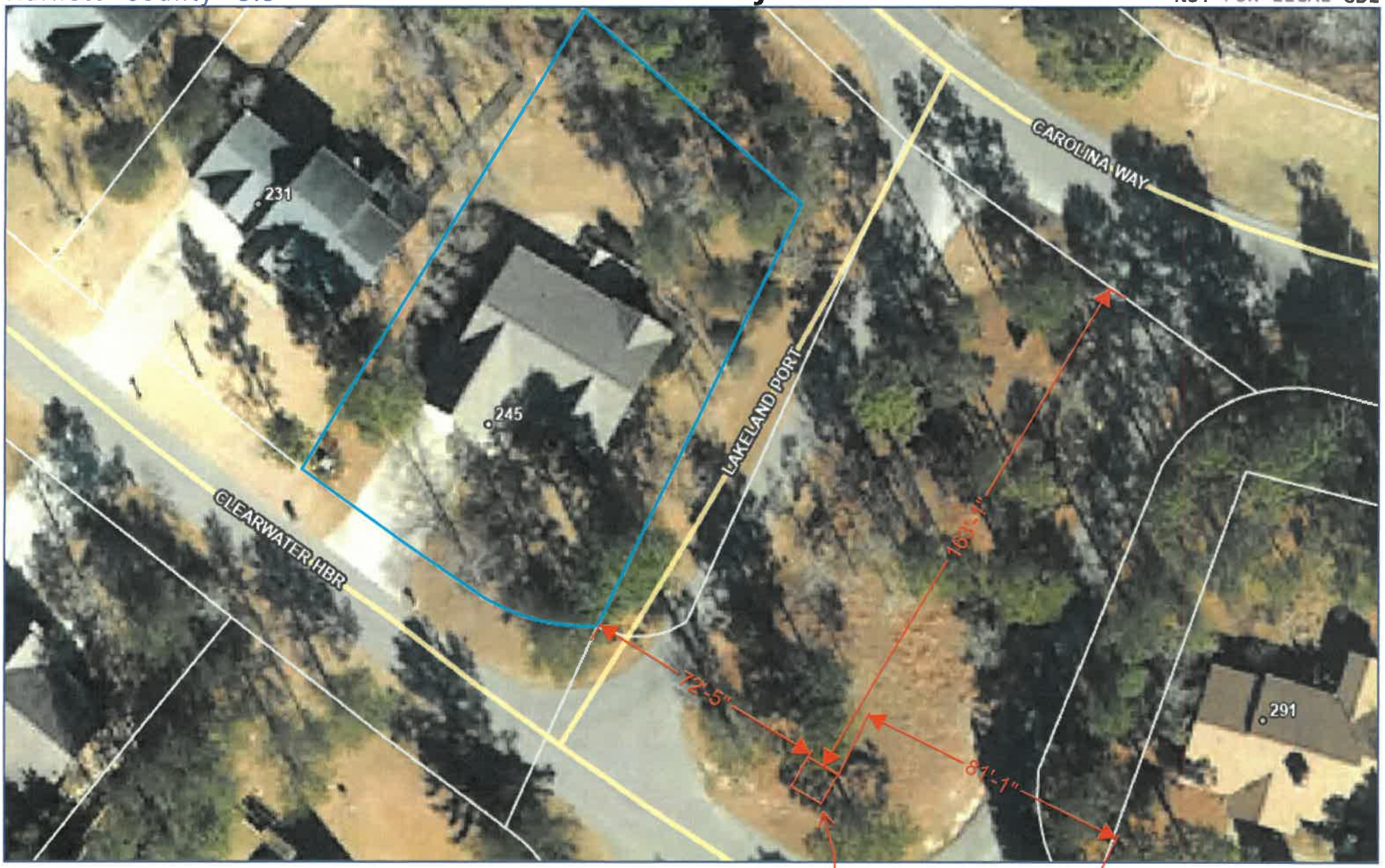
Harnett County GIS

Harnett County GIS

NOT FOR LEGAL USE



Harnett COUNTY NORTH CAROLINA

Harnett.org/GIS

July 10, 2024

- County Boundary
- Address Numbers
- Road Centerlines
- Parcels

N W E S

0 40 Feet

FROM THE DESK OF

Nina Leicht-Crist and Tim Lemons

February 14, 2024

Carolina Lakes POA
Architecture Request
91 Clubhouse Dr.
Sanford, NC, 27332

Dear Board of Directors, Mrs. Serena Reeves,

The residents of Clearwater Harbor and Carolina Lakes Homeschool Club formerly request permission to build a pavilion at the intersection of Clearwater Harbor and Lakeland Port. The pavilion measures 10 by 10 feet and is designed to resemble the pavilions at the marina.

The following contractors have pledged their support via donations of labor and material. All of them are residents of Carolina Lakes.

