2024

Student Steel
Bridge Competition

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ASCE AMERICAN SOCIETY
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Student Bridge Scoring
Spreadsheet User Guide

INSTRUCTIONS FOR USE

Version 06

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Introduction

This official scoring spreadsheet is to be used at all regional competitions and the National Finals. It is a Microsoft Excel Visual Basic macro driven tool, and the **use of Excel 365 is highly recommended**. Click the buttons below to download the spreadsheet and the accompanying user's guide.

The host school should submit the completed scoresheet to ssbcscorekeeper@aisc.org immediately following the competition. The Rules Committee will use this spreadsheet to resolve appeals and to issue invitations to the National Finals. Note that no school at a regional competition will be invited to the National Finals unless this spreadsheet has been submitted.

Overview

The Student Steel Bridge Scoring Spreadsheet (henceforth referred to as "Scoring Spreadsheet") is a Microsoft Excel Visual Basic macro driven tool that is used to streamline the scoring process for both Regional and National competitions. In almost all cases, macros define the behavior of the Scoring Spreadsheet while calculations of values are performed using standard Excel formulas which are dynamically injected once all competing schools have been entered. The Scoring Spreadsheet also makes extensive use of both named variables and tables.

Warning: Users should make no changes to named variables, tables of populated formulas (e.g., renaming, deleting, or adding) or sheet names (i.e., worksheets). You should also never need to manually unhide any hidden worksheets.

Note: You will not be provided any access to the VB code used in this Scoring Spreadsheet.

Reporting Spreadsheet Errors

Please report all potential spreadsheet errors AS SOON AS POSSIBLE to ssbcscorekeeper@aisc.org.

If you find an error in the computations that must be fixed, you must contact the developer ASAP. Please report the error right away to ssbcscorekeeper@aisc.org so that the spreadsheet can be fixed.

Updated versions will be posted on the Competition Guide website: www.aisc.org/ssbc.

First Run

The Scoring Spreadsheet will not operate unless its macros have been enabled. By default, Excel will disable macro execution and it is the user's responsibility to enable them when they first open the Scoring Spreadsheet. When you open the Scoring Spreadsheet, a yellow message bar will appear with a shield icon and the Enable Content button (see Figure 1). For the Scoring Spreadsheet to properly operate, you will need to make sure that you have enabled macros by pressing the "Enable Content" button located in the yellow message bar.
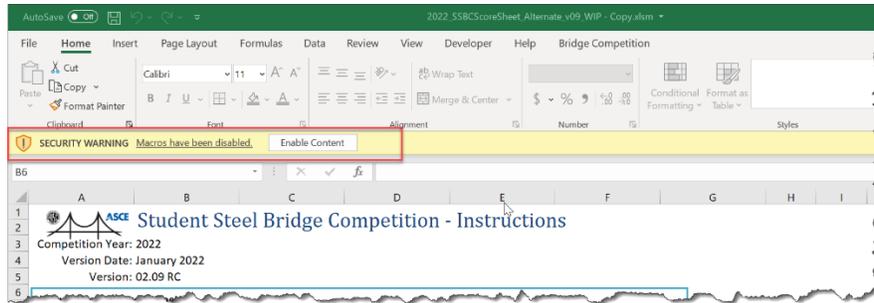
Figure 1: Excel Macro Security Warning.

If you do not see the "Enable Content" message after opening the Excel file, you may need to first "Unblock" the file. Close Excel and then open Windows Explorer. Right clicking on the Excel file in Windows Explorer and selecting "Properties" (Figure 2) from the pop-up menu.

Figure 2: File Properties Menu.
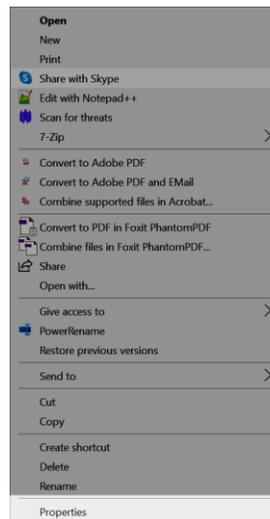
After selecting "Properties", you will see a properties dialog (Figure 3). At the bottom of the first tab, "General", you will see a check box called "Unblock". Check this box, press "Apply" and then press "OK". Open the spreadsheet again and you should see the "Enable Content" option and/or macros should now be enabled.

Figure 3: File Properties Dialog.
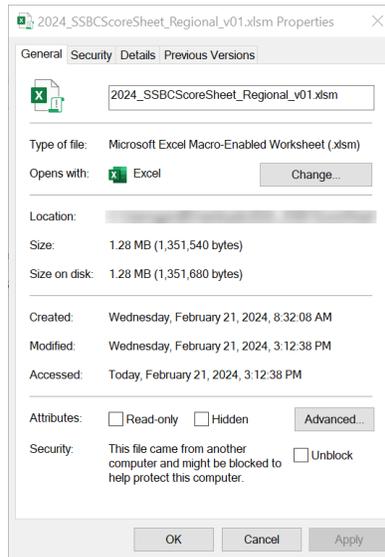
After enabling the Scoring Spreadsheet macros, you will see an alert box that provides you with some basic direction (See Figure 4). Once you have read these directions, press "OK" to continue. This dialog will only appear if you are opening the spreadsheet for the first time or if you have performed a reset. At this point, the Scoring Spreadsheet will be ready to use, accept competition information and calculate results.
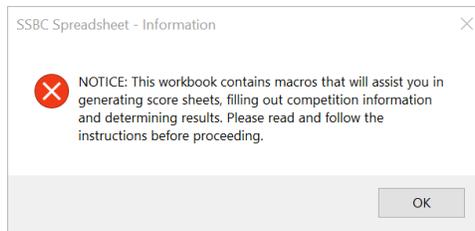
Figure 4: First Run Alert Box.

Note: You should verify that you have the names of all schools that plan on competing before you start using the spreadsheet. Once you have entered the competing school names and executed the steps that populate the remaining sheet and tables, you will be unable to add new or remove existing schools without resetting the Scoring Spreadsheet and starting over again.

Spreadsheet Layout

The Scoring Spreadsheet generally operates like any ordinary Excel spreadsheet. It has been organized to facilitate the following steps:

1. Entry of competition information.
2. Entry of competing school names.
3. Printing of aesthetics judging forms.
4. Printing of competition judging forms.
5. Entry of competition judging forms.
6. Calculation of competition scores.

7. Determination of final competition results order.
8. Printing of results.

You will find worksheets that represent the various stages of the competition, score sheets for each competing school, and intermediate and final results. Additional worksheets will be unhidden or generated as you enter more information and progress through entry steps. The visible sheet tabs can be groups into three categories: 1) input initialization, 2) input judging form information and 3) output results. The initialization tabs will be used to populate the spreadsheet and create individual competition judging form input tabs. A competition judging form tabs will be created for each school you added as a participant in the competition. The short name for the school will be used to name the tab. Each short name must be unique and is auto populated by the spreadsheet. You do not need to enter short names for any schools.

Warning: Many of the sheets within the Scoring Spreadsheet are hidden and later exposed as you enter information. However, there are several sheets that remain hidden and should not be altered in any way.

Warning: Many of the tabs are automatically named by the spreadsheet and that name is referenced elsewhere within the Scoring Spreadsheet. You should never change the name of any tabs in the Scoring Spreadsheet.

Note: The order of the sheet tabs may differ from what is shown in Figure 5. However, the naming and intent remains the same.

Figure 5: Scoring Spreadsheet Common Sheets.

Access to global functionality and utilities has been provided in the Excel Ribbon Bar. You will find a tab called "Bridge Competition". When you select this tab, you will see groups of tools that are specific to the Scoring Spreadsheet (see Figure 6). These groups are "Print Forms", "Print Results", "Utilities", "Interoperability", "School Navigation" and "Help". If you hover your mouse pointer over any of the groups of icons, you will see a pop-up appear that provides simple descriptions.
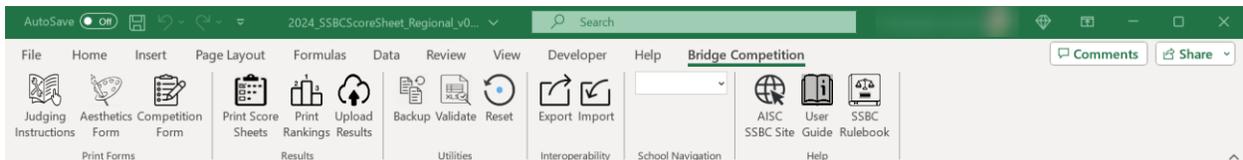
Figure 6: Bridge Competition Ribbon Tab.

