

## Office of Statewide Health Planning and Development

**Facilities Development Division**

1600 9th Street, RM 420  
Sacramento, California 95814  
(916) 654-3362  
Fax (916) 654-2973  
www.oshpd.ca.gov/fdd

November 4, 2005

Raymond Z. Uribes  
LTK Associates, Inc.  
745 Distel Dr.  
Los Altos, CA 94022

Subject: Application for Approval of Anchorage for Fixed Hospital Equipment  
GCX SEISMIC WALL CHANNELS: M, VHM, VB SERIES ARM  
OPA-0697

Dear Mr Uribes:

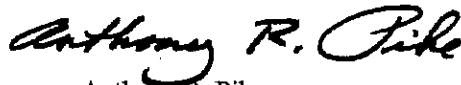
We have reviewed the submittal for OPA-0697. The anchorage details have been stamped approved by this Office. A copy of the stamped details is included with this letter

Please send a finalized version of the calculations and stamped plans to us in pdf format. You can email it to me at [tpike@oshpd.ca.gov](mailto:tpike@oshpd.ca.gov).

Please note that your pre-approval is valid as long as it is listed on our website. It must be renewed when a new building code is adopted or when other conditions warrant.

Thank you for your support of the Pre-approval Program. If you have any questions please contact me at (916)654-1477. In any correspondence regarding this pre-approval please use the number OPA-0697.

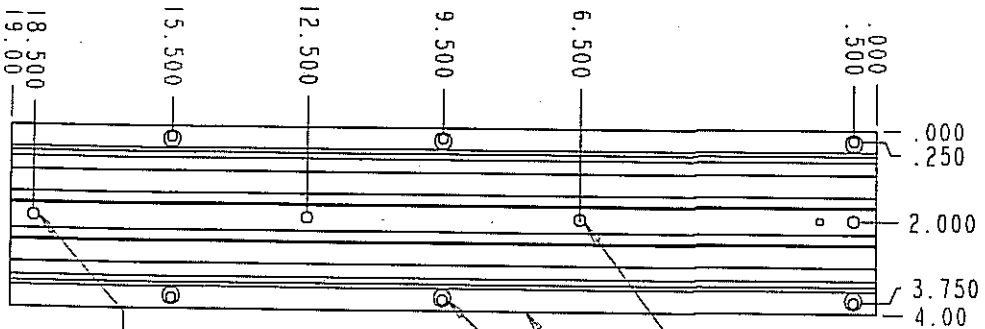
Sincerely,



Anthony R. Pike  
Senior Structural Engineer

cc: File





1X #10 X 2" OVAL HEAD SHEET METAL SCREW (THRU FIXED STOP)

6X #10 X 2" OVAL HEAD SHEET METAL SCREW

19" GCX POLYMOUNT SEISMIC CHANNEL

3X #10 X 2" PAN HEAD SHEET METAL SCREWS

WALL CHANNEL:  
19" GCX POLYMOUNT

MONITOR BRACKET ARMS:  
(MAXIMUM LOADING)  
M SERIES = 60#  
VM SERIES = 40#  
VB SERIES = 40#

- NOTES:
- FOR INSTALLATION OF CHANNEL SEE SHEET 2
  - PRE-DRILL 9/64" OR #28 HOLES FOR 16 GAGE SHEET METAL BACKING
  - SCREWS DRIVEN DIRECTLY INTO WOOD STUD WALLS

ANCHORAGE DESIGNED FOR:  
2001 CALIFORNIA BUILDING CODE (CBC)

SECTION 1632A  
SEISMIC ZONE: 4  
IMPORTANCE FACTOR:  $Z=0.4$   
NEAR-SOURCE FACTOR:  $I_p=1.5$   
SOIL PROFILE TYPE:  $N_s=1.5$   
EQUIP. LOCATION HGT:  $H_x=1.0$   
BUILDING HGT:  $H_t=1.0$   
RESPONSE FACTOR:  $R_p=3.0$   
COMP. AMP. FACTOR:  $ap=2.5$

SEISMIC FORCE FACTOR:  
(ALLOWABLE STRESS DESIGN)  
HORIZONTAL:  $F_{ph} = 2.3571$  (wp)  
VERTICAL:  $F_{pv} = 1.7317$  (wp) = 0.7857(wp)

How to Use This Pre-Approval

- Maximum equipment weight shall not exceed the limits shown on these drawings.
- Attachment of equipment and its mounting device to this Pre-Approval arm is the responsibility of others and shall be adequate to resist all loads of the equipment per OSHPD requirements.
- Design of wall backing and wall framing is the responsibility of others, and shall be designed for the loads due to this wall bracket and equipment supported by the bracket and any other loads.

