

REMOVE EXISTING JUNCTION BOX (TYPICAL 4 LOCATIONS)
 REMOVE EXISTING CONDUCTORS AND ABANDON CONDUIT (TYP.)

REFER TO SHEET 2 FOR SIGNAL ENLARGEMENT
 REFER TO SHEET 3 FOR ELEVATIONS AND DETAILS

SERVICE POLE
 SERVICE PANEL No. 1
 120/240V
 1-50mm RPVC
 2 No.10 LUM. OCT. A
 3 No.14 ADV. WARN. SIGN A2
 1 No.12 BOND

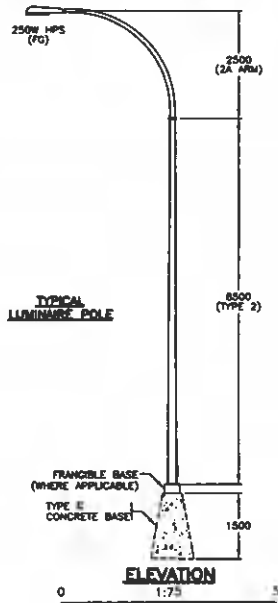
1-50mm RPVC
 2 No.10 LUM. OCT. A
 3 No.14 ADV. WARN. SIGN A2
 1 No.12 BOND
 (FROM JB TO POLE)

REMOVE EXISTING POLE, LUMINAIRE, JB AND CONCRETE BASE.
 REMOVE EXISTING CONDUCTORS AND ABANDON CONDUIT (TYPICAL 6 LOCATIONS)

SITE PLAN
 0 1:500 25

NOTES

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE ELECTRICAL SPECIAL PROVISIONS ISSUED WITH THIS CONTRACT.
- CONDUCTORS FROM JUNCTION BOX TO LUMINAIRE POLE SHALL BE:
 2 No.10 RW90 (70) - 50mm RPVC (UNLESS OTHERWISE NOTED)
 1 No.12 RW90 (70) - 50mm RPVC (UNLESS OTHERWISE NOTED)
- ALL CONDUITS FROM JUNCTION BOXES TO BASES ARE TO BE 50mm RPVC.
- JUNCTION BOXES SHALL BE POSITIONED BEHIND OR, AS AN ALTERNATIVE TO THE SIDE, BUT NOT IN FRONT OF POLES.
- EACH SHIELDED CABLE SHALL RUN CONTINUOUS WITH NO SPLICES, FROM THE CONTROLLER TO THE RESPECTIVE LOOP.
- 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.
- LUMINAIRE NUMBERING EXAMPLE: 1A2
 SERVICE No. - 1 OCT LETTER - A LUM. No. - 2
- WHERE POSSIBLE, POLES SHALL BE POSITIONED WITH THE HANDHOLE IN THE BACK OR IF NOT POSSIBLE, ON THE DOWNSTREAM TRAFFIC SIDE.
- 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 MINISTRY REPRESENTATIVE OF ANY ADJUSTMENTS MADE TO THE BASE LOCATION WHICH WILL EFFECT THE LOCATIONS OF HANDWARE TO BE MOUNTED ON THAT POLE PRIOR TO DRILLING.
- WHERE THREE OR MORE SECONDARY/PEDESTRIAN HEADS ARE BEING MOUNTED ON THE POLE SHAFT, ORIENT THE PEDESTRIAN HEAD MOUNTING BRACKETS WITH THE HIGHWAY ON TOP.
- WHERE TWO OR MORE SECONDARY HEADS ARE BEING MOUNTED IN THE SAME SHAFT, ALL SECONDARY HEADS SHALL HAVE TUNNELS.
- ALL NEW JUNCTION BOXES SHALL HAVE STEEL LIDS.
- ALL CONDUCTORS SHALL BE RW90 STRANDED COPPER UNLESS SHOWN OTHERWISE.



