

GUIDE TO BNi COSTBOOKS

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Preface

For over 75 years, BNi Building News has been dedicated to providing construction professionals with timely and reliable information. Based on this experience, our staff has researched and compiled thousands of up-to-the-minute costs for the BNi Costbooks. Our Costbooks are an essential reference for contractors, engineers, architects, facility managers, or any construction professional who must provide an estimate for any type of building project. Whether working up a preliminary estimate or submitting a formal bid, the costs listed here can be quickly and easily tailored to your needs. All costs are based on prevailing labor rates. Overhead and profit should be included in all costs. Man-hours are also provided.

All data is categorized according to the CSI division format. This industry standard provides an all-inclusive checklist to ensure that no element of a project is overlooked. In addition, to make specific items even easier to locate, there is a complete alphabetical index.

The "Features of this Book" section presents a clear overview of the many features of this book. Included is an explanation of the data, sample page layout and discussion of how to best use the information in the book.

Of course, all buildings and construction projects are unique. The information provided in this book is based on averages from well-managed projects with good labor productivity under normal working conditions (eight hours a day). Other circumstances affecting costs, such as overtime, unusual working conditions, savings from buying bulk quantities for large projects, and unusual or hidden costs, must be factored in as they arise.

The data provided in this book is for estimating purposes only. Check all applicable federal, state and local codes and regulations for local requirements.

All Data in the BNi Costbooks is categorized in MasterFormat®

The **MasterFormat®** is a standard for organizing specifications and other written information for commercial and institutional building projects in the U.S. and Canada. **MasterFormat®** is a product of the Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC). It provides a master list of Divisions, and Section numbers with associated titles within each Division, to organize information about a facility's construction requirements and associated activities.

MasterFormat® is used throughout the construction industry to format specifications for construction contract documents. The purpose of this format is to assist the user in organizing information into distinct groups when creating specifications and estimates, and to assist the user searching for specific information in consistent locations. The information contained in Master-Format is organized in a standardized outline format within 50 Divisions (16 Divisions pre-2004). Each Division is subdivided into a number of Sections.

The following pages (4, 5, and 6) outline the **Broadscope** and **Mediumscope** definitions and provide our users with a comprehensive checklist of items used in everyday estimates.

Costbook Format *(Continued)*

All data is categorized according to the **CSI MASTERFORMAT**. This industry standard provides an all-inclusive checklist to ensure that no element of a project is overlooked.

DIVISION 00 ...PROCUREMENT & CONTRACTING REQUIREMENTS

- 00 10 00 SOLICITATION
- 00 20 00 INSTRUCTIONS FOR PROCUREMENT
- 00 30 00 AVAILABLE INFORMATION
- 00 40 00 PROCUREMENT FORMS AND SUPPLEMENTS
- 00 50 00 CONTRACTING FORMS AND SUPPLEMENTS
- 00 60 00 PROJECT FORMS
- 00 70 00 CONDITIONS OF THE CONTRACT
- 00 80 00 Reserved
- 00 90 00 REVISIONS, CLARIFICATIONS, AND MODIFICATIONS

DIVISION 01 GENERAL REQUIREMENTS

- 01 10 00 SUMMARY
- 01 20 00 PRICE AND PAYMENT PROCEDURES
- 01 30 00 ADMINISTRATIVE REQUIREMENTS
- 01 40 00 QUALITY REQUIREMENTS
- 01 50 00 TEMPORARY FACILITIES AND CONTROLS
- 01 60 00 PRODUCT REQUIREMENTS
- 01 70 00 EXECUTION AND CLOSEOUT REQUIREMENTS
- 01 80 00 PERFORMANCE REQUIREMENTS
- 01 90 00 LIFE CYCLE ACTIVITIES

DIVISION 02 EXISTING CONDITIONS

- 02 30 00 SUBSURFACE INVESTIGATION
- 02 40 00 DEMOLITION AND STRUCTURE MOVING
- 02 50 00 SITE REMEDIATION
- 02 60 00 CONTAMINATED SITE MATERIAL REMOVAL
- 02 70 00 WATER REMEDIATION
- 02 80 00 FACILITY REMEDIATION

DIVISION 03 CONCRETE

- 03 10 00 CONCRETE FORMING AND ACCESSORIES
- 03 20 00 CONCRETE REINFORCING
- 03 30 00 CAST-IN-PLACE CONCRETE
- 03 40 00 PRECAST CONCRETE
- 03 50 00 CAST DECKS AND UNDERLAYMENT
- 03 60 00 GROUTING
- 03 70 00 MASS CONCRETE
- 03 80 00 CONCRETE CUTTING AND BORING

DIVISION 04 MASONRY

- 04 20 00 UNIT MASONRY
- 04 30 00 Reserved
- 04 40 00 STONE ASSEMBLIES
- 04 50 00 REFRACTORY MASONRY
- 04 60 00 CORROSION-RESISTANT MASONRY
- 04 70 00 MANUFACTURED MASONRY
- 04 80 00 Reserved
- 04 90 00 Reserved

DIVISION 05.....METALS

- 05 10 00 STRUCTURAL METAL FRAMING
- 05 12 00 STRUCTURAL STEEL FRAMING
- 05 20 00 METAL JOISTS
- 05 30 00 METAL DECKING
- 05 40 00 COLD-FORMED METAL FRAMING
- 05 50 00 METAL FABRICATIONS
- 05 60 00 Reserved
- 05 70 00 DECORATIVE METAL
- 05 80 00 Reserved
- 05 90 00 Reserved

DIVISION 06..... WOOD, PLASTICS, AND COMPOSITES

- 06 10 00 ROUGH CARPENTRY
- 06 30 00 Reserved
- 06 40 00 ARCHITECTURAL WOODWORK
- 06 50 00 STRUCTURAL PLASTICS
- 06 60 00 PLASTIC FABRICATIONS
- 06 70 00 STRUCTURAL COMPOSITES
- 06 80 00 COMPOSITE FABRICATIONS
- 06 90 00 Reserved

DIVISION 07.....THERMAL AND MOISTURE PROTECTION

- 07 10 00 DAMPPROOFING AND WATERPROOFING
- 07 30 00 STEEP SLOPE ROOFING
- 07 40 00 ROOFING AND SIDING PANELS
- 07 50 00 MEMBRANE ROOFING
- 07 60 00 FLASHING AND SHEET METAL
- 07 70 00 ROOF AND WALL SPECIALTIES AND ACCESSORIES
- 07 80 00 FIRE AND SMOKE PROTECTION
- 07 90 00 JOINT PROTECTION

