ADDRESS . : 2514 MATTHEWS MILL POND RD SUBDIV:
CONTRACTOR : PHONE :
OWNER . . : CHISEK MICHAEL A & ANDREA J PHONE :
PARCEL . . : 04-0672- - -0004- -02-
APPL NUMBER: 11-50027536 CP NEW RESIDENTIAL (SFD)

DIRECTIONS : T/S: 09/15/2011 10:20 AM JBROCK ----
HWY 210 N TO HARNETT CENTRAL RD LEFT ON
HARNETT CENTRAL EAST ON HARNETT CENTRAL
TO MATTHEWS MILL POND RD LEFT ON
MATTHEWS MILL POND RD TO 2514 MATTHEWS
MILL POND RD ON LEFT APPROX 3/4 MILE N
OF HARNETT CENTRAL
LAND NOTES : LXMN 6/07/04 stephen m buffkin lot#2
split from the 01

STRUCTURE: 000 000 75X54 3BDR 3BATH SFD W GAR,CRW,NO FINBON
FLOOD ZONE . . . . : FLOOD ZONE X
BEDROOMS . . . . . : 3000000.00 PROPOSED USE . . . . . : SFD
SEPTIC - EXISTING? . . . . : NEW TANK WATER SUPPLY . . . . . : NEW WELL

PERMIT: CPSF 00 CP * SFD

TYP/SQ	REQUESTED COMPLETED	INSP RESULT	DESCRIPTION RESULTS/COMMENTS
B101 01	4/19/13	KS	R*BLDG FOOTING / TEMP SVC POLE VRU #: 002369225
	4/19/13	AP	T/S: 04/19/2013 02:22 PM KSLATTUM ----------
B103 01	6/14/13	BS	R*BLDG FOUND & TEMP SVC POLE VRU #: 002396213
	6/14/13	AP	T/S: June 14, 2013 11:52 AM BSUTTON ----------
B105 01	7/19/13	KS	R*OPEN FLOOR VRU #: 002411982
	7/19/13	AP	T/S: 07/19/2013 10:50 AM KSLATTUM ----------
A814 01	1/10/14	TW	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 002483147
	1/13/14	AP	2514 matthews mill pond rd angier 27501---------
			T/S: 01/27/2014 04:40 PM TWARD ----------
			T/S: 01/27/2014 04:41 PM TWARD ----------
R425 01	1/10/14	BS	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002483154
	1/10/14	CA	T/S: 01/09/2014 10:22 AM VBROWN ----------
			T/S: January 10, 2014 08:55 AM BSUTTON ----------
R425 02	6/17/14	BS	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002542553
	6/17/14	DA	T/S: 06/16/2014 02:12 PM VBROWN ----------
			T/S: June 17, 2014 03:44 PM BSUTTON ----------
			Need plumbing drain test 3 feet above highest fitting upstairs. Block and fill all tubs/showers. 2.Nail plates for plumbing and electrical. Plumbing plates must be 2 inches above bottom plate or below top plate. 3. Smoke detectors must have 3 wire cable. ground cannot be used as a current carrying conductor. 4. Need a letter from truss company that its ok to drill bottom chord for electrical. 5. Need receptacles in dormer hallways. 6. PLumbing pressure must be at 100 psi min.
R425 03	6/27/14 6/27/14	TI APB	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002548121

---------- COMMENTS AND NOTES ----------

ITW Building Components Group, Inc.

1950 Marley Drive Haines City, FL 33844
Engineering services provided by ABCD Engineering, PLLC NC COA 0838
 Document ID:1V7J9007Z0125142942

Truss Fabricator:	**Peak Truss Builders, LLC**
Job Identification:	**REPAIR / CALQ0115-2A -MIKE CH**
Truss Count:	**4**
Model Code:	**IRC**
Truss Criteria:	**IRC2009/TPI-2007(STD)**
Engineering Software:	**Alpine Software,Version 12.03.**
Minimum Design Loads:	**Roof - 35.0 PSF @ 1.15 Duration** **Floor - N/A** **Wind - 100 MPH ASCE 7-05 -Closed**

Notes:

1. **Determination as to the suitability of these truss components for the structure is the responsibility of the building designer/engineer of record, as defined in ANSI/TPI 1**
2. **As shown on attached drawings; the drawing number is preceded by: HCUSR9007**

