

TECHNICAL SPECIFICATIONS

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
1. Site Improvements-----FS-RR-H-1070
- a. Roads and Walks:
Concrete Work (See MS3)
Bituminous Work -- Asphalt Institute Standards
- b. Drainage:
Drain tile, pipe and culvert-----Appropriate ASTM standards & Federal Specifications

- MS3 CONCRETE
1. Material Chapters of Building Code Requirements for:
Reinforced Concrete-----ACI 318
Structural Concrete in Buildings-----ACI 301
2. Cementitious Materials
Portland Cement-----ASTM C-150
Aggregate
Normal Weight-----ASTM C-33
Light Weight-----ASTM C-330
3. Reinforcement
Cold-drawn Steel Wire-----ASTM C-82
Deformed Billet Steel-----ASTM C-615
4. Admixtures
Air entraining-----ASTM C-260
Fly Ash-----ASTM C-618
Pozzolan (raw or calcined)-----ASTM C-618
Chemical-----ASTM C-494
5. Ready-mixed Concrete-----ASTM C-94
6. Expansion Joint Materials-----FS-HH-F-341E,
ASTM D-994,
D-1751 & 1752
7. Penetration Resistance of Hardened Concrete-----ASTM C-803

- MS4 MASONRY
1. Code & Industry Standard
- Brick Masonry: SCPI, Building Code Requirements for Engineered Brick Masonry.
- Concrete Masonry: NCMA Specifications for the Design and Construction of Load Bearing Concrete Masonry
2. Cementitious Materials
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. Mortar and Grout
Reinforced Masonry-----ASTM C-476
Other Types M, S, N or O-----ASTM C-270
Other Mortars-----ASTM C-447
4. Building Brick
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. Concrete Masonry
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
6. Miscellaneous Masonry
Ceramic Tile-----TCA 137

- MS5 METALS
- Aluminum -- AA, Aluminum Construction Manual
- Steel Materials & Fasteners -- Appropriate ASTM Standard

- MS6 CARPENTRY
- Dimension, Board Lumber and Timbers-----PS-20
Softwood Plywood-----PS-1
Structural Glued Laminated Timber-----PS-56
Pressure Treated Lumber and Plywood-----AWPB
Basic Hardboard-----PS-58
Hardboard Siding-----PS-60
Treated Millwork-----NWMA IS 4
Fire Retardant Pressure Treatment
Lumber-----AWPA C-20
Plywood-----AWPA C-27
- Nails-----FS FF-N-105
Screws-----FS FF-S-111
Bolts-----FS FF-B-561 or 571

- MS7 THERMAL AND MOISTURE PROTECTION
1. Waterproofing and Dampproofing
Asphalt-----ASTM D-449
Felt, Asphalt-saturated-----ASTM D-226
Clay Drain Tile-----ASTM C-4
Perforated Clay Pipe-----ASTM C-700
2. Vapor Barriers
Under Concrete and as Ground Cover-----ASTM E-154
Polyethylene Plastic Sheets-----ASTM D-2103
3. Buuilding Insulation
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 "Beadboard" (k=0.27)-----FS HH-I-524
Perlite Board Roof Insulation (k=0.36)-----FS HH-I-529
Perimeter Insulation-----FS HH-I-524
Vermiculite Wall Filler-----FS HH-I-585, Class 2
4. Sheet Metal
Aluminum-----Aluminum Sheet Metal in Bldg. Construction, AA

Galvanized Steel or Iron-----ASTM C-516 or A-525
5. Caulking and Sealants
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-TT-S-1657

NAAMM Spec. for Non-skinning Bulk Compounds.
NAAMM Spec. for Non-skinning Non-resilient Preformed Compounds.
- Cellular Neoprene-----ASTM C-516
- NAAMM Spec. for Rubber-like Gasket Materials.
NAAMM Spec. for Plastic Gasket Materials.

- MS8 DOORS, WINDOWS & GLAZING PANELS
- Steel Doors and Frames-----SDI 100
Wood Doors
Hardwood, Hardboard and Plastic Faced-----NWMA IS-1
Exterior doors-----WM 3
Aluminum Doors and Frames-----NAAM, AAMA & AA
Special Doors
Aluminum Sliding Glass Doors-----ANSI A134.2
Rolling Fire Doors-----NFPA No. 80
- Windows and Frames
Aluminum Prime Windows-----ANSI A134.1
Wood Window Units-----ANSI A200.1
- Hardware-----BHMA
Glass
Glass-----FS DD-G-451
Tempered Glass-----FS DD-G-1403
Insulating Glass-----SIGMA No. 65-7-2

- MS9 FINISH MATERIALS
1. Exterior Wall Finishes
- Hardboard-----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, SBCCI and HUD.
2. Roof Coverings
Fiberglass Shingles (UL Class A)-----ASTM D3018-90 Type I Underlayment
Asphalt Saturated Felt-----ASTM D226-89
Building Paper-Type I Graded-----FS UU-B-790
Single Ply EPDM Roofing Sheet-----ASTM D4637-87
Metal Roofing-----See Drawings

