FRAMING CONSTRUCTION NOTES

REVISED AUGUST 21, 2002

1. CRAWL GIRDERS AND BAND WITH 4" CURTAIN WALL AND PIER CONSTRUCTION SHALL BE 2-2x10 SOUTHERN YELLOW PINE #2 UNLESS NOTED OTHERWISE. MAXIMUM CLEAR SPAN TO BE 4'-8" (6'-0" O.C. SPACING OF PIERS).

   TO AVOID OBJECTIONABLE CRACKING IN FINISHED HARDWOOD FLOORS OVER ANY GIRDERS, USE THE FOLLOWING PROCEDURE:

   A. NAILING
      I. ALL FLOOR JOISTS MUST BE TOENAILED TO THEIR SUPPORT GIRDERS WITH A MINIMUM OF 3-8d NAILS AT EACH END. LARGER NAILS WILL SPLIT AND RENDER THE TOENAIL INEFFECTIVE. NO END NAILING THROUGH THE GIRDER OR BAND IS PERMITTED.
      II. IF DROPPED GIRDERS ARE USED, END LAP ALL JOISTS AND SIDE NAIL EACH WITH A MINIMUM OF 3-16d NAILS AT EACH END OF EACH JOIST. LEDGER STRIPS NAILED WITH 3-16d NAILS AT EACH JOIST END, SPACED 3" APART.
      III. NAIL MULTIPLE MEMBER BUILT UP GIRDERS WITH TWO ROWS OF 16d NAILS STAGGERED AT 32" O.C., 2" DOWN FROM THE TOP AND 2" UP FROM THE BOTTOM WITH 3-16d NAILS AT EACH END OF EACH PIECE IN THE JOIST THROUGH THE MEMBERS MAKING UP THE MULTIPLE GIRDER.
      IV. THIS NAILING PATTERN WILL INSURE A TIGHT FLOOR FROM OUTSIDE OF HOUSE TO OUTSIDE SO THAT WHEN THE FRAMING SHRINKS DURING THE FIRST HEATING SEASON, THE SHRINKAGE WILL BE UNIFORMLY DISTRIBUTED OVER THE ENTIRE FLOOR. IF THE GIRDER NAILING PATTERN IS OMITTED, THEN THE SHRINKAGE WILL ACCUMULATE OVER THE GIRDERS AND AN OBJECTIONABLE CRACK WILL DEVELOP IN THE FINISHED HARDWOOD FLOOR OVER THE GIRDER LINE.
   B. AT ALL GIRDERS WHERE THE JOISTS CHANGE DIRECTION, INSTALL BRIDGING AT 8' O.C. FOR A MINIMUM OF SIX JOIST SPACINGS BEYOND ANY JOIST DIRECTION CHANGE. THIS WILL INSURE SHRINKAGE DISTRIBUTION OVER THE FLOOR AND NOT LET IT ACCUMULATE AT THE GIRDER.
   C. THERE MUST BE WOOD BLOCKING THRU BOLTED TO THE STEEL BEAM WITH JOISTS TOENAILED OR ATTACHED TO THE BEAM WITH METAL HANGERS UNDER ANY HARDWOOD FLOORS THAT PASS OVER A STELL BEAM SUPPORTING FLOOR JOISTS. THIS CONDITION OFTEN EXISTS BASEMENT AREAS.
2. ALL OTHER LUMBER MAY BE SPRUCE #2 UNLESS NOTED OTHERWISE.
3. STEEL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
4. LVL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
5. MASONRY LINTELS:
   A. FOR SPANS UP TO 6', USE 3 1/2" X 3 1/2" X 1/4" STEEL ANGLES.
   B. FOR SPANS FROM 6' TO 10', USE 5" X 3 1/2" X 5/16" STEEL ANGLES.
   C. FOR SPANS FROM 9' TO 16', USE A PAIR OF 4 GAUGE WIRES IN EACH OF THE FIRST 3 COURSES OF BRICK ON A 5" X 3 1/2" X 5/16" STEEL ANGLE. LAP ALL 4 GUAGE WIRE SPLICES 12" MINIMUM AND EXTEND WIRES 12" MINIMUM INTO JAMBS. TEMPORARILY SUPPORT STEEL ANGLE BEFORE LAYING MASONRY. SHORING MAY BE REMOVED FIVE DAYS FOLLOWING INSTALLATION OF MASONRY.