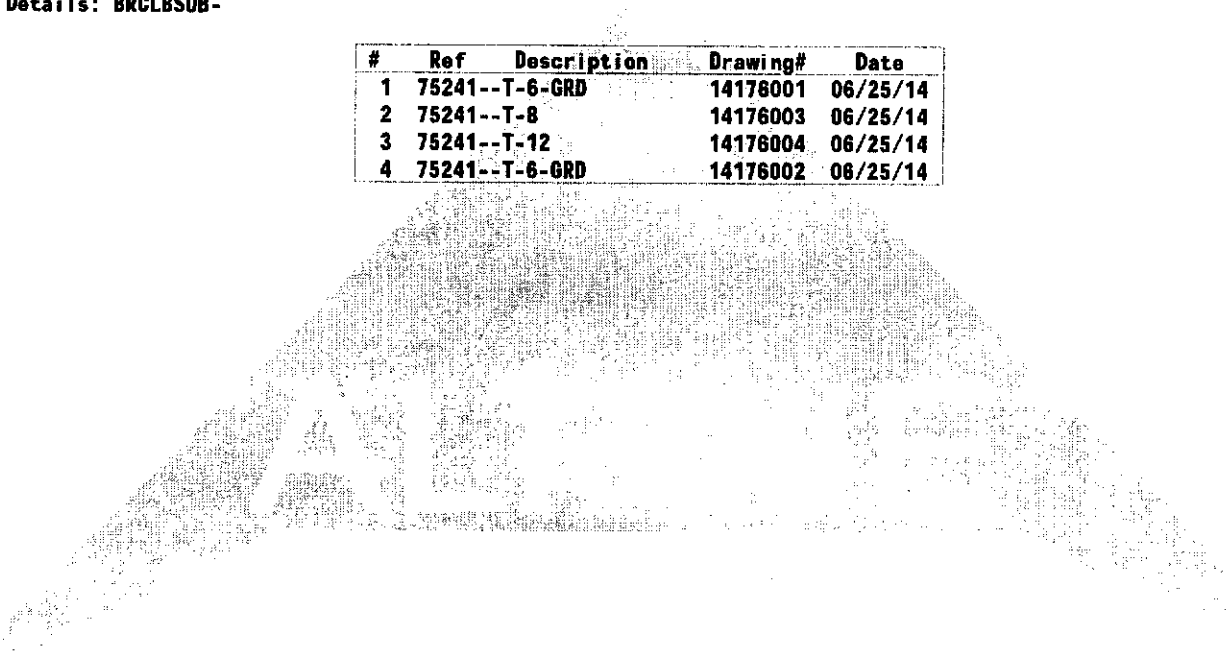
Details: BRCLBSUB-

06/25/2014

-Truss Design Engineer-
Doug Fleming

1950 Marley Drive
Haines City, FL 33844

#	Ref	Description	Drawing#	Date
1	75241--T-6-GRD		14176001	06/25/14
2	75241--T-8		14176003	06/25/14
3	75241--T-12		14176004	06/25/14
4	75241--T-6-GRD		14176002	06/25/14



(calq0115-2a-Mike Chisek-revised porch -- 704-241-8215 - T-6-GRD)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

This truss is repaired for (1) 1.25" and (2) 0.5" diameter holes drilled through the center of the bottom chord at 4" right of the vertical web as shown.

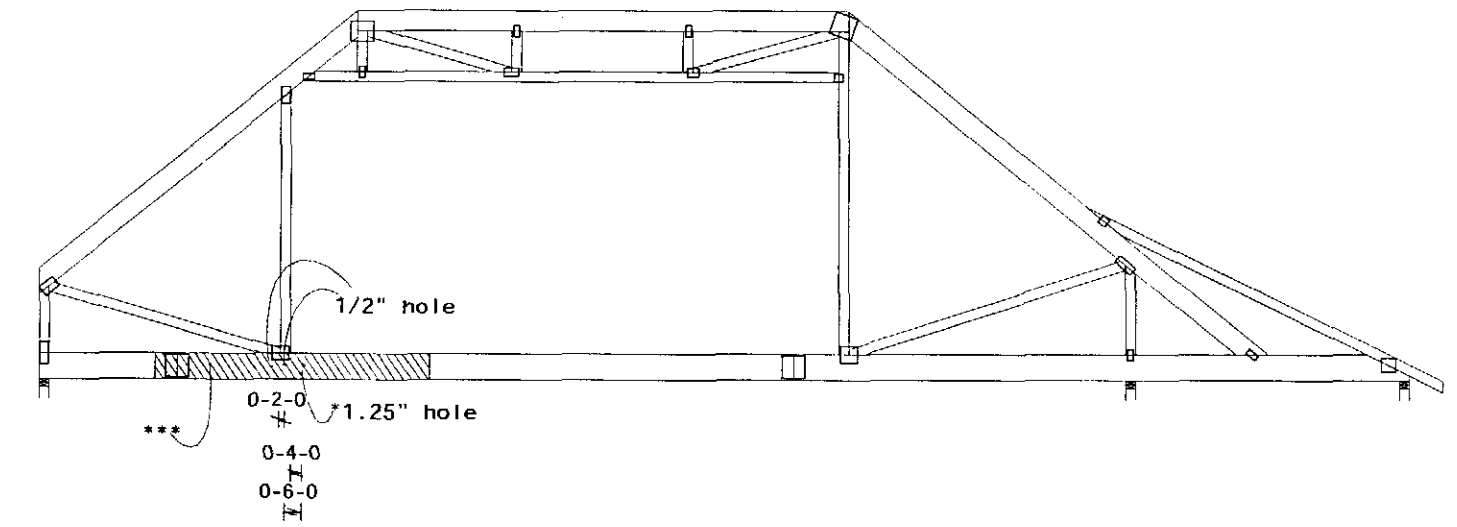
Refer to drawing R9007 13038008 for plates and other data not given here.

Repair(s) must comply with Alpine designs & specifications

Shore Truss and any supported spans in proper position as repair is being made.

2 COMPLETE TRUSSES REQUIRED

***(1) 2x10x(8-0-0) SP #1 OR BETTER SCAB. ATTACH ONE SCAB TO ONE FACE OF TRUSS WITH 0.135"X 3.5" NAILS @ 2" OC STAGGERED THROUGHOUT, WITHOUT SPLITTING LUMBER.
NOTE: HOLES MAY BE DRILLED THROUGH NEW 2X10 SCAB TO MATCH EXISTING HOLES.



Design Crit: IRC2009/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 12.03.00.1116.01 | QTY:1 | NC/-/1/-/-/R/- | Scale =.1875"/Ft.

ALPINE

Engineering services provided by
ABCD Engineering, PLLC NC COA 0838
Orlando FL. 32837

TRUSS REPAIR

DAMAGED TRUSSES MUST BE CAREFULLY EVALUATED TO DETERMINE THE EXTENT OF DAMAGE AND THE FEASIBILITY OF REPAIR. IN SOME CASES THE PRUDENT SOLUTION IS TO SCRAP THE DAMAGED TRUSSES AND REBUILD. INTERNAL WOOD FIBER DAMAGE AND EXCESSIVE CONNECTOR STRESS FROM BENDING OR SHOCK CANNOT BE READILY DETECTED. THEREFORE, IT IS VITAL THAT THE TRUSS FABRICATOR AND BUILDING CONTRACTOR CONSIDER THE CAUSE OF THE DAMAGE IN THEIR DECISION WHETHER TO REPAIR OR REBUILD.

REPAIR WORK SHOWN ON THIS DRAWING APPLIES ONLY TO THOSE SECTIONS OF THE TRUSS REPORTED BY THE TRUSS MANUFACTURER TO HAVE BEEN DAMAGED. A QUALIFIED THIRD PARTY INSPECTOR SHALL CHECK TRUSSES TO DETERMINE THE EXTENT OF ANY FURTHER DAMAGE, IF ANY, AND VERIFY THAT REPAIRS HAVE BEEN PERFORMED AS INDICATED ON THIS DRAWING.