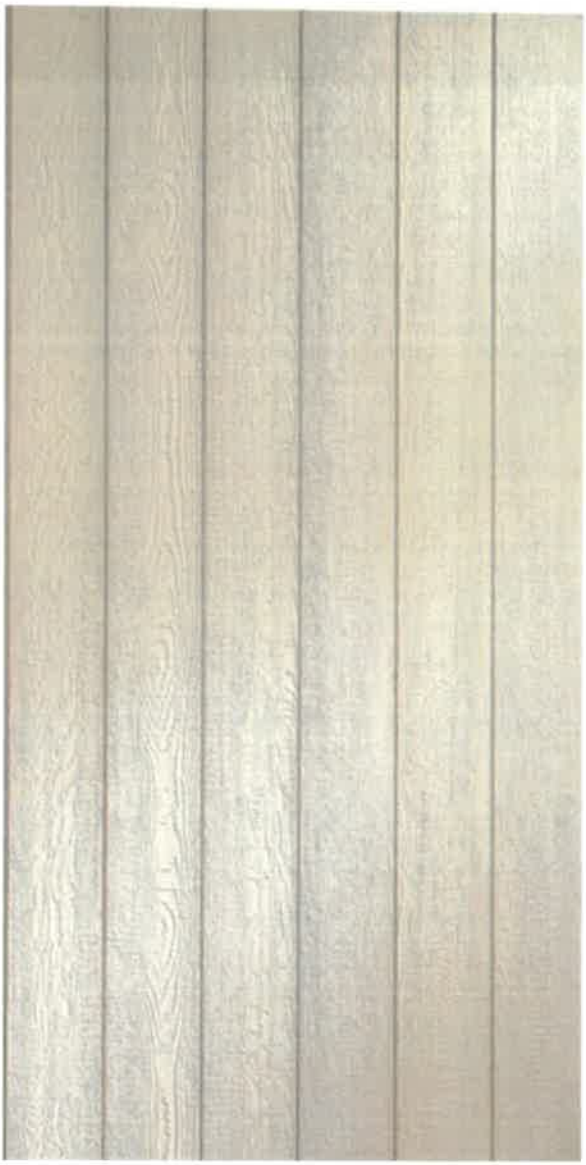
1. Brandon Deal, general contractor - see estimate
2. Sean Canevari, roofing specialist - see estimate
3. Rick Walker, truss design and sales specialist - see estimate and design
4. Richard's Concrete - verbally agreed to supply concrete and labor
5. Mr. Walaschek of Clearwater Harbor - has pledged support in any way necessary
6. Carolina Lakes Homeschool Club - we have raised approximately $400 in addition to the money we spent on the first structure. We plan to participate in the Sandhills MADE Market with a dog grooming and pet snack stand this spring. We have applied, but not received an acceptance letter, yet. However, if that plan falls through, we plan on coming up with alternate means of raising money like inviting more members to our preschool time with Mrs. Jennifer, lemonade stands, bake sales, participate in the yard sale, etc.

Our residents, especially the children, hope you'll approve our request soon. Thank you for your consideration.

Sincerely yours,

Nina Leicht-Crist

Tim Lemons



ON ITEMIZED QUOTE

Carolina Structural Systems
Roof Trusses • Floor Trusses • EWP

Carolina Structural Systems
P.O. Box 157, Ether, NC 27247
225 Frame Shop Rd., Star, NC 27356
910-491-9004
844-767-1926

QUOTE # Q2400283

ORDER DATE	/ /	CUST PO #	
DELIVERY DATE	/ /	COUNTY	HARNETT
ORDERED BY	RICK WALKER	TERMS	PRE-PAY
SUPERINTENDENT	RICK WALKER	SALES REP	RICK WALKER
JOBSITE PHONE #	(828) 342-2133	DESIGNER	RICK WALKER

CASH OR PENDING CREDIT
INTERNAL
,
( ) -

LAKELAND PORT
SANFORD, NC 27332

JOB NAME: CLEARWATER HARBOR SHELTER LOT # SUBDIV:
MODEL: OPTIONS: JOB CATEGORY: SINGLE FAMILY

DELIVERY INSTRUCTIONS:

SPECIAL INSTRUCTIONS:

ROOF TRUSSES

PROFILE	QTY / PLY	PITCH		TYPE ID	BASE SPAN	O/A SPAN	LUMBER TOP	LUMBER BOT	OVERHANG		CANTILEVER LEFT	CANTILEVER RIGHT	STUB LEFT	STUB RIGHT	
	6	6.00	3.00	SCISSORS S1	10-01-00	10-01-00	2 X 6	2 X 6	00-10-00	00-10-00					

ROOF SUB-TOTAL: $ 400.00

QUOTE # Q2400283 DATE QUOTED: 02/13/24 THIS QUOTE EXPIRES ON: 02/20/24

ACCEPTED BY SELLER

BY: _____

TITLE: _____

DATE OF ACCEPTANCE: _____

ACCEPTED BY BUYER

PURCHASER: _____

BY: _____ TITLE: _____

ADDRESS: _____

PHONE: _____ DATE: _____

SUB-TOTAL	$400.00
SALES TAX 7.000%	$28.00
GRAND TOTAL	$428.00

ESTIMATE

YOUR BUSINESS NAME

Customer name	Carolina Lakes POA
Address	91Clubhouse Dr.

Email	bdeal85@gmail.com
Phone	8589569092
Address	21 Pinewinds Dr. Sanford, NC 27332

Quote number	108
Date	02/04/2024
Quote valid until	05/04/2025

SUMMARY OF CUSTOMER REQUIREMENTS

Build a bus stop at the entrance area to Clearwater Harbor.

MATERIALS

Item	Price	Quantity	Amount
all materials are donated			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
			$ 0.00
		Subtotal	$ 0.00

LABOR

Job	Amount
labor for helper for 2 days	$ 300.00
Subtotal	$ 300.00

TERMS & CONDITIONS

ESTIMATE VALUE

Materials	$ 0.00
Labor	$ 300.00
Sales tax	
TOTAL	$ 300.00

PROGRESS PAYMENTS: Build a bus stop at the entrance area to Clearwater Harbor.

