Construction Claims Prevention

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LONG INTERNATIONAL

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1. INTRODUCTION

Claims prevention can be accomplished most effectively during the design phase of a construction project. When the design is sufficiently complete to enable qualified contractors to submit bids for the construction work, the careful preparation of well-considered contract documents offers the next greatest opportunity for claims prevention. Once contracts are executed and construction begins, the prevention of claims becomes more difficult, although the impact of claims can still be mitigated through timely management actions and effective contract administration. Figure 1, Project Transitions, shows how the responsibility for claims control is transferred over the life of the project from the planner to the designer and then to both the construction contractor and construction manager. The owner remains responsible, however, for claims prevention and mitigation activities during all phases of the project. The goal of this article is to identify solutions and suggest programs that you can use to prevent, mitigate, and manage claims. Topics include the following:

- Quality Contract Documents
- Management of Outside Design Professionals
- Constructibility and Biddability Reviews
- Site Investigation
- Review and Approval of Detailed As-Planned Schedules
- Claims Mitigation During Construction
- Project Reviews
- Contractor's Risk Analysis
- Owner Guidelines

Also included are the following checklists:

- Site Investigation
- Contractor’s Project Review
- Contractor’s Risk Analysis

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2. QUALITY CONTRACT DOCUMENTS

The successful project manager is an effective manager of contracts. From the owner's point of view, this involves three basic steps:

- Development of contract documents which provide a clear and nonconflicting basis for a contractor to assemble a bid. The contract documents must reflect the intent of the project in language that is unambiguous and provides a basis for a contractor to plan its means, methods and sequences. Production of plans and specifications merely to satisfy owner goals of form and function is no longer the single objective.
- Contract administration has taken on new meaning. It is not merely the enforcement of the terms and conditions but includes the use of the terms and conditions to adapt to the changing environment, ongoing contract interpretation and management of decisions necessary to keep the project moving forward. Both the contractor and the engineer have duties under the terms of the contract.
- Perhaps the most important step and the one most frequently overlooked is the importance of record keeping or documentation. Does the engineer have the hard facts to support decisions made during contract interpretations and to defend against unreasonable allegations on the part of the contractor expressed in the wording of a total cost claim. Without documentation, the engineer representing its owner is at the mercy of the courts.

The vast majority of claims are based on errors, omissions, conflicts and ambiguities in the contract documents and/or erroneous interpretation of those documents. The engineer is in the middle of this process. No longer can claims be put off as an element to be resolved after the project is completed. The increasing exposure of the design professional makes it necessary for that design professional to take an active role in a claims prevention and mitigation program.

The design professional plays a major role in a claims prevention program prior to award of the construction contract. After all, the documents prepared by the design professional are more often than not used as the basis for a claim. Design professionals are not perfect. There will be errors, omissions and conflicts. The secret of a successful claims prevention and mitigation program is to minimize those errors and omissions and then to respond positively and reasonably when an error and/or omission is uncovered.

A claims prevention review focuses on the principal causes of contractor claims. Value engineering and constructibility reviews, on the other hand, focus on alternatives to reduce costs yet accomplish the same overall objectives. These alternatives typically involve means,

methods, materials, form, equipment selection, etc. A claims prevention review focuses on potential errors, conflicts, omissions, ambiguities and misrepresentations both in terms of the contract documents and the system to administer, interpret and manage those contracts.

It is important to recognize what is not included in a claims prevention review. A claims prevention review does not look at better or less expensive ways to accomplish the objective. It does not address the technical adequacy of the solution. It does attempt to find and recommend elimination of potential causes of claims.

The following questions during the claims prevention review help to evaluate contract documents:

- Are the contract documents clear, complete and enforceable?
- Does the contract language use the common and normal meaning of words?
- Have the contract documents been reviewed to ensure conflicts do not exist between various sections?
- Do the contracts use exculpatory language inappropriately?
- Are the contract documents fair and reasonable?
- Do the contract documents allocate risks to the party best able to control those risks?
- Have the architectural and engineering disciplines taken sufficient precautions to ensure the design is reasonably free of errors?
- Do the contract documents adequately support the terms of payment selected, i.e., fixed price, cost-reimbursable, etc.?
- Are expectations clearly communicated?

3. MANAGEMENT OF OUTSIDE DESIGN PROFESSIONALS

Studies have shown that over 60 percent of claims have their basis in defective and deficient contract documents. Owners often use the engineering services of engineering and construction companies and private design firms for preparation of these contract documents. Such professionals are not deemed to be perfect and do not warrant that their plans and specifications are 100 percent free of errors and omissions. Liability of design professionals for errors and omissions is beyond the scope of this particular course.

Common causes of problems that owners experience with professional contracts include the following:

- Incomplete scope of work
- Misunderstanding of work plan and the responsibilities of the parties
- Unclear performance criteria
- Interference and change by the owner
- No internal quality assurance system by professional designer
- Lack of independent reviews of professional work products
- Lack of coordination between subconsultants
- Inadequate selection procedure
- Lack of an agreed-upon schedule for professional performance
- Conflict between the professional as an agent and the professional as an independent contractor producing work products.

Of all of these causes, the most common problem is the failure in expectations between the parties. Professionals are contractors and must be managed by contract. This involves development of a scope of work, performance criteria, budgets and schedules - all of which form the basis for a meeting of the minds.

Much of the responsibility for the details of the scope of work should rest with the professional. Has the owner required that the professional submit a detailed work plan describing the who, what, where, when and how of the professional's approach to meet the requirements of the owner? Is there an adequate procedure for professional selection that identifies the professional firm that is best qualified to perform the particular scope of work?

A selection process should contain as a minimum the following:

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- Internal review of the scope of work to determine that it meets the requirements of all parties within the owner's organization and adequately describes expectations.
- Requirements for a proposal format that includes: the approach to be taken, a work plan, personnel to work on the job, previous experience in similar work, references, and cost data as required by the owner.
- A formal review and selection process of an unbiased committee to screen written proposals and select three to five firms for oral interviews.
- Requirements that personnel who will actually work on the project present the orals rather than salesmen or marketing professionals.
- An independent committee that receives the oral presentations and makes recommendations to management for award.
- If procedures allow, selection should be made upon the basis of qualifications, personnel, technical competence, experience in similar work, etc. Negotiations can then be conducted with the top-rated firm to arrive at a price. If negotiations on price are not successful, then negotiations can move to the next rated firm on the best-qualified list. In any event, once selection is made, the contract must be managed by the owner. Changes must be controlled and work products subject to scrutiny for independent review, preferably by those who will be responsible for its construction in the field, i.e., the resident engineer and the inspectors.

The role of the professional during construction should be specified. That role is usually limited to review of submittals, responses to requests for information and design clarifications, and occasional monitoring of work to determine that specific elements are being furnished and installed in accordance with the designer's intent. Owners must be careful when placing the design professional in a position as an agent of the owner, making decisions concerning the professional's work products. This occurs when the design professional is given construction management responsibilities. The concern here is the inherent liability for construction problems resulting from design issues and the objectivity of the design firm in dealing with such problems.

4. CONSTRUCTIBILITY AND BIDDABILITY REVIEWS

We have discussed the importance of a review of plans for errors, omissions and conflicts that would lead to a claim for defective construction documents. In addition, work products of the engineering department or design professionals can be subject to constructibility and biddability reviews utilizing the services of the resident engineers and inspectors or outside consultants who specialize in this business.

After an owner decides to build something, the three most important parties in this process of construction are the design professional, the resident engineer team, and the contractor. If these reviews are not performed, the contractor is often the innocent victim of a contract package that is deficient in terms of constructibility and biddability.

Is the contract package an adequate "basis for a bid"? Contractors have to be optimists. They have limited time to bid projects and are competing with their fellow contractors in a tight market. The courts are sympathetic to this problem. If during the prosecution of a claim the contractor can present documentation showing how it put its bid together and show the assumptions made as to means, methods and sequence, that documentation will have great weight as being the contemporaneous actions taken during a short bidding period based upon information available.

The basis for bid must not only be clear as to design intent, but also be a clear basis for constructibility and biddability. Resident engineers and inspectors can provide a great service at this point by addressing the following:

- Specifications and divisions are appropriate and per a standard format.
- Procedures for substitutions are clear.
- Appropriate material and equipment standards are specified.
- No sole source or brand name materials or equipment are specified.
- Technologies and notations are consistent.
- Plans and specifications allow a broad selection of appropriate construction means, methods and techniques.
- Cross-reference of drawings and specifications are complete.
- Complete description is provided of anything to be furnished by the owner with a schedule of delivery.
- Definition of items of work to be provided by each contractor for multiple contracts is provided.

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- Definition of quality control responsibilities of contractor and owner is provided, with clear statement of tests and access required.
- Submittal requirements are clear.
- Review period for submittals is identified and appropriate.
- The construction schedule is feasible and clearly defined with schedule interface points identified.
- Completion times are specified.
- Supplemental data is referenced.
- Disposal requirements of excess material waste cleanup are identified.
- Divisions of work are clearly identified at contractor interfaces.
- Drawings are sufficiently detailed and work is clearly defined.
- Structure of bid form, bid schedule, etc., are clearly defined and unambiguous.
- Proper units are used for bid items.
- Bid items are clear as to the scope that they cover.
- Bid quantities are reasonable for work scope defined.
- Bid items are coordinated with drawings and specifications.
- Measurement and payment mechanisms are clearly defined and reasonably coordinated with bid items.
- Change order procedure is spelled out and basis for adjustment is identified.

