QUALITY CONTROL PROGRAM
FOR THE
UNIVERSITY OF KENTUCKY
RESEARCH BUILDING #2

Quality Management Team:

Vice President: Mike Briselden
Senior Project Manager: Josh Engel
Project Manager: Eli Griggs
Project Manager: John Hearns
Superintendent: Jeff Crouse
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EXECUTIVE SUMMARY

The Whiting-Turner Quality Control Program for the UK RB2 project has been created to address all work for which WT is responsible, including that work performed by WT or Subcontracted to others, from preconstruction through project turn-over. Delivering this project with the highest possible quality - in accordance with Contract Documents - is our primary objective. We work endlessly to meet and exceed customer expectations and the project requirements through comprehensive checklists and inspections performed by all of our employees through a team-oriented approach.

Objective:
The Whiting-Turner team responsible for this project has adopted an innovative approach to Quality Control in an effort to meet the challenges of the project and streamline an effective program. We strive to be on the leading edge of a team-oriented Quality Control initiative that makes its marks in the minds of our clients, the schedule, in employee training, and is reflective of the mission of Whiting-Turner.

One of the ways this project team plans to meet its Objective is through the development of the Special Topic Program, which helps educate the staff on a cross-disciplinary basis while ensuring the quality of specific areas of work. We work to strengthen our expertise in all areas of the construction process by utilizing the knowledge of every team member, from Assistant Project Engineers to Senior Superintendents. By continuing to develop our own understanding of the systems of work, we are able to better control the quality of our subcontractors' work as well as our own. A summary of the Special Topic Program can be found attached to this program (Exhibit 4).

This project team takes an innovative approach to Quality Control by designing and utilizing a QC point system. This point system is meant to enhance the quality of inspections by rewarding people who go above and beyond what is expected. This encourages the team to develop checklists, alerts, logs, and scope specific quality control programs for their specific areas of work. It is our belief that Quality Control goes far beyond policing the work performed by subcontractors. It is for this reason that our point system rewards team members for Quality Control efforts in all facets of their work including but not limited to daily work inspections, safety inspections, issue log maintenance, monitoring subcontractor schedules, properly reviewing invoices, updating cost studies, reviewing reports submitted by 3rd party inspection agencies, etc. A summary of the QC Point System is attached to this manual (Exhibit 3). Also attached are suggestions on how each member of the team can enhance the quality of their work.

The Project Team will use VDC technology that fits the project needs to assure quality. For this reason, we understand that it will be difficult to describe a project’s QC Program without VDC playing a critical role. Therefore, VDC and the project’s QC Program must be developed in tandem at the outset of the project.

An additional resource is our Corporate Quality Control Team which continues to advance and improve on the overall Q.C program and which maintains the Corporate Q.C. database. The team includes Brian Ott as the Corporate Q.C. Officer and is supported by a Corporate Q.C. Advisory Committee and Q.C Division of Work Leaders/Coordinators. The role of the Corporate Q.C. Advisory Committee is to monitor the overall program and seek ways to continue to advance and improve on it. The C.Q.C.A.C. also oversees the Division of Work Leaders/Coordinators. The Division of Work Leaders/Coordinators are responsible for collecting, sorting, managing and publishing the database of Q.C. Alerts, Q.C. Checklists, Q.C. references and further quality related information. To help streamline our process, new or improved Q.C. checklists or alerts should be submitted directly to the Division of Work Leader/Coordinator in charge of the CSI division under which the checklist/alert falls.
3rd Party Inspections:
Prior to the start of construction a comprehensive review of the contract documents will be performed to extract all of the necessary Third Party Inspection requirements, and the local building inspection departments will be contacted for review of their inspection requirements. Involve the Owner and design team to ensure that all critical design elements have been reviewed and the appropriate scope can be developed for the 3rd party inspection agency. A master list of Inspection Requirements will be produced for the project. The individual charged with the oversight of particular trade packages will also monitor the inspections for the package to assure their compliance.

Whiting-Turner Company Policy states that it is mandatory that the following items be carefully inspected by competent experienced independent inspectors:

1. Initial project surveys and controls
2. Structural Earthwork
3. Structural Concrete
4. Structural Steel
5. Structural masonry
6. Anything involved in the structural integrity of the work
7. Pilings, caissons, and similar deep foundation systems
8. Roofing
9. Entire building envelope

If the Owner provides these inspections themselves, or through a 3rd party that is acceptable, as long as we are satisfied that the inspections are happening correctly and they are performed by competent persons. In all cases we must be given copies of the inspectors’ reports. Also, depending on the scope of the work, the inspectors need not necessarily be full time, as long as we are satisfied that they are present enough to satisfy our objectives.
CONSTRUCTION PHASE

Mockups and First Work Inspections: Mock-ups and First Work Inspections will occur in this stage as planned for during the preconstruction phase. Once under construction you may notice other areas that would benefit from a Mock-up or First Work Inspection. Implement these during this phase as warranted. (Refer to Preconstruction Phase: Mock-ups and First Work Inspections for additional information regarding this process). Consider virtual mock-ups even to the extent of stud placement for better coordination with in-wall services, especially in complex projects where space is at a premium.

Quality Control Inspections and Reporting:
Whiting-Turner seeks to perform inspections that will have the greatest positive impact on the project. The goal of these inspections is to assure that work is being performed according to documented standards. We work to further this goal by taking the following measures:

- Inspections are performed prior to the start of work by way of preconstruction conferences with subcontractors, scope assessments, and review of safety procedures. *Reference Division 1 - Subcontractor Pre-Award Checklist.*
- Random inspections are performed while work is in progress. *Reference Exhibit 1 for a copy of the QC inspection and non-conformance report form.*
- Non-Conformance reports are logged and sent to responsible subcontractors for any work that does not meet document standards. *Reference page 7 for a copy of our QC flowchart showing the chain of events that occur during and after an inspection.*
- Follow-up inspections are performed in a timely manner to certify that rework has been completed and schedule delays are avoided. *Reference Exhibit 6 for a table of contents of a list of sample QC checklists by division.*
- Team members are challenged to develop scope specific, customized inspection checklists. The Project Documents (especially the Specifications) shall be completely reviewed, and all relevant QC requirements shall be included into such inspection checklists.
- Quality Control efforts are reinforced during weekly team meetings, and bi-weekly progress meetings provide a forum for trades to raise current quality control issues.

Independent testing and inspection agencies can be hired to perform project surveys; establish initial controls; and to provide testing and inspection of structural earthwork, piling and caissons, structural concrete, structural masonry, structural steel, roofing and spray fireproofing. Include other 3rd party inspections agreed upon during the preconstruction 3rd party inspection coordination meeting.

The Project Team should take every opportunity to communicate its Quality Control Program to the client. Our Quality Control Program is our best example of our commitment to quality and the value-added service that we provide to our client. The following are suggested:

- **Owner Progress Meetings** – dedicate a section of your progress meetings for discussing and documenting Quality Control
- **Monthly Reports** – Include a Quality Control section in your monthly reports to the Owner and design team.
- **Project Website** – Exhibit portions of the Quality Control program on a Project Website
Utilizing CMiC to Manage the Project Quality Control Program:

Many of our projects utilize CMiC as our Project Management database. Our Project Quality Control Programs can be managed by utilizing CMiC. CMiC Manager can assist by streamlining the administrative tasks necessary in a well-organized and well-managed Quality Control Program. The following is a list of just some of the tasks that can be made more efficient through the utilization of CMiC:

- QC Inspection Log maintenance
- Safety Inspection Log Maintenance
- QC Non-conformance Log Maintenance
- Summary Log Reporting (Open Non-Com Report Logs, Project Team QC participation Log, Trade Contractor Participation Logs, etc.)
- Sharing Reports
- Inspection Report / Log Distribution

Through the CMiC Website, CMiC can be utilized to allow other Project Members (owner, design team, subcontractors, etc.) to access and participate in our Quality Control Program.

Submittals and Material Procurement:

Submittals for all areas of work will be monitored and, once received, reviewed for completeness prior to submission to the Design Team and Owner for final approval. Whiting-Turner will monitor the entire approval process for all submittals to ensure that they are completed in a timely manner. The submittal coordinator will be chosen by the project manager to assist project engineers in maintaining a project master submittal schedule and log.

