FIRE RATED CONCRETE MASONRY WALL ASSEMBLIES
FIRE RATE CONCRETE
MASONRY WALL ASSEMBLIES
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RINKER MATERIALS CORPORATION

FIRE RATED CONCRETE MASONRY WALL ASSEMBLIES

These assembly drawings are provided as a service to Engineers, Architects, Building Department Officials, Builders, Contractors and others involved in the design, inspection and construction of structures utilizing concrete masonry. They show the numerous options that are available to produce desired fire resistance ratings using Rinker Materials Corporation concrete block. All the assembly ratings have been certified by an Engineer registered in the State of Florida. The concrete masonry units used in the assemblies are fully identified by Rinker type number. Rinker Materials Corporation will provide the support of its Engineering Department and Quality Control Department in obtaining acceptance of these assemblies, and provide complete documentation as needed to support the indicated fire resistance ratings.

The current editions of the Standard Building Code, of the Southern Building Code Congress International, and the South Florida Building Code, Dade and Broward County Editions, allows for the calculation of the Fire Resistance rating of walls constructed with concrete masonry. The fire rating is based on the physical properties of the concrete masonry unit used in the construction of the wall assembly. The fire rating of the assembly is determined based upon the equivalent thickness of solid material in the wall and the type of aggregate used in the manufacture of the concrete masonry unit. A fire resistive rating is then assigned to the assembly from tables found in the building codes. Each of the model building codes in the United States and Canada recognize this method of determination of fire ratings, which are based on the results of numerous fire tests conducted over the years on concrete masonry walls. Due to the predictable performance of concrete masonry in a fire test (it does not burn, emit toxic smoke or fail structurally) these procedures were able to be developed. Please see the Index of Specifications and Related Documents for additional sources of information.

The Building Codes also recognize the increase in the fire rating of a concrete masonry wall from the addition of supplemental materials into the cores of the block or finishes attached to the wall surface. Methods are provided in the codes to calculate the additional increase in the fire rating of the wall assembly by the addition of selected materials. These materials include masonry grout, loose fill materials such as perlite or vermiculite, and various plasters and gypsum wallboard. Examples of these calculations can be found in the listed references and in this manual.

In the assembly drawings found in this manual, Rinker Materials Corporation has taken several of the 4", 6", 8", 10", and 12" wide (nominal) concrete masonry units we produce, and calculated the fire resistance rating which could be attained using these units and various supplemental materials and finishes added to the units. A copy of each assembly, bearing a Registered Engineer's seal, and copies of the calculations are available from Rinker Materials Corporation upon request. In addition, complete certification of compliance with the applicable requirements of the building codes on the concrete masonry units used in the assembly will be provided. See example of letter of certification in this manual.
When you specify concrete masonry in fire resistive wall assemblies, you get the best material available to do the job. In addition to superior performance, you will benefit from reduced maintenance costs, high energy efficiency, protection from moisture and vermin damage, and lower fire insurance premiums.

All of the assembly fire ratings were calculated based on the physical properties of the indicated concrete masonry unit as produced by Rinker Materials Corporation. The substitution of other concrete masonry units for the indicated unit may result in a lower fire resistive rating than that listed and will void the certification of the rating by the Registered Engineer.

All construction of these assemblies must be in accordance with the applicable sections of the local building code in effect. Rinker Materials Corporation is only specifying the type of concrete masonry unit which must be used in the assembly, and the type and required thickness of the finishes added to the concrete block necessary to achieve the indicated fire resistance rating.

Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assemblies shown. Additionally we accept no responsibility for the construction of said assemblies.

For information on the price or availability of concrete block, please contact the Rinker Materials Corporation plant in your area or in the area you will be working. A listing of all Rinker plants is included in this manual for your convenience.

For technical information or questions about this manual, please contact the Rinker Materials Corporation Quality Control Department, 1501 Belvedere Road, West Palm Beach, Florida 33406, area code 407-833-5555 or 1-800-432-5521.
USE OF THIS MANUAL

8 STEPS TO A SUPERIOR FIRE RATED ASSEMBLY

1. Determine the wall assembly fire rating required from the applicable sections of the local building code in effect.

2. Determine the wall thickness necessary to satisfy the building code and your structural requirements.

3. Consult the appropriate Section(s) in the manual, listed by wall thickness and fire resistance rating, and select the type of assembly(ies) that best suits your design and purpose.

4. Contact the Rinker Plant in the area you will be building in as to the availability of the concrete block in the assembly(ies) you have selected. (see plant listing in this manual)

5. If a certain block texture is desired, consult with the plant as to available textures.

6. If a higher strength unit is required than that indicated by the ASTM Specification corresponding to the unit to be ordered, include the strength requirements in your specifications and consult the plant as to availability. Regular Rinker Concrete Block are certified to have an $f_{mi}^t$ strength of 1500 pounds per square inch.

7. When you have decided on the assembly(ies) you will use, request from the plant a copy of the assembly(ies) and calculations bearing the Engineers Seal, and attach the drawing(s) to your plans. You will also receive certification on the concrete masonry units to be provided.

8. Designate the required concrete masonry units by Rinker type number to insure you receive the proper units. Identify on plans where units go by type number to insure proper placement.
BUILDING CODE REQUIREMENTS

ON SUPPLEMENTAL MATERIALS AND ATTACHMENT OF FINISHES

LOOSE FILL MATERIAL

See Section 3101.6 of the Standard Building Code and Note 13 of Table 37-B of the South Florida Building Code for a listing of approved loose fill materials.

All of the core spaces and cavities in the wall assembly must be filled with approved loose fill materials to achieve the indicated fire resistance rating.

MASONRY GROUT

See Section 1410.1 of the Standard Building Code and Section 2704.10 of the South Florida Building Code for information on proper application in grouting concrete masonry.

All of the core spaces and cavities in the wall assembly must be filled with masonry grout meeting the requirements of the local building code in effect to achieve the indicated fire resistance rating.

PORTLAND CEMENT-SAND PLASTER


All of the assemblies in this manual were calculated using Portland Cement-Sand Plaster applied directly to the concrete masonry unit. Use of other types of plaster or different methods of attachment will require re-calculation of the assembly rating and may result in values other than indicated.

The indicated thickness of Portland Cement-Sand Plaster is the minimum required to achieve the indicated fire resistance rating. Use of other thicknesses will require re-calculation of the assembly rating and may result in values other than indicated.

GYPSUM WALLBOARD

See Chapters 10, 18, and 31 of the Standard Building Code and Chapters 35 and 37 of the South Florida Building Code for information on the proper application of gypsum wallboard.

