Appendices

Annex I

(Permanent and operating charges according to DTR.BC2.2)

1- Permanent charges

A : POIDS VOLUMIQUES ET ANGLES DU TALUS NATUREL POUR DIVERS CORPS EN VRAC

	Poids volumiques (KN/m³)	Angles (deg. séxa-gésimaux)
Sable	17-19	30-35
Gravier	17	35
Terre sèche	18	40
Terre humide	21	20
Ballast concassé	18	40
Ballast roulé	19	30
Ballast pour voies de chemin de fer	18,5	–
Houille, anthracite sèche	8	35
Houille, anthracite humide	10	30
Briquettes en vrac	8	–
Briquettes empilées	13	–
Coke	6,5	35
Minette	20	45
Mâchefer	8	45
Cendres	8	35
Bois en bûches conifères sec	4,5	45
Bois en bûches conifères humide	6,5	45
Bois en bûches feuillus sec	7	45
Bois en bûches feuillus humide	10	45
Bois en copeaux en vrac	2	25
Bois en copeaux compact	3	45
Blé, orge, seigle	8	30
Avoine en vrac	5,5	30
Pommes de terre	7	30
Fruits	4,5	35
Raves	7	30
Malt	6	25
Farine en vrac	6	25
Farine en sacs	5	–
Sucre en sacs	16	–
Sucre en vrac	9,5	35
Sel en vrac	12	40
Sel en sacs	10	–
Foin et paille en vrac	1	–
Foin et paille bottelé	1,5	–
Herbe et trèfle	3,5	–
Fourrages ou feuilles (tassés et fermentés)	10	–
Fumier en tas	12	45
Fumier empilé	18	–
Papier empilé	11	–
Papier en rouleau	16	–
Classeurs, armoires, bibliothèques, compte tenu de vides	6	–

Annex I (continued)

B - POIDS VOLUMIQUES DE QUELQUES MATERIAUX DE CONSTRUCTION

KN/m³

Acier	78,5
Fonte	72,5
Aluminium	27
Matériaux cuivreux	89
Plomb	114
Bois de conifères séché à l'air	6
Bois de feuillus séché à l'air	8
Bois durs tropicaux	10
Grès	25
Calcaire compact, marbre, granit.	28
Calcaire de dureté moyenne	22
Calcaire tendre	18
Béton non armé	22
Béton armé	25
Béton de granulats légers (argile ou schiste expansé)	7,5-15,5
Maçonnerie (*) en moellons	23
Maçonnerie (*) en briques pleines	19
Maçonnerie (*) en briques perforées	13
Maçonnerie (*) en briques creuses	9
Maçonnerie (*) en blocs de béton :	
– blocs pleins en granulats lourds	21
– blocs creux en granulats lourds (parois épaisses)	13
Maçonnerie (*) en pierre de taille	27
Blocs de liège	4
Planches de plâtre	10
Asphalte coulé	18
Béton bitumineux	22
Verre	25

(*) Sans enduits.

Annex I (continued)

C - POIDS APPROXIMATIFS DES ELEMENTS CONSTITUTIFS D'UNE CONSTRUCTION

C. 1 - Maçonnerie

C. 1.1 - Terre cuite

NATURE DE LA PAROI	Pour une épaisseur réelle (cm)	Poids surfacique (KN/m²)
	ENDUIT NON COMPRIS	
A) Parois en briques pleines	5,5 10,5 21,5 33	1,05 2,00 4,05 6,30
B) Parois en briques creuses	5 10 15 20 25 30	0,45 0,90 1,30 1,75 2,15 2,60
C) Parois en briques perforées	5,5 10,5 21,5 33	0,70 1,40 2,95 4,50
D) Parois en blocs perforés	17,5 22,5 27,5	2,30 2,95 3,60

Annex I (continued)

C. 1.2 - Blocs en béton :

NATURE DE LA PAROI	Pour une épaisseur réelle (cm)	Poids surfacique (KN/m²)
	ENDUIT NON COMPRIS	
A) Parois en blocs pleins de béton de granulats lourds	5 10 15 20	1,05 2,10 3,15 4,20
B) Parois en blocs creux de béton de granulats lourds (blocs à parois épaisses)	5 10 15 20 25 30	0,65 1,35 2,00 2,70 3,25 3,85
C) Parois en blocs pleins de béton d'argile expansé ou de schiste expansé (masse volumique du béton : 750-1550 kg/m³).	5 10 15 20	0,45-0,80 0,90-1,60 1,35-2,40 1,80-3,20
D) Parois en blocs creux de béton d'argile expansé ou de schiste expansé (blocs à parois épaisses) (masse volumique du béton : 750-1550 kg/m³).	10 15 20 25	0,60-1,00 0,90-1,50 1,20-2,00 1,50-2,50
E) Parois en blocs pleins de béton de laitier expansé ou de pouzzolane (masse volumique du béton : 1450 kg/m³).	5 10 15 20	0,75 1,50 2,25 3,00
F) Parois en blocs creux de béton de laitier expansé ou de pouzzolane (blocs à parois épaisses (masse volumique du béton : 1450 kg/m³).	10 15 20 25	0,95 1,40 1,90 2,30
G) Parois en blocs pleins de béton cellulaire autoclavé (masse volumique nominale du béton : 600 kg/m³).	15 20 25 30	1,20 1,60 2,05 2,45

Annex I (continued)