Print Forms: This group contains icons for printing pre-competition forms and instructions.

Print Results: This group contains icons for printing post-competition results.

Utilities: This group contains icons for spreadsheet specific utilities.

Interoperability: This group provides icons for importing and exporting score sheets as XML. Currently, only export is available.

School Navigation: This group provides a picklist that displays the names of the competing schools. It provides easier navigation to locate and view the competition data sheet for a specific school. While the short name for each school is used for naming each competition data worksheet tab, the picklist will show the full name for the competing schools. When you select a name, you will immediately be brought to that school's competition data sheet tab. This should eliminate the time spent searching for the correct data worksheet tab for larger competitions. Note that the pick list is not populated until you have entered all competing school names on the "Participants" tab and selected "Continue".

Help: This group provides a link directly to the AISC Student Steel Bridge Competition website where additional helpful information can be found, the current year's rules book and this user's guide. Note that these require that you have internet access.

Cells have been filled with different colors to indicate whether they are input fields, calculated values, or status fields. A color key can be found below in Figure 7.
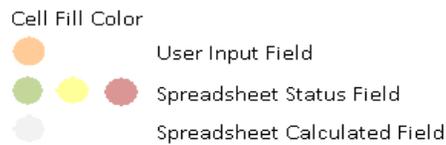
Figure 7: Cell Fill Color Key.

Warning: All sheets within the Scoring Spreadsheet have been protected to prevent inadvertent changes that may break the spreadsheet or cause unexpected results. This means that you will only be able to select and edit cells that are unlocked. While this protection is not password based and any sheet can be manually unprotected, it is inadvisable that you do so.

Use Instructions

The following section outlines the steps to properly operate the Scoring Spreadsheet for a competition. Every competition is composed of two events, the aesthetics judging and competition judging. Before any score can be entered into the Scoring Spreadsheet, the scorekeeper must have a complete list of the names of the schools that will be competing. In general, these steps are shown in Figure 8.
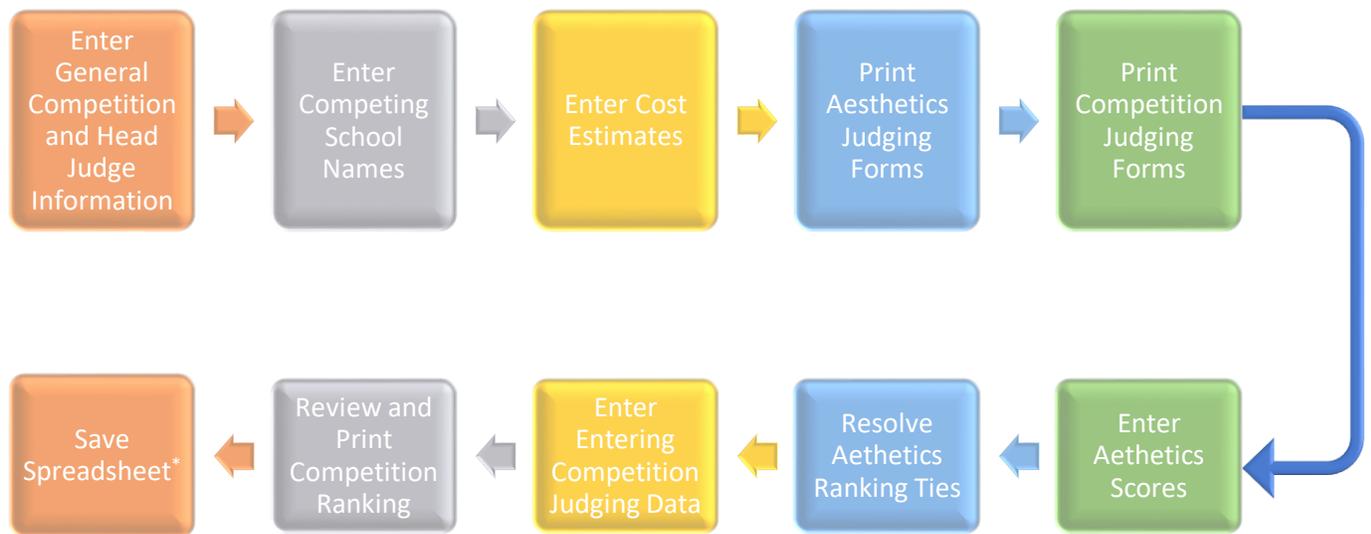
*Save file frequently!

Figure 8: General Competition Scoring Workflow.

Warning: You should not start populating the Scoring Spreadsheet until you have a complete list of the schools that will be competing.

Entering General Competition and Head Judge Information

The first tab you will be responsible for filling out will be the "Competition Info". It is here that you will provide basic information about the competition itself, the head judge, and the result of the die roll. Each cell requiring input is has an orange fill color. You will see that a prompt, shown within angle brackets, has been provided in each cell which you will overwrite with actual values. See Figure 9 below.

Figure 9: Competition Info Tab.

Picklists for competition name, state name, host school name and die roll results have been provided and you will only be allowed to select or enter specific values. See example shown in Figure 10. The button labeled "Today" will auto populate the "Date" field with today's date. Alternatively, you can enter this manually using a "mm/dd/yyyy" format.

Figure 10: Expanded Host Name Picklist.

Once you have finished entering the competition information, you need to provide the name and contact information for the head judge of the competition. The phone number field expects you to enter a 10-digit number consisting of a 3-digit area code and 7-digit phone number. The cell will automatically reformat to the 10-digits to the common (xxx) xxx-xxxx format.

Before timed construction of the first bridge, the head judge will roll a 6-sided die to determine the locations of decking units and where the lateral load will be applied. This value must be recorded in the Scoring Spreadsheet. The corresponding value for "L" will then be displayed in feet and inches. Refer to the Student Steel Bridge Competition Rules for more information.

Before proceeding further, all field must be populated, and you must confirm that you have read the instructions located on the "Readme First" tab. Once you have, select "Yes", press the "Continue" button to proceed onto the next step of entering the names of the competing school.

Note: If you press "Continue" before populating all fields, you will be shown an alert box displaying the information that needs to be corrected before proceeding further (see Figure 11). All errors must be corrected before continuing.
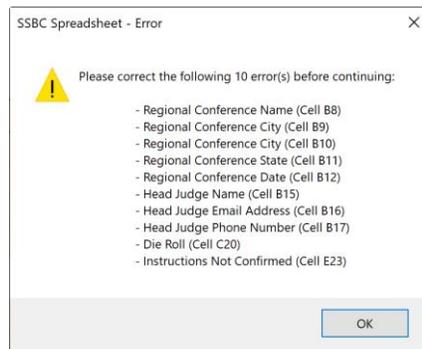
Figure 11: Incomplete Competition Info Error Box.

Entering Competing School Names

After populating the information required on the "Competition Info" sheet and pressing the "Continue" button, the "Participants" sheet will be unhidden (see Figure 13). On this sheet you will see a table with 12 columns and 80 rows where each competing school name should be entered. A picklist of competing schools will be displayed when you select the "Full Name" cell. After selecting the school's name, you should select the appropriate "Guest" status and enter their "Performance Cost Estimate".

Note: Cells that have a grey fill color should not be edited or modified. These cells will be automatically populate later based on fields elsewhere within the Scoring Spreadsheet. This sheet has been protected to prevent you from selecting and modifying those cells.

A sequential row index number is provided in the first column of the table, starting at "1" and ending at "80". Each row index number should correspond to a unique school name. Figure 13 shows an example of 9 school entries. You should be careful not to enter the same school more than once. If you enter a school name more than once, and error dialog will be displayed when you press the continue button (see Figure 12). You will need to correct any errors before continuing.
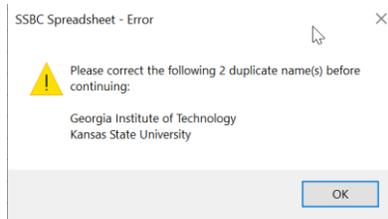
Figure 12: Duplicate Participant Error Dialog.

Each competing school should be entered one after another starting at the row with "Index 1" and continuing downward until all schools are entered. You should not leave any blank rows or gaps between consecutive school names.

Figure 13: Participants Entry Sheet.