DIVISION 08..... OPENINGS

- 08 10 00 DOORS AND FRAMES
- 08 20 00 Reserved
- 08 30 00 SPECIALTY DOORS AND FRAMES
- 08 40 00 ENTRANCES, STOREFRONTS, AND CURTAIN WALLS
- 08 50 00 WINDOWS
- 08 60 00 ROOF WINDOWS AND SKYLIGHTS
- 08 70 00 HARDWARE
- 08 80 00 GLAZING
- 08 90 00 LOUVERS AND VENTS

DIVISION 09.....FINISHES

- 09 20 00 PLASTER AND GYPSUM BOARD
- 09 30 00 TILING
- 09 40 00 Reserved
- 09 50 00 CEILINGS
- 09 60 00 FLOORING
- 09 70 00 WALL FINISHES
- 09 80 00 ACOUSTIC TREATMENT
- 09 90 00 PAINTING AND COATING

Format (Continued)

DIVISION 10..... SPECIALTIES

- 10 20 00 INTERIOR SPECIALTIES
- 10 30 00 FIREPLACES AND STOVES
- 10 40 00 SAFETY SPECIALTIES
- 10 50 00 STORAGE SPECIALTIES
- 10 60 00 Reserved
- 10 70 00 EXTERIOR SPECIALTIES
- 10 80 00 OTHER SPECIALTIES

DIVISION 11..... EQUIPMENT

- 11 10 00 VEHICLE AND PEDESTRIAN EQUIPMENT
- 11 15 00 SECURITY, DETENTION AND BANKING EQUIPMENT
- 11 20 00 COMMERCIAL EQUIPMENT
- 11 30 00 RESIDENTIAL EQUIPMENT
- 11 40 00 FOODSERVICE EQUIPMENT
- 11 50 00 EDUCATIONAL AND SCIENTIFIC EQUIPMENT
- 11 60 00 ENTERTAINMENT EQUIPMENT
- 11 65 00 ATHLETIC AND RECREATIONAL EQUIPMENT
- 11 80 00 COLLECTION AND DISPOSAL EQUIPMENT
- 11 90 00 OTHER EQUIPMENT

DIVISION 12..... FURNISHINGS

- 12 10 00 ART
- 12 20 00 WINDOW TREATMENTS
- 12 30 00 CASEWORK
- 12 40 00 FURNISHINGS AND ACCESSORIES
- 12 50 00 FURNITURE
- 12 60 00 MULTIPLE SEATING
- 12 70 00 Reserved
- 12 80 00 Reserved
- 12 90 00 OTHER FURNISHINGS

DIVISION 13..... SPECIAL CONSTRUCTION

- 13 10 00 SPECIAL FACILITY COMPONENTS
- 13 20 00 SPECIAL PURPOSE ROOMS
- 13 30 00 SPECIAL STRUCTURES
- 13 40 00 INTEGRATED CONSTRUCTION
- 13 50 00 SPECIAL INSTRUMENTATION

DIVISION 14..... CONVEYING EQUIPMENT

- 14 10 00 DUMBWAITERS
- 14 30 00 ESCALATORS AND MOVING WALKS
- 14 40 00 LIFTS
- 14 70 00 TURNTABLES
- 14 80 00 SCAFFOLDING
- 14 90 00 OTHER CONVEYING EQUIPMENT

DIVISION 21..... FIRE SUPPRESSION

- 21 10 00 WATER-BASED FIRE-SUPPRESSION SYSTEMS
- 21 20 00 FIRE-EXTINGUISHING SYSTEMS
- 21 30 00 FIRE PUMPS
- 21 40 00 FIRE-SUPPRESSION WATER STORAGE
- 21 50 00 Reserved
- 21 60 00 Reserved
- 21 70 00 Reserved
- 21 80 00 Reserved
- 21 90 00 Reserved

DIVISION 22..... PLUMBING

- 22 10 00 PLUMBING PIPING AND PUMPS
- 22 30 00 PLUMBING EQUIPMENT
- 22 40 00 PLUMBING FIXTURES
- 22 50 00 POOL AND FOUNTAIN PLUMBING SYSTEMS
- 22 60 00 GAS AND VACUUM SYSTEMS FOR LABORATORY AND HEALTHCARE FACILITIES

DIVISION 23..... HEATING, VENTILATING, AND AIR-COND. (HVAC)

- 23 10 00 FACILITY FUEL SYSTEMS
- 23 20 00 HVAC PIPING AND PUMPS
- 23 30 00 HVAC AIR DISTRIBUTION
- 23 40 00 HVAC AIR CLEANING DEVICES
- 23 50 00 CENTRAL HEATING EQUIPMENT
- 23 60 00 CENTRAL COOLING EQUIPMENT
- 23 70 00 CENTRAL HVAC EQUIPMENT
- 23 80 00 DECENTRALIZED HVAC EQUIPMENT
- 23 90 00 Reserved

DIVISION 25..... INTEGRATED AUTOMATION

- 25 10 00 INTEGRATED AUTOMATION NETWORK EQUIPMENT
- 25 20 00 Reserved
- 25 30 00 INTEGRATED AUTOMATION INSTRUMENTATION AND TERMINAL DEVICES
- 25 40 00 Reserved
- 25 50 00 INTEGRATED AUTOMATION FACILITY CONTROLS
- 25 60 00 Reserved
- 25 70 00 Reserved
- 25 80 00 Reserved
- 25 90 00 INTEGRATED AUTOMATION CONTROL SEQUENCES

DIVISION 26..... ELECTRICAL

- 26 10 00 MEDIUM-VOLTAGE ELECTRICAL DISTRIBUTION
- 26 20 00 LOW-VOLTAGE ELECTRICAL TRANSMISSION
- 26 30 00 FACILITY ELEC. POWER GENERATING & STORING EQUIP
- 26 40 00 ELECTRICAL AND CATHODIC PROTECTION
- 26 50 00 LIGHTING
- 26 60 00 Reserved
- 26 70 00 Reserved
- 26 80 00 Reserved
- 26 90 00 Reserved

DIVISION 27..... COMMUNICATIONS

- 27 10 00 STRUCTURED CABLING
- 27 20 00 DATA COMMUNICATIONS
- 27 30 00 VOICE COMMUNICATIONS
- 27 40 00 AUDIO-VIDEO COMMUNICATIONS
- 27 50 00 DISTRIBUTED COMMUNICATIONS AND MONITORING SYSTEMS
- 27 60 00 Reserved
- 27 70 00 Reserved
- 27 80 00 Reserved
- 27 90 00 Reserved

