

# TOWNSHIP OF ESQUIMALT

## UNDERGROUND UPGRADES PHASE 1

ISSUED FOR TENDER



LOCATION PLAN

DRAWING SCHEDULE		
SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
00	COVER	COVER
01	GENERAL NOTES	GENERAL NOTES
02	LEGEND	LEGEND
03	STA 10+000 TO STA 10+110	ROADWORKS
04	STA 10+110 TO STA 10+270	ROADWORKS
05	STA 10+270 TO STA 10+420	ROADWORKS
06	STA 10+420 TO STA 10+570	ROADWORKS
07	STA 10+570 TO STA 10+720	ROADWORKS
08	STA 10+720 TO STA 10+870	ROADWORKS
09	STA 10+870 TO STA 11+020	ROADWORKS
10	STA 11+020 TO STA 11+200	ROADWORKS
11	CIVIL DETAILS	TYPICAL DETAILS
12	CIVIL DETAILS	TYPICAL SECTIONS
13	CIVIL DETAILS	MMCD SUPPLEMENTS
14	CIVIL DETAILS	MMCD SUPPLEMENTS
15	CIVIL DETAILS	CURB RETURNS
E01	NOTES AND LEGEND	ELECTRICAL
E02	SITE PLAN ENLARGEMENT - LAMPSON STREET AT ESQUIMALT ROAD	ELECTRICAL
E03	ELEVATIONS - LAMPSON STREET AT ESQUIMALT ROAD	ELECTRICAL
E04	SITE PLAN ENLARGEMENT - MACAULAY STREET AT ESQUIMALT ROAD	ELECTRICAL
E05	ELEVATIONS - MACAULAY STREET AT ESQUIMALT ROAD	ELECTRICAL
E06	SITE PLAN ENLARGEMENT - HEAD STREET AT ESQUIMALT ROAD	ELECTRICAL
E07	ELEVATIONS - HEAD STREET AT ESQUIMALT ROAD	ELECTRICAL
E08	SITE PLAN ENLARGEMENT - 848 ESQUIMALT ROAD	ELECTRICAL
E09	ELEVATIONS - 848 ESQUIMALT ROAD	ELECTRICAL
E10	SITE PLAN ENLARGEMENT - DUNSMUIR ROAD AT ESQUIMALT ROAD	ELECTRICAL
E11	ELEVATIONS - DUNSMUIR ROAD AT ESQUIMALT ROAD	ELECTRICAL



**GENERAL NOTES:**

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH:
  - THE MASTER MUNICIPAL CONSTRUCTION DOCUMENT AND STANDARD DETAIL DRAWINGS (MMCD 2009 "PLATINUM EDITION"), EXCEPT AS OTHERWISE NOTED IN THESE DRAWINGS OR THE CONTRACT DOCUMENTS;
  - APPLICABLE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS REFERENCED THEREIN;
  - MINISTRY OF TRANSPORTATION AND TRANSIT "BC TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS", LATEST EDITION;
  - AND
  - WORKSAFEBC, LATEST EDITION.
- THE CONTRACTOR SHALL MAINTAIN ON SITE COPIES OF THE ABOVE DOCUMENTS AND SHALL ENSURE THAT ALL SUB CONTRACTORS ARE THOROUGHLY FAMILIAR WITH THE APPLICABLE SECTIONS OF THE DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL EXCAVATED MATERIAL UNSUITABLE FOR REUSE AT A SUITABLE OFF-SITE DISPOSAL AREA, IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING ROAD SURFACES, SERVICES, SIGNS, LANDSCAPING, DRIVEWAY LETDOWNS, PRIVATE LANDSCAPING, OR PRIVATE IMPROVEMENTS THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION. REPAIRS TO EXISTING TOWN SERVICES SUCH AS WATER, SANITARY SEWER, STORM SEWER, AND STREET OR TRAFFIC LIGHTING MAY BE MADE BY THE OWNER AT COST TO THE CONTRACTOR. REPAIRS TO EXISTING SURFACE WORKS MAY BE DONE BY THE CONTRACTOR AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR.
- THE LOCATION OF EXISTING UTILITIES IS COMPILED FROM OWNER AND UTILITY SUPPLIED RECORD DRAWINGS AND ARE CONSIDERED APPROXIMATE ONLY. THE EXACT LOCATION AND EXTENT OF UTILITIES SHOULD BE DETERMINED BY CONSULTING THE LOCAL AUTHORITIES AND UTILITY COMPANIES CONCERNED.
- REPORT ANY DISCREPANCIES TO THE CONTRACT ADMINISTRATOR A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION TO ENSURE THAT THE LINE AND GRADE OF THE PROPOSED WORK CAN BE ADJUSTED TO SUIT FIELD CONDITIONS AS REQUIRED.
- RESTORATION OF EXISTING DRIVEWAYS, CURBS, STAIRS AND WALKWAYS TO CONFORM TO TOWNSHIP OF ESQUIMALT SPECIFICATIONS AND TO BE INCIDENTAL TO THE UNIT PRICES IN THE CONTRACT.
- EVERY EFFORT IS TO BE MADE TO SAVE EXISTING LANDSCAPING WITHIN THE ROAD R.O.W. LANDSCAPING IS TO BE RESTORED TO ITS ORIGINAL OR BETTER CONDITION. IN THE EVENT OF LANDSCAPING REMOVAL THE PROPERTY OWNER SHALL BE ADVISED OF THE REMOVAL AND THE LANDSCAPING PLACED IN OWNERS PROPERTY UPON THEIR REQUEST.
- ALL SURVEY MONUMENTS, SURVEY PINS, OR LEAD PLUGS WITHIN THE PROJECT BOUNDARIES SHALL BE PROTECTED DURING THE COURSE OF THE WORK. SHOULD ANY SURVEY MONUMENT REQUIRE RAISING OR RELOCATION, THE CONTRACTOR SHALL NOTIFY THE OWNER'S ENGINEERING AND OPERATIONS DEPARTMENT AT LEAST 5 BUSINESS DAYS IN ADVANCE OF SCHEDULING WORK.
- ALL ELEVATIONS ARE GEODETIC AND REFERENCED TO INTEGRATED SURVEY MONUMENT ELEVATIONS LOCATED ON ROAD RIGHT-OF-WAYS.
- ALL PUBLIC ROADWAYS AFFECTED BY THE WORKS SHALL BE KEPT IN A CLEAN STATE AT ALL TIMES AND FREE OF EQUIPMENT AND MATERIALS AT ALL TIMES WHEN CONSTRUCTION ACTIVITY IS NOT UNDERWAY. DUST CONTROL MEASURES SHALL ALSO BE EMPLOYED AS DIRECTED BY THE CONTRACT ADMINISTRATOR.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR COORDINATING THE VARIOUS PARTS OF THE WORK. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THERE IS NO DISRUPTION TO SERVICE, AND IF DISRUPTION IS ANTICIPATED, TO NOTIFY THE CONTRACT ADMINISTRATOR A MINIMUM OF 72 HOURS PRIOR, AND OBTAIN APPROVAL FOR THE DISRUPTION.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY HOT MIX ASPHALT PATCHING TO MMCD REQUIREMENTS AT LOCATIONS SPECIFIED IN THE CONTRACT DOCUMENTS. TEMPORARY ASPHALT PATCHING THICKNESS SHALL MATCH THE EXISTING ASPHALT THICKNESS WITH A MINIMUM OF 75mm AND SHALL MEET THE EXISTING ASPHALT SURFACE. USE OF COLD MIX IS NOT ACCEPTABLE. TEMPORARY PATCHING OF SIDEWALKS AND CURBS AND GUTTERS IS ALSO TO BE MADE WITH HOT MIX AND MEET THE EXISTING SURFACE.
- ALL CONCRETE AND ASPHALT IDENTIFIED FOR REMOVAL IS TO BE DISPOSED OFFSITE UNLESS OTHERWISE NOTED.
- CONTRACTOR TO PROVIDE CUT SHEETS ONE WEEK PRIOR TO CONCRETE FORM WORK.
- CONTRACTOR TO CONFIRM UNDERGROUND LOCATIONS WITH UTILITY COMPANIES. THE LOCATION AND ELEVATION OF THE EXISTING UNDERGROUND INFRASTRUCTURE SHOWN ON THESE DRAWINGS MAY NOT BE ACCURATE OR COMPLETE. THE ACTUAL HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES AND INFRASTRUCTURE MUST BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE START OF ANY EXCAVATION.
- THE LOCATIONS OF EXISTING GAS SERVICES ARE SHOWN APPROXIMATELY BASED ON AVAILABLE RECORDS. EXISTING GAS SERVICE CONNECTIONS BEYOND THOSE INDICATED MAY BE PRESENT WITHIN THE PROJECT EXTENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM UNDERGROUND LOCATIONS WITH UTILITY COMPANIES PRIOR TO THE START OF ANY EXCAVATION.
- CONTRACTOR TO APPLY FOR AND OBTAIN ALL REGULATORY AND OPERATIONAL PERMITS. ROAD OCCUPATION PERMITS (ROP's) MUST BE APPLIED FOR. FEE FOR ROP PERMIT WILL BE WAIVED.
- THE CONTRACTOR IS TO PROVIDE GRADE SHEETS FOR ALL CONCRETE WORK 5 DAYS IN ADVANCE OF CONSTRUCTION. NAILS ARE TO BE SET ON THE ROADSIDE OF CURB AT ALL GEOMETRY POINTS AT A MAXIMUM SPACING OF 5m.

**CONCRETE NOTES:**

- NO CONCRETE WORKS SHALL BE ALLOWED IF THE CURRENT TEMPERATURE ON SITE IS BELOW 5°C OR ABOVE 32°C.
- IF TEMPERATURES ARE EXPECTED TO DROP BELOW FREEZING WITHIN THE 5 DAY WINDOW FOLLOWING A CONCRETE POUR A THERMO BLANKET WILL BE REQUIRED TO MAINTAIN CONCRETE TEMPERATURES.
- IF CONCRETE IS POURED AT TEMPERATURES ABOVE 25°C IT SHALL BE SPRAYED WITH WATER 5 TIMES PER DAY AT REASONABLE INCREMENTS BETWEEN THE HOURS OF 10am AND 3pm.
- CONCRETE WORKS TO BE COMPLETED DURING RAIN EVENTS MAY BE ALLOWED AT THE DISCRETION OF THE CONTRACT ADMINISTRATOR. IN THE EVENT THAT CONCRETE IS POURED DURING A RAIN EVENT THE CONTRACTOR SHALL PROVIDE A PLASTIC COVERING THAT IS MAINTAINED TO PROTECT THE CONCRETE FOR A MINIMUM OF 24 HOURS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE MONITORING OF FRESHLY POURED CONCRETE TO ENSURE NO DAMAGE IS CAUSED. ANY DAMAGE OR DEFAACEMENT OF FRESHLY POURED CONCRETE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

**ENVIRONMENTAL NOTES:**

- ALL INLET STRUCTURES IN PROXIMITY TO TRENCH WORK OR EXPOSED ROAD BASE WILL BE FITTED WITH MANUFACTURED INLET CONTROL DEVICES AND OR 'FILTER SACK' TYPE CATCHBASIN CONTROL (OR APPROVED ALTERNATIVE). CONTROL DEVICES TO BE MAINTAINED AT A REASONABLE INTERVAL TO ACHIEVE A FULLY FUNCTIONAL STATE AT ALL TIMES.
- INLET CONTROL DEVICES (I.E. FILTER SACKS) MUST HAVE A MINIMUM 8" DROP FROM SURFACE OF THE CATCHBASIN.
- UNDER NO CIRCUMSTANCES ARE CATCHBASINS TO BE FITTED WITH GEOTEXTILE SHEATHS CUT FROM STOCKPILE ROLLS.
- AVOID EARTH DISTURBING ACTIVITIES DURING SUBSTANTIAL RAIN EVENTS.
- AVOID STOCKPILING SOILS, SANDS AND OTHER ERODIBLE MATERIALS ONSITE. IT IS PREFERABLE TO "HOT-LOAD" SOIL DIRECTLY INTO TRUCKS FOR OFFSITE DISPOSAL. IF TEMPORARY WASTE OR SOIL STOCKPILES ARE NECESSARY, MAKE SURE THEY ARE FULLY COVERED WITH TARPS AND WEIGHTED WITH SANDBAGS.
- TRACKING OF SEDIMENT, SOIL AND/OR ROADBASE FROM WORKSITE TO VEHICLE TRAVEL LANES MUST BE PREVENTED.
- ROADS MUST BE SWEEPED CLEAN OF SOIL, LOOSE ROAD BASE, EARTH AND SEDIMENT. MECHANICAL SWEEPING IS PREFERRED TO MANUAL SWEEPING. HOWEVER, FREQUENT HAND SWEEPING IS PREFERABLE TO ONCE DAILY MECHANICAL SWEEPING.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SEDIMENT OR SEDIMENT LADEN WATER IS DISCHARGED FROM THE WORKS TO THE OWNER'S DRAINAGE SYSTEM.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP AND PROVIDE TO THE OWNER THE FOLLOWING ENVIRONMENTAL SUBMITTALS WITHIN 15 DAYS AFTER NOTICE OF AWARD:
  - SPILL RESPONSE PLAN THAT PROVIDES WRITTEN SAFE WORK PROCEDURES IN THE EVENT OF A SPILL
    - AN EMERGENCY SPILL KIT WILL BE KEPT ONSITE AT ALL TIMES THE CONTRACTOR IS OPERATING. SPILL KITS MUST INCLUDE BOOMS, SPILL PADS, GLOVES, AND CATCHBASIN BARRIERS. A SPILL KIT WITH AT LEAST 125 LITRES ABSORBENCY IS RECOMMENDED. SANDBAGS AND A SUPPLY OF SAND MUST BE KEPT ONSITE.
    - AN EROSION AND SEDIMENT CONTROL PLAN (ESC).
- THE CONTRACTOR IS TO HAVE ONSITE SODIUM THIOSULPHATE TO TREAT CHLORINATED WATER IN THE EVENT OF A WATER MAIN BREAK.

**TRAFFIC MANAGEMENT, NOTIFICATION AND APPROVALS NOTES:**

- THE CONTRACTOR SHALL PROVIDE CONSTRUCTION SIGNAGE, BARRIERS, FLASHING INDICATORS ACCORDING TO MOTI, BC TRAFFIC MANAGEMENT MANUAL FOR WORK ON ROADWAYS (LATEST EDITION) & WORKSAFE BC REGULATIONS AT ALL TIMES TO ENSURE THE SAFETY OF THE PUBLIC. TRAFFIC CONTROL WILL BE REQUIRED FOR ALL CONSTRUCTION WORKS WITHIN THE TRAVELED PORTION OF THE ROAD. NO ROAD SHALL BE CLOSED WITHOUT WRITTEN CONSENT FROM THE TOWNSHIP OF ESQUIMALT.
- THE CONTRACTOR SHALL ENSURE THAT ALL APPROVALS REQUIRED FOR THE PROPOSED WORKS HAVE BEEN OBTAINED FROM ALL AUTHORITIES AND AGENCIES PRIOR TO COMMENCING THE WORK.
- THE CONTRACTOR SHALL ARRANGE FOR, AND COORDINATE THE WORKS DONE BY:
  - OWNER; AND
  - FRANCHISE UTILITIES.
- THE CONTRACTOR SHALL MAKE CONTACT WITH THE APPROPRIATE PERSONNEL AT LEAST 72 HOURS PRIOR TO THE WORK. SCHEDULING AND OTHER CONSTRUCTION CONSTRAINTS IMPOSED BY THESE WORKS SHALL BE TAKEN INTO ACCOUNT.
- RESIDENTS DIRECTLY AFFECTED BY CONSTRUCTION OF THESE WORKS SHALL BE GIVEN MINIMUM 5 DAYS WRITTEN NOTICE OF THE PROPOSED START OF CONSTRUCTION. THE CONTRACTOR IS TO DISTRIBUTE A NOTICE OF CONSTRUCTION LETTER TO ALL AFFECTED RESIDENTS AND BUSINESSES. LETTER TO DIRECT INQUIRIES TO CONTRACT ADMINISTRATOR. FOLLOWING CONSTRUCTION ACTIVITY ON ANY PRIVATE PROPERTY, A WRITTEN RELEASE MAY BE REQUIRED FROM THE PROPERTY OWNER AT THE DISCRETION OF THE OWNER.
- ACCESS TO ALL PRIVATE PROPERTIES AND BUSINESSES MUST BE MAINTAINED FOR VEHICULAR AND PEDESTRIAN TRAFFIC. WHERE ACCESS IS AFFECTED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 24 HOUR NOTICE TO ANY RESIDENT OR BUSINESS BEFORE STARTING WORK
- A MOTI CATEGORY 1 TRAFFIC MANAGEMENT PLAN CLEARLY DEFINING THE SAFE MANAGEMENT OF ALL ROAD USERS (VEHICLES, BICYCLES, PEDESTRIANS ETC.) TO BE SUBMITTED WITHIN 15 DAYS OF NOTICE OF AWARD AND WORK SHALL NOT COMMENCE WITHIN THE ROADWAY UNTIL IT IS REVIEWED/REVISED/ACCEPTED BY THE TOWNSHIP OF ESQUIMALT.
- NOISE BYLAW MUST BE ADHERED TO AND TWO-WAY TRAFFIC MUST BE MAINTAINED BETWEEN 6AM-9AM AND 3PM-6PM UNLESS OTHERWISE APPROVED BY THE TOWNSHIP OF ESQUIMALT. ANY EXEMPTION TO BE SUBMITTED TO THE TOWNSHIP, ONE WEEK IN ADVANCE TO THE DESIRED EXEMPTION DATE.
- NOTICE OF CONSTRUCTION SIGNS TO BE INSTALLED AT ALL PROJECT LIMITS AND PREFERRED DETOUR ROUTE. NOTIFY CONTRACT ADMINISTRATOR WITH CONSTRUCTION SCHEDULE AND LOCATIONS. SIGNS PROVIDED AND INSTALLED BY CONTRACTOR.
- APPROVAL OF NOISE VARIANCE FOR ALL WORK OUTSIDE OF NORMAL APPROVED WORK HOURS REQUIRED BY THE OWNER.
- LAP JOINTS ARE TO BE INSTALLED AT ALL LIMITS OF CONSTRUCTION.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETION OF ALL PERMANENT PAINT AND THERMOPLASTIC PAVEMENT MARKINGS IN THE PLACE OF THE WORK. PERMANENT LANE MARKINGS ARE TO BE PLACED WITHIN 72 HOURS OF FINAL PAVING AND PERMANENT THERMOPLASTIC PAVEMENT MARKINGS ARE TO BE PLACED WITHIN 5 DAYS OF FINAL PAVING.
- ALL TEMPORARY MARKINGS ARE TO BE REMOVED IMMEDIATELY FOLLOWING INSTALLATION OF THE PERMANENT MARKINGS.
- APPROVALS FOR REQUIRED TREE CUTTING OR TRIMMING NOT INDICATED IN CONTRACT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR FROM THE OWNER PRIOR TO WORK BEING PERFORMED.

**SIGNAGE AND PAVEMENT MARKING NOTES:**

- ALL PAVEMENT MARKINGS AND SIGNS PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION UNLESS STATED OTHERWISE. ALL RAIL SIGNS PER TRANSPORT CANADA GRADE CROSSING STANDARDS (JANUARY, 2019). ALL REGULATORY AND SAFETY SIGNAGE PER TRANSPORTATION ASSOCIATION OF CANADA'S BIKEWAY TRAFFIC CONTROL GUIDELINES FOR CANADA, LATEST EDITION UNLESS STATED OTHERWISE. ALL PAVEMENT MARKINGS TO BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.
- ALL SIGNS TO BE DIAMOND GRADE.
- ALL PAVEMENT MARKINGS ARE NOT TO SCALE.
- CONFLICT PAINT METHYL-METHACRYLATE (MMA):
  - ULTRA-VIOLET ("UV") STABLE;
  - ISO CERTIFIED DURABLE ROAD MARKING MATERIAL;
  - HAVE MINIMUM SKID RESISTANCE OF 49 BPN;
  - COLOUR MUST MATCH THE TOWNSHIP'S CURRENT GREEN TINT (PANTONE #368) WHICH CONFORMS TO THE NEW FHWA FLUORESCENT GREEN STANDARDS; AND
  - GLASS BEADS MUST CONFORM TO AASHTO M247 TYPE 1 (STANDARD GRADATION) SPECIFICATIONS.
- WHITE AND YELLOW PAVEMENT MARKINGS WITHIN MMA CONFLICT PAINT TO BE MMA.
- ALL BIKE STENCILS INCLUDING BIKE SYMBOLS, SHARROWS, DIRECTIONAL CHEVRONS, RESERVED SYMBOL DIAMONDS AND ARROWS, ETC. SHALL BE PERFORMED TORCH ON THERMOPLASTIC STENCILS THAT WILL REQUIRE SURFACE CLEANING/HEATING AND APPLICABLE SEALER APPLIED BEFORE APPLICATIONS. SEALER SHALL ONLY BE OMITTED WHEN NEW ASPHALT IS HIGHLIGHTED WITHIN OUR CIVIL SCOPE FOR THE STENCIL LOCATION.
- ALL SIGN/POST HARDWARE TO BE STAINLESS STEEL C/W 2 WASHERS PER BOLT AND A VINYL LOCKING NUT. NUTS SHALL BE REPLACED IF REMOVED.
- ALL NEW SIGN INSTALLATIONS IN BOULEVARD LOCATIONS SHALL INCLUDE A PROPER BASE AND SITE PREPARATION TO PREVENT MOVEMENT.
- ALL SIGN POSTS SHALL HAVE A SLEEVE INSTALLED C/W SUITABLE BOLT (TO PREVENT SIGN ROTATION) WITH SUFFICIENT THREADS TO ALLOW VINYL LOCKING NUT TO BE FULLY THREADED. POST AND SLEEVE: 12.7mm DIAMETER X 12.7mm OR 19.1mm LENGTH CUP POINT STAINLESS STEEL ALLEN KEY SET SCREW. REFER TOE-SD-C-16 BYLAW DRAWING OF SIGN POST SLEEVE.

**COORDINATION NOTES:**

- CONTRACTOR SHALL COORDINATE WITH TOWNSHIP FORCES, PRIVATE DEVELOPMENTS AND OTHER RELEVANT PARTIES FOR THE DURATION OF THE PROJECT SCHEDULE. THIS MAY INCLUDE BUT IS NOT LIMITED TO SHARED ROAD OCCUPANCY WITH THIRD PARTY CONTRACTORS WHILE COMPLETING WORKS ON THE RIGHT OF WAY AND WHILE ACCESSING PRIVATE PROPERTY. THE CONTRACTOR SHALL ALLOW FOR THIS OCCUPANCY AND COORDINATE THEIR WORKS TO MITIGATE ANY CONFLICTS WHILE MAINTAINING PUBLIC ACCESS TO THE RIGHT OF WAY.

**SANITARY AND STORM SEWER NOTES:**

- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE MMCD, INCLUDING SECTION 33 05 23 (TRENCHLESS SEWER PIPE BURSTING) AND SECTION 33 05 24 (CURED-IN-PLACE PIPE LINERS), AND APPLICABLE MUNICIPAL SUPPLEMENTS.
- SEWER AND DRAIN PIPE UP TO AND INCLUDING 150mm DIAMETER SHALL BE PVC DR-28.
- SEWER AND DRAIN PIPE 200mm TO 525mm SHALL BE PVC DR-35.
- ALL PVC PIPE SHALL BE C.S.A APPROVED.
- CONTRACTOR TO USE ACCEPTABLE METHOD FOR UTILITY REPLACEMENT WORK.
- CONTRACTOR TO CONFIRM DIAMETERS AND LENGTH OF PIPES PRIOR TO ORDERING MATERIALS.
- SANITARY SEWERS AND STORM DRAINS TO BE VIDEO-INSPECTED AS PER MMCD SECTION 33 01 30.1 (CCTV INSPECTION OF PIPELINES). THE VIDEO SHALL INDICATE FLOW THROUGH PIPES FOR ALL GRADES LESS THAN 2%. TWO COPIES OF THE VIDEO REPORT (CD AND BINDER) TO BE PROVIDED TO THE CONTRACT ADMINISTRATOR. BOTH SANITARY AND STORM- DRAIN VIDEOS SHALL BE COMPLETED WITH A FLOW OF 5-10% IN THE PIPE. VIDEOS PROVIDED WITH NO FLOW WILL BE REJECTED. THE FLOW TO BE ADDED UPSTREAM OF THE VIDEOS UPSTREAM MANHOLE. THE VIDEO SHALL PASS THROUGH THE BENCHING OF BOTH THE UPSTREAM AND DOWNSTREAM MANHOLES FOR THE PURPOSE OF ASSESSING BENCHING DEFICIENCIES.
- WITHIN THE FINAL 2 MONTHS OF THE WARRANTY PERIOD THE CONTRACTOR SHALL RE-CCTV OF ALL THE STORM AND SANITARY MAINS AND SUPPLY INSPECTION REPORTS AND VIDEOS TO THE TOWNSHIP OF ESQUIMALT 2 WEEKS PRIOR TO THE WARRANTY WALK THROUGH.
- CONTRACTOR SHALL RECONNECT THE REHABILITATED MAINS TO EXISTING MANHOLES, AS REQUIRED.