All shop drawings, submittals and samples will include the following:

- The Whiting-Turner project number
- Date of submittal
- Submittal number
- Name of subcontractor
- Reference to specification section and/or drawing number
- Any qualifications or deviations from the requirements of the contract documents marked in red ink on the document

Material procurement will be tracked in conjunction with the submittal process. Once approvals are obtained, Whiting-Turner will monitor fabrication of all materials and track delivery dates from subcontractors. Upon delivery to the job site, all materials and equipment will be inspected for conformance with the plans, approved shop drawings and specifications. Additionally, Whiting-Turner will ensure that each subcontractor provides adequate protection of materials from the effects of weather.
Quality Control Coordinator:

Josh Engel, the Quality Control Coordinator for this project, will lead the Quality Control effort and organize team members into one composite and effective Quality Control Team. It will be the responsibility of the coordinator to perform the following tasks:

- Track the master non-conformance log to ensure that non-conforming work is being corrected in a timely manner.
- Log all Quality Control inspection reports monthly and award points to team members for their monthly QC effort using the QC point system outlined in this manual.
- Incorporate the Owner and Design Team into the Quality Control Program to strengthen relationships with the WT Team.
- Coordinate the Special Topic Program by maintaining the special topic schedule and customizing mini QC Programs with other team members to be presented at weekly meetings.
- Update the Quality Control Manual regularly as new work begins and QC Checklists are created by the team.
Quality Control Program – Flowchart

Item does Conform

Team Member Completes Q.C. Inspection

Complete WT Q.C. Inspection Report

Log original copy in jobsite Q.C. Binder

Item does not Conform

Complete WT Q.C. Non-Conformance Report, send to responsible subcontractor

Correction is not Acceptable

Re-inspect once item is corrected by subcontractor

Correction is Acceptable

Notify subcontractor and set new re-inspection date

Note date of re-inspection and approval of correction on original Non-Conformance Report. Mark as ‘Closed’ on Q.C. Log.
Subcontractor Award Program:
The most important aspect of this program is to identify non-conformances and have them corrected expeditiously. Through this effort there may be particular subcontractors that repeatedly demonstrate good quality work, with either little or no non-conformances. In such instances it is suggested that the project team incorporate an award system as an incentive to reinforce our commitment to Quality control and acknowledge the trade’s good efforts. An example of such a program is as follows: These subcontractors may receive a letter of commendations for their repeated compliance with the standards of quality. The letter will be sent to the company’s home office executive in charge, and where appropriate cite specific individuals for their efforts of quality. The individuals/craftsmen working for the company will receive an appropriate project quality control award. The issuance of these awards could occur at various stages throughout the project.

Safety:
Safety is an integral part of producing a quality project. It is, therefore, of the utmost importance that our project staff takes a proactive stance on safety issues by ensuring that all subcontractors meet Whiting-Turner’s safety standards.

We will include on the Quality Inspection Report, when appropriate, a discussion of the safety issues relating to the quality inspection. An unsafe work environment is a contributing factor to poor workmanship. Moreover, a clean job site is a job site that produces quality work. We will include in the Quality Inspection Report instances when subcontractors do not meet Whiting-Turner’s standards of job site cleanliness.

Adherence:
Each subcontractor having responsibility for more than $100,000 of the contract cost shall specifically adhere to the Quality Control program set forth. Each subcontractor should also acknowledge their responsibilities under the contract in general and the Quality Control Program specifically. Those subcontractors that fall under this condition are:

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EXHIBIT 1
UK RB2
QUALITY CONTROL INSPECTION REPORT

QC Inspection Number: ___________________ Date: ___________________
Subcontractor: _______________________________________________________
Scope of work: _______________________________________________________
Specification Reference: ___________ Drawing Reference: _________________
Submittal Reference: _________________________________________________
Employee(s): _______________________________________________________

Detailed description of work and/or material:

________________________________________________________________________

Notes and Comments:

________________________________________________________________________

Through this inspection, the item was found to be in compliance with the drawings and specifications:

☐ YES ☐ NO (NOT IN COMPLIANCE)

Recommended corrections:

________________________________________________________________________

Corrections to be made by:

________________________________________________________________________

Signature: _____________________________

Date for re-inspection: _______________ Inspector: _______________________

Subcontractor notified: ________________ (initials)

Distribution
Original: EVAN SCHEFFER
Copy: GREGG ADDISON
TRADE PROJECT MANAGER NAME
TRADE SUPERINTENDENT NAME

Note: Verification of compliance does not remove the responsibility of the trade contractor or sub contractor to assure total compliance with the project documents. If there are future issues with this area of work, the trade contractor/subcontractor is fully responsible for the scope of work described within their contract.
Quality Control is most often based on actual field inspections; however, there are many other instances where employees work to ensure the quality of the project including administrative and safety procedures. The following is a list of some of the ways that Team Members can control quality in all facets of their work.

<table>
<thead>
<tr>
<th>SUGGESTED QC REPORTS BY POSITION</th>
<th>Project Engineer</th>
<th>Project Manager</th>
<th>Superintendent</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Perform a thorough inspection of a specific area of the jobsite (i.e. steel erection, sediment and erosion control, underground utilities, etc.).</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Review scope of work and schedule with subcontractors prior to the start of work.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Completely review Project Specifications to pull out all relevant QC requirements and incorporate them into project customized Inspection Checklists.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Establish safety guidelines with Subcontractors prior to the start of work.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Develop a Quality Control Checklist for a specific area of work in the field.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Create QC Alerts for areas of specific QC importance and/or in areas of particular expertise.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Diligent follow-up on Non-Conforming QC Inspections</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Photo documentation to reinforce QC initiative.</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Lead discussions for quality control at team meetings (Special Topic Program).</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>□ Prepare and lead Pre-installation conferences for key / critical QC areas of work</td>
<td>✫</td>
<td>✫</td>
<td>✫</td>
</tr>
<tr>
<td>Task</td>
<td>Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Properly review submittals.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organize, maintain, and update the Issue Log.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross-check the RFI and Bulletin logs with the As-Built drawings.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate QC Program in monthly report to clients</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involve Project Architect to be active member of Project QC Team.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform a thorough inspection of a specific area of the jobsite.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare and lead Pre-installation conferences for key / critical QC areas of work</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review and revise contract drafts completed by Project Engineers and Assistant Project Managers.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Update team to-do list, lead Team Meetings, and review action items with individual Team Members.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establish safety guidelines with Subcontractors and Field Team.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform daily floor opening Safety Inspections</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform survey and layout checks to ensure quality of work by Subcontractors</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review scope of work and schedule with Subcontractors prior to the start of work.</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead discussions for Quality Control at Team Meetings (Special Topic Program).</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Prepare and lead Pre-installation conferences for key / critical QC areas of work
- Diligent follow-up on Non-Conforming QC Inspections
- Coordinate and track material delivery to ensure proper lay down areas and traffic control.
- Maintain a log of safety documentation submitted by Subcontractors including but not limited to First-Aid certifications, PPE certifications, OSHA training, and tool box talks.
- Perform safety orientations to new subcontractors and ensure that all workers onsite have gone through proper orientation procedures.
- Perform WT Loss Prevention Checklist Inspections.
EXHIBIT 3

UK RB2

SUGGESTED QUALITY CONTROL POINT SYSTEM

The following point system is designed to enhance the quality of inspections and the overall success of the project.

- **Standard QC Report: 1 point**
  A standard QC Inspection Report is one that requires a team member to do a quick review of a certain area of the jobsite to ensure the quality of work being performed by a trade contractor. Other instances of Quality Control that would be equal in point value would be maintaining the issue log, updating subcontractor cost studies with CMS, or other similar administrative maintenance.

- **Inspection Report completed with a Checklist: 2 points**
  This type of QC report requires a team member to perform a thorough inspection of a particular area of the jobsite while following specific instructions outlined in a checklist. Many areas of work on this job will contain inspection sheets with more than one checklist (i.e. steel erection, masonry, flooring, etc.). In those cases, each checklist will count separately and points will be awarded per checklist completed. Other instances of Quality Control that would be equal in point value would be such things as completing a pre-award review with subcontractors, or using checklists to complete subcontractor and miscellaneous invoices.

- **Extensive QC Report: 4 points**
  These reports go above and beyond a typical jobsite inspection and include such documentation as photographs, drawings, or other written information in addition to the inspection report and checklist. Another instance of Quality Control that would be equal in point value might be leading a Quality Control or Safety site walkthrough to teach the team how to properly inspect a specific area of work (Part of the special topic program).

- **Developing a QC Checklist or a QC Alert: 5 points**
  This involves a spending a significant amount of time reviewing the drawings and a specific scope for a particular aspect of the job and then constructing an involved checklist that covers all facets of that work. This checklist should be posted on the shared drive for other team members to use or reference. Additionally, this checklist should be used as part of a team discussion during team meetings as part of the special topic program. When issues are found that warrant alerting the whole company a QC Alert is generated that describes the concern in detail. After review by the Project Manager and the Group Manager it will be forwarded to WT’s QC department for distribution throughout the company.

