**SECTION II - PROJECT MANAGEMENT**

**710 Wilshire Hotel**

**Santa Monica, California**

**PREMISE**

You recently joined Morley Builders as a Project Engineer and have been assigned to your first project – 710 Wilshire Hotel. You quickly discover how unique and fast-pace this project is and how important it is to maintain great relations with the Owner and Architect. You meet your Project Manager, Tyler, and he explains your responsibilities and how crucial it is that you complete them on time. He also informs you that he’s going on a month long vacation to Scotland tonight to celebrate winning a national championship with his Rugby teammates. Consequently, he has assigned you a long list of tasks to complete while he is away. This includes a variety of emails you have to file through to get a large majority of your direction.

The various assignments are identified as follows and you will need to find the best solutions to each task. Please include all of your responses in the Solutions Binder as outlined in the instructions:

A. Plan Reading

1. Using the project documents, provide answers to each question.

B. Subcontractor Scope Writing

1. Write a complete scope for the elevator trade based on the drawings, specifications, notes, and emails provided.

C. Photo Hunt

1. Provide an answer to each question shown on the photos

D. Project Dilemmas

1. Provide a written response on how to remedy the given scenarios.

The following Exhibits are included for this section:

* Exhibit II.B.01: Subcontractor Buyout – Notes from Elevator Scope Meeting
* Exhibit II.B.02: Example Contract No. 01
* Exhibit II.B.03: Example Contract No. 02
* Exhibit II.B.04: Subcontractor Buyout – Subcontract Template
* Exhibit II.B.05: Subcontractor Buyout - Email No. 01
* Exhibit II.B.06: Subcontractor Buyout - Email No. 02
* Exhibit II.B.07: Subcontractor Buyout - Email No. 03
* Exhibit II.B.08: Subcontractor Buyout - Email No. 04
* Exhibit II.C.01: Photo Hunt Pictures
* Exhibit II.D.01: Part 1 Response Form
* Exhibit II.D.02: Glazing Subcontractor Contract
* Exhibit II.D.03: Part 2 Response Form
* Exhibit II.D.04: Part 3 Response Form

**A. Plan Reading**

Your project superintendent Jefferson is occupied with keeping the project on schedule while leading field activities, he often will look to you to provide information derived from the contract documents to keep work moving forward. Jefferson, and the rest of the field team, rely heavily upon your abilities to research and resolve unexpected issues that arise in the field, while communicating important information back to them and related trades in a short span of time. Below are the questions that Jefferson has asked you.

*Deliverable* – For each question below, provide an answer based on the plans and specs. Please write your answer directly on this form and return it with the Solutions Binder.

SCHOOL NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Where is the Remote CO2 Tank for the Pool and Spa supposed to be located?

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1. How many total stair shafts are there in both the Landmark and Hotel Building? At what level does Stair #5 terminate?

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1. How many floor sinks are there on the Cocktail Bar and Level 07 Kitchen?

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1. What material is to be removed around the existing stair shafts in the Landmark Building?

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1. What type of waterproofing component is required directly over the tiebacks?

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1. Mechanical Equipment Room P-204 has a duct opening in the ceiling deck above. What is the size of this opening? Draw the required reinforcing around this opening.

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1. At what level is the Emergency Generator located? What are the sizes of the two vent pipes that feed this tank?

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1. What is the minimum compressive strength column type C15 on GL Q & 4 on Level P4?

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1. What is an acceptable manufacturer for the exterior FRP (Fiber-Reinforced Polymer) on the Landmark Building?

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1. What is the material that separates the crushed gravel and soil in the container planters?

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1. On the Ground Level at Gridlines 14 and L.7, there is a finish floor elevation of 116.42. Adjacent to this is a ramp that slopes down by 3.6%. What is the length of this ramp? Measurement to be in decimal form.

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1. What is the rough opening size and finish material for the bathroom door at guest room 211?

