Post Occupancy Technical Review (POTR)

U.S. Army Corps of Engineers
Engineering and Support Center, Huntsville

Replica SAC

Building 5037
Fort Bliss, TX

POTR – Phase 1
Project No 74516

DATE: December 18, 2013

TABLE OF CONTENTS

CHAPTER 1 - GENERAL

1-1 Purpose

The intent of this document is to present the findings of the Phase I Post Occupancy Technical Review (POTR) performed on Building 5037 (Replica SAC) at Fort Bliss, TX. The POTR was performed by the HNC team on December 18, 2013.

1-2 Facility Description

Building 5037 is a standard medium sized (150-180 children), School Age Center (SAC) for ages 6 to 10 years that was made available for users in March 2012. The facility is excess space at this time, and is not being used for standard School Age services. It is used by SKIES and other groups as needed. Ms. Ann Ogle is the director for the Replica CDC, and is also considered the director for this facility.

The users are overall pleased with the facility.

1-3 POTR Team Members

The following is a list of HNC's team members that participated in the POTR:

- Jay Clark – Architectural
- Jim Allison – Mechanical
- Jackie White - Electrical

1-4 Meeting Contacts

The roster is attached in Appendix A

1-5 Contractor Feedback

The design-build contractor for this project was Megan Construction. The Installation representatives stated that they were a great bunch to work with. They were very conscientious and very accommodating. They always responded quickly to warranty issues. The only challenge during the construction/warranty time frame was the overload on the COE/DPW, which lead to the CYSS representatives contacting Megan directly for assistance.

1-6 Contract Modifications

The following is a summary of the major contract modifications issued during construction.

- Added a roll-up security door to corridor from Multi-Purpose Room to the restrooms and outside in order to allow outdoor events to utilize the restrooms.

- Added screens to the airport style entrances to the restrooms to eliminate line of sight issues.
- Raised the water cooler. RFP height was too low (was based on CDC height). The height needs to reflect the needs of school age children. Need the EWC at 38 – 43".
- Added cooling unit for video room.

1-7 G-9 Pre-Occupancy report

The G-9 Pre-Occupancy report is included in Appendix B.

1-8 Construction Issues

- There is an issue with the air conditioning that is still being worked.
- MNS kept tripping, but that has been corrected.
- The condensation gutter from one of the units above the ceiling overflowed and left a puddle in the break room.
- There are issues with the video system. Some rooms are out because the signal is not getting back to the DVR. They are trying to get this resolved, and it may mean running new cable between the DVR and the cameras. In addition, the system is starting to record for less than 30 days. Recordings from the cameras are to be kept for 30 days per regulation. Some are only holding for 9 – 14 days. This issue may be Army wide and seems to stem from a software upgrade.
- There were 2 broken floor tiles at the entrance.

- About half a dozen of the exterior lights are out.
- Ice maker needs repair.
- The veneer on some of the doors is very odd. The overall appearance of the doors varies greatly.



1-9 Overall Satisfaction

- Overall, everyone is satisfied with the facility.

CHAPTER 2 - ARCHITECTURAL

2-1 General Discussion

- There are adequate electrical and data outlets at the reception counter. In addition, a duress alarm has been provided.

- A window was provided on both walls of the Director's Office. They liked that, and stated that the window facing the reception desk was the better of the 2 windows to have.

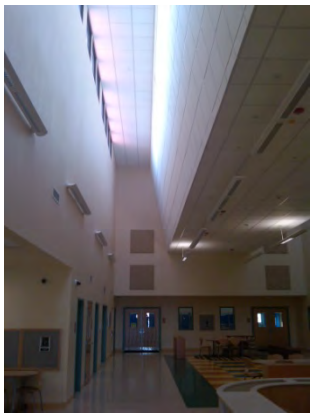
- They have a door connecting the Computer Lab with the Homework Room. They stated this is a good idea.

- Doors that do not lead into fenced areas are alarmed.

- The laundry room has quarry tile floor and gyp. bd. ceiling.

- The fine arts room has a wood floor system.

- The atrium has clerestories, but they are higher than normal due to the roof slope that was most likely driven by Architectural design requirements since the facility is located near the historic area of post. The nearly vertical walls of the drop down over the atrium were done with acoustical ceiling tiles in the standard grid. This is not the ideal solution, and I can see these tiles being knocked out over time.



