

Chief Executive Officer
Michael Thurmond

DEPARTMENT OF PLANNING & SUSTAINABILITY

Interim Director
Cedric Hudson

ZONING BOARD OF APPEALS APPLICATION FOR PUBLIC HEARING (VARIANCES, SPECIAL EXCEPTIONS, APPEALS OF ADMINISTRATIVE DECISIONS)

Applicant and/or
Authorized Representative: _____

Mailing Address: _____

City/State/Zip Code: _____

Email: _____

Telephone Home: _____ Business: _____

OWNER OF RECORD OF SUBJECT PROPERTY

Owner: _____

Address (Mailing): _____

Email: _____ Telephone Home: _____ Business: _____

ADDRESS/LOCATION OF SUBJECT PROPERTY

Address: _____ City: _____ State: _____ Zip: _____

District(s): _____ Land Lot(s): _____ Block: _____ Parcel: _____

Zoning Classification: _____ Commission District & Super District: _____

CHECK TYPE OF HEARING REQUESTED:

_____ VARIANCE (From Development Standards causing undue hardship upon owners of property.)

_____ SPECIAL EXCEPTIONS (To reduce or waive off-street parking or loading space requirements.)

_____ OFFICIAL APPEAL OF ADMINISTRATIVE DECISIONS.

PLEASE REVIEW THE FILING GUIDELINES ON PAGE 4. FAILURE TO FOLLOW GUIDELINES MAY RESULT IN SCHEDULING DELAYS.

Email plansustain@dekalbcountyga.gov with any questions.

William C. Crippen
Crippen Woodworks, Inc.
5885 Musket Lane
Stone Mountain, GA 30087
770.231.4997

County of DeKalb



Administrative Zoning Variance Request

COVER SHEET

1. Cover Sheet	pg 1
2. Zoning Board of Appeals: Application for Public Hearing.....	pg 2
3. Zoning Board of Appeals: Authorization of the Property Owner.....	pg 3
4. Zoning Board of Appeals: Auth. to Represent the Property Owner.....	pg 4
5. Zoning Board of Appeals: Letter of Intent (LOI)	pg 5-6
6. Site Plan.....	pg 7-8
7. Letters of Support	pg 9-10
8. Photo and renderings	pg 11-13
9. Zoning Board of Appeals: Pre Application Form (Lucas Carter).....	pg 14-16
10. Architectural Renderings & Steel Frame Installation Guide	pg 17-40

William Charles Crippen
of Crippen Woodworks on behalf of Nidhip Patel and Jessica Chee

DEPARTMENT OF PLANNING & SUSTAINABILITY

ZONING BOARD OF APPEALS APPLICATION

AUTHORIZATION OF THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals to inspect the premises of the Subject Property.


I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property subject to the application.

DATE: 11/24/25

Applicant Signature:  Nidhi Patel

DATE: 11/24/25

Applicant Signature:  Jessica Chee

DEPARTMENT OF PLANNING & SUSTAINABILITY

ZONING BOARD OF APPEALS APPLICATION


AUTHORIZATION TO REPRESENT THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals to inspect the premises of the Subject Property.

I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property and that I authorize the applicant/agent to apply for a hearing to the Zoning Board of Appeals for the requests as shown in this application.

DATE: 11/24/2025

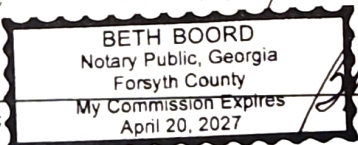

Applicant/Agent William C. Crippen
Signature: 

TO WHOM IT MAY CONCERN:

(I)/ (WE): Nidhip Patel and Jessica Chee
(Name of Owners)

being (owner/owners) of the property described below or attached hereby delegate authority to the above signed agent/applicant.


Notary Public 


Notary Public 

Notary Public


Owner Signature


Owner Signature

Owner Signature

-
William C. Crippen
Crippen Woodworks, Inc.
5885 Musket Lane
Stone Mountain, GA 30087
770.231.4997



County of DeKalb

Administrative Zoning Variance Request

Letter of Intent: Rear Setback Variance for New Construction

Property Address: 1726 Mason Mill Road, 30329

Property Owner: Nidhip Patel and Jessica Chee

Dear County of DeKalb and Members of the Board of Zoning Appeals,

My name is Charlie Crippen, and I am writing to formally request a variance from Section 27-2.2.1 of the DeKalb County Zoning Ordinance. My request pertains to the reduction of the rear yard setback requirement from 40 feet to 33 feet for the property located at 1726 Mason Mill Road, Atlanta 30329. The purpose of this variance is to facilitate the construction of a 17x30 screen porch sized for the outdoor dining and entertainment of a large multi-generational family.

1. Physical Conditions of the Site:

The unique physical conditions of my property constitute a special case necessitating this variance. The home was constructed in 1990 before the 2015 zoning code update. The house is positioned to the rear of the lot putting the rear of the house almost on top of the 40ft setback.

2. Minimum Variance Necessary:

We are requesting the minimum variance necessary to render the screen porch usable for dining and entertaining for a family of 8 which is still expanding. The porch is sized to accommodate a table for 10 and a reading/hang out area. The existing chimney protruding into the space necessitates the projection of the porch out 17ft from the house. We have designed the room with the absolute minimum footprint to accommodate the families desired use. The new 33 foot setback is essential for the practical and reasonable placement of the porch, and does not seek advantages beyond those available to other property owners in the same district.

3. Public Welfare:

The proposed addition will provide a positive impact on the neighborhood and community. We have received a letter of support from our neighbors, who border 1726 Mason Mill Road, and they state the addition would not intrude on their privacy nor be unsightly in any way. There is significant natural screening provided by the terrain and vegetation which will provide minimal visual impact for all surrounding properties. The reduced setback will not pose any harm to public welfare, neighboring properties, or the overall improvements in the R-85 zoning district.

The screen porch will be a modest and tasteful addition, enhancing the property without imposing adverse effects on the surrounding area.

4. Ordinance Hardship:

A strict interpretation of the zoning laws, in this case, would cause undue hardship. No meaningful improvements can be made without variance as the home is legally nonconforming. There is also a creek and retention pond in the front of the parcel, which contributes to a significant mosquito population on the property. The family, particularly the elderly members, currently cannot use the outdoor space for fear of vector borne diseases such as West Nile Virus, Dengue Fever and Zika.

5. Alignment with the Spirit of the Law:

We believe this variance request aligns with the intent of the Suburban Land Use as outlined by the DeKalb County Comprehensive Plan. The proposed construction accommodates multigenerational dwelling and supports the goal of furthering infill development and adding aesthetic value and character to the area.

In conclusion, we appreciate your time and consideration of our variance request. We are committed to working collaboratively to ensure that our proposed changes align with the broader goals and policies of DeKalb County.

Thank you for your attention to and consideration of this matter.

A handwritten signature in dark ink, appearing to read 'William Charles Crippen', with a long, sweeping horizontal stroke extending to the right.

William Charles Crippen
of Crippen Woodworks on behalf of Nidhip Patel and Jessica Chee

November 23, 2025

To whom it may concern:

We, Daniel and Mary Hinkel, are the homeowners at 1718 Mason Mill Road N.E.

We are writing with regards to our neighbor's proposed **screened porch construction** at **1726 Mason Mill Rd NE, Atlanta, Georgia 30329**.

Our property is directly adjacent to 1726 Mason Mill Rd NE, Nidhip and Jessica have explained they are adding a screened porch in their back yard.

We support this addition, as it will have no adverse effect on our property, privacy, or views.

Sincerely,



Daniel Hinkel
1718 Mason Mill Road, NE



Mary Hinkel
1718 Mason Mill Road, NE

To whom it may concern:

I, Brandi Smith and Milad Makkie, are the homeowners at 988 Mason Woods Drive.

I am writing with regards to our neighbor's proposed **screened porch construction** at **1726 Mason Mill Rd NE, Atlanta, Georgia 30329**.

Our property is directly adjacent to 1726 Mason Mill Rd NE, Nidhip and Jessica have explained they are adding a screened porch in their back yard.

We support this addition, as it will have no adverse effect on our property, privacy, or views.

Sincerely,

Brandi Smith and Milad Makkie
988 Mason Woods Drive
478-319-6028

Brandi D. Smith, R.D.







Chief Executive Officer
Lorraine Cochran-Johnson

DEPARTMENT OF PLANNING & SUSTAINABILITY

Director
Juliana Njoku

PRE-APPLICATION FORM ZONING BOARD OF APPEALS

Applicant

Applicant Name: _____ Phone: _____ Email: _____

Meeting Information

Date/Time: _____ Planner Name: _____

Planner Email: _____

Subject Property

Property Address: _____

Comm. District(s): _____ Tax Parcel ID: _____

Zoning: _____ Land Use: _____ Overlay: _____

Existing Use: _____ Supplemental Regs: _____

Proposed Project

Code sections and Amounts seeking a variance from:

Case context and intended project:

Ordinance Criteria for Variance Hardships

Derived from the ordinance and translated into Layman's Terms

(Chapter 27 Section 7.5.2)

1. Physical Conditions of the site – *What did mother nature do?*

Address the specific issues of the ***physical condition*** of the property that make it a special case. This could be its narrowness, shallowness, unique shape, or other physical features such as floodplains, trees, or a steep slope. These conditions should be the result of natural order, not created by you or a prior owner.

2. Minimum Variance Necessary – *Are you asking for just the right amount?*

Demonstrate that your request is only for the ***minimum necessary*** to make your property usable and does not provide any special advantages that aren't available to other property owners in your zoning district.

3. Public Welfare – *Does this harm or benefit your neighbors?*

Discuss the ***potential impact*** of your proposed changes on your neighborhood and community. Show that the variance you're seeking won't harm public welfare, neighboring properties, or any improvements in the same zoning district.

4. Ordinance Hardship – *Does the ordinance prevent your project?*

Detail how a ***strict interpretation of the zoning laws*** would cause undue hardship for you. This could be in terms of impracticality or inability to use your property effectively. Think of this as, ***“if denied, what would happen?”***

5. Alignment with the Spirit of the Law

Demonstrate how your variance request aligns with the overall purpose of the zoning laws and the DeKalb County Comprehensive Plan. Show that your proposal does not undermine these broader goals and policies, but rather seeks a reasonable adaptation to them. Ask your assigned planner for text regarding the parcel's assigned land use.

YOUR VARIANCE TIMELINE

Application Deadline: _____

Sign Posting Deadline: _____

ZBA Meeting: _____

APPLICATION SUBMITTAL INSTRUCTIONS

- 1. Compile all completed materials into a single PDF file, preferably in the following order.**
 - a. ZBA Public Hearing Application
 - b. Owner Authorization
 - c. Property Access Form
 - d. Application Authorization (If Applicable)
 - e. Letter of Intent
 - f. Site Plan
 - g. Other relevant materials (Photographs, Letters of Support, Citation, etc.)
- 2. Head over to <https://epermits.dekalbcountyga.gov/> to create/update your account.**
 - a. Head to the above link and create/update your account
 - b. Start a “ZBA-Variance” application and follow instructions to fill in the prompted fields and submit your PDF file.
 - c. If done correctly, you should see your application number (**1247XXX**). This number is your case! You will need this for the next step.
 - d. You will be notified to pay the \$300 ZBA application fee.
- 3. Email LJCarter@DeKalbCountyGA.gov your application number (**1247XXX**) and application package/contents**
 - a. This alerts staff that you’ve submitted your application and acts as a failsafe should there be technical errors. Failure to do so may result in a deferral.

Patel Residence

1726 Mason Mill Road NE

Atlanta, GA 30329

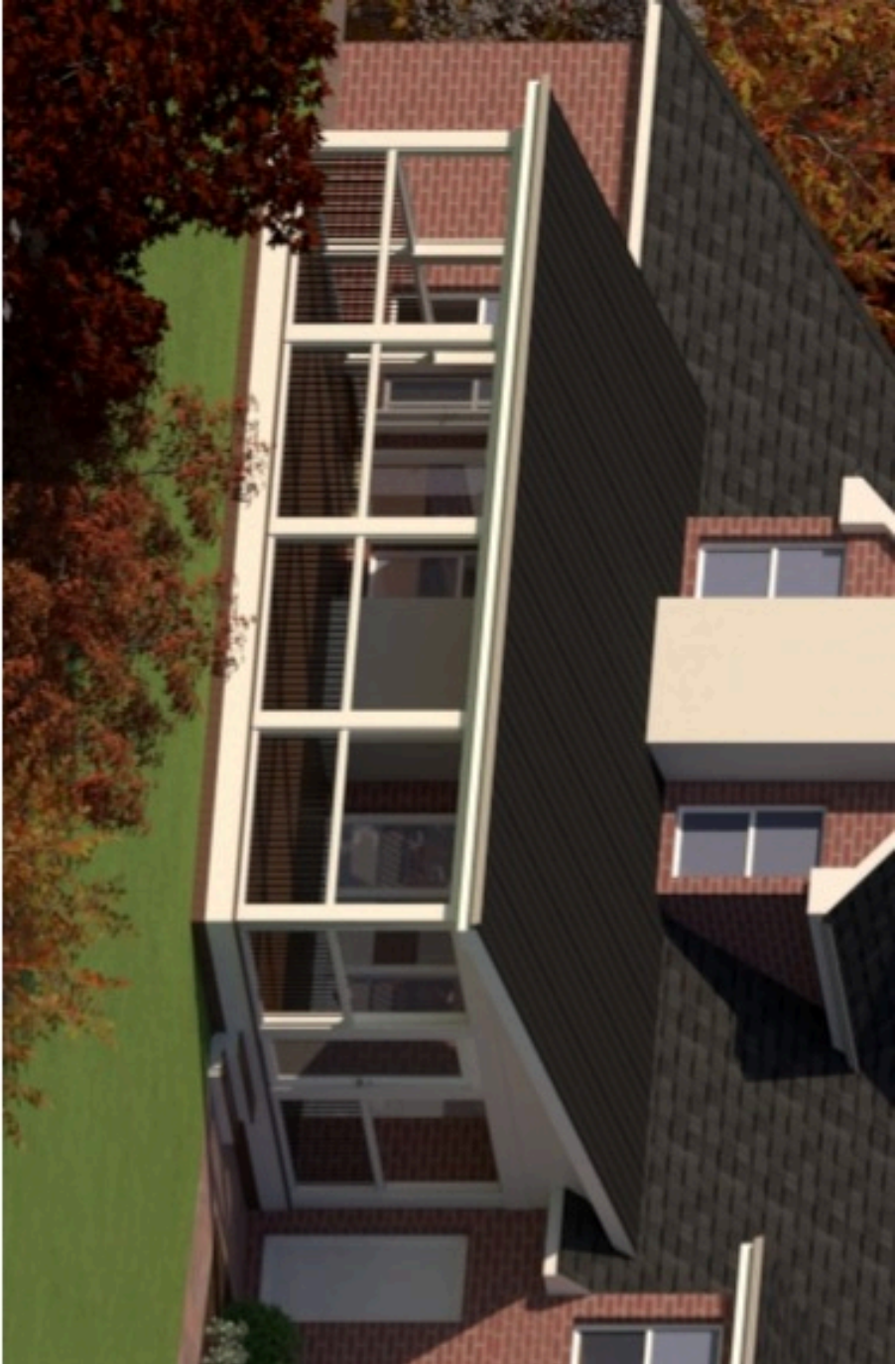
Drawing Index

- C1 - Cover Page
- EL1 - Elevations
- PV1 - Site Plan
- FP1 - Foundation Plan
- FR1 - Framing Plan
- FLR1 - Floor and Railing Plan
- RF1 - Roofing Plan
- Newcastle Steel framing instructions

Scope

Add new 30x17 covered screen porch using Newcastle Steel deck framing, Timbertech advanced PVC flooring, and SYP roof framing w/ standing seam metal roofing

519 sq ft



5775 Musket Lane
Stone Mountain, GA
30087

24 Hour Contact
(770) 231-4997

Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

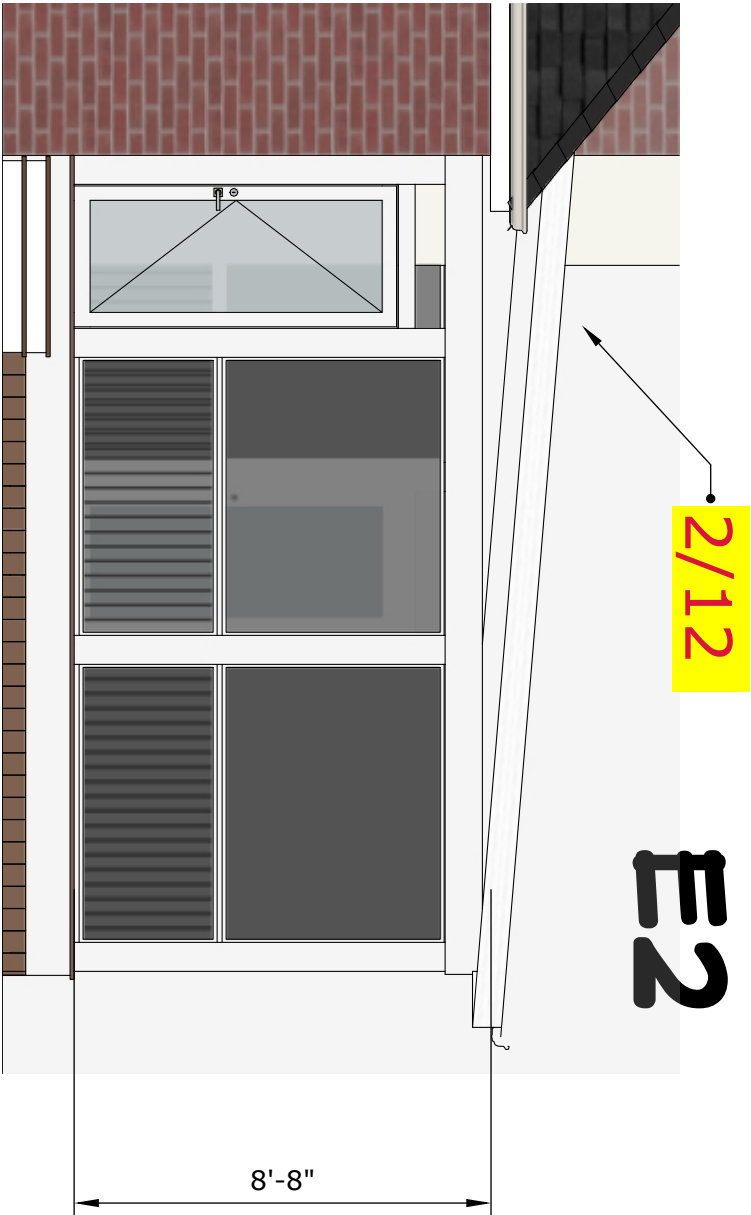
Cover Page

C1

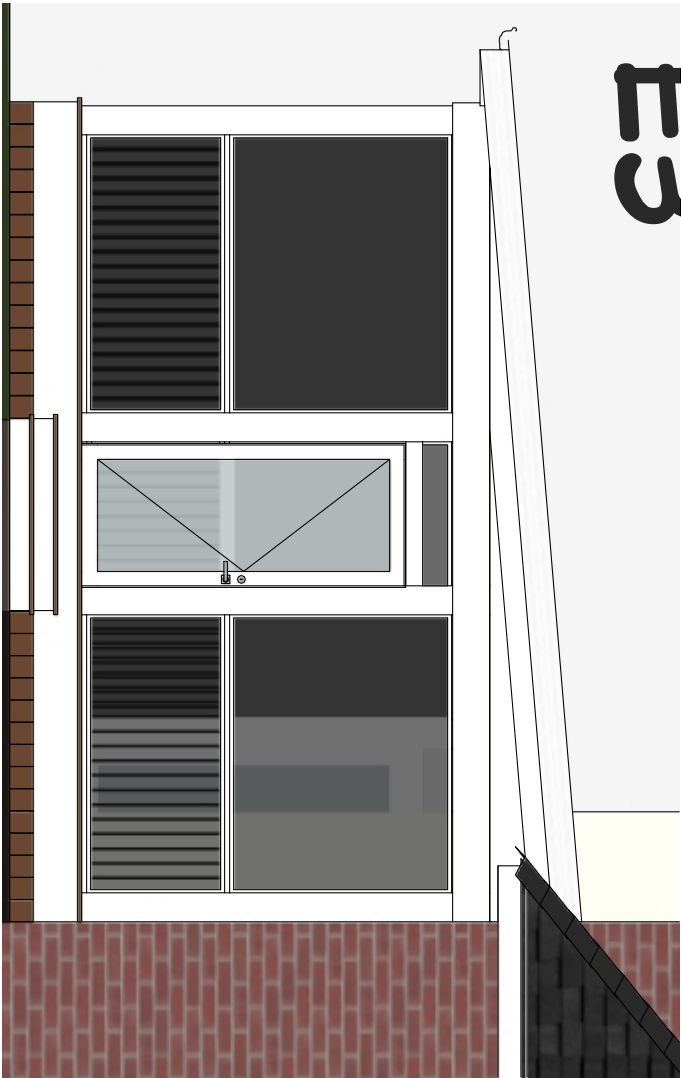
E1



E2



E3



Scale 1/4"=1'



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30087

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(770) 231-4997

Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Elevations

EL1



Scale 1/4"=1'



