

MEMORANDUM FOR

Army Chaplaincy (OCCH IRML)
Army HQ (IMA)
Army (USAG)
Kansas City District (CENWK-PM)
Omaha District (CENWO-ED)

SUBJECT: Fort Hood, TX, Chapel Complex and Religious Education Facility (PN 25033), End State Technical Review Report, construction completed 2011.

PART ONE, ASD FUNCTIONAL BASIS EVALUATION SUMMARY

This portion of the Memorandum will address the specific evaluations made as they relate to the Army Standard Design (ASD) for this facility type, discussed in the order observed. Because any completed facility also includes characteristics and features not part of the ASD requirements, not all of the potential Lesson's Learned have application to the ASD. The primary focus of this investigation is to improve the ASD and to do so in a way that reflects upon the underlying assumptions and theories (design concepts) upon which the ASD was developed. "PART TWO" of the Memorandum will include detail on the actual observations and take up the various issues unique to this facility as well as those applicable to the ASD. To assist perusal of the document the primary functional space type being discussed has been inserted (in parentheses) in between the appropriate groups of comments.

In general, all user participants agreed that the completed facility was excellent (spectacular, wonderful, beautiful) in so many ways that it has attracted almost more usage than it can quite support. The users feel generally empowered to accomplish the Chaplaincy mission in ways that were just not possible before. This has been of tremendous value to the congregations being supported and the entire military community and Army mission.

Weaknesses of the facility focus primarily on aspects where the extremely high usage have overtaken the estimated needs (the expectations that led to the ASD programming), have generated usages outside of the ASD program, or have fallen into areas where cost/benefit decisions deliberately limited capacity. There were also a (very) small number of weaknesses that were rooted in all of the aspects of what puts a project together (contract, design, construction), as well.

Observations made that relate directly to the ASD requirements and the design concepts selected for use by the Office of the Chief of Chaplains (OCCH) are as follows:

1.1. The detailing of the wood trim for the Worship Center raised platform on this facility is beautiful, but usage has revealed that several edges should have better protection against typical scrapes and scratches. Simple usage of the raised platform has resulted in numerous visible blemishes. **While this is an age-old problem that can resist being solved in spite of the greatest care, it has not been specifically addressed (warned about) in the ASD text and adding appropriate verbiage could improve the problem for most facilities. (This comment is the same as 2.5)**

1.2. The front edge of the raised platform for this facility did not end up including an intermediate step for ease of access and this is a small but persistent problem for users. **The ASD does show such a step but having one has not been specifically addressed (warned about) in the ASD text. Adding appropriate verbiage could improve the problem for most facilities. (This comment is the same as 2.6)**

1.3. While Roman Catholic (faith group) supporting “Stations of the Cross” devices are often placed on the Worship Center walls, and their design may vary from location to location, some reinforcement accommodation inside the walls should be provided for them in the original construction. **The ASD text does not describe this requirement. Adding appropriate verbiage could improve the problem for most facilities. (This comment is the same as 2.7)**

1.4. While this facility includes a pre-manufactured baptismal pool, the unit does exhibit some troublesome characteristics. No handrail has been included to assist people in getting in or out. The water level is governed totally by presets in the controls and the placement of drains/floats; these almost require that water will spill over the front edge when the unit is being used. When fully loaded, the unit pulls away from the adjacent materials/surfaces, in spite of being heavily reinforced. Some of these weaknesses may be common in the industry or may be unique to this make and model. **Additional research and adding additional appropriate verbiage to the ASD text could improve the problem for most facilities. (This comment is the same as 2.16)**

1.5. There was a modification to the contract to request that the toddler toilet door be revised to match CDC criteria. **While there are differences of opinion about whether this is necessary, it is an easy change to include in the ASD and will be incorporated. (This comment is the same as 2.22)**