- **Developing a system specific QC Program: 10 points**
  A mini QC Program is developed by a Team Member or a group of team members by creating several checklists covering a specific area of the project such as concrete. This program should also include drawings, photographs, or diagrams, allowing any team member to use the QC program to perform inspections regardless of experience or expertise.
EXHIBIT 4
UK RB2
QC SPECIAL TOPIC PROGRAM

Special Topic Program Summary:
This Whiting-Turner Team has established a “Special Topic Program” as part of the overall Quality Control Program for UK RB2.

Purpose:
The purpose of this program is to educate the staff on a cross-disciplinary basis and allow Team Members to customize Quality Control Inspection checklists for the different building systems and work areas. Through this Program, comprehensive and job specific QC Programs are developed; training tools are implemented for continued training and learning across the Project Team; and teams - not individuals - combine efforts to tackle QC challenges to achieve excellence on the jobsite.

How it works:
Prior to weekly WT Team Progress Meetings, a member of the team is responsible for preparing a presentation on a subject of his or her choice, which the QC Coordinator tracks on the special topic schedule. This topic can be presented in the form of a site inspection, team discussion, or site demonstration depending on the topic. The presenter is encouraged to use Site Inspection Checklists, details derived from the contract drawings, relevant construction materials, and other visual aids in order to properly illustrate the material. Topics range from jobsite safety, Quality Control, site cleanup, and administrative maintenance. Reference Exhibit 5 for an example topic schedule.
## SAMPLE SPECIAL TOPIC PROGRAMS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Type</th>
<th>Responsible Team Member(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-T Safety: Expectations &amp; Policies</td>
<td>Discussion</td>
<td>Superintendent</td>
</tr>
<tr>
<td>Electrical Systems for the current job</td>
<td>Site walk-through</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Warm or Cold Weather Masonry</td>
<td>Discussion</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>General Liability and Loss</td>
<td>Discussion</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Issue Log Maintenance</td>
<td>Discussion</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Structural Steel (for the current job)</td>
<td>Site walk-through</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Site Utilities (for current job)</td>
<td>Site walk-through</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Union Strike Protection: Two-Gate</td>
<td>Discussion</td>
<td>Superintendent</td>
</tr>
<tr>
<td>Safety relating to tower crane use</td>
<td>Discussion or walk-through</td>
<td>Superintendent</td>
</tr>
<tr>
<td>High Performance Teams</td>
<td>Discussion</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Building Skin (for current job)</td>
<td>Site walk-through</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Maintaining cost studies</td>
<td>Discussion</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Concrete System (for current job)</td>
<td>Discussion or walk-through</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Mechanical Systems (for current job)</td>
<td>Site walk-through</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Processing Subcontractor Invoices</td>
<td>Discussion</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Survey and Layout</td>
<td>Site Demonstration</td>
<td>Superintendent</td>
</tr>
<tr>
<td>Maintaining Schedule</td>
<td>Discussion</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Updating the As-Buils</td>
<td>Discussion</td>
<td>Project Engineer</td>
</tr>
<tr>
<td>Sediment &amp; Erosion Control</td>
<td>Site walk-through</td>
<td>Superintendent</td>
</tr>
</tbody>
</table>
VII. **Sample Checklists by Division**

- **Division 1 – General Conditions**
  - Contracts
  - Submittals
  - Building Occupancy
- **Division 2 – Sitework**
  - Footing Excavation
  - Underground Utilities
- **Division 3 – Concrete**
  - Concrete Placement Inspection
  - Structural Concrete Deck
- **Division 4 – Masonry**
- **Division 5 – Metals**
  - Metal Decking
  - Structural Steel
- **Division 6 – Wood and Plastics**
  - Carpentry Inspection
- **Division 7 – Thermal and Moisture Protection**
  - Wall Joint & Flashing Installation
  - Membrane Roofing
- **Division 8 – Doors and Windows**
  - Glass & Glazing
  - Curtain Wall System
- **Division 9 – Finishes**
  - Drywall Inspection
  - Carpeting
- **Division 10 – Specialties**
- **Division 11 – Equipment**
- **Division 12 – Furnishings**
- **Division 13 – Special Construction**
• Division 14 – Conveying Systems
• Division 15 – Mechanical
  o Ductwork Installation
  o Piping Systems
• Division 16 – Electrical
  o Electrical Work
01000 - SUBCONTRACTOR PRE-AWARD CHECKLIST

<table>
<thead>
<tr>
<th>Job Name: __________________________________________</th>
<th>Job #: ________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subcontractor: ____________________________________</td>
<td>Date: _________________</td>
</tr>
<tr>
<td>Address: __________________________________________</td>
<td></td>
</tr>
<tr>
<td>Representative(s): ________________________________</td>
<td>Phone Number: __________</td>
</tr>
<tr>
<td>Reviewed by: ____________________________ (in person, telephone, etc.): ______________</td>
<td></td>
</tr>
<tr>
<td>Approved by: ____________________________ (Project Manager)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OK</th>
<th>NOT OK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope O.K.________________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Will Execute WT Contract____________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Union? (if required)________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Acknowledges Schedule (Notice to Proceed, Submittals, Substantial Completion)</td>
<td></td>
</tr>
<tr>
<td>Start work on site:__________________________ ( )</td>
<td>( )</td>
</tr>
<tr>
<td>Complete submittals: _______________ ( )</td>
<td>( )</td>
</tr>
<tr>
<td>Complete all work: ________________ ( )</td>
<td>( )</td>
</tr>
<tr>
<td>Has Own General Conditions (e.g. cleanup, telephone)_________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Acknowledges Proper Documents______________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Includes Addenda #:______________________________ ( )</td>
<td>( )</td>
</tr>
<tr>
<td>Markups O.K.______________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Unit Prices O.K.___________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Bonds O.K.</td>
<td></td>
</tr>
<tr>
<td>Bid Bond__________________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Performance Bond______________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Owner Approval to Award___________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>DBE / MBE % O.K.___________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Acknowledges Project Labor Agreement________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Alternates O.K.</td>
<td></td>
</tr>
<tr>
<td>Mandatory Alternates______________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Voluntary Alternates ______________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Questionnaire Responses Complete (if required)__________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Price Breakdown___________________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Tax included and broken down_______________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Bid Deposit (If Required)___________________________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Labor Rates and Man-hour Information Provided________( )</td>
<td>( )</td>
</tr>
<tr>
<td>Startup Meeting with superintendent scheduled: __________</td>
<td></td>
</tr>
<tr>
<td>Other: ____________________________________________</td>
<td></td>
</tr>
</tbody>
</table>
01300 - SUBMITTALS CHECKLIST

Processing & Submittals

An accurate and fast review of submittals by Whitin g-Turner can be critical to our Quality (and Schedule) Control and, indeed, the total project. An accurate review of dimensions, tolerances, items “by others” etc., can minimize or eliminate future field problems and any cost, schedule or quality impact.

For any item of work for which submittals are required, their review and approval is always on its critical path - therefore, the importance of having submittals reviewed and approved quickly, with “first time approval” being our goal, is paramount.

The following is a general checklist which can be used to develop an efficient submittal “system” and improve our processing of submittals.

I. SETTING UP THE PROJECT’S “SUBMITTAL SYSTEM”

1. Read the General and Special Conditions of our Contract to determine how architect and owner want submittals proceed (NOTE: Our system should be tailored to their needs as well as ours.)

2. Talk to architect and owner and coordinate our numbering system with theirs to minimize confusion when “tracking” submittals.

3. Determine types (Sepias, Prints), quantities, sizes, etc., of drawings, brochures and samples to be submitted.

4. Work very hard to have agreement to ultimately obtain the words “approved” or “approved as noted” from the designers - not some other gibberish. Review architect’s other notations and what they mean - e.g.: may we proceed if submittal is marked: approved as noted - revise and re-submit?”

5. Review routing of submittals - are all submittals sent to architect or do some go direct to their consultants?

6. Develop a submittal log so you can track each submittal - a personal computer with C.I.P. software is an excellent tool for this. (See attached sample)

7. Always stamp drawings reviewed by Whiting-Turner. (It is often helpful to have a stamp made which gives typical project information.)

8. Often it is helpful on large jobs to have submittal-transmittal sheets printed to tailor transmittal to architect and owner’s needs. (See attached sample) You may want to use an “action” color to differentiate this from Whiting-Turner’s standard transmittal form.

