



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
Development Services
LEE'S SUMMIT, MISSOURI

MiTek USA, Inc.
16023 Swingley Ridge Rd
Chesterfield, MO 63017
314-434-1200

Re: B220019
Lot 111 RR

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Wheeler - Waverly.

Pages or sheets covered by this seal: I49889810 thru I49889890

My license renewal date for the state of Missouri is December 31, 2023.

Missouri COA: Engineering 001193



January 27, 2022

Sevier, Scott ,Engineer

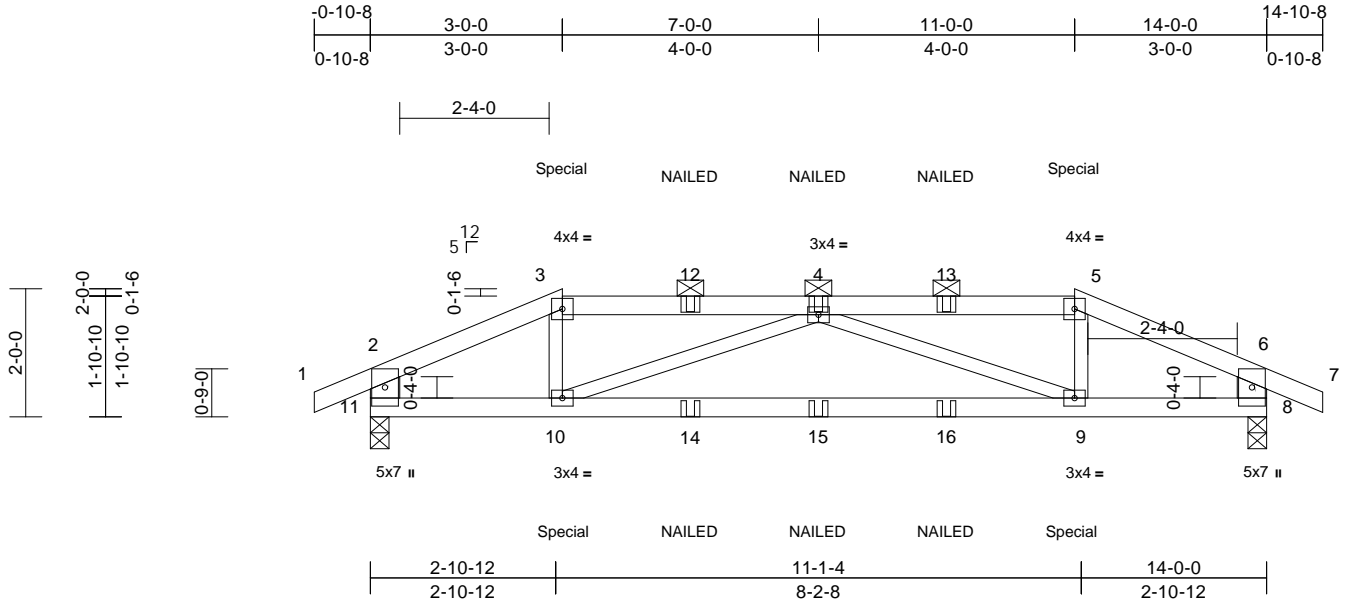
IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	149889810
B220019	A3	Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:52
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Scale = 1:36

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.16	9-10	>999	360	197/144
TCCL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.36	9-10	>452	240	
BCCL	0.0*	Rep Stress Incr	NO	WB	0.29	Horz(CT)	0.03	8	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	9-10	>999	240	
										Weight: 46 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 11-2,8-6:2x6 SP DSS

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-10-9 max.): 3-5.
BOT CHORD	Rigid ceiling directly applied or 8-11-14 oc bracing.

REACTIONS	(lb/size) 8=743/0-3-8, 11=743/0-3-8
	Max Horiz 11=17 (LC 7)
	Max Uplift 8=-199 (LC 5), 11=-199 (LC 4)

FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension
	1-2=0/30, 2-3=-1064/250, 3-4=-892/235, 4-5=-892/236, 5-6=-1064/250, 6-7=0/30, 2-11=-674/167, 6-8=-674/167

BOT CHORD	10-11=-191/908, 9-10=-421/1414, 8-9=-186/908
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WEBS	3-10=0/354, 5-9=0/354, 4-9=-576/251, 4-10=-576/251
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NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCCL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06" tall by 2'-00" wide will fit between the bottom chord and any other members.

- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 199 lb uplift at joint 11 and 199 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- 9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 89 lb down and 138 lb up at 3-0-0, and 89 lb down and 138 lb up at 11-0-0 on top chord, and 30 lb down at 3-0-0, and 30 lb down at 10-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-11=-20
Concentrated Loads (lb)
Vert: 3=-13 (F), 5=-13 (F), 10=-10 (F), 9=-10 (F), 4=-13 (F), 12=-13 (F), 13=-13 (F), 14=-10 (F), 15=-10 (F), 16=-10 (F)



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

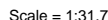
Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:54 Page: 1
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LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 10-2,7-5:2x6 SPF No.2

BRACING	
TOP CHORD	Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 3-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=687/0-3-8, 10=687/0-3-8
Max Horiz 10=-24 (LC 13)
Max Uplift 7=-92 (LC 5), 10=-92 (LC 4)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/30, 2-3=-897/106, 3-4=-750/116, 4-5=-898/105, 5-6=0/30, 2-10=-610/119, 5-7=-610/119

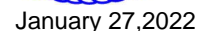
BOT CHORD 9-10=-45/753, 8-9=-47/750, 7-8=-46/753
WEBS 3-9=0/159, 3-8=-98/98, 4-8=0/159

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDF=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-00-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 10 and 92 lb uplift at joint 7.

- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,

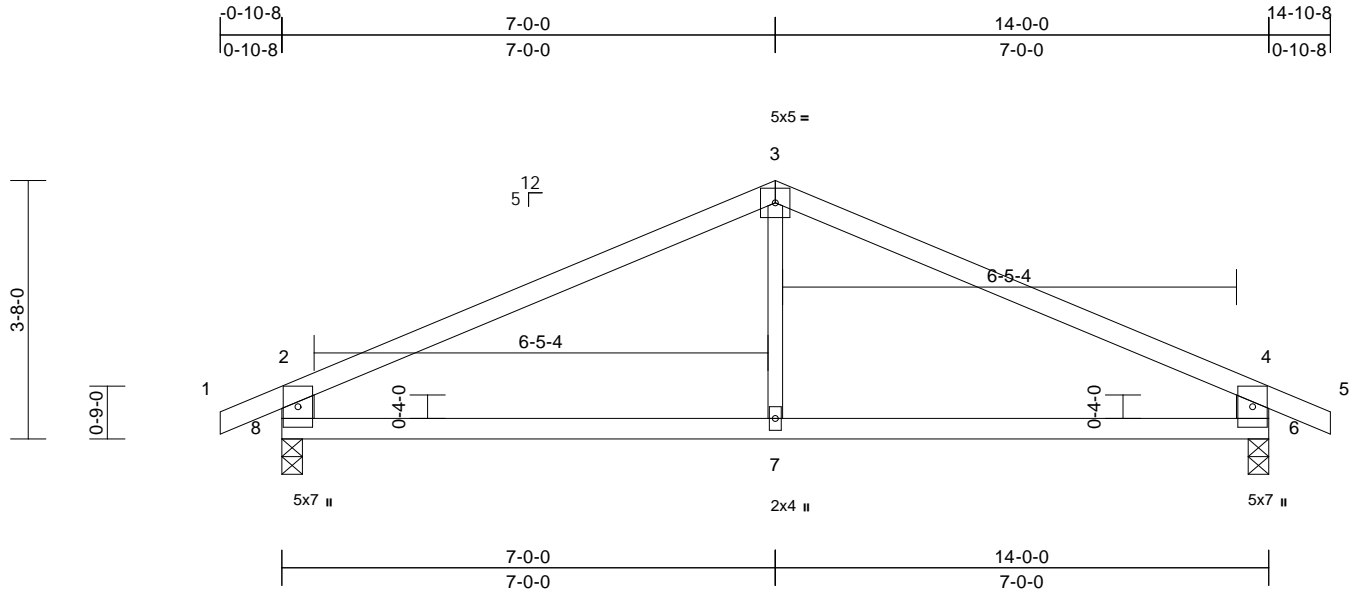


Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	A5	Common	4	1	Job Reference (optional)	I49889812

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:32.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	-0.05	6-7	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.10	6-7	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.09	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	7-8	>999	240	Weight: 39 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x6 SPF No.2 *Except* 7-3:2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-8-5 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 6=687/0-3-8, 8=687/0-3-8
Max Horiz 8=-39 (LC 9)
Max Uplift 6=-103 (LC 9), 8=-103 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/30, 2-3=-819/104, 3-4=-819/104,
4-5=0/30, 2-8=-622/150, 4-6=-622/150

BOT CHORD 7-8=-31/660, 6-7=-31/660

WEBS 3-7=0/284

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06"-00" tall by 2'-00"-00" wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 103 lb uplift at joint 8 and 103 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



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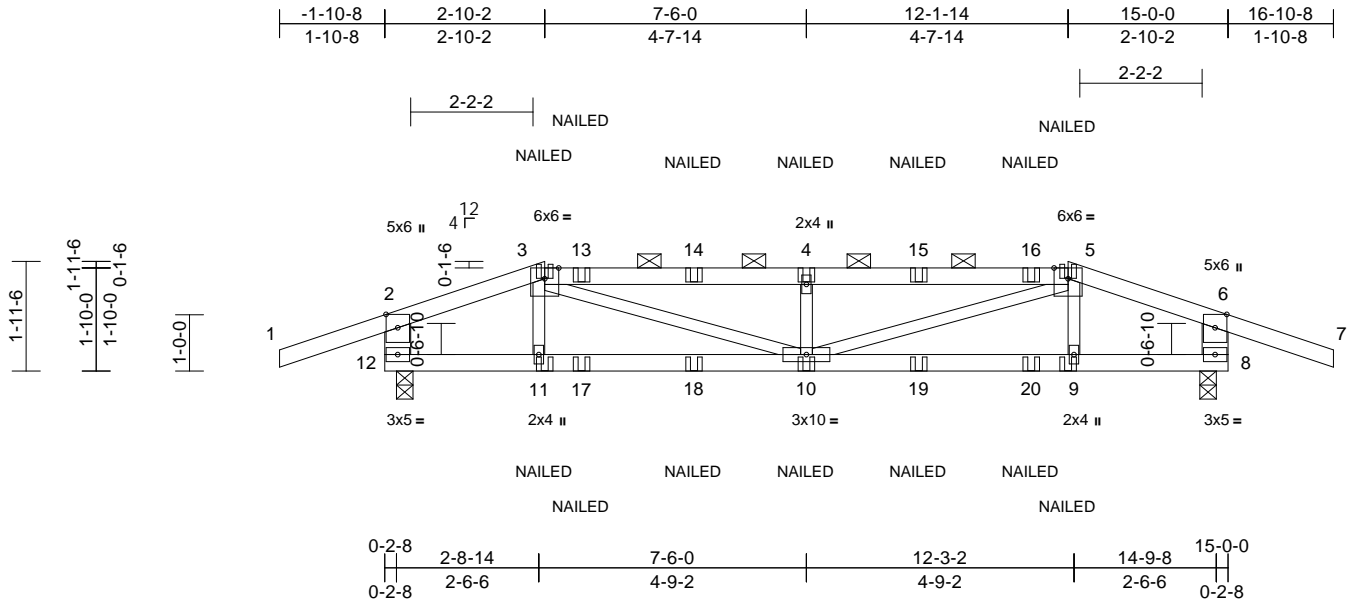
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889813
B220019	B1	Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:41

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.12	9-10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.75	Vert(CT)	-0.22	9-10	>784	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.34	Horz(CT)	0.02	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	10-11	>999	240	Weight: 52 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF 2100F 1.8E *Except* 3-5:2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 12-2,8-6:2x6 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-8 max.): 3-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 8=834/0-3-8, 12=834/0-3-8
Max Horiz 12=15 (LC 19)
Max Uplift 8=242 (LC 5), 12=242 (LC 4)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/47, 2-3=-882/185, 3-4=-1712/393, 4-5=-1712/393, 5-6=-882/185, 6-7=0/47, 2-12=-675/218, 6-8=-675/218
BOT CHORD 11-12=-118/759, 10-11=-124/765, 9-10=-127/765, 8-9=-122/759
WEBS 3-11=-91/90, 3-10=-238/999, 4-10=-469/209, 5-10=-238/999, 5-9=-91/90

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 242 lb uplift at joint 12 and 242 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 6-7=-70, 8-12=-20
Concentrated Loads (lb)
Vert: 11=8 (F), 10=-8 (F), 4=-8 (F), 9=8 (F), 13=-8 (F), 14=-8 (F), 15=-8 (F), 16=-8 (F), 17=-8 (F), 18=-8 (F), 19=-8 (F), 20=-8 (F)



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



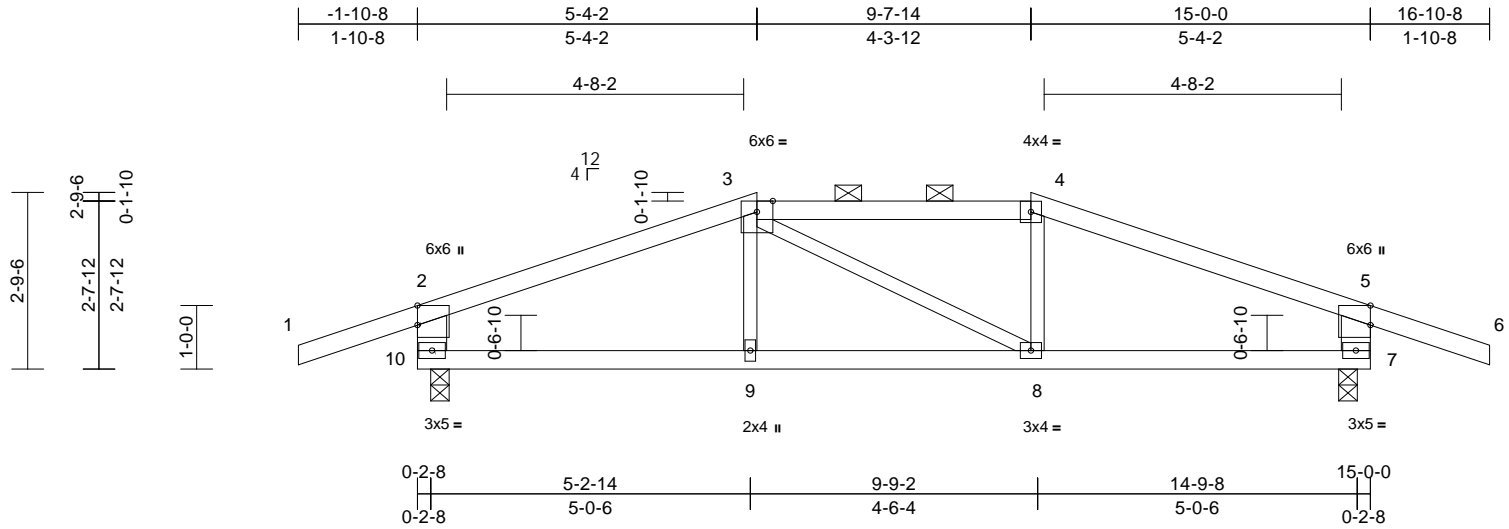
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job B220019	Truss B2	Truss Type Hip	Qty 1	Ply 1	Lot 111 RR Job Reference (optional)	I49889814
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Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:55
ID:5k79XnyLK6NPdPBpNmHjaNz1ksw-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:36.3

Plate Offsets (X, Y): [2:0-3-11,Edge], [5:0-3-11,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.18	8-9	>991	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.32	8-9	>540	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.02	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	8-9	>999	240	Weight: 49 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-2,7-5:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (5-8-5 max.): 3-4.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 7=802/0-3-8, 10=802/0-3-8
Max Horiz 10=-17 (LC 19)
Max Uplift 7=-202 (LC 5), 10=-202 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/47, 2-3=-930/139, 3-4=-802/153, 4-5=-930/139, 5-6=0/47, 2-10=-690/222, 5-7=-690/222

BOT CHORD 9-10=-73/803, 8-9=-76/802, 7-8=-58/803
WEBS 3-9=0/153, 3-8=-87/87, 4-8=-5/153

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 202 lb uplift at joint 10 and 202 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



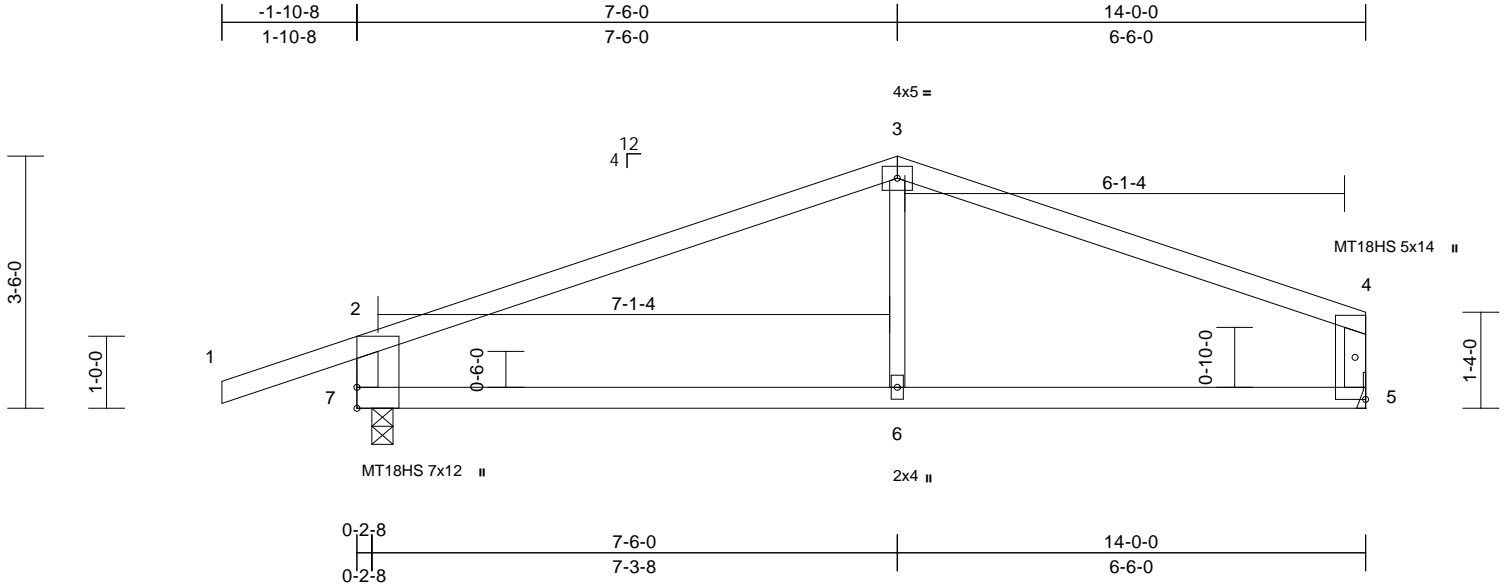
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889815
B220019	B3	Common	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:55
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Page: 1



Scale = 1:32

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.17	6-7	>972	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.69	Vert(CT)	-0.35	6-7	>474	240	MT18HS	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.07	Horz(CT)	0.01	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.10	6-7	>999	240	Weight: 39 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2100F 1.8E *Except* 6-3:2x3 SPF No.2

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-2-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 5=606/ Mechanical, 7=769/0-3-8
Max Horiz 7=42 (LC 8)
Max Uplift 5=-86 (LC 5), 7=-183 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/45, 2-3=-767/107, 3-4=-754/108, 4-5=-483/118, 2-7=-666/226
BOT CHORD 6-7=-53/633, 5-6=-53/633
WEBS 3-6=0/230

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) All plates are MT20 plates unless otherwise indicated.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 7 and 86 lb uplift at joint 5.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



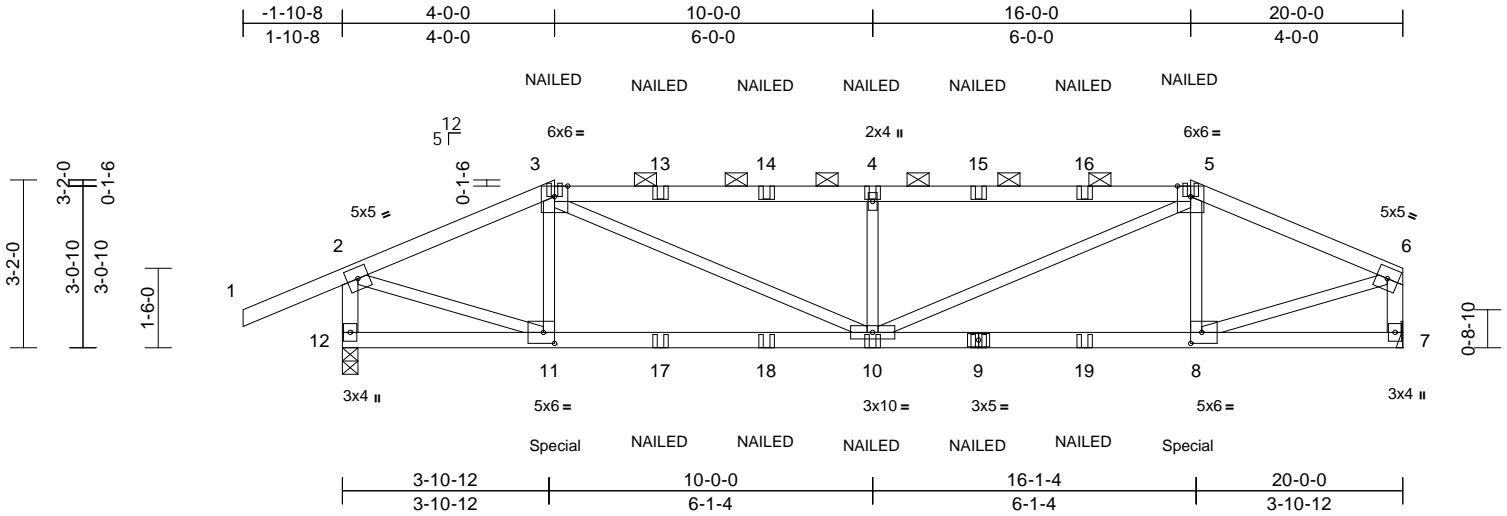
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	C1	Hip Girder	1	1	Job Reference (optional)	I49889816

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:55
ID:nUWW5iRJ?OVHV2Yb?J1ATpz1kuu-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:43.5

Plate Offsets (X, Y): [8:0-2-8,0-2-8], [11:0-2-8,0-2-8]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.55	Vert(LL)	-0.11	10	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.22	8-10	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.64	Horz(CT)	0.04	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	10	>999	240	Weight: 74 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 3-5:2x4 SPF 2100F 1.8E
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-2,7-6:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-0-2 oc purlins, except end verticals, and 2-0-0 oc purlins (3-11-13 max.): 3-5.
BOT CHORD Rigid ceiling directly applied or 8-10-12 oc bracing.

REACTIONS (lb/size) 7=1452/ Mechanical, 12=1608/0-3-8
Max Horiz 12=62 (LC 7)
Max Uplift 7=321 (LC 5), 12=385 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=1952/469, 3-4=2911/727, 4-5=2911/727, 5-6=1981/467, 2-12=1583/395, 6-7=1425/330
BOT CHORD 11-12=50/31, 10-11=431/1770, 8-10=430/1804, 7-8=31/62
WEBS 3-11=249/159, 3-10=307/1284, 4-10=808/390, 5-10=301/1261, 5-8=244/163, 2-11=412/1849, 6-8=421/1828

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 385 lb uplift at joint 12 and 321 lb uplift at joint 7.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 201 lb down and 55 lb up at 4-0-0, and 201 lb down and 55 lb up at 15-11-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard
1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-5=-70, 5-6=-70, 7-12=-20
Concentrated Loads (lb)
Vert: 3=-80 (F), 5=-80 (F), 9=-38 (F), 11=-197 (F), 10=-38 (F), 4=-80 (F), 8=-197 (F), 13=-80 (F), 14=-80 (F), 15=-80 (F), 16=-80 (F), 17=-38 (F), 18=-38 (F), 19=-38 (F)



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MiTek
16023 Swingley Ridge Rd
Chesterfield, MO 63017

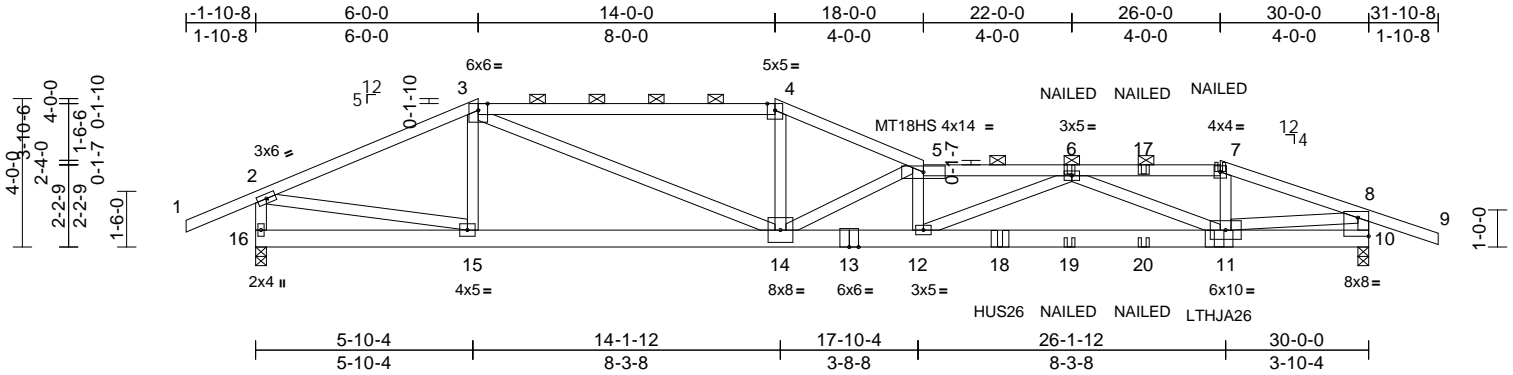
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	C2	Roof Special Girder	1	2	Job Reference (optional)	I49889817

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:56

Page: 1

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Scale = 1:62.1

Plate Offsets (X, Y): [10:Edge,0-6-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.32	11-12	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.98	Vert(CT)	-0.58	11-12	>617	240	MT18HS 197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.56	Horz(CT)	0.06	10	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.26	11-12	>999	240	Weight: 281 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 3-4,5-7:2x4 SPF 2100F 1.8E
BOT CHORD	2x6 SPF No.2 *Except* 13-10:2x6 SPF 1650F 1.4E
WEBS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-3-6 oc purlins, except end verticals, and 2-0-0 oc purlins (5-2-5 max.): 3-4, 5-7.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size)	10=2623/0-3-8, 16=1923/0-3-8
Max Horiz	16=39 (LC 9)
Max Uplift	10=581 (LC 5), 16=303 (LC 4)

FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension 1-2=0/54, 2-3=-2805/472, 3-4=-4536/862, 4-5=-4995/916, 5-6=-9472/1776, 6-7=-4734/914, 7-8=-5127/958, 8-9=0/45, 2-16=-1871/327, 8-10=-2680/594
BOT CHORD	15-16=-74/143, 14-15=-341/2538, 12-14=-1708/9503, 11-12=-1534/7822, 10-11=-67/323
WEBS	3-15=-322/163, 3-14=-441/2252, 4-14=-180/1429, 5-14=-5469/1083, 5-12=-210/575, 7-11=-152/1288, 2-15=-349/2439, 8-11=-841/4579, 6-12=-183/1802, 6-11=-3382/760

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.

- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- All plates are MT20 plates unless otherwise indicated.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 303 lb uplift at joint 16 and 581 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie HUS26 (14-10d Girder, 4-10d Truss) or equivalent at 20-0-12 from the left end to connect truss(es) to front face of bottom chord.
- Use Simpson Strong-Tie LTHJA26 (LTHJA26 on 2 ply, Right Hand Hip) or equivalent at 25-11-10 from the left end to connect truss(es) to front face of bottom chord.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-4=-70, 4-5=-70, 5-7=-70, 7-8=-70, 8-9=-70, 10-16=-20
Concentrated Loads (lb)
Vert: 7=80 (F), 11=-197 (F), 6=80 (F), 17=-80 (F), 18=-1077 (F), 19=-38 (F), 20=-38 (F)



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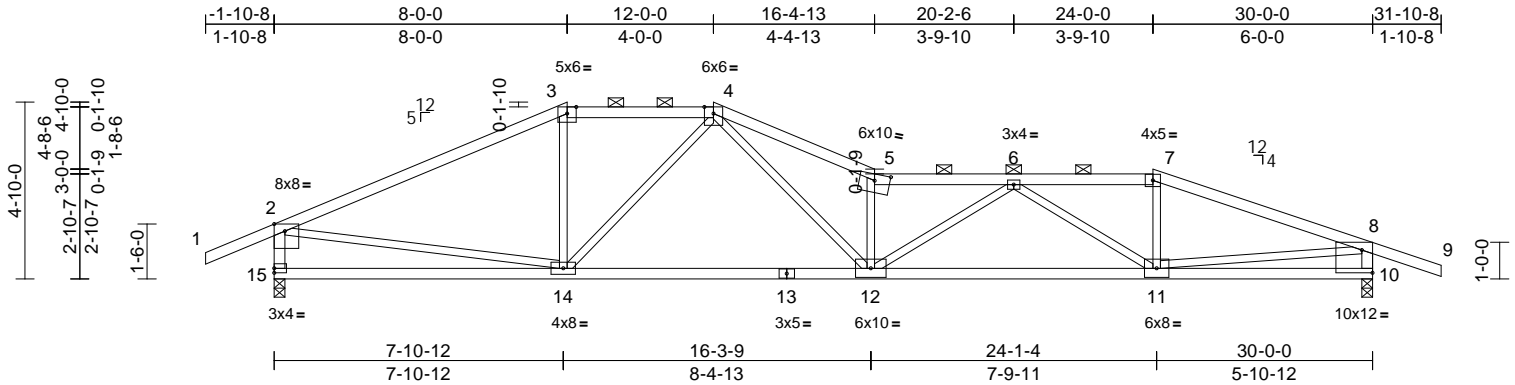
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	C3	Roof Special	1	1	Job Reference (optional)	I49889818

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:56
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Page: 1



Scale = 1:62.9

Plate Offsets (X, Y): [2:0-3-8,Edge], [5:0-5-0,0-2-3], [10:Edge,0-7-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.94	Vert(LL)	-0.29	11-12	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.54	11-12	>658	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.08	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.21	11-12	>999	240	Weight: 111 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2,10-8:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-8-10 max.): 3-4, 5-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 2-2-0 oc bracing: 11-12.

REACTIONS (lb/size) 10=1478/0-3-8, 15=1478/0-3-8
Max Horiz 15=51 (LC 9)
Max Uplift 10=298 (LC 5), 15=152 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/54, 2-3=2009/250, 3-4=1743/256, 4-5=4004/574, 5-6=3727/506, 6-7=2344/370, 7-8=2558/365, 8-9=0/45, 2-15=1406/192, 8-10=1418/323
BOT CHORD 14-15=131/284, 12-14=185/2098, 11-12=435/3322, 10-11=78/313
WEBS 3-14=5/413, 5-12=1726/320, 7-11=0/510, 2-14=91/1485, 8-11=236/2066, 4-14=626/161, 4-12=340/2248, 6-12=8/482, 6-11=1175/198

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
3) Provide adequate drainage to prevent water ponding.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 152 lb uplift at joint 15 and 298 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

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LUMBER

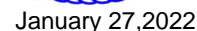
BRACING

FORCES

NOTES

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 14 and 290 lb uplift at joint 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



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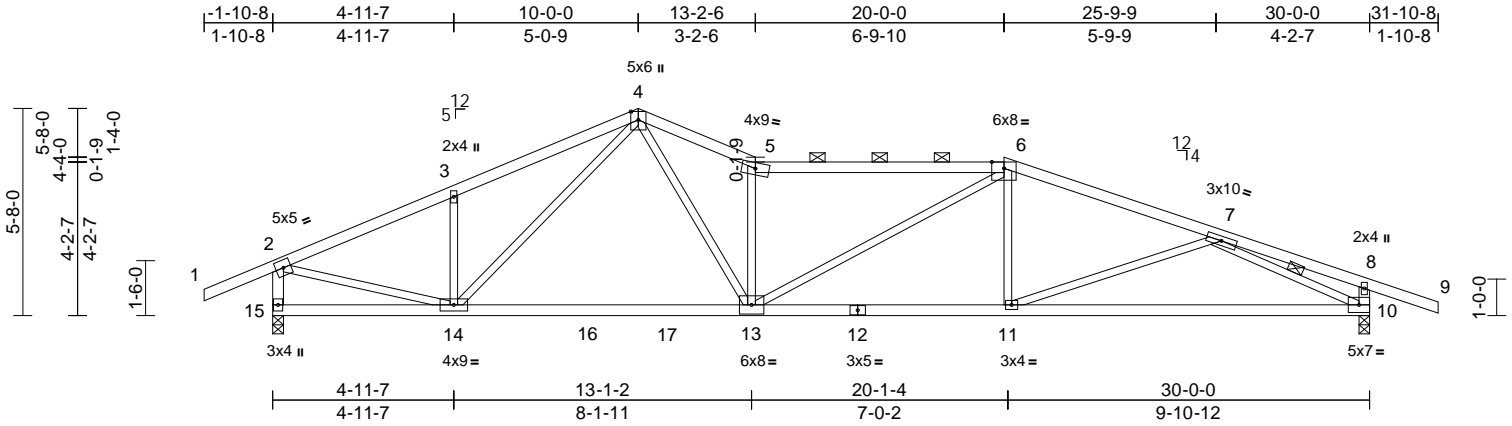
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889820
B220019	C5	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:57
ID:0Sz2t1XSJF?nzV4TW93Mu5z1kn0-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?i

Page: 1



Scale = 1:63

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.69	Vert(LL)	-0.25	13-14	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.83	Vert(CT)	-0.45	10-11	>788	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.61	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	11-13	>999	240	Weight: 115 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 5-6:2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF No.2 *Except* 12-10:2x4 SPF 2100F 1.8E
WEBS	2x3 SPF No.2 *Except* 15-2,10-8:2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 2-7-11 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-7 max.): 5-6.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 7-10

REACTIONS

(lb/size)	10=1478/0-3-8, 15=1478/0-3-8
Max Horiz	15=67 (LC 9)
Max Uplift	10=297 (LC 5), 15=172 (LC 8)
Max Grav	10=1501 (LC 2), 15=1512 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/54, 2-3=-1984/199, 3-4=-1985/257, 4-5=-2842/446, 5-6=-2608/378, 6-7=-2540/377, 7-8=-336/0, 8-9=0/45, 2-15=-1458/189, 8-10=-347/118
BOT CHORD	14-15=-56/99, 13-14=-83/1686, 11-13=-245/2363, 10-11=-367/2175
WEBS	4-13=-284/1771, 5-13=-1409/324, 6-13=-75/287, 6-11=0/289, 7-11=0/241, 2-14=-119/1790, 7-10=-2219/500, 3-14=-357/192, 4-14=-115/271

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 15 and 297 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



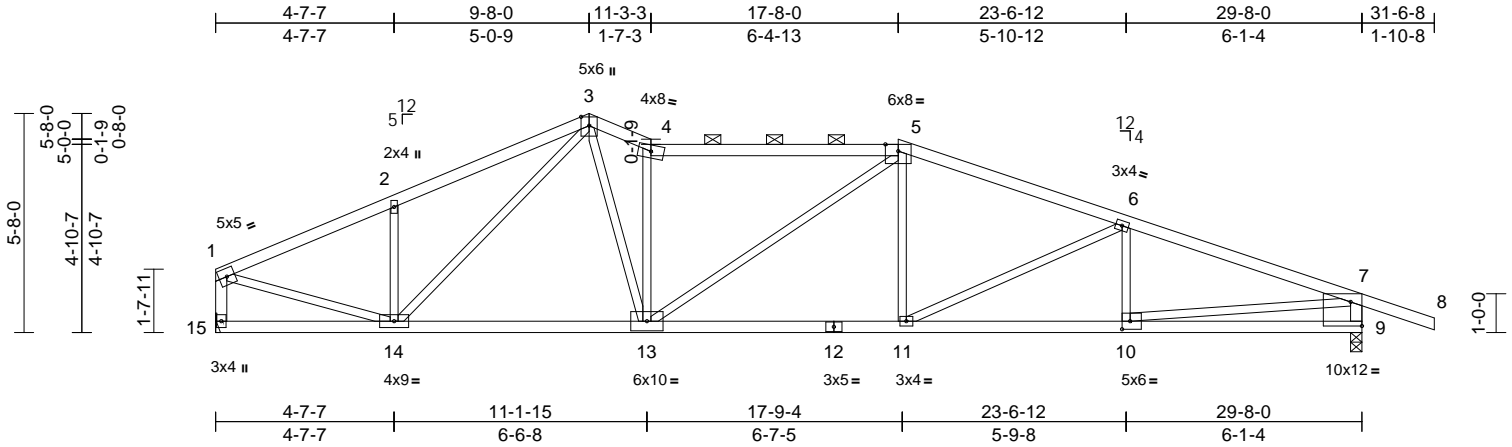
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	C6	Roof Special	1	1	Job Reference (optional)	I49889821

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:57
ID: VS6jnp933DYOCU3SZ4?Z?3z1kmC-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWRCDoi7J4zJC?f

Page: 1



Scale = 1:59.6

Plate Offsets (X, Y): [9:Edge,0-7-8], [10:0-2-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.14	10-11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.28	11-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.71	Horz(CT)	0.06	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	10-11	>999	240	Weight: 115 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-1,9-7:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-12 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-5.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 9=1468/0-3-8, 15=1317/
Mechanical
Max Horiz 15=82 (LC 9)
Max Uplift 9=302 (LC 5), 15=128 (LC 5)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1773/209, 2-3=-1793/273,
3-4=-2186/372, 4-5=-1992/324,
5-6=-2216/372, 6-7=-2519/402, 7-8=0/45,
1-15=-1274/147, 7-9=-1397/332
BOT CHORD 14-15=-33/114, 13-14=-72/1590,
11-13=-207/2041, 10-11=-317/2322,
9-10=-49/284
WEBS 2-14=-369/196, 3-14=-197/196,
3-13=-251/1397, 4-13=-1175/280,
5-13=-192/106, 5-11=0/336, 6-11=-339/122,
6-10=-159/115, 1-14=-144/1591,
7-10=-297/2054

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 128 lb uplift at joint 15 and 302 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



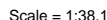
January 27, 2022

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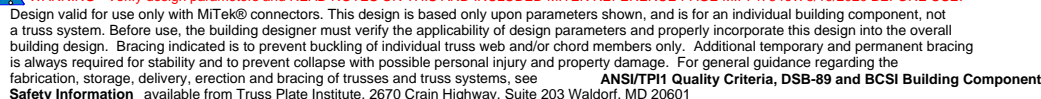


16023 Swingley Ridge Rd
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Page: 1LOAD CASE(S) Standard

WEBS 2-6=-27/117, 2-5=-521/182

January 27, 2022

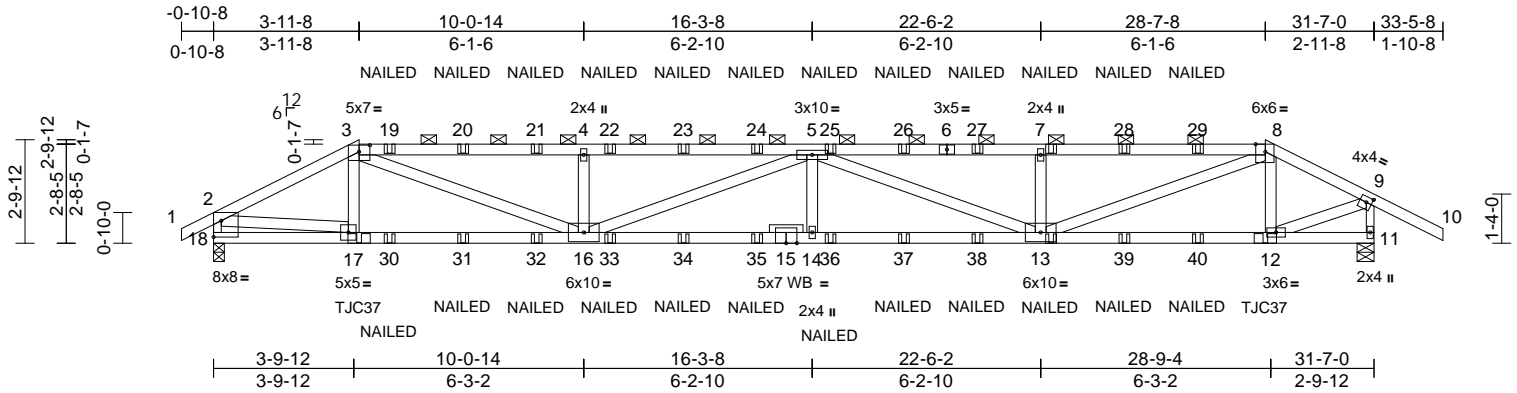


Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	D1	Hip Girder	1	2	Job Reference (optional)	I49889823

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:22:59
ID:qT5_qmX7slDqJERIU9Exmxz1jql-RfC?PsB70Hq3NSgPqnL8w3uITXbGKwRCDoi7J4zJC7f

Page: 1



Scale = 1:62.7

Plate Offsets (X, Y): [3:0-3-8,0-2-3], [8:0-3-2,Edge], [9:0-1-12,0-1-12], [18:Edge,0-5-5]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.91	Vert(LL)	-0.30	14	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.51	Vert(CT)	-0.55	14-16	>687	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.52	Horz(CT)	0.08	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.27	14	>999	240	Weight: 253 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 3-6:2x4 SPF 2100F 1.8E
BOT CHORD	2x4 SPF 2100F 1.8E
WEBS	2x4 SPF No.2 *Except* 11-9,18-2:2x3 SPF No.2
OTHERS	2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-10-14 max.): 3-8.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 11-12.

REACTIONS	(lb/size) 11=2293/0-5-8, 18=2384/0-3-8 Max Horiz 18=64 (LC 7) Max Uplift 11=509 (LC 4), 18=454 (LC 5)
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FORCES

TOP CHORD	(lb) - Maximum Compression/Maximum Tension 1-2=0/31, 2-3=-3842/783, 3-4=-6848/1474, 4-5=-6845/1472, 5-7=-6299/1400, 7-8=-6302/1402, 8-9=-2644/643, 9-10=0/62, 9-11=-2302/508, 2-18=-2349/459
BOT CHORD	17-18=-87/259, 16-17=-705/3408, 14-16=-1649/7749, 13-14=-1649/7749, 12-13=-543/2392, 11-12=-26/20
WEBS	3-17=-110/125, 3-16=-827/3739, 4-16=-799/361, 5-16=-996/235, 5-14=0/419, 5-13=-1564/309, 7-13=-785/356, 8-13=-881/4219, 8-12=-765/184, 9-12=-579/2550, 2-17=-636/3186

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x3 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 454 lb uplift at joint 18 and 509 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 3-11-8 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
- Use Simpson Strong-Tie TJC37 (4 nail 90-150) or equivalent at 28-7-8 from the left end to connect truss (es) to front face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 3-8=-70, 8-9=-70, 9-10=-70, 11-18=-20
Concentrated Loads (lb)
Vert: 17=-224 (F), 7=-83 (F), 13=-35 (F), 12=-7 (F), 19=-83 (F), 20=-83 (F), 21=-83 (F), 22=-83 (F), 23=-83 (F), 24=-83 (F), 25=-83 (F), 26=-83 (F), 27=-83 (F), 28=-83 (F), 29=-83 (F), 30=-35 (F), 31=-35 (F), 32=-35 (F), 33=-35 (F), 34=-35 (F), 35=-35 (F), 36=-35 (F), 37=-35 (F), 38=-35 (F), 39=-35 (F), 40=-35 (F)



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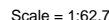
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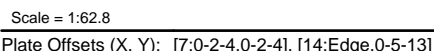


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Chesterfield, MO 63017

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WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:00 Page: 1
ID:jtV340cutan1WX7iQ8o3lz1joh-RfC?PsB70Hg3NSaPanL8w3uITXbGKWRCDoI7J4zJC?f



LUMBER
 TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SPF No.2,
 14-2:2x4 SPF 2100F 1.8E

TOP CHORD Structural wood sheathing directly applied on 3-0-7 oc purlins, except end verticals, and 2-0-0 oc purlins (2-7-11 max.): 3-6.

WEBS	1 Row at midpt	4-13, 5-10
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FORCES (lb) - Maximum Compression/Maximum Tension

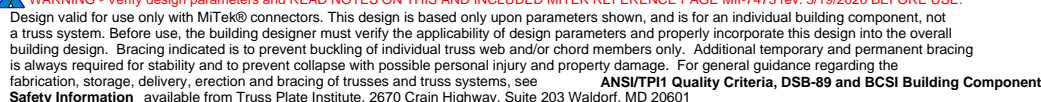
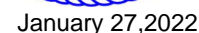
BOT CHORD 13-14=-227/573, 11-13=-466/2876,
10-11=-439/2784. 9-10=-47/107

WEBS 3-13=-31/631, 4-13=-1173/298, 4-11=0/243,
5-11=0/329, 5-10=-1334/314, 6-10=-23/541,
7-10=-191/1622, 2-13=-184/1452

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 14 and 176 lb uplift at joint 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

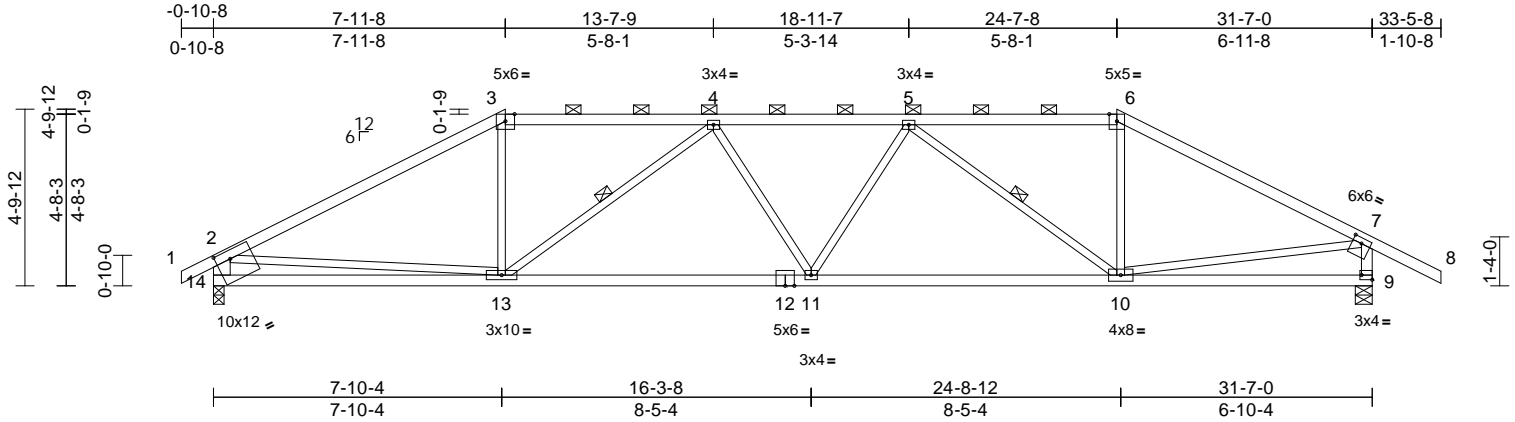


Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	D4	Hip	1	1	Job Reference (optional)	I49889826

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:00
ID:UgWWKZ6IOYjEXMwfA4faZz1jol-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:62.8

Plate Offsets (X, Y): [7:0-3-0,0-1-12], [9:Edge,0-1-8], [14:0-4-12,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.98	Vert(LL)	-0.15	11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.76	Vert(CT)	-0.33	10-11	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.08	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.11	11	>999	240	Weight: 117 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-7:2x4 SPF No.2,
14-2:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-6-0 max.): 3-6.

BOT CHORD Rigid ceiling directly applied or 9-11-7 oc bracing.

WEBS 1 Row at midpt 4-13, 5-10

REACTIONS (lb/size) 9=1549/0-5-8, 14=1478/0-3-8
Max Horiz 14=91 (LC 7)
Max Uplift 9=-149 (LC 4), 14=-137 (LC 5)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/35, 2-3=-2229/267, 3-4=-1866/265,
4-5=-2481/348, 5-6=-1690/248,
6-7=-2012/250, 7-8=0/63, 7-9=-1487/181,
2-14=-1406/177
BOT CHORD 13-14=-312/762, 11-13=-344/2456,
10-11=-323/2402, 9-10=-86/225
WEBS 3-13=-16/568, 4-13=-846/220, 4-11=0/166,
5-11=0/235, 5-10=-971/229, 6-10=-13/515,
7-10=-171/1493, 2-13=-162/1268

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 137 lb uplift at joint 14 and 149 lb uplift at joint 9.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



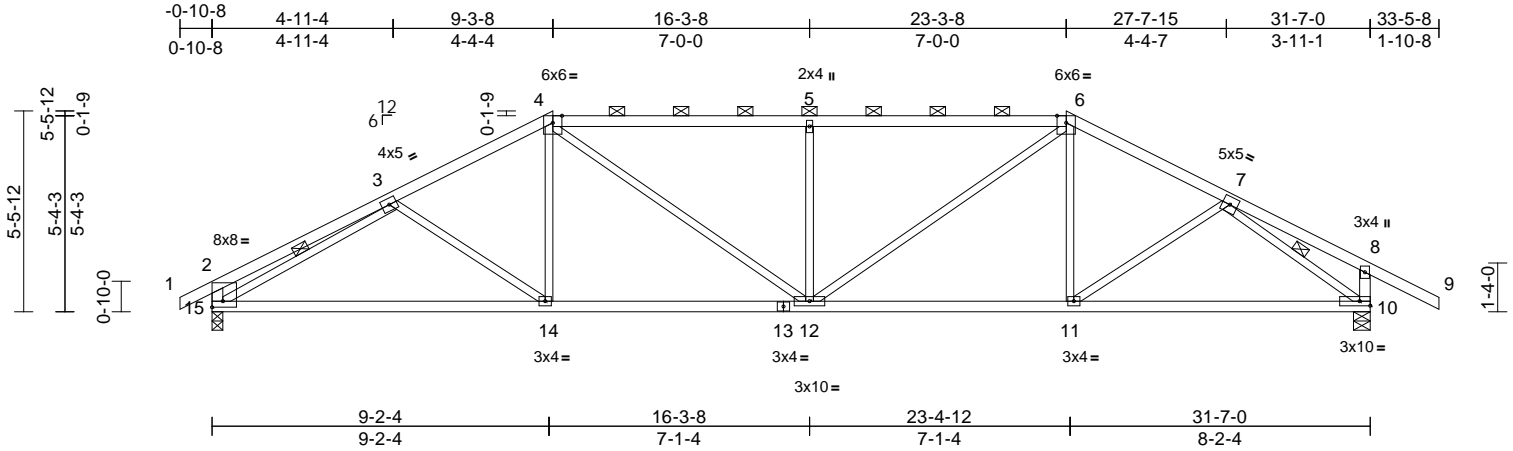
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	D5	Hip	1	1	Job Reference (optional)	I49889827

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:00
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Page: 1



Scale = 1:62.8

Plate Offsets (X, Y): [2:Edge,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.18	14-15	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.37	14-15	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.09	10	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	12-14	>999	240	Weight: 121 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 10-8,15-2:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-10-3 oc purlins, except end verticals, and 2-0-0 oc purlins (2-2-0 max.): 4-6.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 7-10, 3-15

REACTIONS (lb/size) 10=1553/0-5-8, 15=1476/0-3-8
Max Horiz 15=99 (LC 7)
Max Uplift 10=153 (LC 9), 15=141 (LC 8)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-588/84, 3-4=-2087/236, 4-5=-2242/312, 5-6=-2242/312, 6-7=-1932/225, 7-8=-171/39, 8-9=0/63, 8-10=-334/103, 2-15=-487/120
BOT CHORD 14-15=-224/1883, 12-14=-176/1813, 11-12=-112/1679, 10-11=-101/1503
WEBS 3-14=-105/181, 4-14=0/324, 4-12=-173/642, 5-12=-597/239, 6-12=-179/782, 6-11=-16/210, 7-11=-42/325, 7-10=-1830/181, 3-15=-1693/192

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 153 lb uplift at joint 10 and 141 lb uplift at joint 15.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

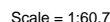
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:01 Page: 1
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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.20	15-17	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.72	Vert(CT)	-0.45	15-17	>825	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.10	12	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.10	13-14	>999	240	Weight: 134 lb	FT = 10%

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed ; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 132 lb uplift at
joint 12 and 155 lb uplift at joint 19.
- 8) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.

LOAD CASE(S) Standard

NOTES

- 1) Unbalanced roof live loads have been considered for this design.



January 27, 2022



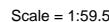
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MH-747.5 (REV. 3/19/2020) BEFORE USE.

