



2001 S.E. Inner Loop
Georgetown, TX 78626
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January 07, 2013

Gary Wilson
Williamson County, Texas
710 Main Street #101
Georgetown, TX 78626

Re: Williamson County Emergency Services Operations Center CM
Job No: 172201

Subj: Change Proposal No. 172201-0028

Gentlemen:

We respectfully submit our proposal for an increase to our contract in the amount of \$0 (zero) dollars to provide Added telecom per the Counties request. (Ladder Rack in RM 77, RFI 122, & Cabling for Make Busy Switches) for the above referenced project.

Our price is valid for Ten (10) days

Please indicate your acceptance of this change proposal by signing and returning one copy of the attached Form B breakdown of our cost.

Very truly yours,
VAUGHN CONSTRUCTION

A handwritten signature in black ink, appearing to read "Doug Boram", written over a horizontal line.

Doug Boram

Attachments: Form B and Backup

CC: File

FORM B

PROJECT: Williamson County Emergency Services Operations Center CM

CHANGE PROPOSAL NO: 172201-0028

QUOTATION :

Item	Labor	Materials	Subs	Total
Added telecom per the Counties request. (Ladder Rack in RM 77, RFI 122, & Cabling for Make Busy Switches)	\$0.00	\$0.00	\$10,314.00	\$10,314.00
Owner Betterment	\$0.00	\$(10,314.00)	\$0.00	\$(10,314.00)

Totals	\$0.00	\$(10,314.00)	\$10,314.00	\$0.00
Insurance, Tax, Benefits on Labor				\$0.00
Overhead				\$0.00
Fee on Subs				\$0.00
Fee on JTV				\$0.00
Bond				\$0.00
Remodel Tax				\$0.00
TOTAL				\$0.00

TIME EXTENSION TO CONTRACT: 0 Days

Submitted Date: 1/7/2013

Accepted

By:



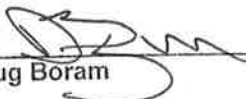
Date

1-16-13

01-17-2013

VAUGHN CONSTRUCTION

By:


Doug Boram

Proposal Valid for 10 Days

Williamson County

Change in Work - Cost Analysis Form

(To Be Completed All Subcontractors, Suppliers & Contractors Associated with the Change Proposal)

Project No. & Name: 1722-01 Wilco ESOC DATE 1/7/2013
 Contractor Name: Vaughn Construction - CM Change No. 172201-0028
 Description of Change: Added telecom per the Counties request. (Ladder Rack, RFI 122, & Make Busy Switches)

Means Code	Description	Quantity	Unit	Unit Cost	Labor	Material & Equipment	Subcontract
	Vaughn Construction - General Works	1	LS				\$ -
	Fuquay, Inc.	1	LS				\$ -
	Empire Acero, LLC	1	LS				\$ -
	MGC Millwork, L.P.	1	LS				\$ -
	Chamberlin Austin, LLC	1	LS				\$ -
	Luebe-Jones, Inc. dba AVAdek	1	LS				\$ -
	ESS Group, LLC	1	LS				\$ -
	Floydco, Inc.	1	LS				\$ -
	Brit-Tex Plastering Company	1	LS				\$ -
	W.E. Imhoff & Company, Inc. dba Intertech Flooring	1	LS				\$ -
	MIL, Ltd., dba Myrex Ind.	1	LS				\$ -
	Sign Resource Management	1	LS				\$ -
	Red & White Greenery	1	LS				\$ -
	Architectural Division 8, Inc.	1	LS				\$ -
	Russell & Traugott Painting & Decorating, Ltd.	1	LS				\$ -
	Titus Systems	1	LS				\$ 10,314
	Stanley Security Solutions	1	LS				\$ -
	Metalink Corporation	1	LS				\$ -
	Bonded Subs						
	Brazos Masonry, Inc.	1	LS				\$ -
	Wattinger Company, Inc.	1	LS				\$ -
	Forman Equipment & Contracting, Inc. dba Forman - Austin	1	LS				\$ -
	Capitol Concrete Contractors, Inc.	1	LS				\$ -
	Over the Top Systems, Ltd dba Pioneer Roof Systems	1	LS				\$ -
	Standard Drywall, Inc.	1	LS				\$ -
	Subguard Covered Subs						
	Champion Site Prep, L.P.	1	LS				\$ -
	Coreslab Structures (Texas) Inc.	1	LS				\$ -
	KST Electric, Ltd.	1	LS				\$ -
	Vaughn Construction General Works - Subguard Coverage 1.25%	1	LS				\$ -
				SUBTOTAL	\$ -	\$ -	\$ 10,314

BOND

\$ -

Work preformed by the Contractor's own employees (per UGC 22.1.2a)	SUBTOTAL	\$ -
Work up to \$10,000.00, add...	15.0%	\$ -
Work between \$10,000.01 and \$20,000.00, add...	10.0%	\$ -
Work greater than \$20,000.00, add...	7.5%	\$ -

Managing subcontracted work (per UGC 22.1.2b)	SUBTOTAL	\$ 10,314
Work up to \$10,000.00, add...	10.0%	\$ -
Work between \$10,000.01 and \$20,000.00, add...	7.5%	\$ -
Work greater than \$20,000.00, add...	5.0%	\$ -

TOTAL FOR THIS CHANGE PROPOSAL \$

10,314

Funds Tracking Log

Change Proposal No.	Change Type & No.	Time Extension (Days)		GMP Breakdown					GMP #1722.01	Total Updated Contract Amount
		Pending	Approved	Owner Betterment	Cost of Work	CM Contingency	General Conditions	Construction Phase Fee		
N/A	GMP	-	-	\$250,000	\$10,551,524	\$492,568	\$682,947	\$320,169	\$12,297,208	\$12,297,208
1	CMC	3	-	\$0	\$3,660	(\$3,660)	\$0	\$0	\$0	\$12,297,208
2	OB	-	-	(\$4,000)	\$4,000	\$0	\$0	\$0	\$0	\$12,297,208
3	CMC	2	-	\$0	\$12,623	(\$12,623)	\$0	\$0	\$0	\$12,297,208
4	OB	3	-	(\$8,551)	\$8,551	\$0	\$0	\$0	\$0	\$12,297,208
5	GMP	-	-	\$0	(\$15,500)	\$15,500	\$0	\$0	\$0	\$12,297,208
6	OB	-	-	(\$20,846)	\$20,846	\$0	\$0	\$0	\$0	\$12,297,208
7	CMC	-	-	\$0	\$12,055	(\$12,055)	\$0	\$0	\$0	\$12,297,208
8	CMC	-	-	\$0	\$2,955	(\$2,955)	\$0	\$0	\$0	\$12,297,208
9	OB	-	-	(\$7,750)	\$7,750	\$0	\$0	\$0	\$0	\$12,297,208
10	CMC	-	-	\$0	\$1,388	(\$1,388)	\$0	\$0	\$0	\$12,297,208
11	OB	-	-	\$0	\$10,156	(\$10,156)	\$0	\$0	\$0	\$12,297,208
12	OB	-	-	(\$25,105)	\$25,105	\$0	\$0	\$0	\$0	\$12,297,208
13	CMC	-	-	\$0	\$10,415	(\$10,415)	\$0	\$0	\$0	\$12,297,208
14	OCO	30	30	\$0	\$368,883	\$0	\$19,447	\$10,097	\$398,427	\$12,695,635
15	OB	-	-	(\$2,370)	\$2,370	\$0	\$0	\$0	\$0	\$12,695,635
16	CMC	-	-	\$0	\$5,513	(\$5,513)	\$0	\$0	\$0	\$12,695,635
17	CMC	-	-	\$0	\$40,112	(\$40,112)	\$0	\$0	\$0	\$12,695,635
18	OCO	-	-	\$0	(\$631,085)	(\$250,000)	\$0	\$0	(\$881,085)	\$11,814,550
19	CMC	-	-	\$0	\$9,868	(\$9,868)	\$0	\$0	\$0	\$11,814,550
20	OB	-	-	(\$9,655)	\$9,655	\$0	\$0	\$0	\$0	\$11,814,550
21	CMC	-	-	\$0	\$5,383	(\$5,383)	\$0	\$0	\$0	\$11,814,550
22	OB	-	-	(\$4,049)	\$4,049	\$0	\$0	\$0	\$0	\$11,814,550
23	CMC	-	-	\$0	\$22,170	(\$22,170)	\$0	\$0	\$0	\$11,814,550
24	OB	-	-	(\$2,184)	\$2,184	\$0	\$0	\$0	\$0	\$11,814,550
25	OB	-	-	(\$9,115)	\$9,115	\$0	\$0	\$0	\$0	\$11,814,550
26	OB	-	-	(\$3,597)	\$3,597	\$0	\$0	\$0	\$0	\$11,814,550
27	OB	-	-	(\$15,487)	\$15,487	\$0	\$0	\$0	\$0	\$11,814,550
28	OB	-	-	(\$10,314)	\$10,314	\$0	\$0	\$0	\$0	\$11,814,550
Current Amounts		38	30	\$126,977	\$10,533,143	\$121,770	\$702,394	\$330,266	\$11,814,550	\$11,814,550