NORTH CAROLINA PROFESSIONAL SEAL 033925 ENGINEER DOUGLAS FLEMING
25 '14

TC LL	20.0 PSF	REF	R9007- 75241
TC DL	10.0 PSF	DATE	06/25/14
BC DL	5.0 PSF	DRW	HCUSR9007 14176001
BC LL	0.0 PSF	HC-ENG	DF/DF
TOT.LD.	35.0 PSF	SEQN-	32778
DUR.FAC.	1.15		
SPACING	36.0"	JREF-	1V7J9007Z01

(calq0115-2a-Mike Chisek-revised porch -- 704-241-8215 - T-8)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

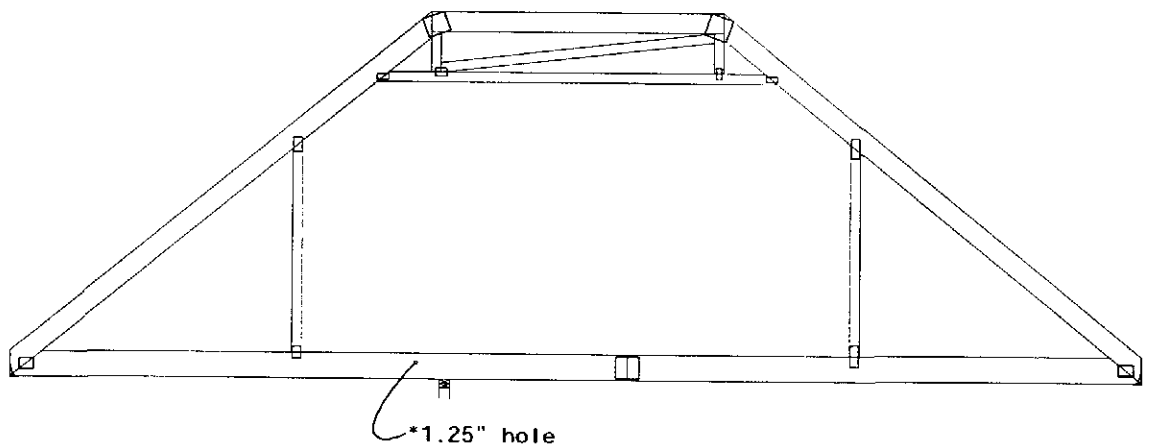
This truss is repaired for a 1.25" diameter hole drilled through the center of the bottom chord at 1' left of the interior bearing as shown.

* NOTE: (1) 1.25" HOLE MAY BE DRILLED HORIZONTALLY THROUGH THE CENTER OF MEMBER, PROVIDED THAT THERE IS NO OTHER LUMBER DEFECT WITHIN 3' EITHER SIDE OF THE DRILLED HOLE.

Refer to drawing R9007 13038007 for plates and other data not given here.

Repair(s) must comply with Alpine designs & specifications

Shore Truss and any supported spans in proper position as repair is being made.



R=1394 U=26
RL=205/-205

R=1213 U=63 W=3.5"

R=1626 U=33

Design Crit: IRC2009/TPI-2007(STD)

PLT TYP. Wave FT/RT=20%(0%)/10(0) 12.03.00.1116.01 QTY:1 NC/-/1/-/-/R/- Scale =.1875"/Ft.

ALPINE
Engineering services provided by
ABCD Engineering, PLLC NC COA 0838
Orlando FL, 32837

TRUSS REPAIR

DAMAGED TRUSSES MUST BE CAREFULLY EVALUATED TO DETERMINE THE EXTENT OF DAMAGE AND THE FEASIBILITY OF REPAIR. IN SOME CASES THE PRUDENT SOLUTION IS TO SCRAP THE DAMAGED TRUSSES AND REBUILD. INTERNAL WOOD FIBER DAMAGE AND EXCESSIVE CONNECTOR STRESS FROM BENDING OR SHOCK CANNOT BE READILY DETECTED. THEREFORE, IT IS VITAL THAT THE TRUSS FABRICATOR AND BUILDING CONTRACTOR CONSIDER THE CAUSE OF THE DAMAGE IN THEIR DECISION WHETHER TO REPAIR OR REBUILD.

REPAIR WORK SHOWN ON THIS DRAWING APPLIES ONLY TO THOSE SECTIONS OF THE TRUSS REPORTED BY THE TRUSS MANUFACTURER TO HAVE BEEN DAMAGED. A QUALIFIED THIRD PARTY INSPECTOR SHALL CHECK TRUSSES TO DETERMINE THE EXTENT OF ANY FURTHER DAMAGE, IF ANY, AND VERIFY THAT REPAIRS HAVE BEEN PERFORMED AS INDICATED ON THIS DRAWING.

NORTH CAROLINA PROFESSIONAL SEAL 033925 ENGINEER DOUGLAS FLEMING
JUN 25 '14

TC LL	20.0 PSF	REF	R9007- 75241
TC DL	10.0 PSF	DATE	06/25/14
BC DL	5.0 PSF	DRW	HCUSR9007 14176003
BC LL	0.0 PSF		HC-ENG DF/DF
TOT.LD.	35.0 PSF	SEQN-	30515
DUR.FAC.	1.15		
SPACING	24.0"	JREF-	1V7J9007Z01

(calq0115-2a-Mike Chisek-revised porch -- 704-241-8215 - T-12)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

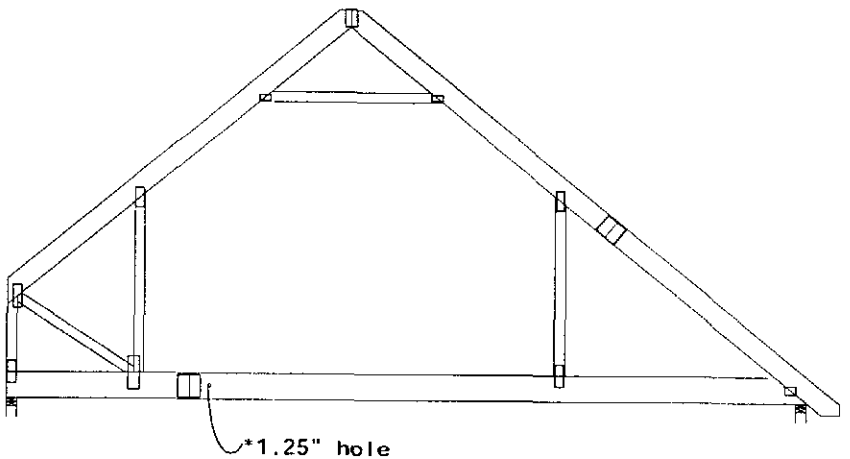
This truss is repaired for a 1.25" diameter hole drilled through the center of the bottom chord at 4" right of the splice plate as shown.