Design valid for use only with MiTEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Code**

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Page: 1

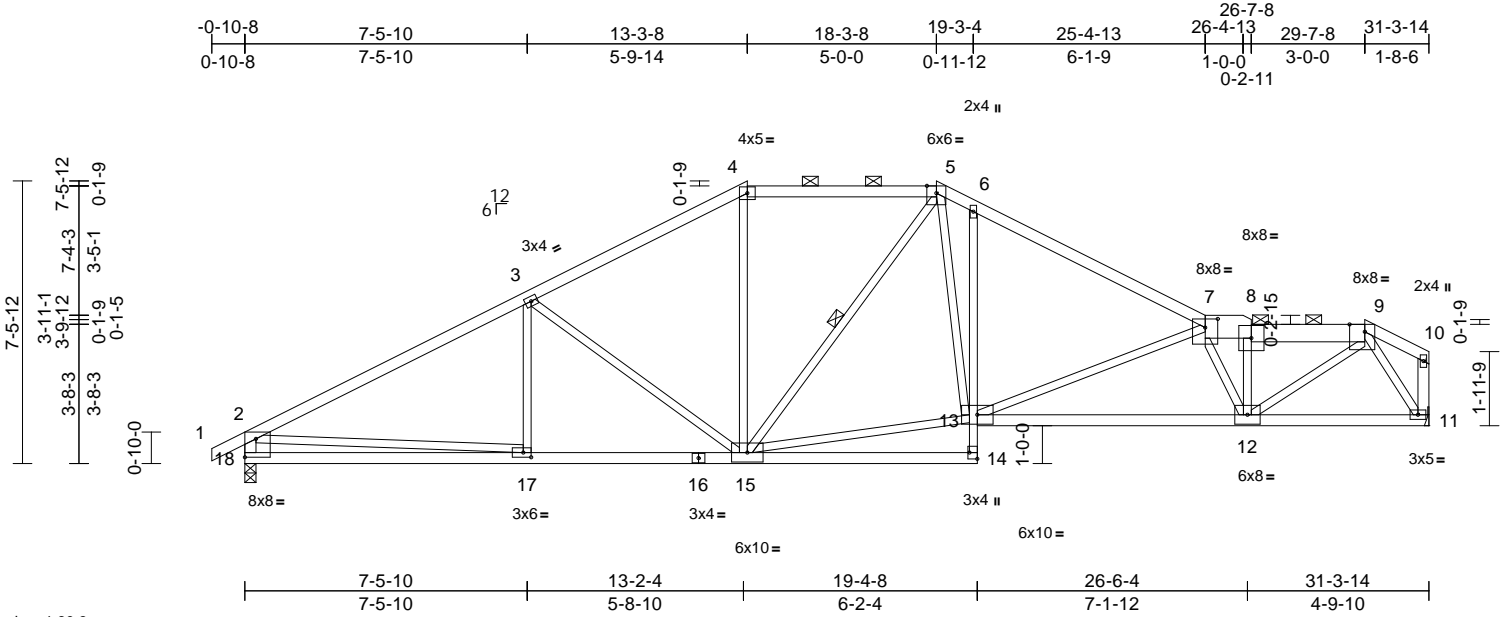
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job B220019	Truss E3	Truss Type Roof Special	Qty 1	Ply 1	Lot 111 RR Job Reference (optional)	I49889830
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Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:60.9

Plate Offsets (X, Y): [7:0-4-0,0-2-12], [9:0-4-13,Edge], [14:Edge,0-2-8], [17:0-2-8,0-1-8], [18:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.67	Vert(LL)	-0.14	12-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.31	12-13	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.87	Horz(CT)	0.09	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.07	12-13	>999	240	Weight: 138 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2 *Except* 7-8:2x8 SP DSS, 8-9:2x6 SPF No.2
BOT CHORD	2x4 SPF No.2 *Except* 14-6:2x3 SPF No.2
WEBS	2x3 SPF No.2 *Except* 18-2:2x4 SPF 2400F 2.0E, 11-10:2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 3-0-8 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-8 max.): 4-5, 7-9
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 5-15

REACTIONS	(lb/size) 11=1395/ Mechanical, 18=1469/0-3-8
	Max Horiz 18=132 (LC 5)
	Max Uplift 11=8 (LC 9), 18=16 (LC 8)

FORCES	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=0/32, 2-3=-2246/20, 3-4=-1782/37, 4-5=-1509/56, 5-6=-2094/86, 6-7=-2148/13, 7-9=-2296/0, 9-10=-67/27, 2-18=-1392/59, 10-11=-69/16
BOT CHORD	17-18=-161/660, 15-17=-29/1901, 14-15=-6/67, 13-14=0/109, 6-13=-338/152, 12-13=-8/2555, 11-12=-13/810
WEBS	3-17=0/199, 3-15=-511/99, 4-15=0/382, 7-13=-774/70, 9-12=0/1886, 2-17=0/1246, 9-11=-1505/16, 5-15=-402/35, 7-12=-728/52, 8-12=-359/38, 5-13=-96/1039, 13-15=0/1619

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- Provide adequate drainage to prevent water ponding.
- The Fabrication Tolerance at joint 2 = 6%
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 18 and 8 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

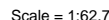
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

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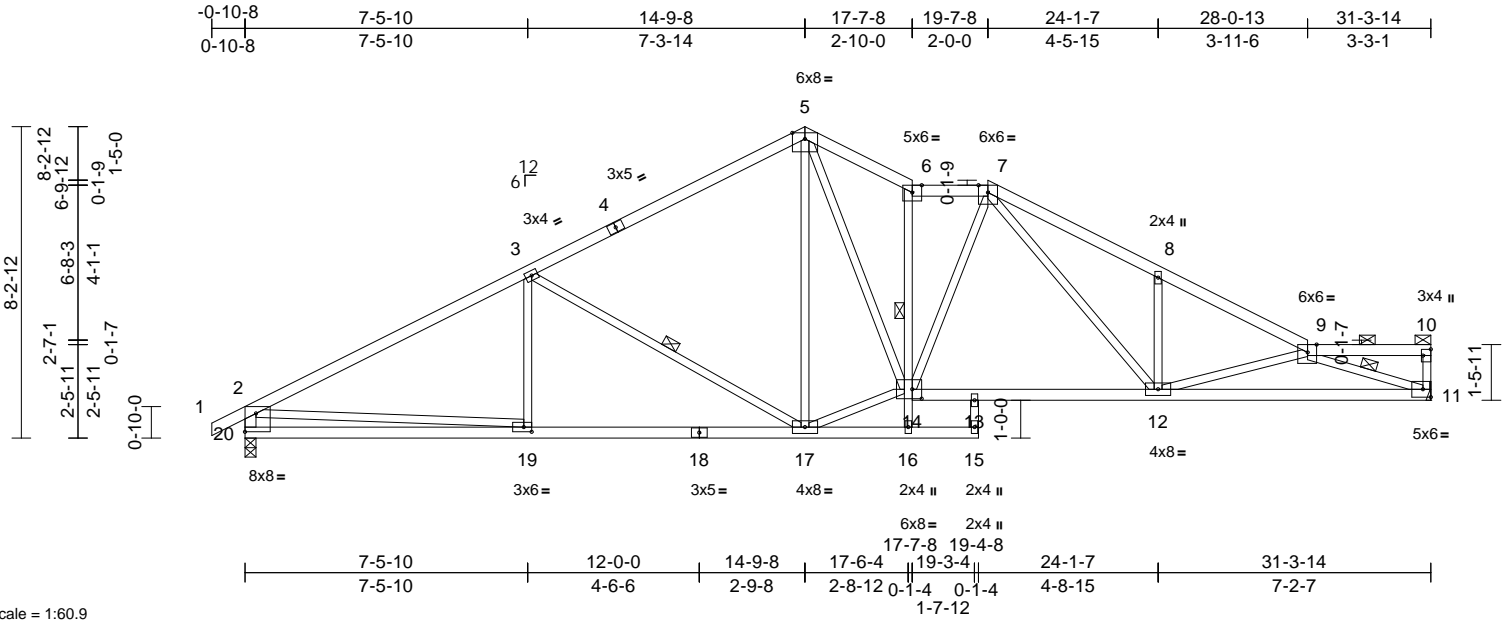
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889832
B220019	E5	Roof Special	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66671,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:03
ID:8Hru4gbV3dqMQS9MO2dkgBz1jam-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC7f

Page: 1



Scale = 1:60.9									
Plate Offsets (X, Y): [9:0-2-14,Edge], [10:Edge,0-2-8], [14:0-3-0,0-3-0], [19:0-2-8,0-1-8], [20:Edge,0-5-13]									
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in (loc)	l/defl	L/d
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.20 12-13	>999	360
TCDL	10.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.39 12-13	>952	240
BCLL	0.0*	Rep Stress Incr	YES	WB	0.67	Horz(CT)	0.11 11	n/a	n/a
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14 12-13	>999	240
					Weight: 133 lb FT = 10%				

LUMBER	
TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 20-2:2x4 SPF 2100F 1.8E
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-7 max.): 6-7, 9-10.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 8-7-14 oc bracing: 11-12.
WEBS	1 Row at midpt 6-16, 9-11, 3-17
REACTIONS (lb/size)	
11=1397/ Mechanical, 20=1471/0-3-8	
Max Horiz 20=154 (LC 5)	
Max Uplift 11=186 (LC 9), 20=190 (LC 8)	
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/32, 2-3=-2268/264, 3-5=-1684/251, 5-6=-2204/352, 6-7=-1955/281, 7-8=-2748/436, 8-9=-2737/331, 9-10=-85/0, 10-11=-136/44, 2-20=-1397/229
BOT CHORD	19-20=-304/599, 17-19=-290/1928, 16-17=0/23, 15-16=0/0, 13-14=-145/1865, 12-13=-145/1865, 11-12=-457/3135
WEBS	13-15=-2/7, 14-16=0/99, 6-14=-1057/204, 7-12=-188/847, 9-11=-3280/488, 2-19=-34/1333, 3-19=0/237, 5-17=-118/104, 14-17=-96/1453, 3-17=-659/234, 8-12=-288/181, 9-12=-765/201, 5-14=-247/1472, 7-14=-47/308

NOTES
1) Unbalanced roof live loads have been considered for this design.

- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Refer to girder(s) for truss to truss connections.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 186 lb uplift at joint 11 and 190 lb uplift at joint 20.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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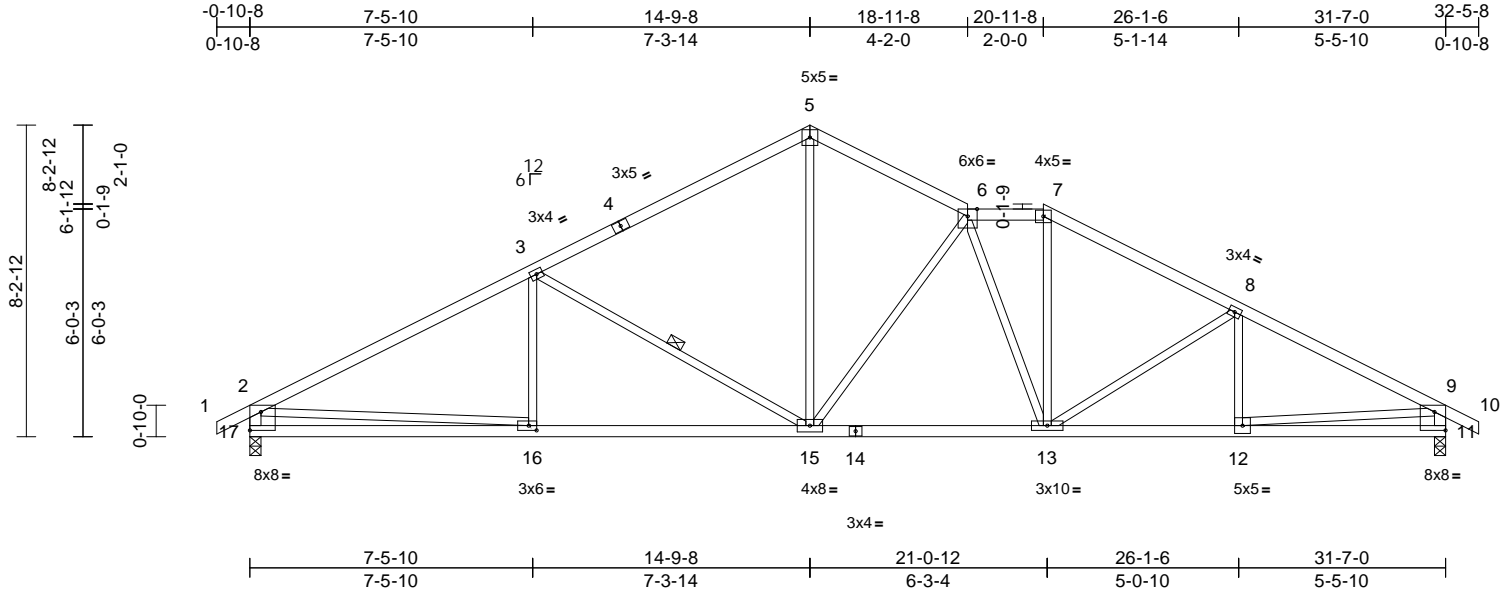
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G1	Roof Special	1	1	Job Reference (optional)	I49889833

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:03
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Page: 1



Scale = 1:60.9

Plate Offsets (X, Y): [11:Edge,0-5-13], [16:0-2-8,0-1-8], [17:Edge,0-5-13]												
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.75	Vert(LL)	-0.12	15-16	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.59	Vert(CT)	-0.26	15-16	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.89	Horz(CT)	0.07	11	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	15-16	>999	240	Weight: 127 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 17-2:2x4 SPF 2100F
1.8E, 11-9:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-4-12 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 3-15

REACTIONS (lb/size) 11=1480/0-3-8, 17=1480/0-3-8
Max Horiz 17=124 (LC 7)
Max Uplift 11=209 (LC 9), 17=191 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2285/267, 3-5=-1702/259, 5-6=-1623/251, 6-7=-1707/292, 7-8=-1997/288, 8-9=-2264/301, 9-10=0/32, 2-17=-1405/230, 9-11=-1415/236
BOT CHORD 16-17=-271/602, 15-16=-259/1942, 13-15=-80/1819, 12-13=-195/1947, 11-12=-89/398
WEBS 7-13=-36/570, 8-13=-314/146, 8-12=-88/84, 2-16=-35/1345, 9-12=-106/1559, 5-15=-115/1020, 6-15=-707/220, 3-15=-659/237, 3-16=0/231, 6-13=-326/93

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 17 and 209 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

- NOTES**
- Unbalanced roof live loads have been considered for this design.
 - Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
 - Provide adequate drainage to prevent water ponding.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

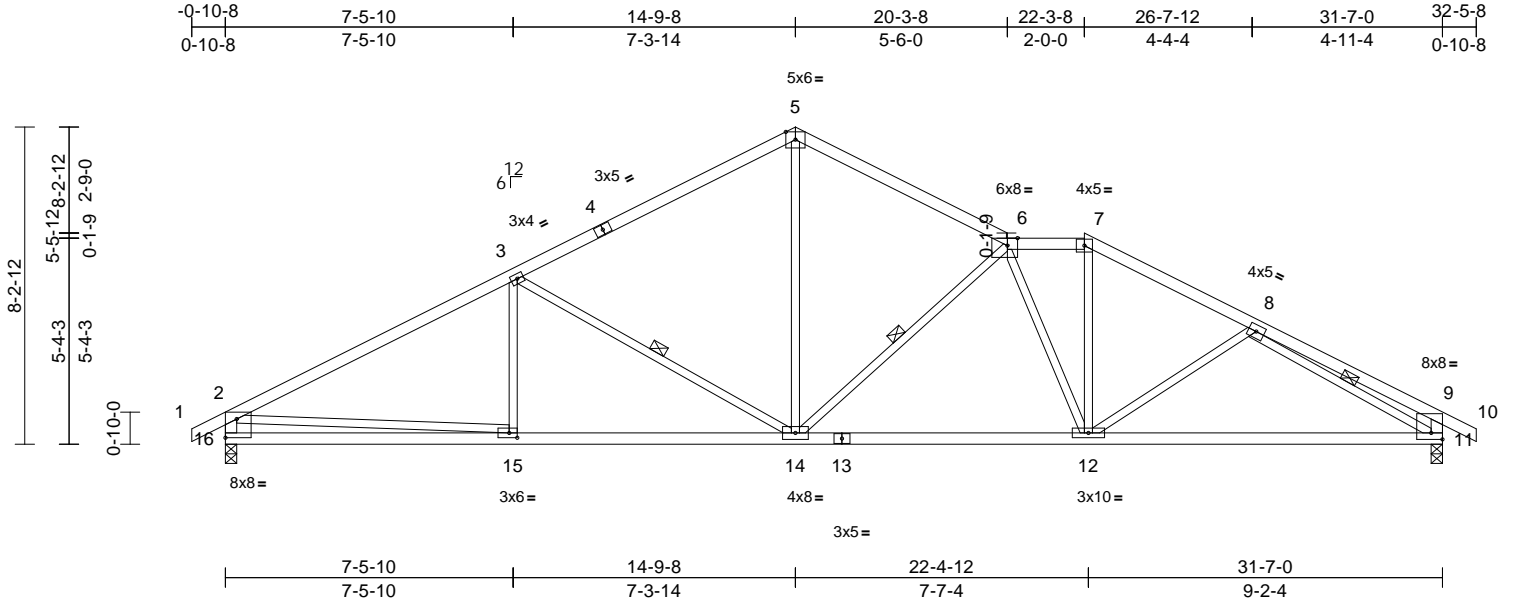
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G2	Roof Special	1	1	Job Reference (optional)	I49889834

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:03

Page: 1

ID:CoP7dh?uWaamzQbrl6DAwsz1jYx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWRCDoi7J4zJC?i



Scale = 1:59.8

Plate Offsets (X, Y): [6:0-3-3,Edge], [9:Edge,0-2-0], [15:0-2-8,0-1-8], [16:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.74	Vert(LL)	-0.17	11-12	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.37	11-12	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.55	Horz(CT)	0.08	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	12-14	>999	240	Weight: 124 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x3 SPF No.2 *Except* 16-2,11-9:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-3-9 max.): 6-7.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-14, 6-14, 8-11

REACTIONS (lb/size) 11=1480/0-3-8, 16=1480/0-3-8
 Max Horiz 16=124 (LC 7)
 Max Uplift 11=209 (LC 9), 16=191 (LC 8)

FORCES

(lb) - Maximum Compression/Maximum Tension
 TOP CHORD 1-2=0/32, 2-3=-2284/267, 3-5=-1703/260, 5-6=-1664/249, 6-7=-1799/283, 7-8=-2088/282, 8-9=-592/104, 9-10=0/32, 2-16=-1405/230, 9-11=-487/131
 BOT CHORD 15-16=-271/605, 14-15=-259/1941, 12-14=-116/1979, 11-12=-228/1892
 WEBS 3-15=0/230, 3-14=-659/237, 5-14=-91/984, 6-14=-775/230, 6-12=-474/120, 7-12=-47/663, 8-12=-140/166, 2-15=-32/1340, 8-11=-1698/239

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 16 and 209 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



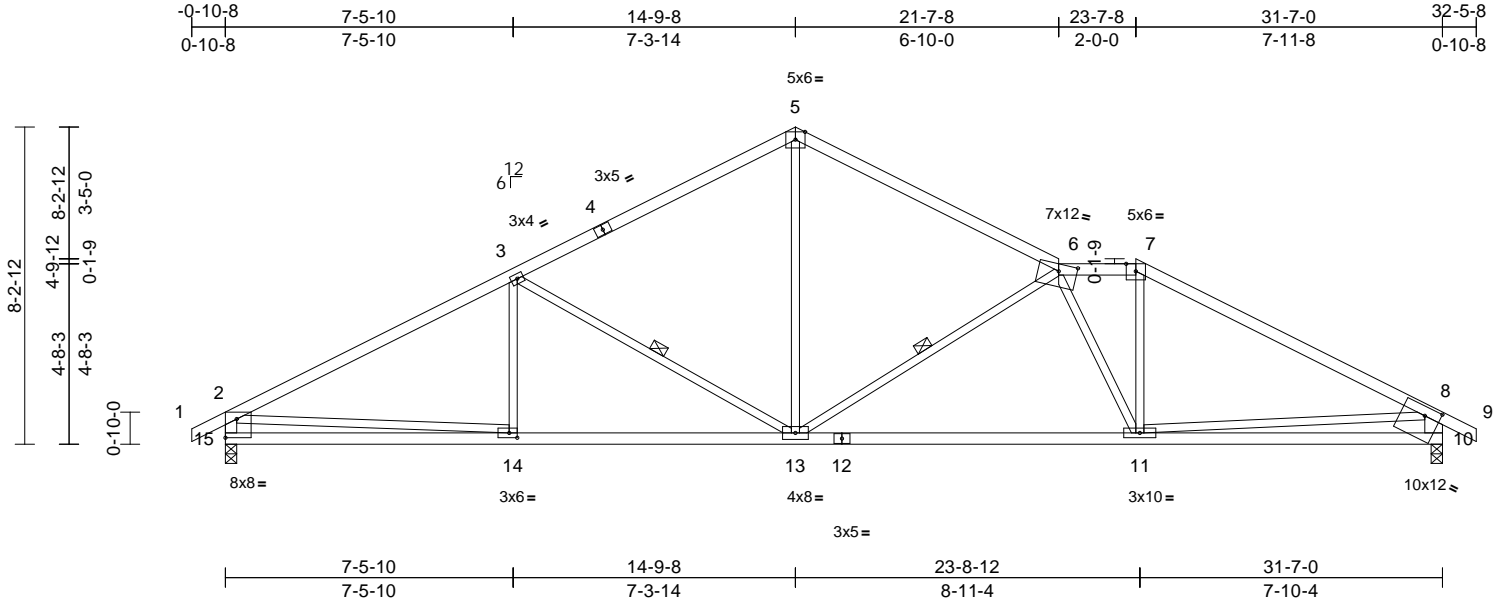
16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G3	Roof Special	1	1	Job Reference (optional)	I49889835

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:04
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Page: 1



Scale = 1:59.8

Plate Offsets (X, Y): [6:0-5-10,0-2-4], [10:0-4-12,0-2-12], [14:0-2-8,0-1-8], [15:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.15	11-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.36	11-13	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.54	Horz(CT)	0.07	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.08	13-14	>999	240	Weight: 121 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 15-2:2x4 SPF 2100F
1.8E, 10-8:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (4-0-1 max.): 6-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-13, 6-13

REACTIONS (lb/size) 10=1482/0-3-8, 15=1476/0-3-8
Max Horiz 15=125 (LC 7)
Max Uplift 10=210 (LC 9), 15=191 (LC 8)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/32, 2-3=-2272/268, 3-5=-1702/257, 5-6=-1688/242, 6-7=-1866/293, 7-8=-2235/269, 8-9=0/35, 2-15=-1400/231, 8-10=-1411/250
BOT CHORD 14-15=-269/612, 13-14=-259/1930, 11-13=-166/2126, 10-11=-277/767
WEBS 3-14=0/217, 3-13=-652/240, 5-13=-62/937, 6-13=-852/261, 6-11=-608/122, 7-11=-6/626, 2-14=-30/1322, 8-11=0/1117

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 15 and 210 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

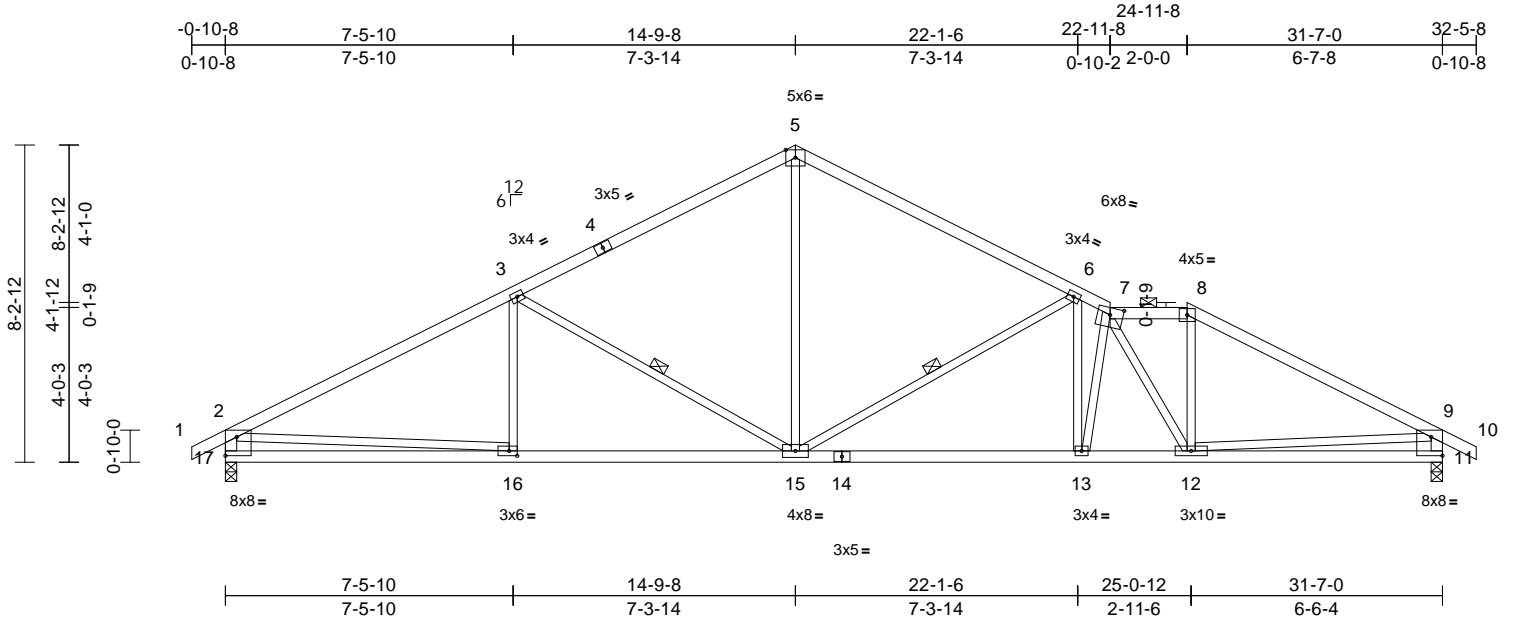
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G4	Roof Special	1	1	Job Reference (optional)	I49889836

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:04

Page: 1

ID: djjO6n45ncfGWyKmvbopUQz1jXZ-RfC?PsB70Hq3NSgPqnL8w3uTXbGKwRCDoi7J4zJC7f



Scale = 1:59.8

Plate Offsets (X, Y): [7:0-4-0,0-2-4], [11:Edge,0-5-13], [16:0-2-8,0-1-8], [17:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.73	Vert(LL)	-0.14	13-15	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.70	Vert(CT)	-0.30	13-15	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.07	11	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	13-15	>999	240	Weight: 125 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
 BOT CHORD 2x4 SPF No.2
 WEBS 2x3 SPF No.2 *Except* 17-2:2x4 SPF 2400F
 2.0E, 11-9:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-0-11 max.): 7-8.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

WEBS 1 Row at midpt 3-15, 6-15

REACTIONS (lb/size) 11=1480/0-3-8, 17=1480/0-3-8
 Max Horiz 17=125 (LC 7)
 Max Uplift 11=209 (LC 9), 17=191 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/32, 2-3=-2282/268, 3-5=-1707/260, 5-6=-1708/245, 6-7=-2415/268, 7-8=-1917/302, 8-9=-2271/289, 9-10=0/32, 2-17=-1404/231, 9-11=-1407/246

BOT CHORD 16-17=-272/613, 15-16=-259/1939, 13-15=-197/2242, 12-13=-181/2311, 11-12=-185/610

WEBS 3-16=0/223, 3-15=-655/239, 5-15=-71/946, 6-15=-957/287, 7-12=-801/69, 8-12=-5/651, 2-16=-30/1330, 9-12=-6/1330, 6-13=0/515, 7-13=-318/3

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 191 lb uplift at joint 17 and 209 lb uplift at joint 11.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G5	Roof Special	1	1	Job Reference (optional)	I49889837

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:04

Page: 1

ID:M440JW2KPIB8a?H5yKD1boz1jV0-RfC?PsB70Hq3NSgPqnL8w3uTXbGKWrCDoi7J4zJC?i

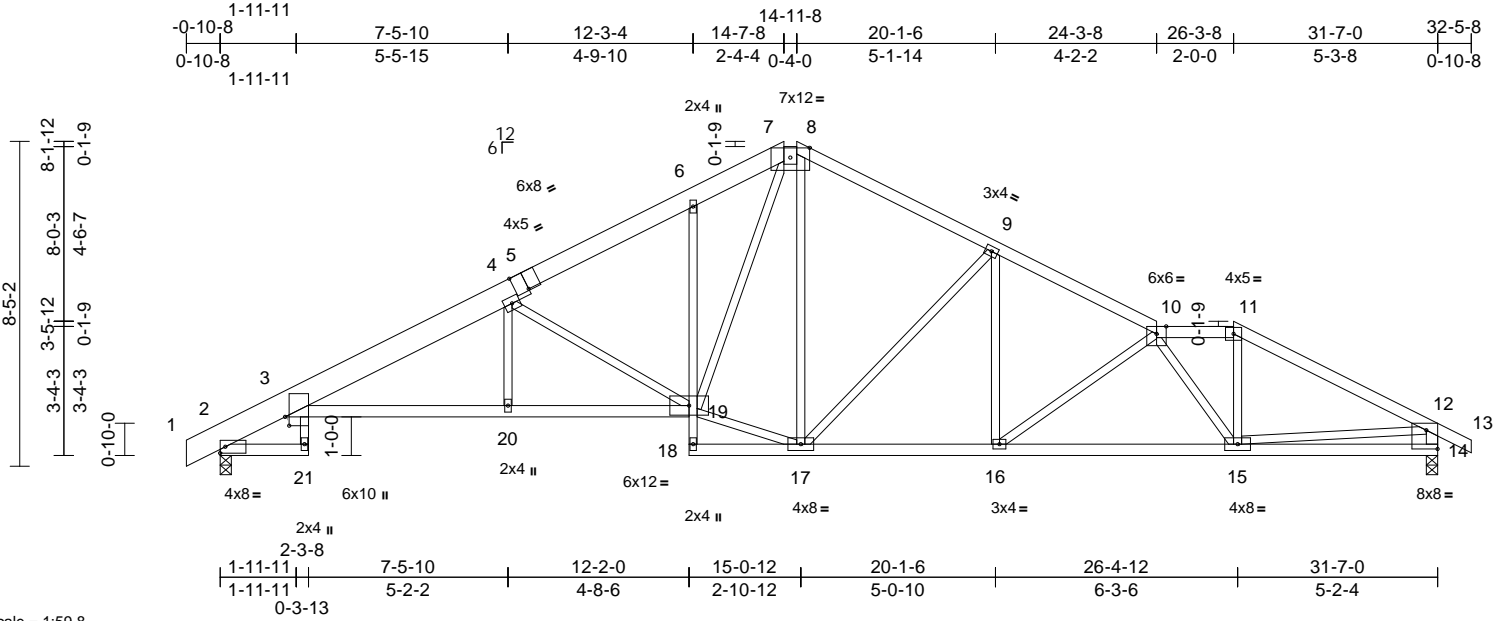


Plate Offsets (X, Y): [3:0-2-12,0-1-5], [5:0-4-0,Edge], [8:0-6-0,0-3-0], [14:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.52	Vert(LL)	-0.19	19-20	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.84	Vert(CT)	-0.36	19-20	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.25	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.14	19-20	>999	240	Weight: 153 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS, 7-8,5-7:2x6 SPF No.2
 BOT CHORD 2x4 SPF No.2 *Except* 6-18:2x3 SPF No.2
 WEBS 2x3 SPF No.2 *Except* 14-12:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-6-1 oc purlins, except end verticals, and 2-0-0 oc purlins (4-2-3 max.): 7-8, 10-11.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-21.

