

HISTORIC AND DESIGN REVIEW COMMISSION

May 19, 2021

HDRC CASE NO: 2021-231
COMMON NAME: Hays Street Bridge
ZONING: UZROW, H
PUBLIC PROPERTY: Yes
CITY COUNCIL DIST.: 2
DISTRICT: Dignowity Hill Historic District
APPLICANT: Anthony Chukwudolue/City of San Antonio, PWD
OWNER: City of San Antonio
TYPE OF WORK: Railing repair and bracing, decking replacement
APPLICATION RECEIVED: May 07, 2021
60-DAY REVIEW: Not applicable due to City Council Emergency Orders
CASE MANAGER: Edward Hall

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to:

1. Install composite decking to replace the existing, deteriorated decking.
2. Brace the existing railing.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 2, Guidelines for Exterior Maintenance and Alterations

4. Materials: Metal

A. MAINTENANCE (PRESERVATION)

- i. Cleaning—Use the gentlest means possible when cleaning metal features to avoid damaging the historic finish. Prepare a test panel to determine appropriate cleaning methods before proceeding. Use a wire brush to remove corrosion or paint build up on hard metals like wrought iron, steel, and cast iron.
- ii. Repair—Repair metal features using methods appropriate to the specific type of metal.
- iii. Paint—Avoid painting metals that were historically exposed such as copper and bronze.

B. ALTERATIONS (REHABILITATION, RESTORATION, AND RECONSTRUCTION)

- i. Replacement—Replace missing or significantly damaged metal features in-kind or with a substitute compatible in size, form, material, and general appearance to the historical feature when in-kind replacement is not possible.
- ii. Rust—Select replacement anchors of stainless steel to limit rust and associated expansion that can cause cracking of the surrounding material such as wood or masonry. Insert anchors into the mortar joints of masonry buildings.
- iii. New metal features—Add metal features based on accurate evidence of the original, such as photographs. Base the design on the architectural style of the building and historic patterns if no such evidence exists.

Sec. 35-643. - Alteration, Restoration and Rehabilitation.

In considering an application for a certificate to alter, restore, rehabilitate, or add to a building, object, site or structure the historic and design review commission shall be guided by the following general standards of the Secretary of the Interior's Standards for Rehabilitation in addition to any specific design guidelines included in this article:

- (a) Every reasonable effort shall be made to adapt the property in a manner which requires minimal alteration of the building, structure, object, or site and its environment.
- (b) The distinguishing original qualities or character of a building, structure, object, or site and its environment, shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.
- (c) All buildings, structures, objects, and sites shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create an earlier appearance shall be discouraged.

- (d) Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, object, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.
- (e) Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, object, or site shall be kept where possible.
- (f) Deteriorated architectural features shall be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should reflect the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historical, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.
- (g) The surface cleaning of structures shall be undertaken with the gentlest means possible. Sandblasting, high pressure washes and other cleaning methods that will damage the historic building's materials shall not be undertaken.
- (h) Every reasonable effort shall be made to protect and preserve archaeological resources affected by, or adjacent to, any project.
- (i) Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural or cultural material, and such design is compatible with the size, scale, color, material, and character of the property, neighborhood or environment.
- (j) Wherever possible, new additions or alterations to buildings, structures, objects, or sites shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the building, structure, object, or site would be unimpaired.

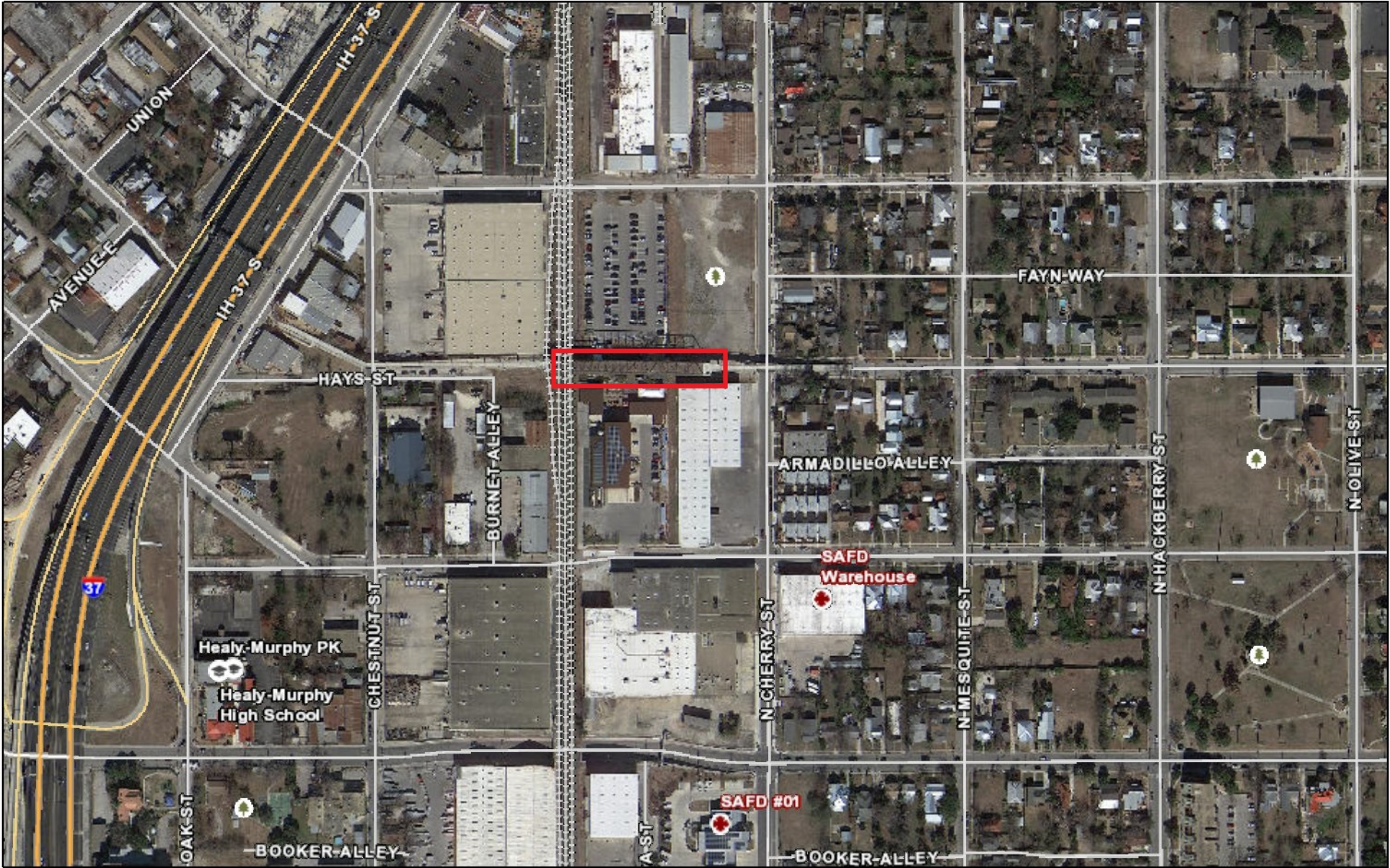
FINDINGS:

- a. The applicant has proposed rehabilitative scopes of work to the Hays Street Bridge to include the replacement of the existing, wood decking with a composite decking material and the installation of bracing elements for the existing, bridge railings.
- b. The historic structure commonly known as the Hays Street Bridge was constructed in 1881 over the Nueces River and was relocated to Hays Street in 1910. The City of San Antonio purchased the bridge from Union Pacific in 2007 and the bridge was restored in 2008 for pedestrian and bicycle use. At that time, the scope of work included general structural rehabilitation, painting of the trusses and railings, the replacement of the timber deck, timber supports, and new approaches.
- c. DECKING INSTALLATION – The applicant has proposed to install a composite decking product to replace the existing, non-original wood decking. The applicant has proposed to install 1” x 5” composite decking featuring a faux wood grain pattern. Generally, staff finds the proposed decking replacement to be appropriate as the bridge did not historically feature a wood deck.
- d. RAILING BRACING – The applicant has noted structural deficiencies with existing railing that pose public safety concerns. The applicant has proposed to install bracing to stabilize the existing railing. Staff finds the proposed bracing to be appropriate.

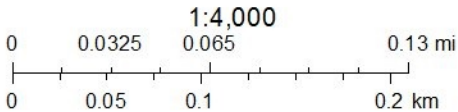
RECOMMENDATION:

Staff recommends approval as submitted based on findings a through d.

City of San Antonio One Stop



May 14, 2021



May 13, 2021 at 11:53 AM
928 N Olive St
San Antonio TX 78202
United States



**THE BRIDGE IS
CLOSED FOR REPAIRS**

Please visit <http://bit.ly/HaysBridgeRepair>
for more information or scan the code with
your smartphone

QUESTIONS?
Contact: Harry Trumble, Project Manager | (210) 207-5031

**EL PUENTE ESTÁ CERRADO
PARA HACER REPARACIONES**

Visite <http://bit.ly/HaysBridgeRepair>
para obtener más información o escanee
el código con su teléfono inteligente

¿PREGUNTAS?
Contacto: Harry Trumble, Gerente de Proyecto | (210) 207-5031

**CITY of SAN ANTONIO
NOTICE of HEARING
HISTORIC & DESIGN
REVIEW COMMISSION**

ADDRESS:
REQUEST: Hays Street Bridge
Repair, decking replacement,
bracing stabilization

**HEARING
DATE:** May 19, 2021
at 3:00 PM

ALL HDRC MEETINGS TAKE PLACE AT 1901 S. ALAMO



STRUCTURAL ASSESSMENT

<u>Project:</u>	Hays Street Bridge Assessment	<u>Job. No:</u>	193091
<u>Location:</u>	San Antonio, TX		
<u>Date:</u>	June 10, 2019 (Site Visit) July 23, 2019 (Report)	<u>Weather:</u>	Sunny
<u>Performed by:</u>	Thomas C. Hamer, P.E. Francisco Martinez, E.I.T. Alpha Consulting Engineers. Inc.		

Purpose and Description:

Alpha Consulting Engineers, Inc. (Alpha) was hired by the City of San Antonio to assess the structural integrity of the guardrails part of the Hays Street Bridge located at 803 North Cherry Street, San Antonio, TX 78202. The structural steel guardrail system is located on both sides of the bridge walkway which consists of a timber deck surface. It is our understanding that Sparks Engineering, a structural consulting company, completed work on the existing bridge in 2008 in partnership with the City of San Antonio. The work scope completed in 2008 included: general structural rehabilitation, painting of the trusses and railings, the replacement of the timber deck, timber supports, and new approaches.

Observations/Discussions:

During the time of our visit, we took approximate measurements of the guardrail plumbness (displacement of a member in any given direction due to its original intended position) at multiple points along the span of the bridge. The measurements were performed using a standard measuring tape and a small weight attached to a strap. We began by measuring the distance from the strap to the vertical guardrail posts in their existing condition, without any extraneous loading. We found that the plumbness of the southern (Alamo Beer Company side) guardrail in its existing state ranged from 1-1/2" to 4" (as measured at different locations) out of plumb, without any extraneous loading. We applied extraneous loading by shaking the guardrail and saw substantial increases in the temporary deflection of the guardrail, as well as strong vibrations. Actual deflection measurements weren't recorded while shaking of the railing, but we estimate they can be between 2" to 5". Due to the nature of how the guardrail was built, the vibrations are seen and felt throughout the entire southern span of the bridge. We also observed the area under the bridge deck and found that timber blocking was missing at several integral points of the guardrail system where load is being transferred— more precisely, at guardrail post locations. Alpha has concluded that this is the reason as to why the guardrail is severely out of plumb. Refer to the attached details which are excerpts of the Hays Street Bridge Rehabilitation structural plans prepared by Sparks Engineering in 2008. Said details denote the required blocking which was missing in the field as noted above. The lack of blocking has affected the



structural integrity of the existing guardrail system and possibly the heavy timber supporting member.

In addition to our field observations, we created a structural model of the existing guardrail members installed in the field in order to check their strength and serviceability. The strength pertains to how much force the member can withstand before undergoing design failure (i.e. undergoing deformation or breaking), while the serviceability is measured to check function of the structure (i.e. deflecting within code allowed parameters). We used the two loading criteria stated in section 4.4.1 of the ASCE 7-05 design code (which was in effect for buildings at the time of the original guardrail design), as well as the criteria set forth by the 2002 AASHTO manual. Through the application of code loading, we found that the vertical guardrail post members were **overstressed** by approximately 10% to 15% of their strength capacity for both codes. The strength capacity overstress in conjunction with the absence of timber blocking in the field justifies the guardrail being severely out of plumb in the field. In its current conditions, the guardrail poses a very critical safety concern for the bridge's users. If there is a large group of people leans on the guardrail - there is a possibility that the guardrail experiences complete failure. This could lead to serious and/or fatal injuries. Alpha recommends completely removing and replacing the entire existing guardrail system or strengthen it. The guardrail on the northern side of the bridge deck can remain as is, as its conditions are structurally acceptable due to the attachment of the truss verticals.

