

Engineering Specifications

Kool Ray Railings – Engineering Specs

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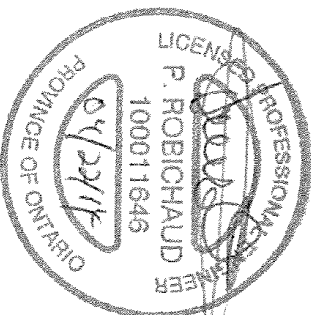
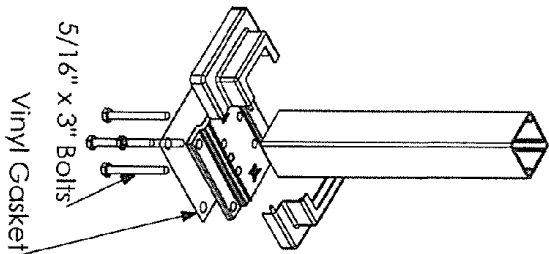
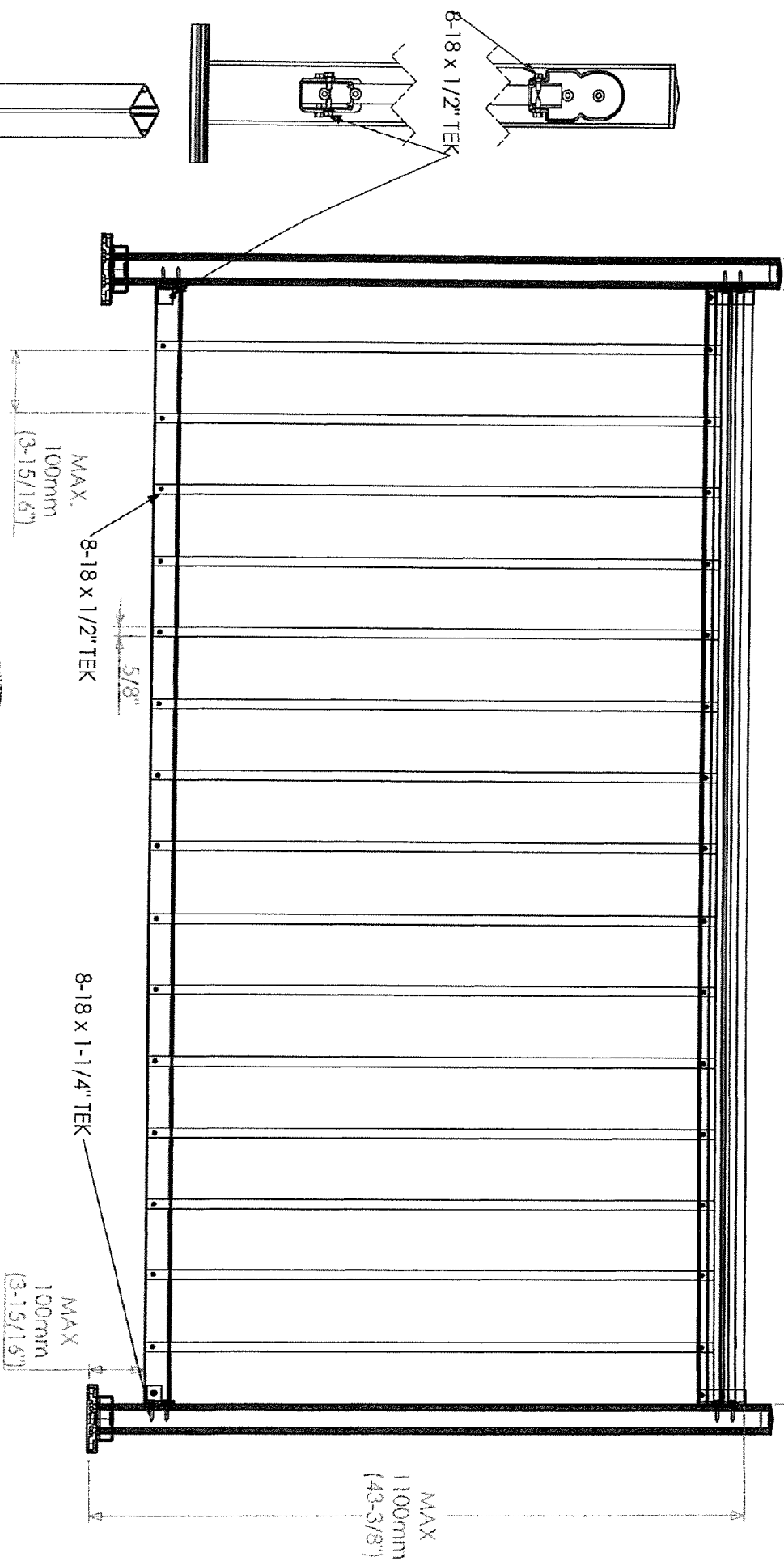
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2" 3" or 4"

MAX 72"



Imperial
Manufacturing Group

40 Industrial Park St
Richibucto, NB
E4W 4A4

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Maximum Span
Construction Drawing
Kool Ray Ready-to-Assemble

Meets NRC-CNRC NBCC 2010,
OCB 2012

SIZE DWG. NO.