REACTIONS

(lb/size) 2=1492/0-3-8, 14=1480/0-3-8
 Max Horiz 2=132 (LC 8)
 Max Uplift 2=183 (LC 8), 14=208 (LC 9)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/6, 2-3=-863/164, 3-4=-2925/340, 4-6=-2199/276, 6-7=-2088/338, 7-8=-1378/266, 8-9=-1685/248, 9-10=-2250/298, 10-11=-1931/288, 11-12=-2271/282, 12-13=0/32, 12-14=-1423/231
 BOT CHORD 2-21=-27/0, 3-20=-342/2677, 19-20=-340/2677, 18-19=0/36, 6-19=-172/119, 17-18=-13/51, 16-17=-107/1968, 15-16=-240/2470, 14-15=-121/420
 WEBS 3-21=0/55, 4-19=-966/245, 7-19=-243/1247, 8-17=-124/251, 9-17=-757/217, 10-15=-962/115, 11-15=-13/719, 12-15=-55/1546, 9-16=-28/491, 10-16=-626/165, 4-20=0/224, 17-19=-42/1478

NOTES

1) Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 183 lb uplift at joint 2 and 208 lb uplift at joint 14.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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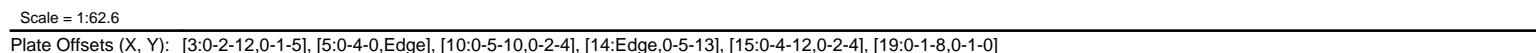
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
 Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:05 Page: 1
ID: WSrcGbvRHIOtL1AP8gRr03z1jQ1-RfC?PsB70Hq3NSqPanL8w3uITXbGKWrcDoI7J4zJC?c



NUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP SS,
5-6:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 19-8,9-16:2x3 SPF
No.2
WEBS 2x3 SPF No.2 *Except*
23-24,15-17,14-12,19-25,26-27:2x4 SPF
No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or
2-2-0 oc purlins, except end verticals, and
2-0-0 oc purlins (4-1-8 max.): 6-7, 10-11.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing, Except:
6-0-0 oc bracing: 2-22
2-2-0 oc bracing: 17-18.
WEBS 1 Row at midpt 4-20

REACTIONS (lb/size) 2=1492/0-3-8, 14=1480/0-3-8
Max Horiz 2=121 (LC 12)
Max Uplift 2=173 (LC 8), 14=198 (LC 9)

FORCES (lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/6, 2-3=-863/147, 3-4=-2920/317,
4-6=-2083/217, 6-7=-1789/233,
7-8=-2592/297, 8-9=-2694/262,
9-10=-4022/380, 10-11=-2024/260,
11-12=-2241/257, 12-13=0/32,
12-14=-1430/209
BOT CHORD 2-22=-27/0, 3-21=-311/2672,
20-21=-309/2672, 19-20=-4/81, 18-19=0/58,
8-18=-36/63, 17-18=-190/3543, 16-17=0/126,
9-17=-78/1339, 15-16=0/66, 14-15=-73/297
WEBS 3-22=0/55, 4-20=-1018/279, 6-20=-34/566,
7-20=-622/80, 18-20=-34/1993,
7-18=-182/1549, 9-18=-1593/255,
15-17=-377/3596, 10-17=-55/174,
10-15=-2503/311, 11-15=-377/80,
12-15=-99/1671, 4-21=0/233

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone, cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 173 lb uplift at joint 2 and 198 lb uplift at joint 14.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord

LOAD CASE(S) Standard



January 27, 2022



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16023 Swingley Ridge Rd
Chesterfield, MO 63017

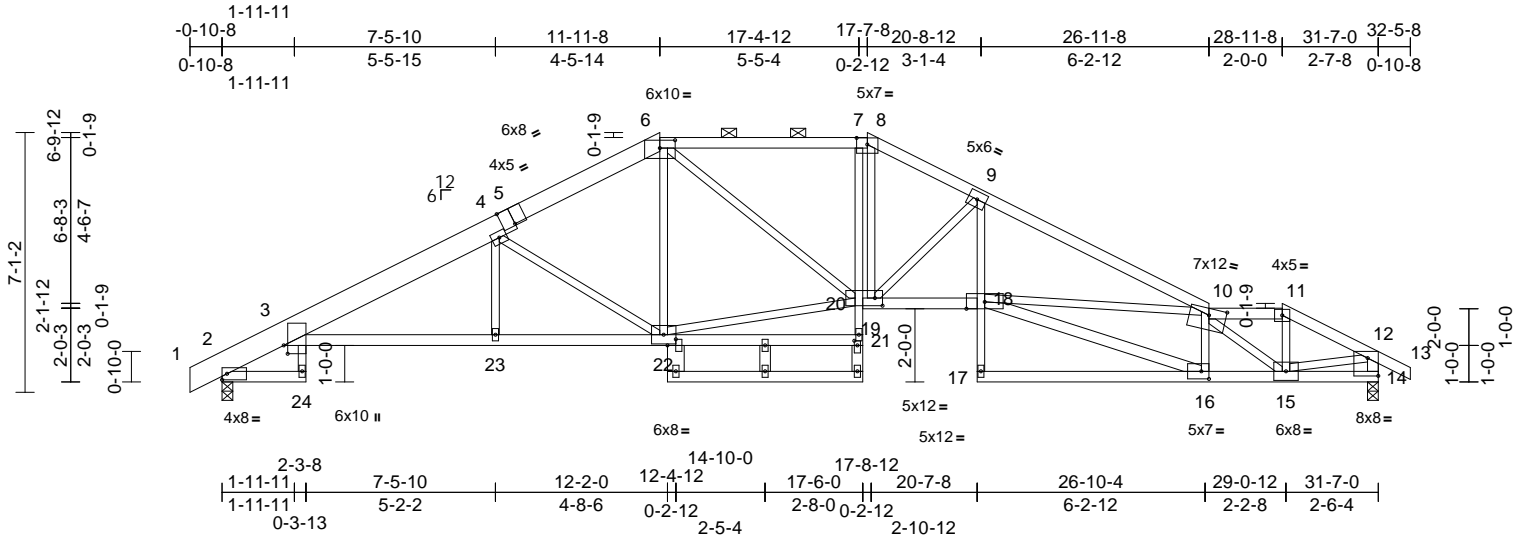
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	G7	Roof Special	1	1	Job Reference (optional)	I49889839

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:05

Page: 1

ID: Vz_TTjrkZKmrzWsgan3hbz1jKy-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?r



Scale = 1:62.9

[3:0-2-12,0-1-5], [5:0-4-0,Edge], [6:0-5-0,0-2-9], [8:0-3-8,0-2-3], [10:0-5-10,0-2-4], [14:Edge,0-5-13], [16:0-2-8,0-2-8], [20:0-2-8,0-2-8], [21:0-1-8,0-1-0],

Plate Offsets (X, Y): [22:0-2-0,0-2-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.28	18-19	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.93	Vert(CT)	-0.51	18-19	>737	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.36	14	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.17	18-19	>999	240	Weight: 164 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS,
8-10:2x4 SPF 2100F 1.8E, 5-6:2x6 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 21-7,9-17:2x3 SPF
No.2
WEBS 2x3 SPF No.2 *Except* 22-25:2x6 SPF No.2,
16-18,14-12,21-26,27-28:2x4 SPF No.2

WEBS

3-24=0/55, 4-22=-863/230, 20-22=-66/1830,
9-19=-1486/252, 16-18=-306/3138,
10-18=-15/555, 10-16=-941/178,
10-15=-1792/171, 11-15=-677/52,
12-15=-148/1609, 6-22=-52/295, 4-23=0/196,
6-20=-87/760, 8-19=-109/1201

NOTES

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 161 lb uplift at joint 2 and 189 lb uplift at joint 14.
- 8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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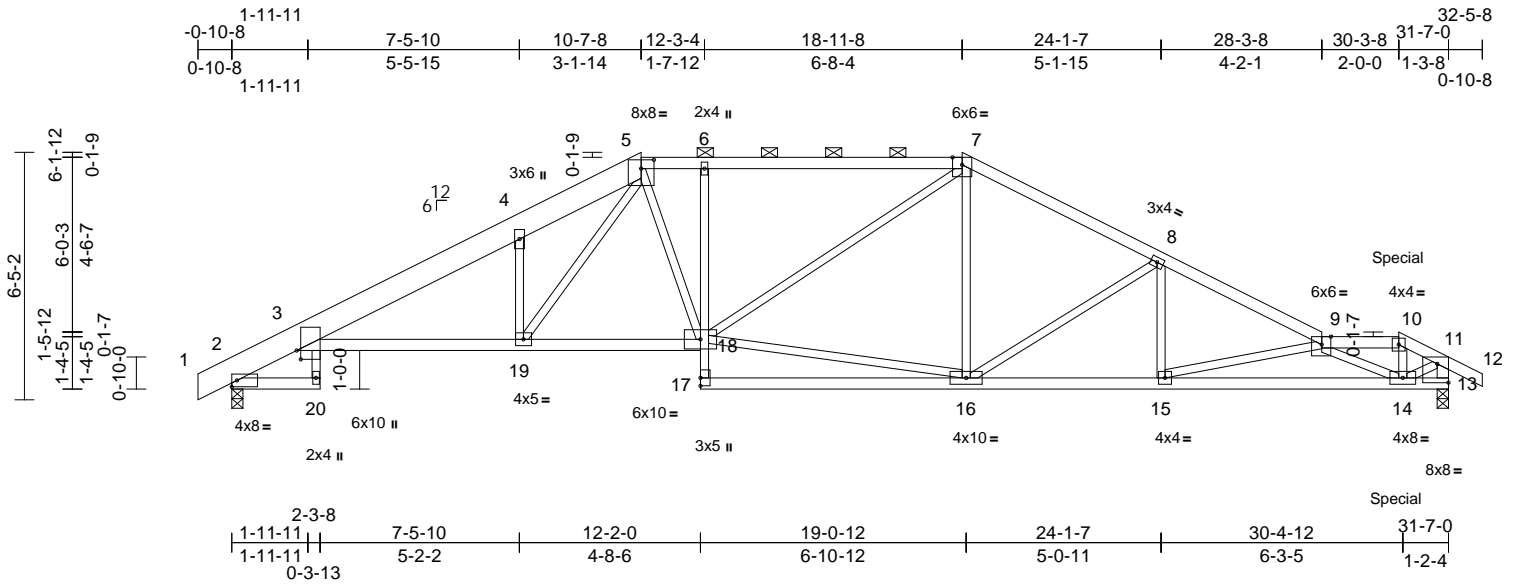
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889840
B220019	G8	Roof Special Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66671,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:06
ID:Pj1gZ196lFOgFKcZNbirtx1jHz-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWCDoi7J4zJC?f

Page: 1



Scale = 1:59.8

Plate Offsets (X, Y): [3:0-2-12,0-1-5], [5:0-4-0,0-2-12], [9:0-2-14,Edge], [13:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.21	6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.92	Vert(CT)	-0.39	16-17	>974	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.63	Horz(CT)	0.26	13	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	18-19	>999	240	Weight: 150 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2 *Except* 1-5:2x8 SP DSS
BOT CHORD 2x4 SPF No.2 *Except* 6-17:2x3 SPF No.2,
17-13:2x4 SPF 2100F 1.8E
WEBS 2x3 SPF No.2 *Except* 13-11:2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or
3-2-10 oc purlins, except end verticals, and
2-0-0 oc purlins (2-7-11 max.): 5-7, 9-10.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing, Except:
6-0-0 oc bracing: 2-20.

REACTIONS (lb/size) 2=1489/0-3-8, 13=1399/0-3-8
Max Horiz 2=97 (LC 8)
Max Uplift 2=150 (LC 8), 13=205 (LC 9)

FORCES (lb) - Maximum Compression/Maximum
Tension
TOP CHORD 1-2=0/6, 2-3=-861/113, 3-4=-2954/239,
4-5=-3141/375, 5-6=-2243/203,
6-7=-2245/209, 7-8=-2145/211,
8-9=-2784/285, 9-10=-1192/137,
10-11=-1383/145, 11-12=0/32,
11-13=-1350/157
BOT CHORD 2-20=-27/0, 3-19=-210/2711,
18-19=-112/2067, 17-18=0/127,
6-18=-458/202, 16-17=0/118,
15-16=-178/2447, 14-15=-380/3364,
13-14=-15/85
WEBS 3-20=0/55, 4-19=-844/273, 16-18=-61/1749,
7-18=-122/605, 7-16=-32/339,
8-16=-706/208, 8-15=0/362, 9-15=-949/209,
9-14=-2472/319, 10-14=-69/581,
11-14=-106/1330, 5-19=-238/1135,
5-18=-154/638

NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 150 lb uplift at
joint 2 and 205 lb uplift at joint 13.
- This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size
or the orientation of the purlin along the top and/or
bottom chord.
- Hanger(s) or other connection device(s) shall be
provided sufficient to support concentrated load(s) 126
lb down and 235 lb up at 30-3-8 on top chord, and 17 lb
down and 65 lb up at 30-2-6 on bottom chord. The
design/selection of such connection device(s) is the
responsibility of others.
- In the LOAD CASE(S) section, loads applied to the face
of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15,
Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-5=-70, 5-7=-70, 7-9=-70, 9-10=-70,
10-11=-70, 11-12=-70, 2-20=-20, 3-18=-20,
13-17=-20
Concentrated Loads (lb)
Vert: 10=58 (B), 14=26 (B)



January 27, 2022

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ANSI/TPI Quality Criteria, DSB-89 and BCSI Building Component



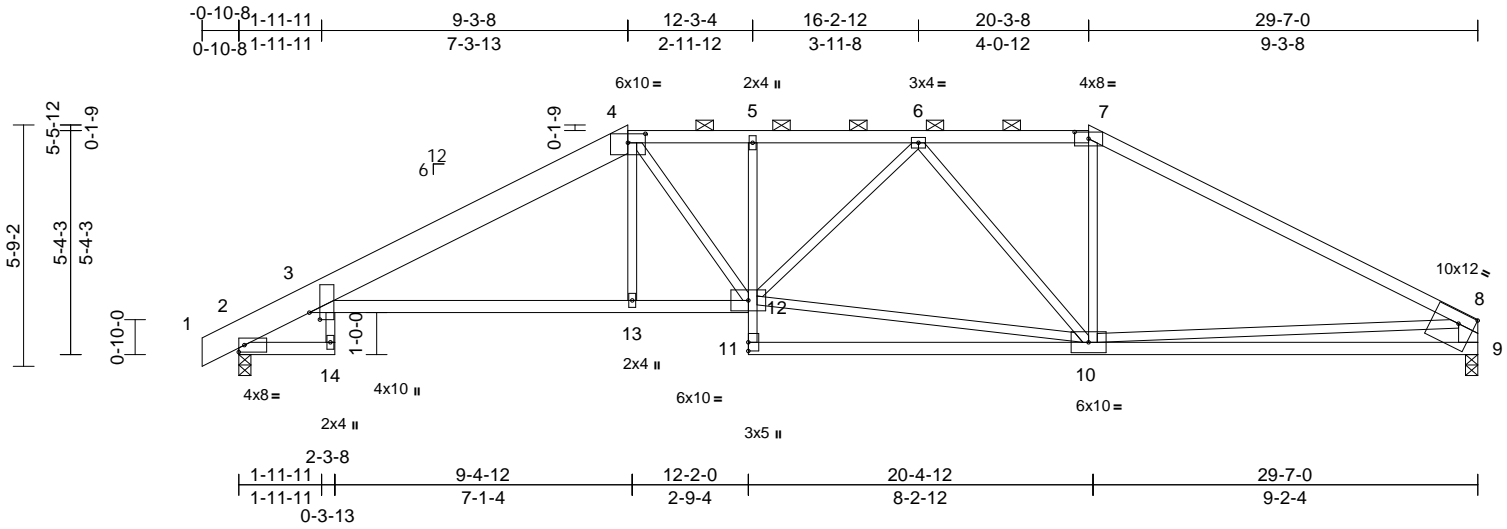
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	H1	Hip	1	1	Job Reference (optional)	I49889841

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:07
ID: ?DSFCFxtSDaRYJ43gLN53az1jGy-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRCDoi7J4zJC?i

Page: 1



Scale = 1:55

Plate Offsets (X, Y): [3:0-2-0,0-3-1], [4:0-5-0,0-2-9], [7:0-4-0,0-1-15], [8:Edge,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.88	Vert(LL)	-0.19	3-13	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.79	Vert(CT)	-0.42	3-13	>830	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.26	9	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.13	3-13	>999	240	Weight: 134 lb	FT = 10%

LUMBER

TOP CHORD 2x8 SP DSS *Except* 4-7:2x4 SPF No.2, 7-8:2x4 SPF 2400F 2.0E
BOT CHORD 2x4 SPF No.2 *Except* 5-11:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 9-8:2x6 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (3-7-4 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-14.

REACTIONS (lb/size) 2=1399/0-3-8, 9=1314/0-3-8
Max Horiz 2=94 (LC 12)
Max Uplift 2=133 (LC 8), 9=115 (LC 9)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-805/75, 3-4=-2375/206, 4-5=-2284/266, 5-6=-2276/266, 6-7=-1680/185, 7-8=-2014/172, 8-9=-1227/165
BOT CHORD 2-14=-26/0, 3-13=-187/2122, 12-13=-184/2125, 11-12=0/133, 5-12=-210/106, 10-11=0/194, 9-10=-200/704
WEBS 3-14=0/54, 4-13=0/319, 4-12=-149/399, 10-12=-216/1884, 6-12=-33/345, 6-10=-727/195, 7-10=0/475, 8-10=-111/1025

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 133 lb uplift at joint 2 and 115 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

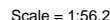
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:07 Page: 1
ID:0mW6tLCRatddXhbaU 3Siz1jGQ-RfC?PsB70Ha3NSaPanL8w3uITXbGKWrCDoi7J4zJC?f



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.12	11	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.56	Vert(CT)	-0.23	9-11	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.39	Horz(CT)	0.06	8	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.09	11	>999	240	Weight: 109 lb	FT = 10%

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x3 SPF No.2 *Except* 13-2,8-6:2x6 SPF No.2

TOP CHORD	Structural wood sheathing directly applied, except end verticals, and 2-0-0 oc purlins (2-10-6 max.): 3-5.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 8=1388/0-3-8, 13=1388/0-3-8
 Max Horiz 13=80 (LC 7)
 Max Uplift 8=-126 (LC 9), 13=-126 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/35, 2-3=-2053/224, 3-4=-2251/317,
4-5=-2251/317, 5-6=-2053/224, 6-7=0/35,
2-13=-1314/170. 6-8=-1314/170

BOT CHORD 12-13=-315/745, 11-12=-180/1717,
9-11=-119/1717, 8-9=-263/745

WEBS 3-12=0/245, 3-11=-178/749, 4-11=-576/233,
5-11=-177/749, 5-9=0/245, 2-12=-145/1138,
6-9=-149/1138

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- 5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 126 lb uplift at joint 13 and 126 lb uplift at joint 8.
- 7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 8) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022



WARNING – Velly design parameters are listed below and included with the key reference to AISC M14-15 16f, 17f, 18f, 19f, 20f, 21f, 22f, 23f, 24f, 25f, 26f, 27f, 28f, 29f, 30f, 31f, 32f, 33f, 34f, 35f, 36f, 37f, 38f, 39f, 40f, 41f, 42f, 43f, 44f, 45f, 46f, 47f, 48f, 49f, 50f, 51f, 52f, 53f, 54f, 55f, 56f, 57f, 58f, 59f, 60f, 61f, 62f, 63f, 64f, 65f, 66f, 67f, 68f, 69f, 70f, 71f, 72f, 73f, 74f, 75f, 76f, 77f, 78f, 79f, 80f, 81f, 82f, 83f, 84f, 85f, 86f, 87f, 88f, 89f, 90f, 91f, 92f, 93f, 94f, 95f, 96f, 97f, 98f, 99f, 100f, 101f, 102f, 103f, 104f, 105f, 106f, 107f, 108f, 109f, 110f, 111f, 112f, 113f, 114f, 115f, 116f, 117f, 118f, 119f, 120f, 121f, 122f, 123f, 124f, 125f, 126f, 127f, 128f, 129f, 130f, 131f, 132f, 133f, 134f, 135f, 136f, 137f, 138f, 139f, 140f, 141f, 142f, 143f, 144f, 145f, 146f, 147f, 148f, 149f, 150f, 151f, 152f, 153f, 154f, 155f, 156f, 157f, 158f, 159f, 160f, 161f, 162f, 163f, 164f, 165f, 166f, 167f, 168f, 169f, 170f, 171f, 172f, 173f, 174f, 175f, 176f, 177f, 178f, 179f, 180f, 181f, 182f, 183f, 184f, 185f, 186f, 187f, 188f, 189f, 190f, 191f, 192f, 193f, 194f, 195f, 196f, 197f, 198f, 199f, 200f, 201f, 202f, 203f, 204f, 205f, 206f, 207f, 208f, 209f, 210f, 211f, 212f, 213f, 214f, 215f, 216f, 217f, 218f, 219f, 220f, 221f, 222f, 223f, 224f, 225f, 226f, 227f, 228f, 229f, 230f, 231f, 232f, 233f, 234f, 235f, 236f, 237f, 238f, 239f, 240f, 241f, 242f, 243f, 244f, 245f, 246f, 247f, 248f, 249f, 250f, 251f, 252f, 253f, 254f, 255f, 256f, 257f, 258f, 259f, 260f, 261f, 262f, 263f, 264f, 265f, 266f, 267f, 268f, 269f, 270f, 271f, 272f, 273f, 274f, 275f, 276f, 277f, 278f, 279f, 280f, 281f, 282f, 283f, 284f, 285f, 286f, 287f, 288f, 289f, 290f, 291f, 292f, 293f, 294f, 295f, 296f, 297f, 298f, 299f, 300f, 301f, 302f, 303f, 304f, 305f, 306f, 307f, 308f, 309f, 310f, 311f, 312f, 313f, 314f, 315f, 316f, 317f, 318f, 319f, 320f, 321f, 322f, 323f, 324f, 325f, 326f, 327f, 328f, 329f, 330f, 331f, 332f, 333f, 334f, 335f, 336f, 337f, 338f, 339f, 340f, 341f, 342f, 343f, 344f, 345f, 346f, 347f, 348f, 349f, 350f, 351f, 352f, 353f, 354f, 355f, 356f, 357f, 358f, 359f, 360f, 361f, 362f, 363f, 364f, 365f, 366f, 367f, 368f, 369f, 370f, 371f, 372f, 373f, 374f, 375f, 376f, 377f, 378f, 379f, 380f, 381f, 382f, 383f, 384f, 385f, 386f, 387f, 388f, 389f, 390f, 391f, 392f, 393f, 394f, 395f, 396f, 397f, 398f, 399f, 400f, 401f, 402f, 403f, 404f, 405f, 406f, 407f, 408f, 409f, 410f, 411f, 412f, 413f, 414f, 415f, 416f, 417f, 418f, 419f, 420f, 421f, 422f, 423f, 424f, 425f, 426f, 427f, 428f, 429f, 430f, 431f, 432f, 433f, 434f, 435f, 436f, 437f, 438f, 439f, 440f, 441f, 442f, 443f, 444f, 445f, 446f, 447f, 448f, 449f, 450f, 451f, 452f, 453f, 454f, 455f, 456f, 457f, 458f, 459f, 460f, 461f, 462f, 463f, 464f, 465f, 466f, 467f, 468f, 469f, 470f, 471f, 472f, 473f, 474f, 475f, 476f, 477f, 478f, 479f, 480f, 481f, 482f, 483f, 484f, 485f, 486f, 487f, 488f, 489f, 490f, 491f, 492f, 493f, 494f, 495f, 496f, 497f, 498f, 499f, 500f, 501f, 502f, 503f, 504f, 505f, 506f, 507f, 508f, 509f, 510f, 511f, 512f, 513f, 514f, 515f, 516f, 517f, 518f, 519f, 520f, 521f, 522f, 523f, 524f, 525f, 526f, 527f, 528f, 529f, 530f, 531f, 532f, 533f, 534f, 535f, 536f, 537f, 538f, 539f, 540f, 541f, 542f, 543f, 544f, 545f, 546f, 547f, 548f, 549f, 550f, 551f, 552f, 553f, 554f, 555f, 556f, 557f, 558f, 559f, 560f, 561f, 562f, 563f, 564f, 565f, 566f, 567f, 568f, 569f, 570f, 571f, 572f, 573f, 574f, 575f, 576f, 577f, 578f, 579f, 580f, 581f, 582f, 583f, 584f, 585f, 586f, 587f, 588f, 589f, 590f, 591f, 592f, 593f, 594f, 595f, 596f, 597f, 598f, 599f, 600f, 601f, 602f, 603f, 604f, 605f, 606f, 607f, 608f, 609f, 610f, 611f, 612f, 613f, 614f, 615f, 616f, 617f, 618f, 619f, 620f, 621f, 622f, 623f, 624f, 625f, 626f, 627f, 628f, 629f, 630f, 631f, 632f, 633f, 634f, 635f, 636f, 637f, 638f, 639f, 640f, 641f, 642f, 643f, 644f, 645f, 646f, 647f, 648f, 649f, 650f, 651f, 652f, 653f, 654f, 655f, 656f, 657f, 658f, 659f, 660f, 661f, 662f, 663f, 664f, 665f, 666f, 667f, 668f, 669f, 670f, 671f, 672f, 673f, 674f, 675f, 676f, 677f, 678f, 679f, 680f, 681f, 682f, 683f, 684f, 685f, 686f, 687f, 688f, 689f, 690f, 691f, 692f, 693f, 694f, 695f, 696f, 697f, 698f, 699f, 700f, 701f, 702f, 703f, 704f, 705f, 706f, 707f,



16023 Swingley Ridge Rd
Chesterfield, MO 63017

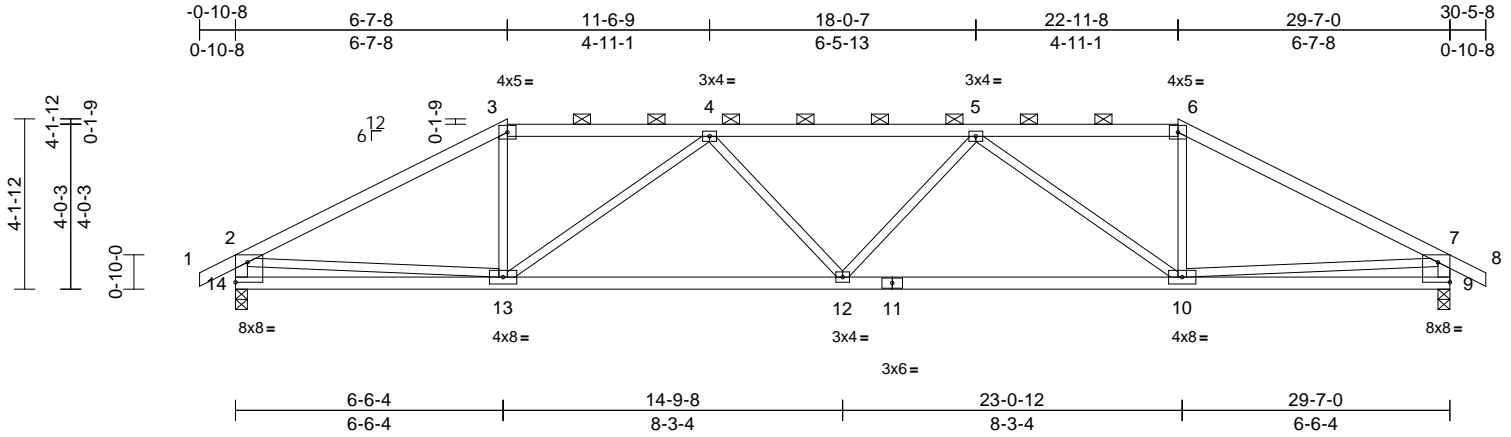
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	H3	Hip	1	1	Job Reference (optional)	I49889843

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:07

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Scale = 1:56.1

Plate Offsets (X, Y): [9:Edge,0-5-13], [14:Edge,0-5-13]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.16	12	>999	360	MT20 197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.77	Vert(CT)	-0.33	10-12	>999	240	
BCLL	0.0*	Rep Stress Incr	YES	WB	0.95	Horz(CT)	0.08	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.12	12	>999	240	Weight: 106 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2 *Except* 14-2,9-7:2x4 SPF 2100F 1.8E

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-2-15 oc purlins, except end verticals, and 2-0-0 oc purlins (3-0-4 max.): 3-6.
BOT CHORD Rigid ceiling directly applied or 9-7-4 oc bracing.

