

	OFFICI	E USE ONLY
APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP - 0031 - 10
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: 🗌 New 🛛 Renewal		
Manufacturer Information		
Manufacturer: _ Edwards, A division of UTC Fire & Security America C	corp., Inc.	
Manufacturer's Technical Representative: _Kyle Venzeio		
Mailing Address: 8985 Town Center Parkway, Bradenton, FL 34202		
	el.k.venzeio@fs.utc.com	
Product Information	MD,	
Product Name: EST3 & EST4 Fire Protection System SHPD	E.	
Product Type: Fire Protection Equipment OSP-0031-10	Se l	
Product Model Number: Various (See Attachment) (List all unique product identification numbers and/or part numbers)		
General Description: Fire protection system including control cabine power supplies, speakers, strobes, and all associated hardware. Seis modifications required to address anomalies observed during the tes	<mark>smic enhanceme</mark> nts ma	de to the test units and
Mounting Description: Panels are rigidly wall mounted. Duct detector	is rigid mounted on due	sting.
	E.P.	
Applicant Information	2001	
Applicant Company Name: TRU Compliance, by Structural Integrity A	ssociates, Inc.	
Contact Person: _ Galen Reid		
Mailing Address: <u>5215 Hellyer Ave., Suite 210, San Jose, CA 95138</u>		
Telephone: <u>541-604-7225</u> Email: <u>greid@</u>	<u>Dstructint.com</u>	
I hereby agree to reimburse the Office of Statewide Health I accordance with the California Administrative Code, 2016. Signature of Applicant:		opment review fees in e: 10/31/2019
Title: Program Manager Company Name: TRU C	compliance, by Structura	al Integrity Associates, Inc.
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	Allan	OSHPD
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	New King Ware	Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)									
Company Name: TRU Compliance, by Structural Integrity Associates, Inc.									
Name: Andrew Coughlin, SE California License Number: S6082									
Mailing Address:5215 Hellyer Ave, Suite 210, San Jose, CA 94608									
Telephone: (844) 878-0200 Email: <u>acoughlin@structint.com</u>									
Supports and Attachments Preapproval									
 Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required) Supports and attachments are not preapproved 									
Certification Method									
Image: Specify in accordance with: Image: CC-ES AC156 Other (Please Specify): OSP-0031-10 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accordance with: Image: CC-ES AC156 Image: Britistic specify in accord									
Testing Laboratory DATE: 01/17/2020									
Company Name: Environmental Testing Laboratory (ETL) Contact Name: Jeremy Lange Mailing Address: 11034 Indian Trail, Dallas, TX 75229 Telephone: (972) 247-9657 Email: jeremy@etIdallas.com									
Company Name:ANCO Engineers, Inc.									
Contact Name: Dr. Paul Ibanez									

Mailing Address:	1965-A 33 rd Street, Boulder	, CO 80301		
Telephone: (3)	03) 443-7580 x223	Email:	paul@ancoengineers.com	

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

Page 2 of 3

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

S	eis	mic	Par	am	eters	
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Design in accordance with ASCE 7-10 Chapter 13: 🛛 Yes 🗌 No
Design Basis of Equipment or Components $(F_p/W_p) = 1.16 (S_{DS} = 1.54)$; 1.11 $(S_{DS} = 2.46)$
S_{DS} (Design spectral response acceleration at short period, g) = <u>1.54 (z/h = 1)</u> ; 2.46 (z/h = 0)
a_p (In-structure equipment or component amplification factor) = <u>2.5</u>
R _p (Equipment or component response modification factor) = <u>6.0</u>
Ω_0 (System overstrength factor) = _2.0
I _P (Importance factor) = 1.5
z/h (Height factor ratio) = _1 (S _{DS} = 1.54); 0 (S _{DS} = 2.46)
Equipment or Component Natural Frequencies (Hz) = <u>See Attachment</u>
Overall dimensions and weight (or range thereof) =See Attachment
Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes X No
Design Basis of Equipment or Components (V/W) =
S _{DS} (Design spectral response acceleration at short period, g) =
S_{D1} (Design spectral response acceleration at 1 second period, g) = S_{D1} (Design spectral response acceleration at 1 second period, g) =
COF-0031-10
R (Response modification coefficient) =
Ω_0 (System overstrength factor) = BY:Timothy J Piland
Cd (Deflection amplification factor) =
I_{P} (Importance factor) = 1.5 DATE: 01/17/2020
Height to Center of Gravity above base =
Equipment or Component Natural Frequencies (Hz) =
Overall dimensions and weight (or range thereof) =
Tank(s) designed in accordance with ASME BPVC, 2015:
List of Attachments Supporting Special Seismic Certification
🖾 Test Report(s) 🗌 Drawings 📄 Calculations 🔲 Manufacturer's Catalog
Other(s) (Please Specify): Product Matrices
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025
1/1/00
Signature: Date: January 17, 2020
Print Name: Timothy J. Piland Title: SSE
Special Seismic Certification Valid Up to: S _{DS} (g) = <u>See Above</u> z/h = <u>See Above</u>
Condition of Approval (if applicable):
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15) Page 3 of 3





Manufacturer:	Edwards, A Div. of UT	C Fire & Sec	urity Ame	ricas Corpo	pration, Inc.		Тл	
Model Line:	EST3 & EST4 Fire Pro		BLE 1					
Certified Product Con	=							
14 gauge carbon steel	enclosure							
Certified Options Sum	nm 2/1//							
Surface or Semi-flush r								
Mounting Configurati	ion:	EC	RCO	DECO				
Wall mounted - rigid	6 6							
Note: Installed mounting co	nfiguration must be of simil	ar configuratio	in and equiva	lient strengtr			<i>z/h=1.0</i>	
Building Code:	CBC 2019	Seismic	Certificati	on Limits:			z/h=1.0 z/h=0.0	/ _P = <i>1.5</i>
Madallar	X	Di	mensions	(in)-10	Weight	m		
Model Line	Model	Depth	Width	Height	(lb)		Notes	UUT
EST3 & EST4 Backbox	3-CA <mark>B7B</mark>	B 5.8 in	28.0	26.0	<mark>99.5</mark>			60
Enclosure	3-CAB14B	5.8	28.0	38.0	130.0	0		2
	3-CAB21B	5.8 DATE:	28.0	48.0	167.0			3, 58, 59
	C				- / 2			
	P				2	•		
					SE!			
		NIA		ING C	,07			
			ROIL	DINO				
							Structural Integr	





	Edwards, A Div. of UTC EST3 & EST4 Fire Prote		-	icas Corpo	pration, Inc	с.	TABLE	2
Certified Product Cons	truction Summary:							
Backbox: 14 gauge carb	oon steel; Doors: 16 ga	auge carbo	n steel					
Certified Options Sum	mary:							
Surface or Semi-flush m	ount							
Mounting Configuratio	<i>n:</i>		RCO					
Wall mounted - rigid		OFC		JE CO	M			
Note: Installed mounting conf	iguration must be of simila	r configuratio	on and equiva	lent strength	n and stiffnes	s to those test	ed.	
Building Code:	CBC 2019	Seismic	Certificati	on Limits:		1.54 g z, 2.46 g z,		1.5
Model Line	Model	Di	mensions	(in)-10	Weight	m	Notes	
Model Line	Model	Depth	Width	Height	(lb)		Notes	UUT
_	3-RC <mark>C7R</mark>	B\6.8 in	25.5	24.0	128.0			Interp.
	XLS-R <mark>CC7R</mark>	6.8	25.5	24.0	128.0	Same as 3	-RCC7R/branding	Interp.
	ADT-R <mark>CC7R</mark>	6.8	25.5	24,0	128.0	Same as 3	-RCC7R/branding	Interp.
EST3 & EST4 Remote	3-RCC14R	6.8	25.5	36.0	160.0			4
Closet Cabinets	XLS-RCC14R	6.8	25.5	36.0	160.0	Same as 3	-RCC14R/branding	Interp.
(Backbox+Door)	ADT-RCC14R	6.8	25.5	36.0	160.0	Same as 3	-RCC14R/branding	Interp.
	3-RCC21R	6.8	25.5	48.0	170.0			5
	XLS-RCC21R	6.8	25.5	48.0	170.0	Same as 3	-RCC21R/branding	Interp.
	ADT-RCC21R	6.8	25.5-	48.0	170.0	Same as 3	-RCC21R/branding	Interp.





Manufacturer:	Edwards, A Div. of UT	C Fire & Sec	urity Ame	ricas Corpo	oration, Inc.	Тл	BLE 3
Model Line:	EST3 & EST4 Fire Prot	IA	DLE J				
	nstruction Summary:						
16 gauge carbon steel	enclosure						
Certified Options Sur	nmarv:						
Surface or Semi-flush							
Mounting Configurat	ion:	EC	RCO	DECO			
Wall mounted - rigid	6						
Note: Installed mounting co	nfiguration must be of simila	ar configuratio	on and equiva	alent strengtr			
Building Code:	CBC 2019	Seismic (Certificati	on Limits:	$S_{DS} = 1.54 g$ $S_{DS} = 2.46 g$		/ _P = <i>1.5</i>
	8	Di	mensions	(in)-10	Weight	2/11-0.0	
Model Line	Model	Depth	Width	Height	(lb)	Notes	UUT
	RLC <mark>M/B</mark>	B\3.5 in	10 ^{7.8} V	13.3	d 4.5		Extrap.
	RLCM <mark>/B-S</mark>	3.5	7.8	13.3	4.5		Extrap.
	4AN <mark>N/B</mark>	3.5	11.5	13,3	11.3		Extrap.
EST3 Annunciator	4ANN/ <mark>B-S</mark>	3.5	11.5	13.3	11.3		63
Backbox Enclosures	6ANN/B	3.5	16.0	13.3	20.3		Interp.
	6ANN/B-S	3.5	16.0	13.3	20.3		Interp.
	10ANN/B	3.5	25.5	13.3	22.5		Interp.
	10ANN/B-S	3.5	25.5	13.3	22.5		1
	4-2ANNMT	4.3	10.0-	13.8	10.5		62
	4-4ANNMT	5.0	14.5	13.8	19.0		Interp.
EST4 Annunciator	4-6ANNMT	5.3	18.8	13.8	21.3		Interp.
Backbox Enclosures	4-8ANNMT	9.8	17.0	24.0	42.0		Interp.
	4-16ANNMT	9.8	26.5	25.3	63.0		Interp.
	4-24ANNMT	9.8	30.0	43.5	94.0		61
Battery Cabinet	BC-1	7.3	18.3	14.0	82.5		18
Accessory Mounting Enclosure	MFC-A	3.5	8.0	14.0	5.5		54, 55