A "Reset" button has been provided which will clear everything in the Scoring Spreadsheet except for the information entered on the "Competition Info" sheet. The reset cannot be undone and should be used with caution. A confirmation dialog will be displayed before this is done.

Warning: The participant's reset button will clear the entire spreadsheet except for the "Competition Info" sheet. This operation cannot be undone once completed.

When you have finished entering all names for the schools that are competing, press the "Continue" button. This will then populate the Scoring Spreadsheet with a sheet for each school. A warning dialog will then be displayed to confirm that you have entered all schools. If you have entered all the correct names, press "Yes", otherwise "No" (see Figure 14). You will see the Scoring Spreadsheet flicker as sheets are added. A progress message will be displayed in the lower left corner of Excel.
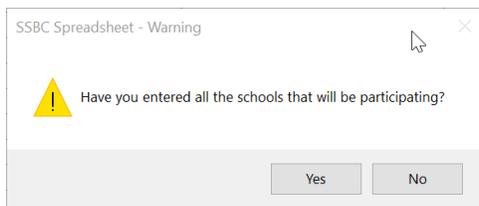
Figure 14: Participants Sheet Continue Warning Dialog.

Note: The Scoring Spreadsheet may flicker as it automatically populates itself after confirming that you have entered the named of all the schools that will be participating. This is normal and you should refrain from any extraneous mouse or keyboard clicks until it has completed.

The Soring Spreadsheet will now be populated with a worksheet for each competing school. The "Short Name" shown in the participants table will be used to name each worksheet (see Figure 15). Navigating between school worksheets can be accomplished by either clicking on the worksheet tab or using the "School Navigation" list available in the "Bridge Competition" ribbon bar. You will notice that contact information shown in the last seven rows of the participants table have been populated with placeholder strings. These are direct references to each school's data form worksheet where you will enter this information. Reminder, you should not modify any cells that are filled with a grey color.

Notice that the performance costs estimate cells are empty. These values will be populated based upon the die roll entered on the competition sheet and the cost information entered on the "Cost Estimates" sheet. A lookup will be performed that matches the school's name to the cost estimates table and then the associated die roll. The next section of this manual describes the process of entering cost estimates.

Figure 15: Scoring Spreadsheet Populated with School Data Form Worksheets.

In addition to a school data form worksheets for each participating school you entered, you will also see tabs for "Ranking" (Figure 16), "AwardsCeremony" (Figure 17) and "AestheticsSummary" (Figure 29). The "Ranking" and "AestheticsSummary" worksheets will be initialized with the names of the competing schools that were entered on the "Participants" worksheet. The "Ranking" and "AwardsCeremony" worksheets will display competition rankings once all judging information has been entered. You will not need to enter or modify the information presented on either worksheet. There is more discussion on each in later sections of this guide.

Figure 16: Initialized and Empty Ranking Worksheet with School Names.
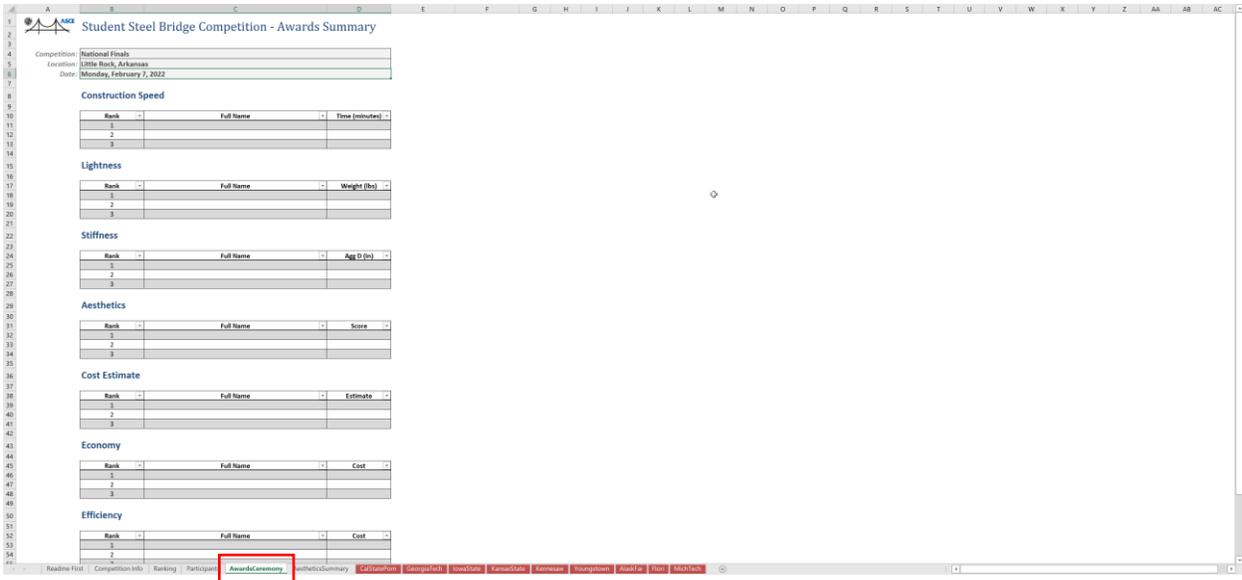
Figure 17: Empty Awards Summary Worksheet.
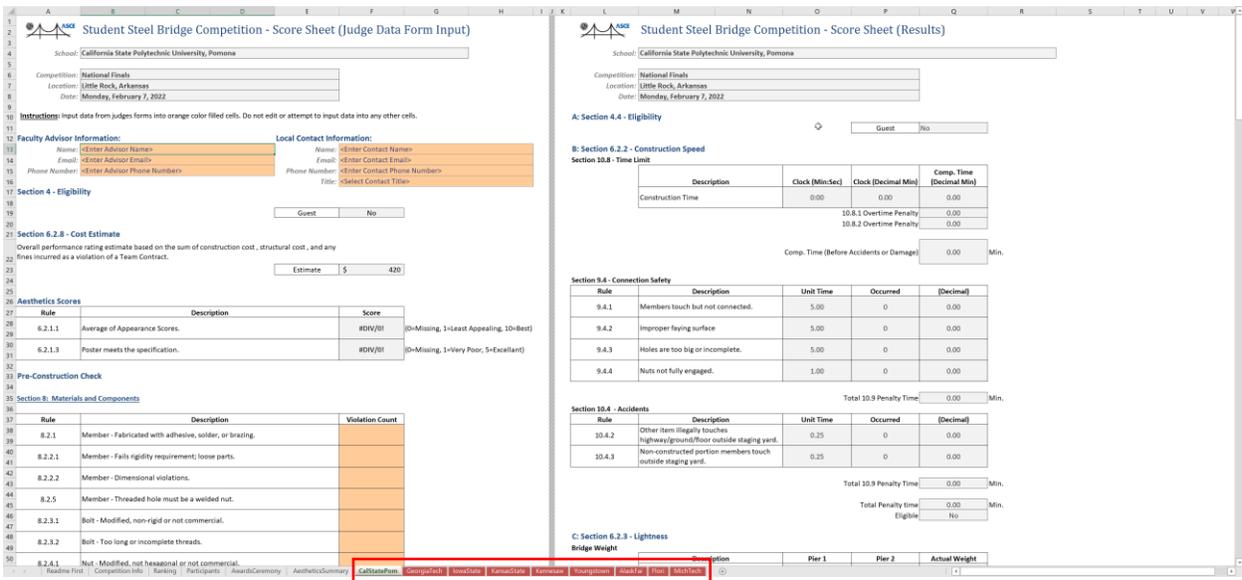
Figure 18: Empty School Judge Data Form Worksheet.

Entering Cost Estimates

An award category based on the estimate of the expected overall performance rating of a team's bridge is submitted to the host school prior to the selection of the controlling load case. The award will be given to the team that best estimates their overall performance rating and completes the competition.

Prior to the selection of the load case as prescribed in Sub-Section 7.1(8). (e.g., at the captain's meeting), all teams will submit their estimated overall performance rating to the host school for all 6 load cases. The host school will input the values for all load cases into the scoring spreadsheet in the table on the "Cost Estimates" sheet. These values will be dynamically updated in the table on the "Participants" sheet based upon the die roll.

The "Cost Estimates" sheet will display once the "Entering Competing School Names" steps have been completed and the "Continue" button pressed. The "Costs Estimates" table will only contain the names of the competing schools entered on the "Participants" table (see Figure 19).

