Traffic Signals

Material Producer List

Traffic Safety Division – Traffic Management Section

Traffic Signals (DMS)

The following materials are pre-qualified for use with the Department's *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges* and are associated with Department Material Specifications (DMS) referenced in Standard Specification Items 680, 681, 682, 685, and 690, which pertain to the installation of highway traffic signals.

MATERIAL PRODUCER LIST (MPL) FOR DMS-11120, "VEHICLE SIGNAL HEADS"

The following products are pre-qualified for use on projects where vehicle signal heads are furnished or installed as required by the item descriptive code. Signal heads are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown. Where miscellaneous parts, brackets, hardware, nuts, bolts, washers, or other incidentals are necessary and are not shown as pre-qualified products, the contractor will furnish products that meet the requirements of the plans and specifications.

Vehicle Signal Housings

Manufacturer/Distributor	Model/Number
Chapel Hill Manufacturing	TPY series (12"/Polycarbonate/Yellow)
	TAY series (12"/Aluminum/Yellow)
Econolite	TPY series (12"/Polycarbonate/Yellow)
	TAY series (12"/Aluminum/Yellow)
General Traffic Equipment Corp. (GTE)	T30H-Poly-TxDOT (Polycarbonate/3-section)
	T40H-Poly-TxDOT (Polycarbonate/4-section)
	T50H-Poly-TxDOT (Polycarbonate/5-section)
	T30H-Poly-TxDOT (Aluminum/3-section)
	T40H-Poly-TxDOT (Aluminum/4-section)
	T50H-Poly-TxDOT (Aluminum/5-section)
McCain	MTSTP series (Polycarbonate)
	MTSTA series (Aluminum)
	PT5X-XXXXXXX-TX (Polycarbonate/5-Section)
	AT3X-XXXXXXX-TX (Aluminum/3-Section)
	AT4X-XXXXXXX-TX (Aluminum/4-Section)
	AT5X-XXXXXXX-TX (Aluminum/5-Section)
Mobotrex Distribution (formerly Brown Traffic)	SA series (Polycarbonate w/Internal Hinges)
	SG series (Polycarbonate or Aluminum w/external hinges)

Vehicle Signal Housings

Manufacturer/Distributor	Model/Number
North American Signals	PT3X-XXXXXXX-TX (Polycarbonate/3-Section)
	PT4X-XXXXXXX-TX (Polycarbonate/4-Section)
	PT5X-XXXXXXX-TX (Polycarbonate/5-Section)
	AT3X-XXXXXXX-TX (Aluminum/3-Section)
	AT4X-XXXXXXX-TX (Aluminum/4-Section)
	AT5X-XXXXXXX-TX (Aluminum/5-Section)
Oriux (Peek Traffic Corp. DBA Oriux)	HSS Series (Aluminum)
	PSS Series (Polycarbonate)
Cubic ITS (Trafficware)	12004 series (Polycarbonate/Yellow)
	2007 series (Aluminum/Yellow)

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11121, "TWELVE-INCH LED TRAFFIC SIGNAL LAMP UNIT"

The following products are pre-qualified for use on the projects where 12 in. (300 mm) light emitting diode (LED) traffic signal lamps are furnished or installed as required by the item descriptive code. LED traffic signal lamp units are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

LED Modules

Manufacturer	Color/Type	Brand Name/Model Number
Dialight	Red Ball	433-1210-003XL (tinted)
		433-1210-003XL15 (tinted)
		433-1270-003XL (clear)
		433-1270-003XL15 (clear)
	Yellow Ball	433-3230-901XL (tinted)
		433-3230-901XL15 (tinted)
		433-3270-901XL (clear)
		433-3270-901XL15 (clear)
	Green Ball	433-2220-001XL (tinted)
		433-2220-001XL15 (tinted)
		433-2270-001XL (clear)
		433-2270-001XL15 (clear)
	Red Arrow	432-1314-001X0DTE (tinted)
		432-1314-001X0D15 (tinted)
		432-1374-001X0D15 (clear)
	Yellow Arrow	431-3334-901X0DTE (tinted)
		431-3334-901X0D15 (tinted)
		431-3374-901X0D15 (clear)
	Green Arrow	432-2324-001X0DTE (tinted)
		432-2324-001X0D15 (tinted)
		432-2374-001X0D15 (clear)
Duralight/Trastar	Red Ball	JXC-300HFTR (tinted)
		JXC300-HFTR03 (tinted)
		JXC300-HFTR04 (tinted)
		JXC300-HFR-C (clear)
	Yellow Ball	JXC-300HFTY02 (tinted)
		JXC300-HFTY03 (tinted)
		JXC300-HFTY04 (tinted)
		JXC300-HFY-C (clear)

LED Modules

Manufacturer	Color/Type	Brand Name/Model Number
Duralight/Trastar	Green Ball	JXC-300HFTG (tinted)
		JXC300-HFTG03 (tinted)
		JXC300-HFTG04 (tinted)
		JXC300-HFG-C (clear)

LED Modules

Manufacturer	Color/Type	Brand Name/Model Number
Duralight/Trastar	Red Arrow	JXJ300-07R03 (clear)
		JXJ300-07R04 (clear)
	Yellow Arrow	JXJ300-07Y03 (clear)
		JXJ300-07Y04 (clear)
	Green Arrow	JXJ300-07G03 (clear)
		JXJ300-07G04 (clear)
Excellence Opto, Inc. (EOI)	Red Ball	TRV-R12SG-D2T (tinted)
	Yellow Ball	TRV-Y12SG-D1T (tinted)
	Green Ball	TRV-G12SG-D2T (tinted)
	Red Arrow	TRA-R12DG-IN (tinted)
	Yellow Arrow	TRA-Y12DG-IN2 (tinted)
	Green Arrow	TRA-G12DG-IN (tinted)
Current (formerly GE Lighting Solutions)	Red Ball	DR6-RTFB-77A (tinted)
		DR6-RTFB-VLA-037 (tinted)
	Yellow Ball	DR6-YTFB-77A (tinted)
		DR6-YTFB-VLA-037 (tinted)
		DR6-YZFB-VLA-037 (tinted)
	Green Ball	DR6-GTFB-77A (tinted)
		DR6-GCFB-77A (clear)
		DR6-GCFB-VLA-037 (clear)
	Red Arrow	DR6-RTAAN-17A (tinted)
		DR6-RTAAN-VLA (tinted)
	Yellow Arrow	DR6-YTAAN-17A-YX (tinted)
		DR6-GTAAN-VLA (tinted)
	Green Arrow	DR6-GTAAN-VLA (tinted)
		DR6-GCAAN-17A (clear)