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**GENERAL NOTES**



1051 Vancouver St, Victoria, BC V8V 3K3  
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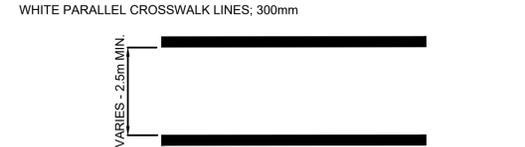
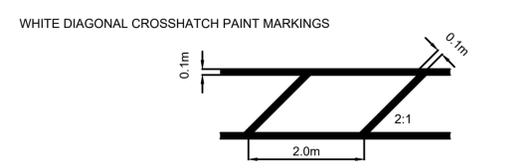
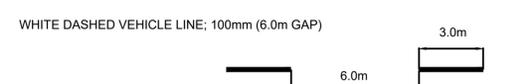
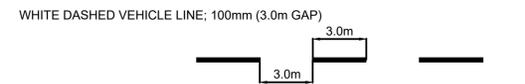
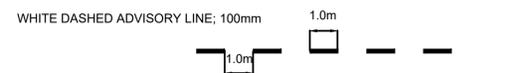
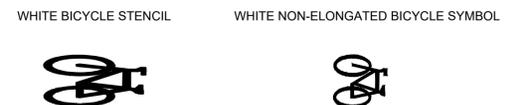
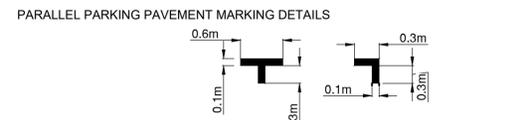
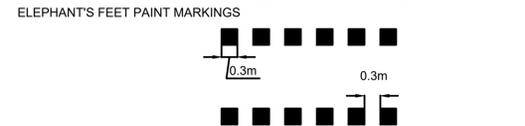
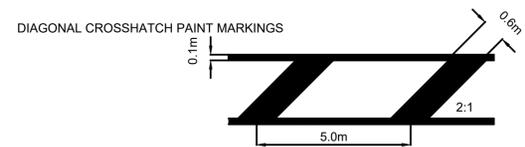
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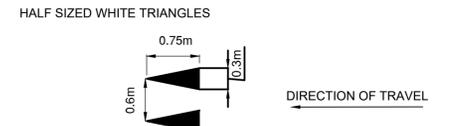
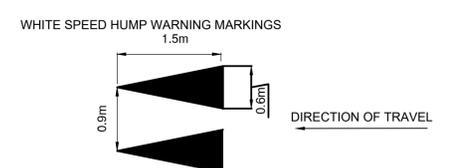
**LEGEND:**

**PAVEMENT DETAILS**

CONFLICT PAINT (FLUORESCENT MMA) 



WHITE SOLID LINE; 100mm

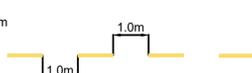
WHITE VEHICLE STOP BAR; 600mm



WHITE BIKE STOP BAR; 300mm



YELLOW DASHED LINE; 100mm



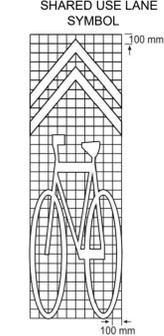
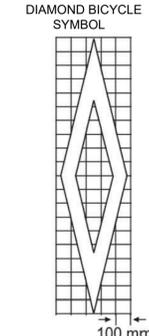
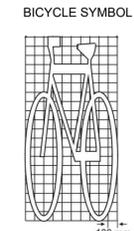
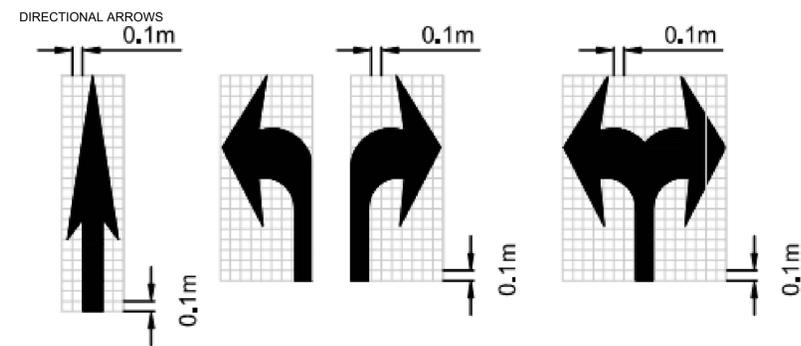
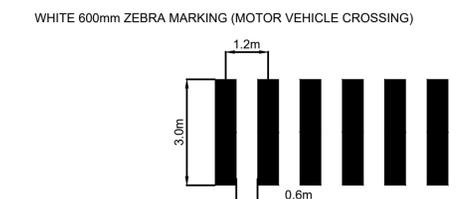
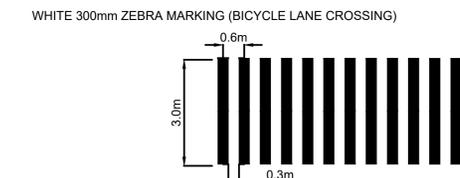
YELLOW SOLID LINE; 100mm



YELLOW DOUBLE SOLID LINE; 100mm



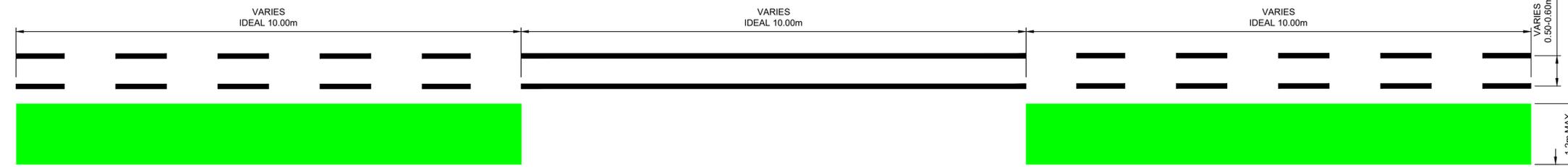
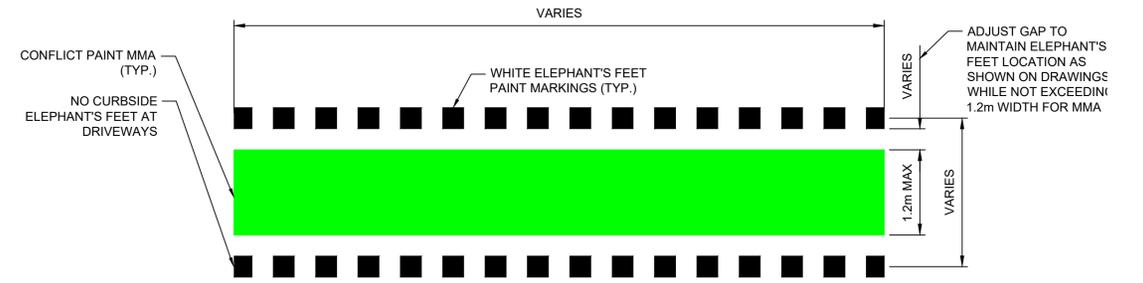
YELLOW DASHED VEHICLE LINE; 100mm (6.0m GAP)

**SIGNAGE DETAILS**

RA-1 600mm x 600mm		RB-91R 600mm x 750mm	
RA-4R/L 600mm x 750mm		RB-92 600mm x 750mm	
R-111-1R/L (CUSTOM MOTI) 600mm x 750mm		R-106 (MOTI) 600mm x 750mm	
RB-37R/L TWO WAYS (CUSTOM) 600mm x 750mm		WA-36 300mm x 900mm	
RB-37R ONE WAY (CUSTOM) 600mm x 750mm		WA-36R/L 300mm x 900mm FULL SIZE	
RB-39 300mm x 450mm		WA-36R 100mm x 500mm CUSTOM COROPLAST	
RA-2 (HALF SIZE) 300mm x 300mm		WA-50 450mm x 450mm	
BIKES MUST TURN LEFT (CUSTOM) 300mm x 375mm		WC-43 450mm x 450mm	

SEE NOTES ON SHEET 01 FOR SIZING DETAILS



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REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM

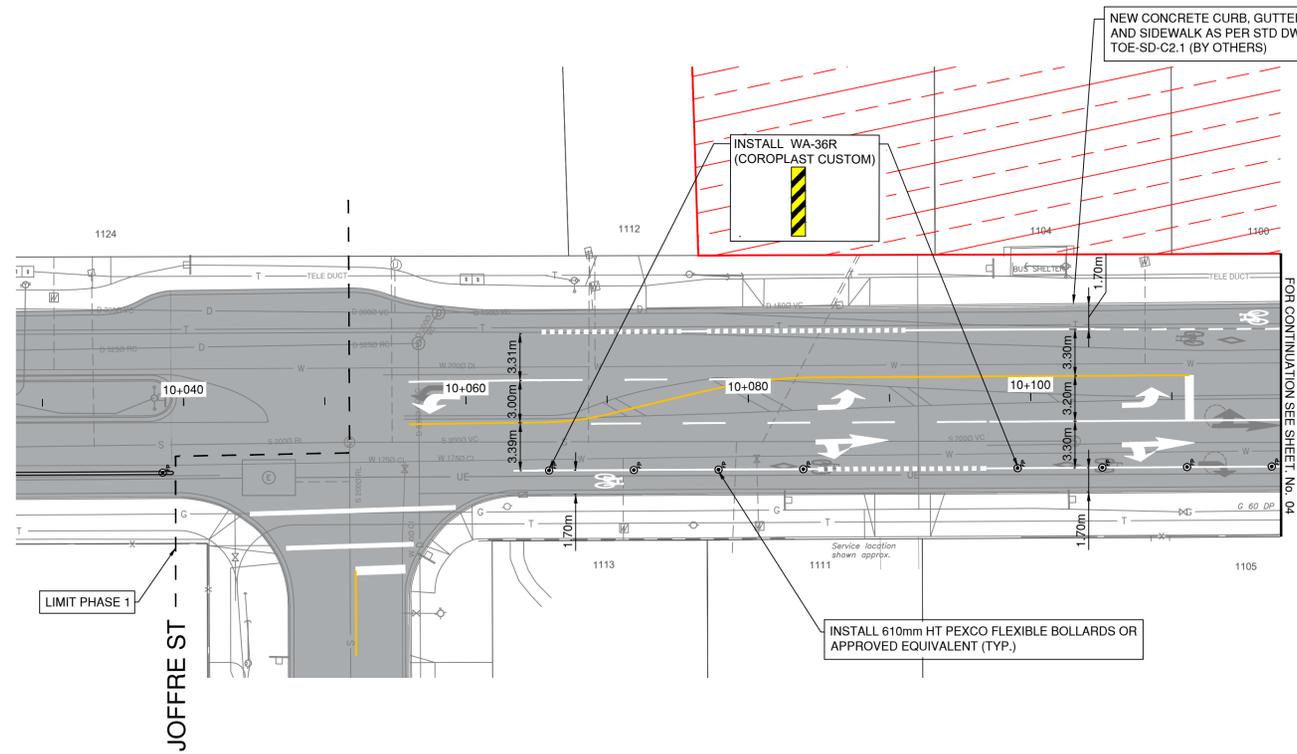


**ROAD WORKS**

**LEGEND**



SCALE	N/A	CREATION DATE	JAN/2025	DWG. NO.	02
DRAWN BY	KPJ	DESIGN BY	KPJ	OF	15
CHECKED BY	IM	APPROVED BY	IM	REV.	0
PLOT DATE	May 21, 2025	DESIGN NO.	33995		



PLAN  
SCALE: 1:250

FOR CONTINUATION SEE SHEET No. 04

**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

**CIVIL LEGEND**

- CONCRETE INSTALLATION  
REFER TO DRAWING FOR DETAILS
- MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION
- FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.
- EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY. NOT INDICATIVE OF PAVING SCOPE.
- FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE
- 50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE
- OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY
- 150mm THICK CONCRETE DRIVEWAY CROSSING
- APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION
- FLEXIBLE BOLLARD  
REFER TO NOTES FOR PRODUCT INFO
- PRECAST CONCRETE BARRIER CURB

**CIVIL NOTES**

1. 610mm AND FLEXIBLE BOLLARD:
  - 1.1. MANUFACTURER: PEXCO LLC
  - 1.2. MODEL: CITY POST - SURFACE MOUNT
  - 1.3. COLOUR: WHITE
  - 1.4. REFLECTIVE WHITE BANDS
  - 1.5. CONTRACTOR SUPPLIED
2. R7301 STAINLESS STEEL BOLLARD
  - 2.1. MANUFACTURER: RELIANCE FOUNDRY
  - 2.2. TOWNSHIP SUPPLIED
3. REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES
4. REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS
5. CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION
6. PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND:
  - 6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD
  - 6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)
  - 6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.



KEY PLAN



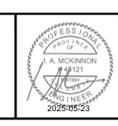
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REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
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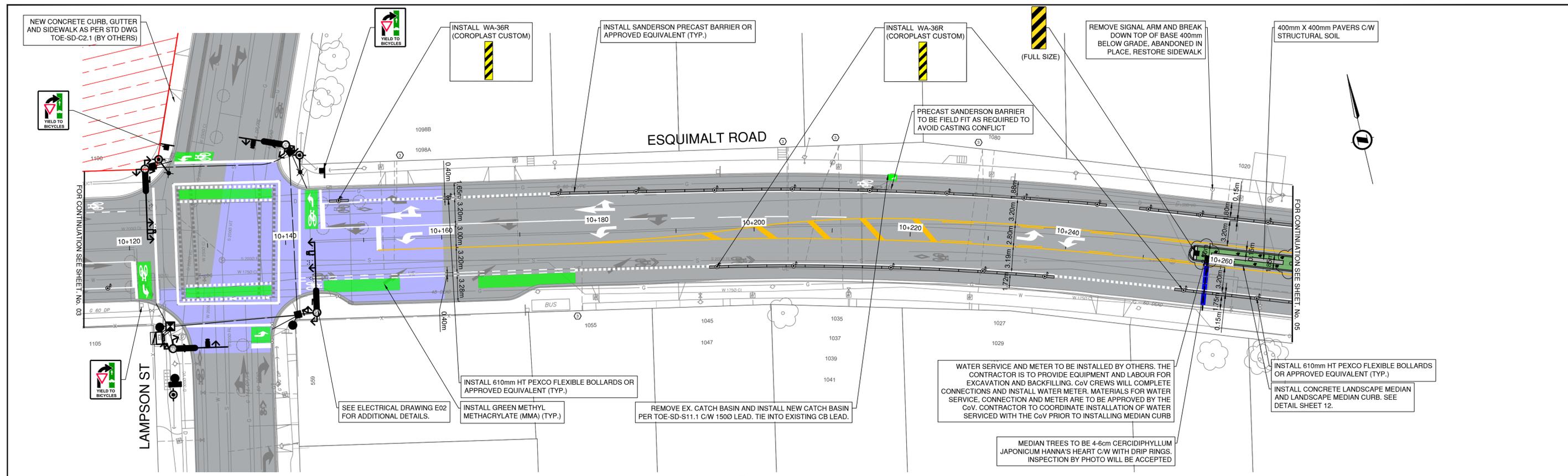


**ROAD WORKS**

**ROADWORKS**  
STA 10+000 TO STA 10+110



ISSUED FOR TENDER		DESIGN NO.		33995	
SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.	03
DRAWN BY	KPJ	DESIGN BY	KPJ	OF	15
CHECKED BY	IM	APPROVED BY	IM	REV.	0
PLOT DATE	May 23, 2025				



PLAN  
SCALE: 1:250

**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

**CIVIL LEGEND**

- CONCRETE INSTALLATION  
REFER TO DRAWING FOR DETAILS
- MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION
- FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.
- EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY. NOT INDICATIVE OF PAVING SCOPE.
- FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE
- 50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE
- OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY
- 150mm THICK CONCRETE DRIVEWAY CROSSING
- APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION
- FLEXIBLE BOLLARD  
REFER TO NOTES FOR PRODUCT INFO
- PRECAST CONCRETE BARRIER CURB

**CIVIL NOTES**

1. 610mm AND FLEXIBLE BOLLARD:
  - 1.1. MANUFACTURER: PEXCO LLC
  - 1.2. MODEL: CITY POST - SURFACE MOUNT
  - 1.3. COLOUR: WHITE
  - 1.4. REFLECTIVE WHITE BANDS
  - 1.5. CONTRACTOR SUPPLIED
2. R7301 STAINLESS STEEL BOLLARD
  - 2.1. MANUFACTURER: RELIANCE FOUNDRY
  - 2.2. TOWNSHIP SUPPLIED
3. REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES
4. REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS
5. CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION
6. PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 10+200 AND:
  - 6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD
  - 6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)
  - 6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.



KEY PLAN

ISSUED FOR TENDER

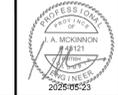
DESIGN NO. 33995

REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM



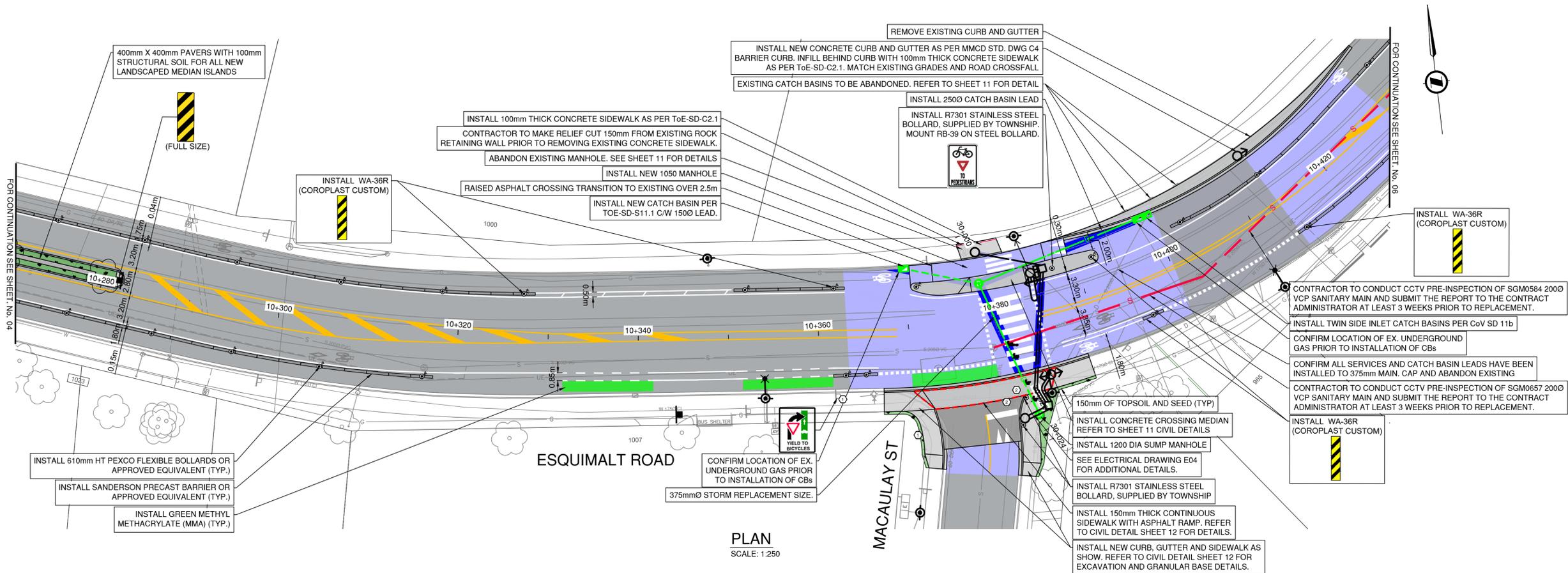
**ROAD WORKS**

**ROADWORKS**  
STA 10+110 TO STA 10+270



SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	04 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0
PLOT DATE	May 23, 2025			

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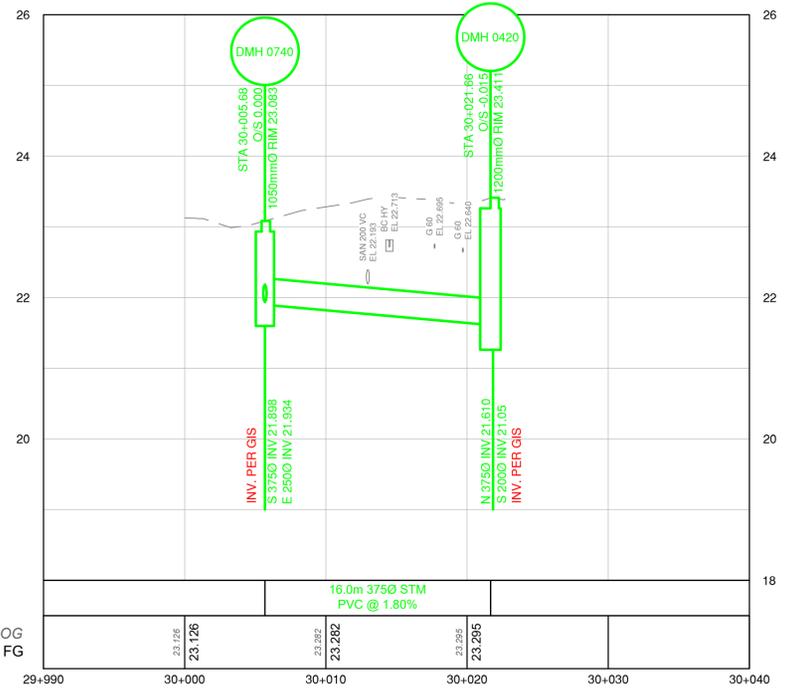


PLAN  
SCALE: 1:250

**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

CIPP OF SANITARY	
MANHOLE NUMBERS	STA 10 + 380 TO 10 + 425
PIPE DIAMETER & MATERIAL	2000 VC
OVERALL PIPE LENGTH	53ms
NO. OF SERVICE CONNECTIONS	0
WORK PRIOR TO REHAB	• COMPLETE CCTV
REHAB	CIPP FULL LENGTH RELINE
CCTV VIDEO AVAILABLE	YES
CCTV REPORT AVAILABLE	YES



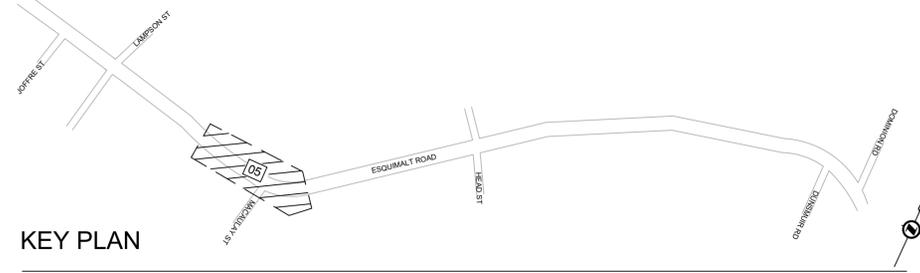
PROFILE  
SCALE: H 1:250 V 1:50

**CIVIL LEGEND**

- CONCRETE INSTALLATION REFER TO DRAWING FOR DETAILS
- MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION
- FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.
- EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY. NOT INDICATIVE OF PAVING SCOPE.
- FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE
- 50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE
- OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY
- 150mm THICK CONCRETE DRIVEWAY CROSSING
- APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION
- FLEXIBLE BOLLARD REFER TO NOTES FOR PRODUCT INFO
- PRECAST CONCRETE BARRIER CURB

**CIVIL NOTES**

1. 610mm AND FLEXIBLE BOLLARD:
  - 1.1. MANUFACTURER: PEXCO LLC
  - 1.2. MODEL: CITY POST - SURFACE MOUNT
  - 1.3. COLOUR: WHITE
  - 1.4. REFLECTIVE WHITE BANDS
  - 1.5. CONTRACTOR SUPPLIED
2. R7301 STAINLESS STEEL BOLLARD
  - 2.1. MANUFACTURER: RELIANCE FOUNDRY
  - 2.2. TOWNSHIP SUPPLIED
3. REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES
4. REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS
5. CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION
6. PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND:
  - 6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD
  - 6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)
  - 6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.



