

SPECIFICATIONS FOR RESTROOM/SHOWERHOUSE SAMPLE

SPECIFICATIONS FOR **DESIGN AND CONSTRUCTION** OF PRE-ENGINEERED RESTROOM AND ADJACENT PAVILION

1.0 **SCOPE**

This specification covers the **engineering**, site prep and **construction** of a pre-engineered site built masonry block, dry stack style restroom building and an adjacent matching wood pavilion. The restroom and pavilion although separate buildings and functionalities, will be located adjacent to one another. This makes it critical that these two structures match in appearance and design. Proposals that do not have matching structures per these specifications will **not** be considered. This restroom shall have a simulated stone and/or wood and/or simulated concrete siding with metal roof. This restroom shall have two community restroom rooms, one for men and one for women, with the third room housing utility/mechanicals. This pavilion roof, framing and stone veneer shall match the restroom that is being specified under this same solicitation. Work will include all **engineering**, site preparation, grading, excavations for these structures, backfill, foundation and pad construction and **building construction**. Successful contractor shall provide specifications of wood, fiber board, simulated stone and exterior hardware within their proposals.

2.0 **SPECIFICATIONS**

ASTM	Concrete Aggregates
ASTM C39	Method of Test for Compressive Strength of Cylindrical Concrete Specimens
ASTM C143	Method of Test for Slump of Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C192	Method of Making and Curing Test Specimens in the Laboratory
ACI 1211.1	Recommended Practices for Selecting Proportions for Normal and Heavyweight Concrete

3.0 **RESTROOM DESIGN CRITERIA**

The restroom building will be designed to meet the following criteria. Successful bidder will provide calculations and **Engineer's stamped drawings** at the time of contract award or upon request by the Government.

A. Snow/Wind Load

1. The restroom building will withstand a snow load that meets the maximum regional requirements found locally for the installation location.
2. The restroom building will withstand the effects of the applicable standard wind load requirement found locally for the installation location.

B. Additional Design Standards

1. The restroom building will meet the requirements of the American with Disabilities Act Requirements and Uniform Federal Accessibility Standards as of the date of these specifications.
2. The restroom building will be **site built**, of dry stack split face block, rebar reinforced and fully grouted and have a colored metal roof.
3. The restroom will have a minimum 6 foot roof extension the entire width of the building and constructed with fir or cedar wood components. The extension will have wood columns and wood rafters, with beams and decorative anchors and fasteners. Wood columns will have stone veneer post wrap which will match the same treatment used on the lower level of exterior walls. Ceiling of the roof extension and exposed eaves and gable overhangs will have 2X6 tongue and groove Douglas fir with v-edge. Roof extension and all wooden

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components will have sealers, color treatments and any other types of paint/sealer required by the manufacturer.

4. Lower level of exterior walls will be finished with Owens Corning simulated stone (to be selected by Government upon contract award). Mortar to match the simulated stone will be installed in all joints.
5. Fiber cement board and batten siding pattern (color and type to be selected by the Government upon award of contract) will be placed above the simulated stone and below the roof, using normal construction techniques to include sealing all areas requiring flashings and sealants.
6. Restroom will have kick proof wall vents on each side and gable vents. Color of vents will be powder coated black and shall include insect screens.

C. Structure Configuration

1. The restroom will be designed and constructed to have a minimum of three separate rooms, one for men, (community style) one for women, (community style) and one housing the utility/mechanicals. This structure shall be site built and all materials, transportation and labor included in this contract, and shall be furnished by contractor: the engineering, design and placement of all concrete footings and concrete slab, a sidewalk that shall encompass the entire structure, that shall support the placement and construction of dry stack, split face block, with full webs for structural reinforcement of rebar with each web filled completely with concrete grout, and each block being standard nominal size of 8" height, 8" width, and 16" in length.

There shall be three exterior lockable doors to provide access to the three individual rooms. The men's room shall be constructed with the following: One hand dryer, one ADA accessible sink, one low rise urinal, one ADA accessible toilet stall. The women's room shall be constructed with the following: One ADA accessible sink, one hand dryer, one individual toilet stall of standard dimension and one ADA accessible toilet stall.

The third room shall be the utility/mechanical room.

Each main room/compartments area will have a floor drain, placed centrally. The floors in each room/compartments must be sloped adequately to drains so that all water is distributed fully to drain, and does not run out of compartment or pool in an area within the compartment away from each drain.