1.6. This facility was always intended to support a full range of Chaplaincy programs AND military community activities. However, an unintended consequence of having such a beautiful and full featured facility is that the military community is using it far more often and in far larger numbers than even envisioned in its design. While the Unit Ministry Team has been able to increase their managing tools to respond to that, some of the “fixed” features cannot keep up. Toilet Rooms in particular are being overtaxed in usage and in cleaning needs. Some finishes are wearing too quickly. **While the ASD was careful to program/include higher fixture counts than what the codes would indicate, it would appear that a larger “cushion” would be advisable. Possibly a flexible toilet room (in addition to having a men’s and women’s in each grouping) might allow for widely varying loads of users. The CoS will work with the OCCH to evaluate this. (This comment is the same as 2.24)**

1.7. While going into all the history and explanation is not appropriate, the ASD upon which this facility is based requires carpeting in the primary corridors. During the review of the design for this specific facility, the CoS did (raise concerns about the carpet color being selected and) encourage a color and pattern that would better hide wear and soiling (at two separate times). For many good reasons, Garrison Project Delivery Team (PDT) members are allowed some (over-ruling) discretion regarding color and finish selection. For this facility, the result is that the actual wear-and-tear-abilities exhibited by facility users have over-powered the carpeting’s ability to sustain it. Carpet wear and soiling have become a serious problem. The locations that have been finished in porcelain tile are doing well and have proven to be aesthetically “equal” to the wear-and-tear of actual use. **The CoS will attempt to better persuade other PDT members on future projects. In addition, the Office of the Chief of Chaplains (OCCH) has authorized that the ASD requirements be modified to finish corridor floors in porcelain tile as the “default”. (This comment is the same as 2.35)**

IN SUMMARY: In general, the results of this ESTR demonstrate that the underlying concepts behind the 2004 ASD were sound and effective. Each of the principle functional areas and features (keeping in mind that there were deliberate compromises made to target specific facility size and cost) are supporting an excellent level of successful ministry. The completed facility appears to represent a very-close-to-optimum balance between aesthetics, function, cost, and maintainability. The completed facility also appears to represent a high-value long-term asset for the military community, the Garrison, the OCCH, and the Army.

PART TWO, ALL OBSERVATIONS AND DISCUSSIONS

This portion of the Memorandum will address each observation discussed in the order observed. Because any completed facility also includes characteristics and features not part of the ASD requirements, not all of the potential Lesson's Learned have application to the ASD. Some are project specific and related to project history, unique points-of-view, unique features, or unique functions that needed to be added to the general facility mission. This portion of the report allows all such observations and discussions to be recorded and applied to future projects as appropriate. The following observations and discussions were identified:

(Administrative Spaces)

2.1. The current ASD was developed at a time when higher authorities had extremely strong feelings against storage and office space being provided. Fort Hood staff already recognizes that they have too little office and storage space. This issue is partly due to the Garrison excluding them from their previous office space "because they had a new building" so they have been forced to fit their entire Garrison-based department (not just staff assigned to the building) inside the facility, when that was not the intent of the project. As a result, more classrooms are being utilized as office space than ever envisioned by the ASD. **New ASD planning is taking place in an atmosphere that is not so hostile to storage and offices and more appropriate amounts of space are being included. Unfortunately, there is no way to protect against decisions that Garrison authorities may choose to make after a project is completed.**

2.2. Changes forced on the local chaplains by the Garrison have led to numerous classroom spaces being used for office space. The ASD allows for that, but in the manner this occurred, no real coordination was possible and many of the accommodations are still occurring piecemeal. **Unfortunately, the ASD has no control over unilateral Garrison decisions that force functional changes of this sort. It is fortunate that the ASD and the combination of two facility types on the same site) included enough accommodation as "standard" features to allow this to work out for the time being...**

(The Worship Center)

