DURA-BUILT, LLC

GENERAL NOTES:

1. STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2018 NORTH CAROLINA RESIDENTIAL CODE (NCRC) AND THE 2018 NORTH CAROLINA BUILDING CODE (NCBC).

2. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ABOVE CODES AT THE TIME OF MANUFACTURE.

3. DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.

4. STRUCTURES ARE CLASSIFIED AS "MINOR STORAGE FACILITIES" (RISK CATEGORY I) PER NCBC TABLE 1604.5 AND SHOULD NOT BE USED FOR HUMAN HABITATION.

5. SIDING FASTENERS SHALL NOT BE INSTALLED IN PANEL SIDING GROOVES IN THE FIELD OF THE PANEL OR WHEN THE SIDING GROOVES OCCUR AT CUT EDGES OF THE SIDING PANEL.

6. STRUCTURES SHOULD HAVE 25 YEAR RATED FIBERGLASS/ ASPHALT SHINGLES OR 29 GA METAL ROOFING OVER WOOD SHEATHING.

7. WOOD FRAMING SHALL COMPLY WITH THE ANSI/AWC "NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION", 2015.

8. ALL ROOF DECKING IS TO BE 7/16" OSB SHEATHING. FASTEN ROOF SHEATHING TO ROOF FRAMING WITH 2" RING SHANK NAILS SPACED AT 6" MAX.

9. ALL SIDING IS TO BE 5/8" TREATED T1-11 PLYWOOD, 3/8" LP SMART PANEL, OR LP DUTCH LAP SIDING. 7/16" OSB WALL SHEATHING IS TO BE INSTALLED ON ALL WALLS USING DUTCH LAP SIDING.

10. ALL FLOOR JOISTS ARE TO BE PRESSURE TREATED SYP #2, OR BETTER, UNLESS NOTED OTHERWISE. FLOOR JOISTS FOR 10' WIDE BUILDINGS ARE TO BE SYP #1, OR BETTER.

11. ALL UN-TREATED WOOD FRAMING IS TO BE SPF #2 OR BETTER.

12. ALL EXTERIOR NAILS ARE TO BE ZINC COATED.

13. ALL FLOOR DECKING IS TO BE 5/8" OR 3/4" PLYWOOD.

14. ALL SKIDS ARE TO BE 4x6 PRESSURE TREATED, RATED FOR GROUND CONTACT.

15. SECTIONS AND DETAILS SHOWN ARE INTENDED TO BE TYPICAL AND SHALL APPLY AT ALL SIMILAR LOCATIONS, UNLESS NOTED OTHERWISE.

ITEMS BY OTHERS:

THE FOLLOWING ITEMS ARE TO BE SUPPLIED AND INSTALLED BY OTHERS. THESE ITEMS MAY BE SUBJECT TO LOCAL JURISDICTION APPROVAL. DURA-BUILT IS NOT RESPONSIBLE FOR THESE ITEMS.

1. THE COMPLETE FOUNDATION AND TIE-DOWN SYSTEM

2. RAMPS, STAIRS, AND GENERAL ACCESS

3. ELECTRICAL SERVICE HOOKUP

DESIGN CRITERIA:

1. RISK CATEGORY I

2. FLOOR LIVE LOAD: 40 PSF

3. ROOF LIVE LOAD: 20 PSF
   (REDUCIBLE PER NCBC 1607.12.2.1)

4. SNOW LOADS ARE BASED ON THE FOLLOWING:
   - GROUND SNOW LOAD, Pg = 20 PSF
   - FLAT ROOF SNOW LOAD, Pf = 14 PSF
   - EXPOSURE FACTOR, Ce = 1.0
   - IMPORTANCE FACTOR, I = 0.8
   - THERMAL FACTOR, Ct = 1.2

5. WIND LOADS ARE BASED ON THE FOLLOWING:
   - Vult = 150 MPH
   - RISK CATEGORY I
   - EXPOSURE CATEGORY B
   - INTERNAL PRESSURE COEFFICIENT:
     - GCpi = ±0.18
   - COMPONENTS & CLADDING:
     - ROOF-ZONE 1 = 14.0, -22.2 PSF
     - ROOF-ZONE 2 = 14.0, -38.7 PSF
     - ROOF-ZONE 3 = 14.0, -57.2 PSF
     - WALL-ZONE 4 = 24.3, -26.3 PSF
     - WALL-ZONE 5 = 24.3, -32.5 PSF

NOTE: C&C WIND PRESSURES SHOWN ARE FOR A 10 SQUARE FOOT EFFECTIVE AREA (Ae) AND MAY BE REDUCED FOR LARGER AREAS AS ALLOWED BY CODE.

PIERS (IF REQUIRED):

1. PIERS ARE NOT REQUIRED WHEN THE SKIDS CAN BE SUPPORTED ON FIRM, LEVEL GROUND. PIERS ALONG INTERIOR SKIDS SHALL BE ORIENTED WITH THE LONG SIDE PERPENDICULAR TO THE SKID. PIERS ALONG THE OUTSIDE SKIDS OF BUILDINGS WITH 4 SKIDS ARE PERMITTED TO BE ORIENTED WITH THE LONG SIDE PARALLEL TO THE SKID PROVIDED THAT THE PIERS ALONG THE INTERIOR SKID ARE ORIENTED PERPENDICULAR TO THE SKID.

2. PIERS SHALL TYPICALLY BE 8"x8"x16" OPEN CELL OR SOLID CONCRETE BLOCKS, DRY STACKED TO A MAXIMUM HEIGHT OF 36". THE BLOCK IN CONTACT WITH THE GROUND AT EACH PIER SHALL BE A 4"x8"x16" SOLID BLOCK. OPEN CELL BLOCKS AND 2" THICK SOLID BLOCKS ARE NOT TO BE USED AS THE BASE OF ANY PIERS. OPEN CELL BLOCKS ARE TO BE PLACED ON TOP OF SOLID BLOCKS AS NEEDED WITH THE OPEN CELLS RUNNING VERTICALLY AND MUST NOT BE PLACED ON THEIR SIDE.

   CORNER PIERS OVER 20" TALL SHALL BE DOUBLE STACKED CONCRETE BLOCKS. TIE DOUBLE STACKED BLOCKS BY ALTERNATING THE DIRECTION OF BLOCKS ON EACH ROW.

3. DURA-BUILT IS NOT RESPONSIBLE FOR THE PREPARATION OF THE PROPOSED SITE OR DETERMINATION OF THE SITE'S SUITABILITY TO SUPPORT THE PROPOSED STRUCTURE. IT IS THE PROPERTY OWNER'S RESPONSIBILITY TO DETERMINE IF SITE CONDITIONS ARE SUITABLE TO SUPPORT THE STRUCTURE.