The indicated thickness and type of gypsum wallboard used in the assemblies is the minimum required to achieve the indicated fire resistance rating. Use of other thicknesses or types of gypsum wallboard will require re-calculation of the assembly rating and may result in values other than indicated.
Gypsum wallboard shall be attached to wood or steel furring members spaced not more than 16 inches on center.

Gypsum wallboard shall be installed with the long dimension parallel to the furring members and shall have the joints finished.

MULTI-WYTE WALLS


The size of the cavity between the wythes must be in accordance with the requirements of the local Building Code in effect.

The type, size and spacing of metal wall ties must be in accordance with the requirements of the local Building Code in effect.

MORTAR

Standard Building Code - Mortars complying with the requirements of A.S.T.M. Specification C270 for Types M, S, N and O are suitable for use in masonry fire rated wall assemblies. See Section 1402.9 of the code for mortar type selection.

South Florida Building Code - Mortars complying with the requirements of A.S.T.M. Specification C270 for Types M and S are required in masonry fire rated wall assemblies rated 2 hours or more. See Section 2702.10 of the code for mortar type selection.
INDEX OF SPECIFICATIONS, CODES
AND RELATED DOCUMENTS

SPECIFICATIONS

American Society for Testing and Materials
1916 Race Street
Philadelphia, PA 19103

A.S.T.M. C90 for "Hollow Load-Bearing Concrete Masonry Units"
A.S.T.M. C145 for "Solid Load-Bearing Concrete Masonry Units"
A.S.T.M. C55 for "Concrete Building Brick"

CODES

Southern Building Code Congress International/Standard Building Code
900 Montclair Road
Birmingham, AL 35213-1206

Chapter 31 "Calculated Fire Resistance"
Section 3101.5 Concrete Masonry Walls
Section 3101.6 Cores of Masonry Filled
Table 3101.4A Multiplying Factor for Finishes on Non-Fire Exposed Side of Wall
Table 3101.4B Time Assigned to Finish Materials on Fire-Exposed Side of Wall
Table 3101.5 Minimum Equivalent Thickness (inches) of Loadbearing or Non-loadbearing Concrete Masonry Walls
Commentary on Chapter 31 "Calculated Fire Resistance"

South Florida Building Code
DADE: Board of Rules & Appeals
111 N.W. 1st Street
Miami, FL 33128

BROWARD: Rules & Appeals Board
955 S. Federal Highway
Ft. Lauderdale, FL 33316

Chapter 37 Fire Resistive Standards
Section 3701.1(b) General
Section 3701.2(o) General
Section 3703.14 Concrete Masonry Walls
Table 37-B(27-31) and note 13 & 14 Rated Fire-Resistive Periods for Various Walls and Partitions
Table 37-D Multiple Factor for Finishes on Non-Fire Exposed Side of Wall
Table 37-E Time Assigned to Finish Materials on Fire Exposed Side of Wall
RELATED DOCUMENTS

Florida Concrete and Products Association, Inc.
649 Vassar Street
Orlando, FL 32804-5382

Calculated Fire Resistance for Concrete and Concrete Masonry
- Florida Code Approved Procedures
  The Florida Home - Your Concrete Advantage

National Concrete Masonry Association
P.O. Box 781
Herndon, VA 22070

  TEK 80A Increasing the Fire Resistance of Concrete Masonry
  TEK 46 Fire Safe Concrete Masonry Construction

Concrete and Masonry Industry Firesafety Committee
5420 Old Orchard Road
Skokie, IL 60077-4321

  Fire Protection Planning Report No. 13
    Analytical Methods Of Determining Fire Endurance of Concrete and Masonry Members
    - Model Code Approved Procedures
STATEMENT BY ENGINEER

The physical properties of the concrete masonry units specified in the assembly drawings found in this manual have been tested under my supervision and to my satisfaction that the properties of the units are correct as indicated.

Physical testing of the units was conducted in accordance with A.S.T.M. Specification C140-75 "Sampling and Testing Concrete Masonry Units". Testing was conducted by an Engineering Laboratory qualified to conduct testing of concrete masonry units and inspected under the Engineering Testing Laboratory Inspection Program administered by the Concrete Materials Engineering Council or equal accreditation program.

I have verified the Fire Resistance Rating of all the assemblies in this manual to insure that the calculations were done correctly resulting in the values indicated, and to insure that all assemblies and calculations were in accordance with the approved procedures as found in the current editions of the Standard Building Code and the South Florida Building Code, Dade and Broward County editions.

[Signature]

Donald A. Beers, P.E.
Fla. Registered Professional Engineer
Rinker Materials Corporation
NOTE: RINKER TYPE NUMBERS

Some of the Rinker Type Numbers, for identification of concrete masonry units as listed on the following page, may be different in some areas of the state.

The following Rinker Type Numbers are interchangeable, and do not affect the fire resistance rating of the assemblies:

<table>
<thead>
<tr>
<th>Rinker Type Number</th>
<th>Alternative Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>209</td>
</tr>
<tr>
<td>215</td>
<td>814</td>
</tr>
<tr>
<td>10 or 11</td>
<td>14</td>
</tr>
<tr>
<td>333</td>
<td>335</td>
</tr>
</tbody>
</table>
# INDEX OF CONCRETE MASONRY UNITS IN THE ASSEMBLY DRAWINGS