(To Be Completed All Subcontractors, Suppliers & Contractors Associated with the Change Proposal)

DATE 11/21/2012

Change No. 3

Pricing Includes markup

Managing subcontracted work (per UGC 22.1.2b)		SUBTOTAL	\$	-
Work up to \$10,000.00, add...	10.0%		\$	-
Work between \$10,000.01 and \$20,000.00, add...	7.5%		\$	-
Work greater than \$20,000.00, add...	5.0%		\$	-

TOTAL FOR THIS CHANGE PROPOSAL \$	3,997
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11/21/2012

Change Order for Williamson County

It is our pleasure to provide a price for the following Scope of work.

We will install Ladder rack for the Motorola room. The ladder rack system will provide a pathway from the Communication tower penetration in the Motorola room to the 14 telecom racks. The ladder will consist of 24" and 12" wide pieces and supported with the appropriate hardware and brackets. The ladder system will also be grounded to the bus bar. We will not however be responsible for grounding the racks.

Price for Materials	\$2647.00
<u>Price for Labor</u>	<u>\$ 1350.00</u>
Total Price	\$ 3997.00

Signature of Acceptance _____

Brendan Fluitt RCDD

Project Manager.

Titus Systems, LP

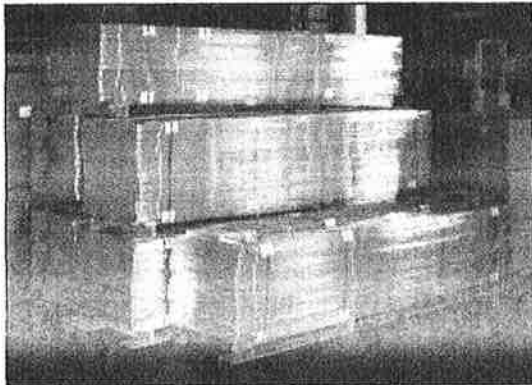
1821 Central Commerce Ct, Suite 100

Round Rock, TX 78664

Brendan.fluitt@titus-systems.com

Ph: 512.252.7171 Fax: 512.252.7278

Cell: 210-842-6570



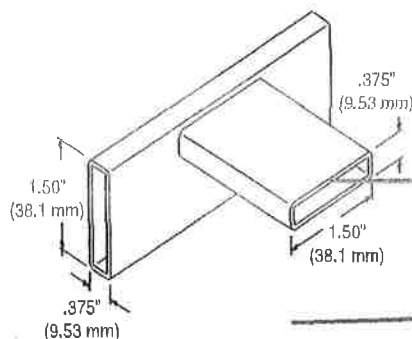
Runway In A Box

Cable runway is individually packaged to simplify shipping. Individual packaging is utilized for all 10250 Series Universal Cable Runway, 11252 Series TELCO-Style Cable Runway and 11275 Series UL Classified Cable Runway. Individual pieces of runway are packaged in a custom width box of 32 ECT cardboard and banded on our strapping machine. Each box is labeled with the part number and product description indicating color and width. Pallets are designed to support the full length and width of multiple quantities of runway. Runway is neatly stacked in two or three columns, fully stretch-wrapped and banded to the pallet to eliminate movement during shipping.

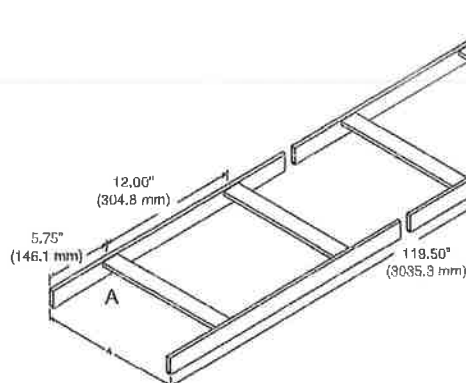
Universal Cable Runway

Our most popular cable runway is designed for value conscious customers. The Universal Cable Runway offers the industry standard features you've come to expect. With the runway supported every 5' (1.5 m), maximum load with minimal deflection is 132 lb/ft (59.9 kg).

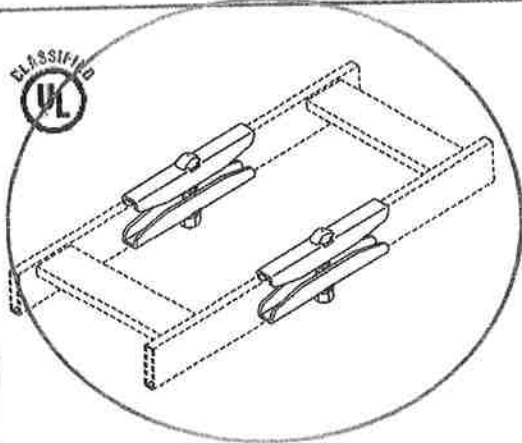
- Made of 3/8" x 1-1/2" x .065" (9.53 mm x 38 mm x 1.65 mm) wall rectangular steel tubing
- Cross members welded at 12" (300 mm) intervals
- Individually boxed to prevent scratches and damage
- Standard length is 9'-11 1/2" / 119.5" (3035 mm)
- Underwriters Laboratory Classified for suitability as an equipment grounding conductor only (must remove paint or use ground straps)
- Installation Best Practices includes Runway Elevation Kit



Part Number/Color			Width (Dim. A) in (mm)	Shipping Weight lb (kg)
Gray	White	Black		
10250-104	10250-204	10250-704	4 (100)	18 (8.2)
10250-106	10250-206	10250-706	6 (150)	19 (8.6)
10250-109	10250-209	10250-709	9 (230)	20 (9.1)
10250-112	10250-212	10250-712	12 (300)	25 (11.3)
10250-115	10250-215	10250-715	15 (380)	27 (12.2)
10250-118	10250-218	10250-718	18 (460)	29 (13.2)
10250-124	10250-224	10250-724	24 (610)	32 (14.5)
10250-131	10250-231	10250-731	30 (760)	35 (15.7)
10250-137	10250-237	10250-737	36 (910)	38 (17.2)



CABLE RUNWAY JUNCTION PRODUCTS



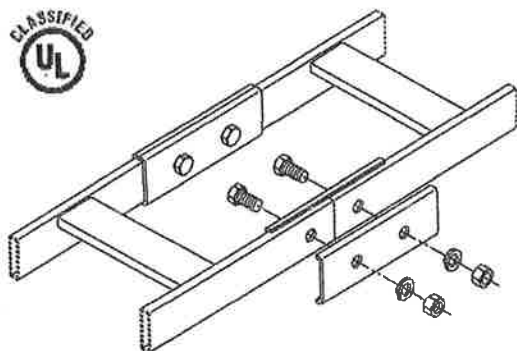
Butt-Splice Kit

Use Butt-Splice Kit to connect two sections of Cable Runway end-to-end. Fits both solid and tubular steel 1-1/2" x 3/8" and 2" x 3/8" (38.1 mm x 9.53 mm and 50.8 mm x 9.53 mm) Cable Runway.

