



Standard Classification for Building Construction Field Requirements, and Office Overhead & Profit¹

This standard is issued under the fixed designation E 2083; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This standard establishes a classification for field requirements, office overhead, and profit for use in construction estimating. This classification is common to all forms of construction, and its components are an integral part of any construction cost estimate. The classification serves as a consistent reference for analysis, evaluation, and monitoring during the feasibility, planning, design, and construction phases of building. Used in conjunction with UNIFORMAT II and other elemental classifications, it also ensures consistency in the economic evaluation of construction work overtime and from project to project. Through consistency in estimating and cost recording it enhances reporting at all stages in construction - from feasibility and planning through the preparation of working documents, construction, maintenance, rehabilitation, and disposal.

1.2 This classification applies to all construction work.

1.3 This classification is not based on permanent physical elements of construction (as defined and classified in E 1557 Standard Classification of Building Elements and Related Sitework - UNIFORMAT II). Rather, the classification items are major, non-permanent, cost components common to all construction work. They perform the same function and provide for similar needs regardless of the design, specification, construction method, or materials used in the physical construction.

2. Referenced Documents

2.1 *ASTM Standards:*

E 833 Terminology of Building Economics²

E 1557 Standard Classification for Building Elements and Related Sitework - UNIFORMAT II²

3. Terminology

3.1 *Definitions*— For definitions of terms used in this classification, refer to Terminology E 833.

¹ This specification is under the jurisdiction of ASTM Committee E06 on Building Constructions and is the direct responsibility of Subcommittee E06.81 on Building Economics.

Current edition approved April 10, 2000. Published August 2000.

² *Annual Book of ASTM Standards*, Vol 04.07.

4. Significance and Use

4.1 This classification defines an integral part of any construction estimate and cost record. It classifies the non-permanent portion of construction activity that is essential to allow physical implementation of the required work to take place.

4.2 Used in conjunction with UNIFORMAT II this classification provides for consistent and complete estimating of building construction work. The same considerations of consistent use and commonality to all work has been applied here.

4.3 This classification is sufficiently generic to allow its use in estimating all forms of construction work and through all stages of planning, design, use, and disposal. Additionally, it is appropriate for use in both elemental estimates and trade estimates.

5. Basis of Classification

5.1 All parts of the built environment are included.

5.2 *Criteria for the Classification*—The selected classification, what items to include in it, and in which parts of the classification to include them are based on the following criteria:

5.2.1 Applies to any construction type and shall not include physical elements of construction such as those defined in E 1557 and other elemental classifications.

5.2.2 Includes only items of a construction enabling, management, supervision, jurisdictional, financial, legal, liability and client requirement nature necessary to the performance of the construction work.

5.2.3 Includes specifically those items of cost that by common understanding and usage are normally borne by a general contractor or construction manager, and any other items required by terms of contract and normally specified within the general requirements and general conditions of contract.

5.2.4 Includes items with significant influence on cost and a high frequency of occurrence. Categories are defined so as to provide a framework for cost control. The decision as to where among the classification elements to include specific items is to ultimately rely on professional judgement as to where professionals in current practice normally look for such items.

6. Description of Field Requirements — Individual Classification

6.1 *Classification of Field Requirements*—Fig. 1 presents the classification of field requirements. It comprises three hierarchical levels. Major Group Classification for Level 1, Group Classification for Level 2, and Individual Classifications for Level 3.

6.2 The following lists show what items are included in the recommended classification at Level 3. Note that the listings of inclusions are not intended to be an exhaustive listing. Rather, they provide a general outline of what to expect in this individual element consistent with the selection criteria outlined in 5.2.

6.3 *Field Requirements* (X 10)

6.3.1 *Bonds, Permits, Fees, and Insurances* (X 10005)

Includes:

- 6.3.1.1 building permit,
- 6.3.1.2 fire district permit,
- 6.3.1.3 miscellaneous permits: street use, curb cuts, sidewalk use, parking meter use,
- 6.3.1.4 utility connections: water, storm sewer, sanitary sewer, electric, gas, fire protection, others,

6.3.1.5 bonds: bid bond, performance bond, payment bond, warranty bond, maintenance bond,

6.3.1.6 insurance: public liability, builders risk, all-risk, hold harmless.