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**B. Subcontractor Buyout**

As part of your role as a Project Engineer, you are responsible for writing subcontracts for the various trades involved in this project. In one of his emails, Tyler instructed you to finish the buyout for Elevators. Subcontractor “buyout” is the process that leads up to successfully finalizing and awarding a subcontract for a particular trade scope. During this process, the project team decides what portions of the job should be the responsibility of a particular subcontractor (Inclusions), and what portions of the job will not be the responsibility of that subcontractor (Exclusions).

Special attention should be given to inclusion items which need to be properly delineated between coordinated trades, such as where piping, conduit, etc. meet with another subcontractor’s work. The subcontractor will be held responsible for all plans and specifications. There is no need to include/exclude items listed on the plans and/or specification, unless you believe there is a need to specifically reference it. Collectively, the list of inclusions and exclusions is called a “scope”. The intent is to develop scopes for each trade, and to not have any omitted items, called “scope gaps”, between all of the combined scopes.

Your estimating team has vetted through the subcontractor bids and it is now your responsibility to write the contract for the chosen elevator subcontractor. You remember that in a meeting with Tyler and your superintendent, Jefferson, you wrote down notes (Exhibit II.B.01) for items you must include in the Elevator subcontractor scope. Tyler also gave you some sample subcontracts from previous projects to aid you in your contract writing (Exhibit II.B.02 & Exhibit II.B.03). You also have about five unread emails from Tyler that might serve beneficial. All of these are included within the Exhibit Section.

*Note: Each subcontract sample includes “boilerplate” language on items such as insurance, payment terms, safety, general cleanup and site rules, etc. For clarification, reference pages 1 through 11 in Exhibit II.B.02 and Exhibit II.B.03. This does not need to be included in your scope, as it automatically gets added into each Subcontract. For the purposes of this exercise, you only need a list of trade specific inclusions and exclusions. Please see “Exhibit G” in Exhibit B.II.02 and Exhibit II.B.03 which starts at the page 19.*

Deliverables –

1) Based on your findings and notes, you are to write the Elevator subcontract that includes a complete scope, listing all inclusions and exclusions (assume subcontract boilerplate and General Clauses will already be included) and turn in with the Solutions Binder. Using the template in Exhibit II.B.04, you are to write a minimum of 20 inclusions and 5 exclusions.

For your reference, use the following exhibits:

* Exhibit II.B.01: Subcontractor Buyout – Notes from Elevator Scope Meeting
* Exhibit II.B.02: Example Contract No. 01
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* Exhibit II.B.04: Subcontractor Buyout – Subcontract Template
* Exhibit II.B.05: Subcontractor Buyout - Email No. 01
* Exhibit II.B.06: Subcontractor Buyout - Email No. 02
* Exhibit II.B.07: Subcontractor Buyout - Email No. 03
* Exhibit II.B.08: Subcontractor Buyout - Email No. 04

**C. Photo Hunt**

The photos included in Exhibit II.C.01 were taken by your superintendent, Jefferson, throughout the day. He has sent these to you to verify for quality control purposes. Please review the attached photos and verify each item based on your review of the drawings. Each question below is listed in the photos.

*Deliverable* – Include your answers on this form and turn in with the Solutions Binder.

SCHOOL NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Photo 1:** | |  |  |
|  | 1) What is the waterproofing type behind the lowest wall? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 2) What is the slab thickness of the slab at this area? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 3) What is the elevation at the bottom of the SUMP basin? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Photo 2:** | |  |  |
|  | 1) What is the hardware set for the two doors here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 2) What is the opening height here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 3) What type of plan gets planted next to the door here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Photo 3:** | |  |  |
|  | 1) What type of bike racks are installed here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 2) What is the size of the beam here? What is the required shear reinforcing? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 3) What is the size of the garage intake here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Photo 4:** | |  |  |
|  | 1) What room number is this? Name one window type between these columns. |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 2) What is the depth of this concrete beam? What detail tells you this? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Photo 5:** | |  |  |
|  | 1) What light fixture type is to be installed here? What is the manufacturer? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 2) What is the height of this guardrail from the finish floor? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  | 3) What steel member spans across here? |  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**D. Project Dilemmas**

A few days before Tyler left for his vacation, he mentioned to you a few problems that have come up and need solving. He is unable to provide direction in his absence, so it is up to you to recommend on how to proceed on the following issues. In each of the following scenarios, please provide a written recommendation on how to proceed. As you and Tyler discussed, the more specific and detailed your answers are, the better you are able to convey your message.