4. PIERS SHOWN ON SHEET S-1 ARE CONCEPTUAL AND MAY NOT REFLECT ACTUAL CONDITIONS. THE PIER LAYOUT MAY BE ADJUSTED AS NEEDED BASED ON SITE CONDITIONS, PROVIDED THAT THE MAXIMUM SPACING SHOWN IS NOT EXCEEDED.

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

DURA-BUILT, LLC

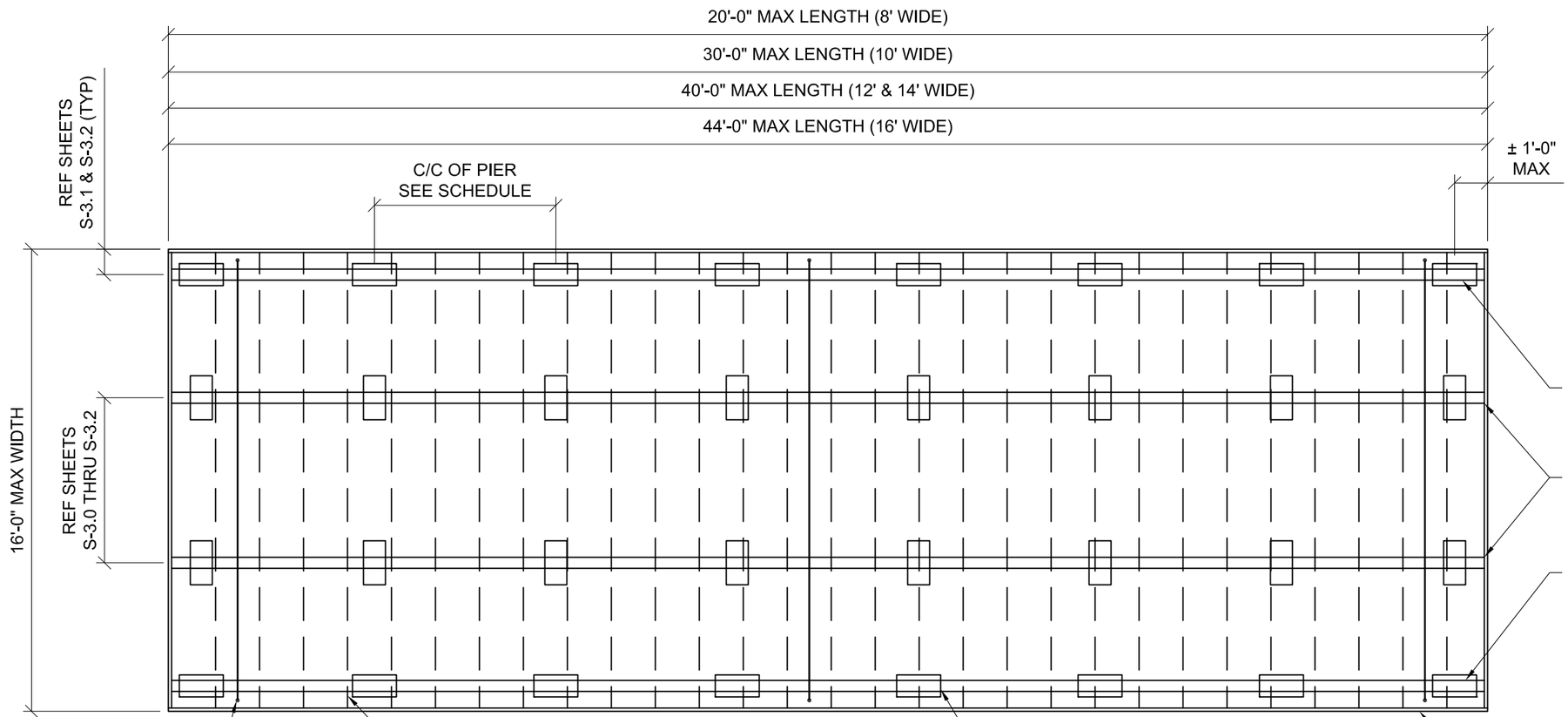
PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

SHEET NUMBER

S-0-LB

SCALE: NONE

PIER SPACING SCHEDULE	
BLDG WIDTH	MAX SPACING
8'-0"	6'-0"
10'-0"	6'-0"
12'-0"	7'-0"
14'-0"	7'-0"
16'-0"	6'-0"



FLOOR FRAMING PLAN

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

SHEET NUMBER

S-1-LB

SCALE: NOT TO SCALE

UPLIFT ANCHORAGE SCHEDULE

BLDG LENGTH	8' WIDE BLDGS		10' WIDE BLDGS		12' WIDE BLDGS		14' WIDE BLDGS		16' WIDE BLDGS	
	NUMBER OF TIE-DOWNS	REQ'D ANCHOR CAPACITY	NUMBER OF TIE-DOWNS	REQ'D ANCHOR CAPACITY	NUMBER OF TIE-DOWNS	REQ'D ANCHOR CAPACITY	NUMBER OF TIE-DOWNS	REQ'D ANCHOR CAPACITY	NUMBER OF TIE-DOWNS	REQ'D ANCHOR CAPACITY
8'-0"	2	450#	-	-	-	-	-	-	-	-
10'-0"	2	550#	2	550#	-	-	-	-	-	-
12'-0"	2	700#	2	650#	2	550#	-	-	-	-
14'-0"	3	550#	3	500#	2	650#	3	550#	-	-
16'-0"	3	600#	3	550#	3	500#	3	600#	3	600#
18'-0"	3	700#	3	650#	3	550#	3	650#	3	700#
20'-0"	4	550#	3	700#	3	650#	4	550#	4	600#
22'-0"	-	-	4	600#	3	700#	4	600#	4	650#
24'-0"	-	-	4	650#	4	550#	4	650#	4	700#
26'-0"	-	-	4	700#	4	600#	5	600#	5	600#
28'-0"	-	-	5	600#	4	650#	5	650#	5	650#
30'-0"	-	-	5	650#	4	700#	5	650#	5	700#
32'-0"	-	-	-	-	5	600#	5	700#	6	600#
34'-0"	-	-	-	-	5	650#	6	650#	6	650#
36'-0"	-	-	-	-	5	700#	6	650#	6	700#
38'-0"	-	-	-	-	5	700#	6	700#	7	650#
40'-0"	-	-	-	-	6	650#	7	650#	7	650#
42'-0"	-	-	-	-	-	-	-	-	7	700#
44'-0"	-	-	-	-	-	-	-	-	8	650#

NOTES:

1) TIE-DOWNS AND ANCHORS ARE TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER. DURA-BUILT IS NOT RESPONSIBLE FOR THE TIE-DOWN SYSTEM. REFER TO NOTE SHEET S-0.