REACTIONS (lb/size) 9=1390/0-3-8, 14=1390/0-3-8
Max Horiz 14=70 (LC 7)
Max Uplift 9=138 (LC 4), 14=138 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/32, 2-3=-2115/261, 3-4=-1781/255, 4-5=-2569/354, 5-6=-1781/255, 6-7=-2115/261, 7-8=0/32, 2-14=-1329/169, 7-9=-1329/169
BOT CHORD 13-14=-227/580, 12-13=-370/2494, 10-12=-349/2494, 9-10=-186/580
WEBS 3-13=-35/602, 4-13=-967/243, 4-12=0/227, 5-12=0/227, 5-10=-967/243, 6-10=-35/602, 2-13=-156/1283, 7-10=-161/1283

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 138 lb uplift at joint 14 and 138 lb uplift at joint 9.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component**

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



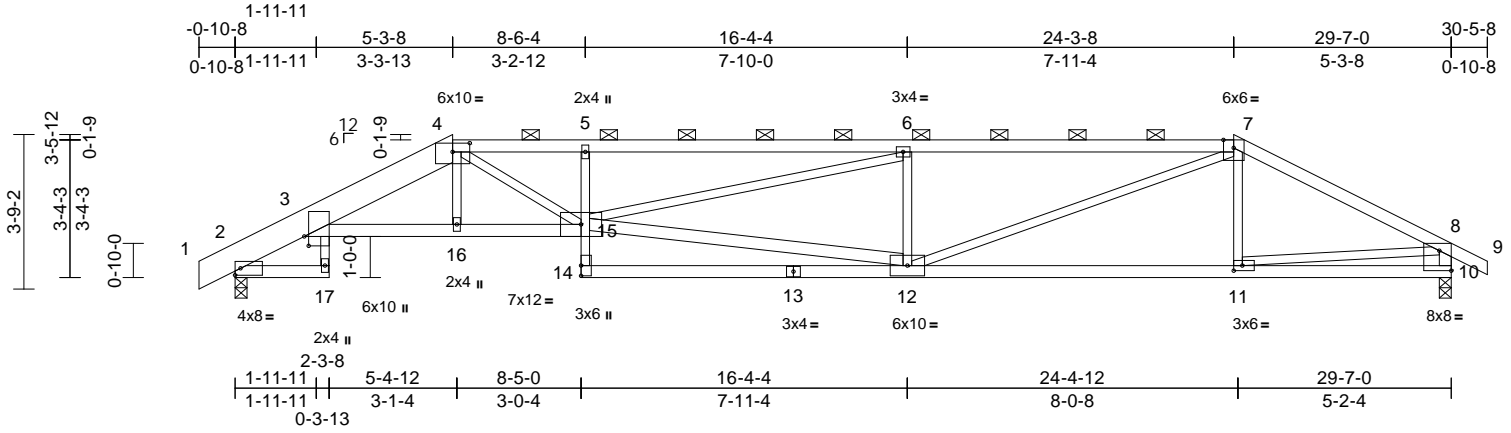
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	H4	Hip	1	1	Job Reference (optional)	I49889844

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:08
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Page: 1



Scale = 1:56

Plate Offsets (X, Y): [3:0-2-12,0-1-5], [4:0-5-0,0-2-9], [10:Edge,0-5-13], [11:0-2-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.84	Vert(LL)	-0.27	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.54	12-14	>651	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.22	10	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.20	5	>999	240	Weight: 124 lb	FT = 10%

LUMBER

TOP CHORD 2x8 SP DSS *Except* 4-7:2x4 SPF 2100F 1.8E, 7-9:2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 5-14:2x3 SPF No.2
WEBS 2x3 SPF No.2 *Except* 12-15,10-8:2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-8-6 oc purlins, except end verticals, and 2-0-0 oc purlins (2-4-4 max.): 4-7.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 2=1402/0-3-8, 10=1390/0-3-8
Max Horiz 2=57 (LC 7)
Max Uplift 2=156 (LC 5), 10=164 (LC 4)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/6, 2-3=-806/121, 3-4=-2992/431, 4-5=-3855/644, 5-6=-3836/651, 6-7=-3287/549, 7-8=-2141/302, 8-9=0/32, 8-10=-1345/185
BOT CHORD 2-17=-26/0, 3-16=-396/2799, 15-16=-392/2801, 14-15=0/141, 5-15=-372/169, 12-14=-9/259, 11-12=-210/1850, 10-11=-104/346
WEBS 3-17=0/54, 4-16=0/152, 4-15=-299/1299, 12-15=-503/3050, 6-15=-115/596, 6-12=-798/289, 7-12=-322/1610, 7-11=-45/148, 8-11=-220/1513

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 156 lb uplift at joint 2 and 164 lb uplift at joint 10.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



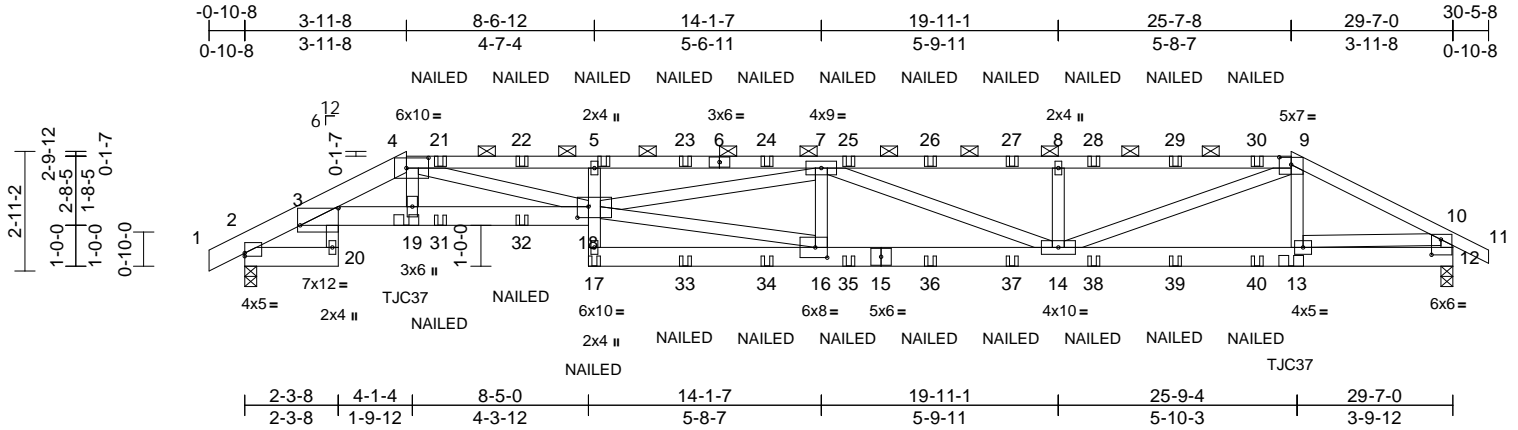
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889845
B220019	H5	Hip Girder	1	2	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:56.4

Plate Offsets (X, Y): [2:Edge,0-0-15], [3:0-11-3,0-5-0], [4:0-6-8,0-3-0], [9:0-3-8,0-2-3], [12:0-2-12,0-4-8], [16:0-3-8,0-3-0], [18:0-3-4,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.36	18	>973	360	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.39	Vert(CT)	-0.66	18	>529	240	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.80	Horz(CT)	0.21	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S		Wind(LL)	0.32	18	>999	240	Weight: 321 lb FT = 10%

LUMBER	
TOP CHORD	2x4 SPF No.2 *Except* 1-4:2x6 SP DSS, 4-6:2x4 SPF 2100F 1.8E
BOT CHORD	2x6 SP 2400F 2.0E *Except* 20-3:2x4 SPF No.2
WEBS	2x4 SPF No.2
BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (2-10-9 max.): 4-9.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 2-20.
REACTIONS (lb/size) 2=2300/0-3-8, 12=2268/0-3-8	
Max Horiz 2=45 (LC 7)	
Max Uplift 2=394 (LC 5), 12=416 (LC 4)	
FORCES (lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=0/6, 2-3=1448/281, 3-4=6550/1252, 4-5=10211/2072, 5-7=9682/1980, 7-8=6264/1290, 8-9=6268/1292, 9-10=3723/736, 10-11=0/32, 10-12=2192/415
BOT CHORD	2-20=165/20, 3-20=33/273, 3-19=1157/6085, 18-19=1164/6173, 16-17=152/779, 14-16=1435/7224, 13-14=617/3293, 12-13=127/594
WEBS	17-18=0/214, 5-18=412/235, 4-19=65/806, 4-18=954/4257, 16-18=1302/6544, 7-18=534/2525, 7-16=885/351, 7-14=1060/203, 8-14=724/332, 9-14=684/3252, 9-13=0/163, 10-13=547/2725

NOTES

- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc.
- All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 394 lb uplift at joint 2 and 416 lb uplift at joint 12.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
- Use Simpson Strong-Tie TJC37 (6 nail 90-150) or equivalent at 3-11-8 from the left end to connect truss (es) to back face of bottom chord, skewed 33.7 deg.to the right, sloping 0.0 deg. down.
- Use Simpson Strong-Tie TJC37 (4 nail, 30-90) or equivalent at 25-7-8 from the left end to connect truss (es) to back face of bottom chord, skewed 33.7 deg.to the left, sloping 0.0 deg. down.
- Fill all nail holes where hanger is in contact with lumber.
- "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 3-4=-70, 4-9=-70, 9-10=-70, 10-11=-70, 2-20=-20, 3-18=-20, 12-17=-20
Concentrated Loads (lb)
Vert: 18=-35 (B), 5=-83 (B), 19=-240 (B), 13=-224 (B), 21=-76 (B), 22=-76 (B), 23=-83 (B), 24=-83 (B), 25=-83 (B), 26=-83 (B), 27=-83 (B), 28=-83 (B), 29=-83 (B), 30=-83 (B), 31=-49 (B), 32=-49 (B), 33=-35 (B), 34=-35 (B), 35=-35 (B), 36=-35 (B), 37=-35 (B), 38=-35 (B), 39=-35 (B), 40=-35 (B)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



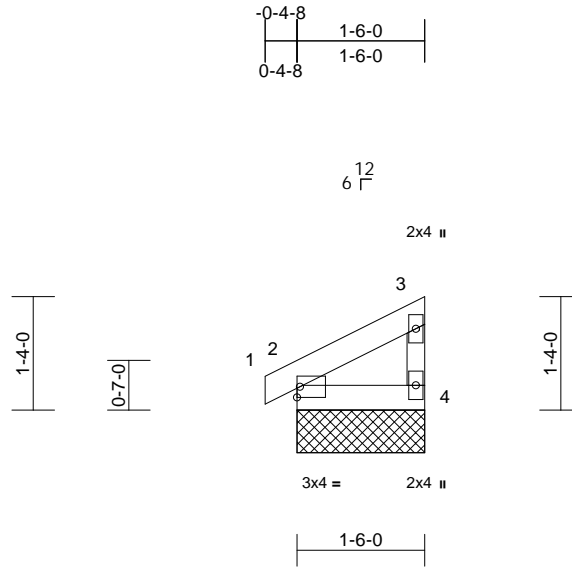
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889846
B220019	J4	Jack-Closed Supported Gable	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:09
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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

8) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=93/1-6-0, 4=59/1-6-0
Max Horiz 2=39 (LC 5)
Max Uplift 2=14 (LC 8), 4=18 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-6/0, 2-3=-43/21, 3-4=-45/26
BOT CHORD 2-4=-14/10

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Gable requires continuous bottom chord bearing.
- 4) Gable studs spaced at 2-0-0 oc.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 18 lb uplift at joint 4 and 14 lb uplift at joint 2.



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



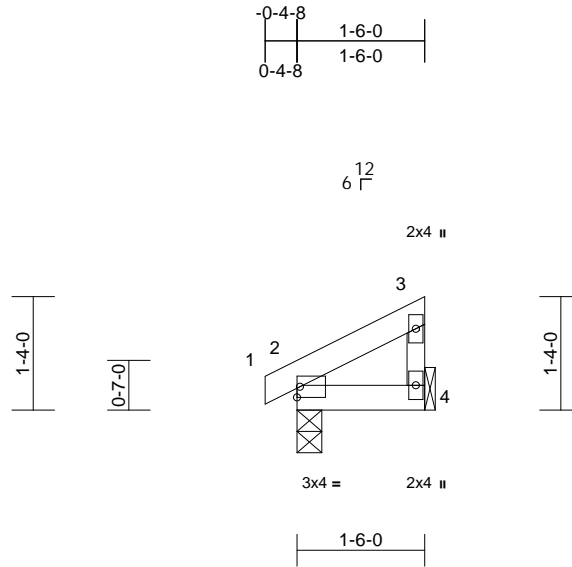
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889847
B220019	J5	Jack-Closed	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	0.00	2-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	0.00	2-4	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 5 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-6-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 2=94/0-3-8, 4=57/ Mechanical
Max Horiz 2=39 (LC 5)
Max Uplift 2=-15 (LC 8), 4=-17 (LC 8)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=-6/0, 2-3=-43/21, 3-4=-44/25
BOT CHORD 2-4=-14/10

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 17 lb uplift at joint
4 and 15 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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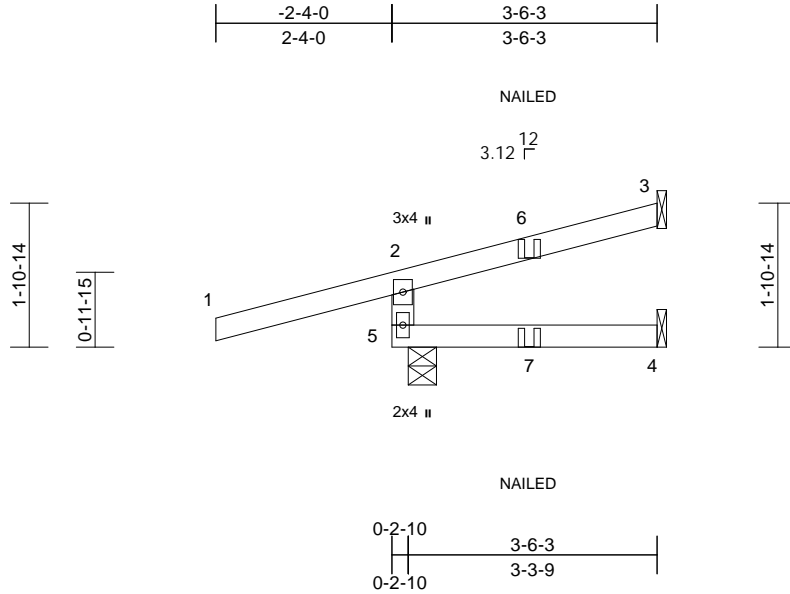
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889848
B220019	J6	Jack-Open Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.01	4-5	>999	240	Weight: 12 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-6 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=67/ Mechanical, 4=15/
Mechanical, 5=386/0-4-8
Max Horiz 5=58 (LC 4)
Max Uplift 3=-37 (LC 8), 5=-157 (LC 4)
Max Grav 3=67 (LC 1), 4=56 (LC 3), 5=386 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-337/174, 1-2=0/44, 2-3=-44/11
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 157 lb uplift at joint 5 and 37 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
 - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=2 (F)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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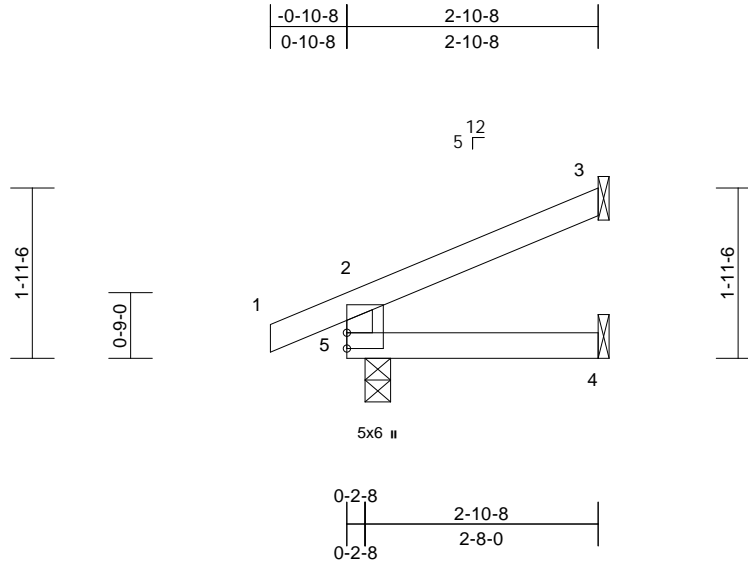
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J7	Jack-Open	5	1	Job Reference (optional)	I49889849

Wheeler Lumber, Waverly, KS - 66871,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-10-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=78/ Mechanical, 4=28/
Mechanical, 5=205/0-3-8
Max Horiz 5=53 (LC 8)
Max Uplift 3=-43 (LC 8), 5=-31 (LC 8)
Max Grav 3=78 (LC 1), 4=49 (LC 3), 5=205
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-180/57, 1-2=0/27, 2-3=-46/23
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 31 lb uplift at joint
5 and 43 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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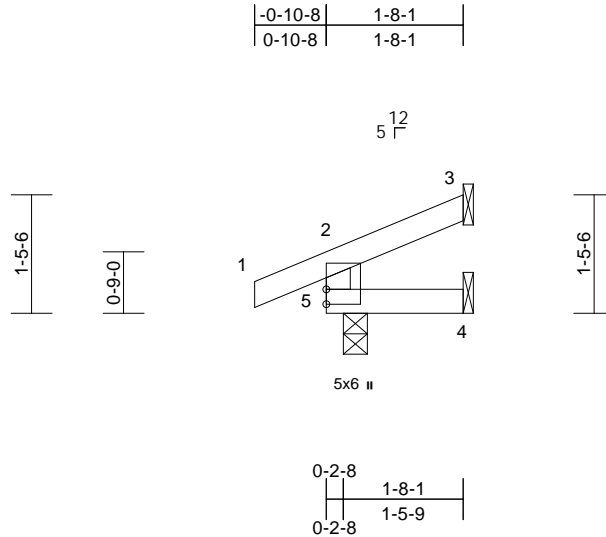
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J8	Jack-Open	2	1	Job Reference (optional)	I49889850

Wheeler Lumber, Waverly, KS - 66871,

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 5 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-8-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=34/ Mechanical, 4=10/
Mechanical, 5=164/0-3-8
Max Horiz 5=37 (LC 5)
Max Uplift 3=24 (LC 8), 5=34 (LC 4)
Max Grav 3=34 (LC 1), 4=27 (LC 3), 5=164
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=143/46, 1-2=0/27, 2-3=28/9
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 34 lb uplift at joint
5 and 24 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



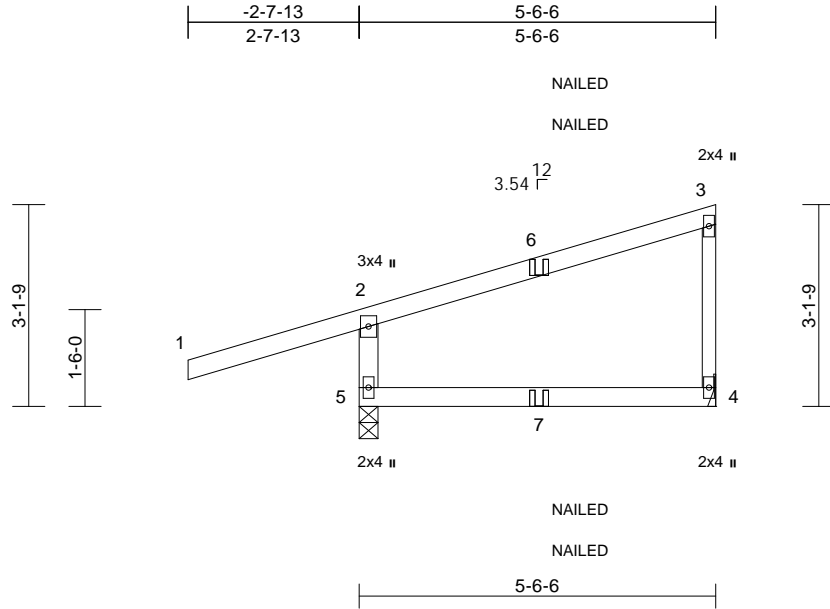
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889851
B220019	J9	Diagonal Hip Girder	2	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:10
ID: ?sw08jWev2w3OMI?YLFLOnz1kw4-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:35.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.64	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 19 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(lb/size) 4=187/ Mechanical, 5=487/0-3-8
	Max Horiz 5=133 (LC 5)
	Max Uplift 4=-54 (LC 5), 5=-190 (LC 4)

FORCES	(lb) - Maximum Compression/Maximum Tension
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TOP CHORD	2-5=-429/217, 1-2=0/55, 2-3=-116/19, 3-4=-137/68
BOT CHORD	4-5=-39/50

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 190 lb uplift at joint 5 and 54 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.

- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-3 (F)



January 27, 2022

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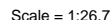
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:11 Page: 1
ID:XMp160e XYkRYz6?RxxRJ1z1laW-RfC?PsB70Hg3NSqPanL8w3uITXbGKWkRCDoi7J4zJC?f



LUMBER

BRACING

REACTIONS	(lb/size)	3=150/ Mechanical, 4=58/ Mechanical, 5=295/0-3-8
Max Horiz		5=85 (LC 8)
Max Uplift		3=-80 (LC 8), 5=-34 (LC 8)
Max Grav		3=150 (LC 1), 4=91 (LC 3), 5=295 (LC 1)

TOP CHORD 2-5=-256/81, 1-2=0/27, 2-3=-80/45
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. I; Exp C; Enclosed; MWFRS (envelope) exterior zone: cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate girder DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 5 and 80 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

January 27, 2022



WARNING: - verify design parameters and READ NOTES ON THIS AND INCLUDED MITER REFERENCE PAGE MMF/473 Rev. 3/19/2020 BEFORE USE.

Design valid for use only with MITek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

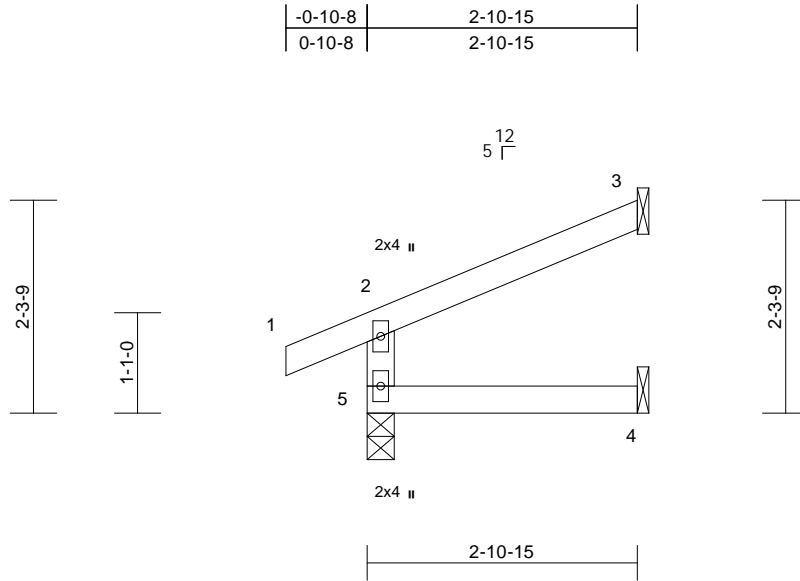
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J11	Jack-Open	2	1	Job Reference (optional)	I49889853

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:11

Page: 1

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Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2400F 2.0E

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=80/ Mechanical, 4=29/
Mechanical, 5=207/0-3-8
Max Horiz 5=58 (LC 5)
Max Uplift 3=-47 (LC 8), 5=-26 (LC 4)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-181/54, 1-2=0/27, 2-3=-47/23

BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 26 lb uplift at joint
5 and 47 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



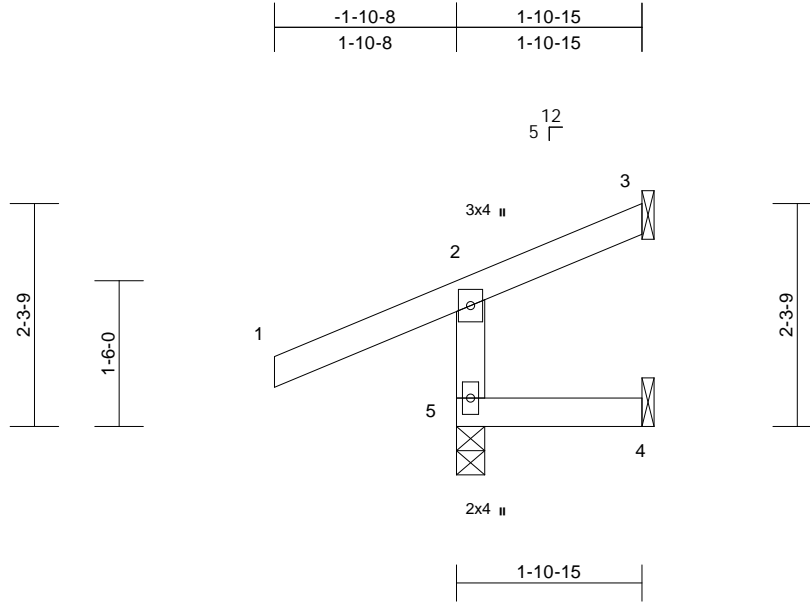
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J12	Jack-Open	1	1	Job Reference (optional)	I49889854

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:11
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Page: 1



Scale = 1:23.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF 2400F 2.0E

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=1/ Mechanical, 4=-4/ Mechanical,
5=302/0-3-8
Max Horiz 5=65 (LC 5)
Max Uplift 3=-23 (LC 8), 4=-6 (LC 5), 5=-74
(LC 4)
Max Grav 3=8 (LC 19), 4=27 (LC 3), 5=302
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-263/90, 1-2=0/54, 2-3=-47/2
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 74 lb uplift at joint
5, 6 lb uplift at joint 4 and 23 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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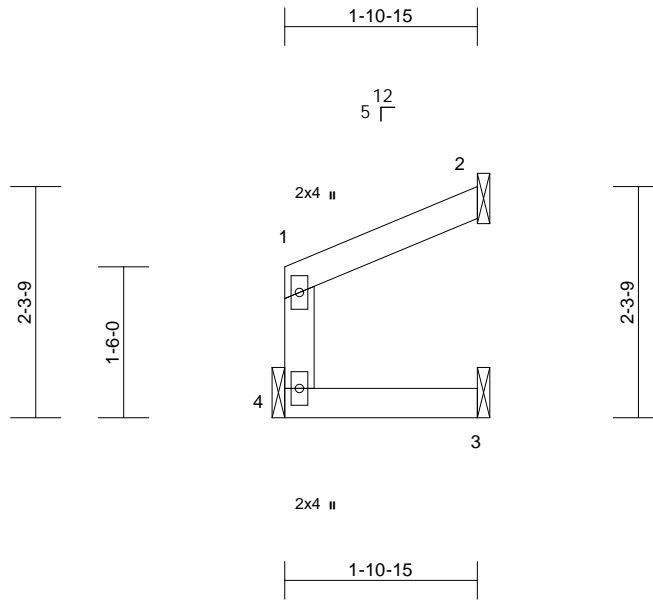
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J13	Jack-Open	1	1	Job Reference (optional)	I49889855

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:11
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Page: 1



Scale = 1:22.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	0.00	3-4	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	3-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	2	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3-4	>999	240	Weight: 6 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 2=59/ Mechanical, 3=20/
Mechanical, 4=79/ Mechanical
Max Horiz 4=47 (LC 5)
Max Uplift 2=-37 (LC 8), 3=-4 (LC 5)
Max Grav 2=59 (LC 1), 3=34 (LC 3), 4=79
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-4=-64/14, 1-2=-29/18

BOT CHORD 3-4=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 37 lb uplift at joint
2 and 4 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

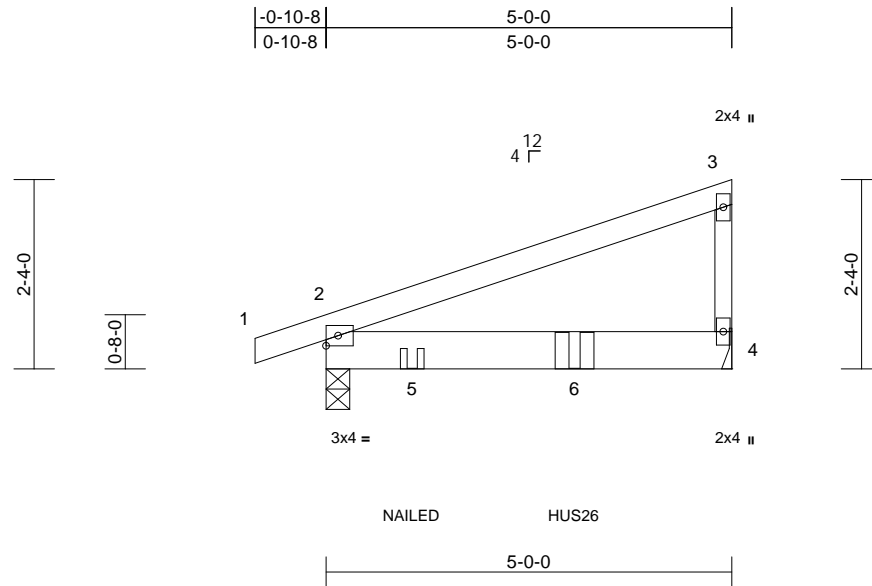
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J14	Jack-Closed Girder	1	1	Job Reference (optional)	I49889856

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:11

Page: 1

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Scale = 1:28.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	-0.08	2-4	>750	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.14	2-4	>409	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P		Wind(LL)	0.06	2-4	>886	240	Weight: 20 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x6 SP DSS
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 4-10-2 oc bracing.