Kit consists of:

- (4) splice plates
- (2) 3/8-16 trimmed head bolts
- (2) 3/8-16 hex nuts
- (2) 3/8" split lock washers

Part Number	Description in (mm)	Shipping Weight lb (kg)
11301-X01*	Butt-Splice Kit, 1-1/2 x 3/8 (38 x 9.53) Stringer	1 (0.5)
11301-X02*	Butt-Splice Kit, 2 (50.8) Stringer	1 (0.5)
16301-X01*	UL Classified Kit	1 (0.5)



Heavy-Duty Butt-Splice Kit

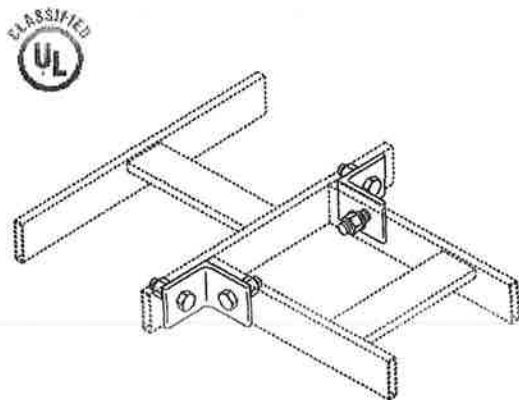
For butting two lengths of Cable Runway together.

- Bolt through Butt-Splice Kit for earthquake areas
- Cable Runway drilling is required

Kit consists of:

- (4) splice plates for 1-1/2" stringers
- (4) 3/8-16 x 1-1/4" hex cap screws
- (4) 3/8-16 hex nuts
- (4) 3/8" split lock washers

Part Number	Description	Shipping Weight lb (kg)
11299-X01*	Heavy-Duty Butt-Splice Kit	2 (0.9)
16299-X01*	UL Classified Butt-Splice Kit	2 (0.9)



Heavy-Duty Junction-Splice Kit

Bolt-through Junction-Splice Kit for vertical runs or to meet seismic requirements.

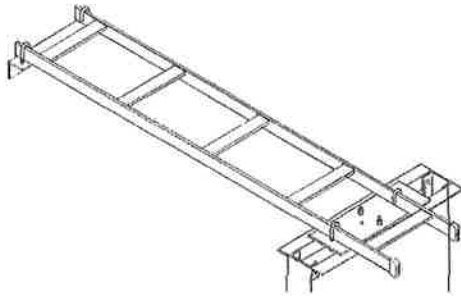
- Material is 2" x 2" x 3/16" (50 mm x 50 mm x 4.763 mm) steel angle
- Cable Runway drilling is required

Kit consists of:

- (2) splice angles
- (4) 3/8-16 x 1-1/4" hex cap screws
- (4) 3/8-16 hex nuts
- (4) 3/8 split lock washers

Part Number	Description	Shipping Weight lb (kg)
11298-X01*	Heavy-Duty Junction Splice	3 (1.4)
16298-X01*	UL Classified Junction Kit	3 (1.4)

*X=color over zinc: 0=Gold, 7=Black. Gold kits include gold color hardware, Black kits include black color hardware.



Rack Not Included

Cable Runway Wall To Rack Kit

The CPI Cable Runway Wall To Rack Kit is a one part number solution to the problem of providing support for cable between the rack and the wall.

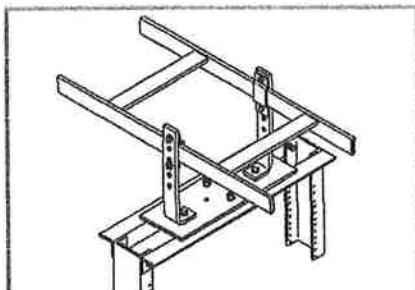
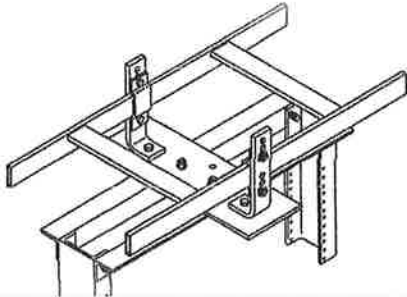
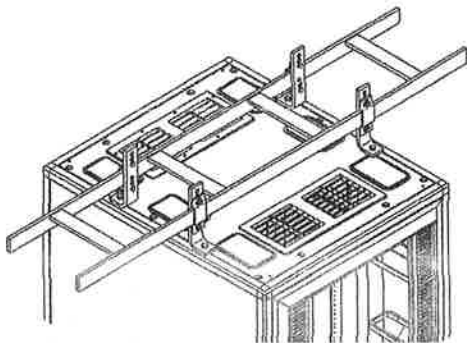
Kit consists of:

- (1) 4' 6" L/54" (1370 mm) Universal Cable Runway
- (1) Wall angle support bracket
- (1) Rack to runway mounting plate
- (1) Pair of end caps
- (6) J-bolts

Note: The kit is available with runway that is 6", 9" or 12"W (150 mm, 230 mm or 300 mm). Rack is not included.

Part Number	Description	Shipping Weight lb (kg)
Standard/Universal Racks with 3"D (80 mm) Mounting Channels Width - in (mm)		
11911-X06	6 (150) Cable Runway Wall to Rack Kit	24 (10.9)
11911-X09	9 (230) Cable Runway Wall to Rack Kit	28 (12.7)
11911-X12	12 (300) Cable Runway Wall to Rack Kit	32 (14.5)
Standard Rack with 6"D (150 mm) Mounting Channels Width - in (mm)		
31473-X06	6 (150) Cable Runway Wall to Rack Kit	17 (7.7)
31473-X09	9 (230) Cable Runway Wall to Rack Kit	19 (8.6)
31473-X12	12 (300) Cable Runway Wall to Rack Kit	24 (10.9)

X=Color: 1=Gray, 2=White, 7=Black. White kits include gold color hardware, Gray and black kits include black color hardware.



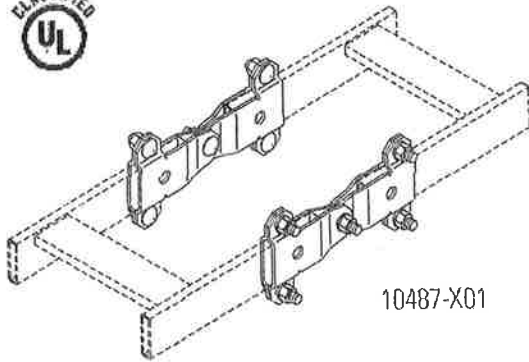
Cable Runway Elevation Kit

Supports Cable Runway above a continuous row of CPI Racks or Cabinets of varying height and provides additional space between the tops of the racks or cabinets and the cable runway, which can create smoother transition of cables.

- Two ranges of incremental elevation
- Can be mounted perpendicular or parallel
- Rack kit includes a single pair of brackets and assembly hardware
- Rack kits attach to the top of the rack with a Rack-To-Runway Mounting Plate (P/N 10595 or 12121, sold separately)
- Cabinet kits include two pairs of brackets and assembly hardware
- Cabinet kits attach directly to the top of the cabinet

2", 2.5" or 3"H (50 mm, 64 mm or 80 mm) Elevation			
Rack	Shipping Weight lb (kg)	Cabinet	Shipping Weight lb (kg)
10506-X02	2 (0.9)	10506-X12	2 (0.9)
4", 5" or 6"H (100 mm, 130 mm or 150 mm) Elevation			
10506-X06	3 (1.4)	10506-16	5 (2.3)

X=Color: 1=Gray, 2=White, 7=Black, 0=Gold. Note: Gold and white kits include gold color hardware, Gray and black kits include black color hardware.



Swivel Splice Kits

Splices cable runway vertically, horizontally or perpendicularly. Adjusts to any angle; not limited to 45 or 90 degrees. Flexible swivel design simplifies Cable Runway installation by making it easier to route around existing plumbing, electrical, etc. Material is steel. Hardware and instructions are included.

