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FROM SPEIGHT, MARSHALL & FRANCIS, P.C.

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Structural Steel Mill Order Drawings

Introduction

Accelerated project schedules and longer lead times for procurement of structural steel have required structural engineers to issue structural steel mill order drawings much earlier than ever before. In many cases, it is extremely beneficial to issue early steel mill order drawings to reduce the overall construction schedule, as well as allowing for earlier occupancies.

Properly managing and understanding the risks associated with producing such drawings are the keys to ensuring this strategy is successful. Minimizing design changes to steel members after steel procurement has been made is essential.

Understanding the Delivery Process

Often when we are asked to produce structural steel mill order drawings, we hear the classic statement “It’s pretty much all on you.” While this statement is true in some respects architects, owners and other members of the team play critical roles in providing key information and making final decisions that invariably can have a huge impact on the structural steel design.

To properly produce early steel mill orders, one must have a clear understanding of how the process works from a delivery and effective timing perspective. From the delivery process one must understand the following:



Kellam High School – steel design by SM&F

- **Mill Order Drawings** – The structural steel drawings must allow for the procurement of steel, as well as be scheduled in the mill rolling process. In order to do this, the structural drawings must show all the steel member sizes and lengths. Furthermore, it is imperative structural engineers do not over-design the steel members, because they feel uncomfortable with the process.

- **Steel Detail Package** – These drawings provide detailed information for the structural steel. Connections, sections and details must be included, as well as miscellaneous edge angles and bracing. These drawings are absolutely critical to ensure the structural steel shop drawings can be completed.
- **Mill Order Information Freeze Dates** – Dates must be established when all important and pertinent information for the mill order drawings must be provided to the structural engineers and it should not change after this data.

Guidelines for Success

Early steel packages are not going away. It is important for all team members to understand their roles in the process. This is not just a “structural engineering thing.” To ensure the process is successful, the following guidelines should be considered and understood by all team members:

- All team members must be committed to the process. An early collaboration meeting at the beginning of the process is critical and structural engineers must be forthright about what they need and team members must be aware of what is required on their end.
- Ongoing communication and honesty are important. The structural engineer bears a large part of the responsibility and it is imperative the team members respond quickly with information. Structural engineers must be in close contact with the structural steel supplier and fabricator.
- All parties must be held accountable for providing information that is accurate and not a five minute stab to get the structural engineer off the phone.
- Team members must do the upfront work and not just provide half thought out information.



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Structural engineers bear the main responsibility in this process, but it takes the full commitment and cooperation of all team members to execute the process successfully.

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