A A-KRES-002

REV

SCALE: NTS Mar 14 SHEET 1 OF 1

Only valid if all components are Imperial Kool Ray

5

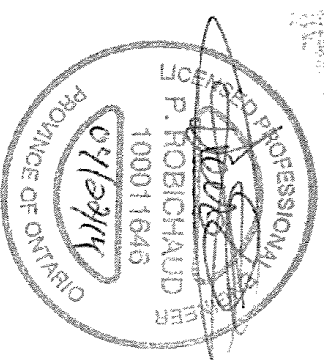
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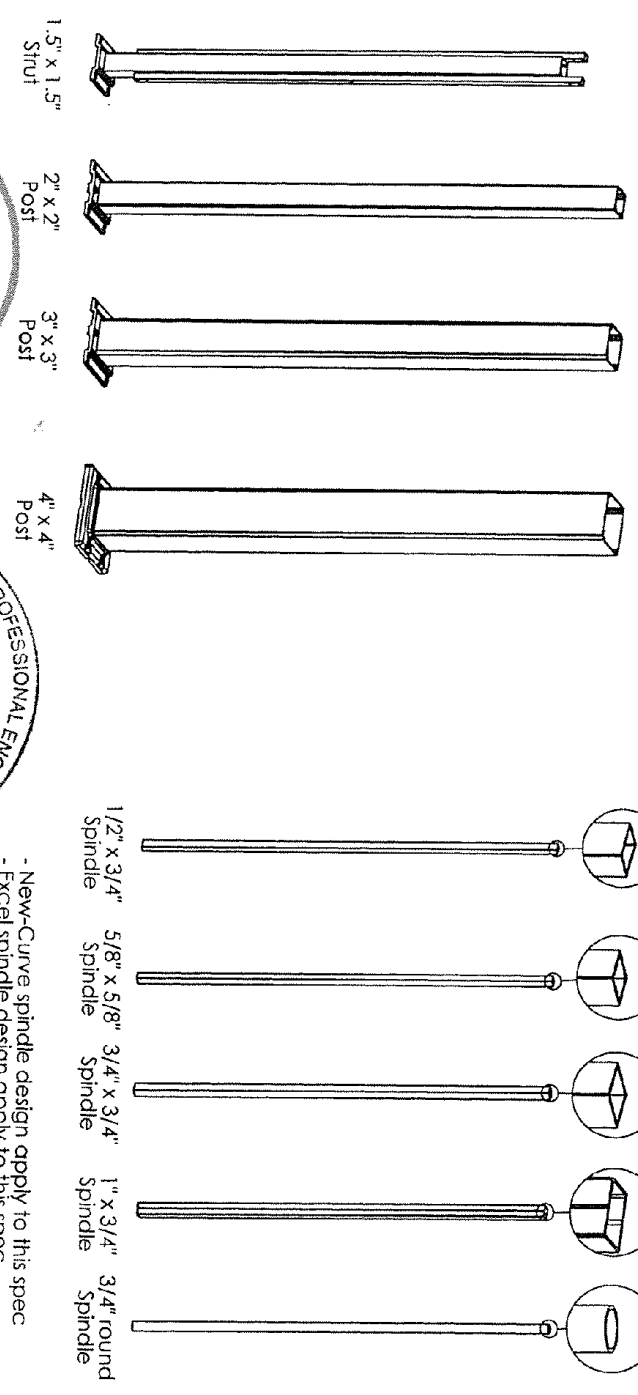
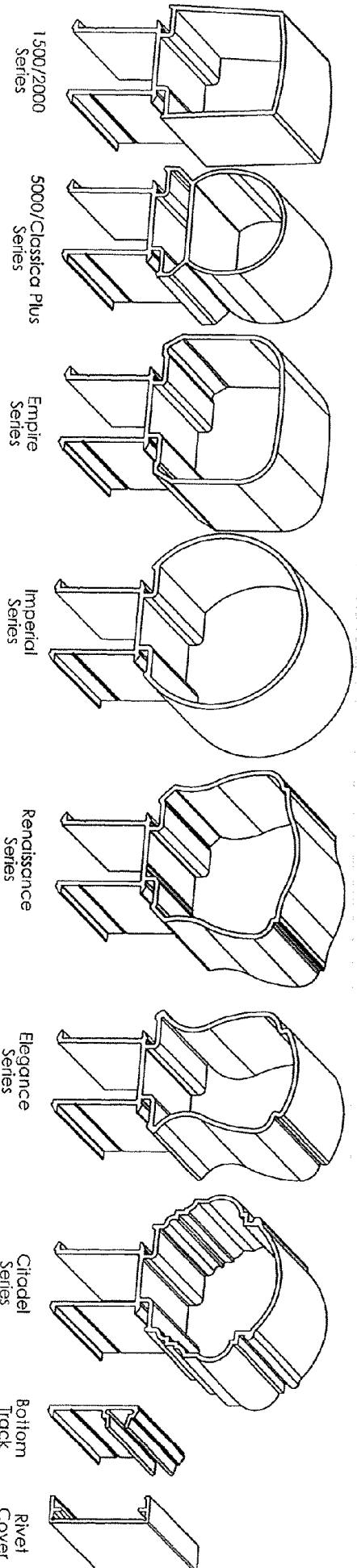
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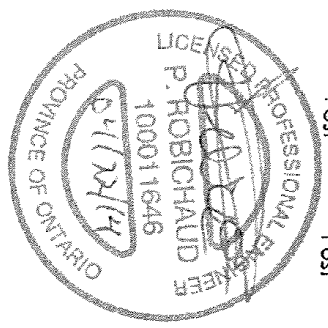
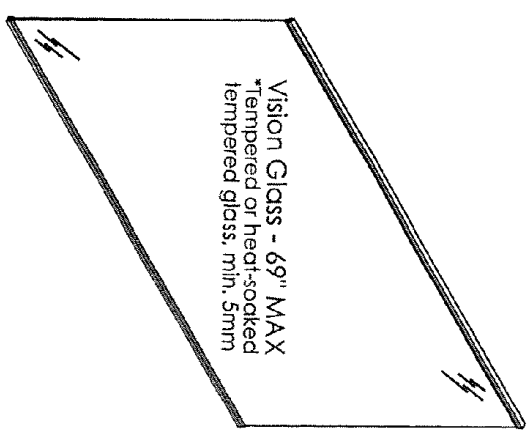
MAX 72



SIZE DWG. NO. REV
A A-KRES-003
 SCALE: NTS Mar 14 SHEET 1 OF 1



- New-Curve spindle design apply to this spec
 - Excel spindle design apply to this spec



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System Components
 Kool Ray
 Pre-Assembled

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SIZE DWG. NO.
A B-KRES-001

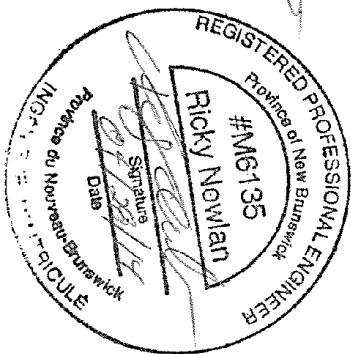
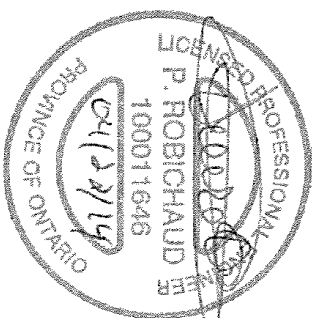
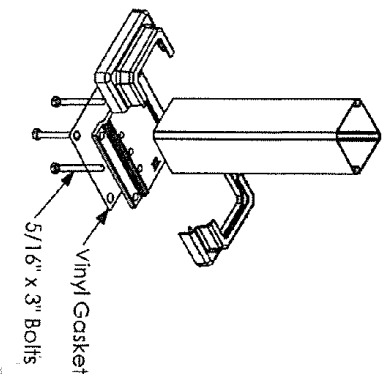
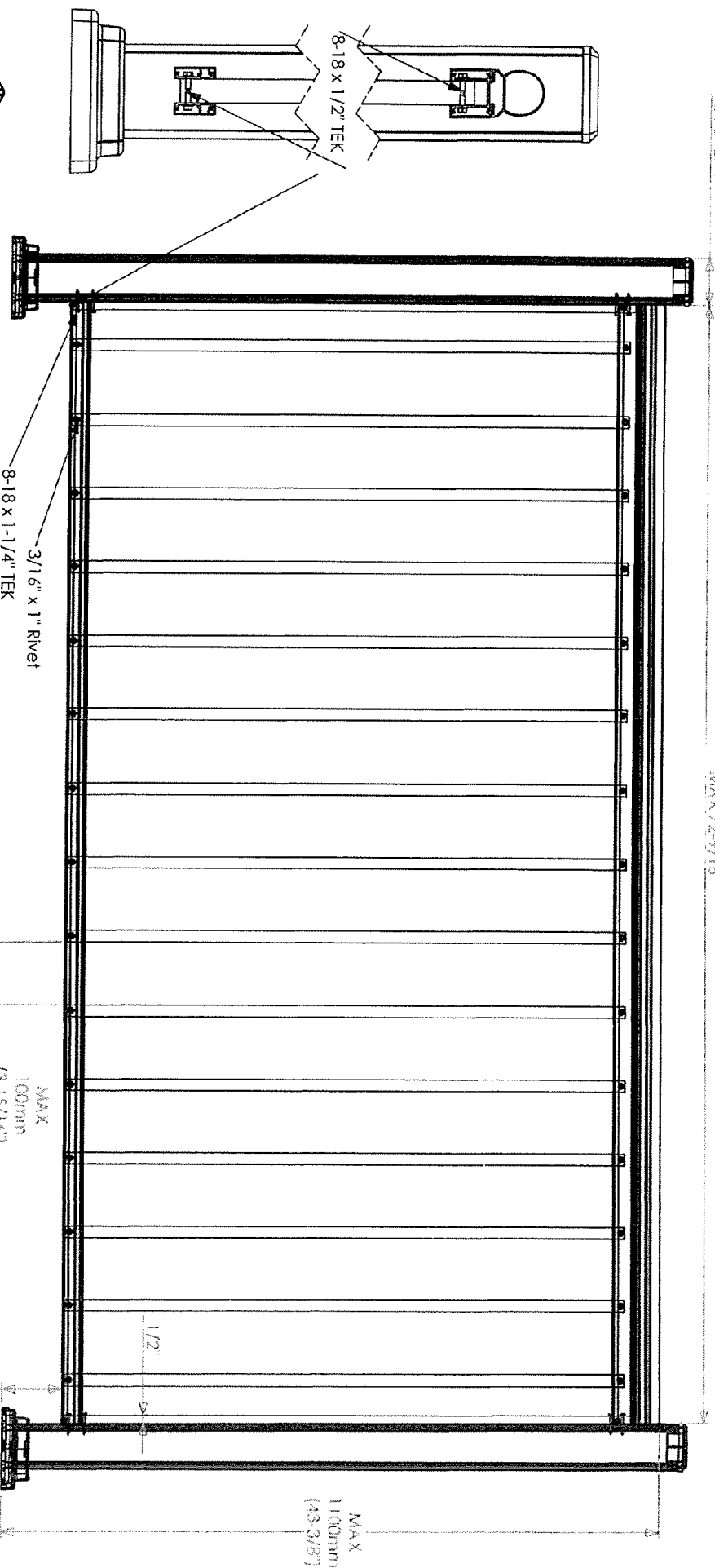
REV