<table>
<thead>
<tr>
<th>RINKER TYPE NO.</th>
<th>SIZE</th>
<th>DESCRIPTION</th>
<th>A.S.T.M. DESIGNATION</th>
<th>EQUIVALENT THICKNESS</th>
<th>FIRE RESISTANCE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Standard Building Code</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Table 3101.5)</td>
</tr>
<tr>
<td>201</td>
<td>4'' x 8'' x 16''</td>
<td>2 core hollow partition</td>
<td>C90</td>
<td>2.6''</td>
<td>56 minutes</td>
</tr>
<tr>
<td>220</td>
<td>4'' x 8'' x 16''</td>
<td>solid partition</td>
<td>C145</td>
<td>3.6''</td>
<td>100 minutes</td>
</tr>
<tr>
<td>215</td>
<td>6'' x 8'' x 16''</td>
<td>2 core hollow partition</td>
<td>C90</td>
<td>3.2''</td>
<td>80 minutes</td>
</tr>
<tr>
<td>997</td>
<td>6'' x 8'' x 16''</td>
<td>2 core solid partition</td>
<td>C145</td>
<td>4.5''</td>
<td>150 minutes</td>
</tr>
<tr>
<td>214</td>
<td>6'' x 8'' x 16''</td>
<td>solid partition</td>
<td>C145</td>
<td>5.6''</td>
<td>217 minutes</td>
</tr>
<tr>
<td>10 or 11</td>
<td>8'' x 8'' x 16''</td>
<td>2 core hollow unit</td>
<td>C90</td>
<td>3.7''</td>
<td>105 minutes</td>
</tr>
<tr>
<td>18 or 11A</td>
<td>8'' x 8'' x 16''</td>
<td>2 core hollow unit</td>
<td>C90</td>
<td>4.1''</td>
<td>125 minutes</td>
</tr>
<tr>
<td>28</td>
<td>8'' x 8'' x 16''</td>
<td>2 core hollow unit</td>
<td>C90</td>
<td>5.2''</td>
<td>195 minutes</td>
</tr>
<tr>
<td>29</td>
<td>8'' x 8'' x 16''</td>
<td>3 core solid unit</td>
<td>C145</td>
<td>6.0''</td>
<td>240 minutes</td>
</tr>
<tr>
<td>57</td>
<td>8'' x 8'' x 16''</td>
<td>solid unit</td>
<td>C145</td>
<td>7.6''</td>
<td>240 minutes</td>
</tr>
<tr>
<td>333</td>
<td>10'' x 8'' x 16''</td>
<td>2 core hollow unit</td>
<td>C90</td>
<td>4.5''</td>
<td>150 minutes</td>
</tr>
<tr>
<td>334</td>
<td>10'' x 8'' x 16''</td>
<td>solid unit</td>
<td>C145</td>
<td>9.6''</td>
<td>240 minutes</td>
</tr>
<tr>
<td>306</td>
<td>12'' x 8'' x 16''</td>
<td>2 core hollow foundation unit</td>
<td>C90</td>
<td>1 1/4'' face-shell</td>
<td>5.1''</td>
</tr>
<tr>
<td>315</td>
<td>12'' x 8'' x 16''</td>
<td>2 core hollow foundation unit</td>
<td>C90</td>
<td>1 1/2'' face-shell</td>
<td>5.8''</td>
</tr>
<tr>
<td>901</td>
<td>12'' x 8'' x 16''</td>
<td>2 core hollow foundation unit</td>
<td>C90</td>
<td>7.7''</td>
<td>240 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 B.B.</td>
<td>4'' x 2 1/4'' x 8''</td>
<td>Besser Brick</td>
<td>C55</td>
<td>3.6''</td>
<td>60 minutes</td>
</tr>
<tr>
<td>660</td>
<td>4'' x 4'' x 16''</td>
<td>Split Face</td>
<td>C145</td>
<td>3.6''</td>
<td>100 minutes</td>
</tr>
</tbody>
</table>

All units are Grade N, Normal weight (125 pounds per cubic foot)
All units are manufactured with limestone coarse aggregate
# INDEX OF ASSEMBLY DRAWINGS

<table>
<thead>
<tr>
<th>ASSEMBLY NO.</th>
<th>DESCRIPTION</th>
<th>STANDARD BUILDING CODE</th>
<th>SOUTH FLORIDA BUILDING CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4 INCH UNIT - 1 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-1-220</td>
<td>T-220 unit</td>
<td>100 minutes</td>
<td>100 minutes</td>
</tr>
<tr>
<td>4-1-201G</td>
<td>T-201 w/grout</td>
<td>100 minutes</td>
<td>100 minutes</td>
</tr>
<tr>
<td>4-1-201F</td>
<td>T-201 w/fill</td>
<td>100 minutes</td>
<td>100 minutes</td>
</tr>
<tr>
<td>4-1-201P</td>
<td>T-201 w/5/8″ plaster either side</td>
<td>80 minutes</td>
<td>81 minutes</td>
</tr>
<tr>
<td>4-1-201W</td>
<td>T-201 w/3/8″ gypsum wallboard either side</td>
<td>66 minutes</td>
<td>66 minutes</td>
</tr>
<tr>
<td><strong>4 INCH UNIT - 2 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-2-220P</td>
<td>T-220 w/5/8″ plaster either side</td>
<td>130 minutes</td>
<td>132 minutes</td>
</tr>
<tr>
<td>4-2-220W</td>
<td>T-220 w/5/8″ gypsum wallboard either side</td>
<td>130 minutes</td>
<td>130 minutes</td>
</tr>
<tr>
<td>4-2-220WF</td>
<td>T-220 w/1/2″ fire code gypsum wallboard either side</td>
<td>125 minutes</td>
<td>125 minutes</td>
</tr>
<tr>
<td><strong>6 INCH UNIT - 1 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-1-215</td>
<td>T-215 unit</td>
<td>80 minutes</td>
<td>81 minutes</td>
</tr>
<tr>
<td><strong>6 INCH UNIT - 2 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-2-997</td>
<td>T-997 unit</td>
<td>150 minutes</td>
<td>150 minutes</td>
</tr>
<tr>
<td>6-2-215P2</td>
<td>T-215 w/5/8″ plaster both sides</td>
<td>142 minutes</td>
<td>144 minutes</td>
</tr>
<tr>
<td>6-2-215PW</td>
<td>T-215 w/5/8″ plaster+ 3/8″ gypsum wallboard</td>
<td>120 minutes</td>
<td>120 minutes</td>
</tr>
<tr>
<td>6-2-215W2</td>
<td>T-215 w/1/2″ gypsum wallboard both sides</td>
<td>120 minutes</td>
<td>120 minutes</td>
</tr>
<tr>
<td><strong>6 INCH UNIT - 3 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-3-214</td>
<td>T-214 unit</td>
<td>217 minutes</td>
<td>216 minutes</td>
</tr>
<tr>
<td>6-3-215G</td>
<td>T-215 w/grout</td>
<td>217 minutes</td>
<td>216 minutes</td>
</tr>
<tr>
<td>6-3-215F</td>
<td>T-215 w/fill</td>
<td>217 minutes</td>
<td>216 minutes</td>
</tr>
<tr>
<td>6-3-997P</td>
<td>T-997 w/5/8″ plaster either side</td>
<td>187 minutes</td>
<td>186 minutes</td>
</tr>
<tr>
<td>6-3-997W</td>
<td>T-997 w/5/8″ gypsum wallboard either side</td>
<td>180 minutes</td>
<td>180 minutes</td>
</tr>
<tr>
<td><strong>6 INCH UNIT - 4 HOUR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-4-214P</td>
<td>T-214 w/5/8″ plaster either side</td>
<td>240 minutes</td>
<td>240 minutes</td>
</tr>
<tr>
<td>6-4-214W</td>
<td>T-214 w/5/8″ gypsum wallboard either side</td>
<td>240 minutes</td>
<td>240 minutes</td>
</tr>
</tbody>
</table>
## INDEX OF ASSEMBLY DRAWINGS (Continued)