* NOTE: (1) 1.25" HOLE MAY BE DRILLED HORIZONTALLY THROUGH THE CENTER OF MEMBER, PROVIDED THAT THERE IS NO OTHER LUMBER DEFECT WITHIN 3' EITHER SIDE OF THE DRILLED HOLE.

Refer to drawing R9007 13038011 for plates and other data not given here.

Repair(s) must comply with Alpine designs & specifications

Shore Truss and any supported spans in proper position as repair is being made.



R=1447 U=26 W=3.5" (3.5" min.)
RL=204/-209

R=1351 U=23 W=3.5" (3.5" min.)

Design Crit: IRC2009/TPI-2007(STD)
FT/RT=20%(0%)/10(0)

PLT TYP. Wave

12.03.00.1116.01 QTY:1 NC/-/1/-/-/R/- Scale =.1875"/Ft.

ALPINE
Engineering services provided by
ABCD Engineering, PLLC NC COA 0838
Orlando FL, 32837

TRUSS REPAIR

DAMAGED TRUSSES MUST BE CAREFULLY EVALUATED TO DETERMINE THE EXTENT OF DAMAGE AND THE FEASIBILITY OF REPAIR. IN SOME CASES THE PRUDENT SOLUTION IS TO SCRAP THE DAMAGED TRUSSES AND REBUILD. INTERNAL WOOD FIBER DAMAGE AND EXCESSIVE CONNECTOR STRESS FROM BENDING OR SHOCK CANNOT BE READILY DETECTED. THEREFORE, IT IS VITAL THAT THE TRUSS FABRICATOR AND BUILDING CONTRACTOR CONSIDER THE CAUSE OF THE DAMAGE IN THEIR DECISION WHETHER TO REPAIR OR REBUILD.

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NORTH CAROLINA PROFESSIONAL SEAL 033925 ENGINEER DOUGLAS FLEMING
25 '14

TC LL	20.0 PSF	REF	R9007- 75241
TC DL	10.0 PSF	DATE	06/25/14
BC DL	5.0 PSF	DRW	HCUSR9007 14176004
BC LL	0.0 PSF	HC-ENG	DF/DF
TOT.LD.	35.0 PSF	SEQN-	30509
DUR.FAC.	1.15		
SPACING	24.0"	JREF-	1V7J9007Z01

(calq0115-2a-Mike Chisek-revised porch -- 704-241-8215 - T-6-GRD)

THIS DWG PREPARED FROM COMPUTER INPUT (LOADS & DIMENSIONS) SUBMITTED BY TRUSS MFR.

This truss is repaired for a 1.25" diameter hole drilled through the center of the bottom chord at 4' left of the interior bearing as shown.

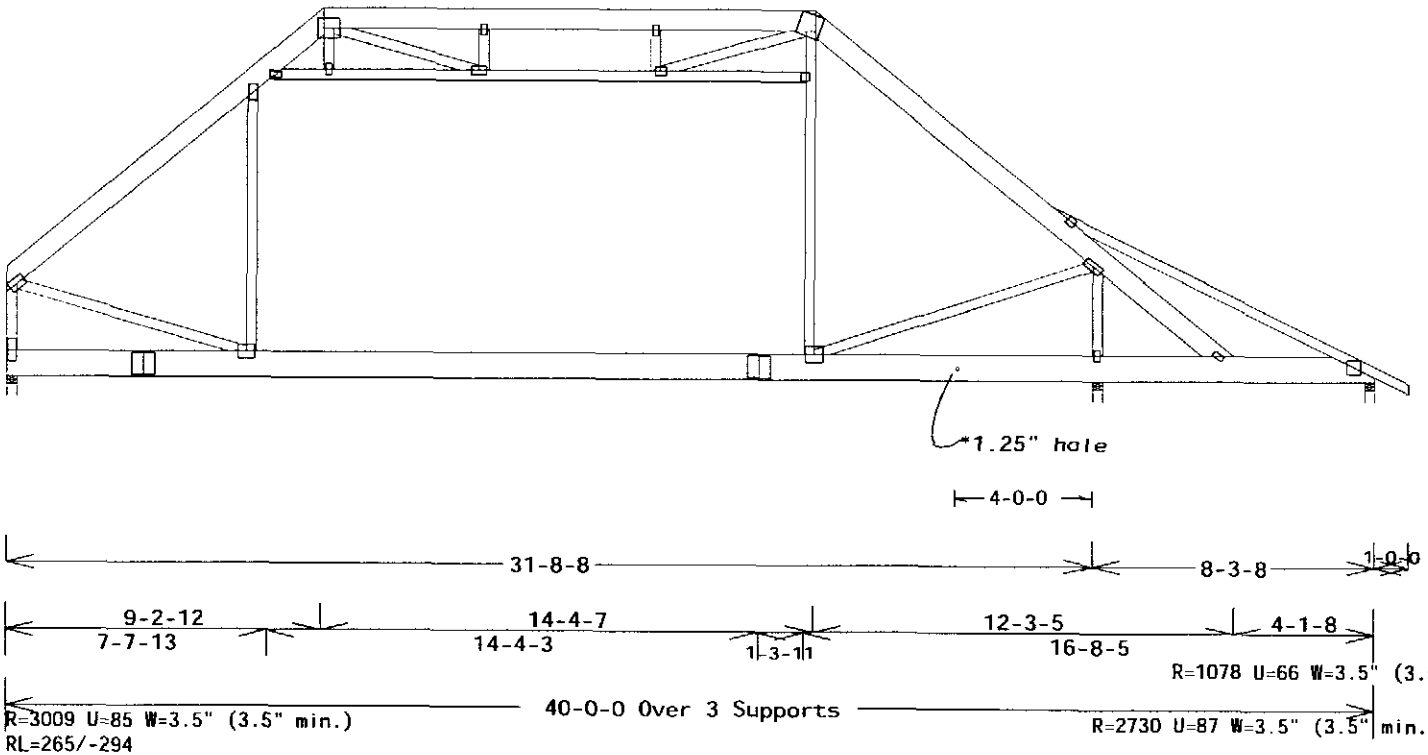
2 COMPLETE TRUSSES REQUIRED

Refer to drawing R9007 13038008 for plates and other data not given here.