SCALE: NTS Mar 14 SHEET 1 OF 1

Only valid if all components are Imperial Kool Ray

2' 3" or 4"

MAX 72.9/16"



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Meets NRC-CNRC NBCC 2010,
OBC 2012

TITLE:

Maximum Span
Construction Drawing
Kool Ray Pre-Assembled

SIZE DWG. NO.

A B-KRES-002

REV

SCALE: NTS Mar 14

SHEET 1 OF 1

Only valid if all components are Imperial Kool Ray

5

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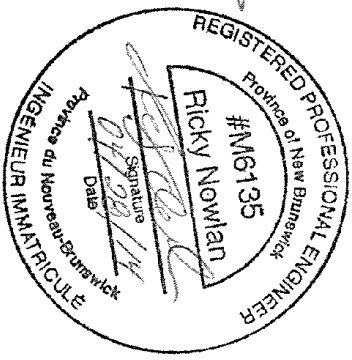
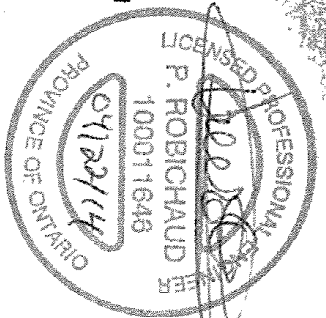
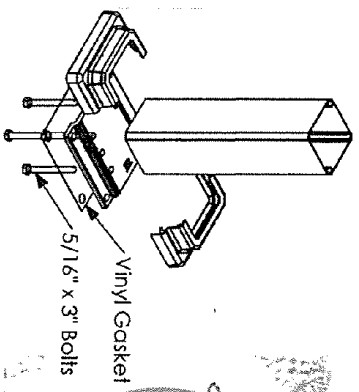
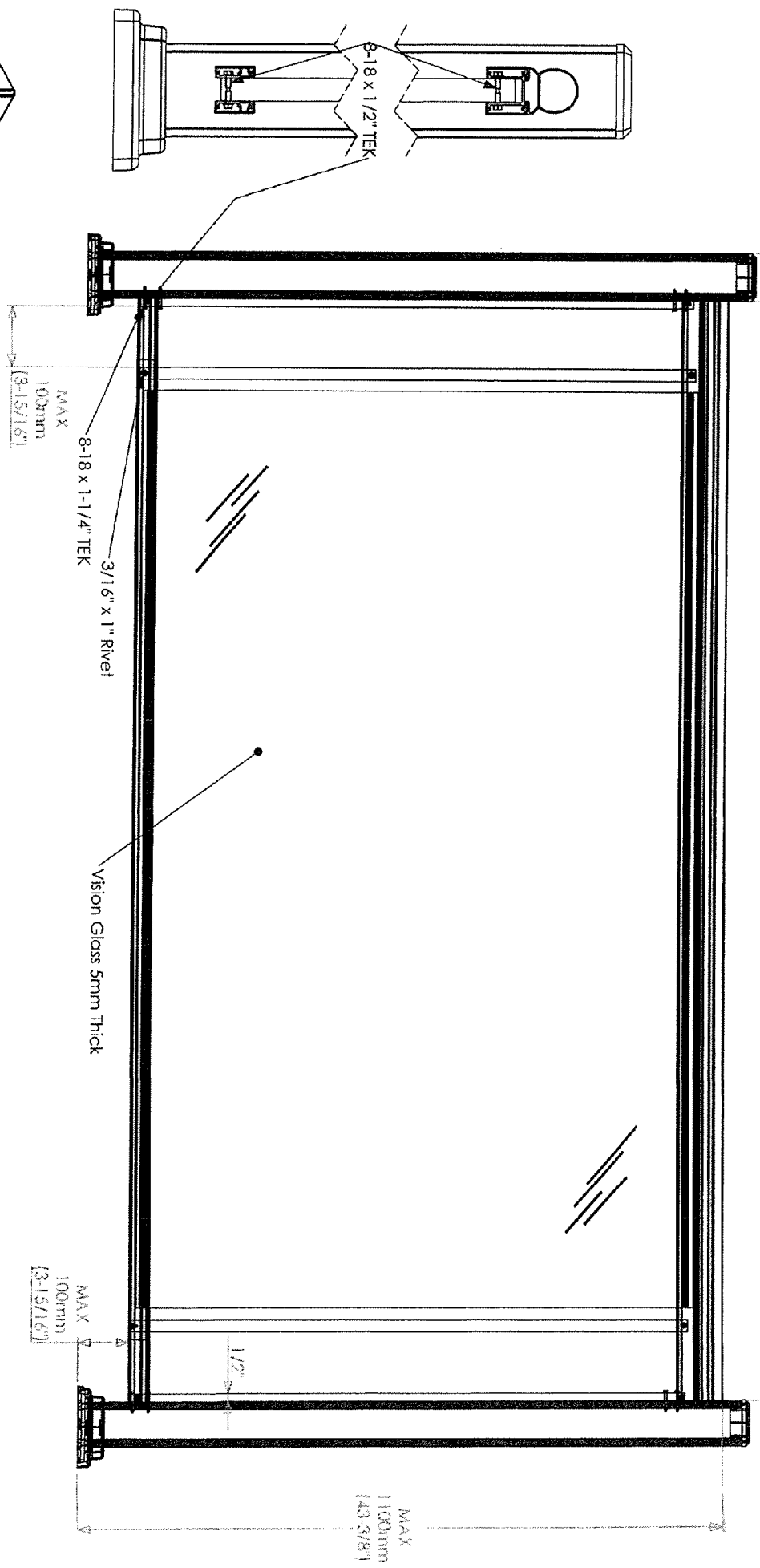
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2

1

2' 3" or 4"

MAX 72-9/16"



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Meets NRC-CNRC NBCC 2010,
OBC 2012

Maximum Span
Construction Drawing
Kool Ray Pre-Assembled
with Vision Glass

SIZE DWG. NO.

