



ASC Student Competition

Sparks, NV

February 6-8, 2020

Open Competition: Sustainability Problem Statement

Building
What Matters



Introduction

Welcome to the 2020 ASC Open Competition Problem Statement focusing on Sustainable Building.

As one of the top Contractors of sustainable construction projects, Skanska strives to create projects that have minimal impact on the environment throughout their construction and lifecycle. Utilizing the criteria set forth by the U.S. Green Building Council, the International Living Future Institute, the Institute for Sustainable Infrastructure and other green certification agencies, along with forward-thinking project teams and design partners, we seek to move the industry farther down the path of green building. We hope to pass some of this knowledge on to you with the problem statements on the following pages. With your participation in this problem statement, you will gain understanding and appreciation of green building practices that the construction industry can employ in our day-to-day operations—regardless of a project's sustainability certifications. Moreover, we hope that you will look to implement these ideals in your daily lives outside the workplace.

No matter what you build, it can be built green



SKANSKA

Schedule

The problem statement schedule is as follows:

- **Friday, January 17th, 2020**

- 2:00 p.m. – Pre-qualification submittal delivered to Skanska

- **Thursday, February 6th, 2020**

- 6:30 - 6:45 a.m. - Sustainable Building Problem Overview
- 6:45 a.m. - 8:59 p.m. - Preparation of written Problem Statement responses.
- 11:30 a.m. – EC3 Tool demonstration—mandatory for at least one student per team
- 5:00 p.m. – Final RFI's due, no RFI's will be accepted after this time. Note: we've eliminated the two RFI sessions this year. RFIs will only be answered via Google Sheets.
- 9:00 p.m. – Written responses to Problem Statement and documentation due.

- **Friday, February 7th, 2020**

- 6:00 a.m. - Turn in all oral presentation materials including handouts, electronic presentation media and other materials to specified room.
- 6:05 a.m. – Presentation of Oral Presentation Schedule.
- 7:30 a.m. - 5:00 p.m. - Oral presentations. (45 minutes each)
 - 5 minutes changeover/setup,
 - 30 minute presentation,
 - 10 minutes of feedback
- 6:00 p.m. - Problem Statement Recap
- 7:00 p.m. to 8:30 p.m. – Hospitality Event

- **Saturday, February 8th, 2019**

- 12:15 p.m. to 1:00 pm - Awards Presentation

Project Description

This year's problem statement studies some hypothetical corporate policies Skanska could implement. We will focus on four different sustainability parameters; energy, waste, water, and contractor well-being with a supplemental problem on carbon. Student teams will evaluate the feasibility of these policies through a variety of projects throughout the United States from Sherwood High School in Oregon to the University of Central Florida's Academic Commons. Some of the projects will be looking through a rating system filter; LEED 2009, LEED v4, Living Building and some will have components not tied to a rating system requirement at all.

Teams will provide a solution to a set of problems focusing on the different parameters. The judges hope to show students that corporate policy is another strategy companies are using to change our industry. The problem statement that follows discusses some factors that must be considered.

Cheers, and good luck!



Scoring

Point scales will be assigned to several elements of the written and oral presentations.

	Possible
Prequalification Statement	5
Problem Statement 1 – Energy	18
Problem Statement 2 – Waste	18
Problem Statement 3 – Water	18
Problem Statement 4 – Contractor Well-Being	18
Problem Statement 5 – Carbon/EC3 Tool	8
Oral Evaluation:	20
Total Points	105

Awards will be provided to the three teams scoring the most overall points; 1st Place, 2nd Place and 3rd Place. The judge's may, additionally, award a Judge's Selection award to a fourth team at their discretion.