2) THE SCHEDULE INDICATES THE RECOMMENDED NUMBER OF BUILDING TIE-DOWNS TO BE INSTALLED BY THE CUSTOMER. EACH TIE-DOWN HAS TWO ANCHORS. REFER TO DETAILS SHOWN ON SHEET S-2.1 FOR TIE-DOWN OPTIONS.

3) PROVIDE A TIE-DOWN NEAR EACH END OF THE BUILDING. REMAINING TIE-DOWNS SHOULD BE EVENLY SPACED ALONG THE ENTIRE LENGTH OF BUILDING.

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

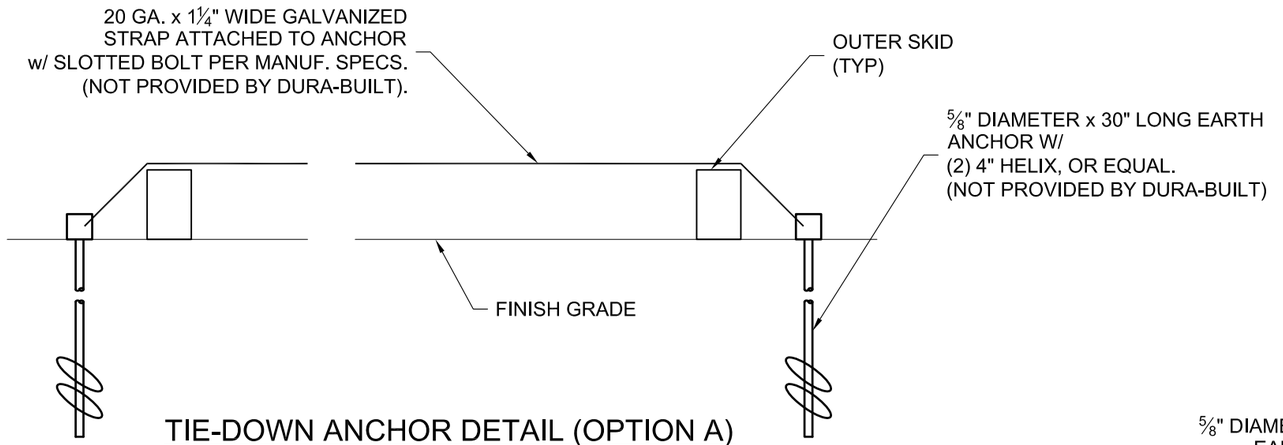
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

SHEET NUMBER

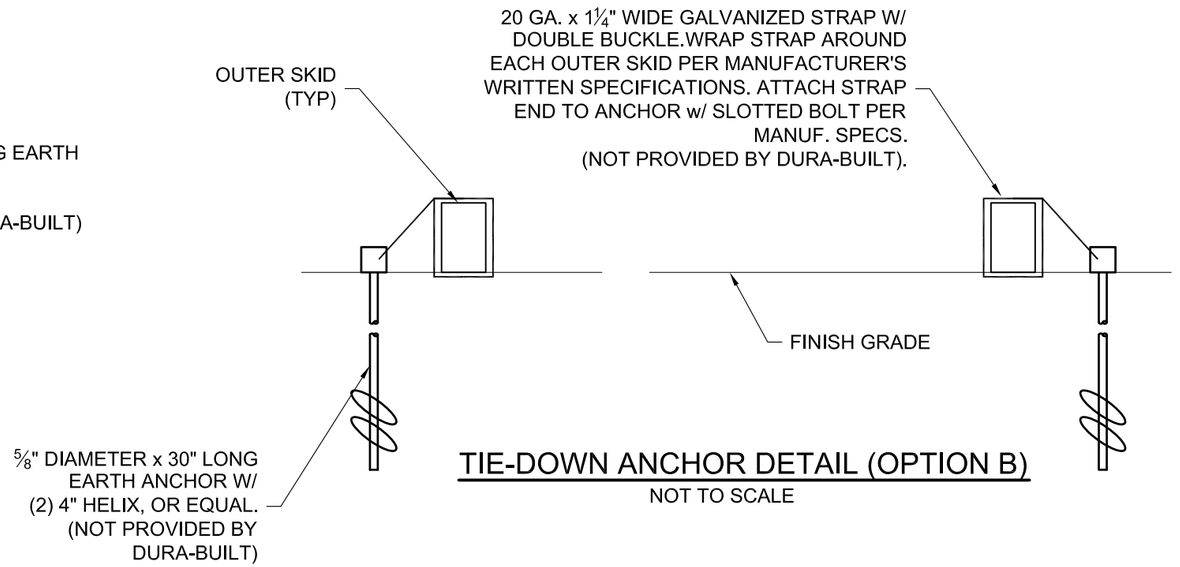
S-2.0-LB

SCALE: NONE



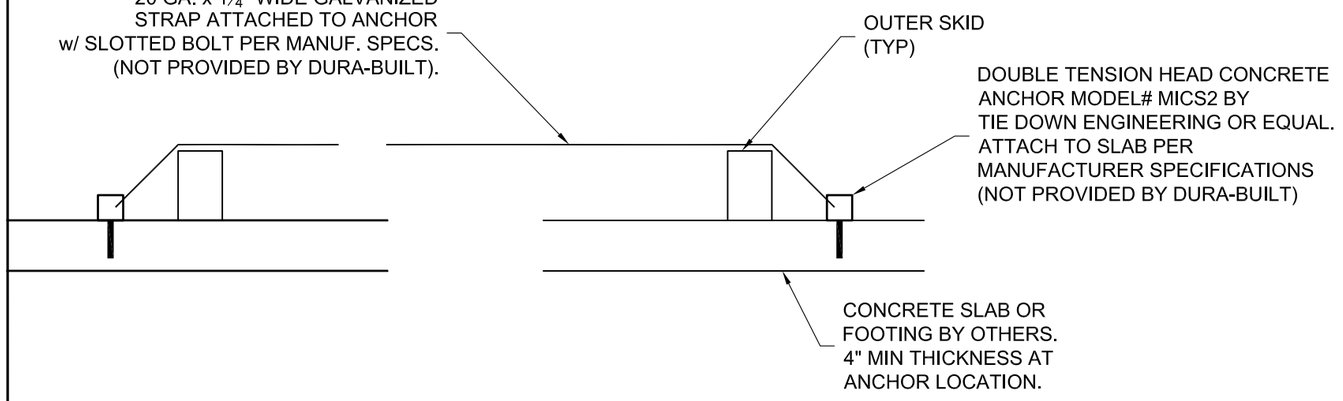
TIE-DOWN ANCHOR DETAIL (OPTION A)