<table>
<thead>
<tr>
<th>ASSEMBLY NO.</th>
<th>DESCRIPTION</th>
<th>FIRE RESISTANCE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STANDARD BUILDING CODE</td>
</tr>
<tr>
<td><strong>8 INCH UNIT - 1 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-1-10</td>
<td>T-10 unit</td>
<td>105 minutes</td>
</tr>
<tr>
<td>8-1-11</td>
<td>T-11 unit</td>
<td>105 minutes</td>
</tr>
<tr>
<td><strong>8 INCH UNIT - 2 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-2-18</td>
<td>T-18 unit</td>
<td>125 minutes</td>
</tr>
<tr>
<td>8-2-11A</td>
<td>T-11A unit</td>
<td>125 minutes</td>
</tr>
<tr>
<td>8-2-10P</td>
<td>T-10 w/5/8&quot; plaster either side</td>
<td>135 minutes</td>
</tr>
<tr>
<td>8-2-11P</td>
<td>T-11 w/5/8&quot; plaster either side</td>
<td>135 minutes</td>
</tr>
<tr>
<td>8-2-10W</td>
<td>T-10 w/1/2&quot; gypsum wallboard either side</td>
<td>120 minutes</td>
</tr>
<tr>
<td>8-2-11W</td>
<td>T-11 w/1/2&quot; gypsum wallboard either side</td>
<td>120 minutes</td>
</tr>
<tr>
<td>8-2-10SF</td>
<td>T-10 unit</td>
<td>120 minutes</td>
</tr>
<tr>
<td><strong>8 INCH UNIT - 3 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-3-28</td>
<td>T-28 unit</td>
<td>195 minutes</td>
</tr>
<tr>
<td>8-3-10W2</td>
<td>T-10 w/2 layers 1/2&quot; gypsum wallboard both sides</td>
<td>200 minutes</td>
</tr>
<tr>
<td>8-3-11W2</td>
<td>T-11 w/2 layers 1/2&quot; gypsum wallboard both sides</td>
<td>200 minutes</td>
</tr>
<tr>
<td>8-3-18P2</td>
<td>T-18 w/5/8&quot; plaster both sides</td>
<td>200 minutes</td>
</tr>
<tr>
<td>8-3-18W2</td>
<td>T-18 w/5/8&quot; gypsum wallboard both sides</td>
<td>190 minutes</td>
</tr>
<tr>
<td>8-3-18PW</td>
<td>T-18 w/5/8&quot; plaster + 5/8&quot; gypsum wallboard</td>
<td>190 minutes</td>
</tr>
<tr>
<td>8-3-11AP2</td>
<td>T-11A w/5/8&quot; plaster both sides</td>
<td>200 minutes</td>
</tr>
<tr>
<td>8-3-11AW2</td>
<td>T-11A w/5/8&quot; gypsum wallboard both sides</td>
<td>190 minutes</td>
</tr>
<tr>
<td>8-3-11APW</td>
<td>T-11A w/5/8&quot; plaster + 5/8&quot; gypsum wallboard</td>
<td>190 minutes</td>
</tr>
<tr>
<td><strong>8 INCH UNIT - 4 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-4-29</td>
<td>T-29 unit</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-57</td>
<td>T-57 unit</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-10G</td>
<td>T-10 w/grout</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-11G</td>
<td>T-11 w/grout</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-10F</td>
<td>T-10 w/fill</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-11F</td>
<td>T-11 w/fill</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-28P2</td>
<td>T-28 w/5/8&quot; plaster both sides</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-28PW</td>
<td>T-28 w/5/8&quot; plaster + 1/2&quot; gypsum wallboard</td>
<td>240 minutes</td>
</tr>
<tr>
<td>8-4-28W2</td>
<td>T-28 w/5/8&quot; gypsum wallboard both sides</td>
<td>240 minutes</td>
</tr>
</tbody>
</table>
### INDEX OF ASSEMBLY DRAWINGS (Continued)

<table>
<thead>
<tr>
<th>ASSEMBLY NO.</th>
<th>DESCRIPTION</th>
<th>FIRE RESISTANCE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STANDARD BUILDING CODE</td>
</tr>
<tr>
<td><strong>10 INCH UNIT - 2 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-2-333</td>
<td>T-333 unit</td>
<td>150 minutes</td>
</tr>
<tr>
<td><strong>10 INCH UNIT - 3 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-3-333P</td>
<td>T-333 w/5/8&quot; plaster either side</td>
<td>187 minutes</td>
</tr>
<tr>
<td>10-3-333W</td>
<td>T-333 w/5/8&quot; gypsum wallboard either side</td>
<td>180 minutes</td>
</tr>
<tr>
<td><strong>10 INCH UNIT - 4 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-4-334</td>
<td>T-334 unit</td>
<td>240 minutes</td>
</tr>
<tr>
<td>10-4-333G</td>
<td>T-333 w/grout</td>
<td>240 minutes</td>
</tr>
<tr>
<td>10-4-333F</td>
<td>T-333 w/fill</td>
<td>240 minutes</td>
</tr>
<tr>
<td>10-4-333W2</td>
<td>T-333 w/2 layers 1/2&quot; gypsum wallboard both sides</td>
<td>240 minutes</td>
</tr>
<tr>
<td><strong>12 INCH UNIT - 3 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-3-306</td>
<td>T-306 unit</td>
<td>187 minutes</td>
</tr>
<tr>
<td>12-3-315</td>
<td>T-315 unit</td>
<td>228 minutes</td>
</tr>
<tr>
<td><strong>12 INCH UNIT - 4 HOUR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-901</td>
<td>T-901 unit</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-306F</td>
<td>T-306 w/fill</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-306G</td>
<td>T-306 w/grout</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-315P</td>
<td>T-315 w/5/8&quot; plaster either side</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-315W</td>
<td>T-315 w/1/2&quot; gypsum wallboard either side</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-306P2</td>
<td>T-306 w/5/8&quot; plaster both sides</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-306PW</td>
<td>T-306 w/5/8&quot; plaster + 5/8&quot; gypsum wallboard</td>
<td>240 minutes</td>
</tr>
<tr>
<td>12-4-306W2</td>
<td>T-306 w/5/8&quot; gypsum wallboard both sides</td>
<td>240 minutes</td>
</tr>
</tbody>
</table>