Butt Swivel (10487) Kit consists of:

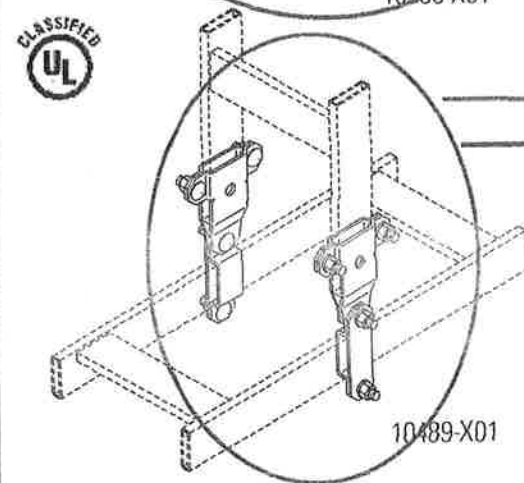
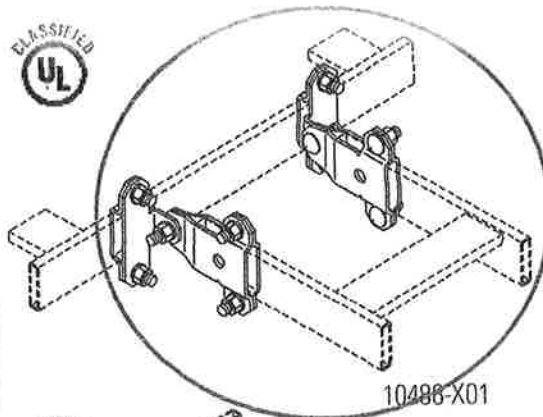
- (8) bracket end
- (8) 5/16-18 x 3/4" round head square, neck bolts
- (2) 5/16-18 x 1" round head square, neck bolts
- (10) 5/16-18 hex nuts, split lock washers

Junction Swivel (10488) Kit consists of:

- (4) bracket end
- (2) bracket supports and plate clamps
- (2) 5/16-18 x 1" round head square, neck bolts
- (8) 5/16-18 x 3/4" round head, square, neck bolts
- (10) 5/16-18 hex nuts, split lock washers

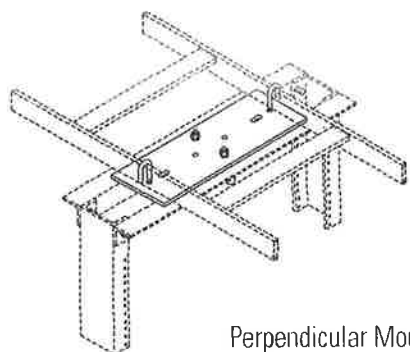
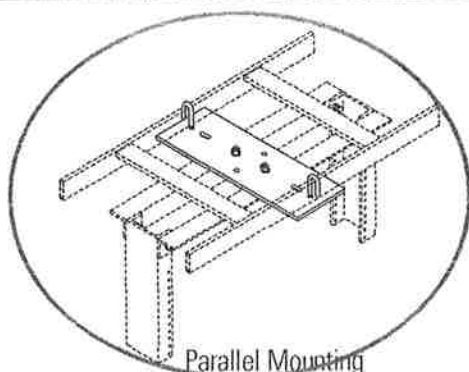
Vertical Swivel (10489) Kit consists of:

- (4) bracket end
- (2) bracket clamps and plate clamps
- (2) 5/16-18 x 1" round head, square neck bolts
- (6) 5/16-18 x 3/4" round head, square neck bolts
- (8) 5/16-18 hex nuts, split lock washers



Part Number	Description	Shipping Weight lb (kg)
10487-X01	Butt-Swivel Splice Kit	1 (0.5)
10488-X01	Junction Swivel Splice Kit	1 (0.5)
10489-X01	Vertical Swivel Splice Kit	1 (0.5)
16487-X01	UL Classified Butt Swivel Splice Kit	1 (0.5)
16488-X01	UL Classified Junction Swivel Splice Kit	1 (0.5)
16489-X01	UL Classified Vertical Swivel Splice Kit	1 (0.5)

X=color over zinc: 0=Gold, 7=Black



Perpendicular Mounting

3" (80 mm) Channel Rack-To-Runway Mounting Plate

Secures Cable Runway to the top of Standard Rack and Universal Rack. Mounts either parallel or perpendicular. For proper attachment of 6"W (150 mm) Cable Runway, specify a rack with top bars instead of top angles.

- Material is 1/4" (6.4 mm) thick cold-rolled steel. Installation best practice includes Runway Elevation Kit (P/N 10506-XXX)

P/N 10595-XXX consists of:

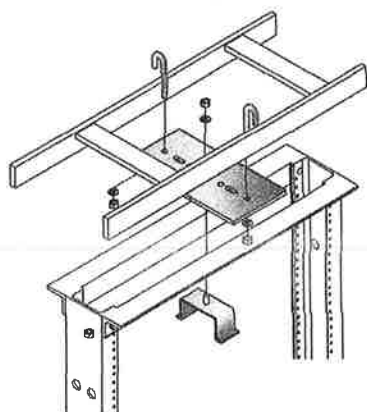
- (1) mounting plate
- (4) 5/16-18 x 2 1/4" J-bolts
- (4) 5/16-18 hex nuts
- (4) 5/16 split lock washers

P/N 12408-X24 consists of:

- (1) mounting plate
- (2) 5/16-18 x 3 1/4" J-bolts
- (2) 5/16-18 x 2 1/4" J-bolts
- (4) 5/16-18 hex nuts
- (4) 5/16 split lock washers

Part Number	Runway Width in (mm)	Plate Material	Shipping Weight lb (kg)
10595-X04	4 (100)	Steel	4 (1.8)
10595-X08	5 to 8 (130 to 200)	Steel	5 (2.3)
10595-X12	9 to 12 (230 to 300)	Steel	5 (2.3)
10595-X18	15 to 18 (380 to 460)	Steel	7 (3.2)
12408-X24*	20 to 24 (510 to 610)	Aluminum	4 (1.8)

X=color: 0=Gold, 1=Gray, 2=White, 7=Black. Gold and white kits include gold color hardware, Gray and black kits include black color hardware. 12408-X24 includes hat-shaped mounting plate that adds 1.25" (32 mm) to height of rack, not available in gold.



3" (80 mm) Channel Rack-To-Runway Mounting Plate With Bracket

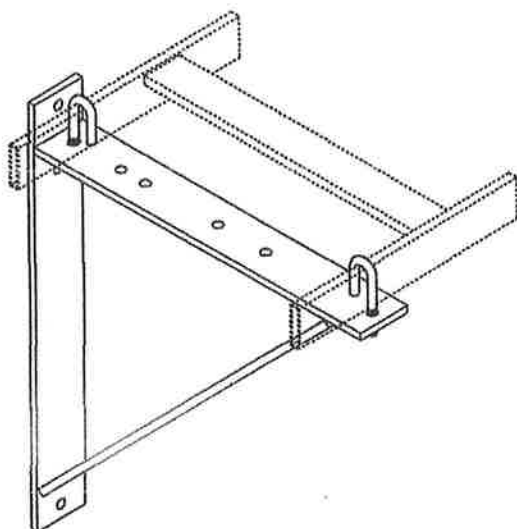
Secures Cable Runway to the top of Universal Rack without intruding into mounting space. The combination of the flat plate and hat-shaped bracket form a clamp around the rack's top angles or top bars. Mounts either parallel or perpendicular. For proper attachment of 6" runway, use top bars (13045 Series) rather than top angles. Installation best practice includes Runway Elevation Kit (P/N 10506-XXX)

Kit consists of:

- (1) mounting plate
- (2) hat-shaped brackets
- (2) J-Bolts, 5/16-18 x 2-1/4"
- (3) hex nuts, 5/16-18
- (3) split lock washers, 5/16"

Part Number	Runway Width in (mm)	Plate Material	Shipping Weight lb (kg)
12730-X04	4 (100)	Steel	4 (1.8)
12730-X08	5 to 8 (130 to 200)	Steel	5 (2.3)
12730-X12	9 to 12 (230 to 300)	Steel	5 (2.3)
12730-X18	15 to 18 (380 to 460)	Steel	7 (3.2)
13730-X24	20 to 24 (510 to 610)	Aluminum	4 (1.8)

X=color: 1=Gray, 2=White, 7=Black. White kits include gold color hardware, Gray and black kits include black color hardware. 13730-X24 adds 1.25" (32 mm) to height of rack.