REACTIONS (lb/size) 2=894/0-3-8, 4=1097/ Mechanical
Max Horiz 2=85 (LC 5)
Max Uplift 2=-201 (LC 4), 4=-248 (LC 8)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/1, 2-3=-77/47, 3-4=-159/74
BOT CHORD 2-4=-27/21

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 248 lb uplift at joint 4 and 201 lb uplift at joint 2.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) Use Simpson Strong-Tie HUS26 (14-10d Girder, 6-10d Truss, Single Ply Girder) or equivalent at 3-0-12 from the left end to connect truss(es) to back face of bottom chord, skewed 0.0 deg.to the right, sloping 0.0 deg. down.
- 8) Fill all nail holes where hanger is in contact with lumber.
- 9) "NAILED" indicates 3-10d (0.148"x3") or 3-12d (0.148"x3.25") toe-nails per NDS guidelines.
- 10) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-70, 2-4=-20
Concentrated Loads (lb)
Vert: 5=-60 (B), 6=-1432 (B)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



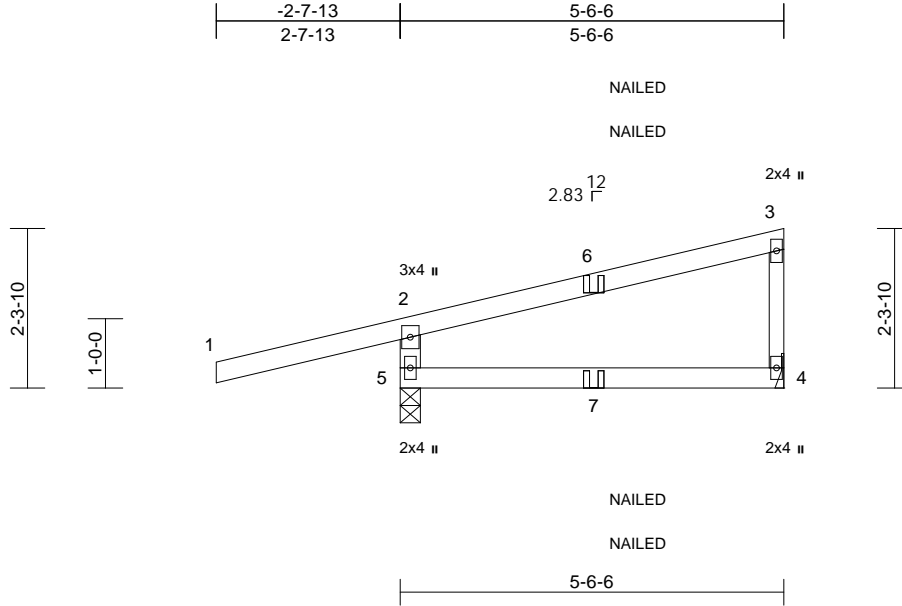
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J15	Diagonal Hip Girder	1	1	Job Reference (optional)	I49889857

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:12
ID:11QjYD0FsErLHA8xXiyk0z1kvA-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.63	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.23	Vert(CT)	-0.06	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.02	4-5	>999	240	Weight: 18 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 4=187/ Mechanical, 5=487/0-3-8
Max Horiz 5=95 (LC 5)
Max Uplift 4=-34 (LC 8), 5=-187 (LC 4)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-428/217, 1-2=0/45, 2-3=-107/11,
3-4=-137/63

BOT CHORD 4-5=-26/58

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 187 lb uplift at joint 5 and 34 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.

- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=-3 (B)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



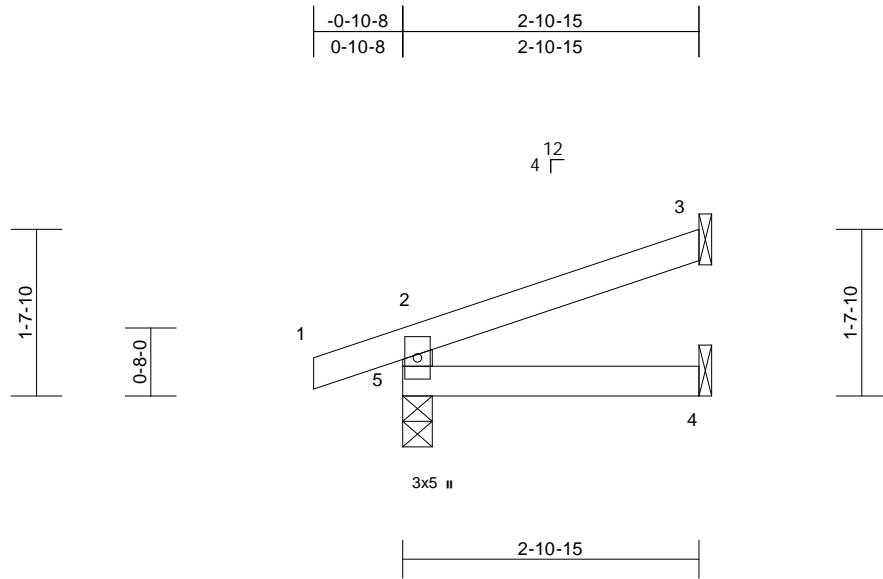
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J16	Jack-Open	1	1	Job Reference (optional)	I49889858

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:12
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Page: 1



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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=80/ Mechanical, 4=29/
Mechanical, 5=207/0-3-8
Max Horiz 5=48 (LC 4)
Max Uplift 3=-39 (LC 8), 5=-61 (LC 4)
Max Grav 3=80 (LC 1), 4=50 (LC 3), 5=207
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-181/84, 1-2=0/23, 2-3=-37/19
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 61 lb uplift at joint
5 and 39 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



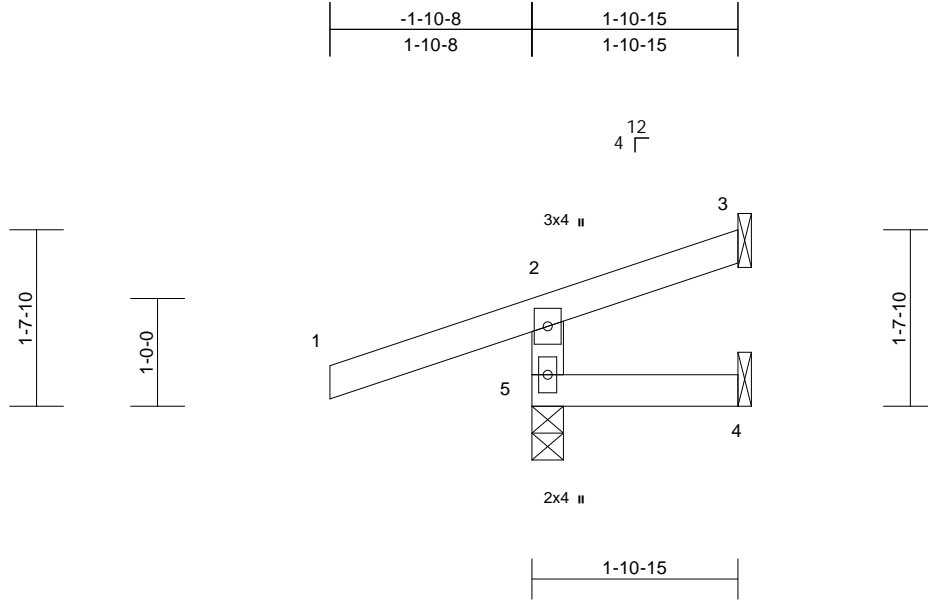
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J17	Jack-Open	1	1	Job Reference (optional)	I49889859

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:12
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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-10-15 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 3=2/ Mechanical, 4=-5/ Mechanical, 5=302/0-3-8
Max Horiz 5=48 (LC 4)
Max Uplift 3=-14 (LC 8), 4=-5 (LC 1), 5=-130 (LC 4)
Max Grav 3=5 (LC 19), 4=26 (LC 3), 5=302 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-262/137, 1-2=0/45, 2-3=-38/1
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 130 lb uplift at joint 5, 5 lb uplift at joint 4 and 14 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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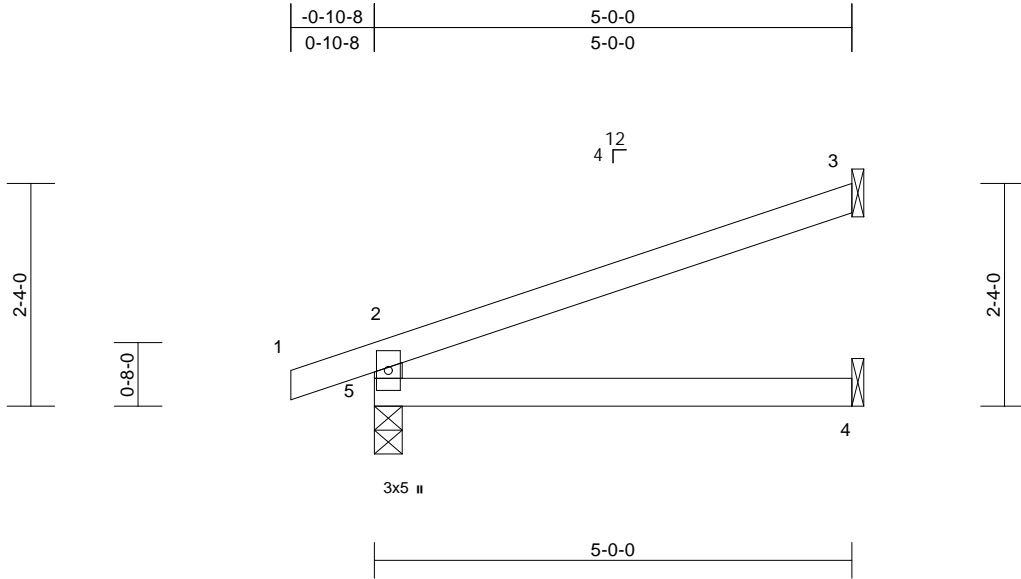
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889860
B220019	J18	Jack-Open	3	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:24.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	-0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.21	Vert(CT)	-0.05	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 13 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5'-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10'-0-0 oc bracing.

REACTIONS

(lb/size) 3=150/ Mechanical, 4=58/
Mechanical, 5=295/0-3-8
Max Horiz 5=77 (LC 4)
Max Uplift 3=-69 (LC 8), 5=-71 (LC 4)
Max Grav 3=150 (LC 1), 4=90 (LC 3), 5=295 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-257/113, 1-2=0/23, 2-3=-64/37
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-06-00 tall by 2'-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 5 and 69 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

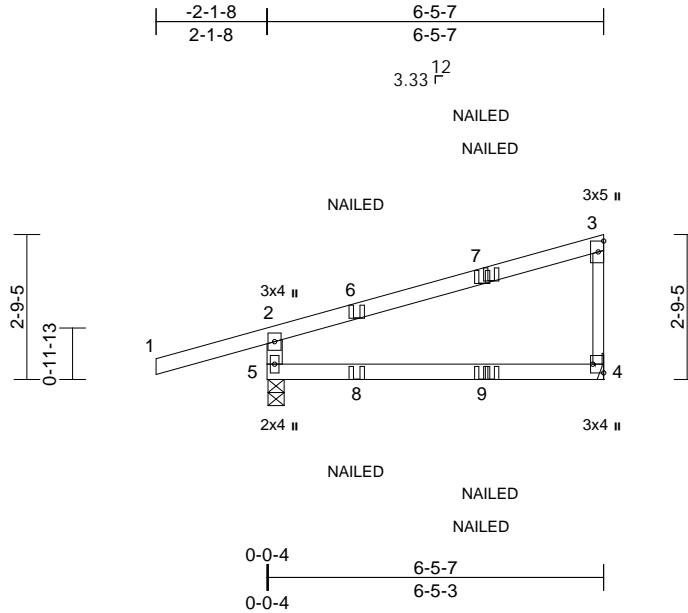
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J19	Diagonal Hip Girder	2	1	Job Reference (optional)	I49889861

Wheeler Lumber, Waverly, KS - 66871,

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Scale = 1:44.1

Plate Offsets (X, Y): [4:Edge,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.50	Vert(LL)	-0.06	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.34	Vert(CT)	-0.12	4-5	>630	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.02	4-5	>999	240	Weight: 20 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(lb/size) 4=248/ Mechanical, 5=463/0-3-11
	Max Horiz 5=116 (LC 7)
	Max Uplift 4=-58 (LC 8), 5=-164 (LC 4)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-5=-412/202, 1-2=0/43, 2-3=-147/17, 3-4=-181/85
BOT CHORD	4-5=-36/59

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 164 lb uplift at joint 5 and 58 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 7) "NAILED" indicates 2-12d (0.148"x3.25") toe-nails per NDS guidelines.

- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 8=4 (B), 9=2 (F=3, B=-1)



January 27, 2022

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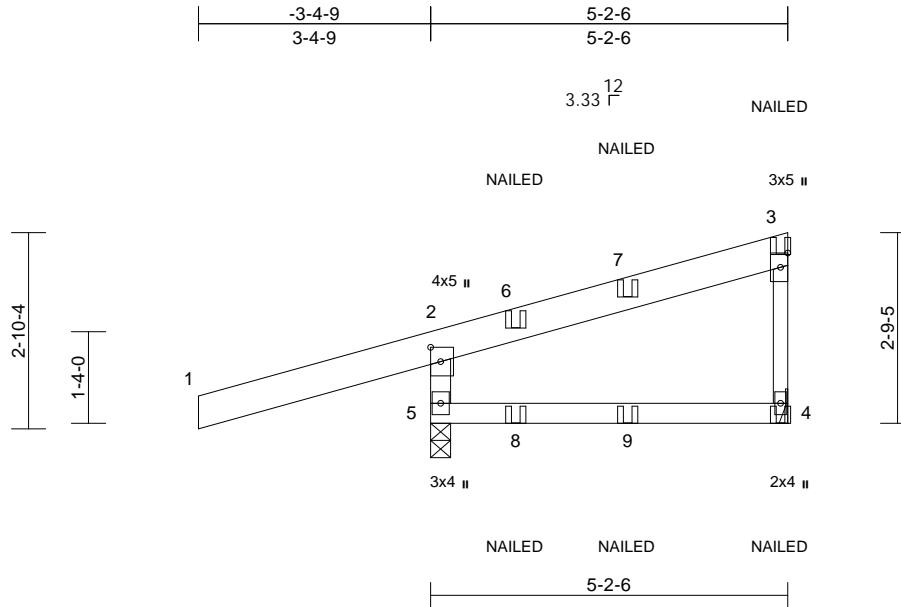
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889862
B220019	J20	Diagonal Hip Girder	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:13
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Page: 1



Scale = 1:33.5

Plate Offsets (X, Y): [2:0-2-8,0-1-12]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	0.02	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.03	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	-0.01	4-5	>999	240	Weight: 29 lb	FT = 10%

LUMBER

TOP CHORD 2x6 SP DSS
BOT CHORD 2x4 SPF 2400F 2.0E
WEBS 2x4 SPF No.2 *Except* 3-4:2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (lb/size) 4=31/ Mechanical, 5=964/0-3-8
Max Horiz 5=118 (LC 7)
Max Uplift 4=-108 (LC 21), 5=-330 (LC 4)
Max Grav 4=224 (LC 24), 5=964 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-897/351, 1-2=-11/133, 2-3=-105/21, 3-4=-145/123

BOT CHORD 4-5=-54/44

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 330 lb uplift at joint 5 and 108 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
 - 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 260 lb down and 47 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
 - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 1=-250, 3=-65 (B), 4=-27 (B), 7=29 (F), 8=11 (B)



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



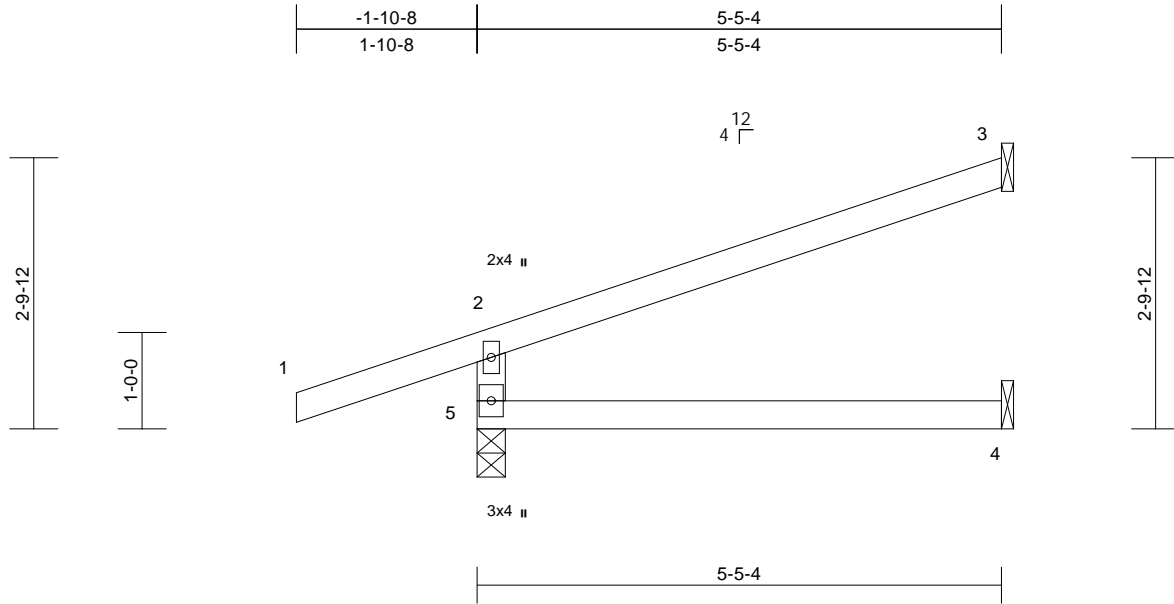
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J21	Jack-Open	21	1	Job Reference (optional)	I49889863

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:13
ID: C4C_4EWTn44nwkr3ptr4Kz1lI0-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrcDoi7J4zJC?f

Page: 1



Scale = 1:23.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.03	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.24	Vert(CT)	-0.07	4-5	>863	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.03	4-5	>999	240	Weight: 16 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
5-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=153/ Mechanical, 4=55/
Mechanical, 5=404/0-3-8
Max Horiz 5=95 (LC 4)
Max Uplift 3=75 (LC 8), 5=122 (LC 4)
Max Grav 3=153 (LC 1), 4=96 (LC 3), 5=404
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-354/165, 1-2=0/45, 2-3=-72/37
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 122 lb uplift at
joint 5 and 75 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



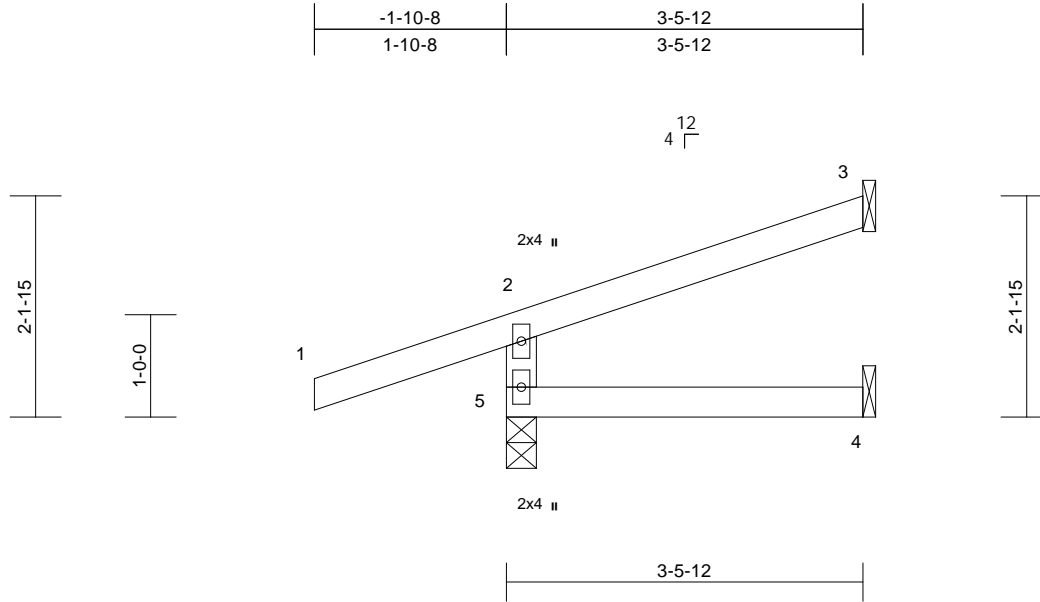
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J22	Jack-Open	2	1	Job Reference (optional)	I49889864

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:13
ID:ceu7iGYL4?SMn9TQlxRZhyz1lkz-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:22.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 11 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
3-5-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=80/ Mechanical, 4=24/
Mechanical, 5=332/0-3-8
Max Horiz 5=69 (LC 4)
Max Uplift 3=44 (LC 8), 5=119 (LC 4)
Max Grav 3=80 (LC 1), 4=58 (LC 3), 5=332
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-291/142, 1-2=0/45, 2-3=-48/18
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 119 lb uplift at joint
5 and 44 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



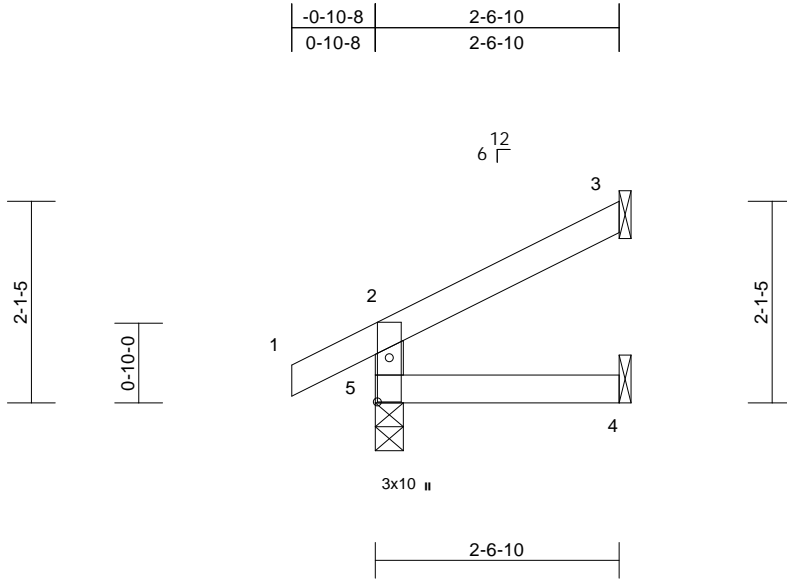
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J23	Jack-Open	2	1	Job Reference (optional)	I49889865

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:13
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Page: 1



Scale = 1:24.1											
Plate Offsets (X, Y): [5:0-5-9,0-1-8]											
Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	0.00	4-5	>999	240	GRIP
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a	197/144
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb
										FT = 10%	

LUMBER **LOAD CASE(S)** Standard

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or
2-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=67/ Mechanical, 4=23/
Mechanical, 5=192/0-3-8
Max Horiz 5=57 (LC 8)
Max Uplift 3=-43 (LC 8), 5=-23 (LC 8)
Max Grav 3=67 (LC 1), 4=43 (LC 3), 5=192
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-169/48, 1-2=0/32, 2-3=-48/22
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 23 lb uplift at joint
5 and 43 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

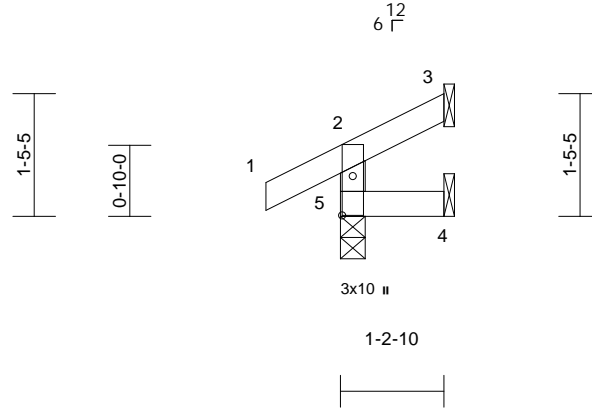
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J24	Jack-Open	4	1	Job Reference (optional)	I49889866

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:13
ID:RoFOzJd6frCWV4wa5BYzxDz1lkt-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Page: 1

-0-10-8	1-2-10
0-10-8	1-2-10



Scale = 1:27.1

Plate Offsets (X, Y): [5:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 5 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-2-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=11/ Mechanical, 4=2/ Mechanical, 5=154/0-3-8
Max Horiz 5=36 (LC 5)
Max Uplift 3=-18 (LC 8), 4=-2 (LC 5), 5=-23 (LC 8)
Max Grav 3=12 (LC 15), 4=18 (LC 3), 5=154 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-134/36, 1-2=0/32, 2-3=-28/3
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 23 lb uplift at joint 5, 2 lb uplift at joint 4 and 18 lb uplift at joint 3.



January 27, 2022

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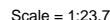
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Wheeler Lumber, Waverly, KS - 66871, Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:14 Page: 1
ID:nNxWbLf ymb4MYf9mK5aZsz1lka-RfC?PsB70Hg3NSaPanL8w3ulTXbGKWCrDci7J4zJC?f



LUMBER

BRACING

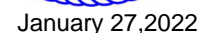
REACTIONS (lb/size) 3=137/ Mechanical, 4=48/
Mechanical, 5=386/0-5-8
Max Horiz 5=89 (LC 4)
Max Uplift 3=-68 (LC 8), 5=-121 (LC 4)
Max Grav 3=137 (LC 1), 4=87 (LC 3), 5=386
(LC 1)

TOP CHORD 2-5=-339/159, 1-2=0/45, 2-3=-66/33
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. I; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate girf DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 121 lb uplift at joint 5 and 68 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1, 1

LOAD CASE(S) Standard



WARNING - Velly design parameters are READ-ONLY on this and INCLUDED WITHIN KEY EXCERPT AGE MP-1493 Rev. 3/19/2020 per ONE USE.