### MULTI-WYTHE WALLS

<table>
<thead>
<tr>
<th>ASSEMBLY NO.</th>
<th>DESCRIPTION</th>
<th>FIRE RESISTANCE RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STANDARD BUILDING CODE</td>
</tr>
<tr>
<td>B-1</td>
<td>Besser Brick or Clay Brick</td>
<td>60 minutes</td>
</tr>
<tr>
<td>B/201-4</td>
<td>T-201 w/Brick veneer</td>
<td>240 minutes</td>
</tr>
<tr>
<td>660/201-4</td>
<td>T-201 w/T-660 veneer</td>
<td>240 minutes</td>
</tr>
<tr>
<td>B/215-4</td>
<td>T-215 w/Brick veneer</td>
<td>240 minutes</td>
</tr>
<tr>
<td>B/10-4</td>
<td>T-10 w/Brick veneer</td>
<td>240 minutes</td>
</tr>
<tr>
<td>B/11-4</td>
<td>T-11 w/Brick veneer</td>
<td>240 minutes</td>
</tr>
<tr>
<td>201/201-3</td>
<td>T-201 Double Wythe</td>
<td>234 minutes</td>
</tr>
<tr>
<td>201/201P-4</td>
<td>T-201 Double Wythe w/5/8&quot; plaster</td>
<td>240 minutes</td>
</tr>
<tr>
<td>201/201W-4</td>
<td>T-201 Double Wythe w/3/8&quot; gypsum wallboard</td>
<td>240 minutes</td>
</tr>
<tr>
<td>215/201-4</td>
<td>T-215 Double Wythe</td>
<td>240 minutes</td>
</tr>
<tr>
<td>215/201-4</td>
<td>T-215 + T-201 Double Wythe</td>
<td>240 minutes</td>
</tr>
</tbody>
</table>
1 HOUR FIRE RATING

4 inch C.M.U.
**1 HOUR FIRE RATING**

**4 inch C.M.U.**

**ASSEMBLY DETAILS**

1. Rinker Type T-220 C.M.U., 4" x 8" x 16" nominal

**ASSEMBLY DETAILS**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

2. Masonry grout - all cells filled

**ASSEMBLY DETAILS**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

OR

3. Approved loose fill material - all cells filled

**ASSEMBLY DETAILS**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

2. Wood or metal furring - 16" o.c. maximum

3. Gypsum wallboard - 3/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
2 HOUR FIRE RATING

4 inch C.M.U.
2 HOUR FIRE RATING

**FIRE RATING:** 2 hour

---

### T220

**ASSEMBLY DETAILS**

1. Rinker Type T-220 C.M.U., 4" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

---

### T220

**ASSEMBLY DETAILS**

1. Rinker Type T-220 C.M.U., 4" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 5/8" thick - long dimension parallel to furring members - all joints finished

---

### T220

**ASSEMBLY DETAILS**

1. Rinker Type T-220 C.M.U., 4" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 1/2" thick firecode - long dimension parallel to furring members - all joints finished

---

*"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."*
1 HOUR FIRE RATING

6 inch C.M.U.
<table>
<thead>
<tr>
<th>ASSEMBLY DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Rinker Type T-215 C.M.U., 6&quot; x 8&quot; x 16&quot; nominal</td>
</tr>
</tbody>
</table>

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
2 HOUR FIRE RATING

6 inch C.M.U.
**ASSEMBLY DETAILS**

1. Rinker Type T-215 C.M.U., 6" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick - both sides - applied directly to C.M.U.
3. Wood or metal furring - 16" o.c. maximum
4. Gypsum wallboard - 3/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
3 HOUR FIRE RATING

6 inch C.M.U.
**ASSEMBLY DETAILS**

1. Rinker Type T-214 C.M.U., 6" x 8" x 16" nominal

**ASSEMBLY DETAILS**

1. Rinker Type T-215 C.M.U., 6" x 8" x 16" nominal
2. Masonry grout - all cells filled

**ASSEMBLY DETAILS**

1. Rinker Type T-997 C.M.U., 6" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

**ASSEMBLY DETAILS**

1. Rinker Type T-997 C.M.U., 6" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 5/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
4 HOUR FIRE RATING

6 inch C.M.U.
ASSEMBLY DETAILS

1. Rinker Type T-214 C.M.U., 6\" x 8\" x 16\" nominal
2. Portland cement stucco - 5/8\" thick applied directly to C.M.U.
3. Gypsum wallboard - 5/8\" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
1 HOUR FIRE RATING

8 inch C.M.U.
**1 HOUR FIRE RATING**

**8 inch C.M.U.**

<table>
<thead>
<tr>
<th>FIRE RATING: 1 hour</th>
<th>No. 8-1-10</th>
<th>FIRE RATING: 1 hour</th>
<th>No. 8-1-11</th>
</tr>
</thead>
</table>

![Diagram of wall assembly](image)

**ASSEMBLY DETAILS**

1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal

![Diagram of wall assembly](image)

**ASSEMBLY DETAILS**

1. Rinker Type T-11 C.M.U., 8" x 8" x 16" nominal

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
2 HOUR FIRE RATING

8 inch C.M.U.
### 2 Hour Fire Rating

**8 inch C.M.U.**

#### No. 8-2-18

**ASSEMBLY DETAILS**

1. Rinker Type T-18 C.M.U., 8" x 8" x 16" nominal

#### No. 8-2-10P

**ASSEMBLY DETAILS**

1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

#### No. 8-2-11A

**ASSEMBLY DETAILS**

1. Rinker Type T-11A C.M.U., 8" x 8" x 16" nominal

#### No. 8-2-11P

**ASSEMBLY DETAILS**

1. Rinker Type T-11 C.M.U., 8" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

---

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
ASSEMBLY DETAILS

1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 1/2" thick - long dimension parallel to furring members - all joints finished

SOUTH FLORIDA BUILDING CODE
BROWARD COUNTY ONLY

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
3 HOUR FIRE RATING

8 inch C.M.U.
3 HOUR FIRE RATING

8 inch C.M.U.

