(Design Agent Name, and/or Graphic)

Parametric Design Report

Project Title
Project Number
Program Year
Location
Date

Optional - Graphics or Other pertinent information

DESIGN AGENT ADDRESS AND CONTACT INFORMATION

Project Title
Project Number, Program Year
Installation Name, Location

Table of Contents

1. Project Introduction

1.1. Purpose: This document contains the Parametric Design data for (**Project Title, Project Number, Installation, and Program Year)**.

1.2. Authorization: This Parametric Design was authorized by a Code 3 Design Directive. (Include a summary of the Design Directive to include the items listed below. If the actual Design Directive and/or approved DD Form 1391 will be included, do so in the appendix for Reference Materials. It is recommended that a record copy of the approved DD Form 1391 is maintained for reference purposes.)

- Date of issuance
- Program Year
- Programmed Amount
- Cost Limitation
- DD Form 1391 cited (Scope, date, or other reference information given)

1.3. Acquisition Strategy: Provide a brief description of the acquisition methods (Design Build, Design-Bid-Build, or Adapt-Build) and the rationale for the selection. Ensure that PDT has selected the appropriate acquisition strategy that has been fully vetted and approved by District (PM and Engineering) leadership and coordinated with COS for those involving standard facilities. Provide signed acquisition strategy template in Appendix 3.

1.4. Project Description and Scope Validation: Complete the following scope chart for the project. Show the resultant quantities (in terms of a definitive unit of measure.

	List ALL Primary Facility Items from approved 1391 with category code and Unit of Measure *whether they have a scope discrepancy or not*				**Parametric Design Quantity for each Primary Facility Item with category code and Unit of Measure (Date of PDR)**				**Quantity Difference**
	Cat Code	**Facility**	**UoM**	**Quantity**	**Cat Code**	**Facility**	**UoM**	**Quantity**	
#1									
#2									
#3									
#4									
#5									
#6									
#7									
#8									
#9									
#10									

***ROM = Rough Order of Magnitude** *(Add more rows as necessary)*

The chart should be followed by a paragraph that includes a description of the standard criteria, standard design, manning document, equipment layouts, or other references used as a basis for scope validation. If the project involves a non-standard facility, the District/Installation must provide the criteria used to develop the facility size. Both standard and non-standard facilities must include the appropriate manning documents (FPS, MTOE, TDA, etc.) for the facility occupant(s). If the actual reference documents need to be included, do so in the appendix for Reference Material.

If the project/scope included on the DD Form 1391 cannot be validated and/or requires changes, the proposed change must be in accordance with paragraph7.1.5.2 and instructions provided in appendix B of the Instructions for Parametric Design Guidance. Scope deviation approval documentation should be summarized in this section and the actual approval correspondence should be included in the appendix for Project Correspondence.

COS validation of standard design facility(ies) will be documented in the DD Form 1391 Processor and should be referenced in this section of the report to include the date of concurrence. The actual COS validation from the DD Form 1391 Processor must be included in the appendix for Reference Materials. A list of COS points of contact are available in the Instructions for Parametric Design (Code 3),Appendix A.

1.5. Project Site Location/Approval: Include a description of the project site location and evidence of IMCOM Regional Director approval. The site location should also be shown through inclusion of a site sketch included in the appendix for Project Sketches. Note if the site has been approved by the Real Property Master Planning Board. If the project site has changed from the location that was included on the DD Form 1391, or no previous project site has been selected, or the site has been moved as part of project development, this should be discussed and rationale for relocation included. If the site has been relocated HQUSACE Regional Integration Teams (RITs) will be notified (via the appropriate MSC) immediately for discussion and resolution with HQIMCOM. Approval from IMCOM for the site relocation is required and evidence should be included in the PDR.

2. Parametric Design Analysis:

These sections are intended to give a brief a 5-15% design level descriptive narrative for architectural, structural, civil, site, mechanical, electrical, structural, and sustainable design. If these areas are adequately described in a Department of the Army Standard Design these sections can be addressed by a brief summary and reference to the appropriate standard. It is not necessary to repeat or include all data already provided in the Standard Design documentation. If a standard design is not available the 5-15% design level description should be developed as part of this effort. The following information should be included for each required utility: **proposed utility connection**

points, size and capacities of existing utilities, estimated size and capacities of new utilities needed for the project.

2.1 Site Development/Civil:

2.1.1. General Site Description: Include a brief description of the proposed site conditions and proposed facility layout. The proposed facility layout should be documented by a site sketch and included in that appendix of this document.

2.1.2. Site Development: Include a brief description of any survey data, soil borings, and subsurface investigations if already available at this level of design. Briefly describe clearing, grubbing, grading, borrow, and or disposal requirements.