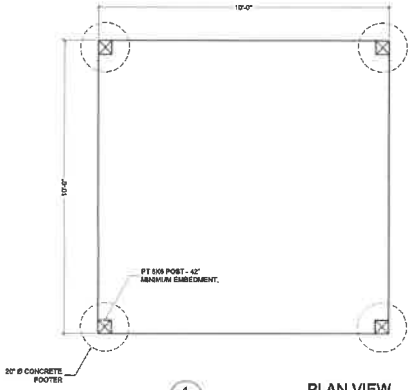
Roofing Quote

Clearwater Hbr. Bus stop

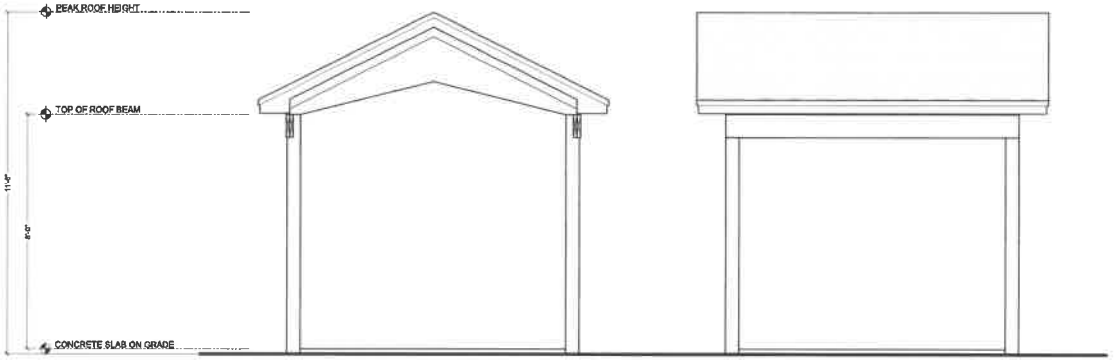
Sanford N.C. 27332

50 year architecture GAF Timberline HDZ Barkwood shingles	$70
Ridge cap shingles GAF Timberline HDZ Barkwood	$60
Starter Shingles	$60
Synthetic underlayment on complete roof	$65
ridge ventilation for proper ventilation for shingle life if needed.	$20
1 ¼ Nails, button cap underlayment nails, supplies ect	$50
Labor for all material installation, E.P.A. removal of waste	$500
Total before tax if applicable	$825

This will be donated by Sean Canevari and Carolina Home Inspection Group. We do not use or install metal roofs due to yearly maintenance of screw seals causing leaks and natural debris removing coating and initiating rust and premature deterioration.

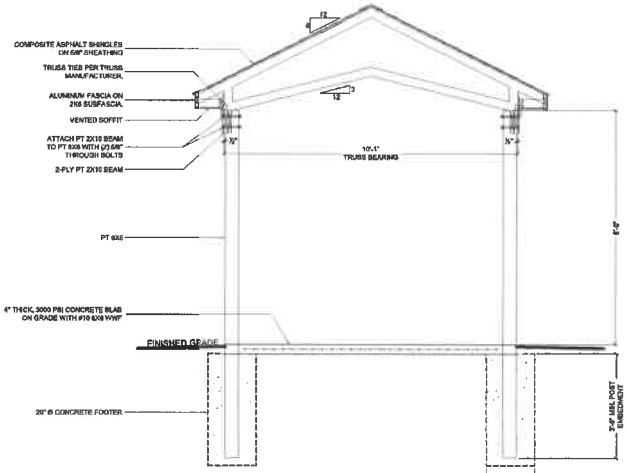


1 / A1 PLAN VIEW
SCALE: 1/2" = 1'

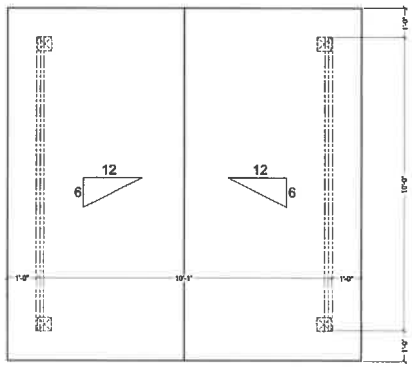


2 / A1 FRONT ELEVATION
SCALE: 1/2" = 1'

3 / A1 SIDE ELEVATION
SCALE: 1/2" = 1'



4 / A1 SECTION DETAIL
SCALE: 1/2" = 1'



5 / A1 ROOF PLAN
SCALE: 1/2" = 1'

BUS STOP SHELTER

REVISIONS	
NO.	DATE

BUS STOP SHELTER
DRAWING NO.

02.05.24
DATE

DJL
DRAWN BY

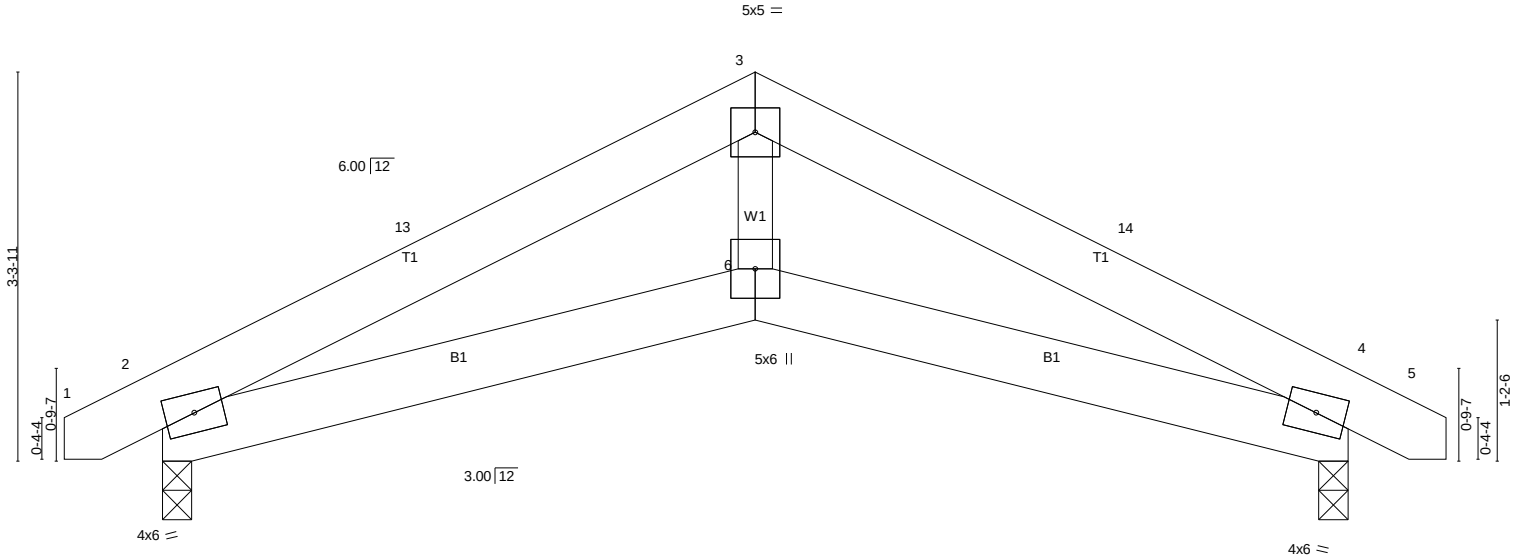
SHEET
A1

Job	Truss	Truss Type	Qty	Ply	CLEARWATER HARBOR SHELTER
240644RM1	S1	SCISSORS	6	1	Job Reference (optional)