2.3. A question was raised regarding the possible benefit of a sloped floor in the Worship Center; sloped flooring generally provides better line-of-sight characteristics for the congregation. **While a sloped floor does provide line-of-sight benefits, it also provides slightly more safety risk for congregation members falling, additional construction cost and complexity, and leads to many other mobility issue problems when the relationship between the Worship Center and the total building plan is considered. At each ASD revision it is reconsidered.**

2.4. Integrating all electrical outlet, stage-lighting, communication outlet, and features connected to non-MCA provided equipment is a major challenge in the chapel facilities; especially as regards the Worship Center. This facility did have some close-calls and failures to fully accomplishing the optimum

integration. **This was an early facility in the most recent RFP process and the CoS team definitely learned lessons later that could have made coordination for this facility smoother. Even then, experience tells us that the Army Regulation required separations between chapel features will always make this coordination inherently difficult to simplify.**

2.5. The detailing of the wood trim for the Worship Center raised platform on this facility is beautiful, but usage has revealed that several edges should have better protection against typical scrapes and scratches. Simple usage of the raised platform has resulted in numerous visible blemishes. **While this is an age-old problem that can resist being solved in spite of the greatest care, it has not been specifically addressed (warned about) in the ASD text and adding appropriate verbiage could improve the problem for most facilities.**

2.6. The front edge of the raised platform for this facility did not end up including an intermediate step for ease of access and this is a small but persistent problem for users. **The ASD does show such a step but having one has not been specifically addressed (warned about) in the ASD text. Adding appropriate verbiage could improve the problem for most facilities.**

2.7. While Roman Catholic (faith group) supporting “Stations of the Cross” devices are often placed on the Worship Center walls, and their design may vary from location to location, some reinforcement accommodation inside the walls should be provided for them in the original construction. **The ASD text does not describe this requirement. Adding appropriate verbiage could improve the problem for most facilities.**

2.8. The issue of faith groups that value visually rich environments with great amounts of religious imagery versus the need to accommodate all faith groups was discussed. One local chaplain of a congregation that uses the facility really feels grieved at the lack of such in the Fort Hood facility. **It is unfortunate in some ways, but keeping the ASD fully compatible with all faith groups and keeping the cost of the ASD appropriate to good stewardship will always be a limitation to what some would prefer to see. The local congregation may be able to gain some assistance from portable features that can be removed and stored when they are not using the spaces. It is understood that this is still just not the same.**

2.9. It was noted that the two projector screens in the Worship Center were too close to the edges of the space, hindering sight lines. It was suggested that angling the screens, moving them closer to the centerline of the room, or replacing them with one larger screen centered on the space would maybe be preferable. **The ASD, of necessity, allows for some flexibility in this; different users have preferences, different designers have preferences. The ASD does try to highlight the need to think the issue through.**

2.10. The ramp up to the platform in the worship area is not wide enough to meet ABA requirements, nor does it have proper turning clearances at the top. This issue could impact the functionality of the space for users with additional accessibility requirements. **While the ramp does vary from letter-of-the-law ABA requirements, the amount is so insignificant that it is unlikely to cause any wheelchair or otherwise handicapped user any difficulty. The ASD should have shown much greater than necessary clearances and avoided having construction tolerances and other dimensional variations from interfering with the final result. The newest ASDs have taken that approach (but trying to keep every small dimensional change or finish selection that occurs during the design and construction from accidentally impacting one of these criteria also leads to surprising growth in building area without providing real functional benefit).**

2.11. Concern was also expressed that the upper portion of the worship platform is not accessible by the ramp and that this issue could impact the functionality of the space for users with additional accessibility requirements. **The newest ASDs do not have a feature quite like this. In addition, we have canvassed the national Access Board for clarification on numerous areas of concern open to interpretation. They agree that for this facility feature, one would have to invent some unusual function or event in such a way that the upper portion would need to be accessed by a handicapped participant. In a typical event there will be multiple rows of standing performers; some will be standing on the main raised platform as well as the upper step. There is no reason to have a handicapped person on the upper step (back row) at all.**