- The Multi-Purpose Room has a poured in place athletic flooring, exposed structure, and a few acoustical panels on the walls.

- The Kitchen has full height ceramic tile walls. Stainless steel counters were not provided along the wall with the pass-throughs. The pass-throughs have been provided with single hung windows.

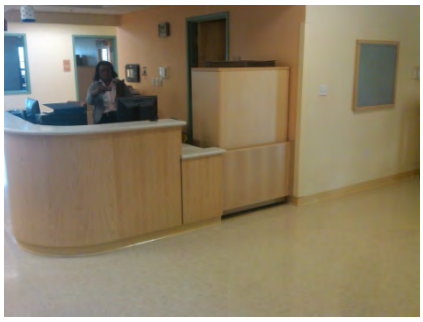
- The waiting area is surrounded by low walls with planters and display case. This works much better than the taller half-walls at some SAC.

2-2 Feedback/Lessons Learned/Standard Design Impacts

- Do not remove the Training Room closet to use as an electrical room. The Training Room needs storage!

- They feel the reception desk is way too small. There is not enough space for the mandatory files and records.

- Do not provide a gate from the reception desk into the atrium. It reduces counter space too much, and also makes it too inviting for children to come behind the desk.



- Video cameras must now be able to monitor the entrances to the staff restrooms. This needs to be updated in the standards and criteria ASAP.

- There are line of sight issues with all of the children restrooms. The 2 remote restrooms are much better (picture below left). The primary restrooms had to have screens added (picture below right, showing the screen). This needs to be resolved in the standard designs.

- The small storage room in the Multi-Purpose Room has a door to the exterior. This door is unnecessary, and eliminates a lot of potential storage area. Either remove the door, or relocate both doors into this space so that racks and other storage can happen on both sides of the room.

- Need to verify the required height for the EWC in this facility. In addition, need to clarify where ABA dual units are required. In this facility, only the EWC in the corridor from the Multi-Purpose Room to the exterior has the ABA dual units.

CHAPTER 3 - MECHANICAL

3-1 General Discussion

HVAC

- HVAC system consists of an air-cooled chiller, a gas-fired boiler, two built-up air handling units serving variable air volume terminal boxes and one constant volume air handling unit. Two communications rooms are served by split system direct expansion air-conditioning units.

- The mechanical equipment room is adequately sized to provide required maintenance access clearances to the equipment. All equipment was operational and appeared to be running properly.

- The air-cooled cooling equipment is located in an equipment enclosure located approximately 50 feet from the building.

- The facility is provided a high efficiency condensing boiler for building heating. A variable speed heating hot water pumping system is also provided to reduce pumping energy.

- The facility is provided variable speed chilled water pumps to reduce pumping energy.

- There is an air-to-air energy recovery system in the mechanical room used to recover energy from air being exhausted from the building.

- The two indoor air-conditioning units serving the communication and video equipment rooms are wall-mounted and are easy to access for filter changes and routine maintenance.

- Each room is typically cooled and heated by a variable air volume terminal box controlled by a wall-mounted thermostat.

- Overall, the HVAC system is maintaining comfort conditions in the building according to the occupants. However, one issue identified by the users was the air conditioning keeps tripping out during high load conditions. Another issue identified by the users was the limited ability to make scheduling and temperature set point changes to the Building Automation System.

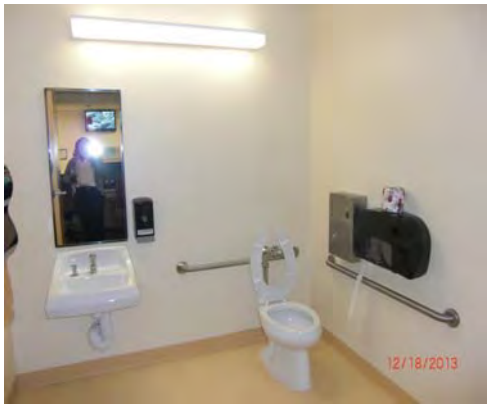
- The only other issue identified by the users was with the maintenance of the HVAC equipment. The maintenance service provider has to be reminded constantly to provide basic service and it appears the provider is always behind schedule.