2.1.3. Pavement (Roads, Parking, Walks): Briefly describe the pavement requirements of the project. Note if a traffic analysis has been completed or is required. Location of proposed pavements should be shown on the project site sketch.

2.1.4. Storm Drainage/Storm Water Management: Briefly describe how storm water will be managed as part of this project. Note any specific erosion control or other measures required by the project. Specific state, local, and installation permits or requirements should be noted. Note ownership of the utility system (i.e. Government, Privatized Contractor, other, etc.) and include any specialized requirements that would allow the cost engineer to accurately estimate the cost of these features.

2.1.5. Landscaping: Briefly describe the landscaping requirements of this project.

2.1.6. Low Impact Development: Briefly describe the Low Impact Development features planned for incorporation into the project to address runoff requirements. Include the project site acreage as identified by the limit of disturbance (LOD) (same as project site boundary), calculate the volume of water required to be managed onsite (the difference between the pre and post project runoff from the site). Calculations must incorporate the 95th percentile storm event, and the varying runoff coefficients for each surface area type including soil and vegetation. When planned construction practices are not known (runoff coefficients are not known), consideration must be given to requirements provided in Army Standards, Standard Designs, and historical data, as well as area of non-building surfaces, such as walks, roads, pavements, etc. All planned LID features must be designed based upon the post project increase in storm water runoff (difference between pre and post project). The LID Planning Tool is available at: **https://ten.usace.army.mil/TechExNet.aspx?p=s&a=AREASOFEXPERTISE;1209**

2.2. Architectural:

2.2.1. Facility Description: Briefly describe each facility contained in the project scope. If standard criteria or a standard design exists it should be noted and referenced. If optional features or methods for sizing a facility are available within the criteria utilized, include an explanation of how the criteria were utilized to develop the final scope. If no standard exists include a breakout of the facility sizes and functional areas. Provide a discussion of the rationale used in determining the requirements for a non-standard facility.

2.2.2. Accessibility: Describe accessibility requirements for each facility or facility type. Requirements contained in a standard design should be referenced in this section.

2.2.3. Building Components: Provide a brief 5-15% design level narrative description of the building components of each facility (i.e. floors, walls, doors, windows, ceilings, etc. If facilities are standard design facility types and covered by the standard design, only a reference to the standard is required.

2.3. Structural:

2.3.1. Structural Requirements General: Provide a brief narrative description of the structural facility construction requirements. Structural information contained in standard designs may be summarized or referenced in this document. Any unique or unusual requirements should be highlighted.

2.4. Electrical:

2.4.1. Electrical Design: Provide a general narrative description of project electrical requirements.

2.4.1.1. Power: Provide a narrative description of project power requirements. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.4.1.2. Exterior and Interior Electrical systems: Provide a narrative description of project interior and exterior electrical requirements. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.4.1.3. Fire Alarms: Provide a narrative description of project fire alarm requirements.

2.4.1.4. Lightning and Cathodic Protection: Provide a narrative description of lightning and cathodic protection requirements.

2.4.1.5. Flexible Wiring System for Prewired Work Stations: Provide a narrative description of project flexible Wiring Systems requirements.

2.4.1.6. Intrusion Detection Systems: Provide a narrative description of project intrusion detection systems requirements.

2.4.1.7. Public Address System/Mass Notification System: Provide a narrative description of project public address and/or mass notification systems requirements.

2.4.1.8. Additional Electrical Requirements: Provide a narrative description of any additional project electrical requirements not described above.

2.5. Mechanical:

2.5.1. Mechanical Systems: Provide a general narrative description of project mechanical requirements.

2.5.2. HVAC Systems: Briefly describe the heating, ventilation, and air conditioning systems descriptions. Include discussion of energy sources and control systems.

2.5.3. Plumbing: Briefly describe the plumbing requirements.

2.5.4. Domestic Water Service: Briefly describe the domestic water requirements of this project. Note ownership of the utility system (i.e. Government, Privatized Contractor, other, etc.) and include any specialized requirements that would allow the cost engineer to accurately estimate the cost of these features. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.5.5. Fire Protection Water Service: Briefly describe the fire protection water requirements of this project. Note ownership of the utility system (i.e. Government, Privatized Contractor, other, etc.) and include any specialized requirements that would allow the cost engineer to accurately estimate the cost of these features. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.5.6. Sanitary Sewer: Briefly describe the sanitary sewer requirements of this project. Note ownership of the utility system (i.e. Government, Privatized Contractor, other, etc.) and include any specialized requirements that would allow the cost engineer to accurately estimate the cost of these features. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.5.7. Natural Gas Service: Briefly describe the sanitary sewer requirements of this project. Note ownership of the utility system (i.e. Government, Privatized Contractor, other, etc.) and include any specialized requirements that would allow the cost engineer to reasonably estimate the cost of these features. Briefly describe projected demand, adequacy of existing utility capacity, size of required utility and proposed connection points.