CRIPPEN
WOODWORKS
CUSTOM CARPENTRY • OUTDOOR LIVING

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Stone Mountain, GA
30087

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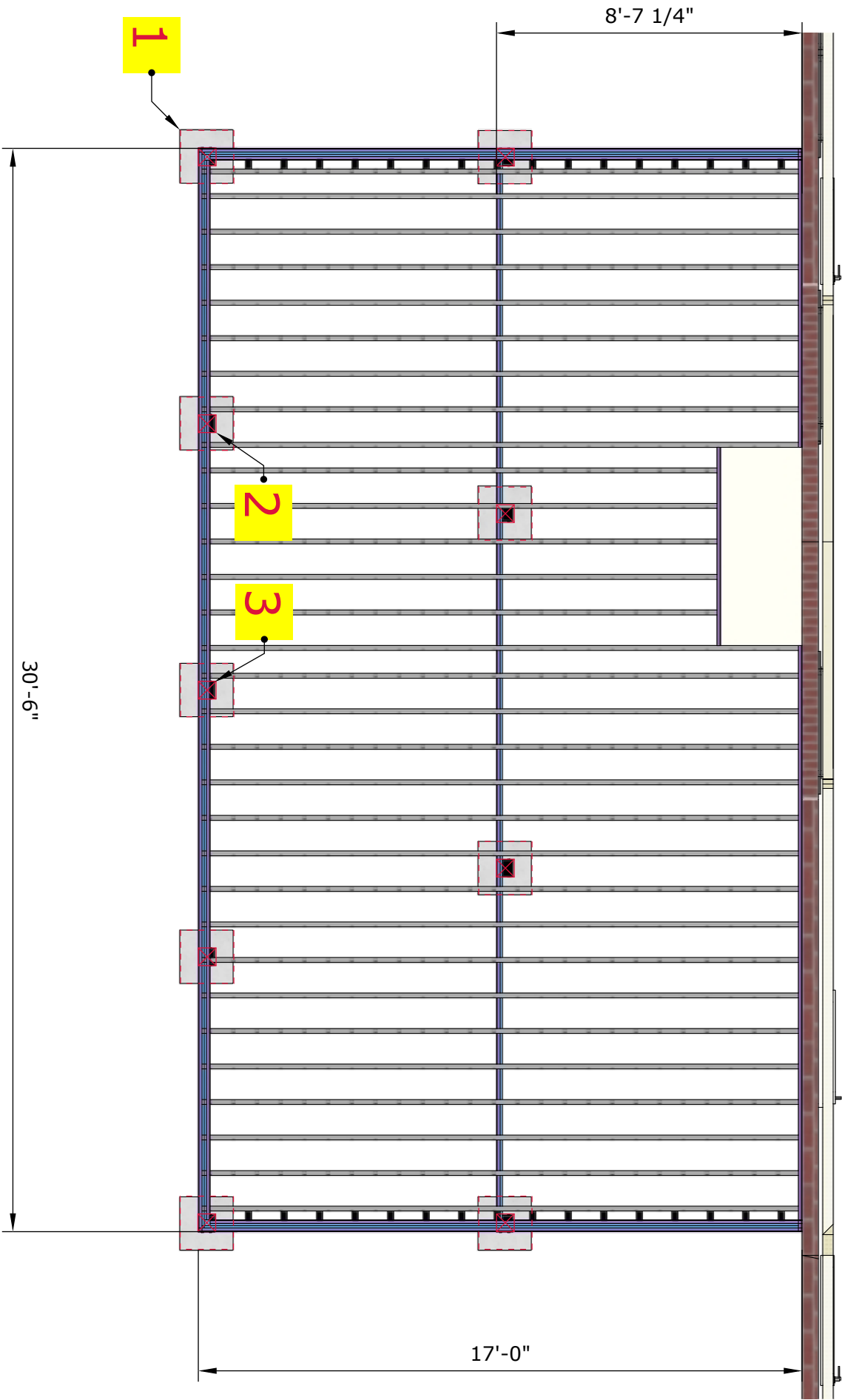
Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Plan View

PY1

Foundation Notes

- 1. 18"x18"x12"(minimum) footing U.O.N.
- 2. 6x6 steel support post, w/ Newcastle post bracket beam attachment per manufacturer's instructions
- 3. 6x6 Newcastle steel post base w/ 1/2" concrete anchor bolts per manufacturer's instructions



Scale 1/4"=1'



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Stone Mountain, GA
30087

24 Hour Contact
(770) 231-4997

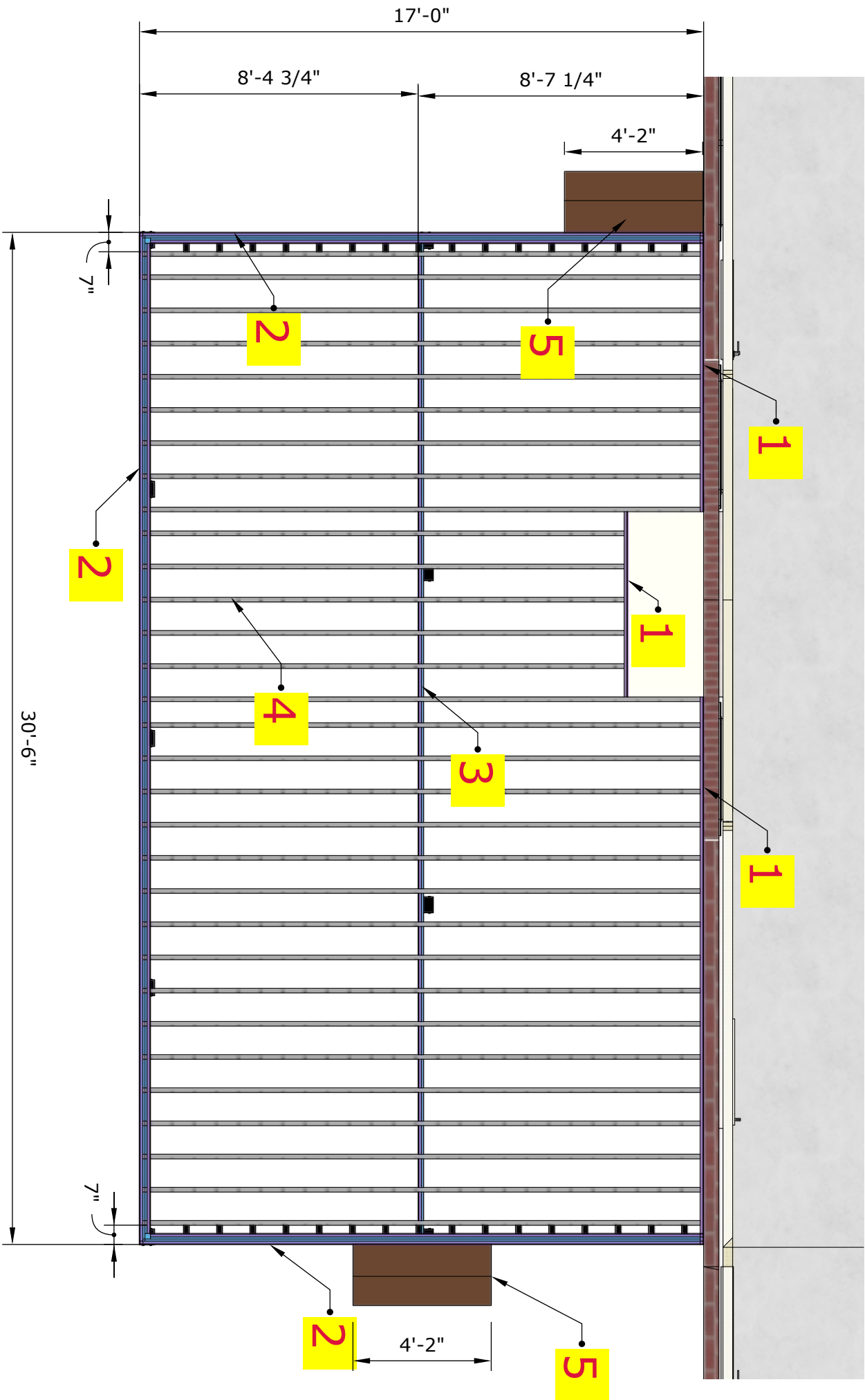
Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Foundation
Plan

FP1

Floor Framing Notes

- 1. Newcastle steel ledger board attached w/ Simpson BYLZ @ 24" o.c. per manufacturer's instructions
- 2. Newcastle steel double 2"x8" 14 gauge flush beam installed per manufacturer's instructions
- 3. Newcastle steel single 2"x8" 14 gauge drop beam installed per manufacturer's instructions
- 4. All joists to be Newcastle steel 1 5/8"x8" 18 gauge @ 12" o.c. w/ joist hangers per Newcastle manufacturer's instructions
- 5. Newcastle steel stair assembly per manufacturer's instructions



Scale 1/4"=1'



CRIPPEN
WOODWORKS
CUSTOM CARPENTRY • OUTDOOR LIVING

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Stone Mountain, GA
30087

24 Hour Contact
(770) 231-4997

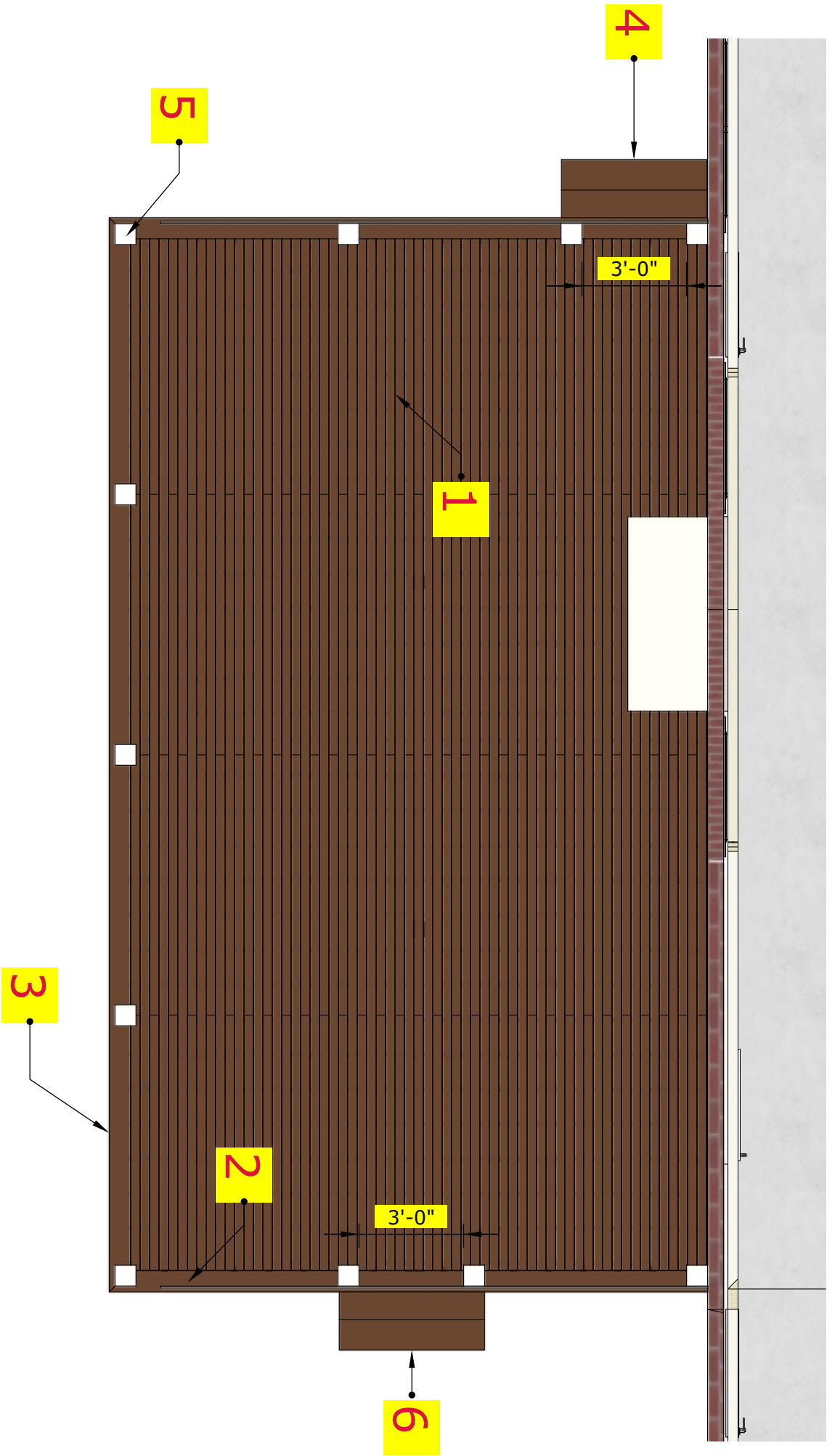
Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Framing
Plan

FR1

Floor and Railing Notes

- 1. Timbertech 3" porch flooring installed per manufacturer's instructions
- 2. Timbertech 8" picture frame
- 3. Acre pvc skirting
- 4. Timbertech 8" riser boards and treads
- 5. KDAT 8x8 porch posts
- 6. Stair lights



Scale 1/4"=1'



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Stone Mountain, GA
30087
24 Hour Contact
(770) 231-4997

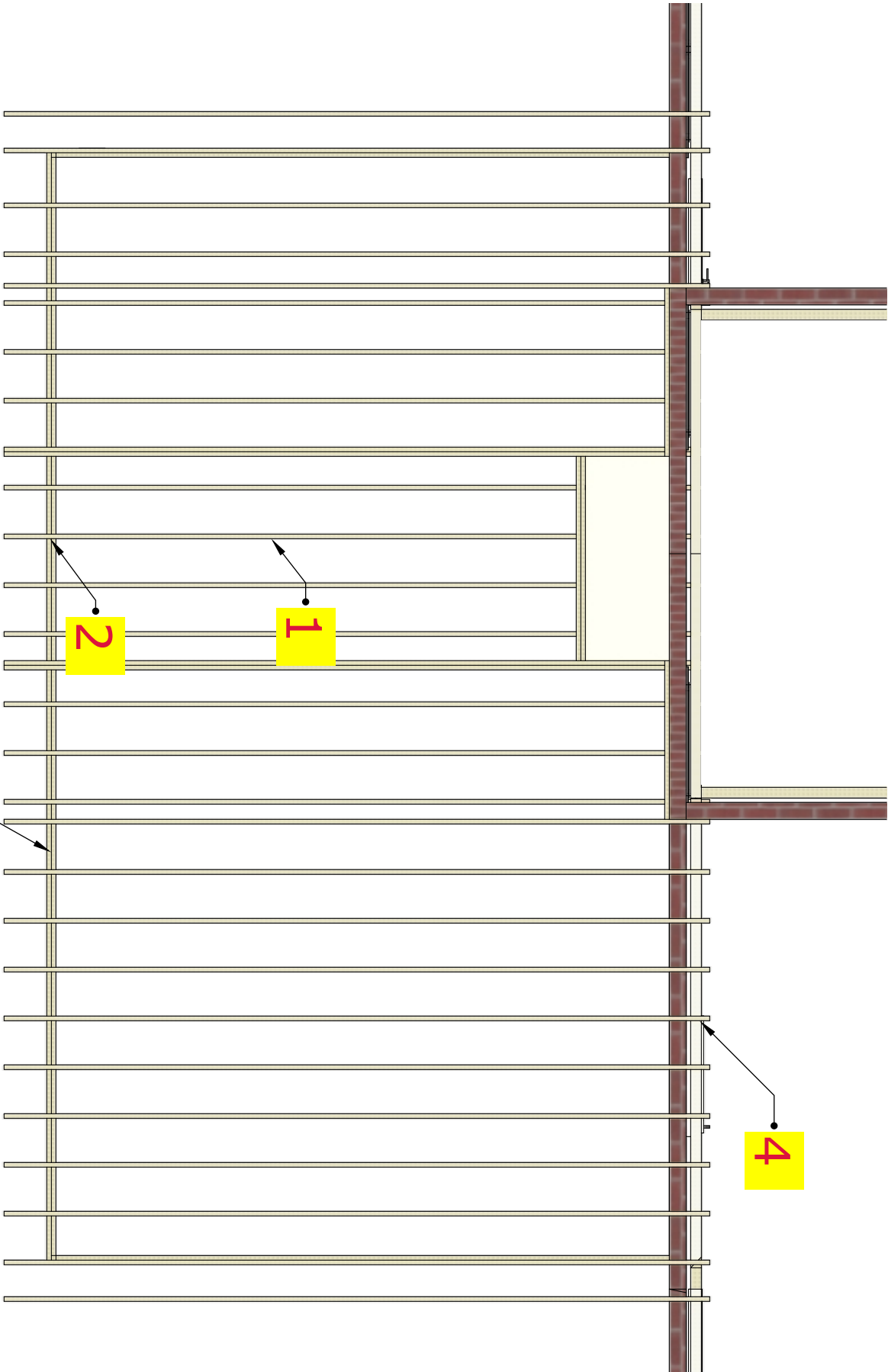
Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Floor and
Railing Plan

FLR1

Roof Framing Notes

- 1. All rafters to be SYP 2x8 @16" o.c.
- 2. Rafters to bear on front beam and attached w/ Simpson H2.5A
- 3. Double SYP 2x10 drop beam
- 4. Rafters to bear on existing house wall
- 5. Roof to be sheathed w/ 1/2" Zip ply system per manufacturer's instructions



Scale 1/4"=1'



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30087

24 Hour Contact
(770) 231-4997

Patel Residence
1726 Mason Mill Rd NE
Atlanta, GA 30329

Roof
Framing

RF1



NEW CASTLE STEEL
STEEL DECK FRAMING
Installation Guide

NEW CASTLE STEEL® INSTALLATION GUIDE

CONTENTS

SECTION ONE: General Information

General Questions and Answers..... 5

Safety..... 6

Tools, Fasteners, and Brackets 6

Parts 7

SECTION TWO: Preparation and Planning

Planning..... 9

Code Compliance..... 9

Table E-50 Span Chart (Total Load 50 PSF) 12

Table E-75 Span Chart (Total Load 75 PSF) 14

Table E-100 Span Chart (Total Load 100 PSF)..... 16

Table E-125 Span Chart (Total Load 125 PSF)..... 18

Table E-150 Span Chart (Total Load 150 PSF)..... 20

Table E-200 Span Chart (Total Load 200 PSF) 22

SECTION THREE: Installation

Installing Piers, Posts, Track/Ledger, and Beams 25

Installing Piers and Posts 26

Installing Track/Ledger 26

Installing Beams 28

Option 1: Flush Beam Scenario 28

Option 2: Drop Beam Scenario..... 29

Installing Rim Joists, Joists, Rim Plates, and Joist Blocking 30

Installing Rim Joists Assembly 30

Installing Inner Joists 30

Option 1: Flush Beam Scenario 31

Option 2: Drop Beam Scenario..... 31

Installing Rim Plate and Joist Blocking (Drop Beam Scenario Only)..... 31

Installing Blocking 31

Beam Blocking..... 32

Mid-Span Blocking..... 33

Installing Rail Posts 34

How to Install Deck Boards..... 34

Tips on Installing Deck Boards over Screws on Ledger/Front Plate 34

How to Install Stairs..... 35

How to Install Deck Boards and Fascia on Stairs 37

SECTION FOUR: Detail Drawings

General Framing Detail – Nominal 41

TYP, Ledger Connections 42

Flush Beam Attachment Scenario..... 44

Dropped Box Beam Attachment Scenario..... 44

Joist Attachment – Sharing Flush Beam Scenario..... 45

Inside Rail Post Attachment at Rim Joist..... 46

Inside Rail Post Attachment at Corner 47

Inside Rail Post Attachment at Rim Plate 48

Post Blocks At Side Rim Joist Scenario 49

Surface Mount Post At Corner With Drop Beam Scenario 50

Surface Mount Post At Corner With Flush Beam Scenario..... 51

Surface Mount Post At Rim Track With Drop Beam Scenario. 52

Assemble Stair Stringers 53

Install Surface Mount Post 54

Stair Overview Diagram..... 54

Stair Support Posts 56

Stair Stringer Assembly 57

Stair Center Stringer Assembly..... 58

Stair Railing Post Attachment..... 59

Adjustable Blocking..... 60

Border Plank Framing..... 61

Breaker Board Framing TYP, Single Break..... 62

Breaker Board Framing TYP, Double Break..... 63

General Framing Detail – Curved Front Track Rim Plate 65

Joist Splice Over Dropped Beam..... 65

General Framing Detail – Joist Perforations 66

Deck Framing Detail (Grounding) 67

General Framing Detail – Trex Rain Escapes® Blocking Atop BM 68

Beam Configurations..... 69

Maintenance 65

Warranty 66

GENERAL QUESTIONS AND ANSWERS

Why New Castle Steel?

- » **Strong** – Our steel provides for a larger deck space with fewer posts and beams for less obstructed views.
- » **Stable** – NCS won't twist, warp, or sag over time.
- » **Long-lasting** – NCS lasts longer than pressure-treated lumber, saving you the cost of fixing or replacing your deck.
- » **Non-combustible** – NCS has achieved a Class A fire rating for our products, which is ideal for areas of high-density housing and frequent wildfires.
- » **Eco-friendly** – NCS contains 25% recycled American-made steel and is 100% recyclable.

How easy is New Castle Steel to build with?

- NCS lays out quickly and easily. There are only three components: (1) NCS Track (Ledger), (2) NCS Joist, and (3) NCS Beam
- » Each piece can be cut to fit and assembled just like wood.
 - » Features premium 12' (3.66 m), 16' (4.88 m), and 20' (6.1 m) lengths for track, ledger, and joist.
 - » NCS is assembled using hex head self-drilling screws and common angle brackets.
 - » NCS requires fewer tools (a circular saw, drill, and ferrous metal blades) than to typical wood framing.

What tools are required?

Go to page 6 for a complete description of the tools, hardware, and connectors required for installing a NCS deck frame.