DO NOT USE THIS DRAWING FOR PAVEMENT MARKINGS

ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT WHERE NOTED

FOR MINISTRY USE ONLY
 THIS DRAWING SERIES PARTIALLY SUPERSEDES DRAWING SERIES DE-84050 SHEET 8

POSTED SPEED LIMIT 80 km/h ON HIGHWAY 11
 POSTED SPEED LIMIT 50 km/h ON VALLEY ROAD

SEE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" FOR APPLICABLE STANDARD DRAWINGS

ALL EQUIPMENT IS NEW EXCEPT WHERE NOTED

LEGEND	
	FUTURE CONCRETE BASE AND LUMINAIRE POLE (SINGLE)
	LUMINAIRE POLE (SINGLE)
	LUMINAIRE POLE (DOUBLE)
	PRIVATE LUMINAIRE (BASE VARIABLE)
	POST TOP MOUNTED LUMINAIRE
	WALL MOUNTED LUMINAIRE
	JUNCTION BOX - No. DENOTES TYPE
	CONCRETE JUNCTION BOX OR VAULT
	SIGNAL POLE WITH SIGNAL HEAD MOUNTED ON SIDE
	COMBINATION LUMINAIRE/TRAFFIC SIGNAL POLE
	ILLUMINATED SIGN WITH AMBER FLASHERS
	COMBINATION LUMINAIRE/ILLUMINATED SIGN WITH AMBER FLASHERS
	SIGN POLE (NON-ILLUMINATED)
	ILLUMINATED SIGN POLE
	COMBINATION LUMINAIRE/NON-ILLUMINATED SIGN
	COMBINATION LUMINAIRE/ILLUMINATED SIGN
	PEC PHOTO ELECTRIC CELL
	RPVC RIGID P.V.C. CONDUIT
	R.C. RIGID STEEL CONDUIT
	F.C. FLEXIBLE CONDUIT (LIQUID TIGHT)
	OVERHEAD FLASHING BEACON
	POST MOUNTED FLASHER
	BACKOUT
	POWER POLE
	TELEPHONE POLE
	POWER/TELEPHONE POLE
	SIGNAL HEAD VEHICLE PHASE
	SIGNAL HEAD PEDESTRIAN PHASE
	P.P.B. PEDESTRIAN PUSHBUTTON
	TEST SWITCH
	BREAKER
	NEUTRAL BAR
	DIAMOND DETECTOR LOOP (WITH LOOP LEADER)
	PRE-FORMED DETECTOR LOOP
	ROUND DETECTOR LOOP
	RECTANGULAR COUNT LOOP
	QUADRUPOLE DETECTOR LOOP
	RAISED CURB
	PROPERTY LINE
	EDGE OF GRAVEL SHOULDER
	EDGE OF PAVEMENT
	PAINT LINE
	FUTURE ELECTRICAL AND GEOMETRICS
	ELECTRICAL EQUIPMENT TO BE REMOVED
	PROPOSED UNDERGROUND CONDUIT
	EXISTING UNDERGROUND CONDUIT
	FENCE
	CORRUGATED METAL PIPE (CULVERT)
	U/G UTILITY
	"G" DENOTES GAS
	"S" DENOTES STORM DRAINS/SEWERS
	"W" DENOTES WATER
	"E" DENOTES ELECTRIC
	"T" DENOTES TELEPHONE
	"S" DENOTES SANITARY SEWER

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 DMD PROJECT No. 802-03-08 of 17

DESIGNED BY DSM DATE APR/04 CHECKED BY DJM DATE OCT/05
 M.O.T ELECTRICAL DESIGN REVIEW JSH DATE Feb 24/06

REV	DATE	DESCRIPTION	DRAWN
1	APR/04	NEW DRAWING SERIES, NEW GEOMETRICS AND NEW STREET LIGHTING ALONG HIGHWAY 11	JOM
2	NOV/04	COMPLETE RE-DESIGN FOR FULL INTERSECTION SIGNALIZATION	SJC
3	JAN/06	SERVICE POLE LOCATION ADDED TO DWG.	ER

