

LIST OF STANDARD CONSTRUCTION MATERIALS: SMART II SERIES 1-2569

Section 1 Materials and equipment for the elderly and health	
Lift	None
Air ventilation equipment	PM 2.5 prevention and clean air ventilation equipment by PD Fresh Airflow model Fresh I , wall mounted in the bedrooms and bathrooms except maid room-maid bathroom (if any)
Elder room floor	Shock absorb Soft+ floor – PVC type, by LT by COTTO with PVC floor skirt
House entrance ramp	Coarse polished cement, as drawing
Door for elder bathroom	White Wood Plastic Composite (WPC) door, hanging sliding type, 1.00 meter wide. With grove pattern (MN80-P01G03, MN80-P01G05 or MN80-P01G08 to be chose later) and sliding rail, equipment and white rail cover by MOHNE'
Elder Bathroom	"AMERICAN STANDARD" or COTTO" (White color)
Water closet	2 pieces water closet by COTTO: C1302 SYDNEY with 2 functions rinsing spray set model CT980H#WH(HM) and stop valve model CT179N(HM)
Wash basin	COTTO: For All SC00537, wall hang type, with water inlet hose model CT683(HM)
Wall mounted faucet for shower	AMERICAN STANDARD: ARC A-J56-10 with 5 functions shower head set model MILANO F46044-CHACT
Wash basin faucet	COTTO: CT1058(HM)
Wall mounted faucet	AMERICAN STANDARD: BASIC F22077-CHADY
Towel bar	AMERICAN STANDARD: CONCEPT RK-2801-46-N
Soap holder	AMERICAN STANDARD: CONCEPT RK-2801-42-N
Tissue holder	AMERICAN STANDARD: CONCEPT RK-2801-43-N
Mirror	AMERICAN STANDARD: SASSI LQ-02
Bathroom floor drain	COTTO: CT6406Z4P (size 100 c.m.) 1 point installed in front of the sliding door with 1 piece of odor trap floor drain model A-8200-N
Safety accessory for Elder bathroom	Foldable support arm COTTO: CT0190 L shape handrail COTTO: CT751L/R#SA(HM)
Swimming Pool	None
Section 2 Materials and equipment for Energy-Efficiency and Heat Insulation	
Solar water heater	None

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Heat prevention beneath the roof	3 inches thick insulator by “STAY COOL”: Premium placed on ceiling beneath upper and lower roof level (except garage, upper, lower terrace area external ceiling and Insulated Roof). For the concrete roof or concrete floor, 6 inches thick “STAY COOL”: Premium is used.
Roofing material	Ceramic Metal Roof : Snaplock – Premium color by PD Insulated (choose the color later) with “Dry ridge system” , stainless steel valley through#24
Exterior/ interior wall material	7.5 cm. thick Autoclave concrete with plastering and skim coat.
Sanitary ware (Water saving)	“AMERICAN STANDARD” or COTTO” (White color)
Water closet	For general bathroom, AMERICAN STANDARD: STD LOVEN TF-2133SC-WT-0 with rinsing spray set model STD A-4900-ST and stop valve model STD A-4401
Section 3 Eco-Friendly Materials and Equipment	
General first floor and upper floor materials	8 mm. thick laminated floor by “INOVAR”: Exquize or equal with PVC floor skirt.
Wooden stair set	A set of Engineered Wood by ACON or BEAVER WOOD color coated from the factory
Stair tread	Size 250x30 mm.
Riser	Size 200x20 mm.
Handrail	Size 75x50 mm.
Post	Size 100x100 mm.
Baluster	Size 50x50 mm.
Sub-baluster	Size 125x25 mm.
Landing	30 mm. thick, 2 pieces (V groove connect)
Eave ceiling	Vinyl board by “SCG”: Solid Board or equal with Zinc galvanized studs#26. or equal
Decorated wall (If any)	In case of fiber cement decorated wall, use “SCG” or “CONWOOD” or Wood Plastic Composite (WPC) - PD WOOD by Maxis Wood model CX-002 teak color or as drawing specified.
Interior Doors	

