

OWNER:

APE ENTERPRISES LTD.

19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8

Arjun Randhawa (Development Manager)

(250) 378-0282

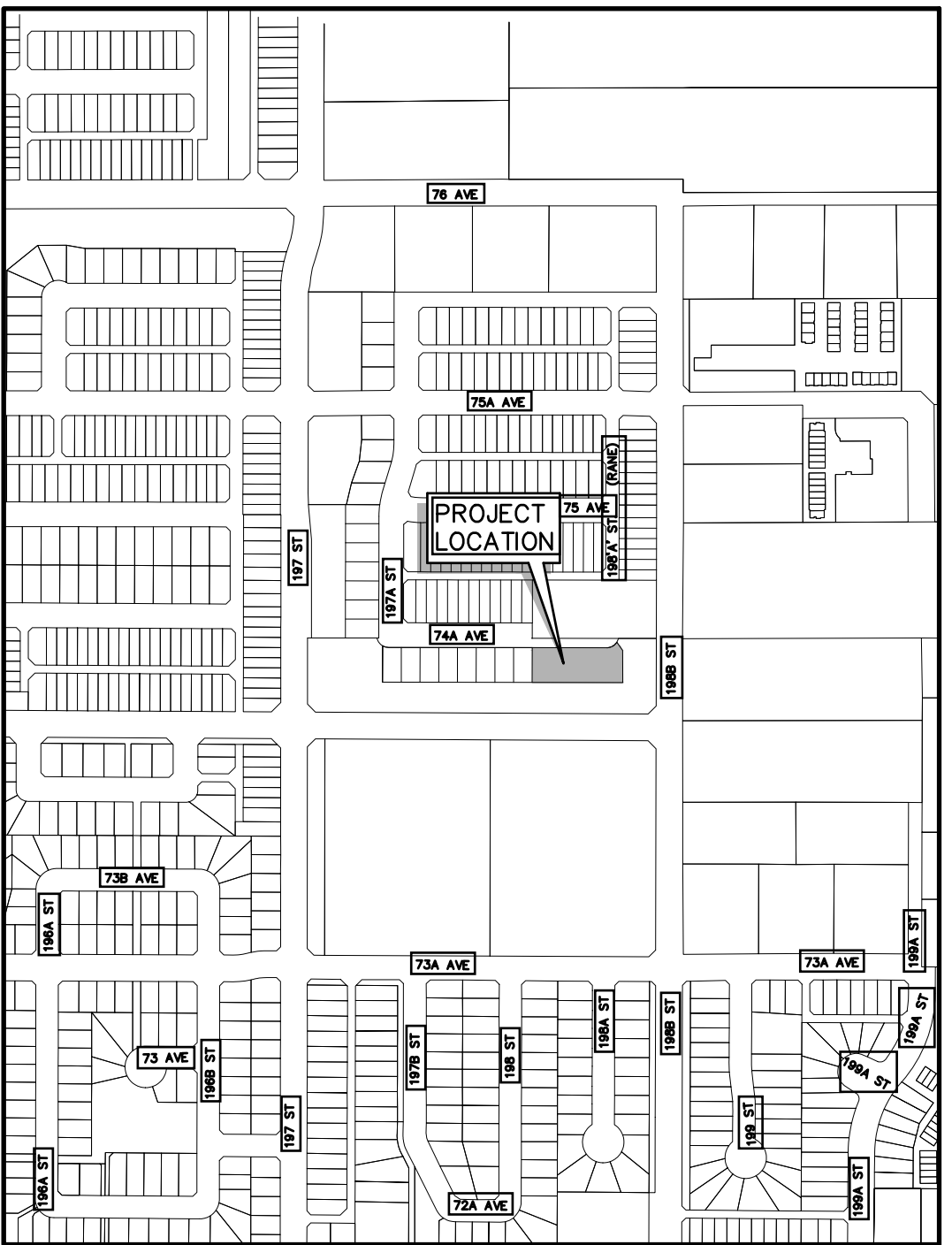
arjun@landbankgroup.ca

SITE LOCATION:

74`A' AVENUE

LEGAL DESCRIPTION:

**LOT 9, PLAN EPP70181,
SECTION 22, TOWNSHIP 8,
NEW WESTMINSTER DISTRICT**



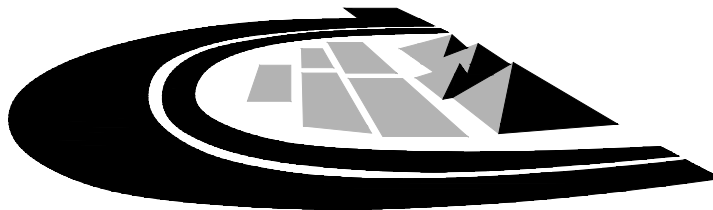
SITE PLAN
1:5000

DRAWING INDEX	
SHEET No	TITLE
1 OF 11	COVER SHEET
2 OF 11	KEY PLAN
3 OF 11	STORMWATER CONTROL PLAN
4 OF 11	ROAD AND WATER
5 OF 11	ROAD AND WATER
6 OF 11	STORM AND SANITARY SEWERS
7 OF 11	LOT GRADING PLAN
8 OF 11	ROAD CROSS-SECTIONS
9 OF 11	STREET LIGHTING PLAN
10 OF 11	GENERAL NOTES
11 OF 11	STANDARD TOWNSHIP OF LANGLEY LEGEND

Coastland File No. **2998**

MUNICIPAL PROJECT No.

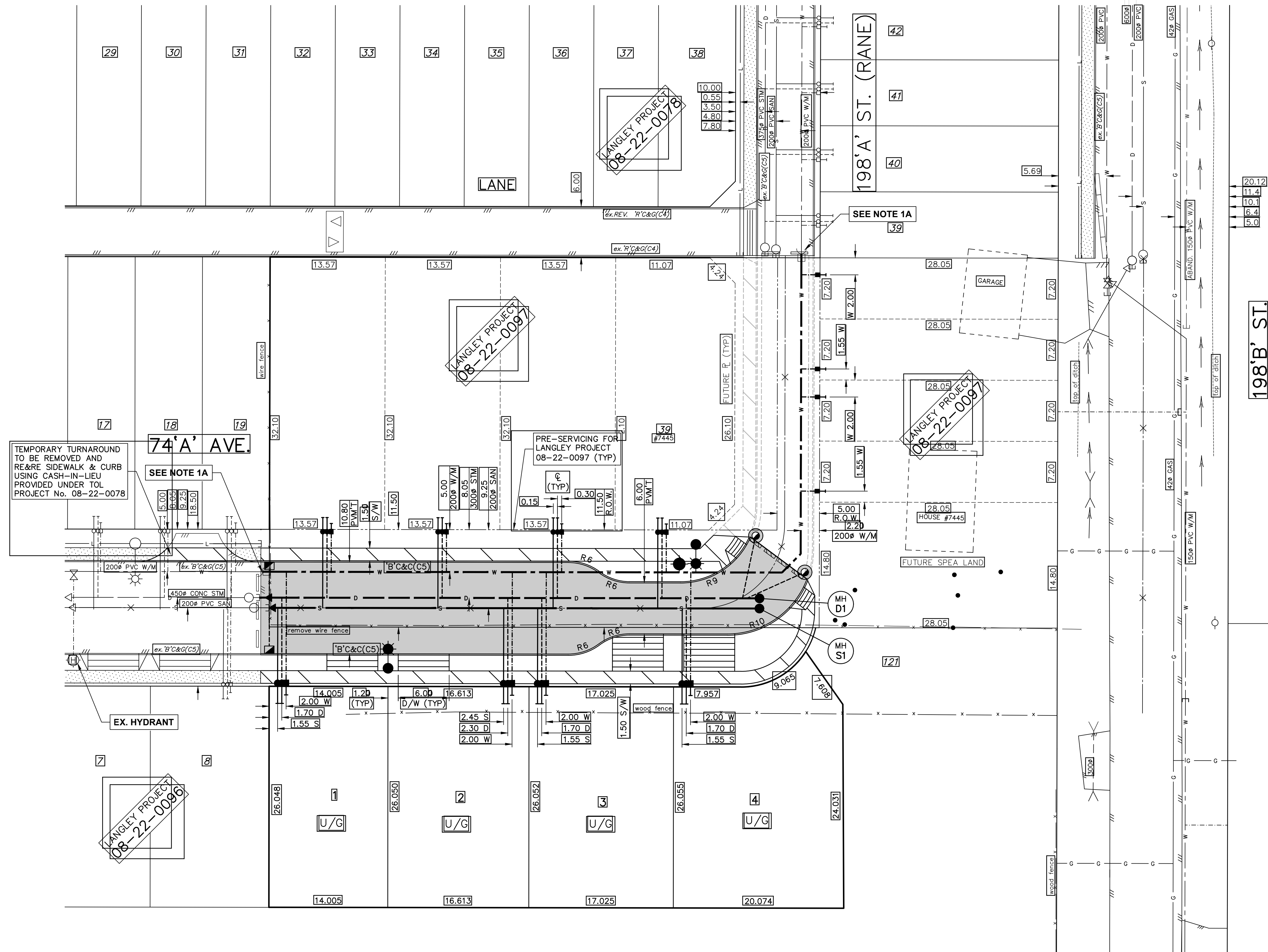
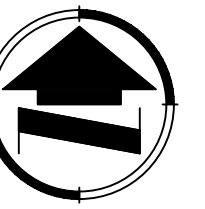
08-22-0096



Coastland
engineering & surveying Ltd.

#101, 19292 – 60 Avenue
Surrey, BC V3S 3M2
Phone: (604)532-9700
Fax: (604)532-9700

Permit To Practice No. 1001893



- NOTES:**
- WORKS BY TOWNSHIP CREWS AT OWNER'S COST:
A) 2 WATERMAIN TIE-IN'S - 74'A' AVENUE, 198'A' STREET (RANE).
 - ALL LOTS TO BE SERVICED WITH UNDERGROUND HYDRO/TEL WIRING.
 - RESTRICTIVE COVENANTS TO BE IN PLACE OVER
A) LOTS 1-4 FOR BUILDING DESIGN GUIDELINES.
B) LOTS 1-4: INDIVIDUAL ON-SITE INFILTRATION SYSTEMS TO THE ACCEPTANCE OF THE TOWNSHIP OF LANGLEY. (TLD12 a, b & c)
 - TRAFFIC SIGNS ARE REQUIRED. TOWNSHIP DEVELOPMENT INSPECTOR SHALL BE NOTIFIED WHEN WORKS ARE READY FOR SIGN INSTALLATION.

RIVER SAND SHALL NOT BE APPROVED FOR USE WITHIN TOWNSHIP OF LANGLEY DEDICATIONS OR RIGHT-OF-WAYS.

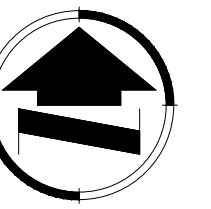
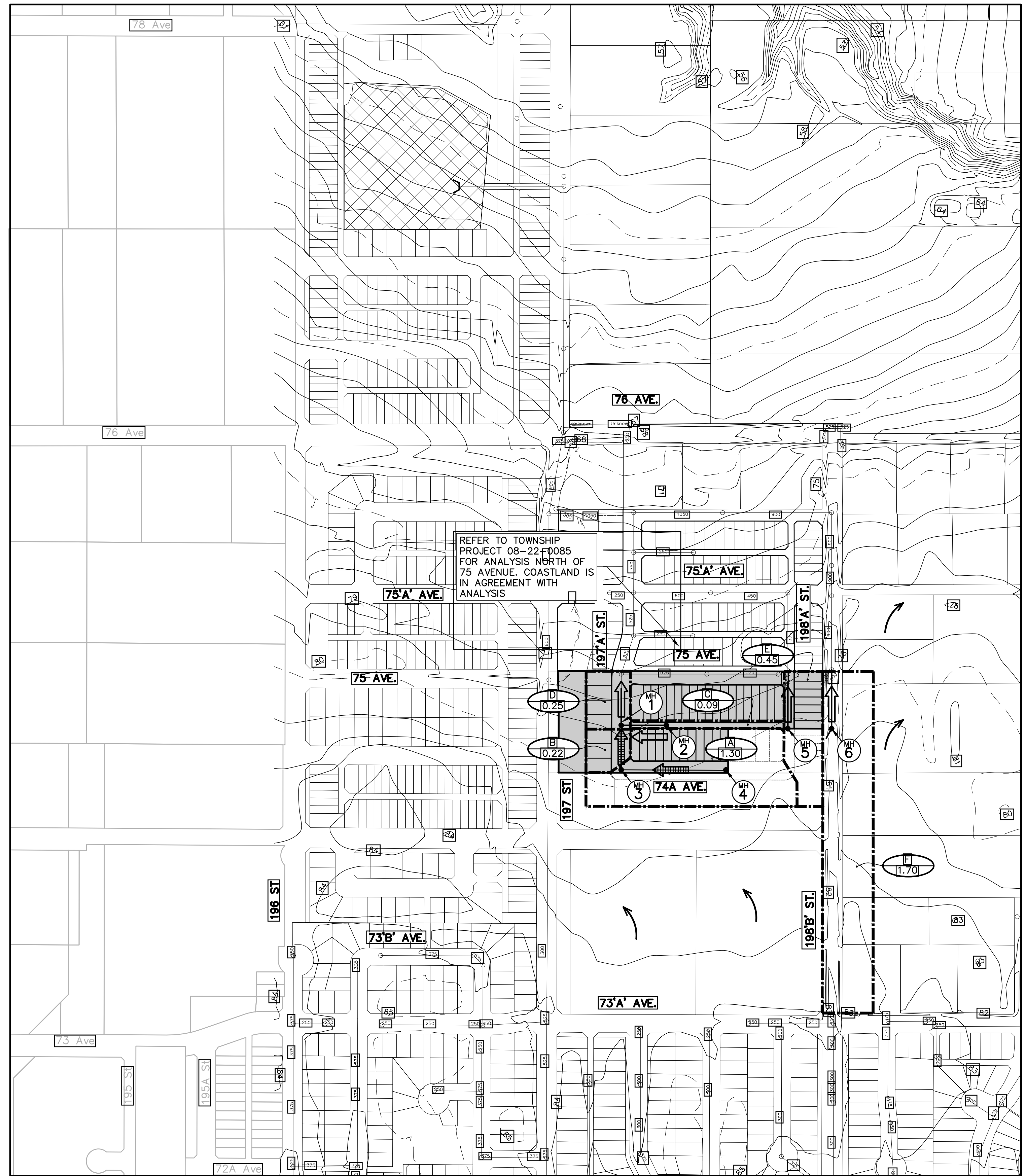
NOTES CONTRACTOR TO CONTACT TELUS, B.C. HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.		BENCHMARK CONTROL MONUMENT NO.88H4596, LOCATED ON THE 198'B' STREET at #7371, ELEVATION = 82.997m		LEGAL LOT 9, PLAN EPP70181, SECTION 22, TOWNSHIP 8, NEW WESTMINSTER DISTRICT		OWNER APE ENTERPRISES LTD. 19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8 Arjun Randhawa (Development Manager) (250) 378-0282 arjun@andbankgroup.ca		OWNER'S ENGINEER Coastland engineering & surveying ltd. #101, 19292 - 60 Avenue Surrey, BC V3S 3A2 Phone: (604)532-9700 Fax: (604)532-9700		REVISIONS 1, F.S. YORSTON, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW, EXCEPT AS NOTED BELOW. EXCEPTIONS: No Date		DESIGN BY MEH DRAWN BY KSH APPROVED BY FRY DATE SCALE 1:250		PLAN		MUNICIPAL PROJECT No. 08-22-0096 The Corporation of the Township of Langley KEY PLAN DESIGN FILE No. 2998 PLAN No. 2 of 11 AS BUILT No. (REV.)	
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DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER.

