

Project Start Up Procedures Manual

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Alliance Project Management Manual (1998)

A typical project manager spends up to 70 percent of his time reacting to minor emergencies, correcting errors, tracking down answers to simple questions and explaining the obvious.

On a six-month project (based on a 40-hour work week), this translates into more than 700 hours of playing catch up – hardly a productive or effective use of a professional manager’s time. If, at the beginning of the project, that same project manager spent 40 hours on project administration, he could cut that 700 hours in half or better.

PREVIEW

Execute contract

Evaluate contract. Is it a "standard form" contract, i.e. CCDC 2?

If contract is not "standard" and is customized it should be reviewed by legal counsel for:

- Verbiage
- Scope
- Risk
- Liability
- Dollar amount

Contract should also be reviewed by estimator for consistency with original tender documents.

Don't be shy....If items in the contract are not satisfactory...negotiate. Do it now; you have no rights to do it after you sign it.

1 KICK-OFF/TURNOVER MEETING

1.1 Select Key staff

(Estimator to chair this meeting)

This meeting will take place immediately after verbal award of contract. The meeting will be initiated by the person below who would receive the call.

Meeting participants:

- GM or other senior company officer
- Estimator/Sales Engineer or staff person in control
- Chief Financial Officer

1.2 Present Project

At this point an overview of the project is given. The chief estimator or sales engineer would present the project by giving a narrative and the characteristics of the job, including profit, overhead, bid comparisons etc.

1.3 Select project manager

Study the intensity of the job to determine what qualifications are needed for the proper project manager. Consider such items as:

- Technical expertise
- Experience
- People skills
- Customer relations
- Administrative skills
- Temperament
- Leadership skills
- Compatibility
- Labour relations experience
- Project location

Develop an organizational chart which is clear and usable showing the "chain of command" i.e. who reports to whom.

1.4 Review Project Documents

Review documents pertinent to the job such as:

- Plans
- Specs
- Addendum
- Estimates
- Clarifications and exclusions listed in proposal
- Codes
- Proposed contract
- Policies
- License permits
- Project agreements
- General contractor's contracts
- Subcontractor constraints
- Union agreements
- Drug testing
- Regulatory policies (EEO, ADA)
- Map to job (location, address)
- Correspondence/emails/internet
- Telephone messages
- Select foreman
- Set date for pre-planning meeting

2 PRE-PLANNING MEETING

(Project Manager to chair – agenda to cover items 2.1 to 2.20)

Include Appendix 1 and Appendix 2 in discussions. They cover checklists and topics.

Meeting participants:

- GM or other senior company officer
- Estimator/Sales Engineer or staff person in control
- Project Manager
- Project Coordinator (Administrator)
- Foreman
- Purchasing

2.1 Evaluate Estimates

Considered the “NUTS AND BOLTS” session, this consists of detailed examination of:

- Estimates
- Spread sheets
- Breakouts
- Material tallies, etc.

Here the Project Manager should take accurate notes. The following items should be presented.

- Rough schedule and labour plan
- List of subcontractors with scope and dollar values
- Suggestions on value engineering based on the estimate (include engineering department staff)
- Synopsis of alternate bids
- Prefabrication and material handling
- Procurement intent

2.2 Evaluate Construction Teams

Present a list containing names, addresses, phone numbers and key contact people such as*:

- Owner
- Construction manager
- Electrical contractor
- General contractor
- Architect
- Engineer (mechanical)
- Municipal guidelines & protocols

- Commissioning company
- Major subcontractors
- Any component parties (independent contractors)
- Outside key suppliers
- Municipal contacts

*Project coordinator should put this together in advance of the meeting

2.3 Perfect job Schedule

Evaluate the general contractor's schedule. Then develop an in-house schedule to determine and identify outside influences which could affect the project.

- Fix start and completion dates for the mechanical progress of job
- When materials are to arrive
- Material handling characteristics
- Special trucking needs
- Regulatory issues
- Permit status
- Other trades
- Develop in-house project schedule on MS Project/Primavera etc.