Figure 19: Unpopulated Cost Estimate Table.

The estimated for overall performance for all 6 load cases, which was submitted to the host school prior to the competition, shall be entered into the "Cost Estimates" table. At a minimum, the values corresponding to the die roll must be entered. However, ideally, all values should be entered for all 6 load cases for each competing school (see Figure 20).

Figure 20: Populated costs estimate table.

Once all costs estimates have been entered, the value corresponding to the die roll for each school will be automatically populated in the "Participants" table as shown in Figure 21.

Figure 21: Costs estimates populated in Participants table.

Printing Aesthetics Judging Forms

Aesthetics judging forms can be printed from the Scoring Spreadsheet by clicking on the "Aesthetics Form" icon in the "Bridge Competition" ribbon bar (see Figure 22). This should be done after the names of all competing schools have been entered in the participant's table.
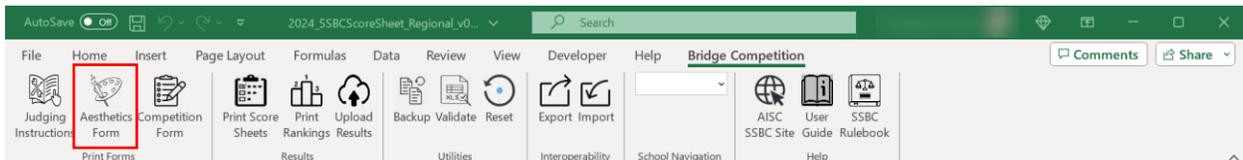
Figure 22: Print Aesthetics Forms Ribbon Bar Icon.

After clicking the "Aesthetics Form" icon, a dialog (Figure 23) will be shown that will allow you to select the printer output type; either "System Default" or "Print to PDF". If you select "System Default", you will be able to set the number of copies that you want to print. If you use the "Print to PDF", a PDF will be created in the same folder as the Scoring Spreadsheet. You can then open the PDF in Adobe Acrobat or similar PDF viewer that you can also print from. The "Copies" option will be greyed out by default when you select "Print to PDF".
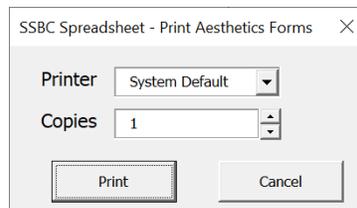
Figure 23: Print Aesthetics Forms Dialog.

An example of the resulting PDF is shown in Figure 24. A judging form should be printed for each judge up to 9. Once aesthetics judging has completed, the scores from each judge should be entered into the Scoring Spreadsheet on the "AestheticsSummary" worksheet.

Figure 24: Example Initialized Aesthetics Judging Form.

Note: The aesthetics judging form shown above can be found by unhiding the "AestheticsForm" tab in the Scoring Spreadsheet. However, you should not need to unhide this or any other hidden worksheet.

Printing Competition Judging Forms

Competition judging forms for each school can be printed by clicking on the "Competition Form" icon located on the "Bridge Competition" ribbon bar (see Figure 25).   A print competition forms dialog will then be displayed (see Figure 26).
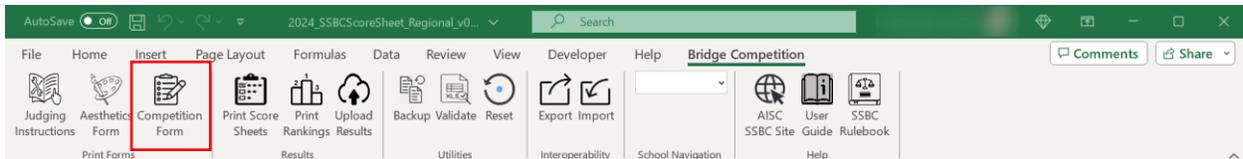
Figure 25: Print School Competition Judging Forms Ribbon Bar Icon.

The "Print Competition Forms" dialog will allow you to print in one of three ways. First, you can print a blank competition judging form which has the school's name left empty. This can be done by selecting "<Blank Form>" from the "School" drop down list. The second option allows you to print individual competition judging forms for any of the participating schools. If you activate the "School" drop down list, you will see the names of each of the schools that were entered in the participants table earlier (see Figure 27). The third option will allow you to print competition judging forms for all schools at once. This

can be done by checking the "All Schools" checkbox. Note that the "School" drop down list will then be greyed out.
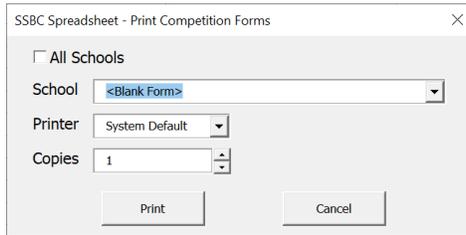
Figure 26: Print Competition Forms Dialog.

Figure 27: Print Competition Forms Dialog with Expanded School Drop Down List.

Printer output can be either set to "System Default", which will default the print output to the system printer designated by the operating system, or "Print to PDF" which will create a PDF in the same directory as the Scoring Spreadsheet. Note that if you have "All Schools" checked and select "Print to PDF", individual PDFs will be created for each participating school. Each file name will have the format "JudgeForm_SchoolName.pdf" (see Figure 28) and have the school's name pre-populated on each judging sheet.
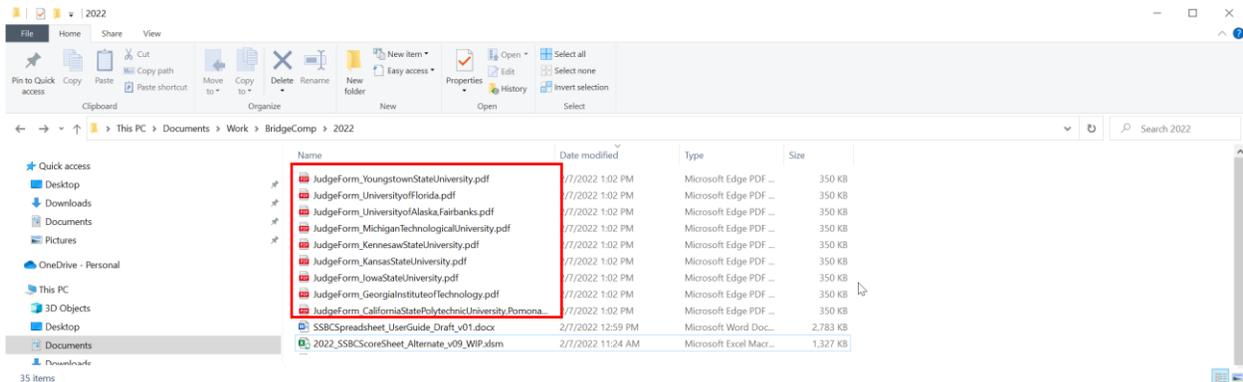
Figure 28: Individual PDF Competition Judging Forms.

Entering Aesthetics Scores

When aesthetics judging has been completed, the scores from each of the aesthetics judges must be entered into the Scoring Spreadsheet on the "AestheticsSummary" worksheet (Figure 29).   Space is provided for only a maximum of 9 aesthetics judges. Although there are spaces for 9 aesthetics judges, there may be less at some competitions. If that is the case, you should leave the fields for the other judge's scores blank.

