

## 45-DEGREE RAILING

15. ATTACH POSTS TO DECKING FRAME. SQUARE TO STRAIGHT SIDE OF RIM JOIST AND LEVEL. FOLLOW PROCEDURES 2-4 TO INSTALL POSTS AND DECKING.

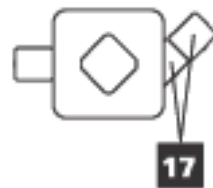
16. DETERMINE THE ANGLE OF THE TOP RAIL AND THE FLAT-TOP HANDRAIL (OPTIONAL).

- A. LAY A TOP RAIL CENTERED ON TOP OF THE TWO POSTS AND MARK ANGLE (SEE RAILING ORIENTATION) AND CUT. MARK AND CUT THE BOTTOM RAIL THE SAME WAY, MAKING SURE TO LAY THE 2-5/8 INCH LEG ON THE POSTS.
- B. MARK AND CUT THE FLAT-TOP HANDRAIL (OPTIONAL) IF YOU ARE INSTALLING IT.



17. CUT A BALUSTER LENGTH-WISE ACROSS THE DIAGONAL ON A 45-DEGREE ANGLE.

- A. PLACE BOTTOM RAIL ON BLOCKS THAT ARE CUT TO THE TOE SWEEP HEIGHT DESIRED (NO LESS THAN 2 INCHES NOR GREATER THAN 4 INCHES) – 2-5/8 INCH LEG LYING ON BLOCKS.
- B. PLACE BALUSTER WITH 45-DEGREE CUT SIDE AGAINST THE POST POSITIONED AT THE 45-DEGREE CORNER AND SIT IT ON THE BOTTOM RAIL. ATTACH IT TO THE POST USING PROCEDURE 6C.
- C. PLACE A REGULAR BALUSTER AGAINST THE DIAGONAL BALUSTER, SITTING ON BOTTOM RAIL AND ATTACH WITH THREE 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS, EVENLY SPACED TOP TO BOTTOM.



18. FINISH WITH STEPS 6D-13 – WITH THE EXCEPTION OF THE POST BALUSTER THAT HAS BEEN INSTALLED ALREADY IN THIS 45-DEGREE SECTION (STEP 17).

20. INSTALL DECK BOARDS. BOARDS MAY BE FLUSH WITH RISER OR EXTEND PAST THE RISE BY 1 INCH. USE TWO 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS PER BOARD PER STRINGER.

- A. OPTIONAL: CUT AND INSTALL ‘KICK BOARDS’ (DECK BOARDS) ALONG EACH STAIR RISE.
- B. INSTALL POST COLLARS IF DESIRED.
- C. CUT AND INSTALL TRIMBOARD ON STRINGERS IF DESIRED. USE PROCEDURES IN STEP 14.



21. LAY A TOP AND BOTTOM RAIL ALONG THE EDGES OF THE STEPS AND UP NEXT TO THE POSTS.

- A. POSITION BOTH RAILS FOR MARKING WITH THE 2-5/8 INCH LEG LYING ON THE STEPS.
- B. MARK THE RAILS ON THE INSIDE FACES OF THE TWO UPRIGHT POSTS.
- C. CUT EACH RAIL ALONG THIS MARK (LINE). CUT THE FLAT-TOP HANDRAIL TO THE SAME LENGTH AND ANGLE AS THE TOP RAIL IF YOU ARE INSTALLING IT (SEE RAILING ORIENTATION).

22. POSITION BOTTOM RAIL 1/2 INCH ABOVE EDGES OF STEPS (CHECK LOCAL CODE) SUPPORT ON BLOCKS CUT FROM SCRAP MATERIAL.

23. CUT ENDS OF TWO BALUSTERS AT THE SAME ANGLE AS THE TOP AND BOTTOM RAILS AND USE THEM AS THE POST BALUSTERS.

24. TO COMPLETE STAIR RAILING FOLLOW STEPS 6B-13.

THESE RAILING SYSTEM COMPONENTS ARE TO BE INSTALLED WITH STRICT ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THESE MOISTURESHIELD® PROFESSIONAL GRADE DECKING INSTALLATION INSTRUCTIONS. TESTING OF THESE RAILING SYSTEMS HAS SHOWN THAT THEY MEET THE REQUIREMENTS OF THE MAJOR MODEL BUILDING CODES IN THE U.S.

CONTACT CUSTOMER SERVICE AT 1-866-729-2378 FOR MORE INFORMATION OR VISIT [WWW.MOISTURESHIELD.COM](http://WWW.MOISTURESHIELD.COM).