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General interior door/ Bedroom/ Storage room (if any)	Laminated engineered wood door model LMD -001-006 (choose color later) with white wood pattern film coated Wood Plastic Composite (WPC) door frame model Ultra series 3 by “ PD WOOD ”
Hung type sliding door (if any)	Laminated engineered wood door model LMD-001-006 (choose color later) by “ PD WOOD ” with white colored Parawood door frame by BEAVER WOOD
Door for maid room/ maid bathroom/ general bathroom (interior door)	White Wood Plastic Composite (WPC) door model C-WPC-001-003, 008, 011, 012 and white wood pattern film coated Wood Plastic Composite (WPC) door frame model Ultra series 3 by “ PD WOOD ”
Door for storage room under stair (if any)	White uPVC door panel with louver
Door for electric control unit panel	White uPVC door panel with louver
Facia	Fiber - cement board by “ CONWOOD ”: Two in One , primer paint coated type or “ SCG ”: 6”, 8” primer paint coated type or equal.
Treatment Tank	Fiberglass tank by “ DOS ”: ST-36/BK or “ PP ”: Ecotank or equal (put underground).
Grease trap Tank	Fiberglass tank by “ DOS ”: GT-09/BK-40 or “ PP ”: GT-30UG (put underground).
Section 4 Construction technology and innovative materials and equipment	
Concrete Structure	
Footing/Column /Beam/ Staircase/ Bathroom tray	Prefabrication structure with Multi Joint Lock System. Some parts of structure are cast-in-place as engineer specified.
General concrete plank	Prestressed planks by D-CON or PCM or equal. Some parts of structure are cast-in-place as engineer specified.
Exterior Door/Window	“TOSTEM”
Door to Terrace / Balcony/ main entrance	Anodized aluminum door by “ TOSTEM ”: WE 70 or as manufacturer specific with 6 mm. thick clear green glass.
Kitchen/ garage door (exterior door)	Anodized aluminum door by “ TOSTEM ”: WE 70 or as manufacturer specific with 6 mm. thick clear green glass.
General Window	Anodized aluminum window by “ TOSTEM ”: WE 70 or as manufacturer specific with 6 mm. thick clear green glass.

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Bathroom Window	Anodized aluminum window by “ TOSTEM ”: WE 70 or as manufacturer specific with 6 mm. thick frosted glass.
Plastering Material	Mortar cement by “ SCG ”, “ INSEE ”, “ TPI ”, “ SINGHA MORTAR ” or equal with skim coat. For exterior wall, protective formula mortar “ PD Mortar Plus ”+ Fiberglass mesh is used.
Roof Truss	Alu-zinc (AZ-150) or SuperDyma coated high strength steel structure with screw and nut system as engineer specified.
Handrail	Vinyl handrail by “ WINDSOR ” as specified drawing (steel/ stainless).
Section 5 General Construction Materials and Equipment	
STRUCTURE	
Piling	<u>Bangkok area and surrounding area</u> One storey house pre-stressed concrete pile I-22, length does not exceed 10.00 m. (2 piles welded connection) Two storey house pre-stressed concrete pile I-22, length does not exceed 16.00 m. (2 piles welded connection). Three storey house pre-stressed concrete pile I-22, length does not exceed 21.00 m. (2 piles welded connection) In case driven pile cannot be used, drilled pile as engineer specified is used (extra cost) <u>Provincial area (stiff soil),</u> One storey house pre-stressed concrete solid square pile 22 X 22 cm., length does not exceed 8.00 m. is used. Two -3 storey house pre-stressed concrete solid square pile 22x22 cm. length does not exceed 10.00 m. is used. In the area where pile cannot be driven, soil bearing foundation as engineer specified is used.
Floor of washing area	Reinforced concrete slab (on ground) as engineer specified
Entrance pavement	N/A
Concrete	Ready mixed concrete by SCG, INSEE, TPI
Floor Level	
Lower floor	0.50 meter high from the ground or as specified in the drawing (In case of multilevel floor).
Upper floor	As specified in drawing
Flooring Materials	