Design valid for use only with MITEK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component Safety Information** available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601

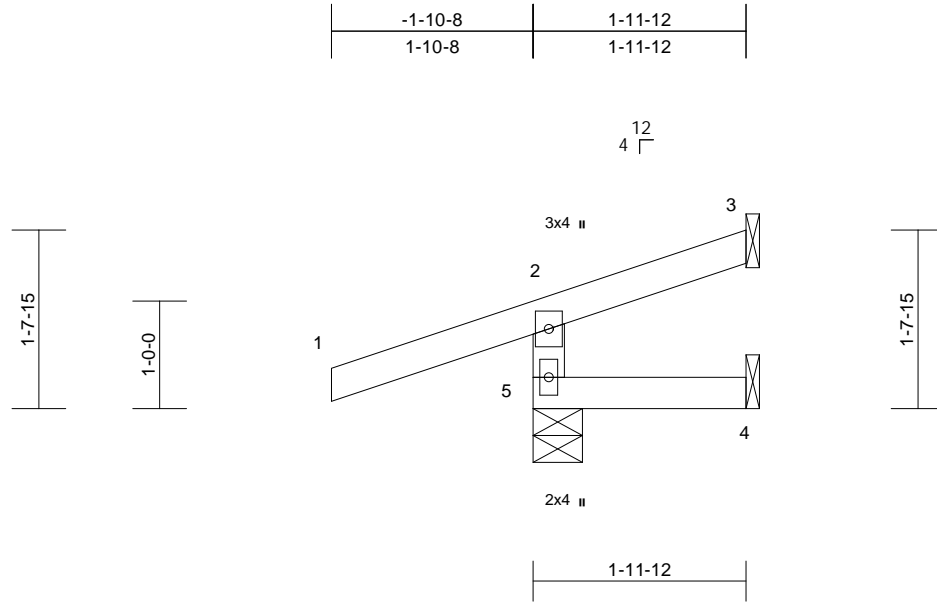


Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889868
B220019	J26	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:14
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Page: 1



Scale = 1:21.4

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.08	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 8 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-11-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=7/ Mechanical, 4=-3/ Mechanical,
5=302/0-5-8
Max Horiz 5=49 (LC 4)
Max Uplift 3=-16 (LC 8), 4=-3 (LC 1), 5=-128
(LC 4)
Max Grav 3=7 (LC 1), 4=28 (LC 3), 5=302
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-262/136, 1-2=0/45, 2-3=-38/1
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 128 lb uplift at
joint 5, 3 lb uplift at joint 4 and 16 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



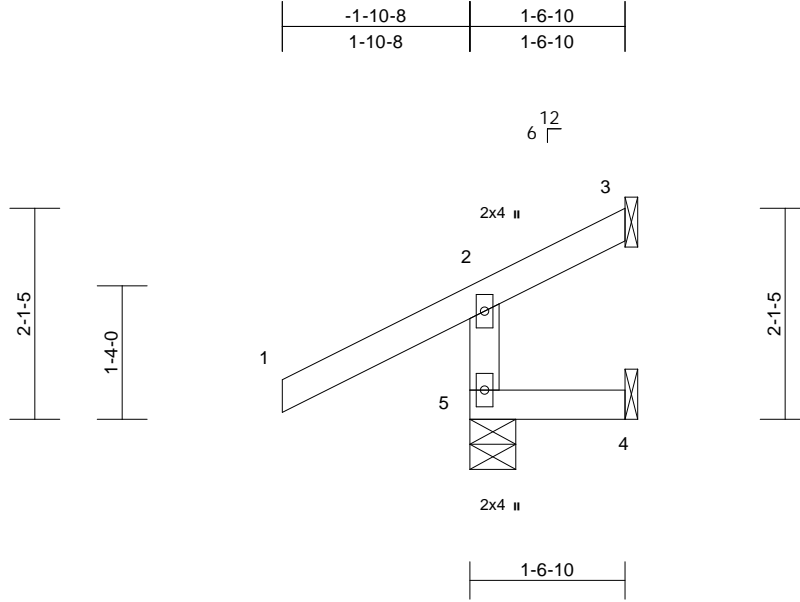
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J27	Jack-Open	1	1	Job Reference (optional)	I49889869

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:14
ID:gXlosOkYcLE4T6J7aC4o6z1lkk-RfC?PsB70Hq3NSgPqnL8w3uITxbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:23

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	0.00	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS

(lb/size) 3=-30/ Mechanical, 4=-10/
Mechanical, 5=307/0-5-8
Max Horiz 5=60 (LC 5)
Max Uplift 3=-30 (LC 1), 4=-10 (LC 16), 5=-53
(LC 8)
Max Grav 3=10 (LC 4), 4=20 (LC 3), 5=307
(LC 1)

FORCES

(lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-269/74, 1-2=0/63, 2-3=-57/4
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 53 lb uplift at joint
5, 10 lb uplift at joint 4 and 30 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



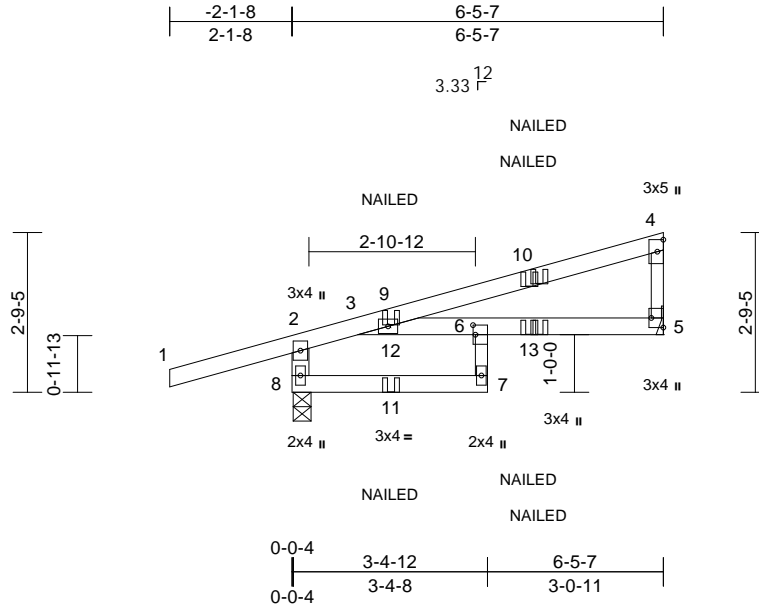
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J28	Diagonal Hip Girder	1	1	Job Reference (optional)	I49889870

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:14
ID:xzcSQbu1Ocuq3zli6gv2Zsz1lhx-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f

Page: 1



Scale = 1:40

Plate Offsets (X, Y): [5:Edge,0-2-8], [6:0-2-0,0-0-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.43	Vert(LL)	-0.05	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.11	5-6	>708	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.00	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.05	5-6	>999	240	Weight: 22 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS	2x4 SPF No.2 *Except* 4-5:2x3 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(lb/size) 5=264/ Mechanical, 8=473/0-3-11
	Max Horiz 8=99 (LC 5)
	Max Uplift 5=-66 (LC 8), 8=-166 (LC 4)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	2-8=-440/184, 1-2=0/43, 2-3=-182/24, 3-4=-168/20, 4-5=-159/68
BOT CHORD	7-8=-50/92, 6-7=0/60, 3-6=-8/29, 5-6=-31/99

NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 166 lb uplift at joint 8 and 66 lb uplift at joint 5.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.

- In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-4=-70, 7-8=-20, 5-6=-20
Concentrated Loads (lb)
Vert: 11=4 (F), 13=-23 (F=-24, B=1)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

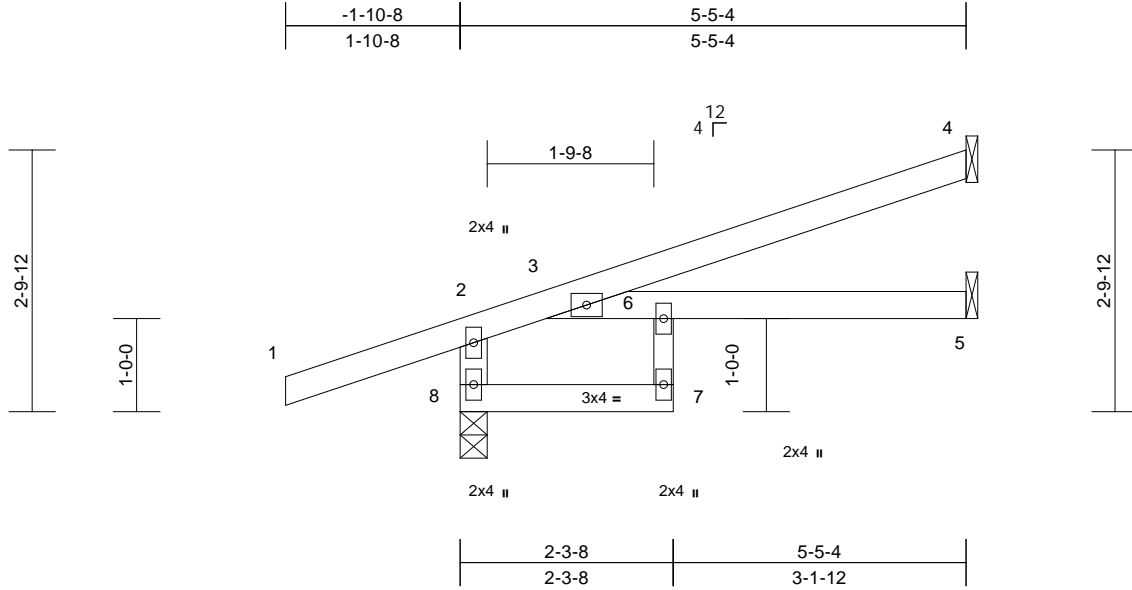
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J29	Jack-Open	2	1	Job Reference (optional)	I49889871

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:15

Page: 1

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Scale = 1:24.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.03	5-6	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	-0.08	5-6	>821	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.03	5	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.04	5-6	>999	240	Weight: 18 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 4=146/ Mechanical, 5=69/ Mechanical, 8=423/0-3-8
Max Horiz 8=95 (LC 4)
Max Uplift 4=63 (LC 8), 8=111 (LC 4)
Max Grav 4=146 (LC 1), 5=104 (LC 3), 8=423 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-8=-396/134, 1-2=0/45, 2-3=-115/0, 3-4=-53/36
BOT CHORD 7-8=-39/39, 6-7=-1/39, 3-6=-39/39, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 111 lb uplift at joint 8 and 63 lb uplift at joint 4.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

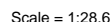
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

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January 27, 2022

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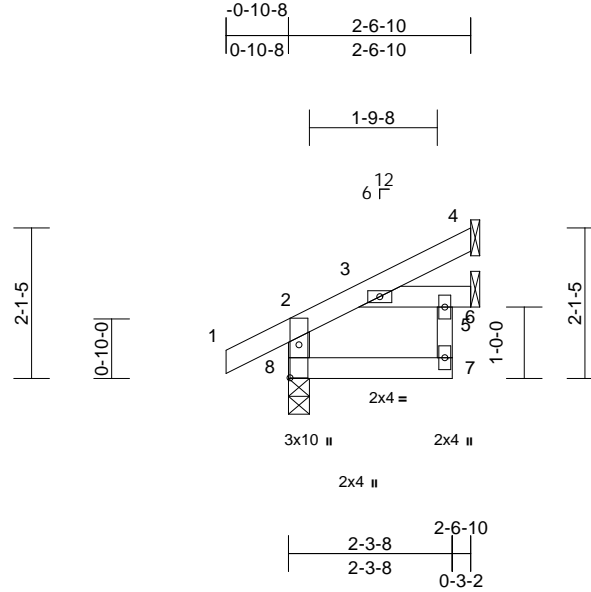


Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J31	Jack-Open	1	1	Job Reference (optional)	I49889873

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:15
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Page: 1



Scale = 1:32.3

Plate Offsets (X, Y): [8:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	3	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.05	Vert(CT)	0.00	3	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	3	>999	240	Weight: 10 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2 *Except* 7-6:2x3 SPF No.2
WEBS 2x4 SPF No.2

6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-6-10 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 4=56/ Mechanical, 5=48/
Mechanical, 8=202/0-3-8
Max Horiz 8=57 (LC 8)
Max Uplift 4=-29 (LC 8), 5=-2 (LC 8), 8=-17 (LC 8)
Max Grav 4=56 (LC 1), 5=73 (LC 3), 8=202 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-8=-181/38, 1-2=0/32, 2-3=-61/0, 3-4=-24/21
BOT CHORD 7-8=-14/19, 6-7=0/41, 3-6=-19/14, 5-6=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 8, 29 lb uplift at joint 4 and 2 lb uplift at joint 5.



January 27, 2022

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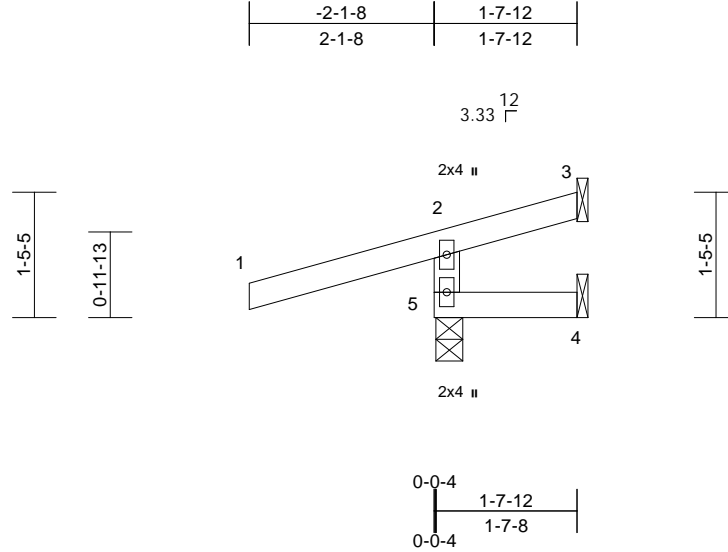
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J32	Jack-Open Girder	1	1	Job Reference (optional)	149889874

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:15
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Page: 1



Scale = 1:26.5

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 1-7-12 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=-43/ Mechanical, 4=-20/ Mechanical, 5=175/0-3-11
Max Horiz 5=51 (LC 7)
Max Uplift 3=-43 (LC 1), 4=-20 (LC 1), 5=-146 (LC 6)
Max Grav 3=33 (LC 4), 4=17 (LC 4), 5=175 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-149/147, 1-2=-5/23, 2-3=-18/9
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 5, 20 lb uplift at joint 4 and 43 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 25 lb down and 9 lb up at -2-1-8, and 25 lb down and 9 lb up at -2-1-8 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Concentrated Loads (lb)
Vert: 1=-38 (F=-19, B=-19)
Trapezoidal Loads (lb/ft)
Vert: 1=0 (F=35, B=35)-to-2=-40 (F=15, B=15), 2=-3 (F=34, B=34)-to-3=-29 (F=21, B=21), 5=0 (F=10, B=10)-to-4=-8 (F=6, B=6)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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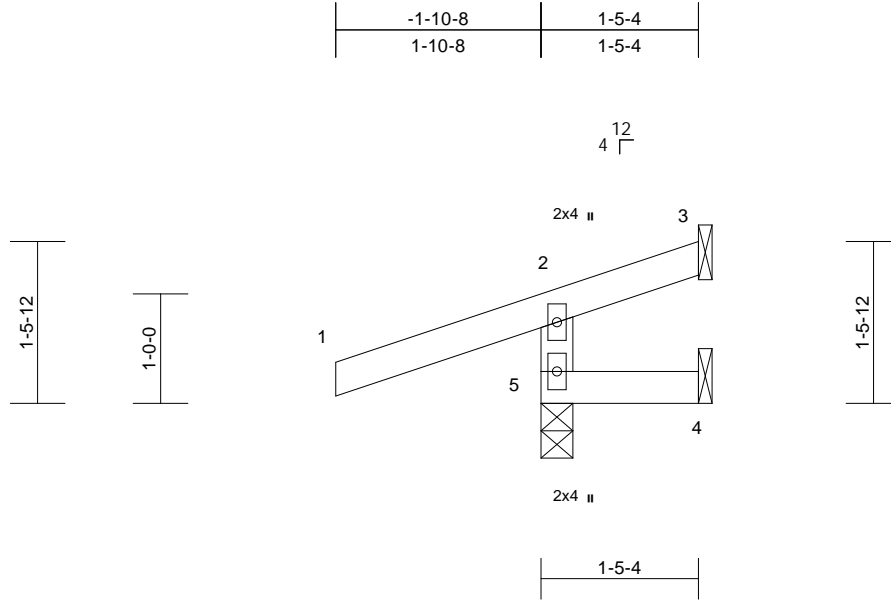
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J33	Jack-Open	1	1	Job Reference (optional)	I49889875

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:21

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.28	Vert(LL)	0.00	4-5	>999	360	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.07	Vert(CT)	0.00	4-5	>999	240	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 6 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

LOAD CASE(S) Standard

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS

(lb/size) 3=-38/ Mechanical, 4=-16/
Mechanical, 5=311/0-3-8
Max Horiz 5=43 (LC 5)
Max Uplift 3=-38 (LC 1), 4=-16 (LC 1), 5=-143
(LC 4)
Max Grav 3=22 (LC 4), 4=16 (LC 3), 5=311
(LC 1)

FORCES

(lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-269/145, 1-2=0/45, 2-3=-40/7
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 143 lb uplift at
joint 5, 16 lb uplift at joint 4 and 38 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



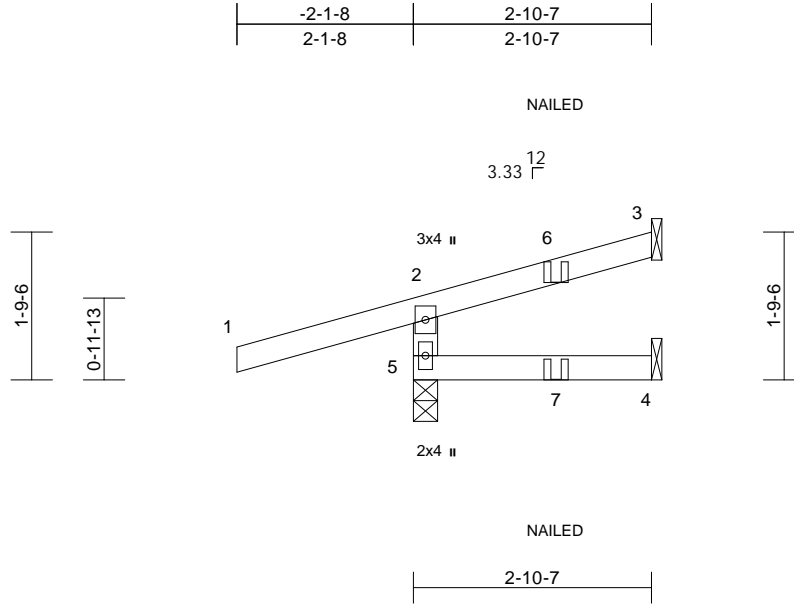
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J34	Jack-Open Girder	2	1	Job Reference (optional)	I49889876

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:16
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Page: 1



Scale = 1:27.8

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 10 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-5-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=44/ Mechanical, 4=6/
Mechanical, 5=345/0-3-8
Max Horiz 5=52 (LC 4)
Max Uplift 3=28 (LC 8), 5=146 (LC 4)
Max Grav 3=44 (LC 1), 4=44 (LC 3), 5=345 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-5=-302/156, 1-2=0/43, 2-3=-39/7

BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 146 lb uplift at joint 5 and 28 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) "NAILED" indicates 3-10d (0.148"x3") or 2-12d (0.148"x3.25") toe-nails per NDS guidelines.
 - 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
- LOAD CASE(S)** Standard
- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-2=-70, 2-3=-70, 4-5=-20
Concentrated Loads (lb)
Vert: 7=4 (F)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

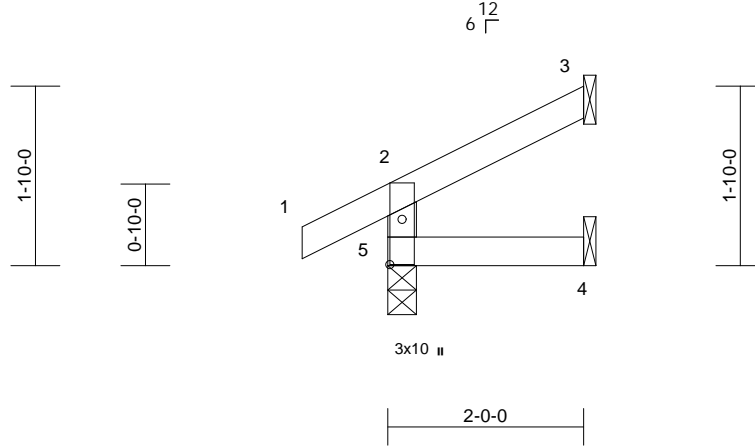
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J35	Jack-Open	3	1	Job Reference (optional)	I49889877

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:16
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Page: 1

-0-10-8	2-0-0
0-10-8	2-0-0



Scale = 1:23.5

Plate Offsets (X, Y): [5:0-5-9,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 7 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=48/ Mechanical, 4=15/
Mechanical, 5=174/0-3-8
Max Horiz 5=47 (LC 8)
Max Uplift 3=-34 (LC 8), 5=-22 (LC 8)
Max Grav 3=48 (LC 1), 4=33 (LC 3), 5=174
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-153/42, 1-2=0/32, 2-3=-39/16
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 22 lb uplift at joint
5 and 34 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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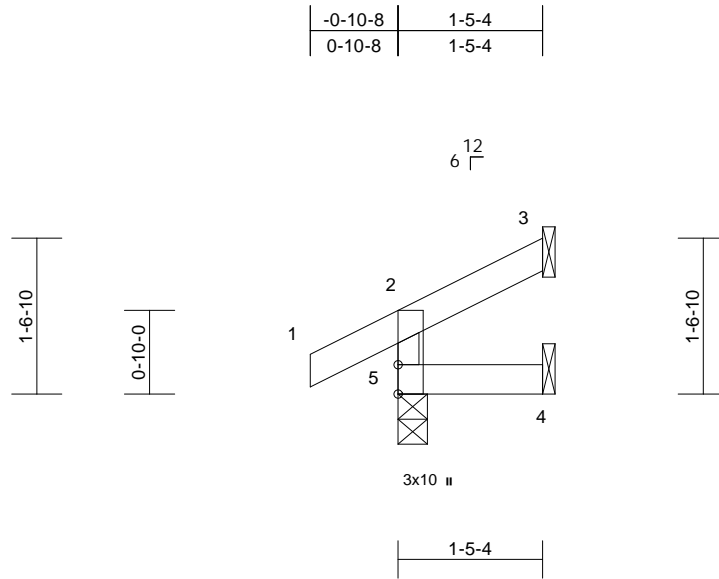
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889878
B220019	J36	Jack-Open	1	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:16
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Page: 1



Scale = 1:22.9

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 5 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x3 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
1-5-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=24/ Mechanical, 4=10/
Mechanical, 5=153/0-3-8
Max Horiz 5=38 (LC 5)
Max Uplift 3=24 (LC 8), 5=21 (LC 8)
Max Grav 3=24 (LC 1), 4=24 (LC 3), 5=153
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-137/37, 1-2=0/31, 2-3=-31/7

BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 21 lb uplift at joint
5 and 24 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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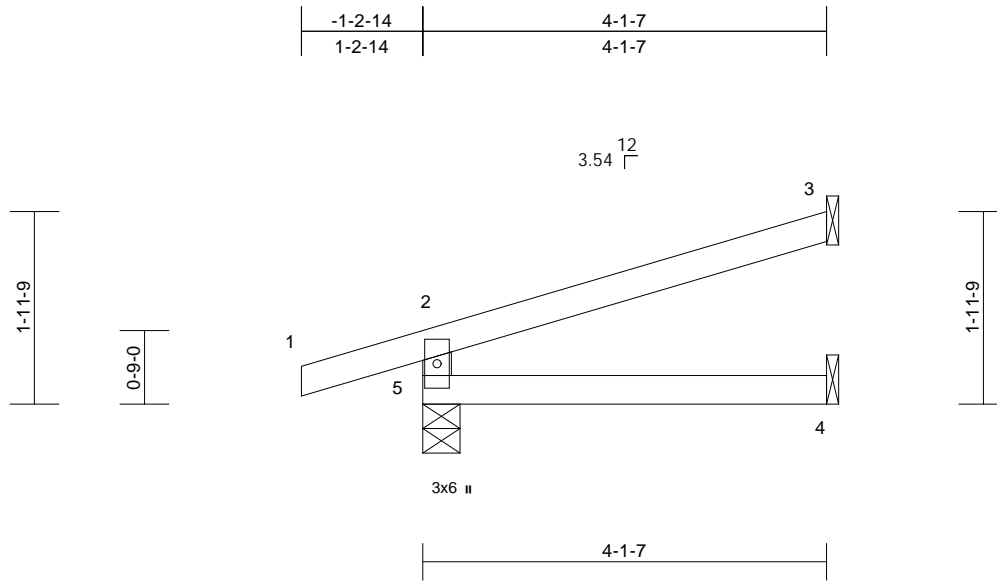
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	J37	Diagonal Hip Girder	2	1	Job Reference (optional)	I49889879

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:16

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Scale = 1:23.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	-0.01	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.10	Vert(CT)	-0.02	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	NO	WB	0.00	Horz(CT)	-0.01	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.01	4-5	>999	240	Weight: 11 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-1-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 3=80/ Mechanical, 4=24/ Mechanical, 5=144/0-4-9
Max Horiz 5=63 (LC 12)
Max Uplift 3=-48 (LC 12), 5=-92 (LC 6)
Max Grav 3=80 (LC 1), 4=60 (LC 3), 5=144 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-5=-128/119, 1-2=-6/21, 2-3=-30/15
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 92 lb uplift at joint 5 and 48 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

- 7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 30 lb down and 11 lb up at -1-2-14, and 30 lb down and 11 lb up at -1-2-14 on top chord. The design/selection of such connection device(s) is the responsibility of others.
- 8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).

