

APPENDIX D

DESIGN GUIDANCE INSTRUCTIONS

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1 DESIGN GUIDANCE INSTRUCTIONS

This document, along with Appendix C and Appendix E, provide design guidance/instructions. These instructions are not considered requirements, but are for information.

1.1 GENERAL INSTRUCTIONS

1.1.1 ACCESSIBILITY ITEMS

The Visitor Control Center (VCC) and Search Area Building shall comply with all accessibility requirements. For facilities with combined functions, the public areas of such facilities shall be accessible. Accessible curb ramps shall be provided in parking areas and sidewalks serving accessible buildings. Installations often use the standard detail drawings of the local municipality for accessible curb ramps. Coordinate with the installation DPW, Civil Engineering Squadron, or other appropriate installation staff for details of curb ramp configuration.

1.2 SITE ISSUES

A. PARKING

1) Vehicle Parking

- a) Privately-owned vehicle (POV) parking will typically be provided only for the VCC. No other ACP buildings will require POV parking. Any VCC parking will be off-street. See Military Surface Deployment and Distribution Command, Transportation Engineering Agency (SDDCTEA) Pamphlet 55-17 for guidance on off-street parking lot configuration and dimensions. POV parking areas that support the VCC shall comply with all accessibility requirements. Accessible parking spaces shall be provided in accordance with the latest guidelines published by the US Access Board.
- b) Provide sufficient parking for anticipated Government-owned vehicles (GOVs) typically used in operation of the ACP. Coordinate with installation physical security or other appropriate installation staff for determining a reasonable number and location of GOV parking spaces. GOV parking is typically located in an area accessible from the Search Area lanes and within reasonable walking distance to the ACP Guard Facilities. GOV parking should not be provided along the inbound or outbound lanes of the ACP corridor. Consider line-of-sight in placement of GOV parking.

B. ACCESS ROADWAYS, DRIVES AND ISLANDS:

- 1) Geometrics of roadways and access drives should be designed with the use of turning templates of the appropriate design vehicle, or designed using a CADD-based turning software that graphically calculates and displays the swept vehicle envelope and tire paths. This effort ensures the curve and intersection radii and lane width can accommodate the design vehicle without off-tracking. If oversize vehicles can be expected at an ACP, use of that vehicle as a worst-case scenario for the purpose of geometric design should be considered.

For horizontal curvature of inbound and outbound lanes, it may be necessary to provide lane widening of the traveled way through any horizontal curve to mitigate off-tracking of large vehicles, especially for inbound and outbound lanes that are one lane in width. See the AASHTO Green Book for additional information on lane widening through horizontal curves. For these situations, consider striping the traveled way pavement at the typical ACP lane width used throughout the ACP corridor and utilize diagonal crosshatch pavement markings in the widened area of the horizontal curve. See the Manual on Uniform Control Devices (MUTCD) for additional information on pavement markings. Note that this area should still be utilized as traversable when determining the entry path of a threat vehicle.

- 2) Curbing for ID Check Area Islands should typically be 6” in height. The profile or shape of the curb, from gutter line to back of curb, should be consistent among all standard curbing used throughout the ACP, and should match other curbing used at the installation. There may be other types of curbing, such as 8” barrier curb, utilized in a project, though not generally in areas where pedestrian traffic is expected.
- 3) The traffic lanes in the ID Check Area shall be concrete paved. (ASD indicates “hardstand”).

1.3 SITE AND LANDSCAPE ITEMS

A. SITE ITEMS

1) Grading:

- (a) Concentrated flow of stormwater (i.e. gutter flow) in the area of the Active Vehicle Barrier should be avoided to the greatest extent possible. The AVB mechanisms and controls below grade can be susceptible to moisture. Additionally, stormwater can carry debris which can collect in the AVB pit, creating a maintenance issue. Utilize grading and/or drainage structures to direct concentrated stormwater flows away from AVBs.
- (b) The ID Check area is part of the ACP corridor, and therefore situated on a roadway. There is potential for the ID Check area to be situated on a portion of the road where vertical curvature is present. ID Check canopies are to have minimum clearances, based on the type of vehicles primarily served by the ACP. If there is vertical curvature through the ID Check area, careful coordination with the Architect and/or Structural engineer needs to occur to ensure sufficient clearance is provided under the canopy.