LED Modules

Manufacturer	Color/Type	Brand Name/Model Number
Leotek Electronics	Red Ball	TSL-12R-LX-IL6-A1-P2 (tinted)
		TSL-12R-LX-IL6-A1-P3 (tinted)
		TSL-12R-LX-IL6-A1-P2-CLR* (clear)
		TSL-12R-LX-IL6-A1-P3-CLR (clear)
	Yellow Ball	TSL-12Y-LX-IL6-A1-P2 (tinted)
		TSL-12Y-LX-IL6-A1-P3 (tinted)
		TSL-12Y-LX-IL6-A1-P2-CLR *(clear)
		TSL-12Y-LX-IL6-A1-P3-CLR (clear)
	Green Ball	TSL-12G-LX-IL6-A1-P2 (tinted)
		TSL-12G-LX-IL6-A1-P3 (tinted)
		TSL-12G-LX-IL6-A1-P2-CLR* (clear)
		TSL-12G-LX-IL6-A1-P3-CLR (clear)
	Red Arrow	TSL-12RA-IL6-A1 (tinted)
		TSL-12RA-IL-A1-P3 (tinted)
		TSL-12RA-IL6-A1-CLR (clear)
	Yellow Arrow	TSL-12YA-IL6-A1 (tinted)
		TSL-12YA-IL-A1-P3 (tinted)
		TSL-12YA-IL6-A1-CLR (clear)
		TSL-12YA-IL6-A1-P3-CLR (clear)
	Green Arrow	TSL-12GA-IL6-A1 (tinted)
		TSL-12GA-IL-A1-P3 (tinted)
		TSL-12GA-IL6-A1-CLR (clear)
		TSL-12GA-IL6-A1-P3-CLR (clear)

NOTE: For Leotek LED Modules marked with an asterisk (*), only modules with manufacture date codes of January 2013 or later are approved for use on Department projects.

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11130, "PEDESTRIAN SIGNAL HEADS"

The following products are pre-qualified for use on the projects where LED optical units for pedestrian signal heads are furnished or installed as required by the plans or item descriptive code. LED optical units for pedestrian signal heads are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Pedestrian Signal Heads

Manufacturer/Distributor	Model/Number
Chapel Hill Manufacturing	6745 (Aluminum)
	7300 (Polycarbonate)
Cubic ITS (Trafficware)	12053 (Aluminum/Yellow)
	12056 (Aluminum/Black)
General Traffic Equipment Corp. (GTE)	P7-EMPTY-*SAM-*GV-TxDOT (Polycarbonate)
	P7-EMPTY-*PO-*GV-TxDOT (Polycarbonate)
	P8-EMPTY-*SAM-*GV-TxDOT (Aluminum)
	P8-EMPTY-*PO-*GV-TxDOT (Aluminum)
	*SAM = Swing Arm Mount (Clamshell)
	*GV = Grid Visor (Z-Crate)
	*PO = Ports Open (Unplugged)
McCain	MPA (Aluminum/Drilled/Standard)
	MPP (Polycarbonate/Drilled/Standard
Mobotrex Distribution (formerly Brown Traffic)	SG7M (Aluminum/Polycarbonate)
	SG7S (Aluminum/Polycarbonate)
North American Signals	PP-XXXOZB-TX (Polycarbonate)
	AP-XXXOZB-TX (Aluminum)
Oriux (Peek Traffic Corp. DBA Oriux)	4302A (Aluminum)
	4302P (Polycarbonate)

Symbolic LED Optical Units

Manufacturer/Distributor	Model/Number
Cooper Lighting Products	CLP18DFA
Dialight	4306472001
Duralight/Trastar	JXM-300VIA
	JXM-400VIA
GELcore	PS7-CFC1-01A
	PS7-CFC1-26A
Leotek Electronics	7300 (Polycarbonate)
Oriux (Peek Traffic Corp. DBA Oriux)	LEDP-HMM-002

NOTE: The above Symbolic Pedestrian LED Modules (without an integrated countdown display) are not approved for traffic signals specified on Department projects let March 2013 and after.

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11131, "PEDESTRIAN LED COUNTDOWN SIGNAL MODULES"

The following products are pre-qualified for use on projects where countdown Symbolic LED optical units for pedestrian signal heads are furnished or installed as required by the plans or item descriptive code. Countdown Pedestrian LED Signal Modules are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Pedestrian LED Countdown Signal Modules

Manufacturer/Distributor	Model/Number
Dialight	430-6479-001XTE
Duralight/Trastar	JXM400VIEIL
	JXM-400VIEIL01
Current	PS7-CFF1-26A-FS
(formerly GE Lighting Solutions)	PS7-CFF1-VLA-037
Leotek Electronics	TSL-PED-16-CIL-P1
	TSL-PED-16-SPC-V1

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11132, "ACCESSIBLE PEDESTRIAN SIGNALS"

The following products are pre-qualified for use on projects where Accessible Pedestrian Signals are furnished or installed as required by the plans or item descriptive code. Accessible Pedestrian Signals are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Accessible Pedestrian Signals