Rules

- Students teams must comply with 2020 ASC Competition Rules.
- Once the kick-off meeting concludes, and until a team's oral presentation is completed, only the students identified as being team members shall be present in the team's room(s) or shall collaborate on the team's response to the problem statement. No additional person(s) may perform as a helper, runner, or assistant for any team for either the regional or open competitions. Teams will be disqualified if any team has more than 6 members participating in the process of creating a competition solution in any way. This includes food and supply runs! The use of cell phones to contact outside persons is not permitted except in an emergency or as deemed appropriate by the problem sponsor. Faculty advisors may not interact with their teams once the competition has begun.
- Use of the internet is allowable and may be necessary for certain components of the problem.
- No phone calls or emails may be made to the Owner, Construction Manager, Architect, Civil, or Structural Engineer, or any other design consultants listed on the Drawings. Similarly, no components of the problem may be sent to others outside the team for assistance in completing the problem.
- A one-half (1/2) point deduction will be taken for each minute that the solution statement is turned in past the time that it is due. Solution statements are due **Thursday at 9:00pm in Southern Pacific E&F**. Other deliverable items, if applicable, will be due as specified.
- No school's team member, team coach, other faculty members, registered students, or videographers may enter the problem presentation room or view a presentation in a problem category that their school is competing in until it is their team's designated time to present within that problem category. Violation of this rule shall be cause for immediate disqualification from the competition.
- An LCD projector, screen and a computer are available for the teams to use during the oral presentations. Any additional equipment required for a presentation is the responsibility of the team. If your presentation requires specific software you must provide your own computer or inquire as to its availability on the provided computer.
- The judges will endeavor to administer the problem with all fairness and appreciation for each team's perspectives; the decisions of the judges shall be final when deciding conflicts and scoring.

Problem Statement Guidelines

Requests for Information:

The excel worksheet titled 'ASC Sustainability RFI Log Example and Instructions' has been provided as an attachment for to show teams how questions will be submitted to the judges. Requests for Information (RFIs) will be asked and answered using Google Sheets. All RFI's submitted and answered will be seen by all participating teams and the Skanska judges.

NEW THIS YEAR: We have eliminated the question and answer periods that had been scheduled during the day Thursday for informal questions. Feedback from past students indicates that these have not been helpful, especially since all questions are answered in the Google Sheet for RFIs. All RFI requests received and answered will be available to all teams.

Supplemental Information:

Some of the problems have additional supplemental information, reference materials, drawings, etc. They can be located on the student USB in labelled folders.

Supplemental Problems:

Supplemental Problems may be provided at miscellaneous times on Thursday as addendums. Supplemental Problems may be additional information about a changing condition that needs to be incorporated into a team's final solution statement. A Supplemental Problem may also be requiring a response and/or solution to accompany the solution statement or may have an earlier deadline during the day. Student teams will need to make note of the conditions and requirements set forth in the individual supplemental problems issued and provide an appropriate response. Note: Supplemental Problems are not 'extra credit' and are accounted for in the total possible points related to their respective category. Solutions to supplemental problems are included in your page count.

Solution Submission Guidelines:

In keeping with sustainable practices, all proposers will provide a paperless submission. Solutions will be submitted on a USB drive and are the only acceptable means of submitting materials. All electronic submissions must be in the form of a PDF, MS Imaging file, JPG, TIF or other electronic format as indicated in problem statements. PDF is the preferred file format for submission. Teams may use the USB drive given to them by Skanska with the problem statement on them. Be sure to clearly label your submission file(s) for the judges.

Once turned in Thursday evening, the judges will transfer files and return the USB drive for your use on the oral presentations Friday. The same USB drive may be used the entire competition. USB drives will be returned to student teams after their oral presentation.

Format of Submission:

In addition to the requirements for electronic submission noted above, the following proposal formats must be adhered to:

1. 12-point Arial font
2. 1-1/4" border around all documents, left justified
3. Maximum submission of 25 pages, including cover page, cover letter, schedules or other documentation necessary to support your submission.

Problem Statement 1: Energy

18 Possible Points

Company Policy: *Projects must use of renewable energy sources to help supply power for jobsite trailers, temporary building lighting and temporary heat.*

Project Title: Sherwood High School

Project Location: Sherwood, OR

Your team has been tasked with developing a plan to implement this policy on the new Sherwood High School project in Portland, Oregon, which is currently under design. The goal is to lower costs by reducing the net amount of energy consumption during construction and to evaluate the feasibility of Skanska's new policy.

Project Background: Sherwood High School is a 350,000 sqft. building that is being built on a 72 acre greenfield site in central Oregon. The building consists of three separate sectors: the athletic wing (ABC), the educational wing (DE), and the commons/theater (FGJ). The designed capacity of the building is for 2,500 students with a planned future addition. The school has no LEED or sustainable requirements on the building, but to maintain with Skanska's core beliefs we are working to construct the building in a sustainable manner.