3. interior Wall and Ceiling Finish
Acoustic Tile-----FS-SS-S-118 & AIMA
- Ceramic Wall Tile-----TCA 137.1
Portland Cement-----ASTM C-150, Type 1
Organic Adhesives-----ANSI A136.1
Dry-set Portland Cement Mortar-----ASTM C-5
- Gypsum Wallboard-----ASTM C-36
Water-resistant Backing Board-----ASTM C-6 30
- Nails-----ASTM C-514
Laminating Adhesives-----ASTM C-475
Hardwood and Decorative Plywood-----PS-51
High Pressure Laminated Plastic Panel-----NEMA LD-1
Prefinished Hardboard Paneling-----PS-59
Basic Hardboard-----PS-58
4. Finish Flooring -- Rigid
Ceramic Tile-----TCA 137.1
Adhesive (organic)-----ANSI A136.1
Dry-set Portland Cement Mortar-----ANSI A118.1
Epoxy Adhesive and Grout-----ANSI A118.3
5. Resilient Flooring
Vinyl Composition Tile, Type IV-----FS SS-T-312
Vinyl Sheet-----FS L-F-475
6. Painting
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" manufac-tured by the U.S. Gypsum Co.
Knock-Down Finish---"Plecture" as manufactured by Triarch Industries (800-537-6111).
7. Wall Coverings
Vinyl Wall Covering-----FS CCC-W-408,
Class 2, mildew resistant backing

- MS10 SPECIALTIES
1. Toilet Accessories:
Acceptable manufacturers are Accessories Specialties, Inc.; American Dispenser Co.; Bobrick Washroom Equip., Inc.; Bradley Corp.; Franklin Brass Co.; G.M. Ketchum Co.; Moore Dispensers, Inc.; The Charles Parker Co.; Watrus, Inc.; or equal.
2. Portable Fire Extinguishers
Acceptable manufacturers are J.L. Industries; Larsen's Mfg. Co.; or equal.
3. Flagpoles
Acceptable manufacturers are Aabec Poles; American Flagpole; Baartol; Concord; Eder; Metal Arts; Texas Flagpoles; or equal.
4. Architectural Louvers
Comply with SMACNA "Architectural Sheet Metal Manual" recommendations for fabrication, construction details and installation. Aluminum louvers equal to Airlite Co. products.
5. Specialty Signs: Provide under an allowance as indicated.

- MS11 EQUIPMENT
1. Laundry Chute:
Acceptable manufacturers are JDA/Midland, Valient Products and Wilkinson Co.
2. Major Electric Appliances (Owner supplied)

MS12 FURNISHINGS (Owner supplied)

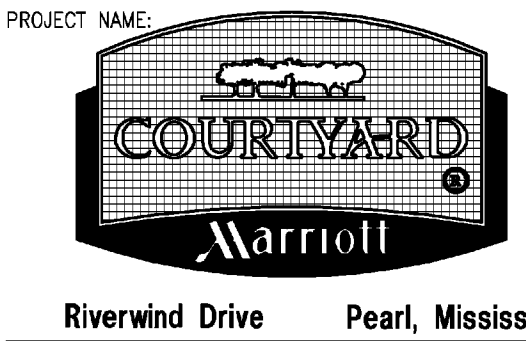
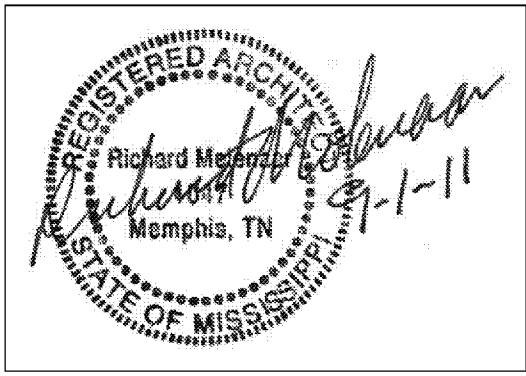
MS13 SPECIAL CONSTRUCTION (reserved)

MS14 ELEVATOR (see CR14)

- MS15 MECHANICAL
1. General-----NFPA
2. Mechanical Ventilation
Ventilation-----HVI-Air Flow
Test AMCA-210
Fan Noise Rating-----HVI-Sound Test
AMCA-300
3. Heating
Air Duct, Insulation-----UL-181
- Furnaces
Gas-----AGA Listed
Electric-----US-573,
NFPA-70
- Radiation
Baseboard-----IBR Rated
Finned Tube-----IBR Rated
Electric-----UL-1042, NEMA
- Humidifiers-----ARI-610
4. A/C Room Units-----UL-484,
AHAM CN-1
Sound Rating-----ARI-270
Heat Pump-----ARI-240,
UL-559
5. Plumbing
Cast Iron Soil Pipe-----ASTM A-74, C-564
CISPI1 HS-72, CISPIHSN-72,
ANSI A112.5
- Cast Iron Water Pipe-----AWWA 106, 108
Copper Drainage Tube-----ANSI H23.6,
ASTM B-88
Copper Water Tube and Pipe K,L,M-----ANSI H23.1,
ASTM B-88
Galvanized Steel Threaded Pipe-----FS WW-P-406
No-hub C.I. Pipe-----CISPI 301
Plumbing Fixtures-General-----FS WW-P-406
Plumbing Fixtures-Enameled Cast Iron-----ANSI A113-19.1
Plumbing Fixtures-Viterous China-----ANSI A112-19.2

- Water Heaters
Gas-----AGA Listed
Electric-----UL-174
- Gas Piping-----NFPA-54, 58

- MA16 ELECTRICAL
- Materials
All electrical work (wiring, lighting, appliance, etc.) per NEC, UL and AHJI Standards



SHEET TITLE:
Specifications

PROJECT NO. 09018
LATEST REVISION:

DRAWN BY: cj
CHECKED BY: rm
SHEET NUMBER:

DATE: 9/01/11

SPEC2