Toilet compartment utilities will be enclosed in a service chase. The chase will run full length between the two sets of compartments. This chase shall provide access to all electrical panel boxes, plumbing and ventilation equipment, valves, etc. All main rooms/compartments will be separated from floor to ceiling with dry stack split face block interior walls. Interior walls will be smooth finish with white latex epoxy paint.

2. All exterior doors and frames shall be powder coat or black finish; shall be equipped with stainless lever handle passage handles and deadbolt locksets. Men's and women's restroom/shower house compartments shall be furnished with keyed vandal resistant deadbolt locksets on interior. Locksets shall be furnished with replaceable style cores, "WR" style. All doors shall be equipped with stainless ball bearing hinges, and stainless kick and push plates on interior and commercial duty door closures.
3. Provide all electrical components to meet National Electric Code Standards (the power supply for this restroom is from Beaver Dam), duplex GFCI electric outlets, according to National Electric Code, at each sink site, including one in chase room.
4. Provide one interior hose bib in utility chase, and one on exterior of structure, hose bib exposed to the general public will be provided with vandal proof removable key design.

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5. All toilets and urinals shall have individual partitions shall be constructed completely of HDPE materials.
6. Package shall be equipped with gable style metal roof, 4:12 minimum slope equivalent or equal to “Fabral Delta Rib”. Include 4 individual skylights, 2 for the men’s side and 2 for the women’s side.
7. The concrete mix will contain cement based waterproofing finish shall be mixed (per manufacturer’s instructions) with liquid bonding admixture. Apply enough coats to obtain proper coverage, to the surface of all interior block
8. Roof panels will be prefabricated, structural, insulated panels. Interior and exterior sheathing is 7/16” Structural II OSB. Insulation is 5 ½” – R-23. Panels include all necessary hardware and fasteners for installation on building walls.
9. Interior vaulted ceiling surfaces are pre-finished with white FRP (fiberglass reinforced panels), .090” thick. FRP is pre-installed with screws. FRP trim and roof panel trim will be white galvanized steel.
10. Concrete will contain a minimum of cement to meet engineering design.
11. Coarse aggregates used in the concrete mix design will conform to standard designs, and must meet pre-engineered requirements.
12. Minimum water/cement ratio will not exceed .45. Slump to be maintained between 3” and 4”. Chemical admixtures may be used to increase slump, although not to the point of segregation.
13. All mixtures will also conform to ASTM C260 and ASTM C494, Type A.
14. All concrete placed shall be consolidated by the use of mechanical vibrators. No excess honeycombs or other voids shall be allowed in any concrete placed.
15. Finish on interior floor will be magnesium floated and fine finish troweled, additionally, each section or stall must be sloped to individual floor drains, and all interior floors (including base tile trim) shall be top finished with quarry tile, (provide color and size samples) of appropriate texture to enable ease of cleaning but prevent slips/falls to users.
16. Exterior surfaces of roof/roof trim will be metal, provide color samples.
17. Any item/components that do not meet enclosed specifications or are found to affect the structural integrity/longevity of the structure will be rejected.
18. Exterior sidewalks shall meet all ADA requirements and be a minimum of six feet wide and surround the entire building.
19. Exterior of building will have stone wains coating to a height of 40 inches with fiber cement board vertical board and batten siding above.

D. Colored concrete and reinforcing

1. All reinforcement will be new, free of all contaminants and conform to ASTM A615. All welded wire fabric will conform to ASTM A185.
2. All steel reinforcement will be engineered to meet design criteria.

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3. Use full lengths of reinforcement if possible, otherwise, splice laps a minimum 12" for #4 bar or smaller, or larger than #4, a minimum lap of 18"
- E. Sealer, Grout and Caulk
1. Exterior and interior surfaces of masonry will be sealed with a penetrating clear concrete/masonry sealer.
 2. Placement of concrete grout will be a non-shrink variety.
- F. Paint/wall finishes
1. All paints will conform to Federal specifications.
 2. Interior Paint shall be white latex epoxy applied after all concrete and blocks are sealed.
 3. Exterior paint will be latex and of type specified by siding manufacturer. Government will select the color upon award.
- E. Grab Bars
1. Grab bars will be stainless steel, able to withstand standard loading applicable to ANSI.
- G. Toilet Paper Dispenser
1. Dispensers will be constructed of stainless steel, and be lockable. Two dispensers will be installed within each restroom stall and combined they must be able to contain a minimum 4 rolls of toilet paper and withstand a minimum 300 lb. top loading.
 2. Women's toilet shall include a sanitary napkin disposal in each stall.
- H. Exterior steel doors
1. Entry doors will be flush panel, powder coat steel, black finish.
 2. All exterior doors and frames shall be powder coat dark black finish style. All doors shall be equipped with stainless ball bearing hinges, and stainless kick and push plates on interior and commercial duty door closures. Each door shall have a men' and women's sign at each door.
 3. All toilet stalls will be equipped with a stainless towel/coat hooks.
- I. Locksets
1. ADA Push Paddles, non-locking.
- J. Dead Bolt
1. Commercial grade, stainless finish, keyed on both interior and exterior side of door.
- K. Door Stop
1. Dome style, stainless, commercial grade.
- L. Mirrors
1. Each sink will have a mirror, constructed of stainless steel.
- M. Door Sweep/Toe Kick
1. Each door will be provided with a brush adjustable door sweep, and stainless interior toe kick plate, standard height and width.