TRU PROJECT NO. 1900428

Manufacturer:	Edwards, A Div. of UTC	•	TABI	E /				
Model Line:	EST3 & EST4 Fire Prote							
Certified Product Co	onstruction Summary:							
18 gauge carbon stee	l enclosure							
Certified Options Su	-							
Surface or Semi-flush	mount							
Mounting Configura	tion:		000					
Wall mounted - rigid		IN FO	RCO	JE CO	1.			
•	onfiguration must be of simila	r configuratio	n and equiva	lent strength	and stiffness	s to those tested.		
Building Code:	CBC 2019	Solomia	ortificati	on Limits:	S _{DS} =	1.54 g z/h=1	.0	/ _P = 1.5
Bunning Coue:	CBC 2013	Seisinit	ertincatio	JII LIIIIILS:	S _{DS} =	2.46 g z/h=0	0.0	/p- <i>1.3</i>
Model Line	Model	Dir	nensions	(in)-10	Weight	NC NC	otes	υυτ
Model Line	Modet	Depth	Width	Height	(lb)			
	BPS6 <mark>A/230</mark>	B\3.8 in	13.3	17.5 _a	<mark>30.5</mark>			Extrap
	BPS6CAA	3.8	13.3	17.5	30.5	Different brand	ding	Extrap
	ADT-B <mark>PS6A</mark>	3.8	13,3	17,5	<mark>3</mark> 0.5	Different brand	Jing	Extrap
	EBPS <mark>6A</mark>	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	EBPS6A/230	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	MIRBPS6A	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	MIRBPS6A/230	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	XLS-BPS6A	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	XLS-BPS6A/230	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	ZBPS6A	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
	ZBPS6A/230	3.8	13.3	17.5	30.5	Different brand	Jing	Extrap
Power Supply	BPS10A	3.8	13.3	17.5	34.0			19
	BPS10A/230	3.8	13.3	17.5	34.0			Interp
	BPS10CAA	3.8	13.3	17.5	34.0	Different brand	Jing	Interp
	ADT-BPS10A	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	EBPS10A	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	EBPS10A/230	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	MIRBPS10A	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	MIRBPS10A/230	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	XLS-BPS10A	3.8	13.3	17.5	34.0	Different brand	Jing	Interp
	XLS-BPS10A/230	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	ZBPS10A	3.8	13.3	17.5	34.0	Different brand	ding	Interp
	ZBPS10A/230	3.8	13.3	17.5	34.0	Different brand	dina	Interp





<i>Manufacturer: Model Line:</i>	Edwards, A Div. of UTC EST3 & EST4 Fire Prote			ricas Corpc	pration, Inc.		TA	BLE 4
Certified Product Con		cuon syste	2111]	
18 gauge carbon steel e								
<i>Certified Options Sun</i> Surface or Semi-flush r								
<i>Mounting Configurati</i> Wall mounted - rigid Note: Installed mounting con	ion: onfiguration must be of similar		R COI		and stiffness	to those	tested.	
Building Code:	CBC 2019	Seismic (Certificatio	on Limits:			z/h=1.0 z/h=0.0	/ _P = <i>1.5</i>
Model Line	Model	Depth	mensions Width	(in)–10 Height	Weight (lb)	m	Notes	UUT
Power Supply	APS <mark>6A APS10A</mark>	B\5.3 in 5.3	15.3 15.3	26.5 26.5	66.0 73.5	0		Interp.
		DATE:	01/17/	2020				
		EORNIA	BUILT	DINGC	ODE.			
	tween 10A/6A is smaller I							

Manufacturer: Model Line:	Edwards, A Div. of UTC EST3 & EST4 Fire Prote	· ·	oration, Inc Table Description: Doors		TABLE 5
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	I _P = 1.5	
Component Type	Manufacturer	Model	RCODEDescription	Not	es UUT
		3-CAB7D	Door for 3-CAB7B		Extrap.
		XLS-CAB7D	Door for 3-CAB7B	Same as 3-CAB7D/Br	anding Extrap.
		ADT-CAB7D	Door for 3-CAB7B	Same as 3-CAB7D/Br	anding Extrap.
		3-CAB14D	Door for 3-CAB14B		2
		X <mark>LS-CA</mark> B14D	Door for 3-CAB14B	Same as 3-CAB14D/B	randing Interp.
	LITC	ADT-CAB14D RV.Ti	Door for 3-CAB14B	Same as 3-CAB14D/B	randing Interp.
EST3 Doors UTC	UIC	3-CAB21D	Door for 3-CAB21B		3, 58
		XLS-CAB21D	Door for 3-CAB21B	Same as 3-CAB21D/B	randing Interp.
		ADT-CAB21D DATE	Door for 3-CAB21B	Same as 3-CAB21D/B	randing Interp.
		3-4ANN/D	Door for 4ANN/B		63
		3-6ANN/D	Door for 6ANN/B		Interp.
		3-10ANN/D	Door for 10ANN/B		1
		4-2ANND	Door for 2-ANNMT		62
		4-4ANND	Door for 4-ANNMT		Interp.
		4-6ANND	Door for 6-ANNMT		Interp.
		4-CAB8DR	Door for 3-CAB5B or 4-8ANNMT backbox	Red color version of 4	I-CAB8D Interp.
		4-CAB8D	Door for 3-CAB5B or 4-8ANNMT backbox		Interp.
EST4 Doors	UTC	4-CAB16DR	Door for 3-CAB7B or 4-16ANNMT backbox	Red color version of 4	I-CAB16D 60
		4-CAB16D	Door for 3-CAB7B or 4-16ANNMT backbox		Interp.
		4-CAB24DR	Door for 3-CAB14B or 4-24ANNMT backbox	Red color version of 4	4-CAB24D 61
		4-CAB24D	Door for 3-CAB14B or 4-24ANNMT backbox		Interp.
		4-CAB24DRL	Door for 3-CAB21B backbox	Red color version of 4	I-CAB24DL Interp.
		4-CAB24DL	Door for 3-CAB21B backbox		59







	Edwards, A Div. of UTC F EST3 & EST4 Fire Protect	ire & Security Americas Corpo tion System	pration, Inc Table Description: Electrical	Components	TABLE 6
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	I _P = 1.5	
Component Type	Manufacturer	Model	RCODEDescription	Not	es UUT
		3-4ANN	Annunciator /w CPU, 2 of 3- ANNSM	Depopulated 3-10AN	N Interp.
		3-6ANN	Annunciator /w CPU, 2 of 3- ANNSM, 2 of 3-ANNBF	Depopulated 3-10AN	N Interp.
		ADT-6ANN	Annunciator /w CPU, 2 of 3- ANNSM, 2 of 3-ANNBF	Depopulated 3-10AN	N Interp.
Annunciator / CPU UTC	UTC	xls-gann By:Ti	Annunciator /w CPU, 2 of 3- ANNSM, 2 of 3-ANNBF	Depopulated 3-10AN	N Interp.
		3-10ANN DATE	Annunciator /w CPU, 2 of 3-ANNSM, 6 of 3-ANNBF		1
		ADT-10ANN	Annunciator /w CPU, 2 of 3- ANNSM, 6 of 3-ANNBF	Identical to 3-10ANN,	/branding Interp.
		XLS-10ANN	Annunciator /w CPU, 2 of 3- ANNSM, 6 of 3-ANNBF	Identical to 3-10ANN,	/branding Interp.
		3-ANNSM	Annunciator LED Display Support Module		1,63
Annunciator Display	UTC	ADT-LDCANN	Remote LCD Command Module	Identical to 3-ANNSM	/branding Interp.
		XLS-LCDANN	Remote LCD Command Module	Identical to 3-ANNSM	/branding Interp.
		3-12/S1GY	LED Display/Control Module		1, 2, 5, 5
		3-12/S1RY	LED Display/Control Module		1, 2, 5, 5
FCT2 LED/Switch		3-12/S2Y	LED Display/Control Module		1,2,3,5, 5
EST3 LED/Switch Module	UTC	3-12RY	LED Display/Control Module		3, 5, 58
module		3-12SG	LED Display/Control Module		3, 58, 63
		3-12SR	LED Display/Control Module		3, 58
		3-12SY	LED Display/Control Module		3, 5, 58





	Edwards, A Div. of UTC EST3 & EST4 Fire Protee	Fire & Security Americas Corpo ction System	oration, Inc Table Description: Electrical	Components	TABLI	E 6
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	/ _P = 1.5		
Component Type	Manufacturer	Model	RCODEDescription	No	tes	UUT
		3-24G	LED Display/Control Module			3, 5, 58
		3-24R	LED Display/Control Module			3, 5, 58
EST3 LED/Switch	UTC	3-24Y	LED Display/Control Module			3, 5, 58
Module	UIC	3- <mark>4/3SG</mark> YWR	LED Display/Control Module			63
	-	3 <mark>-6/3S</mark> 1G2Y	LED Display/Control Module			1, 2, 58
		3 <mark>-6/3S</mark> 1GYR _{RV} .Ti	LED Display/Control Module			1,2,3,5,5
		4-24L	LED Display/Control Module	Mounts to EST4 UIRA	AIL on inner door.	59, 60, 61
EST4 LED/Switch module	UTC	4-24L24S	LED Display/Control Module	Mounts to EST4 UIRA	AIL on inner door.	59, 60, 62
		4-24L18S DATE	LED Display/Control Module	Mounts to EST4 UIRA	AIL on inner door.	59, 60, 61
		4-24L12S	LED Display/Control Module	Mounts to EST4 UIRA	AIL on inner door.	59, 60, 61
		3-LCD	LDC Display/Control Module			1,2,5
EST3 Display Module	UTC	3-LCDANN	LDC Display/Control Module			1,63
		3-LCDXL1	LDC Display/Control Module			3
		4-LCD	LDC Display/Control Module			59,60,61, 62
EST4 Display Module	UTC	4-3LCD	LDC Display/Control Module			58
		4-LCDAUDTEL	LDC Display/Control Module			59
		3-ASU	Audio Source Unit			3
EST3 Audio Module	UTC	3-ASU/FT	Audio Source Unit w/ Firefighter Phone			2
		4-AUDTELS	Audio, Telephone, 1Vrms, and A to D audio	Mounts to 4-CPU		58, 59, 60
EST4 Audio Module	UTC	4-ANNAUDTEL	Audio, A to D audio	Mounts to 4-ANNCPL	J	59
EST3 Telephone Module	UTC	3-FTCU	Firefighter Phone			2