5. SITE INVESTIGATION

A thorough site investigation by the contractor is essential to ensure all site-specific information is collected for preparation of the bid estimate. If the contractor fails to perform an adequate site investigation, many of the impacts that may affect the contractor's time and cost of performance may not be recognized. If such conditions would normally be identified and recognized by a prudent and experienced contractor through a site investigation, recovery from unanticipated costs caused by these impacts would normally be precluded.

A thorough site investigation would include the following categories of information:

- General site information, i.e., soil conditions, utilities, subsurface conditions
- Detailed surface conditions
- Detailed subsurface conditions
- Permits, fees, and tax requirements
- Labor information
- Weather data
- Equipment and materials information
- Transportation information
- Pricing data
- Notes of meetings with owner's site representatives

An example of a Site Investigation Checklist is shown as Table 1.

6. REVIEW AND APPROVAL OF DETAILED AS-PLANNED SCHEDULES

Creating a detailed as-planned schedule that identifies the scope of the work, the activity relationships, milestones and completion requirements is vital to the proper planning of a project. A contractor should perform the following tasks to review and check its as-planned schedules, ensure their completeness, accuracy, and reasonableness, and allow for their timely approval by the owner:

1. Verify that all work that must be performed is included in the schedule.
2. Check the level of detail proposed. Is it consistent and balanced throughout the network or is it vague in certain areas? Is the level of detail adequate to plan, schedule, coordinate, monitor, control, and report on the progress of work?
3. Check for compliance with all contract specifications related to the schedule.
4. Check to ensure that all owner-related functions outlined in the contract documents are properly incorporated. These include:
    a. Access and availability dates for physical areas of the project
    b. Intermediate completion dates established for follow-on contractors
    c. Delivery of owner-furnished materials and equipment
    d. Approval of shop drawings, submittals, and samples
    e. Inspections as required
    f. Joint occupancy dates
    g. Beneficial occupancy dates
5. Check the project milestones and constraints established in the network and identify if they are contractual, absolute, or preferential.
6. Check if restraints in the schedule logic create incorrect critical paths.
7. Evaluate past experience relative to this type of project. Spot-check relationships or work phases and their timing, i.e., structural steel erected to job completion, setting of major equipment to job completion, etc.
8. When comparing the schedule for a similar job, are necessary activities included, are durations correct, and does the project duration fall within a reasonable variation range?
9. Perform a one-to-one data check to validate the consistency of the computer tabulation and the network logic if a CPM is used.
10. Are the size and type of operation for each activity period clearly defined?
11. Are the activities sufficiently small in duration and scope for accurate time estimation and tracking?
12. Are the activity durations reasonable?

13. Are concurrent activities so scheduled?
14. Review the proposed logic sequence and note any exceptions that might be taken. Validate absolute logic conditions and confirm key preferential logic conditions.
15. Spot-check activity durations for quantities involved, crew-size requirements, and productivity factors. Challenge durations when appropriate.
16. Is it possible to complete each activity described in the allocated time, given the resources available?
17. Highlight the first five to seven paths of criticality (paths of least float) to review and understand the controlling logic and mathematics of the schedule. Determine if the critical path is proper and reasonable.
18. Check the plan to see if all major equipment and material restraints and delivery dates are properly reflected.
19. Is the lead time for submittals and approvals realistic?
20. Check for involvement of subcontractors and suppliers and see if they are properly reflected. Are dependencies clearly defined? Any critical deliveries?
21. How is weather reflected? Are there any seasonal weather restrictions to consider?
22. Prior to submitting a detailed as-planned schedule for the owner's approval, obtain approvals from internal management team including:
    - Project Manager
    - Project Controls Manager
    - Operations Manager

7. CLAIMS MITIGATION DURING CONSTRUCTION

Successful claims avoidance results from prudent management activities. The following activities during the construction phase of a project are essential for both the owner's team and the contractor's team to mitigate claims and ensure the overall success of the project:

- Read and understand the contract documents.
- Implement a document control system to capture, code and file documents.
- Hold pre-construction meetings and reach agreements on key project objectives.
- Prioritize the relative importance of each objective.
- Define clearly the roles and responsibilities of each party.
- Allocate risks to the party best able to control those risks and provide equitable rewards for assuming risks.
- Develop performance criteria to communicate expectations and to measure each party’s achievements.
- Coordinate activities involving several parties.
- Implement cost, schedule and quality control procedures.
- Hold periodic progress reviews and inspections.
- Maintain open communications throughout the project.

Commonly, a contractor's Change Order procedure may not require identification of delays to specific schedule activities and the completion date as part of the evaluation of the changed work. Schedule fragnets showing these time impacts to existing activities and the inclusion for new activities should be required as part of the Change Order procedure. In addition, the change estimate should specifically address the cost of potential delay and productivity loss cost impacts on other work as part of the change order estimate. If these estimates are not practical, the contractor should specifically reserve its rights to request additional compensation for delay and impact costs associated with change orders as part of the approval process.

Relative to a contractor's Scheduling Procedure, we suggest that in addition to identifying the variances in durations and lag relationships when performing schedule updates for monthly reviews, the contractor's project personnel should also be required to identify the cause and responsibility for these delays as part of the schedule report for internal management review only. Causes of delay that are the owner's responsibility should be included in the contractor's progress reports to the owner.

Relative to Cost Control Procedures, the contractor should track the man-hours and costs of changed work in the field. This is particularly important on lump sum projects where there may be disagreement as to the costs and impacts of changed work. Separate cost codes and tracking systems should be implemented to capture these increased costs. The contractor's procedure should also ensure that the level of detail in its base contract work is sufficient to capture any impact costs to base work caused by changed work. For example, if the contractor is only capturing the costs of piping in one cost code, and multiple changes start occurring to the piping systems, the contractor should consider expanding the piping cost codes to an area or system basis to ensure that cost impacts can be tracked.

All parties have obligations and duties under their contracts. Principal duties of the engineer acting as an agent of the owner are to make decisions and to interpret the contract when required. Under the principle of implied warranty, the engineer acting as an agent for the owner has a responsibility to affirmatively cooperate to keep the project moving. This cooperation often requires decisions in the following areas:

- Scope of work
- Clarifications
- Alleged errors and omissions
- Differing site conditions
- Submittals
- Or-equal requests
- Questions of quality and performance
- Schedule administration
- Requests for time extension
- Changes
- Questions of progress and early completion
- Third-party coordination
- Payment

On traditional construction projects involving an owner, design professional, and construction contractor, there exist overlapping responsibilities for decisions regarding the areas listed above, as shown in Figure 2. On design-build projects, the design professional and construction contractor functions become the responsibility of one organization. As a result, design

clarifications and the resolution of errors and omissions become problems that are resolved internally by the design-build contractor, as shown in Figure 3.

Under either a traditional or design-build organizational structure, a decision management matrix should be implemented to clearly define who has review and/ or approval responsibility for the various decision points during the project. Written procedures and assignment of responsibilities should be made for each area of overlapping responsibility. For example, the resident engineer should avoid the trap of becoming a historical scribe merely recording submittals as they are received. Under a decision management system, an individual should be designated to review the submittal file and to follow up on those submittals that have been in review longer than ten days.

Timely response is an essential element of a claims mitigation program. The engineer who takes timely and positive action is looked upon by the courts with favor as opposed to one who merely records data for historical purposes and stonewalls legitimate questions of interpretation or clarification.

Finally, a formal system of dispute resolution procedures should be developed which encourages settlements. The goal of the parties should be to resolve disputes before they turn into a claim leading to arbitration or litigation. Figure 4, Claim Resolution Process, presents an example of a formal dispute resolution procedure.

8. PROJECT REVIEWS

During the execution of a project, it is prudent for a contractor's senior management team to conduct periodic reviews of project performance to ensure that problems are being properly resolved, man-hour, cost and schedule information are being properly reported and analyzed to assure performance criteria are being met, changes are being properly estimated and sent to the owner for approval in a timely manner, comprehensive project documentation is being maintained, schedules are being updated and delays are being identified as to causes and responsibilities, and notices are being sent to the owner as required per the contract. In addition, major problems that should be brought to the attention of the owner at a higher level than the contractor's Project Manager should be dealt with immediately to mitigate or resolve significant issues.

A detailed Project Review Checklist is attached as Table 2. This checklist contains a lengthy list of questions that a senior level project review team should use to ensure that all issues regarding the status of the project are covered during project reviews.

9. CONTRACTOR'S RISK ANALYSIS

The best way for a construction contractor to prevent disasters and claims on a project is to thoroughly evaluate, before the job is bid, the risks involved in performing the project and implement necessary and effective mitigation measures in its management of the project to control these risks.