NOT TO SCALE



TIE-DOWN ANCHOR DETAIL (OPTION B)

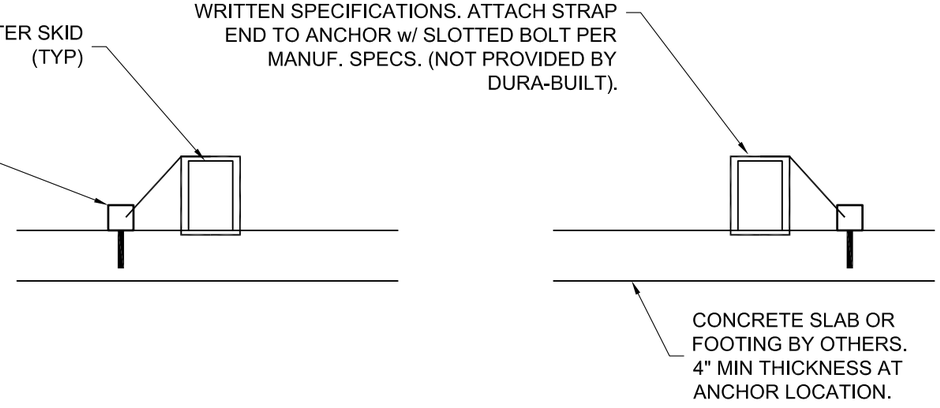
NOT TO SCALE



TIE-DOWN ANCHOR DETAIL (OPTION C)

NOT TO SCALE

NOTE:
DURA-BUILT IS NOT RESPONSIBLE FOR THE DESIGN OR PLACEMENT OF THE CONCRETE SLABS OR FOOTINGS



TIE-DOWN ANCHOR DETAIL (OPTION D)

NOT TO SCALE

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

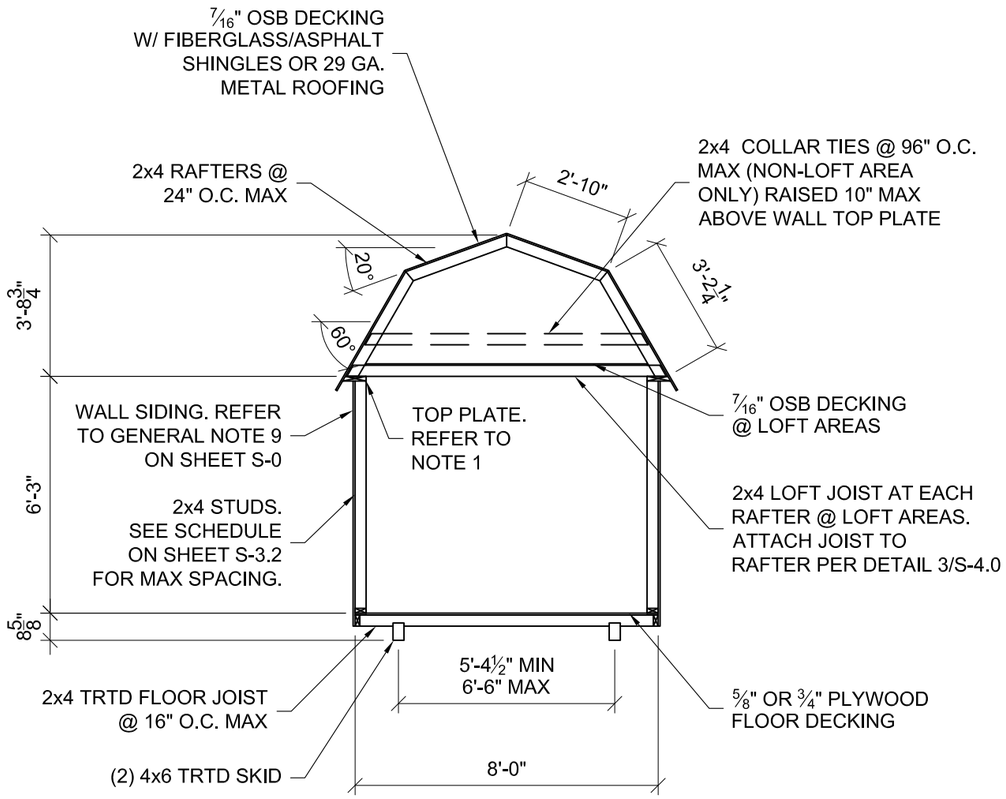
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

