



Student  
Chapters

**NAHB Student Competition**  
**Held in conjunction with the 2025 NAHB International Builders' Show**  
**Problem Description Secondary Programs**

Welcome to the 2025 NAHB Student Competition. Developed by the NAHB Student Chapters Advisory Board, the NAHB Student Competition is the highlight of the International Builders' Show (IBS) for student members. This year's problem will make for an exciting and challenging 2025 NAHB Student Competition.

The 2025 competition allows teams from Secondary Programs to compete in one of two tracks: Architecture or Construction Management. The Architecture track will develop a working set of drawings. The Construction Management track will not require a set of working drawings but will place greater emphasis on the estimating and scheduling for a more complex problem.

The information that you will use to develop your project and presentation is listed below and can be accessed through the NAHB Student Chapters web page [Secondary Problem](#). The Rules and Guidelines document includes the sample grading summary that the judges will use to score your project and presentation. *Please read all documents thoroughly.* If you have problems viewing any of the provided items, **please contact [StudentChapters@nahb.org](mailto:StudentChapters@nahb.org)**:

- Rules and Guidelines
- Problem Description (included in this document)
- Plans: **Floor Plans, Elevations, Site Survey**
- **Description of Materials**
- Estimate Template
- [Sponsor website](#)

**Read and follow the instructions carefully and fulfill all the required elements of the exercise. Going beyond the required elements of the exercise, while it may show initiative, may hurt the overall team score if the basic exercise is not executed well.**

**I. Problem**

The project is in **Mexico Beach, Florida**. Your team is an outside construction management contractor making a proposal to America's Home Place to build the assigned **Ashely 'A' plan** on a pre-graded lot **located within the City of Mexico Beach, Florida**. Your team must **recreate** a set of working drawings (Architecture) or details specified below (Construction Management). In addition, your team must create a detailed cost estimate, and a complete construction schedule for the **single story floor plan provided**.

Teams on the Architecture track must recreate a complete set of working drawings, create a detailed materials and labor estimate, and a complete construction schedule for the **single-story floor plan provided. Copying and pasting is not allowed.**

Teams on the Construction Management track will recreate the details specified below, create a detailed materials and labor estimate, and a complete construction schedule for the **single-story floor plan provided. Copying and pasting is not allowed.**

## **II. Design Criteria**

The plan must allow for all items in the Description of Materials for the Mexico Beach Home. **Easements and setbacks are shown on the site survey plan.**

## **III. Problem Location**

The project address is **62 Azalea Drive, Mexico Beach, FL 32410**. The lot is graded, and the improvements are complete (streets, curb and gutter, and utilities to the lot).

## **IV. Applicable Building Codes**

The plans shall be recreated to meet applicable building codes for **Mexico Beach and the State of Florida.**

## **V. Specifications and Finish Schedules** (See Specifications provided)

## **VI. Deliverables**

### **A. Drawings**

#### 1. Architecture Track

Each team must **recreate** a complete set of working drawings which are sufficient to allow a building permit to be obtained. **Your team should not change the shape of the home or the size and layout of rooms. Points will be deducted if these are altered. Copying and pasting is not allowed.**

Working drawings shall include the following:

- Cover Sheet
- Site Plan showing location of the home and utilities
- Foundation Plan(s) and Details
- Floor Plan(s) and Framing Details
- Elevations
- Area calculations for heated and non-heated floor space under roof

- Roof Plan and Details
- Building Sections (as required)
- Drawings for Electrical, Plumbing and HVAC are **not** required.

Drawings shall be drafted using the following architectural standards:

- Sheet Title Block: Title block design shall be the same for each sheet, and include the school's name, address, phone number, drawn by, checked by, revision space, sheet number, date drawn, date checked, sheet name and plan name.
- Sheet Size 22x34: Ensure that if judges print 11x17 (HALF SIZE) copies of the plans, they print out to exactly one-half scale
- Dimensioning shall be consistent with industry practice
- Dimension and Annotation text height shall be 1/8" (minimum). Text on half-size drawings must be readable by judges
- Floor plans shall be drawn to a scale of 1/4" = 1'-0"
- Details shall be drawn to show complete information. Consider 1" = 1'-0" a minimum scale
- Do not dimension in increments less than 1/4" (except diagonal or squaring dimensions)

## 2. Construction Management Track

Each team must recreate details and drawings to assist in developing the estimate and documenting the quantities. **Your team should not change the shape or room configuration of the floor plan. Points will be deducted if these are altered.**

**Copying and pasting is not allowed.**

Drawings shall include the following:

- Site Plan showing the location of the home and utilities
- Exterior, Load-Bearing Wall Section from the footing to the roof describing all materials including the R-values (1 Story Wall Section On Slab).
- 1 Story Monoslab Detail
- Rafter Tail at Siding Wall
- Corner Framing Details
- Column Porch Soffit Detail

- Horizontal Strapping Detail @ Corners
- Window Installation (Typical)
- Other drawings to assist in developing and documenting the estimate, as required
- Drawings must be well organized, neat and legible. They may be drawn using a CAD program, other drawing software or by hand. Hand-drawn sketches should be created using a straight-edge and appropriate tools to ensure lines are perpendicular. Sketches should be drawn to scale with the scale indicated on the drawing.

## **B. Material and Labor Estimate**

Each team must complete a detailed estimate of the required material and labor for their plan.

- The estimate must be market-based, i.e., adjusted to the market area.
- The estimate should include an allowance for Electrical, Plumbing and HVAC costs. This may simply be based on the square footage of the house.
- The estimate will be judged on clarity, accuracy, and overall conclusion. Provide sufficient detail so that judges can check your calculations. List assumptions in the notes section of the estimate template.
- The estimate must be completed using sheets from the file *2025 NAHB Estimating Template.xlsx*. This is just a template and teams are expected to edit it as they see fit. Teams enter the takeoff quantity, unit cost, and amount total for each item based on the unit of measure provided. Format the sheets with page breaks or blank rows before printing to provide a well- organized copy for the judges. All columns must print on one sheet. Each sheet MUST include the team/school name and page number.
- Each team must justify that the quantities and pricing are reasonable for the problem. Document the sources used for this justification

## **C. Construction Schedule**

- Each team must produce a complete construction time schedule for the project showing a logical construction sequence (i.e., footings before trusses).
- The schedule shall include activity durations and dependencies.
- The schedule will be judged on clarity in the construction process and understanding of lead times. Teams should focus primarily on process (dependencies) and less on durations
- The schedule should include the procurement of the following long lead time items: **Roof Trusses, Cabinets, Flooring, Garage Doors, and Countertops.**
- Each team must justify that the schedule is reasonable for the solution to the problem. Justification sources must also be documented.
- Plan for construction to begin **4/1/2025.**

## **D. Presentation**

**February 24 - February 26, 2025:** The 2025 competition presentations resume to an in-person format at IBS. **There will not be a virtual presentation option.** Every effort will be made to schedule presentations according to the stated preference, but NAHB Student Chapters cannot guarantee a particular time slot. Teams will be notified of the preliminary schedule after the competition entry deadline.

Each presentation should include a description and explanation of their drawings, estimate and schedule. The presentation will be made to a panel of industry professionals, including the project sponsor, [America's Home Place](#). The format will be a 10-minute presentation followed by questions.

The following elements shall be included in the presentation to the judges:

- Introduction of your team members and the school's name
- Overview of the drawing details
- Overview of the cost estimate
- Overview of the schedule and possible issues or problems that may come up during this project

***It is highly recommended that all team members participate in the presentation and answer the judge's questions.***