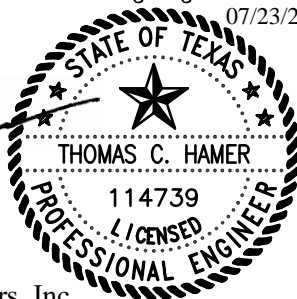
As denoted by the engineering seal on the construction documents and on this letter, we believe that we have fulfilled our obligations as an engineer under the Texas Engineering Practice Act pursuant to its requirements to protect the public health, safety and welfare in the practice of engineering.

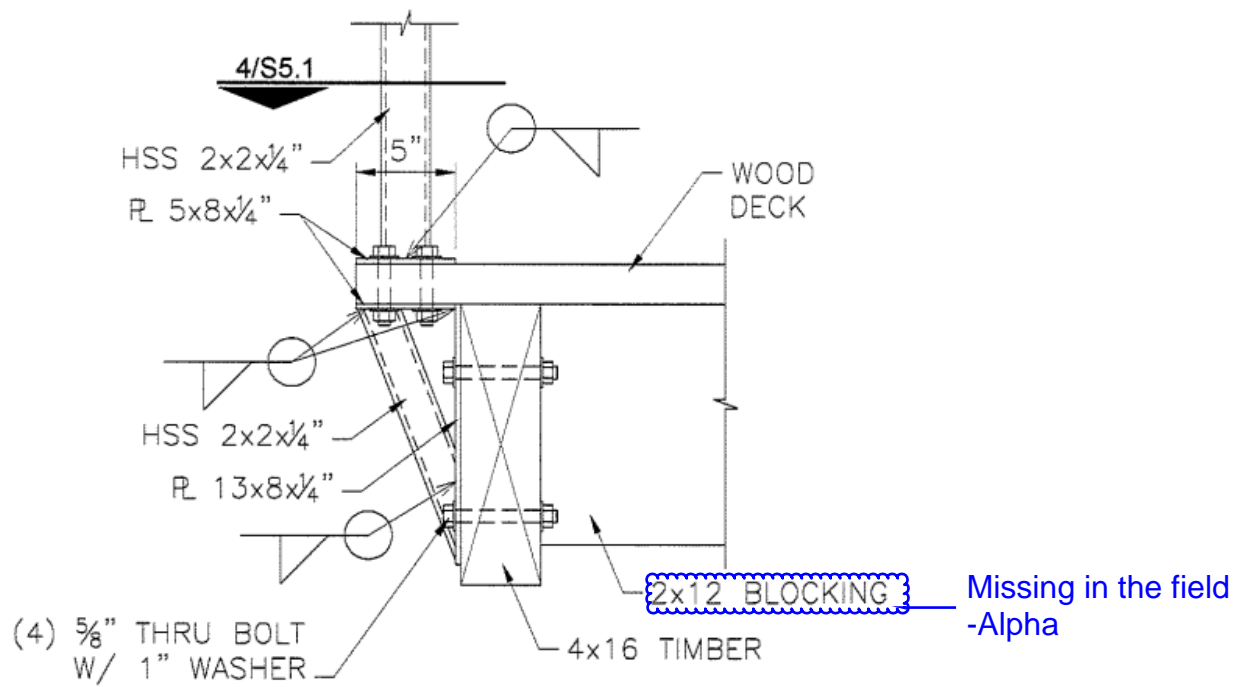
If you have any questions, please call.

Alpha Consulting Engineers F-1010
07/23/2019

Respectfully,

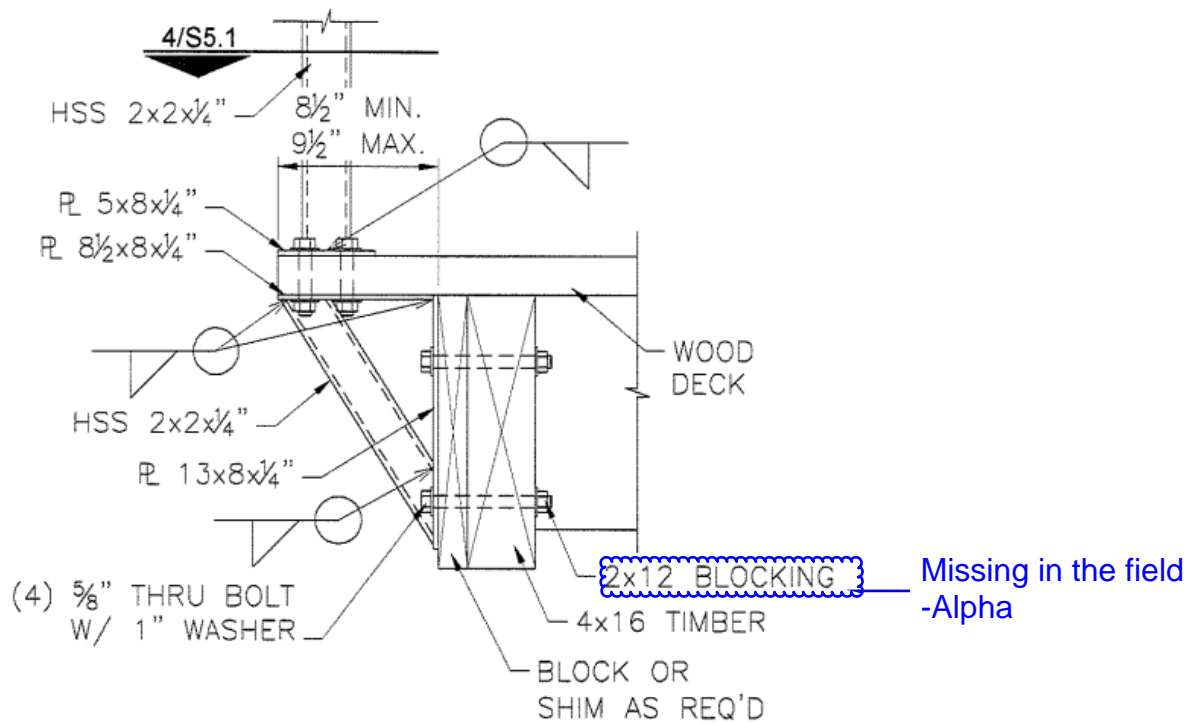
Thomas C. Hamer, P.E.
Associate Principal
Alpha Consulting Engineers, Inc.
Firm Reg. No.: F-1010





1 GUARDRAIL BASE @ WOOD DECK, TYP.

1 1/2" = 1'-0"



2 GUARDRAIL BASE @ WOOD DECK, TYP.

1 1/2" = 1'-0"

FY2021 CIP – Hays Street Bridge Repairs

Streets Division

CD: CW

Project Limits: Hays Street Bridge

Background:

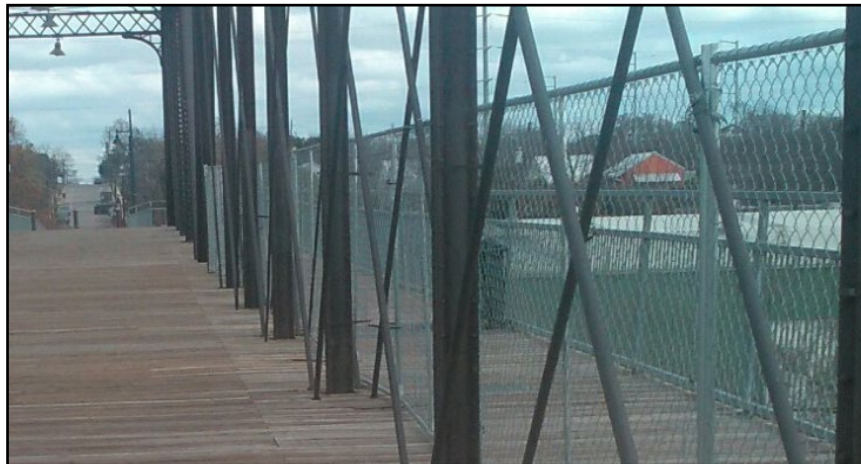
The TCI Streets Division is proposing to provide decking and railing repair and replacement services to the Hays Street Bridge. Due to safety concerns with the failed railing and continuous maintenance upkeep of the decking it is recommended that these repairs take place. A cost estimate for these repairs was provided by LMC Corporation with a total cost of \$596,840.55. Please see the breakdown below of current issues and cost estimates from LMC Corporation.

Project Cost:

Category	Estimated Cost
Railing Repair	\$199,100
Decking Repair	\$397,800
Total*	\$596,900.00

*Rounded up to the nearest \$10k.

FY2021 Budget Request: \$596,900 (Unidentified)






CORPORATION
GENERAL CONTRACTORS

Small Disadvantaged Business

TO: CoSA Frank Orta		FROM: LMC Corporation	DATE: Jan 18
CONTRACT NUMBER:		SUBMITTAL NUMBER: 1	SUBMITTAL: <div><div>X NEW</div><div>RESUBMITTAL</div></div>
SUBMISSION NUMBER 1	PREVIOUS SUBMISSION NUMBER	PROJECT NUMBER 20-2074	

[illegible]

TO BE COMPLETED BY LMC EMPLOYEE

TYPE OR PRINT NAME AND TITLE		SIGNATURE		DATE	
SETH ORTIZ / PROJECT MANAGER				01/18/2021	
FOR CLIENT USE ONLY					
TYPE OR PRINT NAME AND TITLE		SIGNATURE		DATE	
TYPE OR PRINT NAME AND TITLE		SIGNATURE		DATE	

The Trex logo is displayed in a blue, sans-serif font with a registered trademark symbol. It is positioned in the upper left corner of the image, overlaid on a white rectangular background.

Trex®

TREX® DECKING

LEADING THE WAY in long-lasting beauty



COVER
decking: Transcend® Spiced Rum
and Transcend Lava Rock

THIS PAGE
decking: Transcend Lava Rock



decking: Transcend Gravel Path

WORLD'S #1 DECKING BRAND

For more than 20 years, Trex has developed, defined and perfected wood-alternative decking. Our high-performance composite decks combine fade-resistant beauty with outstanding durability. Whether you're planning a breakfast nook in your backyard or rooftop retreat, Trex makes it simple to create the kind of outdoors your life demands.

4

WHY TREX
Learn what makes Trex® unlike any other decking material.

6

GET MORE
Discover all the perks to having a low-maintenance, high-performance deck from Trex.

8

START DESIGNING
See our signature products and begin planning your dream deck.

10

HOW-TO GUIDES
All the info you need to start installing.

21

UPKEEP & WARRANTIES
Get the details on just how little maintenance Trex decks need.



decking: Transcend Lava Rock

Why Trex?

We know a deck is never just a deck. It's an extension of your home, your own personal escape back to nature. With Trex, you can spend less time repairing your deck and more time enjoying it. See how our innovative shell technology makes Trex well worth the investment.



THE SECRET IS IN THE SHELL



Only Trex decks are wrapped in a high-performance shell that resists fade, stain, scratches, mold, mildew, insects and even boredom better than anything else out there.