A B-KRES-003

REV

SCALE: NTS MGR 14

SHEET 1 OF 1

Only valid if all components are Imperial Kool Ray

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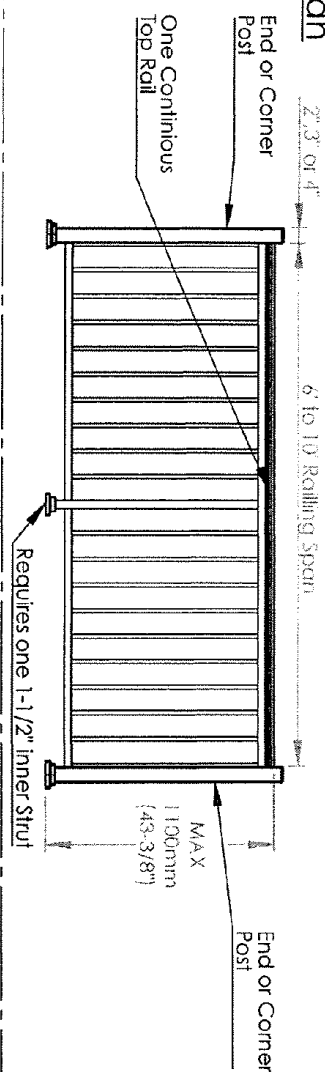
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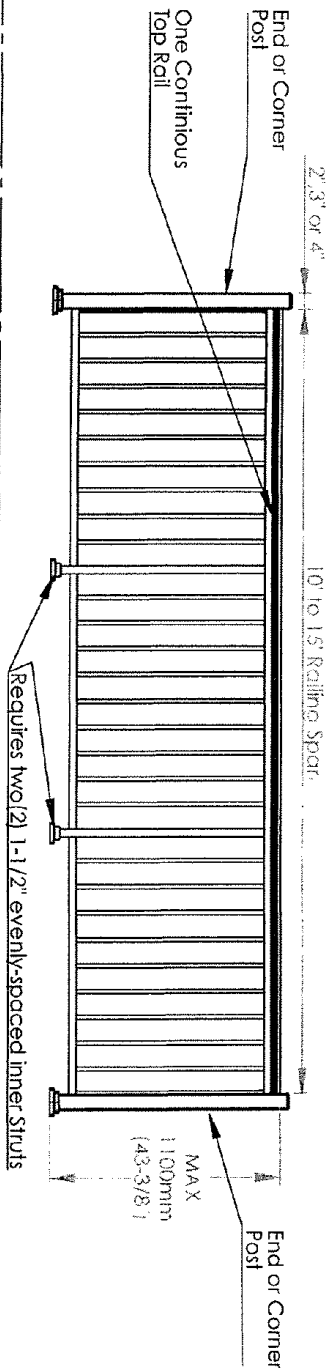
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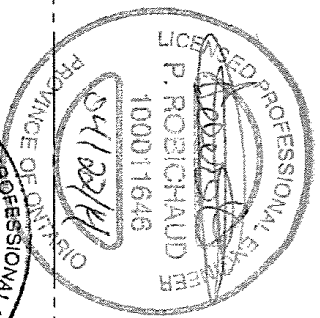
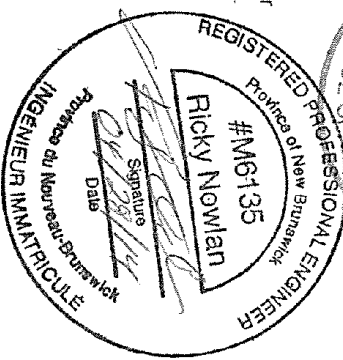
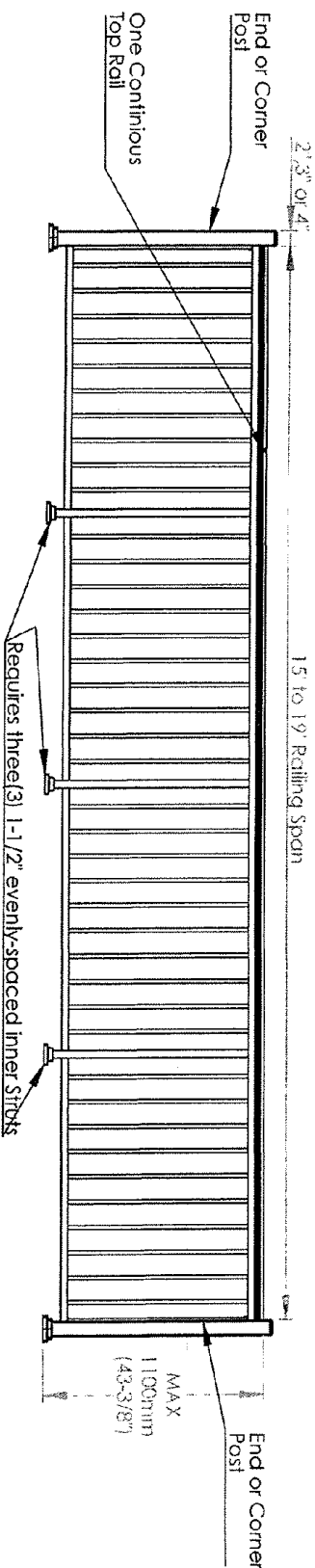
10' Maximum Linear Span



15' Maximum Linear Span



19' Maximum Linear Span



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Meets NIRC-CNRC NBCC 2010,
OBC 2012
TITLE: Extended Linear Span
Construction Drawings
Kool Ray Pre-Assembled

SIZE DWG. NO.
A B-KRES-004

SCALE: NTS Mar 14 SHEET 1 OF 1

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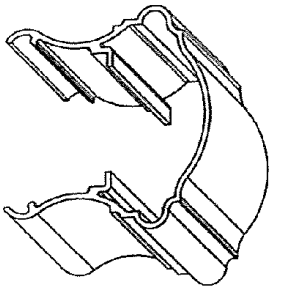
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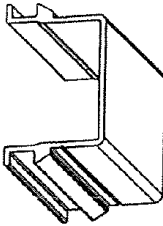
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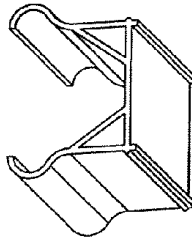
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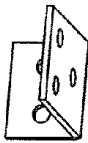
Prestite Series
Top Rail Cap



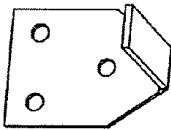
Prestite Series
Top Rail



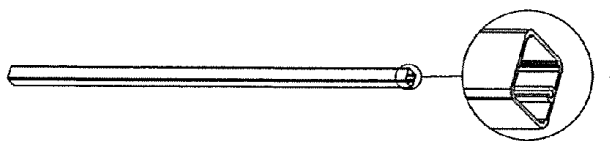
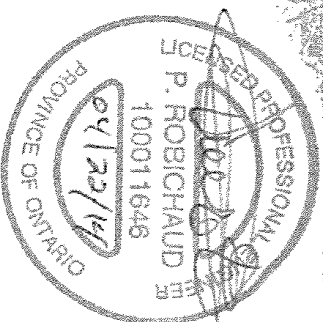
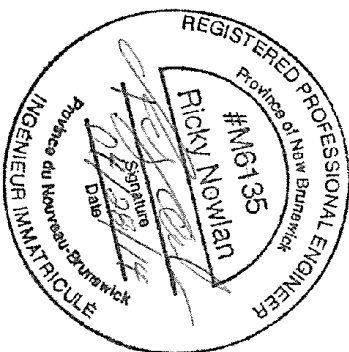
Prestite Series
Bottom Rail



