ENGINEERING EVALUATION

Intertek ETL SEMKO

REPORT NUMBER: 3116513COQ-003B
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EVALUATION CENTER
Intertek Testing Services NA Ltd.
1500 Brigantine Drive
Coquitlam, BC V3K 7C1

RENDERED TO

B.W. Creative Wood Industries Ltd.
23282 River Road
Maple Ridge, BC V2W 1B6

PRODUCT EVALUATED: Creative Rail Series Railing Systems
EVALUATION PROPERTY: 2006 OBC and 2005 NBC

Engineering Evaluation of Creative Rail Series Railing Systems for compliance with the applicable requirements of the following criteria: 2006 Ontario Building Code (OBC) and 2005 National Building Code (NBC)

1 Introduction

Intertek Testing Services NA Ltd. (Intertek) has conducted an engineering evaluation for B.W. Creative Wood Industries Ltd., on Creative Rail Tuscany Series and Craftsman Series Picket Railing Systems, to evaluate if they meet the load requirements of Section 9.8.8.2 of the 2005 NBC and 2006 OBC, as well as the applicable physical requirements of sections 9.8.8.3 *Height of Guards*, 9.8.8.5 *Openings in Guards* and 9.8.8.6 *Design to Prevent Climbing*. The evaluation was conducted to determine if the testing conducted on the Creative Rail Traditional Series Picket Railing System in accordance with Section 9.8.8.2 of the 2005 NBC and 2006 OBC will also qualify these two systems: Creative Rail Tuscany Series and Craftsman Series Picket Railing Systems.

2 Sample and Assembly Description

The following B.W. Creative Wood Industries Ltd. products are being assessed in this evaluation report:

- 8 ft Creative Rail Traditional Series Picket Railing System
- 8 ft Creative Rail Tuscany Series Picket Railing System
- 8 ft Creative Rail Craftsman Series Picket Railing System

The infill material for the Traditional, Tuscany and Craftsman Series consist of T6063-T5 extruded aluminum pickets, straight picket for Traditional and Craftsman and curved for Tuscany with a lock bar. Lock bar is also used for the Craftsman Series. Pickets are available in 7 colors: black, bronze, clay, green, pewter, silver and white. The railings and posts are manufactured from either Western Red Cedar or Treated SPF. All components are mechanically fastened using stainless steel screws. Refer to the Appendix for detailed system drawings.

3 Reference Documents

- 2006 Ontario Building Code
- 2005 National Building Code
- Intertek Test Report 3116513COQ-004

4 Evaluation Method

Intertek conducted a test program on the Creative Rail Traditional Series Picket Railing System in accordance with Section 9.8.8.2 of the 2005 NBC and 2006 OBC and included the following tests:

- In-fill Load Test: A load consisting of 1 kN was applied over a 300 mm x 300 mm square block normal to the in-fill in a worst-case scenario.
- Uniform Load Test: The top rail of the system was subjected to a maximum load of 3.0 kN/m applied vertically to the top rail.
- Concentrated Load Test: Two separate tests were conducted where the proof load of 449 lbf was applied horizontally at the mid-span of the top rail and adjacent to the post to evaluate the connection capacity.

The evaluation included testing both a Cedar and SPF railing system, as well as B.W. Creative Wood Industries Ltd. two post-to-rail fastening connections. Refer to Intertek Test Report 3116527COQ-004 for the conforming test results.

Creative Rail Tuscany Series and Craftsman Series Picket Railing Systems are identical to the Creative Rail Traditional Series Railing Systems with the only difference being the shape of the in-fill component. The Traditional Series uses a straight picket, whereas the Tuscany Series uses curved pickets with a lock bar, and the Craftsman Series uses straight pickets with a lock bar. The inner and outer diameters, thickness, overall finished length and aluminum alloy (6063-T5) are the same for all three pickets. Refer to the Appendix for detailed drawings.

Based on this information, it is Intertek's professional opinion that the following systems also meet the requirements of Section 9.8.8.2 of the 2005 NBC and Section 9.8.8.2 of the 2006 OBC:

- 8 ft Creative Rail Tuscany Series Picket Railing System
- 8 ft Creative Rail Craftsman Series Picket Railing System

5 Conclusion

Intertek has conducted an engineering evaluation for B.W. Creative Wood Industries Ltd., on Creative Rail Tuscany Series and Craftsman Series Picket Railing Systems, to evaluate if they meet the load requirements of Section 9.8.8.2 of the 2005 NBC and 2006 OBC. The products were also found to be compliant with the applicable physical requirements of Sections 9.8.8.3 *Height of Guards*, 9.8.8.5 *Openings in Guards* and 9.8.8.6 *Design to Prevent Climbing*. The evaluation, as reported in Section 4, demonstrated that these two railing systems are equivalent to the tested Creative Rail Traditional Series Picket Railing System.