Protected by a 25-Year Limited Residential Warranty



Low maintenance—never needs staining, sanding or painting



Resists mold, scratching and fading unlike other decks



Natural wood-grain finish in several rich colors



Easy to install without any special tools

SEE HOW TREX STACKS UP *against other decking materials.*

TREX HIGH-PERFORMANCE COMPOSITE

\$\$\$



Trex Transcend Lava Rock

DURABILITY

resists mold, fade, stain and scratches; won't warp, rot or splinter



ENVIRONMENTAL RESPONSIBILITY

made of 95% recycled materials



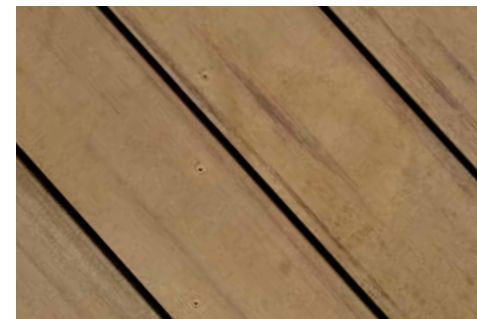
EASE OF MAINTENANCE

cleans with soap and water



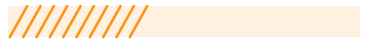
HOLLOW COMPOSITE

\$



DURABILITY

can fade, stain, scratch and mold



ENVIRONMENTAL RESPONSIBILITY

made of recycled materials



EASE OF MAINTENANCE

cleans with soap and water, may require bleach



PVC

\$\$\$



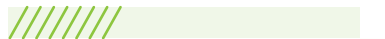
DURABILITY

scratch and mold resistant; won't warp, rot or splinter



ENVIRONMENTAL RESPONSIBILITY

made of virgin plastic



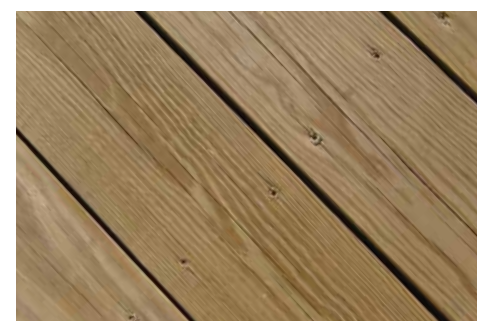
EASE OF MAINTENANCE

cleans with soap and water



WOOD

\$



DURABILITY

rots, splits, swells, twists and fades



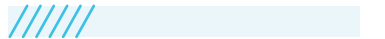
ENVIRONMENTAL RESPONSIBILITY

contributes to deforestation



EASE OF MAINTENANCE

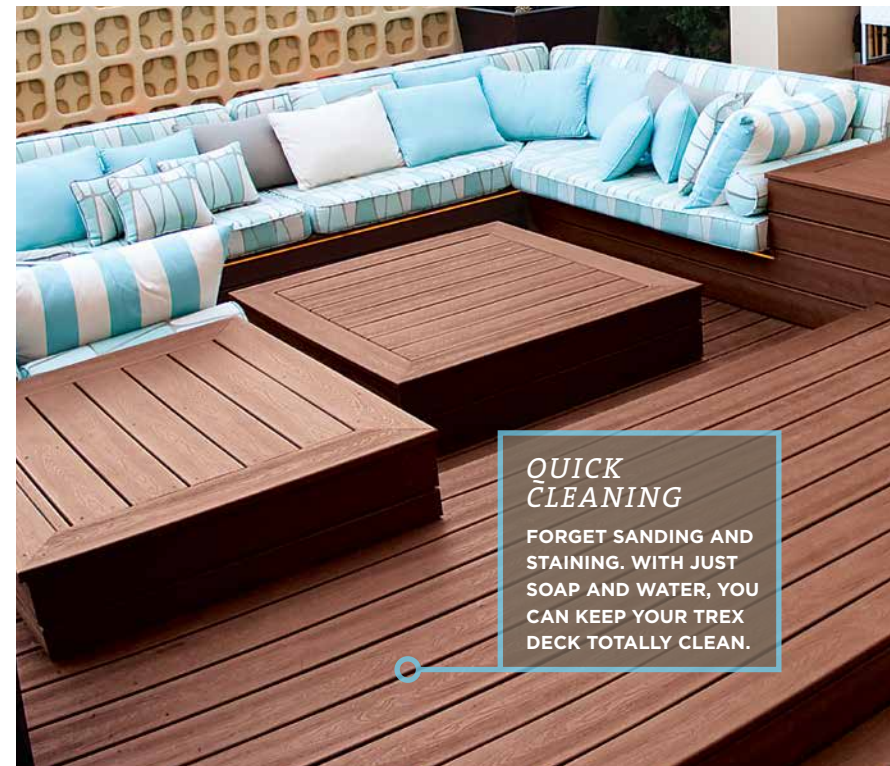
requires annual painting, staining or sealing



Discover what you'll get when you get Trex



ENDURING BEAUTY
THANKS TO ITS FADE-RESISTANT SHELL, TREX LOOKS LIKE NEW FOR 25 YEARS.



QUICK CLEANING
FORGET SANDING AND STAINING. WITH JUST SOAP AND WATER, YOU CAN KEEP YOUR TREX DECK TOTALLY CLEAN.

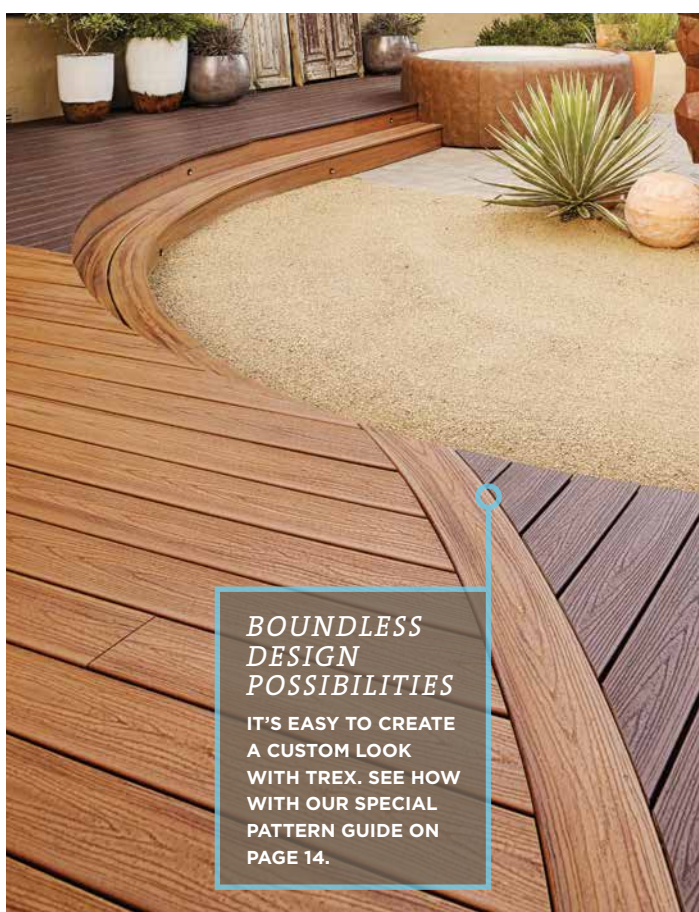


EASY INSTALLATION
TREX INSTALLS JUST LIKE WOOD—NO SPECIAL TOOLS NEEDED. GET STEP-BY-STEP INSTRUCTIONS ON PAGE 12.

HOW WE MAKE GREEN GREENER

From innovative materials to our eco-friendly processes, we take great pride in delivering sustainable products with minimal footprint.

- » All Trex deck boards are made of 95% recycled materials.
- » Trex saves over 180 million kilos of plastic and wood scrap from landfills every year.
- » Trex hasn't felled a single tree in all our years in the decking business.



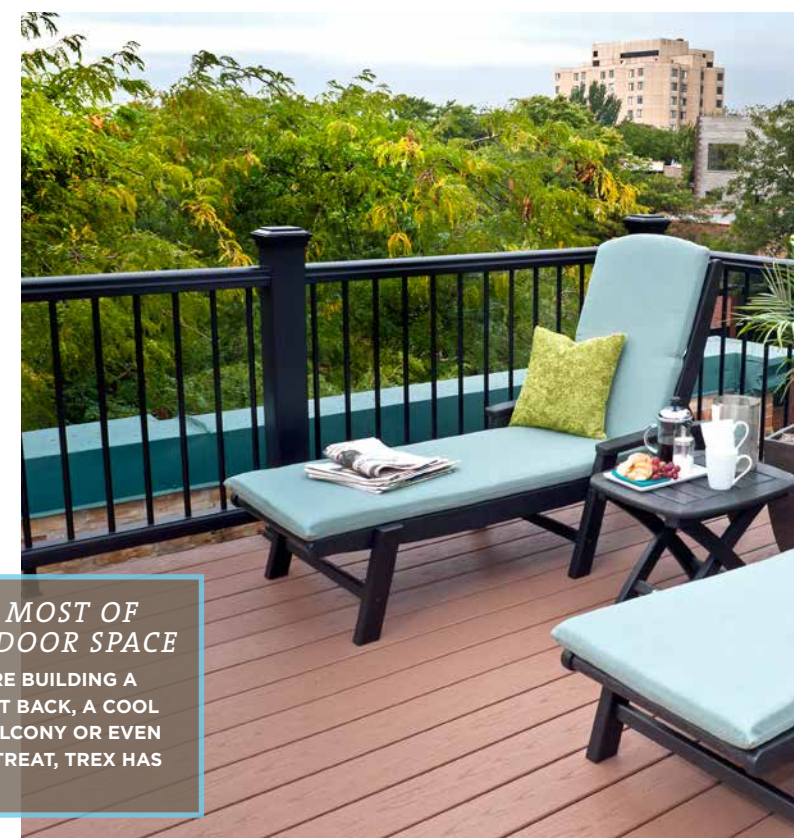
BOUNDLESS DESIGN POSSIBILITIES
IT'S EASY TO CREATE A CUSTOM LOOK WITH TREX. SEE HOW WITH OUR SPECIAL PATTERN GUIDE ON PAGE 14.



RICH TEXTURED FINISH
HIDDEN FASTENERS HELP KEEP THE RICH TEXTURE OF TREX COMPLETELY PRISTINE AND UNBLEMISHED BY DECK SCREWS. LEARN MORE ON PAGE 11.

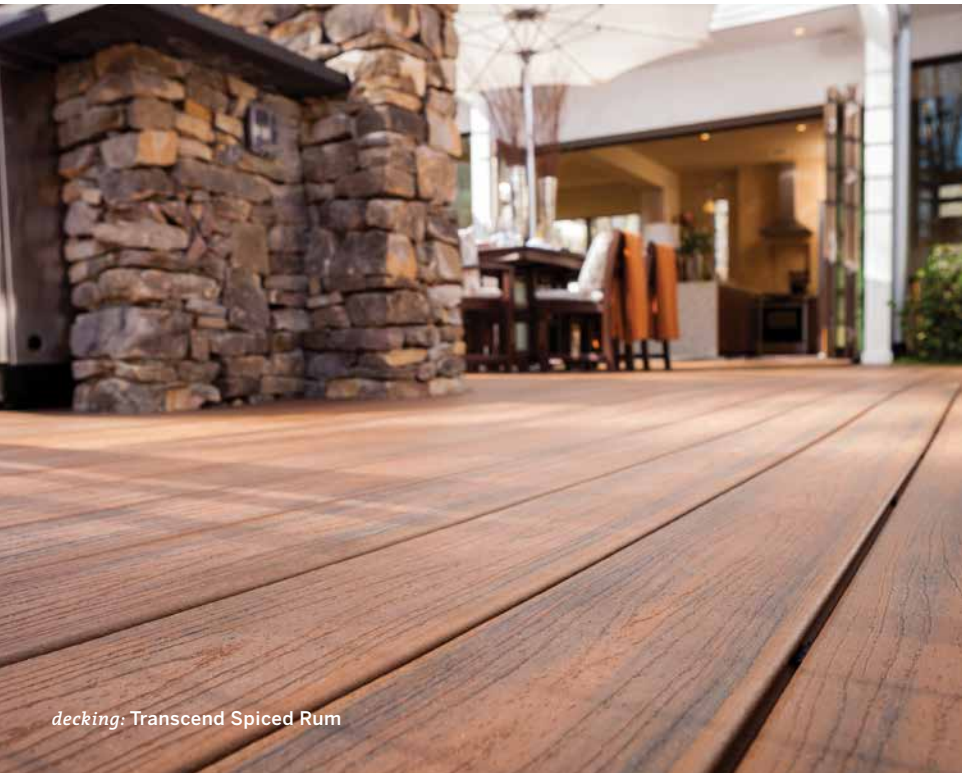


MAKE THE MOST OF YOUR OUTDOOR SPACE
WHETHER YOU'RE BUILDING A SUNNY SPOT OUT BACK, A COOL AND BREEZY BALCONY OR EVEN A ROOF-TOP RETREAT, TREX HAS YOU COVERED.



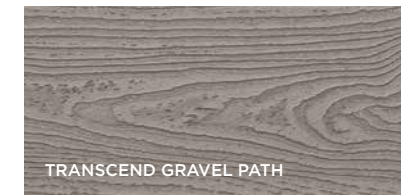
Time to Design

Trex decking comes in a variety of lasting colors with deep grain patterns that complement any style home. So fall in love with one wisely. Because the color you choose is the fade- and stain-resistant color you'll enjoy for decades.



decking: Transcend Spiced Rum

IN-STOCK COLORS



TRANSCEND GRAVEL PATH



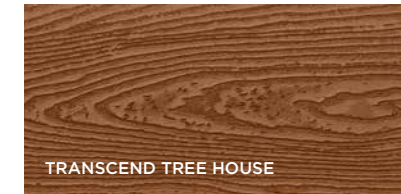
TRANSCEND LAVA ROCK



TRANSCEND SPICED RUM



TRANSCEND TIKI TORCH



TRANSCEND TREE HOUSE



TRANSCEND VINTAGE LANTERN







CONTOUR® PEBBLE GREY



CONTOUR CLOVE BROWN

TREX DECKING

PROFILE		DIMENSIONS
25.4 mm Square Edge Board		25.4 mm in thickness x 139.7 mm in width x varying lengths* <i>Available in all Transcend & Contour colors</i>
25.4 mm Grooved Edge Board		25.4 mm in thickness x 139.7 mm in width x varying lengths* <i>Available in all Transcend & Contour colors</i>
19 mm x 184 mm Fascia		19 mm in thickness x 184 mm in width x 3660 mm in length <i>Available in all Transcend & Contour colors</i>
19 mm x 286 mm Fascia		19 mm in thickness x 286 mm in width x 3660 mm in length <i>Available in all Transcend & Contour colors</i>

Trex Railing*

**Contact your local supplier or retailer for available lengths and additional details regarding Trex decking and railing products.*

TREX HIDEAWAY® HIDDEN FASTENING SYSTEM

TOOLS		DESCRIPTION
Start Clip (stainless steel)		2.5 clips per lineal meter of start board and finish board (36 per bag)
Universal Fastener (glass-filled nylon)		4.6m² Box (90 per box)



LIKE WHAT YOU DON'T SEE?

Our grooved boards accommodate our revolutionary Trex Hideaway Hidden Fastening System, which allows for a smooth, unfettered finish—no screws, no screw holes, nothing to interrupt the smooth texture and comfortable feel of your new Trex deck.

INSTALLATION

Before installing any Trex product, you should review local building codes and regulations, and consult with local building officials, to ensure compliance and safety.