MINISTRY OF TRANSPORTATION
 ELECTRICAL ENGINEERING CENTRE

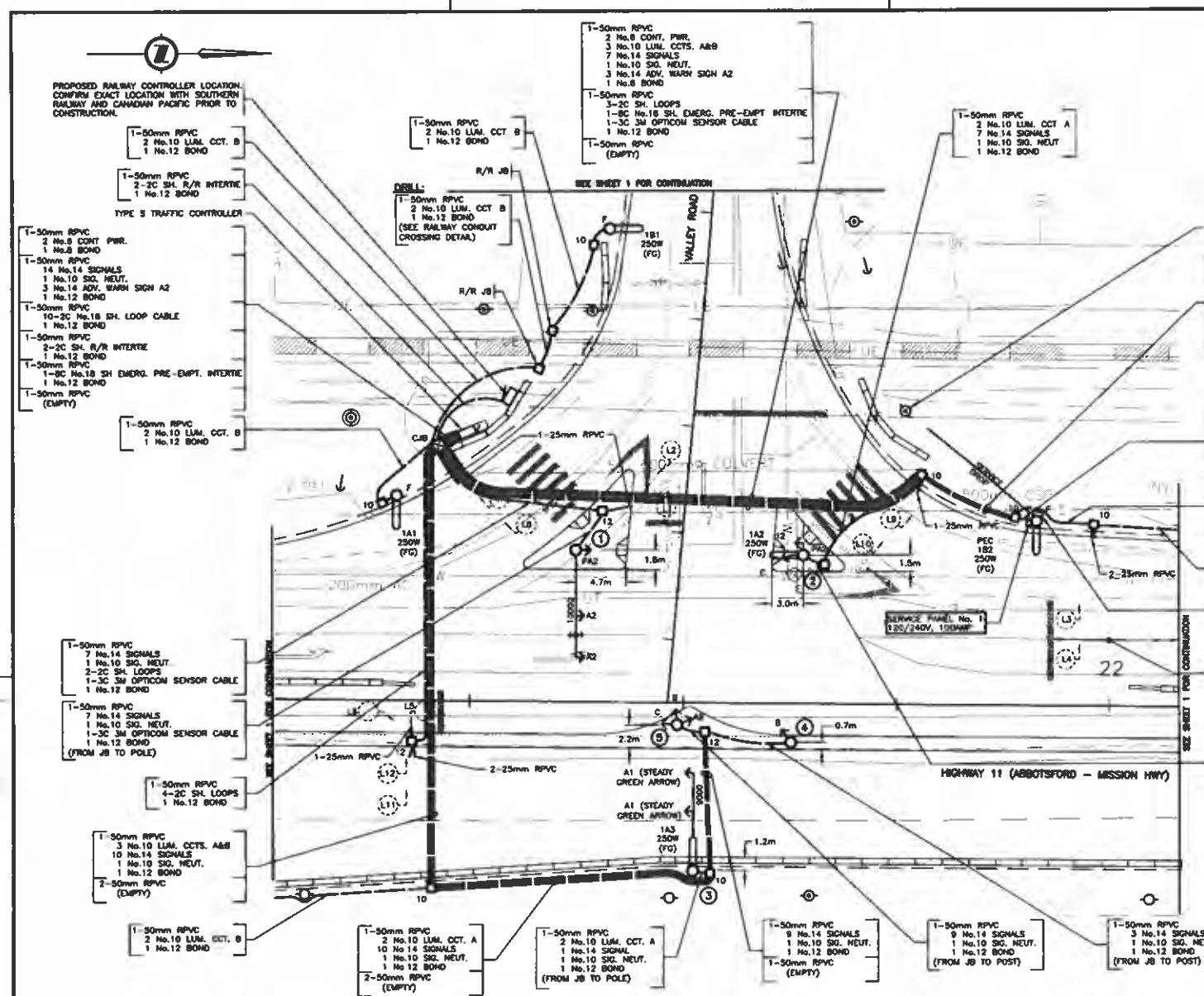
SIGNAL AND LIGHTING INSTALLATION
 HIGHWAY 11 (ABBOTSFORD - MISSION HWY) AT VALLEY ROAD
 ABBOTSFORD