1.4 STRUCTURAL ITEMS

A. GENERAL

The designers shall check if the Visitor Control Center (VCC) or the Search Office exceed the occupancy thresholds of chapter 1.7 of UFC 4-010-01. If so, the designers shall meet or exceed the minimum standards provided in chapter 3 of that same UFC. The installation Security or Antiterrorism Officer should also determine any identified threats posed to the building(s).

Should specific blast protection be required at the VCC or the Search Office, additional design guidance is included in Appendix B of UFC 4-010-01. For determining proper standoff distances, see Appendix B-2.1. For the design of windows and skylights, see Appendix B-3.1. For the design of doors, see Appendix B-3.2.

1.5 COMMUNICATIONS AND SECURITY SYSTEMS

A. CLOSED CIRCUIT TELEVISION (CCTV)

- 1) 1391 Development for CCTV requires CCTV be covered in Tab F. Tab F – Information Systems Cost Estimate (ISEC) is filled out by the installation. Tab F for a given line item has three different categories that can be used: CONF (construction funded cost funded by the project); ISC (information costs not funded by the project but by Other Procurement Authority (OPA)); PROP (proponent costs not funded by the project but by OPA). CCTV costs will fall under PROP and CONF. The proponent cost is for the actual CCTV equipment only: CCTV cameras, monitors, PTZ controllers, switchers, and network video recorders and any associated rack mounted equipment to connect the equipment. All other costs associated with wiring, conduit/junction box system, exterior duct/manhole/handhole system and with installation of the equipment fall under the CONF category. CCTV is required by the Army ACP Standard and the proponent is Office Provost Marshall General (OPMG). The installation is to request the money for the just the equipment from OPMG during the construction of the ACP. The following subparagraphs contain some of the background information.

- (a) Department of the Army memo dated 25 June 2012 – Military Construction, Army (MCA) Guidance for Recurring Primary Costs on the DoD Form 1391 for 2013 and Later MCA projects indicates in part “This MCA guidance applies to the following categories which have routinely appeared in the block 9, "Cost Estimates", of the DD Form 1391 as recurring primary costs: a) Antiterrorism/Force Protection (AT/FP) (including progressive collapse requirements for facilities over 2 stories); b) energy monitoring and control system (EMCS) connections; c) intrusion detection systems (IDS) installation; and d) building information systems.” And then later: “EMCS and IDS Guidance -Generally, EMCS and IDS costs will not be shown as a separate line item on any MCA project. These costs are included in the facility square foot cost. Exceptions would be for unique type facilities or standard facilities that have not been built within the last three years.”
- (b) Wording from AR 420-1, Sect 4-69. “Electronic security systems: Detailed funding guidance covering the acquisition and installation of various components of electronic security systems, including, but not limited to, electronic entry control, closed-circuit television (CCTV), and intrusion detection systems (IDS) equipment is provided in section VII. Most significantly, other than MILCON funds will always be used to acquire electronic security systems equipment. However, MILCON funds may be programmed to install such electronic security systems equipment where required in conjunction with a MILCON project. In such cases, funds required for equipment installation will be indicated as a separate line item under the “Primary Facilities” portion of the project DD Form 1391. Further, the other than MILCON funds required to acquire such equipment will be identified separately under the “Furnishings and Equipment” portion of the DD Form 1391 as well (see chap 3, DA Pam 415-15).”
- (c) Wording from AR 420-1, Sect 4-69.4-71. **Funding of information systems components** “Table 4-2 applies to funding for information systems where those systems are associated with chapter 4 MILCON projects. Costs related to such functions as repair, replacement, expansion, operation, and maintenance unassociated with MILCON projects are not to be construction funded.
 - a. Construction funded items listed in table 4-2 will be funded by MILCON funds.
 - b. The ISC funded items listed in table 4-2 will be programmed and funded by ISEC-FDED.
 - c. Proponent funded items listed in table 4-2 will be programmed by the using agency for mission projects, or the garrison commander for BASEOPS projects.”

