

MONTEREY PENINSULA COLLEGE



Project:

CAMPUS WIDE FIRE ALARM ASSESSMENT

ATCG PROJECT NO.: 206353, BG-01

Prepared by:

Alfa Tech Cambridge Group



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November 8, 2006

Monterey Peninsula College
980 Fremont Street
Monterey, CA 93940

Attn: Mr. Steve Morgan

Sub: Campus Wide Fire Alarm System Assessment
ATCG No.: 206353, BG-01

Dear Mr. Morgan:

Alfa Tech Cambridge Group and Ceitronics has conducted a fire alarm system survey and prepared the following assessment for the systems at Monterey Peninsula College.

Although not specifically required by code, non sprinkled buildings should be provided with fire alarm system to provide a consistent level of life safety protection in every building. Buildings that are sprinkled should have their systems upgraded for the same reason...consistent level of protection throughout the campus.

Existing Conditions (conditions are typical for all buildings):

Zip cord wire used for some circuits.

Several buildings are only partially sprinkled; some are fed from domestic water sources.

Many panels do not have phone lines connected - typical buildings have a Radionics 7212 panel with an FCPS power supply for the horn strobes. Since most buildings are not connected to telephone lines, they are local only systems with no offsite monitoring.

Batteries are not labeled with date of install.

Several panels have been powered down.

Sample panels are shown below. Non code compliant "zip" wire can be found in both FACP and FATC locations.



Fire alarm terminal cans are not labeled. Wire nuts are used throughout terminal cans and fire alarm control panels. Not a workmanlike manner, as prescribed in the code. “Zip” cord wire is prevalent in terminal cans, connected to FPL cable with wire nuts.



Dance & Adaptive PE:

Single story building. Concrete structure.
Building does not have automatic sprinklers.
Manual pull stations at all exits.
NAC coverage throughout.
Radionics 7412 control panel, 1 7ah battery, D192C bell module, (2) D125B module,
No phone lines connected.



Plant Services:

Single story plus mezzanine building. New construction.
Building has automatic sprinklers
Manual pull stations at all exits.
NAC coverage throughout.
Smoke detection in corridors.
Smoke detection above panel.
Radionics 7412G control panel, 1 7ah battery, D192C bell module, (1) D125B module, D8125 module
Phone lines connected, but in comm. fail.



Automotive Technology:

Single story plus mezzanine building
Building has automatic sprinklers
Manual pull stations at all exits.
NAC coverage throughout.
Heat detection in open shop area.
Smoke detection above panel.
Radionics 7212G control panel, 1 7ah battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
Phone lines connected.



PE Gym:

Two story building, concrete construction.
Building partially sprinkled.
Manual pull stations at 2 of 6 exits.
Non compliant NAC coverage throughout.
No smoke detection above panel.
Radionics 7212G control panel, 1 7ah battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
No phone lines connected.
FACP and power supply are powered down.



Pool Lockers and Showers:

Single story building, concrete construction.
Building partially sprinkled.
Manual pull stations at exits.
Non compliant NAC coverage.
No smoke detection above panel.
Radionics 7212G control panel, 1 7ah battery, D192C bell module, D125B module
FCPS power supply, DSM synch module
No phone lines connected.

Theater:

Two story building, concrete construction.
Building partially sprinkled. Missing one water flow switch,
and two tampers
Manual pull stations at 3 of 6 exits.
Non compliant NAC coverage. Strobe in public restroom in
front lobby.
No smoke detection above panel.
Radionics 9112G control panel, 1 7ah battery, (2)D192C bell
module, (1) D125B module no dialer card
Altronix AL400UL power supply, DSM synch module
No phone lines connected.
FACP and power supply is powered down.



College Center Bookstore:

Single story building, concrete construction.
Building not sprinkled.
Manual pull stations at 4 of 6 exits.
Non compliant NAC coverage throughout – ceiling
mounted horn strobes in activity rooms.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah
battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
No phone lines connected.
FACP and power supply is powered down.



Administration:

Single story building, wood frame construction.
Building not sprinkled.
No manual pull stations.
Non compliant NAC coverage.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
No phone lines connected.