SITE PLAN - NOTES - ELEVATION

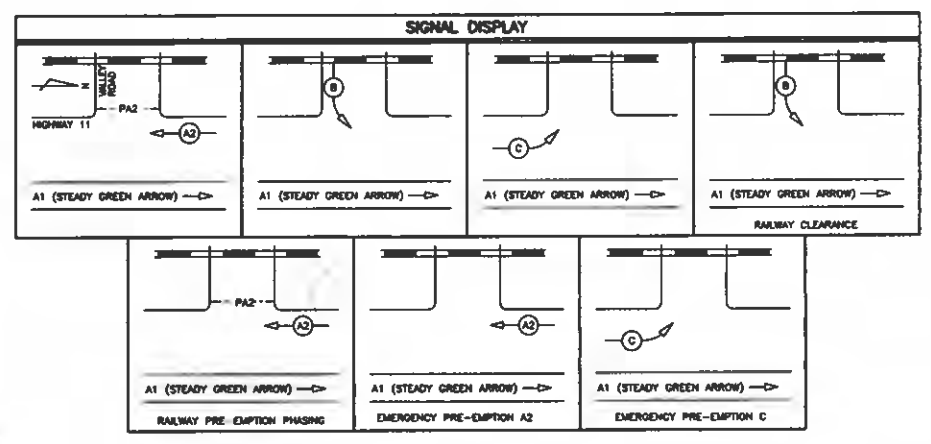
ELECTRICAL ENGINEER OF RECORD (FOR CURRENT REVISION)

[Signature] DATE JAN 24 2006

SHEET NUMBER	SITE CODE	HWY DIST	REGION	DRAWING NUMBER
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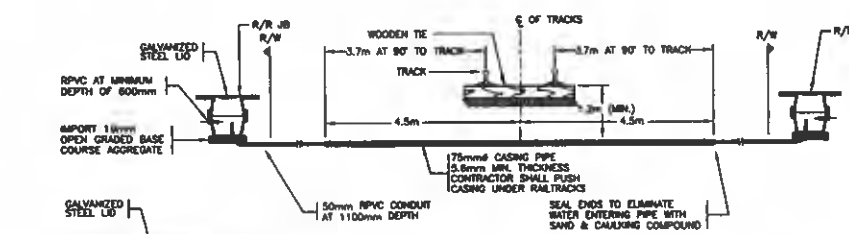


SITE PLAN
1:250

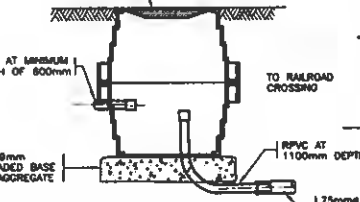


ILLUMINANCE DESIGN CRITERIA		
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED
STREET NAME(S)	HIGHWAY 11 / VALLEY ROAD INTERSECTION	
PEDESTRIAN CONFLICT AREA	LOW	
INTERSECTION CLASSIFICATION	MAJOR / LOCAL	
ILLUMINATION TYPE	250W (11.0m POLE) & 150W (8.0m POLE)	
ILLUMINATION LEVEL (AVG.)	13.0 LUX	18.5 LUX
UNIFORMITY RATIO (AVG./MIN.)	3.0:1	1.8:1

ILLUMINANCE DESIGN CRITERIA AS PER RTD-10		
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED
LOCATION	VALLEY ROAD RAILWAY CROSSING	
ILLUMINATION TYPE	250W (11.0m POLE)	
ILLUMINATION LEVEL (VERTICAL AVG.)	10.0 LUX	15.2 LUX
UNIFORMITY RATIO (VERTICAL AVG./MIN.)	3.0:1	2.8:1



RAILWAY CONDUIT CROSSING DETAIL
1:75



R/R JUNCTION BOX DETAIL
1:20

COORDINATES FOR NEW HARDWARE	
ITEM	STA.
SIGNAL POLE 3/LUM. 1A3	21+81
SIGNAL POST 4	21+78
SIGNAL POST 5	21+58.3
LUM 1A1	21+33
SERVICE POLE/LUM. 1B2	21+83
TYPE 5 TRAFFIC CONTROLLER	21+58
LUM. 1B1	81+22

DETECTOR LOOP TABLE						
LOOP No.	SIZE	TURNS	INDUCTANCE		PHASE	
			LOOP (µH)	LEAD (µH)		
L 1	1.8m #	4	95	11	108	B
L 2	1.8m #	4	95	11	106	B
L 3	1.8m #	4	95	44	139	A2
L 4	1.8m #	4	95	44	139	A2
L 5	1.8m #	4	95	18	113	C
L 6	1.8m #	4	95	18	113	C
L 7	1.8m #	4	95	0	196	COUNT
L 8	1.8m #	4	95	0	221	COUNT
L 9	1.8m #	4	95	31	128	COUNT
L 10	1.8m #	4	95	18	113	COUNT
L 11	1.8m #	4	95	18	113	COUNT
L 12	1.8m #	4	95	18	113	COUNT