Are there color choices in New Castle Steel?

NCS deck framing is available in **ONE** unique color designed to provide a pleasing and subtle shadow effect under the deck, drawing visual attention to the detailed elements of your deck.

What type of maintenance is required with New Castle Steel?

NCS is low maintenance when installed properly. The dual-coated finish protects the steel, insulating it from outdoor elements.

When the steel in New Castle Steel is exposed, in the case of an end cut or scratch, does it need to be painted?

Yes. Each steel component is galvanized and coated with a specially formulated exterior finish that is primed, painted, and baked on—exclusively engineered for the durability of NCS.

- » If scratched and not painted, the galvanization process will restrict rust. Rust will be electro-magnetically restricted to only the area exposed. As a preventative, as well as an aesthetic measure, always paint exposed steel with NCS touch-up paint.

Helpful Hint: Do this after you have cut many components to speed up the process.

Can scrap New Castle Steel cut-offs be recycled?

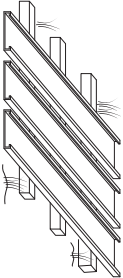
NCS components contain a minimum of 25% recycled steel and cut-offs are 100% recyclable.

Can New Castle Steel be used in high-fire danger areas?

NCS framing has achieved a Class A fire rating for our products. NCS components are non-combustible and qualify for extreme wildfire building codes under the Wild Land Urban Interface (WUI) building material requirements.

What is the proper method to store New Castle Steel?

NCS should be supported at a sufficient height to avoid full ground contact if at all possible. Heat and cold transfer to any steel product can sometimes damage lawn and vegetation.



Can New Castle Steel components come into contact with soil or concrete when installed?

NCS is approved for contact with both soil and concrete.

What fasteners can I use to attach decking to New Castle Steel framing?

Only use NCS-approved fasteners when installing any decking product. Use of non-recommended decking fasteners could void the warranty. Refer to NCS Required Fasteners on page 6 for details.

⚠ WARNING

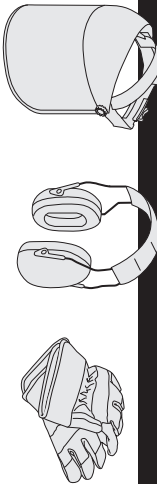
Due to increased risk of corrosion, New Castle Steel may not be installed (1) within 3000 ft. (914.4 m) of any body of salt water or (2) under the surface or within the splash zone of any body of fresh water. Any such installations shall void the New Castle Steel Limited Warranty.

NOTE: Construction methods are always improving. Please ensure you have the most up-to-date installation instructions by visiting newcastlesteel.com.

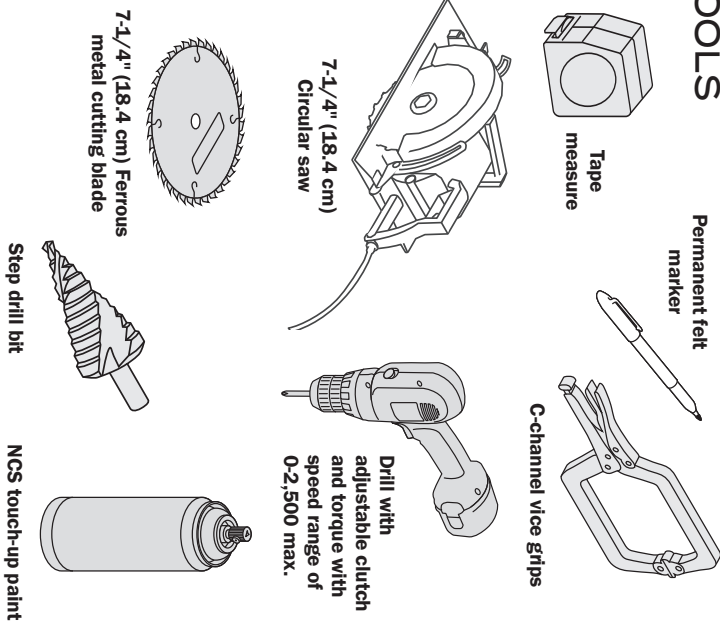
SAFETY

⚠ WARNING

When working on any construction project, you should wear protective clothing and safety equipment. Wear face shield, hearing protection, gloves, and long sleeves, particularly when cutting in confined spaces.



TOOLS



FASTENERS AND BRACKETS

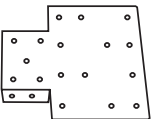
- » Dual Hardness Self-Drilling Steel Framing Screw – refer to New Castle Steel Required Fasteners, column A (shown below).
- » Galvanized 16 Ga. “L” bracket (Simpson Strong-Tie® L70Z, LS70Z or IBC approved equivalent).
- » New Castle Steel Galvanized 16 Ga. post to beam brackets.



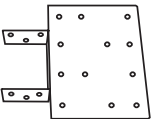
L70Z



LS70Z



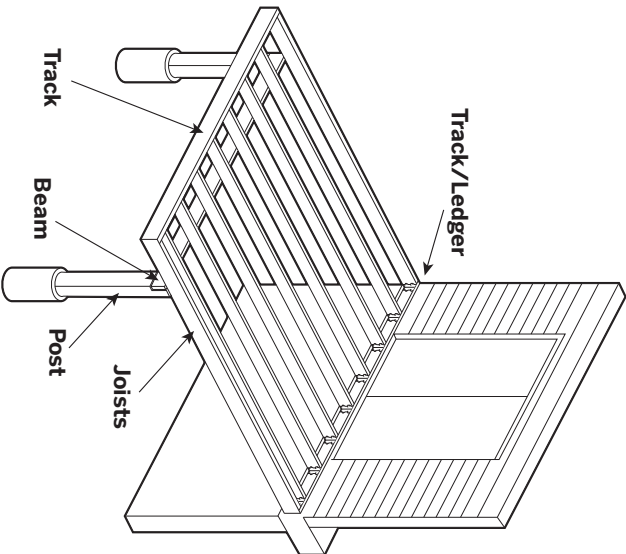
NCS Front Post Bracket



NCS Back Post Bracket

NOTE: For post to pier connections, refer to local building code official for proper installation methods.

NEW CASTLE STEEL™ REQUIRED FASTENERS				
Column A	Column B	Column C		
Metal-to-Metal	Decking to Metal - Face Attachment	Decking to Metal - Hidden Fasteners		
Simpson Strong-Tie® XEQ34B1016	FastenMaster® Cortex Driller™*	Trex Elevations® Universal Hidden Fasteners		
ITW Buildex Tek Select™ P/N 1076000 (10-16 x ¾" [1.9 cm] HWH Tek® 3)	Starborn® DeckFast® Metal 410 SS w/ Epoxy Coating	Camo Wedge Metal		
	Simpson Strong-Tie® Quik Drive DCSD238 (xxxx) *xxxx denotes color code of product			
NEW CASTLE STEEL PRODUCT WEIGHTS				
Profile	lb/ft	lbs./piece		
		12'	16'	20'
Joist - 15/8"	1.81	21.6	28.8	36.0
Joist - 2"	3.37	40.44	53.92	67.4
Track	2.43	28.8	38.4	48.0
Beam	5.80	69.6	92.8	116.0
Post	9.6	----	----	----



* After installing FastenMaster® Cortex Driller™ screws, gently tap Cortex plugs into place to cover screws.

FastenMaster® Cortex Driller™ is a registered trademark of OMG, Inc. DeckFast® is a registered trademark of Starborn Industries, Inc. Tek® Select™ are trademarks of ITW Buildex and Illinois Tool Works, Inc.

Simpson Strong-Tie® is a registered trademark of Simpson Strong-Tie Company, Inc. Refer to www.strongtie.com for important installation and corrosion information.

NEW CASTLE STEEL® BLACK PRODUCT LIST



NCS STEEL DECK FRAMING PARTS	
	NCS 1-5/8" X 8" X 12' Joist 18 gauge (NCS202204BLK)
	NCS 1-5/8" X 8" X 16' Joist 18 gauge (NCS202205BLK)
	NCS 1-5/8" X 8" X 20' Joist 18 gauge (NCS202206BLK)
	NCS 1-5/8" X 8" X 24' Joist 18 gauge (NCS202243BLK)
	NCS 2" X 8" X 12' Joist 14 gauge (NCS202207BLK)
	NCS 2" X 8" X 16' Joist 14 gauge (NCS202208BLK)
	NCS 2" X 8" X 20' Joist 14 gauge (NCS202209BLK)
	NCS 2" X 8" X 24' Joist 14 gauge (NCS202251BLK)
	NCS 1-1/4" X 8" X 12' Track 14 gauge (NCS202201BLK)
	NCS 1-1/4" X 8" X 16' Track 14 gauge (NCS202202BLK)
	NCS 1-1/4" X 8" X 20' Track 14 gauge (NCS202203BLK)
	NCS 1-1/4" X 8" X 24' Track 14 gauge (NCS202247BLK)
	NCS Midspan Blocking (NCS202213BLK)
	NCS Beam Blocking (NCS202214BLK)
	NCS Beam Endcap (NCS202216BLK)
	NCS Double Beam Endcap (NCS202235BLK)
	NCS Touchup Paint (NCS202217BLK)
	Front Post Bracket (NCS202228)
	Back Post Bracket (NCS202229)
	Post Base (NCS202231)
	Post Cap (NCS202232)
	Helical Post Base (NCS202233)
	6" X 6" X 10' Post (NCS202234)
	6" X 6" X 20' Post (NCS202252)
	6-3/4" rise 10-1/2" run - 16 Step Stringer (NCS202254BLK)
	6-7/8" rise 10-1/2" run - 16 Step Stringer (NCS202235BLK)
	7" rise 10-1/2" run - 16 Step Stringer (NCS202256BLK)
	7-1/8" rise 10-1/2" run - 16 Step Stringer (NCS202257BLK)
	7-1/4" rise 10-1/2" run - 16 Step Stringer (NCS202238BLK)
	Stair Installation Bracket (NCS202259BLK)
	Stair Adjustable Handrail Mounting Bracket (NCS202260BLK)
	2" x 8" x 48" Surface Mount Post Block (NCS202261BLK)
THIRD-PARTY PARTS	
	Simpson XEQ #10 16" X 3/4" Framing Screw (NCS202218BLK)
	Simpson L70Z (NCS202219BLK)
	Simpson MSTA22 Stair Strap (NCS202221BLK)
	Simpson HUCQ4.5 DBL Beam Hanger (NCS202222BLK)
	Simpson HUCQ2.25 SGL Beam Hanger (NCS202223BLK)
	CAMO Wedge Metal Clips 250 sqft (NCS202224)

For order inquiries or questions, please email inquiry@ncsteel.com or call 1-888-960-0808.

PREPARATION AND PLANNING

PLANNING

⚠ WARNING

New Castle Steel does not provide direction on making all types of connections. Specific details for critical connections not shown should be designed by a professional engineer and/or building code official.

⚠ WARNING

Build according to local building codes. *Refer to section R505 of the 2012, 2015 IRC, 2018 IRC and 2021 IRC for more information.*

⚠ WARNING

Reference all decking, railing, and deck accessory manufacturers for required attachment and installation procedures regarding their products.

⚠ WARNING

The consumer or contractor should take all necessary steps to ensure the safety of everyone involved in the project, including, but not limited to: wearing the appropriate safety equipment (i.e. eye, ear, and body protection).

⚠ WARNING

Due to increased risk of corrosion, New Castle Steel may not be installed (1) within 3000 ft. (914.4 m) of any body of salt water or (2) under the surface or within the splash zone of any body of fresh water.
Any such installations shall void the New Castle Steel Limited Warranty.

Max span before drop beam required (ft.)

Deck Load (psf)	1 5/8" Joist 12" Joist Spacing	1 5/8" Joist 16" Joist Spacing	2" Joist 12" Joist Spacing	2" Joist 16" Joist Spacing
50	30.4	22.8	44.0	33.0
75	20.3	15.2	29.3	22.0
100	15.2	11.4	22.0	16.5
150	10.1	7.6	14.7	11.0
200	7.6	5.7	11.0	8.3

To build a deck with New Castle Steel components, it is necessary to determine the adequate joist span and beam span of your deck from the illustrations shown on page 1.1. It is also necessary to determine if a cantilever (i.e. overhang) is desired (or required) to attain the desired deck depth. Determine whether a drop beam or flush beam scenario will be used and determine the required information for local building plan approval.

Choose the New Castle Steel span chart (refer to pages 1.2-2.3) that fits within the building code requirements by locating the live, dead, and total load in the Uniform Deck Loads chart. If you do not know the local code requirements, contact your local building code department for assistance.

NEW CASTLE STEEL™ CODE COMPLIANCE



Control No. 5023486



CODE COMPLIANCE CCRR-0449
CERTIFIED TO: AISI S100-16-W/S3/22

Refer to the Intertek Directory of Building Products (<https://dpdirectory.intertek.com>) for detailed information.



CODE COMPLIANCE ICC-ES
Evaluation Report - ESR-5257



CODE COMPLIANCE TER #2406-118
Report No. 2406-118

PLANNING/CONTINUED

Parts of a Deck

Please refer to illustrations on page 11.

A. **Joist Spacing:** Refer to the decking manufacturers instructions to determine allowable joist spacing (i.e. 12" [30.5 cm] or 16" [40.6 cm] O.C.). Even if 16" (40.6 cm) spacing is acceptable, 12" (30.5 cm) spacing could be chosen to achieve a greater joist span.

B. **Maximum Joist Span:** The maximum distance the joist can span from track to support beam or support beam to support beam when joists are spaced on either 12" (30.5 cm) or 16" (40.6 cm).

C. **Overall Length:** The overall desired depth (feet) of the deck cannot exceed the distance determined in step (B) without a support beam & cantilever (D).

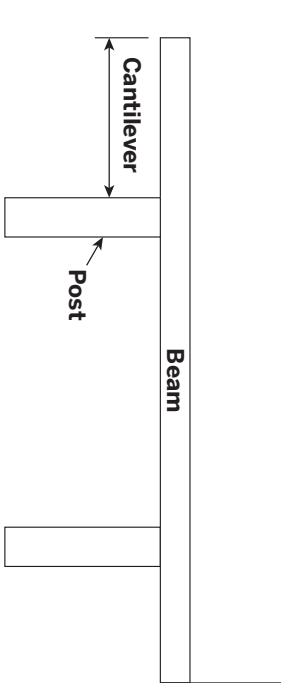
D. **Cantilever:** The overhanging of joists beyond the support beam and/or beams overhanging beyond the support post. If the desired depth of the deck is greater than the maximum joist span (B) a cantilever (D) is needed to obtain the overall size of the deck. The cantilever can be changed according to customer preference as long as it is less than the maximum cantilever noted on the New Castle Steel™ span charts.

Deck depth _____ – maximum joist span (B) _____ = cantilever (D) _____.

E. **Beam Span (distance between support posts):** The distance between support posts. Based on the joist span (B) and the cantilever (D), determine the maximum beam span (E) between support posts (F).

F. **Support Posts:** Based on the maximum beam span (E) determine the number of support posts (F) by dividing the desired width of the deck by the beam span (E), round this number up and add 1.

Desired deck width _____ / beam span (E) _____ = support posts (rounded up) + 1 = total # of posts.



Example: Desired deck is 16' D (4.88 m)x 20' W (6.1 m)

1. Local building code requires a minimum dead load of 10 psf, live load of 40 psf, and total load of 50 psf. Refer to Table E-50 on page 12.

2. The decking manufacturer requires a maximum 16" (40.6 cm) O.C. spacing for joists.

3. Joist span cannot exceed 13' (3.96 m).

4. Desired deck size is 16' D (4.88 m) x 20' W (6.1 m).

5. A minimum cantilever of 3' (.91 m) is required because the overall depth (16' [4.88 m]) is greater than 13' (3.96 m).

• Based on the above information, the cantilever can be between 3' (.91 m) and 4' (1.22 m) depending on customer preference. For this example, a 3' (.91 m) cantilever will be used.

• 16' (4.88 m) depth of deck – 3' (.91 m) cantilever = 13' (3.96 m) joist span

6. Locate the 13' (3.96 m) joist span and 3' (.91 m) cantilever and trace over to 11' 5" (3.48 m) beam span.

20' (6.1 m) deck width/ 11' 5" (346.8 cm) max. beam span = 1.73 support posts

- 1.73 rounds up to 2
- 2 + 1 = 3 support posts (spaced equally or as desired so as not to exceed 11' 5" [3.48 m])

Maximum Beam Cantilever Length (in) For Various Total Loads (T)1,2,3

Unfactored Total Load (psf)	Single Box Beam		Double Box Beam
	Unstiffened	Stiffened	
50	5	34	54
75	1	28	44
100	-	21	34
125	-	13	22
150	-	9	15
200	-	5	10

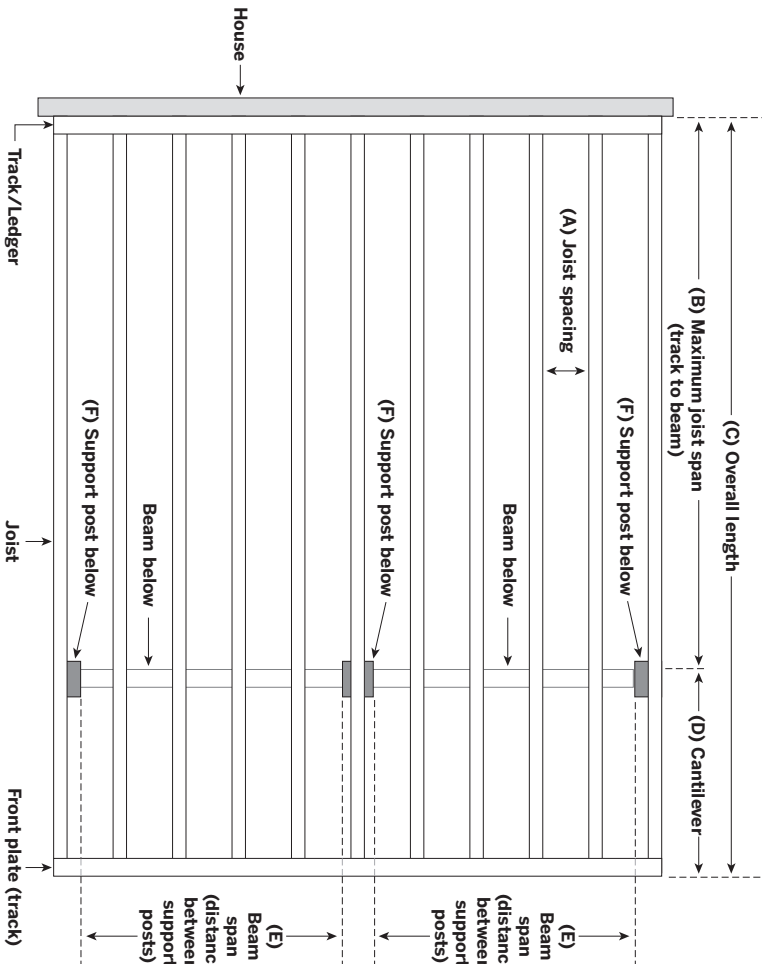
Stiffeners = Full depth web stiffeners, at least 0.067" (0.2 cm) thick, must be through-fastened to the box beam web at each post to develop the full web crippling capacity

SI: 1 in = 25.4 mm.

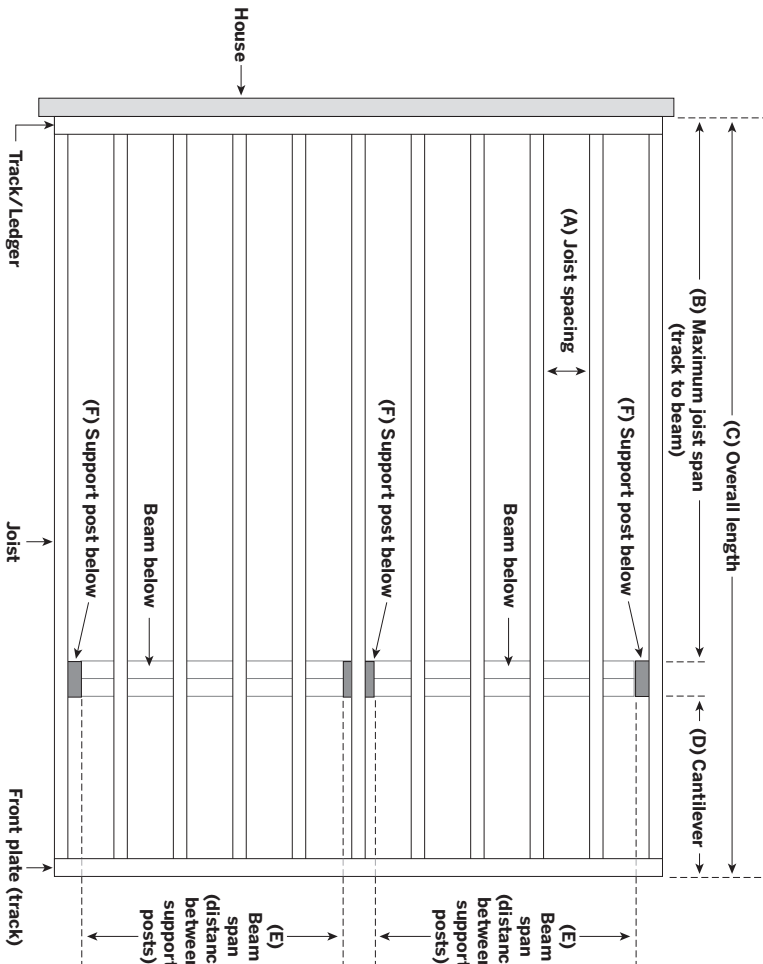
1. Maximum Beam Cantilever Length shall not exceed 50% of the Beam Span.