FIRE RATING: 3 hour
No. 8-3-28

T 28

ASSEMBLY DETAILS
1. Rinker Type T-28 C.M.U., 8" x 8" x 16" nominal

FIRE RATING: 3 hour
No. 8-3-10W2

T 10

ASSEMBLY DETAILS
1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 2 layers 1/2" thick - both sides - long dimension parallel to furring members - all joints finished

FIRE RATING: 3 hour
No. 8-3-11W2

T 11

ASSEMBLY DETAILS
1. Rinker Type T-11 C.M.U., 8" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 2 layers 1/2" thick - both sides - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
**ASSEMBLY DETAILS**

1. Rinker Type T-18 C.M.U., 8" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick - both sides - applied directly to C.M.U.

3. Wood or metal furring - 16" o.c. maximum
4. Gypsum wallboard - 5/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
3 HOUR FIRE RATING

8 inch C.M.U.

FIRE RATING: 3 hour No. 8-3-11AP2

ASSEMBLY DETAILS
1. Rinker Type T-11A C.M.U., 8” x 8” x 16” nominal
2. Portland cement stucco - 5/8” thick - both sides - applied directly to C.M.U.

FIRE RATING: 3 hour No. 8-3-11AW2

ASSEMBLY DETAILS
1. Rinker Type T-11A C.M.U., 8” x 8” x 16” nominal
2. Wood or metal furring - 16” o.c. maximum
3. Gypsum wallboard - 5/8” thick - both sides - long dimension parallel to furring members - all joints finished

FIRE RATING: 3 hour No. 8-3-11APW

ASSEMBLY DETAILS
1. Rinker type T-11A C.M.U., 8” x 8” x 16” nominal
2. Portland cement stucco - 5/8” thick applied directly to C.M.U.
3. Wood or metal furring - 16” o.c. maximum
4. Gypsum wallboard - 5/8” thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
4 HOUR FIRE RATING

8 inch C.M.U.
4 HOUR FIRE RATING

8 inch C.M.U.

FIRE RATING: 4 hour  No. 8-4-29  FIRE RATING: 4 hour  No. 8-4-57

T 29

ASSEMBLY DETAILS

1. Rinker Type T-29 C.M.U., 8" x 8" x 16" nominal

T 57

ASSEMBLY DETAILS

1. Rinker Type T-57 C.M.U., 8" x 8" x 16" nominal

T 10

ASSEMBLY DETAILS

1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal
2. Masonry grout - all cells filled
   OR
3. Approved loose fill material - all cells filled

T 11

ASSEMBLY DETAILS

1. Rinker Type T-11 C.M.U., 8" x 8" x 16" nominal
2. Masonry grout - all cells filled
   OR
3. Approved loose fill material - all cells filled

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
ASSEMBLY DETAILS

1. Rinker Type T-28 C.M.U., 8" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick - both sides - applied directly to C.M.U.

1. Rinker Type T-28 C.M.U., 8" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.
3. Wood or metal furring - 16" o.c. maximum
4. Gypsum wallboard - 1/2" thick - long dimension parallel to furring members - all joints finished

ASSEMBLY DETAILS

1. Rinker Type T-28 C.M.U., 8" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 5/8" thick - both sides - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
2 HOUR FIRE RATING

10 inch C.M.U.
ASSEMBLY DETAILS

1. Rinker Type T-333 C.M.U., 10" x 8" x 16" nominal

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
3 HOUR FIRE RATING

10 inch C.M.U.
3 HOUR FIRE RATING

FIRE RATING: 3 hour No. 10-3-333P

10 inch C.M.U.

FIRE RATING: 3 hour No. 10-3-333W

ASSEMBLY DETAILS

1. Rinker Type T-333 C.M.U., 10" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

ASSEMBLY DETAILS

1. Rinker Type T-333 C.M.U., 10" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 5/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
4 HOUR FIRE RATING

10 inch C.M.U.
**4 HOUR FIRE RATING**

**10 inch C.M.U.**

**FIRE RATING:** 4 hour

No. 10-4-334

---

**ASSEMBLY DETAILS**

1. Rinker Type T-334 C.M.U., 10" x 8" x 16" nominal

---

**T 334**

---

**FIRE RATING:** 4 hour

No. 10-4-333W2

---

**ASSEMBLY DETAILS**

1. Rinker Type T-333 C.M.U., 10" x 8" x 16" nominal
2. Masonry grout - all cells filled

**OR**

3. Approved loose fill material - all cells filled

---

**T 333**

---

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."

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3 HOUR FIRE RATING

12 inch C.M.U.
"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
4 HOUR FIRE RATING

12 inch C.M.U.
4 HOUR FIRE RATING

12 inch C.M.U.

**ASSEMBLY DETAILS**

1. Rinker Type T-901 C.M.U., 12" x 8" x 16" nominal

**ASSEMBLY DETAILS**

1. Rinker Type T-306 C.M.U., 12" x 8" x 16" nominal
2. Approved loose fill material - all cells filled

T901

T306

**ASSEMBLY DETAILS**

1. Rinker Type T-306 C.M.U., 12" x 8" x 16" nominal
2. Masonry grout - all cells filled

**ASSEMBLY DETAILS**

1. Rinker Type T-315 C.M.U., 12" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

T306

T315

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
4 HOUR FIRE RATING

12 inch C.M.U.

FIRE RATING: 4 hour
No. 12-4-315W

ASSEMBLY DETAILS
1. Rinker Type T-315 C.M.U., 12" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 1/2" thick - long dimension parallel to furring members - all joints finished

FIRE RATING: 4 hour
No. 12-4-306P2

ASSEMBLY DETAILS
1. Rinker Type T-306 C.M.U., 12" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick - both sides - applied directly to C.M.U.

FIRE RATING: 4 hour
No. 12-4-306PW

ASSEMBLY DETAILS
1. Rinker Type T-306 C.M.U., 12" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.
3. Wood or metal furring - 16" o.c. maximum
4. Gypsum wallboard - 5/8" thick - long dimension parallel to furring members - all joints finished

FIRE RATING: 4 hour
No. 12-4-306W2

ASSEMBLY DETAILS
1. Rinker Type T-306 C.M.U., 12" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 5/8" thick - both sides - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."