MANUFACTURED BY



MOISTURESHIELD® PROFESSIONAL GRADE DECKING IS MANUFACTURED BY ADVANCED ENVIRONMENTAL RECYCLING TECHNOLOGIES (A.E.R.T.) UNDER U.S. PATENT #5759680 AND COVERED UNDER NER-596. JANUARY 2008. AE-0021

## STAIR RAILING

19. ATTACH POSTS TO STAIR STRINGERS (STRINGERS SHOULD BE 2 FEET X 10 INCH AND PLACED 12 INCH OC OR LESS). SQUARE POSTS TO STRINGERS AND LEVEL.

- A. FOLLOW STEP 2 TO INSTALL POSTS TO STAIR STRINGERS (USE CORNER POST BLOCKING METHOD).



# MOISTURESHIELD® INSTALLATION INSTRUCTIONS

GET STARTED ON YOUR MOISTURESHIELD® DECK NOW WITH OUR EASY INSTALLATION, CLEANING AND CARE INSTRUCTIONS.\*

**CONGRATULATIONS.** YOU HAVE SELECTED A MATERIAL THAT IS BOTH EASY TO WORK WITH AND ENGINEERED TO LAST. WHETHER THIS DECK IS FOR YOU OR YOU ARE BUILDING IT FOR SOMEONE ELSE, WORKING WITH MOISTURESHIELD® PROFESSIONAL GRADE DECKING WILL BE SIMPLE AND REWARDING. THESE INSTALLATION INSTRUCTIONS WILL TAKE YOU THROUGH THE PROCESS OF INSTALLING THE DECKING, RAILING AND STAIR PORTIONS OF YOUR DECK. AS WITH ANY BUILDING PROJECT, USE PROPER EYE AND EAR PROTECTION. AND ALWAYS FOLLOW LOCAL BUILDING CODES. MOISTURESHIELD® PROFESSIONAL GRADE DECKING IS FOR DECKING AND ACCESSORIES ONLY. IT IS NOT TO BE USED AS STRUCTURAL MATERIAL.

**STAIN PREVENTION** – TO PREVENT TEMPORARY STAINS ON MOISTURESHIELD® PROFESSIONAL GRADE DECKING, KEEP IT



COVERED DURING STORAGE OR INSTALLATION.

**CLEANING** – AFTER YOUR DECK IS INSTALLED, CLEAN IT THOROUGHLY USING A

DECK CLEANER THAT CONTAINS OXALIC ACID, AS DEBRIS FROM CONSTRUCTION CAN CREATE TEMPORARY STAINS. ALL DECKS CAN ACCUMULATE DIRT AND MILDEW THROUGH NORMAL EXPOSURE. PERIODIC CLEANING IS RECOMMENDED AS WITH ALL EXTERIOR BUILDING PRODUCTS. USE A DECK CLEANER THAT IS SPECIFIC TO YOUR NEEDS FOR GENERAL CLEANING, CLEANING MILDEW OR DEGREASER AS NEEDED. (FOR ADDITIONAL CLEANING TIPS CONTACT CUSTOMER SERVICE AT 1-866-729-2378 OR VISIT [WWW.MOISTURESHIELD.COM](http://WWW.MOISTURESHIELD.COM))

## INSTALLATION TIPS

**TOOLS** – ALL YOU’LL NEED IS A HAMMER, CIRCULAR SAW (CARBIDE-TIPPED BLADE WITH FEWER THAN 20 TEETH IS RECOMMENDED), LEVEL, TAPE MEASURE, RASP AND CHALK LINE (DO NOT USE RED CHALK).

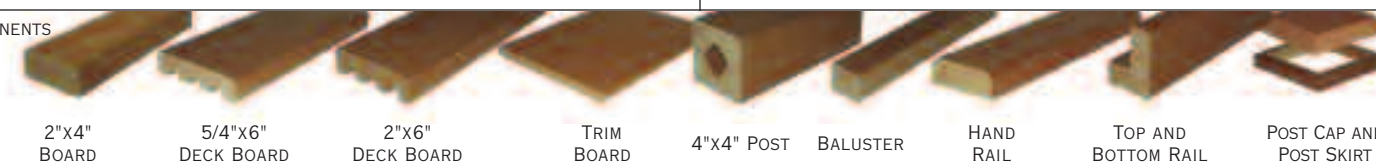
**FASTENERS** – WE RECOMMEND #7 SWAN SECURE 2-1/4 INCH STAINLESS STEEL TRIM-HEAD SCREWS FOR THE DECKING AND RAILING. IF YOU DO NOT WANT THE SCREW HEADS TO SHOW ON THE DECK BOARDS USE THE FOLLOWING TECHNIQUE: COUNTERSINK THE TRIM-HEAD SCREW, RUN YOUR THUMB LIGHTLY OVER THE HOLE, THEN TAP WITH A HAMMER. THIS WILL COVER THE TRIM-HEAD SCREW WITH DECKING MATERIAL. EACH POST REQUIRES TWO 1/2 INCH CARRIAGE BOLTS 8 INCHES MINIMUM LENGTH WITH 1-1/4 INCH FLAT WASHER ON BACK.