100 YEAR OVERLAND FLOW	
100 YEAR FLOW IN PIPE	
100 YEAR FLOW BELOW SURFACE	
DIRECTION OF FLOW FOR SURFACE RUNOFF	
BASIN BOUNDARY LINE	
SUB-BASIN BOUNDARY LINE	
MAJOR CATCHMENT BOUNDARY LINE	
SUB-CATCHMENT BOUNDARY LINE	
LOCAL CATCHMENT BOUNDARY LINE	
EXISTING STORM SEWER	
PROPOSED STORM SEWER	
FUTURE STORM SEWER	
EXISTING CONTOURS	
EXISTING DITCHES	
PROPOSED SWALES	
MANHOLE, CLEANOUT OR HEADWALL NUMBER	
CATCHMENT AREA	
EXISTING DETENTION AREA	
PROPOSED COMMUNITY DETENTION FACILITY	

* $8+6=14.0$
 $\uparrow$
 270m at 0.7m/s



REFER TO TOWNSHIP
PROJECT 08-22-0085
FOR ANALYSIS NORTH OF
75 AVENUE. COASTLAND IS
IN AGREEMENT WITH
ANALYSIS

NOTES

CONTRACTOR TO CONTACT TELUS,
B.C. HYDRO, FORTISBC AND BC ONE
CALL PRIOR TO CONSTRUCTION TO
CONFIRM LOCATIONS OF UTILITIES AND
APPURTENANCES REQUIRING
ADJUSTMENT.

BENCHMARK	CONTROL MONUMENT NO.88H4596, LOCATED ON THE 198'B' STREET at #7371. ELEVATION = 82.997m
LEGAL	[LOT 9, PLAN EPP70181, SECTION 22, TOWNSHIP 8, NEW WESTMINSTER DISTRICT]

OWNER

APE ENTERPRISES LTD.

19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8

Arjun Randhawa (Development Manager)

(250) 378-0282

arjun@randbankgroup.ca

OWNER'S ENGINEER

Coastland
engineering & surveying ltd.



#101, 19292 – 60 Avenue
Surrey, BC V3S 3M2
Phone: (604)532-9700
Fax: (604)532-9700

I, F.R. YORSTON, PROFESSIONAL ENGINEER, IN GOOD
STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA
HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON
THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD
ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE
TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT
CONTROL BYLAW, EXCEPT AS NOTED BELOW.

EXCEPTIONS:

[illegible]

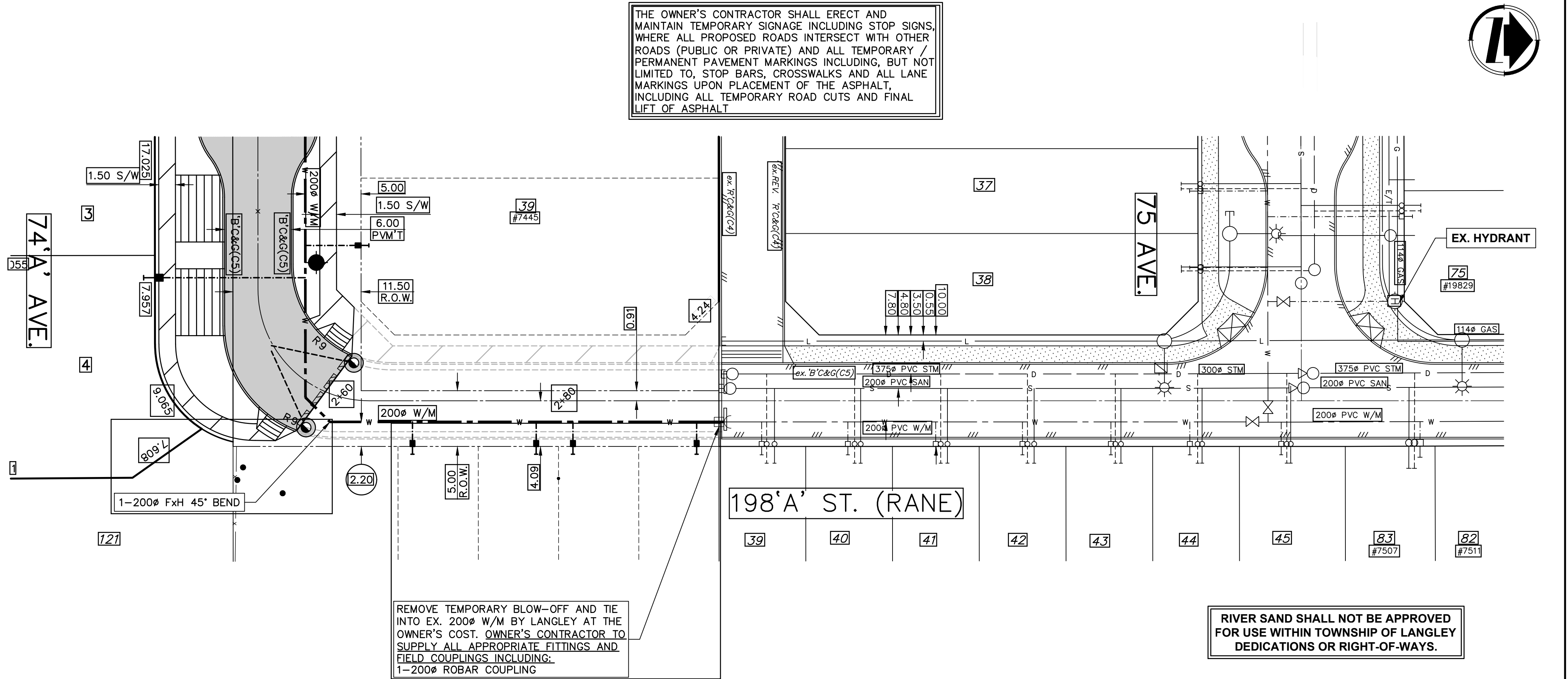
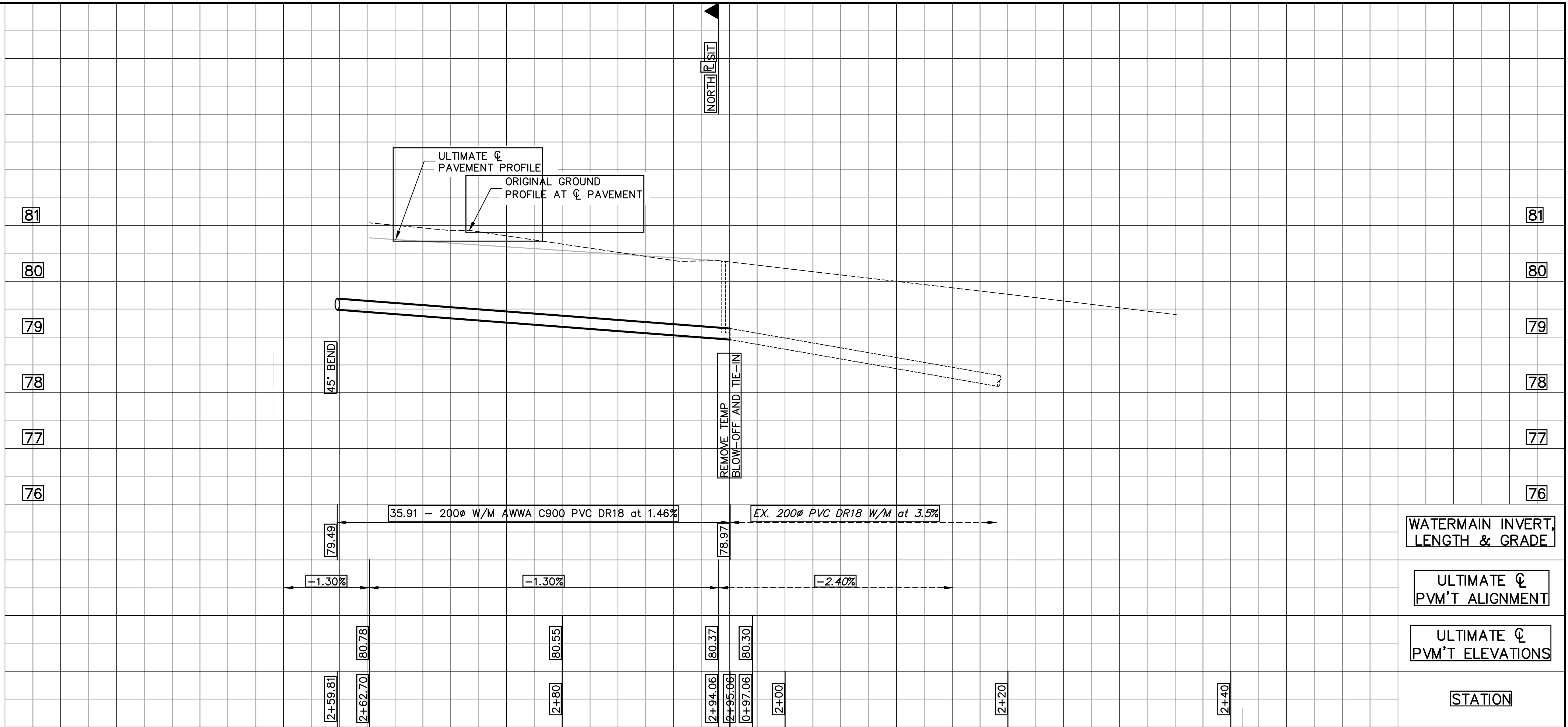
PLAN	DESIGN BY:	FRY
	DRAWN BY:	KSH
	APPROVED BY:	FRY
	DATE:	
	SCALE:	1:2500

MUNICIPAL PROJECT No. 08-22-0096			
The Corporation of the Township of Langley			
	STORMWATER CONTROL PLAN		
	DESIGN FILE No. 2998	PLAN No.	
	AS BUILT No.	SHEET No. 3 of 11	REV.

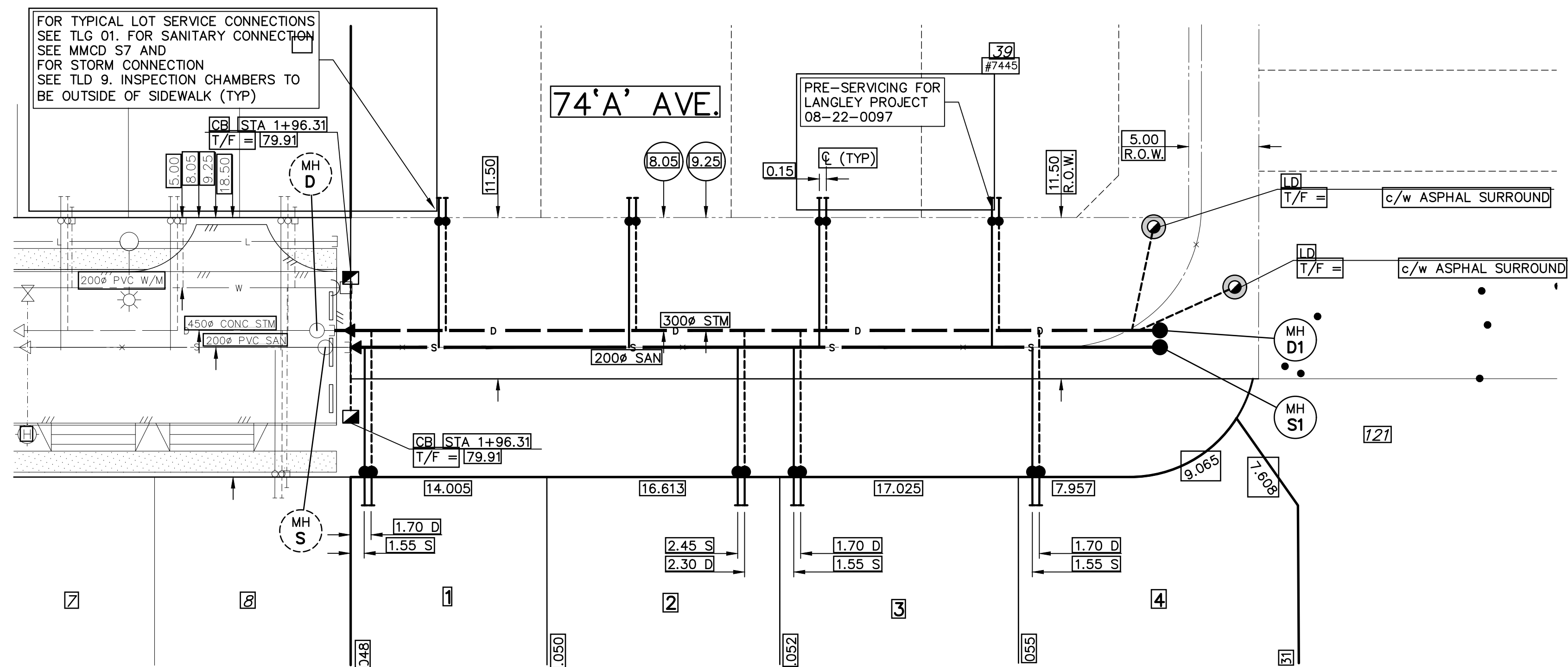
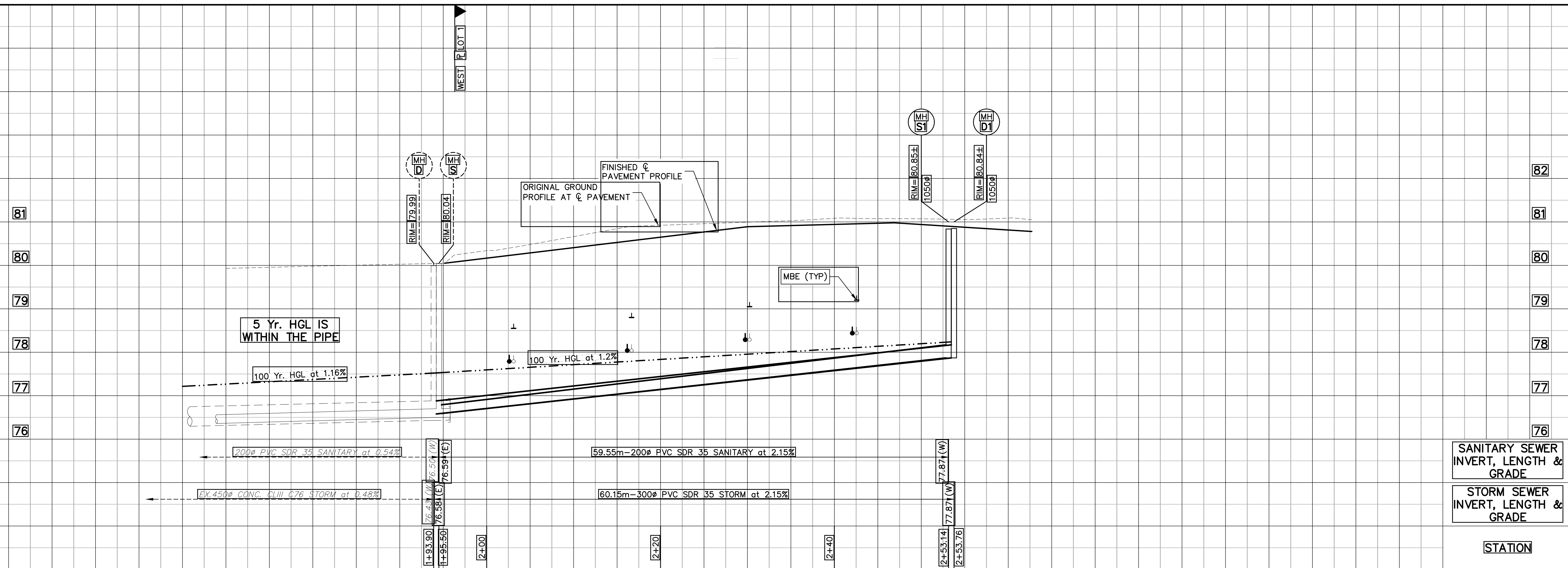
NOTES:

- 1) ALL ROADWORKS IN ACCORDANCE WITH GEOTECHNICAL REPORT BY:
FILE #
DATED:
- 2) TYPE 1 BEDDING AND 100mm GRANULAR BACKFILL.
- 3) ALL FITTINGS TO BE TYTON C110 DUCTILE IRON.
- 4) ALL VALVES TO BE MUELLER A2360-43.
- 5) INSTALL ONE TEST POINT PER SECTION OF MAINLINE BY A TEST VALVE.
- 6) THRUST BLOCKING TO BE IN ACCORDANCE WITH TOWNSHIP STD. DWG. TLW2.
- 7) NO THRUST BLOCKS BETWEEN NEW WATERMAIN AND EX. WATERMAIN AT TIE-IN LOCATION(S), BEHIND BLOW-OFFS, HYDRANTS OR STUBS FOR FUTURE USE. ROD AND RESTRAIN AND/OR USE REVERSE THRUST BLOCKS.
- 8) CONTRACTOR TO EXPOSE, CONFIRM, AND REPORT ANY CONFLICTS WITH ELEVATION OR LOCATION OF ALL EX. UTILITY CROSSINGS BETWEEN NEW WATERMAIN AND EX. WATERMAIN AT TIE-IN LOCATION(S) AND CROSSINGS PRIOR TO ANY CONSTRUCTION.
- 9) NEW WATERMAIN TO BE INSTALLED TO WITHIN 2.0m OF EX. WATERMAIN. ENSURE VERTICAL AND HORIZONTAL ALIGNMENT OF NEW WATERMAIN MATCHES EX. WATERMAIN ELEVATION AT TIE-IN LOCATION(S).
- 10) NEW WATER SYSTEM TO PASS PRESSURE AND BACTERIOLOGICAL TESTING BEFORE CONNECTION IS MADE TO EX. WATER SYSTEM.
- 11) NEW HYDRANTS SERVICED BY TOWNSHIP OF LANGLEY AT OWNER'S EXPENSE.
- 12) WATER SERVICES MUST NOT BE MADE WITHIN 1.0m OF EX. CONNECTIONS, BENDS, PIPE BELLS, VALVES, ETC.