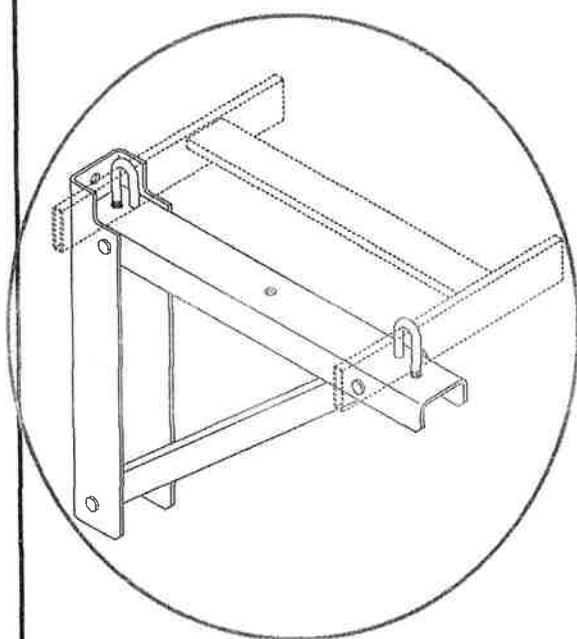
Triangular Support Bracket, Aluminum

Triangular Support Bracket provides wall support for Cable Runway. Made of 1/4" x 2" (6.4 mm x 50 mm) aluminum bar. Load rating is 100 lb (45.4 kg).

Kit consists of:

- (1) triangular bracket
- (2) 5/16-18 x 2 1/4" J-bolts
- (2) 5/16-18 hex nuts & 5/16 lock washers

Part Number	Runway Widths in (mm)	Color	Shipping Weight lb (kg)
11312-106	4-6 (100 - 150)	Gray	2 (0.9)
11312-112	6-12 (150 - 300)	Gray	3 (1.4)
11312-118	12-18 (300 - 460)	Gray	3 (1.4)
11312-206	4-6 (100 - 150)	White	2 (0.9)
11312-212	6-12 (150 - 300)	White	3 (1.4)
11312-218	12-18 (300 - 460)	White	3 (1.4)
11312-706	4-6 (100 - 150)	Black	2 (0.9)
11312-712	6-12 (150 - 300)	Black	3 (1.4)
11312-718	12-18 (300 - 460)	Black	3 (1.4)



Triangular Support Bracket, Steel

Triangular Support Bracket provides wall support for cable runway. Made of cold rolled steel. Load rating is 400 lb (181.4 kg).

Kit consists of:

- (1) vertical wall-mounting bracket
- (1) runway support channel
- (1) angle support channel
- (3) clevis pins (5/16" diameter) & cotter pins
- (2) 5/16-18 x 2 1/4" J-bolts
- (2) 5/16-18 hex nuts & 5/16 lock washers

Part Number	Runway Widths in (mm)	Color	Shipping Weight lb (kg)
11746-112	6, 12 (150, 300)	Gray	5 (2.3)
11746-118	18 (460)	Gray	8 (3.6)
11746-124	24 (610)	Gray	9 (4.1)
11746-212	6, 12 (150, 300)	White	5 (2.3)
11746-218	18 (460)	White	8 (3.6)
11746-224	24 (610)	White	9 (4.1)
11746-712	6, 12 (150, 300)	Black	5 (2.3)
11746-718	18 (460)	Black	8 (3.6)
11746-724	24 (610)	Black	9 (4.1)
11746-012	6, 12 (150, 300)	Gold	5 (2.3)
11746-018	18 (460)	Gold	8 (3.6)
11746-024	24 (610)	Gold	9 (4.1)

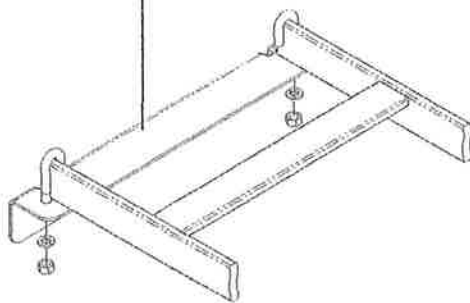
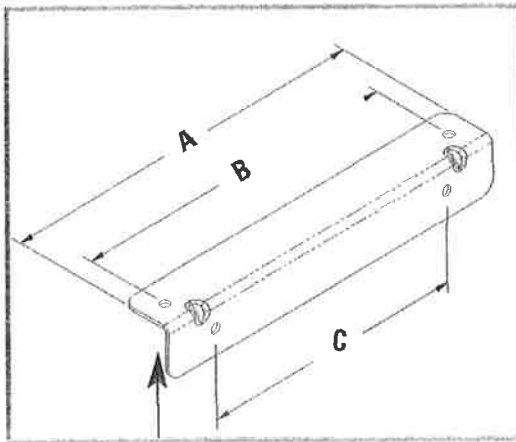
Gold and white kits include gold color hardware, Gray and black kits include black color hardware.

Wall Angle Support Kit, Cable Runway

2" x 2" x .105" (50 mm x 50 mm x 2.67 mm) steel support angle is designed for wall-mounting specific widths of Cable Runway.

Kit consists of:

- (1) wall angle
- (2) 5/16-18 x 2 1/4" J-bolts
- (2) 5/16-18 hex nuts
- (2) 5/16 lock washers



11421 Wall Angle Support Kit

Color	
1	Gray
2	Computer White
7	Black
0	Gold

	Runway Width in (mm)	Dim. A in (mm)	Dim. B in (mm)	Dim. C in (mm)
04	4 (100)	6 (150)	4.31 (109.5)	4.31 (109.5)
06	6 (150)	8 (200)	6.31 (160.3)	4 (100.0)
09	9 (230)	11 (280)	9.31 (236.5)	7 (180.0)
10	10 (250)	12 (300)	10.21 (261.9)	8 (200.0)
12	12 (300)	14 (360)	12.31 (312.7)	10 (250.0)
15	15 (380)	17 (430)	15.31 (388.9)	13 (330.0)
18	18 (460)	20 (510)	18.31 (465.1)	16 (410.0)
20	20 (510)	22 (560)	20.31 (515.9)	18 (460.0)
24	24 (610)	26 (660)	24.31 (617.5)	22 (460.0)
30	30 (760)	32 (810)	30.31 (769.9)	28 (710.0)

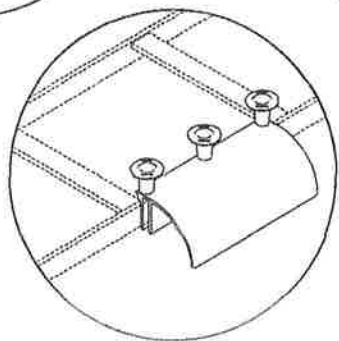
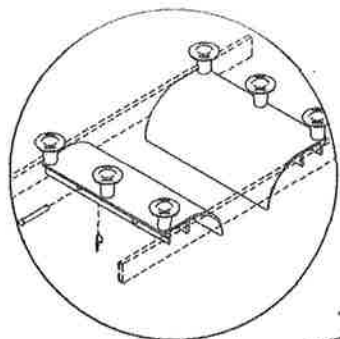
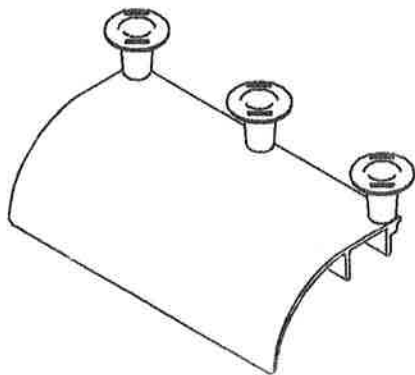
11421 - X XX

Note: Gold and white kits include gold color hardware, Gray and black kits include black color hardware.

