Longford Bridge and Shared Pathway Lighting Schedule.

	Bridge Handrail and Feature Mast Lighting				Bridge LED strip feature lighting.		Shared Pathway Lighting (mains power).	Shared Pathway Lighting (solar power).
	L1	L1a	L5	L6	L2 South side	L2 North side	L4	L3
Luminaire number reference	**H 1 to H 15**	**H 16**	**M 1 to M 6**	**M 7 & M 8**	**LS 1 to LS 17.**	**LS 18 to LS 34**	**P 1 to P 26**	**SP 1 to SP 7.**
Maximum design spacing	12.3m for PP4		N/A	N/A			41.3m single sided for PP4	54.1m single sided for PP5
Luminaire type, description and installation instructions								
EWO 2 LED ID Standard Handrail unit. Minimum luminaire attributes to include; IP67, IK10, 3000K CRI 80 chip, 350mA driver, AP06 optic, PMMA lens and cover, suitable to be completely housed within 44.4 OD polished stainless steel handrail with 1.5mm wall thickness. Each luminaire to be directed 90° downwards. Luminaires to be evenly spaced across the bridge as indicated on the lighting layout drawings. Luminaires to be connected via IP 68 plug and play connectors, cable and relay for switching, all lights to be connected over two separate wiring circuits (one on each side of the bridge) and a concealed driver housed within an IP65 (min) polycarbonate enclosure on the bridge structure or within an IP65 polycarbonate swichboard enclosure located on the eastern side of the bridge with Network power supply coming from Huron Street. Switching and control of all luminaires is to be via Casambi.	✓							
EWO 2 LED ID Standard Handrail unit. Minimum luminaire attributes to include; IP67, IK10, 3000K CRI 80 chip, 350mA driver, AP07 optic, PMMA lens and cover, suitable to be completely housed within 44.4 OD polished stainless steel handrail with 1.5mm wall thickness. Each luminaire to be directed 90° downwards. Luminaires to be evenly spaced across the bridge as indicated on the lighting layout drawings. Luminaires to be connected via IP 68 plug and play connectors, cable and relay for switching, all lights to be connected over two separate wiring circuits (one on each side of the bridge) and a concealed driver housed within an IP65 (min) polycarbonate enclosure on the bridge structure or within an IP65 polycarbonate swichboard enclosure located on the eastern side of the bridge with Network power supply coming from Huron Street. Switching and control of all luminaires is to be via Casambi.		✓						
Lumenpulse Grande LBL 100W Mast projector luminaire. Minimum luminaire attributes to include; IP66, IK09, RGBW colour changing, 48 LED's (6 x red, 6 x green, 6 x blue, 6 x 4000K white per board), operating temp -40° to 50°C, corrosion resistant coating, low copper content within cast aluminium body, fully adjustable yoke mount, tempered glass lens, weight less than 10.89kg, very narrow flood VF 6° optic, SN snoot to limit glare/spill light, black cable connection and minimum 5 year warranty. Switching and control of all luminaires to be via Casambi controls. Luminaire to be mounted at high/intermediate levels on mast with light directed down the mast with all cabling concealed within the mast and remote drivers mounted in a polycarbonate enclosure (min IP65) as detailed on drawings. Finish on mast to be high gloss white colour.			✓					
Lumenpulse Grande LBG 100W Mast projector luminaire. Minimum luminaire attributes to include; IP66, IK09, 4000K white light only, operating temp -40° to 50°C, corrosion resistant coating, low copper content within cast aluminium body, fully adjustable yoke mount, tempered glass lens, weight less than 11kg, extra narrow XN 4° optic, LBGSN snoot to limit glare/spill light, black cable connection and minimum 5 year warranty. Switching and control of all luminaires to be via Casambi controls. Luminaire to be mounted at high level on mast with light directed down each set of backstay cables with all cabling concealed within the mast and remote driver within a polycarbonate enclosure (min IP65) mounted on top of the mast as detailed on drawings.				✓				
Continious length of colour changing LED strip - Unios Eclipse G2 within 22mm x 18mm aluminium extrusion. Minimum luminaire attributes to include; IP67, RGBW (2.5W/m/colour) 4000K 10W/m (24VDC), 104lm/w, CRI 90, "dot free" 120° symmetrical optic, operating temp -40° to 50°C, strip encapsulated PMMA within corrosion resistant Glide G125 aluminium extrusion (22mm wide x 18mm deep), side entry cable connection, mounting clips at 500mm centres and minimum 5 year warranty. Luminaire to be mounted in 5m strips butted end to end on underside of steel "I Beam" flange across each side of the bridge. Each side of the bridge to be a separate circuit with an individual remote driver concealed within a polycarbonate enclosure (min IP65) on the bridge structure as indicated on drawings. Maximum length each driver can be located from each strip is 15m and the driver is to be housed within 100mm wide x 240mm long x 30mm deep IP65 polycarbonate enclosure. Switching, dimming and control of all luminaires to be compatible with Casambi controls. Finish on "I beam" to be high gloss white colour.					✓	✓		