EMERGENCY PRE-EMPTION CONDUCTOR LABELLING			
ITEM	LABEL	COLOUR	CONDUCTOR TYPE
EMERG. PRE-EMPT. INTERTE #A1	PE-A2 INT	N/A	BOLDEN 9380
EMERG. PRE-EMPT. INTERTE #A2	PE C-INT	N/A	

CONDUCTOR COLOUR CODE		
ITEM	SIGNAL SECTION	CONDUCTOR COLOUR
A1	STEADY GREEN ARROW	BLUE (WHITE T.T.)
A2	RED	RED
	YELLOW GREEN	YELLOW BLUE
B	RED	RED BROWN
	YELLOW GREEN ARROW	BLUE (WHITE T.T.)
C	RED	RED
	YELLOW GREEN ARROW	ORANGE BLUE (WHITE T.T.)
PA2	DON'T WALK WALK PUSH BUTTON	YELLOW BLUE PURPLE/PURPLE (YELLOW T.T.)
CONTROLLER POWER		BLACK
LUMINAIRE CCT A		RED
LUMINAIRE CCT B		BLACK
NEUTRAL		WHITE
GROUND/BOND		GREEN
ADVANCE WARNING FLASHER A2		YELLOW BROWN

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POSTED SPEED LIMIT 80 km/h ON HIGHWAY 11
POSTED SPEED LIMIT 50 km/h ON VALLEY ROAD

SEE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" FOR APPLICABLE STANDARD DRAWINGS

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DMD PROJECT No. 802-03-10 of 17

DESIGNED BY SC DATE NOV/04 CHECKED BY DJW DATE NOV/04
M.O.T ELECTRICAL DESIGN REVIEW JSH DATE R2/1/06

REVISIONS

REV	DATE	DESCRIPTION	DRAWN
A	NOV/04	SHEET ADDED TO DRAWING SERIES INTERSECTION SIGNALIZED	JOM
B	JAN/06	SERVICE POLE LOCATION REVEALED, CONDUCTORS AND PRE-EMPT / SERVICE PANELS REVISED TO SUIT.	ER