C. 1.3 - Carreaux de plâtre :

Cloisons en carreaux de plâtre à parements lisses.....par cm: 0,1 KN/m²

C. 1.4 - Pierre de taille

NATURE DE LA PAROI	Pour une épaisseur réelle (cm)	Poids surfacique (KN/m²)
	ENDUIT NON COMPRIS	
A) Parois pleines	20 30	5,30 8,10
B) Revêtements autoportants	8	2,20
C) Revêtements attachés	3	0,80
D) Revêtements scellés (y compris le mortier)	-	0,40

C. 2 - ENDUITS

C. 2.1 - Enduit en plâtre ..... par cm: 0,10 KN/m²

C. 2.2 - Enduit au mortier de liants hydrauliques ..... par cm: 0,18 KN/m²

Annex I (continued)

C. 3 - PLANCHERS

NATURE DU PLANCHER	Pour une hauteur réelle totale (cm)	Poids surfacique (*) (KN/m²)
A) Dalles pleines en béton armé	par cm	0,25
B) Planchers nervurés à poutrelles préfabriquées ou nervures coulées sur place, avec entrevous (corps creux) en béton. Entraxe 60 cm.		
– Montages avec table de compression	12 + 4	2,50 - 2,60
	16 + 4	2,75 - 2,85
	20 + 4	3,10 - 3,30
	25 + 5	3,60 - 4,00
– Montages sans table de compression	16	2,20 - 2,30
	20	2,60 - 2,80
	24	2,90 - 3,10
C) Dito avec entrevous en terre cuite		
– Montages avec table de compression	12 + 4	2,20 - 2,30
	16 + 4	2,50 - 2,60
	20 + 4	2,80 - 3,00
	25 + 5	3,20 - 3,60
– Montages sans table de compression	16	1,90 - 2,00
	20	2,20 - 2,40
	24	2,50 - 2,70
D) Dito avec entrevous très légers (exemple Polystyrène) ou sans entrevous		
– Montages avec table de compression	12 + 5	1,50 - 1,70
	16 + 5	1,70 - 2,00
	20 + 5	1,80 - 2,10
	25 + 5	2,40 - 2,80
E) Planchers préfabriqués à éléments jointifs de dalles alvéolées, à alvéoles de petites dimensions		
	12	2,00 - 2,50
	16	2,40 - 2,90
	20	2,80 - 3,30
	24	3,20 - 3,70

C. 4 - REVETEMENTS DE PLANCHER

	Poids surfacique
A - Chape en mortier de ciment ..... par cm:	0,20 KN/m²
B - Dalle flottante en béton, y compris sous-couche élastique, par cm	0,22 KN/m²
C - Carrelages scellés, y compris la couche de mortier de pose de 2 cm	
– Grès cérame mince (4,5 mm) format 5x5 et 2x2	0,50 KN/m²
– Grès cérame (9,0 mm) format 10x10	0,60 KN/m²
– Dallage céramique ou pierre dure de 15 à 30 mm	0,70 - 1,00 KN/m²
D - Carrelages ou dallages collés ..... par cm:	0,20 KN/m²
E - Parquets de 23 mm y compris lambourdes	0,25 KN/m²
F - Sols minces textiles ou plastiques (collés ou tendus) et parquets mosaiques y compris ragréage du support	0,08 KN/m²
G - Chappe flottante en asphalte 2 à 2,5 cm, y compris couche élastique, revêtement de sol non compris	0,50 KN/m².

Annex I (continued)

C. 5 - TOITURES

NATURE DE L'ELEMENT	Poids surfacique réel (KN/m²)
A) Support de la couverture	
– lattis (ou litaux) sapin	0,03
– voligeage sapin	0,10
– support céramique	0,45
B) Couvertures métalliques	
– en zinc (voligeage et tasseaux compris)	0,25
– en alu 8/10 (plaques ondulées sans support)	0,03
– en alu 8/10 (voligeage et tasseaux compris)	0,17
– en acier inox (voligeage et tasseaux compris)	0,25
– en tôle ondulée d'acier galvanisé 8/10	0,06
C) Couvertures en ardoises	
– ardoises naturelles ordinaires (lattis et voligeage compris)	0,28
– ardoises modèle en amiante ciment (lattis et voligeage compris)	0,30
D) Couverture en tuiles	
– tuiles mécaniques à emboitement (liteaux compris)	0,35-0,45
– tuiles plates (liteaux compris)	0,55-0,75
– tuiles canal (voliges comprises)	0,40-0,60
– tuiles béton (supports compris)	0,45
E) Couvertures en éléments auto-portants non métalliques	
– plaques ondulées d'amiante -ciment	0,17
– plaques profilées d'amiante-ciment sur support de tuiles canal (y compris les tuiles)	0,40
F) Sous-toitures	
– Contreplaqués okoumé, par cm d'épaisseur	0,05
– panneaux de lin, par cm d'épaisseur	0,04
– plaques de plâtre (genre Piacoplâtre ou Pregypan), par cm d'épaisseur	0,09
– panneaux de paille compressée, par cm d'épaisseur	0,03
– plaques planes d'amiante ciment en 6 cm d'épaisseur	0,11
G) Terrasses	
– asphalte coulé en 0,5 cm, épaisseur plus 1,5 cm d'asphalte coulé sablé	0,50
– étanchéité multicouche en ciment volcanique, enduit plastique ou feutre bitumé, épaisseur 2cm	0,12
– gravillon pour protection de l'étanchéité par cm d'épaisseur	0,20
– protection de l'étanchéité réalisée par une couche d'asphalte gravillonné de 2 cm sur deux feuilles papier kraft	0,50