Shared Pathway luminaire mains supply - LRL LED NXT -12S 350mA 3000k 2ES optic 14W c/w post top installation, NEMA socket and shortening cap. Minimum luminaire attributes to include; M30 Acceptable luminaire list, dimmable driver, IP66, IK09, 3000K, weight 8.2kg, 111lm/w, CRI 70, operating temp -40° to 50°C, surge protection, 0.9 power factor, L90 @ 85,000 hours, corrosion resistant die-cast aluminum body, 60mm OD post top spigot attachment and minimum 10 year warranty.							✓	
Shared Pathway luminaire solar power supplied - LRL LED NXT -24S 24V DC 350mA 3000k 2ES optic 28W c/w side mount attachment, switched via occupancy sensor on column with 10 minute delay off time. Minimum luminaire attributes to include; M30 Acceptable luminaire list, IP66, IK09, 3000K, 115lm/w, CRI 70, weight 8.2kg, operating temp -40° to 50°C, surge protection, 0.9 power factor, L70 @ 85,000 hours, corrosion resistant die-cast aluminum body, 42mm OD side mount spigot attachment and minimum 10 year warranty.								✓
	L1	**L1a**	**L5**	**L6**	**L2 South side**	**L2 North side**	**L4**	**L3**
Luminaire number reference	**H 1 to H 15**	**H 16**	**M 1 to M 6**	**M 7 & M 8**	**LS 1 to LS 17.**	**LS 18 to LS 34**	**P 1 to P 26**	**SP 1 to SP 7.**
Column / mounting details								
Supply and install new ground planted PAINTED BLACK RAL 9004 (TBC) straight steel column with 60mm spigot and no outreach arm. Mounting height of luminaire to be 7.5m above finished ground line, located 0.7m behind edge of Pathway at 0° tilt and at 90° to pathway.							✓	
Supply and install new flange mounted Ligman vertical solar PV column onto purpose built concrete foundation footing. Column to be PAINTED BLACK RAL 9011 (TBC). Straight steel column with 42mm OD side mount attachment spigot for LRL-NXT DC luminaire mounting. Minimum column/solar attributes to include; MPPT IP67 controller, cell type mono crystalline, tempered glass, panels to be IP65, solar efficiency greater than 20%, system suitable for operating temperatures -40°c to 50°C, minimum 5 year warranty, expected design life of 20 years, 4m long x 216mm OD round base section with 1998mm x 130mm access door, occupancy sensor or sensors to be located on the upper section at approximately 5.7m to detect movement along the pathway and switch light upto preset output for minimum 10 minute period. Lithium iron phosphate batteries to be mounted as high as possible within the base section of the column but no batteries to be located closer than 1.2m above the ground, 2 x 140W hexagonal shaped solar modules each 1560mm long to be mounted on the column as indicated on drawing, 8 x 12V 16.5Ah batteries housed within base section, luminaire operating profile to be limited to 269W/hr/day, mounting height of luminaire to be 7.5m above finished ground line, column to be located 0.7m behind edge of Pathway with luminaire at 0° tilt and at 90° to pathway. Solar to be suffient to operate the light for the following conditions; Dusk - 100% for 4 hours, dim to 20% output with occupancy override, for 3 hours prior to dawn operate at 100%. Quantities of batteries will provide power for up to 5 days of autonomy based on daily usuage of 12 hours, with 20% safety factor for site specific conditions. Installation contractor to ensure no shading to the solar panels. Column to be supplied with a foundation cage.								✓
	L1	**L1a**	**L5**	**L6**	**L2 South side**	**L2 North side**	**L4**	**L3**
Luminaire number reference	**H 1 to H 15**	**H 16**	**M 1 to M 6**	**M 7 & M 8**	**LS 1 to LS 17.**	**LS 18 to LS 34**	**P 1 to P 26**	**SP 1 to SP 7.**
Cabling								N/A
New sub-circuit cabling known as circuit 1 concealed within north side handrail originating from concealed driver housed within a polycarbonate enclosure as indicated on drawings.	✓	✓						
New sub-circuit cabling known as circuit 2 concealed within south side handrail originating from concealed driver house within a polycarbonate enclosure as indicated on drawings.	✓							
New sub-circuit cabling originating from LV mains connection cabinet off Huron St concealed within bridge structure and mast. Allow for minimum two circuits.			✓	✓				
New sub-circuit cabling known as circuit 1 concealed on underside of I-Beam flange on south side of bridge originating from LV mains connection cabinet off Huron St to concealed driver within a polycarbonate enclosure as per 5m strip and located within 15m of each strip as indicated on drawings.					✓			
New sub-circuit cabling known as circuit 2 concealed on underside of I-Beam flange on north side of bridge originating from LV mains connection cabinet off Huron St to concealed driver within a polycarbonate enclosure as per 5m strip and located within 15m of each strip as indicated on drawings.						✓		
Trench and lay new cable at the base of the stop bank on the road side of the pathway or in the road reserve as indicated to meet Network Operators requirements.							✓	