1. You will need to evaluate and compare at least 2 forms of renewable energy that could be used during construction and explain which would be the most practical for this project. Consider factors such as the location of the project, the project schedule, cost and energy performance of each system, logistical challenges on site, and any other factors your team believes are relevant. In your plan, clearly state the factors influencing your decision as well as any challenges that would need to be overcome and how you would address them. Also compare the practicality of these systems to the use of standard electricity.

Below are the anticipated energy loads per month for the project:

- Job site trailer: 750 kWh per trailer (9 trailers total)
- Temp lighting for building area: 1,500 kWh
- Temp heat for building area: 3,000 kWh

For reference use the attached project schedule to determine the flow of construction around the site. As the project's building areas and site progress, analyze how the systems your team is proposing will need to evolve or relocate to meet the project's needs. Below are the milestone dates in which the project loads will be increased:

See included supplemental information contained on student USB for additional material needed to complete the problem.

Problem Statement 1: Energy

Continued

Project Title: Sherwood High School

Project Location: Sherwood, OR

For reference use the attached project schedule to determine the flow of construction around the site. As the project's building areas and site progress, analyze how the systems your team is proposing will need to evolve or relocate to meet the project's needs. Below are the milestone dates in which the project loads will be increased:

- Start of Construction: **6/18/18**
 - Three trailers are on site at the start of construction and temp electricity is required to power these for the duration of the project.
 - On **12/1/18** all 9 trailers are on site for the remainder of the project.
- Building Area #1 Sectors A and B ready for temp heat and temp lighting: **3/20/19**
- Building Area #2 Sectors F, G, and J ready for temp heat and temp lighting: **4/26/19**
- Building Area #3 Sectors D, E, and H ready for temp heat and temp lighting: **5/30/19**
- Building permanent power and heating functional: **4/1/20**
 - Temp power and heating disconnected
- Final Completion: **5/18/2020**

2. The intent of Skanska's policy is for renewable energy systems to be temporarily used during construction only. Skanska management is interested in understanding the most practical and economic strategies for reducing overall cost while using these renewable systems. As discovered in problem 1, there are a number of factors that contribute to the overall effectiveness and feasibility of each of the renewable energy systems. Provide additional ideas for easing the overall cost of utilizing these systems. This may be in the form of passing on a portion of the cost to an outside source, utilizing the system(s) for long term usage, or spreading the cost of the system over multiple projects. Please include reasoning for your choice and provide a cost analysis explaining the potential cost savings and benefits. List any assumptions that were made in developing your team's cost analysis.

3. The Sherwood project team requests your expertise in developing their logistics plan – seeking your focus in renewable energy. Submit one logistics plan deliverable, incorporating energy, waste, water, and wellness. Meet with the team and contribute the following:

a. Collaborate on a site logistics plan to optimize renewable energy onsite. Detail in **BLUE** the location and type of renewable energy sources in coordination with other trades. Also include access routes to get the material on and off the site.

b. Provide one paragraph answers to the following questions:

1. Explain your decision-making process.
2. How will the logistics plan change during the different phases in construction? At any point during construction, will any of the renewable energy sources need to be relocated?

Problem Statement 1: Energy

Continued

Project Title: Sherwood High School

Project Location: Sherwood, OR

Source	Average Cost (\$/ kWh)	Install Cost (\$/ kW)	Tax Credit (Federal)	Limitations
Electric	0.12			
Solar		2750	26% of install	Tax Credit only applies to new sys- tems
Wind		2750	30% of total cost	Zoning laws apply, need at least 1 acre of land, average wind speed of 10mph, and 30' above obstructions
Geothermal		2500	30% of total cost	Need surface sta- bility, potential emissions
Hydro		1492	30% of total cost	Tax credit only ap- plies to new devel- opment

*Please provide sources and costs if you choose a system that is not listed above

See included supplemental information contained on student USB for additional material needed to complete the problem.

Problem Statement 2: Waste

18 Possible Points

Company Policy: *Divert 95% Waste & all projects must feature at least one salvaged material per 500 square meters of gross building area.*

Part 1:

Project Title: Tennessee Concrete Association

Project Location: 12872 Old Hickory Blvd, Antioch, TN

You are on the project team selected to build a new 6,000 SF facility for the Tennessee Concrete Association. The project will be pursuing the Living Building Challenge full certification in an effort to explore concrete's role in sustainable design and construction. Tennessee Concrete Association believes whatever they build needs to showcase concrete's many advantages as the world's best building material.