INTERTEK TESTING SERVICES NA

Reported by:
Ivo Tanner
Senior Technician, CP Department

Reviewed by:
Kal Kooner, EIT
Team Leader, Engineering Services CDN

Reviewed by:
David Carter, P.Eng
Engineer, Building Products

LICENSED PROFESSIONAL ENGINEER
D. J. CARTER
PROVINCE OF ONTARIO

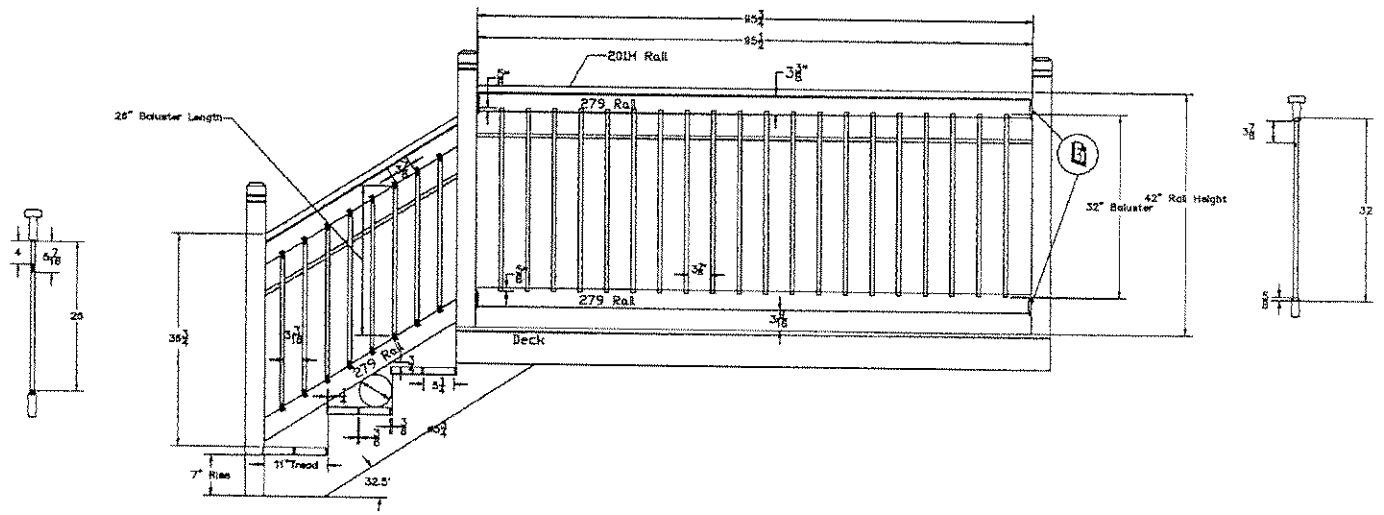
ATTACHMENTS: AutoCAD Drawings

ATTACHMENTS

Creative Rail Railing System Drawings

CRAFTSMAN BALUSTER

CREATIVE WOOD



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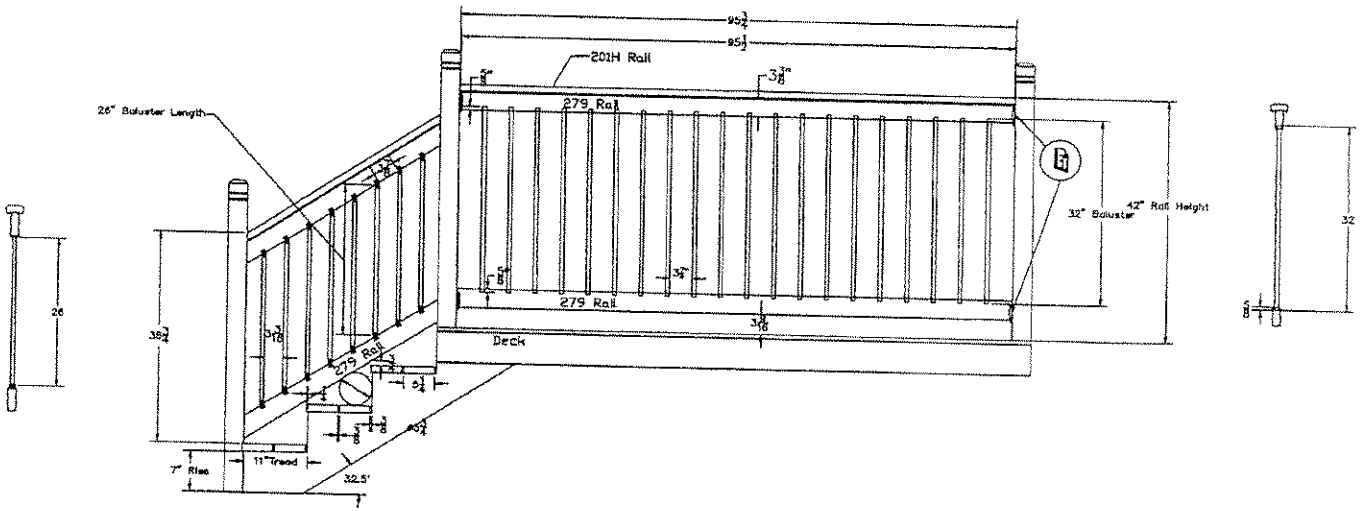
APPROVED: _____
CAD FILE: 279-FULLDIM.DWG