2.12. The corners of the partial height wall at the ramp do not have corner guards, and are beginning to show wear and tear. This impacts the aesthetic qualities of the space. **While the ASD stresses comprehensive good design, it does not include this level of detail. Any facility such as this is inherently complicated enough to make addressing every feature difficult for the designer/contractor and cost issues aggravate things. They may not have experienced these problems with the same detail in a similar, but not identical situation and incorrectly assumed it would work for this facility.**

2.13. A long standing issue with all of the Chapels (and a problem for this facility) is how to best accommodate the changing of lighting lamps in the high-ceilinged areas, i.e. the Worship Center. **Private Sector religious facilities sometimes include relatively expensive catwalk systems that allow for lamp changes to be easily accomplished. Some do not feel that the expense for the catwalk system is appropriate and have to contract out for this task. Since appropriate use of Army resources is also important for such decisions, OCCH has also not directed that a full catwalk system be used. The CoS team has experimented with a multitude of techniques to try to provide a “good” (but not perfect) solution and will continue to do so in hopes of finding an appropriate middle ground.**

2.14. The A/V system advisors suggested to the local chaplains that a center-of-space location for the audio control equipment would be better than having slightly to one side. Current users have not detected a problem with the ASD location. **This was understood at the time that the ASD control console location was established, but the desire not to have it dominate visually in the space led to the decision to locate it to one side.**

(The Activity Center)

2.15. The standard design does not call for sprinkler systems under the activity center stage in the furniture storage areas. This is a conflict of interpretation between Omaha’s engineers and the fire protection personnel at Fort Hood. The Fort Hood Chapel Complex had to add sprinklers. **The use of under-stage storage was introduced to the ASD in 1985 but this sort of interpretation conflict, mis-coordination of storage dollies and other issues has led to the decision to discontinue their use in ASDs currently being developed.**

(The Baptistry Suite)

2.16. While this facility includes a pre-manufactured baptismal pool, the unit does exhibit some troublesome characteristics. No handrail has been included to assist people in getting in or out. The water level is governed totally by presets in the controls and the placement of drains/floats; these almost require that water will spill over the front edge when the unit is being used. When fully loaded, the unit pulls away from the adjacent materials/surfaces, in spite of being heavily reinforced. Some of these weaknesses may be common in the industry or may be unique to this make and model. **Additional**

research and adding additional appropriate verbiage to the ASD text could improve the problem for most facilities.

2.17. So far at Fort Hood, none of the congregations assigned to the facility have ever used all of the changing stalls in the Baptistery Suite at one time. They wondered if fewer stalls would have been sufficient. **The congregation needs of faith groups vary widely and that other groups do use all of the stalls (the very next facility we studied confirmed that they regularly use all of the stalls) for one event regularly and have even requested more of them.**

(Audio/Visual System Issues)

(The Kitchen Suite)

2.18. Several related issues were discussed regarding the ASD defined kitchen (which is part of the specific MCA contract) and the OMA purchased equipment (purchased separately). Accidental timing and direction conflicts left this facility with some very difficult coordination problems (purchases of equipment that could not be electrically supported, would not fit, such early purchases that warranties closed before the equipment could be installed, etc.) for the local Project Delivery Team to resolve and a kitchen that does not quite support (a full service kitchen would have) one of their regularly occurring volunteer-run programs at Fort Hood. In addition it is lacking some of the intended electrical support for crock-pots, etc. **The resource requirements of a full service kitchen are significantly higher than the requirements for a truly residential kitchen or even the sort of activity/caterer's kitchen that allows for large group functions of the kind where pre-prepared food is brought from homes (or a remote commercial kitchen), kept and then served with some small amount of reheating in final preparation. Since appropriate use of Army resources is important for such decisions, OCCH has directed that the latter type of kitchen be required in the ASD. Unfortunately, this did not match with the desires of the Garrison PDT members responsible for the purchases of some equipment items (and is often a frustration to users that like and want to use the features of a full service commercial kitchen). While the CoS team tries to communicate the intent of the kitchens all through the process and adds new techniques for improvement, there will always be some risk of conflict. In addition, (regarding the electrical outlets) future contracts will try to ensure that significantly more outlets are provided in future kitchens.**