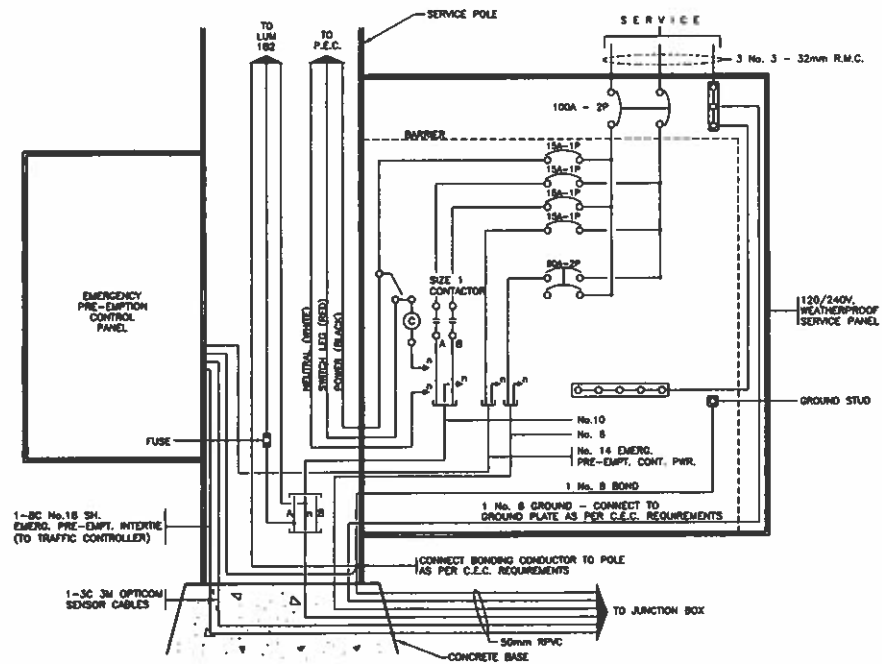
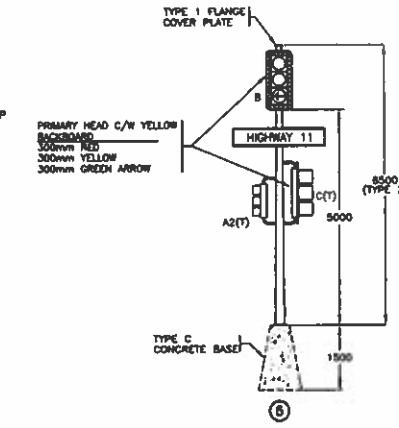
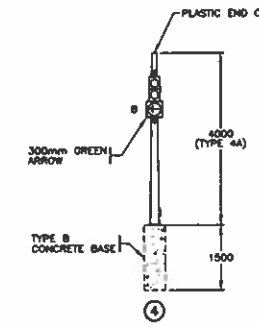
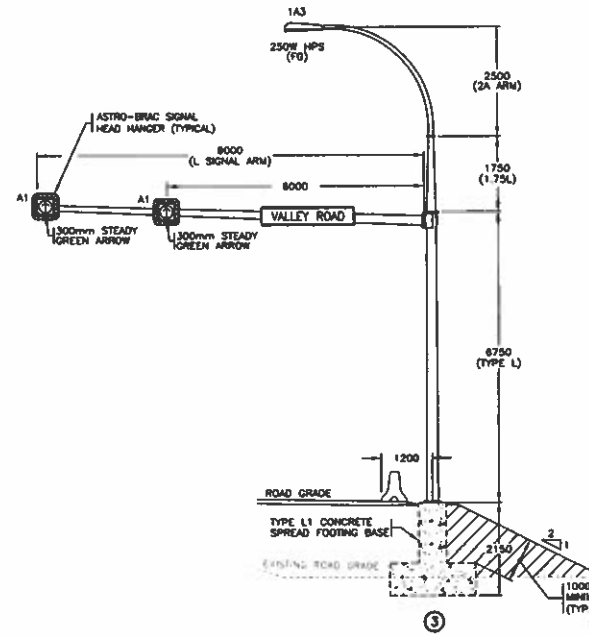
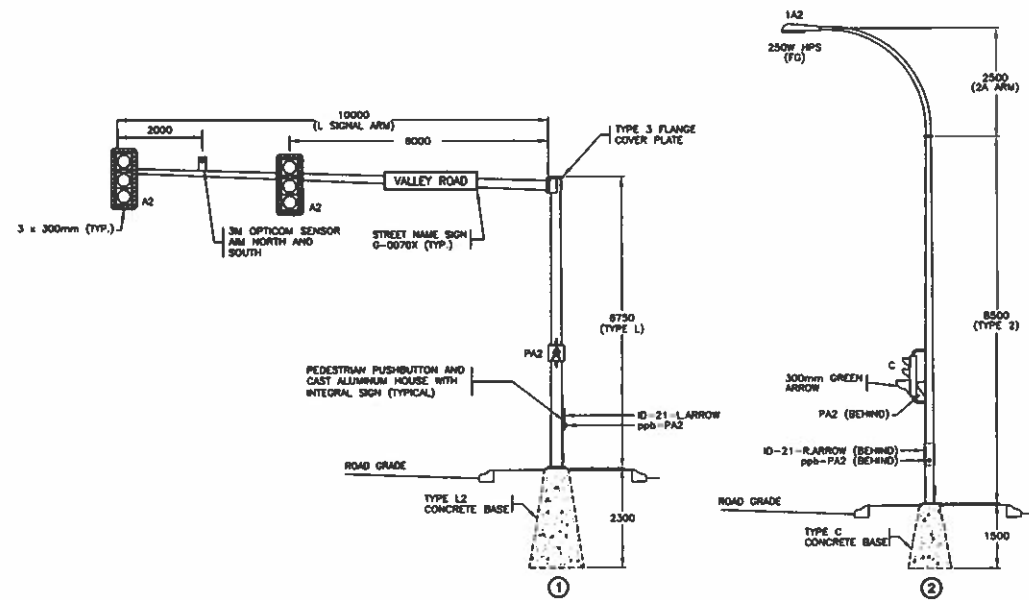
**MINISTRY OF TRANSPORTATION
ELECTRICAL ENGINEERING CENTRE**