Carolina Structural Systems, Star, NC 27356 — 8.720 s Feb 1 2024 MiTek Industries, Inc. Wed Apr 24 10:03:16 2024 Page 1
ID:2mDhMT2fwYhNvY3gRYxh4rzlWYA-ZdrVyqwltO1bFNXzZt9knaJdkaprpnlUaT4N4JzNYlP

-0-10-0	5-0-8	10-1-0	10-11-0
0-10-0	5-0-8	5-0-8	0-10-0

Scale = 1:19.6



5-0-8	10-1-0
5-0-8	5-0-8

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	-0.01	6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	6	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code	IRC2018/TPI2014	Matrix-MS							Weight: 58 lb	FT = 20%

LUMBER-
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.1

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.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. (lb/size) 2=444/0-3-0 (min. 0-1-8), 4=444/0-3-0 (min. 0-1-8)
Max Horz 2=44(LC 11)
Max Uplift2=-32(LC 12), 4=-32(LC 12)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-13=-774/206, 3-13=-708/220, 3-14=-708/220, 4-14=-774/203
BOT CHORD 2-6=-113/659, 4-6=-112/659
WEBS 3-6=-17/395

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=125mph (3-second gust) Vasd=99mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; B=45ft; L=24ft; eave=4ft; Cat. II; Exp B; Enclosed; MWFRS (directional) and C-C Exterior(2E) -0-8-2 to 2-3-14, Interior(1) 2-3-14 to 5-0-8, Exterior(2R) 5-0-8 to 8-0-8, Interior(1) 8-0-8 to 10-9-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) Bearing at joint(s) 2, 4 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 32 lb uplift at joint 2 and 32 lb uplift at joint 4.
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.

LOAD CASE(S) Standard

DrJ ENGINEERING

Paragon ID: 48811

6300 Enterprise Lane | Madison, WI 53719 | drjengineering.org

Re: 240644RM1

Site Information:

Project Customer:	-	Project Name:	240644RM1
Lot/Block:	-	Subdivision:	CAROLINA LAKES - CLEARWATER HARBOR
Address:	-	Model:	BUS STOP
City:	Sanford	State:	North Carolina

Name Address and License # of the Building Designer, if there is one, for the Building:

Name: - License: - State: North Carolina

Address: - City: -

The Truss Manufacturer (TM) is Carolina Structural Systems

The TM has Communicated Truss Design Criteria (TDC) to DrJ Engineering, LLC (DrJ). Refer to the individual Truss Design Drawings (TDDs) for specifics. Building Code, Software & engineering information follows:

Design Code:	IRC2015
Software Program:	20/20
Truss Design Engineer:	Ryan Dexter

The TM has obtained, through the TM's Customer, the TDC &Truss design requirements from the Construction Documents &/or one of the Construction Professionals. The TM has Communicated the TDC & any related Truss design requirements to DrJ. This Communication includes transfer of TDC & any related Truss design requirements using proprietary Truss industry Software. DrJ designs each individual Truss, as illustrated on each TDD, relying upon the accuracy & completeness of Communicated information.

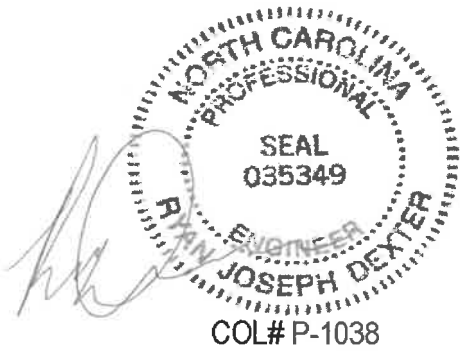
The seal on the Cover/Truss Index Sheet & on the individual TDD represents acceptance of responsibility for the review of the TDC & the design of each individual Truss. Each Truss then becomes one element of a Building Structural System (BSS). For any other BSS information needed, please contact the TM.

The TM is responsible for supplying the truss-to-truss connector type. Contact the TM for questions regarding truss-to-truss connector type, application and/or installation.

All dimensions are reproduced from the referenced Building Designer's plans.

⚠ WARNING: Always review the handling, storage, installation, lateral restraint & diagonal bracing information provided by TM through their delivery of the Truss Submitta Package (TSP). Do not cut or alter any part of a Truss or Structural Element. Never stack building material without proper lateral restraint & diagonal bracing Never overload/exceed the design load shown on any TDD or Structural Element design drawing (SEDD). Property damage &/or personal injury happen when there is complacency regarding safety items. DrJ presumes the TM submits their TSP to be reviewed, approved & used by one or more of the following building Owner, Building Official, Building Designer, Registered Design Professional in Responsible Charge, Contractor &/or Framer.

My license renewal date for North Carolina is 12/31/2024 DrJ Consulting, PLLC P-1038



COL# P-1038

05/23/2024

Ryan Dexter

Scope of Work and Definitions

DrJ is a professional engineering company, which is defined as an Approved Source. In addition, DrJ is an ANAB accredited ISO/IEC 17065 Approved Agency. Approval or acceptance of the work of an Approved Source is determined by the Approved Source employing properly licensed professional engineers. Similarly, approval or acceptance of an Approved Agency is by the Approved Agency being a properly accredited third party certification body.

The DrJ scope of work is to undertake the structural analysis needed to create the TDDs listed here. TDDs prepared by DrJ are Instruments of Service for use solely for the named Project. This includes documents in electronic form. DrJ shall be deemed the author & owner of its Instruments of Service & shall retain all copyrights, common law statutory & other reserved rights. The Instruments of Service shall not be used by anyone for future additions or alterations of this Project or for other Projects without prior written instruction by DrJ. Any unauthorized use of the Instruments of Service shall be at the sole risk of the TM &/or other user & DrJ shall not have liability for this use.