Annex I (continued)

2- Operating expenses

1 - Liste en fonction de la nature des locaux :

	Nature du local	Valeur KN/m²	Indications complémentaires
1	Hébergement en chambres, salles de jeux et repos des crèches	1,5	RH.MH
2	Hébergement collectif (dortoirs)	2,5	RH.MH
3	Salles de restaurants, cafés, cantines de dimensions réduites (nombre de places assises $\leqslant 100$)	2,5	RH.MH
4	Bureaux proprement dits	2,5	RH.MH
5	Salles de réunion avec tables de travail	2,5	RH.MH
6	Halles divers (gares, etc) où le public se déplace	4,0	RH
7	Salles d'exposition : de moins de 50 m² de 50 m² ou plus	2,5 3,5	RH RH
8	Salles de réunion et lieux du Culte avec assistance debout (12)	5,0	–
9	Salles et tribunes des lieux de spectacles et de sport avec places debout (12)	6,0	–
10	Salles de théâtre, salles de conférences, amphithéâtres, tribunes et autres lieux, avec siéges – gradins non compris – (sans tables ou pupitres)(12)	4,0	–
11	Cuisines des collectivités non compris les charges du gros matériel prises en compte indépendamment (13)	2,5	–
12	Salles de lecture des bibliothéques	4,0	MH.RH
13	Salles de danse (14)	5,0	–
14	Boutiques et annexes	5,0	MH et RH
15	Garages et parcs de stationnement de voitures légères, à l'exclusion des ateliers d'entretien et de réparation	2,5	
16	Circulations intérieures des bâtiments. La valeur ne sera pas inférieure à celle des locaux desservis. Elle doit être accrue jusqu'à 5 KN/m² lorsqu'une accumulation statique de personnes y est normalement prévisible (15)	–	–
17	Balcons. La charge au m² sur les balcons ne sera pas inférieure à : Elle doit être accrue jusqu'à : lorsqu'une accumulation de personnes est possible (cas de bâtiments recevant du public et précisée dans le D.P.M.).	3,5 6,0	– –
18	Loggias. Prendre comme charge celle des locaux contigus		

Annex I (continued)

2 - Liste par type d'utilisation :

2.1 - Bâtiments à usage d'habitation :

Nature du local	Valeur KN/m²	Indications complémentaires
Logements y compris combles aménageables	1,5	RH
Balcons	3,5	–
Escaliers à l'exclusion des marches isolées, halls d'entrée	2,5	–
Combles non aménageables dont l'utilisation n'est pas prévue à priori, non accessibles normalement – avec plancher (16) – sans plancher : partie accessible pour l'entretien 1 KN concentré en un point quelconque des éléments de structure ou de supports de plafond sur lesquels l'on peut se déplacer	1,0	–
Greniers proprement dits	2,5	–
Etages des caves	2,5	–

2.2 - Bâtiments de bureaux :

Nature du local	Valeur KN/m²	Indications complémentaires
Bureaux proprement dits	2,5	RH.MH
Bureaux paysagers	3,5	RH.MH
Circulations et escaliers	2,5	–
Halls de réception	2,5	–
Halls à guichet	4,0	Réduction pour grandes surfaces voir:7.1.6
Salles de projection et de conférence à nombre de places limité ($\leq$ 50 m²)	3,5	
Cantines	2,5 à 3,5	Selon les dimensions et nombre de places assises
Salles de réunions avec tables	2,5	–
Zône de dépôts	3,5	–
Salles d'ordinateurs et de reprographie	2,5	Equipement lourd

Annex I (continued)

2.3 - **Bâtiments scolaires et universitaires :**

Nature du local	Valeur KN/m²	Indications complémentaires
Salles de classe	2,5	–
Amphithéâtres (17)	3,5	–
Ateliers, laboratoires le matériel lourd étant à prendre en sus	2,5	–
Circulations, escaliers	4,0	–
Salles de réunion (y compris les salles de classe susceptibles de jouer ce rôle qui devront être fixés par les D.P.M)	4,0	–
Bibliothèques	4,0	–
Surfaces de regroupement d'abri, de détente, et de jeu, salles polyvalentes	4,0	–
Dortoir collectif	2,5	RH.MH
Hébergement individuel	1,5	RH.MH
Dépôts, lingerie	3,5	(voir 7.1 et commentaire 13)
Cuisines collectives	5,0	
Dépôts des cuisines collectives	6,0	–
Salles à manger de petites dimensions	2,5	–
Cantines (17)	3,5	–
Sanitaires collectifs	2,5	–

Annex I (continued)

2.4 - Bâtiments hospitaliers et dispensaires

Nature du local	Valeur KN/m²	Indications complémentaires
1 Locaux hébergement		
– Chambres	1,5	RH.MH
– Circulations internes	2,5	
2 Locaux médicotechniques		
– Salles d'opérations, salles de plâtres salles de travail (Obstétrique) –	3,5	
– Pour les autres services la charge peut être prévue d'une façon générale égale à :	2,5	
– En outre, dans les locaux de radiographie, les salles d'opérations et de plâtres, il y a lieu de prévoir des charges pour équipements suspendus en plafond (19)		Eventuellement équipement lourd ou surcharge de piscine en hydrothérapie (18)
3 Autres locaux		
– Halls	4,0	RH.MH
– Circulations générales	4,0	–
– Bureaux	2,5	RH.MH
– Postes de personnel et de soins	2,5	–
– Salles de cours	2,5	–
– Salles de réunions, de conférences et de restauration générale :		
– local utilisable en tant que local de réception, de surface en principe supérieure à 100 m²	4,0	–
– local de surface inférieure à 50 m²	2,5	–
– Sanitaires	1,5	–
– Cuisines	5,0	(voir commentaire 7.1.10)
– Buanderies	3,5	Equipement lourd
Locaux de réserves, dépôts ou stockage	3,5 à 6	–

