

TECHNICAL SPECIFICATIONS										MS4 CARPENTRY										MS13 MECHANICAL									
Please refer to the Drawings for the unique project information; refer to the Technical Specifications for the "standardized" written requirements, ignoring those "material standards" and "construction requirements" that do not apply to the work as indicated by the Drawings.																													
MATERIAL STANDARDS																													
MS2 SITE										MS7 THERMAL AND MOISTURE PROTECTION										MS15 GENERAL									
1. <u>Site Improvements</u> -----FS-RH-H-1070										1. <u>Waterproofing and Dampproofing</u> Asphalt-----ASTM D-449 Felt, Asphalt-saturated-----ASTM D-226 Clay Drain Tile-----ASTM C-4 Perforated Clay Pipe-----ASTM C-700										1. <u>General</u> -----NFPA 2. <u>Mechanical Ventilation</u> Ventilation-----HV-1 Fan Noise Rating-----Test AMCA-210 HV-1-Sound Test AMCA-300									
a. <u>Roads and Walks:</u> Concrete Work (See MS3) Bituminous Work - Asphalt Institute Standards										Nails-----FS FF-N-105 Screws-----FS FF-S-111 Bolts-----FS FF-B-561 or 571										3. <u>Heating</u> Air Duct, Insulation-----UL-181 Furnaces Gas-----ACA Listed Electric-----US-57.5, NFPA-70									
b. <u>Drainage:</u> Drain tile, pipe and culvert-----Appropriate ASTM standards & Federal Specifications										2. <u>Vapor Barriers</u> Under Concrete and as Ground Cover-----ASTM E-154 Polyethylene Plastic Sheets-----ASTM D-2103										4. <u>AC Room Units</u> -----UL-494, AHAM CN-1 Sound Rating-----ARI-270 Heat Pump-----ARI-240, UL-559									
MS3 CONCRETE										3. <u>Building Insulation</u> Duct Insulation-----FS HH-I-558 Urethane Board (k=0.17)-----FS HH-I-530 Extruded Polystyrene Board (k=0.20)-----FS HH-I-524 Molded Polystyrene "Bedboard" (k=0.27)-----FS HH-I-524 Molded Polystyrene "Bedboard" (k=0.27)-----FS HH-I-524 Perimeter Insulation-----FS HH-I-524 Vermiculite Wall Filler-----FS HH-I-585, Class 2										5. <u>Plumbing</u> Cast Iron Soil Pipe-----ASTM A-74, C-564 OSPII HS-72, OSPHSN-72, ANSI A112.5									
1. <u>Material Chapters of Building Code Requirements for:</u> Reinforced Concrete-----ACI 318 Structural Concrete in Buildings-----ACI 301										4. <u>Sheet Metal</u> Aluminum-----Aluminum Sheet Metal in Bldg. Construction, AA Galvanized Steel or Iron-----ASTM C-516 or A-525										6. <u>Painting</u> Paint-----Manufacturer's best-grade product and appropriate Federal Specifications. Spray Texture-----Acceptable products are "Aristex," manufactured by The Proko Co., 1910 Wall St., Dallas TX, and "Imperial QT" manufactured by the U.S. Gypsum Co. Knock-Down Finish-----"Plexure" as manufactured by Triorch Industries (800-537-6111).									
2. <u>Cementitious Materials</u> Aggregate Normal Weight-----ASTM C-33 Light Weight-----ASTM C-330										5. <u>Caulking and Sealants</u> Elastomeric Type-----FS TT-S-227 or 230 Oil and Resin Base Type-----FS TT-S-598 Silicone Rubber Base-----FS TT-S-1543 Butyl Rubber Base, Single-Compound-----FS-TI-S-1657										7. <u>Wall Coverings</u> Vinyl Wall Covering-----FS CCC-W-408, Class 2, mildew resistant backing									
3. <u>Reinforcement</u> Cold-drawn Steel Wire-----ASTM C-82 Deformed Billet Steel-----ASTM C-615										6. <u>Exhaustion Joint Materials</u> -----FS-HH-F-341E, ASTM D-994, D-1751 & 1752										MS10 SPECIALTIES 1. <u>Toilet Accessories:</u> Acceptable manufacturers are Accessories Specialties, Inc.; American Dispenser Co.; Bobrick Washroom Equip., Inc.; Brodey Corp.; Franklin Brass Co.; G.M. Ketchum Co.; Moore Dispensers, Inc.; The Charles Parker Co.; Watrus, Inc.; or equal.									
4. <u>Admixtures</u> Air entraining-----ASTM C-260 Fly Ash-----ASTM C-618 Pozzolan (raw or calcined)-----ASTM C-618 Chemical-----ASTM C-494										MS8 DOORS, WINDOWS & GLAZING PANELS Steel Doors and Frames-----SDI 100 Wood Doors Hardwood, Hardboard and Plastic Faced-----NMAA IS-1 Exterior doors-----WM 3 Aluminum Doors and Frames-----NMAA, AMA & AA Special Doors Aluminum Sliding Glass Doors-----ANSI A134.2 Rolling Fire Doors-----NFPA No. 80										2. <u>Portable Fire Extinguishers</u> Acceptable manufacturers are U.L. Industries; Larsen's Mfg. Co.; or equal.									
5. <u>Ready-mixed Concrete</u> -----ASTM C-94										5. <u>Windows and Frames</u> Aluminum Prime Windows-----ANSI A134.1 Wood Window Units-----ANSI A200.1										3. <u>Fireplaces</u> Acceptable manufacturers are Abtec Poles; American Fireplaces; Bantrol; Concord; Eder; Metal Arts; Texas Fireplaces; or equal.									