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N. Windows

1. Install polycarbonate window glazing, pebble or similar translucent finish. Minimum 2 per each restroom compartment, installed in gable ends.

O. Plumbing

1. Waste and vents will be PVC plastic, and will be plumbed to meet Uniform Building Codes.
2. Pressured water lines will be copper. Stainless ball valve will be provided at the inlet end of the water line. Water lines will be sized and placed to enable proper operation of all components. All plumbing will be concealed in the service area. Install shutoffs at each fixture location, vandal resistant, of 1/4" turn style, brass construction, and drain cleanouts per Uniform Building Codes.
3. Water shall be non-heated. (no water heater installation).

P. Toilet/Sinks

1. Toilets will be constructed of white vitreous china, floor mount, and commercial grade.
2. Toilets and urinal will have automatic flush valves.
3. Urinal will be constructed of white vitreous china, wall hung and commercial grade.
4. Sinks will be constructed of white vitreous china with back splash.
5. Sink faucets will be heavy duty commercial style and shall have automatic shut off operation.
6. Sinks shall **not** include soap dispensers, and toilets shall **not** include seat cover dispensers.

Q. Electrical

1. All electrical wiring will be enclosed in conduit, surface mounted in chase, or placed concealed in user's area. All wire will be copper.
2. Size of panel shall meet minimum NEC, square D QO panel or equivalent. Panel shall be large enough to provide power to the adjacent matching shelter.
3. Chase shall have adequate lighting, with bulb protector per OSHA.
4. Exterior building lights, 4 each, 35-watt high pressure sodium lights or equivalent, vandal resistant.
5. Interior building lights, minimum required per light manufacturers for interior space, vandal resistant.
6. Each room shall be equipped with one exhaust fan.
7. Each sink shall be equipped with commercial grade electrical hand dryer.

4.0 FINISH AND INSTALL

A. Additional requirements.

1. Interested bidders will supply Government with detailed plans and submittals for all items specified herein. Successful bidder must provide Government a detailed delivery and **construction** schedule within 7 days after award date. **Successful bidder will deliver and install this package NLT August 30, 2011, install includes the facility to be in fully functional condition.** Included in this contract is **all engineering**, site preparation, shipping, furnishing of all materials, off loading the materials, all concrete foundations and concrete slab, and **construction** of the split face block building package, tying in of all utilities and testing of all mechanical systems. All facilities must be in working order upon completion of this install. All waste materials will be disposed of according to all Federal, State and local regulations by contractor. All furnished items, materials will be fully warranted, regardless of needed repair, whether labor, parts, or replacement, for one full year. This time period begins once the facility is installed on site and becomes fully operational.

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5.0 PAVILLION DESIGN CRITERIA

The pavilion building will be designed to meet the following criteria. Successful bidder will provide calculations and **Engineer's stamped drawings** at the time of contract award or upon request by the Government.

R. Snow/Wind Load

1. The pavilion building will withstand a snow load that meets the maximum regional requirements found locally for the installation location.
2. The pavilion building will withstand the effects of the applicable standard wind load requirement found locally for the installation location.