You will find two tables on the "AestheticsSummary" worksheet: one for "Appearance" scores and another for "Poster" scores. As is the case with all other worksheets, although the worksheet has been protected, you should not modify and cell that has a grey fill color.
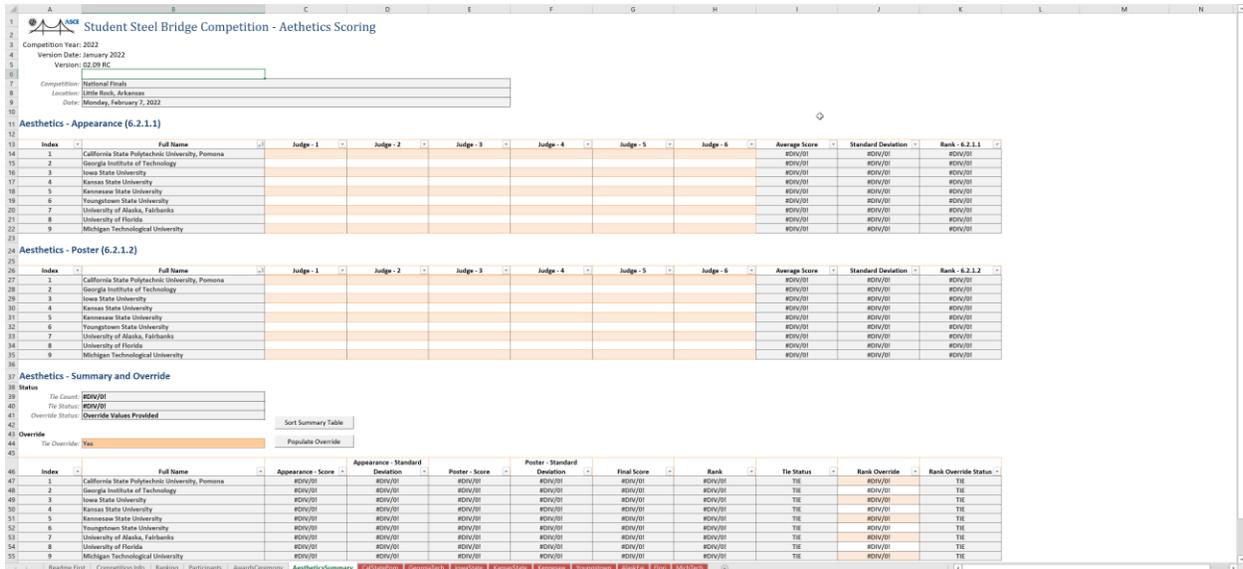
Figure 29: Initialized Empty Aesthetics Scoring Worksheet.

Aesthetics scores are primarily used to decide competition results order for the aesthetics awards. However, aesthetics scores are also used to break any ties that may result in the other competition categories. This means that **no ties can exist in the aesthetics competition order** and it is up to the score keeper to resolve them before the end of the competition.

For example, consider results shown in Figure 30 below which shows the "Summary and Override" region of the "AestheticsSummary" tab. Here we have 9 competing schools where a tie exists for 4th place. You can determine this by looking at the "Rank" and "Tie Status" columns. In the "Rank" column you will see that "4" appears twice and "TIE" is displayed in the "Tie Status" column of the same row.

Initially the aesthetics summary table order is arbitrary and will not match the actual aesthetics competition results order. So, a "Sort Summary Table" button has been provided to sort the summary table based on the initial ranking, followed by the appearance standard deviation, poster standard deviation and then alphabetically by school name. Rank and standard deviations are sorted from smallest to largest. So, emphasis is placed on smaller standard deviations for appearance and then poster. In almost all instances, the standard deviations for one or the other will be different enough that you can break ties. However, in the instance below, they are the same. The next section will discuss the methods of breaking ties if they occur.

Figure 30: Example Aesthetics Scores Ranking with Ties.

Resolving Aesthetics Ties

To assist you with identifying ties, status fields are provided under the "Summary and Override" area of the "AestheticsSummary" worksheet (See Figure 31). Here you will find the following fields:

Tie Count: This displays the total number of schools that have ties. For example, if there is a tie between "School A", "Schools B" and "School C", the count will be "3". You must resolve all ties until the "Tie Count" is zero. The cell will also be show with a red fill if there are any ties.

Tie Status: This displays a prompt indicating whether a tie exists or not. The prompt will either be "Ties Found" or "No Ties Found". Like the "Tie Count" cell, it too will be show with red fill if there are any ties.

Override Status: This displays the current aesthetics competition results order override state and is synchronized with the "Tie Override" option state. It will display "NA" if "Tie Override" is set to "No" and "Override Values Provided" when the "Tie Override" is set to "Yes".

Figure 31: Aesthetics Summary and Override Status and Override State.

When a tie exists, there are two ways of resolving them. The first is using the "Populate Override" button and the second is manually. Before using either, you must first set the "Tie Override" option to "Yes". This will indicate that the competition order will be that shown in the "Rank Override" column. If the override option is "No", the competition order shown in the "Rank" columns is used.

Populate Override: In cases where there are ties and there are differences in the appearance and/or poster standard deviations for the schools that are tied, the "Populate Override" button can be used. However, first you must set the "Tie Override" to "Yes". Pressing the override button will inject a formula into the "Rank Override" column that will automatically re-sort and re-rank all schools. This method cannot be used if the scores and standard deviations are the same for the tied schools. In these instances, you will need to use the manual method described below.

Manual: In cases where there are ties and the appearance and/or poster standard deviations are the same, the ranking must be manually overridden. This can be accomplished by first setting the "Tie Override" to "Yes" and then manually typing in the final ranking for all schools in the "Rank Override" column. The score keeper should confer with the head judge and/or aesthetics judges

on how best to assign rankings so that they are done fairly. Again, you cannot have ties in the aesthetics rankings.

Note: If "Tie Override" is set to "Yes" and there are still ties in the "Rank Override" column, the "Tie Count" and "Tie Status" will indicate this, and the word "TIE" will be displayed in the "Rank Override Status" column. Given the importance of resolving ties, this provides an added layer of protection against missing a tie.

Ties are not considered resolved until "Tie Count" is "0" and "Tie Status" is "No Ties Found". See example shown below in Figure 32.

Figure 32: Aesthetics Tie Status - No Ties.

Entering Competition Judging Data

Individual worksheet will have been automatically created for each school that is participating in the competition. These were created when the participants table was populated and the "Continue" button was pressed. The participants table includes a "Short Name" for each school, and this is used to name that school's corresponding judging data worksheet. See Figure 33 for example.

Figure 33: Competition Judging Data Worksheet Naming Convention.

The judge data input worksheets (Figure 35) are formatted to resemble the physical competition judging forms (Figure 34) used during the competition. This will make transferring the data collected and written on the physical competition judging forms during the competition easier to transcribe. Only cells with an

orange fill color can be modified. These will correspond to the orange fields on the physical competition judging forms.
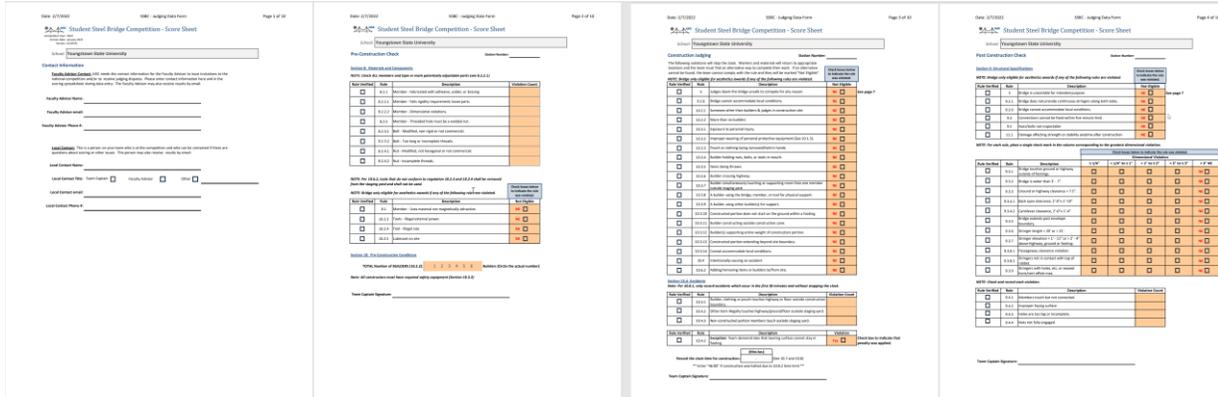
Figure 34: Select Physical Competition Judging Forms.

Note: Verify the school's name shown on the physical competition judging forms against the school's name shown on the judge data form input worksheet before entering any values. It is important that that all information be entered accurately.

Figure 35: Example Competition Judge Data Form Input Worksheet.

There are two "sides" to the judge data form input worksheet. The lefthand side is the area where you will transcribe the data collected on the physical competition judging forms. The righthand side are the series of calculations that correspond to the competition rules and are the basis of the final competition results order. You should make no edits or changes to any cell on the righthand side of the worksheet. The worksheet has been protected to prevent inadvertent changes from happening.

Note: You do not have to enter zero in "Violation Count" fields if there were no violations. You can leave these blank.

Some fields contain dropdown lists. For example, if you select a "Not Eligible" cell, you will see a dropdown list appear that has "NE" as an option. If the school has been ruled not eligible for any rule, you will set its value to "NE". Otherwise, you will leave the cell blank.

