

Appendix “A” Standard Tender Item References

Uniform Traffic Control Specifications and Standards for
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APPENDIX “A” - STANDARD TENDER ITEM REFERENCES

Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A1	602	Electrical Chambers a) Precast Concrete Electrical Handwell with 460mm Diameter Cover, b) Cast in Place Concrete Electrical Handwell with 460mm Diameter Cover, c) Precast Concrete Maintenance Hole, 600mm x 600mm, d) Precast Concrete Maintenance Hole, 675mm Diameter e) Prefabricated Pull Box - Type I, f) Prefabricated Pull Box - Type II, g) Prefabricated Junction Box Installation for Loops	Each Each Each Each Each Each Each	UTS 602.010, UTS 602.020, UTS 602.025, UTS 602.026, UTS 602.030, UTS 602.040, UTS 602.050, UTS 602.060, UTS 602.070, UTS 602.080, UTS 602.090,	Designer to identify electrical chamber for use.
A2	603	Flexible Ducts a) 1-50mm, b) 2-50mm, c) 1-25mm, d) 2-25mm	Metre Metre Metre Metre	UTS 602.030, UTS 602.040, UTS 602.050, UTS 602.060, UTS 602.070, UTS 602.080, UTS 602.090, UTS 603.010,	Designer to identify combinations.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A3	603	Rigid PVC Conduit, Direct Buried, Boulevard a) 1-50mm, b) 2-50mm, c) 1-50mm & 1-100mm, d) 1-75mm, e) 2-75mm f) 1-100mm g) 2-100mm h) 1-50mm, 1-75mm & 2-100mm, i) 1-25mm	Metre Metre Metre Metre Metre Metre Metre Metre	UTS 602.030, UTS 602.040, UTS 602.050, UTS 602.060, UTS 602.070, UTS 602.080, UTS 602.090, UTS 603.010,	Designer to identify combinations.
A4	603	Rigid PVC Conduit, Direct Buried, Roadway a) 1-50mm, b) 1-100mm, c) 1-50mm & 1-100mm, d) 2-75mm, e) 1-100mm, f) 2-100mm	Metre Metre Metre Metre Metre Metre	UTS 602.030, UTS 602.040, UTS 602.050, UTS 602.060, UTS 602.070, UTS 602.080, UTS 602.090, UTS 603.010,	Designer to identify combinations.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A5	603	HDPE Ducts, Directional Bored a) 1-50mm, b) 1-100mm, c) 1-50mm & 1-100mm, d) 2-75mm, e) 1-100mm, f) 2-100mm	Metre Metre Metre Metre Metre Metre	UTS 602.030, UTS 602.040, UTS 602.050, UTS 602.060, UTS 602.070, UTS 602.080, UTS 602.090, UTS 603.010,	Designer to identify combinations.
A6	604	Traffic Signal Cables (Solid) in Duct - MTO a) 19 Conductor, # 14 AWG, b) 7 Conductor, # 14 AWG, c) 4 Conductor, # 14 AWG	Metre Metre Metre	UTS 604.010, UTS 604.011, UTS 604.015, UTS 604.016	Designer to identify combinations.
A7	604	Traffic Signal Cables (Solid), Aerial - MTO a) 19 Conductor, # 14 AWG, b) 7 Conductor, # 14 AWG, c) 4 Conductor, # 14 AWG	Metre Metre Metre	UTS 604.010, UTS 604.011, UTS 604.015, UTS 604.016	Designer to identify combinations.
A8	604	Traffic Signal Cables (Solid), in Duct - IMSA a) 19 Conductor, # 14 AWG, b) 7 Conductor, # 14 AWG, c) 4 Conductor, # 14 AWG	Metre Metre Metre	UTS 604.020, UTS 604.021, UTS 604.025	Designer to identify combinations.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A11	604	Low Voltage Cu Cables, Exposure to Direct Sunlight a) 1/C, # 8 AWG RW90 SR, Coloured, b) 1/C, # 6 AWG RW90 SR, Coloured, c) 1/C, # 4 AWG RW90 SR, Coloured, d) 1/C, # 2 AWG RW90 SR, Coloured, e) 1/C, # 8 AWG RWU90 SR, Coloured, f) 1/C, # 6 AWG RWU90 SR, Coloured, g) 1/C, # 4 AWG RWU90 SR, Coloured, h) 1/C, # 2 AWG RWU90 SR, Coloured, i) 1/C, # 8 AWG RWU90 SR, Black with Stripes, j) 1/C, # 6 AWG RWU90 SR, Black with Stripes, k) 1/C, # 4 AWG RWU90 SR, Black with Stripes, l) 1/C, # 2 AWG RWU90 SR, Black with Stripes	Metre Metre Metre Metre Metre Metre Metre Metre Metre Metre Metre Metre	UTS 614.020, UTS 614.022, UTS 614.030, UTS 614.031	Designer to identify requirements.