S. Additional Design Standards

1. The pavilion building will meet the requirements of the American with Disabilities Act Requirements and Uniform Federal Accessibility Standards as of the date of these specifications.
2. The pavilion building will be site built, of dry stack split face block, rebar reinforced and fully grouted on each post, and have a colored metal roof.
3. The pavilion will be of open configuration, and constructed with fir or cedar wood components. The pavilion will have wood columns and wood rafters, with beams and decorative anchors and fasteners. Wood columns will have stone veneer post wrap which will match the same treatment used on the lower level of exterior walls and posts of matching restroom. Ceiling and exposed eaves and gable overhangs will have 2X6 tongue and groove Douglas fir with v-edge. Roof extension and all wooden components will have sealers, color treatments and any other types of paint/sealer required by the manufacturer and Government.
4. Lower level of exterior posts will be finished **with Owens Corning simulated stone** (to be selected by Government upon contract award). Mortar to match the simulated stone will be installed in all joints.

T. Structure Configuration

1. The pavilion will be pre-engineered, shall be site built and all costs included in this contract. The contractor shall furnish: **the engineering, design** and placement of all concrete footings and concrete slab, **sidewalk** that shall encompass the entire structure, that shall support the placement and construction of dry stack, split face block, with full webs for structural reinforcement of rebar with each web filled completely with concrete grout, and each block being standard nominal size of 8" height, 8" width, and 16" in length.
2. Provide all electrical components to meet National Electric Code Standards (the power supply for this pavilion is from Beaver Dam), duplex GFCI electric outlets, according to National Electric Code, and adequate lighting package.
3. Package shall be equipped with gable style metal roof, 4:12 minimum slope equivalent or equal to "Fabral Delta Rib".
4. The concrete mix will contain cement based waterproofing finish shall be mixed (per manufacturer's instructions) with liquid bonding admixture. Apply enough coats to obtain proper coverage, to the surface of all block
5. Roof panels will be prefabricated, structural, insulated panels. Interior and exterior sheathing is 7/16" Structural II OSB. Insulation is 5 1/2" – R-23. Panels include all necessary hardware and fasteners for installation on building walls.

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6. Concrete will contain a minimum of cement to meet engineering design.
7. Coarse aggregates used in the concrete mix design will conform to standard designs, and must meet pre-engineered requirements.
8. Minimum water/cement ratio will not exceed .45. Slump to be maintained between 3" and 4". Chemical admixtures may be used to increase slump, although not to the point of segregation.
9. All mixtures will also conform to ASTM C260 and ASTM C494, Type A.
10. All concrete placed shall be consolidated by the use of mechanical vibrators. No excess honeycombs or other voids shall be allowed in any concrete placed.
11. Finish on floor will be magnesium floated and fine finish trowel and broom, additionally, each section must be sloped to prevent collection of water or pooling.
12. Exterior surfaces of roof/roof trim will be metal, provide color samples.
13. Any item/components that do not meet enclosed specifications or are found to affect the structural integrity/longevity of the structure will be rejected.

U. Colored concrete and reinforcing

1. All reinforcement will be new, free of all contaminants and conform to ASTM A615. All welded wire fabric will conform to ASTM A185.
2. All steel reinforcement will be engineered to meet design criteria.
3. Use full lengths of reinforcement if possible, otherwise, splice laps a minimum 12" for #4 bar or smaller, or larger than #4, a minimum lap of 18"

V. Sealer, Grout and Caulk

1. Exterior surfaces of cement/masonry will be sealed with a penetrating clear concrete/masonry sealer.
2. Placement of concrete grout will be a non-shrink variety.

W. Paint/wall finishes

1. All paints will conform to Federal specifications.
2. Exterior paint will be latex and of type specified by siding manufacturer. Government will select the color upon award.

X. Electrical

1. All electrical wiring will be enclosed in conduit, surface mounted in chase, or placed concealed in user's area. All wire will be copper.
2. Size of panel shall meet minimum NEC, square D QO panel or equivalent. Panel shall be large enough to provide power to the shelter.

6.0 FINISH AND INSTALL

A. Additional requirements.

1. Interested bidders will supply Government with detailed plans and submittals for all items specified herein. Successful bidder must provide Government a detailed delivery and **construction** schedule within 10 days after award date. **Successful bidder will deliver and**

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install this package NLT August 30, 2011, install includes the facility to be in fully functional condition. Included in this contract is all engineering, site preparation, shipping, furnishing of all materials, off loading the materials, all concrete foundations and concrete slab, and construction of the pavilion package, tying in of all utilities and testing of all mechanical systems. All facilities must be in working order upon completion of this install. All waste materials will be disposed of according to all Federal, State and local regulations by contractor.

2. All furnished items, materials will be fully warranted, regardless of needed repair, whether labor, parts, or replacement, for one full year. This time period begins once the facility is installed on site and becomes fully operational.