Excludes:

6.3.1.7 Permanent work included elsewhere within the physical elements of construction.

6.3.2 *Field/Site Set-Up and Accommodation* (X 1010)

Includes:

6.3.2.1 Access to site: temporary roads, storage, lay down and parking areas, traffic control,

6.3.2.2 Site setup: move in and out, mobilization, set-up, construction signs,

6.3.2.3 Site accommodations

(a) temporary buildings: offices, storage sheds, first aid, lunch room,

(b) temporary labor camp: dormitories, kitchens, laundry, store, entertainment,

(c) temporary toilets,

(d) heating, ventilation and cooling,

(e) telephone, facsimile, and data: service and monthly charges,

Level 1 Major Group Classification		Level 2 Group Classification		Level 3 Individual Classification	
X	Field Requirements, and Overhead & Profit	X 10	Field Requirements	X 1005	Bonds, Permits, Fees and Insurances
				X 1010	Field/Site Set-Up and Accommodation
				X 1015	Management, Supervision and Field Engineering
				X 1020	Personnel Travel, and Lodging
				X 1025	Security
				X 1030	Construction Aids, Equipment and Tools
				X 1035	Temporary Construction
				X 1040	Climatic and Environmental Requirements
				X 1045	Quality Control, Inspection and Testing
				X 1050	Maintenance and Housekeeping
		X 1090	Other Contractual Requirements		
		X 20	Office Overhead & Profit	X 2010	Home Office Overhead
X 2020	Profit				

FIG. 1 Classification of Field Requirements, and Office Overhead & Profit, with Alpha-Numerical Designations

(f) communication system: service and monthly charges,
 (g) computer and copy equipment: purchase, rental, usage, and maintenance,

(h) stationery, copy/printing cost,
 (i) office and first aid supplies.

Excludes:

6.3.2.4 Protection, barricades, enclosures (See 6.3.5 *Security and Safety* (X 1025))

6.3.3 *Management, Supervision and Field Engineering* (X 1015)

Includes:

6.3.3.1 project manager,
 6.3.3.2 superintendents: site, general, field,
 6.3.3.3 engineers: site, project, field, office and safety,
 6.3.3.4 quantity surveyors,
 6.3.3.5 instrument and rodmen,
 6.3.3.6 office management: office manager, accountant, clerks, and timekeepers, expeditors and warehouse assistants,
 6.3.3.7 mechanical and electrical superintendents,
 6.3.3.8 security during construction: guards, watchmen, alarms and systems,
 6.3.3.9 general purpose labor.

Excludes:

6.3.3.10 Home office personnel (See *Home Office Overhead* (X 2010))

6.3.4 *Personnel Travel and Lodging* (X 2010)

Includes:

6.3.4.1 personnel transportation: air, ground, mileage, parking, and tips,
 6.3.4.2 lodging: hotel/motel, apartment,
 6.3.4.3 per diem and/or food, laundry, clothing costs,
 6.3.4.4 miscellaneous travel costs,
 6.3.4.5 health and welfare of personnel.

6.3.5 *Security and Safety* (X 1025)

Includes:

6.3.5.1 safety rails: perimeter, opening, stair,
 6.3.5.2 other miscellaneous safety devices and associated temporary construction,

6.3.5.3 protection

(a) enclosures: doors, windows, walls, roofs,
 (b) erosion control: fences, barriers, straw bales
 (c) separation: dust partitions,
 (d) barricades: building, site, street, walks,
 (e) enclosure: public walks,
 (f) fences: temporary fences and gates,
 (g) fire protection: extinguishers, fire hose cabinets.

6.3.6 *Construction Aids, Equipment and Tools* (X 1030)

Includes:

6.3.6.1 vehicles: pick up truck, van/wagon, others,
 6.3.6.2 cranes: including foundation, assembly and erection, electrical energy and service, tower extensions, boom moves, disassembly, demobilization, repairs and maintenance, and operator,

6.3.6.3 hoists, material: including foundation, assembly and erection, energy/fuel and service, hoist extensions, disassembly, demobilization, repairs and maintenance, and operator,

6.3.6.4 hoists, personnel: including foundation, assembly and erection, energy/fuel and service, hoist extensions, disassembly, demobilization, repairs and maintenance, and operator,

6.3.6.5 scaffolding, platforms, swing staging,

6.3.6.6 tools and equipment: including compressors/generators, pumps, saws, drills/hammers, miscellaneous tools, and equipment,

6.3.6.7 miscellaneous rough hardware: including bolts, screens, nails, fasteners.

6.3.7 *Temporary Construction* (X 1035)

Includes:

6.3.7.1 temporary construction: bridges, coffer dams, overpasses, runarounds, decking, traffic diversions,

6.3.7.2 temporary utilities

(a) water: service, distribution and usage charges,

(b) ice and drinking water: unit rental and service,

(c) sanitary sewers: temporary connections and lines,

(d) storm sewers: temporary connections and lines,

(e) dewatering site/excavation,

(f) electric (power and lighting): service and distribution, energy cost and maintenance,

(g) heating, ventilation and cooling

(h) units: service, rental, maintenance, energy cost,

(i) temporary use of permanent system: beneficial occupancy charge, energy cost, system restoration, filters, inspection.