2.4 Plan labour

- Based on what estimate shows, identify number of man hours needed by each craft and Short Term Interval Planning (STIP) by phase/section
- Develop supervision plan
- Develop mix plan (how many apprentices, journeymen helpers, etc. needed for the job). The estimates may have included some apprentices thereby reducing the labour rate-mix

2.5 Review Material and Equipment

- Evaluate spreadsheet from Step 1.5 (MS Project) and consider combined central purchasing (coordinate purchasing)
- Discuss allowable options and creative options to be cost effective
- Plan material utilization – subtractions can reduce costs
- Arrange plan for additional materials and return merchandise/materials at completion at agreed price
- Discuss using "own forces" or subs as appropriate
- Verify compatibility of components (avoid OEM if possible)
- Discuss lease/purchase/rent equipment and tools

2.6 Review General Conditions

- Job set-up (utilities, trailers)
- High pressure steam licensing
- Power/Utilities – who pays? (You should exclude in your tender)
- Communication and control systems – use of cell phones, tablets, on-site computers
- Material lay down area & receiving
- Tool/material storage – is it adequate and safe?
- Material and equipment storage - how and when paid?
- Rigging and staging – consider co-op plans with other subs or general contractor
- Fab space on site?
- Core drilling
- Special sleeving
- Fire stopping
- Temporary heat
- Safety procedures

2.7 Review Proposed Subcontracts

- Work from spreadsheet from Step 1.5 (MS Project)
- Look for list of areas where subcontractors would be involved (particularly smaller sub work)
- Do subs have proper insurance?
- Contractor must be listed as additional insured on the subcontractors insurance certificate
- Are subs bonded, licensed, covered by WorkSafe etc?
- Are subs qualified to do the work?
- Workload of subs may determine suitability
- Review payment timing and holdback
- Liaise with “internal subs” – sprinkler and fire protection

2.8 Enhance Profitability

This is a highly creative brainstorming and innovation session where other team members are asked to ‘lubricate’ the project manager’s thinking about ways to improve project profitability.

- Review “On-Site” Productivity Manual by Kerry O'Brien.

2.9 Develop change order plan

In this session, discussion centers on how to handle and communicate a change order plan.

- Chief estimator gives overview of potential change order on job and areas to watch for
- Evaluate documents and scope out what constitutes a change order

- Determine who has the authority to approve change orders for the owner and have the project manager get to know him
- Get labour, material, subs, rental rates for change orders in writing
- Understand the owner's change order process to ensure proper paperwork flow in order not to delay payment
- Evaluate the profitability of a change order
- Is there a field order procedure for this project? If so, get it in writing

2.10 Develop Claims avoidance plan

- Be aware of potential problems
- Be aware of project compression and project delays
- Evaluate complexity of project and develop a system to deal with claims
- Document delays immediately and communicate follow-up on Request for Information for keep them from delaying the project. Where forced to do work that you believe is a change from the original project "proceed under protest – issue your protest in writing"
- Deal with adversity immediately – communicate!

2.11 Commit to partnering strategy

Partnering is a strategy in which all construction team members build a relationship based on respect and trust. Best Practices!

Key elements of Partnering are:

- **Commitment** – must come from the top management of all construction team members
- **Early Involvement** – design professionals, general contractors and subs must be involved
- **Equity** – commitment to satisfying each team members' interests/goals
- **Trust** – with understanding comes trust
- **Development of Mutual Goals** – identify all prospective goals for the project i.e. value engineering savings, financial goals, limiting cost job site safety, methods of resolving disputes
- **Implementation** – team members should develop strategies for implementing their mutual goals
- **Continuous Evaluation** – plan periodic joint evaluation meetings
- **Timely Responsiveness** – timely communication and decision making will save money and keep a problem from growing into a dispute

2.12 Develop special risks – safety plan

Evaluate the total project and delineate potential hazards, such as:

- Hazardous waste

- Spills
- Asbestos
- Extreme temperatures
- Physical aspects
- Noise
- CFC's
- Ground contamination
- Soil conditions
- Fire/explosion hazards
- De-watering
- Dangerous machinery/equipment
- WHMIS/CSTS/WorkSafe requirements

2.13 Evaluate insurance

- Are there special insurance requirements on the project?
- Are you prime or sub on the project?
- If prime, expand coverage. Sub work may not need the same insurance as prime work
- Evaluate hold-harmless clauses and the possibility of using OPC clauses
- Minimize your risk through insurance
- Extended warranty coverage
- Evaluate equipment warranties with the insurance company
- Project manager must understand the company's insurance coverage/program, i.e. what is deductible, what is covered, etc.
- Are deductible losses billable?

2.14 Develop Human resource and support plan

Are there special requirements of the project such as:

- Parking
- Breaks
- Food facilities
- Lavatories
- Job site transportation
- Security/passes
- Noise control
- Fire control
- Other
- Hiring local people or minorities
- Local purchasing

Investigate potential for on or near site first aid facilities, to be coordinated with general contractor.