Annex II

Wind zones in Algeria (RNV-2013)

CODE	WILAYA	Zone de vent
01	**ADRAR** Commune de TIMIAOUINE	I
	Commune de BORDJ BADJI MOKHTAR	II
	Toutes les autres communes	III
02	**CHLEF**	II
03	**LAGHOUAT**	III
04	**OUM EL BOUAGHI**	II
05	**BATNA**	II
06	**BEJAIA**	I
07	**BISKRA**	III
08	**BECHAR** Toutes les communes à l'exception de la commune de TEBALBALA	III
	Commune de TABELBALA	II
09	**BLIDA**	I
10	**BOUIRA**	II
11	**TAMANGHASSET** Commune de : FOUGGARAT EZ ZOUAIA	IV
	Commune de: IN SALAH, IN GHAR,	III
	Commune de : IDLES, IN AMGAL	II
	Toutes les autres communes	I
12	**TEBESSA**	II
13	**TLEMCEN**	II
14	**TIARET**	III
15	**TIZI OUZOU**	I
16	**ALGER**	I
17	**DJELFA**	III
18	**JIJEL**	I
19	**SETIF**	II
20	**SAIDA**	III
20	**SAIDA**	III
21	**SKIKDA**	II
22	**SIDI BEL ABBES**	II
23	**ANNABA**	III
24	**GUELMA**	II

Annex I I (continued)

Wind zones in Algeria (RNV-2013)

25	**CONSTANTINE**	**I**
26	**MEDEA**	**II**
27	**MOSTAGANEM**	**II**
28	**M'SILA**	**III**
29	**MASCARA**	**III**
30	**OUARGLA :** Commune de : HASSI MESSAOUD	**IV**
	Toutes les autres communes	**III**
31	**ORAN**	**II**
32	**EL BAYADH**	**III**
33	**ILLIZI** Commune de Djanet	**I**
	Commune de : Illizi	**III**
	Commune de Bordj EL Houadj	**II**
	Toutes les autres communes	**IV**
34	**BORDJ BOU ARRERIDJ**	**II**
35	**BOUMERDES**	**I**
36	**EL TARF**	**III**
37	**TINDOUF** Communes de :TINDOUF, ELASSEL	**II**
	Toutes les autres communes	**III**
38	**TISSEMSILT**	**II**
39	**EL OUED**	**III**
40	**KHENCHELA**	**II**
41	**SOUK AHRAS**	**III**
42	**TIPAZA**	**I**
43	**MILA**	**I**
44	**AIN DEFLA**	**I**
45	**NAAMA**	**III**
46	**AIN TEMOUCHENT**	**II**
47	**GHARDAIA** Communes de : HASSIEL GARAA, GOLEA, HASSI LEFHAL	**IV**
	Toutes les autres communes	**III**
48	**RELIZANE**	**III**

Annex III

Regulatory Technical Documents in Algeria "DTR"

According to the National Center for Integrated Studies and Research in Buildings (CNERIB)

Documents Techniques Réglementaires (DTR- C)				
N°	Référence	Code	Désignations	Prix(DA)
1	DTR C 2.45		Règles de conception et de calcul des maçonneries, 2 ème édition	300
2	DTR C 2.4.6	D30316	Règles de conception et de calcul des structures en bois	400
3	DTR C 2.4.7	D30321	Règlement Neige et Vent " RNV 2013"	450
		D30322	Règlement Neige et Vent " RNV 2013" Exemples d'application	200
4	DTR C 3.1.1	D30309	Isolation acoustique des parois aux bruits aériens	250
5	DTR C 3.31		Ventilation naturelle : locaux à usage d'habitation	250
6	DTR C 3.4	D30106	Règles de calcul des apports calorifiques des bâtiments	300
7	DTR C 4.2	D30323	Conception et calcul des installations de gaz dans les locaux à usage d'habitation	400
8	VRD	D30315	Conception et mise en œuvre des travaux de VRD	350

Documents Techniques Réglementaires (DTR- E)				
N°	Référence	Code	Désignations	Prix(DA)
1	DTR E 2.4		Travaux de maçonnerie de petits éléments, 2ème édition	350
2	DTR E 4.2	D30100	Travaux d'étanchéité des joints dans les constructions préfabriquées en grands panneaux	200
3	DTR E 4.4	D30310	Travaux d'isolation thermique et d'étanchéité des toitures en tôles	300
4	DTR E 5.1		Travaux de menuiserie en bois	350
5	DTR E 5.2	D30104	Travaux de menuiserie métallique	200
6	DTR E 6.1	D30110	Travaux d'enduit pour bâtiment	250
7	DTR E 6.2.1	D30308	Travaux d'enduits intérieurs en plâtre	300
8	DTR E 6.2.3	D30311	Travaux d'exécution des plaques de parement en plâtre (ouvrage vertical)	300
9	DTR E 6.3	D30109	Règles de mise en œuvre des revêtements de sol	250
10	DTR E 6.6	D30317	Travaux de peinture pour bâtiment	400
11	DTR E 7.1	D30320	Travaux d'exécution de vitrerie et de miroiterie	300
12	DTR E 8.1	D30314	Travaux de plomberie sanitaire	500
13	DTR E 10.1	D30318	Travaux d'exécution des installations électriques des bâtiments à usage d'habitation	300