9. Set up a submittals schedule with each subcontractor to determine when each item will be submitted. The architect will greatly appreciate this since he knows when items will be coming. This should be done as soon afterward as possible.

10. Reach agreement with approving authority on the maximum “turn-around time” they will consume for their review.
II. REVIEWING SUBMITTALS

A. Submittal format:
   - Is the drawing/brochure titled?
   - Is the drawing numbered and dated?
   - Are the right number of prints/sepias included?
   - Is the scale and size of drawing correct?
   - Is name of subcontractor/supplier indicated?
   - Has the subcontractor reviewed and stamped submittal if work/material is being done by a sub-
   subcontractor?

B. Submittal Log-In
   - Submittal should be logged in.
   - Submittal should be stamped by Whiting-Turner.
   - Engineer should initial each drawing/brochure.

C. Submittal Review
   - Read all notes and approve or disapprove disclaimers (e.g. “caulking excluded,” etc.)
   - Are dimensions shown correct?
   - Is there enough tolerance built into dimensions?
   - Are items indicated “By Others” correct?
   - Are technical specifications referenced (ASTM, AWA)?
   - For coordinated drawings (i.e., HVAC), have the appropriate subcontractors (electrical, sprinkler)
   reviewed and signed off?
   - Review deviations and highlight them to architect, either on drawing itself or on transmittal
   - Note on transmittal when you need submittal returned if its review is critical.
   - Is information missing or requested? If so, highlight this and specifically ask the architect to provide
   the needed information with the returned submittal.

III. COORDINATING SUBMITTALS

1. Decide when submittals are to be coordinated - usually it is best after architect’s review and approval, but
   analyze each case.

2. Find out of the owner wants copies of submittals. Any submittal review which generates a change in scope
   should be sent to the owner for information and authorization to proceed.

3. One copy of submittal should always be kept in Whiting-Turner’s file.

4. One or more copies should always be given to Whiting-Turner superintendent.

5. Copies of submittals should be given to all affected subcontractors.

6. Important review comments should by highlighted on the transmittal to the subcontractor.

7. Follow up submittals! Call subcontractor to make sure they have received submittal back and confirm
   fabrication lead time. (Start the clock ticking........)

8. Advise the subcontractor clearly what is to be done with returned submittal (proceed with fabrication or
   resubmit.)
<table>
<thead>
<tr>
<th>Quality Control Program</th>
<th>Preliminary Submittal List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Additives</td>
<td>Concrete Design Mix</td>
</tr>
<tr>
<td>Steel Reinforce Placement</td>
<td>Structural Steel</td>
</tr>
<tr>
<td>Metal Deck</td>
<td>Unit Masonry and Mock-up</td>
</tr>
<tr>
<td>Hollow Metal Door Bucks</td>
<td>Doors</td>
</tr>
<tr>
<td>Insulating Fill</td>
<td>Roofing</td>
</tr>
<tr>
<td>Flashing-Details</td>
<td>Storefront</td>
</tr>
<tr>
<td>Automatic Entrance Doors</td>
<td>Curtain wall</td>
</tr>
<tr>
<td>Glass and Glazing</td>
<td>Drywall</td>
</tr>
<tr>
<td>Metal Siding</td>
<td>Loading Dock Equipment</td>
</tr>
<tr>
<td>Rolling Metal Doors</td>
<td>Acoustical</td>
</tr>
<tr>
<td>Railings</td>
<td>Skylights</td>
</tr>
<tr>
<td>Paint</td>
<td>Vinyl Wall Covering</td>
</tr>
<tr>
<td>Special Ceilings</td>
<td>Floor Tile and Vinyl Base</td>
</tr>
<tr>
<td>Ceramic Tile</td>
<td>Quarry Tile</td>
</tr>
<tr>
<td>Raised Flooring</td>
<td>Carpet</td>
</tr>
<tr>
<td>Freight Elevator</td>
<td>Passenger Elevator</td>
</tr>
<tr>
<td>Mail Handling Equipment</td>
<td>Sprinkler</td>
</tr>
<tr>
<td>Cooling Tower</td>
<td>Condensers</td>
</tr>
<tr>
<td>Roof Top Fans</td>
<td>Make-Up Air Units</td>
</tr>
<tr>
<td>Hardware</td>
<td>Unit Heaters</td>
</tr>
<tr>
<td>Air Handling Units</td>
<td>Chillers</td>
</tr>
<tr>
<td>Pumps</td>
<td>Miscellaneous Equipment</td>
</tr>
<tr>
<td>Boilers</td>
<td>Fuel Oil Tanks</td>
</tr>
<tr>
<td>Heating Coils</td>
<td>Vibration Isolation</td>
</tr>
<tr>
<td>Automatic Temperature Control</td>
<td>Energy Management System</td>
</tr>
<tr>
<td>Transformers</td>
<td>Motor Control Center</td>
</tr>
<tr>
<td>Main Switchboard</td>
<td>Electrical Fixtures</td>
</tr>
<tr>
<td>Electrical Specialties</td>
<td>Emergency Generator</td>
</tr>
<tr>
<td>Roof Drains and Pipe</td>
<td>Site Storm Water System</td>
</tr>
<tr>
<td>Toilet Fixtures</td>
<td>Toilet Accessories</td>
</tr>
<tr>
<td>Toilet Partitions</td>
<td>Hot Water Heater</td>
</tr>
<tr>
<td>Sound System</td>
<td>Security System</td>
</tr>
<tr>
<td>Fire Alarm System</td>
<td>Manholes</td>
</tr>
<tr>
<td>Lightpoles</td>
<td>Flagpoles</td>
</tr>
<tr>
<td>Lobby Furnishings</td>
<td>Millwork</td>
</tr>
<tr>
<td>Waterproofing</td>
<td>Dampproofing</td>
</tr>
<tr>
<td>Expansion Joints</td>
<td>Miscellaneous Metals</td>
</tr>
<tr>
<td>Spray Fireproofing</td>
<td>Caulking</td>
</tr>
<tr>
<td>Joists</td>
<td>Precast Concrete</td>
</tr>
<tr>
<td>Louvers and Grilles</td>
<td>Roof Hatches</td>
</tr>
<tr>
<td>Vault Door</td>
<td>Weatherstripping</td>
</tr>
<tr>
<td>Traffic Topping</td>
<td>Locks</td>
</tr>
<tr>
<td>Signage</td>
<td>Fire Extinguishers/ Cabinets</td>
</tr>
<tr>
<td>Window</td>
<td>Entrance Mats</td>
</tr>
<tr>
<td>Trash Handling Equipment</td>
<td></td>
</tr>
</tbody>
</table>
01700 - BUILDING OCCUPANCY / CODE CONFORMANCE CHECKLIST

On a recent large renovation project we had extensive interaction with County Officials and Inspectors regarding, ultimately, building occupancy. This resulted in a maze of requirements which, if not completed as required and in the required order, would have ultimately delayed us from obtaining our Certificate of Occupancy. The following checklist should help eliminate some of the last minute hurdles we usually have to jump to get a Certificate of Occupancy. Some requirements may differ according to local government priorities/preferences.

Project: ___________________________________________ Date: ________________
Status as of: _______________________

<table>
<thead>
<tr>
<th>A. Fire Marshal Requirements</th>
<th>Scheduled Completion</th>
<th>Date Completed</th>
<th>Document On File?</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All fire protection system submittals approved by Fire Marshal and on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
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<td></td>
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<tr>
<td>2. All sprinkler and standpipe systems tested, inspected and approvals on file. (Basic piping and heads)</td>
<td>:</td>
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<tr>
<td>3. All flow and tamper switches tested and approval on file.</td>
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<tr>
<td>4. All smoke detectors and fire alarms tested for annunciation and approval on file.</td>
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<tr>
<td>5. Smoke evacuation test conducted and approval on file.</td>
<td>:</td>
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<tr>
<td>6. Fire and smoke alarm panels tested and signal sent to Fire Department (if applicable)</td>
<td>:</td>
<td>:</td>
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<tr>
<td>7. Exit/Emergency lighting tested (i.e. egress pathways have continuous lighting and continuous exiting direction)</td>
<td>:</td>
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<tr>
<td>8. All elevators tested for firemans recall and approval on file.</td>
<td>:</td>
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<tr>
<td>9. All fire lanes, hydrants and standpipe connections inspected: and approval on file. (Site)</td>
<td>:</td>
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</tr>
</tbody>
</table>
## BUILDING OCCUPANCY / CODE CONFORMANCE CHECKLIST