Repair(s) must comply with Alpine designs & specifications

Shore Truss and any supported spans in proper position as repair is being made.

* NOTE: (1) 1.25" HOLE MAY BE DRILLED HORIZONTALLY THROUGH THE CENTER OF MEMBER, PROVIDED THAT THERE IS NO OTHER LUMBER DEFECT WITHIN 3' EITHER SIDE OF THE DRILLED HOLE.



Design Crit: IRC2009/TPI-2007(STD)

PLT TYP. Wave | FT/RT=20%(0%)/10(0) | 12.03.00.1116.01 | QTY:1 | NC/-/1/-/-/R/- | Scale =.1875"/Ft.

ALPINE

Engineering services provided by
ABCD Engineering, PLLC NC COA 0838
Orlando FL, 32837

TRUSS REPAIR

DAMAGED TRUSSES MUST BE CAREFULLY EVALUATED TO DETERMINE THE EXTENT OF DAMAGE AND THE FEASIBILITY OF REPAIR. IN SOME CASES THE PRUDENT SOLUTION IS TO SCRAP *THE DAMAGED TRUSSES AND REBUILD. INTERNAL WOOD FIBER DAMAGE AND EXCESSIVE* CONNECTOR STRESS FROM BENDING OR SHOCK CANNOT BE READILY DETECTED. THEREFORE, IT IS VITAL THAT THE TRUSS FABRICATOR AND BUILDING CONTRACTOR CONSIDER THE CAUSE OF THE DAMAGE IN THEIR DECISION WHETHER TO REPAIR OR REBUILD.

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NORTH CAROLINA PROFESSIONAL SEAL 033925 ENGINEER DOUGLAS FLEMING
25 '14

TC LL	20.0 PSF	REF R9007- 75241
TC DL	10.0 PSF	DATE 06/25/14
BC DL	5.0 PSF	DRW HCUSR9007 14176002
BC LL	0.0 PSF	HC-ENG DF/DF
TOT.LD.	35.0 PSF	SEQN- 32778
DUR.FAC.	1.15	
SPACING	36.0"	JREF- 1V7J9007Z01

CLR Reinforcing Member Substitution

This detail is to be used when a Continuous Lateral Restraint (CLR) is specified on a truss design but an alternative web reinforcement method is desired.

Notes:

This detail is only applicable for changing the specified CLR shown on single ply sealed designs to T-reinforcement or L-reinforcement or scab reinforcement.

Alternative reinforcement specified in chart below may be conservative. For minimum alternative reinforcement, re-run design with appropriate reinforcement type.

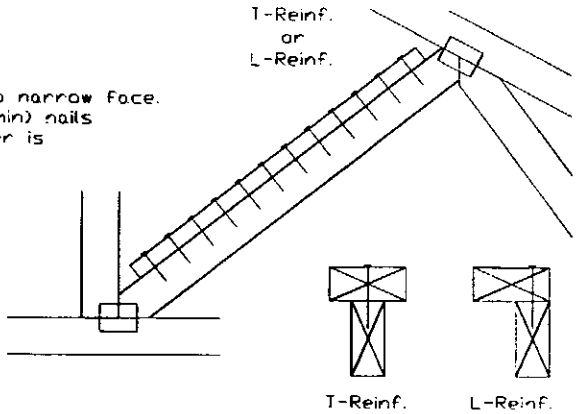
Web Member Size	Specified CLR Restraint	Alternative Reinforcement T- or L- Reinf.	Scab Reinf.
2x3 or 2x4	1 row	2x4	1-2x4
2x3 or 2x4	2 rows	2x6	2-2x4
2x6	1 row	2x4	1-2x6
2x6	2 rows	2x6	2-2x4(*)
2x8	1 row	2x6	1-2x8
2x8	2 rows	2x6	2-2x6(*)

T-reinforcement, L-reinforcement, or scab reinforcement to be same species and grade or better than web member unless specified otherwise on Engineer's sealed design.

(*) Center scab on wide face of web. Apply (1) scab to each face of web.

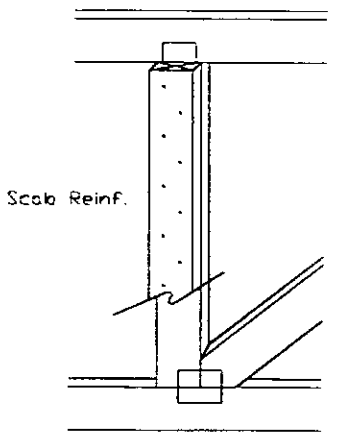
T-Reinforcement or L-Reinforcement:

Apply to either side of web narrow face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length



Scab Reinforcement:

Apply scab(s) to wide face of web. No more than (1) scab per face. Attach with 10d (0.128"x3.0",min) nails at 6" o.c. Reinforcing member is a minimum 80% of web member length.



Building Components Group Inc.