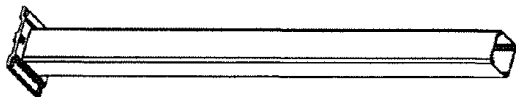
Prestite Series
Top Rail Bracket



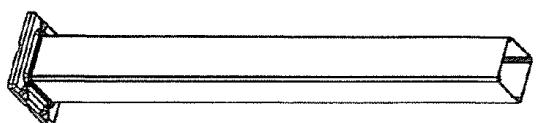
Prestite Series
Bottom Rail Bracket



1-1/4" x 1-1/4"
Spindle



3" x 3"
Post



4" x 4"
Post



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Meets NRC-CNRC NBCC 2010,
OBC 2012
System components
Kool Ray
Prestige

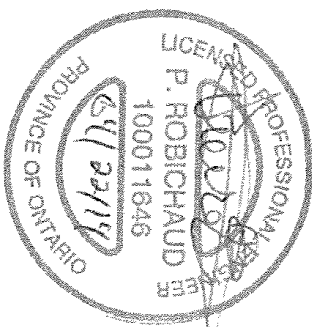
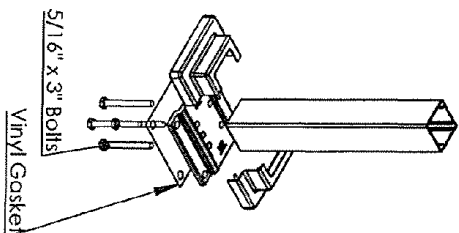
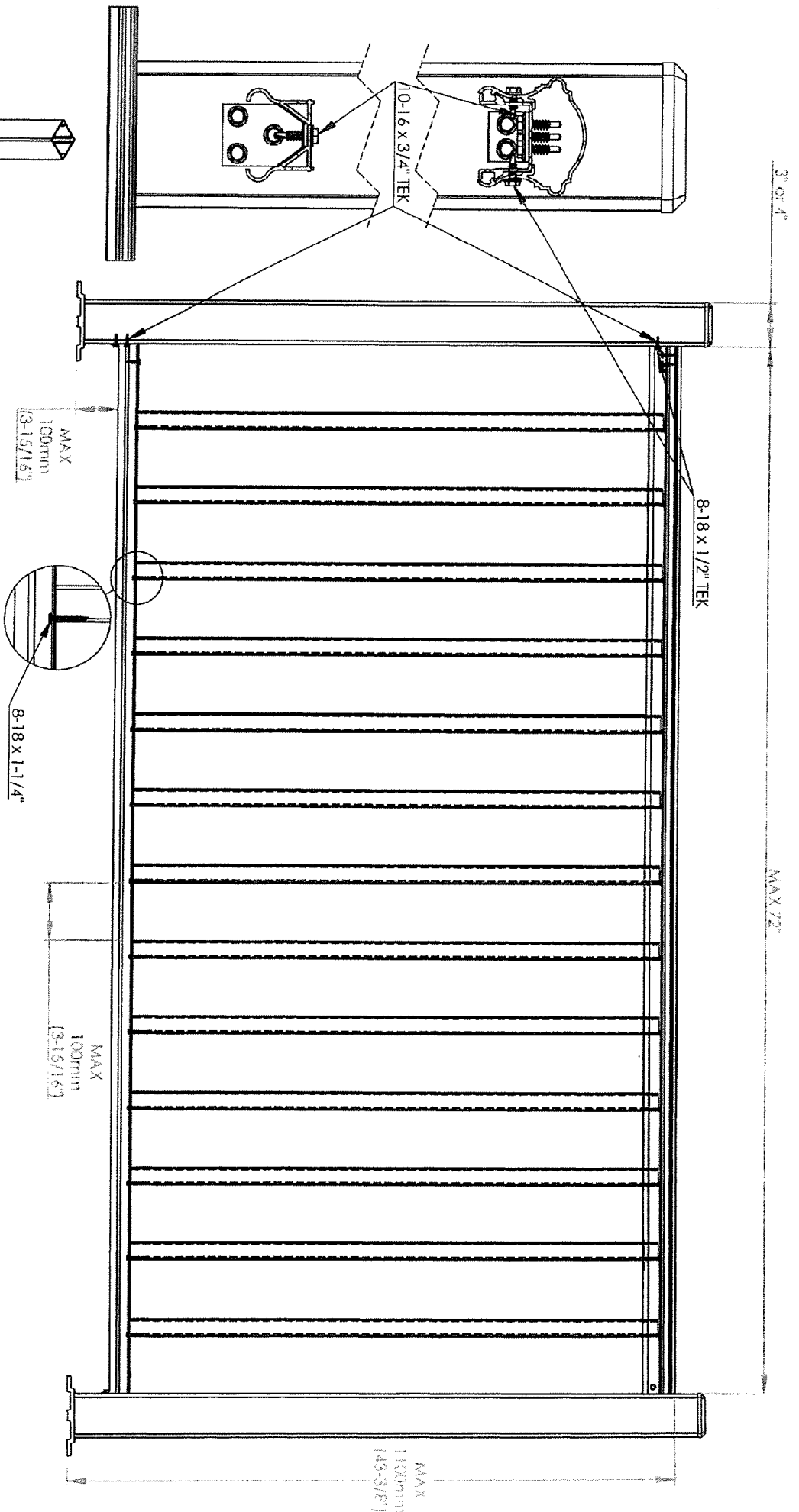
SIZE DWG. NO.

A C-KRES-001

REV

SCALE: NTS Mar 14 SHEET 1 OF 1

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Meets NRC-CNRC NBCC 2010, OBC 2012