PLANNING/CONTINUED

Single Beam



Double Beam





SPAN CHART
TABLE E-50 RESIDENTIAL

50 PSF TOTAL LOAD

Table Instructions: Enter the table with a joist span and cantilever length within the joist span limits based on the joist option, then read the maximum allowable box beam span.

JOIST SPAN LIMITS												
Joist option	1 5/8"		1 5/8", every other joist doubled		1 5/8", all doubled		2"		2", every other joist doubled		2", all doubled	
Joist Spacing O.C.	12"	16"	12"	16"	12"	16"	12"	16"	12"	16"	12"	16"
Maximum Joist Span (Ledger To Box Beam)	15'	13'	17'	15'	18'	17'	18'	16'	20'	18'	22'	20'
Maximum Cantilever Length	4'	4'	6'	5'	6'	6'	6'	6'	6'	6'	6'	6'

MAXIMUM BOX BEAM SPAN (SINGLE BOX BEAM BETWEEN POSTS) – 50 PSF TL

Cant. (Ft.)	Deck Span (ft)																						
	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'
0	29' 8"	23' 7"	20' 7"	18' 8"	17' 4"	16' 4"	15' 6"	14' 10"	14' 3"	13' 9"	13' 4"	12' 11"	12' 7"	12' 3"	11' 10"	11' 5"	11' 1"	10' 10"	10' 6"	10' 3"	10' 0"	9' 9"	9' 7"
1/2	22' 8"	20' 3"	18' 7"	17' 3"	16' 3"	15' 6"	14' 10"	14' 3"	13' 9"	13' 4"	12' 11"	12' 7"	12' 3"	11' 10"	11' 5"	11' 1"	10' 9"	10' 6"	10' 3"	10' 0"	9' 9"	9' 7"	9' 4"
1		18' 0"	17' 0"	16' 1"	15' 4"	14' 9"	14' 2"	13' 8"	13' 3"	12' 11"	12' 7"	12' 2"	11' 9"	11' 5"	11' 1"	10' 9"	10' 6"	10' 3"	10' 0"	9' 9"	9' 7"	9' 4"	9' 2"
1 1/2			15' 8"	15' 1"	14' 7"	14' 1"	13' 7"	13' 3"	12' 10"	12' 6"	12' 2"	11' 9"	11' 5"	11' 1"	10' 9"	10' 6"	10' 3"	10' 0"	9' 9"	9' 6"	9' 4"	9' 2"	9' 0"
2				14' 3"	13' 10"	13' 6"	13' 1"	12' 9"	12' 5"	12' 1"	11' 8"	11' 4"	11' 0"	10' 9"	10' 5"	10' 2"	9' 11"	9' 9"	9' 6"	9' 4"	9' 2"	8' 11"	8' 9"
2 1/2					13' 3"	12' 11"	12' 8"	12' 4"	11' 11"	11' 7"	11' 3"	10' 11"	10' 8"	10' 5"	10' 2"	9' 11"	9' 8"	9' 6"	9' 3"	9' 1"	8' 11"	8' 9"	8' 7"
3						12' 5"	12' 1"	11' 9"	11' 5"	11' 2"	10' 10"	10' 7"	10' 4"	10' 1"	9' 10"	9' 8"	9' 5"	9' 3"	9' 1"	8' 11"	8' 9"	8' 7"	8' 5"
3 1/2							11' 6"	11' 3"	11' 0"	10' 9"	10' 6"	10' 3"	10' 0"	9' 10"	9' 7"	9' 5"	9' 3"	9' 1"	8' 11"	8' 9"	8' 7"	8' 5"	8' 4"
4								10' 10"	10' 7"	10' 4"	10' 2"	9' 11"	9' 9"	9' 6"	9' 4"	9' 2"	9' 0"	8' 10"	8' 8"	8' 6"	8' 5"	8' 3"	8' 2"
4 1/2									10' 2"	10' 0"	9' 10"	9' 7"	9' 5"	9' 3"	9' 1"	8' 11"	8' 9"	8' 8"	8' 6"	8' 4"	8' 3"	8' 1"	8' 0"
5										9' 8"	9' 6"	9' 4"	9' 2"	9' 0"	8' 10"	8' 9"	8' 7"	8' 5"	8' 4"	8' 2"	8' 1"	8' 0"	7' 10"
5 1/2											9' 3"	9' 1"	8' 11"	8' 10"	8' 8"	8' 6"	8' 5"	8' 3"	8' 2"	8' 0"	7' 11"	7' 10"	7' 9"
6												8' 10"	8' 8"	8' 7"	8' 5"	8' 4"	8' 3"	8' 1"	8' 0"	7' 11"	7' 9"	7' 8"	7' 7"

MAXIMUM BOX BEAM SPAN (DOUBLE BOX BEAM BETWEEN POSTS) – 50 PSF TL

Cant. (Ft.)	Deck Span (ft)																						
	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'
0	37' 5"	29' 8"	25' 11"	23' 7"	21' 10"	20' 7"	19' 6"	18' 8"	18' 0"	17' 4"	16' 10"	16' 4"	15' 11"	15' 6"	15' 2"	14' 10"	14' 6"	14' 3"	14' 0"	13' 9"	13' 6"	13' 4"	13' 2"
1/2	28' 6"	25' 7"	23' 5"	21' 9"	20' 6"	19' 6"	18' 8"	17' 11"	17' 4"	16' 9"	16' 4"	15' 11"	15' 6"	15' 2"	14' 10"	14' 6"	14' 3"	14' 0"	13' 9"	13' 6"	13' 4"	13' 1"	12' 11"
1		22' 8"	21' 5"	20' 3"	19' 4"	18' 7"	17' 10"	17' 3"	16' 9"	16' 3"	15' 10"	15' 6"	15' 1"	14' 10"	14' 6"	14' 3"	14' 0"	13' 9"	13' 6"	13' 4"	13' 1"	12' 11"	12' 9"
1 1/2			19' 9"	19' 0"	18' 4"	17' 9"	17' 2"	16' 8"	16' 2"	15' 10"	15' 5"	15' 1"	14' 9"	14' 6"	14' 2"	13' 11"	13' 9"	13' 6"	13' 4"	13' 1"	12' 11"	12' 9"	12' 7"
2				18' 0"	17' 5"	17' 0"	16' 6"	16' 1"	15' 8"	15' 4"	15' 0"	14' 9"	14' 5"	14' 2"	13' 11"	13' 8"	13' 6"	13' 3"	13' 1"	12' 11"	12' 9"	12' 7"	12' 5"
2 1/2					16' 8"	16' 4"	15' 11"	15' 7"	15' 3"	14' 11"	14' 8"	14' 5"	14' 1"	13' 11"	13' 8"	13' 5"	13' 3"	13' 1"	12' 11"	12' 9"	12' 7"	12' 4"	12' 2"
3						15' 8"	15' 5"	15' 1"	14' 10"	14' 7"	14' 4"	14' 1"	13' 10"	13' 7"	13' 5"	13' 3"	13' 0"	12' 10"	12' 8"	12' 6"	12' 4"	12' 2"	11' 11"
3 1/2							14' 11"	14' 8"	14' 5"	14' 2"	14' 0"	13' 9"	13' 7"	13' 4"	13' 2"	13' 0"	12' 10"	12' 8"	12' 6"	12' 4"	12' 1"	11' 11"	11' 8"
4								14' 3"	14' 1"	13' 10"	13' 8"	13' 6"	13' 3"	13' 1"	12' 11"	12' 9"	12' 7"	12' 5"	12' 3"	12' 1"	11' 10"	11' 8"	11' 6"
4 1/2									13' 8"	13' 6"	13' 4"	13' 2"	13' 0"	12' 10"	12' 8"	12' 7"	12' 5"	12' 2"	12' 0"	11' 10"	11' 7"	11' 5"	11' 3"
5										13' 3"	13' 1"	12' 11"	12' 9"	12' 8"	12' 6"	12' 4"	12' 1"	11' 11"	11' 9"	11' 7"	11' 5"	11' 3"	11' 1"
5 1/2											12' 10"	12' 8"	12' 7"	12' 5"	12' 3"	12' 0"	11' 10"	11' 8"	11' 6"	11' 4"	11' 2"	11' 0"	10' 11"
6												12' 5"	12' 3"	12' 1"	11' 11"	11' 9"	11' 7"	11' 5"	11' 3"	11' 2"	11' 0"	10' 10"	10' 8"

- NOTES:
- Sl 1 psf = 0.0479 kPa, 1 ft = 0.305 m, 1 in = 25.4 mm
- Loads used to produce the tables above are as follows: DL=10 psf, LL=40 psf, SL=0 psf. Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
 - Factored load combinations were determined as follows:

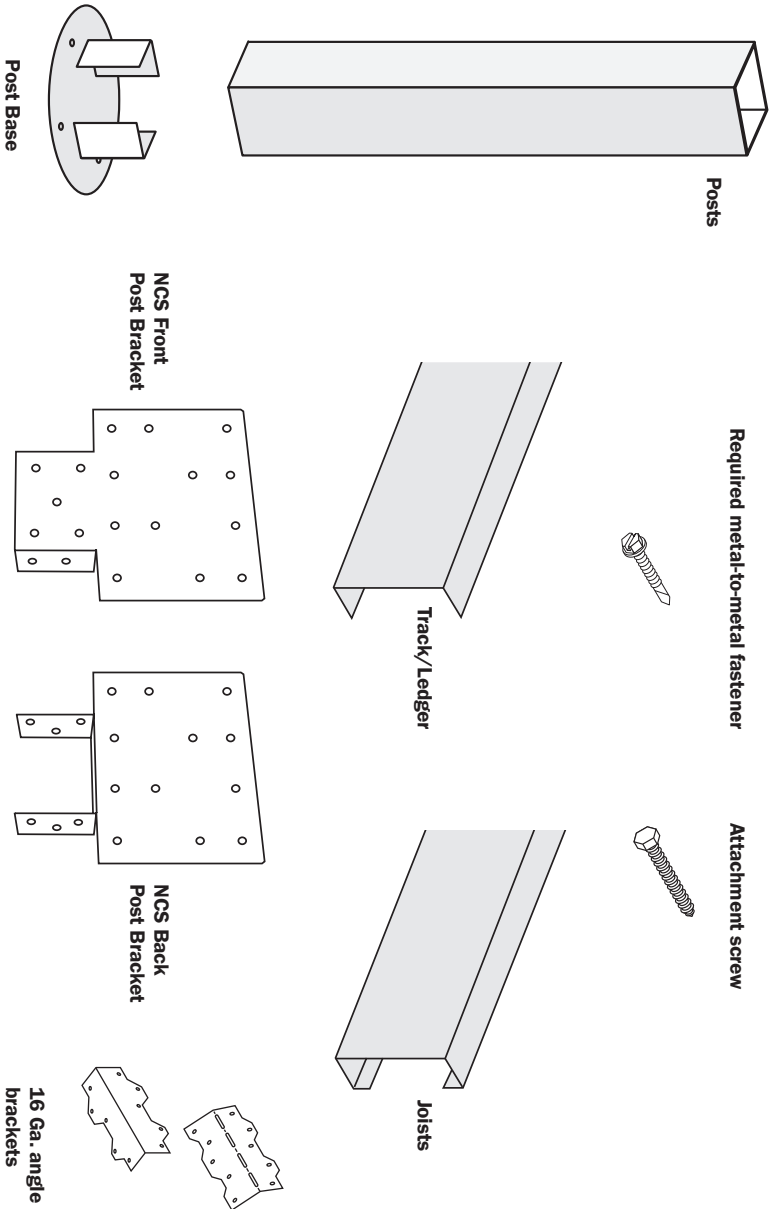
When LL < SL, the factored total load is 1.2DL + 1.6SL + 0.5 LL

When LL > SL, the factored total load is 1.2DL + 1.6LL + 0.5 SL
 - Grey areas in tables indicate instances where the joists backspan is less than twice the cantilever distance or where the maximum joist span is exceeded.
 - If a box beam is supported by more than two posts, then its span selected above should be multiplied by 0.85 for a single box beam and 0.90 for a double box beam.
 - If a box beam is provided as an intermediate joist support, then its span selected above or modified by Note 4 should be multiplied by 0.60 for a “dropped” box beam and 0.70 for a “flush” box beam.

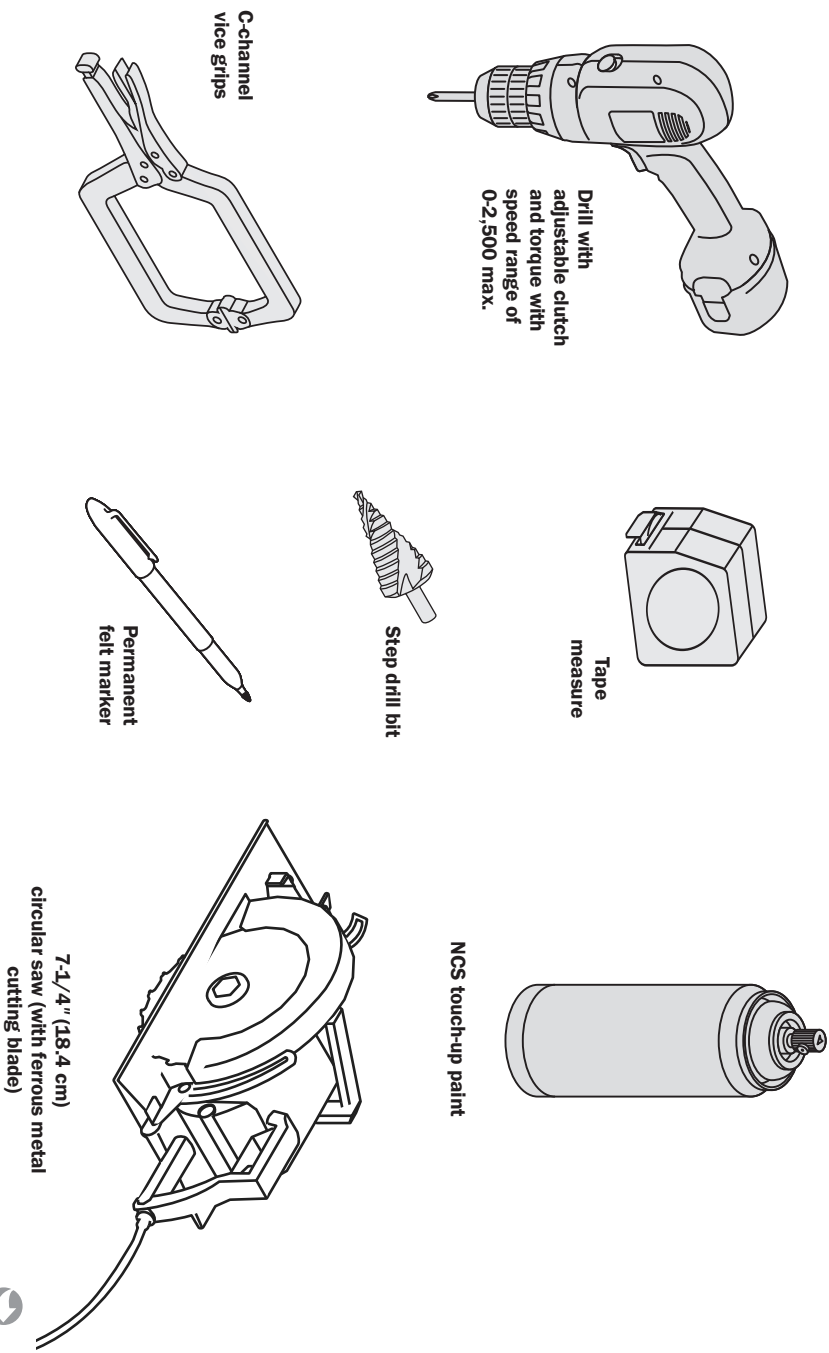
INSTALLATION

INSTALLING PIERS, POSTS, TRACK/LEDGER, AND BEAMS

PARTS



TOOLS NEEDED



INSTALLING PIERS, POSTS, TRACK/LEDGER, AND BEAMS/CONTINUED

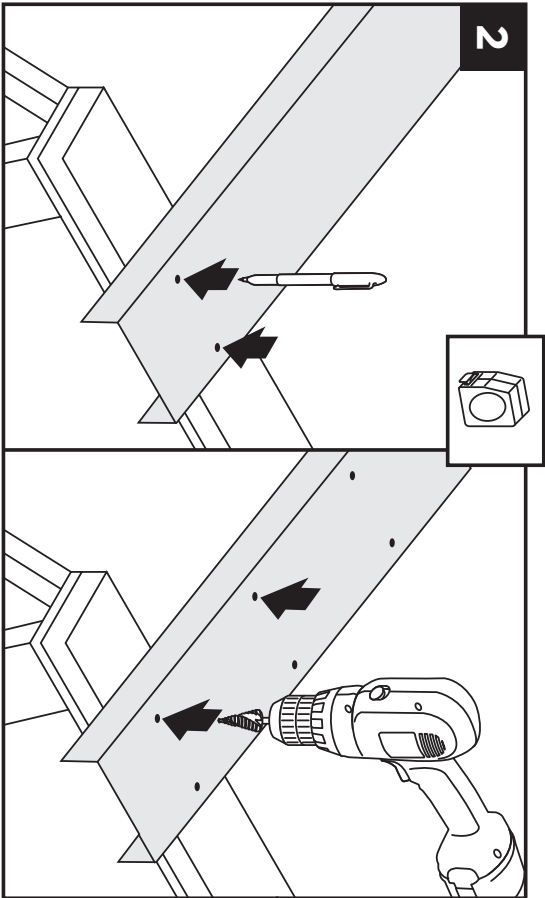
Installing Piers and Posts

1. Install the post as required by local code.
Check with your local building code inspector for requirements.

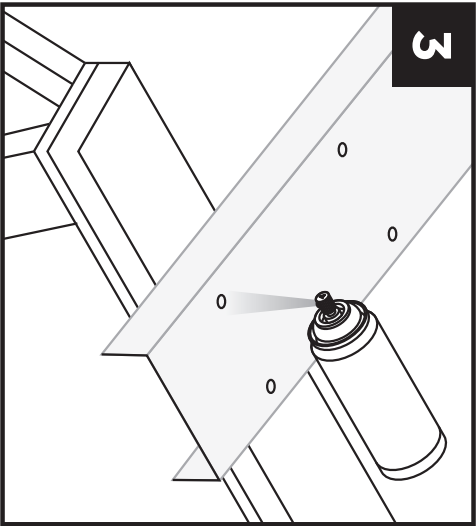
Installing Track/Ledger

2. Before installing the track, mark the track where each joist will be positioned. Joist spacing requirements are determined by local building codes and decking manufacturer and are not to exceed 16" (40.6 cm) on center. Pre-drill the holes for lag bolts using a step bit repetitively while the track is on sawhorses.

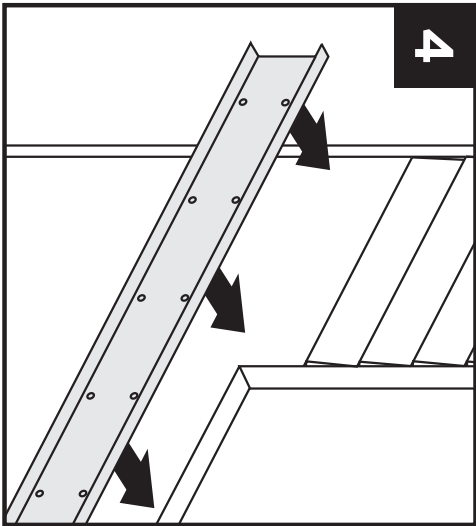
NOTE: See pages 41 for fastener type and placement details.



3. Spray each drilled hole and ends of track with NCS touch-up paint.

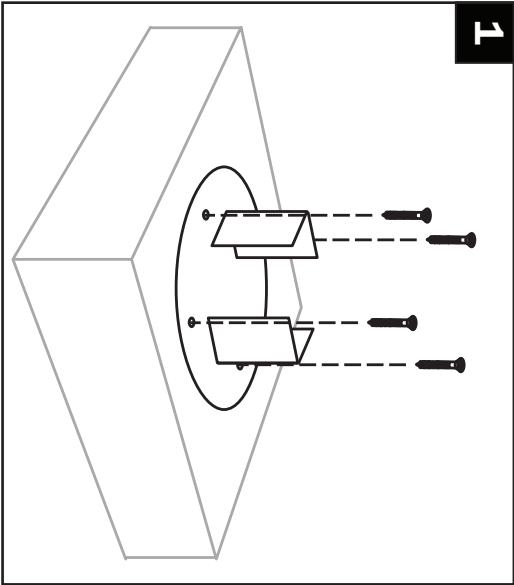


4. Secure track to the structure using approved methods of attachment. Consult a structural engineer or local building code official for proper water management details.