- Metering was installed but it was unclear by the users whether this information is being actively monitored.

- The building users have noticed sewer odors primarily coming from the front of the building and, possibly, from the Mechanical Room. It is unclear where these odors originate whether it may be from the wastewater or storm water system.

PLUMBING

- The toilet automatic flush does not work when the seat is in the up position.



- A water softener is used by the facility due to the high mineral content of the potable water provided by

the water utility.

- Domestic hot water is provided by a high efficiency gas-fired condensing water heater.

FIRE PROTECTION

- The building is protected by a wet pipe sprinkler system using a 500 GPM fire pump. No fire protection issues were identified by the user.

3-2 Lessons Learned/ Standard Design Impacts

- Direct expansion refrigeration equipment such as the air-cooled condensing units located approximately 50 feet from the building should always be installed next to the building as close as possible to the indoor unit they serve. Refrigerant lines should not be run below grade or for long distances because it can reduce the service life of the equipment significantly and reduce the energy efficiency. This should be coordinated by the designer with ATFP requirements and playground location.

CHAPTER 4 - ELECTRICAL

4-1 General Discussion

- They provided the same type of indirect/direct light fixture in the Computer Lab as in the rest of the facility. This is a better choice than the parabolic lenses provided in the Computer Labs in most SAC.

- The metering logs of the facility (peak demand, monthly usage) are not recorded. This is a small building compared to the other facilities on the installation. The energy usage is minimal compared to other buildings, therefore it is not tracked.

- The equipment is tied into an Energy Management Control System (EMCS).

- There is a Service Entrance Panel metering at the site

- There is a water cover plate and Cathodic Protection Test well in the basketball court.



- The location of the exterior cameras does not give a good view of the entire playground area. There are some blind spots.


- The video system is not installed correctly. The camera signal from the Computer Lab is not going back to the video room. The cameras in the Computer Lab are not showing up on the DVR.


- The video recorder records for less than 30 days.

- The front of the restrooms and hallways are not picked up on the camera. The camera should face the front of the restrooms.

- The video surveillance does not cover the parking lot.

- The exterior Electrical Room wall has water stains.

4-2 Lessons Learned/Standard Design Impacts

- The SAC needs more cameras.

CHAPTER 5 - MISCELLANEOUS

5-1 CIVIL/SITE

- Playgrounds include a soccer field of natural turf, a paved area, shade structure, a play element, and swings.




- Water drains into the basketball court.

APPENDIX A - ROSTER

Post Occupancy Technical Review (POTR) - Roster

Installation: FT. BLISS	PN: 64649	Bldg: 5037

Name: CARLOS COVARRUBIAS	Organization: FMWR ENG.
Phone: (915) 568 7283	Email: CARLOS.COVARRUBIASLOPEZ.NAF@MAIL.MIL
Professional Responsibility: ENG TECH	

Name: Merci L. Berrios	Organization: DPW
Phone: (915) 569-8741	Email: merci.l.berrios.civ@mail.mil
Professional Responsibility: Elec Eng.	

Name: George N. Schmidt	Organization: CYSS / FMWR
Phone: (915) 568-3630	Email: george.w.schmidt.nat@mail.mil
Professional Responsibility: FTS	

Name: James Kingwell	Organization: CYSS
Phone: (915) 568-0834	Email: James.r.Kingwell.civ@mail.mil
Professional Responsibility: Youth Administrator	

Name: Jackie White	Organization: CEHNC ED-ME-E
Phone: (256) 895-1742	Email: jackie.white@usace.army.mil
Professional Responsibility: Electrical Engineer	

Name: Jim Allison	Organization: CEHNC ED-ME-M
Phone: (256) 895-5749	Email: james.e.allison@usace.army.mil
Professional Responsibility:	

Name: Reenada J. Perez	Organization: Replica CDC CYSS
Phone: (915) 569-7199	Email: reenada.j.perez@us.army.mil
Professional Responsibility: Bldg Assistant Director	