Maximum Span
 Construction Drawing
 Kool Ray Prestige

SIZE DWG. NO.
A C-KRES-002

SCALE: NTS Mar 14 SHEET 1 OF 1

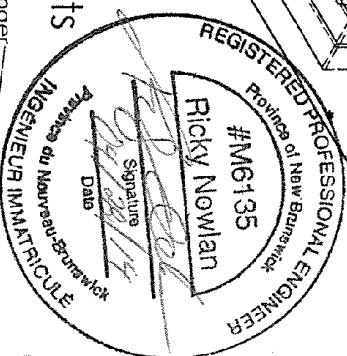
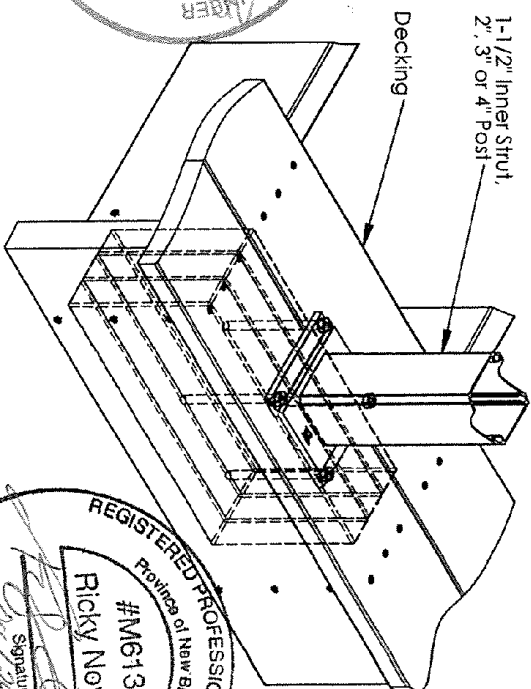
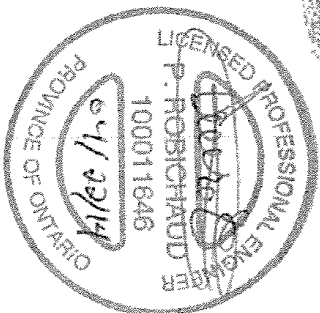
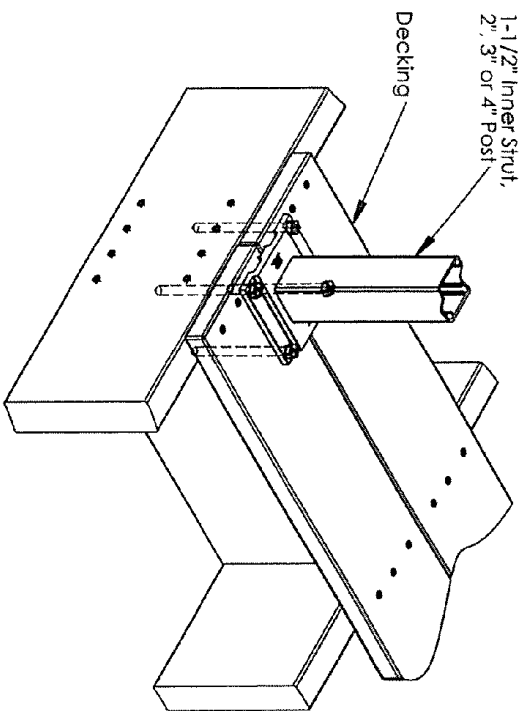
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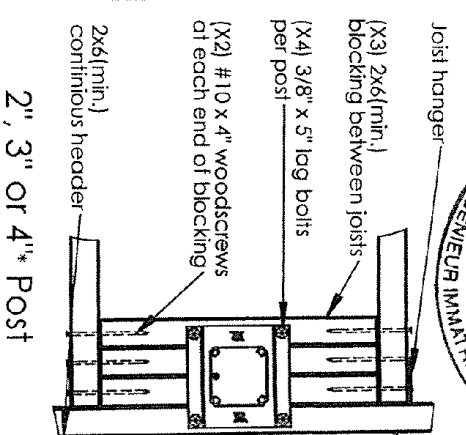
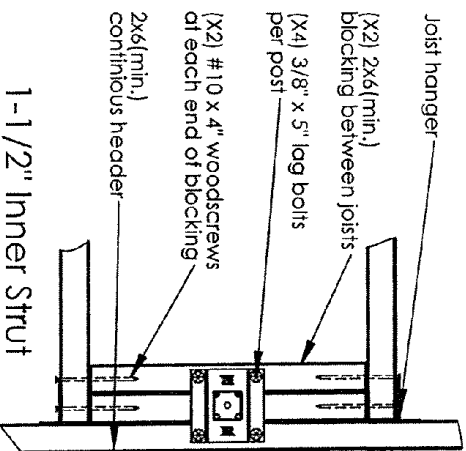
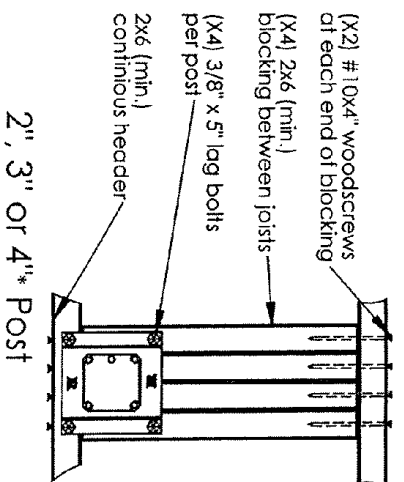
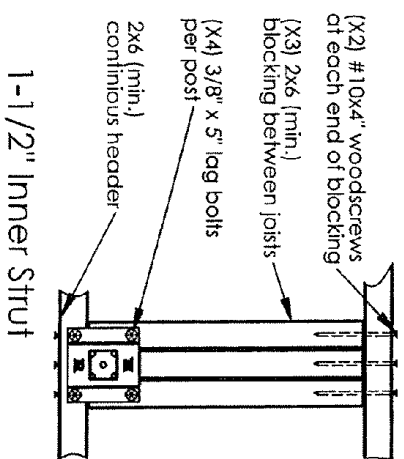
3

2

1



Along Floor Joists



Meets the following building codes:
-NBCC 2010 (section 4.1.5.1.4* - Loads on Guards, section 9.8.8 - Guards)
-Ontario 2012 (section 4.1.5.1.4* - Loads on Guards, section 9.8.8 - Guards)
* excludes clause 1 (a)

* (X5) wood blocking required for 4" Post

* (X4) wood blocking required for 4" Post

Notes:

Install lag bolts as per bolt manufacturer specifications
Ensure 3" minimum thread length embedment in wood for lag bolts
Main structure load capacity responsibility of others

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TITLE: Construction Drawing

Kool Ray 1-1/2" Inner Strut, 2", 3" and 4" posts
Surface mount-Wood Framed Deck

SIZE DWG. NO. REV

A Z-KRES-001

SCALE: NTS Mar 14 SHEET 1 OF 1

3/8" x 3" RedHead LDT

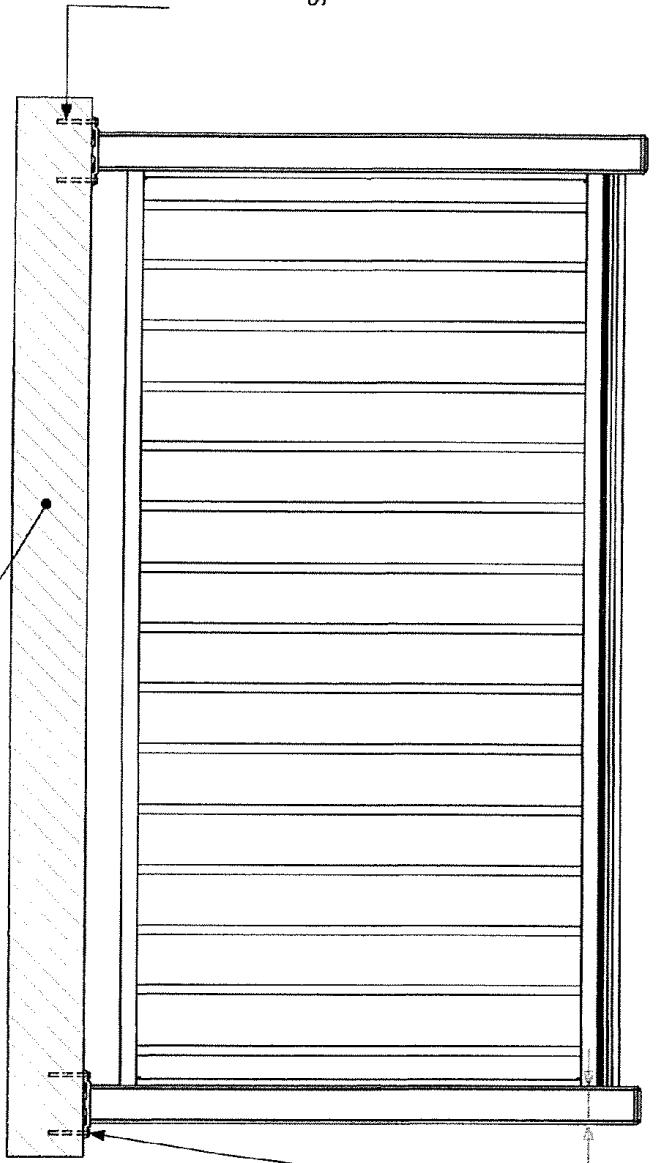
OR

1/4" x 3" Power Fasteners
Wedge Bolt +

(Installed as per manufacturer's
instructions)

