



## Preliminary & Detailed Cost Estimate Checklist

specific to a (1) New, (2) Retrofit or (3) Add on to a Manufacturing Factory, Pharmaceutical or Logistics Facility  
(this checklist to be attached as a part of the Estimating Basis Documentation Package):

Compiled By:	Date:	Revision:
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Approved By:	Date:
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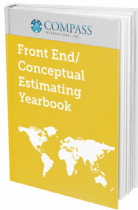
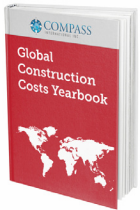
#	PRELIMINARY & DETAILED COST ESTIMATE CHECKLIST SPECIFIC TO MANUFACTURING / PHARMACEUTICAL / LOGISTICS FACILITIES	INCLUDED	EXCLUDED	REMARKS / COMMENTS
1	Estimating Documentation / is FEED study available / Scope of Work / Description of work being estimated			
2	Location of Project (Grass Roots or Brownfield)			
3	Type of Project New / Retrofit / Add-On / Move Facility to new location			
4	Project Schedule (Normal or FastTrack) start - finish dates			
5	Type of Estimate Scoping Study / Preliminary / Funding / Detailed			
6	Accuracy of Estimate / AACE – Estimate Definition (1-5)			
7	Facility Size GSF / NSF - M2 ( Acres - hectares ) Height / # of Floors			
8	Engineering, Procurement & Construction Approach, which organization will handle each activity			
9	Engineering Detailed design percentage complete at this time			
10	Responsible individuals for Estimate Preparation, Estimate Approval & Responsible Project Manager			
11	List of Engineering Deliverable to be used in compiling estimate, together with date and revision & Estimating Plan			
12	Pricing Basis (historical data, estimates / vendor quote or lump sum bid)			
13	Construction Labor Rate build up (indicate base rate, fringes, WCI, FICA, State Unemployment, overhead, profit and any other add-ons - such as supervision, apprentices, travel time, per diems, trips home), explain basis of buildup, Union or Open Shop Labor			
14	Finance costs, royalties, land purchase, management reserve			
15	Insurance BAR / Pub Liability / Bonds, explain basis			
16	Productivity issues - tight work spaces / Busing workers from parking lot / Weather issues explain basis			
17	Overtime / shift work / shut downs / week end work			
18	Material Take Off allowances / waste factors, describe what is included			
19	Design Development allowance / Resolution factor included, how was this determined			
20	Permit issues & requirements (Air, environmental & local township) is cost included in estimate, what permits is owner responsible for			
21	Currency basis / Currency issues, explain basis, how will currency changes be accounted for			
22	Ocean freight / Local freight costs/ import duties, explain basis			
23	Operator training, is Owner responsible for this, who will coordinate this			
24	Witness testing / NDT included travel to vendor shop, explain basis			
25	Provisional Sums / Estimating Allowances, describe basis & how will this be adjusted in the Lump Sum / Final Account			
26	Describe Estimating techniques & software used for determining cost: was company benchmarking values part of the estimate effort:			