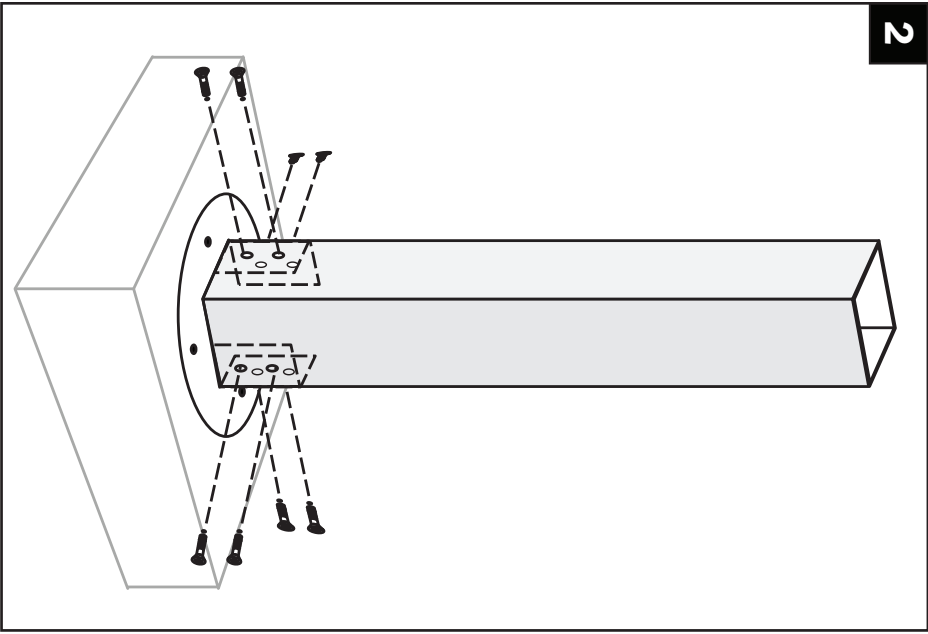


INSTALLING PIERS, POSTS, TRACK/LEDGER, AND BEAMS/CONTINUED

1. Install post base to footing using 4) 1/2" x 6" anchors



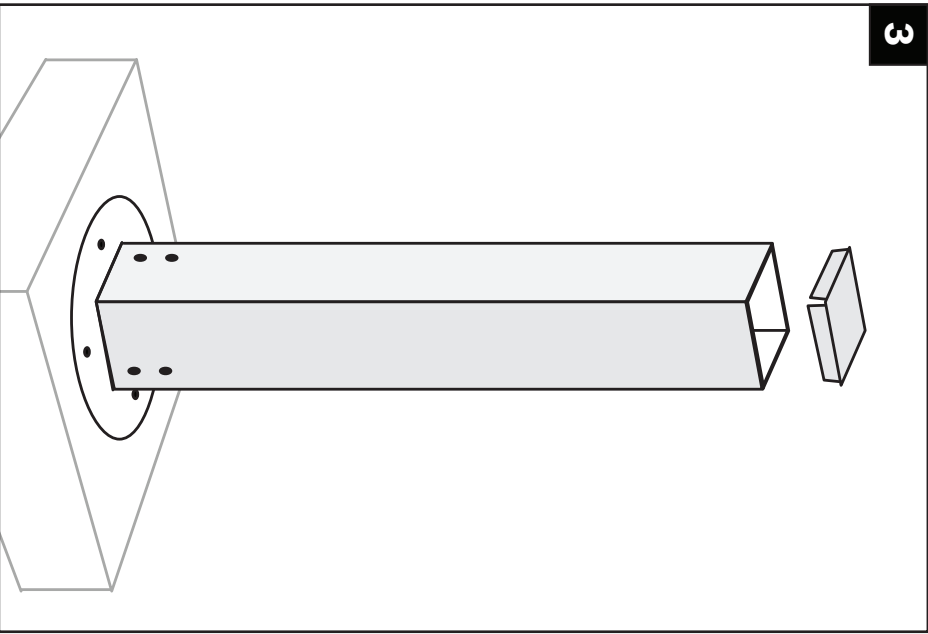
2. Install post cut to desired length, over post base.



- 2A. Pre-drill 2 holes each side through post and post base with a 3/16" drill bit. Holes should be placed center line of post. 1 1/2" and 5" from base.

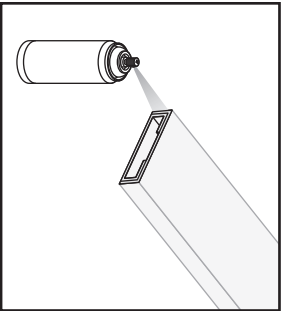
Install provided 1/4 x 1 1/8" screws into holes making sure not to over tighten.

3. Secure post cap with exterior grade sealant.



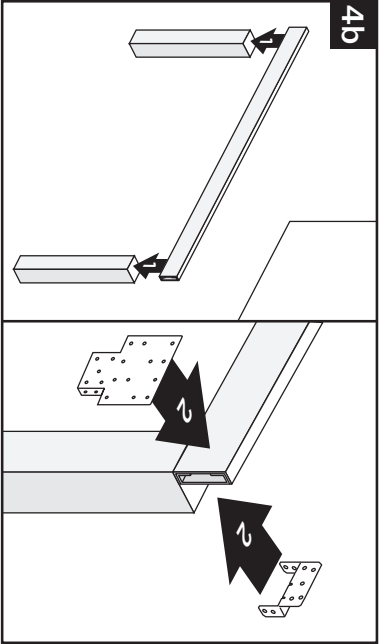
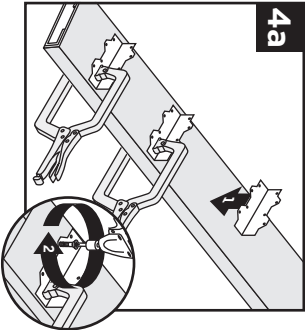
Installing Beams

NOTE: Paint all ends of beams and track/ledger plates with NCS touch-up paint.



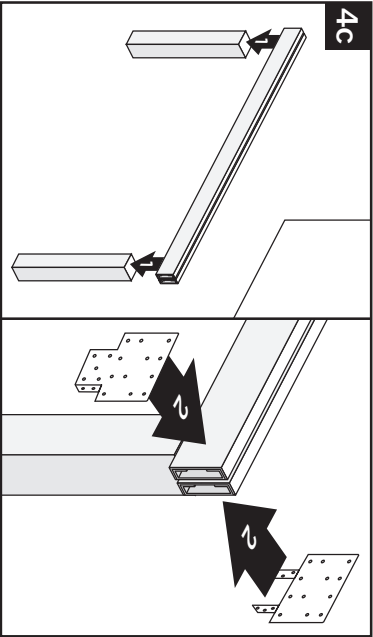
Option 1:
Flush Beam Scenario –

4a. Attach 16 Ga. angle brackets (L70Z or LS70Z) using required fasteners to beam where joists will be joined. Use C-channel vice grips to clamp brackets in place. See *Required Fasteners chart* on page 6, column A, for approved metal-to-metal fasteners for attaching brackets to beam.



4b. Attach beam to post using NCS front beam bracket with required fasteners. See *Required Fasteners chart* on page 6, column A, for approved metal-to-metal fasteners for attaching brackets to beam.

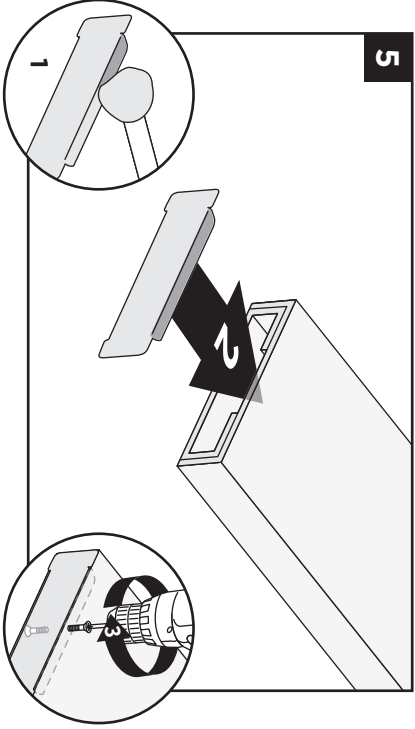
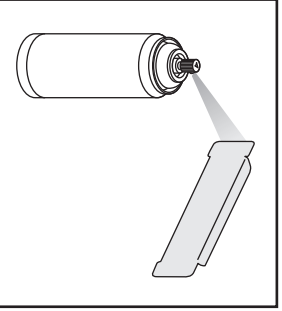
Option 2:
Drop Beam Scenario –



4d. Attach beam to post using NCS front and back beam brackets and required fasteners. See *Required Fasteners chart* on page 6, column A, for approved metal-to-metal fasteners for attaching brackets to beam.

(Optional)
End Cap Attachment

NOTE: Paint end cap with NCS touch-up paint

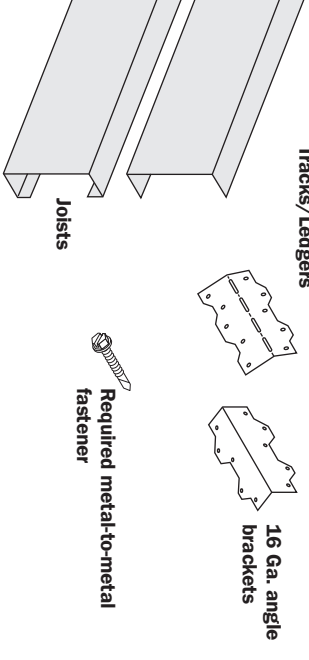


5. Secure cap with exterior grade metal adhesive and/or #10 x 3/4" (1.9 cm) self-tapping screws.

Note: Refer to page 61-62 for beam assembly options.

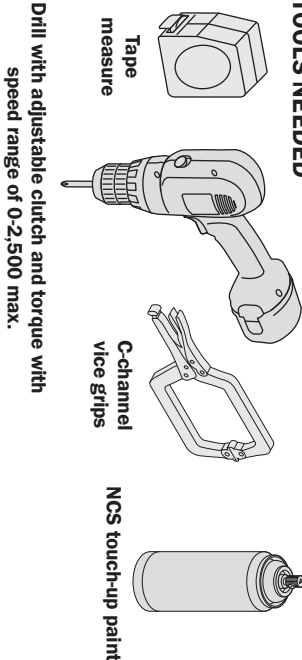
INSTALLING RIM JOISTS, JOISTS, RIM PLATES, AND JOIST BLOCKING

PARTS



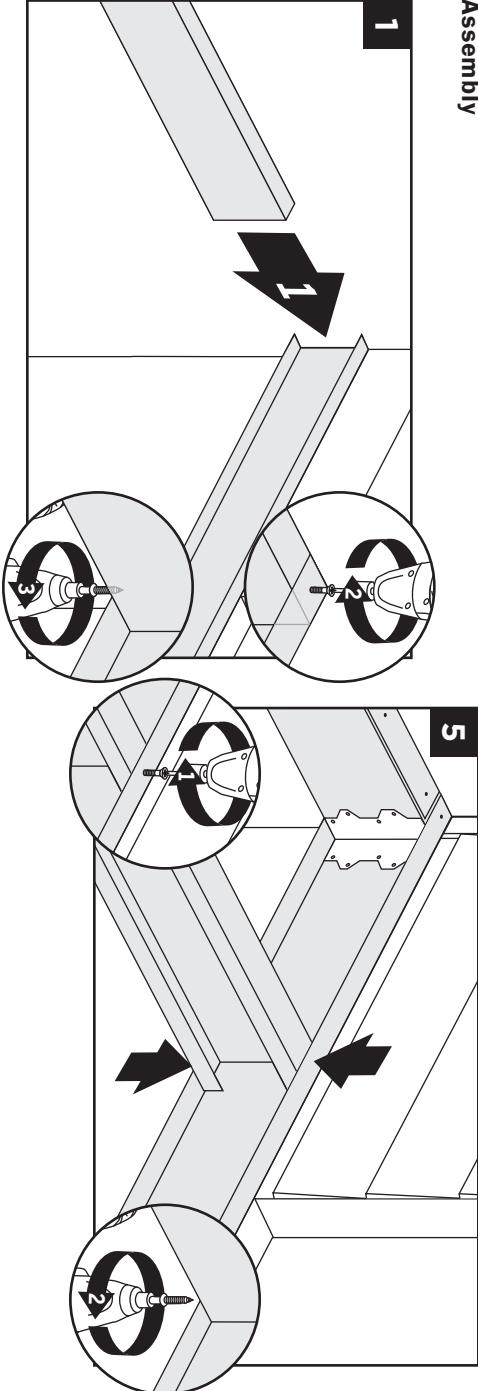
NOTE: See page 6 for detailed description of required fasteners and brackets.

TOOLS NEEDED



NOTE: Paint all ends of rim joists, joists, front plates, and blocking with NCS touch-up paint.

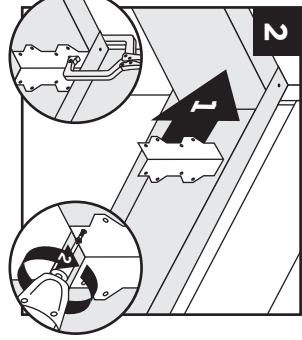
Installing Rim Joists Assembly



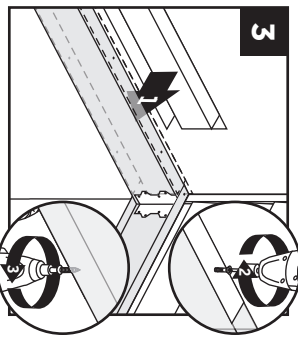
1a. Slide the joist within the flanges of the track and rest the outer end on the support post or beam. Fasten joist to track using required fasteners. See Required Fasteners chart on page 6, column A. Fasten through the track flange into the joist on top and bottom.
1b. 14G 2" joist should be used for rim joist.
Note* For surface mount post attachment, a NCS post block should be inserted into the channel of the joist before installing joist. Refer to surface mount post installation instructions on page 54.

INSTALLING RIM JOISTS, JOISTS, RIM PLATES, AND JOIST BLOCKING/CONTINUED

2. Fasten joist to track with recommended 16 Ga. angle bracket (L70Z or LS70Z) using required fasteners. See Required Fasteners chart on page 6, column A. Use C-channel vice grips to help secure the angled bracket.

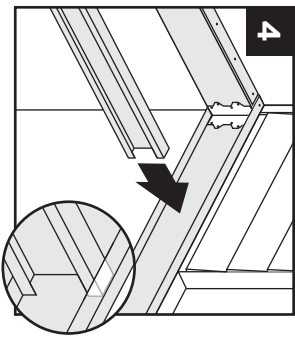


3. Notch outer rim track to allow for fit over end of ledger. Attach outer rim track with metal-to-metal screws (see Required Fasteners chart on page 6, column A) every 12" (30.5 cm) top and bottom.

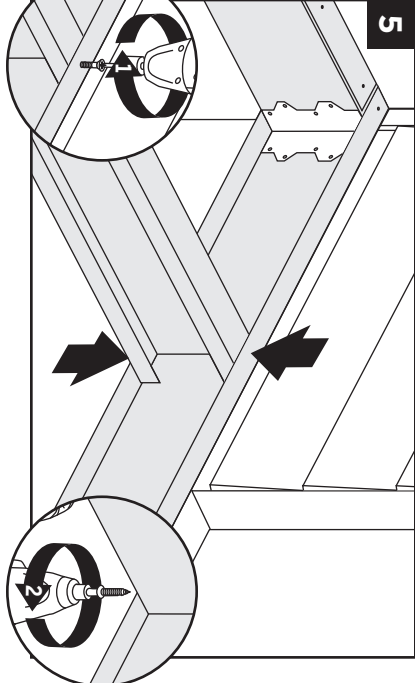


Installing Inner Joists

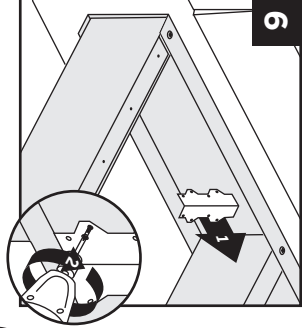
4. Position joist within track flange, spaced according to approved joist spacing.



5. Fasten top and bottom of joist and track. Screw joist to track from above and below with required fasteners. See Required Fasteners chart on page 6, column A.

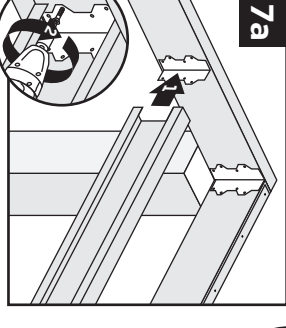


6. Attach joist to track with recommended 16 Ga. angle bracket (L70Z or LS70Z) using required fasteners. See Required Fasteners chart on page 6, column A. Repeat Steps 3-5 for remaining joists.



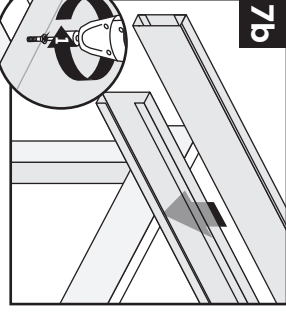
Option 1: Flush Beam Scenario

7a. Fasten joist to beam using recommended 16 Ga. angle brackets already attached.

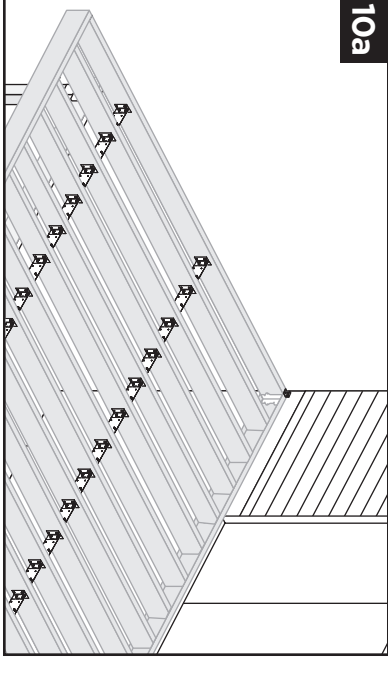
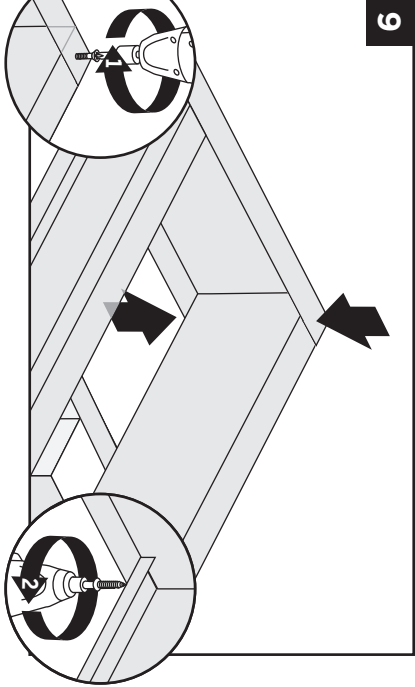


Option 2: Drop Beam Scenario

7b. Rest joist on dropped beam. Attach using required fasteners through bottom of joist and into top of beam. See Required Fasteners chart on page 6, column A.



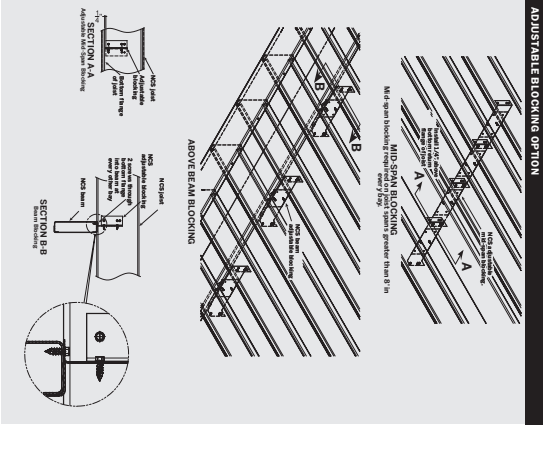
9. Attach track to joists by screwing track to joists in the corners on the top and bottom using required fasteners. See Required Fasteners chart on page 6, column A.



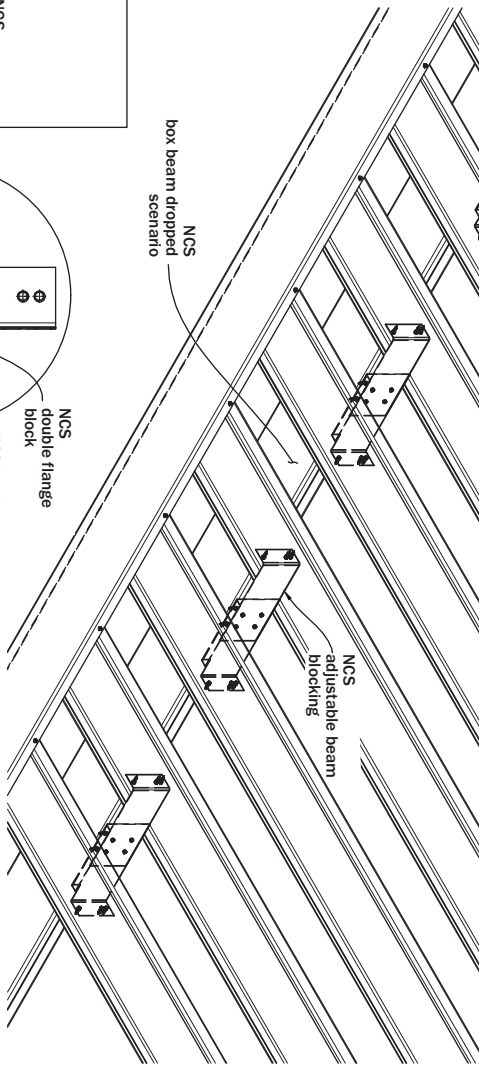
Installing Blocking

10a. For joist spans greater than 8' (2.49 m), blocking is required midspan in every bay.