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Master bathroom floor	Porcelain tile (price does not exceed 400 bath/sq.m.)
General bathroom floor	Porcelain tile (price does not exceed 300 bath/sq.m.)
Elder bathroom floor	Porcelain tile, anti-slip type (price does not exceed 300 bath/sq.m.)
Kitchen floor	Porcelain tile (price does not exceed 300 bath/sq.m.) with PVC floor skirt or equal
Laundry floor (if any)	Porcelain tile (price does not exceed 300 bath/sq.m.) with PVC floor skirt or equal
Maid room floor	Porcelain tile (price does not exceed 250 bath/sq.m.) with PVC floor skirt or equal
Maid bathroom floor	Porcelain tile (price does not exceed 250 bath/sq.m.)
Main entrance terrace	Porcelain tile (price does not exceed 400 bath/sq.m.) with aluminum stair nose
General terrace floor	Porcelain tile (price does not exceed 300 bath/sq.m.) with aluminum stair nose (if there's stair)
General balcony floor	Porcelain tile (price does not exceed 300 bath/sq.m.)
Waterproofing system for terrace/balcony/toilet floor	The paint type waterproofing system, TOA Cement Waterproof with fiberglass mesh or equal will be applied.
Storage room floor	Porcelain tile (price does not exceed 250 bath/sq.m.)
Parking floor	Coarse polished cement.
Entrance pavement	N/A
Footpath (If any)	Coarse polished cement.
Washing area	Porcelain tile (price does not exceed 300 bath/sq.m.) with aluminum stair nose (if there's stair)
Wall Decoration Materials	
Master bathroom wall	Porcelain tile (price does not exceed 400 bath/sq.m.) height does not exceed 2.40 m. with PVC tile trim
General bathroom wall	Porcelain tile (price does not exceed 300 bath/sq.m.) height does not exceed 2.40 m. with PVC tile trim
Elder bathroom wall	Porcelain tile (price does not exceed 300 bath/sq.m.) height does not exceed 2.40 m. with PVC tile trim
Maid bathroom wall	Porcelain tile (price does not exceed 250 bath/sq.m.) height does not exceed 2.40 m. with PVC tile trim

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Decorated wall (If any)	Natural color granite by “ BEZEN ” 2”x9” or “ KENZAI ” : Granite tile 2”x8” (price does not exceed 700 baht/sq.m.) or equal, spaced grooves.
Ceiling	
Exterior ceiling (Balcony/Garage)	Beveled edge moisture resistant gypsum 9 mm. thick by “ SCG ” or “ GYPMANTECH ”. with galvanized metal studs#26
General interior ceiling	Beveled edge gypsum board 9 mm. thick by “ SCG ” or “ GYPMANTECH ” with galvanized metal studs#26. 1 set of 60x60 cm. instant service access on the second-floor ceiling.
Bathroom ceiling	Beveled edge moisture resistant gypsum board 9 mm. thick by “ SCG ” or “ GYPMANTECH ” with galvanized metal studs #26
Ceiling for maid room/ storage	Beveled edge gypsum board 9 mm. thick by “ SCG ” or “ GYPMANTECH ” with galvanized metal studs #26
Roofing materials	C-PAC Concrete roof tiles by SCG (Seagull grey, Tantalum grey, Silver Titanium, Brown Oak, Red round nose or Tawny brick) the color chosen later with “Dry ridge system”, stainless #24 for valley rafter. In case of polished concrete roof, the paint type waterproofing system, TOA PU Waterproof with fiberglass mesh or equal will be applied. In case of Shingle Roof, use the Double layer type (the color chosen later) with equipment from manufacturer.
Door and window accessories	
Main entrance door, Balcony door	By TOSTEM: WE 70 or as manufacturer specified
General windows	By TOSTEM: WE 70 or as manufacturer specified
General interior door	Stainless steel mortise lock set by “ MATURE ”: MTL-001-C or equal with stainless steel door stopper model MDH-006 or equal.
Bathroom door	Stainless steel knob by “ MATURE ”: MT-001 BK SS or equal with stainless steel door stopper model MDH-006 or equal.
Elder bathroom door	As specified by MOHNE’
Maid room door	Stainless steel mortise lock set by “ MATURE ”: MTL-001-C or equal with stainless steel door stopper model MDH-006 or equal.