	Edwards, A Div. of UTC Fi EST3 & EST4 Fire Protect	re & Security Americas Co ion System	prporation, Inc Table Description: Electrica	l Components	TABL	E 6
Building Code:	CBC 2019	Seismic Certific	ation Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	/ _P = 1.5		
Component Type	Manufacturer	Model	FOR CODE Description	Not	tes	UUT
EST4 Telephone Module	UTC	4-FT	Firefighter Phone	Mounts to EST4 UIRA	IL on inner door	59, 60
		6700-0061	Remote firefighter's telephone (Red)			59,61
Telephone	UTC -	6700-0062	Remote firefighter's telephone (Black)	Same as 6700-0061 (color)	Interp.
Telephone Receptacle	UTC	6702-0200	Receptacle for remote firefighter's			59, 61
Battery Shelf	UTC	3-BATS	Battery Shelf for Single 65AH Cell			4
Battery Distribution	UTC	3-BTSEN DA	Battery Cabinet Power Distribution bus & 50A breaker			4
		3-PPS/M-120	Primary Power Supply 120V			2, 3, 58, 59, 60
		3-PPS/M-220	Primary Power Supply 220V	Same hardware as 3	-PPS/M-120	Interp.
Power Supply	UTC	3-BBC/M-120	Booster Power Supply 120V			2,5
		3-BBC/M-220	Booster Power Supply 220V	Same hardware as 3	-BBC/M-120	Interp.
		3-BPS/M-120	Booster Power Supply 120V			5
		3-BPS/M-220	Booster Power Supply 220V	Same hardware as 3	-BPS/M-120	Interp.
		3-CHASS4	Chassis Assy for 4 LRMs			3
Chassis	UTC	3-CHAS5	Chassis for 5 LRMs			Interp.
CIIdSSIS		3-CHAS7	Chassis Assy for 7 LRMs			2, 3, 5, 58 59, 60, 6
		3-CPU3	Central Processor Module			2, 3, 5, 6
EST3 CPU	UTC —	3-ANNCPU3	Annunciator CPU w/ RS485 Board			1,63





	dwards, A Div. of UTC Fi ST3 & EST4 Fire Protect	re & Security Americas Corpo ion System	pration, Inc Table Description: Electrica	Components	TABLE	6
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	I _P = 1.5		
Component Type	Manufacturer	Model	RCODEDescription	Not	es	υυτ
		4-CPU	Central Processor Module	Mounts to chassis, 3-	CHAS7 or 3-CHAS5	58, 59, 60
		4-ANNCPU	EST4 Annunciator CPU			59, 61, 62
		4-NET-AD	Depopulated CPU	Depopulated versior	of 4-ANNCPU	58, 59, 61
EST4 CPU	UTC	4-FWAL1	Depopulated CPU	Depopulated versior	of 4-ANNCPU	Interp.
		4-FWAL2	Depopulated CPU	Depopulated versior	of 4-ANNCPU	Interp.
		4-FWAL3 _{BV} .Ti	Depopulated CPU and	Depopulated version of 4-ANNCPU		Interp.
		4-FWAL4	Depopulated CPU	Depopulated versior	of 4-ANNCPU	Interp.
		3-FIBMB	Fiber Card, /w adaptor card, ribbon cable			3,5
		SMXHi	Single mode plug-in Transceiver- Long Range	Different frequency t	han MMXVR	Interp.
EST3 Communication		SMXLO	Single mode plug-in Transceiver- Short Range	Different frequency t	han MMXVR	Interp.
Card	UTC —	3-RS232	RS232 Communication Card			2,3,5
		3-RS485A	Network Communication Card, Class A			2,63
		3-RS485B	Network Communication Card, Class B	Class A w/wiring cha	nge	Interp.
		3-MODCOM	Modem Communicator and Dialer	Software change from	m 3-MODCOMP	Interp.
		3-MODCOMP	Modem Communicator and Dialer	Optional pager		3
		4-NET-TP	Twisted Pair			58, 59
		4-NET-TP-HC	Twisted Pair			61,62
EST4 Communication Network Modules	UTC	4-NET-CAT	Ethernet CAT5			58, 59, 60 61, 62
		4-NET-SM	Single Mode fiber			58, 59
		4-NET-SMU	Single Mode fiber			58





	Edwards, A Div. of UTC F EST3 & EST4 Fire Protect	ire & Security Americas Corpo ion System	pration, Inc Table Description: Electrical	Components TAB	LE 6
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	/ _P = 1.5	
Component Type	Manufacturer	Model	RCODEDescription	Notes	UUT
		4-NET-SMD	Single Mode fiber		59
		4-NET-SMH	Single Mode fiber		58, 59
		4-NET-MM	Multimode fiber		58, 59
		4-FWAL-CAT	Ethernet CAT5-10	Same hardware as 4-NET-CAT	Interp.
EST4 Communication Network Modules	UTC	4 <mark>-FWA</mark> L-SM	Single Mode fiber	Same hardware as 4-NET-SM	Interp.
Network modules		4-FWAL-SMU _{RV} .Ti	Single Mode fiber and	Same hardware as 4-NET-SMU	Interp.
		4 <mark>-FWAL</mark> -SMD	Single Mode fiber	Same hardware as 4-NET-SMD	Interp.
		4-FWAL-SMH	Single Mode fiber	Same hardware as 4-NET-SMH	Interp.
		4-FWAL-MM	Multimode fiber	Same hardware as 4-NET-MM	Interp.
Communication 3rd Party Module	UTC	4-NET-XT	DHSL, Long distance CAT5 to twisted pair		58, 59
Common Relay Module	UTC	4-COMREL	Common relay board, mounted to 4-CPU		58, 59, 60
EST3 Microphone		3-REMICA	Remote Mic Unit - Ann Mount		1
Module	UTC –	3-REMICP	Remote MIC Panel Mount		5
EST4 Microphone Module	UTC	4-MIC	Paging Microphone	Mounts to EST4 UIRAIL on inner doo	or 59, 60
Device Circuit Module	UTC	3-IDC 8/4	Initiating / Indicating Device Circuit Module		3,58,59,60
Driver Module	UTC	3-LDSM	Annunciator Driver Module		3, 58
Signal Module	UTC	3-OPS	Off Premise Signal Module		5
Access Control Module	UTC	3-SAC	Security/Access Control Module		2