A12	604	Communication Cables, Aerial a) 6 pair, # 22 AWG Cu, b) 12 pair, # 22 AWG Cu, c) 25 pair, # 22 AWG Cu	Metre Metre Metre		Designer to identify requirements.
A13	604	Communication Cables in Duct a) 4 pair, # 22 AWG Cu, b) 6 pair, # 22 AWG Cu, c) 12 pair, # 22 AWG Cu, d) 25 pair, # 22 AWG Cu	Metre Metre Metre Metre		Designer to identify requirements.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A14		Fibre Optic Communication Cables in Duct a) 6 Strand, b) 48 Strand	Metre Metre		Designer to identify requirements.
A15	604	Extra Low Voltage Cables, Aerial a) 4/C #18 AWG, Cu Shielded - Detection b) 4/C #18 AWG, Cu Shielded with Drain Wire - Audible Pushbutton Detection c) 2/C #14 AWG, Cu Shielded with Drain Wire - Audible Pushbutton Detection	Metre <i>Metre</i> <i>Metre</i>	UTS 604.010, UTS 604.011, UTS 604.015, UTS 604.016, UTS 604.020, UTS 604.021, UTS 604.025	Designer to identify requirements.
A16	604	Extra Low Voltage Cables in Duct a) 4/C #18 AWG, Cu Shielded - Detection b) 4/C #18 AWG, Cu Shielded with Drain Wire - Audible Pushbutton Detection c) 2/C #14 AWG, Cu Shielded with Drain Wire - Audible Pushbutton Detection	Metre <i>Metre</i> <i>Metre</i>	UTS 604.010, UTS 604.011, UTS 604.015, UTS 604.016, UTS 604.020, UTS 604.021, UTS 604.025	Designer to identify requirements.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A17	609	Ground Wire a) #6 AWG, Bare Cu, Stranded, b) #6 AWG, Insulated Cu, Stranded, c) #2/O AWG, Bare Cu, Stranded,	Metre Metre Metre	UTS 604.011, UTS 604.021, UTS 604.025, UTS 614.010, UTS 614.020, UTS 614.021, UTS 614.022, UTS 614.025, UTS 614.026, UTS 614.027, UTS 614.030, UTS 614.031, UTS 614.043, UTS 614.044,	Designer to identify combinations.
A18	609	Ground Electrode a) Copperclad Rod - 19mm x 3000mm, b) Hot Dip Galvanized Solid Steel Plate - 254mm x 406mm x 6.3mm, complete with ground rod clamp extension	Each Each	UTS 614.010, UTS 614.020, UTS 614.021, UTS 614.022, UTS 614.026,	Designer to identify requirements.
A19	610 SP	Removal of Electrical Equipment	Each or Lump Sum		SP required for material description.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A20	614	<p>Secondary Supply Facilities</p> <ul style="list-style-type: none"> a) Supply Control Cabinet b) Meter Base c) Power Supply Pedestal with Breaker Panel d) Metered Traffic Signal Power Supply Pedestal c/w Load Centre and Meter Base e) Metered Streetlighting Power Supply Pedestal c/w Load Centre and Meter Base 	<p>Each</p> <p>Each</p> <p>Each</p> <p>Each</p> <p>Each</p>	<p>UTS 614.010, UTS 614.011, UTS 614.020, UTS 614.021, UTS 614.022, UTS 614.025, UTS 614.026, UTS 614.027, UTS 614.030, UTS 614.031, UTS 614.042, UTS 614.043, UTS 614.044, UTS 614.045, UTS 614.046, UTS 614.047</p>	<p>Designer to identify material requirement for use of Meter Base in Local Hydro service area.</p> <p>SP required for material specification.</p>
A21	615	<p>Steel Poles, Base Mounted</p> <ul style="list-style-type: none"> a) 4.6m Light Duty Pole - 287mm B.C.D. (8415), b) 6.1m Standard Duty Pole - 406mm B.C.D., c) 6.1m Heavy Duty Pole - 406mm B.C.D., d) 10.7m Standard Duty Pole - 406mm B.C.D., e) 11.3m Standard Duty Pole - 406mm B.C.D. 	<p>Each</p> <p>Each</p> <p>Each</p> <p>Each</p>	<p>UTS 615.010, UTS 615.015, UTS 615.030, UTS 615.035,</p>	<p>Designer to identify combination of poles.</p> <p>SP required for material specification.</p>