"I, F. R. YORSTON, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WATER MAIN DESIGN ON THIS DRAWING HAS BEEN DONE IN ACCORDANCE WITH THE MINISTRY OF HEALTH DESIGN CRITERIA AND THAT NO CONSTRUCTION WILL OCCUR UNLESS A PERMIT HAS BEEN ISSUED BY THE MINISTRY OF HEALTH."



NOTES		CONTROL MONUMENT NO.88H4596		OWNER		OWNER'S ENGINEER		REVISIONS		PLAN		MUNICIPAL PROJECT No. 08-22-0096	
CONTRACTOR TO CONTACT TELUS, B.C. HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.		LOCATED ON THE 198'B' STREET at #7371 ELEVATION = 82.997m		APE ENTERPRISES LTD. 19766 70 AVENUE, LANGLEY B.C. V2Y 3E8 Arjun Randhawa (Development Manager) (250) 378-0282 arjun@andbankgroup.ca		Coastland engineering & surveying ltd. #101, 19292 - 60 Avenue Surrey, BC V3S 3A2 Phone: (604)532-9700 Fax: (604)532-9700		1, F.R. YORSTON, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW, EXCEPT AS NOTED BELOW. EXCEPTIONS:		No Date		The Corporation of the Township of Langley	
BENCHMARK		LOT 9, PLAN EPP70181, SECTION 22, TOWNSHIP 8, NEW WESTMINSTER DISTRICT								DESIGN BY: FRY DRAWN BY: KSH / KDL APPROVED BY: FRY DATE: SCALE: HORZ. 1:250 VERT. 1:50		ROAD AND WATER 198'A' STREET (RANE) DESIGN FILE No.: 2998 PLAN No.: SHEET No.: 5 of 11 REV.	
LEGAL												DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER	

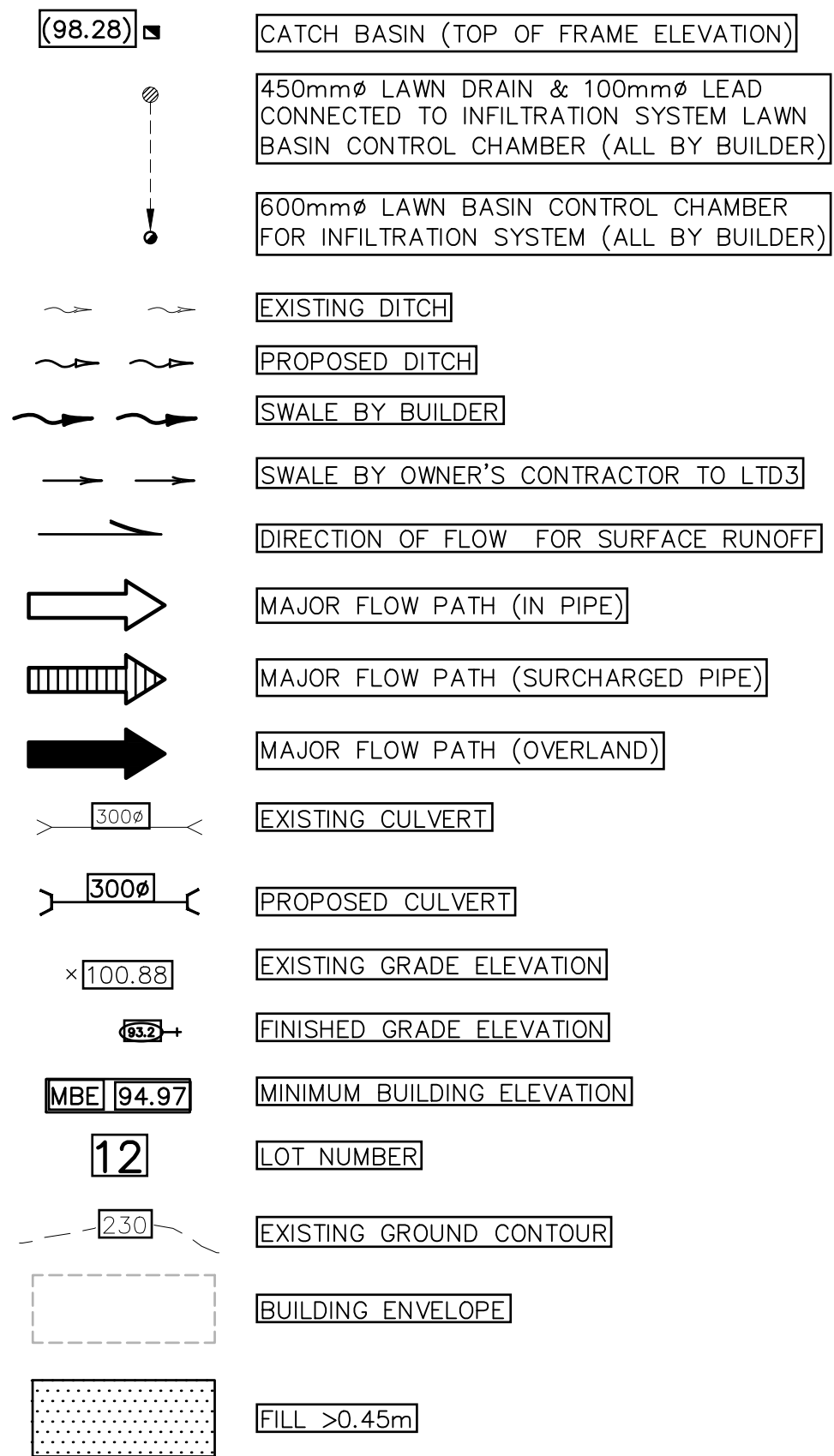


- NOTES**
- 1) TYPE 1 BEDDING AND 100mm GRANULAR BACKFILL (UNLESS OTHERWISE AUTHORIZED BY THE MUNICIPAL ENGINEER).
 - 2) PIPES - CLOSED JOINT.
 - 3) EXPOSE AND VERIFY DEPTH AND LOCATION OF TIE-IN POINTS, AND OF ALL UTILITIES CROSSING PROPOSED STORM AND SANITARY SEWERS PRIOR TO ANY CONSTRUCTION.
 - 4) ALL UTILITY TRENCHES ARE TO BE REINSTATED AS STANDARD DRAWING G-5. ALL ROAD CUTS TO BE REINSTATED AS PER T.O.L. PAVEMENT CUT POLICY.
 - 5) BUILDERS ARE RESPONSIBLE FOR INSTALLING CONCRETE PULL BOXES COMPLETE WITH CAST IRON LIDS OVER CONNECTION I.C.'S SHOULD THEY BE LOCATED IN A DRIVEWAY. STANDARD DRAWING MMCD S-9.
 - 6) ALL STORM CONNECTIONS ARE 150Ø.

RIVER SAND SHALL NOT BE APPROVED FOR USE WITHIN TOWNSHIP OF LANGLEY DEDICATIONS OR RIGHT-OF-WAYS.

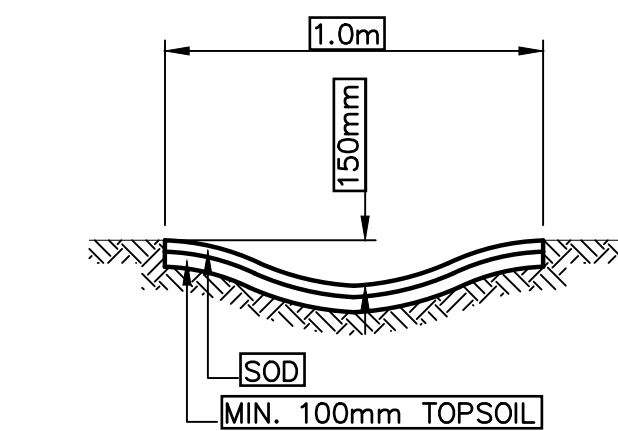
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LOT GRADING LEGEND



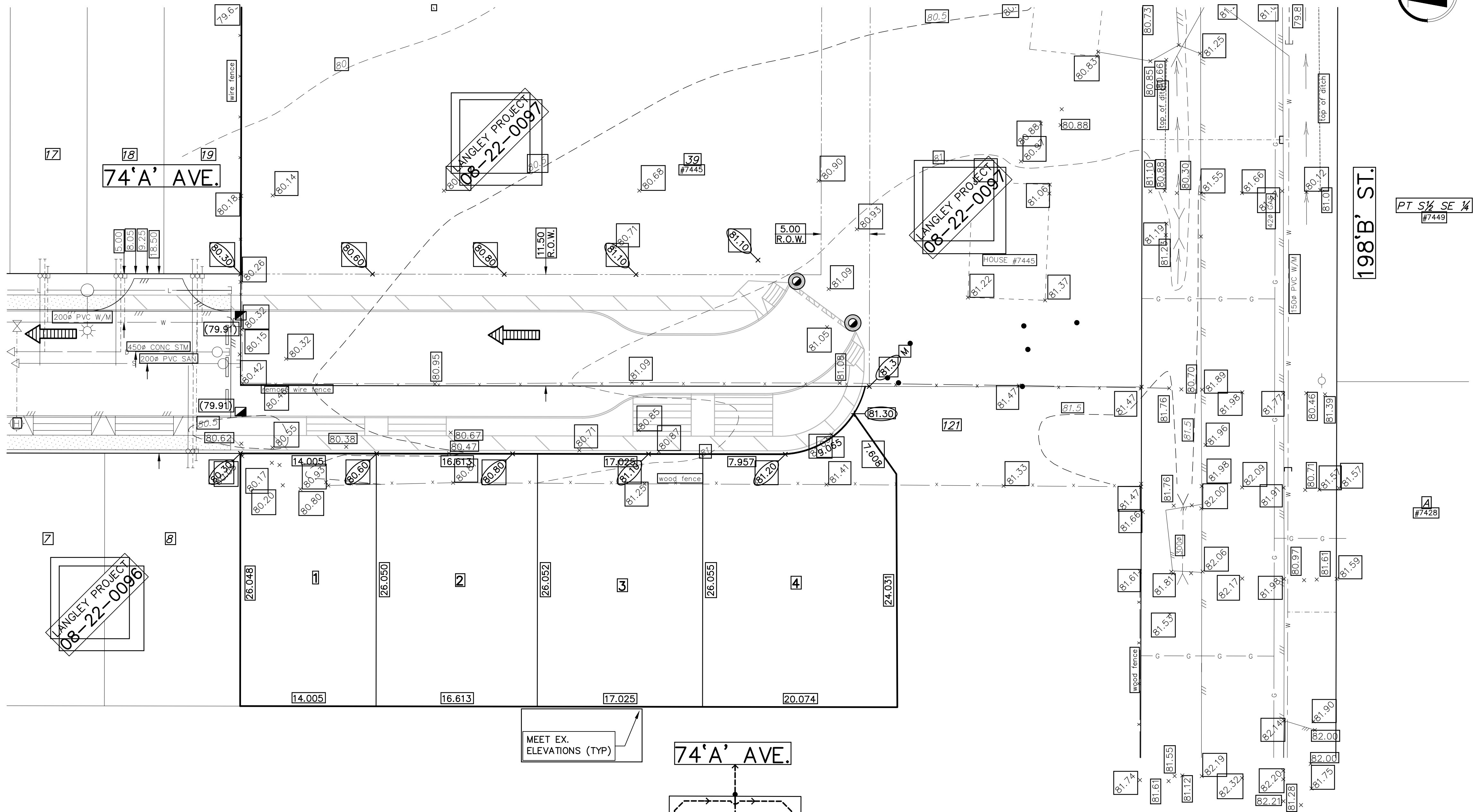
LOT GRADING NOTES:

- 1) HOUSE BUILDERS TO ENSURE THAT ALL ROOF WATER DRAINAGE IS DIRECTED TO A LAWN DRAIN , EITHER BY A SWALE OR TIGHT PIPE (OR COMBINATION) TO MAXIMIZE LOT DRAINAGE TO THE INFILTRATION SYSTEM, ALL AS PER TLD 12.a, b & c. INFILTRATION SYSTEMS SHALL BE LOCATED ON EACH LOT.
- "TYPICAL DRAINAGE DETAILS" DEPICTED ON THIS DRAWING ARE RECOMMENDED, HOWEVER EACH HOUSE BUILDER IS REQUIRED TO SUBMIT A GRADING PLAN TO LANGLEY AND MAY VARY PORTIONS OF THE DETAILS CONTAINED ON THIS DRAWING.
- 2) ROUGH LOT GRADING BY GENERAL CONTRACTOR. FINISHED LOT GRADING BY HOUSE BUILDER.
- 3) HOUSE BUILDER MAY BE REQUIRED TO CONSTRUCT ADDITIONAL DRAINAGE FACILITIES AS DESIGNED BY A PROFESSIONAL ENGINEER PRIOR TO BUILDING PERMIT APPROVAL.
- 4) Q(5) IS WITHIN THE PIPES & Q(100) (MAJOR FLOW) IS AS SHOWN.
- 5) MINIMUM BUILDING ELEVATION (MBE) IS THE ELEVATION OF THE LOWEST FLOOR SLAB IN A BUILDING OR THE UNDERSIDE OF THE FLOOR JOISTS WHERE THE LOWEST FLOOR IS CONSTRUCTED OVER A CRAWLSPACE. THE CRAWLSPACE IS A SPACE BETWEEN A FLOOR AND THE UNDERLYING GROUND HAVING A MAXIMUM HEIGHT OF 1.2m TO THE UNDERSIDE OF THE JOISTS AND NOT USED FOR THE STORAGE OF GOODS OR EQUIPMENT DAMAGEABLE BY FLOODWATER.
- 6) HOUSE BUILDERS TO ENSURE THAT DRIVEWAYS ARE CLEAR OF ALL STREETLIGHTS AND HYDRANTS BY A MINIMUM OF 1.0m.
- 7) ROUGH LOT GRADING TO BE CERTIFIED UPON COMPLETION BY THE ENGINEER OF RECORD.
- 8) HOUSE BUILDERS ARE RESPONSIBLE FOR INSTALLING CONCRETE PULL BOXES COMPLETE WITH CAST IRON LIDS OVER CONNECTION I.C.'s SHOULD THEY BE LOCATED IN A DRIVEWAY. STANDARD DRAWING MMCD S-9.
- 9) NO IMPORT FILL IS TO BE PLACED ON THE LOTS TO ACHIEVE LOT GRADING. FINISH GRADING IS TO BE ACHIEVED BY BUILDER WITH BUILDING EXCAVATION AT TIME OF HOUSE CONSTRUCTION. PROPOSED LOCATION OF THE RIDGE LINE BETWEEN THE LOTS IS A GENERAL GUIDE FOR THE BUILDER AND THE LOCATION CAN VARY DEPENDING UPON THE POSITION OF THE PROPOSED HOUSES.
- 10) LAWN BASINS AT REAR OF LOTS BY BUILDER TO BE CONNECTED TO THE INFILTRATION SYSTEM AS PER TLD 12a, b & c.
- 11) RESTRICTIVE COVENANTS TO BE IN PLACE OVER:
 - A) LOTS 1 - 4 FOR BUILDING DESIGN GUIDELINES.
LOTS 5 - 8 ARE UNDER A DEVELOPMENT PERMIT FOR HOUSE DESIGNS.
 - B) LOTS 1 - 8 FOR INDIVIDUAL ON-SITE INFILTRATION SYSTEMS TO THE ACCEPTANCE OF THE TOWNSHIP OF LANGLEY. (TLD12 A, B & C).
 - C) LOTS 1 - 8 DRIVEWAY ACCESS TO BE LOCATED IN LANE / RANE ONLY.