A Risk Analysis Checklist is provided as Table 3. This checklist includes the following major categories of issues:

- Pre-Contract/Performance Issues
- State Lien Law Requirements
- Bond Requirements
- Critical Contract Clauses
- Notice Requirements
- Scheduling Requirements
- Change Order Procedures
- Payment Provisions
- Disputes Procedure
- Federal Government Contracts

10. OWNER GUIDELINES

Unquestionably, the best way to handle a dispute is to prevent it altogether. The next best way is to settle it when it arises. The parties involved in any construction project frequently have conflicting interests; however, they have one common goal - completion of the project.

The following is a list of recommendations to owners for avoiding disputes:

- Do not rush design. Give the engineering firm and design professionals adequate time to complete, check and coordinate the design, drawings and specifications. If the contractor performs the checking or coordination, the cost will invariably be greater.
- Do not rush preparation of the plans and specifications. A complete set of plans and specifications with adequate details defining the scope of the project reduces the chance of disputes and extra work claims.
- Create a set of plans and specifications tailored and detailed to the particular project. "Off-the-shelf" specifications can create ambiguity, conflict and claims.
- Perform sufficient subsurface exploration to inform the bidders of the conditions of the proposed work. If you do not, you will pay a premium if ground conditions are better than expected or you will face a claim if the contractor encounters a "differing site condition." A good pre-contract site investigation and subsurface exploration are fundamental to the avoidance of disputes.
- The Field Engineer must know the requirements of the contract. The contractor will prosecute the work according to its plan. The Field Engineer must know what is planned as to quality, quantity, method, sequence, technique and procedure. A knowledgeable Field Engineer can catch faulty work or materials before they generate failures and extra costs. A good, honest, objective inspection helps the contractor and the owner.
- Communicate. Do not make the relationship with the contractor an adversarial one. Promote a cooperative attitude and interpret the contract equitably. Do not try to force the contractor to provide more than what is set out in the contract. However, if the contractor submits a change order or claim, the owner may need to request more information to adequately evaluate the merits of the contractor's request.
- Be timely. If a contractor requests information, design clarification, approvals of submittals or shop drawings, act with due dispatch to support the construction. Lack of timely response is a frequent source of disputes and claims.

- Be event oriented. Address problems when they arise. Work out solutions rather than concentrating on pointing fingers. No problem is the contractor's problem alone. If it impacts the project, it is your problem, too. Try to contemporaneously resolve extra work situations.
- Assist the contractor. Do not direct the contractor. You are there to help. The contractor though must build the project. You are not there to manage the work. If you do, you become responsible for any delay or disruption to the contractor's plan.
- Document the job. Document the job. Document the job. You are the eyes and ears on the project. You must contemporaneously record the job history. Without your written words, there is not opportunity to evaluate job events. Provide sufficient information of what occurs on the job everyday so someone unfamiliar with the job can become fully familiar by reading your reports and diary.

Hopefully, these recommendations will help to avoid disputes, but also they should allow for a smoother project, better cooperation between engineer and contractor, and better and easier resolution of claims.

About the Author

***Richard J. Long, P.E.**, is Founder and CEO of Long International, Inc. Mr. Long has over 40 years of U.S. and international engineering, construction, and management consulting experience involving construction contract disputes analysis and resolution, arbitration and litigation support and expert testimony, project management, engineering and construction management, cost and schedule control, and process engineering. As an internationally recognized expert in the analysis and resolution of complex construction disputes for over 30 years, Mr. Long has served as the lead expert on over 300 projects having claims ranging in size from US $100,000 to over US $2 billion. He has presented and published numerous articles on the subjects of claims analysis, entitlement issues, CPM schedule and damages analyses, cumulative impact claims, and claims prevention. Mr. Long earned a B.S. in Chemical Engineering from the University of Pittsburgh in 1970 and an M.S. in Chemical and Petroleum Refining Engineering from the Colorado School of Mines in 1974. Mr. Long is based in Littleton, Colorado and can be contacted at rlong@long-intl.com and (303) 972-2443.*

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Table 1

SITE INVESTIGATION CHECKLIST

The following checklist can be effectively used during the estimating phase. In addition, *pictures, memoranda, and minutes of meetings* with the owner's representative(s) should be maintained in the bid file.

PROJECT NAME: _____

PROJECT LOCATION: _____

ELEVATION: _____ BAROMETRIC PRESSURE: _____

1. GENERAL:

Soil (*Brief description of stability, type, gradation, density*) _____

_____

_____

_____

Identify Underground Utilities (*Check*)

- ☐ Utilities
- ☐ Power
- ☐ Water
- ☐ Telephone
- ☐ Gas

General Description of Subsurface Conditions (*Check*)

- ☐ Hidden Foundations
- ☐ Rock
- ☐ Blasting Required
- ☐ Ground Water Level/Elevation
- ☐ Hazardous Waste
- ☐ Excavation
- ☐ Other

Remarks _____

_____

_____

_____

YES	NO	
☐	☐	Is further investigation needed?
☐	☐	Is piling required?
☐	☐	Has soil report been obtained from owner?
☐	☐	Have we performed our own site investigation?

Table 1

SITE INVESTIGATION CHECKLIST

1. **GENERAL**: (*continued*)

YES NO

☐ ☐ Have we checked with local soils engineer?

☐ ☐ Have we taken pictures of site?

☐ ☐ Have aerial photographs been obtained?

☐ ☐ Have topographic maps been obtained?

☐ ☐ Have we made inquiries of owner regarding any questions we have?

2. SURFACE CONDITIONS:

Type and amount of clearing and demolition *(Describe problems with site clearing / grading)*

_____

_____

YES NO

☐ ☐ Is site accessible?

☐ ☐ Are all utilities available? Do we have to pay for?

YES NO

☐ ☐ Potable water
☐ ☐ Non-potable water
☐ ☐ Natural gas
☐ ☐ Power

☐ ☐ Are other contractors working in area?

☐ ☐ Are there other interferences?

_____

_____

☐ ☐ Will topsoil have to be removed?

☐ ☐ Can excess soil be disposed of on-site?

☐ ☐ Will access roads require maintenance?

☐ ☐ Is there a stream, swamp, or lake in the immediate area?

☐ ☐ Is there a structure which will affect construction operations (such as a nearby building which could affect crane operations, etc.)?

☐ ☐ Is borrow area easily accessible?

Table 1

SITE INVESTIGATION CHECKLIST

2. SURFACE CONDITIONS: *(continued)*

YES	NO	
☐	☐	Is the borrow quantity that is available adequate for the job?
☐	☐	Must borrow/excess soil be hauled from off-site?
☐	☐	How far must borrow be hauled?
☐	☐	Will road conditions to borrow area require special restrictions, maintenance, or equipment?
☐	☐	Are there royalty or other costs necessary for borrow materials?
☐	☐	Are there any special safety problems (high lines, etc.)?
☐	☐	Are there any noise abatement requirements or working hour restrictions?
☐	☐	Are elevations apparently as represented in drawings?
☐	☐	Are there any activities or operations by owner which can affect construction work?
☐	☐	Is adequate space available for equipment, material, storage, and field office?
☐	☐	Is observation of site consistent with conditions shown on plans and drawings?

3. SUBSURFACE CONDITIONS:

YES	NO	
☐	☐	Are there sufficient test holes shown in bid documents?
☐	☐	Is there sufficient data about subsurface conditions shown in bid documents?
☐	☐	Have we examined existing cuts and pits at the site?
☐	☐	Have we drilled our own test holes?
☐	☐	Have special measures been taken for protecting against flooding during construction?
☐	☐	Are there restrictions on pumping water?
☐	☐	Can we dispose of the water?
☐	☐	Have special measures been taken for blasting of rock, over-excavation, etc.?
☐	☐	Have special measures been taken for shoring of ditches?
☐	☐	Are underground utilities identified in bid documents?

Table 1

SITE INVESTIGATION CHECKLIST

3. SUBSURFACE CONDITIONS: *(continued)*

YES NO

☐ ☐ Do the bid documents contain a rock clause?

☐ ☐ Do the bid documents contain a clause compensating you for flooding or other acts of God?

☐ ☐ Are there nearby rivers and streams? Are there hazards from high water?

☐ ☐ Do the bid documents contain other protections against contingencies?

☐ ☐ Did investigation disclose any inconsistencies with conditions shown in plans and drawings?

List site contingencies or risks that must be considered in bid price

_____

_____

4. PERMITS, FEES, AND TAXES: *(Check)*

List Permits and Fees required, and show cost:

☐ Building Permit Cost: _____
☐ Electricity Cost: _____
☐ Water Cost: _____
☐ Gas Cost: _____
☐ Telephone Cost: _____
☐ Other Cost: _____

YES NO

☐ ☐ Do the utility providers need considerable advance notice to provide service to the site?

Who will provide electric transformers? _____

Describe construction water source characteristics. _____

_____

_____

YES NO

☐ ☐ Is there a local drinking water hauling contractor?

☐ ☐ Is adequate water pressure available?

☐ ☐ Is the project tax exempt? If not tax exempt, indicate applicable taxes:

State Sales (Use) Tax _____ %
Local Sales (Use) Tax _____ %
Other Tax _____ %

☐ ☐ Are there other special fees or licenses that will be required? If so, list.

_____

_____

Table 1

SITE INVESTIGATION CHECKLIST

5. LABOR:

YES NO

☐ ☐ Is local, skilled labor readily available?

☐ ☐ Is housing for transient labor camp necessary?