FOR YOUR CONVENIENCE, SOME COMMON MODEL BUILDING CODE REQUIREMENTS ARE REPRINTED HERE:

- RESIDENTIAL MINIMUM HANDRAIL HEIGHT IS GENERALLY 36 INCHES
- MULTI-FAMILY MINIMUM HANDRAIL HEIGHT IS SOMETIMES 42 INCHES
- BALUSTER MAXIMUM SPACING IS GENERALLY 4 INCHES (CLEAR DISTANCE BETWEEN BALUSTERS\*\*\*)
- MAXIMUM GAP BETWEEN BOTTOM RAIL AND DECK SURFACE IS GENERALLY 4 INCHES\*\*\*. SOME CODES REQUIRE A 2 INCH MAXIMUM GAP FOR MULTI-FAMILY APPLICATIONS.

\*\*\*SPACING NOTE: THE PRECISE CODE LANGUAGE IS GENERALLY “DO NOT ALLOW PASSAGE OF A SPHERE 4 INCH IN DIAMETER.” BE SURE TO CHECK ON THE TOLERANCE REQUIREMENTS OF YOUR LOCAL BUILDING CODE.

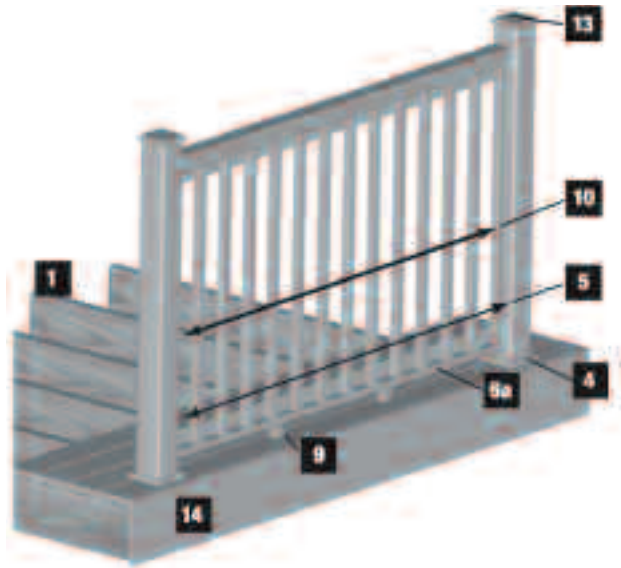
COMPONENTS



\*FOR ADDITIONAL CLEANING TIPS CONTACT CUSTOMER SERVICE AT 1-866-729-2378 OR VISIT [WWW.MOISTURESHIELD.COM](http://WWW.MOISTURESHIELD.COM).

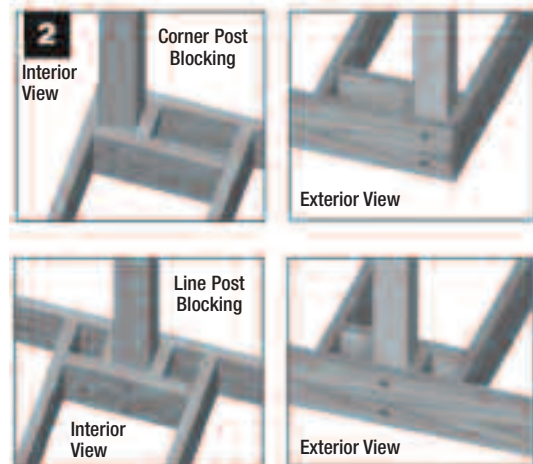
# POST AND DECKING INSTALLATION INSTRUCTIONS

- LAYOUT AND INSTALL JOISTS AT EITHER 16 INCH ON CENTER (OC) WHEN DECKING WILL BE INSTALLED PERPENDICULAR TO THE JOISTS, OR 12 INCH (OC) WHEN DECK BOARDS WILL BE INSTALLED DIAGONALLY OR AT AN ANGLE TO THE JOISTS. JOISTS SHOULD BE LEVEL.