Earth City, MO 63045

WARNING READ AND FOLLOW ALL NOTES ON THIS DRAWING!
IMPORTANT FURNISH THIS DRAWING TO ALL CONTRACTORS INCLUDING THE INSTALLERS
Trusses require extreme care in fabricating, handling, shipping, installing and bracing. Refer to and follow the latest edition of BCSI (Building Component Safety Information, by TPI and SBCA) for safety practices prior to performing these functions. Installers shall provide temporary bracing per BCSI. Unless noted otherwise, top chord shall have properly attached structural sheathing and bottom chord shall have a properly attached rigid ceiling. Locations shown for permanent lateral restraint of webs shall have bracing installed per BCSI sections B3, B7 or B10, as applicable. Apply plates to each face of truss and position as shown above and on the Joint Details, unless noted otherwise. Refer to drawings 160A-Z for standard plate positions.
ITW Building Components Group Inc. shall not be responsible for any deviation from this drawing, any failure to build the truss in conformance with ANSI/TPI 1, or for handling, shipping, installation & bracing of trusses.
A seal on this drawing or cover page listing this drawing, indicates acceptance of professional engineering responsibility solely for the design shown. The suitability and use of this drawing for any structure is the responsibility of the Building Designer per ANSI/TPI 1 Sec.2.
For more information see this job's general notes page and these web sites:
ITWBCG: www.itwbcg.com, TPI: www.tpinst.org, SBCA: www.sbcindustry.org, ICC: www.iccsafe.org

NORTH CAROLINA PROFESSIONAL SEAL 033925 ENGINEER DOUGLAS FLEMING

TC LL	PSF	REF CLR Subst.
TC DL	PSF	DATE 8/15/13
BC DL	PSF	DRWG BRCLBSUB0813
BC LL	PSF	
TOT. LD.	PSF	
DUR. FAC.		
SPACING		

ADDRESS . : 2514 MATTHEWS MILL POND RD SUBDIV:
CONTRACTOR : PHONE :
OWNER . . : CHISEK MICHAEL A & ANDREA J PHONE :
PARCEL . . : 04-0672- - -0004- -02-
APPL NUMBER: 11-50027536 CP NEW RESIDENTIAL (SFD)
DIRECTIONS : T/S: 09/15/2011 10:20 AM JBROCK ----
HWY 210 N TO HARNETT CENTRAL RD LEFT ON
HARNETT CENTRAL EAST ON HARNETT CENTRAL
TO MATTHEWS MILL POND RD LEFT ON
MATTHEWS MILL POND RD TO 2514 MATTHEWS
MILL POND RD ON LEFT APPROX 3/4 MILE N
OF HARNETT CENTRAL
LAND NOTES : LXMN 6/07/04 stephen m buffkin lot#2
split from the 01

STRUCTURE: 000 000 75X54 3BDR 3BATH SFD W GAR,CRW,NO FINBON
FLOOD ZONE . . . . : FLOOD ZONE X
BEDROOMS . . . . . : 3000000.00 PROPOSED USE . . . . . : SFD
SEPTIC - EXISTING? . . . . : NEW TANK WATER SUPPLY . . . . . : NEW WELL

PERMIT: CPSF 00 CP * SFD

TYP/SQ	REQUESTED / COMPLETED	INSP RESULT	DESCRIPTION / RESULTS/COMMENTS
B101 01	4/19/13	KS	R*BLDG FOOTING / TEMP SVC POLE VRU #: 002369225
	4/19/13	AP	T/S: 04/19/2013 02:22 PM KSLATTUM ----------
B103 01	6/14/13	BS	R*BLDG FOUND & TEMP SVC POLE VRU #: 002396213
	6/14/13	AP	T/S: June 14, 2013 11:52 AM BSUTTON ----------
B105 01	7/19/13	KS	R*OPEN FLOOR VRU #: 002411982
	7/19/13	AP	T/S: 07/19/2013 10:50 AM KSLATTUM ----------
A814 01	1/10/14	TW	ADDRESS CONFIRMATION TIME: 17:00 VRU #: 002483147
	1/13/14	AP	2514 matthews mill pond rd angier 27501--------
			T/S: 01/27/2014 04:40 PM TWARD ----------
			T/S: 01/27/2014 04:41 PM TWARD ----------
R425 01	1/10/14	BS	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002483154
	1/10/14	CA	T/S: 01/09/2014 10:22 AM VBROWN ----------
			T/S: January 10, 2014 08:55 AM BSUTTON ----------
R425 02	6/17/14	BS	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002542553
	6/17/14	DA	T/S: 06/16/2014 02:12 PM VBROWN ----------
			T/S: June 17, 2014 03:44 PM BSUTTON ----------
			Need plumbing drain test 3 feet above highest fitting upstairs. Block and fill all tubs/showers. 2.Nail plates for plumbing and electrical. Plumbing plates must be 2 inches above bottom plate or below top plate. 3. Smoke detectors must have 3 wire cable. ground cannot be used as a current carrying conductor. 4. Need a letter from truss company that its ok to drill bottom chord for electrical. 5. Need receptacles in dormer hallways. 6. PLumbing pressure must be at 100 psi min.
R425 03	6/27/14	BS	FOUR TRADE ROUGH IN TIME: 17:00 VRU #: 002548121
	6/27/14	AP	T/S: June 27, 2014 02:11 PM BSUTTON ----------
I129 01	7/07/14	TI	R*INSULATION INSPECTION TIME: 17:00 VRU #: 002550861
	7-7	AP	T/S: 07/03/2014 08:43 AM VBROWN ----------

---------- COMMENTS AND NOTES ----------

Allied Spray Foams Inc.
2624 Avent Ferry Road
Holly Springs, NC 27540
919-971-0869

7/7/2014

Re: Chisek Residence, 2514 MATTHEW MILL POND RD, ANGIER. NC

Atten : Harnett County Inspection Dept.

I, Scott O'Hara, of Allied Spray Foams Inc all main attic, garage roof and 2nd floor wall areas have been sprayed with Demilec APX spray foam as per the approved Rescheck has warranted, and as per the manufacturer's specifications and guidelines. All calculation are verified using the Department of Energy guidelines using a sanctioned computer program.

All crawl walls and 1st floor walls are ICF Block.

Approved Res-Check Certificate is attached to his letter. We certify all foam has been applied as per the Approved Res-Check Certificate

I, Scott O'Hara, attest to installation in accordance with the manufacturer's written instructions and in accordance with the evaluation report submitted for the product shall be included in the certification document. All foam will be separated from interior living space by a 15 minute Thermal Barrier / drywall, or meet requirements to be left exposed in areas of service of utility. No further coatings are required.

Allied Spray Foams is an approved contractor for Demilec USA, and Scott O'Hara has attended the mandatory training program required for this certification.

Sealection APX is an air impermeable insulation and can be applied directly to the back of the roof deck to create an unvented attic assembly as per code. Sealection is APX not a vapor barrier.