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MULTI-WYTHE WALLS
## Multi-Wythe Walls

### Assembly Details

**B.B.**

1. Rinker Besser Concrete Brick, 4" x 2¼" x 8" nominal, or solid clay brick

**B. B.**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal
2. Rinker Besser Concrete Brick, 4" x 2¼" x 8" nominal, or solid clay brick

### Assembly Details

**T 201**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

**T 660**

1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal
2. Rinker Type T-660 C.M.U., 4" x 4" x 16" nominal split face

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
MULTI-WYTHE WALLS

ASSEMBLY DETAILS

1. Rinker Type T-215 C.M.U., 6" x 8" x 16" nominal
2. Rinker Besser Concrete Brick, 4" x 2½" x 8" nominal, or Solid Clay Brick

ASSEMBLY DETAILS

1. Rinker Type T-10 C.M.U., 8" x 8" x 16" nominal
2. Rinker Besser Concrete Brick, 4" x 2½" x 8" nominal, or Solid Clay Brick

ASSEMBLY DETAILS

1. Rinker Type T-11 C.M.U., 8" x 8" x 16" nominal
2. Rinker Besser Concrete Brick, 4" x 2½" x 8" nominal, or Solid Clay Brick

="Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
MULTI-WYTHE WALLS

FIRE RATING: 3 hour No. 201/201-3

T201

ASSEMBLY DETAILS
1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

ASSEMBLY DETAILS
1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal
2. Portland cement stucco - 5/8" thick applied directly to C.M.U.

FIRE RATING: 4 hour No. 201/201W-4

T201

ASSEMBLY DETAILS
1. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal
2. Wood or metal furring - 16" o.c. maximum
3. Gypsum wallboard - 3/8" thick - long dimension parallel to furring members - all joints finished

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
ASSEMBLY DETAILS

1. Rinker Type T-215 C.M.U., 6" x 8" x 16" nominal

ASSEMBLY DETAILS

1. Rinker Type T-215 C.M.U., 6" x 8" x 16" nominal
2. Rinker Type T-201 C.M.U., 4" x 8" x 16" nominal

"Rinker Materials Corporation accepts no responsibility for the proper application of the rated wall assembly shown. Additionally we accept no responsibility for the construction of said assemblies."
### Standard Building Code

<table>
<thead>
<tr>
<th>Equivalent Thickness of unit</th>
<th><strong>4.1&quot;</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness of Finish on Non-Fire side X multiple factor 5/8&quot; plaster</td>
<td>+ = 4.7&quot; = 160 minutes (Table 3101.4A)</td>
</tr>
<tr>
<td>+ = 190 minutes</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equivalent Thickness of unit</th>
<th><strong>4.1&quot;</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness of Finish on Non-Fire side X multiple factor 5/8&quot; plaster</td>
<td>+ = 4.7&quot; = 162 minutes (Table 37-D)</td>
</tr>
<tr>
<td>+ = 192 minutes</td>
<td></td>
</tr>
</tbody>
</table>

| Time for Finish on Fire Side 5/8" gypsum wallboard | 30 minutes (Table 3101.4B) |
| (Add actual thickness of portland cement sand plaster applied directly to masonry if less than 5/8" thick) |

#### Two Calculations Required? **YES X**  **NO**

<table>
<thead>
<tr>
<th>Equivalent Thickness of unit</th>
<th><strong>4.1&quot;</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness of Finish on Non-Fire side X multiple factor 5/8&quot; gypsum wallboard x (1.00)</td>
<td>+ = 4.7&quot; (Table 3101.4A)</td>
</tr>
<tr>
<td>+ = 5.3&quot; = 200 minutes</td>
<td></td>
</tr>
</tbody>
</table>

| Time for Finish on Fire Side 5/8" plaster | 6" (Table 3101.4B) |
| (Add actual thickness of portland cement sand plaster applied directly to masonry if less than 5/8" thick) |

#### Two Calculations Required? **YES X**  **NO**

### Fire Resistant Rating

- **190 minutes**

---

### South Florida Building Code

<table>
<thead>
<tr>
<th>Equivalent Thickness of unit</th>
<th><strong>4.1&quot;</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness of Finish on Non-Fire side X multiple factor 5/8&quot; plaster</td>
<td>+ = 4.7&quot; = 162 minutes (Table 37-D)</td>
</tr>
<tr>
<td>+ = 192 minutes</td>
<td></td>
</tr>
</tbody>
</table>

| Time for Finish on Fire Side 5/8" gypsum wallboard | 30 minutes (Table 37-E) |
| (Add actual thickness of portland cement sand plaster applied directly to masonry if less than 5/8" thick) |

#### Two Calculations Required? **YES X**  **NO**

<table>
<thead>
<tr>
<th>Equivalent Thickness of unit</th>
<th><strong>4.1&quot;</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness of Finish on Non-Fire side X multiple factor 5/8&quot; gypsum wallboard x (1.00)</td>
<td>+ = 4.7&quot; (Table 37-D)</td>
</tr>
<tr>
<td>+ = 5.3&quot; = 198 minutes</td>
<td></td>
</tr>
</tbody>
</table>

| Time for Finish on Fire Side 5/8" plaster | 6" (Table 37-E) |
| (Add actual thickness of portland cement sand plaster applied directly to masonry if less than 5/8" thick) |

#### Two Calculations Required? **YES X**  **NO**

### Fire Resistant Rating

- **192 minutes**
STANDARD BUILDING CODE

August 7, 1987

ABC Masonry Construction
111 Any Street
Anytown, FL 33333

RE: Your Project
Your Job Address
Anywhere, FL 33333

Gentlemen:

This is to certify that the concrete masonry unit, designated Type 11A, 8'' x 8'' x 16'' nominal, 2 core double corner, supplied by Rinker Materials Corporation for the above project, meets the requirements of A.S.T.M. Specification C90-85 for "Hollow Load-Bearing Concrete Masonry Units", Grade N, for normal weight units.

This is to certify that the Type 11A unit, as described above, meets the requirements of the Standard Building Code for a 2.00 hour Fire Resistance Rating, in accordance with Section 3101.5 of the Code. The type of aggregate used in manufacture is limestone, and the equivalent thickness of the unit is 4.1 inches.

Sincerely yours,

RINKER MATERIALS CORPORATION

Thomas F. Herrell
Quality Control Laboratory Supervisor

TFH/ls
SOUTH FLORIDA BUILDING CODE

August 7, 1987

ABC Masonry Construction
111 Any Street
Anytown, FL 33333

RE: Your Project
Your Job Address
Anywhere, FL 33333

Gentlemen:

This is to certify that the concrete masonry unit, designated Type 18, 8" x 8" x 16" nominal, 2 core double corner with double center web, supplied by Rinker Materials Corporation for the above project, meets the requirements of A.S.T.M. Specification C90-85 for "Hollow Load-Bearing Concrete Masonry Units", Grade N, for normal weight units.

This is to certify that the Type 18 unit, as described above, meets the requirements of the South Florida Building Code for a 2.00 hour Fire Resistance Rating, in accordance with Section 2702.5(a)(2) and Table 37-B of the Code. The type of aggregate used in manufacture is limestone, and the equivalent thickness of the unit is 4.1 inches.