1.

In the last Owner, Architect, Contractor (OAC) meetings, a new meeting issue evolved regarding the current design. As you noticed by now, the interior, and to some extent the exterior, design is omitted from the current contract documents, as it is being developed simultaneously as construction progresses. Both the Architect and Owner have agreed that the design documents will be issued in separate pieces, or Bulletins, as soon as they are finished. However, in the last OAC meeting, the Architect was not clear as to what would be included in each Bulletin or exactly when they could provide these documents. Even more critical, Morley noted that it is difficult to complete the current work in the field that has a direct effect on the interior design. For example, in last week’s meeting, Jefferson stated that the third floor bathroom and kitchen room layouts must be identified in the next two months so that the concrete team can properly place any plumbing sleeves in the deck to those rooms.

In the best interest of Morley and the Owner, Morley recommended that these Bulletins be prioritized and coordinated early on, in order to identify what critical information is needed to keep the flow of work going in the field. Tyler has tasked you with choosing which 3 of the following Bulletins should be issued next and what their content should be.

* Door & Hardware Schedule
* Waterproofing & Roofing Details
* Interior design light fixture schedule & Finish wall colors
* Finish Floor elevations & reinforcement requirements
* Pool Drawings & Landmark Kitchen Design

Using Exhibit II.D.01, you are to provide a written response to the Owner, in letter format. Each bulletin should include, at a minimum, the following information.

1. The content required in each bulletin and why it is needed to maintain the critical path.
2. Note major dates and lead times associated with review, shop drawing creation, and fabrication.
3. Explain any potential risks/concerns with not receiving each bulletin in time.

2.

You’ve recently received a returned glass guardrail submittal package back from the Architect where the following comments were made, “Glass railing to be reviewed and approved by a structural engineer.” Your Glazing Subcontractor received this submittal as well and hired a structural engineer to calculate the strength of the glass. Upon completion, they informed you that the glass thickness needed to increase from ½” to ¾” and provided you with the costs to furnish and install the thickened glass for an additional $30,000. The Architect is claiming that the additional cost is to be borne by contractor, not the Owner. The Glazing Subcontractor is adamant this is a valid change to their contract. Using the drawings, specifications and Glazing Subcontractor Contract (Exhibit II.D.02) as your reference, please provide a recommendation to your Project Manager, Tyler, on how to proceed and provide answer in Exhibit II.D.03.

3.

During a site walk, your Owner’s Representative, Tyrion, notices that the curtain wall aluminum framing color is not the color they originally chose. They ask you to confirm with the Glazing Subcontractor and Architect to see what the original design intent was. After looking into the drawings and specifications, you notice that the color installed is, indeed, incorrect. However, after doing a little more digging, you discover the installed color was approved by the architect and owner in the corresponding submittal package.

You inform the Glazing subcontractor immediately and ask them what your options are. They tell you that the product installed cannot be easily replaced and would require an entire teardown and re-build, a process that would take an additional 16 weeks. Included in this re-work is approximately $100,000 worth of additional labor and material, which the subcontractor stated they are not going to pay for, since the submittal directed them to install the incorrect color. This situation is worsened, as the subcontractor has now decided to stop all remaining work until they are paid their $50,000 in outstanding change orders. This all happens the day after Morley Builders and the Owner had started discussing $60,000 worth of “wish-list” items that were originally omitted from the contract documents. Using Exhibit II.D.04, please provide a recommendation to your Project Manager, Tyler, on how to proceed.

For your reference, use the following exhibits:

* Exhibit II.D.01 - Part 1 Response Form
* Exhibit II.D.02 - Glazing Subcontractor Contract
* Exhibit II.D.03 - Part 2 Response Form
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**II - PROJECT MANAGEMENT**

**710 Wilshire Hotel**

**Santa Monica, California**

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