Thank You,

Scott O'Hara
Allied Spray Foams Inc.
President

DEMILEC (USA) LLC.
POLLYURETHANE SYSTEM MANUFACTURER

July 5, 2011

RE: DEMILEC (USA) Authorized Contractor

To Whom It May Concern:

Scott O'Hara of Allied Spray Foams Inc is a DEMILEC (USA) Authorized Contractor and Approved Applicator and has been since March of 2006.

If you have any further questions, please feel free to contact me at (817) 640-4900.

Sincerely,

Awal "Dave" Lall
Chief Executive Officer (CEO)
DEMILEC (USA) LLC

2925 GALLERIA DRIVE • ARLINGTON, TX. 76011 • PHONE: (817) 640-4900 • FAX: (817) 633-2000
Web site: http://www.demilecusa.com • http://sealection500.com • E-mail: info@sealection500.com

RES*check* Software Version 4.5.0
Compliance Certificate

Project Title: MIKE CHISEK - NEW RESIDENCE

Energy Code:	**North Carolina Energy Conservation Code**
Location:	**Angier, North Carolina**
Construction Type:	**Single Family**
Project Type:	**New construction**
Glazing Area Percentage:	**9%**
Heating Degree Days:	**3502**
Climate Zone:	**4**

Construction Site:
2514 MATTHEW MILL POND RD
ANGIER , NC

Owner/Agent:

Designer/Contractor:

Compliance: Passes using UA trade-off

Compliance: **18.4% Better Than Code** Maximum UA: **724** Your UA: **591** Maximum SHGC: **0.30** Your SHGC: **0.30**

The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Crawl 1: Insulated Concrete Forms Wall height: 5.0' Depth below grade: 3.5' Insulation depth: 5.0' Inside below-grade depth: 0.0'	836		22.0		28
Wall 1: Insulated Concrete Forms	2288		22.0		91
Window 1: Vinyl Frame:Double Pane with Low-E SHGC: 0.30	281			0.320	90
Door 1: Solid	18			0.150	3
Door 2: Glass SHGC: 0.30	90			0.320	29
Wall 2: Wood Frame, 16" o.c.	1737	12.9	0.0		142
Ceiling 1: Cathedral Ceiling	4087	22.3	0.0		184
Floor 1: All-Wood Joist/Truss:Over Unconditioned Space	560	0.0	19.0		24

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the North Carolina Energy Conservation Code requirements in RES*check* Version 4.5.0 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Scott Ferra Allied Spray foams — 7/7/14

Name - Title | Signature | Date

ICC-ES Evaluation Report

ESR-3470

Issued March 1, 2013

This report is subject to renewal March 1, 2014.

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DIVISION: 07 00 00—Thermal and Moisture Protection
Section: 07 21 00—Thermal Insulation

REPORT HOLDER:

DEMILEC USA LLC
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ARLINGTON, TEXAS 76011
(817) 640-4900
www.DemilecUSA.com
Info@DemilecUSA.com

EVALUATION SUBJECT:

DEMILEC APX™ SPRAY-APPLIED POLYURETHANE FOAM INSULATION

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2012 and 2009 *International Building Code®* (IBC)
- 2012 and 2009 *International Residential Code®* (IRC)
- 2012 and 2009 *International Energy Conservation Code®* (IECC)
- Other Codes (see Section 8.0)

Properties evaluated:

- Surface-burning characteristics
- Physical properties
- Thermal resistance
- Attic and crawl space installation
- Air permeability

2.0 USES

Demilec APX™ spray-applied polyurethane foam insulation is used as a nonstructural thermal insulating material in Type V-B construction under the IBC and in dwellings under the IRC. The insulation is for use in wall cavities, floor/ceiling assemblies, or attics and crawl spaces when installed in accordance with Section 4.0. Under the IRC, the insulation may be used as air-impermeable insulation when installed in accordance with Section 3.4.

3.0 DESCRIPTION

3.1 General:

Demilec APX™ spray-applied foam insulation is semi-rigid, low-density, polyurethane foam plastic installed as a component of floor/ceiling and wall assemblies. The insulation is a two-component spray foam plastic with a nominal in-place density of 0.5 pcf (8 kg/m^3). The insulation is produced in the field by combining a polymeric isocyanate (A-PMDI™ component) with a polymeric resin (APX™ B-Side Resin). The insulation liquid components are supplied in 55-gallon (208 L) drums and/or 250-gallon (946 L) totes. The A-PMDI™ component must be stored at temperatures between 50°F (10°C) and 100°F (38°C) and has a shelf life of one year when stored in factory-sealed containers at these temperatures. The APX™ B-Side Resin must be stored at temperatures between 50°F (10°C) and 100°F (38°C) and has a shelf life of six months when stored in factory-sealed containers at these temperatures.

3.2 Surface-burning Characteristics:

The insulation, at a maximum thickness of 4 inches (102 mm) and a nominal density of 0.5 pcf (8 kg/m^3), has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84. Greater thicknesses are recognized as described in Sections 4.3 and 4.4. The thickness of Demilec APX™ foam is not limited when the insulation is separated from the interior of the building by a prescriptive thermal barrier such as $^1/_2$-inch-thick (12.7 mm) gypsum board.

3.3 Thermal Resistance, *R*-values:

The insulation has thermal resistance (*R*-value) at a mean temperature of 75°F (24°C) as shown in Table 1.

3.4 Air Permeability:

Demilec APX™ spray-applied polyurethane foam insulation, at a minimum thickness of 3$^1/_2$ inches (89 mm), is considered air-impermeable insulation in accordance with 2012 IRC Section R806.5 or 2009 IRC Section R806.4, based on testing in accordance with ASTM E283 and ASTM E2178.

3.5 Blazelok™ TBX Intumescent Coating:

Blazelok™ TBX intumescent coating, manufactured by TPR^2 Corporation, is a one-component, water-based liquid coating with specific gravity of 1.3. Blazelok™ TBX is supplied in 5-gallon (19 L) pails and 55-gallon (208 L) drums and has a shelf life of one year when stored in factory-sealed containers at temperatures between 45°F (7°C) and 90°F (32°C).