1. Provide a Materials Conservation Management Plan – focusing on the Construction Phase aligned with the 5 required material Diversions for LBC.
 - a. Materials Conservation Management Plan to include the following table:

Waste Stream	Jobsite Disposal Method	Handling Procedure
Material Stream #1:		
Material Stream #2:		
Material Stream #3:		
Material Stream #4:		
Material Stream #5:		
Mixed C&D		
All other non-recyclable C&D waste		

Problem Statement 2: Waste

Continued

b. Materials Conservation Management Plan to include the recycling facility and processing method for each anticipated diverted waste stream that is included in the diversion plan, using the recycling facilities given in the attached reference document “Waste Part 1 Reference Facilities”.

Waste Stream	Destination	Processing Information
Material Stream #1:		
Material Stream #2:		
Material Stream #3:		
Material Stream #4:		
Material Stream #5:		
Mixed C&D		

c. Materials Conservation Management Plan to include a site plan to show dedicated infrastructure for the collection of recyclables and compostable food scraps.

2. The site includes a single family threebedroom brick house that is to be demolished for the new project, reference “Waste Part 1 Q2 Floor Plan”.Per the Living Building Challenge, “a project that is located on a site with existing infrastructure must complete a pre-building audit that inventories available materials and assemblies for reuse or donation.” Provide a self-perform bid proposal to accomplish this work in order to satisfy the waste management requirements. Proposal to include a narrative for the waste streams/salvageable material. See attached “Waste Part 1 Q2BidProposalForm”, for the template.

See included supplemental information contained on student USB for additional material needed to complete the problem.

Problem Statement 2: Waste

Continued

Part 2

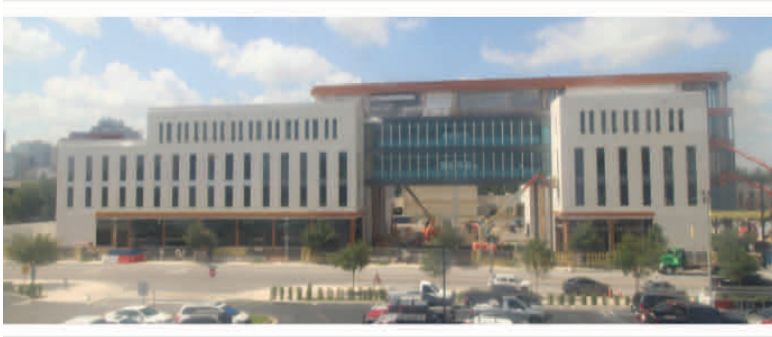
Project Title: UCF Academic Commons

Project Location: Orlando, FL

Your team is halfway through a project for a new campus in the heart of Downtown Orlando for the University of Central Florida. This project is a 150,000 SF academic building pursuing LEED Gold v4. The project has just finished its structure; complete with precast and glazing and is beginning finishes, reference the following snapshot from today, May 31st, 2019.

North Elevation

South Elevation



1. Review the project's waste tracking logs found in "Waste Part 2" folder to determine the current diversion rates using the LEED v4 Construction and Demolition Waste Calculator.

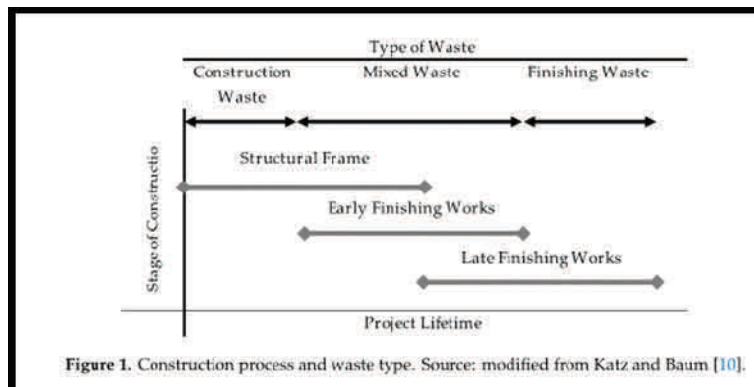


Figure 1. Construction process and waste type. Source: modified from Katz and Baum [10].