For its engineering evaluation and structural design work, DrJ relies upon the accuracy of published raw material (i.e., lumber, OSB, etc.) & manufactured product design values. In addition, DrJ relies upon a product manufacturer's published product, material, design &/or method of construction pursuant to an ISO/IEC 17065 technical evaluation report or a sealed & signed report, which include but is not limited to design values, applications, conditions of use, quality, installation, bracing, & repair requirements. DrJ makes no representation or warranty with respect to raw material or manufactured product performance.

Capitalized terms & responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of TPI 1, the National Design Specification for Wood Construction (NDS), applicable professional engineering law, Appendix A Commentary/Definitions, Appendix B: Project/Deliverables, definitions created within Design Drawings &/or definitions within Reference Sheets. Terms not defined shall have ordinarily accepted meanings as the context implies. All pages of this document must be presented together to be considered complete.

All pages of this document must be presented together to be considered complete.

Construction Materials: Lumber, Metal Plate Connectors (MPCs) & Other Fasteners

Commodity lumber Design Values, specified in the NDS, are defined as strength & stiffness property values of structural lumber products published for design use. These values are determined for specific grades & species/species groups. Sawn lumber used for load-supporting purposes, including end-jointed, edge-glued, machine stress-rated or machine-evaluated lumber, shall be identified by the Grade mark of a lumber grading or inspection agency that has been approved by an Accreditation Body that complies with the latest edition of the DOC PS 20 American Softwood Lumber Standard or equivalent. Approved end-jointed lumber is permitted to be used interchangeably with solid-sawn members of the same species & grade. End-jointed lumber used in an assembly required to have a fire-resistance rating shall have the designation "Heat Resistant Adhesive" or "HRA" included in its grade mark. DrJ relies upon each lumber manufacturer to provide building code conforming Design Values, conditions of use, quality, & repair requirements as well as compliance with DOC PS 20 & the NDS Supplement, as pertinent.

MPCs are presumed to be manufactured, tested & identified in accordance with TPI 1. The design & performance of each Truss rely upon the MPC manufacturer's published ISO/IEC 17065 technical evaluation report &/or a sealed & signed Research Report that delineates design values, performance, application, installation, conditions of use, quality, & repair requirements.

The NDS provides design values for generic fastener types (e.g., bolts, nails, wood screws, spikes, timber rivets, drift pins, steel side plates, etc.)

Structural capacities for commodity & proprietary fastener types & steel side plates are presumed to be established, monitored, manufactured & identified in accordance with ASTM A36, ASTM A153/A153-16A, ASTM A307, ASTM A576, ASTM A576 GR1015 Modified, ASTM F606/F606M, ASTM A641/A641M, ASTM A653 Structural Grade (GR) 33, ASTM A653M SR 33, ASTM A675 GR60, ASTM A1011 SS GR33, ASTM D1761, ASTM D5764, ASTM D7147, ASTM F606/F606M, ASTM F680, ASTM F1575, ASTM F1667, including Supplement 1, ASTM F3359, &/or ASTM SAE J429 GR 2, as pertinent.

For proprietary manufactured structural fastener products & steel side plates, DrJ relies upon the manufacturer's published ISO/IEC 17065 technical evaluation report &/or a sealed & signed Research Report that delineates design values, performance, application, installation, conditions of use, quality, & repair requirements.

DrJ relies upon quality assurance being performed by an Approved Agency &/or Approved Source (e.g., ISO/IEC 17020, professional engineer, etc.).

DrJ makes no representation or warranty & is not liable for; 1) the accuracy of the TM's Communication, 2) lumber Design Values, 3) MPC design values, 4) the accuracy of Software, 5) building code compliance of any Structural Element as used in the BSS, 6) the existence of Grade Marks on lumber 7) the contents of any TSP &/or 8) the design values, quality or installation of any commodity or proprietary product. In addition, Appendix A Commentary/Definitions & Appendix B Project/Deliverables, & the DrJ Reference Sheet contain pertinent information.

Job	Truss	Truss Type	Qty	Ply	CLEARWATER HARBOR SHELTER
240644RM1	S1	SCISSORS	6	1	Paragon ID: 48811 P5253843

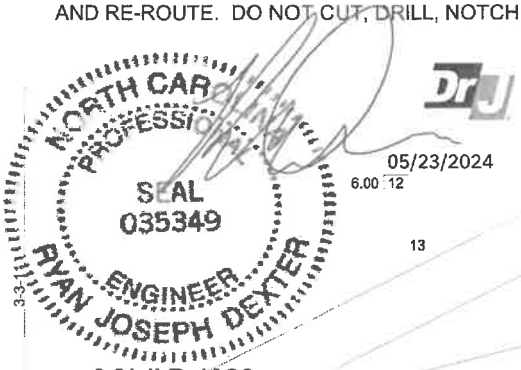
Job Reference (optional)

8.720 s Feb 1 2024 MiTek Industries, Inc. Wed Apr 24 10:03:16 2024

REPAIR:

1) 6X6 POST NOTCHED ON WRONG SIDE FOR DOUBLE 2X10 HEADER CONNECTION.