   D. WHEN STRUCTURAL STEEL BEAMS WITH BOTTOM PLATES ARE USED TO SUPPORT MASONRY, THE BOTTOM PLATE MUST EXTEND THE FULL LENGTH OF STEEL BEAM. THIS PROVIDES SUPPORT TO THE ENDS OF THE PLATE BY BEARING ON THE ADJACENT MASONRY JAMBS. THE BEAM SHOULD BE TEMPORALY SHORED PRIOR TO LAYING THE MASONRY. THE SHORING MAY BE REMOVED FIVE DAYS AFTER LAYING THE MASONRY.
6. ALL BRICK VENEER OVER LOWER ROOFS (BRICK CLIMBS) MUST HAVE A STRUCTURAL ANGLE LAG SCREWED TO ADJACENT STUD WALL IN ACCORDIANCE WITH DETAIL, WITH STEEL BRICK STOPS TO PREVENT SLIDING OF BRICK.
7. ALL RAFTER BRACES MUST HAVE 2 STUDS FROM PLATE THROUGH ALL FLOORS TO FOUNDATION OR SUPPORTING BEAM BELOW. NO BRACES SHALL BE ATTACHED TO TOP WALL PLATE WITHOUT STUDS DIRECTLY UNDER THEM.
8. WHERE PARTITIONS FALLS BETWEEN FLOOR JOISTS OR TRUSSES, 2"x4" LADDERS @ 16" O.C. MUST BE PLACED PERPENDICULAR TO THE TRUSSES TO SUPPORT THE PLYWOOD DECKING.
9. ALL WOOD I-JOISTS AND OPEN JOISTS MUST BE BRACED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS PLUS DETAILS SHOWN ON PLANS. LOAD BEARING PARTITIONS, JACKS, BEAMS AND COLUMN SUPPORTS MUST BE SOLID BLOCKED THROUGH FLOOR TO JOISTS, TRUSSES, AND PLYWOOD CANNOT CARRY CONCENTRATED POINT LOADS. ALL POINT LOADS MUST BE CARRIED TO FOUNDATIONS WITH BLOCKING AND/OR BEAMS.
10. ALL STEEL COLUMNS SHALL BEAR ON CONCRETE, MASONRY, OR STEEL ONLY. AN ADEQUATELY-SIZED BASE PLATE SHALL BE USED TO SPREAD THE COLUMN LOAD ACROSS THE BEARING SURFACE AREAS SO AS NOT TO EXCEED ITS ALLOWABLE COMPRESSIVE STRESS. BEAMS THAT BEAR ON TOP OF STEEL COLUMNS SHALL BE WELDED TO THE COLUMN. BASE PLATE SHALL BE BOLTED WITH FOUR 1/2" DIAMETER ANCHOR BOLTS OR EXPANSION BOLTS TO CONCRETE OR MASONRY.
11. UNLESS NOTED OTHERWISE ON THE PLANS, ALL EXTERIOR FACING STUD WALLS TALLER THAN 10' SHALL BE CONSTRUCTED AS FOLLOWS:
    A. WALLS 10' TO 12' HIGH: BALLOON FRAME 2X4 STUDS @ 12" O.C. WITH 1/2" OSB SHEATHING AND 3 KING STUDS ON EACH SIDE OF EACH OPENING NAILED SECURELY TO THE HEADER.
    B. WALLS 12' TO 20' HIGH: BALLOON FRAME 2X6 STUDS @ 16" O.C. (1/2" OSB SHEATHING REQUIRED FOR WALL HEIGHT> 17'). PROVIDE 2-1 3/4" X 5 1/4" LVL KING STUDS ON EACH SIDE OF OPENINGS 3' TO 8' WIDE AND 3-2X6 KING STUDS FOR OPENINGS LESS THAN 3' WIDE. FASTEN KING STUDS SECURELY TO ALL HEADERS WITH A MINIMUM OF 12-16d NAILS OR 4-3/8" DIAMETER LAG SCREWS EMBEDDED A MINIMUM OF 4" INTO THE HEADER.
    C. GABLE END WALLS OF ROOMS WITH VAULTED CEILING JOISTS: BALLOON FRAME WALL AND PROVIDE TRIPLE KING STUD ON EACH SIDE OF OPENINGS, NAILED SECURELY TO THE HEADER.
    D. TWO-STORY HIGH FOYER WALLS LESS THAN 4' WIDE: EXTEND 3 1/2" X 4 1/4" PARALLAM PSL MEMBER WITH 3-2X4 FLAT PLATES ACROSS THE ENTIRE WALL. LOCATE THE BEAM NEAR MID-HEIGHT OF THE WALL AT OR NEAR FIRST FLOOR TOP PLATE.