Sincerely yours,

RINKER MATERIALS CORPORATION

Thomas F. Herrell
Quality Control Laboratory Supervisor

TFH/ls
All 6 inch Assemblies

<table>
<thead>
<tr>
<th>Bond Beam</th>
<th>6' x 6' x 16'</th>
<th>1-219</th>
</tr>
</thead>
</table>

6-3-215P
6-2-215G
6-2-15W2
6-2-15P6
6-2-15P2
6-1-215
6-4-214W2
6-4-214W
6-4-15P4
6-3-215P
6-3-215G
6-2-215W2
6-2-15P6
6-2-15P2
6-1-215

<table>
<thead>
<tr>
<th>Hall High Partition</th>
<th>6' x 4' x 16'</th>
<th>1-250</th>
</tr>
</thead>
</table>

6-1-215

<table>
<thead>
<tr>
<th>Hall Partition Solid</th>
<th>6' x 6' x 8'</th>
<th>1-438</th>
</tr>
</thead>
</table>

6-1-215

<table>
<thead>
<tr>
<th>Hall Partition Hollow</th>
<th>6' x 8' x 8'</th>
<th>1-440</th>
</tr>
</thead>
</table>

6-1-215

6 INCH UNITS

<table>
<thead>
<tr>
<th>6-2-20WP</th>
<th>4' x 6' x 8'</th>
<th>1-211</th>
</tr>
</thead>
</table>

4-1-20W
4-1-20P
4-1-20P2
4-1-20P3
4-1-20P4

4 INCH UNITS

<table>
<thead>
<tr>
<th>4-2-20WP</th>
<th>4' x 6' x 6'</th>
<th>1-210</th>
</tr>
</thead>
</table>

4-1-20W
4-1-20P
4-1-20P2
4-1-20P3
4-1-20P4

4 INCH UNITS

Additional Rinker Materials Concrete Masonry Units

Which may be used in the fire rated assemblies

**Type No.**

Rinker Materials Corp.
### 8 Inch Units

<table>
<thead>
<tr>
<th>Assemblies</th>
<th>Description</th>
<th>Size</th>
<th>Type No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U-Beam</td>
<td>U-Beam</td>
<td>8&quot; x 8&quot; x 16&quot;</td>
<td>1-106</td>
</tr>
<tr>
<td>U-Beam</td>
<td>U-Beam</td>
<td>8&quot; x 8&quot; x 16&quot;</td>
<td>1-100</td>
</tr>
<tr>
<td>Bond Beam</td>
<td>Bond Beam</td>
<td>8&quot; x 8&quot; x 16&quot;</td>
<td>1-81</td>
</tr>
<tr>
<td>G-Block</td>
<td>G-Block</td>
<td>8&quot; x 8&quot; x 16&quot;</td>
<td>1-94</td>
</tr>
<tr>
<td>A-Block</td>
<td>A-Block</td>
<td>8&quot; x 8&quot; x 16&quot;</td>
<td>1-95</td>
</tr>
<tr>
<td>1/2 High Hollow</td>
<td>1/2 High Hollow</td>
<td>8&quot; x 4&quot; x 16&quot;</td>
<td>1-380</td>
</tr>
<tr>
<td>High Hollow</td>
<td>High Hollow</td>
<td>8&quot; x 4&quot; x 16&quot;</td>
<td>1-350</td>
</tr>
<tr>
<td>Solid Block</td>
<td>Solid Block</td>
<td>8&quot; x 8&quot; x 8&quot;</td>
<td>1-158</td>
</tr>
<tr>
<td>Solid Block</td>
<td>Solid Block</td>
<td>8&quot; x 8&quot; x 8&quot;</td>
<td>1-178</td>
</tr>
<tr>
<td>Hollow Block</td>
<td>Hollow Block</td>
<td>8&quot; x 8&quot; x 8&quot;</td>
<td>1-177</td>
</tr>
</tbody>
</table>

### Rinker Materials Concrete Masonry Units

**Additional Rinker Materials Concrete Masonry Units**

**8 Inch Assemblies**

- U-Beam
- U-Beam
- Bond Beam
- G-Block
- A-Block
- 1/2 High Hollow
- High Hollow
- Solid Block
- Solid Block
- Hollow Block

**8 Inch Units**

- U-Beam
- U-Beam
- Bond Beam
- G-Block
- A-Block
- 1/2 High Hollow
- High Hollow
- Solid Block
- Solid Block
- Hollow Block

(Rinker Materials Corp.)

**Rinker Materials Concrete Masonry Units**

- Additional Rinker Materials Concrete Masonry Units
Units to be filled solid with Masonry Grout.

<table>
<thead>
<tr>
<th>All 12 inch Assemblies</th>
<th>Bond Beam</th>
<th>12&quot; x 8&quot; x 16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-4-306F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306PW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306 BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-3-306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306PW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306BP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-315W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-901</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-3-306</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-4-306</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12 INCH UNITS

<table>
<thead>
<tr>
<th>All 10 inch Assemblies</th>
<th>Bond Beam</th>
<th>10&quot; x 8&quot; x 16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-4-307</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10 INCH UNITS

### Additional Rinker Materials Concrete Masonry Units

<table>
<thead>
<tr>
<th>Assemblies</th>
<th>Description</th>
<th>Size</th>
<th>Type No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10&quot; x 8&quot; x 16&quot;</td>
<td>1-307</td>
</tr>
</tbody>
</table>

**Additional Rinker Materials Concrete Masonry Units**
## ADDITIONAL RINKER MATERIALS CONCRETE MASONRY UNITS WHICH MAY BE USED IN THE FIRE RATED ASSEMBLIES

<table>
<thead>
<tr>
<th>Rinker Type No.</th>
<th>Column Block Type</th>
<th>Description</th>
<th>Maximum Fire Rating for Type of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-30</td>
<td>Plaster</td>
<td>4 hours</td>
<td>1 1/2 hours</td>
</tr>
<tr>
<td>T-360</td>
<td></td>
<td>4 hours</td>
<td>3 hours</td>
</tr>
<tr>
<td>T-310</td>
<td></td>
<td>4 hours</td>
<td>3 hours</td>
</tr>
<tr>
<td>T-801</td>
<td></td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>T-501</td>
<td></td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>T-361</td>
<td></td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

1. Units to be filled solid with Masonry grout or concrete.
2. Minimum cover to main reinforcement 1 1/2 inches.