Jay Clark CEHNC COS Architect
256 8951673 james.t.clark@usace.army.mil

APPENDIX B – G-9 PRE-OCCUPANCY REPORT

Preoccupancy Inspection
Child, Youth and School Services Facility
School Age Center
Ft Bliss, TX
PN 64649, (Replica) Bldg 5037 Sheridan RD
21-23 February 2012

On 21-23 February, the IMCOM G-9 CYSS Inspection Team conducted a pre-occupancy inspection of the newly constructed, mediurn 150-180 capacity School Age Center PN64649, Child, Youth and School Services (CYSS) facility, Bldg 5037 Sheridan Rd, Ft Bliss, TX. The inspection was performed by Sheila Glaspie, Program Specialist; James Derby, Fire Protection Specialist; Terry Williams, Facilities Specialist and Ken Hilton, Industrial Hygiene Technician, US Army Public Health Command Region-North.

The specific items identified in **bold must** be resolved prior to beneficial occupancy and recommendation for DoD certification.

Requests for information/assistance or status of corrective actions should be coordinated through Child, Youth and School Services, Central Region, Tracy Roysdon. For maximum visibility and coordination, please cc the IMCOM G-9 pre-occupancy team listed above in all correspondence.

Note: At the time of the IMCOM G-9 pre-occupancy inspection, the drop down curtain in the Multi-Purpose room was on order and had not been installed

Note: At the time of the IMCOM G-9 pre-occupancy inspection, the ballet mirrors were on order and had not been installed.

Note: At the time of the IMCOM G-9 pre-occupancy inspection, privacy panels to block visibility into the Boys and Girls toilets were on order and had not been installed.

Note: At the time of the IMCOM G-9 pre-occupancy inspection, door self closing devices were on order and had not been installed.

Facility, Health, Safety, and Program Items:

1. **Provide documentation that glass in all windows, viewing panels in walls, and doors is safety glass and that the exterior window and door glazing is AT/FP compliant. This documentation must be provided to CYSS and be kept at the facility.**

2. **Ensure the water temperature in the specialty areas (laundry, janitor and kitchen) is minimum 140 degree Fahrenheit per the General Requirements of Room by Room Description, page E-14.**

3. **Reduce harborage and entry of pests within the Kitchen by sealing around the walk-in cooler, the joint between the quarry tile base and the cabinets, and on the underside**

of the counter at the end adjacent to the 2 compartment sink per DODI 4150.07, Pest Management Program and Technical Guide (TG) No. 29.

4. Provide a copy of the written signed and stamped HVAC Test and Balance Report (TAB) to Kenneth.Hilton@us.army.mil.

5. Provide documentation that the mirrors in all Toilet Rooms, Multi-Purpose Room , and Performing Arts Room #123 are safety glass as required in the Army Room-by-Room Descriptions, E-35, 36, 37, 38 and 44.

6. The existing airport style entry into the Boys Toilet Room #18 and Girls Toilet Room #20 do not satisfactorily block visibility into the toilet rooms. This does not comply with the requirements of the Room by Room Descriptions, pages E 38 and E 36, which states "Provide airport style entry to block visibility into room, but to allow staff to monitor by listening". The Facilities Specialist of the G-9 Inspection Team recommends adding a toilet partition in each room to improve the screening effect.

7. Raise the electric water cooler in the Main Atrium #4 and the higher of the two electric water coolers in the Multi-Purpose Corridor #2 to be between 38"-43" as required in ICC/ANSI A-117.1, Section 602.4. Refer also to the by Room Descriptions, pages E 18.

8. Provide an ADA "Van Accessible" sign on the sign pole for one of the parking spaces adjacent to the van access aisle, as required in ICC/ANSI A-117.1, Section 502.7.

9. Ensure access to the HVAC units in the outside enclosure is secured.

10. At the time of the IMCOM G-9 pre-occupancy inspection, the drop down curtain in the Multi-Purpose room was on order and had not been installed. After installation ensure the curtain shall be operated with a spring loaded key switch requiring the person operating it to maintain a constant pressure on the switch until it is raised or lowered to position.

11. Provide a separate HVAC equipment system to offset the heat generated by the VSS equipment in the Video Monitor room #13.

