

MODULE 02 – SCHEDULE

Part A – Schedule

- 1. Schedule Format Criteria:
 - With one of the three programs listed below you will create a schedule, complete with a continuous logical flow of critical path activities from Notice to Proceed, Permit Releases, Subcontractor Buyout, Procurement, Submittals, Fabrication and Delivery lead times, Construction, Punchlist and Completion - Project, SmartSheet, P6.
 - b. At a minimum, show the following column headers: Activity Description/Task Name, Duration, Start, Finish, Total Float.
 - i. In addition, clearly show predecessors and successors in Gantt or column form.
 - c. Activity Count: No less than 100 activities.
 - d. Organize your activities so they are easy to read, activities are grouped intuitively, and the schedule "flows" well.
- 2. Contractual Criteria:
 - a. Notice to Proceed Pre-Construction: March 6, 2020
 - i. All pre-construction activities will need to have a submission, review, and approval process.
 - b. Notice to Proceed Construction (NTP): To be determined by you
 - i. NTP authorizes contractor mobilization.
 - c. Substantial Completion: May 28, 2021
 - i. Substantial Completion is defined as "the building can be used for its intended purpose." In order to satisfy this requirement, all construction activities shall be substantially complete, the building systems must be operational, all code required inspections must be complete, and a Temporary Certificate of Occupancy must be received from the State Fire Marshal to allow occupancy of the building for its intended purpose.
 - ii. There is a data center in this building. The owner has confirmed that data center needs to be turned over 8 weeks prior to substantial completion.
 - d. The schedule should account for all major US holidays.
 - e. The project is located on an active office complex. Material delivery delays, construction time constraints, and overall complex impact should be analyzed and accounted for in the activity durations.
- 3. Work Breakdown Structure:
 - a. Most project need to be phased to balance crew sizes and workflow. You may need to break out your schedule based on the area phasing plan created by your site logistics team.
 - b. At a minimum, the below milestones and activities need to be included in your schedule add any activities you deem necessary.
 - c. Overall Milestones:
 - i. Notice to Proceed Pre-Construction (March 6, 2020)
 - ii. Notice to Proceed Construction (TBD)
 - iii. Substantial Completion (May 28, 2021)
 - d. Preconstruction:





- i. General
 - 1. Permitting
 - 2. Design Development
 - 3. Existing Space Survey/Turnover
- ii. Submittal Preparation and Review
 - 1. Millwork
 - 2. Lighting
 - 3. Acoustical Treatments
 - 4. Data Center Equipment
 - 5. Stairs
 - 6. Fire Alarm
 - 7. Fire Sprinkler
 - 8. Doors, Frames and Hardware
- iii. Procurement of Material
 - 1. Millwork
 - 2. Lighting
 - 3. Data Center Equipment
 - 4. Glazing
 - 5. Mechanical Equipment
 - 6. Stairs
 - 7. Doors, Frames and Hardware
- e. Construction:
 - i. Mobilization/Make Ready
 - ii. Demolition
 - iii. Framing/Rough In
 - iv. Finishes
 - v. MEP Systems Startup, Testing and Commissioning
 - 1. Line items to assist in the schedule build out:
 - a. Owner Functional Testing & Sign-Off
 - b. Startup Equipment
 - c. Energize Building/Permanent Power
 - d. Building/Fire Marshal Final Inspection & Sign-off
 - e. Test and Balance Air
 - f. Audio Visual (AV)
 - 2. HINT Below are some activities that need to be complete prior to data center turnover:
 - a. Power On
 - b. Fire Suppression System Complete
 - c. CRAC Units Installed/Commissioned (CRAC Unit CRAC units are cooling units installed in high heat producing rooms like data centers, server rooms, etc. that are separate from the building HVAC system)





Part B – Schedule Questionnaire

<u>Objective</u>: The intent of the questions below are to test your knowledge and spark ideas for creating your schedule.

- Typically design build fire alarm and fire sprinkler systems require a deferred permit (Deferred permit: portions of the design that are not submitted at the time of the **permit** application and that are to be submitted to the building official within a specified period). That being said, how early in the project should they be brought on board and why?
- 2. Due to the acoustical requirements at the sound pods and foley, QuietRock 545 has been specified by the design team. Given the nature of QuietRock (being multiple layers of gypsum board with a cement or metal interior) how due you plan to account for the efficiency loss of install in your schedule?
- 3. What scopes of work can be overlapped or staggered in the construction schedule and why? (List 3)
- 4. Based upon your previous answer, which subcontractors would you pay overtime to save time out of your schedule and how is this reflected in your budget?
- 5. Explain the ways that self-perform work can decrease days in your schedule.
- 6. As part of DPR's ever forward thinking, we are constantly looking for ways to stay ahead of our competitors, especially when it comes to implementing innovative technologies and processes. Recently, DPR has begun using prefabricated stud framing on projects in efforts to improve efficiency in the field. Based on your schedule, which areas could be prefabbed to improve durations in the schedule?

Required Deliverables:

- 1. Complete schedule in PDF format
 - a. Including a list of your assumptions you made throughout the schedule creation process
- 2. Questionnaire