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27	Describe Estimating data used; Compass International / RS Means / Historical data, Sub-Contractor unit pricing or fixed price quotes.			
28	Manufacturing / Production / Major Equip List / Tablet Presses / Fillers / Pans / Blenders / Spiral Chillers / Compressors, Condensers / Conveyors / Reactors / Dryers / Robotic Pickers, Scanners / Racking / Hi-Speed Bottling Lines / Cold Boxes etc. Provide latest Major Equip List, with number of items, weights & pricing in US \$, or other currency			
29	Manufacturing / Major Equipment Installation & setting / alignment, describe basis & assumptions			
30	Modules / Pre-assemblies / skids & hook-up, is process piping to be fabricated on site or off site			
31	Warehouse equipment (fork lifts / pickers / wrappers / chargers)			
32	Refurbishment of equipment, 2nd hand used equipment, explain basis			
33	Vendor assistance, explain value used & how value was determined			
34	Freight costs (Tagged Equipment & Bulk Materials), provide details & assumptions			
35	Demolition / Asbestos / Lead Based Paint / Mold / Encapsulation, explain SOW & pricing basis			
36	Details of costs related to removal of hazardous waste, explain pricing & disposal basis			
37	Relocate equipment from another location including transportation, provide details			
38	Remove / Relocation of equipment / utilities / pipe racks, explain details, does equipment need to be re-installed			
39	Need of temp office to house existing Owner staff, provide basis & SF area required. List needs of site staff temp offices			
40	General Conditions / Preliminaries / Division 1 items			
41	Site trailers / Telephone / Express mail, provide basis			
42	Field Oversight / Superintendent and staff, provide details			
43	Temporary partitions / Barricades / Temp heat / Protection of equipment / completed work			
44	Temporary utilities / water / gas / electricity / lighting, explain basis			
45	Clean up / Dumpsters, explain how this was calculated			
46	Guards / safety training / drug testing / TWIC cards			
47	Excavation / fill / removal from site / b/fill / rock, how will rock or a high water table be handled			
48	Excavation Tipping charges, provide details			
49	Site works paving / roads / paths / curbs, explain basis			
50	Fences / gates (Temp / Permanent), provide pricing basis			
51	Fire mains / hydrants, explain basis			
52	Under Ground utilities / Manholes, provide pricing basis			
53	Parking lots / outside lighting / parking access			
54	Landscaping / irrigation, how was this estimated			
55	Field erected tanks / Tank farms / tank age / disposal of testing water, explain pricing basis			
56	Rail track / spur, provide pricing basis			
57	Weigh Bridge / Truck loading area, how was this estimated			
58	Pre-Engineered buildings are foundations and MEP sprinkler services included what about A/E - CM fees			
59	Warehouse / shelving / bar coding equipment			
60	Gatehouse / Control rooms, how was this estimated			
61	Piling / Sheet Piling, provide pricing basis			
62	Concrete foundations / anchor bolts / leveling plates (how is formwork estimated , how many pounds of rebar in CY or M3 of concrete is mesh reinforcement included, strength of concrete)			
63	Concrete flat work / SOG / elevated concrete, how was this estimated			
64	Pre-Cast Concrete, how was this estimated			
65	Grouting requirements			
66	Concrete coating / finishes / waterproofing, how was this estimated			
67	Structural steel (main structure / pipe racks / other steel)			
68	Platforms / grating / decking / ladders			

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69	Miscellaneous metals, provide pricing basis			
70	Exterior walls / Curtain walls / Siding / Roof Decking			
71	Louvers, windows, external doors / roll-up loading area doors			
72	Brickwork / block work / lintels, provide assumptions used in determining this cost			
73	Flashing / downspouts / gutters			
74	Caulking, how was this estimated			
75	Painting / Coatings, how was this estimated			
76	Signs / Blinds / Toilet partitions			
77	Clean rooms (ISO # ) Class 100,000, 10,000, or 1,000 - Band # , provide assumptions used in determining this cost			
78	78 Spiral coolers / Drug control room / Cold rooms SF area - pricing basis			
79	Raised Pedestal Computer Room flooring , provide basis			
80	Special doors / pass throughs / loading docks			
81	Internal walls / coving issues / metal or PVC, provide pricing basis			
82	Pre-Engineered walls systems, how was this estimated			
83	Wall guards, special wall covering (SS or PVC)			
84	HEPA Filters / Walk on ceilings etc. , explain how estimate was compiled			
85	Flooring, carpet, tile, epoxy, terrazzo, other			
86	Laboratory equipment / hoods / specialties / plug in equipment			
87	Utility equipment / boilers / chillers / cooling towers / pumps / wells etc.			
88	Process Piping, materials of construction, diameter, how are valves and fittings estimated, provide pricing basis			
89	In-line piping devices, filters, provide details / assumptions			
90	Gas piping / tubing, provide pricing basis			
91	Plumbing fixtures and pipe, how was this estimated			
92	Floor drains – length of pipe included, explain how estimate was compiled			
93	Piping system testing / pickerling, provide details			
94	Pipe supports / hangers, provide estimate basis or assumptions made			
95	Tie-ins / shut downs, provide pricing basis			
96	Utility stations / flexible piping jumpers			
97	Sprinklers / Heads / Main headers, explain pricing basis			
98	Tubing / supports, explain how estimate was compiled			
99	HVAC equipment / AHU's / HEPA filters			
100	Duct piping / pumps, provide estimate basis or assumptions made			
101	Duct work (pounds or kg of materials – material type)			
102	Balancing HVAC system, how was this estimated			
103	Insulation to pipe / duct / equipment / insulation covering			
104	Electrical (Classification), explain how estimate was compiled			
105	Electrical equip, provide estimate basis or assumptions made			
106	Cable / conduit / external & internal lighting			
107	Instrumentation, # of I/O's, full material take off, explain basis			
108	Instrumentation control wiring, provide estimate basis or assumptions made			
109	Card readers / security / CCTV / speakers, how was this estimated			
110	I/C integration & tie in to existing network, how was this estimated			
111	Building Management System (BMS) , explain basis			
112	Telephone / computer network, provide assumptions used in determining this cost			
113	Elevators (Hydraulic or electric - drill for piston - remove drill excavation)			
114	Fireproofing / fire extinguishers fire stops / sealed penetrations, explain how estimate was compiled			
115	Tracing (Electric / Steam)			
116	Owner Provided Equipment / Materials			
117	Other items Owner construction items – list out items / Attach an additional list of specific items			
118	Spare parts, provide estimate basis or assumptions made			
119	Indirect Costs / compile a list of items included in this category			