2.19. Because the ASD does not mandate how to develop the pass-through feature between the Kitchen and the Activity Center in great detail, little variations come up, as in this facility, that interfere with the smoothest operation. This facility did end up with the OCCH preferred solution of finished wood swinging doors (as opposed to rolling counter shutters) and the visual benefits were noted by observers. Differences of opinion about applying codes, etc. aggravate the situation. **The ASD text will be modified to encourage more care with this.**

(The Blessed Sacrament Space)

2.20. The operable partitions that have allowed the Blessed Sacrament room to grow in size from the average norm of one space to three unfortunately also create visual obstacles that keep the room from functioning as the Fort Hood congregation would like. The need at Fort Hood would appear to justify a much larger and differently shaped space. **This is a need that does vary widely, but rarely does a facility need such a large space and it is not appropriate to plan for one. The ASD includes quite a large number of compromises to what would be best to have so as to also be good stewards of Army resources. The ASD attempts to do a reasonably good job regarding all of the needs and be selective about where reductions are possible.**

(The Sacristy and Robing Suite)

(Multi-purpose/Classroom Spaces)

(The Toddler Nursery Accommodations)

2.21. A porcelain floor finish was selected for the nursery/toddler spaces (the ASD calls for carpeting but allows some latitude for local preference). In hind sight they feel that it is too “hard” a finish. An appropriate sheet vinyl flooring with chemically or heat welded seams (to eliminate soiling at seams) would have been more appropriate. **The ASD text will be modified to encourage more care with this.**

2.22. There was a modification to the contract to request that the toddler toilet door be revised to match CDC criteria. **While there are differences of opinion about whether this is necessary, it is an easy change to include in the ASD and will be incorporated.**

(Vestibules/Lobbies/Corridors/Stairways)

(Storage Spaces)

2.23. The Fort Hood climate makes a coat storage room seem superfluous. **Any Army Standard Design needs to meet the needs across many environments. Too much information gets lost when facilities are “tailored” to local conditions. In consequence, the coatrooms are provided in all facilities and all end up being used well, even if not for coats.**

(Toilet Rooms and Janitor’s Closets)

2.24. This facility was always intended to support a full range of Chaplaincy programs AND military community activities. However, an unintended consequence of having such a beautiful and full featured facility is that the military community is using it far more often and in far larger numbers than even envisioned in its design. While the Unit Ministry Team has been able to increase their managing tools to respond to that, some of the “fixed” features cannot keep up. Toilet Rooms in particular are being overtaxed in usage and in (waterless urinals aggravate this problem) cleaning needs. Some finishes are wearing too quickly. **While the ASD was careful to program/include higher fixture counts than what the codes would indicate, it would appear that a larger “cushion” would be advisable. Possibly a flexible toilet room (in addition to having a men’s and women’s in each grouping) might allow for widely varying loads of users. The CoS will work with the OCCH to evaluate this.**

2.25. The water pressure and the activating motion sensors for the lavatories in the men's bathroom (the observer was not sure of the women's bathrooms) are too weak. It is difficult to get water flow to activate and then the water flow that does come seems ineffective for use. What appear to be the very same devices in the adjacent Religious Education Facility have no trouble activating the flow of water. However the flow of water that comes is much too strong and water splashes everywhere. **Both problems are probably due to a different of water pressure in the line that “feeds” the fixture (valve). Several things can affect this and adjusting for differences can be a little inexact. The imbalance might not have been noticeable during construction, when it would have been easier to correct, however, there may be techniques to bring these locations into better balance.**

(Building Features and Finishes)