☐ ☐ Will overtime shift work be required?

☐ ☐ Are there other major projects coming up in the area which could affect labor market?

☐ ☐ Are there similar projects under construction in the area?

☐ ☐ Do we have the wage rates? Fringe benefits?

☐ ☐ Are labor rates due to increase (new union agreements, etc.)?

☐ ☐ Are strikes possible due to expired labor contracts?

☐ ☐ Is the project being performed in an area or under conditions which could cause inefficiencies, i.e., poor labor market, availability of labor, etc.?

What productivity should be expected from labor in the area in relationship to our basic unit rates? _____

☐ ☐ Will travel time be required?

☐ ☐ Is busing required?

☐ ☐ Are there any special potential jurisdictional problems?

☐ ☐ Is the construction area congested?

How many sides open? _____

☐ ☐ Is access possible?

6. WEATHER:

YES NO

☐ ☐ Has local climatological data obtained?

Rainfall Data
Jan – Mar _____ Inches/Month
Apr – Jun _____ Inches/Month
Jul – Sep _____ Inches/Month
Oct – Dec _____ Inches/Month

Maximum Storm Rainfall in 24 hrs _____ inches in _____ (Indicate Month)

Table 1

SITE INVESTIGATION CHECKLIST

6. WEATHER: *(continued)*

Maximum Storm Rainfall in One Hour Period _____ inches in _____ (Indicate Month)

Average Wind Velocity _____ mph _____ days/year

Average Storm Wind _____ mph _____ days/year

Temperature Range (Minimum and Maximum Range):

Jan – Mar	_____°F – _____°F
Apr – Jun	_____°F – _____°F
Jul – Sep	_____°F – _____°F
Oct – Dec	_____°F – _____°F
Extreme Cold:	_____°F Extreme Heat: _____°F

Snow: Average inches per year_____ Maximum Storm_____inches
Snow Load (psf) _____

Humidity

Jan – Mar	_____ %
Apr – Jun	_____ %
Jul – Sep	_____ %
Oct – Dec	_____ %

Any: Sandstorms? YES ☐ NO ☐ Sleet? YES ☐ NO ☐ Heavy Fog? YES ☐ NO ☐ Tornadoes? YES ☐ NO ☐

Frost Depth _____

Electrical Storm Frequency _____

Earthquake Frequency _____ Richter Scale Severity_____

Are there Dust, Mildew, or Pest Problems? YES ☐ NO ☐ Indicate _____

How much down time can we expect based on weather (e.g., 10-year climatological report from weather bureau)?_____

Will winter work be required? YES ☐ NO ☐

What special measures must be taken to protect against high winds?_____

What special measures must be taken to protect against flooding?_____

What special measures must be taken to protect against freezing?_____

What special measures must be taken to protect against snow?_____

What special measures must be taken to protect against rain?_____

Table 1

SITE INVESTIGATION CHECKLIST

7. EQUIPMENT/MATERIALS:

List special equipment that may be required for the project. _____

_____

YES NO

☐ ☐ Is nature of site (remote, difficult terrain) such that maintenance or depreciation factors must be adjusted?

List any special problem with transporting equipment to job site. _____

_____

YES NO

☐ ☐ Are there adequate local material suppliers?

☐ ☐ Are there overhead obstructions that will interfere with construction equipment?

☐ ☐ Are there any underground lines or open ditches that cannot be crossed with construction equipment?

☐ ☐ Will we have sufficient area for storage of equipment and materials? List _____

Temporary Construction Facilities: (*Furnished by*)

Office Trailer _____
Warehouse _____
Covered Storage Area _____
Fenced Area _____

YES NO

☐ ☐ Are there fabrication shops in the local area? Describe capabilities.

8. TRANSPORTATION:

YES NO

☐ ☐ Does location or schedule dictate special transportation (air freight, barge, etc.)?

Where is nearest paved road? _____

☐ ☐ Are there any railroad sidings near the project site? How far away? ____ mi.

☐ ☐ Any pending transportation strikes? _____

☐ ☐ What is local haulers capacity? _____

☐ ☐ Is there special equipment available? _____

☐ ☐ Is there a wharf at site? _____

☐ ☐ Is dredging required for access? _____

Table 1

SITE INVESTIGATION CHECKLIST

8. TRANSPORTATION: (*continued*)

YES NO

☐ ☐ Will site ambulance be required?

☐ ☐ Are site first aid facilities required?

Where is the nearest hospital? _____

List any special transportation problems _____

_____

_____

9. PRICES:

YES NO

☐ ☐ Are there any price hikes (steel, plywood, wire, pipe, etc.) pending?_____

☐ ☐ Are there any pending industry strikes that could escalate prices or cause material/equipment shortages and delays?_____

☐ ☐ Is an escalation clause included?

10. COMMUNICATIONS:

YES NO

☐ ☐ Are there telephone lines available?

☐ ☐ Is radio telephone needed and/or practical?

☐ ☐ Is a radio license required?

☐ ☐ Is mobile phone service available?

☐ ☐ Can we get a modem and/or fax line?

☐ ☐ Can we get high-speed internet access?

☐ ☐ Is there regular express mail service?

☐ ☐ Is it advantageous to open a post office box in the nearest town or city?

☐ ☐ Are overnight shipping services available in the nearest town or city?

Table 1

SITE INVESTIGATION CHECKLIST

11. MEETINGS:

Summarize meetings, telephone conversations, and discussions with owner or its representative.

DATE	CONTRACTOR'S PERSONNEL	OWNER'S PERSONNEL	SUMMARY OF MEETING

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

PROJECT NAME: _____

_____

PROJECT NO: _____

DATE OF PROJECT REVIEW: _____

PROJECT REVIEW TEAM SIGNATURES: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
COST / FINANCIAL ISSUES				
☐	Are we invoicing to our Contracting Party in a timely manner?	☐	☐	☐
☐	Are our subcontractors invoicing us in a timely manner?	☐	☐	☐
☐	Are the cost accounts in sufficient detail to evaluate productivity?	☐	☐	☐
☐	Do we know our daily field overhead costs (staff, equipment, materials, expenses)?	☐	☐	☐
☐	Are our field overhead costs significantly over or under budget?	☐	☐	☐
☐	Are we tracking our field equipment rental costs?	☐	☐	☐
☐	Are we tracking our owned field equipment costs?	☐	☐	☐
☐	Are our field equipment costs within budget?	☐	☐	☐
☐	Are we tracking installed equipment costs by budget item?	☐	☐	☐
☐	Are our installed equipment costs within budget?	☐	☐	☐
☐	If we are over budget on installed equipment costs, do we know why?	☐	☐	☐
☐	Have we taken the appropriate measures to recover compensable extra installed equipment costs?	☐	☐	☐
☐	Are we tracking installed materials costs by budget item?	☐	☐	☐
☐	Are our installed materials costs within budget?	☐	☐	☐
☐	If we are over budget on installed materials costs, do we know why?	☐	☐	☐
☐	Have we taken the appropriate measures to recover compensable extra installed materials costs?	☐	☐	☐
☐	Do our costs accounts with which we are tracking labor correlate to specific schedule activities?	☐	☐	☐
☐	Is this correlation at the appropriate level of detail?	☐	☐	☐
☐	If a reasonable and sufficiently detailed correlation does not exist, can we create one?	☐	☐	☐
☐	Are our labor cost billings to date consistent with our internal reports for percent complete?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
COST / FINANCIAL ISSUES *(continued)*				
☐	Do we have a current cash flow projection?	☐	☐	☐
☐	Have cash flow projections taken any significant changes from earlier projections over the duration of the project?	☐	☐	☐
☐	Have we taken any measures to reduce retention?	☐	☐	☐
☐	Is there any contractual basis for reducing our retention?	☐	☐	☐
☐	Are we being paid promptly?	☐	☐	☐
☐	Have we taken any measures to expedite payment?	☐	☐	☐
☐	Are we paying our subcontractors per the contract terms?	☐	☐	☐
☐	Are we paying our vendors / suppliers per the contract terms?	☐	☐	☐
☐	Is a copy of the bid estimate in the project files?	☐	☐	☐
☐	Has the bid estimate been correlated to the control budget / cost account budget?	☐	☐	☐
☐	If so, does this correlation make sense?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
LABOR / MAN-HOUR ISSUES				
☐	Are the man-hours on timesheets coded to specific cost accounts?	☐	☐	☐
☐	Are we tracking labor productivity by individual costs accounts?	☐	☐	☐
☐	Are we tracking progress by earned value?	☐	☐	☐
☐	Is our productivity acceptable?	☐	☐	☐
☐	Are we tracking the productivity of our subcontractors?	☐	☐	☐
☐	Is the productivity of our subcontractors acceptable?	☐	☐	☐
☐	Have we taken any measures to improve our productivity?	☐	☐	☐
☐	Have our productivity improvement measures been successful?	☐	☐	☐
☐	Is our Project Manager providing weekly labor and quantity budgets to the Foreman?	☐	☐	☐
☐	Do we have a baseline/as-planned manpower loading chart based on our original contract work?	☐	☐	☐
☐	Do we have a current manpower loading chart for the completion of the project?	☐	☐	☐
☐	Is our manpower level significantly higher or lower than the baseline manpower curve?	☐	☐	☐
☐	If it is, have we evaluated the productivity impact of such deviations?	☐	☐	☐
☐	Are we forecasting labor for future weeks by work activities?	☐	☐	☐
☐	Are we preparing three-week lookahead schedules for labor forecasts?	☐	☐	☐
☐	Are we preparing eight-week lookahead schedules for labor forecasts?	☐	☐	☐
☐	Have our labor forecasts deviated significantly from actuals?	☐	☐	☐
☐	Have we evaluated the productivity of future activities based on the productivity trends of like activities that already have some history?	☐	☐	☐
☐	Are copies of timesheets in the project files?	☐	☐	☐
☐	Are our timesheets signed by the Project Manager?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
LABOR / MAN-HOUR ISSUES *(continued)*				
☐	Are copies of certified payrolls in the project files?	☐	☐	☐
☐	Are we working significant overtime?	☐	☐	☐
☐	Is our overtime consistent with our planned schedule and budget?	☐	☐	☐
☐	Are we being paid for our overtime premiums?	☐	☐	☐
☐	Are we being paid for any loss of productivity associated with overtime work?	☐	☐	☐
☐	Are we getting qualified craft from the labor market?	☐	☐	☐
☐	Are we getting adequate numbers of qualified craft from the labor market?	☐	☐	☐
☐	Are we experiencing high labor turnover?	☐	☐	☐
☐	Has our labor been attracted by other area projects with better incentives and working conditions?	☐	☐	☐
☐	Have we experienced a high rate of absenteeism?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
QUANTITIES ISSUES				
☐	Are installed quantities being tracked and reported regularly?	☐	☐	☐
☐	Are the installed quantities being reported to the same cost accounts as are the man-hours?	☐	☐	☐
☐	Do our installed quantities reports correlate with quantities delivered to the field?	☐	☐	☐
☐	Are we maintaining an equipment / material receiving report?	☐	☐	☐
☐	Are we maintaining as-built drawings on a weekly basis?	☐	☐	☐
☐	Are the as-built drawings be checked against installed quantity data to ensure consistency?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