GLOSSARY OF TERMS

Carriage Bolt	A bolt with a rounded head and a square shoulder under the head to prevent turning during installation.
Connector Clip	Hidden fastener used between deck boards to secure positioning.
Joist	A horizontal structural pressure-treated board that runs from wall-to-wall, wall-to-beam, or beam-to-beam to support the deck floor and decking materials.
Lag Bolt	A large metal fastener with a hex head and screw threads that drive it into the wood.
Ledger Board	A beam supporting one end of the joists.
Nosing	The rounded front edge of a stair tread.
Pan-head Screw	Self-tapping screw with W-cut design and slightly rounded head.
Rim Joist	A joist on either side or the end of the deck. May have stairs attached and typically opposite of the ledger board.
Riser	The vertical board nailed to a stringer.
Scarf Cut	A joint used to join two pieces of decking end-to-end, usually cut at a 45° angle.
Self-tapping Screw	A fastener that taps and drills its own hole and does not require a pre-drilled hole.
Stair Tread	Steps or stairway boards that are the steps.
Start Clip	Metal clips used at the end of decking boards to secure them in position.
Stringer	The structural member in a stairway that supports the treads and risers.
Universal Fastener	Plastic 6 mm self-gapping hidden fastener that has increased durability and allows for easier and faster installation than traditional fasteners.

DECKING FASTENERS

For best results, we recommend Trex Hideaway® Hidden Fasteners, which work well and provide an attractive appearance.

If any condition occurs which is attributable to the use of non-recommended fasteners, such condition shall not be covered under Trex's Limited Warranty.



GAPPING

You must gap Trex® decking, both end-to-end and width-to-width. Gapping is necessary for drainage and the slight thermal expansion and contraction of Trex decking boards. Gapping also allows for the shrinkage of the wood joist system.

» Note, Trex fascia has to be gapped width-to-width and end-to-end the same as Trex decking. See charts below.

» **ALWAYS** follow Trex-recommended gapping guidelines.

» All decks require air circulation to keep them dry and looking good. To improve air flow, leave openings under the decking or increase gapping to 10 mm.

WIDTH-TO-WIDTH GAP		6 mm	
END-TO-END/END-TO-WIDTH AND ABUTTING GAP			
	End-to-End/ End-to-Width	Abutting Gap	
Above 4.5 C*	3 mm	6 mm	
Below 4.5 C*	5 mm	13 mm	

*Temperature at installation.

» When you use the recommended hidden fasteners, the placement of the hidden fastener establishes the designated gap size.



Width-to-Width
The required width-to-width gapping is 6 mm.

HIDDEN FASTENER TIPS

Start Clips Needed

You will need 2.5 clips per lineal meter of start board and finish board.

Joist Spacing (on center)	CONNECTOR CLIPS NEEDED				
	Deck dimension in square meters				
	10	20	30	40	50
305 mm	230	460	640	920	1150
406 mm	200	400	600	800	1000

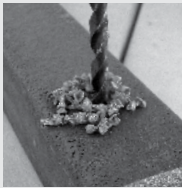
NOTE: When using hidden fasteners (both start and connector clips), one must be used on every joist.

Calculating the Number of Connector Clips Needed

- » # of joists x # of decking boards = # of connector clips needed.
- » Ninety connector clips will cover approximately 4.6 m² using 140 mm decking boards on 406 mm centers.

GENERAL TIPS

- » Most colored chalk lines are permanent. **Use baby powder.**
- » When drilling large or deep holes, periodically lift the bit out of the hole to remove the shavings.
- » If you want to minimize the appearance of joists through the spaces between boards, paint the top of your joists black.
- » Trex® decking is suitable for a wide range of applications. It is not intended for primary structural members such as load bearing columns, joists, stringers, and beams.
- » Construction methods are always improving. Please make sure you have the most up-to-date installation instructions by visiting trex.com.



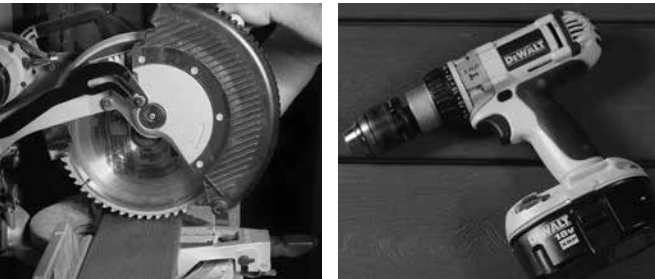
SAFETY

When working on any construction project, you should wear protective clothing and safety equipment. Wear safety glasses, gloves, a dust mask and long sleeves, particularly when cutting in confined spaces.

Trex® decking and railing are heavier and more flexible than wood. **DO NOT** try to lift the same quantity of Trex boards as you would traditional lumber. Go to Trex.com for Material Safety Data Sheets (MSDS).

TOOLS

You can create intricate shapes, profiles, and patterns with Trex. Most installments require no special tools. For best results, use carbide-tipped blades and router bits.

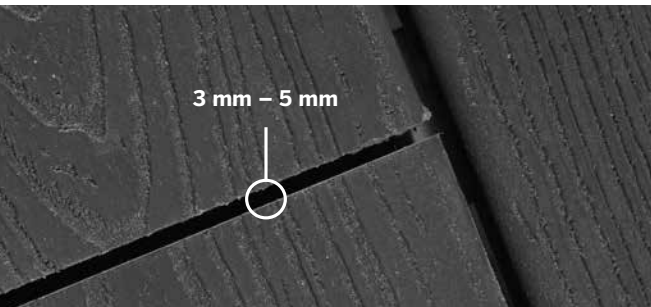


When using a miter saw, we recommend a 254 mm—305 mm saw blade with 40 teeth or less.

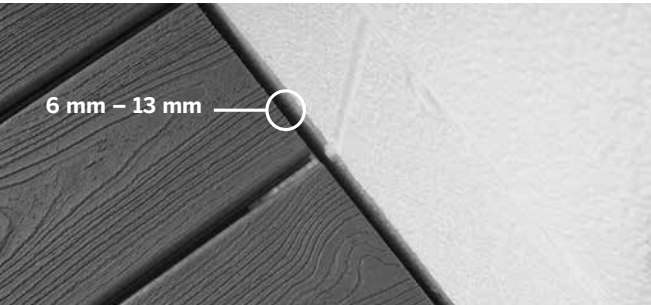
Install Trex recommended fasteners with standard power drills.

HOW WE MAKE GREEN GREENER DURING PRODUCTION

We use reclaimed wood from woodworking operations, used pallets and sawdust.



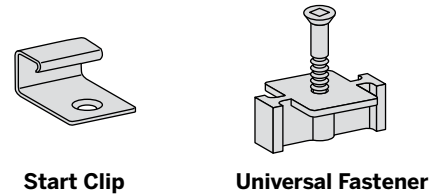
End-to-End/End-to-Width
Gap Trex decking end-to-end, based upon the temperature at installation. See chart at left.



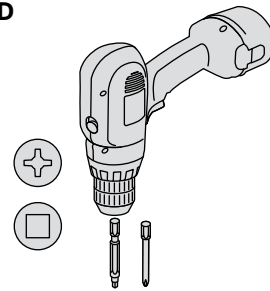
Abutting Solid Objects
When decking is abutting a wall, you must also gap it 6—13 mm depending on the temperature at installation. See chart at left.

HOW TO INSTALL UNIVERSAL HIDDEN FASTENERS

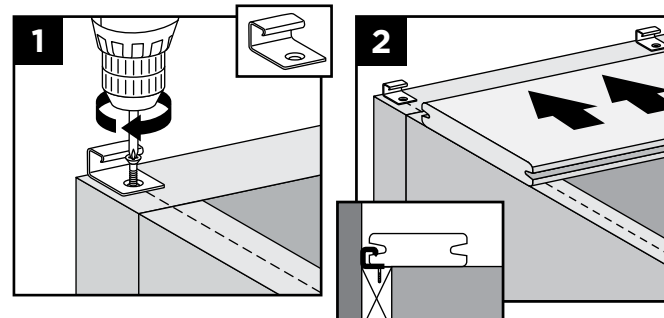
PARTS



TOOLS NEEDED

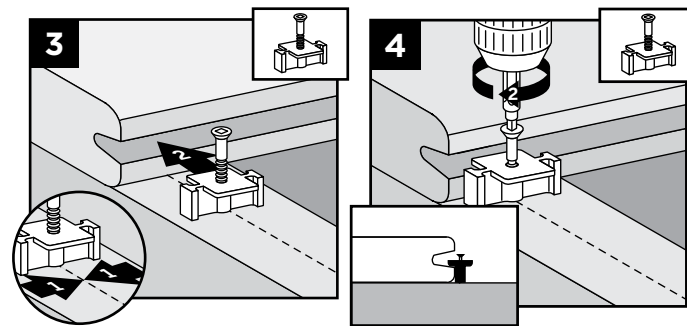


NOTE: Maximum spacing of deck boards using Hideaway system is 406 mm on center. Fasteners provide 6 mm gap when installed correctly.



Installing Start Clips and First Board

1. Install start clips on edge of ledger board, centered on each joist. Secure clips with screws.
2. Push grooved edge of deck board into start clips.
Important: First board MUST be straight and well secured.

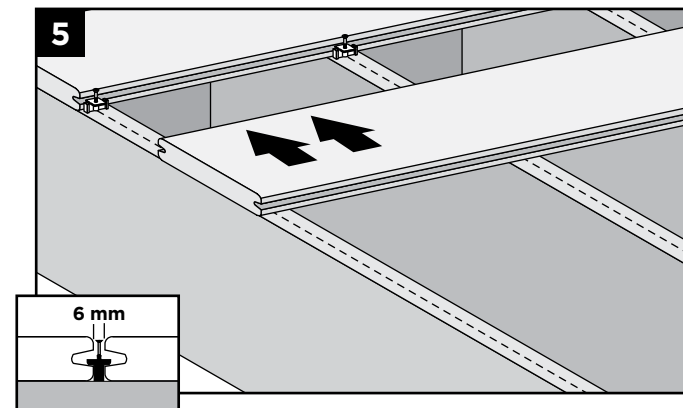


Install Universal Fasteners

3. Insert fastener into grooved edge of deck board.
4. Align screw hole in fastener with center of joist. Continue along the length of the board at every joist.

NOTE: Screw only half way down. **DO NOT** fully tighten.

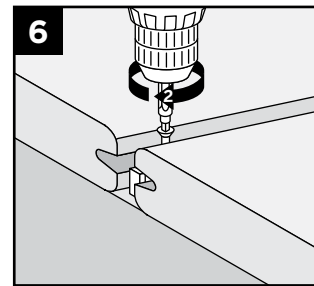
Installing Second Board



5. Slide second board into place, making sure fasteners fit into groove. Install the next universal fastener on the other side of the second board in the same manner as Steps 3 and 4. **DO NOT** fully tighten the screw.

Complete Installation

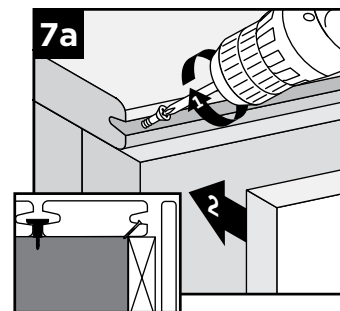
6. Tighten screws on fasteners in first row. Proceed with Steps 3 through 5, tightening down each row after board that follows is in place. Be sure to use a long #1 square bit.



Installing Last Board

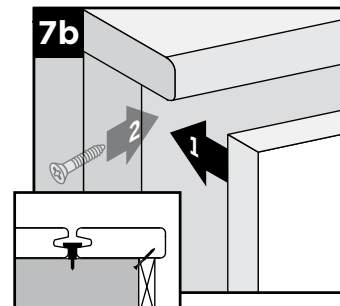
Option 1: Using Fascia Board

- 7a. Pre-drill pilot hole at an angle through grooved edge of deck board into ledger board. Install 64 mm screws through pilot holes to secure. Attach a fascia board flush with deck surface.



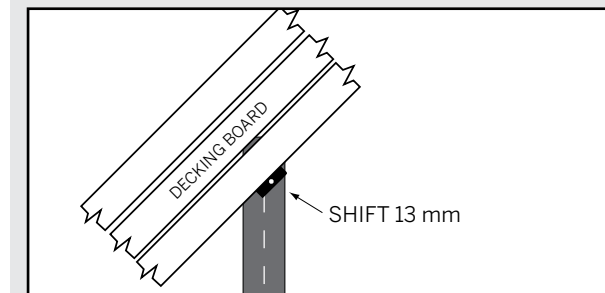
Option 2: With Deck Board Overhang

- 7b. Pre-drill pilot holes at 45° angle from below deck surface through rim joist. Seat last board into fasteners overhanging rim joist. Secure board with 64 mm screws using pilot holes. Position fascia board below overhanging deck board.