6. <u>Expansion Joint Materials</u> -----FS-HH-F-341E, ASTM D-994, D-1751 & 1752										4. <u>Hardware</u> -----BHMA Glass-----FS DD-G-451 Tempered Glass-----FS DD-G-1403 Insulating Glass-----SIGMA No. 65-7-2										4. <u>Architectural Louvers</u> Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for fabrication, construction details and installation. Aluminum louvers equal to Aivelle Co. products.									
7. <u>Penetration Resistance of Hardened Concrete</u> -----ASTM C-803										MS9 FINISH MATERIALS 1. <u>Exterior Wall Finishes</u>										5. <u>Specialty Signs:</u> Provide under an allowance as indicated.									
MS4 MASONRY										1. <u>Hardboard</u> -----PS-58, ANSI A135.4 Plywood-----PS-1 or PS-51 Stucco-----ANSI A42.2 Exterior Insulated Finish System Finish and base coat classified by UL. System approved and listed by Factory Mutual. System approved in report documents by BOCA, ICBO, SBOCI and HUD.										2. <u>Major Electric Appliances (Owner supplied)</u>									
1. <u>Code & Industry Standard</u> Brick Masonry: SCPI, Building Code Requirements for Engineered Brick Masonry. Concrete Masonry: NMAA Specifications for the Design and Construction of Load Bearing Concrete Masonry										2. <u>Roof Coverings</u> Fiberglass Shingles (UL Class A)-----ASTM D3018-90 Type I Underlayment Asphalt Saturated Felt-----ASTM D226-89 Building Paper-Type I Graded-----FS UL-B-790 Single Ply EPDM Roofing Sheet-----ASTM D4637-87 Metal Roofing-----See Drawings										2. <u>Major Electric Appliances (Owner supplied)</u>									
2. <u>Cementitious Materials</u> Portland Cement-----ASTM C-150 Portland Cement, Air Entraining-----ASTM C-175 Hydrated Lime, Type S-----ASTM C-207 Quick Lime-----ASTM C-5 Gypsum-----ASTM C-91 Masonry Cement-----ASTM C-91 Aggregate-----ASTM C-144										3. <u>Building Insulation</u> Duct Insulation-----FS HH-I-558 Urethane Board (k=0.17)-----FS HH-I-530 Extruded Polystyrene Board (k=0.20)-----FS HH-I-524 Molded Polystyrene "Bedboard" (k=0.27)-----FS HH-I-524 Molded Polystyrene "Bedboard" (k=0.27)-----FS HH-I-524 Perimeter Insulation-----FS HH-I-524 Vermiculite Wall Filler-----FS HH-I-585, Class 2										3. <u>Fireplaces</u> Acceptable manufacturers are Abtec Poles; American Fireplaces; Bantrol; Concord; Eder; Metal Arts; Texas Fireplaces; or equal.									
3. <u>Mortar and Grout</u> Reinforced Masonry-----ASTM C-476 Other Types M, S, N or O-----ASTM C-270 Other Mortars-----ASTM C-447										4. <u>Sheet Metal</u> Aluminum-----Aluminum Sheet Metal in Bldg. Construction, AA Galvanized Steel or Iron-----ASTM C-516 or A-525										4. <u>Architectural Louvers</u> Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for fabrication, construction details and installation. Aluminum louvers equal to Aivelle Co. products.									
4. <u>Building Brick</u> Clay Brick-----ASTM C-62 Facing Brick-----ASTM C-216 Sewer and Manhole Brick-----ASTM C-32 Paving Brick-----ASTM C-7 Hollow Brick-----ASTM C-652										5. <u>Caulking and Sealants</u> Elastomeric Type-----FS TT-S-227 or 230 Oil and Resin Base Type-----FS TT-S-598 Silicone Rubber Base-----FS TT-S-1543 Butyl Rubber Base, Single-Compound-----FS-TI-S-1657										5. <u>Specialty Signs:</u> Provide under an allowance as indicated.									
5. <u>Concrete Masonry</u> Hollow Units-----ASTM C-90 Hollow Non-loadbearing-----ASTM C-129 Solid Units-----ASTM C-145 Cast Stone-----ACO 704 Cold-drawn Steel Wire (joint reinf.)-----ASTM A-82										MS8 DOORS, WINDOWS & GLAZING PANELS Steel Doors and Frames-----SDI 100 Wood Doors Hardwood, Hardboard and Plastic Faced-----NMAA IS-1 Exterior doors-----WM 3 Aluminum Doors and Frames-----NMAA, AMA & AA Special Doors Aluminum Sliding Glass Doors-----ANSI A134.2 Rolling Fire Doors-----NFPA No. 80										5. <u>Specialty Signs:</u> Provide under an allowance as indicated.									
6. <u>Miscellaneous Masonry</u> Ceramic Tile-----TCA 137										MS9 FINISH MATERIALS 1. <u>Exterior Wall Finishes</u>										2. <u>Major Electric Appliances (Owner supplied)</u>									
MS5 METALS Aluminum - AA, Aluminum Construction Manual Steel Materials & Fasteners - Appropriate ASTM Standard										1. <u>Hardboard</u> -----PS-58, ANSI A135.4 Plywood-----PS-1 or PS-51 Stucco-----ANSI A42.2 Exterior Insulated Finish System Finish and base coat classified by UL. System approved and listed by Factory Mutual. System approved in report documents by BOCA, ICBO, SBOCI and HUD.										2. <u>Major Electric Appliances (Owner supplied)</u>									
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