**SIGNAL AND LIGHTING INSTALLATION
HIGHWAY 11 (ABBOTSFORD - MISSION HWY) AT VALLEY ROAD
ABBOTSFORD**

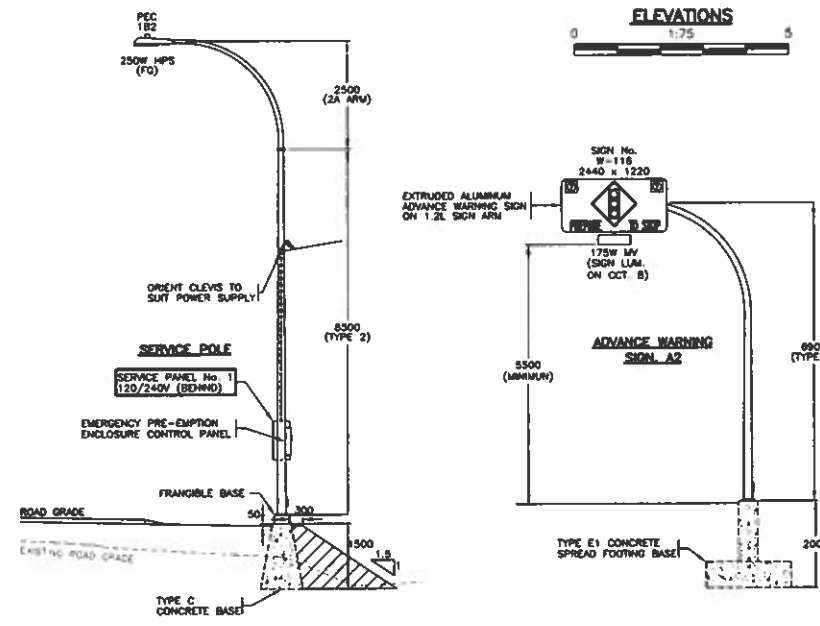
SITE PLAN ENLARGEMENT - SIGNAL DISPLAY - COLOUR CODE
ELECTRICAL ENGINEER OF RECORD (FOR CURRENT REVISION)

[Signature] DATE JAN 24 2008

SHEET NUMBER 3 SITE CODE HWY DIST REGION DRAWING NUMBER
SHEET 2 OF 3 1 1 TE-04003-2 B



WIRING DIAGRAM - SERVICE PANEL No. 1
N.T.S.



ELEVATIONS
1:75

ALL EQUIPMENT IS NEW EXCEPT WHERE NOTED

ALL SIGNAL, PEDESTRIAN AND ADV. WARN. FLASHER DISPLAYS SHALL BE LED

(T) DENOTES TUNNEL VISORS

REFER TO SHEET 1 FOR NOTES

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SEE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" FOR APPLICABLE STANDARD DRAWINGS

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DESIGNED BY	DSM	DATE	APR/04	CHECKED BY	DJM	DATE	OCT/06
M.O.T. ELECTRICAL DESIGN REVIEW JSB DATE 6/28/06							
REVISIONS							
REV	DATE	DESCRIPTION	DRAWN				
APR/04		NEW TR. DRAWING SOURCE, NEW GEOMETRICS AND NEW STREET LIGHTING ALONG HIGHWAY 11	JOM				
A	DEC/04	INTERSECTION SIGNALIZED	SAC				
B	JAN/06	SERVICE PANEL No. 1 / LUM. 1B2 MODIFIED	DR				

MINISTRY OF TRANSPORTATION ELECTRICAL ENGINEERING CENTRE				
LIGHTING INSTALLATION HIGHWAY 11 (ABBOTSFORD - MISSION HWY) AT VALLEY ROAD ABBOTSFORD				
WIRING DIAGRAM - ELEVATIONS				
ELECTRICAL ENGINEER OF RECORD (FOR CURRENT REVISION)				
DATE JAN 24 2006				
SHEET NUMBER	SITE CODE	HWY DIST	REGION	DRAWING NUMBER
SHEET 3 OF 3		1	1	TE-04003-3