Music – Orchestral:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at 4 of 8 exits.
Non compliant NAC coverage throughout – one horn strobe in auditorium.
No smoke detection above panel.
Radionics 8112G control panel, annunciator at panel, (2) D192C bell module, (1) D125B module
Only one phone line connected.



Music – Practice:

Single story buildings, wood frame construction.
Buildings not sprinkled.
Manual pull stations at 2 of 4 exits.
Non compliant NAC coverage throughout – strobes in practice rooms, one central horn strobe in corridor.
No control panel, controlled by panel located in music – orchestral.



Music – Choral:

Single story buildings, wood frame construction.
Building partially sprinkled. Water flow switch monitored, needs tamper switch.
Manual pull stations at 2 of 4 exits.
Non compliant NAC coverage.
No smoke detection above panel.
Radionics 8112G control panel, Annunciator at panel,
D192C bell module, D125B module
Only one phone line connected.



Art Ceramics:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull station at 3 of 13 exits.
Non compliant NAC coverage – strobes in restrooms, horn strobes in 2 other rooms.
Kiln room not sprinklered. Range guard suppression system not monitored.
No fire alarm control panel. Devices connected to Art Studio.



Art Gallery:

Single story building, 2 rooms, wood frame construction.
Building not sprinkled.
Manual pull station at 1 of 2 exits.
Horn strobe in both rooms.
No panel. Devices connected to Art Studio.



Art Studio:

Single story building, wood frame construction.
Building sprinkled. Has Water flow switch, missing tamper switch
Manual pull stations at 2 of 8 exits.
Non compliant NAC coverage throughout, 3 horn strobes for entire building
Smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, (3)D192C bell module, (3) D125B module
Alarm-Saf power supply, (2)DSM synch module
No phone lines connected.



Drafting – Graphic Arts :

Single story building, wood frame construction.
Building not sprinkled.
Manual pull station at 1 of 11 exits.
Non compliant NAC coverage – Only 1 horn strobe
No fire alarm control panel – devices connected to panel
Nursing building.



Nursing:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at 3 of 11 exits.
Non compliant NAC coverage – H/S at 3 of 11 exits, strobes in restrooms.
Smoke detection above panel.
Radionics 8112G control panel, Annunciator at panel, 7ah battery, (2) D192C bell module, (1) D125B module
Alarm-Saf power supply, DSM synch module
No phone lines connected



Art Dimensional:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at all exits.
Non compliant NAC coverage – 1 interior H/S.
Smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel,
D192C bell module, (2) D125B module
FCPS power supply missing batteries, DSM synch module
Only one phone line connected



International Center:

Two story building.
Building partially sprinkled – connected to domestic water supply.
Manual pull stations at all exits.
Non compliant NAC coverage – 1 centralized horn strobe per floor.
No smoke detection above panel.
Radionics 7212G control panel, annunciator at panel,
D192C bell module, (2) D125B module
Alarm-Saf power supply, DSM synch module
No phone lines connected
Stand alone smoke detectors for elevator recall – exterior elevator
No exterior sprinkler bell.
Panel is powered down.



Old Library Building:

Two story building, wood frame construction.
Building not sprinkled.
Two manual pull stations centralized on upper floor only.
Non compliant NAC coverage - two horn strobes centralized on upper floor only.
FACP locked in armory downstairs. No access.



Social Sciences:

Two story building, concrete construction.
Building partially sprinkled – connected to domestic water supply.
Manual pull stations at all exits.
Non compliant NAC coverage – 1 centralized horn strobe per floor.
No smoke detection above panel.
Radionics 7212G control panel, annunciator at panel, D192C bell module, D125B module
FCPS power supply, DSM synch module
No phone lines connected
No smoke detectors for elevator recall – exterior elevator.
No exterior sprinkler bell.
Panel located above door. – should be relocated.