2.26. The ASD requirement for borrow lites in the interior doors was left out of the RFP and this caused a modification to include them. **Newer ASDs are being written as RFP documents.**

2.27. While ASDs normally try to avoid hardware details, this facility would have benefited by an automatic opening feature at the primary doors such as is usually provided on other Garrison facilities. **While the Garrison provided requirements for RFP's may have been or get changed too, it would also be an easy change to include in the ASD and will be incorporated.**

2.28. Keying has proven to be an issue due to the constant turnover of personnel. The doors are constantly being re-keyed, as previous personnel lend out keys and lose track of them. Digital keypads were suggested as an alternate solution, due to the ease of changing the code. **Both the RFP (PP 3.2.1.7.2) and the ASD require a keyless type (digital keypad) lockset on one exterior door of the local chaplains choosing. It is possible that this requirement was missed or derailed.**

2.29. The Fort Hood casework doors have no locks, while current Standard Designs call for locks on all casework. The current direction from OCCH is to have locks. **It is possible that this requirement was missed or derailed.**

2.30. One user of the Blessed Sacrament room had taken to using nails to hang religious banners from the walls. This damages the finish of the space. Permanent banner hangers might be an appropriate solution. **Using these three separate spaces to accommodate a much larger Blessed Sacrament function is technically outside of the intended use of the space. The CoS has also seen many other Blessed Sacrament rooms in other facilities and has never come across an array of wall mounted decorations similar to those at Fort Hood.**

2.31. A different floor finish material was selected for the Baptistry Suite than for the adjacent corridor. Some observers felt that a uniform treatment would have been better looking and provide more continuity. **While the ASD stresses comprehensive good design, it does not include this level of detail (some finish decisions always occur during the design and construction process that vary slightly for a variety of reasons). Any facility such as this is inherently complicated enough to make addressing every feature difficult for the designer/contractor and cost issues aggravate things. The ASD text will be modified to encourage more care with this.**

2.32. Some gaps were observed between individual carpet tiles in the Worship Center. **These might possibly be cleared up under warranty.**

2.33. This facility allows access to the Equipment Mezzanine (for the changing out of major pieces of equipment) by way of a set of double doors (mounted 12 to 14 feet up on the exterior wall). The safety aspect of this was questioned. **Removable louvers and removable wall panels are also used for this purpose and seem safer. All such features represent some risk if not properly handled; if properly handled they should all provide an equal level of safety.**

2.34. The eternal light provided by the contractor does not meet the expectations of the Roman Catholic chaplain. It is not the required red color, nor does it mimic in shape a candle and flame, as is the intent. The chaplain provided his own eternal light (a plug-in lamp). **None of the criteria the Roman Catholic chaplain cites has been provided to the CoS previous to this. The CoS will consult again with them and modify the ASD requirements at their direction.**

(Furniture, Appliances, and Equipment Items)

2.35. While going into all the history and explanation is not appropriate, the ASD upon which this facility is based assumed that projector-and-screen technology would dominate the local building user's preferences for meeting rooms, etc. For this facility (and most other recent facilities) this has already

shifted to television based visual aids (also the message TV in the lobby). These require some additional integrating of all electrical outlets, communication outlet, and support features and not all of these features were provided in this facility. **The ASD requirements will be modified to focus on that technology preference.**

2.36. While going into all the history and explanation is not appropriate, the ASD upon which this facility is based requires carpeting in the primary corridors. During the review of the design for this specific facility, the CoS did (raise concerns about the carpet color being selected and) encourage a color and pattern that would better hide wear and soiling (at two separate times). For many good reasons, Garrison Project Delivery Team (PDT) members are allowed some (over-ruling) discretion regarding color and finish selection. For this facility, the result is that the actual wear-and-tear-abilities exhibited by facility users have over-powered the carpeting's ability to sustain it. Carpet wear and soiling have become a serious problem. The locations that have been finished in porcelain tile are doing well and have proven to be aesthetically "equal" to the wear-and-tear of actual use. **The CoS will attempt to better persuade other PDT members on future projects. In addition, the Office of the Chief of Chaplains (OCCH) has authorized that the ASD requirements be modified to finish corridor floors in porcelain tile as the "default".**