**A. Fire Marshal Requirements**

<table>
<thead>
<tr>
<th>Scheduled Completion</th>
<th>Date Completed</th>
<th>Document On File?</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. All fire protection/alarm systems functional throughout structures.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>11. Unoccupied/vacant areas separated by a non-combustible or fire wall per Fire Marshal direction. (If necessary)</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>12. Final occupancy walkthrough inspection performed and approved by Fire Marshall.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>

**B. Building Department Requirements**

<table>
<thead>
<tr>
<th>Scheduled Completion</th>
<th>Date Completed</th>
<th>Document On File?</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All construction documents approved by each building discipline and a current approved set on file and available for inspection purposes.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>2. All HVAC systems inspected by Mechanical Inspector and approval on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>3. Final Plumbing systems inspected by Plumbing Inspector and approval on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>4. Final electrical systems inspection by Electrical Inspector and approval on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>5. All elevators/escalators inspected and approved by Elevator Inspector and approval on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td></td>
<td>Scheduled Completion</td>
<td>Date Completed</td>
<td>Document On File?</td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td><strong>B. Building Dept. Requirements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. All structural steel and/or reinforced concrete shop drawings approved by Structural Engineer must be processed through local critical structures department.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>7. All structural inspections must be performed off of approved drawings (Re: #6 above) and any non-conformance’s corrected and approved by inspection agency.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>8. All fireproofing must be inspected for thickness density and cohesion/adhesion by locally approved inspecting agency or local building department per UL and ASTM Standards.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>9. Certification letters must be drafted by inspection agency, approved by Structural Engineer and forwarded to County for both Structural and Fireproofing Inspections testifying that all nonconformances have been resolved.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>10. All fire rated stairs, corridors and shafts must be inspected by building official for fire integrity and approval and must be on file.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>11. Fire corridors and emergency egress pathways must be inspected for safe and efficient exiting with approval on file.</td>
<td>:</td>
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<td>:</td>
</tr>
<tr>
<td>12. Final Occupancy inspection walkthrough by building inspector only after all other trade inspectors and Fire Marshal have signed off.</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>
### BUILDING OCCUPANCY / CODE CONFORMANCE CHECKLIST

<table>
<thead>
<tr>
<th>Certificate of Occupancy</th>
<th>Non-Residential use</th>
<th>Scheduled Completion</th>
<th>Date Completed</th>
<th>Document On File?</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C. Permit (Non-RUP)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Sitework:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a. Arborist approval</td>
<td>:</td>
<td>:</td>
<td>:</td>
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<td>:</td>
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<tr>
<td>b. Local Utility Inspections</td>
<td>:</td>
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<tr>
<td>c. Storm and sanitary</td>
<td>:</td>
<td>:</td>
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<tr>
<td></td>
<td>inspected by local authorities</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>d. Final surveyed building</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
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<tr>
<td></td>
<td>lines if necessary</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>e. Any C of O issues on</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
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<tr>
<td></td>
<td>sitework structures</td>
<td>:</td>
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<td>:</td>
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<tr>
<td>2. Health Department Inspection</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
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<tr>
<td>(If necessary)</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>3. Building, Fire Marshal and Trade Inspection approvals on file with local authorities.</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
<tr>
<td>4. Fill out C of O (Non-RUP) Form and obtain C of O from local authorities (proof of inspection approvals may be required.</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
<td>:</td>
</tr>
</tbody>
</table>
### 02300 - CHECKLIST FOR FOOTING EXCAVATION

**Date:** __________

**Project Name:** ____________________________

**Job No.:** ____________________________

**Footing No.:** ____________________________

**Design Size:** ____________________________

**Existing Subgrade Elevation:** ____________________________

**Design Top Elevation:** ____________________________

**Design Bottom Elevation:** ____________________________

**Report Completed By:** ____________________________

<table>
<thead>
<tr>
<th>Rock Encountered</th>
<th>( ) Yes</th>
<th>( ) No</th>
<th>Elev.</th>
<th>______________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction by Inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency for Excavation</td>
<td>( ) Yes</td>
<td>( ) No</td>
<td>Elev.</td>
<td>______________</td>
</tr>
<tr>
<td>Direction by Inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency for Undercut</td>
<td>( ) Yes</td>
<td>( ) No</td>
<td>Elev.</td>
<td>______________</td>
</tr>
<tr>
<td>Utilities Encountered</td>
<td>( ) Yes</td>
<td>( ) No</td>
<td>Elev.</td>
<td>______________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ground Water Encountered</th>
<th>( ) Yes</th>
<th>( ) No</th>
<th>Elev.</th>
<th>______________</th>
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<tbody>
<tr>
<td>(Description)</td>
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</table>

**Date First Encountered** ____________________________ **Date Completed** ____________________________

**Duration of Work** ___________ (work days) **Delay to Other Work** ( ) Yes ( ) No

### Calculations:

- **Design volume** ___________ CY
  - (Does not include excavated material from subgrade to design top of footing unless otherwise noted.)

  - **Excavated size of footing** ___________ CY
    - (Additional excavation from design bottom due to rock, utilities, bearing, etc.)

- **As-Built bottom elevation** ___________ CY

- **Difference in bottom elevation** ___________ CY
  - (From design bottom elevation to final bottom elevation due to rock, utilities, bearing, etc.)

**Total volume excavated** ___________ CY

- **Fill used - Concrete** ___________ CY
  - **- Other** ___________ CY

**Difference** = ___________ CY

- **Add 4,500 design mix used if not formed.** ___________
Inspection Checklist for Footing Excavation

Project Manager __________________________________________________________
Superintendent __________________________________________________________
Project Engineer __________________________________________________________
Testing Agency Rep. ______________________________________________________
A/E Rep. _________________________________________________________________
Owner’s Rep. ____________________________________________________________
02500 - CHECKLIST FOR UNDERGROUND UTILITIES

1. Be sure that lines are properly located in depths as well as plan location.

2. Note any deviations in the location on the as-built plans for coordination with future lines.

3. Be sure that appropriate test fixtures are installed in accordance with specifications.

4. Before underground lines are backfilled, be sure that appropriate pressure tests are conducted and proper inspections conducted (like Fire Marshall).

5. Be sure that lines are properly bedded.

6. Be sure that steel lines are coated with the required anti-corrosion coating, and if required the coating is tested for tightness.

7. Be sure that water lines are sterilized, and other special post-installation tests are conducted.

8. For certain types of joints, thrust blocks must be placed at all turns.
**03300 - CONCRETE PLACEMENT INSPECTION CHECKLIST**

**DURING CONCRETE PLACEMENT:**

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<th>NOT OK</th>
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1. Check to see that concrete free fall does not exceed allowable limits.
2. Check placing equipment for proper operation.
3. Check for proper vibration.
4. Check proper mixing time.
5. Place at rate sufficient to prevent cold joints.
6. Check placing time on concrete.
7. Receive verbally, temperature, air and slump data from the independent testing laboratory.
8. Reject concrete when mixing time, placing time, temperature air or slump do not meet specification requirements.
9. Continue formwork and all embedded material watch.
10. Watch for segregation of concrete.
11. Retain truck batch tickets and hold in job files.

**AFTER PLACEMENT:**

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<tr>
<th>OK</th>
<th>NOT OK</th>
<th>N/A</th>
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</table>

1. Check for proper finish.
2. Cure to prevent loss of moisture.
3. Avoid premature removal of formwork.
4. Provide cold weather protection if necessary.
**STRUCTURAL CONCRETE DECK CHECKLIST**

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<th>Not OK</th>
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</table>

1. Check subgrade for stability.
2. Check all shoring and placement of mud sills.
3. Check all individual posts to make sure they are tied (laced) together and plumb.
4. Check to see if all scaffold bracing is in place.
5. Check to see that all beam clamps are in place and secured.
6. Check that all spacing of scaffold and posts are proper.
7. Check for proper size (thickness) and grade of plywood being used.
8. Check plywood for cleanliness from previous pours or dirt.
9. Check plywood for proper oiling.
10. Check for adequate nailing to eliminate movement.
11. Check for any trash or debris before placing rebar.
12. Check for proper placement of reinforcement.
13. Check to see that sleeves and mechanical opening are installed.