- ATTACH POSTS TO DECKING FRAME. DO NOT NOTCH POSTS. THE MAXIMUM DISTANCE FROM CENTER OF POST TO CENTER OF POST IS 72 INCHES. SQUARE AND LEVEL POSTS.
  - BLOCK POSTS AND ATTACH TO RIM JOISTS WITH 2 BOLTS (1/2 INCH CARRIAGE BOLTS 8 INCH – MINIMUM LENGTH WITH 1-1/4 INCH FLAT WASHER ON BACK)

BOLT POSITIONS: THE TOP BOLT TO BE NO MORE THAN 3 INCHES BELOW THE FINISHED DECK SURFACE AND THE BOLT SPACING TO BE NO LESS THAN 4 INCHES ON CENTER.



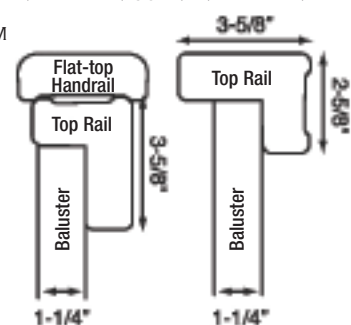
- INSTALL MOISTURESHIELD® DECKING USING 2 1/4 INCH #7 SWAN SECURE STAINLESS STEEL TRIM-HEAD SCREWS, TWO SCREWS PER BOARD PER JOIST RECOMMENDED. SCREWS SHOULD BE A MINIMUM OF 1/2 INCH FROM THE BOARD END.
  - ALLOW 1/4 INCH SIDE-TO-SIDE SPACING BETWEEN DECK BOARDS. ALLOW 1/8 INCH (OR GREATER) END-TO-END SPACING BETWEEN ENDS OF BOARDS (BUTT JOINTS). IF INSTALLING IN FREEZING WEATHER, LEAVE 1/4 INCH (BUTT JOINTS).
  - CUT DECK BOARDS TO FIT AROUND POST. LEAVE 1/8 INCH GAP BETWEEN BOARD AND POST.
  - STAGGERING THE BUTT JOINTS ON LONG DECKS USUALLY IMPROVES THE OVERALL APPEARANCE OF THE FINISHED DECK. SOME PEOPLE ALSO PREFER A DISTINCTIVE PATTERN FOR THE DECK BOARDS. TO ACHIEVE AN INTERESTING DESIGN INSTALL A PATTERN BOARD WHICH ELIMINATES BUTT JOINTS.
  - ONCE THE BOARDS ARE IN PLACE, ADJUST THE BLADE DEPTH OF YOUR SAW TO MATCH THE THICKNESS OF YOUR DECK BOARDS. USE A CHALK LINE TO MARK YOUR CUT AND GO. TO AVOID STAINING THE DECKING BOARDS USE BLUE CARPENTER'S CHALK. RASP THE EDGES TO FINISH.



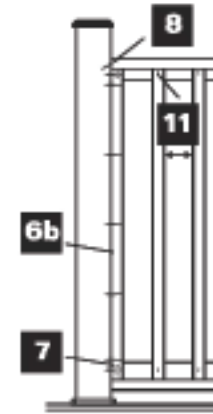
- SLIP POST COLLAR OVER POST ONTO DECK IF INSTALLING.

## RAILING INSTALLATION INSTRUCTIONS

RAILING ORIENTATION – FLAT-TOP HANDRAIL (OPTIONAL): TO USE THE FLAT-TOP HANDRAIL, THE TOP RAIL SHOULD BE INSTALLED WITH THE SHORT LEG (2-5/8 INCH) IN THE HORIZONTAL ORIENTATION. IF YOU CHOOSE NOT TO USE THE FLAT-TOP HANDRAIL, THE TOP RAIL MUST BE INSTALLED WITH THE LONG LEG (3-5/8 INCH) IN THE HORIZONTAL ORIENTATION. THE BALUSTERS SET ON THE LEDGE OF THE BOTTOM LEG OF THE BOTTOM RAIL AND ARE COVERED BY THE TOP RAIL LEG. THE TOP AND BOTTOM RAILS ALLOW THE BALUSTERS TO FACE EITHER TOWARD OR AWAY FROM THE DECK DEPENDING ON WHICH WAY THE CONSUMER PREFERS THE RAIL SYSTEM TO BE INSTALLED.