Excludes:

6.3.7.3 Temporary construction of a major nature normally designed and/or specified within the construction contract documents.

6.3.8 *Climatic and Environmental Requirements* (X 1040)

Includes:

6.3.8.1 extreme climatic conditions: winter heat, summer cooling, premium for winter concrete and winter work, snow and ice clearing, tarpaulins, insulation mats, enclosures,

6.3.8.2 temporary controls: noise, dust, water, pest, rodent, debris, pollution.

6.3.9 *Quality Control, Inspection and Testing* (X 1045)

Includes:

6.3.9.1 personnel: quality control, inspection and tearing,
 6.3.9.2 collection and laboratory testing: soil, steel, welding, concrete, piling, roofing, and other materials,

6.3.9.3 sample mock ups.

6.3.10 *Maintenance and Housecleaning* (X 1050)

Includes:

6.3.10.1 site clean up: continual and final,

6.3.10.2 rubbish chutes: installation, use, and removal,

6.3.10.3 debris: collection and removal,

6.3.10.4 land fill charges,

6.3.10.5 building cleanup: continual and final, floor and glass,

6.3.10.6 protection: finished work and finished surfaces, material and equipment.

6.3.11 *Other Contractual Requirements* (X 1090)

Includes:

6.3.11.1 general contract conditions: plans, drawings, specifications, progress photography and reporting, shop drawings, product data and samples, “as built” drawings and specifications, signs, delay/contingency/risk analysis, wage upgrading, mobilize/demobilize, phasing/schedule analysis,

6.3.11.2 Obligations and restrictions imposed by employer

- (a) access, possession, and site use,
- (b) limitations on working space,
- (c) limitations on working hours,
- (d) use and disposal of materials found on site,
- (e) hoardings, fence screens, temporary roofs, temporary name boards and advertising rights,
- (f) the maintenance of existing live drainage, water, gas, and other mains or power services on or over the site,
- (g) undertaking and delivery of work in a specific order of sections and/or phases,
- (h) maintenance of specific temperature and humidity levels,
- (i) temporary accommodation and facilities for use by employer: including heat, light furniture, cleaning, and maintenance,
- (j) telephone, facsimile, and data service for use by employer: installation, rental, service, and maintenance,
- (k) ceremonies: ground breaking, opening,
- (l) other obligations or restrictions.

Excludes:

6.3.11.3 Base cost of such necessary work included elsewhere in *Field Requirements* (X10) and/or permanent physical elements.

7. Description of Office Overhead & Profit Individual Element

7.1 *Classification of Office Overhead and Profit*—Fig. 1 presents the classification of office overhead and profit. It comprises three hierarchical levels. Major Group Classification for Level 1, Group Classification for Level 2, and Individual Classifications for Level 3.

7.2 The following lists show what items are included in the recommended classification at Level 3. Note that the listings of inclusions are not intended to be an exhaustive listing. Rather, they provide a general outline of what to expect in this individual element consistent with the selection criteria outlined in 5.2.

7.3 *Office Overhead and Profit* (X 20)

7.3.1 *Home Office Overhead* (X 2010)

Includes:

7.3.1.1 that portion of the contractor’s home office costs (corporate overhead) allocated to the construction contract,

7.3.1.2 Corporate Overhead (Home Office Costs) includes for example:

- (a) office: rental, purchase, tax considerations,
- (b) insurances: liability insurance, errors and omissions (if design/build), vehicle insurance, workers compensation (if not included in hourly rates),
- (c) office staff (not assigned to a specific project): owner, secretary, buyer, scheduler, estimator,
- (d) utilities,
- (e) transportation: purchase/lease company cars and trucks, maintenance and repairs,
- (f) marketing: production, printing, distribution, brochures, newsletters,
- (g) office equipment/supplies: computers, printers, facsimile, office furniture, stationery,
- (h) communications: telephone communication lines, telephones, pagers, radio communication systems, data communication lines and networks, LANS, WANS, Internet, intranet, extranet,
- (i) financing, bank loans and other funding arrangements.

Excludes:

7.3.1.3 Field staff, field accommodations, and field costs specifically dedicated to the construction work (See *Field Requirements* (X10)).

7.3.2 *Profit* (X 2020)

Includes:

7.3.2.1 Any markup or profit included within a contractors bid for undertaking the specified work.

Excludes:

7.3.2.2 Subcontractors mark-up, or profit normally included within the permanent physical elements of construction.

8. Keywords

8.1 building economics; classification; construction element; construction estimating; construction field requirements; cost control; cost estimating; cost planning; elemental estimate; elemental format; general accounts; general conditions; general requirements; overhead; profit; trade estimate; UNIFORMAT II

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