12. Provide a local light switch that is accessible to the CYSS staff on the exterior of the Main Communication Room #36. This room currently has a sensored light and vision panel in the door. As a child abuse prevention measure, the light in this room must be on a switch that is not sensored, so staff can turn the light on and leave it on when the facility is occupied.

13. Provide locksets on the Multipurpose Room Boys and Girls Toilets 26 A and B that requires a key entry. Doors will have the ability to be opened from the inside when locked. This is a child abuse prevention measure.

14. Completely remove burrs and sharps slivers on the bottom window seals.

15. Adjust all exterior exit doors so that the doors close in at least 5 seconds from a 90 degree position in compliance with ICC/ANSI A: 117.1 section 404.2.7.

16. Provide adequate electrical outlets along the counter top in the commercial grade kitchen designed for use by staff to meet the food service needs of school age children in accordance with USDA and Preventive Medicine regulations. Also refer to the requirements of the NFPA 70, Sections 210.50B and 210.8B. Currently, there are no outlets in this area.

17. Ensure the hot water temperature in the Demo Kitchen sink and the Arts and Science Room does not exceed 110 degree Fahrenheit.

Fire Protection Items:

1. Provide flush type panic hardware on all exterior exit doors IAW UFC 4-740-06 and the General Requirements of the Room by Room Description, page E-13.

2. Provide door self closing devices on all interior corridor doors, including the Kitchen and the Electrical Room #40 located within the Training Room page E-13.

3. Move the existing smoke detector 6 feet toward the East to the location indicated by the blue tape on the ceiling in the Boys Toilet Room #18 and the Girls Toilet Room # 20, to meet NFPA 72, Spacing Requirements.

4. Add a smoke detector on the upper portion of the ceiling in the Main Atrium #4 IAW NFPA 72, Spacing Requirements, paragraph 5.7.3.

5. Remove manual hold open device on lower portion of fire rated interior door of Storage Room #27 and on the Kitchen #15 entry door.

Outdoor Activity Area/Playground Items:

1. Fencing and gates - All ties and bolt threads are to be positioned so that any sharp points are directed to the outside of the playground. Where fence fabric bolt threads and nuts are required to face a playground (generally between play areas), bolts will be trimmed to two exposed threads and sharp edges will be dressed with a file. Additionally, all wire fasteners used to secure the fence fabric to piping (poles, etc.), where the cut ends face an outdoor activity area, will be flush cut to reduce the introduction of knife edges on the ends of the wires.

2. Provide documentation that all playground installations are in accordance with the Consumer Products Safety Commission (CPSC) and all applicable American Society for Testing and Materials (ASTM) standards, that the playground meets these standards and has been inspected by a Certified Playground Safety Inspector (CPSI) prior to acceptance by the Government as required in the Room by Room

Description. Provide the CPSI certificate. Ensure the building number, physical location and signature are included. A copy is to be maintained by CYS Services staff at the facility per the RFP, page E-13.

General Items for Corrective Action:

1. Documentation must be provided to CYSS and be kept at the facility verifying that the multipurpose room floor meets the requirements to withstand roller-blading/skating.

2. Documentation must be provided to CYSS and be kept at the facility verifying that the carpeting meets the requirement for anti-static and meets the fire resistive criteria.

3. Documentation must be provided to CYSS and be kept at the facility verifying that the ballet mirrors are unbreakable.

4. Reduce harborage and entry of pests inside the facility by caulking and sealing around all escutcheons, wall and floor penetrations where sinks are mounted to the wall and floor, around all types of plumbing, base board molding, mirrors, and where shelves and cabinets meet walls and door frames and any cracks on or near food preparation/ food storage surfaces. DODI 4150.07, Pest Management Program and Technical Guide (TG) No. 29.

5. Replace damaged ceiling tiles throughout the facility.

6. Remove the coat hooks on the ADA stalls to eliminate potential protrusion hazard. Provide a bumper on the wall behind these doors to protect the ceramic tile from damage.

7. Adjust the weather stripping on all exterior pair of doors to seal tightly.

Room By Room Items:

Computer Lab #34
Replace the existing lock set on the door between the Computer Lab and Homework Center with a passage latch.
Replace the door stop on the floor behind the door between the Computer Lab and Homework Center with a door limiter to allow the door to open without hitting the window.