2.37. The kneeler assemblies on the pews are failing at an unacceptably high rate. There are also some smaller problems with loose trim on the pews. **These are standard features that should not be failing at such a high rate. It may be due to a problem with the specific manufacturer and this will be investigated in hopes of diminishing the risk on future projects and to resolve the problem for this facility, if possible.**

2.38. Signage in the Fort Hood Chapel and REF is not flexible, as are the directories. (According to the ASD the signage should be changeable in all but a few cases.) This has led to issues with changing personnel. New personnel have had to cover original signage with other signage which doesn't match the existing signage. **The ASD addresses this properly, but for this facility something accidentally failed in the process.**

2.39. When the local life safety "authority having jurisdiction" made the decision to require sprinklering in the space under the Activity Center raised platform (usually not deemed necessary) changes had to be made in the furniture dollies selected for use that resulted a dolly that is inherently difficult to maneuver around corners when exiting and entering spaces. Larger turning spaces might have mitigated that issue. **The specific RFP, the ASD, and the efforts of numerous parts of the Project Delivery Team were all consistent in requiring and facilitating the proper coordination of the furniture dollies. Unexpected decisions along the way can always cause it to fail. The under-platform storage idea has proven to generate multiple points of conflict and the decision has been made not to use this concept in current ASDs development.**

2.40. The sound monitor (a group of devices that allow "performers" to hear other "performers" "on stage") system does not have sufficient capacity or control to allow for multiple (monitoring) speakers to play different sounds. Currently, all the (monitoring) speakers play the same sound/s, and can't be changed to have one play guitars while another plays vocals. **By Army Regulation, the A/V system is funded separately and usually designed and installed separately. The technology changes quickly and the cost of every feature you add makes the system cost grow quickly as you add them. It is a miserable situation for the local chaplains and Garrison and will always be fraught with hazards. We add and will continue to add guidance to the ASD, but it can never be enough.**

2.41. The Fort Hood REF was not provided with a permanent or portable stage system. The chaplains expressed interest in acquiring a portable stage system. The current standard design calls for a portable stage system. **Current OCCH direction is to use portable stage systems.**

2.42. This project did exhibit a number of coordination problems (that the DoD process goes to considerable lengths to avoid) between the items that the building constructor provides and the items other parties provide. Every component, from walls to furniture, needs to function as an integrated whole. When a non-coordinating component gets selected or forced on the project by other decisions, it creates functional roadblocks to successful use of the facility. **This has been a common problem and the CoS continues to try to educate and communicate enough that things happen correctly. We will continue to try to improve upon this.**

2.43. The specific brand and model of operable partition selected for this facility requires activation/control by two separate people at two separate locations which is understandably inconvenient. **The ASD text will be modified to eliminate this control separation choice.**

2.44. The REF utilizes 4 flat screen TVs in the multi-purpose area, with the idea that the room could be divided into quarters, but the TVs didn't appear to be on flexible mounts to allow for the repositioning and angling of the screens. Pivot mounts would increase the flexibility of the TVs. **Growing experience with this technology has been adding to the ASD guidance text.**

2.45. Partitions (interior walls) have been damaged by the chair dollies. The issue of cause is complicated by having unexpected decisions made by the local "authority having jurisdiction" and forcing a change to a more-difficult-to-manuever chair dolly. If even the proper chair dollies would lead to such damage, it might be necessary to call for more extensive wall protection devices. **This will be studied with other (recently completed) facilities (particularly where the correct chair dollies have been provided) and measures taken accordingly.**

(Equipment Rooms and Systems)