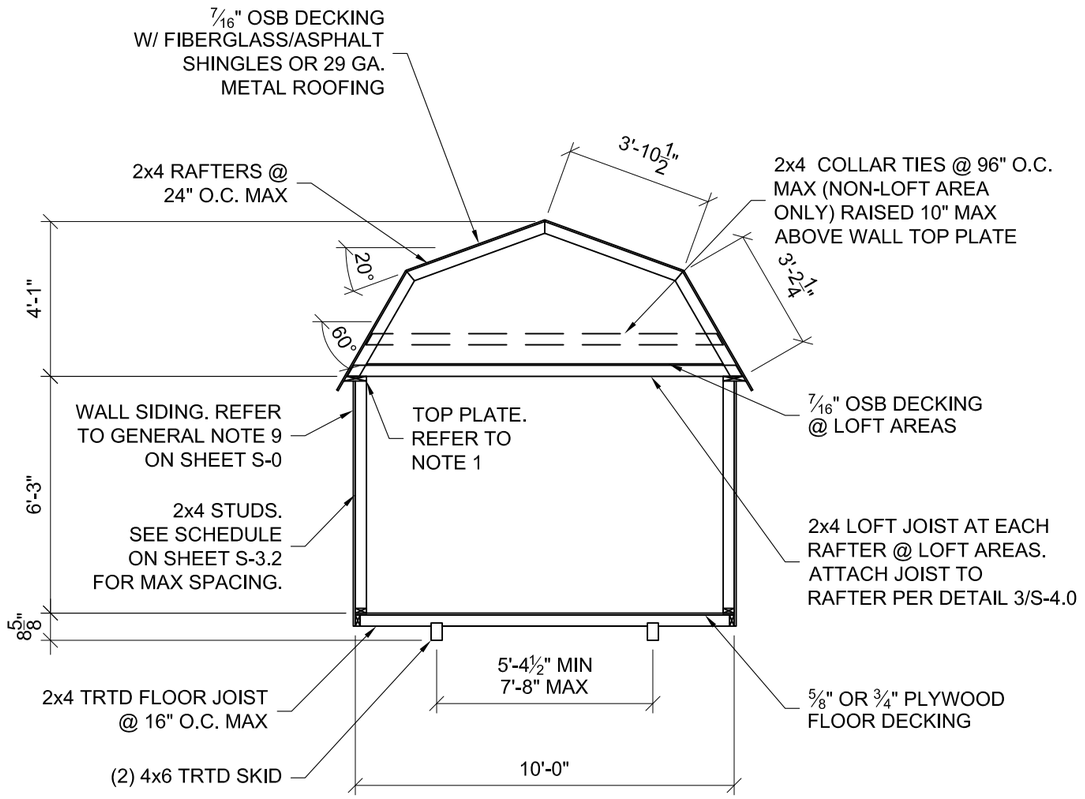
SHEET NUMBER

S-2.1-LB

SCALE: NONE



8' WIDE



10' WIDE

BUILDING SECTIONS

NOTES: 1. PROVIDE A DOUBLE TOP PLATE ALONG THE SIDE WALLS WHEN THE RAFTER SPACING DOES NOT MATCH THE WALL STUD SPACING.
2. ACTUAL SKID SPACING MAY VARY PROVIDED THAT THE CENTER TO CENTER SPACING IS WITHIN THE MAX/MIN SPACING STATED.
3. 2x6 FRAMING MAY BE SUBSTITUTED FOR THE 2x4 FRAMING SHOWN. THE SPACING OF THE 2x6 FRAMING SHALL BE AS SHOWN FOR THE 2x4.

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

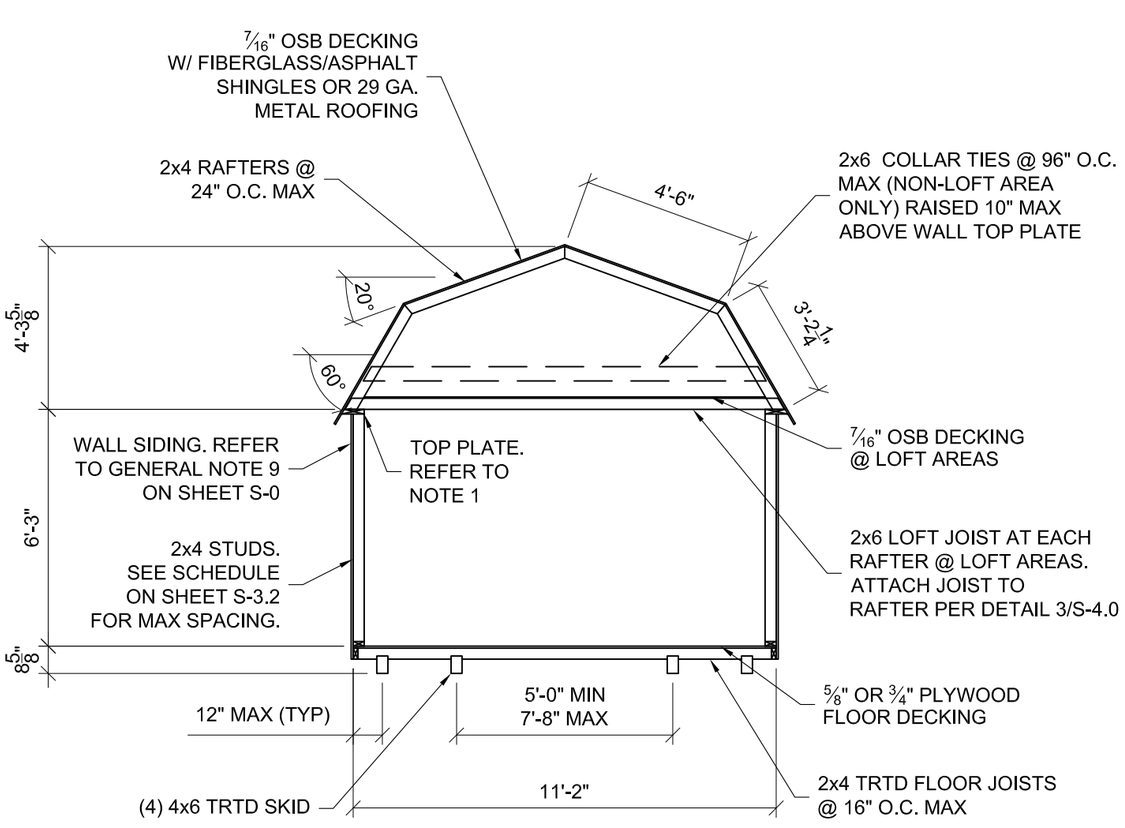
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