Guides de mise en œuvre				
N°	Référence	Code	Désignations	Prix(DA)
1		D30319	Guide de normalisation de la représentation graphique en matière	300
2		D30538	Guide de formulation, de mise en œuvre et de contrôle des bétons	200
3		D30539	Guide VRD : Assainissement	250
4		D30540	Guide VRD : Eclairage urbain réseau distribution du gaz	250
5		D30541	Guide VRD : Aménagement des voiries et aires de stationnement	350
6		D30542	Guide VRD : Aménagement des espaces verts et plantations	250
7		D30543	Guide VRD : Alimentation en eau potable	250
8		D30545	Guide de mise en œuvre des travaux d'amélioration urbaine	500

Annex I V

Some examples of Algerian construction standards (CTC center 2012)

Fundamental Standards

DESIGNATION	REF.	ANN
Real estate construction - Modular coordination - Module of base	**NA 784**	1990
Real estate construction - Modular coordination - Multi modules for coordination dimensions horizontal	**NA 785**	1990
Real estate construction - Modular coordination - Vocabulary	**NA 786**	1990
Construction real estate - Tolerances - Expression of Dimensional Accuracy - Principles and terminology	**NA 787**	2006
Building construction - Modular coordination - Principles and rules	**NA 789**	1992
General principles of reliability constructions	**NA 828**	1990
Technical drawings - Construction drawings - Assembly drawings of structures prefabricated	**NA 830**	2006
Drawings of building - Systems of designation - Buildings And parts of buildings	**NA 832**	2006
Building Drawings – Methods of projection	**NA 833**	1990
Construction drawings - Simplified representation of reinforcement concrete	**NA 834**	2005
Drawings of building And of genius civil - Facilities - Representation simplified devices sanitary	**NA 835**	1990
Drawings techniques - Drawings of construction - Representation of the dimensions, lines and grids modular	**NA 836**	1990
Methods of measurement for construction - Staking out and measuring - Planning And organization, procedures of measurement And criteria of acceptance	**NA 837**	1990
Basics of calculation of the constructions : Deformations of the buildings has the state usage limit	**NA 838**	1990
Operating costs in residential buildings and public	**NA 840**	1990
Technical product documentation - vocabulary-terms relating to technical drawings: generalities and types of drawings.	**NA 841**	2005
Basis of calculation of constructions - Permanent loads and operating costs due to the forces of gravity	**NA 2103**	2009
Tolerances for building - Fundamental principles for assessment and specification	**NA 2340**	1992
Tolerances for building - Statistical bases for the prediction of possibilities assembly between components, relevant of a normal distribution of dimensions	**NA 2341**	1992
Tolerances for building - Procedures for choosing the required dimension and planning the adjustment	**NA 2342**	1992
Construction real estate - Tolerances For THE building - Series of values to be used for the specification of tolerance	**NA 2344**	2008

Annex V

Some common terms in construction

WATER SUPPLY: Supply of water close to its place of consumption by means of pipes (gravity flow or under pressure). Entire installation.

ADJUDICATION: Operation putting into competition (according to precise legal provisions) a certain number of contractors or suppliers to seek the best price, and resulting in the designation of the "successful" contractor, subject to compliance with the clauses governing the consultation. See also "Call for tenders".

ADJUVANT: Product added to concrete during manufacture to modify certain characteristics (fluidity, plasticity, setting time, water repellency, etc.).

AGGLOMERE: Prefabricated construction element, based on cement or wood blocks, particle boards.

AGGREGATES: All the mineral elements used in the composition of concrete.

SILL: Part of wall or panel located under a window or bay window.

CALL FOR TENDERS: Consultation of contractors or suppliers, put in competition to find an attractive price, but not entailing the obligation to treat; therefore a more flexible formula than the award.

LEAN: Annex building with a single-slope roof leaning against a wall or another building.

CROSSBEAM: Part of the frame supporting the purlins.

REINFORCEMENT: Set of steel bars used in the construction of a reinforced concrete structure.

BASE: Surface on which a work rests.

ATTACHMENT: Written document (written attachment), or drawn (figurative attachment), dated and signed, recording either a state of affairs, or the execution of works or projects that could not be verified subsequently, or particularities likely to be the subject of subsequent disputes. The attachment is only a statement: it does not bind the parties as to the decision to be taken or a possible settlement.

CANOPY: Part of the roof extending beyond the alignment of the walls or posts.

AMENDMENT: Written document modifying the initial provisions of the contract.

FORMWORK: Formwork surface prepared in advance and capable of repeated use.

CLADDING: Set of elements providing enclosure or covering for the gables and long sides of a building (similar to vertical roofing).

SHINGLE: A board made of split wood or industrially manufactured from waterproof products (in English: shingle), used to cover roofs or to clad walls particularly exposed to rain.

BATARD: Refers to a mortar whose binder is a mixture of cement and lime, in proportion to the resistance and ease of implementation sought .