Girls Toilet Room # 21
Seal the light fixture over lavatory.
Grout the ceramic floor tiles at the drain.
Provide corner guards on the outside corners of the wing wall.

Boys Toilet Room #19
Grout the ceramic floor tiles at the drain.
Provide corner guards on the outside corners of the wing wall.

Main Communication Room #36
Provide cove base as required in the Room by Room Description page E-36 of the RFP.

East Vestibule
Provide a cover for the missing Cabinet Heater #2.

Performing Arts #30
Caulk gap at the exterior door frame and threshold.

Arts and Science Activity Room #29
Provide the plaster trap under the sink is as required in the Room by Room Descriptions, page E 47.
Seal the joint between the cove base on the toe kick and the base cabinetry.
Seal the counter and side splash.

Multipurpose Room
Provide protective cages for all exit lights and intercom devices per UFC 4-740-06.
Provide documentation that the light fixtures comply with the IESNA recommendations for basketball /sports lighting, class 3. Room by room descriptions page E-42
Reverse the installation of 1 light switch as marked.
Seal around the camera junction box openings.
Relocate both fire extinguishers to opposite corners as marked with blue tape and ease all edges of cabinet.
The Room by Room Description for this space requires recessed volleyball stanchions with flush mounted covers.

Laundry Room
Close the gap at the top of the wall cabinets between the cabinets and the wall.
Caulk the joint between the top of the quarry tile base and the cabinets.
Ensure the water connection box is fire rated.

Storage Room #27
If shelving is provided ensure red line is painted 18 inches down from fire department sprinkler head.
Verify HVAC requirements for this space are being met based on the fact there are no return air ducts.

Multipurpose Storage #28
Provide a keeper hole for inactive leaf of interior doors.
Patch holes in concrete floor.

Multipurpose Room Boys and Girls Toilets #26A and B
Grout the ceramic floor tiles at the drain.

Video Monitor Room #13
Close the open j-boxes above the ceiling.

Provide missing escutcheon for the sprinkler head.

Janitor Closet #22
Remove manual hold open device on lower portion of entry door.
Provide red line above shelving.

Boys Toilet Room #18 and Girls Toilet Room #20
Clean trash from furr down above lavatories.
Provide corner guards on the outside corners of the wing walls.

Staff Lounge #12
Complete the installation of the red line in the storage closet.
Seal joint at lockers and cove base.

Reception Counter
Provide the openings and grommets in the upper counter surfaces per the Room by Room Description page E-24.
Provide an opening in the counter brace to allow access from the electrical and data outlets to the openings and grommets in the counter as marked with blue tape.
Provide an under counter pencil drawer per sheet A-107 and the Room by Room Description page E-24 at the location identified by the blue tape.

Kitchen #15
Provide stainless steel protective guards on the exposed corners in the Kitchen per Room-by-Room Descriptions, page E-31.
Prepare the leak at the hand washing sink.
Secure the storage racks across from the dishwasher. Provide a red line above these racks.

NOTE: The Dry Storage room is smaller than required per the Room by Room Description page E-5. This area also contains the electrical panel which will limit use of the wall space.

Demonstration Kitchen
Ensure the double doors in this area close properly.

Atriums
Seal above the cove base at the lockers.
Replace damaged floor tiles.
Provide hooks in the 11 lockers that do not have installed hooks.

Gathering Area
Provide locks on the slide doors of the display cabinets per the Room by Room Description page E-19. Provide documentation that this glass is unbreakable.
Complete the caulking under the lip of the planter.

The Finish Schedule for this area calls for carpeting, but the Room by Room Description is not specific. The IMCOM G-9 team recommends the local CYSS staff have the final determination if the VCT currently installed is acceptable.

Exterior

Completely seal around the ADA push button at the front entry to keep dust, sand and moisture from interfering with proper operation.
Provide a lint screen at the dryer vent exhaust outlet.
Complete the Utility Maintenance Control System (UMCS) wiring (by Ft Bliss DPW).
Identify and correct the cause of the sewer gas smell at the NE corner of the front of the building.

Mechanical Room #38

Identify and repair the leak in the domestic water system.
Extend the condensation drain lines of the domestic cold water system so they drain properly into the floor sink.

END OF REPORT.