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120	Construction Equip - welding machines, trucks, excavators			
121	Field Supervision, provide assumptions used in determining this cost			
122	Field Labor Support – transporting field materials / equipment / drinking water			
123	NDT / Testing – stone, concrete, welds, provide assumptions used in determining this cost			
124	Scaffolding, provide estimate basis or assumptions made			
125	Small Tools under \$100 - saws, picks, chisels, hammers, drills, explain how estimate was compiled			
126	Consumables / grease / gases / welding rods, explain basis			
127	Ongoing Site Establishment costs			
128	Initial startup materials, provide estimate basis or assumptions made			
129	Warehousing support, explain how estimate was compiled			
130	Fabrication facilities, provide assumptions used in determining this cost			
131	Construction Heavy Lift Cranes			
132	Maintenance of Construction Equipment / Fueling / Repairs			
133	Engineering man-hours and cost			
134	Engineering Fee / Contractors Fee			
135	Abandoned Engineering costs			
136	Site Transportation - Buses, vans, provide estimate basis or assumptions made			
137	Construction Management man-hours and cost, provide assumptions used in determining this cost			
138	Construction Management Fee, explain basis			
139	Commissioning man-hours and cost			
140	Owner costs / staff / CM, travel costs			
141	Third party consultants / Peer review costs, explain how estimate was compiled			
142	Cost of early engineering, provide details / assumptions used in determining this cost			
143	Validation costs, provide estimate basis or assumptions made			
144	Surveys / setting out the work, explain basis			
145	Soil Testing / Bore holes, how was this estimated			
145	Protection of completed work			
146	Escalation what was the basis, how many months to the mid-point of the project.			
147	Local State taxes / GST / B&O tax / Overseas Import Duties			
148	Contingency (Provide an analysis of contingency)			
149	Cash Flow forecast, provide pricing basis			
150	Expense items (compile list of items) , explain how estimate was compiled			
151	Write up on Allowances / Assumptions / Exclusions			
152	Write up on Estimating Plan, List of Engineering Deliverables / Drawings / Specifications / Date & Revision. Priced out Vendor Quotes, Inclusions / Exclusions			
153	Validity of Submitted Estimate - how many days is estimate good for 30, 60 or 90 days.			
154	Potential Value Engineering ideas / Cost saving ideas			
155	Consultants / Engineering internal and external resources, explain pricing basis			
156	Hot taps / Draining existing lines / Removal of insulation / Shut downs / Flag men / Traffic control, explain how estimate was compiled			
157	Construction labor issues, Union / Open Shop, ability to produce modules, pre-assemblies / pre-fabrication of piping systems at this site, are any potential strike issues anticipated			
158	Production and maintenance resources participating in Commissioning / start up, provide estimate basis or assumptions made			
159	Owner Internal resources for qualification and validation (Describe how facility is to be commissioned & handed over to client) provide pricing basis			
160	Will a temporary camp be needed to house construction workers			

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161	Will de-watering of foundations be required, explain pricing basis			
162	Are there enough Lay down areas available during construction, provide pricing basis			
163	Is imported special engineered fill / crusher run required, will water tankers be required to minimize dust			
164	Are there any special T&C's / payment / retention / bonds / warranty issues that will / could impact cost estimate, provide details			
165	Field Labor productivity issues, explain current thinking and basis on this topic			
166	Field communications, dedicated T1 computer network lines, field computers, copiers, telephones, CCTV, conference equipment, scanners, special software, satellite network systems, explain estimating basis			
167	Other issues that could impact cost estimate / bid, provide details			



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