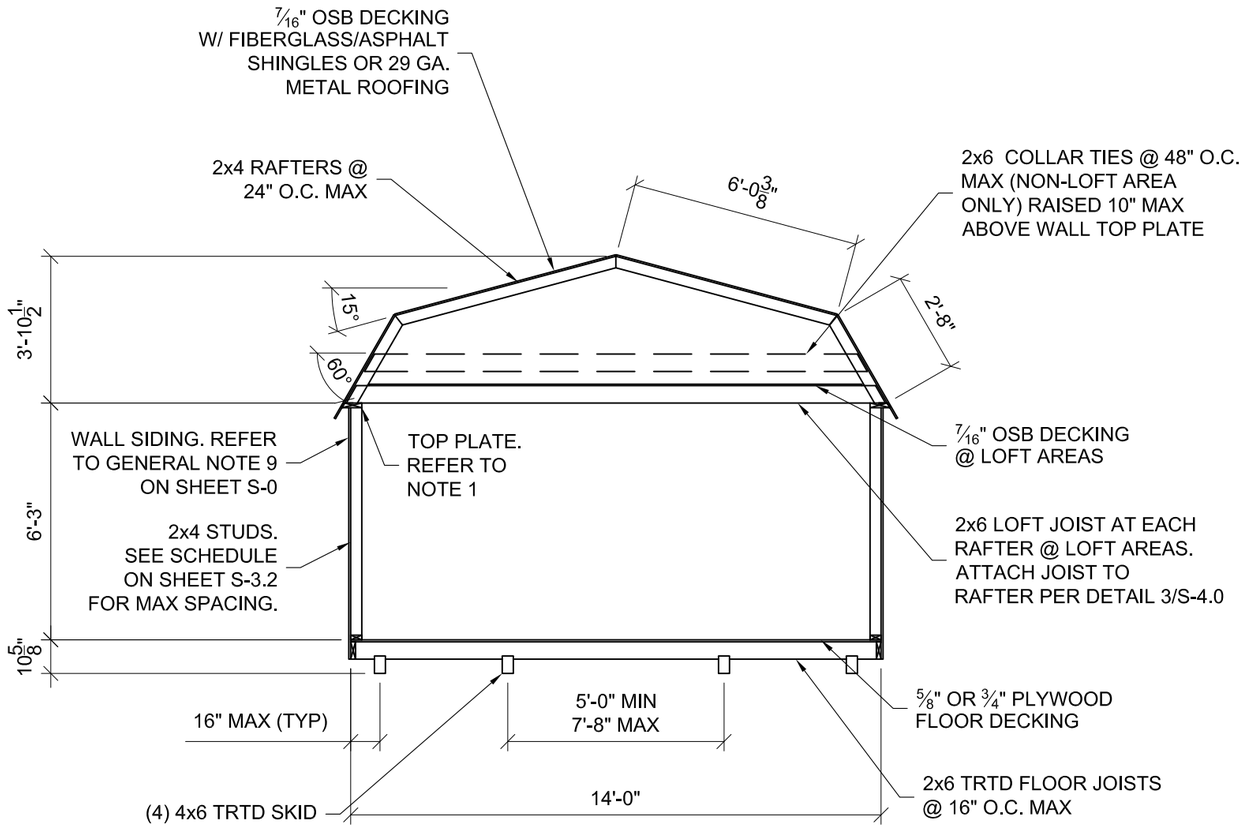
SHEET NUMBER

S-3.0-LB

SCALE: 1/4" = 1'-0"



12' WIDE

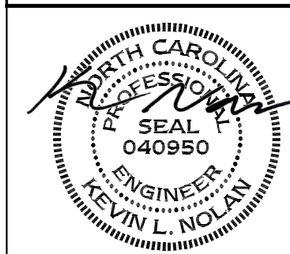


14' WIDE

NOTE: PROVIDE 7/16" OSB INTERIOR WALL SHEATHING AT 11'-2" WIDE ENDWALLS WITH 9'-0" WIDE ROLL-UP DOORS. ATTACH THE OSB TO THE WALL FRAMING WITH 2" RING SHANK NAILS SPACED AT 4" MAX.

NOTES: 1. PROVIDE A DOUBLE TOP PLATE ALONG THE SIDE WALLS WHEN THE RAFTER SPACING DOES NOT MATCH THE WALL STUD SPACING.
2. ACTUAL SKID SPACING MAY VARY PROVIDED THAT THE CENTER TO CENTER SPACING IS WITHIN THE MAX/MIN SPACING STATED.
3. 2x6 FRAMING MAY BE SUBSTITUTED FOR THE 2x4 FRAMING SHOWN. THE SPACING OF THE 2x6 FRAMING SHALL BE AS SHOWN FOR THE 2x4.

BUILDING SECTIONS



2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

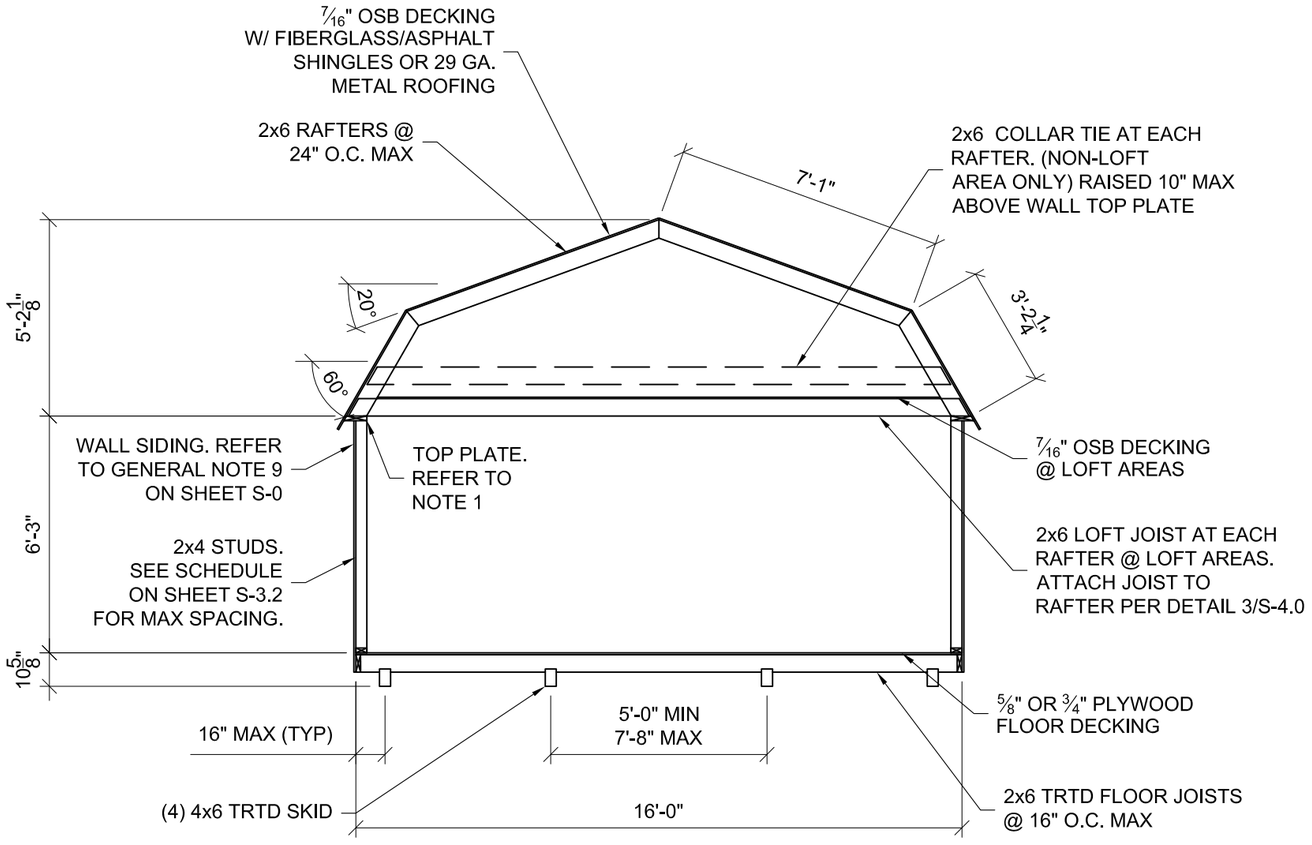
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