KEY PLAN

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REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM



**ROAD WORKS**

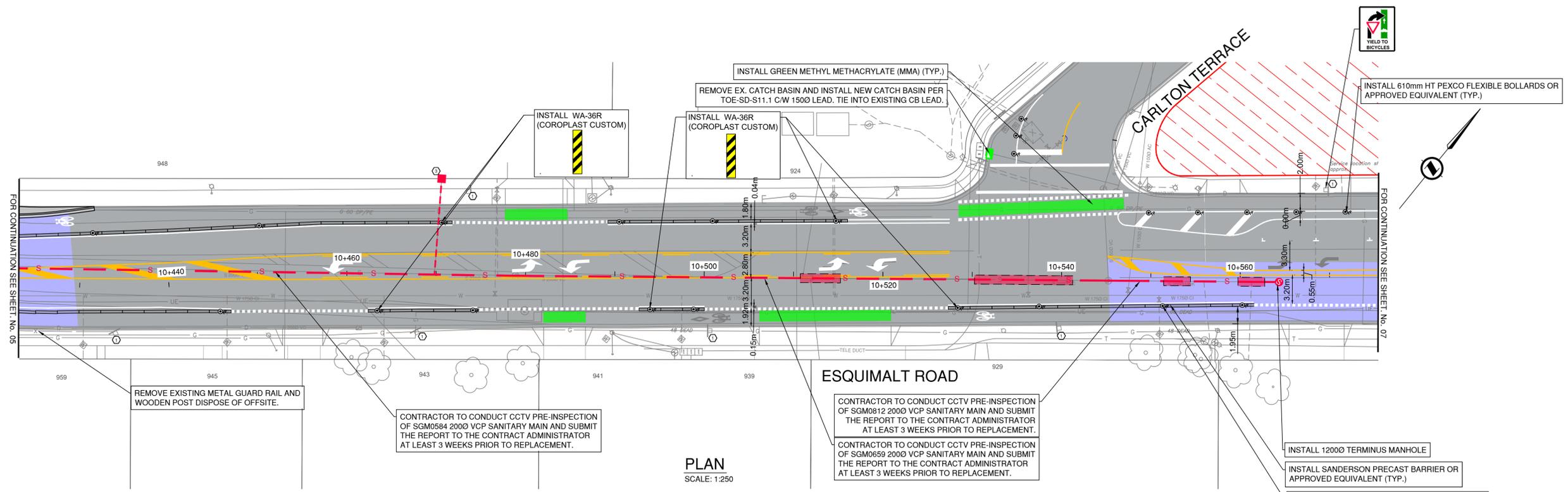
**ROADWORKS**  
STA 10+270 TO STA 10+420



ISSUED FOR TENDER

DESIGN NO. **33995**

SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	05 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0
PLOT DATE	May 23, 2025			

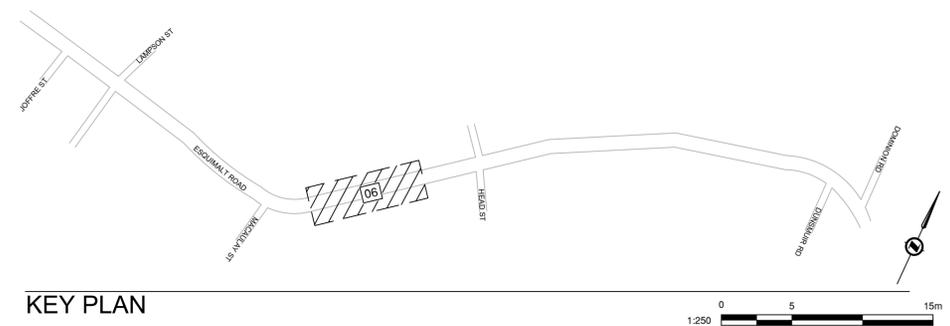


**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

CIPP OF SANITARY	
MANHOLE NUMBERS	STA 10 + 430 TO 10 + 560
PIPE DIAMETER & MATERIAL	200Ø VC
OVERALL PIPE LENGTH	133.6m±
NO. OF SERVICE CONNECTIONS	4
WORK PRIOR TO REHAB	• COMPLETE CCTV
REHAB	CIPP FULL LENGTH RELINE
CCTV VIDEO AVAILABLE	YES
CCTV REPORT AVAILABLE	YES

CIVIL LEGEND	CIVIL NOTES
CONCRETE INSTALLATION REFER TO DRAWING FOR DETAILS	<ol style="list-style-type: none"> <li>610mm AND FLEXIBLE BOLLARD:               <ol style="list-style-type: none"> <li>1.1. MANUFACTURER: PEXCO LLC</li> <li>1.2. MODEL: CITY POST - SURFACE MOUNT</li> <li>1.3. COLOUR: WHITE</li> <li>1.4. REFLECTIVE WHITE BANDS</li> <li>1.5. CONTRACTOR SUPPLIED</li> </ol> </li> <li>R7301 STAINLESS STEEL BOLLARD               <ol style="list-style-type: none"> <li>2.1. MANUFACTURER: RELIANCE FOUNDRY</li> <li>2.2. TOWNSHIP SUPPLIED</li> </ol> </li> <li>REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES</li> <li>REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS</li> <li>CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION</li> <li>PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND:               <ol style="list-style-type: none"> <li>6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD</li> <li>6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)</li> <li>6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.</li> </ol> </li> </ol>
MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION	
FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.	
EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY. NOT INDICATIVE OF PAVING SCOPE.	
FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE	
50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE	
OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY	
150mm THICK CONCRETE DRIVEWAY CROSSING	
APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION	
FLEXIBLE BOLLARD REFER TO NOTES FOR PRODUCT INFO	
PRECAST CONCRETE BARRIER CURB	



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REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
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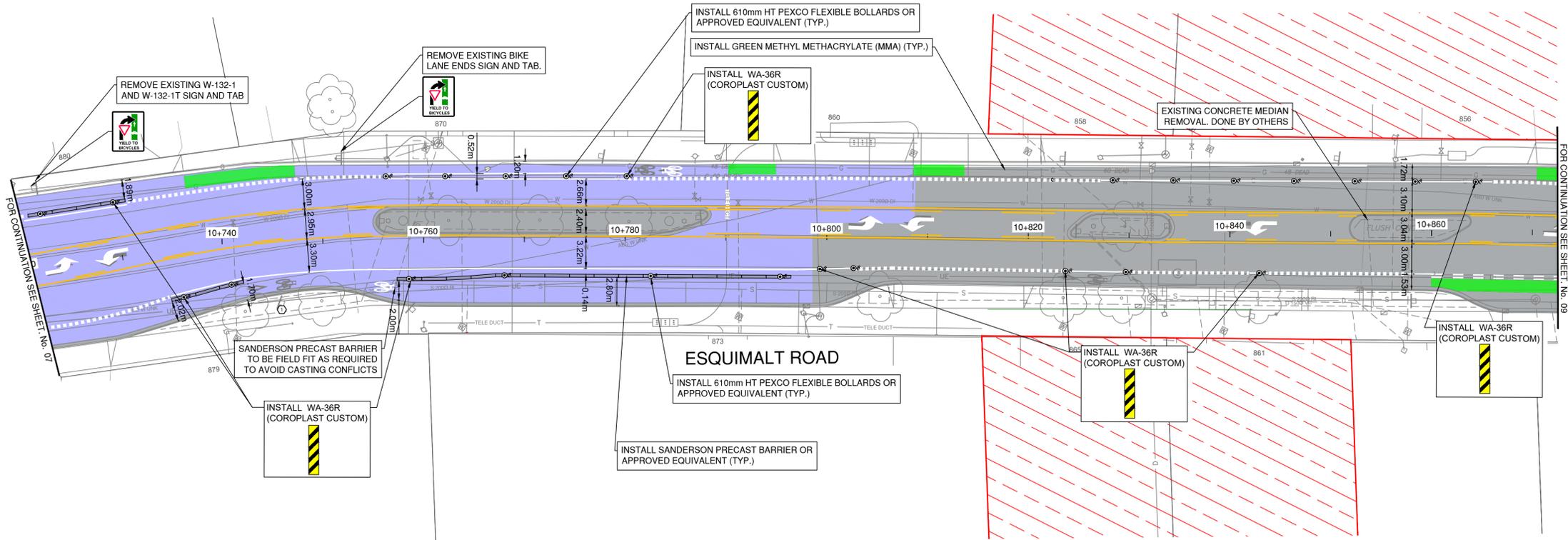
**ROAD WORKS**

**ROADWORKS**  
STA 10+420 TO STA 10+570



ISSUED FOR TENDER		DESIGN NO.		33995	
SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.	06
DRAWN BY	KPJ	DESIGN BY	KPJ	OF	15
CHECKED BY	IM	APPROVED BY	IM	REV.	0
PLOT DATE	May 23, 2025				



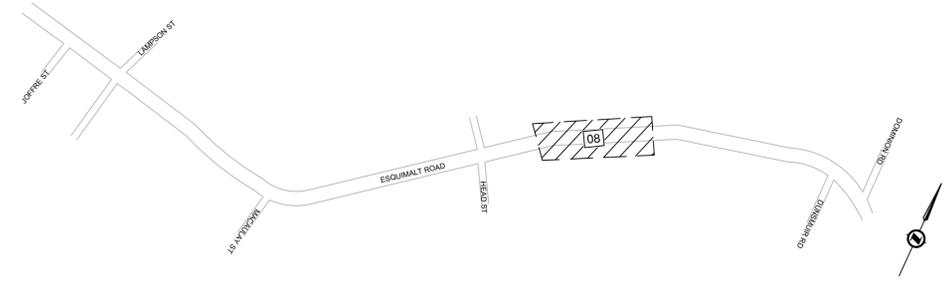


PLAN  
SCALE: 1:250

**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

CIVIL LEGEND		CIVIL NOTES	
	CONCRETE INSTALLATION REFER TO DRAWING FOR DETAILS	<ol style="list-style-type: none"> <li>610mm AND FLEXIBLE BOLLARD: 1.1. MANUFACTURER: PEXCO LLC 1.2. MODEL: CITY POST - SURFACE MOUNT 1.3. COLOUR: WHITE 1.4. REFLECTIVE WHITE BANDS 1.5. CONTRACTOR SUPPLIED</li> <li>R7301 STAINLESS STEEL BOLLARD 2.1. MANUFACTURER: RELIANCE FOUNDRY 2.2. TOWNSHIP SUPPLIED</li> <li>REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES</li> <li>REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS</li> <li>CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION</li> <li>PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND: 6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD 6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.) 6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.</li> </ol>	
	MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION		
	FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.		
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	50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE		
	OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY		
	150mm THICK CONCRETE DRIVEWAY CROSSING		
	APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION		
	FLEXIBLE BOLLARD REFER TO NOTES FOR PRODUCT INFO		
	PRECAST CONCRETE BARRIER CURB		



KEY PLAN

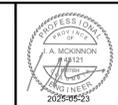
ISSUED FOR TENDER DESIGN NO. 33995

REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM



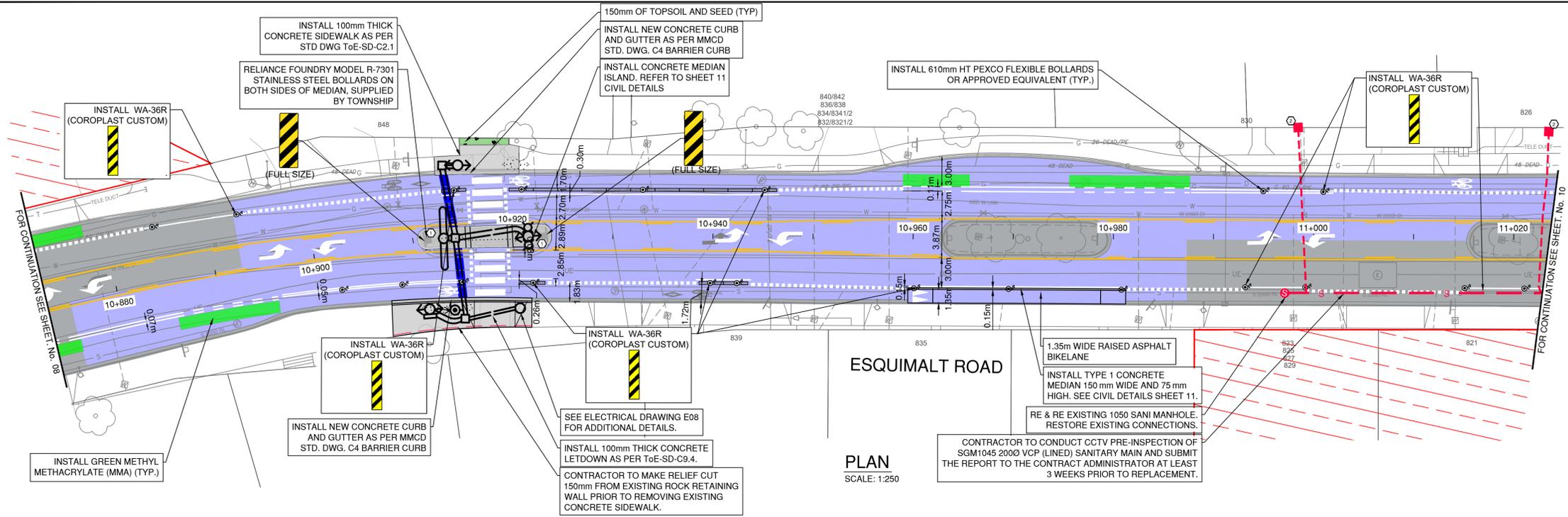
**ROAD WORKS**

**ROADWORKS**  
STA 10+720 TO STA 10+870



SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	08 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0
PLOT DATE	May 23, 2025			

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PLAN  
SCALE: 1:250

**DETAILED CONSTRUCTION NOTES:**

- ① REMOVE OR RELOCATE EXISTING SIGN.
- ② ADJUST CASTING TO FINISHED GRADE.
- ③ PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

CIPP OF SANITARY	
MANHOLE NUMBERS	STA 10 + 880 TO 11 + 020
PIPE DIAMETER & MATERIAL	2000 VCP
OVERALL PIPE LENGTH	26.0m±
NO. OF SERVICE CONNECTIONS	4
WORK PRIOR TO REHAB	• COMPLETE CCTV
REHAB	CIPP FULL LENGTH RELINE
CCTV VIDEO AVAILABLE	YES
CCTV REPORT AVAILABLE	YES

**CIVIL LEGEND**

- CONCRETE INSTALLATION REFER TO DRAWING FOR DETAILS
- MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION
- FUTURE DEVELOPMENT SITE. FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.
- EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY. NOT INDICATIVE OF PAVING SCOPE.
- FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE
- 50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE
- OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY
- 150mm THICK CONCRETE DRIVEWAY CROSSING
- APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR. TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION
- FLEXIBLE BOLLARD REFER TO NOTES FOR PRODUCT INFO
- PRECAST CONCRETE BARRIER CURB

**CIVIL NOTES**

1. 610mm AND FLEXIBLE BOLLARD:
  - 1.1. MANUFACTURER: PEXCO LLC
  - 1.2. MODEL: CITY POST - SURFACE MOUNT
  - 1.3. COLOUR: WHITE
  - 1.4. REFLECTIVE WHITE BANDS
  - 1.5. CONTRACTOR SUPPLIED
2. R7301 STAINLESS STEEL BOLLARD
  - 2.1. MANUFACTURER: RELIANCE FOUNDRY
  - 2.2. TOWNSHIP SUPPLIED
3. REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES
4. REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS
5. CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION
6. PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND:
  - 6.1. DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD
  - 6.2. DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)
  - 6.3. LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.



KEY PLAN

ISSUED FOR TENDER

DESIGN NO. **33995**

REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM



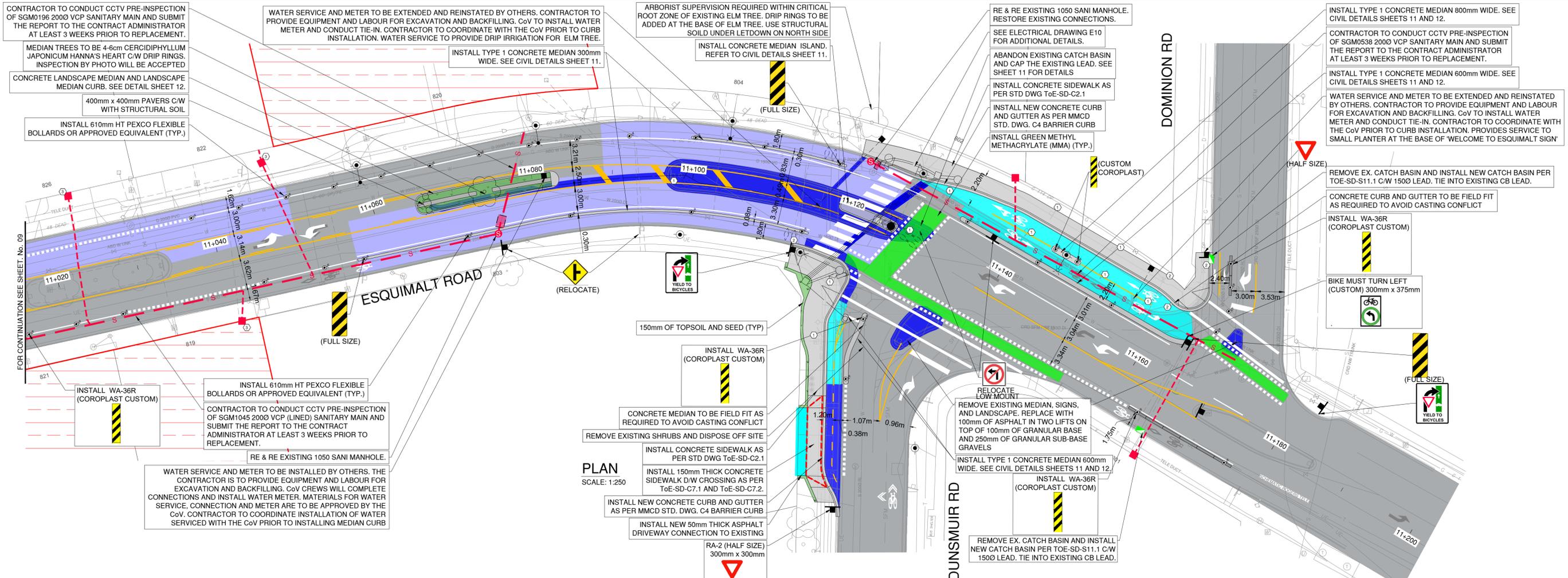
**ROAD WORKS**

**ROADWORKS**  
STA 10+870 TO STA 11+020



SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.	09
DRAWN BY	KPJ	DESIGN BY	KPJ	OF	15
CHECKED BY	IM	APPROVED BY	IM	REV.	0
PLOT DATE	May 23, 2025				

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PLAN  
SCALE: 1:250

**DETAILED CONSTRUCTION NOTES:**

- REMOVE OR RELOCATE EXISTING SIGN.
- ADJUST CASTING TO FINISHED GRADE.
- PRIOR TO INSTALLATION OF NEW INSPECTION CHAMBER AND CIPP RESTORATION, CONTRACTOR SHALL CONFIRM THE LOCATION AND CONDITION OF EXISTING SANITARY SERVICES USING CCTV INSPECTION.

CIPP OF SANITARY	
MANHOLE NUMBERS	STA 11 + 020 TO 11 + 170
PIPE DIAMETER & MATERIAL	2000 VCP
OVERALL PIPE LENGTH	102.8m±
NO. OF SERVICE CONNECTIONS	4
WORK PRIOR TO REHAB	• COMPLETE CCTV
REHAB	CIPP FULL LENGTH RELINE
CCTV VIDEO AVAILABLE	YES
CCTV REPORT AVAILABLE	YES

**CIVIL LEGEND**

- CONCRETE INSTALLATION REFER TO DRAWING FOR DETAILS
- MILL AND INLAY - REMOVE 50mm AND PLACE 50mm - LIMITS TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION
- FUTURE DEVELOPMENT SITE, FUTURE AAA INFRASTRUCTURE TO BE INSTALLED AS A PART OF DEVELOPMENT FRONTAGE.
- EXISTING ROAD HATCH SHOWN FOR PAVEMENT MARKING CLARITY, NOT INDICATIVE OF PAVING SCOPE.
- FULL DEPTH RESTORATION - 100mm OF ASPHALT (TWO LIFTS) ON TOP OF 100mm OF GRANULAR BASE AND 250mm OF GRANULAR SUB BASE
- 50mm THICK ASPHALT DRIVEWAY CONNECTION/ BIKE LANE
- OLDCASTLE SLAB 400mm X 400mm PAVERS, GRAY
- 150mm THICK CONCRETE DRIVEWAY CROSSING
- APPROXIMATE LOCATION OF UNDERGROUND SANITARY SPOT REPAIR, TO BE CONFIRMED WITH CCTV PRIOR TO CONSTRUCTION
- FLEXIBLE BOLLARD REFER TO NOTES FOR PRODUCT INFO
- PRECAST CONCRETE BARRIER CURB

**CIVIL NOTES**

- 610mm AND FLEXIBLE BOLLARD:
  - MANUFACTURER: PEXCO LLC
  - MODEL: CITY POST - SURFACE MOUNT
  - COLOR: WHITE
  - REFLECTIVE WHITE BANDS
  - CONTRACTOR SUPPLIED
- R7301 STAINLESS STEEL BOLLARD
  - MANUFACTURER: RELIANCE FOUNDRY
  - TOWNSHIP SUPPLIED
- REFER TO CIVIL DETAIL SHEET 15 FOR CURB RETURN PROFILES
- REFER TO LEGEND SHEET 02 FOR PAVEMENT MARKING AND SYMBOL DIMENSIONS
- CONTRACTOR TO CONFIRM CONDITION OF EXISTING CATCH BASIN LEADS AND SANITARY SERVICES WITH PUSH CAMERA AND/OR CCTV INSPECTION PRIOR TO CONNECTION
- PAVEMENT MARKINGS TO BE ERADICATED FROM STA 10+050 TO STA 11+200 AND:
  - DUNSMUIR RD - 35m SOUTH OF ESQUIMALT ROAD
  - DOMINION RD - 30m NORTH OF ESQUIMALT ROAD (EXCLUDING PROPOSED ASPHALT INSTALLATION AREA TYP.)
  - LIMITS OF ERADICATION ARE TO BE CONFIRMED IN THE FIELD WITH THE CONTRACT ADMINISTRATOR A MINIMUM OF 5 DAYS PRIOR TO ERADICATION WORK.