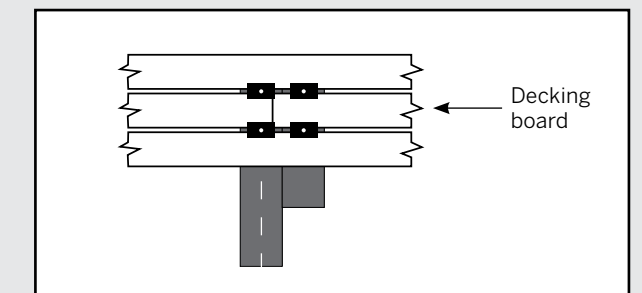
TIPS FOR INSTALLING A TREX HIDEAWAY® HIDDEN FASTENING SYSTEM

Installing Angled Deck Boards in Corners



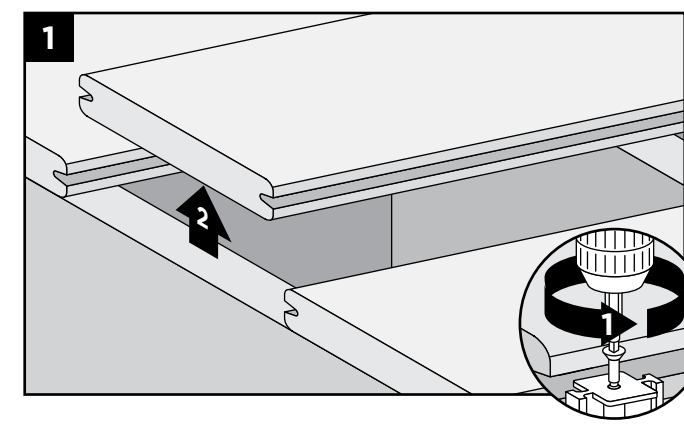
ALWAYS start in corner with a small triangular piece of decking at 45° and work outwards. Install Trex Hideaway fasteners 13 mm off center to keep fastener screws in middle of joists.

How to Butt Seams

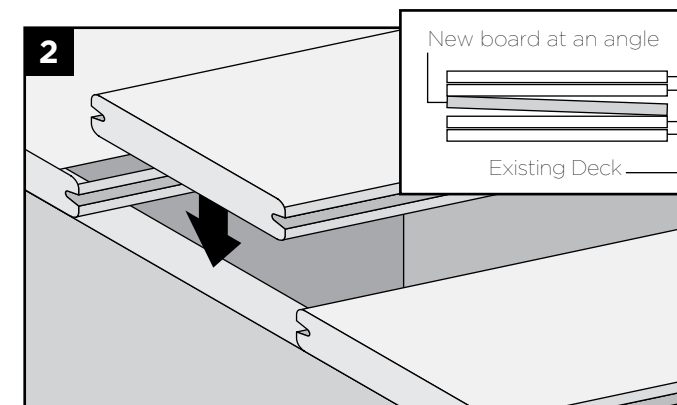


1. Install 254 mm–305 mm framing boards along joists where seams will butt.
2. Place additional fasteners on the adjacent board over the joist and framing boards where the seam will be.
3. Put the first board of the seam in place and secure with fastener.
4. Butt end of second board to first and secure with fastener.
5. Place second set of fasteners on each side of butt seam for next board.

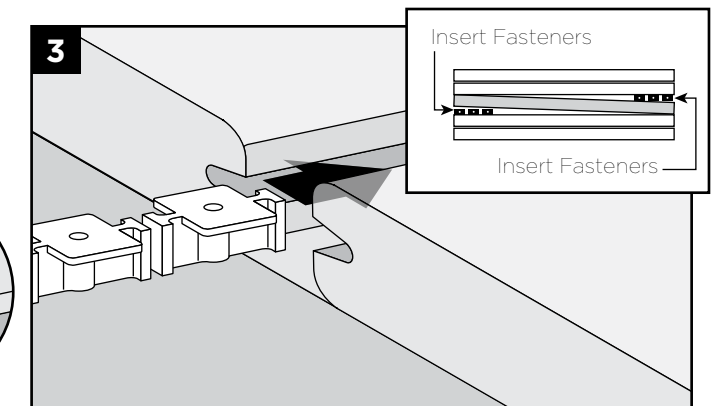
HOW TO REPLACE TREX® BOARDS INSTALLED WITH UNIVERSAL FASTENERS



1. Remove screws from fasteners on both sides of board to be replaced and remove board.



2. Angle new board to place. See inset box (above).



3. Slide a fastener for each joist into board grooves from both ends of the board.

NOTE: You may have to loosen adjacent boards to slide fasteners into position.

4. Position replacement board and secure fasteners on center of each joist.

CODE COMPLIANCE

Joist Spanning for Decking

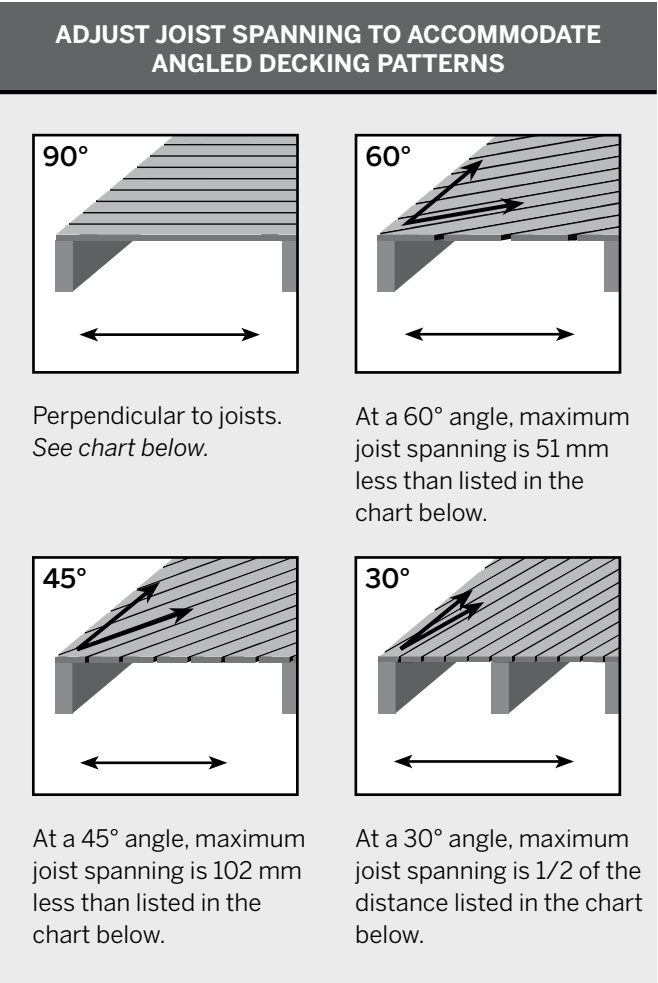
The joists must be spaced on center according to the chart below. Be sure that joists are level and plumb. Trex® decking must span at least three joists. For heavy items such as hot tubs, planters, etc., consult a local building engineer or inspector for span recommendations. If you want to minimize the appearance of joists through the spaces between boards, paint the top of your joists black.

NOTE: The ends of deck boards can not overhang joist by more than 10 mm.

For a Materials Safety Data Sheet (MSDS), please visit trex.com

HOW WE MAKE GREEN GREENER & STAY THAT WAY

We regularly seek out third-party audits to make sure we're continuously improving our green practices while meeting all environmental, health and safety guidelines and regulations.



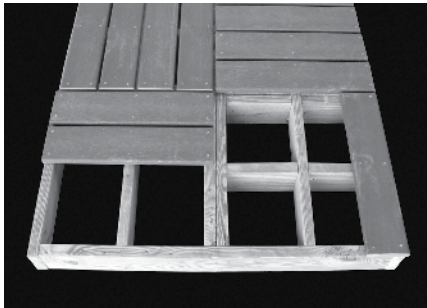
JOIST SPACING SPAN CHART (Center to Center)			
	Residential Decks, Light Duty Docks, Residential/Day care Playground	Commercial Decks, Boardwalks and Marinas	
Decking Loading	4788 N/m²	4788 N/m²	9576 N/m²
140 mm x 25 mm Boards	406 mm	406 mm	305 mm

SPECIAL PATTERNS

When planning a unique pattern, you will need to adjust the framing to support the surface pattern. Many decks are designed to take advantage of angles, as shown below.



Herringbone Pattern

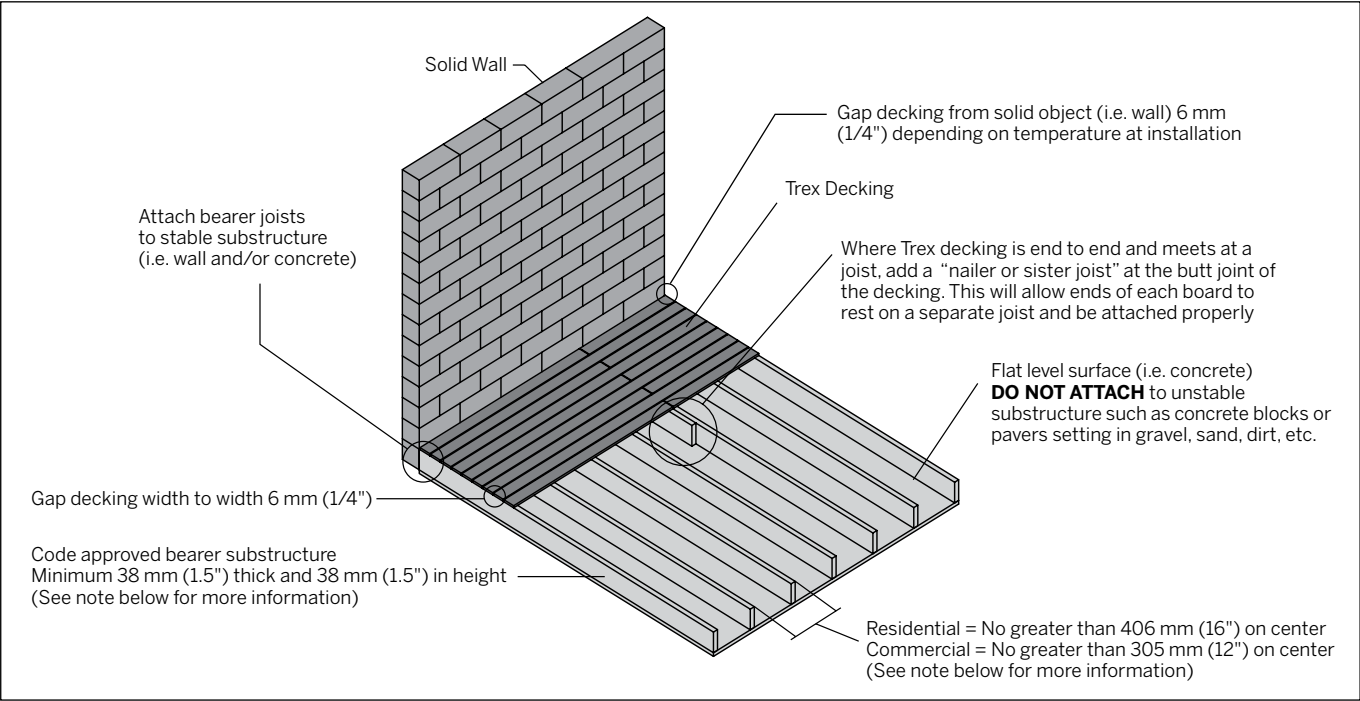


Tile Pattern



Picture Frame Pattern

TREX RECOMMENDATIONS WHEN USING WITH A BEARER SYSTEM:



A bearer system is a substructure between a solid surface and Trex decking. Drainage, access, and airflow are critical. Water must be able to flow through and away from the deck. For repairs and removal of debris, bearer system access may be necessary.

It is recommended that building code approved structural material be used as the supports.

End to End gapping rules are required when installing Trex Decking. See chart on page 11.

This system should not be allowed to float; it must be attached in a manner that secures the framing/system.

The bearer system must be level and have no uneven undulations. Any uneven areas of the substructure will transfer to the Trex decking, resulting in uneven decking.

Trex, when used with a bearer system, must be supported below its entire length and if using in a roofing application, the supports must run the direction of the pitch of the roof to facilitate proper drainage. Bearer should be placed perpendicular to the deck board orientation.

» For Commercial applications it is recommended to consult local building code official for specific requirements.

» If installing decking at angle, decrease spans 100 mm (4") for each of the above. (305 mm/12" for residential and 204 mm/8" for commercial).

For bearer systems where little debris (leaves, sand, dirt) can accumulate either between or under deck boards, a minimum of 38 mm (1.5") height is allowable and Trex Universal Hidden Fasteners can be used. (Note that Trex recommended composite decking screws are too long when using 38 mm (1.5") height as this will penetrate through the bearer.) For areas with the potential for debris buildup, a minimum 89 mm (3.5") or greater height is recommended to allow the debris to be removed along with the use of either Trex Universal Hidden fasteners or Trex recommended screws.

Always consult your local building code authority for proper details on roof and railing installation to the roof structure if required.