	re & Security Americas Co on System	prporation, Inc Table Description: Electric		TABL	E 6
CBC 2019	Seismic Certific	Tation Limits: $S_{DS} = 1.54 g \ z/h = 1.0$ $S_{DS} = 2.46 g \ z/h = 0.0$	/ _P = 1.5		
Manufacturer	Model	FOR CODE Description	No	tes	UUT
	3-AADC1	Analog Driver Controller	Firmware change fro	om 3-SSDC1	Interp
	3-DSDC1	Signature Dual Driver Controller	Same as 3-SSDC1/br	anding	Interp
	3-SDC1	Signature Data Card for Controller			2,3,5
	3-SDC1	Signature Data Card for Controller			3, 58, 5
	3-SDDC1	Signature Dual Driver Controller			2, 3, 5
	3-SSDC1 RV.	Signature Single Driver Controller			5, 58, 6
UTC —	3-TAMP	EST3 Cabinet Tamper Switch	For use with 3-CAB7D,3-CAB14D, 3- CAB21D		2, 58
	3-TAMP5	EST3 Cabinet Tamper Switch	For use with 4-CAB8 TAMP.	D. Identical to 3-	Interp
	3-TAMPRCC	EST3 Cabinet Tamper Switch		, ,	Interp
	4-TAMP	EST4 Cabinet Tamper Switch	For use with 4-CAB1 CAB24DL	6D,4-CAB24D,4-	59,60
	3-ZA20A	20 Watt Zone Amplifier, Class A			58,60
	3-ZA20B	20 Watt Zone Amplifier, Class B			59
	3-ZA30A	30 Watt Zoned Amplifier, Class A			Interp
UTC	3-ZA30B	30 Watt Zoned Amplifier, Class B			Interp
	3-ZA40A	40 Watt Zoned Amplifier, Class A			2, 5, 58,
	3-ZA40B	40 Watt Zoned Amplifier, Class B			58, 59
	3-ZA95	95 Watt Zoned Amplifier			3, 58, 5
					_
	UTC	EST3 & EST4 Fire Protection SystemCBC 2019Seismic CertificManufacturerModel3-AADC13-AADC13-DSDC13-SDC13-SDC13-SDC13-SDD13-SSDC13-SSDC13-SSDC13-TAMP3-TAMPUTC3-TAMP5UTC3-TAMP5UTC3-ZA20A3-ZA20A3-ZA30A3-ZA30A3-ZA30AUTC3-ZA40A3-ZA40A3-ZA40A	EST3 & EST4 Fire Protection System CBC 2019 Seismic Certification Limits: S os = 1.54 g z/h=1.0 S os = 2.46 g z/h=0.0 Manufacturer Model Description 3-AADC1 Analog Driver Controller 3-05021 3-DSDC1 Signature Dual Driver Controller 3-SDC1 Signature Data Card for Controller 3-SDC1 Signature Dual Driver Controller 3-SDC1 Signature Single Driver Controller 3-SSDC1 Signature Single Driver Controller 3-SAPD STAMP5 EST3 Cabinet Tamper Switch UTC 3-TAMP EST4 Cabinet Tamper Switch 4-TAMP EST4 Cabinet Tamper Switch 3-ZA208 UTC <t< td=""><td>EST3 & EST4 Fire Protection SystemCBC 2019Seismic Certification Limits:$S_{DS} = 1.54g \ z/h = 1.0 \ S_{DS} = 2.46g \ z/h = 0.0$$I_p = 1.5$ManufacturerModelDescriptionNoModelJANDEL Colspan="2">Observation of the systemUTC3-AADC1Analog Driver ControllerGeneration Controller3-AADC1Analog Driver Controller3-AADC1Analog Driver Controller3-AADC1Signature Dual Driver Controller3-DSDC1Signature Dual Driver Controller3-SDC1Signature Dual Driver Controller3-TAMPEST3 Cabinet Tamper SwitchArt Art PEST4 Cabinet Tamper SwitchArt Art P<!--</td--><td>IABL CBC 2019 Seismic Certification Limits: \$_DS = 1.54g z/h = 1.0 \$_DS = 2.46g z/h = 0.0 I _p = 1.5 Manufacturer Model Description I _p = 1.5 Manufacturer Model Description Notes 3-AADC1 Analog Driver Controller Firmware change from 3-SSDC1 3-BSDC1 Signature Dual Driver Controller Same as 3-SSDC1/branding 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB8D, Identical to 3- TAMP. UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPFC EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPF EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB2</td></td></t<>	EST3 & EST4 Fire Protection SystemCBC 2019Seismic Certification Limits: $S_{DS} = 1.54g \ z/h = 1.0 \ S_{DS} = 2.46g \ z/h = 0.0$ $I_p = 1.5$ ManufacturerModelDescriptionNoModelJANDEL Colspan="2">Observation of the systemUTC3-AADC1Analog Driver ControllerGeneration Controller3-AADC1Analog Driver Controller3-AADC1Analog Driver Controller3-AADC1Signature Dual Driver Controller3-DSDC1Signature Dual Driver Controller3-SDC1Signature Dual Driver Controller3-TAMPEST3 Cabinet Tamper SwitchArt Art PEST4 Cabinet Tamper SwitchArt Art P </td <td>IABL CBC 2019 Seismic Certification Limits: \$_DS = 1.54g z/h = 1.0 \$_DS = 2.46g z/h = 0.0 I _p = 1.5 Manufacturer Model Description I _p = 1.5 Manufacturer Model Description Notes 3-AADC1 Analog Driver Controller Firmware change from 3-SSDC1 3-BSDC1 Signature Dual Driver Controller Same as 3-SSDC1/branding 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB8D, Identical to 3- TAMP. UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPFC EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPF EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB2</td>	IABL CBC 2019 Seismic Certification Limits: \$_DS = 1.54g z/h = 1.0 \$_DS = 2.46g z/h = 0.0 I _p = 1.5 Manufacturer Model Description I _p = 1.5 Manufacturer Model Description Notes 3-AADC1 Analog Driver Controller Firmware change from 3-SSDC1 3-BSDC1 Signature Dual Driver Controller Same as 3-SSDC1/branding 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D 3-SDC1 Signature Single Driver Controller For use with 3-CAB7D,3-CAB14D, 3- CAB21D UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB8D, Identical to 3- TAMP. UTC 3-TAMP5 EST3 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPFC EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB24DL J-TAMPF EST4 Cabinet Tamper Switch For use with 4-CAB16D,4-CAB24D,4- CAB2





	Edwards, A Div. of UTC F EST3 & EST4 Fire Protect	ire & Security Americas Corp tion System	oration, Inc Table Description: Electrica	al Components	TABLE 6
Building Code:	CBC 2019	Seismic Certificat	ion Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	/ _P = 1.5	
Component Type	Manufacturer	Model	OR CODE Description	Note	es UUT
		MN-NETSW1	10/100 Ethernet Network Switching Hub		3,17
		FW-19LCDTS3W	19 Inch touch screen monitor		21
	-		Audio Bridge	25Vrms for MN-FVPN encoder/decoder	VoIP 3,17
		FW4UL4	FireWork Computer		20
		PCWD2 Ry.T	FireWorks Computer watchdog Card		20, 21
		FW-SP4I	Four port FireWorks Serial Card		20, 22
		MN-BRKT1	Mounting Bracket for EST3 cabinet	1 chassis space	3,17
		4-BRKT-CS	EST4 chassis side mounting bracket		58
		4-BRKT-CB	EST4 chassis back mounting bracket		59
		4-MPLT	Mounting plate for various accessories		58, 6
Accessories	UTC	MMXVR	Multimode plug-in Transceiver		3,5
		MN-PASM	Pre-AMP Supervision Module		3,17
		MN-COM1S	TCP/IP to RS232 Interface Module		5
		MN-FVPN	VoIP Unit, audio encoder/decoder		3,17
		SIGA-CC1	Single Riser Output module	Depopulated SIGA-CC	2 Interp
		GSA-CC1	Riser Output module	Same as SIGA-CC1/br	anding Interp
		SIGA-CC1S	Single Riser Output module	Depopulated SIGA-CC	2 Interp
		GSA-CC1S	Riser Output module	Same as SIGA-CC1/br	anding Interp
		SIGA-CC2	Dual Riser Output module		19
		GSA-CC2	Riser Output module	Same as SIGA-CC2/br	anding Interp
		SIGA-MAB	Universal input or output module		55
		GSA-MAB	Universal input or output module	Same as SIGA-MAB/br	randing Interp





	Edwards, A Div. of UTC Fi EST3 & EST4 Fire Protect	re & Security Americas Corpo ion System	oration, Inc Table Description: Electrical	Components	TABLE	6
Building Code:	CBC 2019	Seismic Certification	fon Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	I _P = 1.5		
Component Type	Manufacturer	Model	RCODEDescription	Note	S	UUT
		SIGA-MCC1	Single output	Depopulated SIGA-MC	C2	59,61
		GSA-MCC1	Single output	Same as SIGA-MCC1/b	randing	Interp
		SIGA-MCC1S	Single output, with Sync	Same as SIGA-MCC1		Interp
		SIGA-MCC2	Dual Riser Output Module			55
		GSA-MCC2	OEM Branding, different functional feature	Same hardware as SIG	A-MCC2/branding	Interp
		SIGA-MCC2A	Dual Riser Output Module class A			54
		SIGA-MCR	Relay			55
		GSA-MCR	Relay	Same as SIGA-MCR/bra	anding	Interp
		SIGA-MCRR	Relay	Same hardware as SIG layout	A-MCR/diff.	Interp
Accessories	UTC	GSA-MCRR	Relay	Same as SIGA-MCRR/b	randing	Interp
		SIGA-MCT2	Dual input pre programmed			55, 61
		GSA-MCT2	Dualinput	Same as SIGA-MCT2/b	randing	Interp
		SIGA-MDM	Digital message module			54
		GSA-MDM	Digital message module	Same as SIGA-MDM/br	anding	Interp
		SIGA-MIO	Input/output			55,61
		SIGA-MM1	Dual input pre programmed	Same as SIGA-CT2		Interp
		GSA-MM1	Dual input	Same as SIGA-CT2/bra	nding	Interp
		SIGA-MRM1	Riser monitor			54
		SIGA-RM1	Riser monitor			3
		SIGA-UIO2R	Two slot motherboard			54, 59,
		GSA-UIO2R	Two slot motherboard	Same as SIGA-UIO2R/t	oranding	Interp





	Edwards, A Div. of UTC F EST3 & EST4 Fire Protect	ire & Security Americas Corpo ion System	pration, Inc Table Description: Electrica	l Components	TABLI	E 6
Building Code:	CBC 2019	Seismic Certificatio	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	/ _P = 1.5		
Component Type	Manufacturer	Model	RCODEDescription	No	tes	υυτ
		SIGA-UI06	Six slot motherboard			55
		GSA-UIO6	Six slot motherboard	Same as SIGA-UIO6/	branding	Interp
		SIGA-UIOGR	Six slot motherboard, riser version	Same hardware as SIGA-UIO6/diff. layout		61
		G <mark>SA-U</mark> IO6R	Six slot motherboard, riser version Same as SIGA-UIO6R/branding		R/branding	Interp
Accession		SIGA-UM RY-Ti	Universal input or output module			19
Accessories	cessories UTC	GSA-UM	Universal input or output module	Same as SIGA-UM/br	randing	Interp
	SIGA-WTM	Dual input pre programmed	Same hardware as S	IGA-CT2	Interp	
		GSA-WTM	Dual input pre programmed	Same as SIGA-UM/br	randing	Interp
		4-USBHUB	USB ports / RS485 communication for coded output module 3-CDR3	Isolated and non-iso	lated USB ports.	58, 59,
		CDR3	Coded output module			59
		3-ANNBF	Filler plate			1
Filler Plate	UTC	3-LRMF	Filter plate D			3,5
Filler Plate		3-XFP	Filler plate	Same as 3-LRFM		Interp
		4-FIL	Filler plate			59,60
		4-CABL0502	4-LCD to 4-CPU or 4-ANNCPU			59-62
		4-CABL0504	4-LCD or 4-LCDAUDTEL to 4-ANNCPU			59,60
		4-CABL0505	Door Rail to Rail			59-62
Flex Cables	UTC	4-CABL0507	Door Rail to Rail			Interp
		4-CABL0509	4-LCDAUDTEL to 4-ANNCPU			59,60
		4-CABL0541	4-3LCD to 4-CPU			58
		4-CABL0542	4-CPU or 4-ANNCPU w/out LCD to inner door			Interp