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A24	616	Concrete Footings in Earth for Base-Mounted Pole / Pedestal a) 151mm (6") B.C.D. - 1200mm, b) 190mm (7.5") B.C.D. - 1200mm c) 242mm (9 1/2") B.C.D. - 2150mm, d) 292mm (11 1/2") B.C.D. - 2150mm, e) 292mm (11 1/2") B.C.D. - 2600mm, f) 292mm (11 1/2") B.C.D. - 2750mm, g) 406mm (16") B.C.D. - 2150mm, h) 406mm (16") B.C.D. - 2600mm, i) 406mm (16") B.C.D. - 2750mm, j) 406mm (16") B.C.D. - 1400m, k) 539mm (21.375") B.C.D. - 1400mm - Metered Power Pedestal	Each Each Each Each Each Each Each Each Each Each Each	UTS 616.010, UTS 616.011, UTS 616.012, UTS 616.014, UTS 616.015, UTS 616.020, UTS 616.021, UTS 616.025, UTS 616.026	Designer to identify combinations. SP required for material specification.
A25	616	Concrete Footings in Earth Spread Footing	Each	UTS 616.013, UTS 616.020, UTS 616.021	Designer to identify use.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A26	616	Traffic Controller Foundation a) "M" Series / "P44" Cabinets, One Pedestal b) Communication "M" Series Cabinet, c) "M" Series / "P44" Cabinets, With Power Pedestal, d) "M" Series / "P44" Cabinets, With Metered Power Pedestal, e) "M" Series / "P44" Cabinets, Two Pedestals	Each Each Each Each Each	UTS 616.030, UTS 616.031, UTS 616.035, UTS616.036, UTS 616.040	Designer to identify type of Controller Cabinet for use.
A27	617	Roadway Lighting Luminaires – LED a) Type II-MCO b) Type III-MCO	Each Each		Designer to identify Manufacturer and Type of Luminaire. SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A28	617	Roadway Lighting Bracket Assemblies a) 2.4m - Metal/Concrete Pole, 1.2 Rise, b) 3.0m - Metal/Concrete Pole, 1.2 Rise, c) 3.6m - Metal/Concrete Pole, 1.5 Rise, d) 2.4m - Wooden Pole, 1.2 Rise, e) 3.0m - Wooden Pole, 1.2 Rise, f) 3.6m - Wooden Pole, 1.5 Rise g) 1.8m Heavy Duty - Metal Pole, 1.2 Rise, h) 2.4m Heavy Duty - Metal Pole, 1.2 Rise	Each Each Each Each Each Each Each Each	UTS 617.010, UTS 617.015, UTS 617.016, UTS 617.020	Designer to identify type of Luminaire.
A29	620	Vehicle Signal Head with Light Emitting Diode Lense Units a) "Highway"- 300mm (R), 200mm (Y-G), b) Oversized "Highway" - 300mm - R-Y-G	Each Each		Designer to identify type of Signal Heads. SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A30	620 SP	Special Vehicle Signal Head with Light Emitting Diode Lense Units a) Type 1 - 300mm - R-Y and Straight Arrow, b) Type 2 - 300mm - R-Y and Left Arrow, c) Type 3 - 300mm - R-Y and Right Arrow, d) Type 9A - 300mm - R-Y-G and Bimodal Arrow, e) Type 10A - 300mm - R-Y-G and Left Arrow, f) Type 11A - 300mm - R-Y-G and Right Arrow, g) Oversized "Highway" with Programmable 300mm Lenses h) "Highway" with Programmable 300mm - R-Y-G-YA-GA Lenses	Each Each Each Each Each Each Each Each		Designer to identify type of Signal Heads. SP required for material specification.
A31	620 SP	"Pedestrian" Type Signal Head with Light Emitting Diode Lense Units a) One Section - Walk / Don't Walk, b) Two Section - Walk / Don't Walk and Countdown Timer	Each Each	UTS 620.051	Designer to identify type of Signal Heads. SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A32	620	Aluminum Single Member Arm a) 0.6m b) 1.2m c) 1.8m, d) 2.4m, e) 3.0m, f) 3.6m, g) 4.6m, h) 5.5m, i) 6.1m, j) 6.7m, k) 7.6m, l) 5.5m - Horizontal - Lane Designation Sign Support, m) 5.5m - Horizontal - HOV Sign Support, n) 6.1m - Horizontal - Lane Designation Sign Support, o) 6.7m - Horizontal - HOV Sign Support, p) 7.6m - Horizontal - HOV Sign Support	Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each Each	UTS 999.060, UTS 999.062	Designer to identify combinations. SP required for elevated plumbizer specification.