DIVISION 28..... ELECTRONIC SAFETY AND SECURITY

- 28 10 00 ELEC. ACCESS CONTROL & INTRUSION DETECTION
- 28 20 00 ELECTRONIC SURVEILLANCE
- 28 30 00 ELECTRONIC DETECTION AND ALARM
- 28 40 00 ELECTRONIC MONITORING AND CONTROL
- 28 50 00 Reserved
- 28 60 00 Reserved
- 28 70 00 Reserved
- 28 80 00 Reserved
- 28 90 00 Reserved

DIVISION 31..... EARTHWORK

- 31 10 00 SITE CLEARING
- 31 20 00 EARTH MOVING
- 31 30 00 EARTHWORK METHODS
- 31 40 00 SHORING AND UNDERPINNING
- 31 50 00 EXCAVATION SUPPORT AND PROTECTION
- 31 60 00 SPECIAL FOUNDATIONS AND LOADBEARING ELEMENTS
- 31 70 00 TUNNELING AND MINING
- 31 80 00 Reserved
- 31 90 00 Reserved

Format (Continued)

DIVISION 32 EXTERIOR IMPROVEMENTS

- 32 10 00 BASES, BALLASTS, AND PAVING
- 32 20 00 Reserved
- 32 30 00 SITE IMPROVEMENTS
- 32 40 00 Reserved
- 32 50 00 Reserved
- 32 60 00 Reserved
- 32 70 00 WETLANDS
- 32 80 00 IRRIGATION
- 32 90 00 PLANTING

DIVISION 33 UTILITIES

- 33 10 00 WATER UTILITIES
- 33 20 00 WELLS
- 33 30 00 SANITARY SEWERAGE UTILITIES
- 33 40 00 STORM DRAINAGE UTILITIES
- 33 50 00 FUEL DISTRIBUTION UTILITIES
- 33 60 00 HYDRONIC AND STEAM ENERGY UTILITIES
- 33 70 00 ELECTRICAL UTILITIES
- 33 80 00 COMMUNICATIONS UTILITIES
- 33 90 00 Reserved

DIVISION 34 TRANSPORTATION

- 34 10 00 GUIDEWAYS/RAILWAYS
- 34 20 00 TRACTION POWER
- 34 30 00 Reserved
- 34 40 00 TRANSPORTATION SIGNALING AND CONTROL EQUIP
- 34 50 00 TRANSPORTATION FARE COLLECTION
- 34 60 00 Reserved
- 34 70 00 TRANSPORTATION CONSTRUCTION AND EQUIPMENT
- 34 80 00 BRIDGES
- 34 90 00 Reserved

DIVISION 35 WATERWAY AND MARINE CONSTRUCTION

- 35 10 00 WATERWAY AND MARINE SIGNALING AND CONTROL EQUIP
- 35 20 00 WATERWAY AND MARINE CONSTRUCTION AND EQUIP
- 35 30 00 COASTAL CONSTRUCTION
- 35 40 00 WATERWAY CONSTRUCTION AND EQUIPMENT
- 35 50 00 MARINE CONSTRUCTION AND EQUIPMENT
- 35 60 00 Reserved
- 35 70 00 DAM CONSTRUCTION AND EQUIPMENT
- 35 80 00 Reserved
- 35 90 00 Reserved

DIVISION 40 PROCESS INTEGRATION

- 40 10 00 GAS AND VAPOR PROCESS PIPING
- 40 20 00 LIQUIDS PROCESS PIPING
- 40 30 00 SOLID AND MIXED MATERIALS PIPING AND CHUTES
- 40 40 00 PROCESS PIPING AND EQUIPMENT PROTECTION
- 40 50 00 Reserved
- 40 60 00 Reserved
- 40 70 00 Reserved
- 40 80 00 COMMISSIONING OF PROCESS SYSTEMS
- 40 90 00 INSTRUMENTATION & CONTROL FOR PROC. SYSTEMS

DIVISION 41 ...MATERIAL PROCESSING & HANDLING EQUIPMENT

- 41 10 00 BULK MATERIAL PROCESSING EQUIPMENT
- 41 20 00 PIECE MATERIAL HANDLING EQUIPMENT
- 41 30 00 MANUFACTURING EQUIPMENT
- 41 40 00 CONTAINER PROCESSING AND PACKAGING
- 41 50 00 MATERIAL STORAGE
- 41 60 00 MOBILE PLANT EQUIPMENT
- 41 70 00 Reserved
- 41 80 00 Reserved
- 41 90 00 Reserved

DIVISION 42..... PROCESS HEATING, COOLING, & DRYING EQUIP.

- 42 10 00 PROCESS HEATING EQUIPMENT
- 42 20 00 PROCESS COOLING EQUIPMENT
- 42 30 00 PROCESS DRYING EQUIPMENT
- 42 40 00 Reserved
- 42 50 00 Reserved
- 42 60 00 Reserved
- 42 70 00 Reserved
- 42 80 00 Reserved
- 42 90 00 Reserved

DIVISION 43..... PROCESS GAS & LIQUID HDLG, PURIFICATION, & STORAGE EQUIPMENT

- 43 10 00 GAS HANDLING EQUIPMENT
- 43 20 00 LIQUID HANDLING EQUIPMENT
- 43 30 00 GAS AND LIQUID PURIFICATION EQUIPMENT
- 43 40 00 GAS AND LIQUID STORAGE
- 43 50 00 Reserved
- 43 60 00 Reserved
- 43 70 00 Reserved
- 43 80 00 Reserved
- 43 90 00 Reserved

DIVISION 44..... POLLUTION CONTROL EQUIPMENT

- 44 10 00 AIR POLLUTION CONTROL
- 44 20 00 NOISE POLLUTION CONTROL
- 44 40 00 WATER TREATMENT EQUIPMENT
- 44 50 00 SOLID WASTE CONTROL
- 44 60 00 Reserved
- 44 70 00 Reserved
- 44 80 00 Reserved
- 44 90 00 Reserved

DIVISION 45. INDUSTRY-SPECIFIC MANUFACTURING EQUIPMENT

- 45 60 00 Reserved
- 45 70 00 Reserved
- 45 80 00 Reserved
- 45 90 00 Reserved

DIVISION 48..... ELECTRICAL POWER GENERATION

- 48 10 00 ELECTRICAL POWER GENERATION EQUIPMENT
- 48 20 00 Reserved
- 48 30 00 Reserved
- 48 40 00 Reserved
- 48 50 00 Reserved
- 48 60 00 Reserved
- 48 70 00 ELECTRICAL POWER GENERATION TESTING
- 48 80 00 Reserved
- 48 90 00 Reserved

Features of BNi Costbooks

We have included sample pages with graphic explanations. These explanations, along with the discussions below, will provide a good understanding of what is included in our BNi Costbooks and how they can best be used in construction estimating.