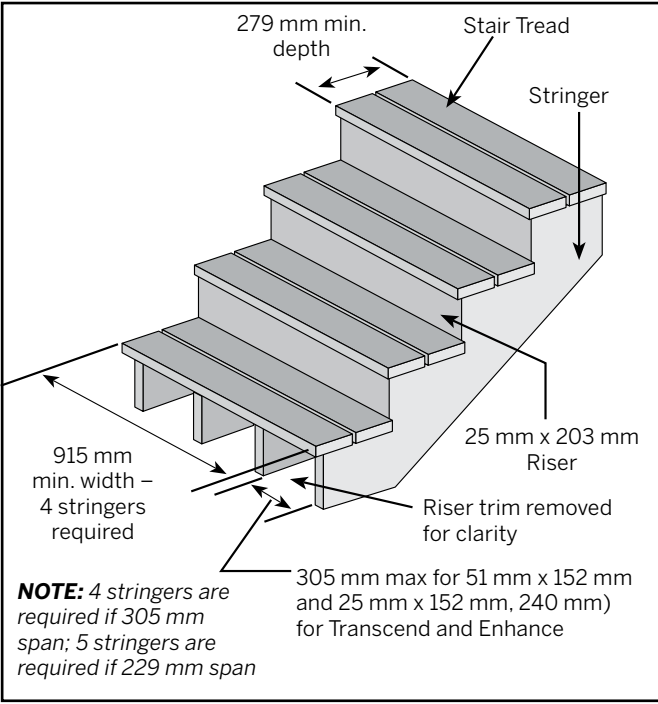
Any deviation from these recommendations could result in the voiding of the Trex warranty.

STAIRS

Stairway Detail

- » Fasten stair treads continuously across at least four stringers.
- » See chart (at right) for center-to-center spacing of profiles.
- » Dress the sides of the stringers and risers with Trex® fascia or trim for a finished look.
- » Gapping between Trex boards on stair treads must be 6 mm–10 mm.
- » The overhang of the stair tread is not to exceed 13 mm.

MAXIMUM SPACING OF STAIR JOISTS (Center to Center)	
51 x 152 mm, 25 x 152 mm Boards	305 mm



HOW TO INSTALL STAIR TREADS

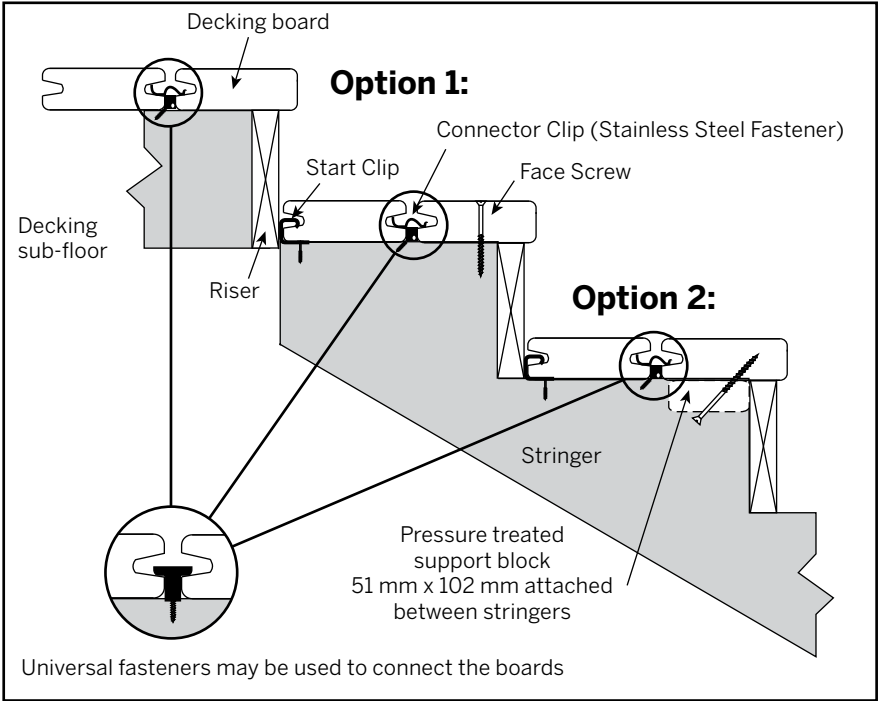
Installation Options

Option 1: Using Hidden Fasteners

1. Install start clips against riser on each step.
2. Install first board.
3. Install second board.
4. Secure with screws from top of second board into stringer boards.

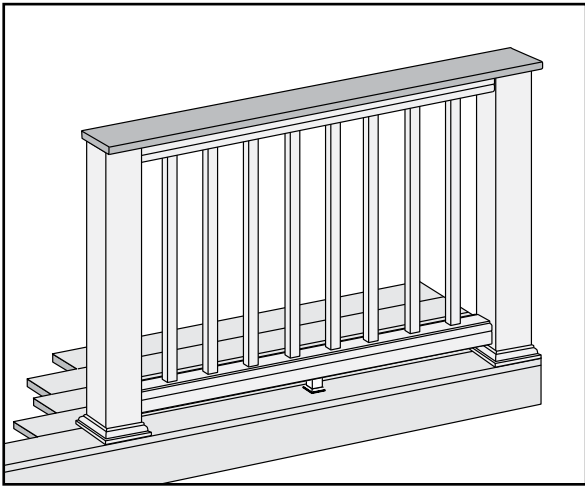
Option 2: Using 51 mm x 102 mm Wood Support Blocks

1. Install start clips against riser on each stair tread.
2. Install first board.
3. Attach 51 mm x 102 mm long wood support blocks between stringers.
4. Pre-drill holes up through blocks.
5. Install second board.
6. Secure with screws from bottom through blocks and into stair treads.



HOW TO INSTALL TREX TRANSCEND® CLASSIC RAILING

Trex railing is suitable for residential decks with a deck board height up to 600 mm from the ground. For higher level decks or commercial decks please contact your local Trex supplier or retailer for advice.



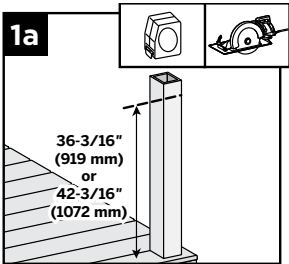
Important: ONLY for use with 102 mm x 102 mm post and post sleeve. Cutting post and post sleeve only apply to the Classic style railing. Universal Railing Kit is required.

1. Installing Pressure-Treated Posts

See instructions on page 18.

Cutting Post and Post Sleeve

- 1a. Mark and cut post and post sleeve measuring from deck surface:
 - » 919 mm for 914 mm height.
 - » 1072 mm for 1067 mm height.



2. Installing Post Sleeve Skirts and Post Sleeves

See instructions on page 18.

3. Installing Railing Support Brackets (RSBs)

See instructions on page 18.

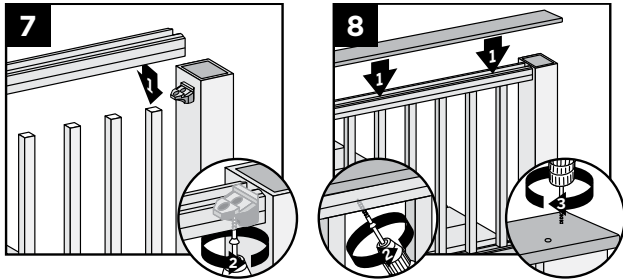
4. Attaching Universal Rail and Foot Block

See instructions on page 19.

5-6. Placing Baluster Spacers and Balusters

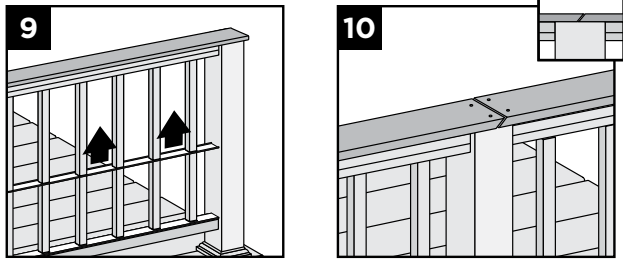
See instructions on page 19.

Attaching the Inverted Universal Rail



7. Place inverted universal rail onto RSBs with balusters in channel. Attach universal rail to RSBs with two self-tapping screws (provided).

8. Place deck boards over universal rails. Attach boards on each post with Trex-recommended composite screws at an angle at a diagonal. Secure boards to universal rails with 51 mm pan-head screws (provided) every 406 mm on center.

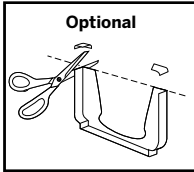


9. Slide baluster spacers up and snap into universal rails.

NOTE: If necessary, cut tips off rail gaskets prior to installation.

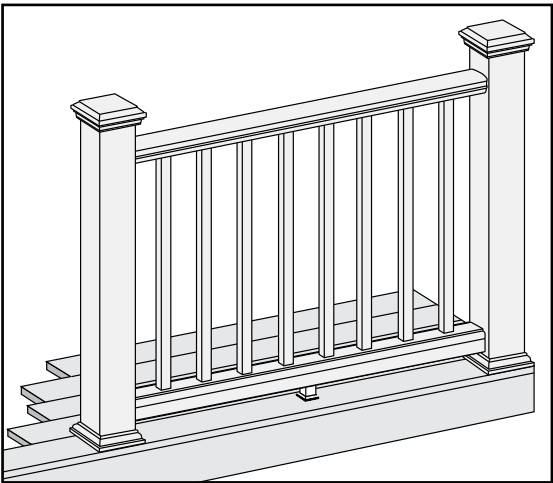
10. Use scarf cut for posts where two deck boards meet.

NOTE: If installing in weather below 4.5°C, leave 3 mm gap between deck boards.



HOW TO INSTALL TREX TRANSCEND® STANDARD RAILING

Trex railing is suitable for residential decks with a deck board height up to 600 mm from the ground. For higher level decks or commercial decks please contact Arbor Forest Products Ltd for advice.

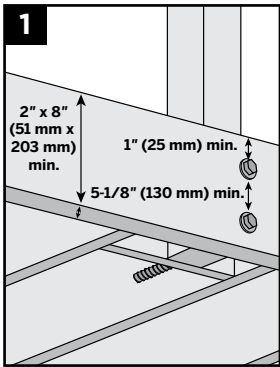


Read all instructions BEFORE installation.

Important: Post sleeves are NOT to be cut for this design style.

Installing Pressure-Treated Posts

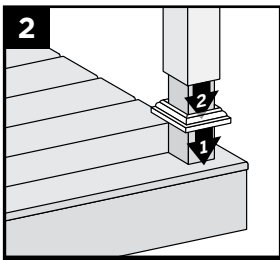
- » Posts are to be installed 1.83 m or 2.44 m on center to accommodate appropriate railing length.
- » Attach posts using 13 mm carriage bolts.
- » Minimum joist size is 51 mm x 203 mm.
- » Top bolts must be 25 mm from tops of joists.
- » Bottom bolts must be 130 mm from top bolts.



NOTE: Blocking can be added for extra strength.

Installing Post Sleeve Skirts and Post Sleeves

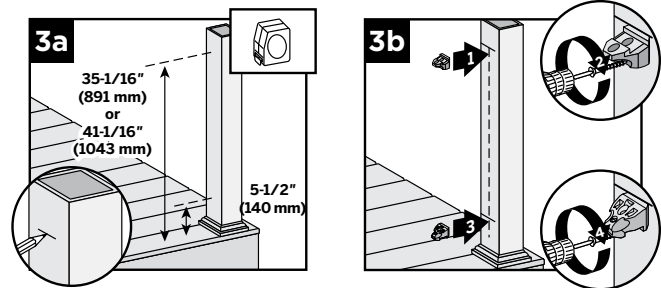
2. Slide post sleeve skirt over post and down to rest on decking surface. Slide post sleeve over post and position inside post sleeve skirt.



NOTE: Shims can be used to plumb post sleeves.

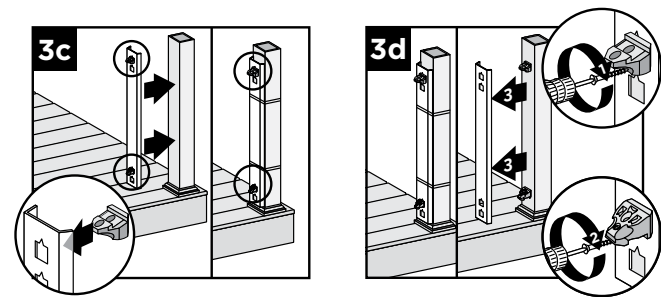
Installing Railing Support Brackets (RSBs)

Option 1: Without Trex®Express™ Railing Template



- 3a. Mark 140 mm and 891 mm from deck surface OR for 1067 mm height, mark 140 mm and 1043 mm from the deck surface.
- 3b. Place RSBs directly under marks, center on posts, and secure with 51 mm wood screws (provided with post sleeve). Place top RSBs flat side up, bottom RSBs flat side down.

Option 2: With TrexExpress Railing Template

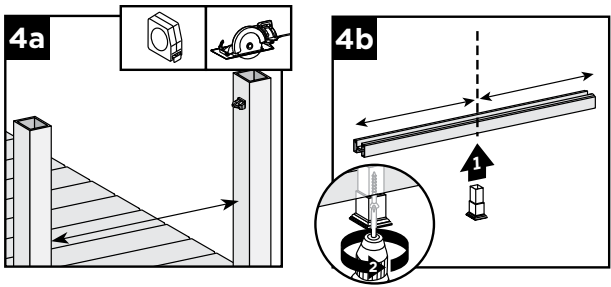


- 3c. Place RSBs in template. Place top RSBs flat side up, bottom RSBs flat side down. Secure template on post with tape or rubber band, with bottom of template resting on post skirt.
- 3d. Secure RSBs with 51 mm wood screws (provided with post sleeve) and remove template.