2.5.8. Additional Mechanical Requirements: Provide a narrative description of any additional project electrical requirements not described above.

2.6. Sustainable Design and Energy Conservation: Include a description of how sustainable design and energy conservation will be achieved. Include a validation that the project will be designed to meet LEED "Silver" rating IAW ECB 20087-1, 28 January 2008. In addition, this section of the PDR must address how the project will comply with the 8 July 2010, Department of the Army, Office of the Assistant Secretary for the Army Installations and Environment Memorandum, SUBJECT: Sustainable Design and Development Policy Update (Environmental and Energy Performance).

2.6.1. LEED Checklist: If a Preliminary LEED checklist is not included in the approved DD Form 1391 from the Planning Charrette, a Preliminary LEED checklist should be completed as part of the PDR. The actual appropriate Preliminary LEED Assessment Checklist (Version 3.0) shall be included in the appendix for Reference Materials. All LEED checklist submissions must follow LEED version 3.0. If specific sustainability features are known at this stage of design, a LEED checklist with detailed costs shall be included as part of the ENG Form 3086 submission. SDD costs in excess of the maximum 2% must be thoroughly described, justified and costed as part of this submission.

2.6.2. Energy Enhancement Measures: For this analysis, the PDT is to determine energy savings for a suite of energy efficiency measures (EEMs) in accordance with ECB 2011-1 High Performance Energy and Sustainability Policy. EEMs should consider the building envelope construction, lighting and plug load design and power densities, as well as heating, ventilation and air conditioning strategies. EEMs should be modeled for specific building type and climatic region of the site. The goal is the most energy efficient building design, which meets building functional and mission requirements. Functional and mission requirements cannot be altered during the modeling process without consent of the appropriate authority. **Briefly describe the EEMs evaluated and/or selected for this project.** Costs must be justified and included as part of the ENG Form 3086 submission. PDTs are to perform a Life Cycle Cost Analysis (LCCA) on energy-related decisions of major systemsin accordance with ECB 2012-13 Energy Implementation Guidance Update, ASHRAE 189.1, Life Cycle Cost Analysis Requirements.

3. Additional Project Requirements:

3.1. Furnishings & Equipment: Validate that the cost included in the DD Form 1391 for the furnishing and equipment required for this project are adequate. If this section of the 1391 is blank or incomplete it should be developed and included in the PDR, Note the intended procurement appropriation (OMA – Operation and Maintenance Army, OPA – Other Procurement Army, etc) for the included furnishing and equipment and include a confirmation of the party responsible for obtaining/budgeting for the funding (Proponent, Facility User, etc.). **The PDR must contain a definitive statement that the PDT considers the Furnishings and Equipment cost shown in the 1391 are adequate. If the PDT determines that these cost are not adequate a revised listing and cost for these items must be included in this section of the PDR.** Furnishing and equipment requirements and cost for projects containing standard design facility types can be obtained from the appropriate COS(s). Furniture pricing data is also available from the Huntsville Center, centrally managed Furnishing Program.

3.2. Information Systems Requirements: Include a brief discussion of the project Information Systems requirements. Scope consistency between DD Form 1391 and the Parametric Design Estimate (ENG Form 3086) is critical and the Design District shall coordinate and energize the Installation Directorate of Information Management (DOIM) to validate that the information systems requirements and cost remain valid. If information systems cost must change from those shown on the DD Form 1391, the installation DOIM is required to make those changes through coordination with USA Information Systems Engineering Command (USAISEC).

3.3. Antiterrorism Measures: Include a description of the AT Measures that are included in the project design. If a Planning Charrette was conducted and the DD Form 1391, Tab G, correctly reflects the antiterrorism requirements it can be summarized or referenced in this section to convey the project requirements. In previous program years, a line item was typically added to the project cost to account for AT Measures. This line item was typically 2 of the cost of Primary Facilities. This cost line will NOT be added to the ENG3086 or DD1391 for Antiterrorism/Force Protection Measures (CATCD 88041) when just the Minimum AT/FP standards are required AND threat-specific required Minimum Set-back (Stand-off) Distances are achieved. Primary facility unit costs in the DRAFT PAX Newsletter 3.2.2 now incorporate the normal AT/FP costs. When buildings are 3 or more stories high or the required minimum stand-off distance is not available, add an AT/FP line item cost, not to exceed 1.5% of the Primary Facility cost, for each building for progressive collapse. If the AT/FP features proposed are unique or do not fall within the criteria above, the District must include a strong justification in the PDR and the Data Development Block of the ENG Form 3086 and coordinate approval with the Omaha District, Protective Design Center (PDC). Any correspondence or guidance obtained from the PDC shall be included in the PDR. PDC Point of Contact is Mr. Curt Betts, (402) 221-3817