Material Costs: The material costs used in our Costbooks represent national averages for prices that a contractor would expect to pay plus an allowance for freight (if applicable) and handling and storage. These costs reflect neither the lowest or highest prices, but rather a typical average cost over time. Periodic fluctuations in availability and in certain commodities can significantly affect local material pricing. In the final estimating and bidding stages of a project when the highest degree of accuracy is required, it is best to check local, current prices.

Labor Costs: Labor costs include the basic wage, plus commonly applicable taxes, insurance and markups for overhead and profit. The labor rates used here to develop the costs are typical average prevailing wage rates. Rates for different trades are used where appropriate for each type of work.

Fixed government rates and average allowances for taxes and insurance are included in the labor costs. These include employer-paid Social Security/Medicare taxes (FICA), Worker's Compensation insurance, state and federal unemployment taxes, and business insurance.

Please note, however, most of these items vary significantly from state to state and within states. For more specific data, local agencies and sources should be consulted.

Man-Hours: These productivities represent typical installation labor for thousands of construction items. The data takes into account all activities involved in normal construction under commonly experienced working conditions such as site movement, material handling, start-up, etc.

Equipment Costs: Costs for various types and pieces of equipment are included in Division 1 - General Requirements and can be included in an estimate when required either as a total "Equipment" category or with specific appropriate trades. Costs for equipment are included when appropriate in the installation costs in the Costbook pages.

Features of BNi Costbooks *(Continued)*

Overhead and Profit: Included in the labor costs are allowances for overhead and profit for the contractor/employer whose workers are performing the specific tasks. No cost allowances or fees are included for management of subcontractors by the general contractor or construction manager. These costs, where appropriate, must be added to the costs as listed in the book.

The allowance for overhead is included to account for office overhead, the contractors' typical costs of doing business. These costs normally include in-house office staff salaries and benefits, office rent and operating expenses, professional fees, vehicle costs and other operating costs which are not directly applicable to specific jobs. It should be noted for this book that office overhead as included should be distinguished from project overhead, the General Requirements (Division 1) which are specific to particular projects. Project overhead should be included on an item by item basis for each job.

Depending on the trade, an allowance of 10-15 percent is incorporated into the labor/installation costs to account for typical profit of the installing contractor. See Division 1, General Requirements, for a more detailed review of typical profit allowances.

Adjustments to Costs: The costs as presented in this book attempt to represent national averages. Costs, however, vary among regions, states and even between adjacent localities.

In order to more closely approximate the probable costs for specific locations throughout the U.S., a table of Geographic Multipliers is provided. These adjustment factors are used to modify costs obtained from our Costbooks to help account for regional variations of construction costs. Whenever local current costs are known, whether material or equipment prices or labor rates, they should be used if more accuracy is required.

Editor's Note: Our BNi Costbooks are intended to provide accurate, reliable, average costs and typical productivities for thousands of common construction components. The data is developed and compiled from various industry sources, including government, manufacturers, suppliers and working professionals. The intent of the information is to provide assistance and guidelines to construction professionals in estimating. The user should be aware that local conditions, material and labor availability and cost variations, economic considerations, weather, local codes and regulations, etc., all affect the actual cost of construction. These and other such factors must be considered and incorporated into any and all construction estimates.

PLACING CONCRETE

ID Code	Description Component Descriptions	Output		Unit Costs			
		Unit of Meas.	Manhr / Unit	Material	Labor	Equipment	Total Cost
03 - 31001	BEAM CONCRETE,						31001
2540	By hand buggy	CY	0.800				240
4000	5000# concrete						
4010	By crane	CY	0.960	190	74.00	50.00	310
4020	By pump	"	0.873	190	67.00	45.50	300
4040	By hand buggy	"	0.800	190	62.00		250
9460	Bond beam, 3000# concrete						
9470	By pump						
9480	8" high						
9500	4" wide	LF	0.019	1.39	1.48	1.00	3.87
9520	6" wide	"	0.022	2.09	1.68	1.13	4.91
9530	8" wide	"	0.024	2.81	1.85	1.25	5.91
9540	10" wide	"	0.027	3.49	2.06	1.38	6.94
9550	12" wide	"		4.21	2.31	1.56	8.09
9555	16" high						
9560	8" wide			5.60	2.31	1.56	9.48
9570	10" wide			6.97	2.65	1.78	11.50
9580	12" wide			8.36	3.09	2.08	13.50
9585	By crane						
9590	8" high						
9600	4" wide	LF	0.021	1.39	1.61	1.08	4.09
9620	6" wide	"	0.023	2.09	1.76	1.19	5.04
9640	8" wide	"	0.024	2.81	1.85	1.25	5.91
9650	10" wide	"	0.027	3.49	2.06	1.38	6.94
9660	12" wide	"	0.030	4.21	2.31	1.56	8.09
9665	16" high						
9670	8" wide	LF	0.030	5.60	2.31	1.56	9.48
9680	10" wide	"	0.032	6.97	2.47	1.66	11.00
9690	12" wide	"	0.037	8.36	2.85	1.92	13.25
03 - 31002	COLUMN CONCRETE						03 - 31002
0980	Column						
0990	2500# or 3000# concrete						
1000	By crane	CY	0.873	170	67.00	45.50	280
1010	By pump	"	0.800	170	62.00	41.75	270
1980	3500# or 4000# concrete						
2000	By crane	CY	0.873	180	67.00	45.50	290
2020	By pump	"	0.800	180	62.00	41.75	280
3980	5000# concrete						