Rule	Description	Not Eligible
8.1	Member - Uses material not magnetically attractive.	NE
10.2.3	Tools - Illegal external power.	
10.2.4	Tool - Illegal size.	
10.2.5	Lubricant on site	

Figure 36: Not Eligible Field Option.

When a dimensional violation is documented on the physical competition judging form, you will select "Yes" from the dropdown list for the corresponding dimension range. For example, if a team had a dimensional violation less than or equal to 1/4" for rule 9.3.1, you would select the "≤ 1/4" cell for that rule and set it to "Yes" (see Figure 37).

Note: If there are any dimensional violations, you should only have one "Yes" selected per rule. That means you cannot violate more than one dimension measurement for any one rule.

Note: For each rule, select 'Yes' in the column corresponding to the greatest dimensional violation. Leave blank if there are no violations.

Rule	Description	Dimensional Violation				
		≤ 1/4"	> 1/4" to ≤ 1"	> 1" to ≤ 2"	> 2" to ≤ 3"	> 3" NE
9.3.1	Bridge touches ground or highway outside of footings.	Yes				
9.3.2	Bridge is wider than 3' - 7".					
9.3.3	Ground or highway clearance < 7.5".					
9.3.4.1	Back span clearance, 2'-0"x 1'-10"					
9.3.4.2	Cantilever clearance, 2'-0"x 1'-4"					
9.3.5	Bridge extends past envelope boundary.					
9.3.6	Stringer length < 20' or > 21'.					
9.3.7	Stringer elevation < 1' - 11" or > 2' - 4" above highway, ground or footing.					
9.3.8.1	Passageway clearance violation.					
9.3.8.2	Stringers not in contact with top of rabbet.					
9.3.9	Stringers with holes, etc. or exceed horiz/vert offset max.					
	Total Violated	0	0	0	0	0

Figure 37: Dimensional Violation Field Option.

This process will be repeated for each of the schools competing. When you have transcribed all of the information from the physical competition judging form, you are done.

Review and Print Competition Ranking

Once all schools have completed competing and their information has been entered into the spreadsheet, you can view the final ranking for all the categories. You will find a complete list of ranking on the "Ranking" worksheet.

The "Ranking" worksheet will initial be displayed unordered (see Figure 39). A "Sort Ranking Tables" button has been provided which will automatically sort all the tables by rank from smallest to largest. It is advisable that you sort the tables before printing them. To print the complete competition rankings, press the icon "Rankings" which can be found in the "Bridge Competition" ribbon bar (see Figure 38). You

will have two output options for printing: either to the system default printer or as a PDF. If you choose to print to a PDF, the file will be created in the same folder as the Scoring Spreadsheet.
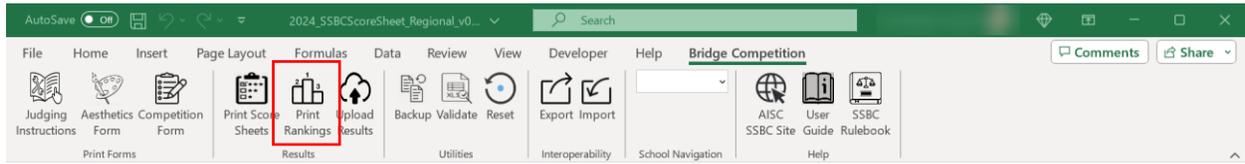
Figure 38: Print Competition Rankings Ribbon Bar Icon.

Note: You may want to adjust the print area before printing the final competition rankings. This can be done by selecting the "Ranking" worksheet and adjusting the page breaks as you would normally do in Excel.

Note: You should sort all results ranking tables before printing. This can be done by pressing the "Sort Ranking Tables" button located towards the top of the worksheet.
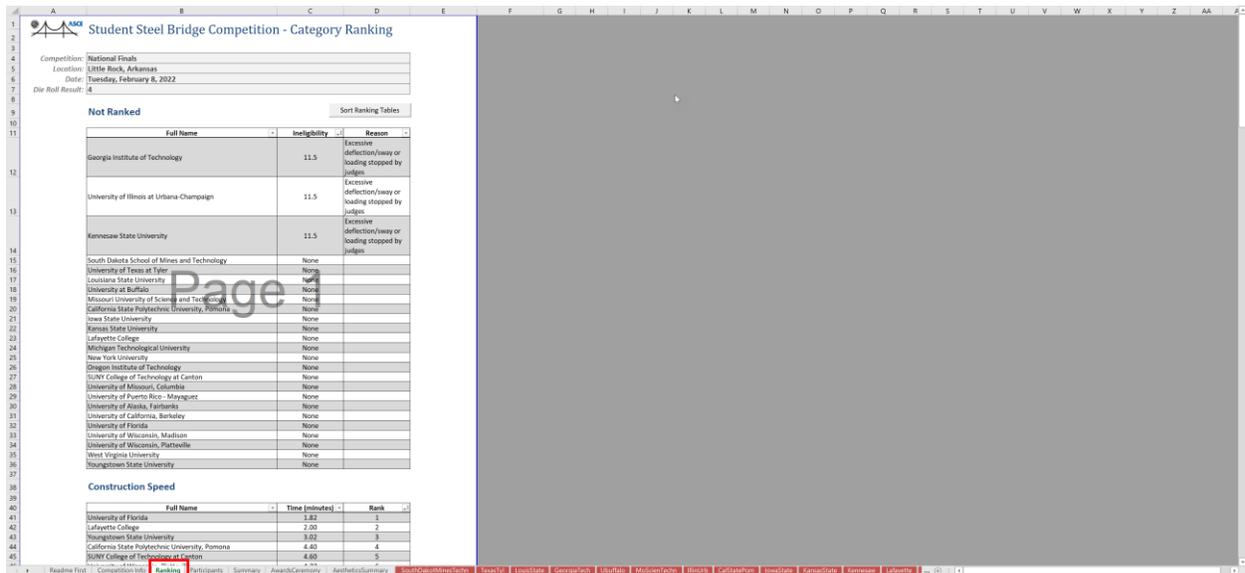
Figure 39: Ranking Worksheet Print Layout.

Spreadsheet Utilities

The Scoring Spreadsheet include a couple useful utilities which you may want to use. They are described as follows.

> **Backup:** It is good practice to periodically create a backup of your spreadsheet as you enter information. Should there be a problem, you can revert to one of the backups so that you do not have to re-enter information from scratch. When you press the "Backup" icon, a duplicate of the current spreadsheet and its state will be created in the same folder as the spreadsheet that is opened. The backup file name will be the same as the current file with the date and time of creation appended to it. For example, "myfilename_yyyy-mm-dd_hh_mm_ss.xlsm".

> **Validate:** The validate button is intended to check for errors in with the Scoring Spreadsheet. It will report if there are missing sheet, tables, and variables. This feature can be used to help quickly

debug a spreadsheet that is not behaving as expected. You should obtain a new version of the Scoring Spreadsheet and/or contact AISC for more information if any errors reported. Figure 40 shows the dialog displayed when there are no errors and Figure 41 shows the dialog displayed when there are errors with the Scoring Spreadsheet.
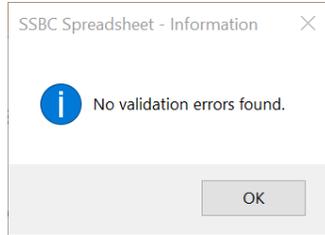
Figure 40: Scoring Spreadsheet Validation Check – No Error.
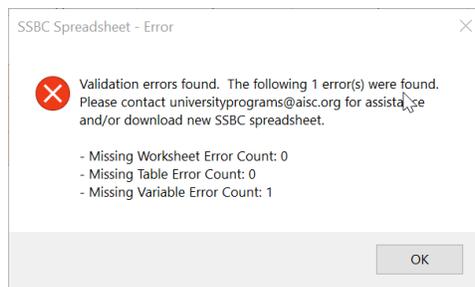
Figure 41: Scoring Spreadsheet Validation Check - Error.

Reset: This icon will clear the current spreadsheet and set it back to a "clean-state". A warning message will appear asking if you are sure you want to reset the spreadsheet or not (Figure 42). There is no way to undo a reset and this feature should be used with caution.
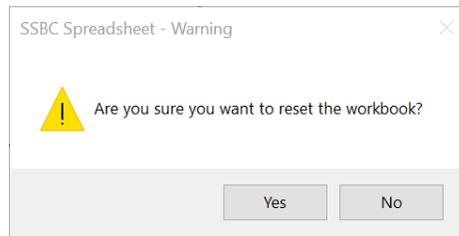
Figure 42: Spreadsheet Reset Warning Dialog.