2.15 Determine codes, permits, licenses/inspections

- What codes, permits are necessary? Be certain that you are not overcharged
- Remember all municipal codes that apply
- Fire protection authority

2.16 Develop material and equipment logistics plan

- Is tool/material storage available and is it secure?
- Consider off hour deliveries
- Develop clean up/pick up plan
- Develop orderly plan for tool inventory and return to shop
- Develop plan for timely return of rental equipment
- Develop plan for return of material

2.17 Review accounting, bond and financial plan

- Set up and implement budget
- Develop progress payment procedures
- Re-evaluate holdback, negotiate to minimize
- Escrow hold back/interest
- Cash flow
- Credit available?
- Is bonding required?
- Who pays bonding premium?
- Are subs bonded or do you have a policy for bonding?
- Are there special aspects of the project that require special banking?
- Have individuals from the accounting department worked with project managers to be certain that everyone is familiar with the financial system on the project

2.18 Review unique project conditions

Coordinate with owner's production schedule:

- Shut downs
- Shifts
- QA/QC
- Is facility occupied
- Security
- Are special badges/scan cards required to enter project?
- Off-hour guards
- Damage liability in occupied building
- Distance, accessibility, travel

- Dust, fumes, smoke, arc (welding) control
- Confined space – special training

2.19 Review final project plan

This meeting is held with the entire project management team. The project manager takes everything gathered at this point and presents it to the project team.

- Project manager accepts "sign on" to job
- Project team reviews the project plan
- After final review the entire project team "signs-on" to project by signing title page of this document.

2.20 Sign-off

All parties to this meeting will sign-off on these procedures as confirmation that all the issues have been dealt with correctly and completely.

- GM or other senior company officer
 - _____
- Estimator/Sales Engineer or staff person in control
 - _____
- Project Manager
 - _____
- Project Coordinator (Administrator)
 - _____
- Foreman
 - _____

Date _____

APPENDIX 1

CHECKLIST – SITE LAYOUT AND MATERIALS HANDLING

Site Layout and Materials Handling Checklist

1. Site Actions

Actions/Comments

- How do trucks get in and out of the site? _____
- Is there an "in-gate" and an "out-gate"? _____
- Any one-way street problems? _____
- Will local traffic be a problem, especially at rush hours? _____
- Will there be good roadways at the site? _____
- Are efficient traffic patterns made clear to everyone on site? _____
- Clear access to truck unloading areas? _____

2. Truck Unloading

- Are truck unloading positions best located for overall materials handling efficiency (minimum handling)? _____
- Truck level unloading docks?
- Permanent docks installed early
 - Attached to building?
 - Attached to man-material hoist?
- _____
- Ideal is for materials/equipment to be unloaded directly into the building structure _____
- If on-site staging is required, avoid using trailers – consider fork lift accessible containers or temporary structure _____

Site Layout and Materials Handling Checklist

3. Hoisting

Actions/Comments

a. Man and Material Hoist

Planned location? Optimum location?

Capacity (lbs)?

Gate and internal dimension?

Will truck-level unloading dock be attached to hoist?

Access from the hoist onto the floors (hoist stops at every floor)?

Date ready for use?

Dismantling date?

Scheduling system for use of hoist?

Who sets up schedule? Who enforces the schedule?

b. Tower Crane

Location?

Capacity at all loading points?

Access to the loading points?

Floor loading platforms? How many?

Date ready for use?

Dismantling date?

Hours available?

Scheduling system for use of the crane? Who sets up the schedule?
Who enforces the schedule?

c. Other

High-lift fork truck

Site Lay-out and Materials Handling Checklist

4. Movement of Manpower & Materials within the Building

Actions/Comments

- Will stairways be installed at the earliest possible time? _____
- Any problems due to building design (requiring ramps, etc.)? _____
- Placement of materials, etc. on the floors –
Designated areas for each trade? _____
- Floor loading capacity? _____
- Aisle ways to be kept clear? _____
- Early placement of materials, etc. to be avoided?
(this can be a serious problem for horizontal movement.) _____

5. Installation Areas

- Any high ceilings? If so, can scaffolding or high-lift equipment be shared between trades? _____
- Coordination of trades? (can a trade contractor be guaranteed a certain installation area to himself for a specified period of time?) _____
- When can a mock-up of a typical area be installed?
- On-site?
 - Off-site?
 - Trade contractor's shop/warehouse? _____

Site Layout and Materials Handling Checklist

6. Housekeeping and Garbage Removal

Actions/Comments

- Garbage removal by garbage chute or man material hoist? _____
- Where is the garbage dumpster located? _____
- Are small dumpsters (on wheels or pallets) provided on each floor/area? _____
- Floor sweeping and miscellaneous garbage – GC does daily using labourers. Composite Crew? _____