Cable Runway Radius Drop

Mounts to the side stringer or cross member of CPI Cable Runway to help maintain proper Category 5e/6/6a or fiber bend radius.

- Quick and easy installation using clevis pin
- Fits 6", 9", 12" and 18" (150 mm, 230 mm, 300 mm and 460 mm) cross member tubing
- For use only with runs on CPI Universal Runway (Series 10250)
- Provides 3" (80 mm) bend radius
- Products 5"W (130 mm), 12100-X06, 12101-X03, drop into CPI's 6"W (150 mm) vertical cabling sections
- Supplied with 1-1/2" (38.1 mm) cable spools (P/N 15003-001) to separate and guide cables
- Sold individually



Runway Radius Drop, Cross Member

Part Number	Cable Runway Width in (mm)	Product Width in (mm)	Cable Spools
12100-X06	6 (150)	5 (130)	2 ea.
12100-X09	9 (230)	8 (200)	2 ea.
12100-X12	12 (300)	11 (280)	3 ea.
12100-X18	18 (460)	17 (430)	3 ea.

Runway Radius Drop, Stringer

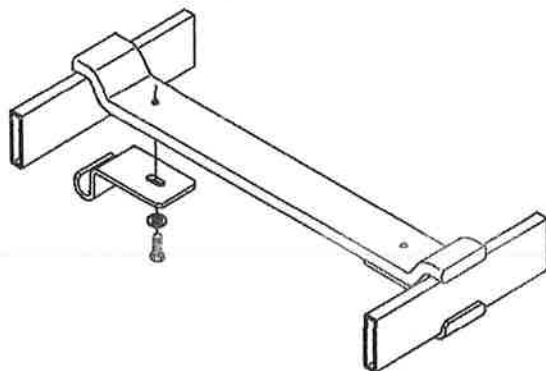
Part Number	Runway Application	Product Width in (mm)	Cable Spools
12101-X01	Universal	10-1/4 (260.4)	3 ea.
12101-X02	Telco	7-3/4 (196.9)	2 ea.
12101-X03	Misc.	5 (130)	2 ea.

X=color: 1=Gray, 2=White, 7=Black.

Cable Runway Movable Cross Member

Permits the dropping of cables at any point between cross members of 9", 12" or 18"W (230 mm, 300 mm or 460 mm) Cable Runways. Combine with the recommended Cable Runway Radius Drop.

- Fits on standard Cable Runway only — 1-1/2" x 3/8" stringer (38.1 mm x 9.53 mm)
- Can be used as an attachment point for the Cable Runway Radius Drops listed below
- Easy installation using provided hardware



Part Number	Cable Runway in (mm)	Use with Radius Drop
12115-X09	9 (230)	12100-X07
12115-X12	12 (300)	12100-X10
12115-X18	18 (460)	12100-X16

X=color: 1=Gray, 2=White, 7=Black. White (-2XX) kits include gold-colored hardware, Gray (-1XX) and Black (-7XX) kits include black color hardware.

Ground Wire (Bare or Jacketed)

Product Description

Ground Wire is used specifically to ground electrical devices and to maintain shield continuity at cable splices

Physical Description

- CONDUCTOR: Solid Annealed Bare Copper 6 AWG (4.1 mm), 10 AWG (2.6 mm), 12 AWG (2.0 mm)
- INSULATION: Weather-resistant PVC (Polyvinyl Chloride) as applicable

Part Numbers and Physical Characteristics

Part #	AWG	Jacket Color	Non. Dia. inches (mm)	Approx. Weight lbs/kt (kg/km)	Package
12-001-04	6	Black	0.22 (5.6)	91 (135)	500 ft Spool
12-101-04	6	Gray	0.22 (5.6)	91 (135)	200 ft Boxed Coil
12-102-04	6	Gray	0.22 (5.6)	91 (135)	200 ft Coil
12-105-04	6	Gray	0.22 (5.6)	91 (135)	500 ft Coil
12-106-04	6	Gray	0.22 (5.6)	91 (135)	500 ft Box Coil
12-107-04	6	Gray	0.22 (5.6)	91 (135)	600 ft Coil
12-104-04	6	Gray	0.22 (5.6)	91 (135)	4000 ft Reel
12-018-04	6	Green	0.22 (5.6)	91 (135)	500 ft Reel
12-905-04	6	Bare	0.16 (4.1)	79 (118)	600 ft Plastic Spool
12-901-04	6	Bare	0.16 (4.1)	79 (118)	200 ft Boxed Coil
12-902-04	6	Bare	0.16 (4.1)	79 (118)	2500 ft Plywood Spool
12-903-04	6	Bare	0.16 (4.1)	79 (118)	300 ft Plastic Spool
12-904-04	6	Bare	0.16 (4.1)	79 (118)	4000 ft Reel
12-907-04	6	Bare	0.16 (4.1)	79 (118)	500 ft Coil
12-111-04	10	Gray	0.14 (3.6)	37 (55)	200 ft Boxed Coil
12-112-04	10	Gray	0.14 (3.6)	37 (55)	500 ft Boxed Coil
12-011-04	10	Black	0.14 (3.6)	37 (55)	500 ft Plastic Spool
12-015-04	10	Green	0.14 (3.6)	37 (55)	500 ft Plastic Spool
12-121-04	12	Gray	0.12 (3.0)	25 (37)	200 ft Boxed Coil
12-122-04	12	Gray	0.12 (3.0)	25 (37)	300 ft Boxed Coil
12-123-04	12	Gray	0.12 (3.0)	25 (37)	500 ft Plywood Spool

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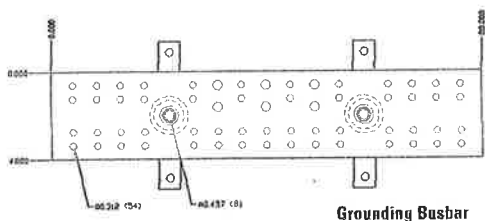
59

PRODUCT APPLICATION SHEET

ORDERING INFORMATION

Grounding Busbar

Part Number	Bar Size	Number of Connectors 5/8" centers / 1" centers	
13622-010	2"W x 10"L x 1/4" thick	4	3
13622-012	2"W x 12"L x 1/4" thick	6	3
40153-012	4"W x 12"L x 1/4" thick	15	3
40153-020	4"W x 20"L x 1/4" thick	27	3



Grounding Busbar

Two Mounting Hole Ground Terminal Block

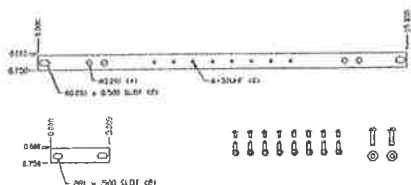
Part Number	Description
40167-001	3/4"H x 1-1/2"W, 5/8" Hole Spacing, #14 AWG to 2/0



Two Mounting Hole Ground Terminal Block

Rack Busbars

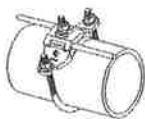
Part Number	Description
40161-072	Vertical Rack Busbar Kit, 72"L x 1/4" thick
10610-019	Horizontal Rack Busbar Kit for 19"W Racks/Cabinets
40172-001	Rack Ground Bar Kit, 78"L x .05" thick



Horizontal Rack Busbar Kit

Pipe Clamp with Grounding Connector

Part Number	Pipe Nominal Size Range	Pipe OD Range
40170-001	1/2" - 3/4"	.375" - 1"
40170-002	1" - 1 1/4"	.75" - 1.7"
40170-003	1 1/2" - 2"	1" - 2.4"
40170-004	2-1/2" - 3"	2.25" - 3.5"
40170-005	3-1/2" - 4"	3.2" - 4.5"
40170-006	5" - 6"	6.53" - 6.63"



Compression Lug

Part Number	Cable Size	Hole Spacing	Screw Size	Color Code
40162-901	#6 AWG	5/8"	1/4"	Blue
40162-903	#6 AWG	1"	3/8"	Blue
40162-909	2/0	1"	3/8"	Black
40162-913	#6 AWG	1/2", 5/8"	1/4"	Blue
40162-914	#6 AWG	1/2", 5/8"	1/4"	Blue

C-Type Compression Taps

Part Number	Conductor Run	Conductor Taps
40163-001	#4 Stranded, #6 Solid	#6 Stranded, #6 Solid

Note: Other sizes are available.