KEY PLAN

ISSUED FOR TENDER

1:250 0 5 15m **33995**

REV NO.	REVISION DESCRIPTION	DATE	DRAWN	APPRD
0	ISSUED FOR TENDER	12MAY/25	AG	IM



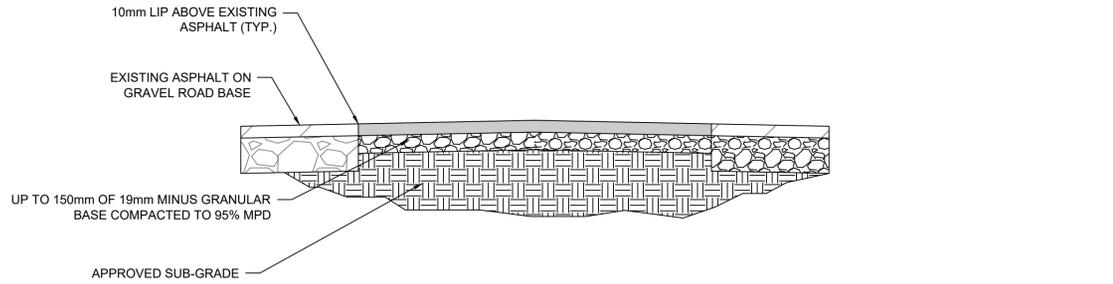
**ROAD WORKS**

**ROADWORKS**  
STA 11+020 TO STA 11+194

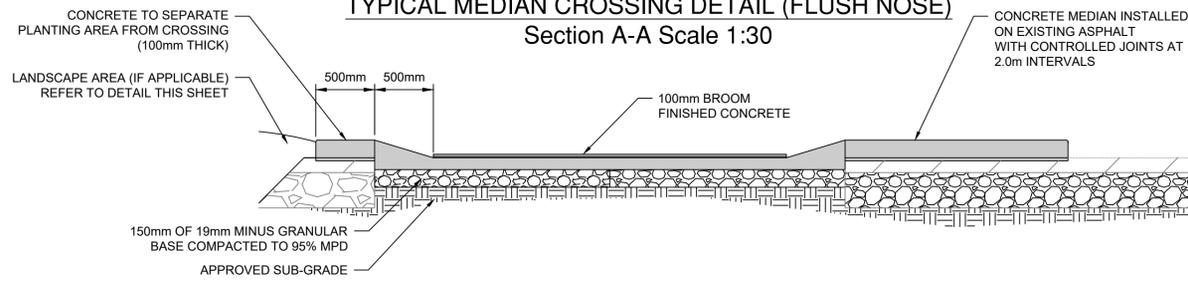


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DRAWN BY	KPJ	DESIGN BY	KPJ	10 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0
PLOT DATE	May 23, 2025			

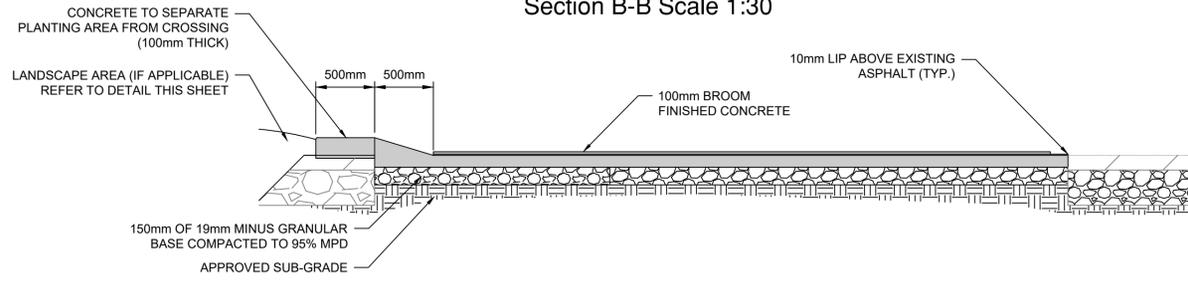
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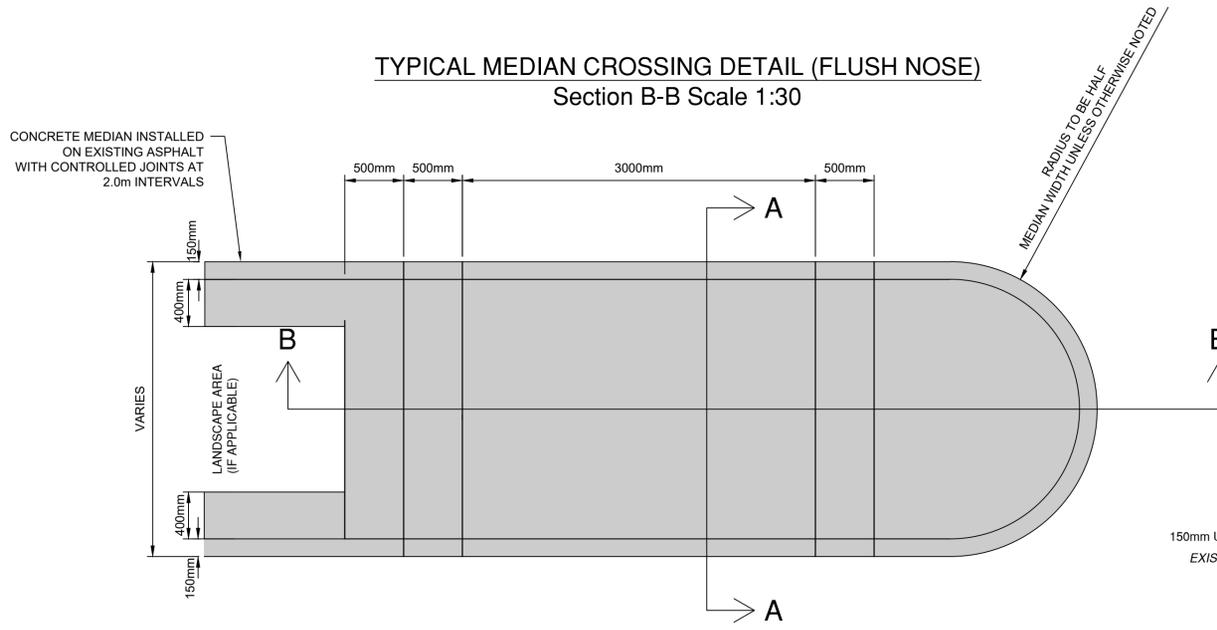
**TYPICAL MEDIAN CROSSING DETAIL (FLUSH NOSE)**  
Section A-A Scale 1:30



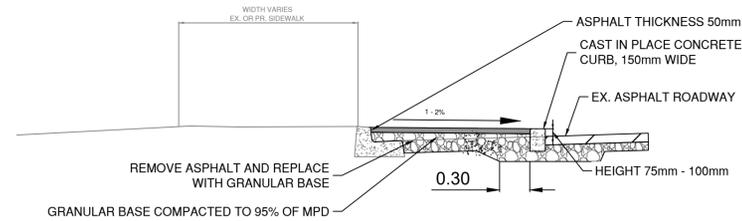
**TYPICAL MEDIAN CROSSING DETAIL (RAISED NOSE)**  
Section B-B Scale 1:30



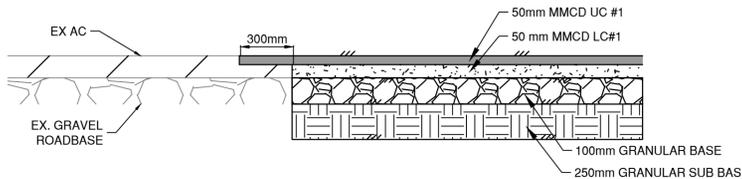
**TYPICAL MEDIAN CROSSING DETAIL (FLUSH NOSE)**  
Section B-B Scale 1:30



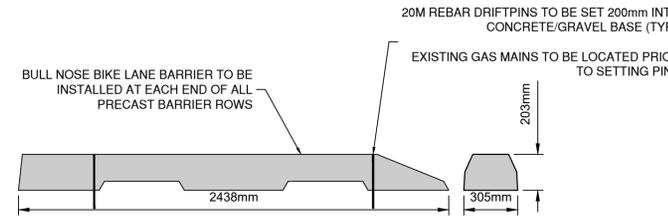
**TYPICAL MEDIAN CROSSING DETAIL (RAISED AND FLUSH NOSE)**  
Scale 1:30



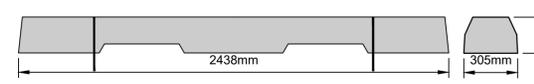
**RAISED BIKE LANE TYPICAL SECTION**  
NOT TO SCALE



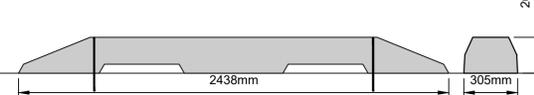
**GRAVEL ROADBASE PAVEMENT RESTORATION DETAIL**  
FULL DEPTH RESTORATION ON GRAVEL BASE ROADS.



**BULLNOSE BIKE LANE BARRIER DETAIL**

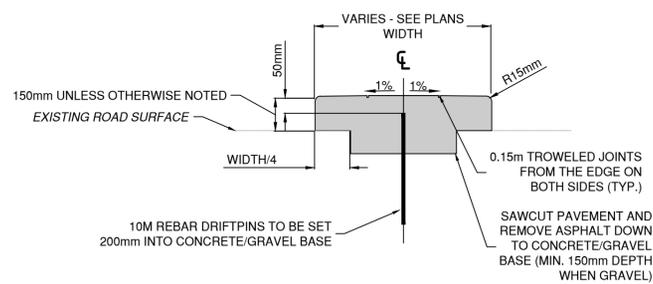


**NON-BULLNOSE BIKE LANE BARRIER DETAIL**

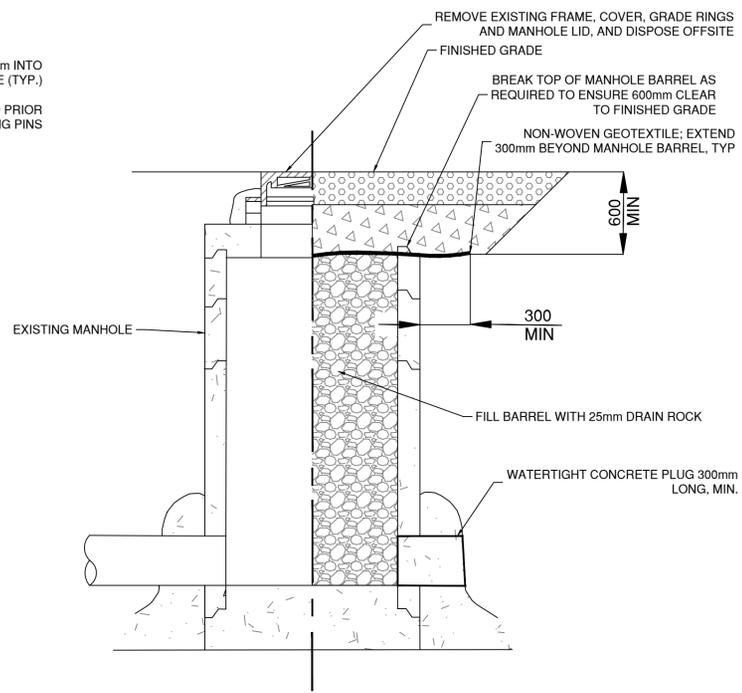


**DUAL BULLNOSE BIKE LANE BARRIER DETAIL**

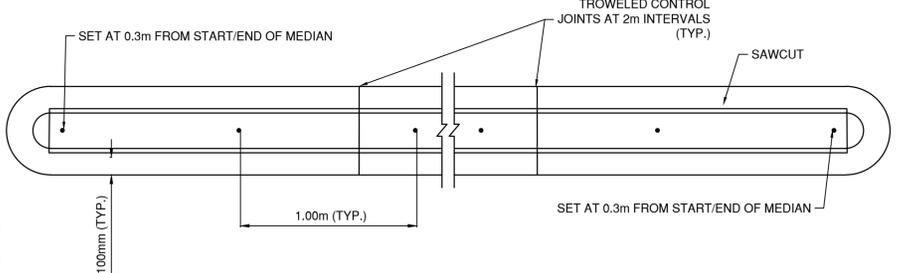
**HAZARD MARKER AND BOLLARD MOUNTING NOTES**  
 - SIMPSON STRONG-TIE TITEN HD HEX WASHER HEAD, ZINC PLATED. 3/8" DIA. X 1 3/4" BOLTS, PRODUCT NUMBER THD37134H  
 - (ATTACH BY BOLTING THROUGH TWO DIAGONALLY OPPOSITE HOLES; LEAVE THE OTHER TWO HOLES UNBOLTED TO AVOID STRIKING REBAR IN THE PRECAST MEDIAN.)



**TYPE 1 MEDIAN (WIDTH < 0.5m)**  
Scale 1:5



**EXISTING CATCHBAIN/MANHOLE ABANDONMENT DETAIL**  
NTS



**DRIFTPIN LAYOUT DETAIL**  
NTS

File: C:\AS\AS\ACCD\001\33995\Production\Phase133995\_SH\_CIVIL\_DETAILS.dwg

REV NO	REVISIONS	DATE	DRAWN	APPR'D
0	ISSUED FOR TENDER	12MAY/25	AG	IM



**ROAD WORKS**

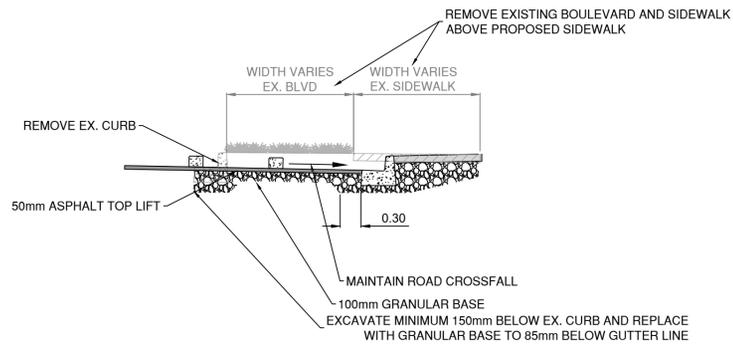
**CIVIL DETAILS**  
TYPICAL DETAILS



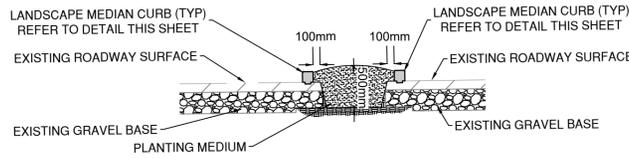
ISSUED FOR TENDER DESIGN NO.

SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	11 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0

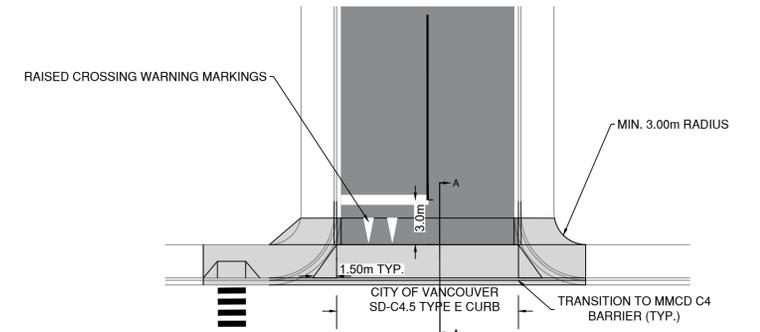
**33995**



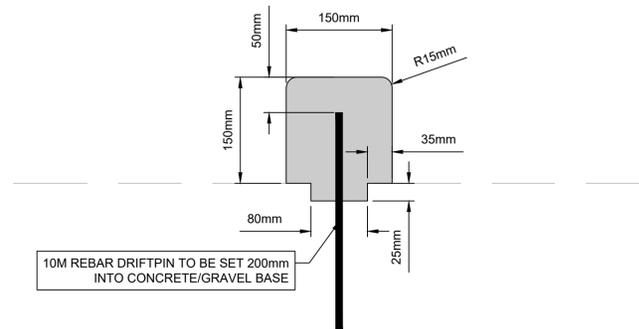
**ESQUIMALT RD AND DOMINION RD EXTENSION AND SIDEWALK SHIFT**  
**TYPICAL SECTION**  
 NTS



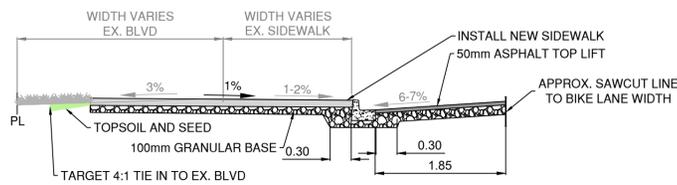
**TYPICAL LANDSCAPE MEDIAN DETAIL**  
 NTS



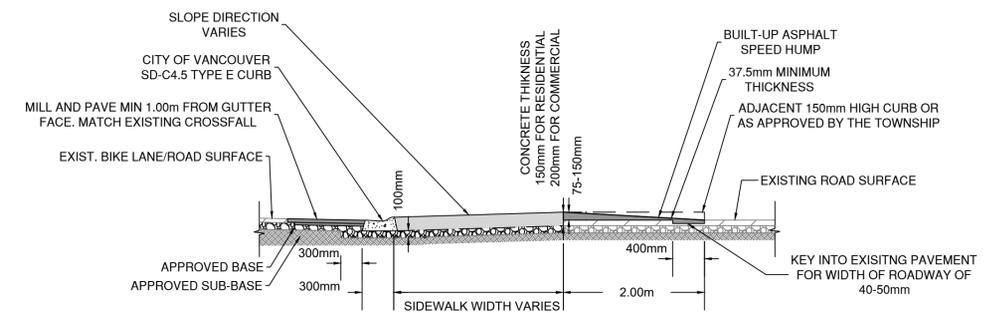
**MACAULEY CONTINUOUS SIDEWALK CONSTRAINED**  
**TYPICAL DETAIL**  
 NTS



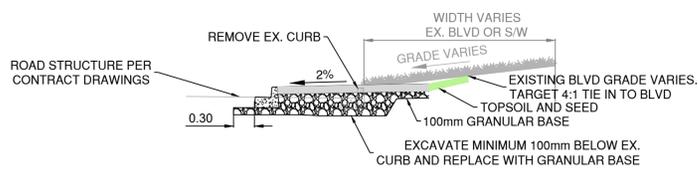
**LANDSCAPE MEDIAN CURB (NO APRON)**  
 SCALE 1:5



**NEW CURB AND SIDEWALK WIDENING**  
**TYPICAL SECTION**  
 NTS



**SECTION A-A CONTINUOUS SIDEWALK**  
**TYPICAL SECTION**  
 NTS



**SIDEWALK EXTENSION**  
**TYPICAL SECTION**  
 NTS

PLOT DATE: May 23, 2025

REV NO	REVISIONS	DATE	DRAWN	APPR'D
0	ISSUED FOR TENDER	12MAY25	AG	IM



**ROAD WORKS**

**CIVIL DETAILS**  
**TYPICAL SECTIONS**



1051 Vancouver St, Victoria, BC V8T 3K3  
 T: (250) 381-3230 F: (250) 381-3230

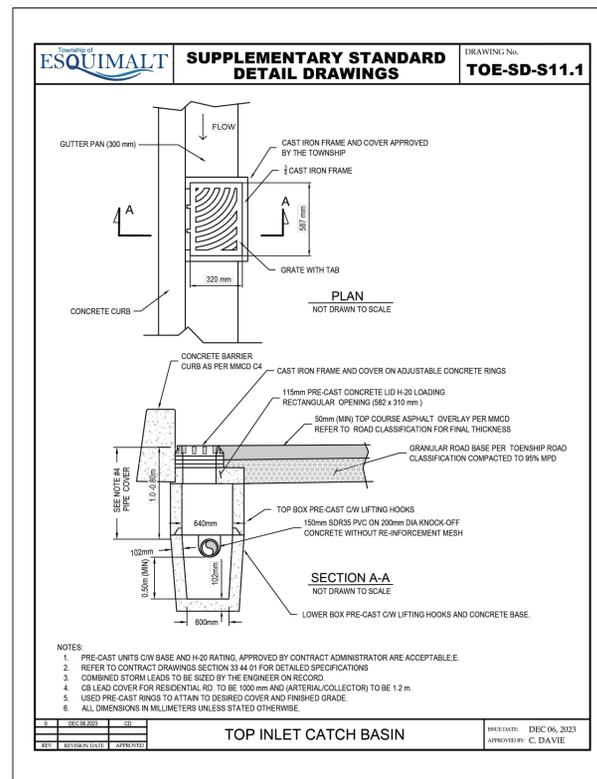
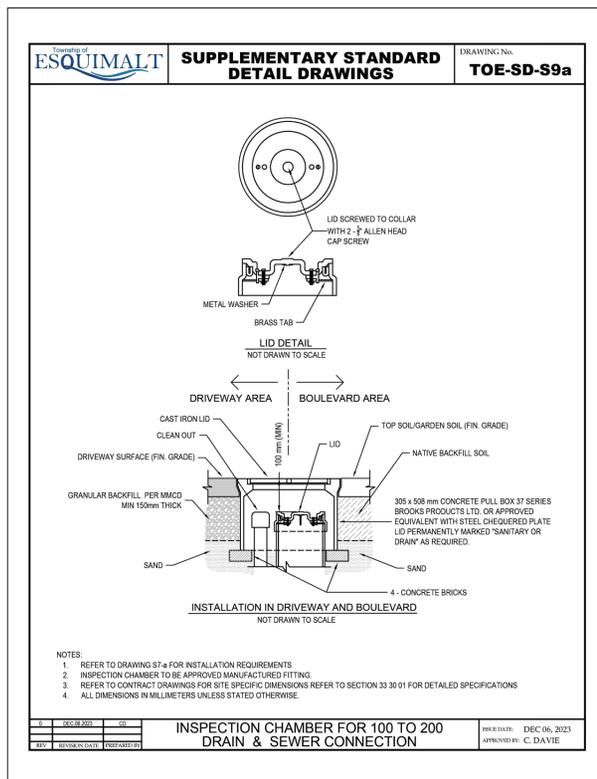
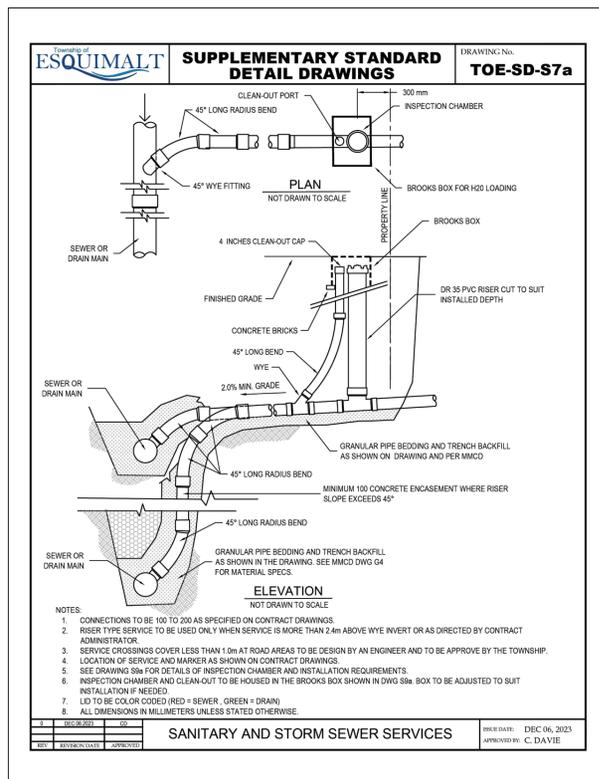
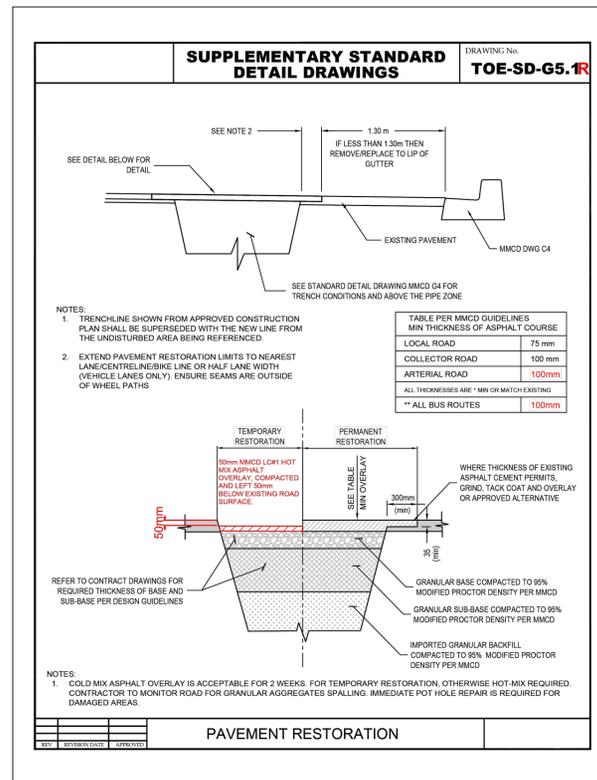
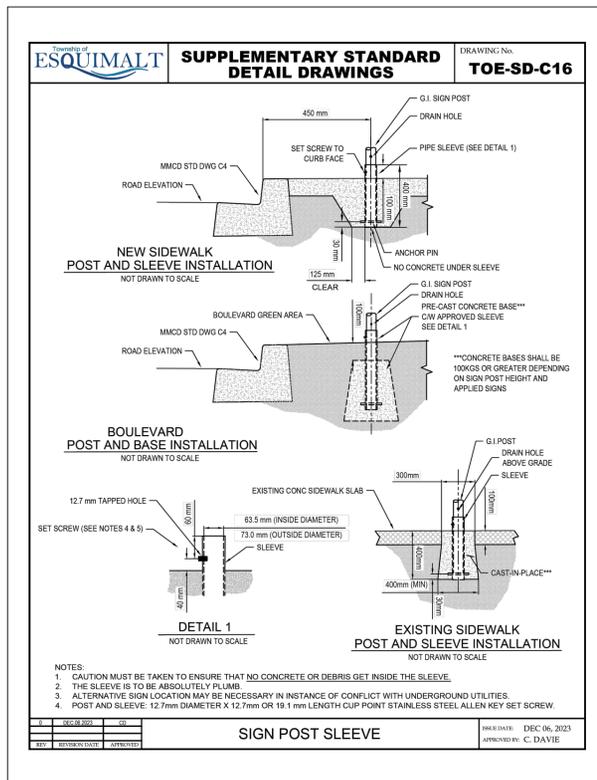
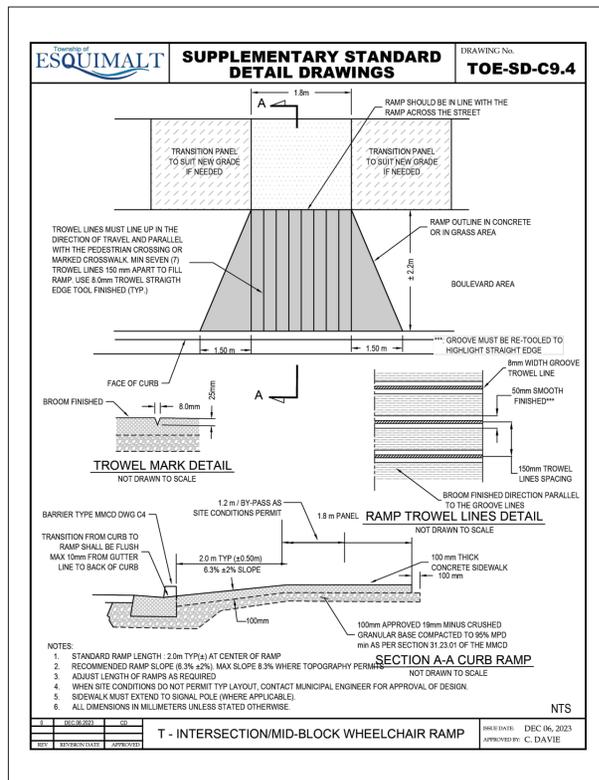
ISSUED FOR TENDER DESIGN NO.

SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	12 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0

**33995**

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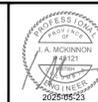
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PLOT DATE: May 23, 2025

REV NO	REVISIONS	DATE	DRAWN	APPR'D
0	ISSUED FOR TENDER	12MAY25	AG	IM



**CIVIL DETAILS**  
**MMCD SUPPLEMENTALS**

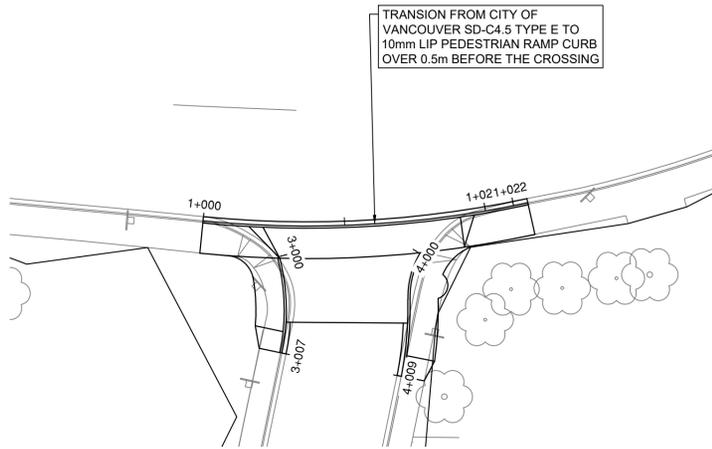


1051 Vancouver St, Victoria, BC V8T 3K3  
T: (250) 381-3320 F: (250) 381-3749

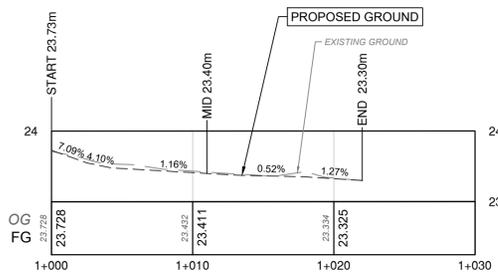
ISSUED FOR TENDER DESIGN NO.

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DRAWN BY	KPJ	DESIGN BY	KPJ	14 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0

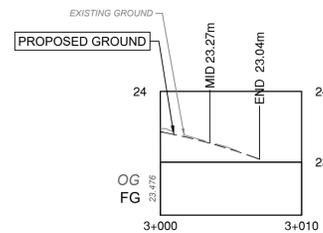
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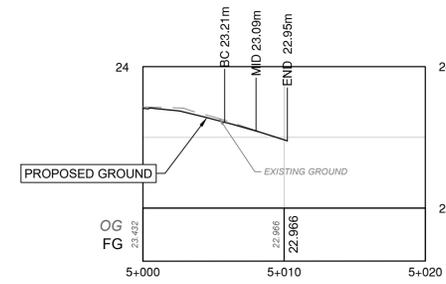
**ESQUIMALT RD AND MACAULAY ST**  
SCALE 1:250



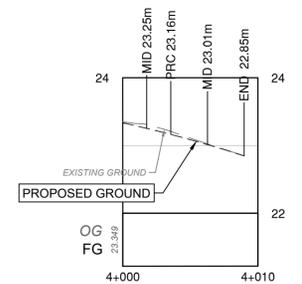
**ESQUIMALT RD AND MACAULAY ST CURB RETURN PROFILE**  
SCALE 1:250H 1:50V



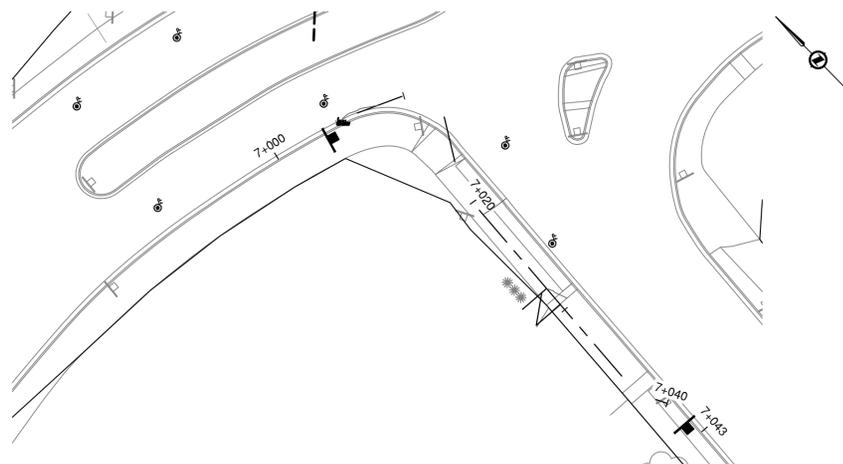
**MACAULAY ST WEST SIDE CURB RETURN PROFILE**  
SCALE 1:250H 1:50V



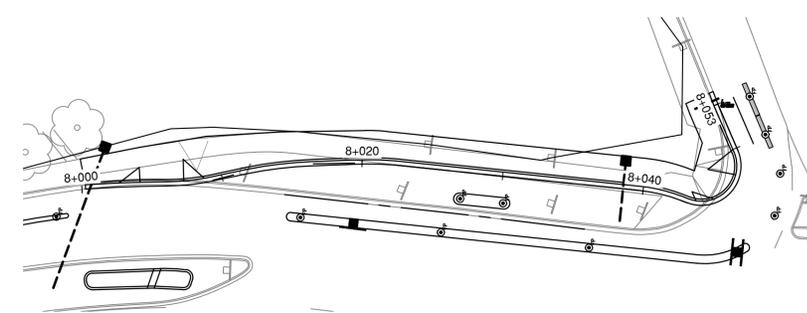
**MACAULAY ST CENTERLINE PROFILE**  
SCALE 1:250H 1:50V



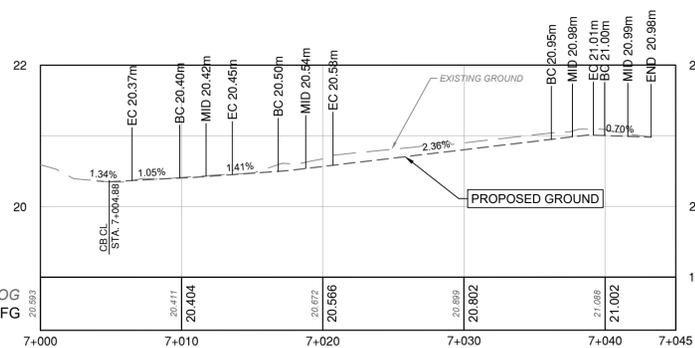
**MACAULAY ST EAST SIDE CURB RETURN PROFILE**  
SCALE 1:250H 1:50V



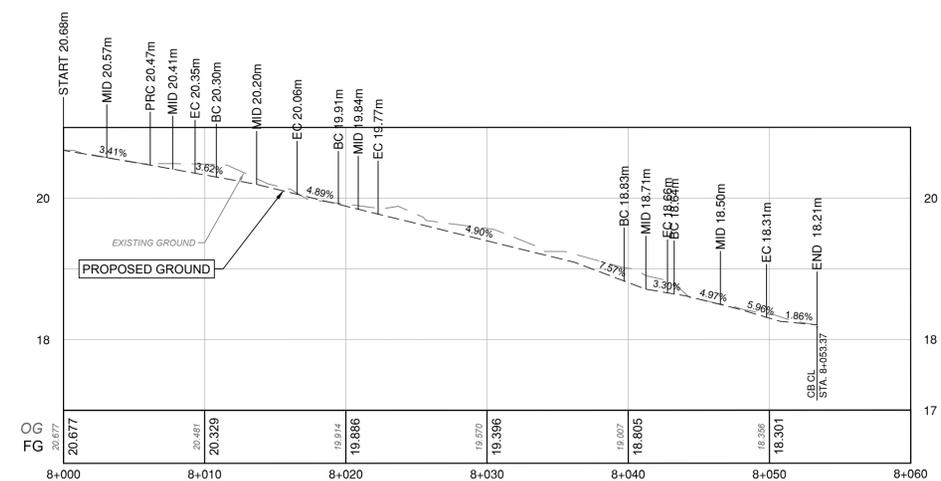
**ESQUIMALT RD AND DUNSMUIR RD**  
SCALE 1:250



**ESQUIMALT RD AND DOMINION RD**  
SCALE 1:250



**ESQUIMALT RD AND DUNSMUIR RD CURB RETURN PROFILE**  
SCALE 1:250H 1:50V



**ESQUIMALT RD AND DOMINION RD CURB RETURN PROFILE**  
SCALE 1:250H 1:50V



NOTE: CURB RETURNS ARE TO GENERALLY MATCH EXISTING ROAD CROSSFALL AND GRADING. INSTALL LAYOUT MARKERS ON THE ROADWAY SIDE OF THE PROPOSED CURB LINE.

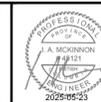
ISSUED FOR TENDER DESIGN NO.

**33995**

REV NO	REVISIONS	DATE	DRAWN	APPR'D
0	ISSUED FOR TENDER	12MAY25	AG	IM



**CIVIL DETAILS**  
CURB RETURNS



1051 Vancouver St, Victoria, BC V8T 3K3  
T: (250) 381-3320 F: (250) 469-3726

SCALE	1:250	CREATION DATE	JAN/2025	DWG. NO.
DRAWN BY	KPJ	DESIGN BY	KPJ	15 OF 15
CHECKED BY	IM	APPROVED BY	IM	REV. 0

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**ELECTRICAL NOTES**  
**GENERAL NOTES**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) AND THE TOWNSHIP OF ESQUIMALT SUBDIVISION AND DEVELOPMENT CONTROL BYLAW No. 3128
- ELECTRICAL WORK SHALL CONFORM TO LATEST EDITION OF CANADIAN ELECTRICAL CODE AND BULLETINS PUBLISHED BY TECHNICAL SAFETY BC.
- ALL WORK SHALL CONFORM TO ALL APPLICABLE REGULATIONS OF WORKSAFE BC.
- THE CONTRACTOR SHALL SUPPLY ALL MATERIALS, EQUIPMENT AND LABOUR TO COMPLETE THE WORKS, EXCEPT AS NOTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES FOR PERMITS AND INSPECTIONS, AS REQUIRED BY TECHNICAL SAFETY BC.
- ALL SIGNAL HEAD SECTIONS SHALL BE WIRED SEPARATELY FROM THE HANDHOLE OF THE POLE TO EACH HEAD INCLUDING A SEPARATE NEUTRAL AND BONDING CONDUCTOR FOR EACH HEAD.
- ALL REDUNDANT HOLES IN POLES SHALL BE TREATED WITH GALVACON PAINT AND PLUGGED USING SUITABLE GALVANIZED PLUG OR COVER PLATE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL CONCRETE BASES AND JUNCTION BOX SYMBOLS ARE NOT TO SCALE.
- THE CONTRACTOR SHALL NOT PRE-DRILL HOLES IN A SIGNAL POLE UNTIL AFTER THE BASE FOR THAT POLE HAS BEEN INSTALLED. THE CONTRACTOR SHALL ADVISE THE CONTRACT ADMINISTRATOR OF ANY ADJUSTMENTS MADE TO THE BASE LOCATION WHICH WILL EFFECT THE LOCATIONS OF HARDWARE TO BE MOUNTED ON THAT POLE PRIOR TO DRILLING.
- CONTRACTOR SHALL CONFIRM THE SERVICE CONNECTION WITH BC HYDRO.
- THE CONTRACTOR SHALL ENSURE THERE IS NO INTERRUPTION OF THE EXISTING LIGHTING DURING DARKNESS HOURS.
- ENSURE CLEARANCES FROM OVERHEAD UTILITY LINES MEET UTILITY AND WORKSAFE BC REGULATIONS PRIOR TO CONCRETE BASE INSTALLATION. CONTACT PBX ENGINEERING IN THE EVENT OF CONFLICT.
- ALL COMMON CIRCUIT WIRING SHALL BE TAGGED AND TY-RAPPED AS DETAILED IN THE MMCD, SECTION 26 56 01, SUBSECTION 3.8.
- HANDHOLES SHALL BE POSITIONED ON THE DOWNSTREAM TRAFFIC SIDE OF THE POLE OR BEHIND.
- LANE CLOSURES DURING CONSTRUCTION SHALL BE PERMITTED BETWEEN 9am AND 3pm ONLY UNLESS OTHERWISE COORDINATED WITH AND APPROVED BY THE TOWNSHIP. CONTRACTOR SHALL ADVISE THE TOWNSHIP OF ESQUIMALT 2 DAYS IN ADVANCE OF PLANNED LANE CLOSURE ACTIVITY TO ALLOW THE TOWNSHIP TO NOTIFY LOCAL EMERGENCY RESPONSE DEPARTMENTS INCLUDING FIRE DEPARTMENT, AMBULANCE, POLICE, AND BC TRANSIT OF ANY ROAD CLOSURES.
- ALL NEW POLES INSTALLED ON EDGE OF SIDEWALK SHALL HAVE 0.3m OFFSET FROM FACE OF CURB.

**ELECTRICAL CIVIL NOTES**

- ALL CONDUITS FROM JUNCTION BOXES TO BASES SHALL BE 53mm RPVC.
- ALL EMPTY CONDUITS SHALL HAVE A PULL STRING AND SHALL BE CAPPED. PULL STRING SHALL BE POLYPROPYLENE WITH A MINIMUM TENSILE STRENGTH OF 1.1 KN.
- ALL EXISTING WIRING, CONDUIT AND BASES TO BE REMOVED SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOT USE ANY FACTORY BENDS IN CONDUIT RUNS UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER IN THE FIELD. WHERE FACTORY 90 DEGREE BENDS ARE APPROVED, THE RADIUS SHALL BE GREATER THAN 900mm.
- ALL CONDUITS SHALL BE VERIFIED AND CLEANED USING THE FOLLOWING PROCEDURE:  
**IN THE EVENT OF EXISTING CONDUIT FAILURE, NOTIFY CONTRACT ADMINISTRATOR.**
  - TO VERIFY INTEGRITY OF CONDUIT, PULL THROUGH EACH DUCT, A HARD RUBBER MANDREL NOT LESS THAN 300mm LONG AND OF A DIAMETER 6mm LESS THAN INTERNAL DIAMETER OF DUCT, PRECEDED BY A SWAB OF SUITABLE DIAMETER TO REMOVE SAND, EARTH AND OTHER FOREIGN MATTER.
  - NOTIFY PROJECT ENGINEER IN THE EVENT OF CONDUIT FAILURE.
  - CLEAN DUCTS BEFORE LAYING. CAP ENDS OF DUCTS DURING CONSTRUCTION AND AFTER INSTALLATION TO PREVENT ENTRANCE OF FOREIGN MATERIALS.
  - TERMINATE CONDUIT ENDS IN THE JUNCTION BOX AS PER STANDARD DRAWINGS.
  - CLEAN AND VACUUM JUNCTION BOXES.

**ELECTRICAL MATERIAL SPECIFICATIONS**

- ALL MATERIALS SHALL BE NEW AND SUPPLIED FROM THE "APPROVED PRODUCTS LIST" EXCEPT WHERE NOTED. ALL LIKE MATERIALS SHALL BE FROM THE SAME MANUFACTURER.
- ELECTRICAL MATERIAL, EQUIPMENT AND FITTINGS MUST BEAR EVIDENCE OF C.S.A. APPROVAL OR SPECIAL CERTIFICATIONS ACCEPTABLE TO THE CHIEF ELECTRICAL INSPECTOR. UNAPPROVED ITEMS SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS' EXPENSE.
- CONDUCTORS SHALL BE STRANDED COPPER, RW90 XLPE INSULATED AND COLOUR CODED UNLESS OTHERWISE NOTED.
- JUNCTION BOXES SHALL BE (UNLESS NOTED OTHERWISE):
  - STREET LIGHTING/RRFB - DFW PLASTICS INC, DFW37C4-18-4DP BLANK C/W MANUFACTURERS BOLT DOWN LID. REFER TO MMCD STANDARD DRAWING E2.1.
  - TRAFFIC SIGNALS - DFW PLASTICS INC, DFW1703C4-18-4DP. JUNCTION BOX LID SHALL BE SECURED WITH MANUFACTURER'S SUPPLIED DEVICE. REFER TO MMCD STANDARD DRAWING E2.1.
- ALL NEW POLES SHALL BE GALVANIZED STEEL.
- SHOP DRAWINGS OF ALL NEW SIGNAL POLES MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER TO VERIFY POLE LOADING PASSES MoTT REQUIREMENTS.
- TRAFFIC SIGNAL CONTROLLER SYSTEM COMPONENTS:
  - ECONOLITE TS2 TYPE 2 PLUG-N-GO
  - P44DD CABINET
  - ECONOLITE COBALT CONTROLLER
  - 16 CHANNEL MMU SMART MONITOR
  - 8 PHASE 12 POSITION 16 CHANNEL BP
  - 16 CHANNEL DET. RACK
  - COMPUTER SHELF
  - FRAM FILTER
- UPS EQUIPMENT - VALID MANUFACTURING: KSD4483014 CABINET INCLUDING:
  - FXM 1100 UPS: 017-201-32
  - AUTOMATIC TRANSFER SWITCH: 020-165-21
  - BATTERY CABLE KIT: SP96-022-94
  - 4x12VDC BATTERIES: 240 XTV BATTERIES: 181-230-10
  - ALPHA GUARD BATTERY CHARGER: AG-CMT43C

**LEGEND (SOLID FILL DENOTES EXISTING)**

	DECORATIVE LUMINAIRE POLE		RAISED CURB
	LUMINAIRE POLE (SINGLE) 'F' DENOTES FRANGIBLE BASE		PROPERTY LINE
	LUMINAIRE POLE (DOUBLE)		EDGE OF GRAVEL SHOULDER
	RRFB POLE		EDGE OF PAVEMENT
	DFW PLASTICS DFW37C4-18-4DP JUNCTION BOX		PAINT LINE
	DFW PLASTICS DFW1730C4-18-4DP JUNCTION BOX		FUTURE ELECTRICAL AND GEOMETRICS
	SIGNAL POLE WITH SIGNAL HEAD MOUNTED ON SIDE		ELECTRICAL EQUIPMENT TO BE REMOVED
	COMBINATION LUMINAIRE/TRAFFIC SIGNAL POLE		PROPOSED UNDERGROUND CONDUIT
	LANE-USE SIGN POLE		EXISTING UNDERGROUND CONDUIT
	ILLUMINATED SIGN W/ AMBER FLASHERS		FENCE
	POWER/TELEPHONE POLE		CORRUGATED METAL PIPE (CULVERT)
	PEC PHOTO ELECTRIC CELL		U/G UTILITY:
	RPVC RIGID P.V.C. CONDUIT		'G' DENOTES GAS
			'S' DENOTES STORM DRAINS/SEWERS
			'W' DENOTES WATER
			'UE' DENOTES ELECTRIC
			'UT' DENOTES TELEPHONE
			'SAN' DENOTES SANITARY SEWER

DRAWING LIST		
DRAWING NO.	REV.NO	DESCRIPTION
E01	1	NOTES AND LEGEND
E02	1	SITE PLAN ENLARGEMENT - LAMPSON STREET AT ESQUIMALT ROAD
E03	1	ELEVATIONS - LAMPSON STREET AT ESQUIMALT ROAD
E04	1	SITE PLAN ENLARGEMENT - MACAULAY STREET AT ESQUIMALT ROAD
E05	1	ELEVATIONS - MACAULAY STREET AT ESQUIMALT ROAD
E06	1	SITE PLAN ENLARGEMENT - HEAD STREET AT ESQUIMALT ROAD
E07	1	ELEVATIONS - HEAD STREET AT ESQUIMALT ROAD
E08	1	SITE PLAN ENLARGEMENT - 848 ESQUIMALT ROAD
E09	1	ELEVATIONS - 848 ESQUIMALT ROAD
E10	1	SITE PLAN ENLARGEMENT - DUNSMUIR ROAD AT ESQUIMALT ROAD
E11	1	ELEVATIONS - DUNSMUIR ROAD AT ESQUIMALT ROAD

LED LUMINAIRE PRODUCT LIST					
MANUFACTURER	MODEL No.	WATTAGE	DISTRIBUTION TYPE	QUANTITY	
AMERICAN ELECTRIC	ATBO P203 MVOLT R2 3K HSS	70W LED	TYPE II	1	
AMERICAN ELECTRIC	ATBO P303 MVOLT R3 3K	106W LED	TYPE III	1	
AMERICAN ELECTRIC	ATBO P303 MVOLT R3 3K FSS	106W LED	TYPE III	2	
CYCLONE LIGHTING	C012P1-DP3AR-T3-P40-30K	56W LED	TYPE III	4	
CYCLONE LIGHTING	C012P1-DP3AR-T3M-P70-30K	107W LED	TYPE III	2	

APPROVED PRODUCT LIST					
PRODUCTS	MANUFACTURER	SPECIFICATIONS	EXCEPTIONS	SUPPLIER	COMMENTS
POLES, SIGNAL ARM, AND ANCHOR BOLTS	WEST COAST ENGINEERING/NOVA POLE	MMCD/MoTT	-	CONTRACTOR	GALVANIZED
SIDE MOUNT BRACKETS	GREEN LITE	MoTT	-	CONTRACTOR	
SIGNAL HEADS	ECONOLITE	MoTT	-	CONTRACTOR	
LED DISPLAYS	DIALIGHT 433	MMCD/MoTT	-	CONTRACTOR	
PEDESTRIAN HEADS	ECONOLITE	MoTT	-	CONTRACTOR	COLOUR TO MATCH EXISTING
COUNTDOWN LED PEDESTRIAN DISPLAYS	DURALIGHT	JXM200-VIHMCD JXM200-VIE	-	CONTRACTOR	COLOUR TO MATCH EXISTING
PEDESTRIAN PUSHBUTTON (AT RRFB CROSSINGS)	POLARA	INX 9WNO-Y-NA	-	CONTRACTOR	AUDIBLE MESSAGE "YELLOW LIGHTS ARE FLASHING" AND PBF9A9X15-X SIGN ADAPTER
CYCLIST PUSHBUTTON	POLARA	BULLDOG	-	CONTRACTOR	COLOUR TO MATCH EXISTING
SERVICE PANEL	VALID MANUFACTURING	HWYSP12-6S-M	-	CONTRACTOR	
JUNCTION BOXES	DFW PLASTICS INC	DFW37C4-18-4DP DFW1730C4-18-4DP	-	CONTRACTOR	
RRFB'S (120V HARDWIRED)	CARMANAH	R920-MX 300-AC	-	CONTRACTOR	
RRFB'S (SOLAR)	CARMANAH	R920-MX 100	-	CONTRACTOR	