**Broadscope Category
(First 2 Digits)**

**Mediumscope Category
(Next 5 Digits)**

PLACING CONCRETE

ID Code	Description	Output		Unit Costs			
		Unit of Meas.	Manhr / Unit	Material Cost	Labor Cost	Equipment Cost	Total Cost
03 - 31002 COLUMN CONCRETE. Cont'd... 03 - 31002							
4010	By crane	CY	0.873				300
4020	By pump	"	0.800				290
03 - 31003 ELEVATED SLAB CO 03							
0980	Elevated slab						
0990	2500# or 3000# concrete						
1000	By crane	CY	0.480				230
1010	By pump	"	0.369				220
1020	By hand buggy	"	0.800	170	62.00		230
1980	3500# or 4000# concrete						
2000	By crane	CY	0.480	180	37.00	25.00	240
2020	By pump	"	0.369	180	28.50	19.25	230
2040	By hand buggy	"	0.800	180	62.00		240
4000	5000# concrete						
4010	By crane	CY	0.480				250
4020	By pump	"	0.369				240
4040	By hand buggy	"	0.800				250
8980	Topping						
8990	2500# or 3000# concrete						
9010	By crane	CY	0.480	170	37.00	25.00	230
9020	By pump	"	0.369	170	28.50	19.25	220
9040	By hand buggy	"	0.800	170	62.00		230
9080	3500# or 4000# concrete						
9100	By crane	CY	0.480	180	37.00	25.00	240
9120	By pump	"	0.369	180	28.50	19.25	230
9140	By hand buggy	"	0.800	180	62.00		240
9180	5000# concrete						
9200	By crane	CY	0.480				
9210	By pump	"	0.369				
9220	By hand buggy	"	0.800				
03 - 31004 EQUIPMENT PAD CONCRETE							
0960	Equipment pad						
0980	2500# or 3000# concrete						
1000	By chute	CY	0.267				
1020	By pump	"	0.686				
1040	By crane	"	0.800				
1050	3500# or 4000# concrete						
1060	By chute	CY	0.267				

Detailed Descriptions

Complete descriptions of items may include information listed above a particular line. Review of the whole category is recommended for a complete description.

Unit of Measure

Each item (and cost) is defined in terms of the common estimating unit. All costs are listed in dollars per unit. In this case CY means Cubic Yard.

Man-Hours

These productivities represent typical installation labor for thousands of construction items. The data takes into account all activities involved in normal construction under commonly experienced working conditions such as site movement, material handling, start-up, etc.

PLACING CONCRETE

ID Code	Description Component Descriptions	Output		Unit Costs			
		Unit of Meas.	Manhr / Unit	Material Cost	Labor Cost	Equipment Cost	Total Cost
03 - 31004 EQUIPMENT PAD CONCRETE, Cont'd... 03 - 31004							
1080	By pump	CY	0.686	180	53.00	35.75	270
1100	By crane	"	0.800	180	62.00	41.75	280
1110	5000# concrete						
1120	By chute	CY	0.267	190	20.50		210
1140	By pump	"	0.686	190	53.00	35.75	280
1160	By crane	"	0.800	190	62.00	41.75	290

ID Code	Description Component Descriptions	Output		Unit Costs			
		Unit of Meas.	Manhr / Unit	Material Cost	Labor Cost	Equipment Cost	Total Cost
03 - 31005 FOOTING CONCRETE 03 - 31005							
0980	Material cost represents average contractor prices plus an allowance for freight, handling and storage.						
0980							
1000		CY	0.267	170	20.50		190
1010		"	0.600	170	46.25	31.25	250
1020		"	0.686	170	53.00	35.75	260
1980	3500# or 4000# concrete						
2000	By chute	CY	0.267	180	20.50		200
2020	By pump	"	0.600	180	46.25	31.25	260
2040	By crane	"	0.686	180	53.00	35.75	270
4000	5000# concrete						
4010	By chute	CY	0.267	190	20.50		210
4020	By pump	"	0.600	190	46.25	31.25	270
4030	By crane	"	0.686	190	53.00	35.75	280
4980	Spread footing						
5000	2500# or 3000# concrete						
5010	Under 5 c.y.						
5020		CY	0.267	170	20.50		190
5040		"	0.640	170	49.50	33.25	250
5060		"	0.738	170	57.00	38.50	270
6980	Labor cost represents U.S. prevailing wages plus applicable fringes.						
7000		CY	0.200	170	15.50		190
7020		"	0.565	170	43.75	29.50	240
7040	By crane	"	0.640	170	49.50	33.25	250
7060	3500# or 4000# concrete						
7070	Under 5 c.y.						
7080	By chute	CY	0.267	190	20.50		210
7100	By pump	"	0.640	190	49.50	33.25	270
7120	By crane	"	0.738	190	57.00	38.50	290
7130	Over 5 c.y.						
7140	By chute	CY	0.200	180	15.50		200

PLACING CONCRETE

ID Code	Description	Output		Unit Costs			
		Unit of Meas.	Manhr / Unit	Material Cost	Labor Cost	Equipment Cost	Total Cost

03 - 31005 FOOTING CONCRETE Cont'd... 03 - 31005

7160	By pump				43.75	29.50	250
7180	By crane				49.50	33.25	260
7200	5000# concrete						
7205	Under 5 c.y.						
7210	By chute				20.50		220
7220	By pump				49.50	33.25	280
7230	By crane				57.00	38.50	300
7235	Over 5 c.y.						
7240	By chute	CY	0.200	190	15.50		210
7250	By pump	"	0.565	190	43.75	29.50	260
7260	By crane	"	0.640	190	49.50	33.25	270

Equipment Cost
 This cost includes equipment costs only, the wages for the crew operating the equipment are included in the Labor column.

33.25
38.50

03 - 31006 GRADE BEAM CONCRETE 03 - 31006

0960	Grade beam						
0980	2500# or 3000# concrete						
1000	By chute	CY	0.267	170	20.50		190
1020	By crane	"	0.686	170	53.00	35.75	260
1040	By pump	"	0.686	170	46.25	31.25	250
1060	By hand buggy			170	62.00		230
1070	3500# or 4000# concrete						
1080	By chute			180	20.50		200
1100	By crane			180	53.00	35.75	270
1120	By pump			180	46.25	31.25	260
1140	By hand buggy			180	62.00		240
1150	5000# concrete						
1160	By chute			190	20.50		210
1180	By crane			190	53.00	35.75	280
1190	By pump			190	46.25	31.25	270
1200	By hand buggy	"	0.800	190	62.00		250

Total Cost
 The total cost is the sum of material and installation costs. This total represents typical contractors' costs including overhead and profit, but does not include markups for the general contractor or construction management fees.