2.46. The ground-level electrical and mechanical rooms in the Chapel were noted by the base personnel as being too small for their functions, limiting the ability to work properly in the spaces. **The ASD intended that more equipment be located on the equipment mezzanine level but, of necessity, equipment selection and location selection becomes a project-by-project decision.**

(Site Issues)

2.47. This facility resides with several community supporting facilities and the parking areas are shared. The site itself was manipulated considerably to provide the highest possible amount of parking. In fact, all of the completed facilities (there is one yet to open) are so successful that insufficient parking is proving to be a serious problem already. **Every Garrison agonizes over the issues regarding the siting of facilities and their parking. The ASD provides guidance (which matches the guidance the Garrisons have), but the ASD has no jurisdiction over the final decisions. The local Chaplains plan to work further on this issue with the Garrison.**

2.48. This facility resides with several community supporting facilities and helps to form a sort of community campus that provides many extra amenities for the soldier and family. In recognition of that "campus" concept, the RFP encouraged and the RFP proposer provided considerably more landscaping and site features than usually occurs. The proper care for all of these features requires more support than is available to the local Chaplains and this has become a source of conflict and distraction. **Such features are not a requirement of the ASD; however OCCH recognizes the value they represent as well as**

the dueling issues they represent and intends to seek additional support from the Garrison for this facility.

2.49. The site presented several challenges. LEED and ATFP requirements combined with the site challenges to result in the location of a cooling tower right along the main thoroughfare adjacent to the building. Originally the cooling towers were left unscreened, and their appearance was found unpleasing by Garrison representatives. Steps were taken after construction to mitigate their appearance, but the solution materials were not coordinated with the pre-existing trash enclosure and it would seem to have been wiser to accomplish that. **The ASD does contain direction that tries to guarantee the appropriate screening of exterior equipment. Army direction has pitted so many conflicting criteria against an optimum solution for these kinds of features that some compromises are inevitable short of refusing to build facilities unless a site will allow everything to align perfectly.**

2.50. The parking lot appeared well marked with specialty stalls to comply with LEED, but it didn't appear as if many vehicles were complying with the stall requirements. This is true of many LEED projects. **Conformance of this nature is easier when parking is related to employees. When the parking is for a wide-range of visiting members of an even larger community, it is much more difficult. Time and experience may improve that situation.**

PART THREE, UNIQUE ISSUES

3.1. The local Chaplains realized that having some decision making responsibility for a facility as large and complex (and so heavily used after completion) as this one was very difficult to do well. They wondered if utilizing 3D graphics to show interior spaces might help with visualization and understanding how a space works. Such graphics might have better informed them on some choices they made in regards to this project. Current acquisition tools don't require this and often interfere with this. **While not strictly an ASD issue, there may be ways for the CoS to facilitate some of this. In addition, the industry is moving in this direction, BIM Models allow for these techniques, and the current DoD acquisition tools may lead to this ability relatively soon. Availability will probably always be impacted by the costs associated with the time it takes (man-hours and project schedule limitations), but as these reduce because of advances in technology, they begin to be "reachable".**

PART FOUR, THE REVIEW PROCESS AND PARTICIPANTS

The following team of participants gathered at the Chapel Complex and Religious Education Facility on February 27, 2012. The review process began with some before-the-meeting examining and photographing by the Omaha District CoS team (whose flights had them arrive early) until lunch time. After lunch they joined the actual meeting group. After introductions and signing in there was discussion related to a pre-prepared item list (provided by the garrison representatives). Once general discussion reached an appropriate point, the team shifted to a tour of the facility with further items brought up as we went.

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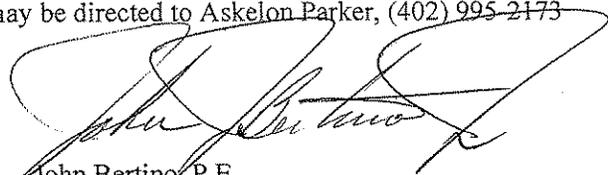
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