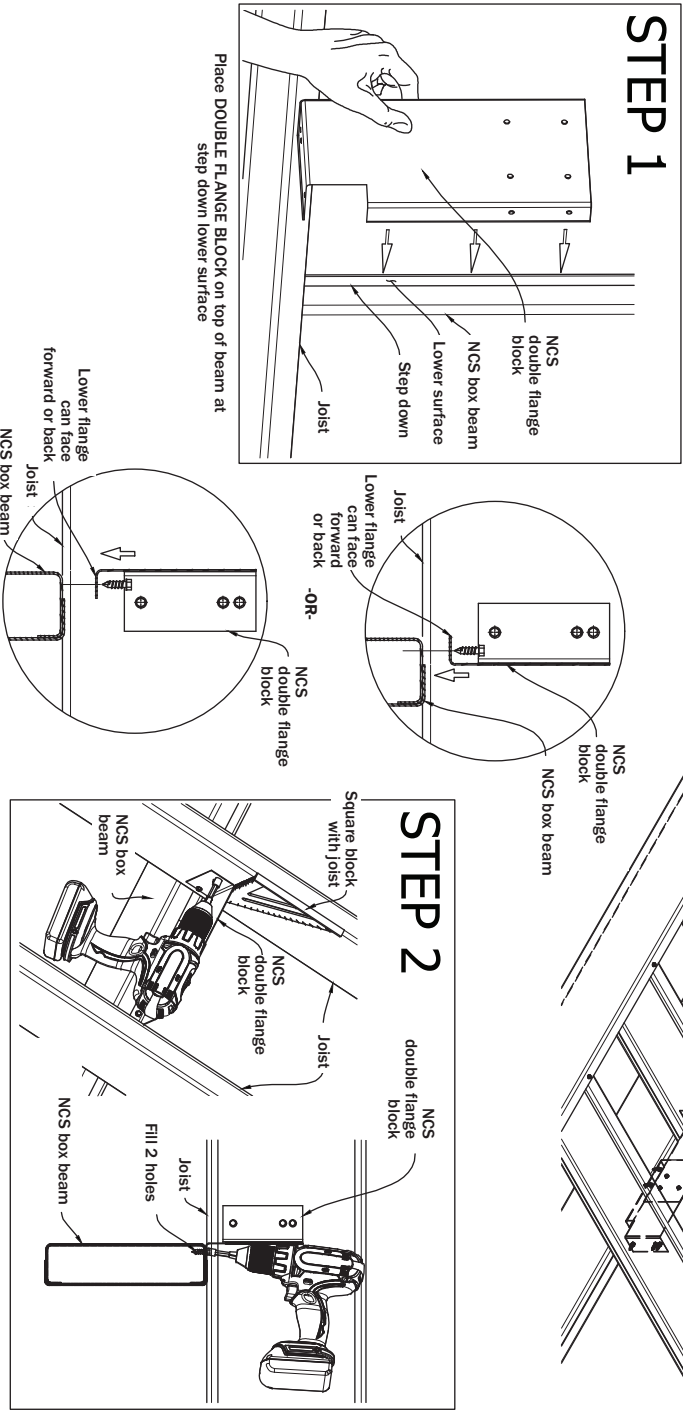
10b. Adjustable midspan and beam blocking instructions on page 60.



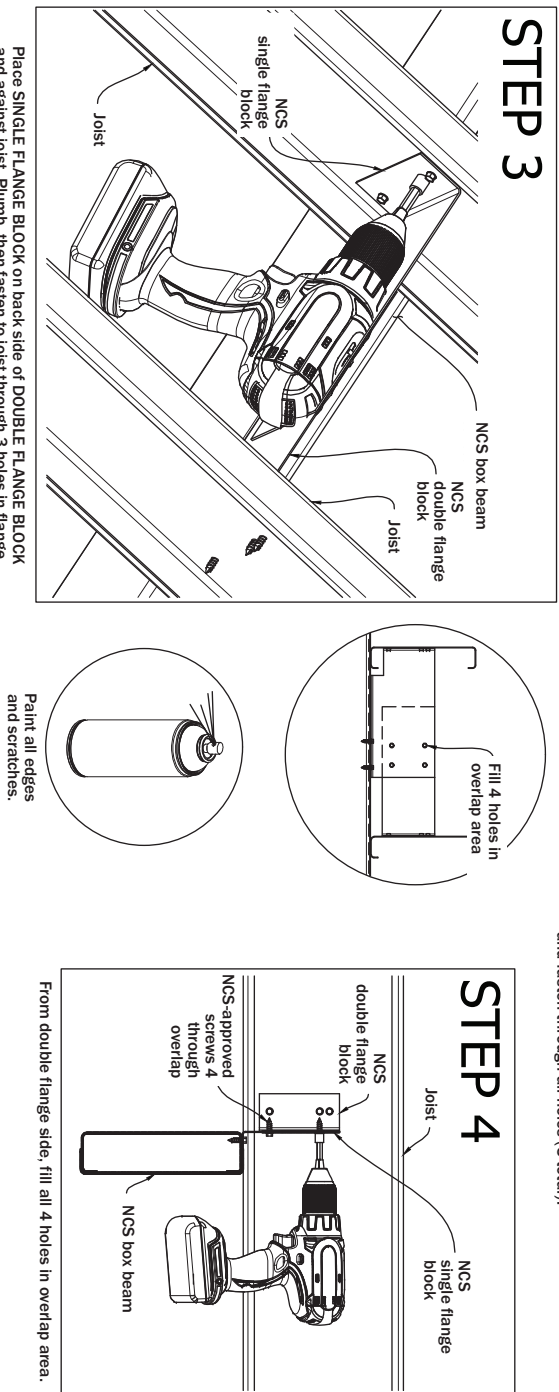
BEAM BLOCKING



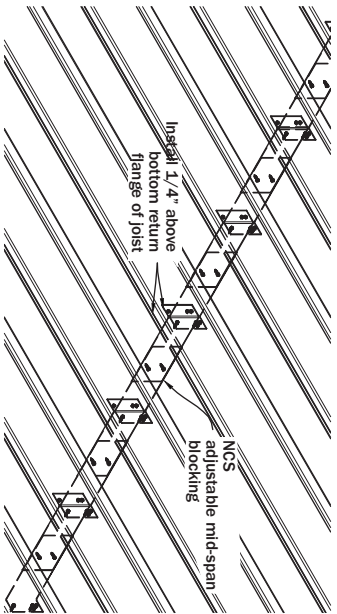
STEP 1



STEP 2



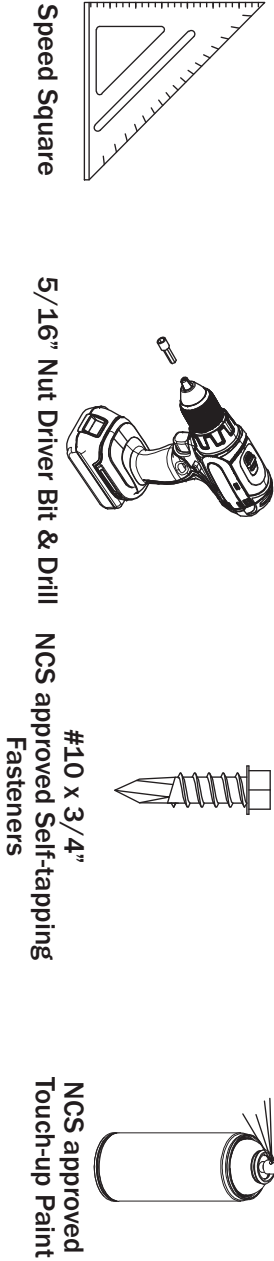
MID-SPAN BLOCKING



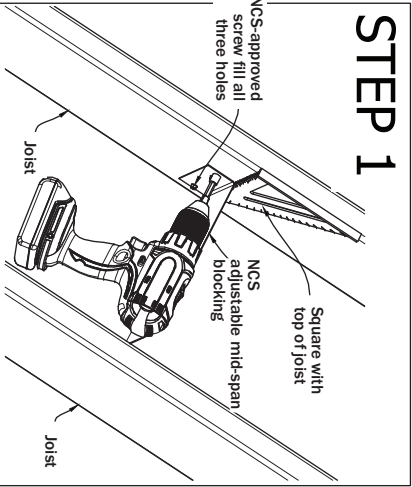
NOTE:

Mid-span blocking required in every bay where joist spans are greater than 8'.

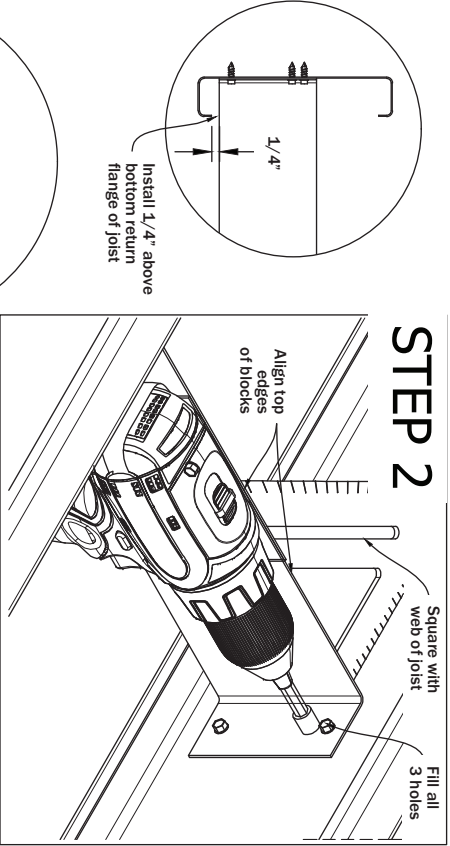
TOOLS AND FASTENERS NEEDED



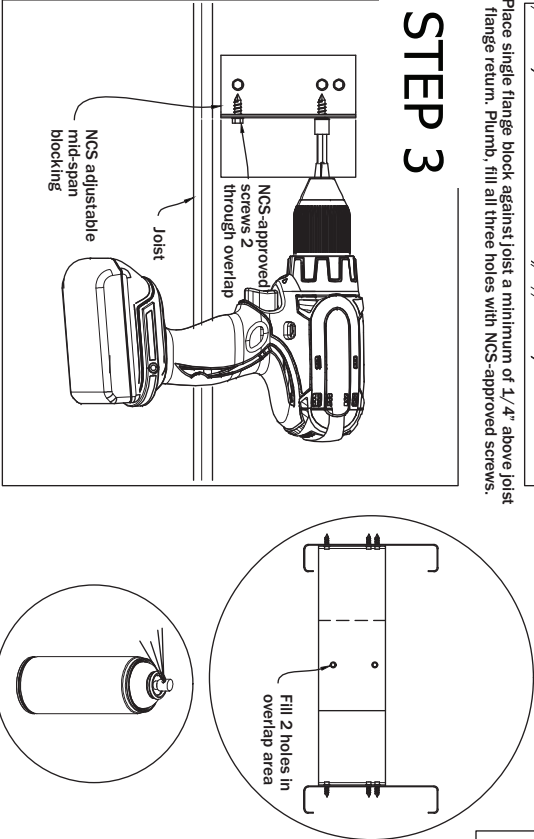
STEP 1



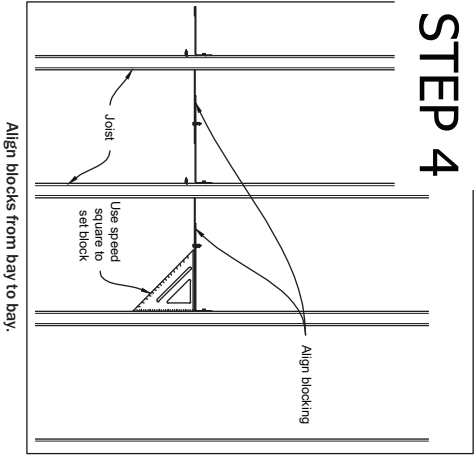
STEP 2



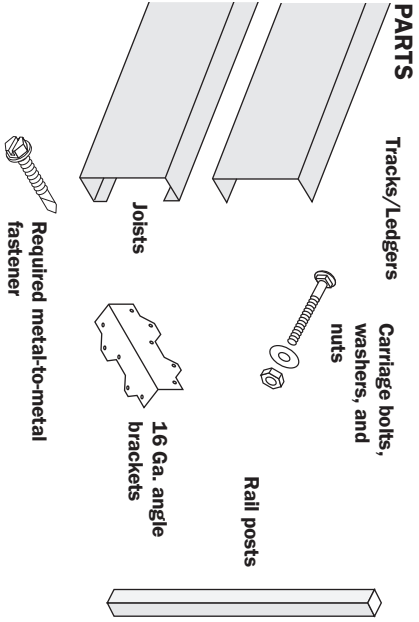
STEP 3



STEP 4



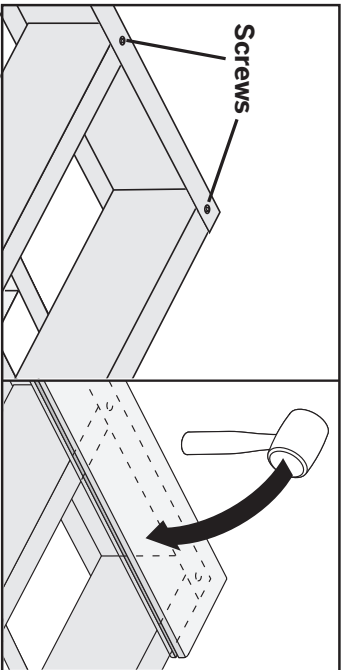
INSTALLING RAIL POSTS



NOTE: See page 6 for detailed description of required fasteners and brackets.

HOW TO INSTALL DECK BOARDS

Tips on Installing Deck Board over Screws on Ledger/ Front Plate

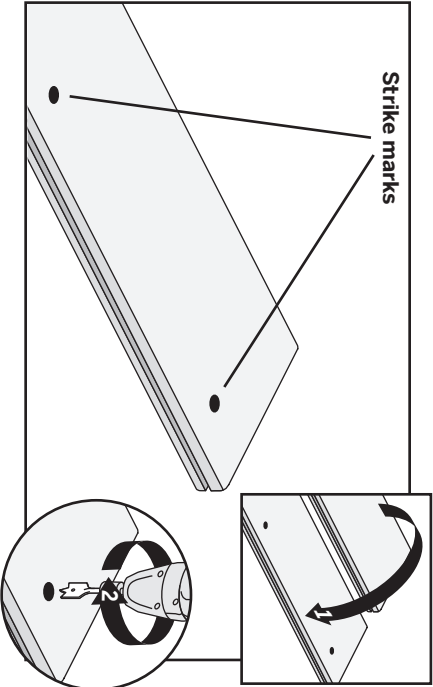


Tip 1:

1. Place deck boards in proper location over end joist fasteners. Use a rubber mallet on top of deck board in order to mark underside of decking where screws may have caused the deck board to stick up.

Installing Posts:

THERE ARE THREE CODE APPROVED METHODS FOR ATTACHMENT OF RAIL POSTS. YOU MUST REFER TO THE CRITICAL CONNECTIONS SECTION, RAIL POST INSTALLATION SCENARIOS FOR DETAILS ON HOW THIS IS DONE. See pages 44-46.

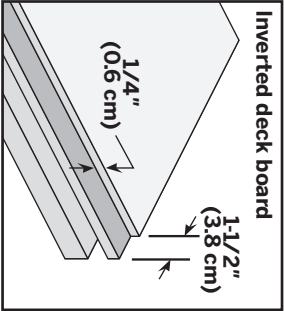


2. Flip board over so that bottom of board faces up and

shows strike marks from the screws. Using a paddle drill bit, carefully drill holes to the depth of the fastener heads in the joist. Flip board over so that drilled holes fit over joist fasteners, and fasten board per instructions.

Tip 2:

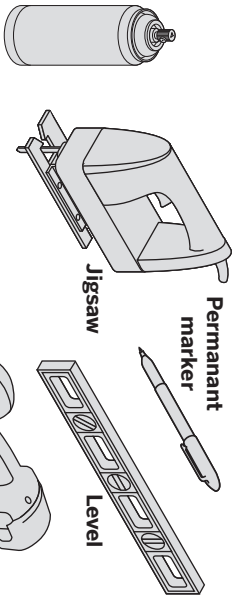
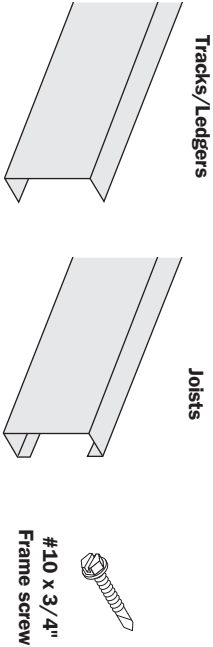
Cut out groove (1-1/2" [3.8 cm] wide x 1/4" [0.6 cm] height) on underside of decking to allow for clearance of screws.



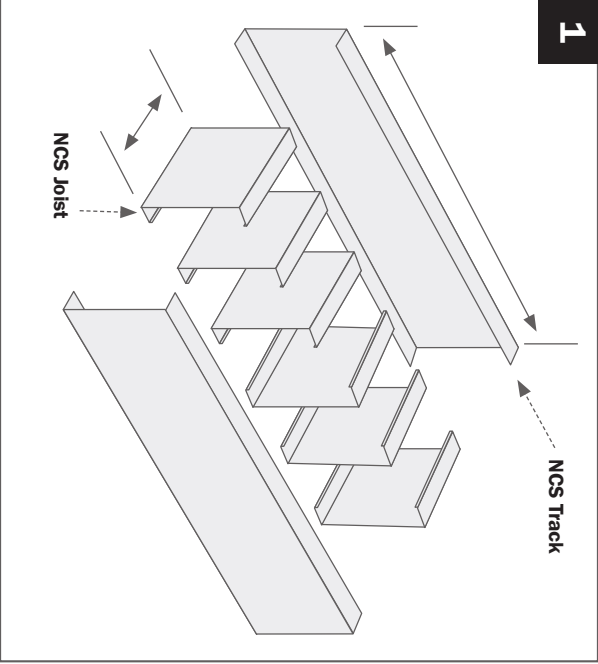
WARNING

DO NOT walk or stand on top of New Castle Steel joists prior to installing deck boards.