Follow-Up action required: ____________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Cc: Project Manager
Superintendent
Other: ____________________________________________
____________________________________________
____________________________________________

31
05100 - STRUCTURAL STEEL CHECKLIST

ERECTION:

1. Check steel shapes and sizes using approved shop drawings.
2. Check the shop painting for scale rust or abraded areas, correcting before erection.
3. Check contractor’s equipment for condition and adequate lifting capacity.
4. Check column and beam connection plates for matching.
5. Heavy sections should be temporarily fastened with at least four bolts at each connection point.
6. Stability should be maintained at all times during erection.
7. During plumbing operation, take care not to over stress back guys.
8. Review the test calibration of high-strength bolt wrenches on a daily basis.
9. Spot check high strength bolts with a calibrated wrench.
10. High strength bolts should not be reused of once removed.

WELDING:

11. Check to see that all welds required by the shop drawings have actually been made, that they are accurately located and are of the specified size.
12. Be certain that the nondestructive shop testing of welds by X-ray, magnaflux, or ultrasonic testing procedures have been performed, and the test locations identified.
13. Be certain that similar field tests required have been made.
14. Make sure that joints to be welded are properly clamped or tack-welded, so that uniform stresses are built up.
15. Check that proper type and size of welding rod is used, particularly where special strength steel is joined, or for materials that are difficult to weld, such as aluminum.
05300 - METAL DECKING CHECKLIST

Project ______________________ Floor # _________ Area _________ Date _________

A walk through with the Metal Decking Trade Contractors and Whiting-Turner should occur, and each of the following items be checked-off before acceptance of the Metal Deck of a particular floor:

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>1. Is all metal deck installed as per the contract documents?</td>
<td>(   )</td>
<td>(   )</td>
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<tr>
<td>2. Has a safety checklist for this floor been conducted and approved?</td>
<td>(   )</td>
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<tr>
<td>3. Are all deck side joints button punched?</td>
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<tr>
<td>4. Are all shear connector studs installed as per the approved shop drawings?</td>
<td>(   )</td>
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<td>5. Is all deck adequately supported?</td>
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<tr>
<td>6. Has the Owner’s Testing Agency conducted an inspection, an approved</td>
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<td>7. Is all deck securely fastened?</td>
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<tr>
<td>8. Are all pour edges, and closures installed secure with continuous sheet metal edging?</td>
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<tr>
<td>9. Are metal cover plates installed to close gaps where the deck terminates into columns, walls and openings?</td>
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<tr>
<td>10. Are metal cover plates installed to close gaps where the deck terminates into columns, walls and openings?</td>
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<tr>
<td>11. Are provisions for venting through composite roof decking complete?</td>
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<tr>
<td>12. Have 2” telescoping end laps been maintained?</td>
<td>(   )</td>
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<tr>
<td>13. Has thickness of deck been checked to verify the proper gauge is being used?</td>
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<tr>
<td>14. a. Has the Contractor who is pouring the concrete on the deck been given a set of deck drawings for the floor which shows all temporary shoring requirements?</td>
<td>(   )</td>
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<tr>
<td>b. Is the shoring responsibility established?</td>
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<tr>
<td>c. Is it installed?</td>
<td>(   )</td>
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</table>
# METAL DECKING CHECKLIST

<table>
<thead>
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<th>Yes</th>
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</table>

15. Have all plug welds been performed in accordance to the Owner’s Testing Agencies requirements? ( ) ( )

16. Have all welds and field cuts received touch-up paint? ( ) ( )

17. Is the deck properly painted or finished? ( ) ( )

**Comments:**

---

**Approved Status:**

A walk through has been conducted and the above noted items need to be completed prior to the acceptance of the metal deck.

Superintendent ___________________________ Date: __________

A walk through has been conducted and all items have been approved as being in conformance to the contract documents, shop drawings, and all safety standards.

Superintendent ___________________________ Date ________

Project Manager ___________________________ Date ________

Project Engineer ___________________________ Date ________

Owner’s Representative ______________________ Date ________

Trade Contractor ___________________________ Date ________
06100 - CARPENTRY INSPECTION CHECKLIST

Project: ________________________________________________________________
Date:  ________________________________________________________________
By:  _________________________________________________________________

Location of work inspected: _____________________________________________
(e.g. floor, room, etc.)

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<tr>
<th>OK</th>
<th>NOT OK</th>
<th>N/A</th>
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</tbody>
</table>

1. Checked method of nailing, jointing, anchoring, etc., for conformance with shop drawings.

2. Check framing lay-out, bracing, level and plumb.

3. Check blocking, nailing strips, plywood, etc. for proper “grade” (Ex. Douglas Fir).

4. Check rough hardware (nails, screws, bolts, etc.) for proper type.

5. Check type of wood and wood treatments for conformance with contract specifications.

6. Check for proper storage of all materials. Protect lumber against dampness, stains, and mechanical injury.

7. Other (list):

Follow-Up Action Required: _____________________________________________
_____________________________________________________________________
_____________________________________________________________________

cc: Project Manager
Superintendent
07000 - WALL JOINT & FLASHING INSTALLATION CHECKLIST

Project:  
Location:  
By:  
Date:  

WATERPROOFING, FLASHING, AND SEALANT PREPARATION

OK  NOT OK

1. The subcontractor has the specifications and drawings at the site and is using them.
2. The subcontractor has and is using the correct shop drawings, approved by the architect.
   Shop Drawings # - _____________________________
3. All requirements are being met to secure waterproofing and sealant material warranties.

MATERIALS AND PREPARATION

4. All materials to be installed are clean and dry and stored in correct environmental conditions.
5. Surfaces are clean and free from foreign material.
6. Surfaces are properly primed if required.
7. Masonry and concrete surfaces are wire brushed or abrasive blasted as necessary for proper adhesion of sealants.

WALL EXPANSION/CONTRACTION JOINTS

8. Vertical and horizontal joints are constructed as per drawings and specifications:
9. Distribution/Spacing is per drawings and Specs
10. Depths are per Specification
11. Widths are per Specification
12. Backing Materials is per Specification
13. Continuity is maintained
14. Compatibility of adjacent or connecting materials has been verified
15. Joints are of specified widths and depths:
   a. No joints are smaller than 1/4" in width or depth
   b. Joints up to 1/2" width are equal in depth
   c. Joints 1/2" to 1" in width are 1/2" in depth
   d. Joints wider than 1" are 1/2" to 3/4" in depth depending on sealant manufacturer's instruction.
16. Deep joint slots are packed with backup material to bring joints to correct depth.
17. Extra-wide joints are protected from accumulation of debris and from damage to sealant.
18. Joint appearance isn't noticeably different on the sunny versus the shady side of the building.
19. Sealants applied in joints are not allowed to be deeper than they are wide. (That stresses the sealants excessively during expansion.)
WALL JOINT & FLASHING INSTALLATION CHECKLIST

OK  NOT OK

JOINTS SEALANTS (MATERIAL AND APPLICATION)

(   ) (   ) 20. Sealants and caulks are as specified

(   ) (   ) 21. Compounds are delivered in sealed, labeled containers.
(Save labels as needed for confirmation)

(   ) (   ) 22. Solvents used to prepare surfaces are applied uniformly and applied with on rag and removed with another.

(   ) (   ) 23. Dust and moisture are removed after sand blasting or wire brush preparation of concrete and masonry joints.

(   ) (   ) 24. Check materials being installed for adhesion, elasticity, staining, melting, sagging or shrinkage.

(   ) (   ) 25. Check primer for compatibility with sealant and substrate.
(Manufacturer’s recommendations)

(   ) (   ) 26. Air temperature should not be below 40°F when applying caulking.

FLASHING

(   ) (   ) 27. Materials are as per Specifications, details and samples:

   a. Material types
   b. Gauges or weights
   c. Coatings or primers
   d. Shapes

(   ) (   ) 28. Materials free of damage or corrosion

(   ) (   ) 29. Fastenings are of Specified materials, types and sizes

(   ) (   ) 30. Dissimilar metals are kept separated to avoid corrosion.

(   ) (   ) 31. Connection and fabrication are as Specified.

(   ) (   ) 32. Cleating as Specified

(   ) (   ) 33. Soldering as Specified

(   ) (   ) 34. Welding as Specified

(   ) (   ) 35. Fastenings are noncorrosive

(   ) (   ) 36. Seams are lapped and locked

(   ) (   ) 37. Seam joints are soldered where necessary to guarantee water-tightness.

(   ) (   ) 38. Flashing widths and laps are as drawn and/or as Specified:

   a. Opening heads, jambs and sills.
   b. Spandrels
   c. Through-wall flashing
   d. Wall penetrations such as for mechanical equipment.

(   ) (   ) 39. Flashing at lintels and next to expansion joints if “dammed” or turned up at the ends 6" to 9" to drain water intrusions.

(   ) (   ) 40. Spandrel flashing is turned upwards to 6" to 9" and locked into a positive seal.