SHEET NUMBER

S-3.1-LB

SCALE: 1/4" = 1'-0"



16' WIDE

WALL STUD SPACING SCHEDULE (REFER TO NOTE 1)	
WALL SIDING	**STUD SPACING**
5/8" T1-11 PLYWOOD	24" MAX
3/8" LP SMART PANEL	16" MAX
LP DUTCH LAP w/ OSB SHEATHING	16" MAX

NOTES:
1. PROVIDE A DOUBLE TOP PLATE WHEN THE STUDS ARE SPACED AT 16" O.C.
2. ALL WALL PANELS SHALL BE FASTENED TO FRAMING WITH 2" RING SHANK NAILS.
3. WALL PANEL NAIL SPACING SHALL BE:

STUDS SPACED AT 24:
SIDE WALLS: SPACE NAILS AT 6" MAX ALONG ALL PANEL EDGES AND 6" MAX IN THE FIELD.
END WALLS: SPACE NAILS AT 4" MAX ALONG ALL PANEL EDGES AND 6" MAX IN THE FIELD.

STUDS SPACED AT 16:
SIDE WALLS: SPACE NAILS AT 6" MAX ALONG ALL PANEL EDGES AND 12" MAX IN THE FIELD.
END WALLS: SPACE NAILS AT 4" MAX ALONG ALL PANEL EDGES AND 12" MAX IN THE FIELD.

BUILDING SECTIONS

NOTES: 1. PROVIDE A DOUBLE TOP PLATE ALONG THE SIDE WALLS WHEN THE RAFTER SPACING DOES NOT MATCH THE WALL STUD SPACING.
2. ACTUAL SKID SPACING MAY VARY PROVIDED THAT THE CENTER TO CENTER SPACING IS WITHIN THE MAX/MIN SPACING STATED.
3. 2x6 FRAMING MAY BE SUBSTITUTED FOR THE 2x4 FRAMING SHOWN. THE SPACING OF THE 2x6 FRAMING SHALL BE AS SHOWN FOR THE 2x4.

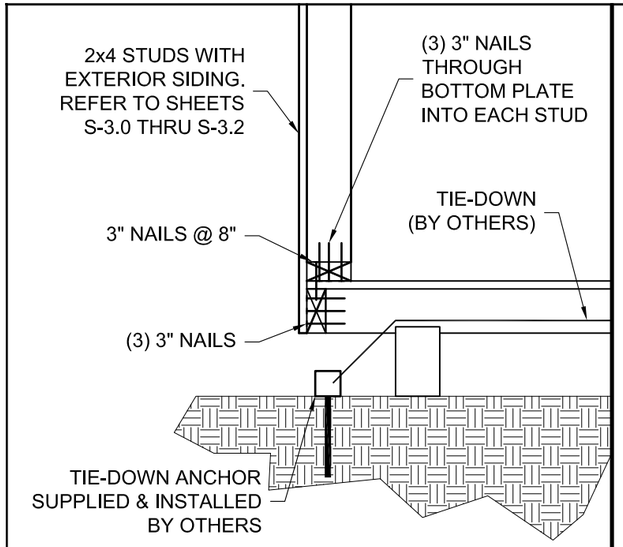
NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN
2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

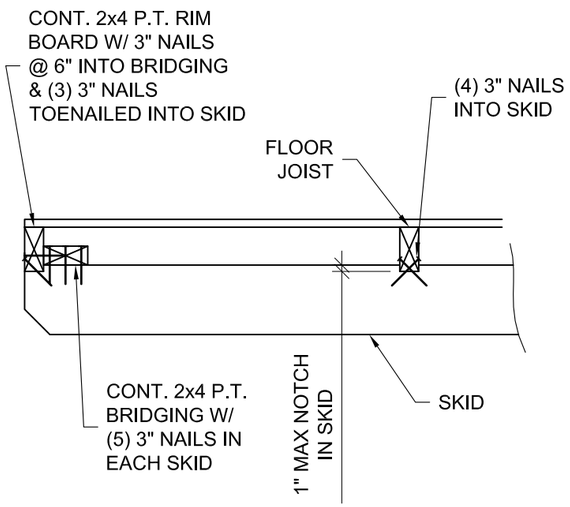
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

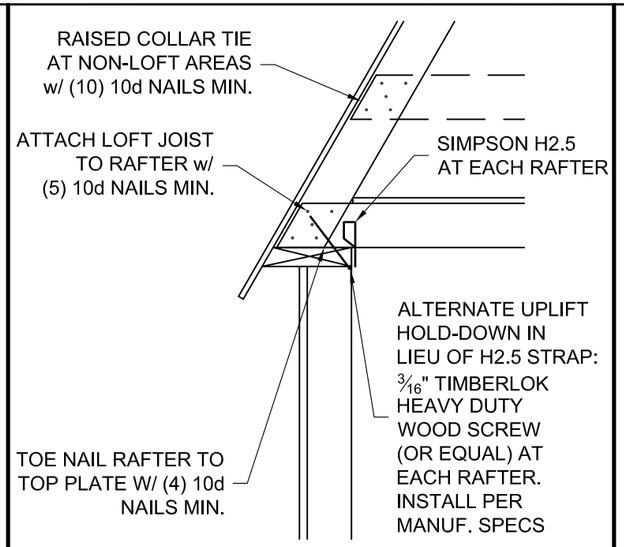
SHEET NUMBER
S-3.2-LB
SCALE: 1/4" = 1'-0"