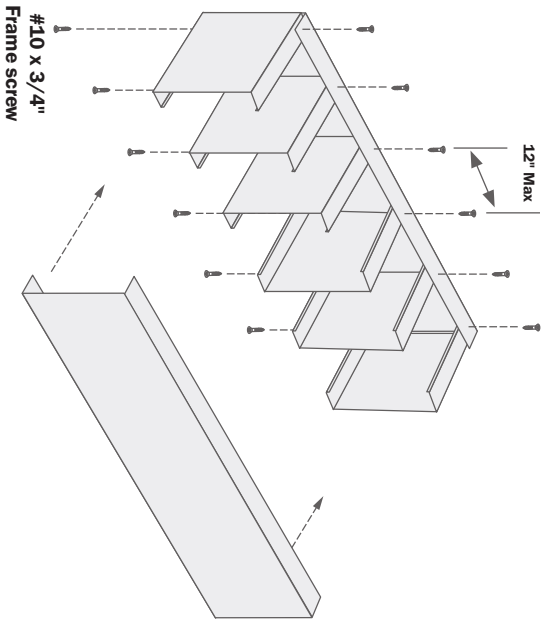
HOW TO INSTALL STAIRS



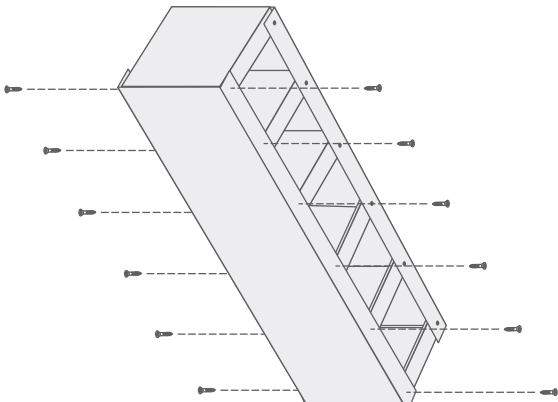
STEPS 1 - 4, BUILD A LADDER BOX STEP



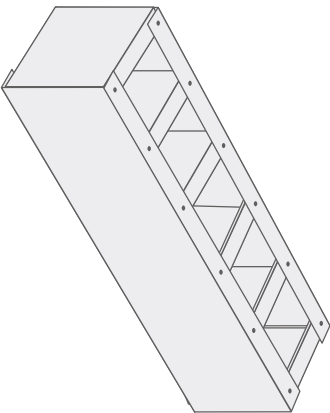
2



3



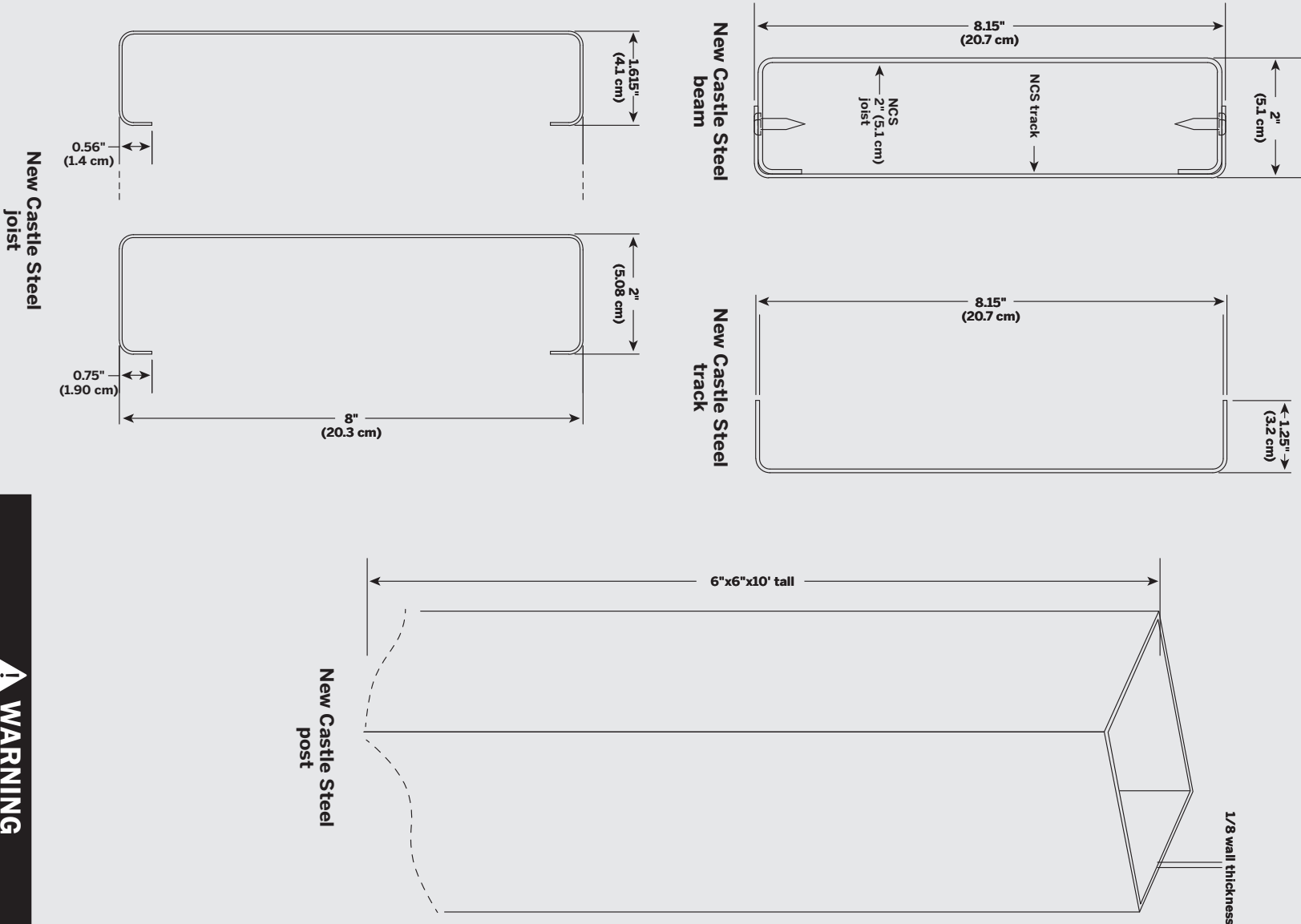
4





DETAILED DRAWINGS

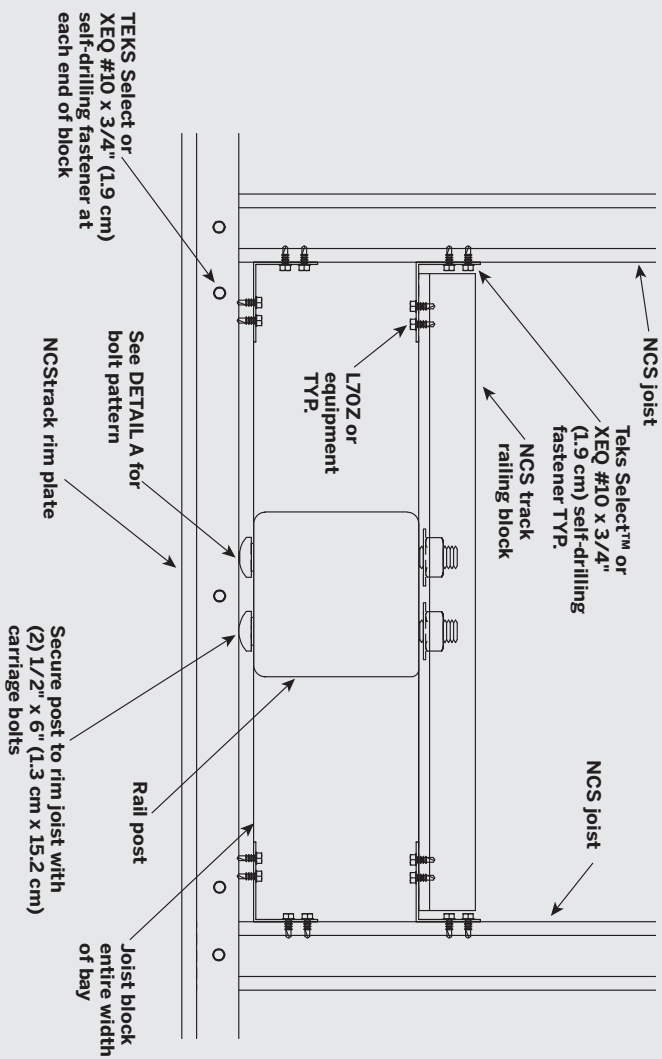
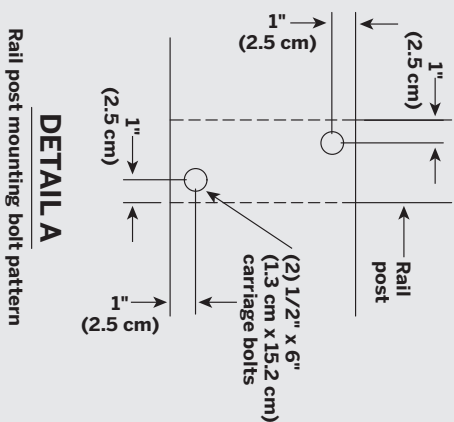
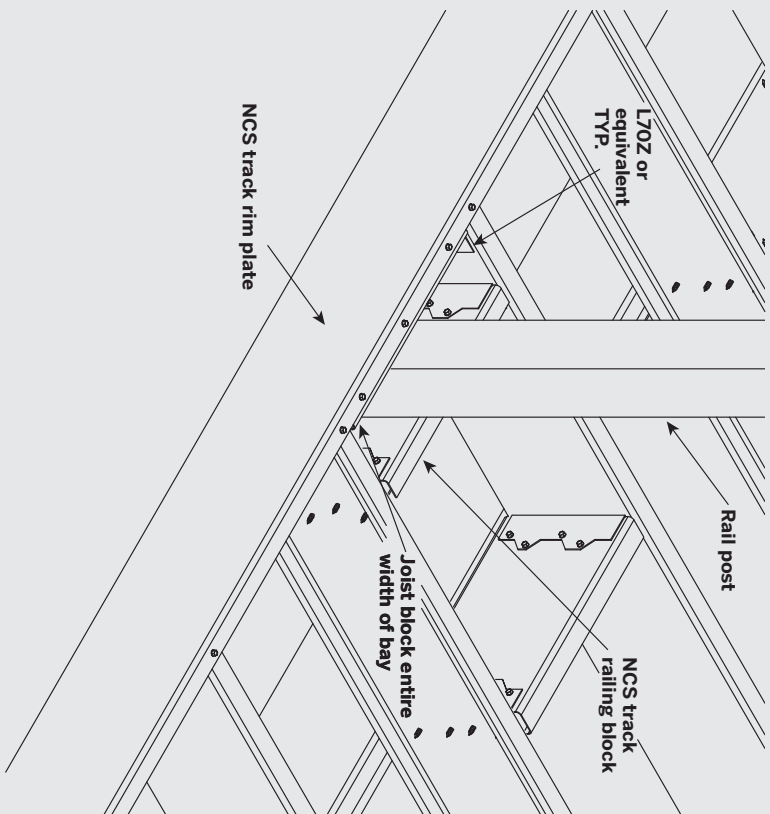
GENERAL FRAMING DETAIL - NOMINAL



⚠ WARNING

When building with New Castle Steel always wear protective gear and refer to your local building codes for approved methods of construction.

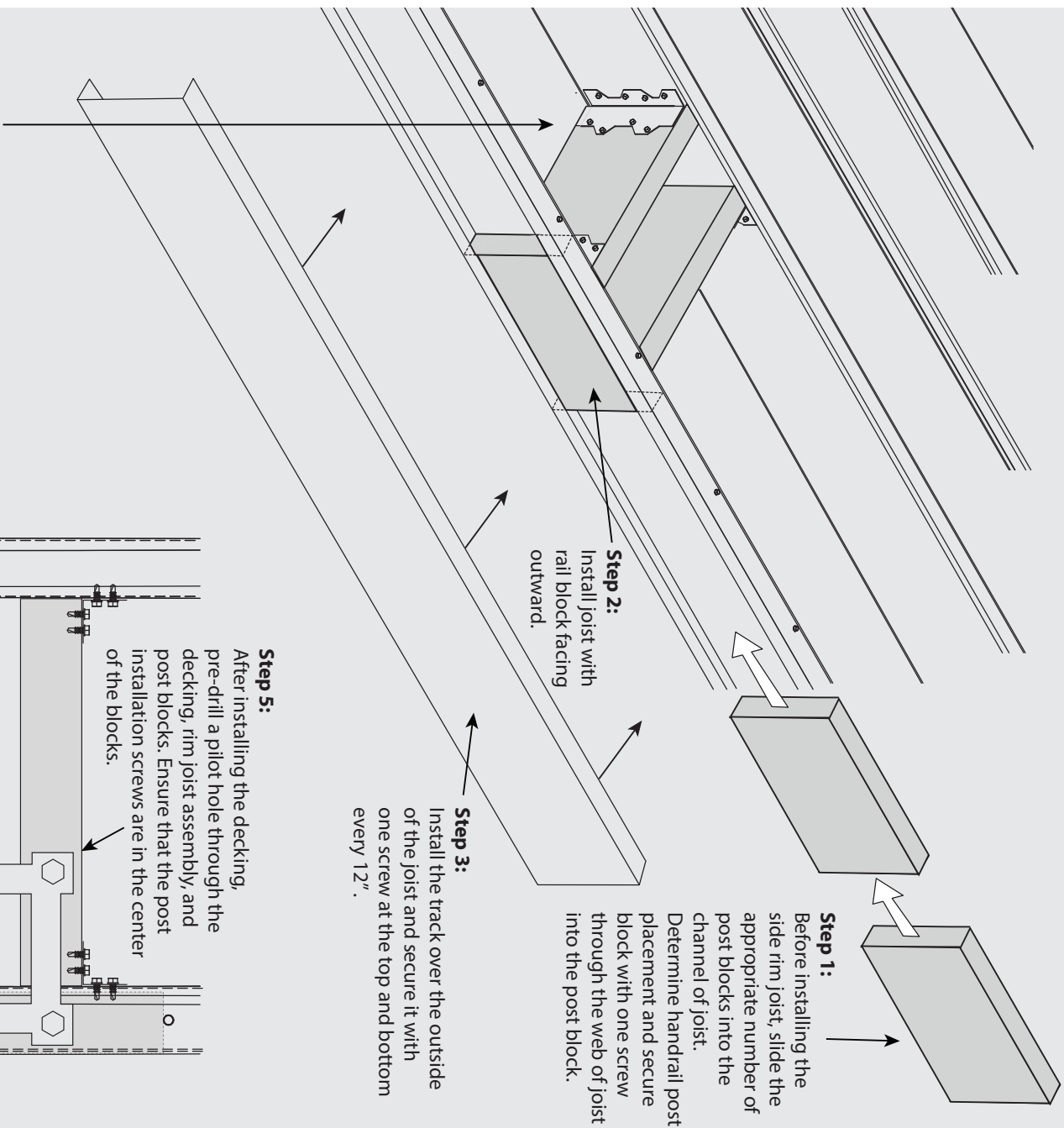
INSIDE RAIL POST ATTACHMENT AT RIM PLATE



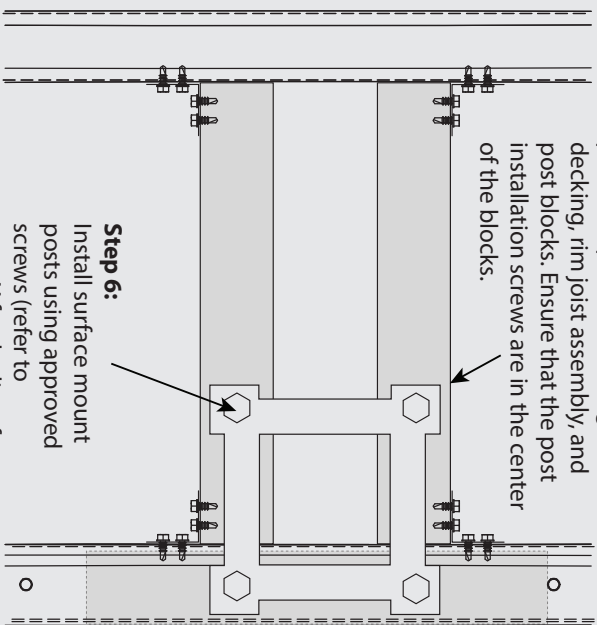
⚠ WARNING

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POST BLOCKS AT SIDE RIM JOIST SCENARIO



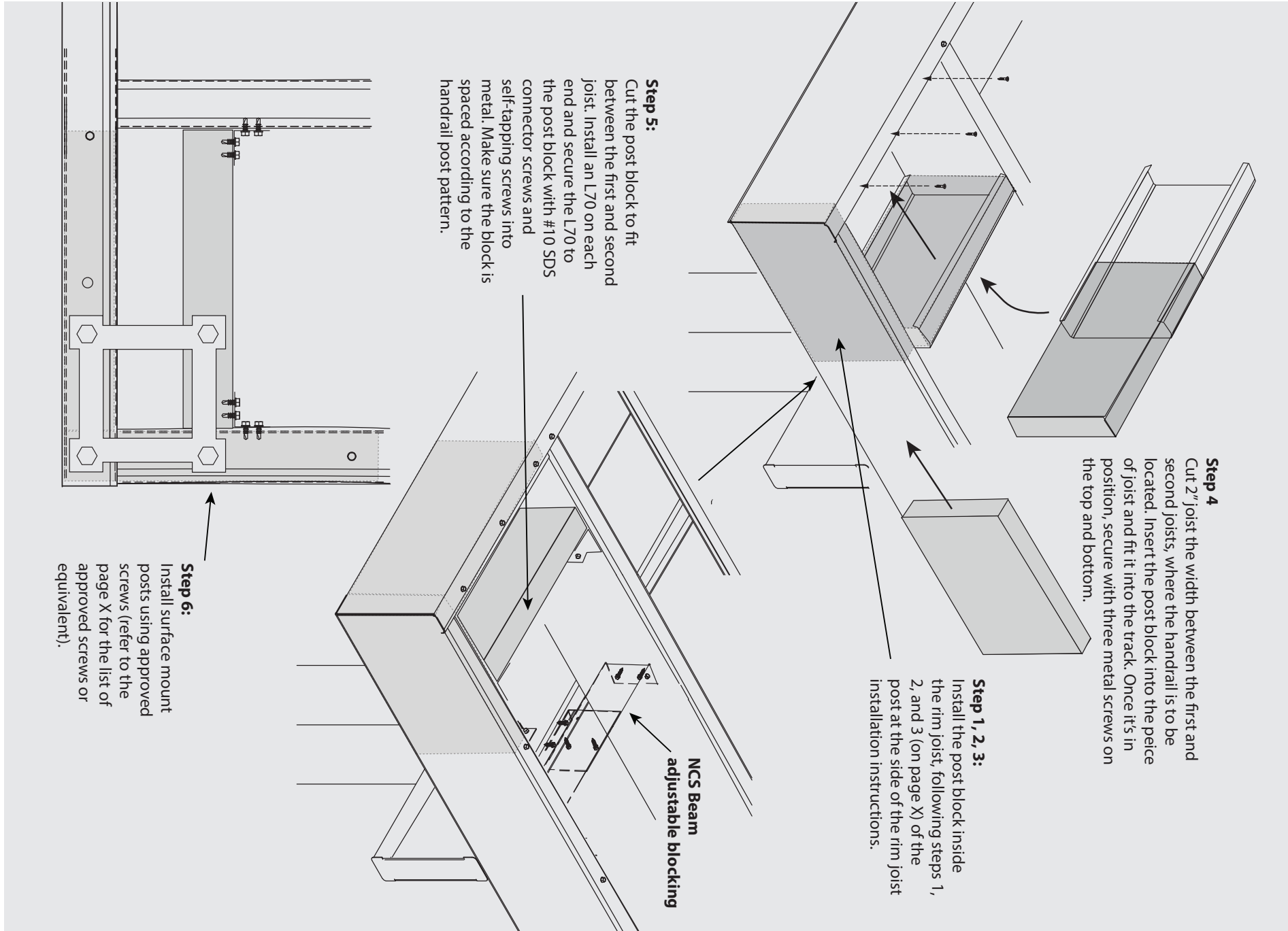
Step 4: Once you have determined the exact placement of the posts, install two rail post blocks between the rim joist and the second joist using Simpson L70Z hangers. Use #10 SDS connector screws to secure to the post blocks. Use self-tapping screws to attach to metal. Ensure that the center of the post blocks line up with the handrail bolt pattern.



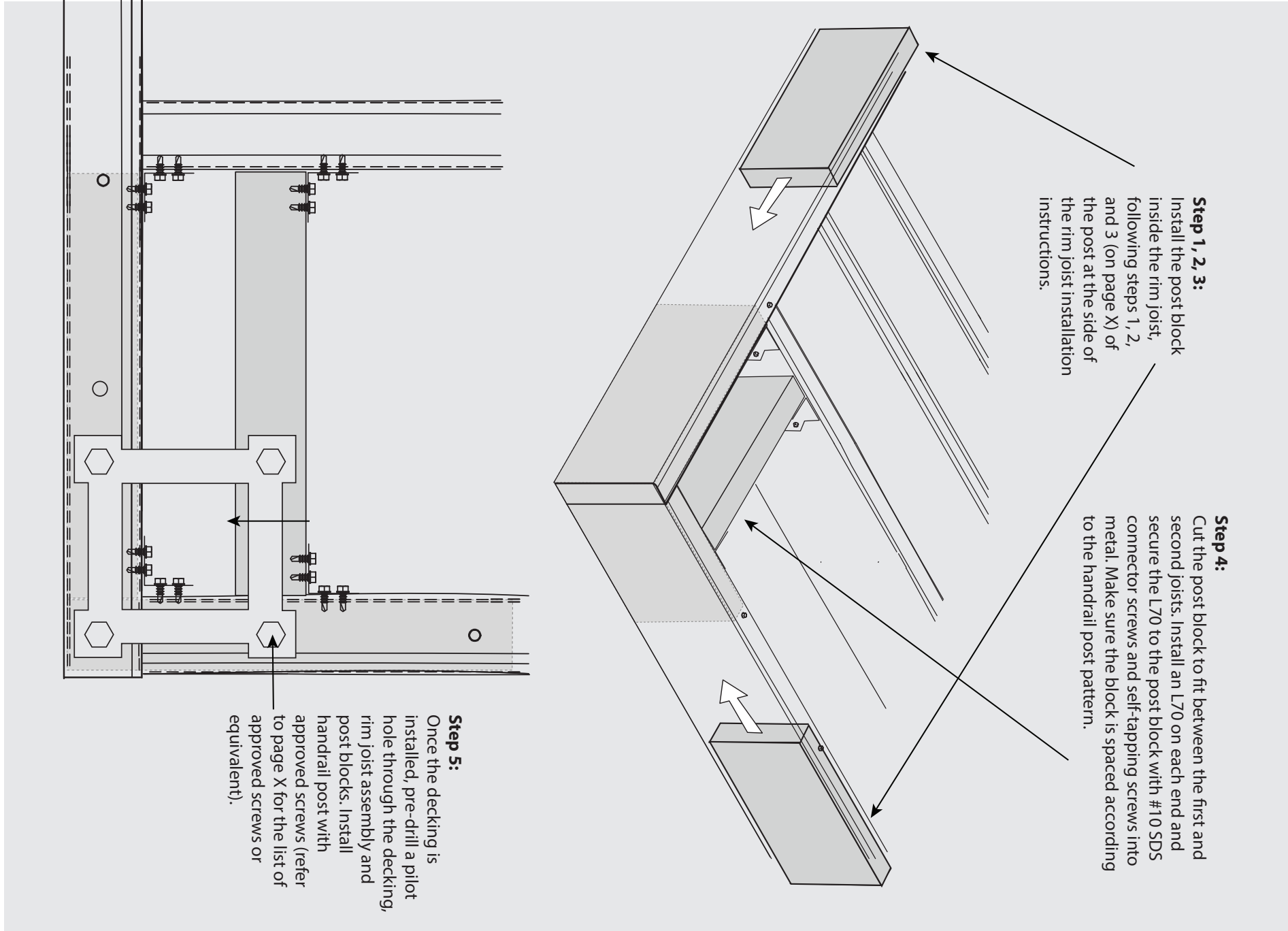
Step 5: After installing the decking, pre-drill a pilot hole through the decking, rim joist assembly, and post blocks. Ensure that the post installation screws are in the center of the blocks.

Step 6: Install surface mount posts using approved screws (refer to page X for the list of approved screws or equivalent).