DETAIL OF SWALE

(ALSO REFER TO LANGLEY DWG TLD 4)



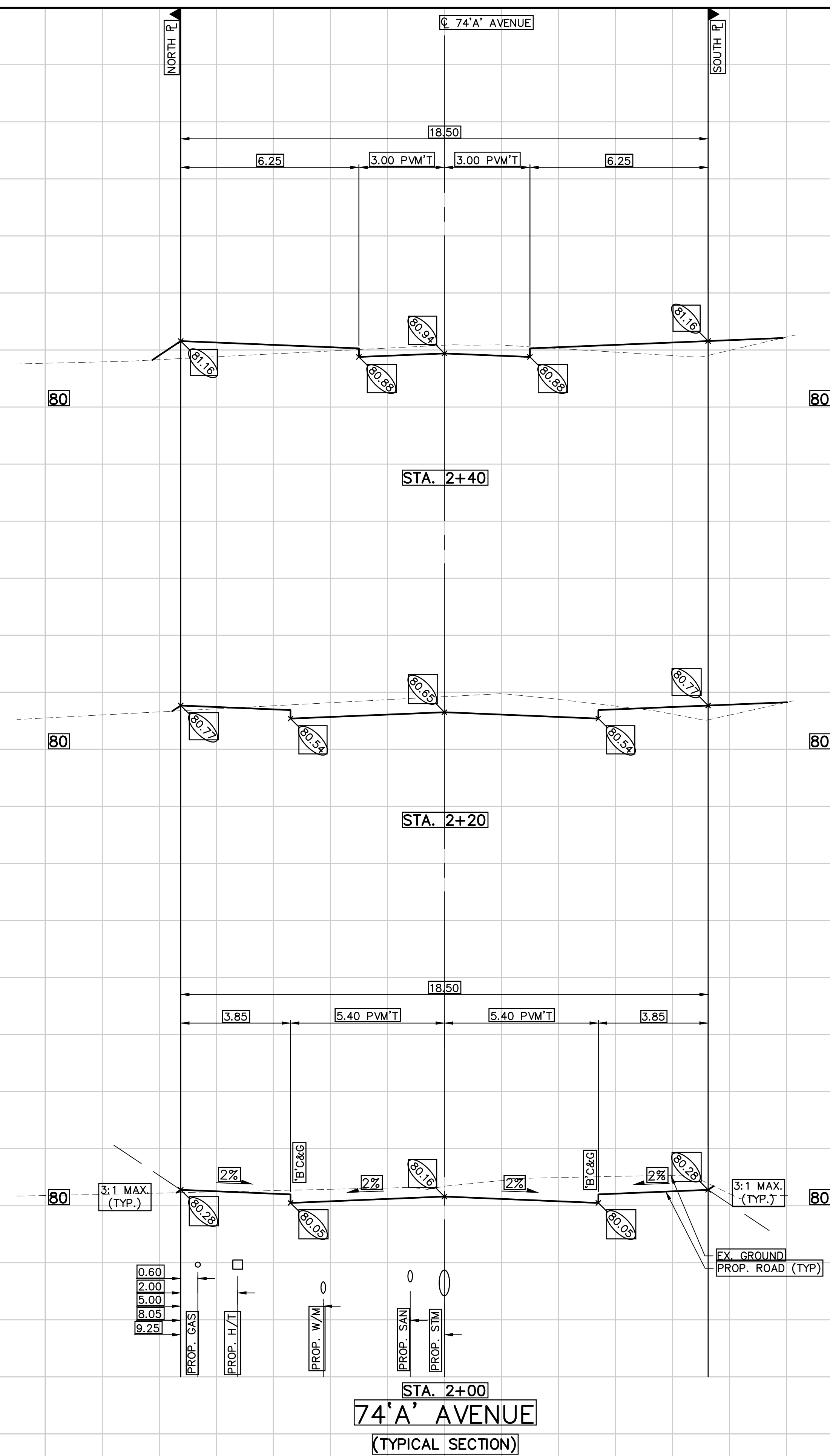
**TYPICAL DRAINAGE
DETAIL LOTS 1-5**

**RIVER SAND SHALL NOT BE APPROVED
FOR USE WITHIN TOWNSHIP OF LANGLEY
DEDICATIONS OR RIGHT-OF-WAYS.**

[illegible]

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DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER



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THE OWNER'S CONTRACTOR SHALL ERECT AND MAINTAIN TEMPORARY SIGNAGE INCLUDING STOP SIGNS, WHERE ALL PROPOSED ROADS INTERSECT WITH OTHER ROADS (PUBLIC OR PRIVATE) AND ALL TEMPORARY / PERMANENT PAVEMENT MARKINGS INCLUDING, BUT NOT LIMITED TO, STOP BARS, CROSSWALKS AND ALL LANE MARKINGS UPON PLACEMENT OF THE ASPHALT INCLUDING ALL TEMPORARY ROAD CUTS AND FINAL LIFT OF ASPHALT

SIGN LIST		
SIGN	QUANTITY	
ROAD CURVES AHEAD	2	
NO PARKING	2	
NO PARKING IN LANE ON STREET LIGHT POLE	1	
HAZARD SIGN	2	
REMOVE CHECKERBOARD SIGN	2	
TOTAL	9	

STREET LIGHTING DESIGN CRITERIA							
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED	DESIGN REQUIREMENTS	DESIGN ACHIEVED	DESIGN REQUIREMENTS	DESIGN ACHIEVED	DESIGN REQUIREMENTS
STREET NAME(S)	74'A AVENUE		198'A STREET		198'B STREET		
LAND USE	RESIDENTIAL		RESIDENTIAL		RESIDENTIAL		
ROAD CLASSIFICATION AND ROAD WIDTH	LOCAL / 10.8m		LOCAL / 8.7m		COLLECTOR / 11.0m (ULTIMATE)*		
PEDESTRIAN ACTIVITY	MEDIUM		MEDIUM		MEDIUM		
LUMINAIRE DESCRIPTION/PRODUCT NUMBER	LIVABLE CITIES NXT / NXT-36S-450mA-2ES-3000K (PROP./EXIST.)		LIVABLE CITIES NXT / NXT-36S-600mA-2ES-3000K (PROP./EXIST.)		LIVABLE CITIES NXT / NXT-36S-600mA-2ES-3000K (PROP./EXIST.)		
PHOTOMETRIC FILE No.	NXT-36S-450mA-2ES-3000K.ies (PROP./EXIST.)		NXT-36S-600mA-2ES-3000K.ies (PROP./EXIST.)		NXT-36S-600mA-2ES-3000K.ies (PROP./EXIST.)		
LAMP WATTAGE & LIGHT SOURCE	52W - LED		69W - LED		69W - LED		
INITIAL LAMP LUMENS	5868 lm		7427 lm		7427 lm		
LIGHT LOSS FACTOR	0.8		0.8		0.8		
LUMINAIRE DISTRIBUTION TYPE	2ES		2ES		2ES		
POLE HEIGHT (m)	9.0m DAVIT POLE (PROP./EXIST.)		7.5m DAVIT POLE (PROP./EXIST.)		9.0m DAVIT POLE (PROP./EXIST.)		
POLE ARRANGEMENT	STAGGERED		ONE SIDED		STAGGERED		
POLE SPACING (MAX DESIGN SPACING)	35.0m		32.0m		33.0m		
LUMINANCE LEVEL (AVG.)	0.5cd/m²	0.6 cd/m²	0.5cd/m²	0.6 cd/m²	0.6cd/m²	0.8 cd/m²	
LUMINANCE UNIFORMITY RATIO (AVG.:MIN)	≤6.0:1	3.0:1	≤6.0:1	1.9:1	≤3.5:1	1.6:1	
LUMINANCE UNIFORMITY RATIO (MAX.:MIN)	≤10.0:1	5.0:1	≤10.0:1	3.7:1	≤6.0:1	2.6:1	
VEILING LUMINANCE RATIO (VLMAX:AVG.)	≤0.4:1	0.2:1	≤0.4:1	0.2:1	≤0.4:1	0.3:1	

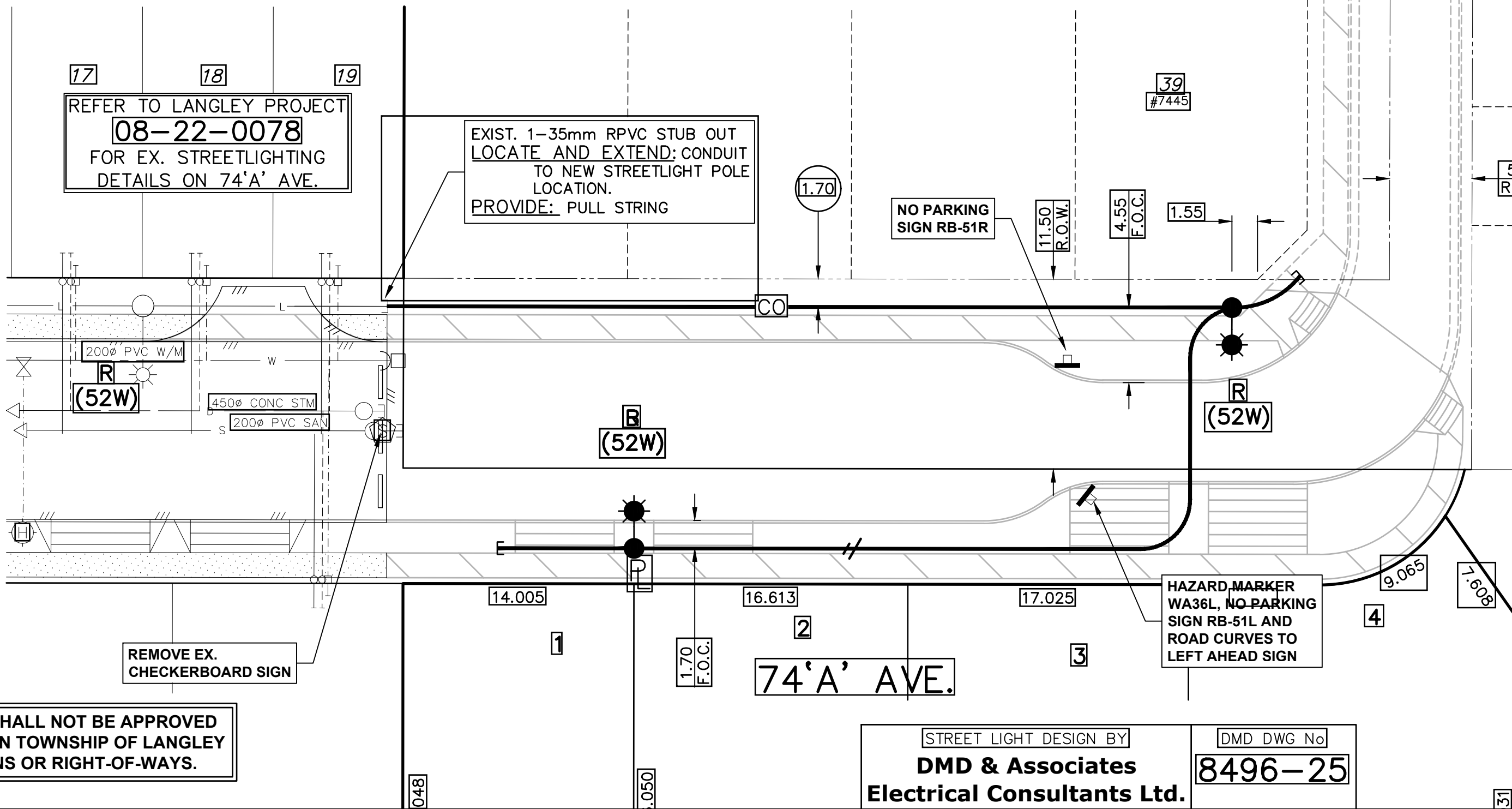
* BASED ON A 20 YR FIXTURE LIFE AND 10 YR CLEANING CYCLE.

* BASED ON A 20 YR FIXTURE LIFE AND 10 YR CLEANING CYCLE.

* BASED ON A 20 YR FIXTURE LIFE AND 10 YR CLEANING CYCLE.

** BASED ON ULTIMATE DESIGN

LUMINAIRE SCHEDULE			
PRODUCT	MANUFACTURER	SPECIFICATION	EXCEPTIONS
COBRA HEAD LUMINAIRES	LIVABLE CITIES	69W : NXT-36S-0-7-2ES-6-GY-4-UL-S-2H 52W : NXT-36S-0-7-2ES-4-GY-4-UL-S-2H	C/W SHORTING CAP AND NEMA LABEL (PHOTOCELL WHERE NOTED)



NOTES
CONTRACTOR TO CONTACT TELUS, B.C. HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.

BENCHMARK
CONTROL MONUMENT NO.88H4596, LOCATED ON THE 198'B STREET at #7371, ELEVATION = 82.997m
LEGAL
LOT 9, PLAN EPP70181, SECTION 22, TOWNSHIP 8, NEW WESTMINSTER DISTRICT

OWNER
APE ENTERPRISES LTD.
19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8
Arjun Randhawa (Development Manager)
(250) 378-0282
arjun@andbankgroup.ca

STREET LIGHT DESIGN BY
DMD & Associates
Electrical Consultants Ltd.
OWNER'S ENGINEER
Coastland
engineering & surveying ltd.
#101, 19292 - 60 Avenue
Surrey, BC V3S 3M2
Phone: (604)532-9700
Fax: (604)532-9700

DMD DWG No
8496-25

I, F.S. YORSTON, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW, EXCEPT AS NOTED BELOW.
EXCEPTIONS:

No	Date	REVISIONS

DESIGN BY	DMD
DRAWN BY	KSH
APPROVED BY	FRY
DATE	
SCALE	1:250

MUNICIPAL PROJECT No. 08-22-0096

The Corporation of the Township of Langley

STREET LIGHTING PLAN

DESIGN FILE No.	2998	PLAN No.	
AS BUILT No.		SHEET No.	9 of 11
		REV.	

DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER

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LEGEND

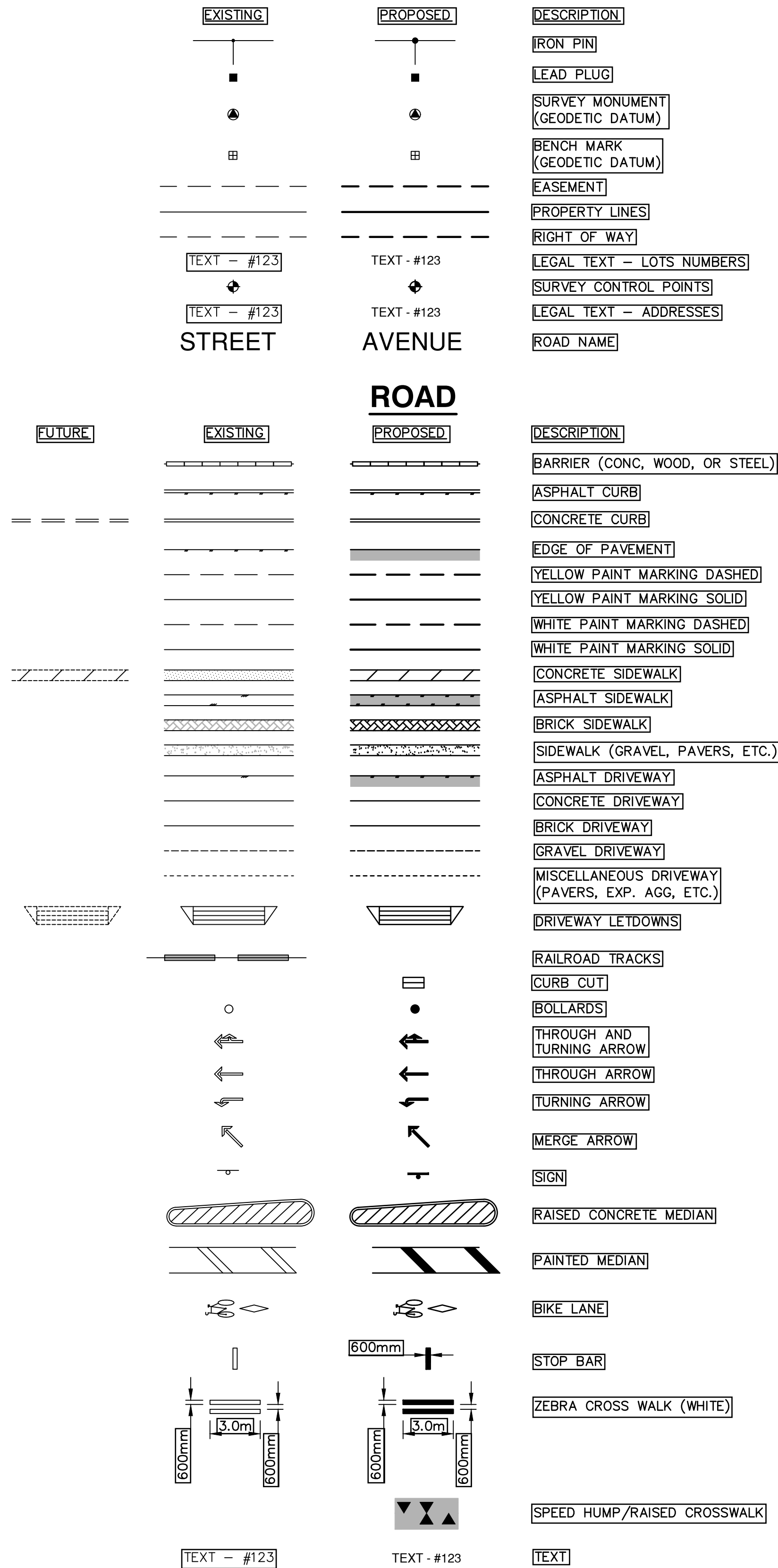
- FUTURE DAVIT STREET LIGHT POLE
- EXISTING DAVIT STREETLIGHT POLE
- EXISTING UTILITY POLE
- PROPOSED DAVIT STREETLIGHT POLE (8.1m-LED LUMINAIR) C/W PHOTOCELL AND A 40A SERVICE PANEL C/W SURGE PROTECTION (VALID MANUFACTURING BSD4S24CQS) AND STANDING PAD A 0.9m HIGH SERVE BASE ON A TYPE C1 CONCRETE BASE.
- PROPOSED DAVIT STREETLIGHT POLE (9.0m-LED LUMINAIRE WATTAGE AS NOTED) ON A TYPE C CONCRETE BASE.
- PROPOSED DAVIT STREETLIGHT POLE (9.0m-LED LUMINAIRE WATTAGE AS NOTED) ON A TYPE C CONCRETE BASE.
- PROPOSED 35mm R.P.V.C. CONDUIT ONLY
- PROPOSED 3 No. 4(Al) RW90 ST. LTG. AND 1 No. 6(Al) RW90 BOND IN 35mm R.PVC
- PROPOSED 2 No. 4(Al) RW90 ST. LTG. AND 1 No. 6(Al) RW90 BOND IN 35mm R.PVC
- EXISTING CONDUIT AND CONDUCTORS
- PROPOSED 35mm RPVC STUB OUT
- LUMINAIRE ON RED PHASE CONDUCTOR
- LUMINAIRE ON BLACK PHASE CONDUCTOR
- TRAFFIC SIGN LOCATION AND TYPE. THE SIGNS INDICATED ARE A GUIDE FOR TOWNSHIP FORCES ONLY. THE TOWNSHIP MAY REQUIRE ADDITIONAL SIGNS AS NECESSARY. SIGNS SUPPLIED AND INSTALLED BY THE TOWNSHIP AT THE OWNER'S COST.

STREET LIGHT NOTES

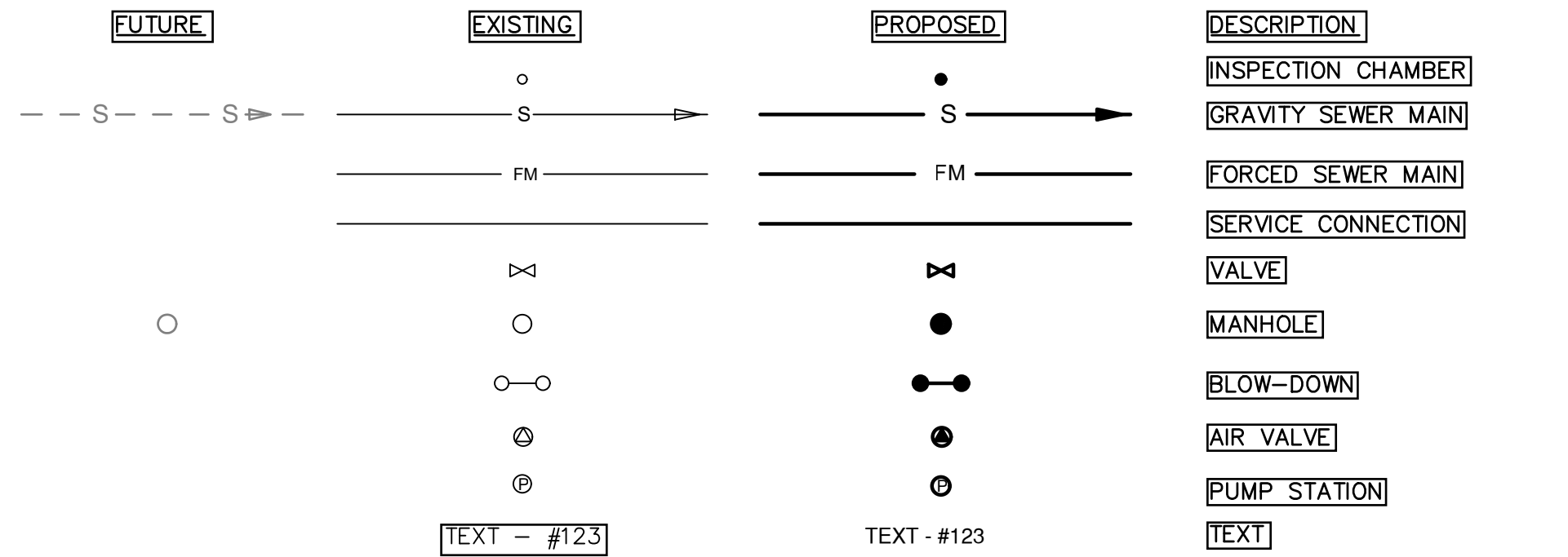
- ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2009 MASTER MUNICIPAL CONSTRUCTION DOCUMENT, LANGLEY SUBDIVISION AND DEVELOPMENT SERVICING BYLAW 2019, No. 5382, SUPPLEMENTAL SPECIFICATIONS ISSUED WITH THIS CONTRACT AND THIS DRAWING.
- A TRON HEB AA WATER-RESISTANT FUSE HOLDER, C/W A 10A BUSS BAN-10 FUSE AND 2 'L' TYPE INSULATING BOOTS, SHALL BE INSTALLED IN EACH LUMINAIRE AND RECEPTABLE LIVE CONDUCTOR IN THE HANDHOLE.
- THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT LAYOUT.
- ALL LUMINAIRES AND RECEPTACLES SHALL BE BONDED WITH No.12 RW90 BOND CONDUCTORS FROM THE BOND IN THE HAND HOLE.
- ALL CONDUCTORS SHALL BE STRANDED COPPER, TYPE RW90(XLPE) INSULATED AND COLOUR CODED.
- ALL COMMON CIRCUIT WIRING SHALL BE TAPED TOGETHER & TAGGED AS NOTED IN SPECIFICATIONS.
- EMPTY CONDUITS SHALL BE CAPPED AND HAVE A NYLON PULL STRING INSTALLED IN THEM.
- ALL COPPER (CU) STREET LIGHTING CONNECTIONS SHALL BE MADE WITH MARRETTE TYPE CONNECTORS IN POLE HANDHOLE AND SPLIT BOLT CONNECTIONS IN JUNCTION BOXES. SEALING OF THE CONNECTIONS SHALL BE AS DETAILED IN THE MMCD.
- ALL STREET LIGHTING FEEDER CONDUCTORS SHALL BE STRANDED ALUMINUM (AL), UNLESS NOTED OTHERWISE. SIZE OF CONDUCTORS AS NOTED.
- ALL ALUMINUM CONNECTIONS ARE TO BE COMPLETED WITH H-TAP COMPRESSION TYPE CONNECTIONS RATED FOR USE WITH ALUMINUM TO COPPER CONNECTIONS (BLACKBURN WR159 FOR #6 AWG COPPER TO #4 AWG ALUMINUM AND WR9 FOR #4 AWG ALUMINUM TO #12 AWG COPPER OR APPROVED EQUAL) . CONNECTIONS SHALL BE COMPLETED WITH A BLACKBURN 00581 MANUAL COMPRESSION TOOL WITH "O" DIE OR APPROVED EQUIVALENT. MINIMUM 4 WRAPS AROUND CONDUCTORS AND SPLICES WITH SELF FUSING RUBBERIZED (NOT PVC) TAPE AND COMPLETELY COVER RUBBERIZED TAPE WITH PVC TAPE. ALL CONNECTIONS ARE TO HAVE "PENETROX" ELECTRICAL JOINT COMPOUND. DO NOT OVERSTRETCH RUBBERIZED TAPE OVER SPLICES. INSULATION OF SPLICES SHALL BE EQUIVALENT TO THAT OF THE CONDUCTORS BEING JOINED.
- ALL NEW POLES SHALL BE GALVANIZED. POLES 9.0m AND UNDER SHALL BE OF ONE PIECE CONSTRUCTION.
- PLOUGHING OF CONDUITS IS NOT ALLOWED.
- WIRE SENTRY TO BE INSTALLED IN ALL POLES WITH COPPER CONDUCTORS. CONTACT TRANS CANADA TRAFFIC INC. CONTRACTOR TO INSTALL WIRING AS PER WIRE SENTRY INSTRUCTIONS.
- ALL STREETLIGHT POLES ARE TO BE 1.0m CLEAR OF ALL DRIVEWAYS.
- ALL ELECTRICAL CONDUITS SHALL BE BURIED MIN. 600mm DEEP IN BOULEVARDS AND 900mm DEEP BELOW THE FINISH GRADE OF THE ROAD AT CROSSINGS. A 'BURIED CABLE' MARKER TAPE SHALL BE INSTALLED IN ALL TRENCHES.
- ALL CONDUITS SHALL BE RIGID P.V.C. MANUFACTURED IN ACCORDANCE WITH C.S.A. C22.2 NO. 211.2. (NOT DB2).
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND LICENSES PRIOR TO CONSTRUCTION AND BE SUBJECT TO APPROVAL OF THE MUNICIPAL ELECTRICAL INSPECTOR.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THE ADEQUACY OF THE EXISTING STREET LIGHT CONDUIT AND CONDUCTORS AND MAKE ALL NECESSARY REPAIRS TO ADEQUATELY COMPLETE ALL CONNECTIONS INTO THE EXISTING STREET LIGHT SYSTEM.
- SEE B.C. HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS.
- CONTRACTOR TO ARRANGE FOR EXACT SERVICE LOCATION WITH B.C. HYDRO PRIOR TO COMMENCING CONSTRUCTION.