NOTE: SEE SPECIAL DESIGN OR ENGINEER FOR WALLS TALLER THAN 20', WHEN OPENINGS IN HIGH WALLS EXCEED 6' IN WIDTH, OR IF THE WALL CANNOT BE CONSTRUCTED USING ANY OF THE METHODS MENTIONED.

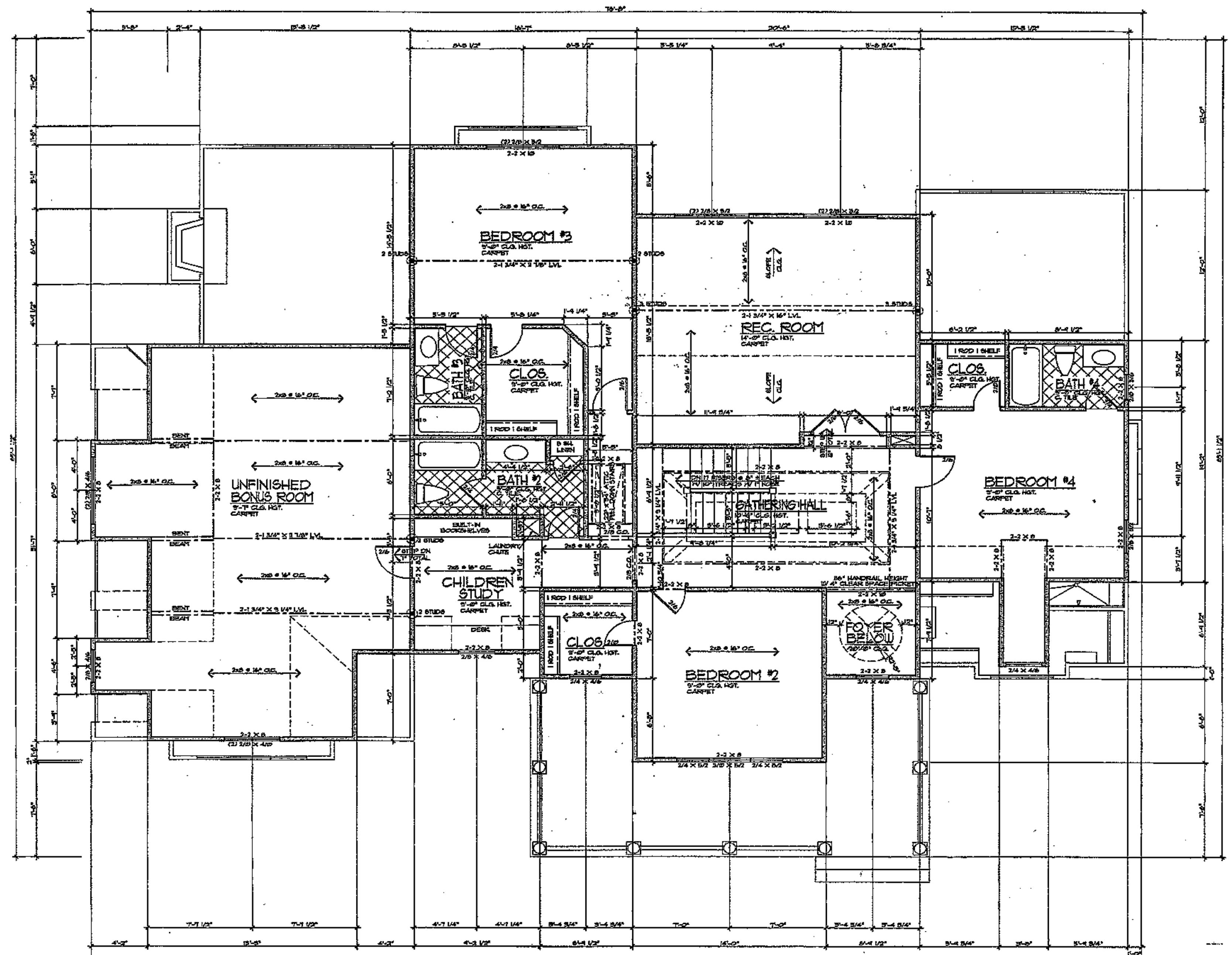
12. CONTINUOUS 2x6 BRIDGING SHALL BE NAILED TO DIAGONAL OR VERTICAL WEB MEMBERS OF ALL OPEN WEB FLOOR TRUSSES OVER 10' LONG. THEY SHALL BE INSTALLED NEAR MID-SPAN AS A LOAD DISTRIBUTION MEMBER. IF THE 2x6 BRIDGING IS NOT CONTINUOUS, LAP ENDS OF BRIDGING ONE TRUSS SPACE.
13. LOWER STUD WALLS FOR BUILDINGS OVER TWO STORIES, BUT NOT MORE THAN THREE STORIES:
    A. INTERIOR WALLS
       I. LOAD BEARING — 2x4 @ 12" O.C.
       II. NON LOAD BEARING — 2x4 @ 16" O.C.
    B. EXTERIOR WALLS
       USE 2x6 @ 16" O.C. WITH 1/2" X 4' X 8' PLYWOOD SHEATHING AT ALL CORNERS AND EVERY 25', OR USE 2x4 @ 12" O.C. WITH 1/2" PLYWOOD SHEATHING SOLID ON WALLS.
14. HEADERS SHALL BE AS SHOWN UNLESS NOTED DIFFERENTLY ON PLANS.
    A. INTERIOR
       I. SPANS UP TO 2'-6" — 2-2x6'S
       II. SPANS 2'-6" TO 5'-6" — 2-2x8'S
       III. SPANS 5'-6" TO 6'-6" — 2-2x10'S
       IV. SPANS 6'-6" OR MORE — SEE PLAN
    B. EXTERIOR
       I. SPANS UP TO 2'-0" — 2-2x6'S
       II. SPANS 2'-0" TO 5'-0" — 2-2x8'S
       III. SPANS 5'-0" TO 7'-0" — 2-2x10'S
       IV. SPANS 7'-0" OR MORE — SEE PLAN