PROBLEM / ISSUE	YES	NO	UNSURE
FINANCIAL / COST REPORTING ISSUES			
Are the following types of financial / cost reports being regularly created and evaluated?			
☐ Cost of Labor Man-hours Report	☐	☐	☐
☐ Labor Productivity Report	☐	☐	☐
☐ Change Order Analysis Report	☐	☐	☐
☐ Purchase Order Status Report	☐	☐	☐
☐ Aged Payable Report	☐	☐	☐
☐ Cash Position Report	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
CHANGE ORDER ISSUES				
☐	Have we experienced a high number of Change Orders?	☐	☐	☐
☐	Was this level of Change Orders anticipated?	☐	☐	☐
☐	Are there an unusually high number of errors and omissions in the drawings and specifications?	☐	☐	☐
☐	Have the Change Proposals and Change Orders been approved in a timely manner?	☐	☐	☐
☐	Has there been a change in the contract work without the issuance of a formal Change Order?	☐	☐	☐
☐	Is the pricing of our Change Proposals and Change Orders current?	☐	☐	☐
☐	Are we pricing our Change Proposals and Change Orders per the terms of the contract?	☐	☐	☐
☐	Do our Change Proposals and Change Orders request time extensions?	☐	☐	☐
☐	Do we submit fragnets and schedule information with each Change Proposal or Change Order pricing?	☐	☐	☐
☐	Do our Change Proposals and Change Orders contain pricing for delay costs?	☐	☐	☐
☐	Do our Change Proposals and Change Orders contain pricing for impact / loss of productivity costs?	☐	☐	☐
☐	Does the Project have the commonly used reports on productivity impact factors for pricing Change Proposals and Change Orders?	☐	☐	☐
☐	Does our Project Manager understand productivity impact pricing?	☐	☐	☐
☐	Do our Change Proposals and Change Orders have adequate language to reserve our rights to additional costs?	☐	☐	☐
☐	Have we evaluated the reservation of rights language in Change Proposals and Change Orders from our subcontractors?	☐	☐	☐
☐	Does the subcontractor's reservation of rights language open us to claims?	☐	☐	☐
☐	Do our Change Orders from subcontractors provide full accord and satisfaction language?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
CHANGE ORDER ISSUES *(continued)*				
☐	Have our Change Proposals and Change Orders been approved by our Contracting Party?	☐	☐	☐
☐	Are we invoicing for Change Order costs?	☐	☐	☐
☐	Are we tracking the man-hours and costs for Change Order Work separately?	☐	☐	☐
☐	Are we tracking the installed quantities for our Change Order work separately?	☐	☐	☐
☐	Have we approved Change Proposals and Change Orders submitted by our subcontractors?	☐	☐	☐
☐	Are our subcontractors invoicing for Change Order Work?	☐	☐	☐
☐	Have we performed any Extra Work / Work Tradeoffs for which there is no formal cost agreement?	☐	☐	☐
☐	Have we performed any Change Order Work without agreement and approval on costs?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
OTHER ISSUES				
☐	Do we have personnel with the required contracting and professional licenses on the project or at the office responsible for the project?	☐	☐	☐
☐	Has work been directed in a manner or method that is different from or more expensive than the method that was originally anticipated?	☐	☐	☐
☐	Are we aware of any material facts that were withheld from our knowledge that would have affected our costs, time, or method of performance?	☐	☐	☐
☐	Was our work made impossible due to specification errors or unattainable performance requirements?	☐	☐	☐
☐	Has notice and a Change Order been provided to our contracting party for changed methods?	☐	☐	☐
☐	Have we been required to provide unanticipated engineering services?	☐	☐	☐
☐	Has notice and a Change Order been provided to our contracting party for these additional engineering services?	☐	☐	☐
☐	Has the supply of utilities for our work been adequate?	☐	☐	☐
☐	Is there a proactive Safety Program on this project?	☐	☐	☐
☐	Is safety receiving the required emphasis?	☐	☐	☐
☐	Has a safety review been performed on the project?	☐	☐	☐
☐	Are the number of lost time accidents and lost time work days above average?	☐	☐	☐
☐	Have we received any OSHA citations?	☐	☐	☐
☐	Are the OSHA citations in our files?	☐	☐	☐
☐	Has our or our subcontractor's safety record been acceptable?	☐	☐	☐
☐	Are we having regular meetings with our contracting party?	☐	☐	☐
☐	Are we having regular meetings with our subcontractors?	☐	☐	☐
☐	Is our scope of work well defined?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
OTHER ISSUES *(continued)*				
☐	Do we have adequate (numbers and experience) field staff assigned to the project?	☐	☐	☐
☐	Have we experienced any work that was commercially impractical, i.e., unreasonable difficult in locating or obtaining necessary materials, supplies, tools, or equipment, or at an unreasonably high cost, or procurement or delivery was not possible at the time or place needed?	☐	☐	☐
☐	Have we unexpectedly experienced any work that was extremely expensive, dangerous or difficult?	☐	☐	☐
☐	Has any of our work or our subcontractor's work been damaged by others?	☐	☐	☐
☐	Have we provided formal written notice relative to this damaged work?	☐	☐	☐
☐	Has our contracting party representative been accessible on a day-to-day basis to address our problems and concerns?	☐	☐	☐
☐	Are our subcontractors bonded?	☐	☐	☐
☐	Do we have copies of their bonds?	☐	☐	☐
☐	Are the site housekeeping conditions adequate?	☐	☐	☐
☐	Does the project have on file an analysis of the required notices to protect our rights?	☐	☐	☐
☐	If required by law, have pre-lien notices been properly filed to the owner?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
SCHEDULE ISSUES				
☐	Did the bid estimate contain a bid schedule?	☐	☐	☐
☐	Do we have a hard copy of this bid schedule?	☐	☐	☐
☐	Do we have a computer disk containing the files of this bid schedule?	☐	☐	☐
☐	Was the bid schedule man-loaded?	☐	☐	☐
☐	Was the bid schedule in CPM format?	☐	☐	☐
☐	Was the Notice-to-Proceed issued on the date set forth in the Contract?	☐	☐	☐
☐	Was a detailed as-planned schedule created after we started the project?	☐	☐	☐
☐	Is the detailed as-planned schedule consistent with the bid schedule?	☐	☐	☐
☐	Did we transmit a copy of our detailed as-planned schedule to our contracting party for approval?	☐	☐	☐
☐	Did we receive approval from our contracting party relative to our detailed as-planned schedule?	☐	☐	☐
☐	Did we adequately address all concerns relative to our as-planned schedule that were raised by our contracting party?	☐	☐	☐
☐	Did we plan on completing our work earlier than the contract completion date?	☐	☐	☐
☐	Did our as-planned schedule clearly show an early completion date?	☐	☐	☐
☐	Does the detailed as-planned schedule correlate with the chart of cost accounts at the appropriate level?	☐	☐	☐
☐	Is the any written documentation relative to the cost accounts / schedule activities' correlation in the project files?	☐	☐	☐
☐	Does the detailed as-planned schedule contain submittal and procurement activities?	☐	☐	☐
☐	Is there any evidence of acceleration when the bid schedule is compared to the detailed as-planned schedule?	☐	☐	☐
☐	Are we maintaining a statused as-built schedule?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
SCHEDULE ISSUES *(continued)*				
☐	Is our as-built schedule current?	☐	☐	☐
☐	Is the statused as-built schedule consistent with the observed status in the field?	☐	☐	☐
☐	Do we have hard copies of all of our statused as-built schedules?	☐	☐	☐
☐	Do we have computer disks containing the files of all of our statused as-built schedules?	☐	☐	☐
☐	Is our Contracting Party maintaining a statused as-built schedule?	☐	☐	☐
☐	Is our Contracting Party's as-built schedule current?	☐	☐	☐
☐	Does the statused as-built schedule show the current contract completion and milestone dates including all current time extensions?	☐	☐	☐
☐	Do we have hard copies of all of our Contracting Party's statused as-built schedules?	☐	☐	☐
☐	Do we have computer disks containing the files of all of our Contacting Party's statused as-built schedules?	☐	☐	☐
☐	Are all known delays to our work included in the statused as-built schedule?	☐	☐	☐
☐	Is a Daily Schedule Activity log being prepared?	☐	☐	☐
☐	Is the duration and linkage of the delays to the affected activities accurate?	☐	☐	☐
☐	Are delays relative to late RFI responses in the statused as-built schedule?	☐	☐	☐
☐	Have we provided formal written notice to our contracting party for late RFI responses?	☐	☐	☐
☐	Are delays relative to late submittal responses in the statused as-built schedule?	☐	☐	☐
☐	Have we provided formal written notice to our contracting party for late submittal responses?	☐	☐	☐
☐	Are delays relative to Change Orders in the statused as-built schedule?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
SCHEDULE ISSUES *(continued)*				
☐	Are delays relative to late delivery of equipment or materials by others in the statused as-built schedule?	☐	☐	☐
☐	Have we provided formal written notice to our contracting party for late equipment or material deliveries?	☐	☐	☐
☐	Have there been any differing site conditions, i.e., different from those described in the contract or that are unusual or extraordinary, that have delayed our work and / or have increased our costs?	☐	☐	☐
☐	Have we provided formal written notice to our contracting party for all differing site conditions problems?	☐	☐	☐
☐	Have there been significant delays to predecessor work by others?	☐	☐	☐
☐	Have we provided formal written notice to our contracting party for late predecessor activities?	☐	☐	☐
☐	Are we using an appropriate scheduling technique to evaluate the impact of delays to our work, such as time impact analysis?	☐	☐	☐
☐	Have we lost float as a result of the delays to our work?	☐	☐	☐
☐	Has the loss of float caused or will it cause stacking of trades?	☐	☐	☐
☐	Have we requested time extensions for all known delays?	☐	☐	☐
☐	Have we received any time extensions?	☐	☐	☐
☐	Are the time extensions consistent with our entitlement for delay?	☐	☐	☐
☐	If we have not received adequate time extensions, have we transmitted notice letters?	☐	☐	☐
☐	Have we incurred weather and / or force majeure delays?	☐	☐	☐
☐	Have we included these weather and / or force majeure delays in the statused as-built schedule?	☐	☐	☐
☐	Have these weather and / or force majeure delays increased our costs?	☐	☐	☐
☐	Are we being directed to perform our work earlier than the schedule would require?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
SCHEDULE ISSUES *(continued)*				
☐	If we are being directed to accelerate, have we written letters to our contracting party to request additional costs?	☐	☐	☐
☐	Are we being constructively accelerated, i.e., are justifiable time extensions being ignored?	☐	☐	☐
☐	Have we written notices relative to this constructive acceleration?	☐	☐	☐
☐	Are we tracking the progress of Change Order work separately in the schedule?	☐	☐	☐
☐	Were there any delays in the timely receipt of construction drawings prepared by others?	☐	☐	☐
☐	Did we provide notice for these delays in the receipt of construction drawings that were prepared by others?	☐	☐	☐
☐	Has our work space been congested by the storage of materials by others?	☐	☐	☐
☐	Have we provided formal written notice of this stored material congestion?	☐	☐	☐
☐	Have we experienced delays in securing permits or right-of-ways?	☐	☐	☐
☐	Have we provided formal written notice relative to these permit or right-of-way delays?	☐	☐	☐
☐	Have we experienced delays to the access of our work?	☐	☐	☐
☐	Have we provided formal written notice relative to these access delays?	☐	☐	☐
☐	Were there any strikes or work stoppages?	☐	☐	☐
☐	Has there been defectively installed work by others that has caused delay in the installation of our work?	☐	☐	☐
☐	Have we provided formal written notice relative to this defectively installed work by others?	☐	☐	☐
☐	Have we caused any delay to our work?	☐	☐	☐
☐	Has our subcontractors caused any delay to their work?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