Manufacturer/Distributor	Model/Number
PedSafety (A Campbell Company)	WiAAPS (Wireless Advisor Advanced Accessible Pedestrian Station) Consists of the following: • APC (*Advanced Pedestrian Coordinator) w/antenna • APB (**Advanced Pedestrian Button) • APB (**Touchless Advanced Pedestrian Button) • Termination Board Software used: Web Browser
Pelco	IntelliCross Consists of the following: • Push Button Station • PIM (Power Interface Module) • CIU-C (Communications Interface Unit) Software used: ICS (IntelliCross Configuration Software) Notes: SP-1055-TX-x-x-Pxx
Polara Enterprises, LLC	EN2 EZCOMM Navigator Consists of the following: • EN2 Push Button Station • CCU2EN Central Control Unit (Blue) • Interconnect Board (50 pin 4 cable harness) Software used: EZ APS Tool Box Notes: Blue CCU2EN = 18VDC system between Control Unit and Push Buttons over the two button wires. Not Compatible with iN2 iNavigator or iNS2 iNavigator systems. (This product has been discontinued from manufacture, but this item will remain on MPL until a specified time is determined for it to be removed.)
	iN2 iNavigator Consists of the following: • iN2 Push Button Station • iCCU-S (Intelligent Central Control Unit) (Red) • Interconnect Board (iN2-iCB) Software used: Intelligent Config Utility Notes: Red iCCU-S = 24VDC system using PLC over the two button wires between Control Unit and Push Buttons. Includes SDLC & 50 Pin 4 cable harness. Can operate as a full BIU in TS2. Compatible with iNS2 push buttons. (This system is superseded by iNS2 System. The iCCU-S is no longer available. The iCCU-S2 is compatible with the iN2 push buttons).

Accessible Pedestrian Signals

Manufacturer/Distributor	Model/Number
Polara Enterprises, LLC	**iNS2 iNavigator** Consists of the following: • iNS2 Push Button Station • iCCU-S2 (Intelligent Central Control Unit) (Red) • Interconnect Board (iN2-iCB) Software used: Intelligent Config Utility Polara Field Service iOS App Notes: Red iCCU-S2 = 24VDC system using PLC over the two button wires between Control Unit and Push Buttons. Includes SDLC & separate cables. Can operate as a full BIU in TS2. Compatible with iN2 push buttons. Manufacturer sells an adapter cable, 50PINADP, that allows you to use the existing cabinet iN2 ped input and ped output wiring (50 pin 4 cable harness system) with the newer iNS2 iNavigator System that utilizes the iCCU-S2 with a separate cable wiring system.
	iDetect Consists of the following: • iDS2 Push Button Station • iCCU-S2 (Intelligent Central Control Unit) (Red) • Interconnect Board (iN2-iCB) Software used: Intelligent Config Utility Polara Field Service iOS App Notes: Red iCCU-S2 = 24VDC system using PLC over the two button wires between Control Unit and Push Buttons. Includes SDLC & separate cables. Can operate as a full BIU in TS2. Compatible with iNS2 push buttons. iDetect is a touchless actuation feature that only comes in an iNS push button station. It is an added feature to the iNS push button station. If ordered with iNS, it becomes "iDS" or as a 2-wire push button "IDS2".

* This model of APS (5.0b) has newer hardware that supersedes previous approved unit (4.0).

** This model of APS (5.0c) has newer hardware that supersedes previous approved unit (4.0 & 5.0b).

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11150, "SOLAR POWER FLASHER CONTROLLER ASSEMBLY"

The following products are pre-qualified for use on the projects where solar power flasher controller assemblies are furnished or installed as required by the plans or item descriptive code. Solar power flasher controller assemblies are subject to testing.

24-Hour Flasher Assembly

Manufacturer	Model/Number	Type
BDesign	BD24-1R-Z1	Single Red Indication
	BD24-2R-Z1	Dual Red Indication
	BD24-1Y-Z1	Single Yellow Indication
	BD24-2Y-Z1	Dual Yellow Indication
	BD24-1R-Z2	Single Red Indication
	BD24-2R-Z2	Dual Red Indication
	BD24-1Y-Z2	Single Yellow Indication
	BD24-2Y-Z2	Dual Yellow Indication
Carmanah	R829-G	Dual Yellow Indication
Chapel Hill	SP24-TX1-1R	Single Red Indication
	SP24-TX1-2R	Dual Red Indication
	SP24-TX1-1Y	Single Yellow Indication
	SP24-TX1-2Y	Dual Yellow Indication
Consolidated Traffic Controls, Inc.	RTC SF24-TX1R	Advance Red Indication
	RTC SF24-TX2R	Advance Red Indication
	RTC SF24-TX1Y	Advance Yellow Indication
	RTC SF24-TX2Y	Advance Yellow Indication
Eltec	S890502	Single Yellow Indication
	S890503	Single Red Indication
	S890505	Dual Yellow Indication
	S890506	Dual Red Indication
	S890507	Dual Yellow Indication
	S890508	Dual Red Indication
Encom	Harmony	Dual Yellow Indication Dual Red Indication
K&K Systems, Inc.	KK161709-TX	Single Yellow Indication (116-S12)* Dual Yellow Indication (118-D12)* Single Red Indication (115-S12)* Dual Red Indication (117-D12)*
Paradigm Traffic, Inc.	AI070-90W-15CAB	Dual Yellow Indication
RTC	TXDCSZ (1 Battery)	Dual Yellow Indication
	TXDC2BATT (2 Battery)	Dual Yellow Indication

24-Hour Flasher Assembly

Manufacturer	Model/Number	Type
Texas Highway Products (formerly ACM Highway Products)	SF24-1R-Z1	Single Red Indication
	SF24-1Y-Z1	Single Yellow Indication
	SF24-2R-Z1	Dual Red Indication
	SF24-2Y-Z1	Dual Yellow Indication
	SF24-1R-Z2	Single Red Indication
	SF24-1Y-Z2	Single Yellow Indication
	SF24-2R-Z2	Dual Red Indication
	SF24-2Y-Z2	Dual Yellow Indication
Traffic and Parking Control Company, Inc. (TAPCO)	600173 (Dual BlinkerBeacon)	Dual Yellow Indication
WE Manufacturing	TxDOT Solar Flasher	Dual Yellow Indication Dual Red Indication

*Approval of 24HR flasher only (Side of Pole Mount Type).