2. Although LEED v4 only requires 75% diversion for 2 points, your company policy requires 95% on every job. How can you improve your current waste management? Provide a waste forecast plan that highlights the upcoming waste streams for the project and ways to reduce, reuse and recycle those products. Include a narrative discussing the waste management during the three phases of construction – Structural Frame, Early Finishing Work, and Late Finishing Work. Architectural Finish Plans can be found for reference in "Waste Part 2" folder.

See included supplemental information contained on student USB for additional material needed to complete the problem.

Problem Statement 2: Waste

Continued

Part 3

Debrief and Comparison

1. Analyze the unique waste diversion challenges project to project. Write a work plan that will help mitigate the challenges of accomplishing the company policy. Include at least three (3) helpful tools or waste management strategies for future project teams to rely on.

2. The Sherwood project team requests your expertise in developing their logistics plan – seeking your focus in waste management. Submit one logistics plan deliverable, incorporating energy, waste, water, and wellness. Meet with the team and contribute the following:

a. Collaborate on a site logistics plan to optimize the project's waste management. Detail in **GREEN** the dumpster quantity, type and location, as well as any other waste management project strategies.

Problem Statement 3: Water

18 Possible Points

Company Policy: *Post-development runoff rates should not exceed pre-development rates on any of our projects. When practical, use treated stormwater for construction water uses.*

Project Title: Sherwood High School

Project Location: Sherwood, OR

The New Sherwood High School contract was awarded to your firm and you are responsible for overseeing the completion of the engineering design for water treatment and runoff as well as the construction of the project. Your team has been assigned to determine how to best manage stormwater runoff, local & federal environmental regulations and water use onsite. Your firm has implemented a new policy to ban single use plastic water bottles to cut down on waste.

The New Sherwood High School site consists of approximately 71.5 acres of undeveloped land located in Washington County, Oregon. The site was previously agriculture pasture and wooded area all located within three drainage basins. Since you are constructing on a previously undeveloped public site, it is required that the post construction runoff is no greater than its undeveloped condition.

The “Owner,” Sherwood School District, has requested for your firm to fully evaluate the four questions below prior to construction starting.

QUESTION 1: LOCAL AND FEDERAL REGULATIONS

Problem 1: Fill out the NPDES 1200-C Permit on [oregon.org](https://www.oregon.gov/dep/water/npdes/1200-C).

Problem 2: From the Sherwood Stormwater Masterplan, the two basins onsite will drain to Chicken Creek and Cedar Creek. Cedar Creek eventually drains to Chicken Creek and flows to the Tualatin River. List what paperwork needs to be submitted to meet the State Water Quality Regulations and Federal Water Quality Regulations based off of where the source of discharge is. Follow the attached links:

Federal Regulations: <https://www.epa.gov/wqs-tech/federal-water-quality-standards-requirements>

State Regulations: <https://www.epa.gov/wqs-tech/water-quality-standards-regulations-oregon>

QUESTION 2: STORMWATER POLLUTION PREVENTION (SWPPP)

Problem 1: List five storm water best management practices (BMPS) that are best suited for your project

Problem 2: Use the logistics plan to create a map of your storm water pollution prevention plan indicating in **RED** the location of the five BMP's. Also detail in **RED** an area on the logistics plan that can serve as a temporary overflow collection area if the stormwater onsite exceeds the annual average. Collaborate on the site logistics plan; submit one logistics plan deliverable, incorporating energy, waste, water, and wellness.

Problem Statement 3: Water

Continued

QUESTION 3: RUNOFF

In the effort to ensure the post-development runoff rates from the site do not exceed the pre-development runoff rates from the site, the project team selected Extended Dry Basin as the storm-water quantity on-site detention facility to capture runoff. The Extended Dry Basin is used for water quality purpose as well as detention for flow control. Water quality manholes will be installed up-stream of any discharge into the extended dry basins for pretreatment and all catch basins will be trapped.

Please refer to the Extended Dry Basins location indicated in the logistic plan as well as the Extended Dry Basin Information Sheet for the following problems. The civil engineer has indicated that the total impervious area for the proposed site is 1,278,901 SF.