Upload Competition Files

At the conclusion of the competition, you must scan all judging forms, including those used for aesthetics judging. A single PDF with all forms is preferred. These scans must be uploaded along with the final Excel competition scoring spreadsheet. Make sure that you have saved the spreadsheet before uploading it. The spreadsheet will be checked against the scans of the judging forms for correctness. A button has been provided in the ribbon bar which will take you to the online upload form. Note that an internet connection is necessary (Figure 43).
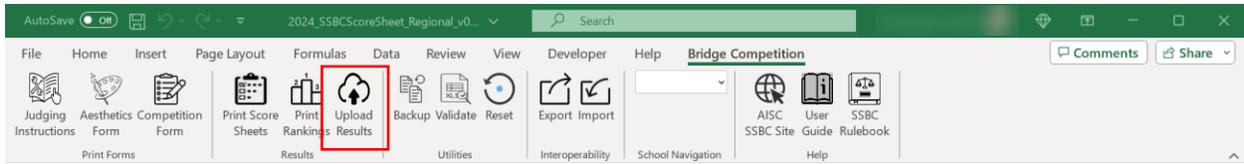
Figure 43: Upload Competition Judging and Results Information Ribbon Bar Icon.

The upload form can be seen in Figure 44 below. Files should be uploaded immediately following the competition. Rankings are not final until they have been reviewed.

Figure 44: Competition Upload Form.

Appendix A – School Region Assignments

The Scoring Spreadsheet comes prepopulated with all regional competition school assignments. This list is used to populate picklists based upon the competition that is selected on the "Competition Info" worksheet. The following table is a direct copy of the information contained within the current Scoring Spreadsheet. Note that this table must be updated once the schools competing in the national competition are known and a new Scoring Spreadsheet must be issued. This information can be found on the hidden "Lookup – School" tab. A blank "Region Name" indicates that this school will not be competing in the current year.

Table 1: School and Region Assignments.

Long Name	Region Name
Alabama A&M University	
Angelo State University	ASCE Region 6
Arizona State University	Intermountain Southwest
Arkansas State University	Mid-South
Auburn University	Gulf Coast
Autonomus University of Mexico State	
Benedictine College	
Bluefield State College	
Bob Jones University	
Boise State University	Intermountain Southwest
Bradley University	Western Great Lakes
Brigham Young University	Intermountain Southwest
Brigham Young University, Idaho	
Bryan College	
Bucknell University	
California Baptist University	Pacific Southwest
California State Polytechnic University, Pomona	Pacific Southwest
California State Polytechnic University, San Luis Obispo	Pacific Southwest
California State University, Chico	Mid-Pacific
California State University, Fresno	Mid-Pacific
California State University, Fullerton	Pacific Southwest
California State University, Long Beach	Pacific Southwest
California State University, Los Angeles	Pacific Southwest
California State University, Northridge	Pacific Southwest
California State University, Sacramento	
Calvin College	
Carnegie Mellon University	
Carroll College	
Case Western Reserve University	Eastern Great Lakes
Catholic University of America	
Central Connecticut State University	
Christian Brothers University	Mid-South
Cincinnati State Technical and Community College	
City College of New York, CUNY	

Long Name	Region Name
Clarkson University	Upstate New York-Canada
Clemson University	Carolinas
Cleveland State University	Eastern Great Lakes
College of New Jersey	Metropolitan
Colorado Mesa University	Rocky Mountain
Colorado School of Mines	Rocky Mountain
Colorado State University	Rocky Mountain
Colorado State University, Fort Collins	
Colorado State University, Pueblo	
Columbia University	
Concordia University	
Cooper Union	Metropolitan
Cornell University	Upstate New York-Canada
Dalian University of Technology	
De La Salle Bajio University	
Dordt University	
Drexel University	Mid-Atlantic East
Duke University	
École de Technologie Supérieure	Northeast
École Polytechnique	
Embry-Riddle Aeronautical University, Daytona Beach	
Fairleigh Dickinson University	
Fairmont State University	
FAMU-FSU College of Engineering	Southeast
Florida A&M University	
Florida Atlantic University	
Florida Gulf Coast University	
Florida Institute of Technology	Southeast
Florida International University	Southeast
Geneva College	Mid-Atlantic West
George Mason University	Mid-Atlantic West
George Washington University	Mid-Atlantic West
Georgia Institute of Technology	Southeast
Georgia Southern University	Southeast
Gonzaga University	
Harding University	Mid-South
Hofstra University	
Hope College	Eastern Great Lakes
Horry Georgetown Technical College	
Howard University	Mid-Atlantic West
Hudson Valley Community College	
Humboldt State University	
Idaho State University	
Illinois Institute of Technology	Western Great Lakes
Instituto Politecnico Nacional	

Long Name	Region Name
Iowa State University	Mid-America
Jackson State University	
James Madison University	Virginias
Johns Hopkins University	Mid-Atlantic East
Kansas State University	Mid-America
Kennesaw State University	Southeast
Lafayette College	Mid-Atlantic East
Lakehead University	Western Great Lakes
Lamar University	
Lawrence Technological University	Eastern Great Lakes
Lehigh University	Mid-Atlantic East
LeTourneau University	ASCE Region 6
Liberty University	Virginias
Lipscomb University	Mid-South
Louisiana State University	Gulf Coast
Louisiana State University and A&M College	
Louisiana Tech University	Gulf Coast
Loyola Marymount University	
Manhattan College	Metropolitan
Marquette University	Western Great Lakes
Marshall University	Virginias
Massachusetts Institute of Technology	
McMaster University	
McNeese State University	
Mercer University	
Merrimack College	Northeast
Messiah College	
Metropolitan State University	
Metropolitan State University of Denver	
Michigan State University	
Michigan Technological University	Eastern Great Lakes
Milwaukee School of Engineering	Western Great Lakes
Minnesota State University, Mankato	
Mississippi State University	
Missouri State University	Mid-America
Missouri University of Science and Technology	Mid-America
Montana State University	Pacific Northwest
Montana State University, Northern	
Montana Tech of the University of Montana	
Montana Technological University	Pacific Northwest
Moorpark College	
Morgan State University	Mid-Atlantic East
Nassau Community College	
New Jersey Institute of Technology	Metropolitan
New Mexico Institute of Mining and Technology	ASCE Region 6

Long Name	Region Name
New Mexico State University	ASCE Region 6
New York City College of Technology	Metropolitan
New York University	
New York University Tandon School of Engineering	Metropolitan
North Carolina Agricultural and Technical State University	Carolinas
North Carolina State University	Carolinas
North Dakota State University	Western Great Lakes
Northeastern University	Northeast
Northern Arizona University	Intermountain Southwest
Northwestern University	Western Great Lakes
Norwich University	Northeast
Ohio Northern University	Eastern Great Lakes
Ohio State University	Eastern Great Lakes
Ohio University	Eastern Great Lakes
Oklahoma State University	
Oklahoma State University Institute of Technology	
Old Dominion University	Virginias
Olivet Nazarene University	Western Great Lakes
Oregon Institute of Technology	Pacific Northwest
Oregon State University	Pacific Northwest
Pennsylvania State University, Harrisburg	Mid-Atlantic West
Pennsylvania State University, University Park	Mid-Atlantic West
Point Park University	
Polytechnic Institute of New York	
Polytechnic University of Puerto Rico	Southeast
Polytechnique Montréal	
Portland State University	Pacific Northwest
Prairie View A&M University	
Princeton University	
Purdue University, Fort Wayne	
Purdue University, Northwest	
Purdue University, West Lafayette	Indiana-Kentucky
Quinnipiac University	
Rensselaer Polytechnic Institute	Upstate New York-Canada
Rice University	
Rochester Institute of Technology	Upstate New York-Canada
Roger Williams University	
Rose-Hulman Institute of Technology	Indiana-Kentucky
Rowan University	Metropolitan
Rutgers University	Metropolitan
Saint Louis University	Mid-America
Saint Martin's University	Pacific Northwest
Salt Lake Community College	
San Diego State University	Pacific Southwest
San Francisco State University	