School-Zone Flasher Assembly

Manufacturer	Model/Number	Type
BDesign	BDSZ-1Y-Z1	Single Beacon School-Zone
	BDSZ-2Y-Z1	Dual Beacon School-Zone
	BDSZ-1Y-Z2	Single Beacon School-Zone
	BDSZ-2Y-Z2	Dual Beacon School-Zone
Carmanah	R829-G	Dual Beacon Indication
Chapel Hill	SPSZ-TX1	School-Zone
Consolidated Traffic Controls Inc.	RTC SZF-TX1Y	School-Zone
	RTC SZF-TX2Y	School-Zone
Eltec	S890501	Single Beacon School-Zone
	S890504	Dual Beacon School-Zone
Encom	Harmony	Dual Yellow Indication
Paradigm Traffic, Inc.	AI070-90W-15CAB	Dual Yellow Indication
RTC	TXDCSZ (1 Battery)	Dual Yellow Indication
	TXDC2BATT (2 Battery)	Dual Yellow Indication
Texas Highway Products (formerly ACM Highway Products)	SFSZ-2Y-Z1	School-Zone
	SFSZ-2Y-Z2	School-Zone
Traffic and Parking Control Company, Inc. (TAPCO)	600173 (Dual BlinkerBeacon)	Dual Yellow Indication

Replacement Parts

Manufacturer	Model/Number	Type
Consolidated Traffic Controls Inc.	RTC 502598TxDOTF	Panel DC with Flasher & Regulator

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11160, "FLASHER CONTROLLER ASSEMBLY"

The following products are pre-qualified for use on the projects where flasher controller assemblies are furnished or installed as required by the plans or item descriptive code. Flasher controller assemblies are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Flasher Cabinets

Manufacturer/Distributor	Model/Number
B Designs	FB1-TX
Chapel Hill / Traffic Parts	2859
Henke Enterprises	NFF2C
Mobotrex Distribution (formerly Brown Traffic)	EPS217
RTC	RTCAC
TEC (Traffic Engineering Controls)	NF2C-TX
Cubic ITS (Trafficware)	50040-2000
WE Manufacturing	WE-MFG 120V AC Flasher

Time Clocks

Manufacturer/Distributor	Model/Number
ELTEC (Electrotechnics)	TC-18 Software used to connect: DLPRO 18
RTC	AP21T Software used to connect: trcomp
RTC	AP22 Software used to connect: RTC Connect
Cubic ITS (Trafficware)	50075-2001 (Chronomax) Software used to connect: Chronomax Direct

MATERIAL PRODUCER LIST (MPL) FOR
DMS-11170, "TRAFFIC SIGNAL CONTROLLER ASSEMBLY"

The following products are pre-qualified for use on the projects where traffic signal controller assemblies are furnished or installed as required by the plans or item descriptive code. Traffic signal controller assemblies are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

CONTROLLER UNIT (ONLY)

NEMA, TS-2, Pole-Mount/Base-Mount (12 and 16 positions), SDLC Traffic Controller Assembly with ABC Connectors (Type 2) and without ABC Connectors (Type 1)

Manufacturer/Distributor	Model/Number	Type	Firmware Version
Econolite	Cobalt (Color Touch Screen)	Type 1 and 2	3.2.13-Rev-A ***
	Cobalt (Non-Touch Screen)	Type 1 and 2	3.2.13-Rev-A ***
Econolite ATMS Software	Centracs		2.5.9.9
	Centracs Local Edition (Standalone)		2.5.9.9
QFree (formerly Intelight)	XN	Type 1 and 2	2.10.1
QFree (formerly Intelight) ATMS Software	MaxView*****		~~1.9.0.745~~
McCain, Inc.	M57970 (ATCeX2) M57390 (ATCeX2)	Type 1 Type 2	3.3.00 3.3.00
McCain ATMS Software	Transparity		1.4
Oriux (Peek Traffic Corp. DBA Oriux)	ATC 1000 Gen 1	Type 1 and 2	3.18
	ATC 1000 Gen 2	Type 1 and 2	3.18
Oriux (Peek Traffic Corp. DBA Oriux)	Spinnaker		2.0.0
	ATC Link (Standalone)		3.25
Yunex Traffic (A Siemens Business)	8132-0000-** (M60 NEMA Linux)*	Type 2	5.4.4
	8133-0000-** (M60 ATC Lite)*	Type 2	5.4.4
	8133-0004-** (M60)*	Type 2	5.4.4
Yunex Traffic (A Siemens Business) ATMS Software	Tactics		5.4.1
Cubic ITS (Trafficware)	50280-2140	980 ATC Type 1	76.16c
	50280-2240	980 ATC Type 2	76.16c
	COM-11xxxx10****	Commander Type 1	85.3.0
	COM-21xxxx10****	Commander Type 2	85.3.0
Trafficware ATMS Software	ATMS.Now		2.12
	Street Sync		1.5

CONTROLLER UNIT (ONLY)

NEMA, TS-2, Pole-Mount/Base-Mount (12 and 16 positions), SDLC Traffic Controller Assembly with ABC Connectors (Type 2) and without ABC Connectors (Type 1)

Manufacturer/Distributor	Model/Number	Type	Firmware Version

*Not compatible with Econolite Accuscan 600, 1000 and Smartmicro Type 32 radar systems when using SDLC. Use expansion module (contact closure) cards. (ATC8309 Engine Board)
**This denotes latest approved firmware by TRF-TM Branch.
***New Cobalt's are being shipped with new EB1.3 (repackaging EOS 3.2.13 to include new firmware (EBOS 06.18)
****Are manufacturer variable options that do not affect adherence to specification
*****MaxView uses an Microsoft plugin called "Silverlight" that is no longer supported/updated. Therefore, the MaxView ATMS is no longer allowed for use on the TxDOT network. Contact TRF-TM for further info.