Minimum 2-1/2" into
Concrete

Minimum 4000 PSI Concrete



1-1/2" Inner Strut
2", 3" or 4" Post

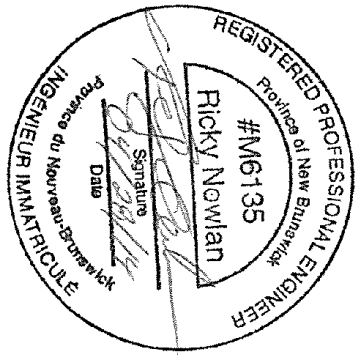
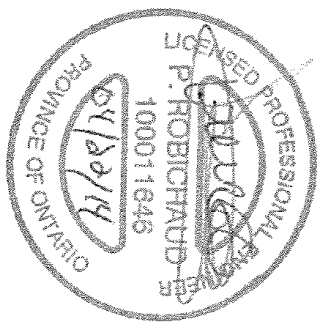
3/8" x 3" RedHead LDT

OR

1/4" x 3" Power Fasteners
Wedge Bolt +

(Installed as per manufacturer's
instructions)

Minimum 2-1/2" into
Concrete



Meets the following building codes:
-NBCC 2010 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
-Ontario 2012 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
*excludes clause 1(c)

Notes:

Install anchors as per bolt manufacturer specifications

Ensure 2-1/2" minimum thread length embedment in concrete for anchors

Main structure load capacity responsibility of others

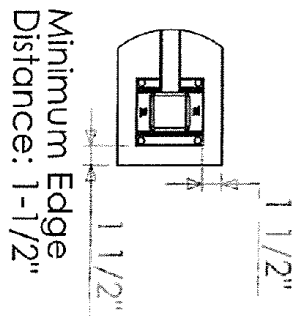
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Meets NRC-CNRC NBCC 2010,
OBC 2012



Minimum Edge
Distance: 1-1/2"

Construction Drawings
Kool Ray 1-1/2" Inner Strut, 2", 3" or 4" posts
Surface mount - Concrete

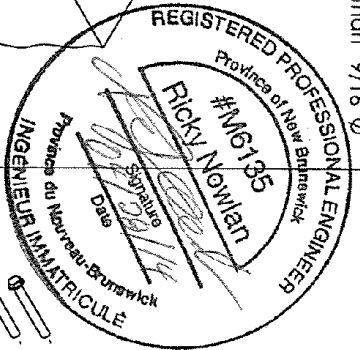
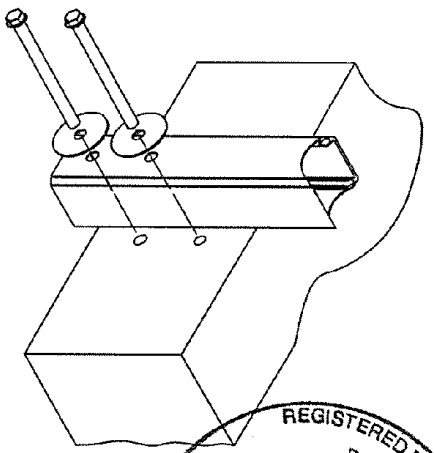
SIZE DWG. NO.
A Z-KRES-002

REV

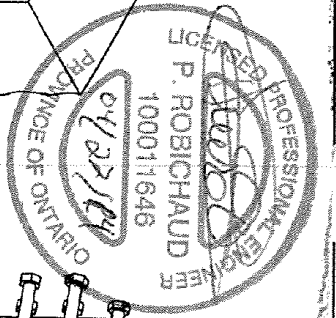
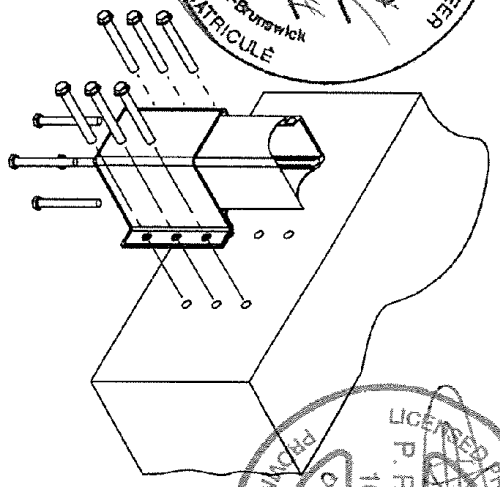
SCALE: NTS Mar 14 SHEET 1 OF 1

Fascia Mount, Direct to Concrete

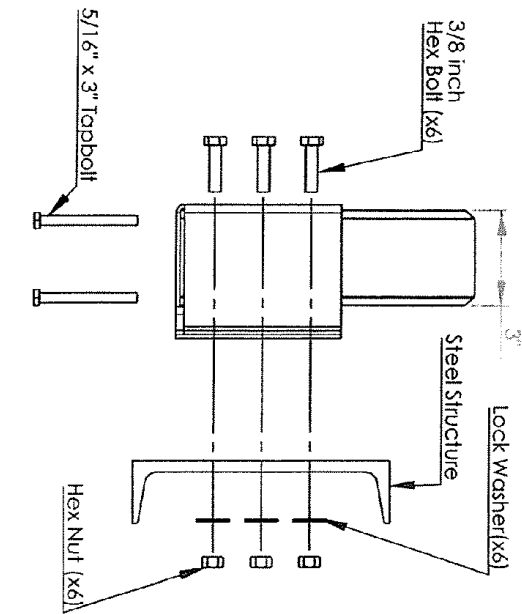
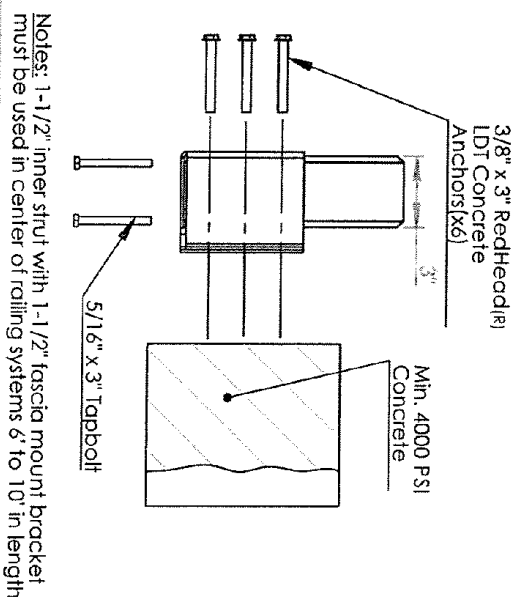
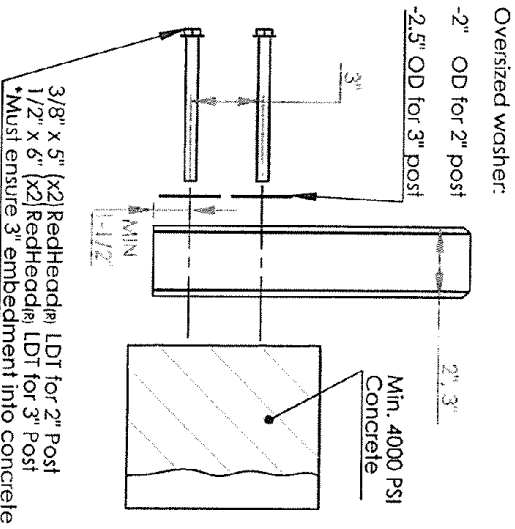
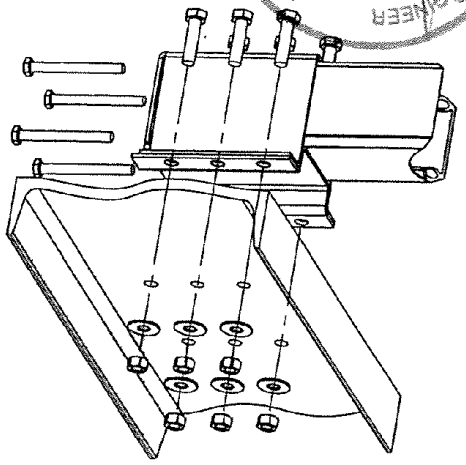
- Drilled holes into 2" post must be no larger than 13/32" Ø
- Drilled holes into 3" post must be no larger than 9/16" Ø



Fascia Mount, Bracket to Concrete



Fascia Mount, Bracket to Steel



Meets the following building codes:

- NBCC 2010 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
- Ontario 2012 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
- * excludes clause 1(c)

Notes: 1-1/2" inner strut with 1-1/2" fascia mount bracket must be used in center of railing systems 6' to 10' in length

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Construction Drawing
Kool Ray Posts
Fascia mount(Steel and Concrete)

Meets NRC-CNRC NBCC 2010,
OBC 2012

SIZE DWG. NO.