A33	620	Adjustable Offset Plumbizer Signal Head Hanger	Each	UTS 620.010	Designer to identify combinations.
A34	620	Dual-End Signal Head Mounting Bracket	Each	UTS 620.020	Designer to identify combinations.
A35	620	Double Signal Head Mount Bracket	Each	UTS 620.030	Designer to identify combinations.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A36	620	Extruded Aluminum Arm Bracket a) 300mm (EDA-300) - Signals, b) 450mm (EDA-450) - Signals, c) 600mm (EDA-600) - Signals, d) 300mm (EPA-300) - Emergency Pre-emption	Each Each Each Each	UTS 620.050, UTS 620.051, UTS 620.090	Designer to identify combinations.
A37	620	Double Arm Brackets, Aluminum Tube a) 300mm (12") b) 450mm (18"), c) 600mm (24")	Set Set Set	UTS 620.051, UTS 620.070, UTS 620.071,	Designer to identify combinations.
A38	620	Signal Head Aerial Suspension Mounting Bracket	Each		SP required for material specification.
A39	620	Traffic Signal Controller (NEMA) (Supplied by Operating Authority) a) Traffic Control and Contractor Field Representation During Installation	Lump Sum		SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A40	620	Loop Detectors a) 1.8m x 3.0m - Simple (4 Turns), b) 1.8m x 6.1m - Simple (4 Turns), c) 1.8m x 7.6m - Simple (4 Turns), d) 1.8m x 7.6m - Duplex (2-4-2 Turns), e) 1.8m x 10.0m - Simple (4 Turns), f) 1.8m x 10.0m - Duplex (2-4-2 Turns), g) 1.8m x 1.8m - Diamond Simple (4 Turns)	Each Each Each Each Each Each Each	UTS 620.080 UTS 620.081	Designer to identify combinations required for material specification.
A41	620 SP	Pedestrian Pushbutton Assemblies a) Audible Pedestrian Pushbutton Assembly, b) Audible Pedestrian Pushbutton Information Sign c) Pedestrian Pushbuttons and Information Signs d) Pedestrian Pushbutton Information Sign	Each Each	UTS 620.083 UTS 620.084 UTS 620.085 UTS 620.086	Designer to identify requirements.
A42	620 SP	Wooden Post Stand for Temporary a) Pedestrian Signals b) Pedestrian Pushbuttons	Each Each	UTS 620.055 UTS 620.056	SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A43	620 SP	Emergency Vehicle / Transit Priority Pre-Emption a) Installation of GTT Opticom™ Model # 721 Detector Unit b) 3/C #20 AWG Stranded, Shielded Cable (GTT Opticom™ Model # 138) c) Installation of GTT Opticom™ Model # 3100 GPS Radio Unit d) 5 pair - #20 AWG Stranded, Shielded Cable - (GTT Opticom Model # 1070 GPS Installation Cable)	Each Metre Each Metre	UTS 620.090	SP required for material specification.
A44	620 SP	Overhead Video Detection a) Installation of Video Camera Unit b) Video Detector Cable 3/C # 20 ELV	Each Metre	UTS 620.095	SP required for material specification.
A45	620 SP	Overhead Wavetronix (Radar) Detection a) Installation of Wavetronix Unit b) Wavetronix Detector Cable – 3 Pair #20 ELV	Each Metre	UTS 620.096	SP required for material specification.

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Item No.	Spec. No.	Description	Unit	Applicable Standards	Remarks
A46	604, 615, 617, 620, SP	Temporary Electrical Work	Lump Sum	UTS 620.051, UTS 620.055, UTS 620.056, UTS 620.060, UTS 620.061,	SP required for material specification.
A47	SP	Traffic Control, Warning and Street Name Signs	Lump Sum	UTS 999.010, UTS 999.020, UTS 999.030, UTS 999.031, UTS 999.035, UTS 999.040, UTS 999.045	SP required for material specification.

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A48	710 1713 1750 SP	Pavement Markings	Lump Sum		
A49	SP	Maintenance of Traffic	Lump Sum		

SP – Refers to a specification for the specific item required for installation as part of the Contract.