CABINET ASSEMBLY

NEMA, TS-2, Pole-Mount/Base-Mount (12 and 16 positions), SDLC Traffic Controller Assembly without ABC Connectors

Manufacturer/Distributor	Model/Number
Econolite	CAB17366 (Rev R) (Size 6, 16-position, Base Mount) • Model P44 • Part# 170-1020-521-2
Henke Enterprises, Inc.	M128T-TS2-1 (Size 5, 12-position, Pole Mount 30" Wide)
	M62128-TS2-1 (Size 5, 12-position, Pole Mount, 62") ** P128T-TS2-1 (Size 6, 12-position, Base Mount)
	P168T-TS2-1 (Size 6, 16-position, Base Mount) HEN-TS2 (Size 6, 16-position, Base Mount)
	P67168-TS2-1 (Size 6, 16-position, Base Mount, 67") *
McCain	M47800 (Size 6, 16-position, Base Mount)
Mobotrex Distribution (formerly Brown Traffic)	EL702-TX2P (Size 5, 12-position, Pole Mount) EL708-TX2 (Size 5, 12-position, Pole Mount, (62") ** EL702-TX2 (Size 5, 12-position, Base Mount) EL712-TX2 (Size 6, 16-position, Base Mount) ELS1008-TX2 (Size 6, 16-position, Base Mount, Stretch P, 66") * EL720-TX2 (Size 6, 16-position, Base Mount) (R Cabinet, 77") *
Paradigm Traffic Systems, Inc.	PT-M55128TS2-1 (Size 5, 12-position, Pole Mount)
	004-M62128-TS2-1-TX (Size 5, 12-position, Pole Mount, 62") **
	PT-P38128TS2-1 (Size 5, 12-position, Pole Mount 38" Wide)
	PT-P44128TS2-1 (Size 6, 12-position, Base Mount)
	PT-P44168TS2-1 (Size 6, 16-position, Base Mount)
	004-PT-P442D168-TX (Size 6, 16-position, Base Mount, 67") *
Oriux (Peek Traffic Corp. DBA Oriux)	8500-17568 (Size 6, 16-position, Base Mount) 8500-17568-01 (Size 6, 16-position, Base Mount)
RTC Manufacturing	TS-2-P16-TX (Size 6, 16-position, Base Mount)
Cubic ITS (Trafficware)	70008-3044E-BM (Size 5, 12-position, Base Mount)

CABINET ASSEMBLY

NEMA, TS-2, Pole-Mount/Base-Mount (12 and 16 positions), SDLC Traffic Controller Assembly without ABC Connectors

Manufacturer/Distributor	Model/Number
	70008-3044E (Size 5, 12-position, Pole Mount)
	70008-3044E-62 (Size 5, 12-position, Pole Mount, 62") **
	70006-3044 (Size 6, 16-position, Base Mount)
	70006-3044E (Size 6, 16-position, Base Mount)
	70006-3044E-68RD (Size 6, 16-position, Base Mount, 68") *

* This model of cabinet is taller with a third shelf and additional rear door.

**This model of cabinet is taller with a third shelf

Malfunction Management Unit (MMU)

Manufacturer/Distributor	Model/Number	Firmware Ver.
Eberle Design (EDI)	MMU2-16LEip*	7.5
Eberle Design (EDI) Software	ECcom	4.5

* This model of MMU is also rebranded with the Trafficware and Econolite name.

Flasher Load Switch
NEMA, TS-2, TWO CIRCUIT, SOLID STATE, 15-AMP

Manufacturer/Distributor	Model/Number
Eberle Design (EDI)	810*
GDI	204
PDC	204

* This model of EDI Flasher Load Switch is also rebranded with the Econolite name.

Load Switch
NEMA, TS-2, THREE CIRCUIT, SOLID STATE, 10-AMP

Manufacturer/Distributor	Model/Number
Eberle Design (EDI)	510
PDC	200*
TSC	200

* This model of EDI Load Switch is also rebranded with the Econolite name.

Bus Interface Unit (BIU)
NEMA, TS-2

Manufacturer/Distributor	Model/Number
Eberle Design (EDI)	BIU-700
Econolite	160-1018-501
Cubic ITS (Trafficware)	BIU-700-TW (Same as EDI BIU-700)

Power Supply (PS)

NEMA, TS-2

Manufacturer/Distributor	Model/Number
Eberle Design (EDI)	PS 250 A (Linear Power Supply)
	PS 250 B (Switching Power Supply)
	PS 250 E (Linear Power Supply)*
Eagle (Mobotrex Distribution, formerly Brown Traffic)	CPS 105
Cubic ITS (Trafficware)	PS2D

* This model of Power Supply is the EDI PS250A that is rebranded with the Econolite name.

Surge Protection Device (SPD)

Manufacturer/Distributor	Model/Number
Citel	DS72US-120S/G (SPD)
	DUC31 (EMI/RFI Filter)
	DS72US-120S/G-F-ASSM (SPD & Filter)
	M50-120S-A (SPD)
	M50-120S-B (SPD)
	M50F-120S-A (SPD & Filter)
	M50F-120S-B (SPD & Filter)
Dehn	SN 4616 (Part#989409/S)
Eaton	ITCF1203-RJ
Emerson	SHA-1235FS
HESCO	SPD130KV2 HE1820

Traffic Signals (SS)

The following materials are pre-qualified for use with the Department's *Standards Specifications for Construction and Maintenance of Highways, Streets, and Bridges* and are associated with TO Specifications, which pertain to the installation of highway traffic signals. This is unique to statewide special specifications. District wide and one-time use (OTU) are not represented in this list.

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-3056 FLASH TRANSFER RELAYS

The following products are pre-qualified for use on the projects where Flash Transfer Relays are furnished or installed as required by the plans or item descriptive codes. Flash Transfer Relays are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Electromechanical Devices

Manufacturer/Distributor	Model/Number
AEMCO	136-4992
Deltrol Controls	295
Magnecraft	21ACPXD-5
Midtex	136-62T3A1
Reno A&E	TR-200
Struthers-Dunn	21ACPX-21XBXP
Struthers-Dunn	21XBXPL-120VAC

Solid State Devices

Manufacturer/Distributor	Model/Number
ACT Electronics, Inc.	91 ACN – AC positive is pin 1
	91 ACN – AC positive is pin 2

* NOTE: For solid state devices, the AC positive pin is cabinet dependent.