B. ELECTRONIC SECURITY.

- 1) 1391 Development for Electronic Security Systems (ESS) is a mixture of MILCON funding and OPA funding. Department of the Army and Office of the Provost Marshall General (OPMG) have provided guidance regarding electronic security systems that need to be applied. ESS for an ACP includes intrusion detection systems (IDS) and duress alarm systems. Department of Army guidance below indicates to have the ESS non-equipment cost built into the facility per square-footage cost; however, that is not practical for an ACP, since it is so heavily site dependent and it is felt that it falls under “unique facility type” exception. This means the IDS/Duress alarm costs need to be covered in 1391 block 9 and in Tab E – Furnishings and Equipment. Block 9 costs are to be listed as a ‘**Primary**’ line item. This line item is to have all costs associated with IDS/Duress, except those costs directly associated with purchasing the actual equipment. Tab E is to have an ESS (IDS/Duress alarm) line item that captures the cost of the equipment only. ESS is required by the Army ACP Standard and the proponent is Office Provost Marshall General (OPMG). The installation is to request the money for the just the equipment from OPMG during the construction of the ACP. The following subparagraphs contain some of the background information.
 - (a) Department of the Army memo dated 25 June 2012 – Military Construction, Army (MCA) Guidance for Recurring Primary Costs on the DoD Form 1391 for 2013 and Later MCA projects indicates in part “This MCA guidance applies to the following categories which have routinely appeared in the block 9, "Cost Estimates", of the DD Form 1391 as recurring primary costs: a)

Antiterrorism/Force Protection (AT/FP) (including progressive collapse requirements for facilities over 2 stories); b) energy monitoring and control system (EMCS) connections; c) intrusion detection systems (IDS) installation; and d) building information systems.”

And then later:

“EMCS and IDS Guidance -Generally, EMCS and IDS costs will not be shown as a separate line item on any MCA project. These costs are included in the facility square foot cost. Exceptions would be for unique type facilities or standard facilities that have not been built within the last three years.”

- (b) Wording from AR 420-1, Sect 4-69. “Electronic security systems: Detailed funding guidance covering the acquisition and installation of various components of electronic security systems, including, but not limited to, electronic entry control, closed-circuit television (CCTV), and intrusion detection systems (IDS) equipment is provided in section VII. Most significantly, other than MILCON funds will always be used to acquire electronic security systems equipment. However, MILCON funds may be programmed to install such electronic security systems equipment where required in conjunction with a MILCON project. In such cases, funds required for equipment installation will be indicated as a separate line item under the “Primary Facilities” portion of the project DD Form 1391. Further, the other than MILCON funds required to acquire such equipment will be identified separately under the “Furnishings and Equipment” portion of the DD Form 1391 as well (see chap 3, DA Pam 415–15).”
- (c) Office of the Provost Marshall General (OPMG), in a letter dated 4 Nov 2013 indicated, in part, the following: “Starting in fiscal year 2016, the OPMG will only program and fund IDS equipment costs, and requests that planners record the cost to install IDS as MILCON in the Primary Facilities tab of DO Form 1391 if it is not already captured in the Primary Facility unit

C. AUTOMATION.

- 1) Automated Installation Entry (AIE) is used in CONUS for checking identification cards at the ID Check. AIE can either be handhelds or fixed, though the vast majority of the systems have gone to handhelds latterly. Project Manager – Force Protection Systems (PM-FPS) is an organization under the Office of the Provost Marshall General that develops security systems for the Army including this one. PM-FPS is the entity that knows the schedule and type planned for an installation. There are some differences between the conduit rough-ins for the handhelds and the fixed, but if you will need a rear tag camera, a driver camera, and the traffic arm, there is little reason not to provide the few additional conduits for the fixed position. PM-FPS is the entity that knows the schedule and type planned for an installation.

D. ACTIVE VEHICLE BARRIER CONTROL SYSTEM

- 1) SDDCTEA updated Pamphlet 55-15 in 2019. Several of the safety schemes were revised and have different layouts and timing sequences. The question arose on how to deal with the older schemes in the 2014 Pamphlet 55-15 and those that were updated in 2015. These are referred to safety schemes 2014/2015. The following is the current position for how to deal with the possible different scenarios.