Lecture Forum:

Two story building, concrete construction.
Building partially sprinkled – connected to domestic water supply.
Water flow switch monitored, missing tamper switch.
Manual pull stations at 4 of 13 exits.
Non compliant NAC coverage – 1 centralized horn strobe in each lecture room, 15' up the wall.
No smoke detection above panel.
Radionics 7212G control panel, annunciator at panel, D192C bell module, D125B module
Alarm-Saf power supply, DSM synch module
Only one telephone line connected



Physical Sciences:

Two story building, concrete construction.
Building partially sprinkled – connected to domestic water supply.
Manual pull stations at all exits.
Non compliant NAC coverage – 1 centralized horn strobe per floor.
No smoke detection above panel.
Radionics 7212G control panel, annunciator at panel, D192C bell module, D125B module
FCPS power supply, DSM synch module
No phone lines connected
No smoke detectors for elevator recall – exterior elevator



No exterior sprinkler bell.

Life Sciences:

Two story building, concrete construction.
Building partially sprinkled – connected to domestic water supply.
Manual pull stations at all exits.
Non compliant NAC coverage – 1 centralized horn strobe per floor.
No smoke detection above panel.
Radionics 7212G control panel, annunciator at panel,
D192C bell module, D125B module
FCPS power supply, DSM synch module
No phone lines connected
No smoke detectors for elevator recall – exterior elevator
No exterior sprinkler bell.



Library Technology Center:

Three floors, wood frame construction.
Building sprinkled.
Manual pull stations at all exits.
Compliant NAC coverage.
Smoke detection above panel.
Siemens MXL control panel. All addressable system.
Annunciator at entry.
Monitored.



Family & Consumer Science:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at all exits.
Non compliant NAC coverage – 4 interior H/S, 1 exterior.
Ansul system needs to be monitored.
Smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, (1) D125B module
FCPS power supply missing batteries, DSM synch module
No phone lines connected



Business & Computer Science:

Two story building, concrete construction.
Building not sprinkled.
Manual pull stations on exterior corridors.
Smoke detection in each room, heat detectors in restrooms.
Non compliant NAC coverage throughout – exterior NAC appliances.
Smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, D125B module
FCPS power supply, (2) DSM synch module
No phone lines connected.
No elevator recall on exterior elevator.



Business & Humanities

Single story building, concrete construction.
Building not sprinkled.
Manual pull stations at exterior corridors.
Non compliant NAC coverage throughout – exterior NAC appliances.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
No phone lines connected.



Student Services:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at 2 interior locations.
Non compliant NAC coverage throughout – only 1 interior horn strobe, 1 exterior h/s.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, (1) D125B module
FCPS power supply, DSM synch module
No phone lines connected.



Humanities:

Two story building, concrete construction.
Building not sprinkled.
Manual pull stations on exterior corridors.
Non compliant NAC coverage throughout – exterior horns.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, D192C bell module, D125B module
FCPS power supply, DSM synch module
Two phone lines connected.
No elevator recall on exterior elevator.



Support Service & Children's Center:

Single story building, wood frame construction.
Building not sprinkled.
Manual pull stations at 2 of 11 exits.
Non compliant NAC coverage throughout – only 1 interior horn strobe, strobes in restrooms.
No smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, D192C bell module, D125B module
Only 1 phone line connected.

Childrens Modular (Toddlers Ctr):

Modular building.
Building not sprinkled.
Manual pull stations at both exits.
Non - compliant NAC coverage – needs strobes in restrooms.
Smoke detection above panel.
Radionics 7212G control panel, Annunciator at panel, 7ah battery, D192C bell module, (1) D125B module
Alarm-Saf power supply
No phone lines connected.

Recommendations:

General Summary

From a code standpoint, most of the buildings on campus are classified as B occupancies. If the B occupancies have less than 100 sprinkler heads, they are not required to have a fire alarm system. However, since most of the buildings already have manual pull stations and horns on each floor, and the A occupancy buildings have manual evacuation systems, ALL buildings should be upgraded to have a code compliant fire alarm system and provide the same level of protection in each building.

Another aspect to consider is that most of the systems are conventional. Although that is code compliant, it does not offer the greater level of detail that the fire department is accustomed to with other systems throughout the city. Addressable systems offer greater flexibility, increased longevity and quicker response to the actual fire origin.