LEAF: Moving part of a door, window, shutter, etc. ...

CONCRETE: Construction material obtained by mixing sand, gravel and water with a hydraulic binder (usually cement) whose setting ensures the formation of a non-deformable block; the possibility of modifying the properties of concrete by varying the nature and proportions of its constituent elements allows for an extreme diversity of uses. See "Concrete plant".

BLOCKING: A layer of compacted stones that can be used as a base for a slab, a roadway, etc.

PRICE SCHEDULE: Document indicating unit prices applicable to specific works (which may include a whole range of works).

CONNECTION: Connection of a private installation to a public network (water, gas, electricity, sewer).

SPECIFICATIONS: Document defining the technical provisions to be respected in the execution of the work. It is established by trade.

SPECIAL TECHNICAL SPECIFICATIONS: Complementary to the previous one, it defines the options taken from the liberties left by the specifications. These charges are called "special", because they are specific to each of the markets of the operation.

GENERAL TERMS AND CONDITIONS: Document setting out the administrative provisions applicable to a general range of construction contracts.

SPECIAL CLAUSES SPECIAL NOTES: complementary to the previous one, it sets out certain clauses specifically applicable to contracts of the same trade.

SPECIAL CLAUSES BULLETIN: supplementing and possibly modifying the previous ones, it sets out the clauses specific to a given operation.

CONCRETE PLANT: All the machines used to produce concrete:
- construction site center,
-factory where you can get “ready-mix concrete”.

CHAINAGE: Tensioners or reinforcements ensuring, through their anchoring in the masonry, the cohesion and maintenance of the latter. By extension, reinforced concrete beam, incorporated into a wall to ensure its good holding and its connection with floors, etc.

CHAIR: Triangular assembly of boards bearing an alignment mark (materialized by a point) and used for the location of a building.

DOOR FRAME: Door or window frame.

SCREED: A thin, cement-rich coating covering a floor or slab. Incorporated screed: a screed that is applied to the slab before the concrete sets to ensure good uniformity throughout.

FRAME: Glass frame, which can possibly be opened (a single leaf).

GUTTER: Channel located at the bottom of the roof slope and used to collect rainwater and direct it towards the downpipes. Unlike the gutter, the gutter is not necessarily on the bank (encased gutter). See "Gutter".

CLOSER: Roofing accessory designed to close off, by fitting it, the profile of the trays or corrugated sheets used for the roofing (or cladding) of buildings (the closures prevent air from circulating between the purlin and the roofing).

FORMWORK: Set of materials used to hold freshly poured concrete and to mold it into the final shape you want it to have afterwards.

COMPACTION: Packing down of an embankment or natural soil, in one or more operations, to firm it up (increase in the volume of solid elements compared to the total apparent volume).

PLYWOOD: A wooden panel made by gluing (phenolic) several thin sheets with alternating perpendicular threads. The same sheet of plywood can be made with different species and sheets of different thicknesses. Brands and quality labels must be printed on the panels.

WIND BRACING: Device ensuring the stability of a frame, a building, etc. against the deforming action of horizontal thrusts.

GROUT: Very fluid preparation based on cement or plaster and intended to penetrate into cracks or joints (of tiles, for example).

SECTION: Projection of a building onto a continuous or broken vertical secant plane, the location of which is chosen to best show the elements that one wishes to make appear.

COVERING: Any device waterproof to atmospheric precipitation, covering the upper part of buildings, structures (this is the external part of the roof).

JOINT COVER: Plate or connecting element joining the ends of two elements; strip fixed on a joint to be hidden.

SKETCH: Generally speaking, a drawing done freehand.

SLAB: A plate of resistant material (stone, concrete, etc.) for flooring or floor covering.

DOLPHIN: Lower, curved end of a rainwater downspout.

parallelepiped block used as a wedging or distribution element under a post.

EXCAVATION: Refers to an excavation above ground as opposed to an excavation (below ground).

STRIPPING : Superficial excavation to remove a layer of earth (0.20m). Complete cleaning of a surface to be treated (steel, etc.) before applying the protective coating.

QUOTE : Written document relating specifically to a project.

DESCRIPTIVE QUOTE: Document or set of documents giving the specification of the works and their location.

QUANTITATIVE ESTIMATE: Document or set of documents establishing the quantities of materials and works necessary for a construction, and allowing the items in the estimated estimate to be quantified (syn.: preliminary measurement).

ESTIMATE: Document or set of documents giving the initial assessment of the amount of work.

DOSAGE: Proportions of the different elements entering into a preparation (example: dosage of concrete).

DRAIN : Buried conduit used to collect groundwater or infiltration water (pottery, fascine, dry stone, plastic drains, etc.).

SAMPLE: Small piece of framework used to secure a purlin to a rafter.

SEWER: The lowest part of a roof through which rainwater drains. Masonry gallery or, by extension, evacuation pipe (wastewater, rainwater, and other effluents).

BASE: Support element distributing a load on its own support.

COATING: A coating that is spread in thin layers on the surfaces to be treated. Covering a surface to be painted with a material that behaves plastically in order to eliminate roughness and holes.

TIE ROD: Lower chord of a truss, in a frame with two or more slopes. It is most often horizontal and maintains the spacing of the rafters at the supports.

SPACER: Part (of framework or formwork) intended to maintain a constant spacing between two elements (beams, formwork, bars, etc.).