	Edwards, A Div. of UTC Fir EST3 & EST4 Fire Protectio	e & Security Americas Corpo on System	oration, Inc Table Description: Batteries		TABLE 7
Building Code:	CBC 2019	Seismic Certificati	on Limits: $S_{DS} = 1.54 g z/h = 1.0$ $S_{DS} = 2.46 g z/h = 0.0$	I _P = 1.5	
Component Type	Manufacturer	Model	RCODEDescription	Note	s UUT
		12V1A2	1.2Ah Sealed Lead Acid Battery, 1.3 lbs		Extrap
		12V4A	4.5Ah Sealed Lead Acid Battery, 3.9 lbs		Extra
		12V6A5	7.2Ah Sealed Lead Acid Battery, 5.4 lbs		Extra
		12V10A	11Ah Sealed Lead Acid Battery, 7.8 lbs		19
Batteries	Leoch	12V17A	17Ah Sealed Lead Acid Battery, 12.6 lbs		2, 3, 5 59, 60
		12V18A	18Ah Sealed Lead Acid Battery, 14.8 lbs		2,3
		12V24A	26Ah Sealed Lead Acid Battery, 20.7 lbs		17
		12V40A DATE	40Ah Sealed Lead Acid Battery, 29.1 lbs		18
		12V50A	50Ah Sealed Lead Acid Battery, 35.3 lbs		Interp
		12V65A	65Ah Sealed Lead Acid Battery, 42.3 lbs		4
			Str.		
		TNI	Lic COr		
			BUILDING		







TRU PROJECT NO. 1900428

Manufactu Model Line	,	C Fire & Security Americas Co ection System	rporation, Inc.			
υυτ	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _P
1	10ANN/B-S	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
_		0200002		2.46	0.0	
2	3-CAB14B	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
_				2.46	0.0	
3	3-CAB21B	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
5		0200102		2.46	0.0	1.0
4	3-RCC14R	< 3295.02 ODE C	ANCO Engineers, Inc.	1.54	1.0	1.5
•	5 1001 11	C F GESSIOE	Allee Englicers, inc.	2.46	0.0	
5	3-RCC21R	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
5	J-RECZIR	3235.02	ANCO Lingineers, inc.	2.46	0.0	1.5
17	APS10A	3295.02 21 1	ANCO Engineers, Inc.	1.54	1.0	1.5
11	AI SIGA	OSP-0031-1	ANCO Eligiteers, inc.	2.46	0.0	1.5
18	BC-1	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
10	DC-1	By:Timothy J Pila	and	2.46	0.0	1.5
19	BPS10A	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
15	DI SIGA	DATE: 01/17/2020	ANCO Eligineers, inc.	2.46	0.0	1.5
20	FW4UL4	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
20	FW4UL4	5235.02	ANCO Eligiteers, inc.	2.46	0.0	1.5
21	FW-19LCDTS3W	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
21	FW-19ECD135W	3233.02	ANCO Engineers, inc.	2.46	0.0	1.5
54	SIGA-UIO2R	A3295.02 DING	ANCO Engineers, Inc.	1.54	1.0	1.5
54	SIGA-DIOZK	5235.02LDING	ANCO Engineers, inc.	2.46	0.0	1.5
55	SIGA-UIO6	3295.02	ANCO Engineers, Inc.	1.54	1.0	1.5
55	31GA-0106	5295.0Z	ANCO Engineers, inc.	2.46	0.0	1.5
58	EST3: 3-CAB21B (backbox) with	15371 Rev. 1	Environmental Testing	2.00	1.0	1.5
50	3-CAB21D (door)	15571 Rev. 1	Laboratory (ETL)	3.20	0.0	1.5
59	EST4: 3-CAB21B (backbox) with	15371 Rev. 1	Environmental Testing	2.00	1.0	1 5
29	4-CAB24DL (door)	15371 Rev. 1	Laboratory (ETL)	3.20	0.0	1.5
60	EST4: 3-CAB7B (backbox) with 4-	15371 Rev. 1	Environmental Testing	2.00	1.0	1 5
60	CAB16DR (door)	10011 Kev. 1	Laboratory (ETL)	3.20	0.0	1.5
61	EST4: 4-24ANNMT (backbox)	15371 Rev. 1	Environmental Testing	2.00	1.0	1.5
61	with 4-CAB24DR (door)	10011 Kev. 1	Laboratory (ETL)	3.20	0.0	1.5

Notes:





Manufacti	Edwards, A Div. of UT	C Fire & Security Americas Co	rporation, Inc.			
Model Lin	e: EST3 & EST4 Fire Prot	ection System		-	-	-
UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _P
62	EST4: 4-2ANNMT (backbox) with 4-2ANND (door)	15371 Rev. 1	Environmental Testing Laboratory (ETL)	2.00	1.0	1.5
			-	3.20	0.0	
63	EST3: 3-4ANN/B (backbox) with 3-4ANN/D (door)	15371 Rev. 1	Environmental Testing Laboratory (ETL)	2.00 3.20	1.0 0.0	1.5
	3-4ANN/D (0001)			3.20	0.0	
		ED FOR CODE C	OMO			
	1	OSHPD				
	REI	OSP-0031-10	CE			
		BY:Timothy J Pila	and			
	0					
	CR	DATE: 01/17/2020	6			
			DE.			
		NIA BUILDING	COL			
Notes:						





TRU PROJECT NO. 1900428

Model Line:			-	Americas Cor	rporation	, Inc.			JUT	1
	EST3 & ES	T4 Fire Protection	System							
Model Number:	10ANN/B-	S			Serial N	umber:	N/A			
Product Construc 16 gauge carbon st	-	/:								
Options/Subcomp	oonent Summ	arv:								
		nk filler plate; 3-REI	MICA remo	te mic unit; 3	3-12/S1G	Y Led str	ip w/3-ANI	NSM; 3-12	2/S1RY Le	d strip
w/3-ANNSM; 3-12/	S2Y Led strip w	/3-ANNSM; 3-6/3S1	G2Y Led st	trip w/3-ANN	SM; 3-6/3	S1GYR L	ed strip w	/3-ANNSI	М	
		IED	FOR	ODEC	OMP.					
		K. K.		Properties		T.				
Weight		Dimension (in) — — — — — — — — — — — — — — — — — — —			Lowes	st Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSP-	leight - 1	Front	-Back	Side-Side		Ver	tical
22.5	3.5	25.5		13.3	Manana N	/A	N,	/A	N	/A
				Seismic Rur	n Informa	ation		1	1	
Building	; Code	Test Crit	teria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	019	ICC-ES AC15	6 (2015)	17/1.54 2.46	1.0	1.5	2.46	1.85	1.64	0.66
Test Mounting De			VIARU			V/				

Contents were included in testing per operating conditions.