**APPROVED**

Fixed Equipment Anchorage  
Office of Seismic Health Planning and Development

OPA-0697



Friday, November 04, 2005

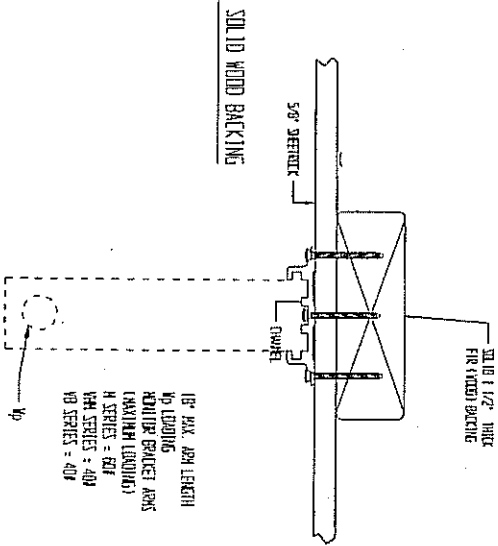
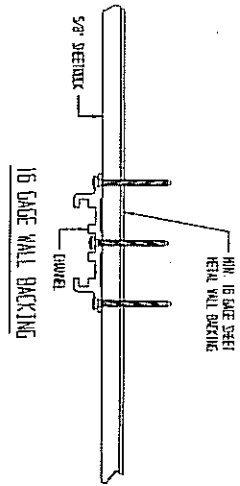
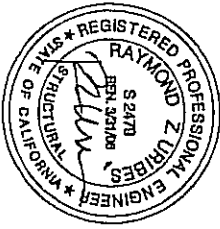
*Anthony R. Piker*  
Anthony R. Piker  
(916) 654-3362

SHEET 1 OF 5

DIMENSIONAL TOLERANCES AS FOLLOWS UNLESS OTHERWISE SPECIFIED:		REV	ECN#	DATE	APPRV.	DESIGN BY:	DESIGNED BY:	CHECKED BY:
1/4"	±.005					R. GLASER	R. GLASER	
3/16"	±.005							
1/2"	±.005							

GCM PROPRRIETARY		GCX 19" SEISMIC CHANNEL W/HARDWARE	
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION THAT IS THE PROPERTY OF GCM. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING BY GCM.		DWG NO.	DATE
		OPA0697-01.0	1/31/05
		REV.	LEV.
		A	PT



HIGH QUALITY INSULATION, PER THIS QUALITY SYSTEM IS APPROVED FOR THE CEX SYSTEM WALL. THE INSULATION SHALL BE RATED FOR A SERIES 180. MATCH THE LEAKAGE OF 10.

THE WALL BACKING SHALL BE SUPPORTED BY A WALL DESIGN MEASURE THE WALLS TO BE SUPPORTED BY THE WALL. THE BACKING IS TO BE INSTALLED IN THE RESULT OF WALL FLEXING DESIGN AND OTHER DESIGN ASPECTS PER THE INSTALLATION OF AN ANK.

THE HICKORY WALL BACKING THICKNESS SHALL BE AS STATED BY THIS DRAWING. THE ANK, BRICK AND WALL FLEXING TO SUPPORT THESE LOADS ARE TO BE DESIGNED BY THE STRUCTURE ENGINEER BY RECORD FOR EACH SPECIFIC PROJECT.

THIS WALL BACKING IS TO BE INSTALLED PER THE WALLS. 16 GAGE STEEL BACKING WAS INSTALLED TO STEEL STUDS USING 1/2" SHEET PILE STUDS. SOLID WOOD BACKING WAS INSTALLED TO REDUCED WALL STUDS USING 1/2" HICKORY WALLS. 5/8" SHEET PILE WAS APPLIED TO ONLY ONE SIDE OF WALLS TO SIMULATE WEST CASE SITUATION. AIR PENETRATION FROM WEST CASE SITUATION REQUIRES APPROVE FROM

THE ATTENDANT OF THE COMPETENCE IN THE JOB AND THE CONSTRUCTION OF THE DESIGN ARE NOT SUBJECT TO BOARD REVIEW AND APPROVAL.