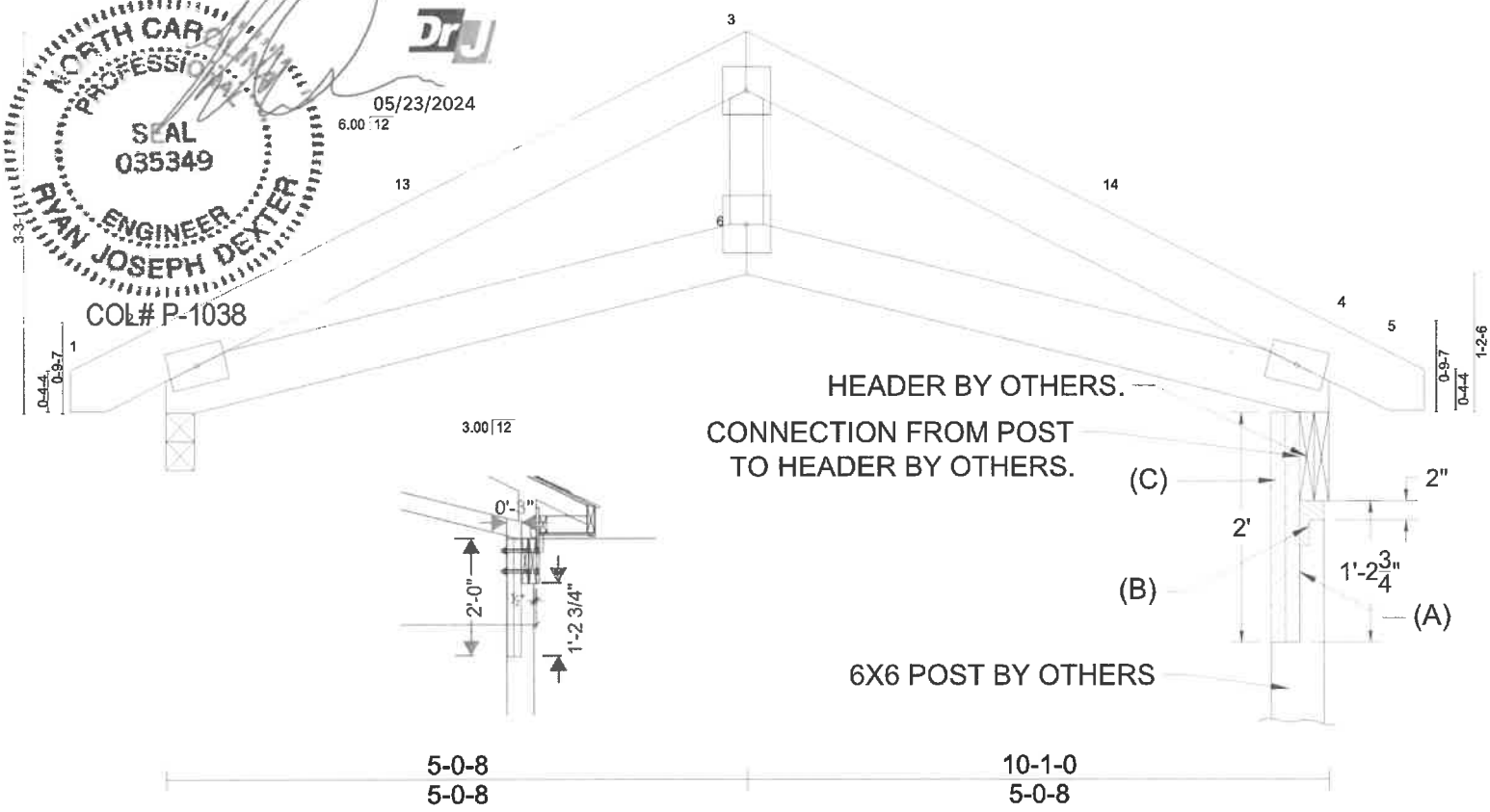
- NOTE - THIS REPAIR IS VALID FOR THE DESIGN CONDITIONS PROVIDED IN THIS TRUSS REPAIR DRAWING. IT'S ADEQUACY FOR THE ACTUAL CONDITIONS MUST BE VERIFIED BY OTHERS.
- REFER TO ORIGINAL TRUSS DESIGN DRAWING FOR ADDITIONAL NOTES.
- IF TRUSS IS IN PLACE, SHORE UP TRUSS TO RELIEVE ANY LOAD IT MAY BE SUPPORTING BEFORE BEGINNING REPAIR.
- UNLESS OTHERWISE SPECIFIED, REMOVE ALL ELECTRICAL, MECHANICAL, PLUMBING, ETC. RUNS INTERFERING WITH THE REPAIR MATERIALS AND RE-ROUTE. DO NOT CUT, DRILL, NOTCH, OR MODIFY REPAIR MATERIALS.



COL# P-1038

DrJ

05/23/2024



(A) LUMBER TO BE CUT CLEANLY AND ACCURATELY. DO NOT OVERCUT.

(B) 'PACK OUT' SPACE BETWEEN COLUMN AND HEADER WITH (1) SP or SPF No. 2 BLOCK. CUT TO FIT TIGHT. SCREWS FROM PART (C) MUST BE DRIVEN THROUGH BLOCK.

(C) ADD (1) NEW 2-PLY 2 X 6 SP or SPF NO.2 MEMBER AS SHOWN - CUT TO FIT TIGHT. ATTACH PLIES TOGETHER WITH THREE (3) CONTINUOUS 3/8" DIAMETER BEADS, OR GREATER, OF LOCTITE POWER GRAB HEAVY-DUTY CONSTRUCTION ADHESIVE. THEN, ATTACH 2-PLY MEMBER TO POST WITH THREE (3) CONTINUOUS 3/8" OR GREATER DIAMETER BEADS OF LOCTITE POWER GRAB HEAVY-DUTY CONSTRUCTION ADHESIVE TO ALL INTERSECTING MEMBERS AND (2) ROWS OF SIMPSON SDS25412 (4.5" X 0.25") WOOD SCREWS SPACED @ 3" OC. SCREWS MUST HAVE A MINIMUM EDGE DISTANCE OF 1" AND MINIMUM END DISTANCE OF 3".

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plate Grip DOL	1.00	TC	0.08	Vert(LL)	-0.01	6	>999	240	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.11	Vert(CT)	-0.02	6	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.06	Horz(CT)	0.01	4	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-MS							Weight: 58 lb	FT = 20%

DrJ Reference Sheet

WARNING Always review the handling, storage, installation, lateral restraint & diagonal bracing information provided by the Truss Manufacturer (TM) through their delivery of the Truss Submittal Package (TSP). Do not cut or alter any part of a Truss or Structural Element. Never stack building material without proper lateral restraint & diagonal bracing. Never overload/exceed the design load shown on any TDD or Structural Element Design Drawing (SEDD). Property damage &/or personal injury happen when there is complacency regarding safety items. DrJ presumes the TM submits their TSP to be reviewed, approved & used by one or more of the following; building Owner, Building Official, Building Designer, Registered Design Professional in Responsible Charge, Contractor &/or Framer.