SKETCH: Small-scale drawing, executed freehand with a view to finding the broad outlines of the constituent party.

PROP: Piece of wood generally used to maintain or support a building (threatening to collapse or undergoing work) to relieve an overly loaded beam, etc. ...

EXCAVATION: Excavation below ground, as opposed to excavation in excavation.

FACADES: Overall elevation of the various faces of a building. These facades can be shaded or tinted.

RIDGE: Longitudinal edge formed at the top of a roof by the meeting of two slopes.

RIDGE: Relating to the ridge. Taken as a noun, it refers to the ridge purlin.

TRUSH: A beam system, generally triangular, whose upper chord with a single or double slope regulates the slope of a roof; they support the purlins which constitute the support of the roof.

REINFORCEMENT: Set of steel reinforcements embedded in concrete to form reinforced concrete.

REBATE: Longitudinal notch, made in the uprights and lintel of a bay to accommodate a frame, and by extension (wood, metal or masonry) to receive a part presenting an additional longitudinal projection (fixed frame for example, or inspection cover, etc.).

DEFLECTION: Magnitude of the elastic deformation at a given point, or at the point where it is maximum, of a beam under the action of the loads which act on it.

EXCAVATION: Action of digging in a field. Result of this action.

TEMPLATE: Instrument or equipment defining the outline of a profile, with a view to its reproduction (repeated if necessary) or the control of a passage to be respected.

SHEATH : Conduit (insulated or not) carrying air in an installation (stale or fresh air, pulsed, filtered, conditioned, etc.) . Tube protecting a pipe, or intended to provide a passage for it.

GALVANIZATION: Industrial process consisting of coating a metal object with zinc in order to protect it against corrosion (by electrolysis or by dipping)

TREAD : On a staircase, the horizontal distance from step nose to step nose. In the case of a curved flight, the theoretical tread is then the width of the step measured on the line of travel (constant tread location).

GUSSET: Wooden or metal plate providing rigidity to an assembly of long parts.

GUTTER: A channel generally semi-circular in shape (often made of zinc or plastic) located at the lower part of a roof to collect rainwater and direct it towards the downpipes. The gutter is located on the bank and is generally supported by hooks.

GRANULOMETRY: Classification of aggregates used in the composition of mortars and concretes, established according to their distribution by size classes.

RUBBLE or DEBUT: Demolition materials.

HEDGEHOG: Bed of large hard stones, erected directly on the ground to serve as a foundation (road, slab, etc.).

BUILDING: Today: element manufactured in concrete or ceramic, used between joists, beams, etc. as underside and support for making a floor.

FRAME: Fixed frame delimiting a bay in a partition and on which a door is hinged.

WATER-REPELLENT: Which preserves from humidity. By extension, adjuvant intended to waterproof the mass of mortars or concretes.

HYGROSCOPIC: Describes a substance or material that has an affinity for water and therefore the property of absorbing moisture.

TRANSOM: Fixed or movable part, glazed or not, above a door or a window.

JOINT: Intentional break between several elements of the same structure which must be joined while allowing them a possibility of play, shrinkage, expansion, settling, etc. without risking cracking. In a wall, space between consecutive stones, bricks, etc.

JOINTING: Filling and finishing the joints of a wall or floor facing, etc.

ROCK WOOL - GLASS WOOL: Mineral fibres made from molten minerals, spun to very small diameters and bonded to synthetic resins; presented in the form of semi-rigid panels or flexible rolls, used as thermal insulation.

JOINTS: Pieces of wood spaced regularly and sealed, onto which the parquet slats are fixed.

PANELLING: Assembled wooden panels constituting doors, shutters, thin partitions, etc. or thin wall coverings.

GLUE-LAMINATE: Industrial process for assembling wooden slats by special gluing under a press. This system makes it possible to produce beams and trusses that are very light and can reach very large spans.

LANTERN: Raised part of an attic providing overhead lighting and/or ventilation.

TRACK LINE: A line representing the theoretical path taken on a staircase. It is located on the plane in the axis of the flight, and at most 0.50 m from the inside edge if the staircase is not straight.

LINTEL: Horizontal beam made of reinforced concrete, wood or steel, located at the upper part of a bay (see also Chest).

SMOOTH: Horizontal bar used as a guardrail, handrail, frame crosspiece, or cladding support.

BATTEN: Piece of wood with a square section (2.5 x 2.5 cm) fixed horizontally on the rafters and supporting the tiles or slates.

LONG PAN: The most important face of a building, an attic, etc. and parallel to the edge or the eaves of the roof.

LONGRINE: Longitudinal beam placed at the base of a wall and distributing the loads on its support points.

TIMBER: Piece of commercial rectangular section wood, with the usual dimensions of 8 x 23 cm.

CONTRACTING AUTHORITY: Natural or legal person, designated by this term in the contract documents and on whose behalf the works or projects are carried out.

PROJECT MANAGER: Natural or legal person chosen by the project owner to carry out the management and coordination tasks entrusted in the written documents to the person designated by this term, or by that of architect.

GLOBAL FIXED PRICE CONTRACT: Contract where the work requested from the contractor is completely defined, and where the corresponding prices are fixed in bulk and in advance. The insertion of price variation clauses does not cause this type of contract to lose its fixed-price nature. The global price contract may provide that certain works will be paid for by the quantity survey.

METER MARKET: Market where payment is made by applying unit prices to the quantities actually executed. Unit prices may be either specially established for the same market considered (bill of quantities) or based on those of an existing collection (series).