    HEADERS WIDER THAN 5' SHALL HAVE A MINIMUM OF 2-2X4 KING STUDS ON EACH SIDE U.N.O.
15. WHEN CEILING JOISTS ARE PARALLEL TO AN EXTERIOR WALL AND RAFTERS BEAR ON THIS EXTERIOR STUD WALL TOP PLATE, TIE THE RAFTERS NEAR THE TOP PLATE TO CEILING JOISTS WITH 2x6 HOGS A MINIMUM OF 6' LONG AT 4' ON CENTER ACROSS THE TOP OF THE CEILING JOISTS.
16. AT ALL BAY WINDOWS, EACH PANEL SHALL BE NAILED TO EACH ADJACENT PANEL WITH 3-16d NAILS OR TIED TOGETHER WITH METAL STRAPPING NAILED AT FOUR LOCATIONS BETWEEN FLOORS WITH A MINIMUM OF 2-16d NAILS INTO EACH PANEL AT EACH STRAP. THIS WILL AVOID VERTICAL CRACKING IN PANEL JOISTS DUE TO HORIZONTAL OSCILLATING PANELS.
17. AT ALL STAIRS, EVERY STUD AT EACH STRINGER MUST BE NAILED TO EACH STRINGER WITH A MINIMUM OF 2-16d NAILS. THIS WILL AVOID CRACKING BETWEEN WALLBOARD AND TOP OF BASE MOLDING DUE TO VERTICAL OSCILLATION OF STAIR STRINGERS.
18. STEEL PIPE COLUMNS MUST BE IN CANTACT WITH THE UPPORTED MEMBER AND CONTINUED SOLID TO THE SUPPORTING MASONRY OR CONCRETE FOUNDATION. NO INTERMEDIATE WOOD BLOCKING SHOUL BE USED AS IT WILL CRUSH.

ADDITIONAL NOTES

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1 / A5 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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1 OCTOBER 21, 2005

SECOND LEVEL FLOOR PLAN

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