A Z-KRES-003

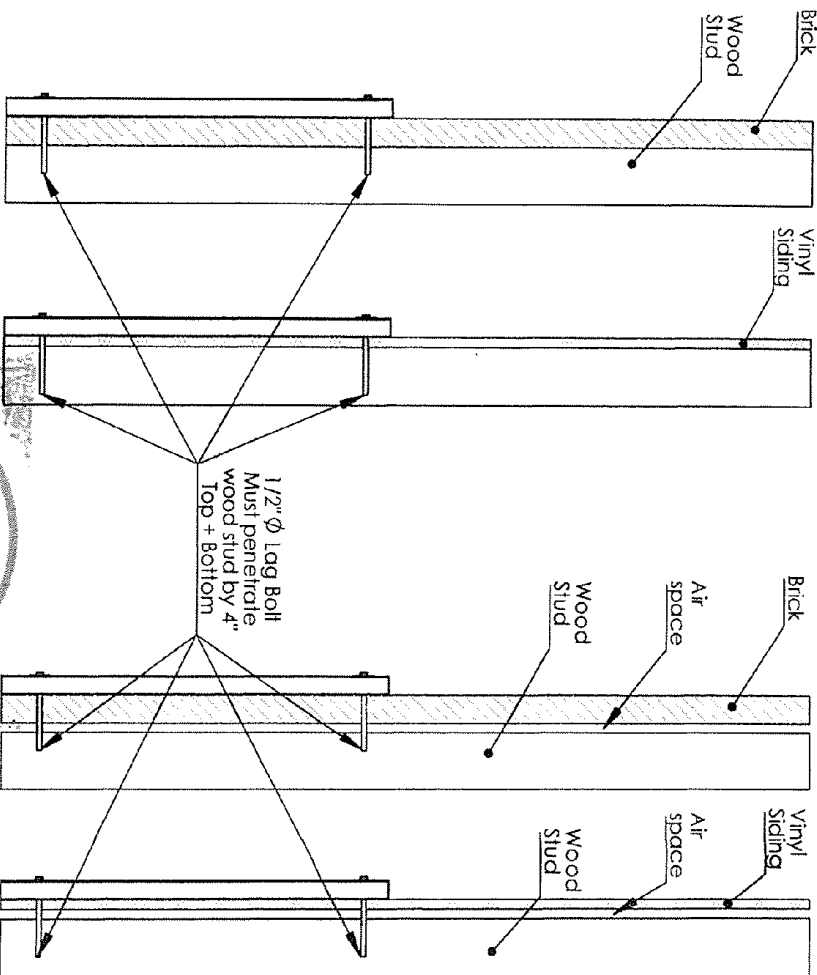
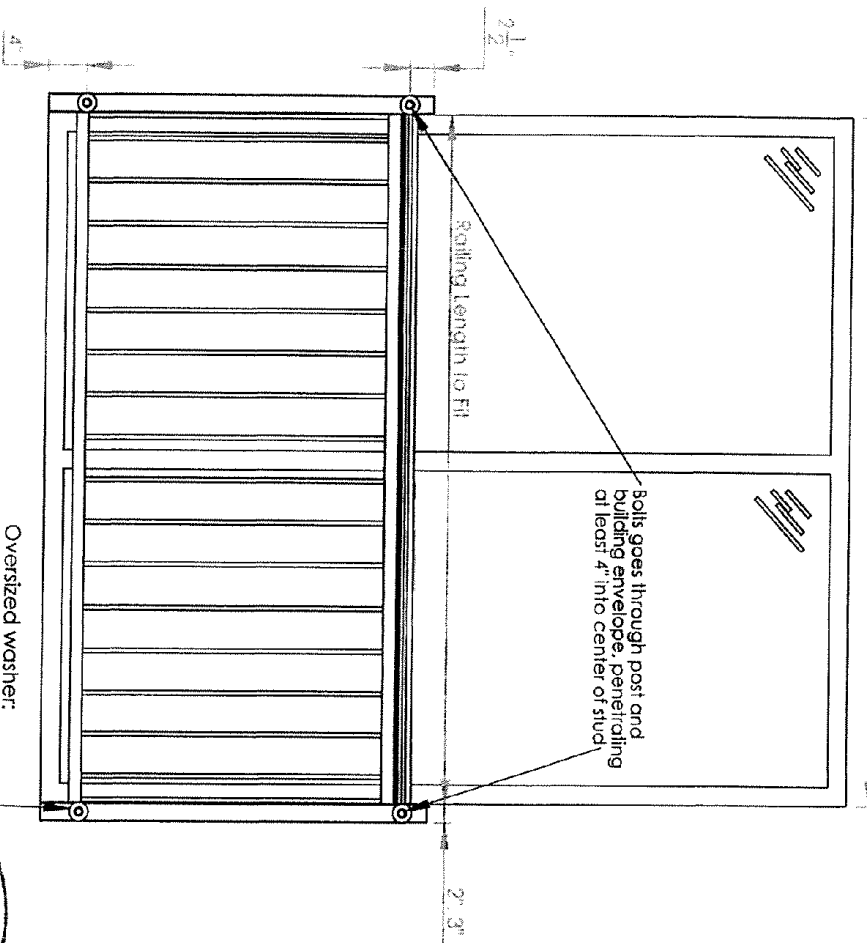
REV

SCALE: NTS Mar 14 SHEET 1 OF 1

Notes:

Install anchors as per bolt manufacturer specifications
Main structure load capacity responsibility of others

MAX 6' Patio Door

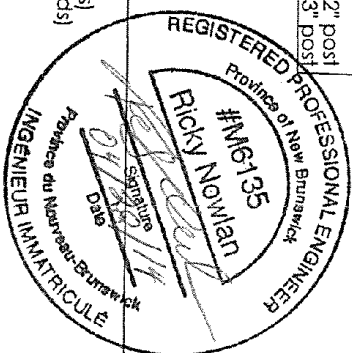


Oversized washer:
- 1-1/2" MIN OD for 2" post
- 2" MIN OD for 3" post

- Drilled holes into 2" post must be no larger than 9/16" ϕ
- Drilled holes into 3" post must be no larger than 9/16" ϕ

Meets the following building codes:

- NBCC 2010 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
- Ontario 2012 (section 4.1.5.14* - Loads on Guards, section 9.8.8 - Guards)
- * excludes clause 1(c)



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SIZE DWG. NO.

A Z-KRES-004

REV

Construction Drawing
Kool Ray Pre-Assembled
Juliette Railing for 6'(MAX) Patio Doors

SCALE: NTS Mar 14 SHEET 1 OF 1

Notes:

Install anchors as per bolt manufacturer specifications
Main structure load capacity responsibility of others