200
270
260











03 - 31007 PILE CAP CONCRETE 03 - 31007

0970	Pile cap						
0980	2500# or 3000 concrete						
1000	By chute	CY	0.267	170	20.50		190
1005	By crane	"	0.800	170	62.00	41.75	270
1010	By pump	"	0.686	170	53.00	35.75	260
1020	By hand buggy	"	0.800	170	62.00		230
1980	3500# or 4000# concrete						
2000	By chute	CY	0.267	180	20.50		200

Square Foot Tables

The Square Foot Tables list hundreds of actual projects for ten building types, each with associated building size, total square foot building cost and percentage of project costs for total mechanical and electrical components. This data provides an overview of construction costs by building type. These costs are for actual projects. The variations within similar building types may be due, among other factors, to size, location, quality and specified components, materials and processes. Depending upon all such factors, specific building costs can vary significantly and may not necessarily fall within the range of costs as presented. The data has been updated to reflect current construction costs.

BUILDING CATEGORIES

 Commercial	 Civic/Government	 Educational	 Hotel/Motel
 Industrial	 Medical	 Office	
 Recreational	 Religious	 Residential	

PROJECT	DESCRIPTION	CITY	STATE	SIZE	\$/SF	NOTES	
<i>Commercial</i>							
Bank	School Credit Union Administration Building	Katy	TX	30,700	\$291.60	New	
	FineMark National Bank & Trust	Fort Myers	FL	20,039	\$550.11	New	
	Florida Shores Bank	Pompano Beach	FL	11,697	\$700.15	New	
	Mobiloil Credit Union	Vidor	TX	9,252	\$491.02	New	
	Beaumont Community Credit Union	Beaumont	TX	3,267	\$556.66	New	
Office	Allendale Town Center	Allendale	NJ	80,226	\$51.39	Addition/Renovation	
	Roanoke Electric Cooperative	Ahoskie	NC	52,752	\$293.13	New	
	Regional Aviation & Training Center	Currituck	NC	39,930	\$371.85	New	
	Transportation/Warehouse Facility	Monroe	GA	32,400	\$258.13	New	
	Collection System Operations Facility	Walnut Creek	CA	27,179	\$509.95	New	
	ULTA - (Shell Only)	Pensacola	FL	10,850	\$131.94	Renovation	
	Daycare Center	Clawson	MI	4,270	\$208.93	Adaptive Reuse	
	Campgrounds Office & Retail	Cincinnati	OH	2,300	\$457.70	New	
	Parking	Palm Avenue Parking Garage	Sarasota	FL	287,040	\$78.20	New
		Reynolds Street Parking Deck	Augusta	GA	214,000	\$92.02	New
Retail	High School Parking Structure	Houston	TX	174,582	\$82.35	New	
	1. Super - Mixed-Use	2. Fargo	3. ND	143,860	\$138.39	New	
	Way/Steinmart Renovation	Pensacola	FL	88,299	\$48.61	Renovation	
	No Frills Supermarket	Omaha	NE	61,000	\$148.07	New	
	West Oaks Mall Redevelopment	Houston	TX	49,800	\$263.50	Renovation	
	World of Decor	2. Deerfield Beach	3. FL	47,500	\$201.11	New	
	Sarasota Yacht Club	Sarasota	FL	41,332	\$590.88	New	
	Karschs Village Market	Barnhart	MO	35,384	\$115.41	New	
	Fresh Thyme Farmer's Market	Fishers	IN	29,750	\$253.06	New	
	Nashville Hangar Inc.	Nashville	TN	29,750	\$265.34	New	
	Party Time Plus	Billings	MT	25,990	\$134.63	New	
	Marshalls - (Shell Only)	Pensacola	FL	25,990	\$64.41	Renovation	
	Ed Hicks Mercedes-Benz USA	Corpus Christi	TX	25,273	\$352.10	New	
	Montana Honda & Toyota			22,963	\$153.01	Addition	
	Fresh Market - (Shell Only)			21,000	\$110.73	Renovation	
	Theatre Exchange			19,344	\$178.60	Renovation	
	DSW Shoes Renovation			18,000	\$123.97	Renovation	
	Dormans Lighting & Electrical			15,220	\$168.06	Addition	
	The Groves Exterior			15,137	\$95.01	Renovation	
	Don Gibson Theatre			13,386	\$500.92	Renovation	
	Tri Ford Showroom			12,881	\$163.83	Addition/Renovation	
	Fiat of LeHigh Valley	Easton	PA	11,905	\$209.81	New	
	Sicardi Art Gallery	Houston	TX	6,175	\$330.03	New	
	Childrens Mercy Hospital Gift Shop	Kansas City	MO	5,010	\$415.95	Tenant Build-out	
	Restaurant	LaMar Cebicheria Peruana Restaurant	San Francisco	CA	11,000	\$425.27	Tenant Build-out
Ulele Restaurant		Tampa	FL	8,905	\$1,030.73	Adaptive Reuse	
Youells Oyster House		Allentown	PA	6,107	\$338.36	New	
Mellow Mushroom Highlands Shell		Louisville	KY	5,802	\$137.15	New	
Mellow Mushroom Highlands TBO		Louisville	KY	5,802	\$227.47	Tenant Build-out	
Mellow Mushroom Pizza		Wilder	KY	5,500	\$325.34	New	
Liberty Microbrewery		Plymouth	MI	3,425	\$234.07	Addition	
700 South Deli		Linthicum	MD	3,200	\$288.42	Tenant Build-out	
New York Pizza Department (NYPD)		Tempe	AZ	2,338	\$441.26	Tenant Build-out	
Airport Restaurant Build Out		Eglin Air Force Base	FL	2,320	\$379.87	Tenant Build-out	

- 1. Type of Building
- 2. Location of Structure
- 3. Square Footage of Project
- 4. Cost per Square Foot

Full details for any of these actual projects are available in the Simpl•Est Square Foot project database on www.dcd.com.

[Click here to start a 7-day free trial of Simpl•Est.](#)

Metro Area Multipliers

The costs as presented in our Costbooks attempt to represent national averages. Costs, however, vary among regions, states and even between adjacent localities.

In order to more closely approximate the probable costs for specific locations throughout the U.S., the Metro Area Multipliers table is provided in our Costbooks. These adjustment factors can be used to modify costs obtained from our Costbooks to help account for regional variations of construction costs and to provide a more accurate estimate for specific areas. The factors are formulated by comparing costs in a specific area to the costs presented in our Costbooks. An example of how to use these factors is shown below. Whenever local current costs are known, whether material prices or labor rates, they should be used when more accuracy is required.