Two-Hole Compression Lug
P/N 40162-901



90° Slotted Compression Lug
P/N 40162-913

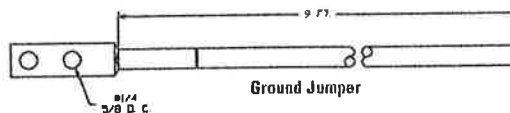


C-Type Compression Taps

Ground Wire & Jumpers

Part Number	Description
40159-001	Ground Wire, No Lugs, #6 AWG, 100'L
40159-009	Ground Jumper, (1) Lug, #6 AWG, 9'L
40159-010	Equipment Ground Jumper Kit (2) Lugs, #6 AWG, 24"L

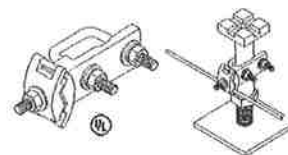
Note: Insulated (green and yellow stripe), stranded conductors.



Ground Jumper

Pedestal Clamp with Grounding Connector

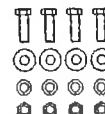
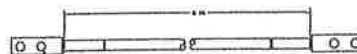
Part Number	Type	Pedestal Size/Style	Connections
40169-001	Cross	Square, 1-1/8" OD	(2) #6 AWG per side
40169-002	Cross	Round, 1-1/8" to 1-3/4" OD	(1) #6 AWG & (1) 2/0 per side
40169-003	Straight	Square or Round, 1-1/8" OD	(2) #6 AWG or (2) 2/0, one side only



Straight Type Pedestal Clamp

Cable Runway Ground Straps

Part Number	Description
40164-001	8"L (11" Overall), #6 AWG, Includes Hardware



Cable Runway Ground Straps



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Williamson County

Change in Work - Cost Analysis Form

(To Be Completed All Subcontractors, Suppliers & Contractors Associated with the Change Proposal)

Project No. & Name: 1722-01 Wilco ESOC

DATE 12/17/2012

Contractor Name: Titus Systems

Change No. 4

Description of Change: Pulling out 30 existing cable runs and repulling new drops to new designated comm closets. Each drop will be terminated using existing jacks and faceplates. RFI 122 is the reference for changing IDF locations. (Markup included.)

[illegible]

Work performed by the Contractor's own employees (per UGC 22.1.2a)		SUBTOTAL	\$	5,040.00
Work up to \$10,000.00, add...	15.0%			
Work between \$10,000.01 and \$20,000.00, add...	10.0%		\$	-
Work greater than \$20,000.00, add...	7.5%		\$	-

Managing subcontracted work (per UGC 22.1.2b)		SUBTOTAL	\$	-
Work up to \$10,000.00, add...	10.0%		\$	-
Work between \$10,000.01 and \$20,000.00, add...	7.5%		\$	-
Work greater than \$20,000.00, add...	5.0%		\$	-

TOTAL FOR THIS CHANGE PROPOSAL	\$ 5,040
---------------------------------------	-----------------

REQUEST FOR INFORMATION



RFI NO: 122
To: Bill Spence
Parsons
106 East 6th Street, Suite 200
Austin, TX 78701
Phone: (512) 501-3745
Fax: (512) 501-3741

2001 S.E. Inner Loop
Georgetown, TX 78626
Phone: (512) 230-6282
Fax: (512) 681-9752

Date: 11/13/2012

Required By: 11/16/2012

From: Colby Hilton

Project: Williamson County Emergency Services
Operations Center (CM)

Job No : 172201

Re: Termination Locations for Motorola, ATT, & CAPCOG Cabling

Spec. Section:

Drawing Number: TT-000, TT-200 Series

Other Reference: WILCO Diagram

Question:





In reference to the TT-200 series of the Construction Documents, all telecom outlet cabling shall be home run and terminated in either Server Room 76 or Telecom Room 32. Per the attached email correspondence and diagram provided by R. Semple, Williamson County has requested that all Motorola outlet cabling be routed directly to and terminated in Motorola Room 77, and all CAPCOG/AT&T outlet cabling be terminated in Pots Demark Room 78, in lieu of this cabling being home run and terminated in Server Room 76. Please reference the following items and provide additional clarification regarding this request.

1. Motorola Cabling: In reference to Sheet TT-000, please advise which telecom symbols and associated outlet cabling shall be routed directly to and terminated in Motorola Room 77.
2. CAPCOG/AT&T Cabling: In reference to Sheet TT-000, please advise which telecom symbols and associated outlet cabling shall be routed directly to and terminated in Pots Demark Room 78.
3. Please advise if additional cable tray will be needed, or if any cable tray routing revisions will be required to accommodate this request.
4. Please advise if these new requirements will affect outlet cabling outside of Comm. Ops. Room 40 (i.e. symbol's 16 & 17 in Room 26 and symbol 17 in EOC Room 39).

Proposed Answer:

Please provide necessary clarifications regarding termination locations for Motorola, ATT, & CAPCOG cabling.

Answer:

1. Outlet  and  shall be routed directly to and terminated in Motorola Room 77.
2. Outlet  and  shall be routed directly to and terminated in Pots Demark Room 78.
3. Additional cable tray should not be needed for the reroute of the specified cable.

4. Refer to Answer 1 and 2.

Tyson E. Leonard , RCDD SMW 11/20/12

Very truly yours,

VAUGHN CONSTRUCTION

Attachments: WILCO Email Correspondence

CC:



KEY PLAN

NOTE:
ALL TELEPHONE OUTLET CABLES
ON THIS SHEET ARE SHOWN IN
THEir OWN RIGHT OF WAY
AND ARE NOT TO BE
CONSIDERED AS
PART OF THE
TELEPHONE
SYSTEM.
THEY ARE
TO BE
INSTALLED
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DATE	10/1/78
BY	SM&W
CHECKED	SM&W
APPROVED	SM&W
SCALE	1" = 10'