4.0 DESIGN AND INSTALLATION

4.1 General:

Demilec APX™ spray-applied foam insulation must be installed in accordance with the Center for Polyurethane Industries *Guidance on Best Practices for the Installation of Spray Polyurethane Foam*, the manufacturer's published

technical data sheet and product application guide, and this report. A copy of each must be available at all times on the jobsite during installation.

4.2 Application:

The Demilec APX™ insulation is spray-applied on the jobsite using a volumetric positive displacement pump as identified in the Demilec application guide. The insulation must be applied when the ambient and substrate temperatures are higher than 45°F (7.2°C). The insulation must not be used in areas that have a maximum in-service temperature higher than 180°F (82°C). The foam plastic must not be used in electrical outlet or junction boxes or in contact with water, rain or soil. The foam plastic must not be sprayed onto a substrate that is wet, or covered with frost or ice, loose scales, rust, oil, or grease. The insulation must be protected from the weather during and after application. The insulation may be applied to the maximum thickness in a single pass. Where insulation is used as an air-impermeable insulation, such as in unvented attic assemblies under 2012 IRC Section R806.5 or 2009 IRC Section R806.4, the insulation must be installed at a *minimum thickness of 3 1/2 inches (89 mm).*

4.3 Thermal Barrier:

4.3.1 Application with a Prescriptive Thermal Barrier: Demilec APX™ spray foam insulation must be separated from the interior of the building by an approved thermal *barrier of 1/2-inch-thick (12.7 mm) gypsum wallboard or an* equivalent 15-minute thermal barrier complying with, and installed in accordance with, IBC Section 2603.4 or IRC Section R316.4, as applicable, except where insulation is in an attic or crawl space as described in Section 4.4. Demilec APX™ foam thickness is not limited when the insulation is separated from the *interior of the building by* an approved thermal barrier, based on fire testing in accordance with NFPA 286 and AC377.

4.3.2 Application without a Thermal or Ignition Barrier: The prescriptive 15-minute thermal barrier or ignition barrier may be omitted when installation is in accordance with this section. Demilec APX™ spray foam insulation and Blazelok™ TBX intumescent coating may be spray-applied to the interior facing of walls and the underside of roof sheathing or roof rafters, and in crawl spaces, and may be left exposed as an interior finish *without a prescribed 15-minute thermal barrier* or ignition barrier. The foam plastic insulation thickness must not exceed 7 1/2 inches (191 mm) in walls and 11 1/2 inches (292 mm) in floors and ceilings. All foam surfaces must be covered with an 11-mil dry thickness (0.28 mm) [17 mils wet thickness (0.43 mm)] of Blazelok™ TBX intumescent *coating, described in Section 3.5. The intumescent coating* must be spray-applied over the insulation in accordance with the coating manufacturer's instructions and this report at a rate of 85 square feet per gallon (2.09 m^2/ L) to obtain the recommended minimum dry film thickness noted in this section.

4.4 Attics and Crawl Spaces:

4.4.1 Application with a Prescriptive Ignition Barrier: When Demilec APX™ spray foam insulation is installed within attics or crawl spaces where entry is made only for service of utilities, an ignition barrier must be installed in accordance with IBC Section 2603.4.1.6 or IRC Section R316.5.3 or R316.5.4, as applicable. The ignition barrier must be consistent with the requirements for the type of construction required by the applicable code, and must be installed in a manner so the foam plastic insulation is not exposed. Demilec APX™ spray-applied foam insulation as described in this section may be installed in unvented attics in accordance with 2012 IRC Section R806.5 or 2009 IRC Section R806.4, as applicable.

4.4.2 Application without a Prescriptive Ignition Barrier: Where Demilec APX™ spray-applied foam insulation is installed in accordance with this section and Section 4.4.2.2, the following conditions apply:

a. Entry to the attic or crawl space is only to service utilities, and no storage is permitted.

b. There are no interconnected attic or crawl space areas.

c. *Air in the attic or crawl space is not circulated to other* parts of the building.

d. Under-floor (crawl space) ventilation is provided when required by IBC Section 1203.3 or IRC Section R408.1, as applicable.

e. *Attic ventilation is provided when required by IBC* Section 1203.2 or IRC Section R806, except when air-impermeable insulation is permitted in unvented attics in accordance with 2012 IRC Section R806.5 or 2009 Section R806.4 or Section 1203.2 of the IBC as applicable.

f. Combustion air is provided in accordance with IMC (*International Mechanical Code®*) Section 701.

4.4.2.1 Attics and Crawl Spaces: In attics and crawl spaces, the insulation may be spray-applied to the underside of the roof sheathing and/or rafters, to the underside of wood floors and to vertical surfaces as described in this section. The thickness of the foam plastic applied to the underside of the top of the space must not exceed 11 3/4 inches (298 mm), and the thickness when applied to vertical surfaces must not exceed 7 3/4 inches (197 mm). The insulation does not require an ignition barrier or coating.

4.4.2.2 Use on Attic Floors: The spray-applied foam insulation may be installed at a maximum thickness of 11 3/4 inches (197 mm) between and/or over floor joists in attic floors without an ignition barrier, coating or covering. *Demilec APX™ spray foam insulation may* be applied to a maximum thickness of 11 3/4 inches (298 mm) on the attic floor between and/or over the joists when a prescriptive ignition barrier is installed in accordance with IBC Section 2603.4.1.6 or IRC Section 316.5.3. The insulation must be separated from the interior by an approved thermal barrier.

5.0 CONDITIONS OF USE

The Demilec APX™ spray foam insulation described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 The products must be installed in accordance with the Center for Polyurethane Industries *Guidance on Best Practices for the Installation of Spray Polyurethane Foam*, the manufacturer's published technical data sheet and product application guide, this evaluation report and the applicable code. If there are any conflicts between other published guides and this report, this report governs.

5.2 The insulation must be separated from the interior of the building by an approved 15-minute thermal barrier as described in Section 4.3.1, except when installation is in attics and crawl spaces as described in Section 4.4.

5.3 The insulation must not exceed the thicknesses noted in Sections 3.2, 4.2, 4.3 and 4.4.

5.4 The insulation must be protected from exposure to weather during and after application.

[1]*R*-values are calculated based on tested *K*-values at 1- and 4-inch thicknesses.