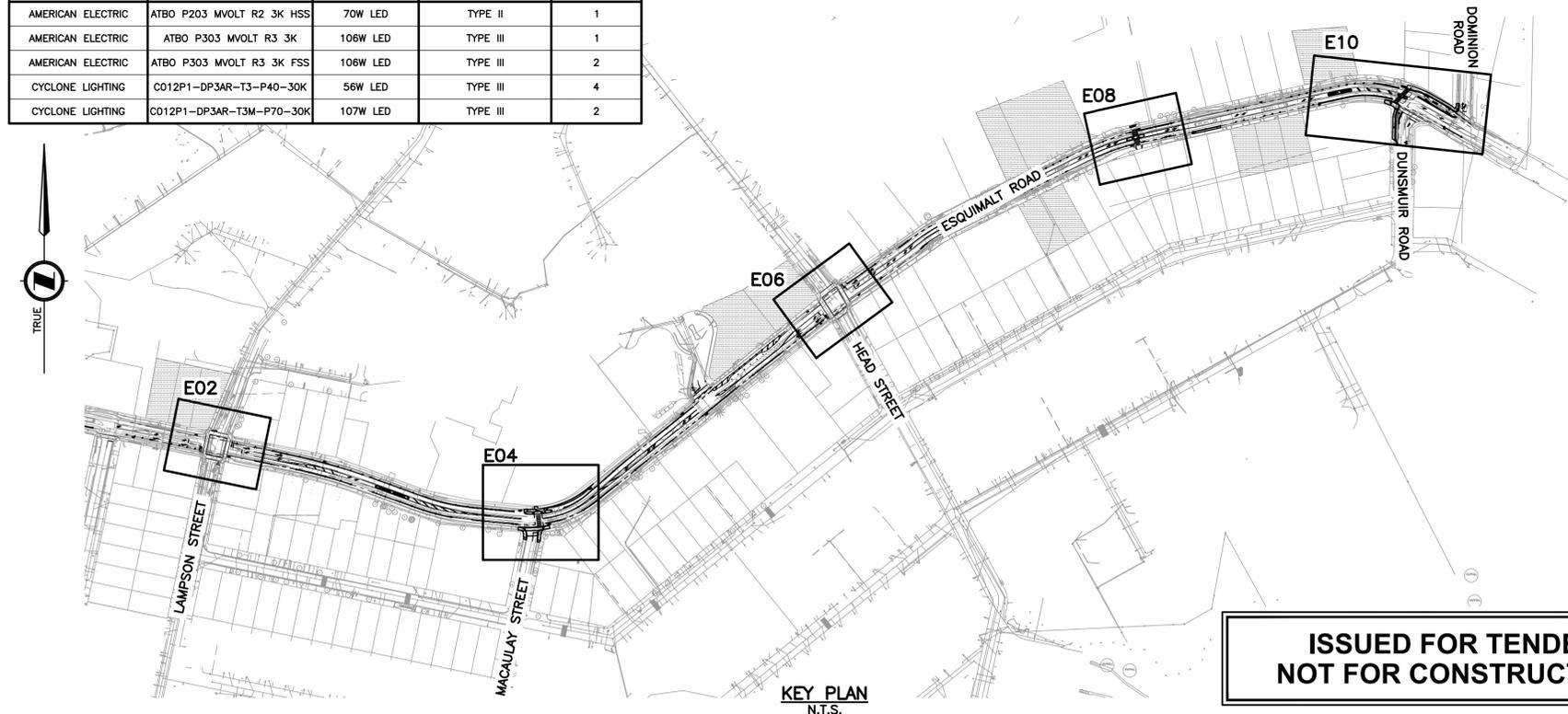
PBX ENGINEERING LTD.  
PERMIT TO PRACTICE NUMBER:  
**1000208**

# TOWNSHIP OF ESQUIMALT

## ESQUIMALT ROAD - PROJECT 1

### STREET LIGHTING & SIGNALS

#### ISSUED FOR TENDER



SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

**ISSUED FOR TENDER**  
**NOT FOR CONSTRUCTION**

**ELECTRICAL DRAWING: E01**

**33995**

ISSUED FOR TENDER DESIGN NO.

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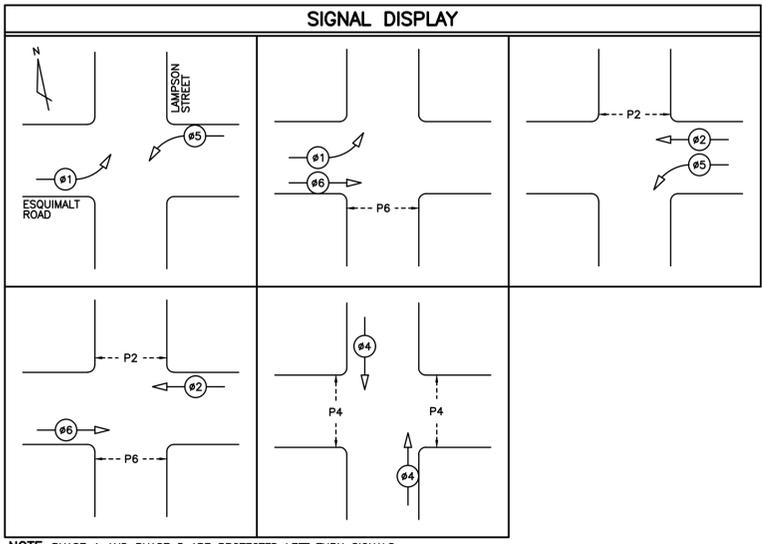
### STREET LIGHTING & SIGNALS

#### NOTES AND LEGEND



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Victoria BC V8W 2A4  
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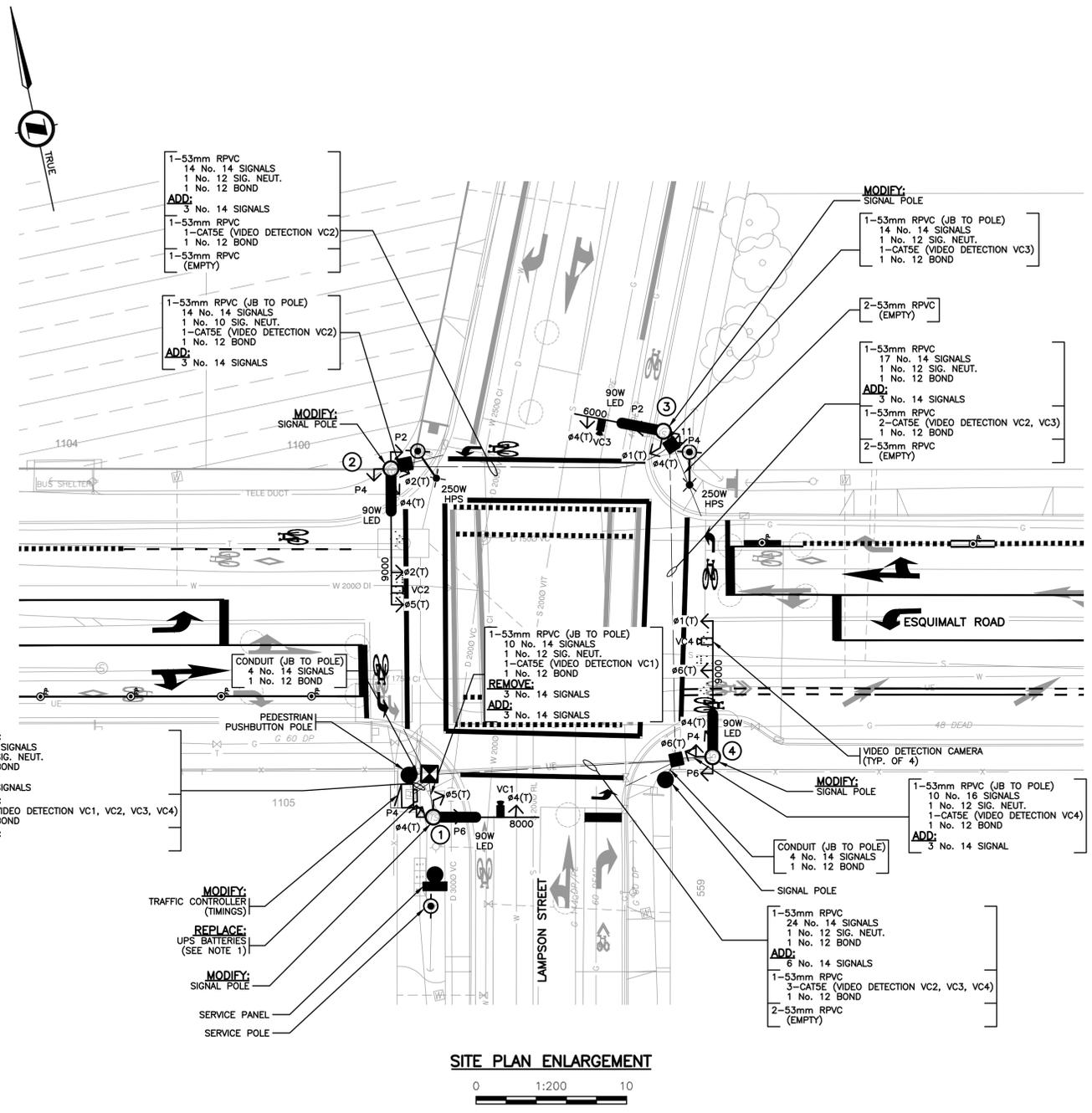
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DRAWN BY	PBX	DESIGN BY	AJB/JG	1
CHECKED BY	MD	APPROVED BY	MD	OF 11
				REV. 1



NOTE: PHASE 1 AND PHASE 5 ARE PROTECTED LEFT TURN SIGNALS.

INTERSECTION LIGHTING DESIGN CRITERIA		
ROADWAY LOCATION	LAMPSON STREET AT ESQUIMALT ROAD	
ROAD CLASSIFICATION	MAJOR/MAJOR	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER	90W/TYPE II/AMERICAN ELECTRIC/ATBO 20BLEDE13 MVOLT R2 3K	
	RECOMMENDED ILLUMINANCE	ACHIEVED ILLUMINANCE
ILLUMINATION LEVEL (AVG.)	26.0 LUX	45.8 LUX
UNIFORMITY RATIO (AVG-MIN)	3.0:1	2.5:1

NOTE: BASED ON IESNA RP-8-21 (TABLE 12-1)



SITE PLAN ENLARGEMENT



CONDUCTOR COLOUR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
MODIFY:	#1	RED YELLOW GREEN ARROW
	#2	RED YELLOW GREEN
	#4	RED YELLOW GREEN
INSTALL:	#5	RED (BLUE T.T.) YELLOW BLUE (WHITE T.T.)
	#6	RED YELLOW (RED T.T.) BLUE
INSTALL:	P2	DON'T WALK WALK PUSH BUTTON
	P4	DON'T WALK WALK PUSH BUTTON
RE-LABEL: (PREVIOUSLY P1)	P6	DON'T WALK WALK PUSH BUTTON
	CONTROLLER POWER	
LUMINAIRE CCT. A		BLACK
LUMINAIRE CCT. B		RED
NEUTRAL		BLACK
GROUND/BOND		WHITE
GROUND/BOND		GREEN

NOTE: T.T. DENOTES TAPE TRACER.

VIDEO DETECTOR CAMERA DETAILS		
CABLE DESCRIPTION	LABEL	VEHICLE MOVEMENT
VIDEO DETECTOR CAMERA No. 1 ON POLE 1	VC1	SOUTHBOUND (#4)
VIDEO DETECTOR CAMERA No. 2 ON POLE 2	VC2	WESTBOUND (#2)
VIDEO DETECTOR CAMERA No. 3 ON POLE 3	VC3	NORTHBOUND (#4)
VIDEO DETECTOR CAMERA No. 4 ON POLE 4	VC4	EASTBOUND (#6)

NOTES:  
1. UPS BATTERIES SHALL BE ALPHACELL MODEL 240XTV. CONTRACTOR SHALL VERIFY PRODUCT FITS IN EXISTING CABINET PRIOR TO ORDERING



CHECK BEFORE YOU DIG  
CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL UNDERGROUND UTILITIES.

POSTED SPEED LIMIT 40 km/h  
SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ALL EQUIPMENT IS EXISTING UNLESS NOTED OTHERWISE

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ELECTRICAL DRAWING: E02  
**33995**

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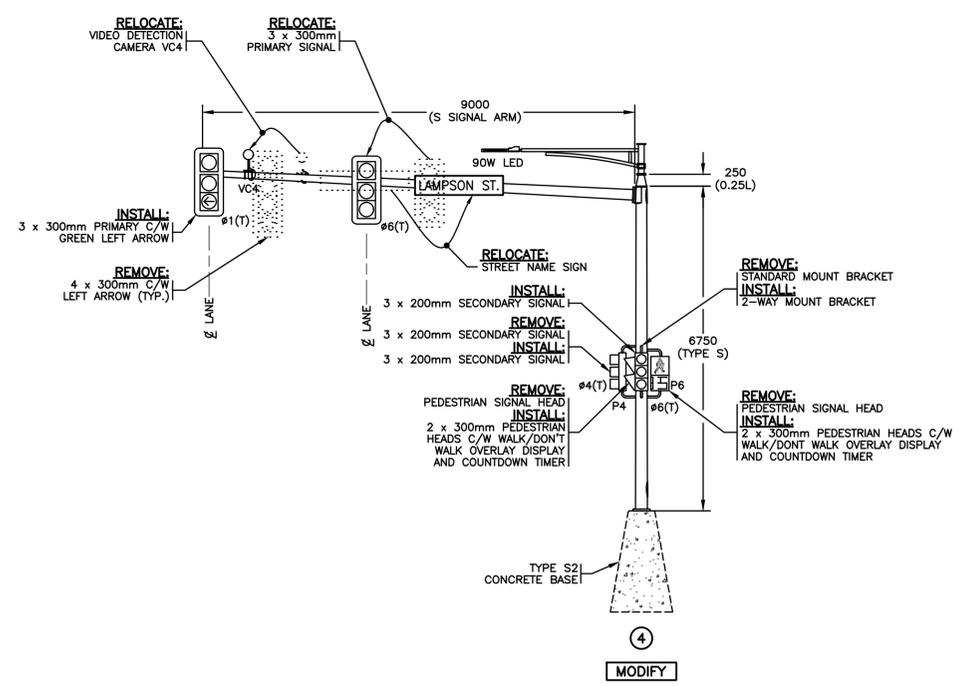
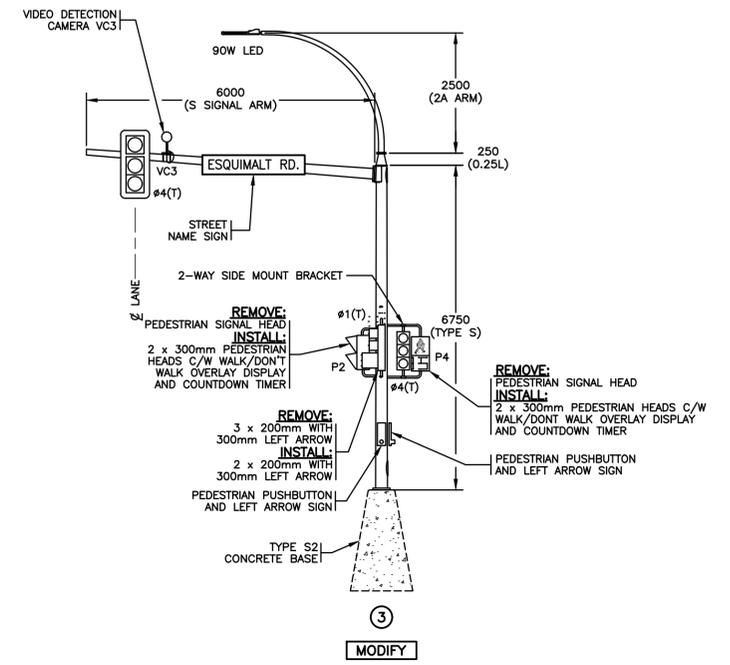
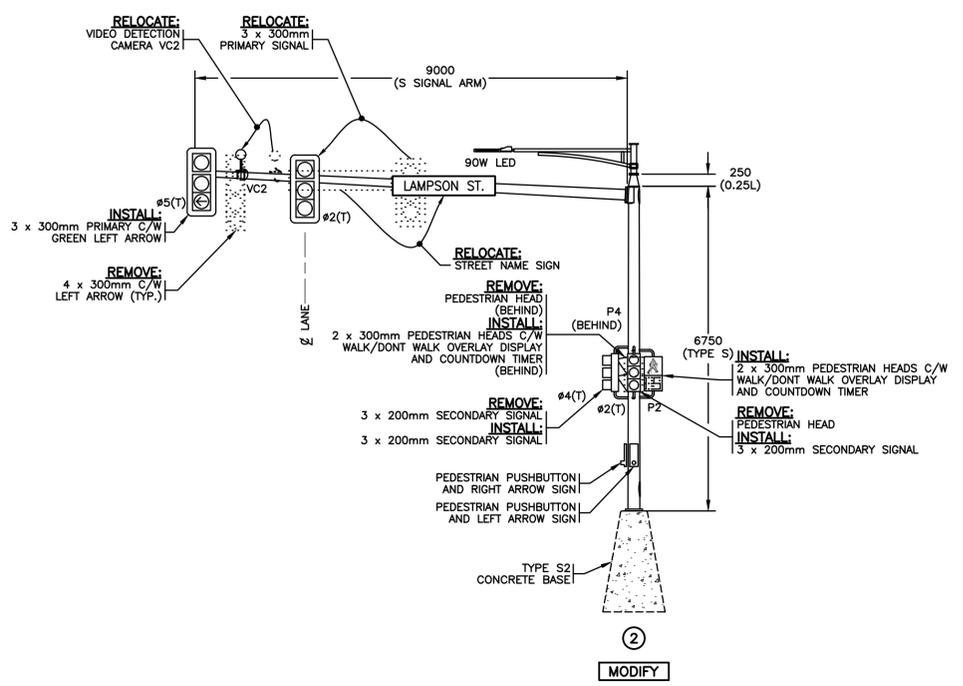
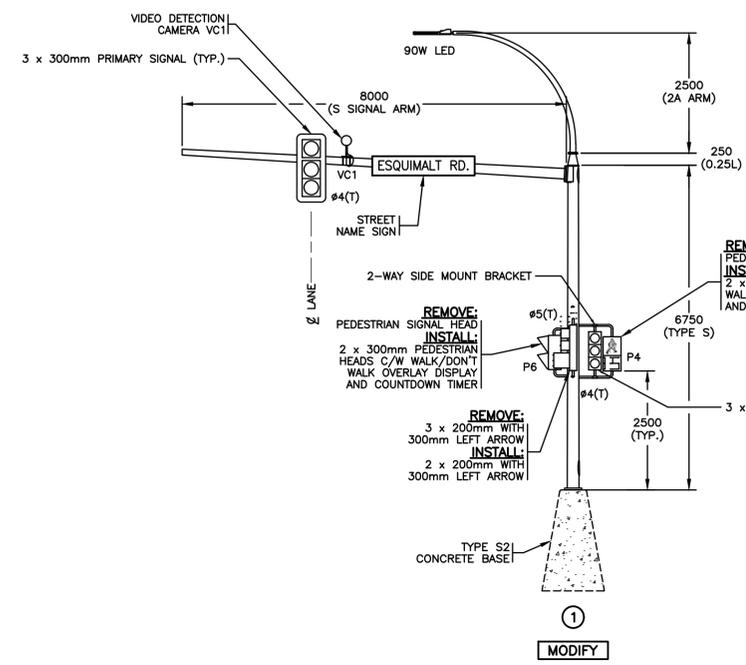


**STREET LIGHTING & SIGNALS**  
SITE PLAN ENLARGEMENT - LAMPSON STREET AT ESQUIMALT ROAD

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Tel 250.388.7222  
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'T' DENOTES TUNNEL VISORS



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SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ELECTRICAL DRAWING: E03

33995

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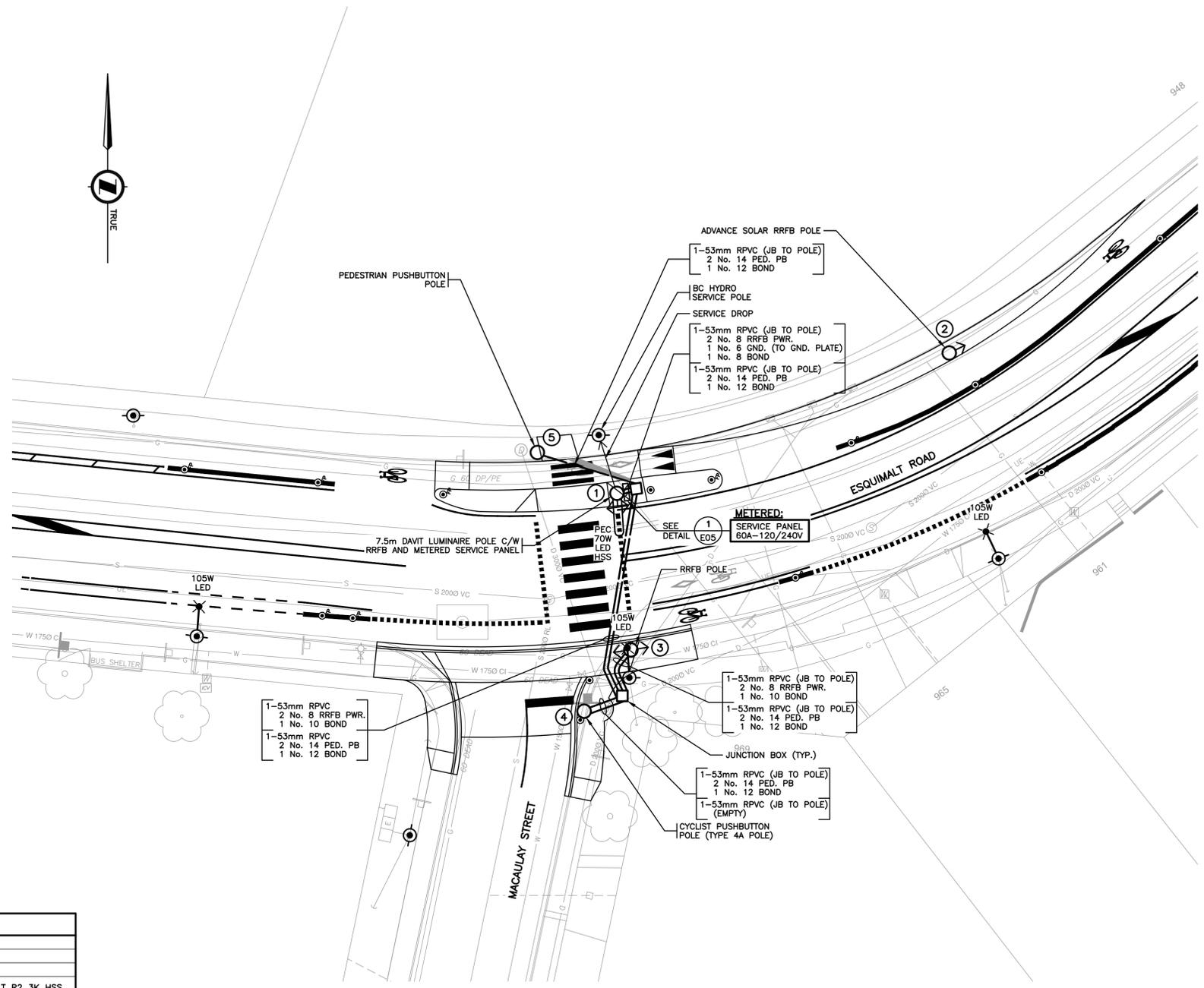


**STREET LIGHTING & SIGNALS**  
**ELEVATIONS - LAMPSON STREET AT ESQUIMALT ROAD**



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Tel 250.388.7222  
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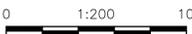
SCALE	AS NOTED	DATE	25/05/22	DWG. NO.
DRAWN BY	PBX	DESIGN BY	AJB/JG	3
CHECKED BY	MD	APPROVED BY	MD	11
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INTERSECTION LIGHTING DESIGN CRITERIA		
INTERSECTION NAME	ESQUIMALT ROAD AT MACAULAY STREET	
ROAD CLASSIFICATION	MAJOR/LOCAL	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER	70W/TYPE II/AMERICAN ELECTRIC/ATBO P203 MVOLT R2 3K HSS 105W/TYPE II/AMERICAN ELECTRIC/ATBO 30BLEDE10 MVOLT R2 3K	
ILLUMINATION LEVEL (AVG.)	RECOMMENDED ILLUMINANCE	ACHIEVED ILLUMINANCE
	20.0 LUX	27.8 LUX
UNIFORMITY RATIO (AVG:MIN)	3.0:1	2.9:1

NOTE: BASED ON IESNA RP-8-21 (TABLE 12-1)

**SITE PLAN ENLARGEMENT**



POSTED SPEED LIMIT 40 km/h



**CHECK BEFORE YOU DIG**  
 CONTRACTOR SHALL CONFIRM THE LOCATIONS  
 OF ALL UNDERGROUND UTILITIES.

SEE MASTER MUNICIPAL CONSTRUCTION  
 DOCUMENTS (MMCD) - LATEST EDITION AND  
 TOWNSHIP OF ESQUIMALT SUPPLEMENTAL  
 SPECIFICATIONS FOR APPLICABLE STANDARDS AND  
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**ELECTRICAL DRAWING: E04**

**33995**

ISSUED FOR TENDER DESIGN NO.