	PROBLEM / ISSUE	YES	NO	UNSURE
SCHEDULE ISSUES *(continued)*				
☐	Have our subcontractor's delays been evaluated for overall project delays?	☐	☐	☐
☐	Have we experienced delay in the receipt of equipment and / or materials to the project?	☐	☐	☐
☐	Have these delays affected the critical path and could delay the project?	☐	☐	☐
☐	Have we experienced any delay or unreasonableness in the inspection of our work by others?	☐	☐	☐
☐	Have we provided formal written notice relative to these inspection delays?	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

PROBLEM / ISSUE	YES	NO	UNSURE
DOCUMENTATION			
☐ Are the project files well organized and in good order?	☐	☐	☐
☐ Is current documentation being regularly filed?	☐	☐	☐
☐ Is the following documentation in the project files?			
☐ Copy of the Contract	☐	☐	☐
☐ Copy of the Subcontracts	☐	☐	☐
☐ Copy of the original estimate	☐	☐	☐
☐ Site investigation report / checklist	☐	☐	☐
☐ Daily construction reports	☐	☐	☐
☐ RFIs	☐	☐	☐
☐ RFI log	☐	☐	☐
☐ Submittals	☐	☐	☐
☐ Submittal log	☐	☐	☐
☐ Correspondence	☐	☐	☐
☐ Correspondence log	☐	☐	☐
☐ Change Orders	☐	☐	☐
☐ Change Proposals	☐	☐	☐
☐ Change Order log	☐	☐	☐
☐ Change Proposal log	☐	☐	☐
☐ Invoices to our contracting party	☐	☐	☐
☐ Invoices from our Subcontractors	☐	☐	☐
☐ Drawings	☐	☐	☐
☐ Specifications	☐	☐	☐
☐ Bid schedule	☐	☐	☐
☐ Detailed as-planned schedule	☐	☐	☐
☐ Schedule updates	☐	☐	☐
☐ Schedule data disks	☐	☐	☐
☐ Daily Schedule Activity log	☐	☐	☐
☐ Schedule meeting minutes	☐	☐	☐
☐ Other meeting minutes	☐	☐	☐

Table 2

CONTRACTOR'S PROJECT REVIEW CHECKLIST

PROBLEM / ISSUE	YES	NO	UNSURE
DOCUMENTATION *(continued)*			
☐ Is the following documentation in the project files? *(continued)*			
☐ Project controls reports	☐	☐	☐
☐ Internal progress reports	☐	☐	☐
☐ External progress reports	☐	☐	☐
☐ Monthly cost / financial reports	☐	☐	☐
☐ Monthly cash flow projections	☐	☐	☐
☐ Drawing revision log	☐	☐	☐
☐ Timesheets	☐	☐	☐
☐ Certified payrolls	☐	☐	☐
☐ Foreman's diaries	☐	☐	☐
☐ Project Manager's diaries	☐	☐	☐
☐ Purchase orders	☐	☐	☐
☐ Issue files	☐	☐	☐
☐ As-built drawings	☐	☐	☐
☐ Backup tapes from field computers	☐	☐	☐
☐ Field equipment lists with on-off dates	☐	☐	☐
☐ Accident reports	☐	☐	☐
☐ OSHA citations and logs	☐	☐	☐
☐ Nonconformance reports	☐	☐	☐
☐ Progress Photos, dated and noted	☐	☐	☐
☐ Time and Materials work log	☐	☐	☐
☐ Labor agreement	☐	☐	☐
☐ Certificates of Insurance (ours and our subcontractor's)	☐	☐	☐
☐ Bonds (ours, our subcontractor's)	☐	☐	☐
☐ Equipment and tool inventories	☐	☐	☐
☐ Equipment maintenance logs	☐	☐	☐
☐ Start-up / Testing plan	☐	☐	☐
☐ Material control receiving tickets	☐	☐	☐
☐ Project close out plan	☐	☐	☐
☐ QC program	☐	☐	☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

PRE-CONTRACT / PERFORMANCE ISSUES	
REQUIREMENT / ACTIVITY / RISK	YES / NO
City, County, or State Licensing Requirements	☐ ☐
Foreign Corporation Registration	☐ ☐
Non-Resident Contractor's Bond or Registration	☐ ☐
Annual Filings / Reports	☐ ☐
Sales / Use Tax Obligations	☐ ☐
Other Taxes	☐ ☐
County Municipal Requirements	☐ ☐
Permits / Fees	☐ ☐
Insurance Requirements	☐ ☐
Environmental Site Assessment	☐ ☐
Financial Capacity of Parties	☐ ☐
Parties' Performance History	☐ ☐
Prequalification Requirements	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