TRU PROJECT NO. 1900428

Manufacturer:	Edwards, /	A Div. of UTC Fire & S	ecurity Am	nericas Cor	poration	, Inc.				า
Model Line:	EST3 & ES	T4 Fire Protection Sy	vstem					L	JUT	Z
Model Number:	3-CAB14B				Serial N	umber:	N/A			
Product Construc	-	:								
14 gauge carbon s	teel enclosure									
Options/Subcom		-						-		
		assembly; 3-CPU3 Ce				-				
-		; 3-SAC Security/Acc					•			
		mmunication Card;	AD'LI			-	•			
		hary Power Supply 1 les; 3-6/3S1G2Y, 3-6/		A A A A A A A A A A A A A A A A A A A			-	-12/5161	, 3-12/311	11, 3-
		les, 5-0/551021, 5-0/	SSIGNEL	D Gloups,	IGAILEE		attery.			
		~~~~	UUT Pro	operties		Z				
Weight		Dimension (in)				Lowes	st Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	SP-He	ight]-]	Front	-Back	Side	Side	Ver	tical
130.0	5.8	26.5	37	7.5	Ń	/A	N	/A	N	/A
		UUT Highest	Passed Se	eismic Run	n Informa	ation				
Building	g Code	Test Crite	ria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2	2019	ICC-ES AC156	(2015)/1	1,54 2.46	1.0 0.0	1.5	2.46	1.85	1.64	0.66
Test Mounting De	tails:									
					CODE					

Unistrut was rigid mounted to a 5/8" fire-rated drywall covered wall fixture using (6) ungraded 3/16" toggle bolts. The unit was rigid wall mounted to unistrut using (4) ungraded 1/4" bolts into spring nuts.

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.





#### **TRU PROJECT NO. 1900428**

Manufacturer:		A Div. of UTC Fire & Se		-	rporation	, Inc.			JUT	<u>ີ</u>
Model Line:		T4 Fire Protection Sys	stem					<u> </u>		5
Model Number:	3-CAB21B				Serial N	umber:	N/A			
<i>Product Constructio</i> 14 gauge carbon stee	-	;								
<i>Options/Subcompol</i> 3-CAB21D, One 3-CHAS 3LRMF, One 3-ZA95, One One MN-BRKT1, One MN 24R, One 3-24Y, Two 12 ¹	7, One 3-CHAS4 e 3-RS232, One N-COM1S, One	4, One 3-CPU3, One 3-S e 3-FIBMB, Two MMXVR	R, One :	3ASU/FT, One MI	N-NETSW1	1, One MN-	-FVPN, One	e MN-ABPM	I, One MNF	PASM,
			UU	IT Properties		Z				
Weight		Dimension (in)					t Natural			
(lb)	Depth	Width O	124	Height	77	-Back		-Side		tical
156.5	5.8	26.5		48.0	017	/A	N	/A	N	/A
~				ed Seismic Rur				<b></b>	·	
Building C	ode	<b>Test Criter</b>	ria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 201	9	ICC-ES AC156 (	(2015)	)/17/1.54 2.46	1.0 0.0	1.5	2.46	1.85	1.64	0.66
Test Mounting Detai					° ·					
Unistrut was rigid mo rigid wall mounted to Unit maintained strue	o unistrut usir	ng (4) ungraded 1/4"	bolts	into spring nut	ts.	-				it was

Contents were included in testing per operating conditions.





Manufacturer:	Edwards,	A Div. of UTC Fire & So	ecurity Ar	nericas Co	rporation	, Inc.				_
Model Line:		T4 Fire Protection Sys	-		•	-			JUT	4
Model Number:	3-RCC14R	,			Serial N	umber:	N/A			
Product Constru							,			
Backbox: 14 gaug	e carbon steel; D	oor: 16 gauge carboı	n steel							
Options/Subcon	=	=								
(1) 3-BTSEN; (1) 3	-BATS; (2) 12V-65	5Ah Batteries								
			OP C							
		NEDF	ORC		OMP					
			UUT PI	operties		PA				
Weight		Dimension (in)		021 1			st Natural		- · · ·	
(lb)	Depth	Vidth O	1	ight – – –	77	-Back		-Side	-	tical
160.0	6.8	25.5		6.0	777	/A	N	/A	N	/A
		UUT Highest Passed Seis		<del>x                                    </del>		ation	1			
Buildir	ng Code	<b>Test Criter</b>	ria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	А _{rig-н} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC	2019	ICC-ES AC156 (	(2015)/1	2.46	1.0	1.5	2.46	1.85	1.64	0.66
Test Mounting D	etails:	T. Manual				0				
		A Constant				-				
		RNI		TING	CON	A				
			TUI	UUT04		N				
		1								
			1			1				
						N				
			- 11	-		1				
				eismic Test est # 5		1 and 1				
				I Longitudinal		L				
			10	28/2009	internal and	1				
						-				
		Contraction of the local division of the loc	Deeres		111					
		The second second			111	2				
			-			- 7 -				
-									-	
ملاحد بالمعاد المناب المتحاد		/8" fire-rated drywall			-	ungrade	ed 3/16" to	oggle boli	s. The un	it was
-	ed to unistrut usi	ng (4) ungraded 1/4"	bolts into	spring nut	IS.	-				it was
Jnit maintained s	ed to unistrut usin structural integri		bolts into ctional pe	spring nut	IS.	-				it was





Manufacturer:	Edwards,	A Div. of UTC Fire	& Securi	ty Am	nericas Cor	poration	, Inc.				
Model Line:	EST3 & ES	T4 Fire Protection	າ System	I					ļ	JUT	5
Model Number:	3-RCC21R					Serial Nu	umber:	N/A			
Product Construc	tion Summary	/:									
Backbox: 14 gauge	carbon steel; [	Door: 16 gauge ca	rbon stee	el							
Options/Subcomp	onent Summa	ary:									
Three - 3-CHAS7, O											
One 3-PPS/M-120,								-			3-12SG
One 3-12SR, One 3-	12SY, One 3-24	4G, One 3-24R, On	e 3-24Y, 0	One 3	8-6/3S1G2Y	, One 3-6	/3S1GYF	R, Two 12V	-26Ah Ba	tteries	
		,ED	FOI			Mp.					
		Le la	UU	IT Pre	operties		T.				
Weight		Dimension (i	n)				Lowe	st Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSF	Hei	ght1-1	Front	-Back	Side	-Side	Ver	tical
169.5	6.8	25.0		48	3.0	N,	/A	N	/A	N	/A
		UUT High	est Pass	ed Se	ismic Rur	n Informa	ntion			1	
Building	Code	Test Cr	iteria		S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	019	ICC-ES AC1	56 (2015	¢/17	2.46	1.0	1.5	2.46	1.85	1.64	0.66
		303		* 1010		CODE	2				
			1000	UU)	uur	-					
Unistrut was rigid r		•					ungrad	ed 3/16" to	oggle bolt	s. The un	it was
Unistrut was rigid r rigid wall mounted Unit maintained st	to unistrut usi	ng (6) ungraded 1	/4" bolts	s into	spring nut	s.	-				it was





Manufacturer:	Edwards,	A Div. of UTC Fire & Secu	rity Am	nericas Coi	rporation	, Inc.				-
Model Line:	EST3 & ES	T4 Fire Protection Syster	m					U	UT 1	. (
Model Number:	APS10A				Serial N	umber:	N/A			
Product Constru	iction Summary	/:								
16 gauge carbon	steel enclosure									
Options/Subcon	nponent Summ	ary:								
MN-NETSW1, MN	-FVPN, MN-ABPN	I, MN-PASM, MN-BRKT, S	SIGA-CT	12, SIGA-IC	0 & (2) 12	V24A Bat	teries			
			- 01							
		NEDFO	RCU	DDE C	OMD,					
				operties		7				
Weight		Dimension (in)					st Natural			<u> </u>
(lb)	Depth	Width US		ght ] - ] (	70	-Back		-Side		tical
73.5	5.3	15.3 UUT Highest Pas	26			/A	N	/A	N	/A
Buildir	ng Code	Test Criteria	seu se	S _{DS} (g)	z/h		A(g)	A	A _{FLX-V} (g)	Analis
	-			1.54	1.0					
CBC	2019	ICC-ES AC156 (201	.5) / 1	2.46	0.0	1.5	2.46	1.85	1.64	0.66
		CORNIA I		DING	CODE					
		1	1							
Jnistrut was rigio	l mounted to a 5	/8" fire-rated drywall cov	/ered w	vall fixture	using (4)	) ungrade	ed 3/16" to	oggle bol	ts. The un	it was
rigid wall mounte	ed to unistrut usi	/8" fire-rated drywall cov ng (4) ungraded 1/4" bol ity and remained functio	ts into	spring nut	IS.	-				it was





#### **TRU PROJECT NO. 1900428**

Manufacturer:		A Div. of UTC Fire & Secu		poratior	n, Inc.		U	UT 1	8
<i>Model Line: Model Number:</i>	BC-1	T4 Fire Protection Syster		Serial N	umbori	N/A		••••	<u> </u>
Product Constru		/•		Serialin	umper:	N/A			
16 gauge carbon s	-								
Options/Subcom	ponent Summa	arv:							
(2) 40Ah Batteries	-								
		WED FO	R CODE C	OMP					
			UT Properties		Z				
Weight		Dimension (in)	D 0021 1			t Natural			
(lb)	Depth	& Width OS	P-Height1-1		t-Back		-Side		tical
82.5	7.3	18.3	14.0		I/A	N	/A	N	I/A
Buildin	a Code	UUT Highest Pas Test Criteria	<u> </u>	z/h		A (m)	A (g)	A _{FLX-V} (g)	A (g)
CBC	-	ICC-ES AC156 (201	<b>S_{DS} (g)</b> 1.5) / 1 7/1.54 2.46	1.0 0.0	1.5	2.46	л _{кід-н} (g) 1.85	1.64	0.66
Test Mounting D	etails:	Horizan		CODE	500		in the second se		
		-		-		41			

Unistrut was rigid mounted to a 5/8" fire-rated drywall covered wall fixture using (6) ungraded 3/16" toggle bolts. The unit was rigid wall mounted to unistrut using (4) ungraded 1/4" bolts into spring nuts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Contents were included in testing per operating conditions.





Model Line:	,	A Div. of UTC Fire & Sec	curity An	nericas Cor	poration	, Inc.				~
	EST3 & ES	T4 Fire Protection Syste	em					U	JUT 1	.9
Model Number:	BPS10A				Serial N	umber:	N/A			
Product Construct	tion Summary	/:								
18 gauge carbon st	eel enclosure									
Options/Subcomp		ary:								
(2) 12V 10Ah Batter	ies									
			200							
		NEDFO	JR CI	DDE C	OMP					
				operties		Z				
Weight		Dimension (in)					st Natural		1	
(lb)	Depth	& Width		ight 1-1	717	-Back		-Side		tical
34.0	3.8	13.3		7.5		/A	N	/A	N	/A
Devil dire e	Cada	UUT Highest Pa	HVUI (							
Building	Code	<b>O</b> Test Criteria	<b></b>	S _{DS} (g)	<b>z/h</b> 1.0	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (§
CBC 20	019	ICC-ES AC156 (20	015)/1	1.54 2.46	0.0	1.5	2.46	1.85	1.64	0.66
Test Mounting Det	tails:	S		ŧ.		52			•	
					1	V				
				TOG TOUR	and the second s					
		Part Part		A AND	00					
		RNIA	BLU	DING	CODA	-				
		RNIA	BUI	DING	COD	-				
		RNIA	BUI	DING	COD	ET E				