GENERAL NOTES 1. ANY SIGNIFICANT REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE OWNER'S ENGINEER, WHO SHALL REVIEW ANY CHANGES WITH THE MUNICIPAL ENGINEER, PRIOR TO ANY CONSTRUCTION. 2. WORKSAFE BC IS TO BE GIVEN NOTICE OF CONSTRUCTION PRIOR TO THE START OF CONSTRUCTION. 3. CONSTRUCTION MAY NOT COMMENCE PRIOR TO THE ISSUANCE OF A "PERMISSION TO CONSTRUCT" OR A "NOTIFICATION TO PROCEED". 4. EXISTING UNDERGROUND UTILITIES ARE TO BE LOCATED (EXCAVATED AND SURVEYED) PRIOR TO INSTALLING ANY NEW UNDERGROUND SERVICES. ANY DISCREPANCY IN ELEVATION OR LOCATION IS TO BE REFERRED TO THE OWNER'S ENGINEER. 5. RESIDENTS AFFECTED BY THE PROPOSED CONSTRUCTION ARE TO BE NOTIFIED BY THE CONTRACTOR IN WRITING TWO COMPLETE WORKING WEEKS PRIOR TO THE START OF CONSTRUCTION AND PROVIDED WITH THE CONTRACTOR'S PHONE NUMBER AND SCHEDULE. 6. THE OWNER AND CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO EXISTING STREETS OR SERVICES BY CONSTRUCTION EQUIPMENT AND/OR TRUCKS HAULING MATERIALS TO THE SITE. THIS WILL INCLUDE DAILY CLEANING AND SWEEPING OF EXISTING ROADS OF DIRT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY. 7. TRAFFIC CONTROL IS TO BE MAINTAINED AT ALL TIMES WHEN WORKING ON MUNICIPAL RIGHTS-OF-WAY (SIGNS, BARRICADES, CERTIFIED FLAG PERSONS). A HIGHWAY USE PERMIT MUST BE OBTAINED FROM THE TOWNSHIP OF LANGLEY ENGINEERING DEPARTMENT PRIOR TO WORKS WITHIN THE MUNICIPAL RIGHT-OF-WAY. 8. CONSTRUCTION IN AND CLOSE TO A WATERCOURSE MUST RECEIVE PRIOR APPROVAL FROM THE PROVINCIAL MINISTRY OF ENVIRONMENT AND/OR THE FEDERAL DEPT. OF FISHERIES AND OCEANS, WHERE APPLICABLE, BEFORE THE TOWNSHIP OF LANGLEY ACCEPTS OWNER'S CIVIL PLANS. 9. PERMANENT STREET, TRAFFIC AND ADVISORY SIGNS AND PAVEMENT MARKINGS REQUIRED BUT NOT NECESSARILY SHOWN ON THE DRAWINGS, MUST BE INSTALLED BY THE TOWNSHIP OF LANGLEY, AND ALL COSTS CHARGED TO OWNER, UNLESS OTHERWISE NOTED. 10. LEGAL SURVEY POSTS, MONUMENTS, STAKES AND INTEGRATED SURVEY MONUMENTS ARE TO BE REPLACED IF DESTROYED OR DAMAGED DURING CONSTRUCTION AT THE OWNER'S EXPENSE; THIS WORK IS TO BE UNDERTAKEN BY A B.C. LAND SURVEYOR UNLESS OTHERWISE NOTED. 11. TOWNSHIP OF LANGLEY'S SURVEY MONUMENTS ARE TO BE PROTECTED AND A MINIMUM OF 2.5m CLEARANCE SHOULD BE MAINTAINED. GROUND DISTURBANCE WORKS WITHIN THE 2.5m CLEARANCE RESULT IN THE MONUMENTS CONSIDERED DESTROYED OR DAMAGED, AND 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 SUBDIVISION & DEVELOPMENT SERVICING BYLAW, MMCD SPECIFICATIONS, AND APPLICABLE DESIGN CRITERIA AND SPECIFICATION STANDARD DRAWINGS IN EFFECT AT THE TIME OF DRAWING ACCEPTANCE. 13. THE TOWNSHIP OF LANGLEY HAS A LIST OF APPROVED MATERIALS AND PRODUCTS AS LISTED IN SCHEDULE "D" OF THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. ONLY THOSE MATERIALS ON THE LIST OR, IF NOT ON THE LIST, SPECIFIED WITHIN THE MMCD MASTER MUNICIPAL SPECIFICATIONS MAY BE USED IN THE WORKS. 14. APPROVED GRANULAR MATERIAL MUST BE USED FOR BACKFILL IN TRENCHES WHEN INSIDE ROAD LIMITS. APPROVED NATIVE MATERIAL MAY BE USED ONLY AS CONFIRMED IN WRITING BY A GEOTECHNICAL ENGINEER, AND ACCEPTED BY THE MUNICIPAL ENGINEER. 15. WHERE UTILITY OR SERVICE CROSSINGS ARE REQUIRED ACROSS EXISTING PAVEMENT, AUGERING AND JACKING ARE REQUIRED UNLESS THE OWNER'S CONTRACTOR RECEIVES APPROVAL FROM THE MUNICIPAL ENGINEER FOR OPEN CUT OPERATIONS. ALL EXISTING PAVEMENT, BOULEVARDS, DRIVEWAYS, ETC. WHICH ARE DISTURBED DURING CONSTRUCTION MUST BE RESTORED TO ORIGINAL OR BETTER CONDITION, WHERE NO IMPROVEMENT IS OTHERWISE PROPOSED UNDER THIS CONTRACT. EXISTING DRIVEWAYS MUST BE SHAPED ACROSS THE WIDTH OF BOULEVARD TO FORM A SMOOTH TRANSITION WITH NEW PAVEMENT. THE FINISHED PAVEMENT SURFACE OVER TRENCH EXCAVATIONS MUST BLEND IN SMOOTHLY WITH EXISTING PAVEMENT. 16. WHERE INFILLING OF DITCHES ETC. IS REQUIRED OR PROPOSED, AND WHERE SERVICES ARE CONSTRUCTED IN FILL SECTIONS, THE FILL MATERIAL MUST BE APPROVED GRANULAR MATERIAL PLACED IN LIFTS NOT EXCEEDING 300mm AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY. 17. NEW SERVICE CONNECTIONS ARE TO BE LOCATED AT CENTRE-LINE OF LOT FRONTAGE AS SHOWN ON TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT SERVICING BYLAW STANDARDS, OR AS NOTED ON DRAWINGS. 18. FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS. 19. OFFSETS AND SIZES OF ALL EXISTING MAINS, CONNECTIONS AND OTHER UTILITIES MUST BE DEPICTED ON THE KEY PLAN. 20. ALL REFERENCES TO MMCD REFER TO THE MOST RECENT EDITION. 21. ALL REFERENCES TO MMCD MASTER MUNICIPAL SPECIFICATIONS INCLUDE TOWNSHIP OF LANGLEY SUPPLEMENTARY SPECIFICATIONS, WHICH SUPERCEDE THE MMCD SPECIFICATIONS. LOT GRADING 1. FOR URBAN DEVELOPMENT, LOTS ARE TO BE GRADED TO DESIGN GRADES AT CONTROL POINTS AND +/- 100mm BETWEEN CONTROL POINTS PRIOR TO THE INSPECTION FOR SUBSTANTIAL COMPLETION, UNLESS OTHERWISE NOTED. 2. LOTS ARE TO BE GRADED TO A MINIMUM SLOPE OF 2.0%. LOT GRADING MUST BE UNIFORM AND CONSISTENT. 3. GRADING IS TO MEET EXISTING GROUND ELEVATIONS AT PROPERTY LINES COMMON WITH ADJOINING PROPERTIES UNLESS OTHERWISE NOTED. WHERE GRADING DOES NOT MEET EXISTING GROUND ELEVATIONS, APPROPRIATE PROTECTION MEASURES ARE TO BE TAKEN BY THE CONTRACTOR, TO THE SATISFACTION OF THE MUNICIPAL ENGINEER. 4. LOTS MARKED WITH THE "FILL" SYMBOL ARE SUBJECT TO BUILDING DEPARTMENT REVIEW AND MAY REQUIRE AN ENGINEERED FOUNDATION/FOOTINGS DESIGN BY A QUALIFIED GEOTECHNICAL ENGINEER. 5. MINIMUM BUILDING ELEVATION (M.B.E.) FOR LOTS ARE SET IN ACCORDANCE WITH THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 6. RAIN WATER LEADERS ARE TO DISCHARGE TO SPLASH PADS UNLESS OTHERWISE APPROVED. 7. THE "HOUSE BUILDER" IS RESPONSIBLE FOR FINAL LOT GRADING WHICH MAY INCLUDE CONSTRUCTION OF INDIVIDUAL SWALES ON EACH LOT AS NOTED. ALL DEVELOPER'S SWALES ARE TO BE RESTORED TO LINE AND GRADE AND ARE TO BE RE-SODDED IF REQUIRED. 8. RETAINING WALLS MUST BE ENGINEERED IF OVER 1.2m IN HEIGHT.		ROADWORKS 1. THE CONTRACTOR IS TO ENGAGE A GEOTECHNICAL ENGINEER TO PERFORM IN-PLACE TESTING DURING THE PREPARATION OF THE SUBGRADE AND CONSTRUCTION OF THE ROAD STRUCTURE TO VERIFY THE ADEQUACY OF THE PROPOSED AND EXISTING ROAD STRUCTURE AND SUBGRADE. 2. CHANGES OF GRADE ARE TO BE FORMED BY SMOOTH VERTICAL CURVES. GRADE TRANSITIONS ARE TO BE FORMED TO BE UNNOTICEABLE TO VEHICULAR TRAFFIC WHEN BEING TRAVERSED. 3. LOOSE OR ORGANIC MATERIAL IS TO BE EXCAVATED FROM ROADWAY PRISM. 4. GRANULAR SUB-BASE AND OTHER BASE MATERIALS MUST BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. 5. THE ROAD BASE MUST EXTEND A MINIMUM OF 0.3m BEYOND THE SIDEWALK AND/OR CURB & GUTTER. 6. CATCH BASIN ELEVATIONS GIVEN ARE FOR TOP OF RIM. RIM IS TO BE SET 30mm BELOW GUTTER GRADE. 7. EXISTING VALVE BOXES, MANHOLES, ETC, WITHIN THE RIGHT-OF-WAY ARE TO BE ADJUSTED TO FINISHED GRADE. 8. BENKELMAN BEAM TESTING WILL BE REQUIRED TO CONFIRM THE SUITABILITY OF THE ROAD STRUCTURE PRIOR TO PAVING. 9. PLACEMENT OF ASPHALT CONCRETE AND PORTLAND CEMENT CONCRETE IS TO BE UNDERTAKEN ONLY WHEN WEATHER CONDITIONS ARE IN CONFORMANCE WITH MMCD SPECIFICATIONS. 10. UNLESS OTHERWISE ACCEPTED BY THE MUNICIPAL ENGINEER, ASPHALT CONCRETE IS TO BE LAID IN A MINIMUM OF 2 LIFTS TO A MAXIMUM OF 85mm PER LIFT AND A MINIMUM OF 35mm PER LIFT. 11. TIE-INS TO EXISTING PAVEMENT ARE TO BE MADE IN ACCORDANCE WITH THE TOWNSHIP OF LANGLEY PAVEMENT CUT POLICY NO. 05-116. 12. ASPHALT TAPERS TO BE CONSTRUCTED TO PAVEMENT DESIGN SPECIFICATIONS AS SHOWN IN THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 13. MACHINERY AND MATERIALS MUST NOT BE PARKED OR PLACED IN THE MUNICIPAL RIGHT-OF-WAY OVERNIGHT WHERE POSSIBLE. ANY SUCH PLACEMENT WILL REQUIRE A HIGHWAY USE PERMIT AND ILLUMINATED BARRICADES AND SIGNAGE. WATERWORKS 1. FOR TYPICAL "UTILITY TRENCH" SECTION DETAIL, SEE MMCD STANDARD DETAIL DRAWING. PAVEMENT RESTORATION TO BE IN ACCORDANCE WITH THE TOWNSHIP OF LANGLEY PAVEMENT CUT POLICY NO. 05-116. 2. WATERMAIN MATERIALS MUST CONFORM TO MMCD MASTER MUNICIPAL SPECIFICATIONS, AND SCHEDULE "D" OF THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 3. TIE-INS OF PROPOSED MAINS AND SERVICE CONNECTIONS TO EXISTING WATERMAINS WILL BE PERFORMED BY THE TOWNSHIP OF LANGLEY AT THE OWNER'S EXPENSE. ALL REQUIRED FITTINGS TO BE SUPPLIED BY THE TOWNSHIP OF LANGLEY AT OWNER'S COST. 4. NEW WATERMAIN IS TO BE INSTALLED WITHIN 2.0m OF EXISTING WATERMAIN AT CONNECTION LOCATION EXCEPT AS ACCEPTED BY THE MUNICIPAL ENGINEER. 5. THE CONTRACTOR MUST ENSURE NEW WATERMAIN ELEVATION AND GRADE MATCHES EXISTING WATERMAIN ELEVATION AND GRADE AT THE CONNECTION LOCATION. 6. THE CONTRACTOR MUST EXPOSE AND CONFIRM ELEVATION & OFFSET OF ALL UTILITIES BETWEEN NEW WATERMAIN & EXISTING WATERMAIN AT THE CONNECTION LOCATION. 7. CONNECTIONS MUST NOT BE MADE WITHIN 1.0m OF EXISTING CONNECTIONS, BENDS, VALVES, OR OTHER SYSTEM FITTINGS. 8. CONNECTIONS MUST BE PERPENDICULAR TO MAIN, EXCEPT AS ACCEPTED BY THE MUNICIPAL ENGINEER. 9. MINIMUM COVER ON WATERMAINS IS TO BE 1.2m. 10. SERVICE CONNECTIONS ARE TO BE 25mm DIAMETER UNLESS OTHERWISE NOTED. 11. WATER SERVICE CONNECTIONS ARE TO BE SET SO THAT AN ADJUSTMENT OF 200mm ABOVE FINAL GRADE IS AVAILABLE BY THE TELESOPING BURY-BOX, MINIMUM DEPTH 0.80m, MAXIMUM DEPTH 1.0m. 12. HYDRANTS IN URBAN AREAS MUST BE SUPPLIED WITH THE CORRECT DEPTH OF BURY TO MEET FINAL BOULEVARD GRADES. FOR HYDRANT DETAILS, SEE MMCD STANDARD DETAIL DRAWING. HYDRANTS IN RURAL AREAS; REFER TO SUPPLEMENTAL DRAWING TLW1. 13. THRUST BLOCKS AS SHOWN ON MMCD STANDARD DRAWING ARE TO BE LOCATED AT VALVES, BENDS, TEES, WYES, REDUCERS AND PLUGS. REVERSE THRUST BLOCKS ARE REQUIRED ON CAPS AND BLOWOFFS (REFER TO TOWNSHIP OF LANGLEY SUPPLEMENTARY DRAWINGS FOR THRUST BLOCK AREA FOR DETAILS). 