

School Building Authority of West Virginia
PROJECT SUBMISSION FORM – DESIGN DEVELOPMENT PHASE
SBA FORM 302-C

The Design Development Documents shall illustrate and describe the development of the approved Schematic Design Documents and it shall consist of documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the project as to the architectural, structural, mechanical and electrical systems, and such other information as may be appropriate. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish in general their quality levels.

SBA County/Architect (*Check the applicable boxes*)

- Please check this box only if all previous SBA review comments have been addressed.
- Revised Program of Spaces reconciliation document if changes are required from the Schematic Phase submission.
- A narrative of the school’s proposed technology plan that describes how the technology is to be integrated into the daily lesson plan by the instructors and how the technology will be utilized and where major technology components will be located. Please refer to the SBA Quality and Performance Standards Section for further assistance.
- Provide verification that the available utility services are adequate to support the proposed building requirements.
- Outline specification that identifies the major materials and systems and establishes in general their quality levels. This document should include but is not limited to a detailed overview of all major building components and systems per division of work specific to the project. Please refer to the current SBA Quality and Performance Standards in order to establish minimum requirements. If desired, include a request for deviations from the SBA Standards with the submission information.
- (*Where applicable*) Provide the project construction analyst or construction manager, an electronic copy of the Design Development document.
- The designers shall submit a written narrative confirming the design intent from the schematic phase, which will provide the logic and background for the mechanical system chosen. The design intent shall take into consideration the county maintenance personnel’s ability to operate and maintain specific HVAC systems including the building automation system (BAS). If this system has changed from the list of systems described in the Schematic Design phase, please provide reasoning for this change.
- Provide life cycle cost analysis (if required by of the SBA Quality and Performance Manual)
- (*Where Applicable*) Final List of Green School components. A separate LEED for Schools Matrix may be attached.

The Design Development Submission shall include, but is not limited to, the following:

SBA County/Architect

- Cover Sheet:**
 - List of all drawings included with the submission
 - List of abbreviations and project specific typical notes
 - Map of general project location with north arrow
 - Breakdown of building square footage by floor

- Site Design drawings shall include:**
 - Key Plan
 - Property lines
 - Buildings (existing and proposed)
 - Parking and paving including exterior steps and handicapped ramps, indicate locations of asphalt and concrete pavements, including curbs and sidewalks
 - Fencing
 - Storm Water Management
 - Spot Grades at all entrances and new building corners
 - Grades at drives and parking
 - Locations of power, water, communications, sewer and/or other necessary utilities

- Structural Drawings with key plan shall include:**
 - Key plan
 - Overall dimensions around the building
 - Diagrammatic layout of floor and roof framing plans showing major structural components including sizes/weights
 - Descriptions of all floor deck and concrete systems
 - Proposed locations of retaining walls or non-standard foundation or framing systems (if any)
 - Location of columns and bearing walls with dimensions needed to locate them
 - Bearing height of structural elements
 - Finish floor elevations
 - Designers shall include a narrative describing structural systems for all footings, foundations, floors and roof areas including proposed bottom of footing elevations.

- Architectural Drawings shall include:**
 - Key plan
 - Show all columns, exterior walls, interior partitions doors, door swing, windows, stairs, handrail, guard rails, elevators, interior frames and openings, casework counter tops and built in items in plan.
 - Seating capacities of gymnasiums and auditoriums.
 - Room names and numbers.
 - Door numbers
 - Overall building dimensions around the building
 - Column line dimensions tied to exterior wall dimensions.

- A minimum of two continuous string of dimensions (longitudinally and laterally) through the building that equals the overall dimensions shown including the exterior wall thickness.
- Dimensions at stairs and ramps
- Building section marks
- Building elevation marks
- Location of roof drains, gutters and downspouts.

- Parapets, ridge lines, valleys, and hips with arrows to indicate the direction of slope.
- Roof plan (showing preliminary roof/overflow drain locations)
- Roof access, hatches, doors etc.
- Include a preliminary finish schedule of all floor, wall and ceiling finishes.

- Building Elevation Drawings:**
 - Show outline of building walls and roofs
 - Finish grade line
 - Windows and doors
 - Vertical dimensions with finish floor & roof bearing heights.
 - Roof pitch
 - Note materials and indicate extents.
 - Show building section marks.

- Building and Wall Section Drawings:**
 - Show the outline of building items that the section plane cuts through, including roofs, exterior walls, foundations, footings, floors, beams, joist, windows and door openings ceilings, bulkheads, insulation and finish grade lines.
 - Vertical dimensions with finish floor heights and roof bearing heights.
 - Note direction and percentage and/or pitch of roof slopes.
 - Note all materials

- Reflected Ceiling Plan:**
 - Key plan
 - Show grid, bulkheads, changes in elevations, materials, and ceiling mounted signage, HVAC equipment and lighting locations.

- Plumbing Drawings:**
 - Key plan with legend
 - Provide preliminary plumbing fixture schedule and equipment schedules for all plumbing equipment (Makes and model, if available)
 - Show Plumbing fixture and equipment locations
 - Locate main water line, include sizing
 - Locate main sewer and vent lines, include sizing
 - Locate roof drain lines, include sizing
 - Identify where water, sewer and storm enter and exit the facility.

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SBA County/Architect

- Fire Protection Drawings (when applicable):**
 - Key Plan with legend
 - Locate main water line, include sizing. Locate main equipment and risers.

- HVAC Drawings (Provide life cycle cost analysis, where applicable):**
 - Key plan with legend
 - Provide preliminary equipment schedules with sizes and quantities from design basis shown. (Manufacturer make and model, if known)
 - Locate all major HVAC equipment
 - Single line diagram of ducts and pipes sufficient to show zone locations, including preliminary sizing for all ductwork mains and piping system main lines on plan view.
 - Location of roof top equipment, fans, HVAC, etc. Ensure all roof top equipment locations allow for proper clearances in relation to parapet walls, exhaust vents & intake louvers.

- Electrical Drawings:**
 - Key plan
 - Power plan with legend showing locations of main and distribution panel boards and outlets, as well as service entrance and transformer locations.
 - Emergency power system (generators, ATS and misc. systems)
 - Lighting plan with legend showing the location of lighting, include fixture type, controls, dimming systems, exit lighting and emergency egress lighting. Preliminary fixture schedule showing all fixture types from the design basis. (Manufacturer make and model, if known)
 - Communications plan with legend showing location of fire alarm pull stations, hardwired computer outlets, phone outlets, CCTV locations and TV monitors. (where applicable)

- Power, lighting and communication layouts in classroom areas can be shown in a typical classroom layout. All other remaining areas should be shown as designed:**
 - Site Utility service connections and details
 - Technology documents showing cable tray, outlet locations, main technology closets and outlet details.
 - Technology documents showing video, clock, sound, paging, security, CCTV and wireless outlets and outlet details. (where applicable)

- Construction Cost Estimate by Division of Work:**
 - Architect's cost estimate. Include all proposed off-site utility extension access roads, soft costs and contingency.
 - If a deficit exists in the detailed cost estimate, a letter from the grant recipient committing additional local funding needed to solidify the deficit, if the additional funds were not previously committed at the Schematic Design Phase.