- CUT TOP AND BOTTOM RAILS THE SAME LENGTH (THE MAXIMUM RAIL LENGTH AS CUT WOULD BE 67-3/4 INCHES). MEASURE FROM INSIDE OF POST TO INSIDE OF POST TO DETERMINE THE TOP AND BOTTOM RAIL LENGTH.
- CUT TWO TEMPORARY BLOCKS FROM SCRAP MATERIAL TO THE HEIGHT YOU WANT THE TOE SWEEP (NO LESS THAN 2 INCHES NOR GREATER THAN 4 INCHES) PLACE ON INSIDE OF POSTS SITTING ON DECKING.
  - SET BOTTOM RAIL ON BLOCKS (WITH THE 2-5/8 INCH LEG RESTING ON THE BLOCKS) AND CENTER ON POST.
  - PLACE BALUSTER AGAINST POST AND SIT IT ON THE BOTTOM RAIL (1-1/4 INCH SIDE AGAINST THE POST).
  - USING 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS SECURE BALUSTER TO POST, TWO SCREWS AT EACH END, AND THREE ADDITIONAL SCREWS EVENLY SPACED BETWEEN THE END CONNECTIONS.
  - PLACE 2ND BALUSTER AGAINST OPPOSITE POST AND REPEAT STEP C.
- SECURE BOTTOM RAIL TO EACH POST BALUSTER USING TWO 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS, REPEAT ON OTHER END OF BOTTOM RAIL.
- PLACE TOP RAIL ON BALUSTERS (SEE RAILING ORIENTATION FOR DETAILS) AND REPEAT FASTENING AS IN STEP 7. IN ADDITION, ANGLE (TOE NAIL) TWO 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS FROM TOP RAIL DIRECTLY INTO EACH POST.
- PLACE A SUPPORT BLOCK EVERY TWO FEET BETWEEN BOTTOM RAIL AND DECKING FOR SUPPORT (SEE DIAGRAM 9). SECURE SUPPORT BLOCK WITH ONE 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREW, THROUGH THE BOTTOM RAIL INTO THE SUPPORT BLOCK.
- USE THE FORMULA BELOW TO DETERMINE THE AMOUNT OF BALUSTERS YOU NEED AND THE SPACING BETWEEN THEM. MEASURE THE DISTANCE BETWEEN THE INSIDE OF ONE POST BALUSTER TO THE INSIDE OF THE OTHER POST BALUSTER. THIS IS YOUR TOTAL SPACE.
  - DIVIDE THE TOTAL SPACE BY 5, AND ROUND IT OFF TO A WHOLE NUMBER. THIS IS THE NUMBER OF ADDITIONAL BALUSTERS YOU NEED.



- MULTIPLY THE VALUE IN A X 1.5 AND SUBTRACT IT FROM YOUR TOTAL SPACE.
  - DIVIDE THE VALUE IN B BY THE VALUE OF (A+1). THIS IS THE SPACING BETWEEN THE BALUSTERS. YOU MAY WANT TO CUT TWO SPACER BLOCKS FROM SCRAP MATERIAL OR A BALUSTER, THE SAME WIDTH AS ANSWER C., AND USE THESE TWO SPACERS AT TOP AND BOTTOM TO PLACE EACH BALUSTER.
- ATTACH BALUSTERS TO TOP AND BOTTOM RAILS USING ONE 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS. (4 INCH MAXIMUM DISTANCE BETWEEN BALUSTERS, VISIBLE OPENING – CHECK LOCAL BUILDING CODE).
  - ATTACH FLAT-TOP HANDRAIL (OPTIONAL) TO TOP RAIL USING 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS. INSTALL SCREWS FROM THE BOTTOM OF THE TOP RAIL UP INTO THE FLAT-TOP HANDRAIL OR FROM THE FLAT-TOP HANDRAIL DOWN INTO THE TOP RAIL. INSTALL A SCREW IN THE CENTER OF EVERY BALUSTER OPENING FOR STRUCTURAL INTEGRITY.
  - ATTACH POST CAPS TO TOP OF POST USING 2-1/4 INCH #7 SWAN SECURE TRIM-HEAD STAINLESS STEEL SCREWS OR CONSTRUCTION ADHESIVE (SEE DIAGRAM 13).
  - ADDITIONALLY, FOR A FINISHED LOOK, INSTALL TRIMBOARDS OVER THE RIM JOISTS. POSITION FLUSH WITH THE TOP OF THE DECKING.
    - ATTACH USING 2-1/4 INCH #7 SWAN SECURE STAINLESS STEEL TRIM-HEAD SCREWS. ONE SCREW THROUGH THE END OR SIDE OF THE DECKING AND ONE INTO THE RIM JOIST EVERY 18 INCHES.
    - WE RECOMMEND PUTTING THE SCREW THROUGH THE THICKEST PART OF THE DECK BOARD (CENTER BETWEEN THE TOP OF THE BOARD AND THE BOTTOM OF A RIB) WHEN ATTACHING THE TRIMBOARD. TAKE CARE TO KEEP SCREWS LEVEL WHEN INSTALLING TRIMBOARD TO THE DECKING.