Scenario 1. MILCON Army Projects

Entire ACP or Minor MILCON project that includes entire AVB system
Direction: Utilize AVB Safety Schemes published by SDDCTEA in 2019. Older SDDCTEA safety schemes are not grandfathered.

Exceptions/waivers (When 2019 SDDCTEA Safety Scheme Not Utilized):

- Exceptions must follow waiver process identified in the Army Standard, and AR 420-1
- Installation must pursue AR 190-13 Exception through OPMG.
- Exception must also request waiver to UFC 4-022-01 ECFs/ACPs from HQUSACE.

Scenario 2. Non-MILCON Army projects (SRM, OPA, Etc.)

AVB Replacement With No AVB Location Change
In kind (Same Location)

Direction: Utilize AVB Safety Schemes published by SDDCTEA in 2019 **OR** safety schemes in the 2014/2015* version of SDDCTEA 55-15. Where feasible the use of the 2019 SDDCTEA safety schemes is recommended.

Exceptions/waivers (When neither 2014/2015* nor 2019 SDDCTEA Safety Scheme is Utilized):

- Though considered non-compliant with the Army Standard for ACPs the Army Standard, the formal waiver process identified in AR 420-1 only applies to MILCON projects. Document deficiency and create MFR.
- Installation must pursue AR 190-13 Exception through OPMG
- Exception must also request waiver to UFC 4-022-01 ECFs/ACPs from HQUSACE

Scenario 3. Non-MILCON Army projects (SRM, OPA, Etc.)

AVB Replacement With AVB Location Change

(Existing ACP with Existing AVBs but moving location of AVBs)

Direction: Utilize AVB Safety Schemes published by SDDCTEA in 2019 OR safety schemes in the prior version of SDDCTEA 55-15.

Exceptions/waivers (When 2019 SDDCTEA Safety Scheme is Not Utilized):

- Though considered non-compliant with the Army Standard for ACPs the Army Standard, the formal waiver process identified in AR 420-1 only applies to MILCON projects. Document deficiency and create MFR.
- Installation must pursue AR 190-13 Exception through OPMG
- Exception must also request waiver to UFC 4-022-01 ECFs/ACPs from HQUSACE

1.6 FIRE PROTECTION ITEMS

- A. Fire Protection – Sprinkler. The facilities are not considered mission essential. Most the facilities will have low number of occupants at a given time. Outside of possibly a Visitor Control Center or a facility that has combined functions, the facilities will not required a sprinkler system.
- B. Fire Alarm System and Mass Notification. The facilities are not considered mission essential. Most of the facilities will have a low number of occupants at a given time. Outside of possibly a Visitor Control Center or a facility that has combined functions, the facilities will not require a fire alarm or a mass notification system. This has been an issue with installation both ways. Some request the fire alarm systems and some make sure you don't provide it. This is something that needs to be discussed up front.

1.7 UFGS 34 71 13.19 CRASH RATED ACTIVE VEHICLE BARRIER & CONTROLS

This UFGS combined the active vehicle barrier specification with the Army active vehicle barrier control spec. Several tailoring options were setup in the UFGS to help with the editing. It will help save considerable time, if the type of barrier, safety scheme, and if information will be on the drawings and Appendix A before editing. Appendix A is broken into several appendixes that deal with the safety schemes. It is critical that the correct appendix be left and delete the unused ones. This is the only location that really goes into the sequence of operation for the safety scheme and how the controls operate.

1.8 CYBERSECURITY

Ensure cybersecurity is taken into account for 1391 development and at the design charrette. The 1391 needs to show a Primary line item for cybersecurity. Ensure the platforms anticipated are listed. An ACP will typically have three to four major platforms that need to be taken into account.

1.9 EQUIPMENT

1.9.1 OPA Equipment

A. OPA and 1391 Development

- 1) For discussion on OPA funding pertaining to Electronic Security Systems and CCTV, see paragraph 1.5.