14. HYDRANTS MUST HAVE A 1.2m OFFSET FROM PROPERTY LINE UNLESS OTHERWISE NOTED. DURING CONSTRUCTION, AND AT ANY TIME PRIOR TO ACCEPTANCE OF WATERMAINS BY THE TOWNSHIP OF LANGLEY, THE CONTRACTOR SHALL INSTALL A 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. HYDRANTS TO HAVE A STORZ QUICK RELEASE NOZZLE INSTALLED. 15. THE CONTRACTOR MUST ENSURE THAT ALL SECTIONS OF LINES HAVE TEST POINTS AND TEMPORARY BLOW-OFFS SUITABLE TO ENSURE ADEQUATE PRESSURE TESTING, CHLORINATION AND FLUSHING. DISCHARGE OF CHLORINATED WATER IS NOT PERMITTED INTO DITCHES, STORM SEWERS OR WATERCOURSES UNLESS NEUTRALIZED WITH SODIUM THIOSULPHATE OR APPROVED EQUIVALENT ACCEPTED BY THE MUNICIPAL ENGINEER. 16. TESTING AND CHLORINATION OF WATERMAINS IS THE RESPONSIBILITY OF THE CONTRACTOR WITH INSPECTION AUTHORIZED BY THE MUNICIPAL ENGINEER. WATERMAINS MUST PASS PRESSURE AND BACTERIOLOGICAL TESTING BEFORE CONNECTION IS MADE TO EXISTING WATER SYSTEM. 17. WHERE APPLICABLE, ALL SERVICE CONNECTIONS ARE TO BE MARKED ON THE CURB WITH A 2mm DEEP SAW CUT AND A 50mm x 100mm STAKE 0.3m FROM PROPERTY LINE. BOTH ARE TO BE PAINTED BLUE. 18. SERVICE CONNECTION PIPE MUST BE AS PER APPROVED LIST OF PRODUCTS, EXCEPT AS ACCEPTED BY THE MUNICIPAL ENGINEER. THE TYPE OF CURB STOP AND BURY BOX NOTED ON THE APPROVED DRAWING SHALL BE USED IN ALL CASES, UNLESS AN ALTERNATIVE IS ACCEPTED BY THE MUNICIPAL ENGINEER.		STORM SEWER 1. STORM SEWER MATERIALS ARE TO CONFORM TO THE MMCD SPECIFICATIONS AND SCHEDULE "D" OF THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 2. FOR TYPICAL "UTILITY TRENCH" SECTION DETAIL, SEE MMCD STANDARD DETAIL DRAWING. PAVEMENT RESTORATION TO BE IN ACCORDANCE WITH THE TOWNSHIP OF LANGLEY PAVEMENT CUT POLICY NO. 05-116. 3. EXISTING DRAINS FROM PRIVATE PROPERTIES ARE TO BE TIED INTO THE NEW STORM SYSTEM WHEN INFILLING EXISTING DITCHES, CONNECTIONS ARE NOT TO PROTRUDE INTO MAIN. 4. FOR TYPICAL CATCH BASIN DETAILS REFER TO MMCD STANDARD DETAIL DRAWING UNLESS OTHERWISE SPECIFIED BY MUNICIPAL ENGINEER. 5. FOR TYPICAL DETAILS OF ALL STORM SEWER CONNECTIONS, SEE TOWNSHIP OF LANGLEY SUPPLEMENTARY DRAWING. 6. ALL SINGLE CATCH BASIN LEADS ARE TO BE MINIMUM 200mm DIAMETER, ALL DOUBLE CATCH BASIN LEADS ARE TO BE MINIMUM 250mm DIAMETER. NO CURVES OR BENDS ARE PERMITTED IN THE LEADS. 7. ALL STORM SEWER SERVICE CONNECTIONS ARE TO BE MINIMUM 100mm DIAMETER, IF STORM SEWER CONNECTION IS TO A LAWN BASIN, CONNECTIONS ARE TO BE A MIN 150mm DIAMETER, FOR RESIDENTIAL AND 150mm FOR INDUSTRIAL/COMMERCIAL. 8. DIAMETER OF ALL STORM SEWER MANHOLES MUST CONFORM TO THE MMCD STANDARD DETAIL DRAWING UNLESS OTHERWISE NOTED. 9. TIE-INS OF MAINS TO EXISTING STORM SEWER SYSTEMS ARE TO BE PERFORMED BY THE CONTRACTOR. 10. MANUFACTURED WYES ARE TO BE USED ON STORM PIPE UNDER 450mm DIAMETER. 11. STORM SEWERS ARE TO BE CONSTRUCTED WITH SEALED JOINTS UNLESS OTHERWISE SPECIFIED ON THE DESIGN DRAWINGS. 12. WHERE APPLICABLE ALL STORM SEWER CONNECTIONS ARE TO BE MARKED BY ALL OF THE FOLLOWING – 2mm DEEP SAW CUT ON THE CURB, 50mm x 100mm STAKE (PAINTED GREEN) AND PLACED AT END OF PIPE, AND THE END OF THE PIPE TO BE CAPPED AND PAINTED GREEN. STORM IC LID IS ALSO PAINTED GREEN. 13. TOP OF INSPECTION CHAMBER STANDPIPES IS TO BE CONSTRUCTED TO 600mm ABOVE FINAL LOT GRADE. 14. SEWER MAINS AND CONNECTIONS TO BE VIDEO INSPECTED PRIOR TO USE. CONTRACTOR TO PROVIDE A VIDEO COPY ON DVD TO THE TOWNSHIP OF LANGLEY. SANITARY SEWER 1. SANITARY SEWER MATERIALS MUST CONFORM TO THE MMCD SPECIFICATIONS AND SCHEDULE "D" OF THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 2. MANHOLE DETAILS TO BE IN ACCORDANCE WITH MMCD STANDARD DETAIL DRAWINGS. 3. TYPICAL DETAILS OF ALL SEWER CONNECTIONS TO BE IN ACCORDANCE WITH MMCD STANDARD DETAIL DRAWING. 4. FOR TYPICAL "UTILITY TRENCH" SECTION DETAIL SEE MMCD STANDARD DETAIL DRAWING. PAVEMENT RESTORATION TO BE IN ACCORDANCE WITH THE TOWNSHIP OF LANGLEY PAVEMENT CUT POLICY NO. 05-116. 5. SERVICE CONNECTIONS ARE TO BE 100mm DIAMETER FOR RESIDENTIAL AND MINIMUM 150mm DIAMETER FOR INDUSTRIAL/COMMERCIAL, UNLESS OTHERWISE NOTED. 6. TOP OF INSPECTION CHAMBER STANDPIPES ARE TO BE CONSTRUCTED TO 600mm ABOVE FINAL LOT GRADE. 7. NEW SEWER LINES TIED INTO EXISTING LINES MUST BE PLUGGED UNTIL THEY ARE TESTED, FLUSHED AND ACCEPTED BY THE TOWNSHIP OF LANGLEY. 8. SERVICE CONNECTIONS MUST BE MADE TO THE MAIN WHEREVER POSSIBLE. SHOULD A CONNECTION HAVE TO BE MADE TO A MANHOLE, IT MUST BE AT A HIGHER ELEVATION THAN THE CROWN OF THE HIGHEST SEWER MAIN ENTERING THE MANHOLE. 9. TIE-INS OF PROPOSED MAINS TO EXISTING SANITARY SEWER MAINS ARE TO BE PERFORMED BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED. 10. TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR WITH INSPECTION AUTHORIZED BY THE MUNICIPAL ENGINEER. SEWER MAINS MUST PASS PRESSURE TESTING BEFORE CONNECTION IS MADE TO EXISTING SEWER SYSTEM. 11. THE CONTRACTOR MUST DISCONNECT AND SEAL ABANDONED SERVICES TO THE ACCEPTANCE OF THE MUNICIPAL ENGINEER. 12. CONNECTIONS TO MAIN MUST BE PERPENDICULAR TO MAIN EXCEPT AS ACCEPTED BY THE MUNICIPAL ENGINEER. 13. 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. SANITARY I.C. LID IS ALSO PAINTED RED. 14. CONTRACTOR IS RESPONSIBLE FOR ENSURING OWNER'S ENGINEER OR TOWNSHIP INSPECTOR IS PRESENT TO WITNESS SERVICE CONNECTION TIE-INS TO EXISTING SEWERS. 15. SEWER MAINS AND CONNECTIONS TO BE VIDEO INSPECTED PRIOR TO USE. CONTRACTOR TO PROVIDE A VIDEO COPY ON DVD TO THE TOWNSHIP OF LANGLEY.		STREETLIGHTS 1. WORKS MUST COMPLY WITH THE CURRENT MMCD CONSTRUCTION DOCUMENTS AND THE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW. 2. THE CONTRACTOR MUST ARRANGE FOR EXACT HYDRO SERVICE BOX LOCATIONS PRIOR TO THE START OF WORK AND IS TO REFER TO B.C. HYDRO STANDARDS, REGULATIONS AND SPECIFICATIONS FOR CONNECTION DETAILS. 3. STREET LIGHT POLES ARE TO BE GALVANIZED. 4. LUMINARIES ARE TO BE 100W & 150W WITH TYPE 2 MC DISTRIBUTION, FLAT GLASS HIGH PRESSURE SODIUM (UNLESS OTHERWISE SPECIFIED ON PLAN). 5. THE CONTRACTOR MUST OBTAIN BASE TEMPLATES FROM THE POLE MANUFACTURER FOR ANCHOR BOLT INSTALLATION. 6. STAGGER CONNECTIONS IN EACH POLE SO THAT ONE FIXTURE CONNECTS TO THE BLACK PHASE CONDUCTOR AND THE OTHER TO THE RED PHASE CONDUCTOR (SEE SUBDIVISION AND DEVELOPMENT SERVICING BYLAW). 7. PREDUCTING MUST BE EXTENDED ACROSS THE ROAD UNLESS OTHERWISE NOTED. 8. ALL STREETLIGHT POLES TO INCLUDE ANTI-WIRE THEFT DEVICE SUCH AS WIRE SENTRY OR APPROVED EQUIVALENT. 9. CONDUCTORS INSIDE POLES ARE TO BE NO. 12 RW90 X-LINK, NO. 8 RW90 BOND. 10. CONDUCTOR INSIDE CONDUIT ARE TO BE NO. 6 RW90 X-LINK. 11. PLOUGHING OF CONDUIT WILL NOT BE ALLOWED. 12. ALL STREETLIGHT CONNECTIONS ARE TO BE MADE WITH WIRE NUT. SEALING OF THE CONNECTIONS IS TO BE WITH PVC TAPE. FIBRE OPTICS & FIBRE TESTING 1. ALL RPVC COMMUNICATIONS MANUFACTURED BENDS SHALL BE 900mm RADIUS UNLESS OTHERWISE NOTED. 2. FIBRE OPTIC JUNCTION BOX (5686) WITH GALVANIZED STEEL LID LABELED "TOL-COMM" 3. FIBRE OPTIC SPLICE BOX (243 COMMUNICATIONS VAULT) WITH GALVANIZED STEEL LID LABELED "TOL-COMM" FOR BOULEVARD USE. 4. FIBRE OPTIC SPLICE BOX (632 BCH SERVICE VAULT) WITH GALVANIZED LID LABELED (TOL-COMM) FOR ROADWAY USE. 5. OTDR ACCEPTANCE (BI-DIRECTIONAL, 2 WAVE LENGTHS (1310mm AND 1550mm)) TO BE DONE BY CONTRACTOR ON FULL RUN FOR EACH FIBRE SPLICED INTO SERVICE. 6. POWER METER ACCEPTANCE (BI-DIRECTIONAL, 2 WAVE LENGTHS) TO BE DONE BY CONTRACTOR ON FULL RUN PER EACH FIBRE SPLICED INTO SERVICE.									
NOTES CONTRACTOR TO CONTACT TELUS, B.C. HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.		BENCHMARK CONTROL MONUMENT NO.88H4596 LOCATED ON THE 198^B STREET at #7371 ELEVATION = 82.997m LEGAL LOT 9, PLAN EPP70181 SECTION 22, TOWNSHIP 8 NEW WESTMINSTER DISTRICT		OWNER APE ENTERPRISES LTD. 19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8 Arjun Randpawa (Development Manager) (250) 378-0282 arjun@andbankgroup.ca		OWNER'S ENGINEER Coastland engineering & surveying ltd. #101, 19292 – 60 Avenue Surrey, BC V3S 3A2 Phone: (604)532-9700 Fax: (604)532-9700		I, F.R. YORSTON, PROFESSIONAL ENGINEER, IN GOOD STANDING IN AND FOR THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY THAT THE WORKS AS HEREIN SET OUT ON THE ATTACHED DRAWINGS HAVE BEEN DESIGNED TO GOOD ENGINEERING PRACTICE AND IN COMPLIANCE WITH THE TOWNSHIP OF LANGLEY SUBDIVISION AND DEVELOPMENT CONTROL BYLAW, EXCEPT AS NOTED BELOW. EXCEPTIONS:		No Date REVISIONS		PLAN DESIGN BY MEH DRAWN BY KSH APPROVED BY FRY DATE SCALE N/A		MUNICIPAL PROJECT No. 08-22-0096 The Corporation of the Township of Langley Township of Langley (SALVO) STANDARD NOTE SHEET DESIGN FILE No. 2998 AS BUILT No. PLAN No. SHEET No. 10 of 11 (REV.) DESTROY ALL PRINTS BEARING PREVIOUS REVISION NUMBER	
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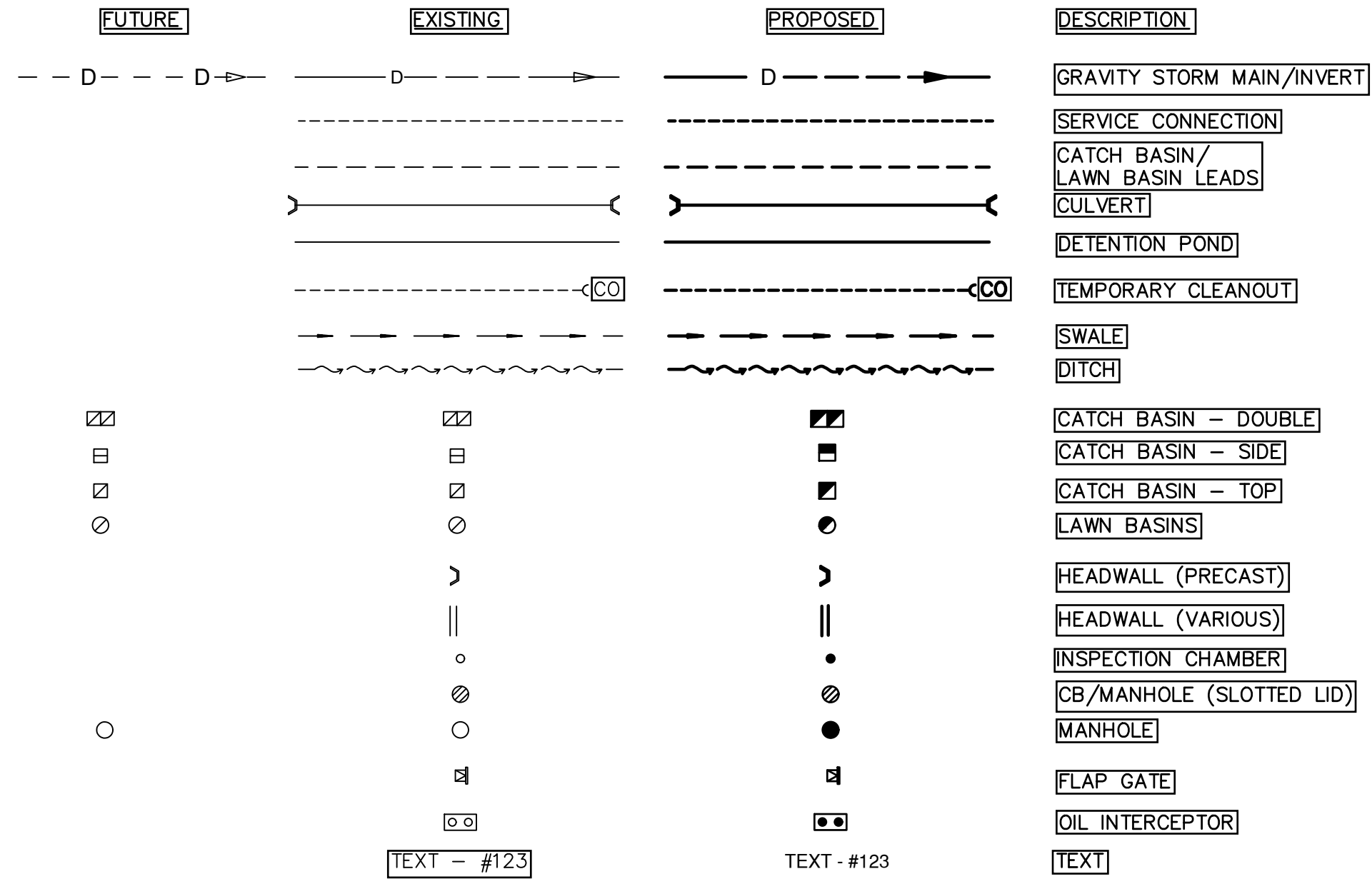
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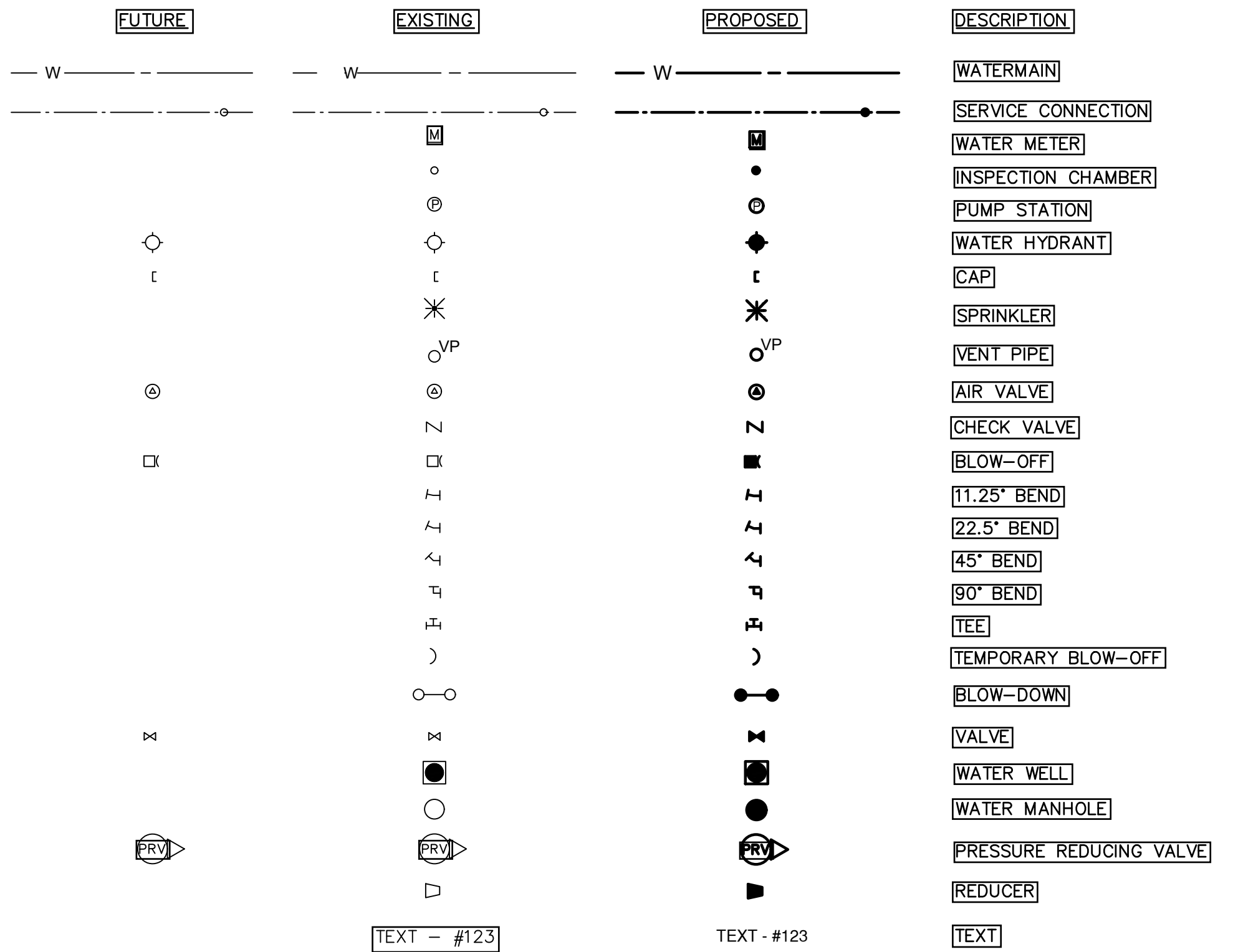
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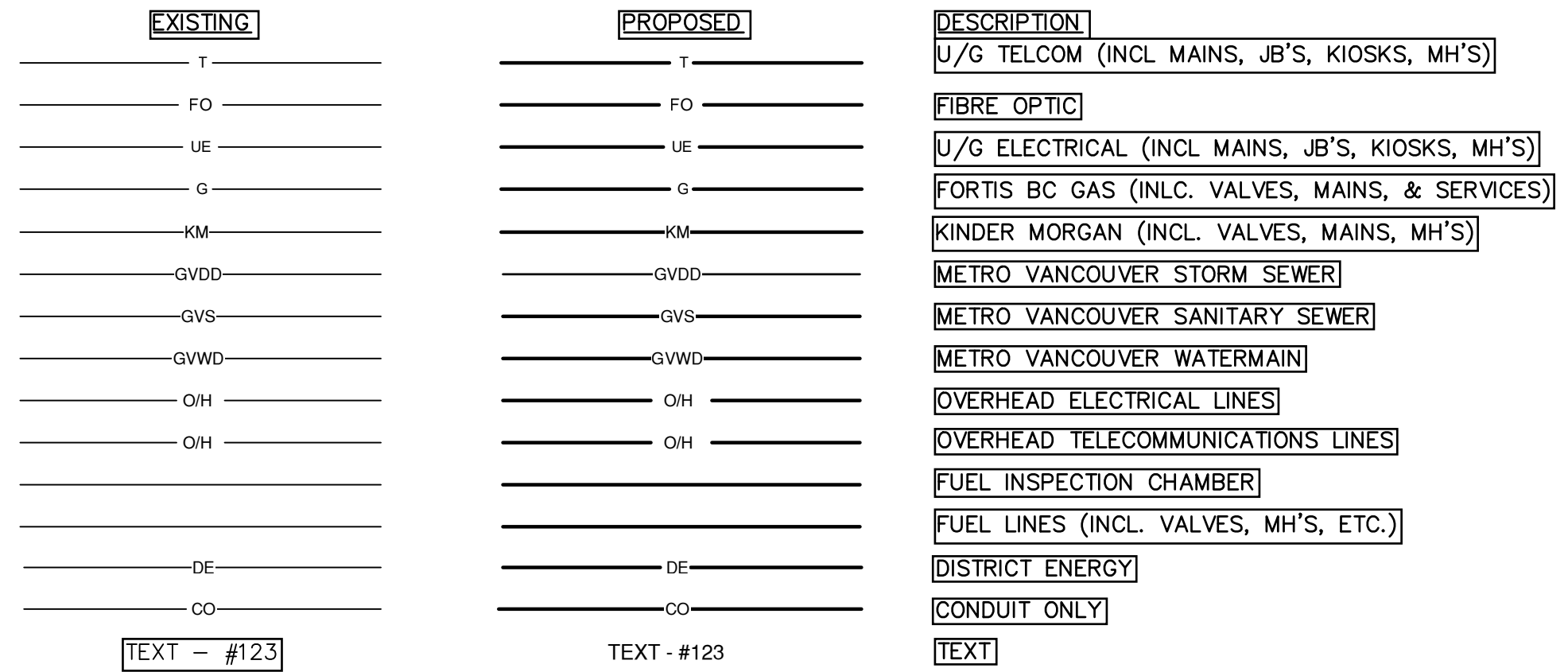
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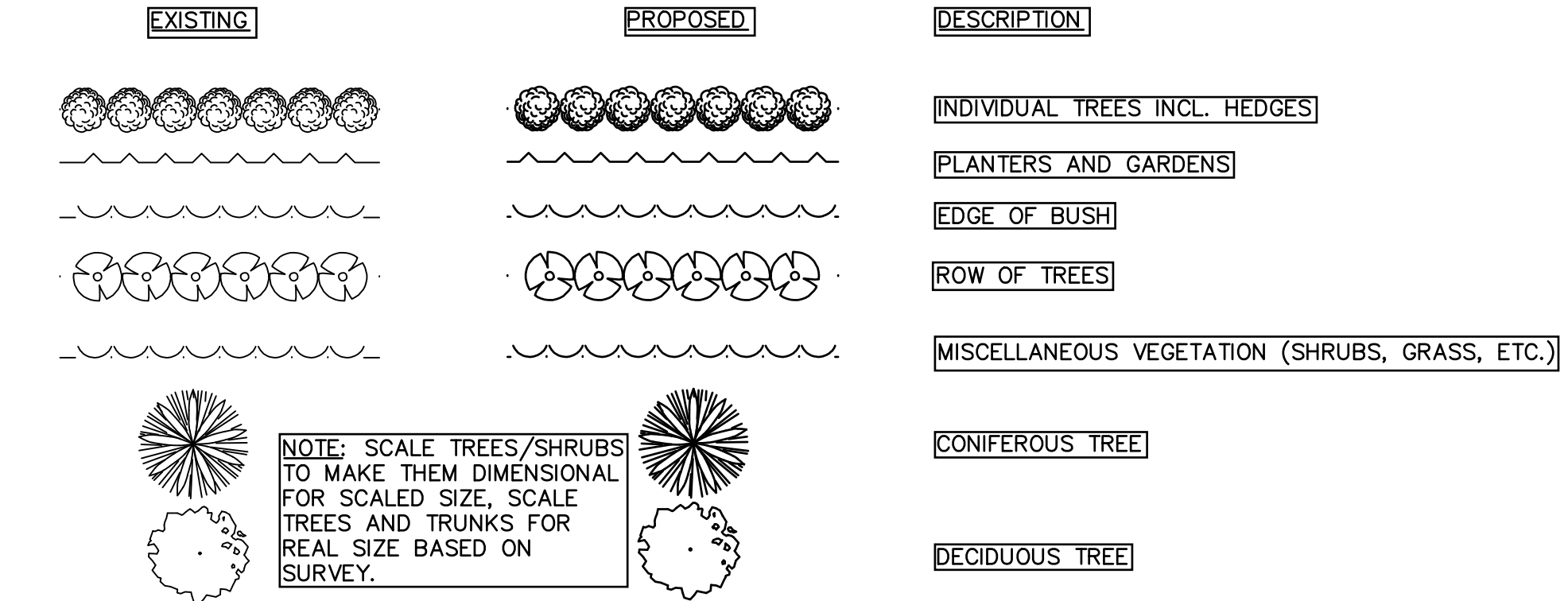
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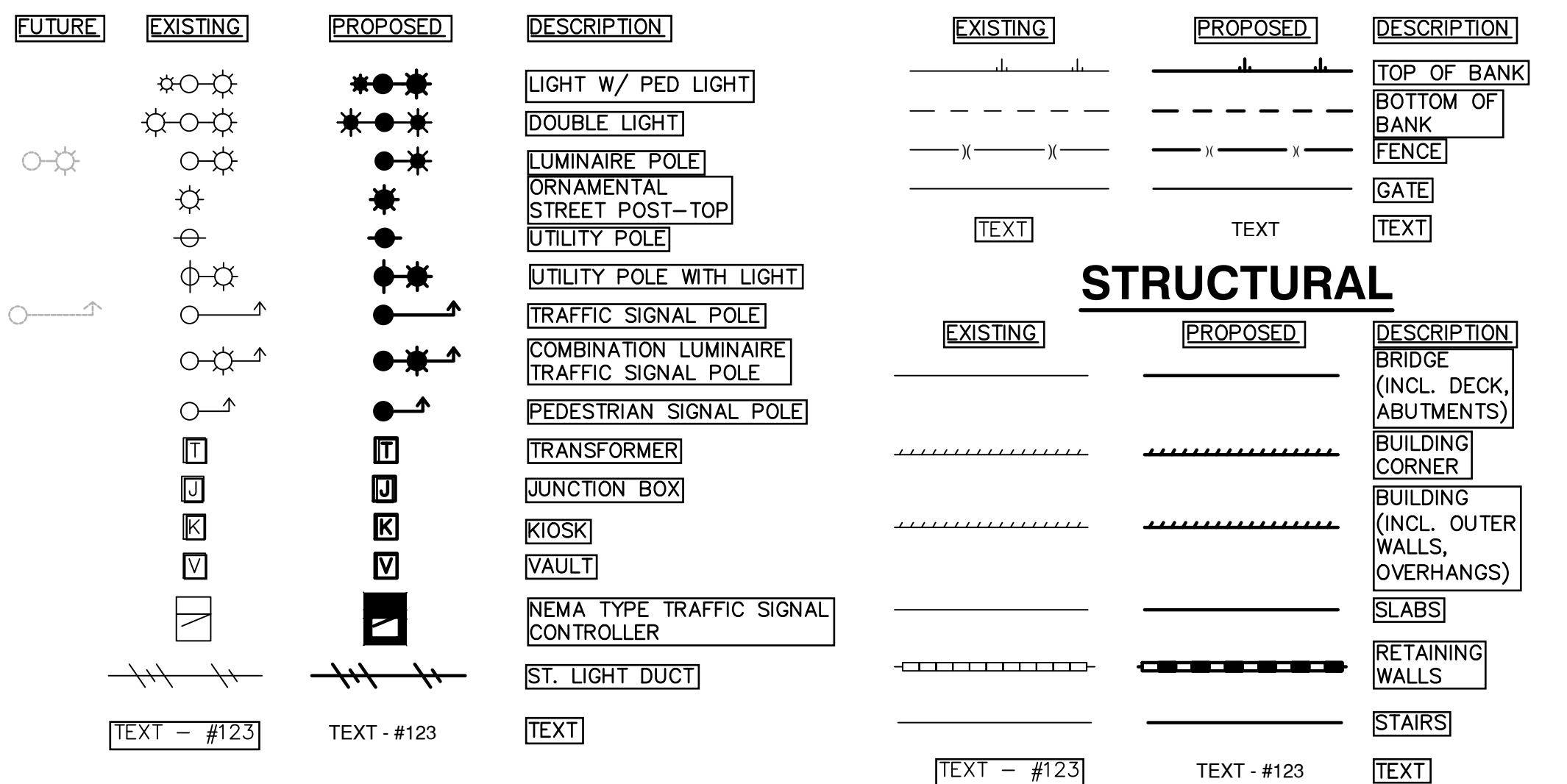
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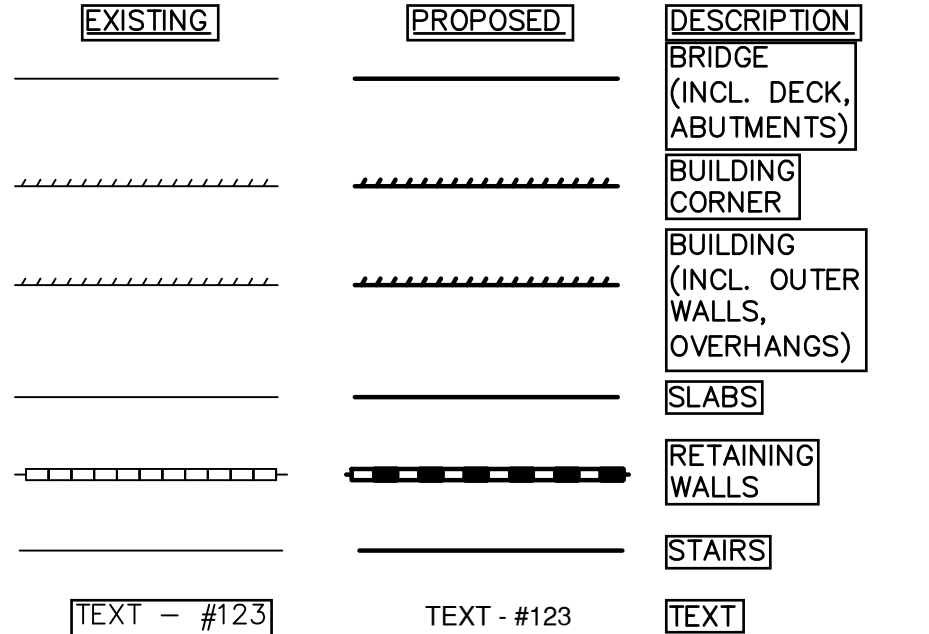
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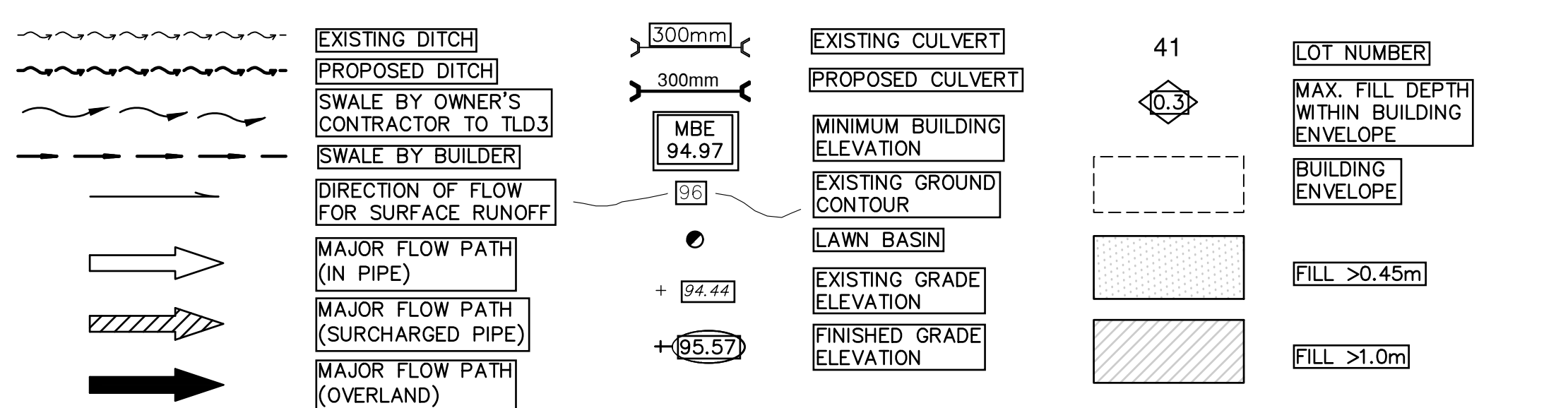
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STRUCTURAL