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Maid bathroom door	Stainless steel knob by "MATURE": MK-012-B SS (eco) or equal with stainless steel door stopper model MDH-006 or equal.
Hinge for general door/ bedroom/ maid room/ bathroom/ kitchen	Stainless steel butterfly hinge by "MATURE": MH-S4325HS2BB or equal, 4 pieces/door
Kitchen/ garage door (open to exterior)	By TOSTEM: WE 70 or as manufacturer specified
Hung type sliding door (if any)	By "HAFELE", the upper rail model 499.40.042 with sliding wheel model 499.72.050 with lockset.
SANTARY WARE	"AMERICAN STANDARD" or COTTO" (White color) or equal (as specified by company)
Water closet (maid bathroom)	2 pieces water closet by AMERICAN STANDARD : NEW WINPLUS FRONT TF-2697SCW-WT-0 with rinsing spray model AS BASIC F75006-WTADY and stop valve model STD-A-4401
Urinal (if any)	AMERICAN STANDARD: TF-6789N- WT-0 with flush valve (1 unit in bathroom downstairs)
Bathtub	N/A
Wash basin	For master bathroom, general bathroom, AMERICAN STANDARD: SIGNATURE WP-0420-WT , under the counter type For maid bathroom, AMERICAN STANDARD: STD NEW CODIE-S 0948-WT-0, wall hung type.
Wash basin faucet	For master bathroom, general bathroom AMERICAN STANDARD: SIGNATURE A-1706-10-LL For maid bathroom AMERICAN STANDARD: WINSTON FFAST601-1T1500BT0
Bathroom counter	Counter topped with Porcelain tile same as the wall, not available for maid bathroom.
Wall mounted faucet for shower	For master bathroom, general bathroom AMERICAN STANDARD: ARC EXP A-J56-10 For maid bathroom, AMERICAN STANDARD: STD AS BASIC F21033-CHADY
Shower head set	For master bathroom, general bathroom, AMERICAN STANDARD: MILANO F46044-CHACT For maid bathroom, AMERICAN STANDARD: STD AS BASIC F46103-CHADYHS
Wall mounted faucet	AMERICAN STANDARD: AS BASIC F22078-CHADY 1 for each bathroom
Towel bar	AMERICAN STANDARD: CONCEPT R K-2801-46-N , chromium color

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Soap holder	For master bathroom, general bathroom, AMERICAN STANDARD: CONCEPT R K-2801-42-N chromium color For maid bathroom RASLAND: RA-BENZ-9894
Tissue holder	For master bathroom, general bathroom, AMERICAN STANDARD: CONCEPT R K-2801-43-N chromium color For maid bathroom RASLAND: RA-822626
Shelf	For maid bathroom RASLAND: RA-B30044
Mirror	For master bathroom, general bathroom, AMERICAN STANDARD: SASSI LQ-02 For maid bathroom COTTO: MM004#6
Bathroom floor drain	Odor trap, stainless steel floor drain by AMERICAN STANDARD: STD A-8200-N, 2 for each bathroom.
WATER	PVC pipes by SCG or THAI PIPE
Clear water pipe	¾" dia. PVC pipe (class 13.5) for main pipe from building to meter, length not exceed 20.00 m. with ball valve, metal hand, separating for each floor. ½" dia. PVC (class 13.5) for branch pipe.
Waste water/ Drain	4" dia. PVC pipe (class 8.5) for sewage pipe. 2" dia. PVC (class 8.5) for drainage pipe and 3" dia. for main pipe (class 8.5)
Ventilation pipe	1" dia. PVC pipe (class 5.0)
Rain-water drainage	2" dia. PVC pipe for branch rainwater pipe and 3" dia. for main water pipe (class 8.5). 2" skull shape stainless steel floor drain for balcony or concrete slap roof.
SANITARY SYSTEM	
Drainage pipe	Asbestos cement pipe dia. 8" to public drain (Not exceed 16.00 m. long from the house).
Manhole	30x40 cm. precast manhole every 6.00 m. interval and every bends or corners.
ELECTRICITY SYSTEM	Electric cables and equipment comply with the Standard of Metropolitan Electricity or Provincial Electricity Authority. Electricity cable by THAI YASAKI or equal.
Main income wiring	Single copper wiring PVC insulated (THW#16 sq.mm.) The length from wall to meter not exceed 20.00 m.