**APPROVED**

Fixed Equipment Anchorage

Office of Statewide Health Planning and Development

OPPA-0697

on

Friday, November 04, 2005

Anthony R. Pike

AGREEMENT DESIGNER FOR: 200 CALIFORNIA BUILDING CODE (CBC)

SECTION AREA: 701.4

SECTION AREA: 701.5

SECTION AREA: 701.5

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SECTION AREA: 701.5

CEX PROPRIETARY

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CEX CORPORATION  
3075 CYPRESS DRIVE  
FETALIMA, CA 94954  
800-228-2555

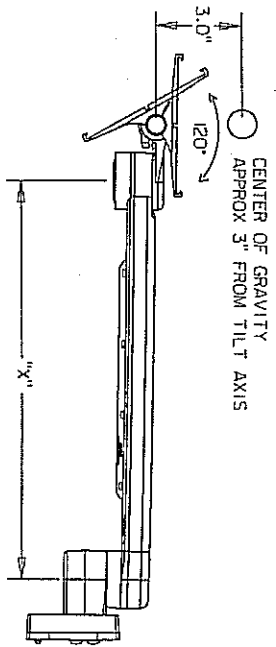
CEX WALL BACKING SOLUTIONS

SCALE: 1-31-05 SHEET 2 (LEV 2)

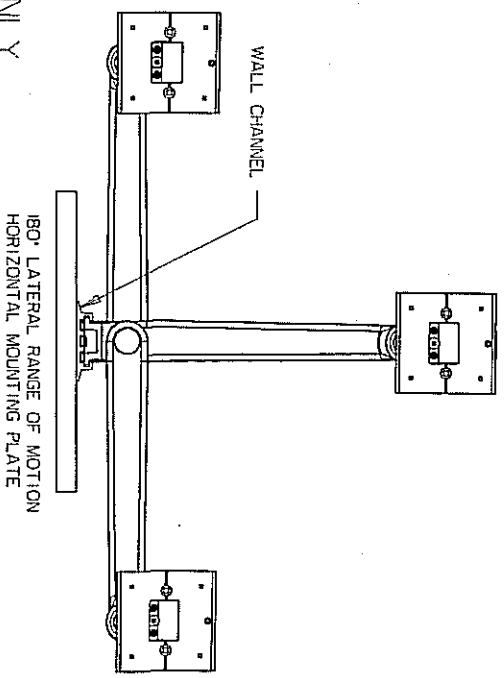
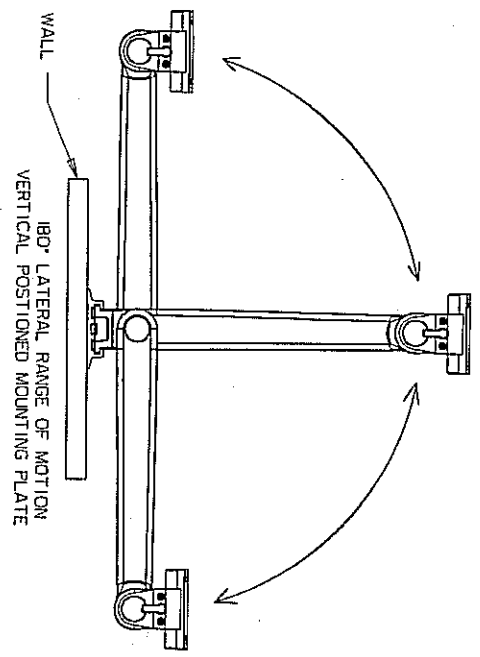
DRAWN BY: ROB G

CHECK BY:

DESCRIPTION	"X"
M SERIES - 8" PIVOT ARM	8
M SERIES - 12" PIVOT ARM	12
M SERIES - 16" PIVOT ARM	16



- 8" (20.3cm), 12" (30.5cm) and 16" (40.6cm) ARM LENGTHS:
- Pivot of the slide for lateral adjustability
  - 180° nominal lateral pivot range
  - Smooth tilt and swivel adjustments at front and end
  - 60lbs. (27.2 kg) Arm / 30 lbs. (13.6 kg) Tilt duty ratings
  - Monitor attachment hardware (to GCX mounting plates)
- shall be sized and numbered adequately to withstand forces generated by the maximum load rating of the GCX arm/channel system. (60LBS FOR OPA-0697)