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-4050 SPREAD SPECTRUM RADIO FOR TRAFFIC
SIGNAL CLOSED LOOP SYSTEMS

The following products are pre-qualified for use on the projects where Spread Spectrum Radio for Traffic Signal Closed Loop Systems are furnished or installed as required by the plans or item descriptive codes. Spread Spectrum Radio for Traffic Signal Closed Loop Systems are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Spread Spectrum Radio for Traffic Signal Closed Loop Systems

Manufacturer/Distributor	Model/Number
Encom	COMMPAK 2000 Series* (contact closure for detection)
	COMMPAK 4000 Series* (contact closure)
	COMMPAK 5000 Series* (closed loop)
	COMMPAK 7000 Series* (two-way contact closure)
	COMMPAK 8000 Series* (Ethernet)
Freewave	FGR-115RE* (Ethernet)
	FGR-115RC* (rugged)
	FGR-115WC* (waterproof)
Intuicom	Communicator II – • FIP1-900C2M-R2 (shelf mounted 900 MHz radio)
	DIO Radio – • FIP1-900DIO-R (switch closure 900 MHz radio)
Microhard Systems, Inc.	Nano IP n920 (with enclosure)
GE (General Electric Company)	9810 (data only)
	iNet 900* (Ethernet)
	TransNET 900*
Phoenix Contact	RAD-ISM-900-EN-BD (900 MHz frequency hopping, serial, and Ethernet)
Simrex Corporation	SS-900; Alias Datamover SS (900 MHz frequency hopping and serial)

*Forward Store Capabilities

Surge Protection Devices (SPDs) for

Spread Spectrum Radio for Traffic Signal Closed Loop Systems

Manufacturer/Distributor	Model/Number
Citel	P8AX09-N/FF (SPD Coax for Spread Spectrum Systems)

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6019 PEDESTRIAN PUSH BUTTONS

The following products are pre-qualified for use on the projects where Pedestrian Push Buttons are furnished or installed as required by the plans or item descriptive codes. Pedestrian Push Buttons are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Mechanical (Plunger Style)

Manufacturer/Distributor	Model/Number
Chapel Hill	PB-S10-B04-Y

Solid State (Piezo Style)

Manufacturer/Distributor	Model/Number
Polara Enterprises, LLC	BDSP-04-Y (Bull Dog)

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6045 TWO CHANNEL LOOP DETECTOR

The following products are pre-qualified for use on the projects where Two Channel Loop Detector are furnished or installed as required by the plans or item descriptive codes. Two Channel Loop Detector are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

TWO CHANNEL LOOP DETECTOR

Manufacturer/Distributor	Model/Number
Eberle Design (EDI)	Oracle 2E
Reno A&E	Model C (1200-SS)
Oriux (Peek Traffic Corp. DBA Oriux)	292 CC-D
Global Traffic Technologies (GTT)	Canoga 9004 (4-channel card with ethernet port)
Cubic ITS (Trafficware)	722L (2-channel LCD)
	722LC (2-channel LCD)
	724 (4-channel LCD)

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6290(A) VIDEO IMAGING VEHICLE DETECTION
SYSTEM (Intersection Control Only)

The following products are pre-qualified for use on the projects where Video Imaging Vehicle Detection Systems are furnished or installed as required by the plans or item descriptive codes. Video Imaging Vehicle Detection Systems are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Video Imaging Vehicle Detection System

Manufacturer/Distributor	Model/Number
FLIR (Consolidated Traffic Controls)	Traficon VIP 3.1 (single camera input)
	Traficon VIP 3.2 (two camera input)
	Traficon VIP/3D.2 Edge (dual camera video detection processor)
	Traficon VIP/3D.1 Edge (single camera video detection processor)
	Traficon Viewcom E (Ethernet or serial communication interface for remote video viewing of the VIP/3D.1 or VIP/3D.2 Edge video processor)
Iteris, Inc.	Iteris Edge 2-2N TEXAS
Paradigm Traffic Systems, Inc.	Econolite Autoscope Solo Pro
	Econolite Autoscope Rackvision
	Econolite Autoscope Rackvision Terra
	Econolite Autoscope Rackvision Pro2
Oriux (Peek Traffic Corp. DBA Oriux)	VideoTrak-IQ
Cubic ITS (Trafficware)	Traficon VU BIU
	Traficon VU COM
	Traficon VU 2 Series (includes VU 2 & VU 2F two camera input)
	Traficon VU 1 Series (includes VU 1 & VU 1F one camera input)

Surge Protection Devices (SPDs) for Video Imaging Vehicle Detection Systems

Manufacturer/Distributor	Model/Number
Citel	P8AX09-B/FF (SPD Coax for VIVDS)

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6291 VIDEO IMAGING VEHICLE DETECTION
SYSTEMS (For Intersection Stop Line Detection)

The following products are pre-qualified for use on the projects where Video Imaging Vehicle Detection Systems (For Intersection Stop Line Detection) are furnished or installed as required by the plans or item descriptive codes. Video Imaging Vehicle Detection Systems (For Intersection Stop Line Detection) are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Video Imaging Vehicle Detection System (For Intersection Stop Line Detection)

Manufacturer/Distributor	Model/Number
Econolite	Autoscope Vision System • Camera • Comm Manager (Power Dist. Panel/Comm/SDLC) • Econolite Supervisor (Software for local/remote config)
FLIR (Consolidated Traffic Controls)	Trafiradar System • Cam/Sensor • Power Distribution Panel • TI X-Stream Edge Interface • PIM (Used with TS2 SDLC for additional 64 outputs) • 4/Os xp Expansion Boards (For additional outputs) • Traficon Configuration Tool (Software used for remote config)
Gridsmart	Gridsmart System • Camera • GS2 (Processor)** • GS3 (Processor) • Gridsmart Client (Software for remote config)
Iteris	Vantage Vector System • Camera/Sensor • Power Distribution Panel • Processor • VRAS (Software for Remote Config.)
	Vantage Next System • Camera • CCU (Power Distribution Panel) • Processor • Next Setup Tool/Viewer (Software for remote config)
ITS Plus, Inc.	ITS Plus System • Camera • Power Distribution Panel • Processor • SVS (Software for remote config)

Video Imaging Vehicle Detection System (For Intersection Stop Line Detection)