Cost from Costbook Pages x Metro Area Multiplier = Adjusted Cost

For example, a project estimated to cost \$1,000,000 using the Costbook pages can be adjusted to more closely approximate the cost in Los Angeles:

$$\mathbf{\$1,000,000 \times 1.27 = \$1,270,000}$$

State	Metropolitan Area	Multiplier
OH	MANSFIELD	0.95
	MARION	0.95
	MASSILLON	0.94
	MIDDLETOWN	0.95
	OTHER	0.95
	PORTSMOUTH	0.95
	SPRINGFIELD	0.94
	STEUBENVILLE	0.94
	TOLEDO	0.97
	WARREN	0.94
OK	YOUNGSTOWN	0.94
	BARTLESVILLE	0.87
	ENID	0.85
	LAWTON	0.86
	MUSKOGEE	0.87
	NORMAN	0.87
	OKLAHOMA CITY	0.87
	OTHER	0.87
	PONCA CITY	0.87
	TULSA	0.87
OR	ASHLAND	1.00
	BEND	1.05
	CORVALLIS	1.05
	EUGENE	1.05
	MEDFORD	1.00
	OTHER	1.05
	PENDLETON	1.05
	PORTLAND	1.08
	SALEM	1.06
	SPRINGFIELD	1.05
PA	THE DALLES	1.05
	ALLENTOWN	1.00
	ALTOONA	0.97
	BETHLEHEM	1.02
	CARLISLE	0.97
	EASTON	1.02
	ERIE	0.97
	HARRISBURG	0.98
HAZLETON	0.99	
	JOHNSTOWN	0.97

State and City

This is the number that you use to adjust the book prices for you specific area. In this case, Tulsa would be 87 percent of the Costbook values.

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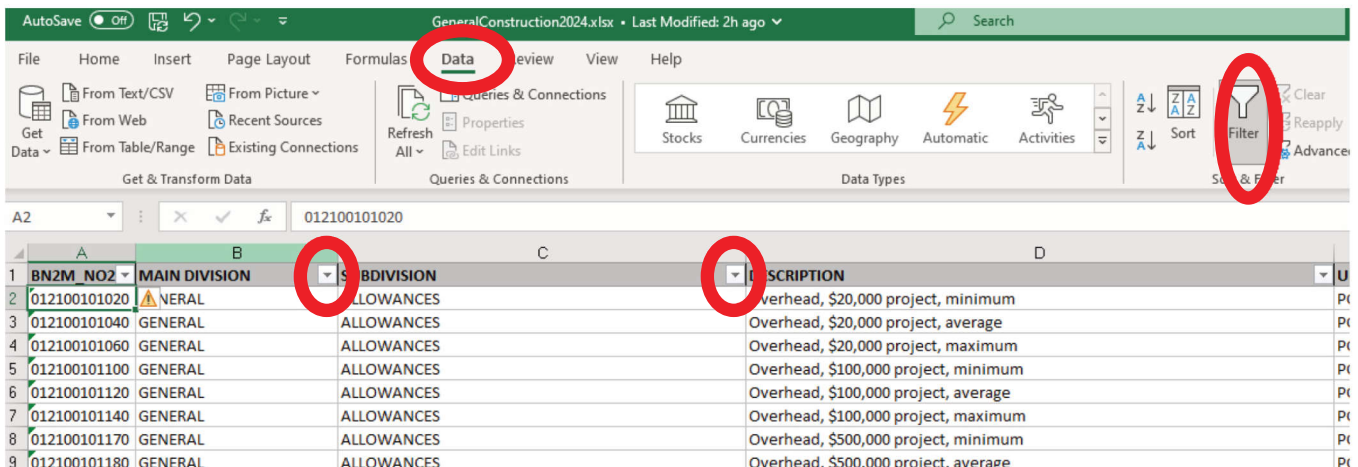
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Features of the Excel Database

The BNi pricing database is available as an Excel companion document. This database allows you to quickly locate the cost of any item within the Costbook you have purchased and effortlessly transfer the data into your customized estimating template or worksheet. We strongly suggest that you make a backup copy of this Excel file and keep it in a safe place. In order to follow the procedures in this document, we suggest that you use Microsoft Excel 2016 or later. To begin with, please note that the Excel file contains three, tabbed worksheets:

- **The first worksheet tab:** Format1 presents the data with the Primary CSI Division and the CSI Subdivisions in separate columns.
- **The second worksheet tab:** Format2 presents the data with the information grouped using running headers, which is very similar to the way the data is presented in the book.
- **The third worksheet tab:** This tab contains Regional Cost Multipliers. Since the costs in the database are based on national averages, you can use these multipliers to adjust the costs to over 600 metro areas throughout the country.

Using Format1, you can quickly find the data you want by selecting "Data" and then "Filter" from the main menu (see below). Doing this adds a drop-down arrow to the header of each column.