Scope of Work and Definitions

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DrJ presumes that the Communicated TDC & Truss design requirements conform to ANSI/TPI 1-2014, National Design Standard for Metal Plate Connected Wood Trusses (TPI 1). This includes but is not limited to:(a) allowable vertical, horizontal or other required deflection criteria;(b) any lateral thrust developed by scissors-type Trusses; (c) modeling requirements for scissors trusses;(d) any dead load, live load & in-service creep deflection criteria for floors or flat roofs;(e) any floor or roof camber requirements; (f) any Truss-to-Truss or Truss-to-adjacent structural member differential deflection criteria;(g) any special floor truss deflection criteria &/or vibration criteria including but not limited to strongback bridging requirements;(h) any dead load, live load, & in-service creep deflection criteria for floors supporting stone or ceramic tile finishes;(i) any conditions where moisture, temperature, corrosive chemicals & gases are expected to result in a wood moisture content exceeding 19% &/or sustained temperatures exceeding 150°F; (j) any conditions where wood preservatives or other sources of corrosion may affect the truss design;(k) standard & unique design loads;(l) standard & unique truss spacing; & (m) building code used for the design of the Building Structural System.

DrJ designs each individual Truss, as illustrated on each TDD, relying upon the accuracy & completeness of Communicated information.

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The DrJ scope of work is to undertake the structural analysis needed to create the TDDs listed here. TDDs prepared by DrJ are Instruments of Service for use solely for the named Project. This includes documents in electronic form. DrJ shall be deemed the author & owner of its Instruments of Service & shall retain all copyrights, common law statutory & other reserved rights. The Instruments of Service shall not be used by anyone for future additions or alterations of this Project or for other Projects without prior written instruction by DrJ. Any unauthorized use of the Instruments of Service shall be at the sole risk of the TM &/or other user & DrJ shall not have liability for this use.

As permitted by the applicable material chapters & referenced standards of the listed building code, DrJ structural design may use strength design, load & resistance factor design, allowable stress design, empirical design, &/or conventional construction methods, as pertinent. The TDD defines the individual Truss that safely supports the factored loads or nominal loads, in load combinations defined in the listed building code, without exceeding the appropriate strength limit states or allowable stresses, as pertinent.

For its engineering evaluation & structural design work, DrJ relies upon the accuracy of published raw material (e.g., lumber, OSB, etc.) & manufactured product design values (e.g., I-joists, LVL, wood structural panels, metal connector plates, fasteners, etc.). In addition, DrJ relies upon a product manufacturer's published product, material, design &/or method of construction pursuant to an ISO/IEC 17065 technical evaluation report or a sealed & signed report, which include but is not limited to design values, applications, conditions of use, quality, installation, bracing, & repair requirements. DrJ makes no representation or warranty with respect to raw material or manufactured product performance.

When the TM has provided a Truss Placement Diagram (TPD) in its TSP, it is an Illustration that identifies the assumed location of each individually identified Truss to aid Truss installation. Contact the TM for questions regarding the TPD &/or Truss installation.

The TM is responsible for supplying the truss-to-truss connector type. Contact the TM for questions regarding truss-to-truss connector type, application &/or installation.

All dimensions are reproduced from the referenced Building Designer's plans.

Capitalized terms and responsibilities are defined pursuant to the applicable building code, applicable reference standards, the latest edition of TPI 1, the National Design Specification® for Wood Construction (NDS), applicable professional engineering law, Appendix A Commentary/Definitions, Appendix B: Project/Deliverables, definitions created within Design Drawings &/or definitions within Reference Sheets. Terms not defined shall have ordinarily accepted meanings as the context implies.

Compliance with the referenced building code is confirmed when: 1) the "for construction" TDDs have been examined for conformance with the local building code & requirements of pertinent laws, 2) any non-conformance is provided in writing to DrJ stating the reasons for the non-conformance, 3) the non-conformance is cured, 4) the plan examination & approval of the TDDs is complete, & 5) required inspections are complete.

Truss Design

Each TDD is created by various Software developers & produces engineering analysis. Software generates framing layout, design, manufacturing, &/or management data/output consistent with the TM's business procedures, inventory & Selectable Software Parameters. Software is used under a Software license agreement between the TM & Software developer.

Reliance upon the Software company, by the TM and DrJ, includes but is not limited to; all Software warranties, its use of accepted engineering mechanics models, its use of appropriate design equations, its use of accurate mathematical analysis, its use of any needed calibration to testing, its accuracy in the context of TPI 1 &/or NDS requirements, that output derived from the Software is appropriate for the pertinent building code & for the end use intended when used in accordance with Software instructions & guidance from the Software developer, & any unique characteristics delineated by the Software output for each singular Truss & its TDD or TRD. Given Service reliance upon proprietary Software, DrJ cannot be responsible for any interruption of the use of Software outside of the control of DrJ.

Each TDD indicates the minimum lumber species, size & grade required to be used. Lumber with higher Design Values can be substituted.

Each TDD indicates the plate type, minimum size, orientation, & location for each truss joint. Use of Metal Plate Connectors (MPCs) with wider widths &/or longer lengths of the same gauge are permitted.

Each TDD presumes that the top chords are sheathed or continuous lateral restraint members (i.e., purlins) are provided at the spacing indicated on TDD (e.g., 24 in. o.c. maximum).

Graphical representation of lateral restraint members (i.e., web member restraint, purlins, etc.), if shown on the TDD, do not illustrate the size or orientation of the restraint along the top chord, bottom chord &/or web members.

Attachment of a purlin gable (e.g., hip frames, lay-in gables, etc.) to the supporting hip Trusses satisfies the compression bracing requirements for the top chord of hip Trusses. Refer to the TDD to locate hip Trusses that have been designed to have this type of top chord compression bracing.