TRADITIONAL BALUSTER

CREATIVE WOOD



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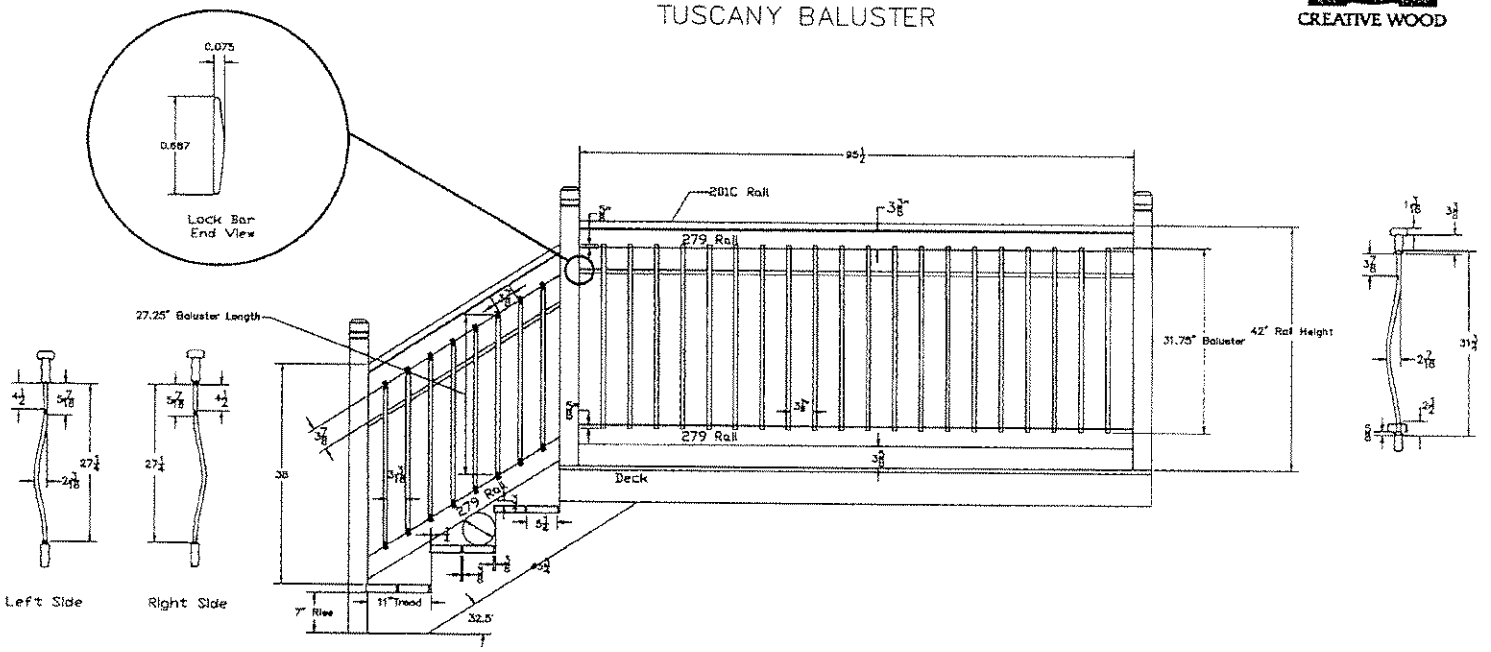
TUSCANY BALUSTER

CREATIVE WOOD



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REVISION SUMMARY

DATE	SUMMARY
May 17, 2007	No Revisions
June 5, 2007	Added physical requirements of Sections 9.8.8.3, 9.8.8.5, and 9.8.8.6 from 2005 NBC / 2006 OBC.