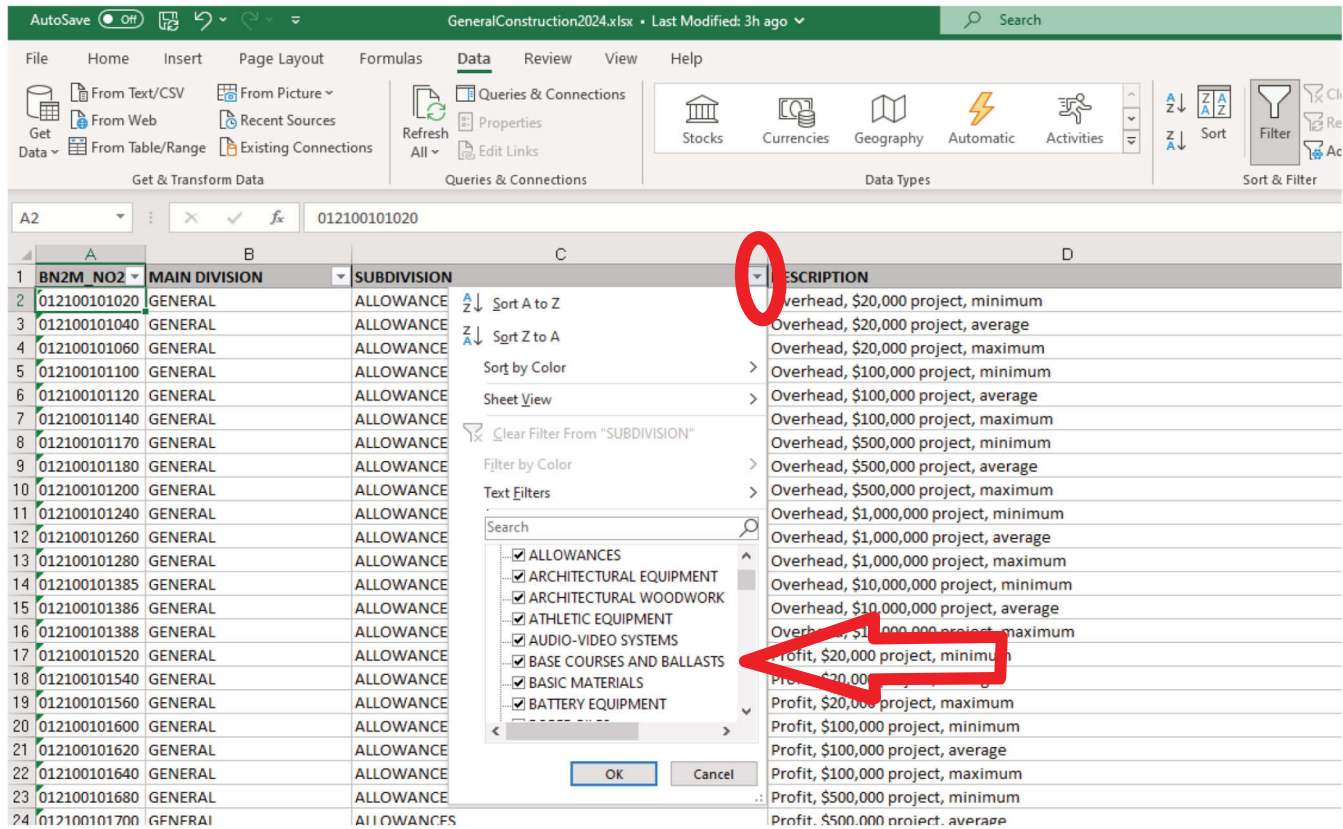


The screenshot shows the Microsoft Excel interface with the 'Data' tab selected in the ribbon. The 'Filter' button in the 'Sort & Filter' group is circled in red. Below the ribbon, a table is displayed with columns A through U. The 'MAIN DIVISION' and 'SUBDIVISION' columns have red circles around their respective drop-down arrows, indicating that filtering has been applied to these columns.

	A	B	C	D	E
1	BN2M_NO2	MAIN DIVISION	SUBDIVISION	DESCRIPTION	
2	012100101020	GENERAL	ALLOWANCES	Overhead, \$20,000 project, minimum	PC
3	012100101040	GENERAL	ALLOWANCES	Overhead, \$20,000 project, average	PC
4	012100101060	GENERAL	ALLOWANCES	Overhead, \$20,000 project, maximum	PC
5	012100101100	GENERAL	ALLOWANCES	Overhead, \$100,000 project, minimum	PC
6	012100101120	GENERAL	ALLOWANCES	Overhead, \$100,000 project, average	PC
7	012100101140	GENERAL	ALLOWANCES	Overhead, \$100,000 project, maximum	PC
8	012100101170	GENERAL	ALLOWANCES	Overhead, \$500,000 project, minimum	PC
9	012100101180	GENERAL	ALLOWANCES	Overhead, \$500,000 project, average	PC

Features of the Excel Database (Continued)

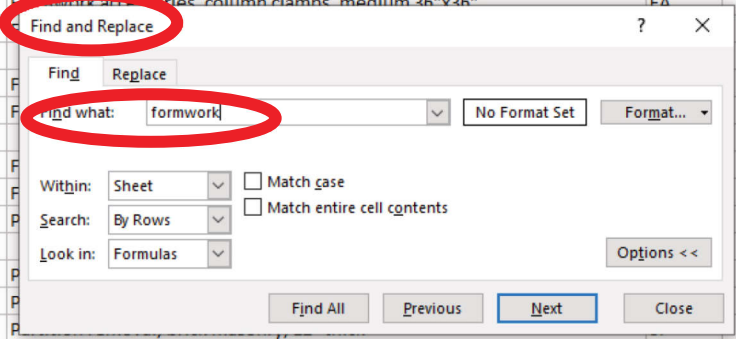
With the column header drop-down arrows, you can easily search by Main Division or Subdivision. In the example below, you can see a partial list of the selections that become available when selecting Subdivision:



Then, if you were to select “Formwork”, for example, you would get a listing of just the 234 cost items under “Formwork.”

The data in the Format2 worksheet tab allows for a more visual approach to finding the data you need, and it more closely follows the format used in the book.

1	BN2M_NO2	HEADING	FULL DESCRIPTION	UNIT
'83	030130107125	60 mil thick		
'84	030130107130	60" wide	Pile repairs, polyethelene wrap, 60 mil thk, 60" wide	SF
'85	030130107140	80" wide	Pile repairs, polyethelene wrap, 60 mil thk, 80" wide	SF
'86	030130108010	Pile spall, average repair 3'		
'87	030130108020	18" x 18"	Pile spall, average repair 3', 18" x 18"	EA
'88	030130108030	20" x 20"	Pile spall, average repair 3', 20" x 20"	EA
'89	031003000000	FORMWORK ACCESSORIES	FORMWORK ACCESSORIES	
'90	031003001000	Column clamps		
'91	031003001010	Small, adjustable, 24"x24"	Formwork accessories, column clamps small, adjustable, 24"x24"	EA
'92	031003001020	Medium 36"x36"	Formwork accessories, column clamps, medium 36"x36"	EA
'93	031003001030	Large 60"x60"		
'94	031003002000	Forming hangers		
'95	031003002010	Iron 14 ga.		
'96	031003002020	22 ga.		
'97	031003003000	Snap ties		
'98	031003003010	Short-end with washers, 6" long		
'99	031003003020	12" long		
'00	025119001160	12" thick		
'01	025119001200	Brick masonry partitions		
'02	025119001220	4" thick		
'03	025119001240	8" thick		
'04	025119001260	12" thick		



The best way to search this format is to bring up the "Find and Replace" dialog box (as shown above) by pressing CTRL + F. In the example above, we entered the term "Formwork" which brought us right to Formwork Accessories.

The third and final worksheet tab in the Excel file contains the Regional Cost Modifiers. These can be used to adjust your cost estimate up or down depending on your location. So, for example, if your estimated total cost for a project was \$10,000, and the project was in Lubbock, Texas, you could look up Lubbock, Texas in this worksheet and find the factor of 0.85. Multiplying \$10,000 by 0.85 would give you an adjusted total cost of \$8,500. Likewise, if your project were in Warwick, Rhode Island, you could search this worksheet to find that Warwick has an adjustment factor of 1.07. Multiplying \$10,000 by 1.07 would give you an adjusted total cost of \$10,700.

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