REFERENCE ONLY

DIMS/STRAIGHT TOLERANCES AS FOLLOWS UNLESS OTHERWISE SPECIFIED			REV	ECN#	DATE	APPRV.	DRAWN BY:	DESIGNER:	DEC'D BY:	DWG NO.	REV.
X.XXX ±.003							TLH	GCX		OPA0697-03.0	A
X.XX ±.005											
X.X ±.007											
X ±.010											
A ±.030											

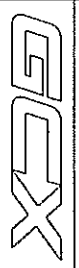
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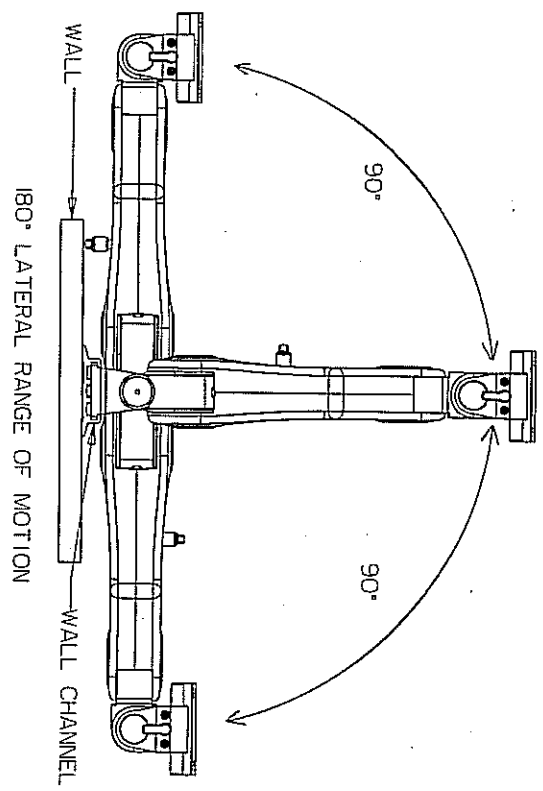
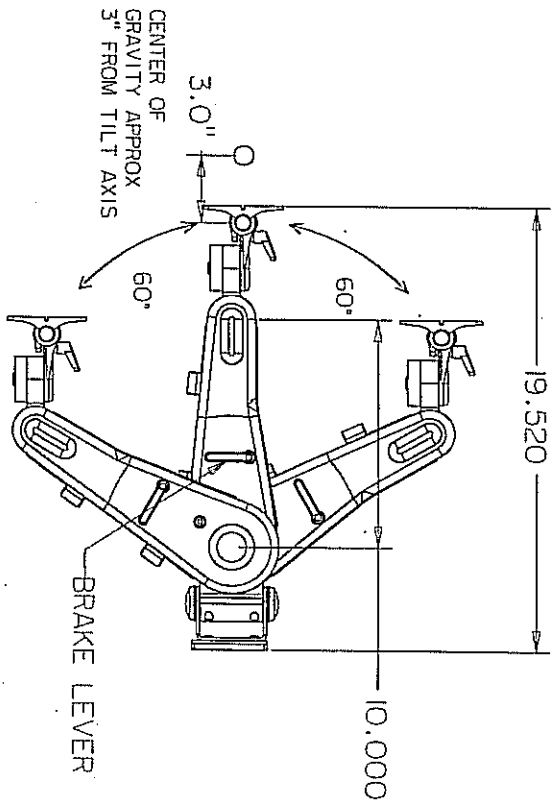
GCX PROPRIETARY

8" 12" 16" M-SERIES ARMS

DATE: 1/31/05

REV: A





- VHM ARM:
- Vertical and lateral movement combined with independent tilt and swivel adjustment at the head of the arm permits optional positioning of equipment.
  - 0-40 lbs. (13.6 kg) duty rating, counterbalanced via an adjustable internal gas spring.
  - +/- 60 degrees vertical motion range (17" (43.8cm) total travel)
  - +/- 90 degrees lateral motion range (from perpendicular to wall)
  - Tilt and pivot joints held with adjustable friction.
  - Vertical position may be locked w/brake lever.
  - Monitor attachment hardware (to GCX mounting plates) shall be sized and numbered adequately to withstand forces generated by the maximum load rating of the GCX arm/channel system. (40LBS FOR OPA-0697)