3.4. Facility Demolition: Include a brief description of any facility demolition that is included as part of the project. If the demolition data in the DD Form 1391, Tab H, is complete and adequate it can be noted in this section. Note if there are special considerations associated with the facilities to be demolished (i.e. asbestos removal, lead based paint, etc). Include a sketch showing the location of the facilities to be demolished in the appendix for Project Sketches. Per ACSIM, in coordinating with the Installation, note the following:

3.4.1. One for one demolition is required for all MILCON projects.

3.4.2. Relocatable facilities are personal property and must be disposed of and funded from Installation dollars.

3.4.3. When the one for one demolition requires demolition outside the footprint of the project, the Facilities Reduction Program cannot be used to cover the SF demolition (outside the footprint) for a programmed MILCON project.

3.4.4. Facilities identified for demolition as part of the one to one demolition policy do not need to be the same catcode as the facility being built.

3.5. Environmental Considerations/Documentation: Provide a general summary statement indicating what specific NEPA (National Environmental Policy Act) documentation is required (whether EIS, REC or EA), **current status, definitive timeline for completion** and way ahead, other environmental issues, and identification of any required waivers and permits.

Need to also identify if the PES (Pre-construction Environmental Survey) has been completed by the installation. If the NEPA and PES actions are incomplete or there are significant issues, District PM should immediately notify HNC CX and RIT for coordination with OACSIM, HQIMCOM, and HQUSACE for resolution. The results of this coordination, the status of NEPA and PES documentation must be included in the PDR. Include a description of any impacts on cultural resources, historic structures, flood plains, wetland or other environmental issues. Note any other unique or installation specific environmental requirements. If available or pertinent, include a sketch showing potential or significant environmental constraints or issues in the appendix for Project Sketches.

3.6. UXO, DDESB, Cultural, Real Estate, etc Issues: If applicable, provide a brief description, status, responsible parties, timelines and way ahead for resolving unexploded ordinance, explosive safety, cultural-sensitive sites, real estate actions, and other issues that are considered show stoppers for project execution/delivery.

3.7. Approvals/Waivers: Briefly describe approvals received or status of COS approval for standard design facilities and other required approvals from affected Federal or state agencies. If project has multiple facilities with different COS involvement, ensure that all COS are engaged and have provided the concurrence required. Projects with sites that may impact an airfield, or any project with airfield pavements, will need to provide evidence of coordination and approval by the Transportation Systems Mandatory Center of Expertise, Omaha District.

3.8. Project Definition Rating Index (PDRI): If a Project Definition Rating Index was developed as part of a Planning Charrette, no further action is required. If a Project Definition Rating Index was NOT developed as part of a Planning Charrette, then initial PDRI assessment will be done as part of the code 3 efforts. Official PDRI rating must be obtained from the USACE PDRI website and then submitted during PDR preparation. The resulting score should be reflected in this section of the document and reported as well in P2.

4. **Project Sketches**

4.1. Project Sketches: The following project sketches have been prepared and are included in the Project Sketches appendix:

4.1.1. [List sketch included in appendix]

4.1.2. [List sketch included in appendix]

4.1.3. [List sketch included in appendix]

4.1.4. [List sketch included in appendix]

Project sketches are intended to compliment and further clarify narrative information included in the Parametric Design Report narrative. These sketches are also intended to assist the cost engineer with validating quantities when preparing the parametric design cost estimate.

These should be simplified sketch drawings used to present the following types of features where appropriate:

- Proposed Site Plan including major project features (facilities, roads, parking, and relationship to surrounding facilities if important).
- Single line floor plans when applicable.
- Proposed Utility connection points, size and capacities of existing utilities estimated size and capacities of new utilities needed for the project (i.e. electric, water, gas, steam, voice and data communication and other utilities).
- Antiterrorism standoff distances.
- Environmental constraints or issues when applicable. If the project had a Planning Charrette, site sketches may already be available for use and further development. All sketches should be high quality, clear, concise and uncluttered by extraneous detail for ease of reading.

Format. Sketch drawings should be presented on 215 mm x 280 mm (8 ½" x 11") letter size sheets or, if necessary, with 280 mm x 430 mm (11" x 17") fold-out sheets, but no larger. A graphic bar scale and North Arrow should be provided on each separate sketch. A site/location plan, utilities site plan, floor plan or plans of the primary facility or facilities should be included, if applicable. A cross-section may be provided if appropriate.

Appendix 1: Project Sketches

Appendix 2: Reference Materials

Appendix 3: Project Correspondence

Appendix 4: Project Delivery Team

(SAMPLE PDT ROSTER)

PDT Members

Name	Role	Office	Tel Number
John Doe	PM	SAM	123-456-7890
Mary Jones	Planner	DPW	123-456-3344
Robert Young	Cost	SAM	123- 456-2587