NOTE: Special steps are necessary when using 152 mm x 152 mm plastic TrexExpress template.

- » Cut off 13 mm from the bottom (blue arrows up) of the tool before first use.
- » Position top RSBs only, 152 mm higher for 1067 mm rail height.
- » Secure RSBs with 64 mm wood screws (provided in railing kit) and remove template.

Attaching Universal Rail and Foot Block

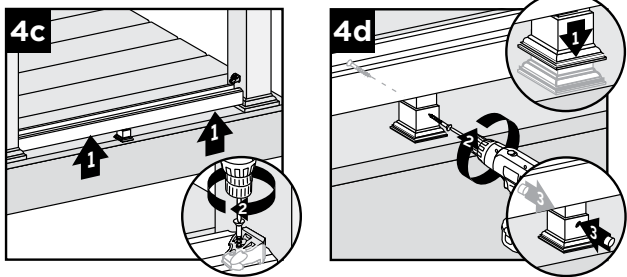


- 4a. Measure between posts and cut rails to same length.

NOTES:

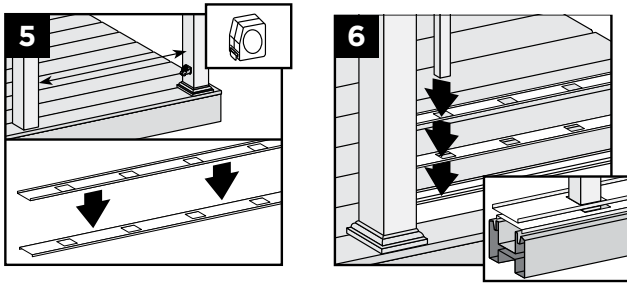
- » If using optional rail gaskets, subtract 1.5 mm from each end.
- » When measuring, cut equal lengths from each end of railing and baluster spacer to ensure equal spacing of balusters per each railing section.
- » Attach baluster spacer to railing before cutting to allow for cleaner cut and less work.
- » In some cases, the gasket can be attached before tightening railing to RSB.

- 4b. Center foot block in universal rail channel and attach. DO NOT extend foot block.



- 4c. Lift bottom rail so RSBs are in the channel and attach with self-tapping screws (provided).
- 4d. Telescope foot block down and screw through opposite sides. Place screw plugs.

Placing Baluster Spacers and Balusters



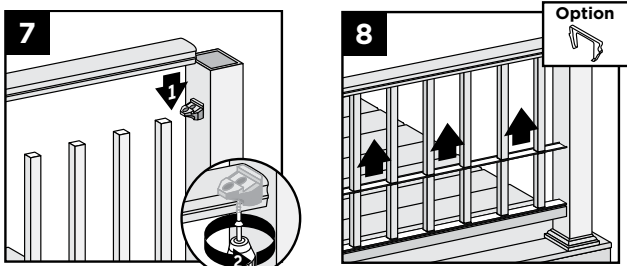
5. Cut baluster spacers the same length as rails, equally spaced so the holes line up.

6. Snap baluster spacer into bottom rail. Place inverted baluster spacer on top of first baluster spacer. Place balusters in baluster spacer holes.

NOTE: If using Contemporary balusters, also use Contemporary baluster connectors to ensure a tight fit of the balusters (this will help prevent balusters from rattling).

- » Install without using screws (screws are included in connector packaging and screws are used only with Designer Railing).
- » Install bottom connector tight into contemporary baluster.
- » Install top connector approximately half way into contemporary baluster.
- » Contemporary balusters should then have a snug fit when placing into the baluster spacers in the horizontal position—if not, adjust the depth of the connector.

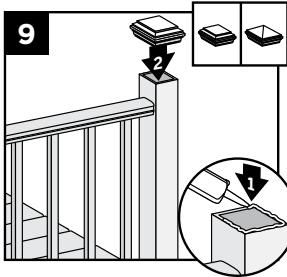
Attaching Top Rail



7. Place top rail on RSBs with balusters in rail channels. Attach top rail to RSB with two self-tapping screws (provided).
8. Slide baluster spacer up and snap into top rail. Place optional top rail gaskets on each end of rail.

Attaching Post Caps

9. Secure post caps with silicone or PVC adhesive.
- NOTE: Clean-up any excess adhesive before drying.



EUROPEAN PHYSICAL & MECHANICAL PROPERTIES
TREX TRANSCEND® AND TREX ENHANCE®

CRITERION	TEST METHOD	RESULTS	TEST EXPLANATION
Bending Modulus	PrEN 15534-1:2012		
Trex Transcend & Enhance (25.4 mm)	Deflection under load of 500N < / = 2.0 mm	Pass	3-point bend test to determine the amount of flexibility at break that a sample possesses
Breakage Modulus [psi]	PrEN 15534-1:2012		
Trex Transcend & Enhance (25.4 mm)	F' max > / = 3300 N	Pass	Maximum amount of force in a 3 point bend test that it takes to break a sample
Determination of Slipperiness	PrEN 15534-1	Angle/Quality Class	
Trex Transcend & Enhance (25.4 mm)	Average angle of inclination	28 / C	Wet-loaded barefooted areas, walking method-ramp test
Trex Transcend & Enhance (25.4 mm)	Average angle of inclination	32 / C	Wet-loaded barefooted areas, walking method-ramp test
Fire Resistance Testing	EN ISO 11925-2:2010 & EN ISO 9239-1:2010	Classification	
Trex Transcend (25.4 mm)		Fire Class = Cfl – s1	Classification according to EN 13501-1
Trex Enhance (25.4 mm)		Fire Class = Efl	Classification according to EN 13501-1
Creep Behavior	PrEN 15534-1, 7.4.1	Classification	
Trex Transcend & Enhance (25.4 mm)		Pass	3-point bend test under constant load of 850 N for 168 hr. Must deflect less than 10mm
Falling Mass Impact Resistance	prEN 15534-4: 2012		
Trex Transcend & Enhance (25.4 mm)			1000 gram striker falling from 700mm. Distance between supports for the boards = 200mm. Must not indent more than > / = 0.5mm

* German/Euro lab = “eph” – Entwicklungs – und Prüflabor Holztechnologie GmbH (Dresden, Germany)


CRITERION	TEST METHOD	RESULTS	TEST EXPLANATION
Thermal Expansion Coefficient (Transcend and Enhance)	ASTM D696		
Width		8.94 x 10 – 5 cm/cm/C	Distance a 304.8 mm sample expands or contracts in the width direction at various temperatures
Length		4.1 x 10 – 5 cm/cm/C	Distance a 304.8 mm sample expands or contracts in the length direction at various temperatures
Compressive Strength (Transcend and Enhance)	ASTM D695		
Surface		12.45 MPa	Force required to compress the surface of a sample between two (2) 50 mm spheres for a 0.2 mm indentation
Edge		13.40 MPa	Force required to compress the surface of a sample between two (2) 50 mm spheres for a 0.2 mm indentation
Relative Density [g/cm³] (Transcend and Enhance)	ASTM D792		
Width		1.05	Mass per unit volume as compared to water (1.00 g/cm³)
Resistance to Fungal Infestation	ASTM D1413		
[Brown, White Rot]		No decay	Samples are subjected to wood destroying fungi (white and brown rot) and evaluated for decay and weight loss.
Screw Retention (Transcend and Enhance)	ASTM D1761		
#8 screws		1,377.25 N/m	Amount of force it takes for a screw to be removed from a deck board
Water Absorption (Transcend and Enhance)	ASTM D1037		
Vol. %		<0.5%	Weight gain measurement of a deck board when immersed in water for 24 hrs.
Mass %		0	Change in mass measurement of a deck board when immersed in water for 24 hrs.

* ASTM (American Society for Testing of Materials) tests conducted at Washington State University (Pullman, WA, USA)

TREX TRANSCEND® AND TREX ENHANCE®
CARE AND CLEANING GUIDE

All exterior building materials require cleaning. Generally, soap and water is all that is required to clean Transcend and Enhance products. For further information, see below.

PROBLEM	SOLUTION
Dirt and Debris	The affected area should be sprayed off with a hose to remove surface debris. Use warm soapy water and a soft bristle brush to remove dirt and debris from the embossing pattern.
Chalk Lines	Most colored chalks are permanent and may discolor the surface. Use only chalk lines that contain chalk that can be easily removed or washed off.
Tannins Due to Debris	Remove all debris from the deck using a hose or broom. Once the deck surface is dry, apply a Deck Brightener* to the deck as directed by the manufacturer. Deck Brighteners contain oxalic acid, which will also remove tannins.
Ice and Snow	A plastic shovel may be used to remove snow from the deck. Use calcium chloride or rock salt to melt the snow and ice from the deck surface.
Oil, Grease and Food	All food spills should be removed as soon as possible. The surface must be cleaned within seven days to maintain the stain warranty. To remove, spray off with a hose and use warm, soapy water and a soft bristle brush to remove spills from the embossing pattern.
Mold and Mildew	If debris such as pollen and dirt is allowed to remain on the deck surface, mold can feed on the biofilm. Using a hose and warm, soapy water with a soft bristle brush is recommended to remove the food source and mold.
Using a Pressure Washer	A pressure washer with no greater than 3100 psi** that has a fan attachment/ adjustment and soap dispenser may be used to remove dirt, concrete dust, or other types of construction dirt. Spray deck with soap, then follow with gently scrubbing each deck board with a soft bristle brush. Spray/rinse each individual deck board using a fan tip no closer than 8" from the decking surface. RINSE THOROUGHLY. If dirty water from cleaning is left to dry, this will cause a film to remain on the decking surface.
Maintaining Transcend Railing	NEVER use acetone or other solvents on Trex Transcend railing to maintain the beauty of the surface. For color transfer issues (from attachment of baluster spacer), use Mr. Clean® Magic Eraser® Original or Magic Eraser® Extra Power to help remove this.*** For small surface scratches, marks, or scuffs, use Dupli-Color Scratch Seal™ Clear Sealer Pen. *****



HOW WE MAKE GREEN GREENER *IN OUR FACTORIES*

» Factory runoff is recycled back into the manufacturing line.

» The processing methods at Trex eliminate any need for smokestacks.

*Use of products containing bleach or acid will lighten the surface of Trex. Use in an inconspicuous area to determine whether you like the effect. Neither product will affect the structural integrity of Trex.

**Use of a pressure washer greater than 3100 psi could damage the boards and void the warranty.

***Mr. Clean® and Magic Eraser® are registered trademarks of The Procter and Gamble Company.

****Scratch Seal™ Clear Sealer Pen is a registered trademark of Dupli-Color® Products Company.

TREX® LIMITED WARRANTY

Trex Company, Inc. (hereinafter “Trex”) warrants to the original purchaser (“Purchaser”) that, for the period of time set forth in the following sentence, under normal use and service conditions, Trex® products shall be free from material defects in workmanship and materials, and shall not split, splinter, rot or suffer structural damage from termites or fungal decay. The term of such warranty shall be twenty-five (25) years from the date of original purchase for a residential application, and ten (10) years from the date of original purchase for a commercial application. If a defect occurs within the warranty period, Purchaser shall notify Trex in writing and, upon confirmation by an authorized Trex representative of the defect, Trex’s sole responsibility shall be, at its option, to either replace the defective item or refund the portion of the purchase price paid by Purchaser for such defective item (not including the cost of its initial installation).

Notwithstanding the foregoing, (a), the term of the warranty for the LED lights and housing for Trex® DeckLighting™ shall be seven (7) years, the term of the warranty for the LED lights and housing for Trex® LandscapeLighting™ shall be five (5) years, and the term of the warranty for the dimmer, timer and transformer for both shall be three (3) years, in each case provided that a Trex transformer is used (with no warranty on any components if a Trex transformer is not used), and any other parts or accessories shall not be warranted; (b) with respect to hardware for the Trex Surroundings® gate (gate frame, hinges and screws), the term of the warranty shall be five (5) years, (c) with respect to Trex Decorative Balusters, the term of the warranty covering the paint coating shall be ten (10) years, and shall be prorated in the following manner: 100% replacement for the first five (5) years; and 50% replacement for the next five (5) years, and (d) this warranty shall not apply to Trex Elevations® steel deck framing, Trex Reveal® aluminum railing and TrexTrim™ (which each have separate warranties).

For purposes of this warranty, a “residential application” shall refer to an installation of the Product on an individual residence, and a “commercial application” shall refer to any installation of the Product other than on an individual residence.

THIS WARRANTY SHALL NOT COVER AND TREX SHALL NOT BE RESPONSIBLE FOR COSTS AND EXPENSES INCURRED WITH RESPECT TO THE REMOVAL OF DEFECTIVE TREX PRODUCTS OR THE INSTALLATION OF REPLACEMENT MATERIALS, INCLUDING BUT NOT LIMITED TO LABOR AND FREIGHT.

With respect to a residential application, this warranty may be transferred one (1) time, within the five (5) year period beginning from the date of original purchase by the Purchaser, to a subsequent buyer of the property upon which the Trex products were originally installed. With respect to a commercial application, this warranty is freely transferable to subsequent buyers of the property upon which the Trex products were originally installed.