Local and centralized reporting is another concern. Since most of the building's fire alarm systems are either powered down or have no phone lines, it is virtually impossible for responding personnel to respond to emergency signals without considerable delay. The lack of offsite reporting will also delay response times from emergency personnel in the event of an actual fire. Upgrading the buildings and providing uniform protection can only aid in the protection of life, property and the mission of the College. Installation of a centralized radio reporting system will keep campus police and facilities personnel better informed and reduce recurring costs of phone line charges since radio transceivers can be connected to each fire alarm control panel eliminating the need for costly phone lines. In turn, those signals would report to a centralized receiver that can be connected to one centralized DACT, sending zoned signals out to the central station.

All building should be provided with notification appliances throughout.

Replace all existing "zip" wire with code compliant wire or cable.

Provide conduit or wiremold to protect all existing and new cable supporting old and new devices.

Estimated Construction Cost

Building Name	Approx. Square ft.	Material Cost	Labor Cost	Material & Labor
Dance & Adaptive PE	9,000	-	-	-
Plant Services	32,000	-	-	-
Automotive technology	3,600	-	-	-
PE Gym	14,000	\$9,800.00	\$32,760.00	\$42,560.00
Pool Lockers and Showers	5,000	\$3,500.00	\$9,750.00	\$13,250.00
Theater	12,500	\$8,750.00	\$29,250.00	\$38,000.00
College Center Bookstore	8,800	\$6,160.00	\$17,160.00	\$23,320.00
Administration	7,300	\$5,110.00	\$9,490.00	\$14,600.00
Music Orchestral	7,000	\$4,900.00	\$9,100.00	\$14,000.00
Music Practice	3,200	\$2,240.00	\$4,160.00	\$6,400.00
Music choral	5,200	\$3,640.00	\$6,760.00	\$10,400.00
Art Ceramics	8,100	\$5,670.00	\$10,530.00	\$16,200.00
Art Gallery	1,100	\$770.00	\$1,430.00	\$2,200.00
Art Studio	4,800	\$3,360.00	\$6,240.00	\$9,600.00
Drafting - Graphic Arts	4,500	\$3,150.00	\$5,850.00	\$9,000.00
Nursing	7,400	\$5,180.00	\$9,620.00	\$14,800.00
Art Dimensional	11,000	\$7,700.00	\$14,300.00	\$22,000.00
International Center	14,200	\$9,940.00	\$18,460.00	\$28,400.00
Old Library	12,500	\$8,750.00	\$16,250.00	\$25,000.00
Social Sciences	15,000	\$10,500.00	\$29,250.00	\$39,750.00
Lecture Forum	7,500	\$5,250.00	\$17,550.00	\$22,800.00
Physical Sciences	37,000	\$25,900.00	\$67,340.00	\$93,240.00
Life Sciences	13,800	\$9,660.00	\$26,910.00	\$36,570.00
Library and Technology Center	50,000	-	-	-
Family and Consumer Science	3,700	\$2,590.00	\$4,810.00	\$7,400.00
Business and Computer Science	12,400	\$8,680.00	\$24,180.00	\$32,860.00
Business and Humanities	8,650	\$6,055.00	\$11,245.00	\$17,300.00
Student Services	6,500	\$4,550.00	\$8,450.00	\$13,000.00
Support Services and Children's center	7,000	\$4,900.00	\$9,100.00	\$14,000.00
Children's Modular	1,554	\$1,087.00	\$2,020.00	\$3,107.00
Humanities	25,000	\$17,500.00	\$48,750.00	\$66,250.00
Centralized Radio Monitoring System				\$75,000.00
Total for work identified above	\$359,304.00	\$185,292.00	\$450,715.00	\$711,007.00

Total construction cost for all work identified above	\$ 711,007.00
Contingency, 10%	\$ 71,000.00
Soft Cost	\$ 218,960.00
TOTAL	\$ 1,000,967.00

If you have any questions concerning the information contained in this document, please don't hesitate to call. Alfa Tech Cambridge Group would like to thank you for using our professional services for this very important project. We look forward to providing our services to you in the future.

Sincerely,

Reza Zare
Partner