(   ) (   ) 41. Thru-wall flashing projects form the building face by 3/4” and is turned down at 45 degrees to form a positive drip. If not done, what is the alternative and is it per Specification?___________________________________________________________

(   ) (   ) 42. Internal concealed wall flashing is placed to positively redirect water that might enter the walls back outside again.
Further Action: __________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

WALL JOINT & FLASHING INSTALLATION CHECKLIST
Page 3

Follow-Up Date: __________________________

cc: PM

Super
Subcontractor
Other (list) __________________________
____________________________________
____________________________________

38
07500 - MEMBRANE ROOFING CHECKLIST

Project: ________________________________
Job No: ________________________________
Date: ________________________________
By: ________________________________

Location of Work Inspected (e.g. column line(s), bay, etc.):

OK       NOT OK

1. Weather Conditions (temp, sky conditions, humidity, other) 
   beginning of work day: ________________________________
   End of work day: ________________________________

2. Water is not to be on the roof deck before installation.

3. Were materials received in original containers, with original 
   manufacturer label? ( ) Yes ( ) No

4. List of Materials:
   
<table>
<thead>
<tr>
<th></th>
<th>Specified</th>
<th>Delivered</th>
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<tbody>
<tr>
<td>a. Membrane</td>
<td></td>
<td></td>
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<tr>
<td>Type A</td>
<td></td>
<td></td>
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<tr>
<td>Type B</td>
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<tr>
<td>b. Insulation-Regular</td>
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<tr>
<td>c. Insulation-Tapered</td>
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<td></td>
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<tr>
<td>d. Roof Expansion Joint</td>
<td></td>
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<tr>
<td>e. Recovery Board</td>
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<tr>
<td>f. Gypsum Board</td>
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<tr>
<td>g. Adhesive</td>
<td></td>
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<tr>
<td>h. Nailers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Sealants</td>
<td></td>
<td></td>
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<tr>
<td>j. Flashing</td>
<td></td>
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<tr>
<td>k. Mastics</td>
<td></td>
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<tr>
<td>l. Cant Strips</td>
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</tbody>
</table>

5. Membrane and accessories are not to reach greater than ________
   Deg. F. or less than ________ degrees F.

6. Splicing surfaces are to be clean and dry.

7. Oil base and/or plastic roof cement should not to be used.
MEMBRANE ROOFING CHECKLIST

<table>
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<th>NOT OK</th>
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<tr>
<td></td>
<td>8. Gypsum board installation - installed perpendicular to steel roof deck with end joints staggered a minimum of one foot in adjacent rows, and occurring over crests of steel roof deck.</td>
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<td></td>
<td>9. Insulation to have a minimum (______)&quot; thickness (at the drains).</td>
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<tr>
<td></td>
<td>10. Other</td>
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</tbody>
</table>

cc: PM
Super
Subcontractor
Other (list) 

__________________________________

__________________________________

__________________________________

__________________________________

__________________________________
08800 - INSPECTION CHECKLIST FOR GLASS AND GLAZING

PROJECT: ________________________________  DATE: ________________

________________________________________  BY: ________________

Location of work inspected: ________________________________
(e.g. floor, room, etc.)

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<tr>
<td></td>
<td>1.</td>
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<td>Check samples submitted and materials being delivered for conformance with the contract documents.</td>
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<tr>
<td></td>
<td>a.) Manufacturer</td>
</tr>
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<td>b.) Type</td>
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<td>c.) Thickness</td>
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<td>Glass should be protected from damage by suspended flagging, or tape clearly visible, but not attached directly to the glass surface. Glass should not be marked with “X”s or other symbols.</td>
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<td>3.</td>
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<td>Check drawings for proper locations of glass and glazing.</td>
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<td>4.</td>
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<td>Check glass for twists, warps and other distortions.</td>
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<td>5.</td>
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<tr>
<td></td>
<td>Prepare surfaces for glazing according to manufacturer’s recommendations.</td>
</tr>
<tr>
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<td>6.</td>
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<tr>
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<td>Air temperature should be above 40 degrees F before applying glazing.</td>
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<td>7.</td>
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<td>Check applied glazing adhesives for air bubbles, gaps, and embedded foreign materials.</td>
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<td>8.</td>
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<td>Check proper protection.</td>
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<td>Other: (list)</td>
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Follow-Up Action Required: ________________________________

________________________________________

c.c.  Project Manager
      Superintendent
      Other: ____________________
08900 - CURTAIN WALL SYSTEM CHECKLIST

JOB NAME: ___________________________  JOB NO.: ________________

CONTRACTOR: ________________________  DATE: ________________

INSPECTOR: __________________________  TIME: ________________

1.) Is material stored properly?  Yes _____  No _____
2.) Are anchoring clips properly fastened?  Yes _____  No _____
3.) Are anchoring clips spaced properly?  Yes _____  No _____
4.) Are stud and track of proper gauge?  Yes _____  No _____
5.) Are all studs welded properly?  Yes _____  No _____
6.) Are all studs plumbed and aligned properly?  Yes _____  No _____
7.) Are all abutting pieces of track properly welded or spliced together?  Yes _____  No _____
8.) Is sheathing attached properly?  Yes _____  No _____
   (12" O.C. infield 8" on joints)
9.) Is proper sheathing being used?  Yes _____  No _____
   (tongue and groove and water resistant if required)
10.) Are all welds being touched-up with zinc-rich paint or specified paint?  Yes _____  No _____
11.) Are walls properly braced?  Yes _____  No _____
12.) Is all flashing installed properly and spliced with mastic?  Yes _____  No _____
13.) Is vapor barrier installed properly?  Yes _____  No _____
14.) Are tears in vapor barrier patched with mastic?  Yes _____  No _____
15.) Are wall ties installed, spaced, secured and sealed?  Yes _____  No _____
16.) Are any ties stripped out of stud?  Yes _____  No _____
17.) Make sure both pieces of wall ties (if two [2] part) are being used.  Yes _____  No _____
18.) Are window openings proper size?  Yes _____  No _____
19.) Are control lines the same for Mason and GWB Contractor?  Yes _____  No _____
20.) Are control joints and/or expansion joints located and installed as called for?  Yes _____  No _____
21.) Caulking and backer rod: Are correct materials being used? Is installation of same satisfactory?  Yes _____  No _____
22.) Are welder’s certificates – if certified welders are required – on file?  Yes _____  No _____

Follow-up Action Required: ________________________________

Distribution: 1 Superintendent
   1 Project Manager

(Trade Contractor)

(Other)
**09200 - DRYWALL CHECKLIST**

**JOB NAME:** __________________________  **JOB NO.:** ______________________

**CONTRACTOR:** ______________________  **DATE:** ______________________

**INSPECTOR:** ______________________  **TIME:** ______________________

1. Is drywall material stored properly, protected from moisture?  
   **Yes**____  **No**____

2. Is track and stud material the proper gauge?  
   **Yes**____  **No**____

3. Are track, stud and hanger material being fastened properly?  
   **Yes**____  **No**____

4. Is spacing correct?  
   **Yes**____  **No**____

5. Are studs properly aligned and do they provide a plane nailing surface?  
   **Yes**____  **No**____

6. Are wall penetrations (door openings, duct openings, etc.) framed as specified?  
   **Yes**____  **No**____

7. Are grounds and blocking properly installed?  
   **Yes**____  **No**____

8. Are the specified fasteners being used for the drywall and is the spacing as specified (12" O.C. in the field and 8" O.C. on the edge)?  
   **Yes**____  **No**____

9. Is the proper board being installed (water resistant, fire codes, etc.)?  
   **Yes**____  **No**____

10. Are special construction requirements such as acoustical insulation, and sealants installed properly?  
    **Yes**____  **No**____

11. Are vapor barrier and exterior wall insulation continuous and installed as specified?  
    **Yes**____  **No**____

12. Are fire rated partitions constructed as specified (proper Number of layers of drywall and insulation)?  
    **Yes**____  **No**____

13. Are penetrations through rated partitions sealed?  
    **Yes**____  **No**____

14. Is temperature above 55 degrees Fahrenheit for finishing joints?  
    **Yes**____  **No**____

15. Is spackling sanded properly? (Drywall paper should not be scuffed.)  
    **Yes**____  **No**____

16. Is drywall proper thickness?  
    **Yes**____  **No**____
UK RB2                                             THE WHITING-TURNER CONTRACTING CO.