To make a claim under this limited warranty, Purchaser, or the transferee, shall send to Trex, within the warranty period referred to above, a description of the claimed defect and proof of purchase, to the following address:

Trex Company, Inc.
Customer Relations
160 Exeter Drive
Winchester, VA 22603-8605
U. S. A.

Trex does not warrant against and is not responsible for, and no implied warranty shall be deemed to cover, any condition attributable to: (1) improper installation of Trex products and/or failure to abide by Trex’s installation guidelines, including but not limited to improper gapping; (2) use of Trex products beyond normal use and service conditions, or in an application not recommended by Trex’s guidelines and local building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which Trex products are installed; (4) any act of God (such as flooding, hurricane, earthquake, lightning, etc.), environmental condition (such as air pollution, mold, mildew, etc.), staining from foreign substances (such as dirt, grease, oil, etc.), or normal weathering (defined as exposure to sunlight, weather and atmosphere which will cause any colored surface to gradually fade, chalk, or accumulate dirt or stains); (5) variations or changes in color of Trex products; (6) improper handling, storage, abuse or neglect of Trex products by Purchaser, the transferee or third parties; or (7) ordinary wear and tear.

No person or entity is authorized by Trex to make and Trex shall not be bound by any statement or representation as to the quality or performance of Trex products other than as contained in this warranty. This warranty may not be altered or amended except in a written instrument signed by Trex and Purchaser.

UNDER NO CIRCUMSTANCES WILL TREX BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARE SOUGHT IN CONTRACT, IN TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, AND TREX’S LIABILITY WITH RESPECT TO DEFECTIVE PRODUCTS SHALL IN NO EVENT EXCEED THE REPLACEMENT OF SUCH PRODUCTS OR REFUND OF THE PURCHASE PRICE, AS DESCRIBED ABOVE.

Some nations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from nation to nation. Consumers have legal rights under applicable national legislation governing the sale of consumer goods. This warranty does not affect those rights.

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TREX TRANSCEND®, TREX ENHANCE®, TREX CONTOUR® AND TREX® FASCIA LIMITED FADE & STAIN WARRANTY

For the term set forth below, Trex Company, Inc. (hereinafter “Trex”) warrants to the original end-user purchaser (the “Purchaser”) that Trex Transcend® decking, porch or fascia, Trex Enhance® decking or fascia, Trex Contour® decking or Trex Fascia, as the case may be (the “Product”) will perform, under normal use and service conditions, as follows:

Term of Warranty: The term of this warranty shall begin on the date of original purchase, and shall end (1) twenty-five (25) years thereafter for a residential application of the Product, and (2) ten (10) years thereafter for a commercial application of the Product.

Residential/Commercial Application: For purposes of this warranty, a “residential application” shall refer to an installation of the Product on an individual residence, and a “commercial application” shall refer to any installation of the Product other than on an individual residence.

Fade Resistance: The Product shall not fade in color from light and weathering exposure as measured by color change of more than 5 Delta E (CIE) units.

The Product is designed to resist fading. No material is fade proof when exposed to years of UV exposure and the elements. The Product is designed to resist fading, and will not in any event fade by more than 5 Delta E (CIE) units.

Stain Resistance: The Product shall be resistant to permanent staining resulting from spills of food and beverage items including ketchup, mustard, salad oils, tea, wine, coffee, fruit punch, barbecue sauce, grease, sodas and other food and beverage related items that would typically be present on a residential deck, or mold and mildew naturally occurring in the environment, provided that such substances are removed from the Product with soap and water or mild household cleaners after no more than one (1) week of exposure of the food or beverage to the surface or first appearance of the mold and mildew.

Notwithstanding the foregoing, Trex does not warrant that the Product is stain-proof, and does not warrant stain resistance resulting from spilled or otherwise applied food and beverage substances which are not properly cleaned as provided above within one (1) week of exposure. In addition, materials not covered in the stain resistant warranty include abrasive compounds of acidic or basic pH, paints or stains, strong solvents, metallic rust or other abnormal deck use items, and non-food and non-beverage substances, including but not limited to, biocides, fungicides, plant food, or bactericides. Mold and mildew can settle and grow on any outdoor surface, including this Product. You should periodically clean your deck to remove dirt and pollen that can feed mold and mildew. This warranty does not cover mold and mildew which is not properly cleaned as provided above within one (1) week of first appearance.

Standard Trex Company Limited Warranty: This warranty is in addition to the standard Trex Company Limited Warranty that applies to all Trex products.

Transferability: With respect to a residential application, this warranty may be transferred one (1) time, within the five (5) year period beginning from the date of original purchase by the Purchaser, to a subsequent buyer of the property upon which the Trex products were originally installed. With respect to a commercial application, this warranty is freely transferable to subsequent buyers of the property upon which the Trex products were originally installed.

EXCLUSIONS FROM WARRANTY COVERAGE:

Exposure to Heat: Direct or indirect contact with extreme heat sources (over 275 degrees) may cause fading and may damage the surface of the Product, and any effects of such exposure are expressly excluded from coverage under this warranty.

Surface Damage: Never use metal shovels or sharp-edged tools to remove snow and ice on the surface of the Product. If the surface of the Product is damaged or punctured, this warranty will be voided.

Paint or Other Materials Applied to the Product: If paint or other coating materials are applied to the Product, this warranty will be voided.

Railing: This warranty does not cover Trex Transcend® railing components.

Other Exclusions: This warranty shall not cover any condition attributable to: (1) improper installation of the Product and/or failure to abide by Trex’s installation guidelines, including but not limited to improper gapping; (2) use of the Product beyond normal use or service conditions, or in an application not recommended by Trex’s guidelines and local building codes; (3) movement, distortion, collapse or settling of the ground or the supporting structure on which the Product is installed; (4) any act of God (such as flooding, hurricane, earthquake, lightning, etc.); (5) improper handling, storage, abuse or neglect of the Product by Purchaser, the transferee or third parties; (6) any fading or staining not on the walking surface of the Product (i.e., the underside or the ends of the Product); or (7) ordinary wear and tear.

Procedure for Making a Claim under this Warranty

In order to make a claim under this warranty, Purchaser must do the following:

1. If the Purchaser is making a claim relating to the warranty on stain resistance, Purchaser must do as follows:

(a) Purchaser must try to clean the affected area of the deck by using the cleaning procedures described above within one (1) week of exposure of the food or beverage to the Product or first appearance of the mold and mildew.

(b) If the affected area remains reasonably unsatisfactory after Purchaser has tried these cleaning procedures, then Purchaser must have the affected area of the deck professionally cleaned at Purchaser’s expense.

(c) If the affected area remains reasonably unsatisfactory after the professional cleaning, Purchaser may make a claim under this warranty, provided that such claim is made within thirty (30) days after the professional cleaning.

2. To make a claim under this limited warranty, Purchaser, or the transferee, shall send to Trex, within the warranty period referred to above, a description and photographs of the affected area of the Product, proof of purchase, and if the claim relates to the warranty on stain resistance, proof of compliance with paragraph 1. above, to the following address:

Trex Company, Inc.
Customer Relations
160 Exeter Drive
Winchester, VA 22603-8605
U. S. A.

3. Upon confirmation by an authorized Trex representative of a valid claim hereunder, Trex’s sole responsibility shall be, at its option, to either replace the affected item or refund the portion of the purchase price paid by Purchaser for such affected item (not including the cost of its initial installation). Replacement material will be provided that is as close as possible in color, design and quality as the replaced material, but Trex does not guarantee an exact match as colors and design may change.

4. If a valid warranty claim hereunder is made during years eleven (11) through twenty-five (25) after the original purchase for a residential application, recovery will be prorated. If Trex is providing replacement materials, it may elect to replace the percentage listed below of boards otherwise meeting the requirements for a claim, or if it is refunding the purchase price, it may elect to refund the percentage listed below of the purchase price of boards otherwise meeting the requirements for a claim.

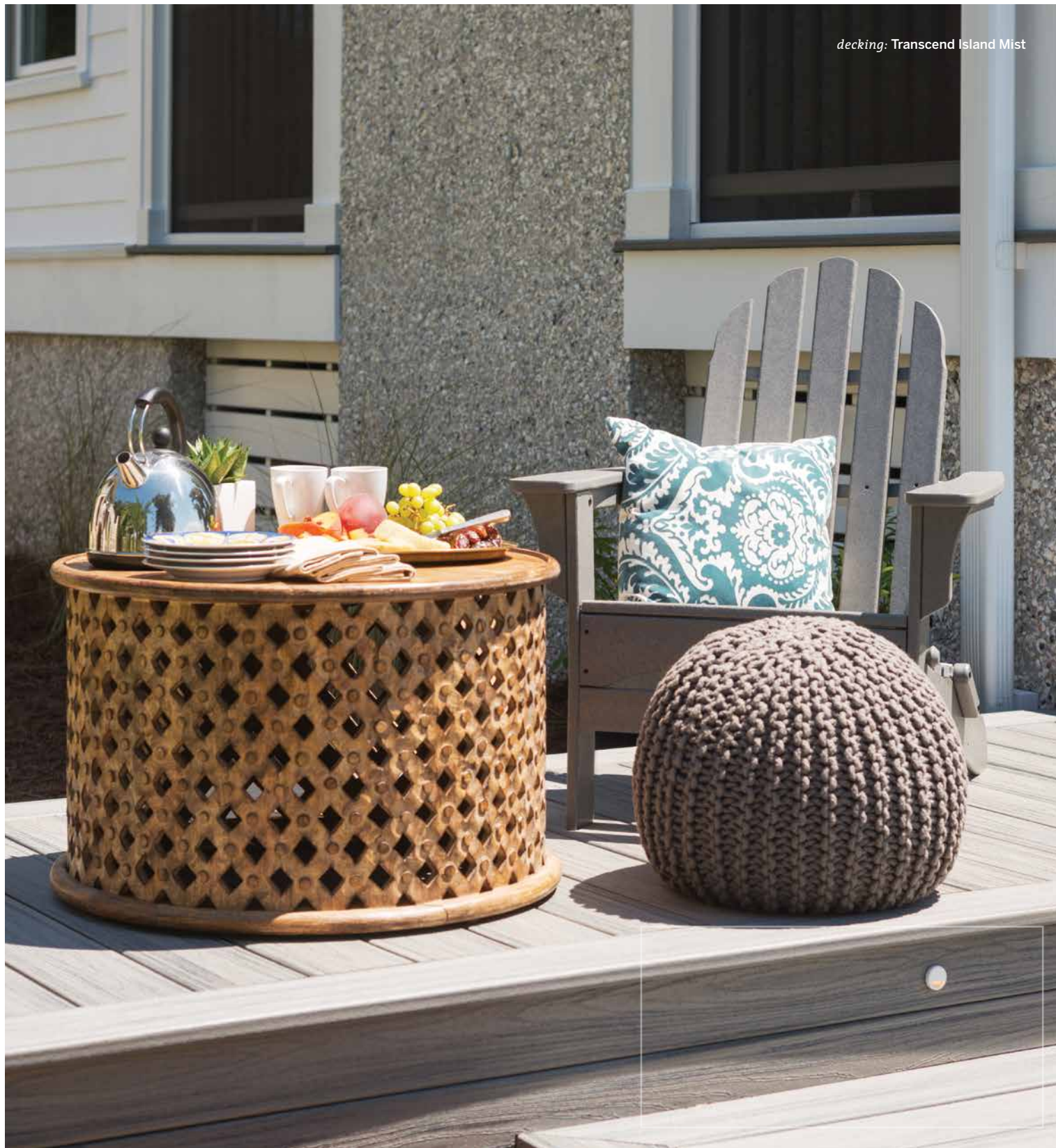
YEAR OF WARRANTY CLAIM	PERCENTAGE RECOVERY
11	80%
12	80%
13	80%
14	60%
15	60%
16	60%
17	40%
18	40%
19	40%
20	20%
21	20%
22	20%
23	10%
24	10%
25	10%

5. THIS WARRANTY SHALL NOT COVER AND TREX SHALL NOT BE RESPONSIBLE FOR COSTS AND EXPENSES INCURRED WITH RESPECT TO THE REMOVAL OF AFFECTED PRODUCT OR THE INSTALLATION OF REPLACEMENT MATERIALS, INCLUDING BUT NOT LIMITED TO LABOR AND FREIGHT.

UNDER NO CIRCUMSTANCES WILL TREX BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER SUCH DAMAGES ARE SOUGHT IN CONTRACT, IN TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE AND STRICT LIABILITY) OR OTHERWISE, AND TREX’S LIABILITY WITH RESPECT TO PRODUCTS SHALL IN NO EVENT EXCEED THE REPLACEMENT OF SUCH PRODUCTS OR REFUND OF THE PURCHASE PRICE, AS DESCRIBED ABOVE.

Some nations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from nation to nation. Consumers have legal rights under applicable national legislation governing the sale of consumer goods. This warranty does not affect those rights.

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Trex®

THE WORLD'S #1 DECKING BRAND

Visit: www.trex.com

**For more information, contact Arbor Forest Products Ltd.
at 01469 532300 or sales@arborforestproducts.co.uk**

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