SURFACE MOUNT POST AT CORNER WITH DROP BEAM SCENARIO

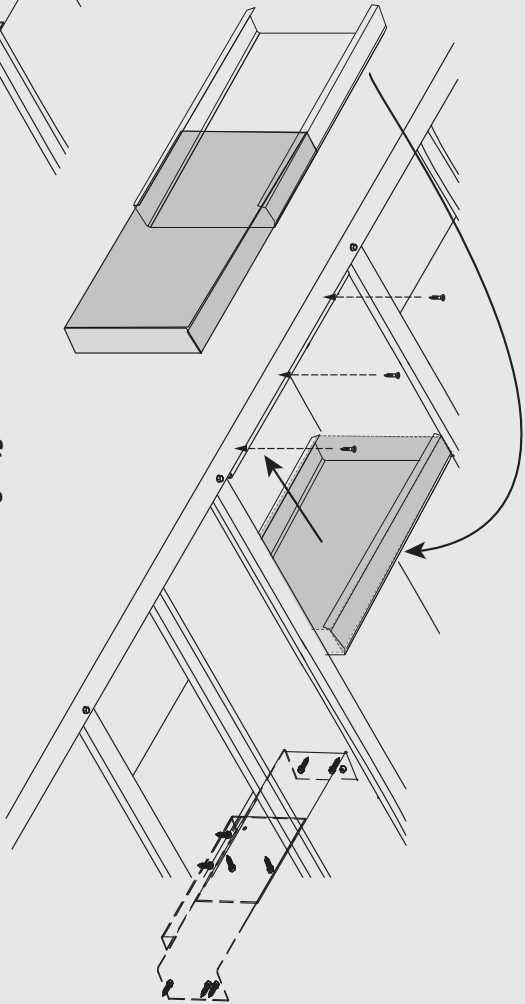


SURFACE MOUNT POST AT CORNER WITH FLUSH BEAM SCENARIO

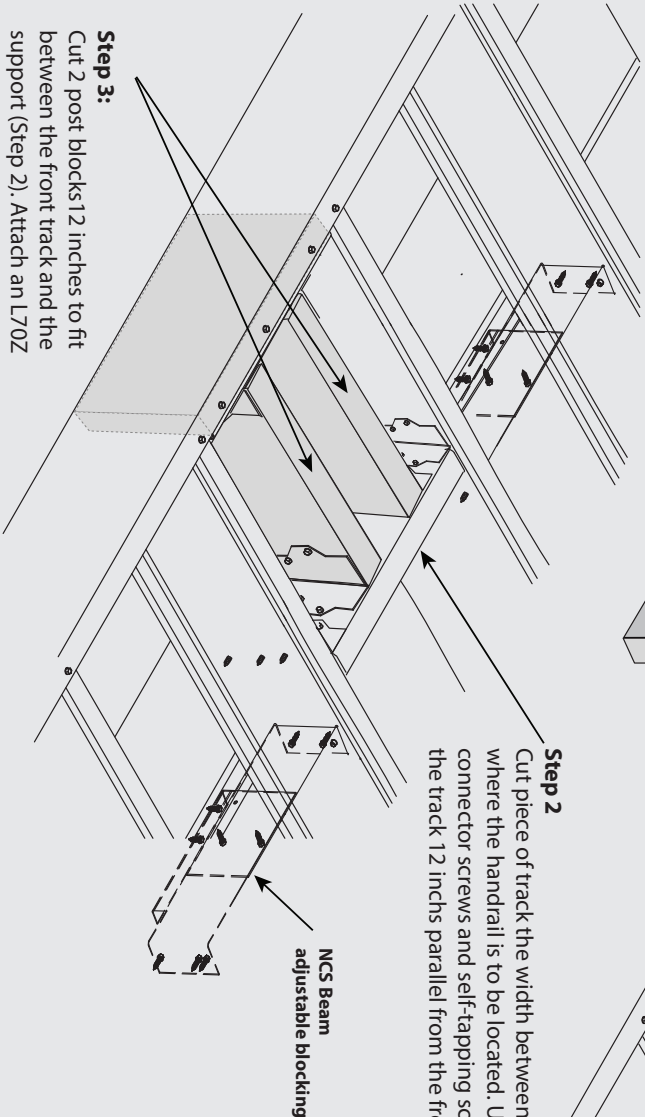


SURFACE MOUNT POST AT RIM TRACK WITH DROP BEAM SCENARIO

Step 1
Measure between the 2 joists where the handrail is to be located. Cut a piece of 2" joist and block. Insert the post block into the peice of joist and fit it into the track. Once it's in position, secure with three metal screws on the top and bottom.

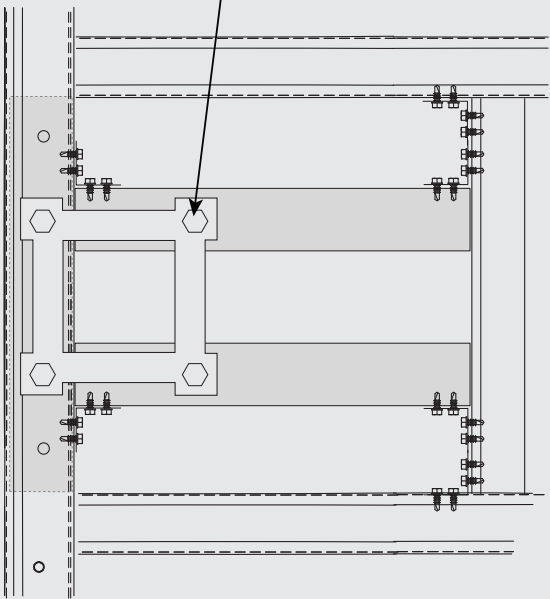


Step 2
Cut piece of track the width between two joists where the handrail is to be located. Use #10 SDS connector screws and self-tapping screws to secure the track 12 inches parallel from the front track.



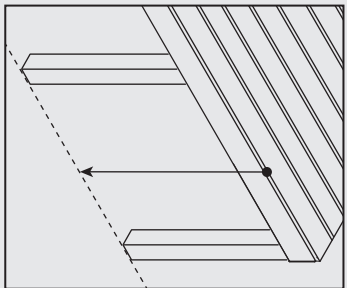
Step 3:
Cut 2 post blocks 12 inches to fit between the front track and the support (Step 2). Attach an L70Z on each end of the blocks. Use #10 SDS connector screws and self-tapping screws to secure the L70Z to the post block. Ensure the blocks are spaced correctly according to the handrail post bolt pattern.

Step 4:
Install surface mount posts using approved screws (refer to the page X for the list of approved screws or equivalent).



ASSEMBLE STAIR STRINGERS

Step 1: Determine the appropriate riser height

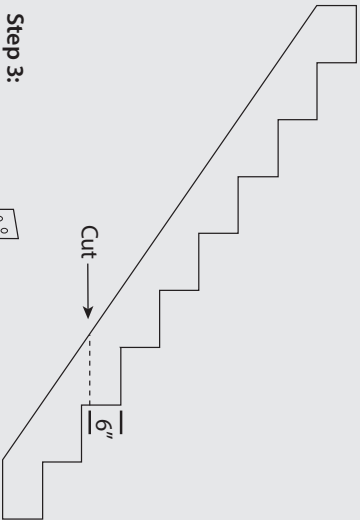


To determine the appropriate riser height, measure from the top of the deck surface to the landing.
Example: Figure 1 is 49" height
From this measurement, you would choose a 7" rise ($49" \div 7" = 7"$)

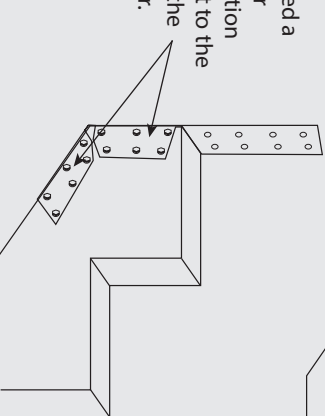
Step 2: Cut a stringer to the appropriate length using a saw with a ferrous metal blade.

If the stairs are terminating at a hard landing, cut the bottom riser 1" short, in this case the bottom rise would be 6".

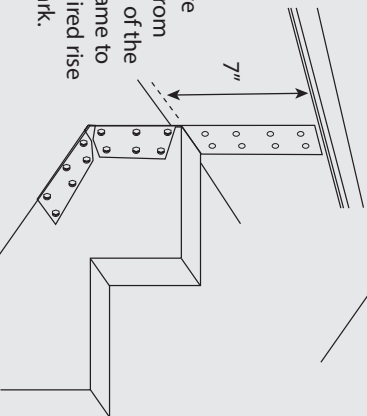
Paint the cut with touch up paint, after the stairs are cut.



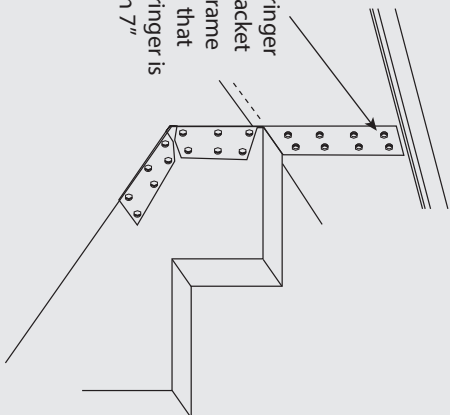
Step 3:
Attached a stringer installation bracket to the top of the stringer.



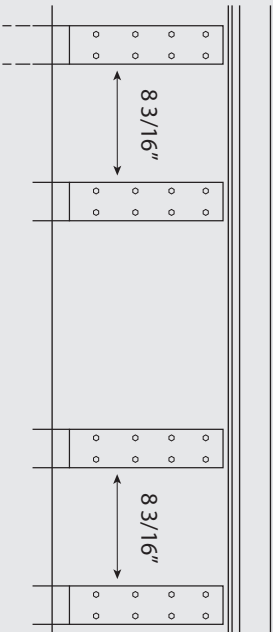
Step 4:
Measure down from the top of the deck frame to the desired rise and mark.



Step 5:
Screw stringer install bracket to deck frame ensuring that top of stringer is level with 7" mark.



Step 6:
On each side of the stair, stringers should be installed 8 3/16" apart.



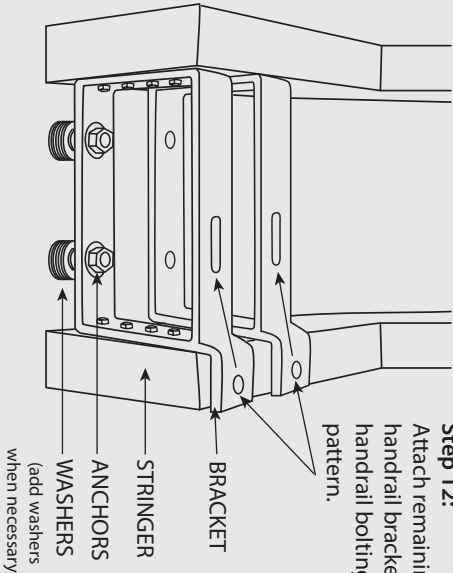
Step 7:
Install remaining stringers according to decking manufacturers suggested stringer spacing.

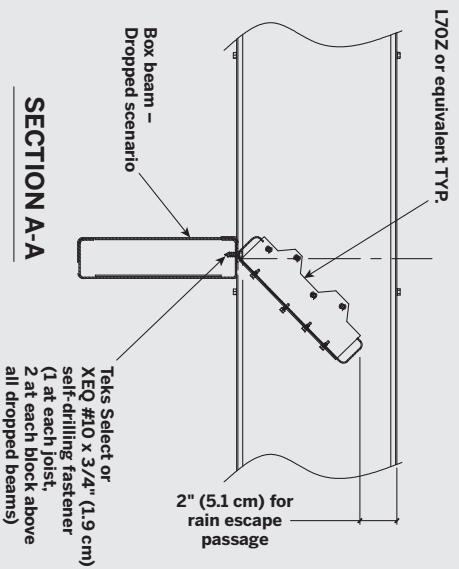
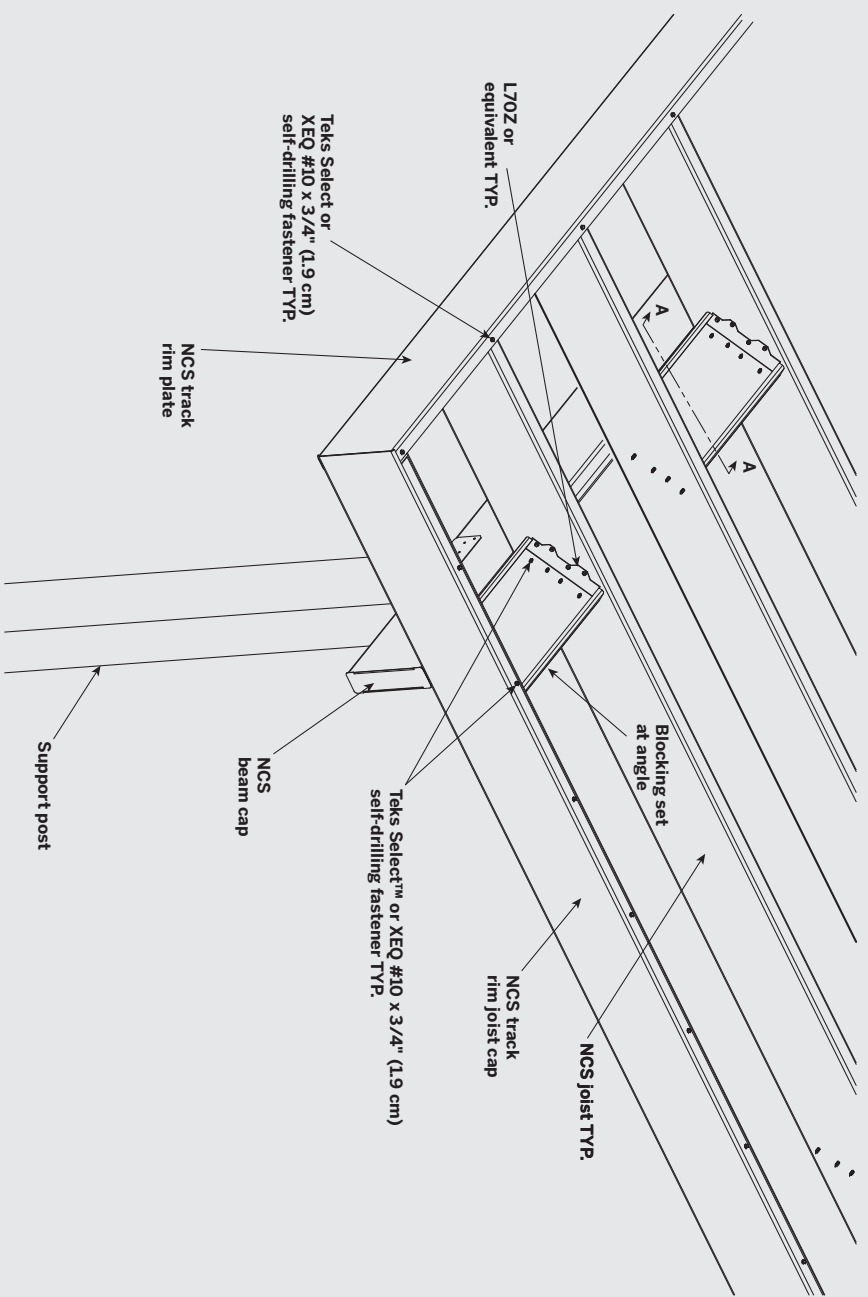
Step 8:
Ensure stringers are square to the deck.

Step 9:
Install the first handrail attachment bracket between first two stringers on each side, and screw into side of stringers. brackets should in installed flush with top of stringer.

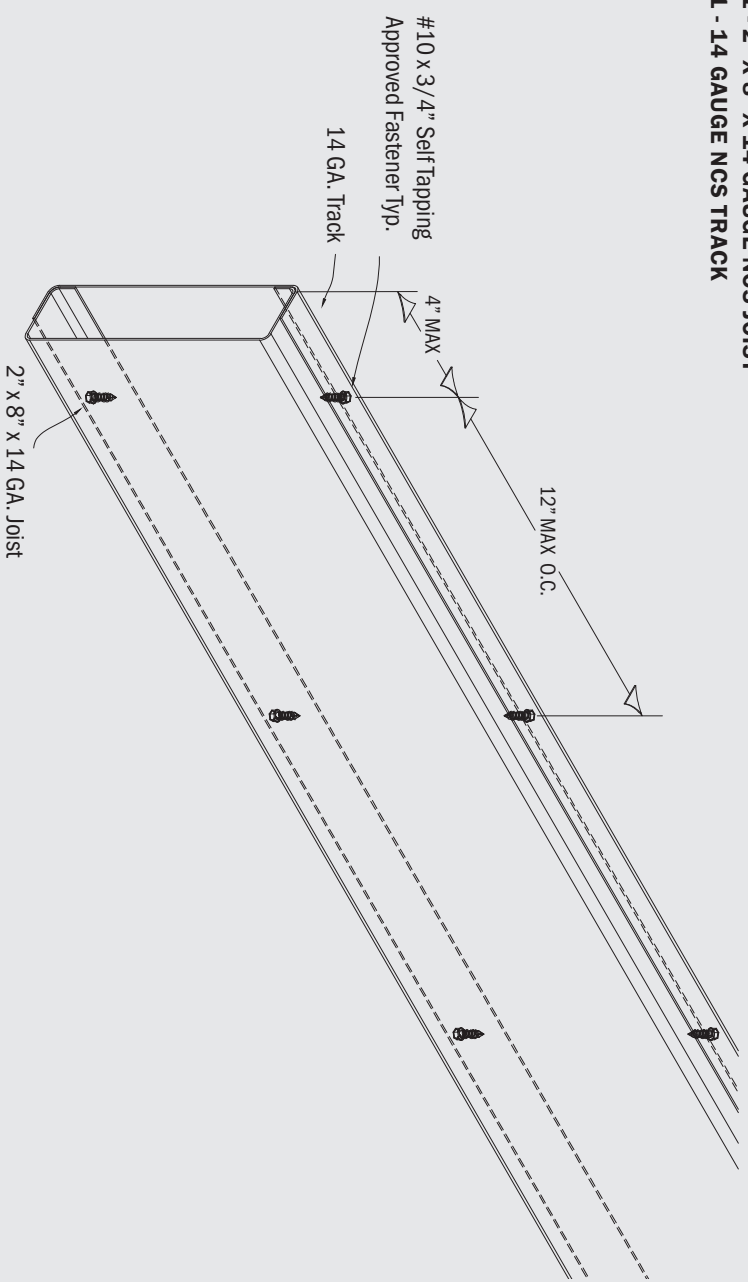
Step 10:
Secure handrail attachment bracket to landing by drilling 2) 1/2" holes into concrete and installing 2) 1/2" anchors, ensuring 4" embedment into concrete.

Step 12:
Attach remaining handrail brackets per handrail bolting pattern.

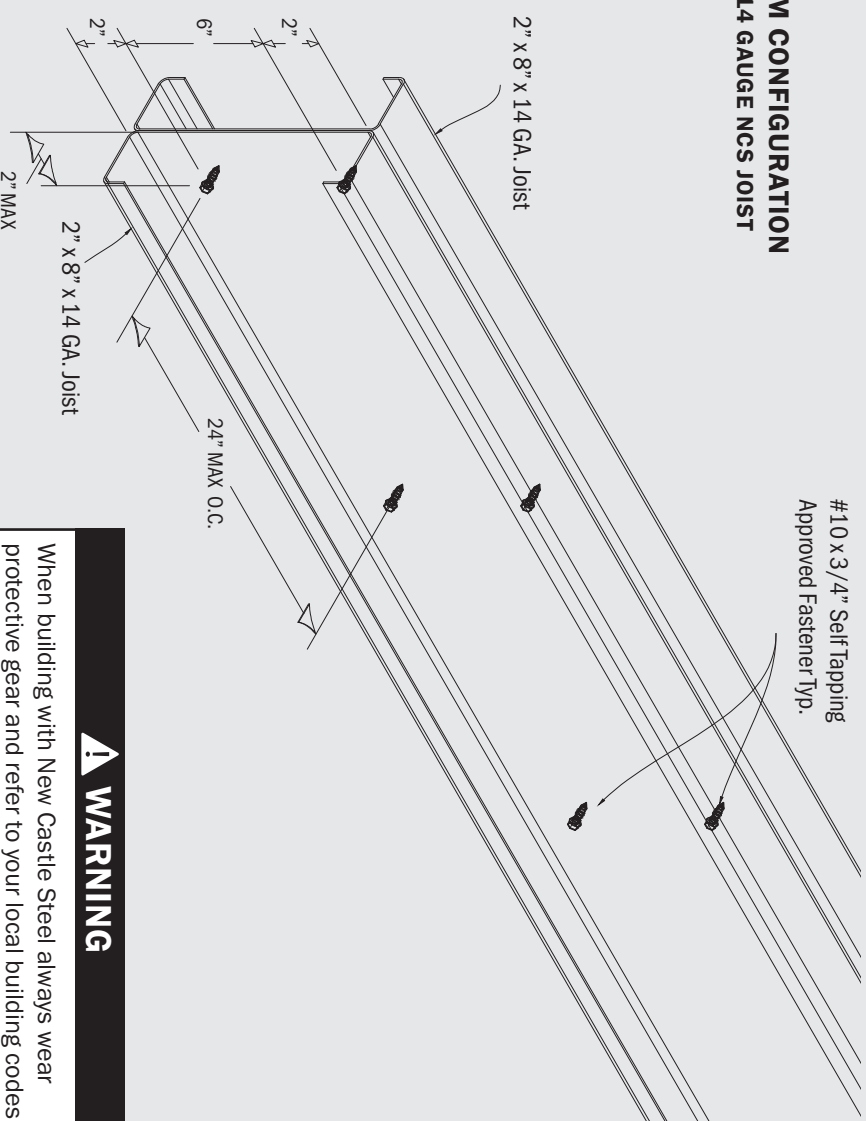




SINGLE BEAM CONFIGURATION
1 - 2" X 8" X 14 GAUGE NCS JOIST
1 - 14 GAUGE NCS TRACK



OPEN BEAM CONFIGURATION
2 - 2" X 8" X 14 GAUGE NCS JOIST



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