STATE LIEN LAW REQUIREMENTS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Pre-Contract or Pre-Performance Filing Required	☐ ☐
Pre-Contract or Pre-Performance Notice Required	☐ ☐
AIA 201 & 2.1.2 Request to Owner for Property Description	☐ ☐
Obtaining Legal Description	☐ ☐
Preliminary Notices	☐ ☐
Deadline for Filing Lien	☐ ☐
Definition: "Last Labor or Materials"	☐ ☐
Scope of Lien Law Coverage	☐ ☐
Deadline for Lien Foreclosure	☐ ☐
Miscellaneous Notice-Filing Requirements	☐ ☐
Contractual Lien Waiver Clauses	☐ ☐
Pay Application Lien Waivers	☐ ☐
Property Exempt from Liens	☐ ☐
Lien Subordination Agreement	☐ ☐
Bonding off Liens	☐ ☐
Final Payment Lien Waivers	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

BOND REQUIREMENTS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Bid Bond Required	☐ ☐
Performance Bond Required	☐ ☐
Payment Bond Required	☐ ☐
Bond Notice Requirements	☐ ☐
Contractual Time Limit for Suit on Bond	☐ ☐
Statutes Affecting Bond Claims	☐ ☐
Comparison of Bond With Statutes	☐ ☐
Is Contract Incorporated Into Bond?	☐ ☐
Scope of Bond Protection	☐ ☐
Arbitration With Principal and / or Surety	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

CRITICAL CONTRACT CLAUSES REQUIREMENT / ACTIVITY / RISK	YES / NO
No-Damages-for-Delay / Inefficiencies	☐ ☐
Changes Clause	☐ ☐
Differing Site Conditions	☐ ☐
Site Investigation Obligations	☐ ☐
No Claims Due to Site Conditions	☐ ☐
Pricing of Significant Quantity Variations	☐ ☐
Economic Price Adjustments	☐ ☐
Shift of Design Responsibility	☐ ☐
Drawing Review Obligations	☐ ☐
Shop Drawing / Submittals Procedures	☐ ☐
Suspension of Work Rights	☐ ☐
Termination for Convenience	☐ ☐
Termination for Default	☐ ☐
Overhead / Profit Limitations	☐ ☐
Pay-When-Paid-Provisions	☐ ☐
Coordination Responsibilities (Design / Schedule)	☐ ☐
Warranty Risks	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

CRITICAL CONTRACT CLAUSES *(continued)*	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Notice Requirements	☐ ☐
Unusual Indemnity Requirements	☐ ☐
Lien Waiver Provisions	☐ ☐
Right to Stop Work	☐ ☐
Contractor Quality Control	☐ ☐
Unusual Insurance Requirements	☐ ☐
Scheduling (CPM) Requirements	☐ ☐
Acceleration of Work Rights	☐ ☐
Liquidated Damages Clause	☐ ☐
Clauses Incorporated by Reference	☐ ☐
Documents Incorporated by Reference	☐ ☐
Order of Precedence Clause	☐ ☐
Limitations on Authority Provisions	☐ ☐
Contract Choice of Law Provision	☐ ☐
Inspection / Testing Requirements	☐ ☐
Acceptance Procedures	☐ ☐
Final Payment Provisions	☐ ☐
Disputes Procedure	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

CRITICAL CONTRACT CLAUSES *(continued)*	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Requirements for Release of Retainage	☐ ☐
Merger Clause	☐ ☐
Exclusion of Qualifications / Clarifications	☐ ☐
Payment Application Requirements	☐ ☐
Contract Milestone Requirements	☐ ☐
Interest on Late Payments	☐ ☐
Change Clause	☐ ☐
Differing Site Conditions Clause	☐ ☐
Insurance and Bonds Clause	☐ ☐
Offset Payment Clause	☐ ☐
Indemnification Clause	☐ ☐
No Damages for Delay Clause	☐ ☐
Hazardous Materials Clause	☐ ☐
Site Cleanup Clause	☐ ☐
Lien Waiver Clause	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

NOTICE REQUIREMENTS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Time Extensions & Excusable Delays	☐ ☐
Differing Site (Changed) Conditions	☐ ☐
Changes & Extra Work	☐ ☐
Notice of Acceleration	☐ ☐
Damage to Person or Property	☐ ☐
Notice of Claims or Backcharges to Subcontractors	☐ ☐
Termination Notices – Right to Cure	☐ ☐
Insurance Claim Notices	☐ ☐
Warranty Claims	☐ ☐
Arbitration Demand	☐ ☐
Submission to Architect / CM	☐ ☐
Errors or Omissions	☐ ☐
Weather	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

SCHEDULING REQUIREMENTS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Presence of Contract Schedule	☐ ☐
Form of Schedule	☐ ☐
Scheduling Responsibility	☐ ☐
Right to Alter Schedule	☐ ☐
Start Date (NTP) Trigger	☐ ☐
Update Requirements	☐ ☐
Technique Required	☐ ☐
Who Owns the Float?	☐ ☐
Damages for Delay (Liquidated – Actual or Both)	☐ ☐
Excusable Delays Defined	☐ ☐
Time Extension Justification Process	☐ ☐
Milestone Dates	☐ ☐
Phased Completion – Acceptance / Commencement of Warranties	☐ ☐
Completion Date – Substantial / Actual	☐ ☐
Coordination of Work Provisions	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

CHANGE ORDER PROCEDURES	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Authority to Issue Binding Changes	☐ ☐
Required Approvals	☐ ☐
Writing Requirements	☐ ☐
Constructive Changes Procedure	☐ ☐
Financing Institution Approvals	☐ ☐
Impact / Delay Cost Recovery	☐ ☐
Overhead / Fee Limits on Added Work	☐ ☐
Limits on Number of Allowed Markups	☐ ☐
Unit Prices – Quantity Variation Pricing	☐ ☐
Force Account Work Procedures	☐ ☐
Equipment Pricing Procedures	☐ ☐
Overhead / Fee on Deductive Changes	☐ ☐
Limits on Acceleration Payments	☐ ☐
Time Limits for Proposal Submission	☐ ☐
Stated Effect of Untimely Submission	☐ ☐
Audit-Subsequent Modification Rights	☐ ☐
Funding for Changes	☐ ☐
Confirming Change Directives	☐ ☐
Tracking Direct and Indirect Costs	☐ ☐
Partial Payment for Disputed Changes	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

PAYMENT PROVISIONS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Pay Request Form	☐ ☐
Schedule of Values Required	☐ ☐
Project Schedule Required	☐ ☐
Payment for Stored Materials	☐ ☐
Timing of Payment Application	☐ ☐
Timing of Payments (Partial & Final)	☐ ☐
Pre-Conditions on Obligation to Pay	☐ ☐
Lien Waivers – Contractor's Affidavit	☐ ☐
Deadline for Payment	☐ ☐
Right to Stop Work for Non-payment	☐ ☐
Required Notifications	☐ ☐
Withholding or Backcharge Rights	☐ ☐
Effect of Acceptance	☐ ☐
Retention Requirements	☐ ☐
Reduction of Retention	☐ ☐
Pre-Conditions to Final Payment	☐ ☐
Interest on Late Payments	☐ ☐
Effect of Final Payment on Rights	☐ ☐
Approvals Required	☐ ☐
Certification of Payment to Subcontractors	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

DISPUTES PROCEDURE	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Mandatory Mediation	☐ ☐
Arbitration	☐ ☐
Litigation	☐ ☐
Venue Selection	☐ ☐
Time Limits for Making Claims	☐ ☐
Right to Join Additional Parties	☐ ☐
Alternative Disputes Procedures	☐ ☐
Incorporated by Reference	☐ ☐
Pass-Through Claim Provisions	☐ ☐
Special Disputes Procedures	☐ ☐
Limitations on Liability	☐ ☐
Interpretation of Contract Clauses	☐ ☐
Partnering Obligations	☐ ☐

Table 3

CONTRACTOR'S RISK ANALYSIS CHECKLIST

FEDERAL GOVERNMENT CONTRACTS	
REQUIREMENT / ACTIVITY / RISK	YES / NO
Responsiveness of Bid	☐ ☐
Responsibility Determinations	☐ ☐
Bid Protest Procedures	☐ ☐
Bid Mistake Relief	☐ ☐
Social & Economic Programs	☐ ☐
Buy American Restrictions	☐ ☐
Davis Bacon Requirements	☐ ☐
Cost & Pricing Data Submissions	☐ ☐
Application of Cost Principles	☐ ☐
Disputes Clause Certification	☐ ☐
Other Certifications and Liabilities	☐ ☐
False Claims/False Statements	☐ ☐
Prompt Payment Act Obligations	☐ ☐