Manufacturer/Distributor	Model/Number
Miovision Technologies	MiovisionOne System • CoreDCM (Detection and Count Module) • SmartView Camera • Web Browser (For local/remote config) ◦ Roadside and Cloud Configuration Tool
NoTraffic	NoTraffic Detection & Sensing System Model 2.0 • Control Unit • Sensor Unit • DIN Rail w/power distribution • Intersection Manager (Web UI for local/remote config)
Rhythm Engineering	codeGreen • codeGreen Processor • Panamorphic Lens Camera • SDLC Module • DIN Rail w/ethernet switch and power distribution • Code Green Configurator (Web UI for local/remote config)

Surge Protection Devices (SPDs) for Video Imaging Vehicle Detection Systems

(For Intersection Stop Line Detection)

Manufacturer/Distributor	Model/Number
Citel	CGMJ8-POE-A (SPD POE for VIVDS)*
	CRMJ8-POE-C6A (SPD POE for VIVDS)*
	CWMJ8-POE-C6A (SPD POE for VIVDS)*
	MJ8-C6A (SPD Ethernet for VIVDS)
	MJ8-POE-A (SPD POE for VIVDS)
	MJ8-POE-C6A (SPD POE for VIVDS)

*These SPD's are in an outdoor rated enclosure

**The GS2 will be removed from the MPL on 04-17-25. The GS3 is the updated processor.

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6295 WIRELESS VIDEO IMAGING VEHICLE
DETECTION SYSTEM

The following products are pre-qualified for use on the projects where Wireless Video Imaging Vehicle Detection System are furnished or installed as required by the plans or item descriptive codes. Wireless Video Imaging Vehicle Detection System are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

WIRELESS VIDEO IMAGING VEHICLE DETECTION SYSTEM

Manufacturer/Distributor	Model/Number
Iteris	4WCAMSYS
Traficon	FPCT 5.8

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-6300 THERMAL TRAFFIC CAMERA

The following products are pre-qualified for use on the projects where Thermal Cameras are furnished or installed as required by the plans or item descriptive codes. Thermal Cameras are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

TWO CHANNEL LOOP DETECTOR

Manufacturer/Distributor	Model/Number
FLIR Systems, Inc.	SR-Series
	FC-Series

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-7010 NETWORKED SCHOOL ZONE FLASHER SYSTEMS

The following products are pre-qualified for use on the projects where Networked School Zone Flasher Systems are furnished or installed as required by the plans or item descriptive codes. Networked School Zone Flasher Systems are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Networked School Zone Flasher Systems

Manufacturer/Distributor	Model/Number
Applied Information	System consists of the following: Time Clock: • AI-500-070 Software: • Glance (Cloud Based)
Encom	Harmony System consists of the following: Time Clock: • EH 600 DC Gateway • EH 600 AC Gateway • EH 500 AC (SBX Remote) • EH 500 DC (SBX Remote) • HAR-700-DC-KIT (Cellular Gateway) • HAR-700-AC-KIT (Cellular Gateway) • HAR-700-DC-NR-KIT (Cellular/No Radio) • HAR-700-AC-NR-KIT (Cellular/No Radio) Software: • Stratos • ATMOS Cloud (Cloud Based**) ** For cloud-based solution from Encom, it is recommended to use the vendor supplied cellular router.
Eltec Traffic Products	System 3000 System consists of the following: Time Clock: • Lang 3000 • TC-3000 Software: • DLPRO 3000 Notes: Uses 900MHz radios for Lang and TC Clocks, with TxDOT approved cellular modem. For solar applications, a lower power usage modem is recommended. TxDOT TRF-TM has this info on recommended models.
RTC Manufacturing	RTC Connect System consists of the following: Time Clock: • APP22 • (Optional): Guardian (AC & DC Models) Software: • RTC Connect (Software on PC) * • RTC Connect (Cloud Based) ** Notes: Uses either vendor supplied cellular modem or TxDOT approved cellular modem. * Contact TRF-TM for further details when using a TxDOT supplied modem with RTC system. ** For cloud based solution from RTC, it is recommended to use the vendor supplied cellular router.

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-8000 RADAR VEHICLE DETECTION SYSTEM

The following products are pre-qualified for use on the projects where Radar Vehicle Detection Systems are furnished or installed as required by the plans or item descriptive codes. Radar Vehicle Detection Systems are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Radar Vehicle Detection System

Manufacturer/Distributor	Model/Number
FLIR (Consolidated Traffic Controls)	Trafiradar (Advance Detection)
Iteris	Vantage Vector (Advance Detection) • Processor* • Sensor** • SPD Panel (Surge Protection) • Radius Setup Tool (RST-2) (Software for Remote Config.) * This system uses a specific card style Vector Edge Processor for both radar and video detection. ** Sensor for this system is typically coupled with a video camera for presence detection
	Vantage Radius (Presence Detection) • CCU* • Sensor** • SPD Panel (Surge Protection) • Radius Setup Tool (RST-2) (Software for Remote Config.) * CCU can vary depending on intersection setup. (i.e. 2, 4 sensor capable CCU's. The older CCU's can be upgraded to latest firmware for compatibility with Radius Plus and Radius systems. ** This system was only presence detection and Iteris had two generations of this system, a Gen 1 and Gen 2.
	Vantage Radius Plus (Presence/Advanced Detection) • CCU* • Sensor** • SPD Panel (Surge Protection) • Radius Setup Tool (RST-2) (Software for Remote Config.) * CCU can vary depending on intersection setup. (i.e. 2, 4 sensor capable CCU's. ** Sensor for this system do both presence and advanced detection in one sensor.
Smartmicro	Type 44 (Presence Detection)* • UMRR11 Sensor (Full Duplex) • Works with TMIB V2 Only