		RNIA	BUII	DING	COD	ſ				
		RNIA	BUII	DING	coo					
		U	BUIL	DING	coo					
		U	BUI	-DING	coor					
		U	BUII	19	coo					
		U	BUIL	-DING	coo					
		ORNIA U	BUII	19	COD					
		ORNIA U	BUII	19	coo					
		U	BUI	19	COD					
-		John Provide the second s	IUT overed v	19 vall fixture	-	ungrade	ed 3/16" to	oggle bolt	ts. The un	it was
rigid wall mounted	to unistrut usi		overed v	19 vall fixture spring nut	s.	-				it was





Manufacturer:	Edwards,	A Div. of UTC Fire & S	ecurity A	mericas Coi	rporation	, Inc.				
Model Line:	EST3 & ES	ST4 Fire Protection Sy	stem					U	UT 2	20
Model Number:	FW4UL4				Serial N	umber:	N/A	<u></u>		
Product Constru	ction Summary	<i>v:</i>								
Fireworks contro	ller PC Mounted	using sliding RETMA I	rack rails							
<i>Options/Subcon</i> FW-SP4I, PCWD2,	-	<i>ary:</i> V-RACKSD, FW-19LCD	T3RACK							
, , , , , , , , , , , , , , , , , , ,										
		E	ORC	ODEC						
		NEDF		ODEC	MD					
		14	UUTP	roperties		71				
Weight		Dimension (in)		021 1	_		t Natural		1	• •
(lb)	Depth	Width	1	eight –	77	-Back		-Side		tical
43.0	7.0	17.0 UUT Highest		20.0	177	/A	N	/A	N	/A
Buildir	ng Code	Test Criter		S _{DS} (g)	z/h		A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{PIG-V} (§
	2019	ICC-ES AC156	(2015)/1	7/1,54	1.0	1.5	2.46	1.85	1.64	0.66
СВС	2019	ICC-L3 ACISO	(2013)/ I	2.46	0.0	1.5	2.40	1.65	1.04	0.00
			GE Seis T20 Tes Horizonta	EDING Firesua smic Test st # 7 I Transverse 3/2009	arks					
The unit was rigic Unit maintained s		to the test fixture in th			-	-	-			





	Edwards,	A Div. of UTC Fire & S	ecurity An	nericas Cor	poration	, Inc.				
Model Line:	EST3 & ES	T4 Fire Protection Sy	stem					U	<b>UT 2</b>	21
Model Number:	FW-19LCD	TS3W			Serial Nu	umber:	N/A			
Product Constru	ction Summary	/:								
Designed to mou	nt directly to a s	tandard RETMA cabin	et.							
Options/Subcon	ponent Summa	ary:								
-	-	- RACKSD, FW-19LCD	T3RACK							
		F	ORC	DDEC	0.					
		NED		DDEC	MD,					
		- W		operties		Z				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width O	SP-he	ight 1-1	Front	-Back	Side	Side	Ver	tical
16.0	2.8	17.3		1.5	N,	XXXXX	N,	/A	N,	/A
		UUT Highest Passe		<u> </u>						
Buildir	ng Code	<b>Test Criter</b>	'ia	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC	2019	ICC-ES AC156	(2015)/1	2.46	1.0	1.5	2.46	1.85	1.64	0.66
Test Mounting D	ataila.	0		2.40	0.0	121				
			ABUI	DING	CODY	-				
				Firesoo	inks					
		UU	T21	B. E.	irks					
			GE Seisr T20 Test	nic Test						
			GE Seisr T20 T est Horizontal	nic Test # 7						
īhe unit was rigic	I wall mounted t		GE Seisn 120 Test Horizontal 11/03	nic Test # 7 Transverse /2009		using (4	) ungrade	d #10-32 s	screws.	
			GE Seisr T20 Test Horizontal 11/03	mic Test # 7 Transverse /2009	iguration					





Manufacturer:	Edwards,	A Div. of UTC Fire & Se	ecurity Ar	nericas Cor	poration	, Inc.				
Model Line:	EST3 & ES	ST4 Fire Protection Sys	stem					U	UT 5	)4
Model Number:	SIGA-UIO	2R			Serial Nu	umber:	N/A	-		
Product Constru	=		2.4							
	istened to an Mr	-C-A wall mounting bo	JX							
<i>Options/Subcon</i> SIGA-UIO2R popu	-	<b>ary:</b> \-MCC2A (Dual Output	: Signal M	odule); SIG	A-MDM (E	Digital Me	essage Mo	dule)		
		NEDF	ORC		OMPL					
Waisht			UUT Pr	operties		Z	+ Notural	<b>F</b> wa <b>m</b> a m		
Weight (lb)	Depth	Dimension (in)	SP-0	ight1-1(	Front		t Natural	Frequen -Side		tical
3.6	3.5	7.8		3.8	N/	////A		- <b>Side</b> /A		I/A
	0.0	UUT Highest			1017	X // // //		// .		
Buildin	ng Code	<b>Test Criter</b>	HIV4H	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
СВС	2019	ICC-ES AC156 (	2015)/1	1.54 2.46	1.0	1.5	2.46	1.85	1.64	0.66
Test Mounting D	etails:	P	1	* ] \		0				
		OPA			- ODE	E				
	- 11	RNI	ABUI	LDING	CO	-	1.1			
	10									
	101	- IP		-						
	111	1.1		E.A						
		. U	01	04	<b>R</b> 17		1.1			
	1.10	1								
	12									
	18	1			-	1				
	1.00	1				1	1.1			
-		using two ungraded 3,			-					
		ity and remained fund		r manufact	urer requ	iirement	after shal	ke table t	est.	
ontents were inc	cluded in testing	g per operating condit	lons.							





Manufacturer:	Edwards,	A Div. of UTC Fire	& Security Ar	mericas Co	poration,	, Inc.				
Model Line:	EST3 & ES	T4 Fire Protection	n System						UT 5	5
Model Number:	SIGA-UIO6	5			Serial Nu	ımber:	N/A			
Product Constru	ction Summary	:								
Interface board fa	stened to an MF	C-A wall mountir	ıg box							
Options/Subcom	ponent Summa	ary:								
SIGA-UIO6 popula			age Module);	SIGA-MCC2	(Dual Ou	tput); Sl	GA-MRM1	(Rider Mo	onitor);	
SIGA-MCT2 (Dual	Input); SIGA-MC									
			ORC	ODF						
		NE	FORC		OMPI					
				roperties		Z,				
Weight		Dimension (i		024 44			st Natural		1	
(lb)	Depth	<b>Width</b>		eight   -	Front	44/7		-Side		tical
5.5	3.5	7.8		.3.8	N/		N	/A	N	/A
			est Passed S	<del>, u i ii</del>			1			
Buildin	g Code	C Test Ci	riteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC	2019	ICC-ES AC	156 (2015) / 1	2.46	1.0 0.0	1.5	2.46	1.85	1.64	0.66
Test Mounting D	etails:	S		4		2	-			
						V/				
		A	NIA BUI		CODA					
	10.		BUI	LDING			1.01			
		100		-						
	141			UL	JTS	5				
	111						100			
	110			120						
	0.00			196						
	100.00				12					
	1.63				-					
	1000	1			-	_				
	2142	1								
	180	1					2			
The unit was rigid										
Unit maintained s				er manufact	urer requ	irement	after shal	ke table t	est.	
Contents were inc	cluded in testing	per operating co	nditions.							





## **TRU PROJECT NO. 1900428**

Model Line:	Edwards,	A Div. of UTC Fire & Se	curity Americas Cor	rporation	, Inc.		.	UT 5	:0
mouel Line.	EST3 & ES	T4 Fire Protection Sys	tem				U		0
Model Number:	3-CAB21B			Serial N	umber:	N/A			
Product Construc	tion Summary	/:							
EST3, 14 gauge car	bon steel lobby	y enclosure (3-CAB21B	backbox with 3-CA	B21D do	or).				
Options/Subcomp		-							
		12/S2Y, 3-12RY, 3-12SG		-				-	
		3-SDC1, 3-LDSM, 3-ID							
		COMREL, 4-NET-MM, 4-			-SMH, 3-	IAMP, 3-P	PS, 3-CH/	4S7, 3-CH	AS7,4-
MPLI, Datteries 12	V1/AN, 4-NET-	AD mounted on 4-BRK	1-C3, 4-NET-CAT, 4-	NEI-I.					
		NE							
		NY C	UUT Properties		Z1				
Weight		Dimension (in)	CD 0021 1			t Natural		<u> </u>	
(lb)	Depth	Width O	SP-Height  -	70	-Back		-Side		tical
149.0	5.8	28.0	52.0	77	/A	N	/A	N	/A
			Passed Seismic Rur			1	I	I	
Building	; Code	<b>Test Criteri</b>		z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	.019	ICC-ES AC156 (2	2015)/17/2.00	1.0	1.5	3.20	2.40	2.13	0.85
Test Mounting De			3.20	0.0	$\sqrt{\alpha}$				
Ū			BUILDIN	COPE					

integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.





## **TRU PROJECT NO. 1900428**

		A Div. of UTC Fire &	-	Americas Cor	rporation	, Inc.			UT 5	:0
Model Line:	EST3 & ES	ST4 Fire Protection S	ystem							Ĵ
Model Number:	3-CAB21B				Serial N	umber:	N/A			
Product Constru	-		1D haalih		ام امددم	a ri				
ES14, 14 gauge ca	irbon steel lobb	y enclosure (3-CAB2	тв раскр	ox with 4-CA	.B24DL 00	bor).				
Options/Subcom	ponent Summ	ary:								
		12S, 4-24L, 4-LCDAU				-				
		3-OPS, 3-ZA95, 4-NE	-	-		-			•	-TP, 4-
NET-SMU, 4-NET-	5мп, 3-РРЗ, 4-А	NNCPU W/ANNAUD		ited on 4-br	KI-CD, 3-	CHASI,	4-MPLI, Do	atteries I		
		NED			Ms,					
		Lu C	UUTI	Properties		7				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	JSP-	leight 1-1	) Front	-Back	Side	Side-Side		tical
166.5	5.8	28.0		52.0		/A	N	/A	N	/A
		UUT Highes		· <del>- · · · · · ·</del>	AI I M - M					
Buildin	g Code	Test Crite	eria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC	2019	ICC-ES AC156 (2015)		1 7/2.00 3.20	1.0	1.5	3.20	2.40	2.13	0.85
Test Mounting D				LDING						

UUT 59 was rigid mounted to a wall fixture using six (6) 1/4" ungraded bolts and flat washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.





## **TRU PROJECT NO. 1900428**

Manufacturer:	Edwards,	A Div. of UTC Fire & S	Security Americas Co	rporation	i, Inc.				•••	
Model Line:	EST3 & ES	T4 Fire Protection Sy	vstem					UT 6	U	
Model Number:	3-CAB7B			Serial N	umber:	N/A				
Product Construc	-									
EST4, 14 gauge car	bon steel lobby	y enclosure (3-CAB7E	3 backbox with 4-CAE	816DR do	or).					
Options/Subcomp	oonent Summa	ary:								
		12S, 4-24L, 4-FIL, 4-F PPS, 12V17AH Battery	Г, 4-MIC, 4-CPU w/ 4- и 3-CHAS	AUDTELS	5, 3-PPS/N	/I, 3-IDC 8/	/4, 3-SSD(	C1, 3-ZA2	0A, 3-	
27407, 4-COMILE,	-NET-CAT, 5-1									
		NEDF	ORCODEC	OMP						
		4	UUT Properties		T1					
Weight		Dimension (in)	NCD 0021 11			t Natural	-		-	
( <b>lb</b> ) 99.5	<b>Depth</b> 5.8	28.0	26.0	70	:- <b>Back</b> /A	Side-Side N/A		Vertical N/A		
99.5	5.0		Passed Seismic Rui	77		<u> </u>	/A	IN	/A	
Building	Code	Test Crite	<u></u>	z/h		Arry u (g)	Anic u (g)	A _{FLX-V} (g)		
CBC 2			ICC-ES AC156 (2015) / 1 / 2.00 3.20		1.5	3.20	2.40	2.13	0.85	