Figure 1

Project Transitions

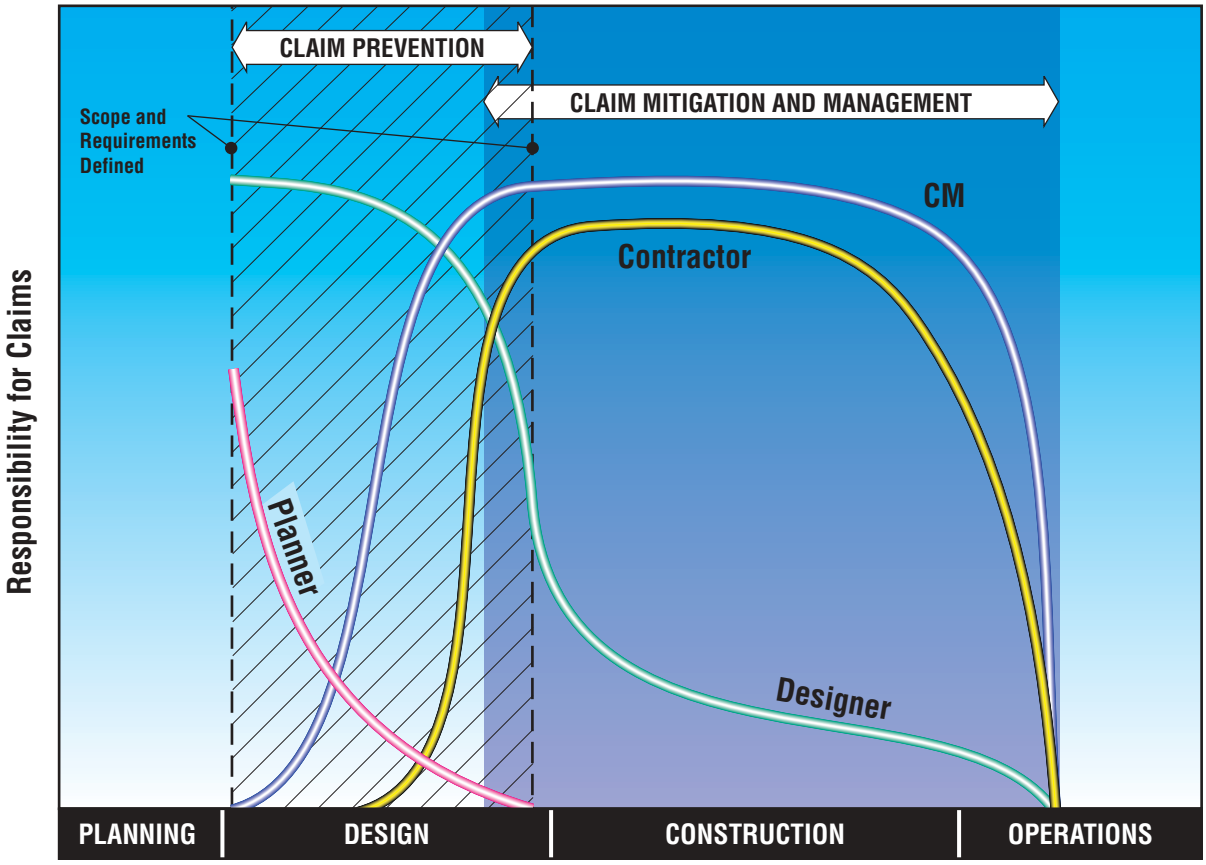
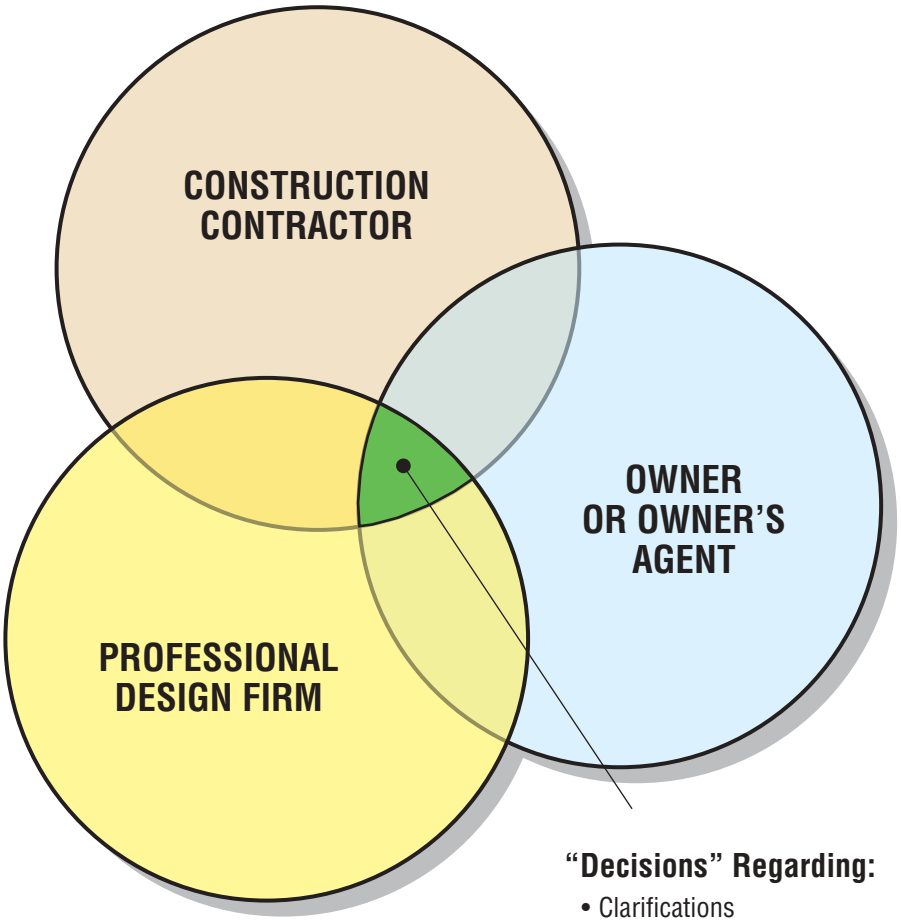


Figure 2

Overlapping Roles of Major Parties in Traditional Construction Delivery

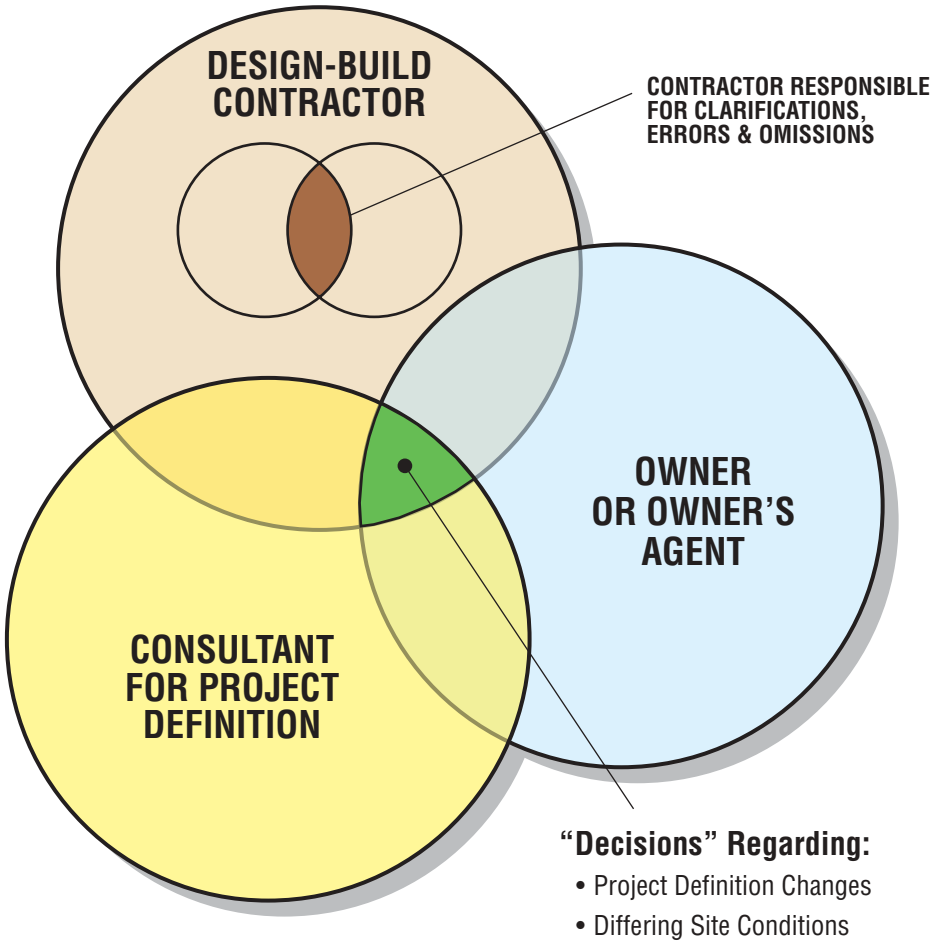


"Decisions" Regarding:

- Clarifications
- Errors & Omissions
- Scope of Work
- Differing Site Conditions
- Submittals and "Or Equals"
- Quality & Performance
- Time Extensions
- Progress & Early Completion
- Changes
- Third-Party Coordination
- Payment

Figure 3

Overlapping Roles of Major Parties in Design-Build Approach



"Decisions" Regarding:

- Project Definition Changes
- Differing Site Conditions
- "Or Equals"
- Quality & Performance
- Time Extensions
- Progress & Early Completion
- Changes
- Third-Party Coordination
- Payment

Figure 4

Claim Resolution Process