STORM WATER MANAGEMENT



MUNICIPAL PROJECT No. 08-22-0096

The Corporation of the Township of Langley

STANDARD TOWNSHIP OF LANGLEY LEGEND

DESIGN FILE No.: 2998

PLAN No.: 11 of 11

AS BUILT No.: 11

SHEET No.: 11

REV.

NOTES

CONTRACTOR TO CONTACT TELUS, B.C. HYDRO, FORTISBC AND BC ONE CALL PRIOR TO CONSTRUCTION TO CONFIRM LOCATIONS OF UTILITIES AND APPURTENANCES REQUIRING ADJUSTMENT.

BENCHMARK

CONTROL MONUMENT NO.88H4596, LOCATED ON THE 198'B STREET at #7371, ELEVATION = 82.997m

LOT 9, PLAN EPP70181, SECTION 22, TOWNSHIP 8, NEW WESTMINSTER DISTRICT

OWNER

APE ENTERPRISES LTD.

19766 70 AVENUE, LANGLEY, B.C. V2Y 3E8

Arjun Randhawa (Development Manager)

(250) 378-0282

arjun@andbankgroup.ca

OWNER'S ENGINEER

Coastland

engineering & surveying ltd.

#101, 19292 - 60 Avenue

Surrey, BC V3S 3A2

Phone: (604)532-9700

Fax: (604)532-9700

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EXCEPTIONS:

No Date REVISIONS

DESIGN BY: MEH

DRAWN BY: KSH

APPROVED BY: FRY

DATE:

SCALE: NTS