Radar Vehicle Detection System

Manufacturer/Distributor	Model/Number
	Type 48 (Presence & Advance Detection) (TRUGRD)* • C Sensor (Full Duplex) • Works with TMIB V2 Only *Use Comm Hub w/SDLC Module for proper operation with the Yunex M60 traffic signal controller
	Type 48 Stream (Presence & Advance Detection) (TRUGRD)* • C Sensor (Full Duplex) • Comm Hub (SDLC, Power Supply, SPD) • 3 Conductor Wire (Ethernet over Power) *Use Comm Hub w/SDLC Module for proper operation with the Yunex M60 traffic signal controller
MS Sedco	Intersector (Presence & Advance Detection) • TC-CK1-SBE (Sensor) • TCIB-2.1 (Contact Closure Card 2 Channel) • TCIB-4.1 (Contact Closure Card 4 Channel) • TCPI-4 Power Injector
	Intersector (Advance Detection) • TC-CK1-VMS (Sensor) • TCIB-2.1 (Contact Closure Card 2 Channel) • TCIB-4.1 (Contact Closure Card 4 Channel) • TCPI-4 Power Injector
Wavetronix	Presence & Advance Detection • ARC Series* (2,5,6 Sensor) • Click 65x (600=4 Sensor, 650=4 Sensor, 656=6 Sensor) • SS Presence (WX-SS-225) • SS Advanced (WX-SS-200) • SS Advanced Extended Range (WX-SS-200E) • SS Manger Advanced & Matrix (Software for local/remote config.). • Web UI (Click 65x for some programming capabilities • Expanse (SW for ARC Config. only) * Compatible with current listed sensors

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-8010 WIRELESS MAGNETOMETER VEHICLE
DETECTION SYSTEMS

The following products are pre-qualified for use on the projects where Wireless Magnetometer Vehicle Detection Systems are furnished or installed as required by the plans or item descriptive codes. Wireless Magnetometer Vehicle Detection Systems are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Wireless Magnetometer Vehicle Detection Systems

Manufacturer/Distributor	Model/Number
Sensys Networks	VDS240
Cubic ITS (Trafficware)	Valence Pod System

MATERIAL PRODUCER LIST (MPL) FOR
SPECIAL SPECIFICATION TO-8248 UNINTERRUPTIBLE POWER SUPPLY (UPS)
SYSTEM FOR SIGNAL CABINETS

The following products are pre-qualified for use on the projects where Uninterruptible Power Supply (UPS) System for signal cabinets are furnished or installed as required by the plans or item descriptive codes. Uninterruptible Power Supply (UPS) System assemblies are subject to testing. No substitutions of products will be allowed when pre-qualified products are shown.

Uninterruptible Power Supply (UPS) System for signal cabinets

Manufacturer/Distributor	Model/Number
Alpha Technologies, Inc. (Sold by Paradigm Traffic)	UPS Assembly: • S6-FXM2-4X1810229 Inverter/Charger: • FXM-2000, 120V i/o, 48VDC, SNMP-017-232-31 • FXM-HP 2000 (Part #0170022-001) Cabinet: • TXDOT S6 w/o Gen w/RM UATS, Srg, BCK, SrvcPnl-026-053-75 Batteries: • 4ea. – Alpha Cell 240XTV Battery, 12V, 112Ah, Top M6Fem Term-1810229
American Power Conversion (APC) (Sold by Consolidated Traffic Controls)	UPS Assembly: • APC-TXDOT Inverter/Charger: • IND1K3H12SB (Includes Smart UPS 1300W (XU1K3LLXXRCC) and SBU) Cabinet: • CTCBBS (260012) Batteries: • 4ea. – Interstate DCM0100L • 4ea. – MK8A30 HEI batteries

Uninterruptible Power Supply (UPS) System for signal cabinets

Manufacturer/Distributor	Model/Number
Clary (Sold by Texas Highway Products)	UPS Assembly: • Clary SP2000LX-N Assembly • Clary SP2000LX-N/48 Assembly Inverter/Charger: • SP2000LX • SP200LX-N/48 Cabinet: • Bison Cabinet-014406 Batteries: • 8ea. – OPB-1251 • 8ea. – MK 8A24HEI • 4ea. – SLA1195 (Interstate)
Marathon (Sold by Tiger Traffic, formerly Wildcat)	UPS Assembly: • CTRS-2004-01 Inverter/Charger: • Marathon Power 2000VA/1500W (Part# TRTC-2004-N1) Cabinet: • Southern Manufacturing 49H22W17D BBS Enclosure (New Cabinet Design) Batteries: • 4ea. – MK 8A30 HEI
Multilink (Sold by Mobotrex)	UPS Assembly: • MBBU-L2200 Inverter/Charger: • 8005-0130-UPS2200-ML (w/UPS cable assembly) Cabinet: • EL762TX1 Batteries: • 4ea. – MK 8A30 HEI
Myers Power Products (Sold by Iteris)	UPS Assembly: • MP200E/EL762TX1 Inverter/Charger: • MP2000E Cabinet: • BC1280 (w/ MK 31HR4000S batteries) • EL762TX1 (w/ MK 8A30HEI batteries) Batteries: • 4ea. – MK 31HR4000S • 4ea. – MK8A30HEI

Uninterruptible Power Supply (UPS) System for signal cabinets

Manufacturer/Distributor	Model/Number
Oriux (Peek Traffic Corp. DBA Oriux)	UPS Assembly: • 5200#15774 (BBU TxDOT Approved / No Batteries Included) Inverter/Charger: • PB-2000 ITS (Power Back) (2M40-0084 PB2000 w/Ethernet Card) Cabinet: • 5201-0002 (Cabinet Shell w/Shelves & 1 Fan Assembly) Batteries: • 4ea. – Universal UB121100 (2X60-0007) • 4ea. – Interstate 12MQ3000 (2X65-0011)
Cubic ITS (Trafficware)	UPS Assembly: • 50450-200-ML-TX (MultiLink) Inverter/Charger: • 8005-0130-UPS2200-ML Cabinet: • 50450-2000-MLAUX Batteries: • 4ea. – MK 8A30HEI
ZincFive (Sold by Mobotrex)	UPS Assembly: • UPStealth 2 UPS 1500 XRT Inverter/Charger: • 09000-00200-00006 / 09000-00200-00012 (UPStealth 2 UPS Controller) (XRT-Battery Charger/Monitor) Cabinet: • CAB-GEN2-XRT Batteries: • 4ea. – 01200-00500-00004 (13V 80Ah H S Nickel-Zinc Battery)