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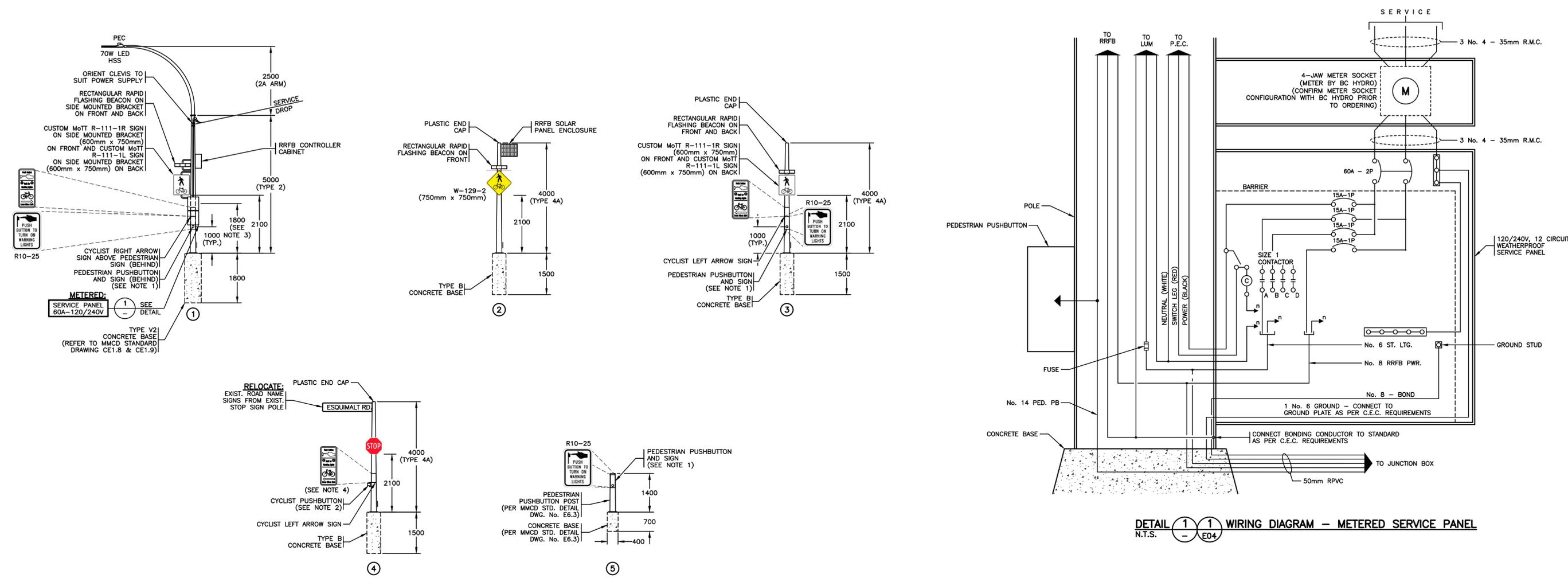
**STREET LIGHTING & SIGNALS**  
**SITE PLAN ENLARGEMENT - MACAULAY STREET AT ESQUIMALT ROAD**



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- NOTES:**
1. PEDESTRIAN PUSHBUTTON SHALL BE POLARA INX AUDIBLE PUSHBUTTON. AUDIBLE MESSAGE SHALL BE "YELLOW LIGHTS ARE FLASHING".
  2. CYCLIST PUSHBUTTON SHALL BE POLARA BULLDOG PUSHBUTTON.
  3. SERVICE PANEL METER SHALL BE INSTALLED AT A HEIGHT OF 1500mm TO 1800mm ABOVE GRADE.
  4. CYCLIST PUSHBUTTON SIGN SHALL BE INSTALLED ON ANGULAR FACE OF POLE 45 DEGREES TO STOP SIGN.

ALL EQUIPMENT IS PROPOSED  
UNLESS NOTED OTHERWISE

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SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ELECTRICAL DRAWING: E05  
**33995**

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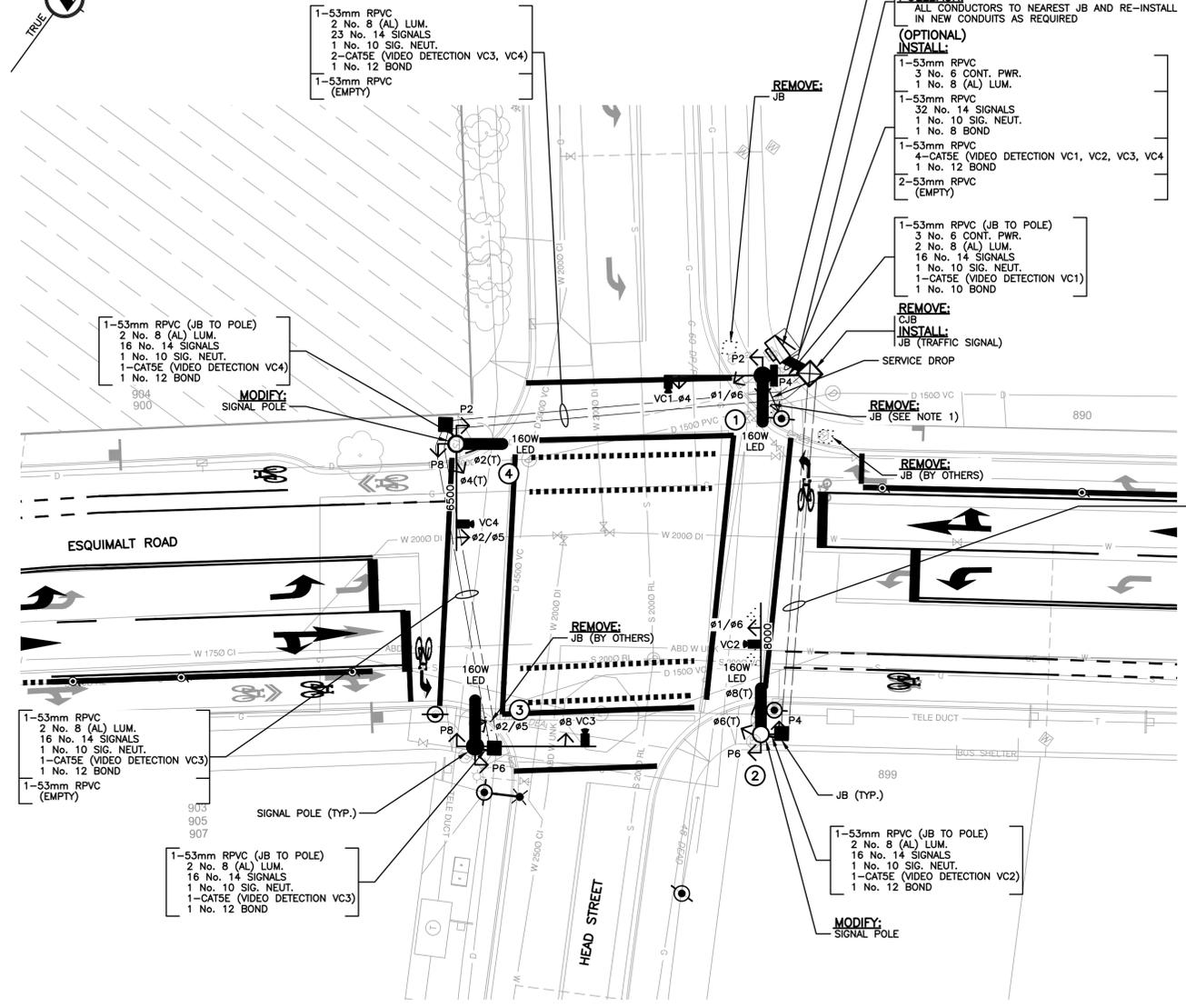
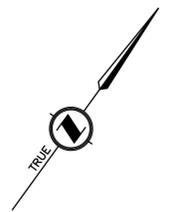
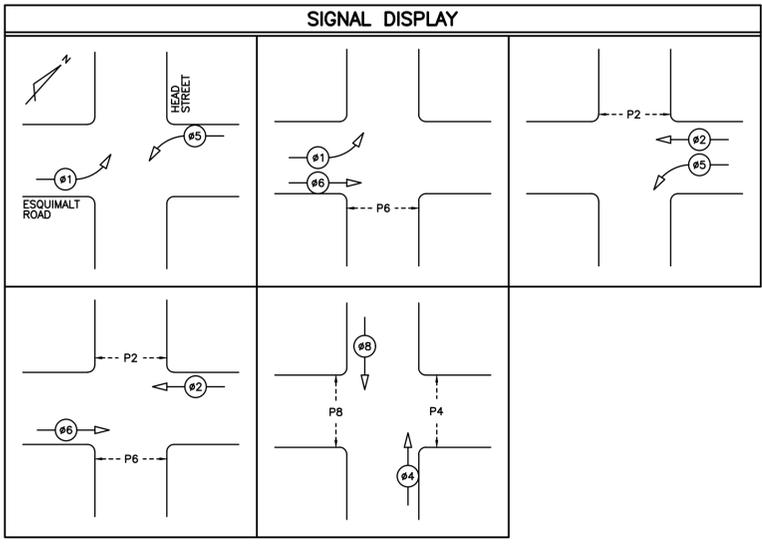


**STREET LIGHTING & SIGNALS**  
ELEVATIONS - MACAULAY STREET AT ESQUIMALT ROAD



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(OPTIONAL)  
**REMOVE:**  
TRAFFIC CONTROLLER, CONTROLLER CABINET AND CONCRETE BASE  
**INSTALL:**  
ECONOLITE COBALT TRAFFIC CONTROLLER IN P44 CABINET ON A TYPE P CONCRETE BASE C/W UPS CABINET ON BACK AND CONCRETE STEP PADS.

(OPTIONAL)  
**REMOVE:**  
2-53mm RPVC (FROM EXIST. CJB TO TRAFFIC CONTROLLER CABINET)  
**PULLBACK:**  
ALL CONDUCTORS TO NEAREST JB AND RE-INSTALL IN NEW CONDUITS AS REQUIRED

(OPTIONAL)  
**INSTALL:**  
1-53mm RPVC  
3 No. 6 CONT. PWR.  
1 No. 8 (AL) LUM.  
1-53mm RPVC  
32 No. 14 SIGNALS  
1 No. 10 SIG. NEUT.  
1 No. 8 BOND  
1-53mm RPVC  
4-CATSE (VIDEO DETECTION VC1, VC2, VC3, VC4)  
1 No. 12 BOND  
2-53mm RPVC (EMPTY)

1-53mm RPVC (JB TO POLE)  
3 No. 6 CONT. PWR.  
2 No. 8 (AL) LUM.  
16 No. 14 SIGNALS  
1 No. 10 SIG. NEUT.  
1-CATSE (VIDEO DETECTION VC1)  
1 No. 10 BOND

**REMOVE:**  
CJB  
**INSTALL:**  
JB (TRAFFIC SIGNAL)

**REMOVE:**  
JB (SEE NOTE 1)

**REMOVE:**  
JB (BY OTHERS)

1-53mm RPVC  
2 No. 8 (AL) LUM.  
16 No. 14 SIGNALS  
1 No. 10 SIG. NEUT.  
1-CATSE (VIDEO DETECTION VC2)  
1 No. 12 BOND  
1-53mm RPVC (EMPTY)

INTERSECTION LIGHTING DESIGN CRITERIA		
ROADWAY LOCATION	HEAD STREET AT ESQUIMALT ROAD	
ROAD CLASSIFICATION	MAJOR/COLLECTOR	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/LUMINAIRE MANUFACTURER/MODEL NUMBER	160W/TYP II/LUMEC/SVM 140W4LED4K G2 LE2	
	RECOMMENDED ILLUMINANCE	ACHIEVED ILLUMINANCE
ILLUMINATION LEVEL (AVG.)	22.0 LUX	48.2 LUX
UNIFORMITY RATIO (AVG-MIN)	3.0:1	2.2:1

**NOTE:** BASED ON IESNA RP-8-21 (TABLE 12-1)

CONDUCTOR COLOUR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
Ø1	YELLOW ARROW GREEN ARROW	ORANGE (WHITE T.T.) BLUE (WHITE T.T.)
Ø2	RED YELLOW GREEN	RED YELLOW BLUE
Ø4	RED YELLOW GREEN	RED YELLOW (RED T.T.) BLUE
Ø5	YELLOW ARROW GREEN ARROW	ORANGE (WHITE T.T.) BLUE (WHITE T.T.)
Ø6	RED YELLOW GREEN	RED BROWN BLUE
Ø8	RED YELLOW GREEN	RED BROWN (ORANGE T.T.) BLUE
P2	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE (YELLOW T.T.)
P4	DON'T WALK WALK PUSH BUTTON	YELLOW (RED T.T.) BLUE PURPLE/PURPLE (RED T.T.)
P6	DON'T WALK WALK PUSH BUTTON	BROWN BLUE PURPLE/PURPLE (BROWN T.T.)
P8	DON'T WALK WALK PUSH BUTTON	BROWN (ORANGE T.T.) BLUE PURPLE/PURPLE (ORANGE T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCT. A		RED
LUMINAIRE CCT. B		BLACK
NEUTRAL		WHITE
GROUND/BOND		GREEN

**NOTE:** T.T. DENOTES TAPE TRACER.

VIDEO DETECTOR CAMERA DETAILS		
CABLE DESCRIPTION	LABEL	VEHICLE MOVEMENT
VIDEO DETECTOR CAMERA No. 1 ON POLE 1	VC1	NORTHBOUND (Ø4)
VIDEO DETECTOR CAMERA No. 2 ON POLE 2	VC2	EASTBOUND (Ø6)
VIDEO DETECTOR CAMERA No. 3 ON POLE 3	VC3	SOUTHBOUND (Ø8)
VIDEO DETECTOR CAMERA No. 4 ON POLE 4	VC4	WESTBOUND (Ø2)

- NOTES:**
- JUNCTION BOX IN NORTH EAST QUADRANT NEXT TO BC HYDRO POLE APPEARS TO BE REDUNDANT. CONTRACTOR SHALL ENSURE ALL WIRING INSIDE JUNCTION BOX IS REDUNDANT PRIOR TO REMOVAL.
  - CONDUCTOR COLOUR CODE ASSUMED PER MINISTRY STANDARD. CONTRACTOR SHALL VERIFY AND CONFIRM EXISTING WIRING PRIOR TO CONSTRUCTION.

POSTED SPEED LIMIT 40 km/h



**CHECK BEFORE YOU DIG**  
CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL UNDERGROUND UTILITIES.

SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

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**ELECTRICAL DRAWING: E06  
33995**

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1	ISSUED FOR TENDER	25/05/22	PBX	MD



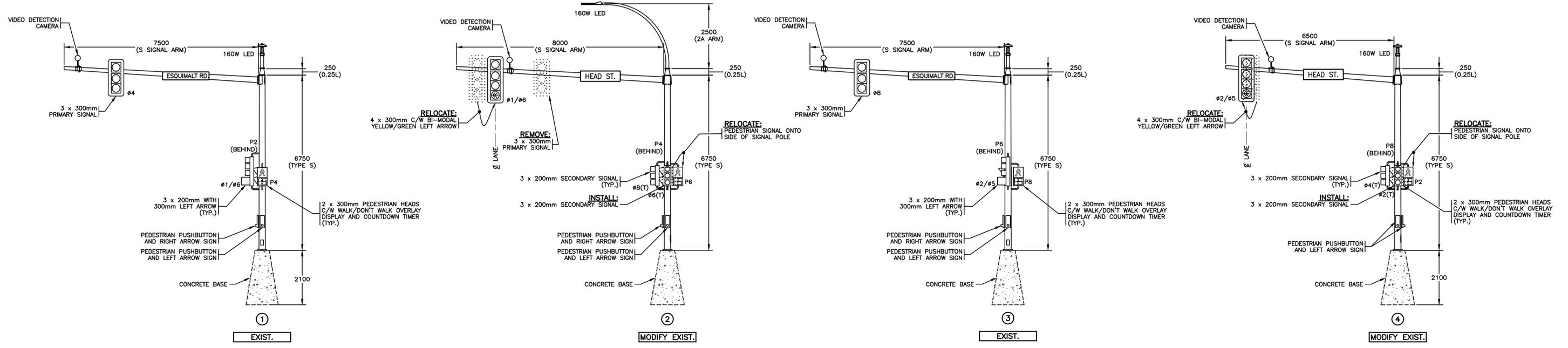
**STREET LIGHTING & SIGNALS**  
SITE PLAN ENLARGEMENT - HEAD STREET AT ESQUIMALT ROAD



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Suite 201 - 1221 Broad St.  
Victoria BC V8W 2A4  
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www.pbxeng.com

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DRAWN BY	PBX	DESIGN BY	AJB/JG	6
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'T' DENOTES TUNNEL VISORS



ALL EQUIPMENT IS EXISTING  
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ISSUED FOR TENDER  
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SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ELECTRICAL DRAWING: E07

33995

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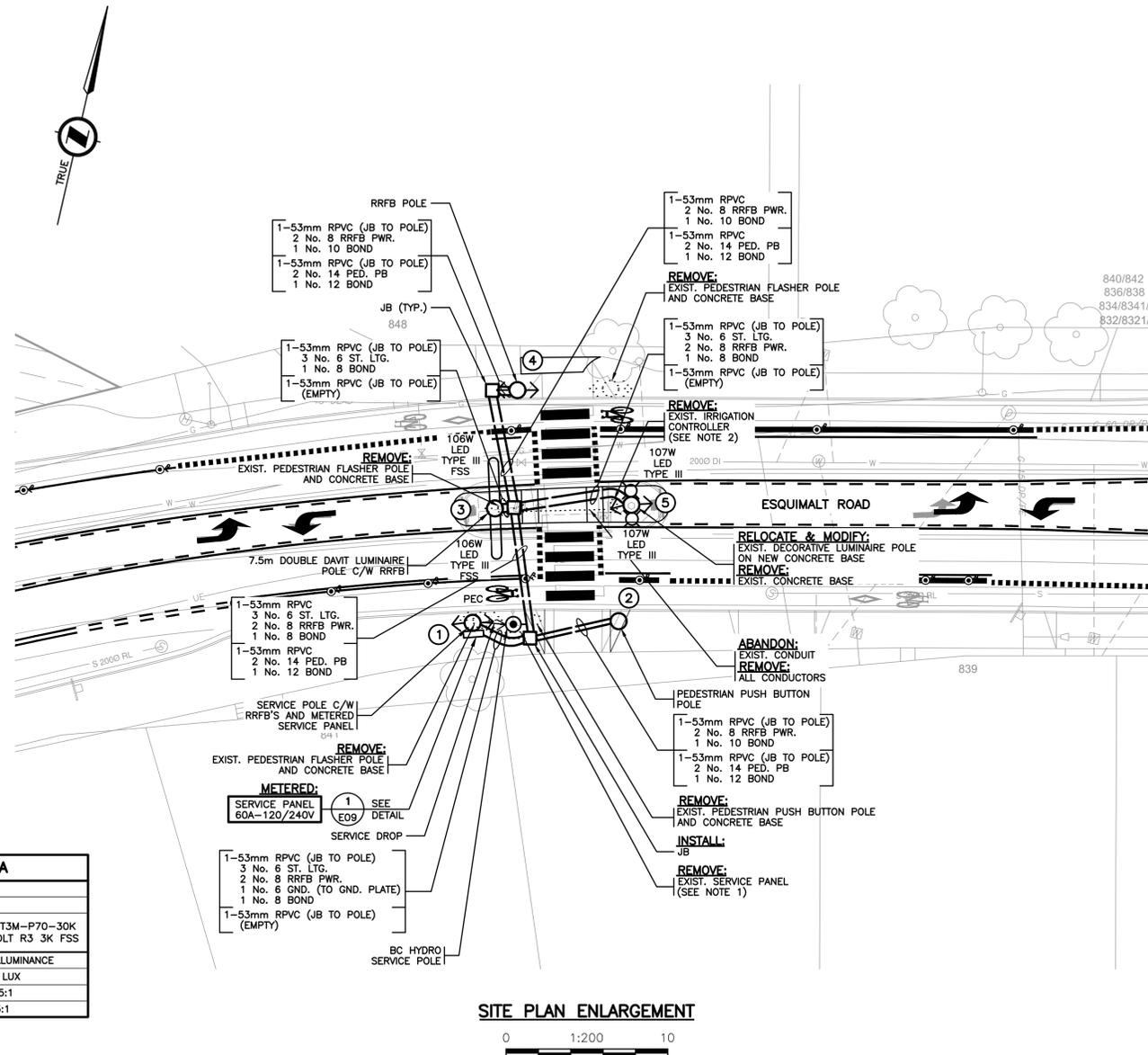


**STREET LIGHTING & SIGNALS**  
 ELEVATIONS - HEAD STREET AT ESQUIMALT ROAD



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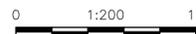
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PEDESTRIAN CROSSWALK LIGHTING DESIGN CRITERIA		
ROADWAY LOCATION	PEDESTRIAN CROSSWALK AT 848 ESQUIMALT ROAD	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/LUMINAIRE MANUFACTURER/MODEL NUMBER	107W/TYPE III/CYCLONE LIGHTING/CO12P1-DP3AR-T3M-P70-30K 106W/TYPE III/AMERICAN ELECTRIC/ATBO P303 MVOLT R3 3K FSS	
	RECOMMENDED ILLUMINANCE	ACHIEVED ILLUMINANCE
VERTICAL CROSSWALK ILLUMINANCE (AVG.)	30.0 LUX	31.4 LUX
HORIZONTAL ILLUMINATION LEVEL (AVG.)	9.0:1	64.5:1
HORIZONTAL UNIFORMITY RATIO (AVG:MIN)	3.0:1	1.3:1

NOTE: BASED ON IESNA RP-8-21 SECTION 12.6.4

SITE PLAN ENLARGEMENT



NOTES:

- CONTRACTOR SHALL VERIFY EXISTING CIRCUITS ARE RE-FED TO NEW SERVICE PANEL.
- CONTRACTOR SHALL CONFIRM IRRIGATION CONTROLLER REQUIREMENT WITH ESQUIMALT PRIOR TO REMOVAL.

POSTED SPEED LIMIT 40 km/h



CHECK BEFORE YOU DIG  
 CONTRACTOR SHALL CONFIRM THE LOCATIONS OF ALL UNDERGROUND UTILITIES.

SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ALL EQUIPMENT IS PROPOSED UNLESS NOTED OTHERWISE

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ELECTRICAL DRAWING: E08

33995

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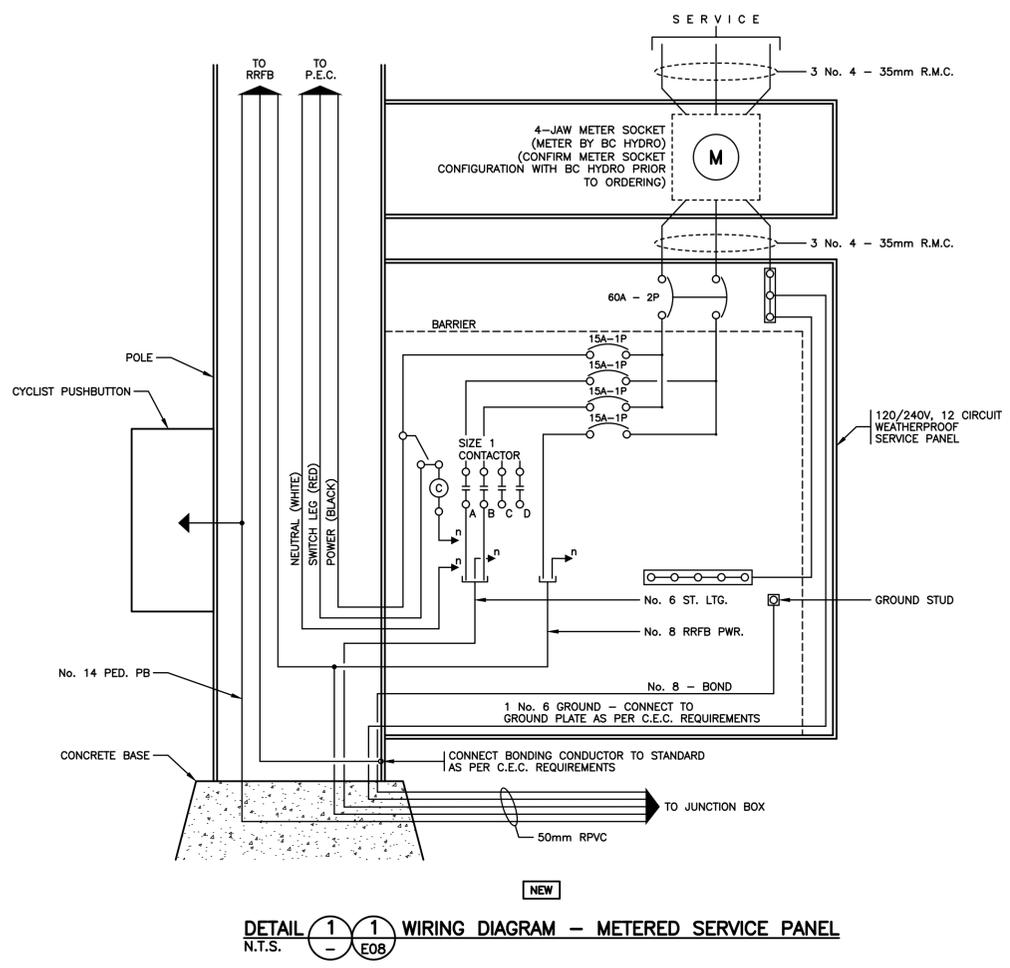
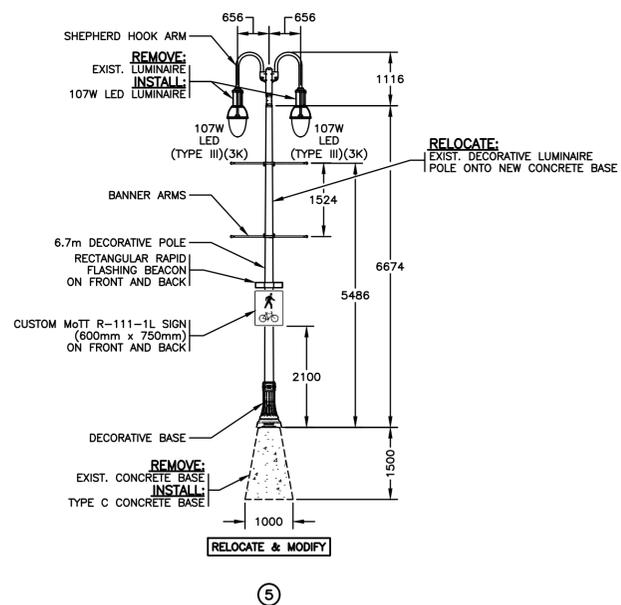
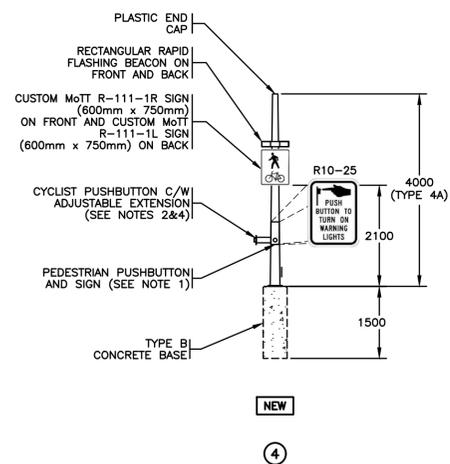
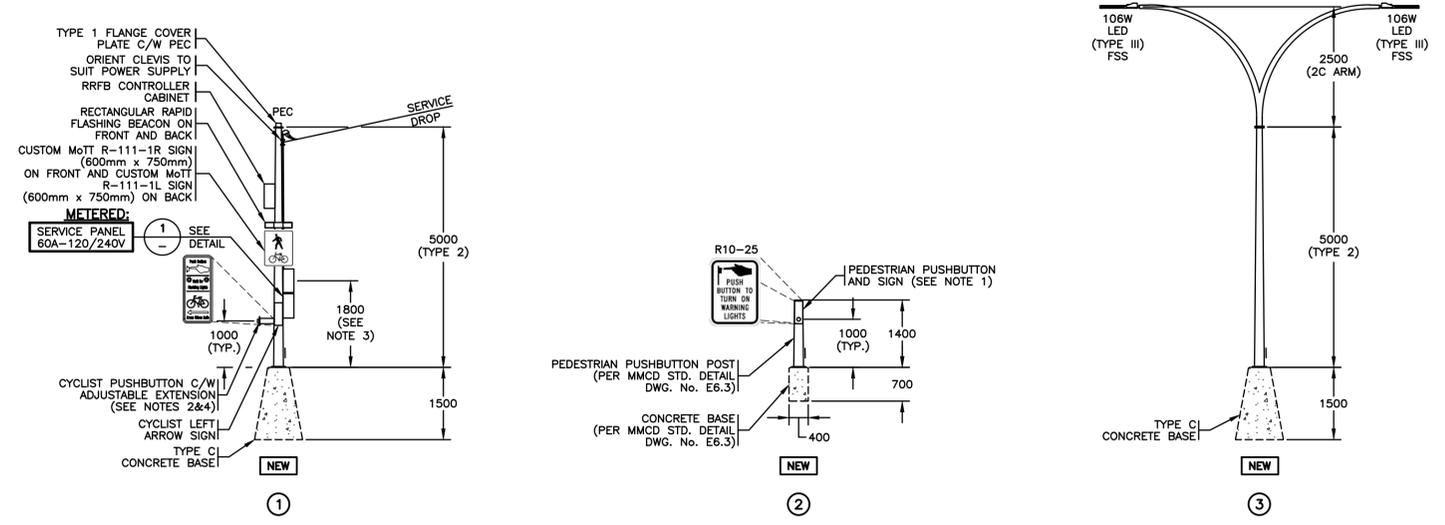


STREET LIGHTING & SIGNALS  
 SITE PLAN ENLARGEMENT - 848 ESQUIMALT ROAD



PBX ENGINEERING Ltd.  
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 Tel 250.388.7222  
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CHECKED BY	MD	APPROVED BY	MD	11
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- NOTES:**
1. PEDESTRIAN PUSHBUTTON SHALL BE POLARA INX AUDIBLE PUSHBUTTON. AUDIBLE MESSAGE SHALL BE "YELLOW LIGHTS ARE FLASHING".
  2. CYCLIST PUSHBUTTON SHALL BE POLARA BULLDOG PUSHBUTTON.
  3. SERVICE PANEL METER SHALL BE INSTALLED AT A HEIGHT OF 1500mm TO 1800mm ABOVE GRADE.
  4. PUSHBUTTON EXTENSION SHALL BE PELCO SE-2169-PNC 12 INCH.

ALL EQUIPMENT IS PROPOSED  
UNLESS NOTED OTHERWISE

ISSUED FOR TENDER  
NOT FOR CONSTRUCTION

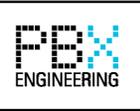
SEE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) - LATEST EDITION AND TOWNSHIP OF ESQUIMALT SUPPLEMENTAL SPECIFICATIONS FOR APPLICABLE STANDARDS AND DRAWINGS

ELECTRICAL DRAWING: E09  
**33995**

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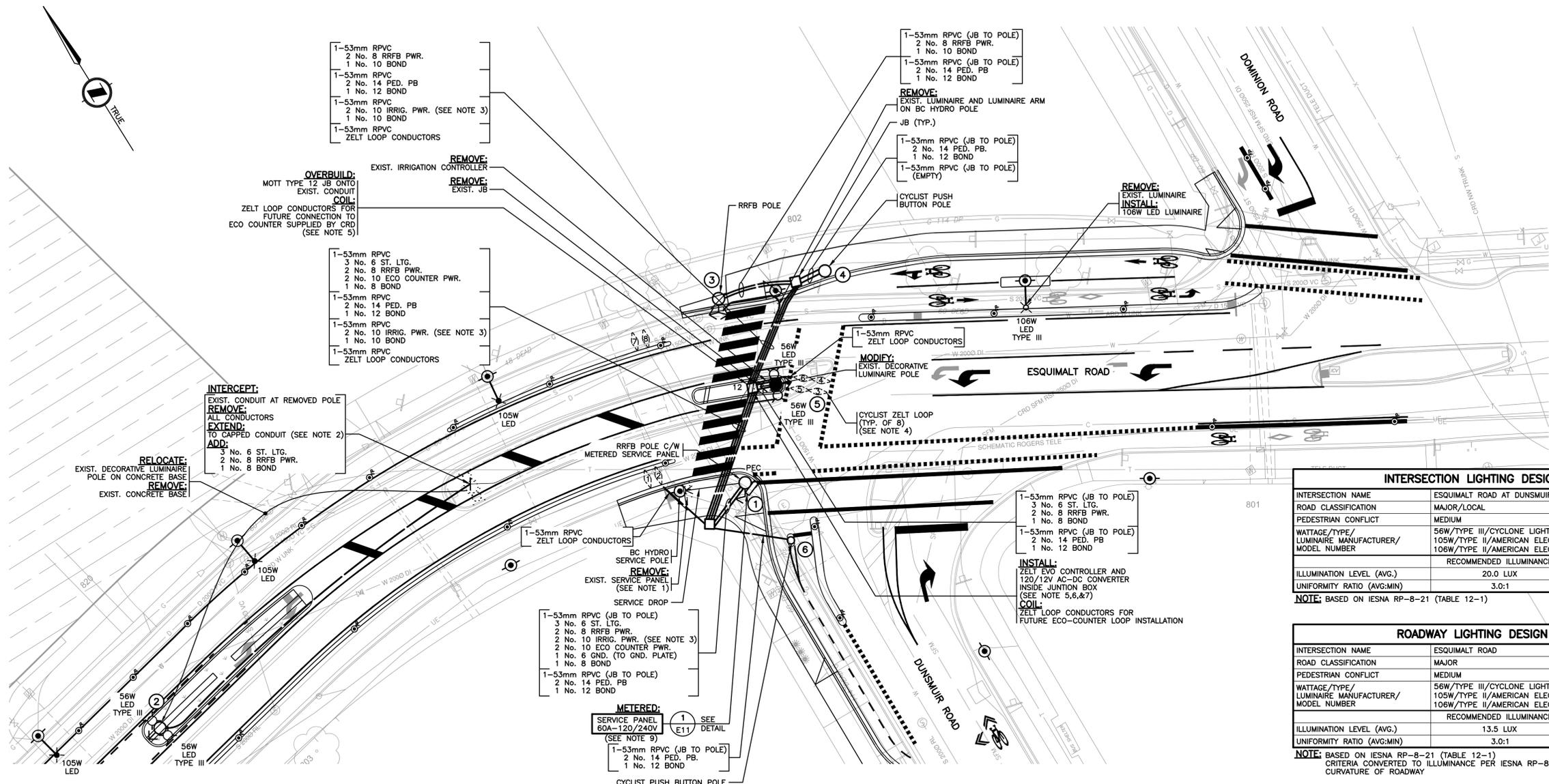
**STREET LIGHTING & SIGNALS**  
ELEVATIONS - 848 ESQUIMALT ROAD



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SITE PLAN ENLARGEMENT



INTERSECTION LIGHTING DESIGN CRITERIA		
INTERSECTION NAME	ESQUIMALT ROAD AT DUNSMUIR ROAD	
ROAD CLASSIFICATION	MAJOR/LOCAL	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER	56W/TYPE III/CYCLONE LIGHTING/CO12P1-DP3AR-T3-P40-30K 105W/TYPE II/AMERICAN ELECTRIC/ATBO 30BLEDE10 MVOLT R2 3K 106W/TYPE II/AMERICAN ELECTRIC/ATBO P303 MVOLT R3 3K	
ILLUMINATION LEVEL (AVG.)	RECOMMENDED ILLUMINANCE 20.0 LUX	ACHIEVED ILLUMINANCE 23.5 LUX
UNIFORMITY RATIO (AVG:MIN)	3.0:1	2.6:1

NOTE: BASED ON IESNA RP-8-21 (TABLE 12-1)

ROADWAY LIGHTING DESIGN CRITERIA		
INTERSECTION NAME	ESQUIMALT ROAD	
ROAD CLASSIFICATION	MAJOR	
PEDESTRIAN CONFLICT	MEDIUM	
WATTAGE/TYPE/ LUMINAIRE MANUFACTURER/ MODEL NUMBER	56W/TYPE III/CYCLONE LIGHTING/CO12P1-DP3AR-T3-P40-30K 105W/TYPE II/AMERICAN ELECTRIC/ATBO 30BLEDE10 MVOLT R2 3K 106W/TYPE II/AMERICAN ELECTRIC/ATBO P303 MVOLT R3 3K	
ILLUMINATION LEVEL (AVG.)	RECOMMENDED ILLUMINANCE 13.5 LUX	ACHIEVED ILLUMINANCE 20.3 LUX
UNIFORMITY RATIO (AVG:MIN)	3.0:1	1.9:1

NOTE: BASED ON IESNA RP-8-21 (TABLE 12-1)  
CRITERIA CONVERTED TO ILLUMINANCE PER IESNA RP-8-21 SECTION 3.2 DUE TO CURVATURE OF ROADWAY

- NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING CIRCUITS ARE RE-FED TO NEW SERVICE PANEL.
  - CONTRACTOR SHALL FIELD FIT CONDUIT TO MATCH EXISTING CONDUIT.
  - IRRIGATION CONTROLLER LOCATION TO BE CONFIRMED DURING CONSTRUCTION.
  - ZELT LOOPS SHALL BE INSTALLED IN A 1.5m x 0.4m DIAMOND CONFIGURATION.
  - ECO-COUNTER SYSTEM TO BE INSTALLED INSIDE OF JUNCTION BOX BY CRD (FUTURE WORK).
  - 120V TO 12V WATERPROOF AC-DC CONVERTER SHALL BE MODEL TMW 24-112.
  - AC-DC CONVERTER SHALL BE INSTALLED IN DRY LOCATION WITHIN THE JUNCTION BOX.
  - ECO-COUNTER AND AC-DC CONVERTER SHALL BE SUPPLIED BY THE CRD.
  - SERVICE PANEL SHALL BE INSTALLED ON 45 DEGREE FACE OF POLE.

ALL EQUIPMENT IS PROPOSED  
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POSTED SPEED LIMIT 40 km/h

CHECK BEFORE YOU DIG  
CONTRACTOR SHALL CONFIRM THE LOCATIONS  
OF ALL UNDERGROUND UTILITIES.

SEE MASTER MUNICIPAL CONSTRUCTION  
DOCUMENTS (MMCD) - LATEST EDITION AND  
TOWNSHIP OF ESQUIMALT SUPPLEMENTAL  
SPECIFICATIONS FOR APPLICABLE STANDARDS AND  
DRAWINGS

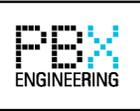
ELECTRICAL DRAWING: E10  
**33995**

ISSUED FOR TENDER

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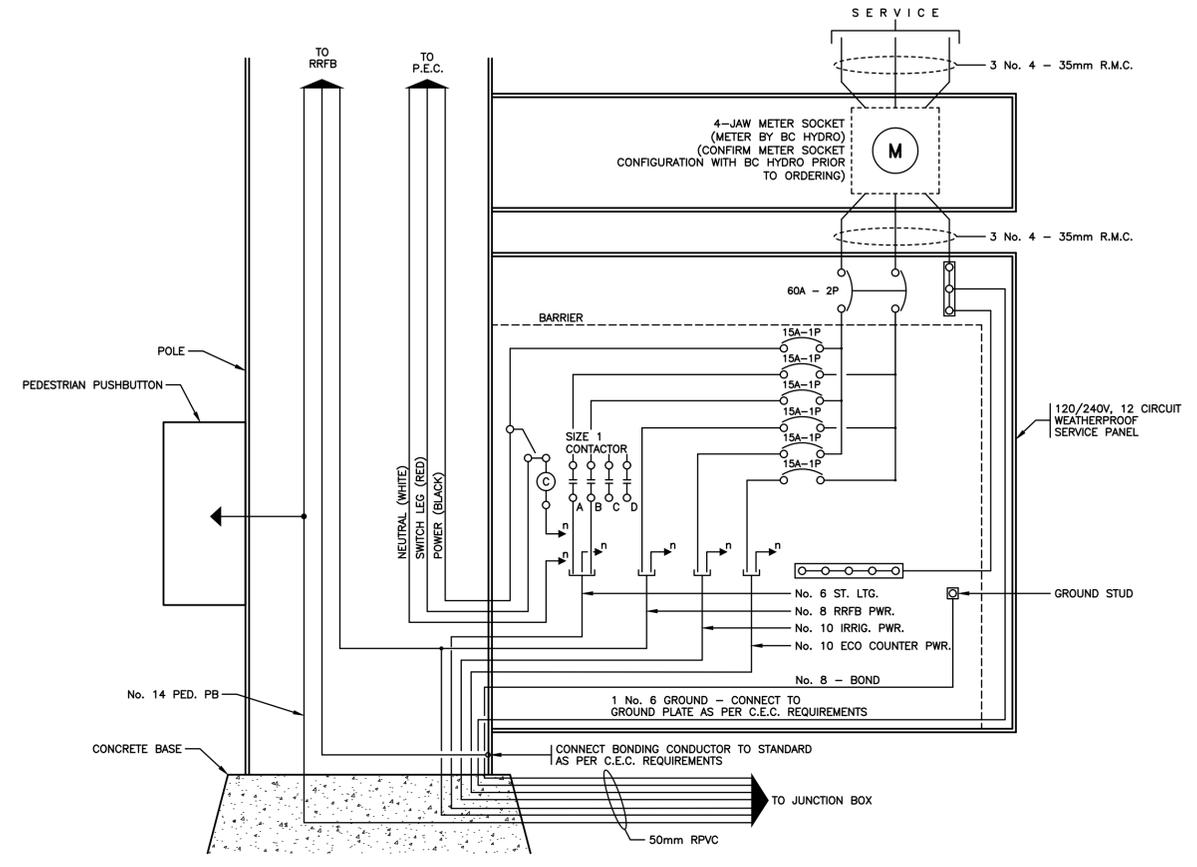
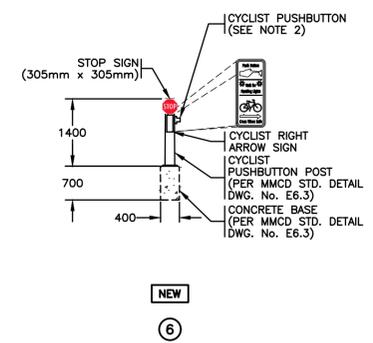
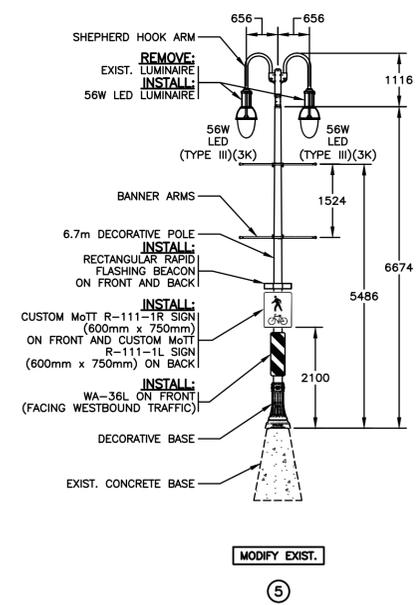
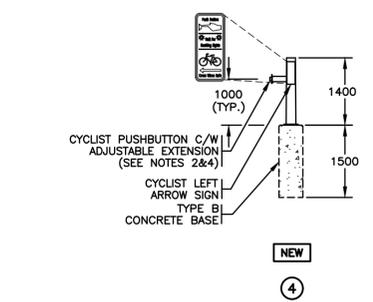
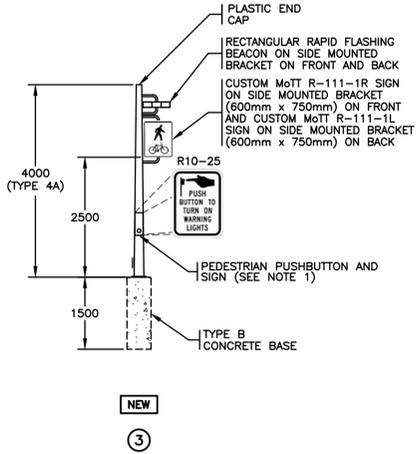
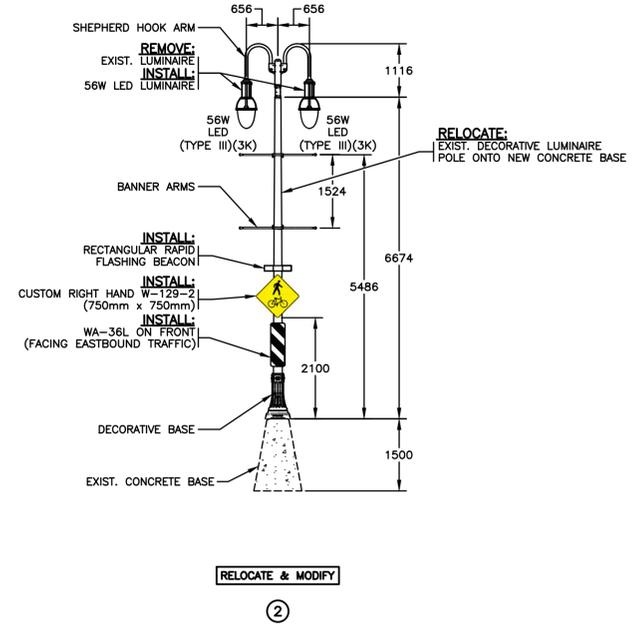
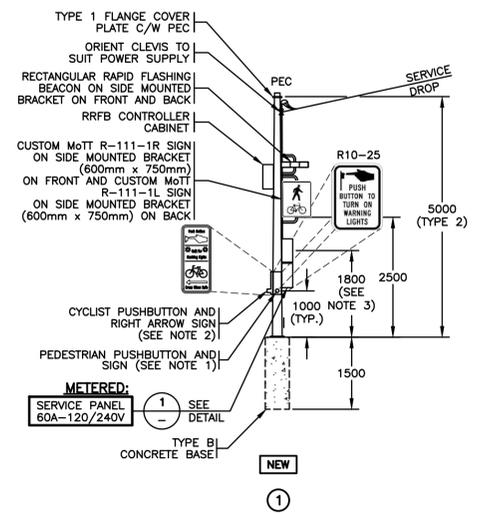
**STREET LIGHTING & SIGNALS**  
SITE PLAN ENLARGEMENT - DUNSMUIR ROAD AT ESQUIMALT ROAD



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DETAIL 1-1 WIRING DIAGRAM - METERED SERVICE PANEL  
N.T.S.

- NOTES:**
1. PEDESTRIAN PUSHBUTTON SHALL BE POLARA INX AUDIBLE PUSHBUTTON. AUDIBLE MESSAGE SHALL BE "YELLOW LIGHTS ARE FLASHING".
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ELECTRICAL DRAWING: E11  
**33995**

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