Problem 1: Please use the provided drawings to indicate the impervious areas on site, and then calculate the total impervious area to compare to the engineer's report. Then use the Water Quality Approach Sizing Methods provided below to calculate the Water Quality Volume (WQV) and Water Quality (WQF):

Water Quality Approach Sizing Methods

Water Quality Volumes and Flows (applies to approaches in Section 4.05.3.c.1 (A)-(C))

a. Water Quality Volume (WQV)

The WQV is the volume of water that is produced by the water quality storm. The WQV equals 0.36 inches over the impervious area that is required to be treated as shown in the formula below:

$$\text{Water Quality Volume (cu.ft.)} = \frac{0.36 \text{ (in.)} \times \text{Area (sq.ft.)}}{12 \text{ (in./ft.)}}$$

b. Water Quality Flow (WQF)

The WQF is the average design flow anticipated from the water quality storm as shown in the formulas below:

$$\text{Water Quality Flow (cfs)} = \frac{\text{Water Quality Volume (cu.ft.)}}{14,400 \text{ seconds}}$$

Problem Statement 3: Water

Continued

Problem 2: Please use the provided drawings to calculate the area of the extended dry basin, then use the Extended Dry Basin Hydraulic Design Criteria below to calculate the size of the basin:

Diameter of the basin orifice (D) & effective basin detention Height (H):

1. Permanent Pool Depth: 0.4 feet
2. Permanent pool is to cover the entire bottom of the basin.
3. Minimum Water Quality Detention Volume (Q): 1.0 x Water Quality Volume (WQV)
4. Water Quality Drawdown Time (T): 48 hours
5. Centerline of orifice to the bottom of the basin: 0.1 ft.
6. $H(\text{ft}) = [2/3 \times \text{WQV}/\text{Basin Bottom Area}] - [\text{Centerline of orifice to the bottom of the basin}]$
7. Orifice Size (D):

$$D = 24 * [(Q / (C[2gH]^{0.5})) / \pi]^{0.5}$$

Where:

$$Q \text{ (cfs)} = \text{WQV}/T$$

$$C = 0.62$$

$$g = 32.17$$

8. Maximum Depth of Water Quality Pool (not including Permanent Pool): 4 feet or as limited by issuing jurisdiction.

QUESTION 4: CONTRACTOR WELL-BEING

Problem 1: What ways can the project team ensure that all workers have access to clean drinking water at all times during the work day?

Problem 2: What role does water play in safety on a jobsite?

Problem Statement 4: Contractor Well-Being

18 Possible Points

Company Policy: *Project logistics will focus more on worker health and well-being; implementing measurable strategies to improve overall well-being.*

The task force designated to establish this policy is targeting the contractor wellness topics listed below. Your team has been asked to join the task force by providing perspective and practical implementation from the project management level. Skanska plans to use these implementation strategies across all projects sites in the US to improve working conditions and to exhibit Skanska's commitment to one of its core values: Care for Life.

Contractor Wellness Topics

Adequate Physical Activity
Blood Pressure
Commuting
Healthy Diet
Opioid Crisis
Smoking and Tobacco Use
Suicide Prevention
Women's Health
Work-Life Balance
Topic of your choosing

Part 1: Contractor Wellness Program

1. Detail the impact of three of the above topics on construction worker well-being. Explain the scope of the problem, answering questions like how many people does this impact? Can these impacts be mitigated? How does project locality factor into these impacts? How do the impacts in the construction industry vary from other industries? Provide references for all data and statistics used.
2. Detail an implementation plan to address the three topics selected. Provide an estimated implementation cost, SMART metrics for success, and a detailed timeline for implementation around project milestones. Make the implementation plan applicable to any project, with pricing and timeline able to be adjusted for project specific metrics like number of craft workers onsite and duration/size of project. In estimated cost summary, provide final cost in units of \$/worker/month plus flat setup costs if applicable.

See included supplemental information contained on student USB for reference links.