EXPANDED METAL: A type of wire mesh or wire mesh whose diamond-shaped mesh is obtained by the transverse extension of a sheet of metal previously cut regularly into fairly short parallel slots.

RUBBLE: Exposed limestone, more or less squared, used in the construction of walls.

MOISE : Beam composed of two parallel and integral members, resting on either side of the posts which support it.

MORTAR: Mixture of cement (or lime), sand and water used to make plasters, assemble bricks, etc.

VALLEY: Hollow line determined by the meeting of two roof slopes forming a re-entrant angle (inverse: edge).

PURLIN: Horizontal frame part connecting the trusses, fixed on the rafters and supporting the rafters or directly the roofing.

Parallel-shaped element in unreinforced concrete (with or without vertical holes) and whose smallest dimension is that of the thickness of the wall.

GABLE: Construction wall whose upper part supports the two (or more) sloped roof and whose shape it follows.

PLAN: Projection on the ground of a building cut at a certain height by a horizontal plane.

GROUND PLAN: Plan of a building, or a set of buildings, situating the buildings on a small scale in relation to each other and in relation to the terrain. Common scales : 1/200 - 1/100 and 1/50.

LOCATION PLAN: Plan situating a building in relation to a town, a district, a street; it is produced on a small scale (1/5000 - 1/2000).

PLATE: Metal plate for assembling and supporting posts or beams, generally arranged in a plane perpendicular to the longitudinal axis of the part.

PLASTER: Material obtained by calcining gypsum and setting with water.

CHEST: Large span lintel supporting heavy loads.

SPAN: Distance separating two successive supports of a beam, or any load-bearing element.

PORTICO: Construction system formed by two vertical or inclined uprights connected at the upper part by a straight or broken crosspiece, each connection with the uprights being made so that it constitutes a perfect fit.

BEAM: A fairly often horizontal element, receiving generally vertical loads, and resting on:
- either on a single support, with recess (console)
- either on two supports (free, free and recessed, or recessed)
- either on several supports (continuous beam).

PREFABRICATION: Execution outside the actual construction site (or in a location specially provided on the construction site) in small or medium series, of standardized construction elements ready for assembly.

PROJECT: Set of documents (descriptive, estimated, quantitative, etc.) bringing together the information necessary for the completion of a construction, and established from a preliminary project.

RADIER: Reinforced concrete slab serving as a foundation (road, machine, building, etc.) for a construction not founded on wells or piles.

RAMPANT: Inclined surface (example: slope of a roof)

ACCEPTANCE OF WORKS: Confirmation of their completion and acceptance, the contract having been effectively fulfilled.

PARTITION: Load-bearing wall located inside a building and connecting two facades, and used to reduce the spans of beams, floors, etc.

TREAT: Spread a thin layer of earth, sand, pebbles, etc.

MANHOLE: A structure generally made of masonry and providing access to a pipeline, for the purpose of maintenance or inspection.

SURVEY: Dimensioned sketch, produced on site, freehand ; it is intended for the drawn representation of existing works.

FILL: Contribution of earth to fill a previous excavation or raise an existing ground level.

SHRINKAGE: Retraction of a material due to drying (case of concrete, wood).

GUTTER: Small trench receiving foundations. Small channel for water flow.

SHORE: Edge which ends a roof, in gable.

SAND PANE: Horizontal beam bracing the posts of a long-span at the level of the truss overhangs. Sand-plate purlin: located at the lower part of a roof slope.

SEALING: Fixing a part in masonry.

SEGREGATION: Separation of the constituent elements of concrete, during its transport or implementation.

FOOTING: A significantly enlarged foundation element that distributes the loads transmitted to it over the ground (post, wall, etc.). Generally made of reinforced concrete.

SERVITUDE: Legal term designating any right or charge which alienates land for the benefit of another, which limits or hinders a right of ownership.

FLASHING: Joint ensuring the sealing and caulking of a roof located against a wall.

JOIST: Beam forming the direct or primary framework of a floor.

SURVEY: Operation consisting of examining by drilling or sampling, the state or composition of a soil, a structure, etc.

SUBMISSION: Signed commitment by the Company which declares to submit to the conditions of the contract. Price proposal for the execution of a specific job for a specific price.

SUPPORT: Wall or construction intended to resist the pressure of the earth.

SUPERSTRUCTURE: Part of a construction located above ground level.

OVERLOADS: All variable, one-off or distributed loads due to operation, testing, maintenance, climatic conditions (snow or wind), etc. occurring in a structure.

BUTT: Small section wooden wedge.

TIE ROD: Part working in traction.

TRENCH: Excavation lengthwise in the ground.

SPAN: Interval between two trusses, distance between two posts taken in the longitudinal direction of the building.

CROSS-BEAM: Beam or bar, generally horizontal, used to maintain the spacing between uprights in half-timbering, ironwork, or cladding frames.

LATTICE: Structure of a beam, a post, a truss, in which the solid core is replaced by a triangular network of secondary bars. Example: lattice beam.

TRIANGULATION: Triangular assembly of frame parts ensuring their non-deformability in their construction plane.
LEAF: Movable panel closing a bay. Opening part of a door or window.

VIBRATION: Action of vibrating the concrete to improve its compactness and to ensure good filling of the formwork.

SHEETING: Thin board less than 20 mm thick.
ZINC PLATING or ZINCING: Synonym of galvanization