7. Site Layout/Facilities

- Trade contractor trailer/office areas? _____
- Lunch room and toilet locations? (and types) _____
- Parking Facilities for supervisors and site personnel? _____
- Staggered start/quit times? _____
- Communications? (common channel on two way radios?) _____
- Organization structure? Who does one talk to for what? (between GC and all trades) _____

8. Staging – prior to site

- Special arrangement with vendors? _____
- Company warehouse? _____
- Rented warehouse? _____

APPENDIX 2

MAJOR ITEMS AND AREAS FOR REVIEW

Use the following checklist to bring up more potential problems on the project. Record them on a flip chart, white board or computer with screen.

Team Building and General Concerns Checklist

1. Overall team

- What are the client's objectives? Where will he be placing the most stress?
- Does the General Contractor have a reputation for being well organized on the site?
- Does each Trade Contractor have a reputation for being co-operative and productive?
- Who is the General Contractor's superintendent and what is he like to deal with?
- Who is each Trade Contractor's senior person on site and what is he like to deal with?
- Who is the Engineering consultant and what is he like to deal with?
- Would top management public relations with the clients on this project assist (a) project profitability, and (b) future contract possibilities?

2. Project Team (on-site organization)

- Discuss system whereby foremen give clear instructions to the tradesmen and, together with the tradesman, come up with objectives for each work segment.
- The optimum crew size is a crew of one. Discuss this principle and also how foremen are going to plan crew sizes and allocation of work.
- Will "working" foremen become full foremen during the project and perhaps require sub-foremen? At what times during the project would these positions be created?
- Does the project require a full or part-time clerk?
- Does the project warrant on-site engineering or drafting assistance?
- Expediting to be carried out by whom?
- Is there any other support required that involves full-time or part-time assistance?
- What is the clients administration structure (who do we go to for what)?
- What site accommodation is required?
- What communication system is required?
- Will there be internet service/WIFI on-site
- Will there be cameras monitoring work areas?
- What are the smoking restrictions?
- Will there be sign-in/out procedures?
- What is the Project Manager/Superintendent's biggest area of concern on this project?
- What actions could management take to help?
- Do we know who the union representatives are going to be?
- What are the possible jurisdictional disputes on this project? Is there anything we can do to prevent or mitigate such disputes?
- How are we going to familiarize ourselves with local conditions that will affect manpower?

3. General Concerns (schedules, etc.)

- Is there a Project Activity Schedule available which has enough detail to enable the preparation of:
 1. Materials/equipment delivery schedules
 2. Effective trace sequencing
 3. Manpower requirements chart

- Have there been any changes to the contract or specifications?
- Is there a possibility of excessive changes on this project
- How will future change notices be estimated and handled at the project site?
- Are there any design changes that we should be investigating with the engineering consultant in order to save labour hours and/or material costs?
- Are we satisfied with the present system of what should be pre fabricated?
- What is the probability of having to deal with legal claims on this project?
- Which of the following measure should be carried out on this project:
 1. close monitoring of the project activity schedule?
 2. letters to be sent of any serious schedule deviations occurrences, clearly stating causes and effects?
 3. foreman to maintain daily diaries/logs?

4. Housekeeping & Garbage Removal System

The following system, with appropriate variations, has been successfully implemented on a number of projects.

1. Major Trade Debris

Each trade will move its major trade debris to a central box on a regular basis.

- By chute or hoist

2. Miscellaneous Debris

This will be placed in carts that will be made available, by the GC, in all areas.

3. Residual Miscellaneous Clean-up and Sweeping

- Performed by G.C.
- Costs shared by G.C. ad trades, based on labour man-days (non-working supervision not included)
- All trades with labour on site are included, except the following:
 - excavation, pilling, top soil, sodding, landscaping, concrete finishing and placing

- Because of the nature and time of their work, the following trades will be part of the calculations, using one half their man-days:
 - paving, rebar installation, masonry
- Costs billed monthly
- Costs and man-days available for inspection for G.C. office at any time.

5. Project Site Visit

It is a valuable exercise to visit the project site location at this point because:

- In analyzing the Site Layout and Materials Handling Checklist, certain questions will have arisen which may be answered by visiting the site location.
- It gives trade contractors a chance to meet with the general contractor superintendent on the project.
- A site visit will enhance the value of the first pre-planning session.

Ideally, all the people who are going to be at the first pre-planning session should visit the site.