DRYWALL CHECKLIST

Action Required:

Follow-up Date: ________________________________

Distribution:  1 Superintendent
               1 Project Manager

(Subcontractor)

(Other)
09200 - DRYWALL INSTALLATION CHECKLIST

**PROJECT:** __________________________  **DATE:** __________________________

________________________________________  **BY:** __________________________

**Location of work inspected:** ________________________________________________
(e.g. floor, room etc.)

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<th>NOT OK</th>
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**Follow-Up Action Required:** ________________________________________________
________________________________________
________________________________________

**c.c. Project Manager**
**Superintendent**
**Other:** __________________________
________________________
09600 - CARPET CHECKLIST

Direct glue down installation problems

1. Prior to installation :
   a.) Material certification received.
   b.) Sub-floor surface is properly prepared and/or cleaned.
   c.) Sub-floor is properly installed, i.e., plywood panels staggered, concrete leveled and patched.
   d.) Adhesive is compatible with carpet backing or sub-floor surface treatment.
   e.) Check temperature and humidity requirements to avoid a loose bond :
      1.) during storage
      2.) during application

Common problems

1. Carpet is buckling _ Determine whether :
   a.) Sufficient adhesive was applied.
   b.) Adhesive was skinned over in spots and is not adhering to carpet backing.
   c.) Wax or other sub-floor sealers, dressings, and/or substances were completely removed.

2. Uneven or peaking seams or obvious seam lines – Check for :
   a.) Mill edge not trimmed off sufficiently before making seam.
   b.) Cutting face yarn at seam edges when trimming for seams.
      All seams should be trace cut.
   c.) Seam adhesive not used or improperly placed, or seam adhesive not cleaned from surface.

3. Edges next to the wall appear uneven (not meeting the wall properly) – Check for :
   a.) Improper trimming of carpet free hand at the wall.
   b.) Improper setting on wall trimmer.
   c.) Dull blades in wall trimmer.
   d.) Insufficient allowance of carpet for trimming-in.

4. Imperfections showing through carpet :
   a.) Sub-floor surface depressions or cracks not patched and sanded smoothly before installation of carpet.
   b.) Dirt or contaminants not cleaned from surface or carpet backing

5. Adhesive only adhering to portions of the concrete – Check for :
   a.) Surface not properly cured.
   b.) Porous surface not properly sealed.
   c.) Improper application of adhesive.
   d.) Adhesive allowed to skin over before carpet is applied.
   e.) Incompatible sealant placed on concrete.
1. Check for size and material thickness (usually on delivery to job site since ductwork is prefabricated).  
   Yes____ No_____

2. Check for turning vanes where required.  
   Yes____ No_____

3. Check for fire damper installation.  
   Yes____ No_____

4. Check lock seams and breaks for cracking.  
   Yes____ No_____

5. Check hanger system for stability.  
   Yes____ No_____

6. Check that insulation or acoustical liners have been used where specified / required.  
   Yes____ No_____

7. During testing operations, check dampers for proper operation.  
   Yes____ No_____
1. Check for size and strength of materials, as well as proper materials in accordance with specifications.  
   Yes____  No____

2. Check valves and fittings for pressure rating and specification items.  
   Yes____  No____

3. Check anchorages to be sure that those required are in place, and also that there are no inadvertent anchorages where a line should be free moving.  
   Yes____  No____

4. Check welding, and other workmanship, in accordance with specification tests.  
   Yes____  No____

5. Check for sufficient supports, and freedom of movement where required. Check for special fittings, such as vibration isolators, where required.  
   Yes____  No____

6. When piping system is completed, carry out strength tests and containment tests in accordance with specifications.  
   Yes____  No____

7. Ensure that special requirements such as sterilization of water systems are carried out.  
   Yes____  No____

8. Be sure that piping installation permits full access and egress as required by the drawings and specifications, (i.e. doorways, aisleways), and that piping is accessible for maintenance, if required.  
   Yes____  No____

9. Following strength and containment tests, monitor the installation of insulation for materials, amount and workmanship.  
   Yes____  No____

10. For lines which are to be hydrostatically tested, ensure that the system can be both vented and drained, and that the fittings can be capped off after the test.  
    Yes____  No____

11. For special systems, such as liquid oxygen, ensure that special pre-cleaning operations have been carried out.  
    Yes____  No____
A. **During Construction**

1. Assure conduit being installed is the type specified for that particular installation.  
   Yes____  No____

2. Assure that supports are of proper type and at required intervals.  
   Yes____  No____

3. Are conduits properly fastened to racks?  
   Yes____  No____

4. Are conduits cleaned of debris & moisture prior to wire pull?  
   Yes____  No____

5. Are empty conduits capped? Are boxes and hangers properly Fastened?  
   Yes____  No____

6. Are all circuits properly identified where required – in boxes, panels, and on wires?  
   Yes____  No____

7. Do not allow conduit to be supported by pipes, ducts or ceiling system.  
   Yes____  No____

8. See that embedded items are properly fastened.  
   Yes____  No____

9. Check for proper spacing (2") between conduits.  
   Yes____  No____

10. Check for properly boxed ground cables, and reasonable slack in length of cables.  
    Yes____  No____

11. Are all screws and bolts in place and tight?  
    Yes____  No____

12. Check spec’s for special clearance requirements for equipment, dry transformers, etc.  
    Yes____  No____

13. Prohibit installation of any damaged or incorrect materials or products.  
    Yes____  No____

14. Determine that recessed items will not interfere with other above-ceiling equipment – i.e. – recessed ‘can’ lights vs. ductwork.  
    Yes____  No____

15. Panelboards should be properly supported.  
    Yes____  No____

16. Do transformers have proper vibration isolation?  
    Yes____  No____

17. Check all bus connections for tightness.  
    Yes____  No____

18. Assure proper db levels for transformers.  
    Yes____  No____

19. Inspect and assure ballasts and lamps are the type required – energy saving, low temperature, etc.  
    Yes____  No____
ELECTRICAL WORK CHECKLIST # 1

20. Fixtures and lamps should be cleaned. Fixture trim should be clean and properly aligned. Yes____ No____

21. Fixtures should be properly supported. Yes____ No____

22. Fixtures should be protected after installation, prior to Owner acceptance. Yes____ No____

23. Wall plates should be properly aligned. Yes____ No____

24. Look for U.L. labels where required. Yes____ No____

B. Prior to Turn Over to Owner (Punch List)

1. Is everything clean, complete, correct and operational? Yes____ No____

2. Lighting:
   - Check that switches, relays, contactors, and breakers operate lights. Yes____ No____
   - Check that fixtures are clean; all lamps are working; all lenses are in place. Yes____ No____

3. Are all switch and receptacle plates installed? Are they clean and straight? Yes____ No____

4. Panelboards:
   - Are directories typed and correct? Yes____ No____
   - Are panels properly labeled? Yes____ No____
   - Are the insides of panelboards free of debris? Yes____ No____
   - Are covers in place? Yes____ No____
   - Are all breakers working? Yes____ No____

5. Switchgear:
   - Are nameplates installed? Yes____ No____
   - Are all compartments clean & free of debris? Yes____ No____
   - Are connections tight? Yes____ No____
   - Are all fuses in place? Yes____ No____
   - Is paint touched up? Yes____ No____
   - Is the room clean and free of trash? Yes____ No____

6. Have all systems – (fire alarm, intercom, security) been tested? Yes____ No____

7. If required, have the Operation & Maintenance Manuals been assembled and turned over to the Owner? Yes____ No____

8. Generator:
   - All switches, etc. labeled? Yes____ No____
   - Fuel oil and antifreeze in place? Yes____ No____
   - Room swept clean and free of trash? Yes____ No____
   - Exhaust system complete? Yes____ No____
16000 - ELECTRICAL WORK CHECKLIST

C. **Material**

1. Source and material approval. Yes_____ No_____
2. Shop drawings approved. Yes_____ No_____
3. Certifications received if applicable. Yes_____ No_____
4. Samples submitted and approved. Yes_____ No_____

D. **Construction**

1. Proper location of conduit and/or ground cable. Yes_____ No_____
2. Conduit and/or ground cable properly secured. Yes_____ No_____
3. Conduit capped with proper plug. Yes_____ No_____
4. Embedded boxes properly braced. Yes_____ No_____
5. Templates installed properly. Yes_____ No_____
6. Proper spacing between conduit (minimum 2") Yes_____ No_____
7. Proper identification tags on conduit. Yes_____ No_____
8. Extended ground cable properly boxed. Yes_____ No_____
9. Reasonable slack in ground cable. Yes_____ No_____
10. Pull wire installed in conduits. Yes_____ No_____
11. Conduit cleaned with duct brush or General Contractor approved equal. Yes_____ No_____