Problem Statement 4: Contractor Well-Being

Continued

Part 2: Contractor Wellness Tool Box Talk

A Toolbox Talk is an informal group discussion that focuses on a particular safety issue. These talks promote department safety culture as well as to facilitate health and safety discussions on job sites and can be technical in nature or a more universal discussion. Toolbox Talks are generally discussed on a weekly basis, presented by the Superintendent or another Skanska project team member. The weekly Toolbox Talk should always be relevant to the project risks and worker safety. It is good practice for them to be conversational to encourage participation by the craft or project team to provide additional information, personal stories or examples which provides more context. The Toolbox Talk should be informational in providing facts on the topic but also must ensure the workers connect to what the issues are, how they could be affected, and what actions they can take to minimize risk.

1. Choose one of the three contractor wellness topics that you addressed in Part 1. Create a one-page tool box talk that a superintendent could discuss with their crews. See included examples as reference.

This has an early deadline. Tool box talk must be submitted by 3pm today. You will be sent an email with a link to a Google folder where you can submit your tool box talk.

2. Send at least one representative to Southern Pacific EF at 3:30pm today to draw for your presentation time. You will be given a 5-minute timeslot between 3:30pm – 5:00pm to present your toolbox talk as if you were presenting it to a crew on a jobsite. The judges will have copies of the tool box talks submitted through Google drive. You are welcome to sit through all presentations if you would like.

Part 3: Logistics Plan Designed for Contractor Wellness

The Sherwood project team requests your expertise in developing their logistics plan – seeking your focus in contractor wellness. Submit one logistics plan deliverable, incorporating energy, waste, water, and wellness. Meet with the team and contribute the following:

1. Collaborate on a site logistics plan to optimize contractor wellness onsite. Detail in **ORANGE** the bathroom quantity, type and location, parking quantity and location, break areas, and any other contractor wellness features.

2. Provide one paragraph answers to the following questions:

- a. Explain your decision-making process.
- b. Are there any legal requirements that need to be met for providing bathrooms and parking for contractors? Note these may change based on project location.
- c. How will the logistics plan change during the different phases in construction?

See included supplemental information contained on student USB for reference links.

Problem Statement 5: Carbon/EC3 Tool

8 Possible Points

Company Policy: *Add at least 25% of your materials selection into the EC3 tool to increase its data set.*

Project Title: Skanska Commercial Development on Wilshire Blvd

Project Location: 9000 Wilshire Blvd

Each team must have at least one representative attend the **EC3 demonstration at 11:30** in the Southern Pacific EF room. All team members interested are welcome; the demonstration should last 15 minutes. The remaining of this problem will be distributed at that time. You may elect to have the problem emailed to your team captain or uploaded to a USB drive that you bring with you to the demonstration.

Oral Evaluation

OAC Meeting Presentation

20 Possible Points

You've spent a good amount of time investigating the feasibility of the given hypothetical corporate policies for Skanska projects. The Skanska Senior Leadership Team (SLT) has asked for an update and feedback on these policies from project teams. The Oral Presentation will be in the style of a meeting with the Senior Leadership Team. Teams will be given a list of topics from the SLT to discuss during the presentation. Your team will be representing the Skanska project teams needing to explain decisions or actions that have taken place on the project and justifying any impacts to cost or schedule as they impact each project. The Skanska judges will be representing the SLT.

Your team will be responsible for preparing the meeting agenda and any additional documents, etc that may be needed to illustrate your decision-making process. Unlike a presentation, the SLT may ask questions during the meeting topic. There is also a stiff time constraint on the meeting, as the SLT has other meetings throughout the day. If a resolution cannot be reached, or if the owner is unsatisfied with your decision-making, the conversation may be tabled for further discussion at a later date in order to get through all of the equally important topics being covered during the meeting.

Additional Details regarding content and format of the SLT Meeting will be provided at a later time.

Presentation Timeline:

- Teams will have five (5) minutes between presentations to set-up and break down.
- Teams will be allotted thirty (30) minutes in which to; introduce their team, present their information, and explain the expected challenges. Judges will be able to ask questions during this period.
- A ten (10) minute period for feedback will follow the presentation.
- A computer with MS PowerPoint, a projector, and screen will be provided for presentation to the committee.

Any other presentation materials required are to be provided by the team.

**ALL ELECTRONIC AND HARDCOPY PRESENTATION MATERIALS ARE TO
BE DELIVERED AT 06:00 AM PST TO
THE PRESENTATION ROOM (Southern Pacific E&F)
ON THE MORNING OF FEBRUARY 7, 2020.**