Long Name	Region Name
San José State University	Mid-Pacific
Santa Clara University	
Savannah State University	
Seattle University	Pacific Northwest
Shippensburg University	
South Carolina State University	
South Dakota School of Mines and Technology	Rocky Mountain
South Dakota State University	Mid-America
Southern Illinois University, Carbondale	Mid-America
Southern Illinois University, Edwardsville	Mid-America
Southern Methodist University	ASCE Region 6
Southern Polytechnic State University	
Southern University and A&M College	
Stanford University	
Stevens Institute of Technology	
Stony Brook University	Metropolitan
SUNY College of Technology at Canton	Upstate New York-Canada
SUNY Polytechnic Institute	Upstate New York-Canada
SUNY Polytechnic Institute, Utica	
Swarthmore College	
Syracuse University	Upstate New York-Canada
Tarleton State University	ASCE Region 6
Tecnológico de Monterrey	ASCE Region 6
Temple University	Mid-Atlantic East
Tennessee State University	
Tennessee Tech	Mid-South
Texas A&M University	ASCE Region 6
Texas A&M University, Kingsville	
Texas Southern University	
Texas Tech University	ASCE Region 6
The Catholic University of America	Mid-Atlantic West
The Citadel	Carolinas
The City College of New York	
Tongji University	Mid-Pacific
Trine University	Indiana-Kentucky
Tufts University	Northeast
United States Air Force Academy	Rocky Mountain
United States Coast Guard Academy	
United States Military Academy	Upstate New York-Canada
United States Naval Academy	
Universidad Autonoma Del Estado De Mexico	
Universidad de las Américas Puebla	
Universidad La Salle	
Universidad La Salle, Cuernavaca	
Universidad La Salle, Mexico City	

Long Name	Region Name
Universidad La Salle, Victoria	
Universidad Nacional Autónoma de Mexico	ASCE Region 6
Universidad Panamericana, Guadalajara	ASCE Region 6
Université Laval	Northeast
University at Buffalo	Upstate New York-Canada
University of Akron	Eastern Great Lakes
University of Alabama	
University of Alabama, Birmingham	
University of Alabama, Huntsville	Gulf Coast
University of Alaska, Anchorage	Pacific Northwest
University of Alaska, Fairbanks	Pacific Northwest
University of Arizona	Intermountain Southwest
University of Arkansas	
University of Arkansas, Fayetteville	Mid-South
University of Arkansas, Little Rock	
University of British Columbia	Pacific Northwest
University of California, Berkeley	Mid-Pacific
University of California, Davis	Mid-Pacific
University of California, Irvine	Pacific Southwest
University of California, Los Angeles	Pacific Southwest
University of California, San Diego	Pacific Southwest
University of Central Florida	Southeast
University of Cincinnati	Eastern Great Lakes
University of Colorado, Boulder	
University of Colorado, Denver	
University of Connecticut	Northeast
University of Dayton	Eastern Great Lakes
University of Delaware	
University of Detroit-Mercy	
University of District of Columbia, Van Ness	
University of Evansville	
University of Florida	Southeast
University of Georgia	Southeast
University of Hartford	
University of Hawaii at Manoa	Pacific Southwest
University of Houston	ASCE Region 6
University of Houston, Downtown	
University of Idaho	Pacific Northwest
University of Illinois at Chicago	Western Great Lakes
University of Illinois at Urbana-Champaign	Western Great Lakes
University of Iowa	
University of Kansas	Mid-America
University of Kentucky	Indiana-Kentucky
University of Louisiana at Lafayette	Gulf Coast
University of Louisville	Indiana-Kentucky

Long Name	Region Name
University of Maine	Northeast
University of Maine - Orono	
University of Maryland, College Park	Mid-Atlantic East
University of Massachusetts, Amherst	Northeast
University of Massachusetts, Dartmouth	
University of Massachusetts, Lowell	Northeast
University of Memphis	
University of Miami	
University of Michigan	Eastern Great Lakes
University of Minnesota, Duluth	Western Great Lakes
University of Minnesota, Twin Cities	Western Great Lakes
University of Mississippi	
University of Missouri, Columbia	Mid-America
University of Missouri, Kansas City	
University of Nebraska, Lincoln	Mid-America
University of Nebraska, Lincoln at Omaha	
University of Nevada, Las Vegas	Intermountain Southwest
University of Nevada, Reno	Intermountain Southwest
University of New Hampshire	Northeast
University of New Haven	
University of New Mexico	ASCE Region 6
University of New Orleans	Gulf Coast
University of North Carolina at Charlotte	Carolinas
University of North Dakota	Western Great Lakes
University of North Florida	Southeast
University of Notre Dame	Indiana-Kentucky
University of Oklahoma	ASCE Region 6
University of Pittsburgh	Mid-Atlantic West
University of Pittsburgh at Johnstown	Mid-Atlantic West
University of Portland	Pacific Northwest
University of Puerto Rico, Mayagüez	Southeast
University of Rhode Island	
University of South Alabama	Gulf Coast
University of South Carolina	Carolinas
University of South Florida	Southeast
University of Southern California	Pacific Southwest
University of Southern Indiana	Indiana-Kentucky
University of St. Thomas	Western Great Lakes
University of Tennessee, Chattanooga	
University of Tennessee, Knoxville	Mid-South
University of Tennessee, Martin	Mid-South
University of Texas at Arlington	ASCE Region 6
University of Texas at Austin	ASCE Region 6
University of Texas at El Paso	ASCE Region 6
University of Texas at Rio Grand Valley	

Long Name	Region Name
University of Texas at San Antonio	ASCE Region 6
University of Texas at Tyler	ASCE Region 6
University of Texas at Tyler, Houston Engineering Center	
University of Texas, Rio Grande Valley	ASCE Region 6
University of the District of Columbia	
University of the Pacific	
University of Toledo	
University of Utah	
University of Vermont	
University of Virginia	
University of Washington	Pacific Northwest
University of Waterloo	Upstate New York-Canada
University of Wisconsin, Green Bay	
University of Wisconsin, Madison	Western Great Lakes
University of Wisconsin, Milwaukee	Western Great Lakes
University of Wisconsin, Platteville	Western Great Lakes
University of Wyoming	Rocky Mountain
Utah State University	Intermountain Southwest
Utah Valley University	Intermountain Southwest
Valparaiso University	Indiana-Kentucky
Vanderbilt University	Mid-South
Villanova University	
Virginia Military Institute	Virginias
Virginia Polytechnic Institute & State University	
Virginia Tech	Virginias
Walla Walla University	
Washington State University	
Washington State University, Tri Cities	
Wayne State University	Eastern Great Lakes
Wentworth Institute of Technology	Northeast
West Texas A&M University	ASCE Region 6
West Virginia University	Virginias
West Virginia University Institute of Technology	Virginias
Western Kentucky University	Indiana-Kentucky
Western Michigan University	
Western New England University	Northeast
Western University, Canada	
Widener University	
William Jewell College	Mid-America
Worcester Polytechnic Institute	Northeast
York College of Pennsylvania	
Youngstown State University	Eastern Great Lakes
Zhejiang University	

Appendix B – Scoring Spreadsheet School Lookup

The competition name selected on the "Competition Info" tab is used to populate school picklists used on the "Participants" worksheet. A hidden worksheet called "Lookup - School" contains a table listing schools and their assigned ASCE competition region (Figure 45). This table was prepopulated before the Scoring Spreadsheet was posted for download. As is the case with other worksheets, any field that is grey should not be modified.

If a school has been incorrectly assigned to a region, you can manually change the assignment by unhiding the "Lookup - School" worksheet, locating the school's name and changing the "Region Name" assignment. Once you have done this, you will need to reset the workbook and reenter the competition information before this change to takes place across the Scoring Spreadsheet. You should then notice that the school picklist on the "Participants" worksheet reflects the change and includes any schools you modified.

As is the case with all hidden worksheets, you should not have the need to unhide these manually. However, in this instance, when a school is not being shown on the participants worksheet picklist, unhiding and changing a hidden worksheet might be necessary.


Figure 45: Hidden School Lookup Worksheet.

Appendix C – Frequently Asked Questions

How do I enter participant names without first knowing the die roll? The Scoring Spreadsheet verifies that all values on the "Competition Info" sheet have been populated before allowing you to move onto the next step of entering participating school names and then printing pre-populated competition forms. However, in some instances, you may not have performed the die roll yet. If that is the case, you can enter or select an arbitrary value for the die roll as a placeholder until you have performed the actual competition die roll. Once you have, you should go back to the "Competition Info" sheet and enter the actual value. Make sure that you enter the actual competition die roll value before submitting the official competition Scoring Spreadsheet.