Test Mounting De				CODE	P.					
UUT 60 was rigid m	nounted to a wa	all fixture using four (	(4) 1/4" ungraded bo	lts and fla	at washer	rs. Unit ma	aintained	structura	al	
-		-	equirement after sha							

operating conditions.





#### **TRU PROJECT NO. 1900428**

Model Line:       ESTA & ESTA Fire Protection System         Model Number:       4-24ANNMT       Serial Number:       N/A         Product Construction Summary:       ESTA, 16 gauge carbon steel annunciator enclosure (4-24ANNMT backbox with 4-CAB24DR door).         Options/Subcomponent Summary:       4-CD 4-24L35, 4-24L125, 4-24L, 4-LCDAUTEL, 4-FT, 4-MIC, 4-24L245, 4-ANNCPU, 4-NET-AD, 4-ANNCPU W/4-annaudtels, SIGA-UIO2R, SIGA-UIO3R, 4-USBHUB, 4-NET-CAT, 4-NET-TP-HC.         UDT Properties       UUT Properties         Weight       Dimension (in)       Lowest Natural Frequency (Hz)         (b)       Depth       Width       Height       Front-Back       Side-Side       Vertical         94.0       9.8       30.0       43.5       N/A       N/A       N/A         Building Code       Test Criteria       Social       Z/I       Ic       Ansex(g)       Ansex(g)       Ansex(g)       Ansex(g)       Ansex(g)         Test Mounting Details:       ICC-ES ACL56 (2015)       2.00       1.5       3.20       2.40       2.13       0.85	Manufacturer:	Edwards,	A Div. of UTC Fire &	Security A	mericas Cor	rporation	, Inc.				1
Under Construction Summary:         EST4, 16 gauge carbon steel annunciator enclosure (4-24ANNMT backbox with 4-CAB24DR door).         Options/Subcomponent Summary:         4.LCD, 4-24L125, 4-24L, 4-LCDAUTEL, 4-FT, 4-MIC, 4-24L245, 4-ANNCPU, 4-NET-AD, 4-ANNCPU W/4-annaudtels, SIGA-UIO2R, SIGA-UIO6R, 4-USBHUB, 4-NET-CAT, 4-NET-P-HC.         UUT Properties         Weight       Lowest Natural Frequency (Hz)         UUT Properties         Weight       Dimension (in)       Lowest Natural Frequency (Hz)         94.0       9.8       30.0       43.5       N/A       N/A       N/A         Building Code       Test Criteria       Sps (g)       2.1         CEC ES 2019       ICC-ES AC156 (2015)       1.5       3.20       2.40       2.13       0.85         Test Mounting Details:	Model Line:	EST3 & ES	T4 Fire Protection S	System					U		) T
EST4, 16 gauge carbon steel annunciator enclosure (4-24ANNMT backbox with 4-CAB24DR door).           Options/Subcomponent Summary:         4LCD, 4-24L125, 4-24L, 24, 4-LCDAUTEL, 4-FT, 4-MIC, 4-24L245, 4-ANNCPU, 4-NET-AD, 4-ANNCPU W/4-annaudtels, SIGA-UIO2R, SIGA-UIO6R, 4-USBHUB, 4-NET-CAT, 4-NET-TP-HC.         OUT Properties         Weight       Dimension (in)       Lowest Natural Frequency (Hz)         (b)       Depth       Width       Properties         UUT Highest Passed Seisthic Run Information         Building Code       Test Mounting Details:	Model Number:	4-24ANNM	1T			Serial N	umber:	N/A			
Options/Subcomponent Summary:         4-LCD, 4-24L125, 4-24L, 4-LCDAUTEL, 4-FT, 4-MIC, 4-24L245, 4-ANNCPU, 4-NET-AD, 4-ANNCPU W/4-annaudtels, SIGA-UIO2R,		-			Thackboyy		א מסוכם	arl			
A-LCD, 4-24L18S, 4-24L, 4-LCDAUTEL, 4-FT, 4-MIC, 4-24L24S, 4-ANNCPU, 4-NET-AD, 4-ANNCPU W/4-annaudtels, SIGA- UIO2R, SIGA-UIO6R, 4-USBHUB, 4-NET-CAT, 4-NET-TP-HC. UD2R         UD7 Properties           U02R         Dimension (in)         Lowest Natural Frequency (Hz)           (Ib)         Depth         Width         Height         Front-Back         Side-Side         Vertical           94.0         9.8         30.0         43.5         N/A         N/A         N/A           Building Code         Test Criteria         Sps (g)         Z/h         Ip         Artxx+(g)         Arec.+(g)	ES14, 16 gauge care	on steet annu	ficiator efictosure (4	+-24ANNM		VILIT 4-CA	D24DK U(	501).			
UIO2R, SIGA-UIO6R, 4-USBHUB, 4-NET-CAT, 4-NET-TP-HC. UUT Properties Weight Dimension (in) Lowest Natural Frequency (Hz) (lb) Depth Width Height Front-Back Side-Side Vertical 94.0 9.8 30.0 43.5 N/A N/A N/A UUT Highest Passed Seisthic Run Information Building Code Test Criteria Sps (g) Z/h lp AFLX+N (g) ARIG+N (g)	Options/Subcomp	onent Summa	ary:								
UUT Properties           Weight (b)         Dimension (in)         Lowest Natural Frequency (Hz)           94.0         9.8         30.0         43.5         N/A         N/A         N/A           94.0         9.8         30.0         43.5         N/A         N/A         N/A           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sp. (g)         Z/h         Ip         AFLC+(g)         AFL					24L24S, 4-AN	INCPU, 4	-NET-AD,	4-ANNCP	U W/4-an	naudtels,	SIGA-
UUT Properties           Weight (b)         Dimension (in)         Lowest Natural Frequency (Hz)           94.0         9.8         30.0         43.5         N/A         N/A         N/A           94.0         9.8         30.0         43.5         N/A         N/A         N/A           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sp. (g)         Z/h         Ip         AFLC+(g)         AFL			IED.	FORC	ODEC	OMp.					
Ub)         Depth         Width         Height         Front-Back         Side-Side         Vertical           94.0         9.8         30.0         43.5         N/A         N/A         N/A           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps (g)         Z/h         Ip         A _{FLX+I} (g)         A _{RIG-H} (g)         A _{RIG-V} (g)         A _{RIG-V} (g)           CBC 2019         ICC-ES AC156 (2015) / 1         2.00         1.0         1.5         3.20         2.40         2.13         0.85			L				P				
94.0         9.8         30.0         43.5         N/A         N/A         N/A           UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps (g)         z/h         Ip         AFLX.H (g)         ARIG-H (g)<	-							1			
UUT Highest Passed Seismic Run Information           Building Code         Test Criteria         Sps (g)         Z/h         Ip         AFLX-H (g)         AFLX-H (g) </td <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>70</td> <td></td> <td></td> <td></td> <td colspan="2"></td>					-	70					
Building Code         Test Criteria         Sps (g)         Z/h         Ip         AFILX-H (g)         AFILX-V (g	94.0	9.8						N,	/A	N	/A
C         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		<u> </u>				<u> </u>					
CBC 2019       ICC-ES AC156 (2015) // 3.20       0.0       1.5       3.20       2.40       2.13       0.85	Building	Code	lest Crite	eria			P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (§
Test Mounting Details:	CBC 20	19	ICC-ES AC156	6 (2015) /		)	1.5	3.20	2.40	2.13	0.85

01/17/2020

operating conditions.





## **TRU PROJECT NO. 1900428**

Manufacturer:	Edwards,	A Div. of UTC Fire & Se	ecurity A	mericas Cor	poration	, Inc.				
Model Line:	EST3 & ES	T4 Fire Protection Sys	stem						UT 6	2
Model Number:	4-2ANNM	Г			Serial N	umber:	N/A			
Product Constru	ction Summary	/:								
EST4, 16 gauge ca	rbon steel annu	inciator enclosure (4-:	2ANNMT	backbox wi	th 4-2AN	ND door	).			
Options/Subcom	•	•								
4-LCD, 4-ANNCPU	, 4-NET-CAT, 4-N	NET-TP-HC.								
			ORC	ODFC						
		NEDF			OMP					
		L. L.	UUT P	roperties		Y_				
Weight		Dimension (in)		004 4			st Natural		1	
(lb)	Depth	<b>Width</b>		eight – – –	77	-Back		-Side		tical
10.5	4.3	10.3		13.8	171	/A	N	/A	N	/A
		UUT Highest		<del></del>						
Buildin	g Code	Test Criter	ia	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (§
CBC	2019	ICC-ES AC156 (	2015)/1	2.00	1.0 0.0	1.5	3.20	2.40	2.13	0.85
			52	UUT 5 IDANG DANG DANG DANG DANG DANG DANG DANG						
-		all fixture using four (4		-						
		l per manufacturer re	quireme	nt after shal	ke table t	est. Con	tents were	includeo	l in testing	g per
operating condition	ons.									





## **TRU PROJECT NO. 1900428**

Model Line: Model Number:				Americas Cor	rporation	i, Inc.				• •
	ES13 & ES	T4 Fire Protection Sy	/stem					U	UT 6	5
	3-4ANN/B				Serial N	umber:	N/A			
Product Construct	ion Summary									
EST3, 16 gauge carb	on steel annu	nciator enclosure (3-	-4ANN/I	B backbox wit	th 3-4ANN	ND door).				
Outine (Cutores										
Options/Subcompo		<b>ary:</b> 3-ANNCPU w/3-RS48	50 3-01	MSM						
5-LCDANN, 5-1250,	5-4/5501WR, .									
			201	CODE						
		IN F	OK	CODEC	OMP					
		NED			MP/					
		L.	UUT	Properties		Z				
Weight		Dimension (in)					t Natural		cy (Hz)	
(lb)	Depth	Width	JSP-	Height –	70	-Back		Side-Side		tical
11.3	3.5	11.5		13.3		/A	N,	/A	N	/A
	<b>.</b> .	UUT Highest								<u> </u>
Building	Code	Test Criteria		S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{rig-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 20	19	ICC-ES AC156	(2015)	17/2.00	1.0 0.0	1.5	3.20	2.40	2.13	0.85

operating conditions.