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Main telephone cable	Four cores wiring not exceed 20.00 m. from meter to the house put in PE conduit ½" underground.
Internal wiring	Single copper wiring with PVC insulated with yellow PVC conduit in wall or on ceiling.
Air condition wiring	1 point at Master Bedroom
Control panel	15 Amps. 16 circuit breakers by "BTICINO" : BTCN21 or equal with Residual Current Device (RCBO).
Lighting switch	Flat wall mounted lighting switch by "BTICINO" switch cover model Nexy Q01W / Q02W / Q03W 1 way switch model Nexy Q4001A install 1 switch for 1 room and 2 switches for master bedroom, 2 way switch model Nexy Q4003A only at stair hall.
Receptacle	Flat wall mounted 3 pins receptacle by "BTICINO" model Nexy QW4185A install 2 for each room and 3 for living room (none for storage/bathroom).
Exterior receptacle	1 set of Flat wall mounted 3 pins receptacle by "BTICINO" model Nexy QW4185A with IP55 waterproof case model 29603
T.V. outlet	1 set of Flat wall mounted T.V. outlet by "BTICINO" cover model Nexy QA4803M1W and 75 ohm T.V. outlet model Nexy QW4202T
LAN outlet	1 set of Flat wall mounted LAN outlet by "BTICINO" cover model Nexy QA4803M1W and CAT6 LAN outlet model QW4279C6
Luminaire	Total budget not over 30,000 Baht
Emergency light	1 set of twin LED lamp head emergency light at stair hall or as drawing specified.
ELECTRICITY AND WATER METER	
Permanent electric meter	15 Amps, (Excluded fee and deposit for meter and the service area extension fee)
Permanent water meter	1/2" diameter, (Excluded fee and deposit for meter and the service area extension fee)
PAINTING	BY TOA
External wall	External acrylic paint "TOA": 4 SEASON or equal, 1 primer and 2 final coated
Internal wall	Internal acrylic paint "TOA": 4 SEASON or equal, 1 primer and 2 final coated
Steel surface/HDF panel	Emulsion paint "TOA": Glipton or equal 1 primer and 2 final coated
Facia/Fiber Cement Board	External acrylic paint "TOA": 4 SEASON or equal, 1 primer and 2 final coated

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OTHER WORK	
Termite protection system	Springer system with "SCG" or "THAI PIPE" PVC pipe. 1/2" class 13.5 is installed beneath the first-floor structure for termite protection chemical from the service provider. The owner pays for the chemical and service fee.
Tile adhesive	Glue cement by SCG, WEBER, CROCODILE or equal
Section 6 Warranty	
Structure	20-year warranty
General work	1 year warranty exclude natural depreciation of materials due to long used and misused

Remarks: The company reserves the right to change the list if needed but the price of the materials is not less than that stated above. The cost of the construction does not include:

- Old building demolition - Interior decoration and garden - Air conditioner system.
- Water drainage outside the construction site. - Mosquito net, door and window steel bars, rain gutter.