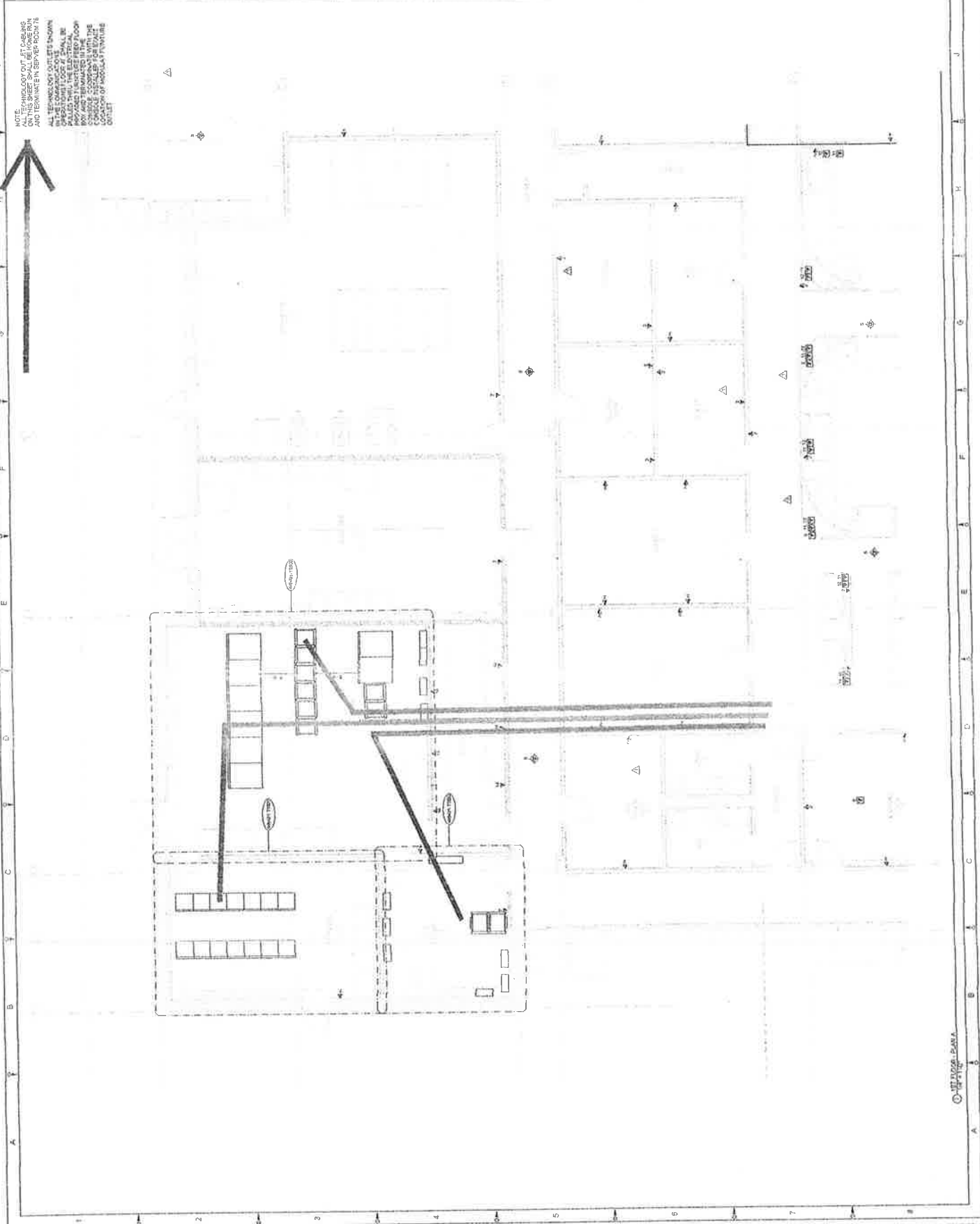


WILLIAMSON COUNTY
EMERGENCY SERVICES
OPERATIONS CENTER

TECHNOLOGY TELECOM
PLAN - AREA A

448431-TT-200

2



SEE PAGE 2 OF 2

Colby Hilton

From: Dale Butler <dbutler@wilco.org>
Sent: Friday, November 09, 2012 3:27 PM
To: Colby Hilton
Subject: FW: Wilco ESOC - ATT & Capcog Cabling
Attachments: TT200.pdf

Please see email and attachment per Gary.

Thank You

From: Richard Semple
Sent: Thursday, November 08, 2012 4:14 PM
To: Gary Wilson
Cc: Dale Butler; Jay Schade; Benjamin Wassink; Otis Coufal; Bill Spence (Bill.Spence@parsons.com); Jeff Smith
Subject: RE: Wilco ESOC - ATT & Capcog Cabling

Gary:

I have attached a simple diagram that shows the endpoints of the cabling in the server rooms. Please forward if appropriate.

The terminations should be in the following rooms:

Motorola cabling: Room 77

CAPCOG/AT&T: Room 78

All other technology cabling: Room 76

Thanks,
Richard

Richard Semple, GISP, MPA
Public Safety Technology Director
GIS & 9-1-1 Addressing Director
Williamson County
301 SE Inner Loop, Suite 107, 78626
Office: 512-943-1489
www.wilco.org/maps
www.wilco.org/pstp

From: Doug Boram [mailto:dougboram@vaughnconstruction.com]
Sent: Thursday, November 08, 2012 10:57 AM
To: Gary Wilson; Spence, Bill
Cc: Dale Butler; Stuart Baker; Colby Hilton; rrogers@capcog.org; Richard Semple; Brendan Fluitt
Subject: Wilco ESOC - ATT & Capcog Cabling

Gary / Bill,

I spoke with Randy Rogers this morning and he mentioned that ATT/Capcog does not want their cabling to be terminated in the Server Room 76 as noted on the plans (see the attached). They would like their cabling to be routed directly to the Pots Demark Room 78 and terminated. If this is what Wilco would like to do please send a PR showing the changed routing.

Change in Work - Cost Analysis Form

(To Be Completed All Subcontractors, Suppliers & Contractors Associated with the Change Proposal)

Project No. & Name: 1722-01 Wilco ESOC

DATE 12/27/2012

Contractor Name: Titus Systems

Change No. 5

Description of Change: 8 additional cables in Communications Operations Floor 40. All 8 cables will be pulled, terminated and tested.

Markup is included in pricing.

[illegible]

Work performed by the Contractor's own employees (per UGC 22.1.2a)		SUBTOTAL	\$	1,277.00
Work up to \$10,000.00, add...	15.0%			
Work between \$10,000.01 and \$20,000.00, add...	10.0%		\$	-
Work greater than \$20,000.00, add...	7.5%		\$	-

Managing subcontracted work (per UGC 22.1.2b)		SUBTOTAL	\$	-
Work up to \$10,000.00, add...	10.0%		\$	-
Work between \$10,000.01 and \$20,000.00, add...	7.5%		\$	-
Work greater than \$20,000.00, add...	5.0%		\$	-

TOTAL FOR THIS CHANGE PROPOSAL	\$ 1,277
---------------------------------------	-----------------

REQUEST FOR INFORMATION



2001 S.E. Inner Loop
Georgetown, TX 78626
Phone: (512) 230-6282
Fax: (512) 681-9752

RFI NO: 133
To: Gary Wilson
Williamson County
3101 S.E. Inner Loop
Georgetown, TX 78626
Phone: (512) 943-1636
Fax: (512) 930-3313

Date: 12/27/2012

Required By: 12/31/2012

Project: Williamson County Emergency Services
Operations Center (CM)

Job No : 172201

From: Colby Hilton

Re: Additional Cabling for Make Busy Switches

Spec. Section:

Drawing Number:

Other Reference: Owner Request

Question:

Per the attached email correspondence from Michael Wright, dated 12/13/12, Williamson County has requested that Vaughn install eight (8) additional cables/drops to accommodate the make busy switches that are to be Owner provided and installed at Communications Operations Floor 40. As noted on the attached sketch provided by Williamson County, please confirm that the eight (8) additional Cat 6 cables are to be pulled from the two (2) different locations indicated at Comm Ops. Floor 40, and terminated at Pots Demark Room 78. Please provide any additional information needed for construction, including any specific location and termination requirements for this cabling.

Answer:

Very truly yours,

VAUGHN CONSTRUCTION

Attachments: Cable Routing Sketch

CC:

Colby Hilton

From: Doug Boram
Sent: Friday, December 14, 2012 12:18 PM
To: Brendan Fluitt
Cc: Colby Hilton; Stuart Baker
Subject: FW: AT&T / CAPCOG Make Busy Switches
Attachments: 05-A232 - Wilco ESOC - Make Busy Switches.pdf

Brendan,
Can you provide the wires shown in the attached for the make busy panels?

Doug Boram
Vaughn Construction

From: Michael Wright [mailto:MWright@wilco.org]
Sent: Thursday, December 13, 2012 11:34 AM
To: Doug Boram; Gary Wilson
Subject: AT&T / CAPCOG Make Busy Switches

Doug,

I am following up to see if the low voltage contractor pulled the make busy cables for AT&T per the meeting conversations.

Michael L Wright
Captain - Logistic
Williamson County
Public Safety
Emergency Communications
508 S Rock St
Georgetown, Tx 78626

EOC Duty Officer (512) 943-1394
Office (512) 943-3753
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