Sheathing applied in the plane of the Truss is NOT considered in the design of the individual Truss unless specifically noted otherwise (i.e., a Gable End Truss has not been designed using composite stiffness analysis).

Each TDD presumes Trusses are installed vertically.

Each TDD presumes dry & non-treated lumber is used.

When fire-retardant, preservative-treated, or green lumber is used it is specifically noted on each TDD where it is used.

DrJ presumes that the Truss depicted on each TDD meets the minimum manufacturing quality requirements specified in Chapter 3 of TPI 1 so that design assumptions are met. DrJ also relies upon quality assurance being performed by an accredited agency (e.g. ISO/IEC 17020, professional engineer, etc.). DrJ makes no representation or warranty regarding the performance of each manufactured Truss.

Construction Materials: Lumber, Metal Plate Connectors & Other Fasteners

Commodity lumber Design Values, specified in the NDS, are defined as strength & stiffness property values of structural lumber products published for design use. These values are determined for specific grades & species/species groups. Sawn lumber used for load-supporting purposes, including end-jointed, edge-glued, machine stress-rated or machine-evaluated lumber, shall be identified by the Grade mark of a lumber grading or inspection agency that has been approved by an Accreditation Body that complies with the latest edition of the DOC PS 20 American Softwood Lumber Standard or equivalent. Approved end-jointed lumber is permitted to be used interchangeably with solid-sawn members of the same species & grade. End-jointed lumber used in an assembly required to have a fire-resistance rating shall have the designation "Heat Resistant Adhesive" or "HRA" included in its grade mark. DrJ relies upon each lumber manufacturer to provide building code conforming Design Values, conditions of use, quality, & repair requirements as well as compliance with DOC PS 20 & the NDS Supplement, as pertinent.

MPCs are presumed to be manufactured, tested & identified in accordance with TPI 1. The design & performance of each Truss rely upon the MPC manufacturer's published ISO/IEC 17065 technical evaluation report &/or a sealed & signed Research Report that delineates design values, performance, application, installation, conditions of use, quality, & repair requirements.

The NDS provides design values for generic fastener types (e.g., bolts, nails, wood screws, spikes, timber rivets, drift pins, steel side plates, etc.)

Structural capacities for commodity & proprietary fastener types & steel side plates are presumed to be established, monitored, manufactured & identified in accordance with ASTM A36, ASTM A153/A153-16A, ASTM A307, ASTM A576, ASTM A576 GR1015 Modified, ASTM F606/F606M, ASTM A641/A641M, ASTM A653 Structural Grade (GR) 33, ASTM A653M SR 33, ASTM A675 GR60, ASTM A1011 SS GR33, ASTM D1761, ASTM D5764, ASTM D7147, ASTM F606/F606M, ASTM F680, ASTM F1575, ASTM F1667, including Supplement 1, ASTM F3359, &/or ASTM SAE J429 GR 2, as pertinent.

For proprietary manufactured structural fastener products & steel side plates, DrJ relies upon the manufacturer's published ISO/IEC 17065 technical evaluation report &/or a sealed & signed Research Report that delineates design values, performance, application, installation, conditions of use, quality, & repair requirements.

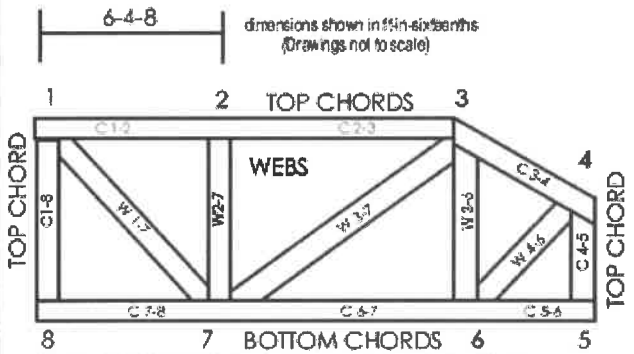
DrJ relies upon quality assurance being performed by an Approved Agency &/or Approved Source (e.g., ISO/IEC 17020, professional engineer, etc.).

DrJ makes no representation or warranty & is not liable for: 1) the accuracy of the TM's Communication, 2) lumber Design Values, 3) MPC design values, 4) the accuracy of Software, 5) building code compliance of any Structural Element as used in the BSS, 6) the existence of Grade Marks on lumber 7) the contents of any TSP &/or 8) the design values, quality or installation of any commodity or proprietary product. In addition to this DrJ Reference Sheet, Appendix A Commentary/Definitions & Appendix B Project/Deliverables, contain pertinent information.

The DrJ Reference Sheet will be updated annually on 12/31 of each year & supersedes all prior versions & understandings with respect to the DrJ Reference Sheet.

The DrJ Reference Sheet may also be updated periodically during the year upon Communication of DrJ to Carolina Structural Systems

Numbering System

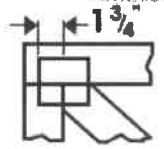


JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT

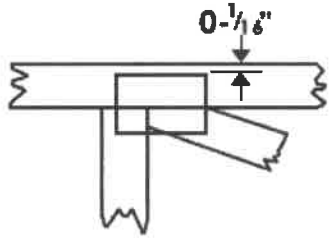
CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated.
Dimensions are in ft-in-sixteenths (x-x-x)
Apply MCPs to both sides of Truss and fully embed teeth



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

This symbol indicates the required direction of slots in the MCP

* MCP location details available upon request from

MCP SIZE

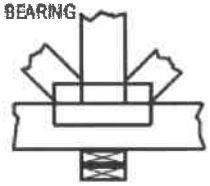
4 x 4

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

LATERAL RESTRAINT LOCATION

Indicated by symbol shown and/or by text in the bracing section of the output. Use T-, L-, or I-Reinforcement or proprietary bracing if indicated
NOTE: LATERAL RESTRAINTS MUST BE BRACED. REFER TO BCSI OR AS SPECIFIED BY THE BD

BEARING



Indicates location where bearings (supports) occur. Joint numbers may vary but reaction section indicates [ ] at number where bearings occur