REFERENCE ONLY

SHEET 4 OF 5

DIMENSIONAL TOLERANCES AS FOLLOWS UNLESS OTHERWISE SPECIFIED:				DRAWN BY:	
XXXX	±.00	REV	ECN#	DATE	APPRV.
XXX	±.005				
XX	±.00				
X	±.00				

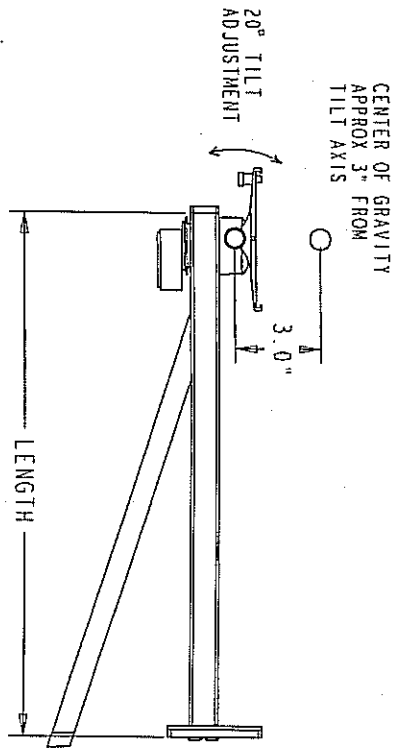
  

DESIGNER:		CHECKED BY:	

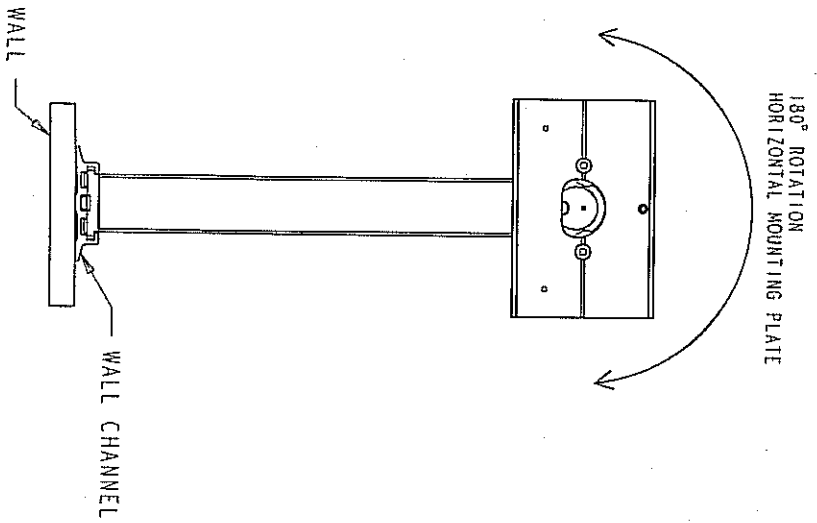
  

VHM - VARIABLE HEIGHT SUPPORT ARM		DWG NO. OPA0697-04.0		REV. A	
		DATE: 1/31/05		LEV. PT	

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- VB ARM:
- FIXED ARM DESIGN, NO LATERAL MOVEMENT
  - MOUNTING PLATE ADJUSTABLE AS NOTED
  - ARM LENGTHS: 8", 12", 15", 18" MAX
  - 40LB (22.7kg) DUTY RATING
  - MONITOR ATTACHMENT HARDWARE (TO GCX MOUNTING PLATES) SHALL BE SIZED AND NUMBERED ADEQUATELY TO WITHSTAND FORCES GENERATED BY THE MAXIMUM LOAD RATING OF THE GCX ARM/CHANNEL SYSTEM. (40LBS FOR OPA-0697)



REFERENCE ONLY

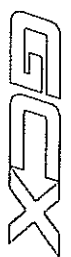
SHEET 5 OF 5

DIMENSIONAL TOLERANCES AS FOLLOWS UNLESS OTHERWISE SPECIFIED:		REV	ECN#	DATE	APPRV.	DESIGNER	CHECKED BY	DWG NO.	REV.
XXX.X	±.010					R. GLASER		OPA0697-05.0	A
XXX	±.025					R. GLASER			
XXX	±.050								
XXX	±.000								

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EXTERNAL PARTY FOR OTHER THAN GCX USE UNLESS AUTHORIZED BY GCX.

VB - FIXED SUPPORT ARM

DATE: 1/21/05



DATE: 1/21/05

REV. A