LOAD CASE(S) Standard

- 1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Concentrated Loads (lb)
Vert: 1=-46 (F=-23, B=-23)
Trapezoidal Loads (lb/ft)
Vert: 1=0 (F=35, B=35)-to-2=-24 (F=23, B=23), 2=-3 (F=34, B=34)-to-3=-72 (F=-1, B=-1), 5=0 (F=10, B=10)-to-4=-21 (F=0, B=0)



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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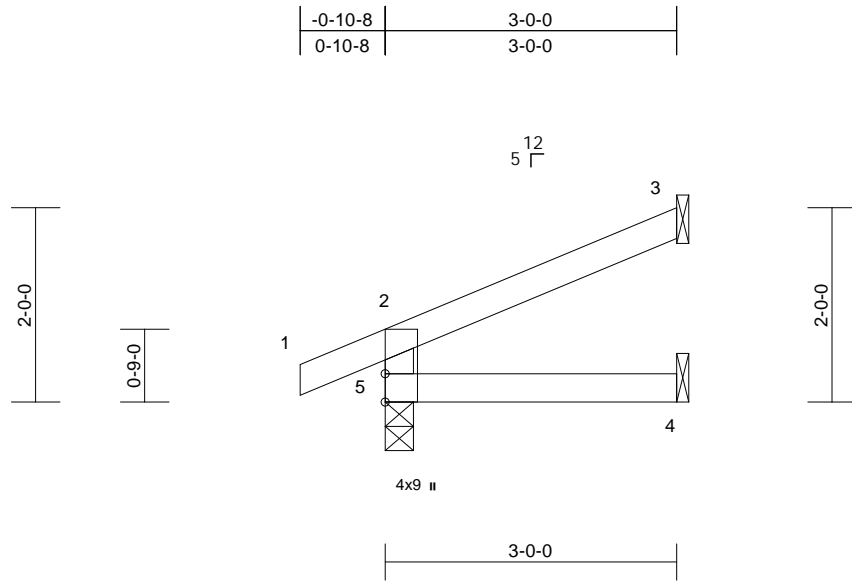
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	I49889880
B220019	J38	Jack-Open	5	1	Job Reference (optional)	

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:23.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.10	Vert(LL)	0.00	4-5	>999	360	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.06	Vert(CT)	-0.01	4-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-R		Wind(LL)	0.00	4-5	>999	240	Weight: 9 lb	FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
3-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (lb/size) 3=83/ Mechanical, 4=30/
Mechanical, 5=210/0-3-8
Max Horiz 5=55 (LC 8)
Max Uplift 3=-45 (LC 8), 5=-32 (LC 8)
Max Grav 3=83 (LC 1), 4=52 (LC 3), 5=210
(LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 2-5=-184/58, 1-2=0/27, 2-3=-48/24
BOT CHORD 4-5=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust)
Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat.
II; Exp C; Enclosed; MWFRS (envelope) exterior zone;
cantilever left and right exposed; end vertical left and
right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom
chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 20.0psf
on the bottom chord in all areas where a rectangle
3-06-00 tall by 2-00-00 wide will fit between the bottom
chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to
bearing plate capable of withstanding 32 lb uplift at joint
5 and 45 lb uplift at joint 3.
- 6) This truss is designed in accordance with the 2018
International Residential Code sections R502.11.1 and
R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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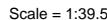
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

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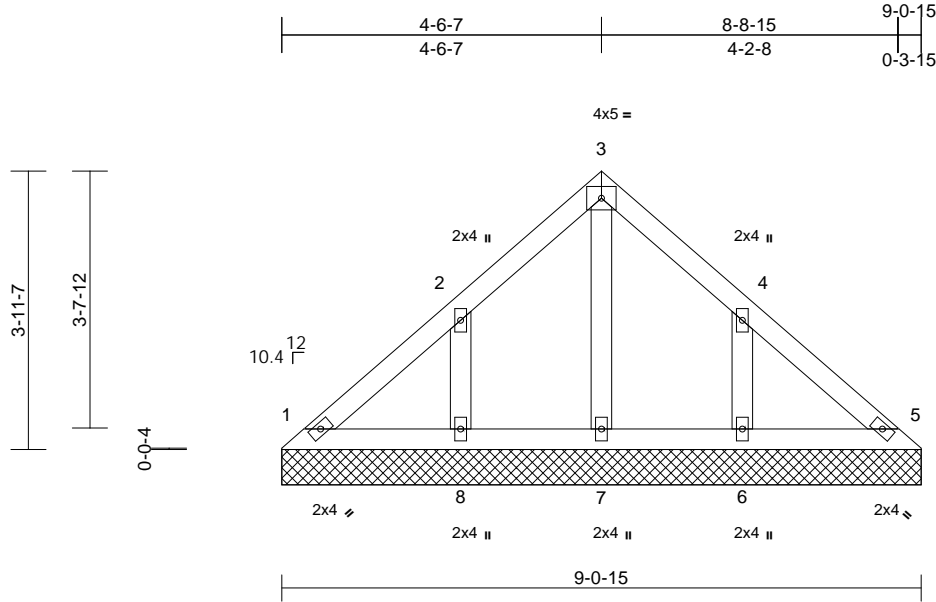
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY1	Lay-In Gable	1	1	Job Reference (optional)	I49889882

Wheeler Lumber, Waverly, KS - 66871,

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Page: 1



Scale = 1:32.7

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.02	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 31 lb FT = 10%

LUMBER

TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
OTHERS 2x4 SPF No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size) 1=94/9-0-15, 5=94/9-0-15, 6=224/9-0-15, 7=116/9-0-15, 8=224/9-0-15
Max Horiz 1=-94 (LC 4)
Max Uplift 1=-10 (LC 4), 6=-119 (LC 9), 8=-120 (LC 8)
Max Grav 1=103 (LC 16), 5=94 (LC 1), 6=242 (LC 16), 7=124 (LC 18), 8=242 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-93/74, 2-3=-86/80, 3-4=-79/64, 4-5=-77/54

BOT CHORD 1-8=-34/74, 7-8=-34/74, 6-7=-34/74, 5-6=-34/74

WEBS 3-7=-89/0, 2-8=-188/142, 4-6=-187/141

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 10 lb uplift at joint 1, 120 lb uplift at joint 8 and 119 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 5/19/2020 BEFORE USE.

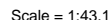
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



16023 Swingley Ridge Rd
Chesterfield, MO 63017

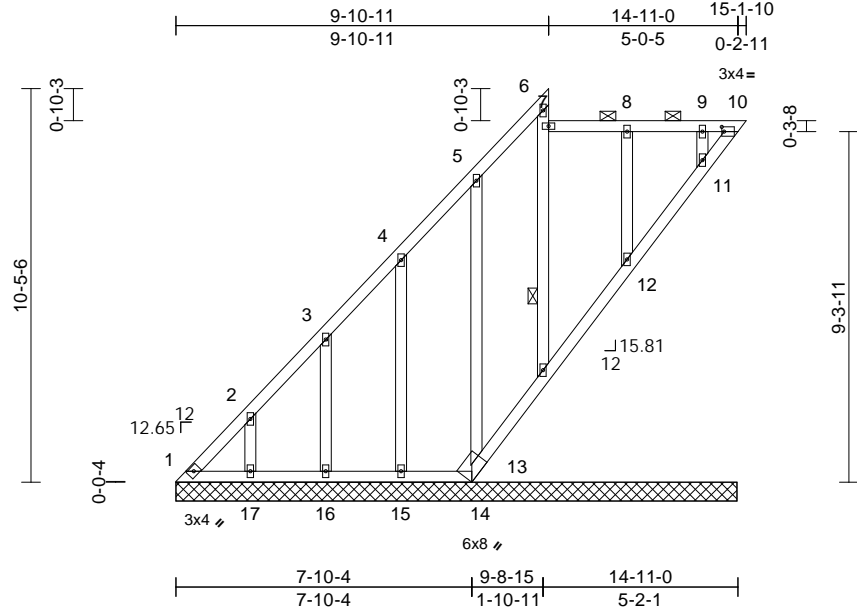
Page: 1

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY3	Lay-In Gable	1	1	Job Reference (optional)	I49889884

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:17
ID:E62zwETORGIM5FF?zaRNUbz1lu6-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWRcDoi7J4zJC?f

Page: 1



Scale = 1:61.2

Plate Offsets (X, Y): [10:0-0-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.06	Vert(LL)	n/a	-	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	-0.01	10	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S						Weight: 79 lb	FT = 10%

LUMBER
TOP CHORD 2x4 SPF No.2
BOT CHORD 2x4 SPF No.2
WEBS 2x4 SPF No.2
OTHERS 2x4 SPF No.2

BOT CHORD 1-17=-61/27, 16-17=-61/27, 15-16=-61/27, 14-15=-61/28, 13-14=-65/32, 12-13=-173/94, 11-12=-116/63, 10-11=-111/49
WEBS 2-17=-161/144, 3-16=-163/149, 4-15=-165/152, 5-14=-161/139, 8-12=-168/73, 9-11=-111/47

12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-13, 7-10. Except:
1 Row at midpt 7-13
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 10-11.

REACTIONS (lb/size) 1=62/14-10-11, 10=30/14-10-11, 11=145/14-10-11, 12=219/14-10-11, 13=141/14-10-11, 14=172/14-10-11, 15=182/14-10-11, 16=179/14-10-11, 17=183/14-10-11
Max Horiz 1=433 (LC 8)
Max Uplift 1=-102 (LC 6), 10=-78 (LC 8), 11=-29 (LC 9), 12=-83 (LC 9), 14=-113 (LC 8), 15=-126 (LC 8), 16=-123 (LC 8), 17=-126 (LC 8)
Max Grav 1=353 (LC 8), 10=48 (LC 15), 11=145 (LC 1), 12=219 (LC 1), 13=176 (LC 17), 14=191 (LC 15), 15=206 (LC 15), 16=202 (LC 15), 17=207 (LC 15)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-503/202, 2-3=-384/156, 3-4=-259/110, 4-5=-131/72, 5-6=-63/29, 7-13=-115/39, 6-7=-51/28, 7-8=-30/61, 8-9=-30/61, 9-10=-31/63

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 102 lb uplift at joint 1, 78 lb uplift at joint 10, 113 lb uplift at joint 14, 126 lb uplift at joint 17, 123 lb uplift at joint 16, 126 lb uplift at joint 15, 83 lb uplift at joint 12 and 29 lb uplift at joint 11.
- N/A
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



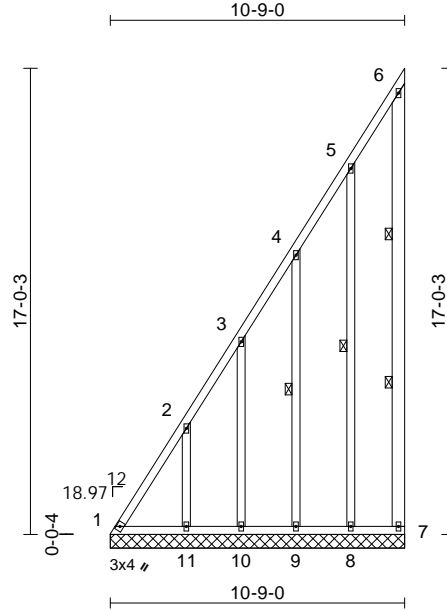
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY4	Lay-In Gable	3	1	Job Reference (optional)	I49889885

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:18
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Page: 1



Scale = 1:84.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.15	Vert(LL)	n/a	-	n/a	999	MT20	197/144
TCDL	10.0	Lumber DOL	1.15	BC	0.04	Vert(TL)	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.17	Horiz(TL)	0.00	7	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 103 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x6 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-6-9 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 4-9, 5-8
WEBS	2 Rows at 1/3 pts 6-7

REACTIONS	(lb/size)	1=93/10-9-0, 7=67/10-9-0, 8=177/10-9-0, 9=187/10-9-0, 10=161/10-9-0, 11=240/10-9-0
	Max Horiz	1=662 (LC 8)
	Max Uplift	1=-367 (LC 6), 7=-94 (LC 8), 8=-224 (LC 8), 9=-249 (LC 8), 10=-213 (LC 8), 11=-316 (LC 8)
	Max Grav	1=923 (LC 8), 7=95 (LC 15), 8=245 (LC 15), 9=262 (LC 15), 10=226 (LC 15), 11=337 (LC 15)

FORCES

	(lb) - Maximum Compression/Maximum Tension
TOP CHORD	1-2=-1109/524, 2-3=-808/376, 3-4=-584/278, 4-5=-335/164, 5-6=-100/66, 6-7=-79/99
BOT CHORD	1-11=-1/1, 10-11=-1/1, 9-10=-1/1, 8-9=-1/1, 7-8=-1/1
WEBS	2-11=-268/326, 3-10=-195/242, 4-9=-219/270, 5-8=-207/254

NOTES

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 367 lb uplift at joint 1, 94 lb uplift at joint 7, 316 lb uplift at joint 11, 213 lb uplift at joint 10, 249 lb uplift at joint 9 and 224 lb uplift at joint 8.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR
B220019	LAY5	Lay-In Gable	1	1	Job Reference (optional)

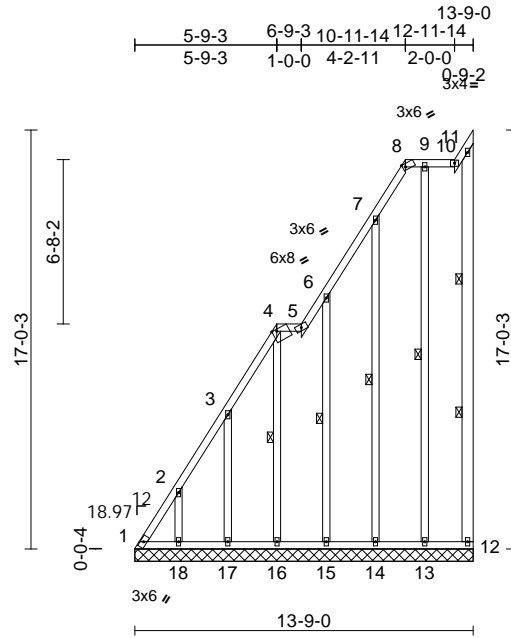
I49889886

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:18

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Scale = 1:93.6

Plate Offsets (X, Y): [4:0-2-5,Edge], [8:0-1-5,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.00	12	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							
Weight: 134 lb FT = 10%											

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x6 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-6-14 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 4-5, 8-10.		
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.		
WEBS	1 Row at midpt	4-16, 6-15, 7-14, 9-13	
WEBS	2 Rows at 1/3 pts	11-12	

REACTIONS

(lb/size)	1=52/13-9-0, 12=66/13-9-0, 13=181/13-9-0, 14=178/13-9-0, 15=188/13-9-0, 16=169/13-9-0, 17=186/13-9-0, 18=175/13-9-0
Max Horiz	1=650 (LC 8)
Max Uplift	1=410 (LC 6), 13=51 (LC 8), 14=285 (LC 8), 16=354 (LC 8), 17=294 (LC 8), 18=215 (LC 8)
Max Grav	1=955 (LC 8), 12=66 (LC 1), 13=181 (LC 1), 14=268 (LC 15), 15=188 (LC 1), 16=255 (LC 15), 17=279 (LC 15), 18=240 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-1138/535, 2-3=-933/442, 3-4=-641/302, 4-5=-301/142, 5-6=-330/165, 6-7=-348/184, 7-8=-77/39, 8-9=-16/13, 9-10=-16/13, 10-11=-9/40, 11-12=-51/5
BOT CHORD	1-18=-1/1, 17-18=-1/1, 16-17=-1/1, 15-16=-1/1, 14-15=-1/1, 13-14=-1/1, 12-13=-1/1
WEBS	2-18=-192/224, 3-17=-240/321, 4-16=-214/377, 6-15=-148/0, 7-14=-227/308, 9-13=-141/82

NOTES

- 1) Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left exposed; Lumber DOL=1.60 plate grip DOL=1.60
- 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 3) Provide adequate drainage to prevent water ponding.
- 4) All plates are 2x4 MT20 unless otherwise indicated.
- 5) Gable requires continuous bottom chord bearing.
- 6) Gable studs spaced at 2-0-0 oc.
- 7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 410 lb uplift at joint 1, 215 lb uplift at joint 18, 294 lb uplift at joint 17, 354 lb uplift at joint 16, 285 lb uplift at joint 14 and 51 lb uplift at joint 13.
- 10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

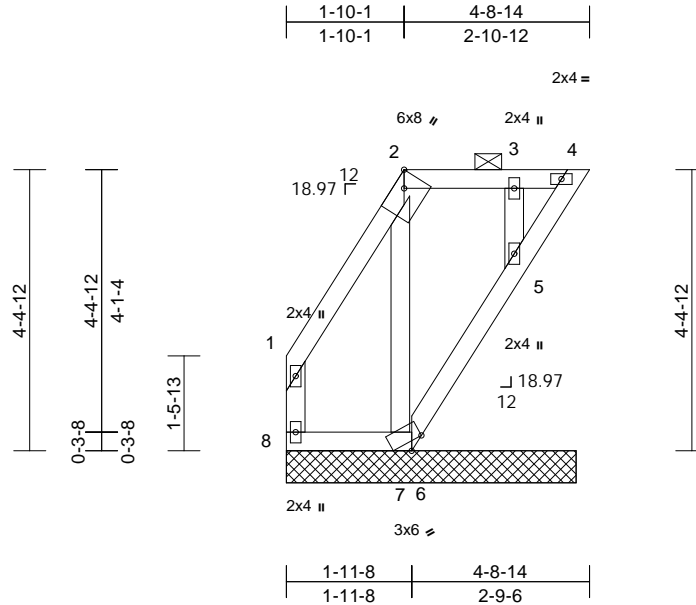
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY6	Lay-In Gable	1	1	Job Reference (optional)	I49889887

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:18

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Scale = 1:36

Plate Offsets (X, Y): [2:0-2-15,Edge], [6:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							
										Weight: 22 lb	FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 4-5.

REACTIONS

(lb/size)	4=17/4-6-6, 5=158/4-6-6, 6=22/4-6-6, 7=164/4-6-6, 8=72/4-6-6
Max Horiz	8=95 (LC 8)
Max Uplift	4=165 (LC 8), 5=32 (LC 5), 6=130 (LC 6), 7=2 (LC 4), 8=93 (LC 8)
Max Grav	4=109 (LC 6), 5=158 (LC 1), 6=161 (LC 8), 7=164 (LC 1), 8=126 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-8=-114/100, 1-2=-96/96, 2-3=-68/103, 3-4=-67/104
BOT CHORD	7-8=-104/67, 6-7=-104/67, 5-6=-206/146, 4-5=-202/127
WEBS	2-7=-109/42, 3-5=-124/52

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 1-9-6 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 93 lb uplift at joint 8, 165 lb uplift at joint 4, 130 lb uplift at joint 6, 2 lb uplift at joint 7 and 32 lb uplift at joint 5.
- N/A
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

Safety Information available from Truss Plate Institute, 2670 Crain Highway, Suite 203 Waldorf, MD 20601



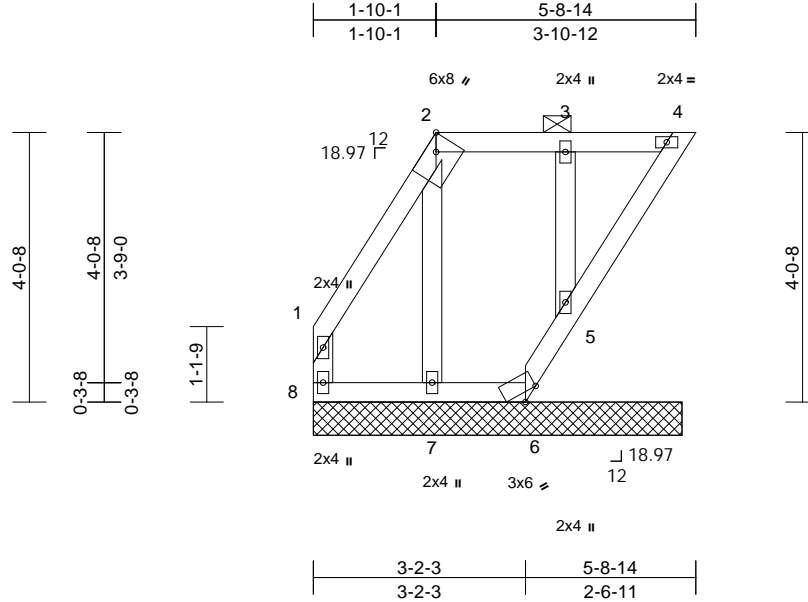
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY7	Lay-In Gable	1	1	Job Reference (optional)	I49889888

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:19
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Page: 1



Scale = 1:34.6

Plate Offsets (X, Y): [2:0-2-15,Edge], [6:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.03	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	4	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 25 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
WEBS	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-8-14 oc purlins, except end verticals, and 2-0-0 oc purlins: 2-4.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 4-5.

REACTIONS

(lb/size)	4=59/5-6-6, 5=193/5-6-6, 6=4/5-6-6, 7=151/5-6-6, 8=72/5-6-6
Max Horiz	8=100 (LC 8)
Max Uplift	4=-167 (LC 8), 5=-56 (LC 5), 6=-104 (LC 6), 7=-10 (LC 4), 8=-97 (LC 8)
Max Grav	4=111 (LC 15), 5=193 (LC 1), 6=194 (LC 8), 7=151 (LC 1), 8=120 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-8=-108/104, 1-2=-89/101, 2-3=-63/106, 3-4=-62/106
BOT CHORD	7-8=-107/62, 6-7=-106/62, 5-6=-215/140, 4-5=-209/125
WEBS	2-7=-113/35, 3-5=-158/66

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 97 lb uplift at joint 8, 167 lb uplift at joint 4, 104 lb uplift at joint 6, 10 lb uplift at joint 7 and 56 lb uplift at joint 5.
- N/A
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see

ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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16023 Swingley Ridge Rd
Chesterfield, MO 63017

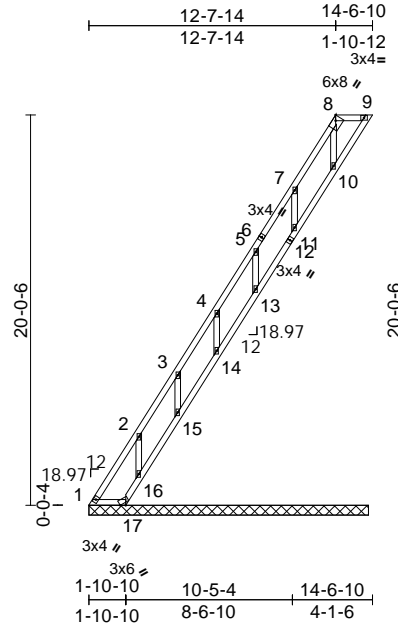
Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY8	Lay-In Gable	1	1	Job Reference (optional)	I49889889

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:19

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Scale = 1:118.2

Plate Offsets (X, Y): [8:0-2-15,Edge], [17:0-3-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.06	Horiz(TL)	-0.03	9	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-S							Weight: 74 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-9-8 oc purlins, except 2-0-0 oc purlins (6-0-0 max.): 8-9.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS

(lb/size)	1=81/14-4-2, 9=35/14-4-2, 10=294/14-4-2, 13=325/14-4-2, 14=120/14-4-2, 15=191/14-4-2, 16=186/14-4-2, 17=30/14-4-2
Max Horiz	1=804 (LC 8)
Max Uplift	1=-348 (LC 6), 9=-223 (LC 8), 10=-17 (LC 8), 13=-439 (LC 8), 14=-155 (LC 8), 15=-249 (LC 8), 16=-299 (LC 8), 17=-110 (LC 6)
Max Grav	1=861 (LC 8), 9=83 (LC 6), 10=294 (LC 1), 13=460 (LC 15), 14=167 (LC 15), 15=267 (LC 15), 16=275 (LC 15), 17=313 (LC 8)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-1028/483, 2-3=-751/351, 3-4=-511/241, 4-5=-300/162, 5-7=-100/36, 7-8=-89/206, 8-9=-89/190
BOT CHORD	1-17=-192/86, 16-17=-378/176, 15-16=-372/181, 14-15=-359/167, 13-14=-400/204, 11-13=-307/124, 10-11=-433/231, 9-10=-332/146
WEBS	8-10=-180/8, 7-11=-112/173, 5-13=-307/353, 4-14=-174/225, 3-15=-212/260, 2-16=-246/301

NOTES

- Unbalanced roof live loads have been considered for this design.

- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Provide adequate drainage to prevent water ponding.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Bearing at joint(s) 9, 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 223 lb uplift at joint 9, 348 lb uplift at joint 1, 110 lb uplift at joint 17, 17 lb uplift at joint 10, 439 lb uplift at joint 13, 155 lb uplift at joint 14, 249 lb uplift at joint 15 and 299 lb uplift at joint 16.
- N/A
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



January 27, 2022

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ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component

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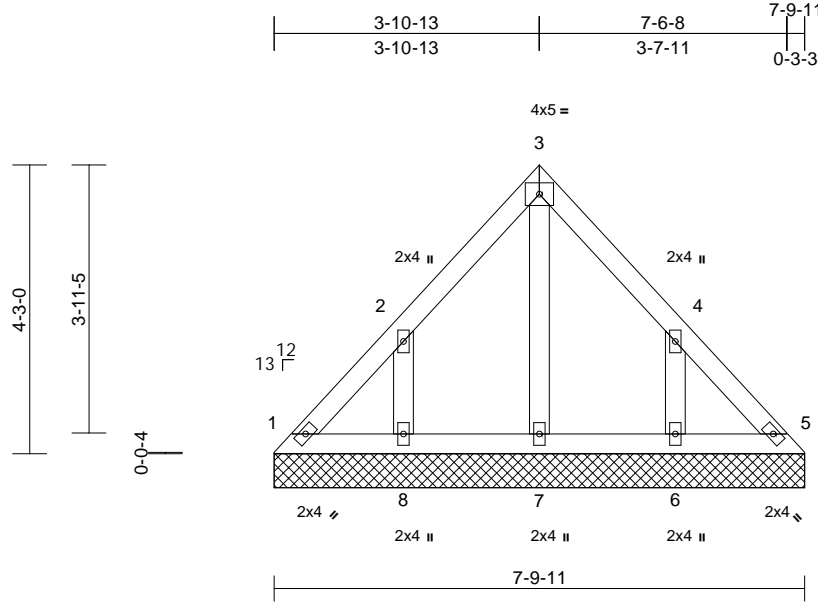
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Job	Truss	Truss Type	Qty	Ply	Lot 111 RR	
B220019	LAY9	Lay-In Gable	1	1	Job Reference (optional)	I49889890

Wheeler Lumber, Waverly, KS - 66871,

Run: 8.43 S Oct 11 2021 Print: 8.430 S Oct 11 2021 MiTek Industries, Inc. Tue Jan 25 16:23:19
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Page: 1



Scale = 1:33.9

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	25.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(TL)	n/a	-	n/a	999	197/144
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horiz(TL)	0.00	5	n/a	n/a	
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-P							Weight: 29 lb FT = 10%

LUMBER

TOP CHORD	2x4 SPF No.2
BOT CHORD	2x4 SPF No.2
OTHERS	2x4 SPF No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(lb/size)	1=71/7-9-11, 5=71/7-9-11, 6=198/7-9-11, 7=110/7-9-11, 8=198/7-9-11
Max Horiz	1=-104 (LC 4)
Max Uplift	1=-25 (LC 4), 5=-8 (LC 5), 6=-147 (LC 9), 8=-147 (LC 8)
Max Grav	1=96 (LC 16), 5=87 (LC 18), 6=226 (LC 16), 7=122 (LC 18), 8=226 (LC 15)

FORCES

(lb) - Maximum Compression/Maximum Tension	
TOP CHORD	1-2=-115/87, 2-3=-98/77, 3-4=-90/62, 4-5=-99/64
BOT CHORD	1-8=-42/89, 7-8=-42/89, 6-7=-42/89, 5-6=-42/89
WEBS	3-7=-82/0, 2-8=-186/171, 4-6=-186/171

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=115mph (3-second gust) Vasd=91mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.

- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 25 lb uplift at joint 1, 8 lb uplift at joint 5, 147 lb uplift at joint 8 and 147 lb uplift at joint 6.
- This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

LOAD CASE(S) Standard



January 27, 2022

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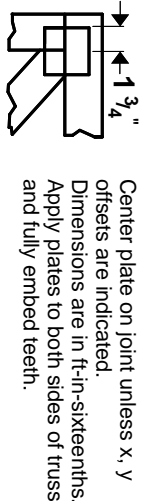
ANSI/TPI1 Quality Criteria, DSB-89 and BCSI Building Component



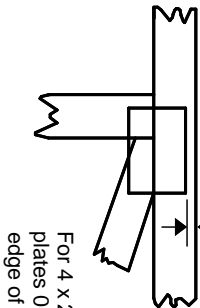
16023 Swingley Ridge Rd
Chesterfield, MO 63017

Symbols

PLATE LOCATION AND ORIENTATION



0-¹/₁₆"



For 4 x 2 orientation, locate plates 0- ¹/₁₆" from outside edge of truss.

—
—
This symbol indicates the required direction of slots in connector plates.

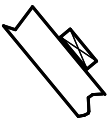
* Plate location details available in **MiTek 20/20** software or upon request.

PLATE SIZE

4 X 4

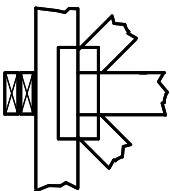
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING



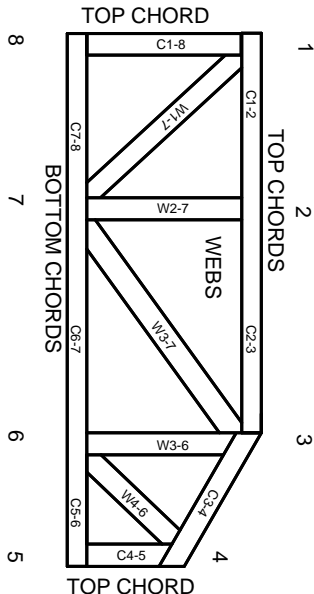
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3282

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 1 section 6.3 These truss designs rely on lumber values established by others.

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MiTek Engineering Reference Sheet: MII-7473 rev. 5/19/2020



General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.