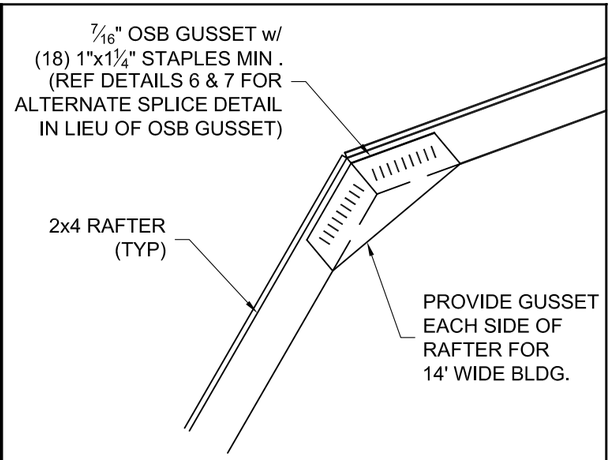
1-TYPICAL DETAIL



2-FLOOR JST TO SKID DETAIL

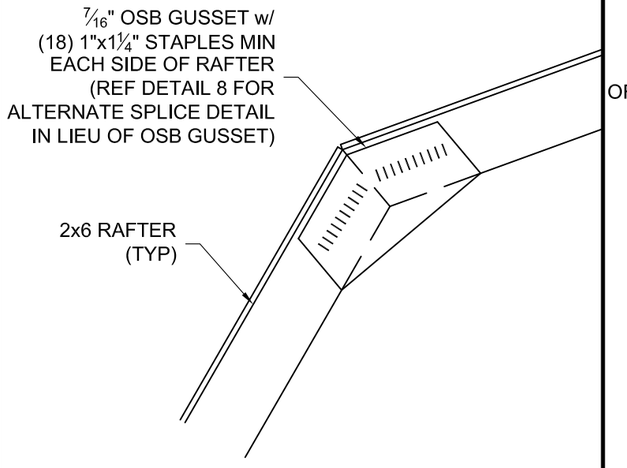


3-LOFT EAVE DETAIL



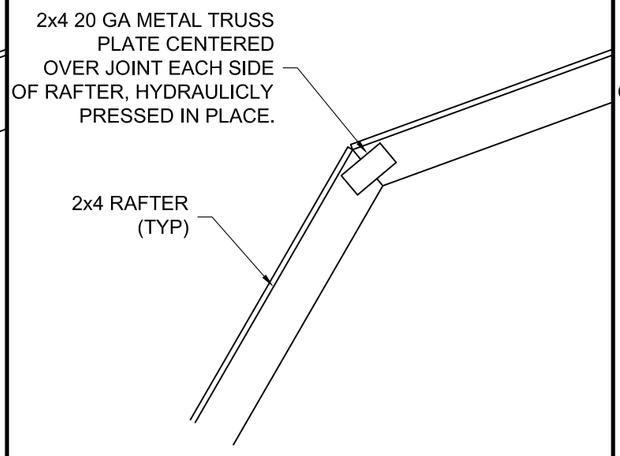
BUILDINGS UP TO 14' WIDE

4-RAFTER SPLICE DETAIL



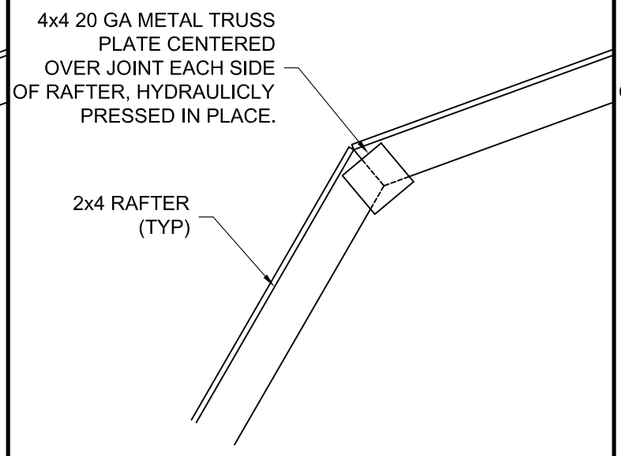
16' WIDE BUILDINGS

5-RAFTER SPLICE DETAIL



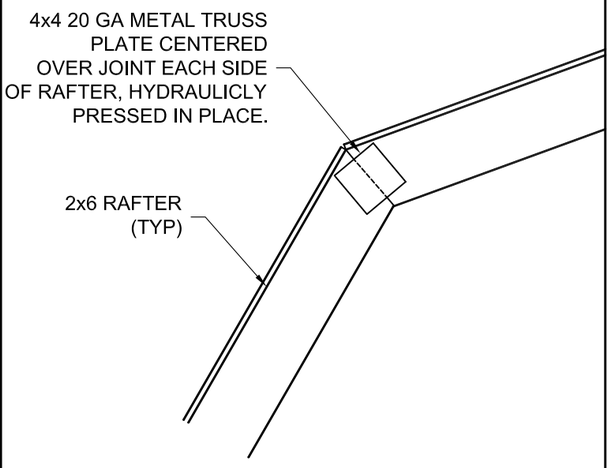
BUILDINGS UP TO 12' WIDE

6-ALTERNATE RAFTER SPLICE DETAIL



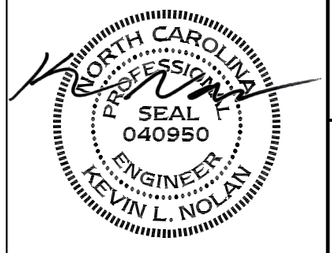
14' WIDE BUILDINGS

7-ALTERNATE RAFTER SPLICE DETAIL



16' WIDE BUILDINGS

8-ALTERNATE RAFTER SPLICE DETAIL



2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

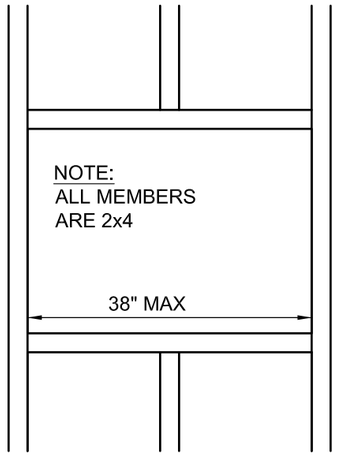
DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

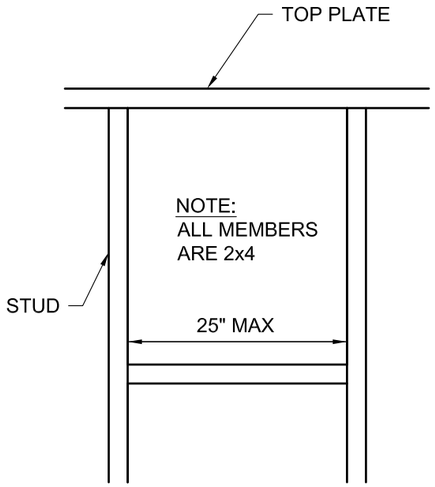
SHEET NUMBER

S-4.0-LB

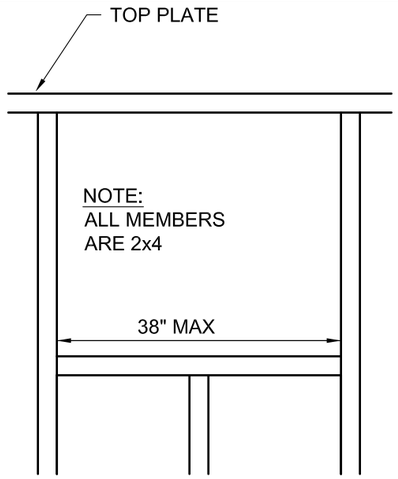
SCALE: 1"=1'-0



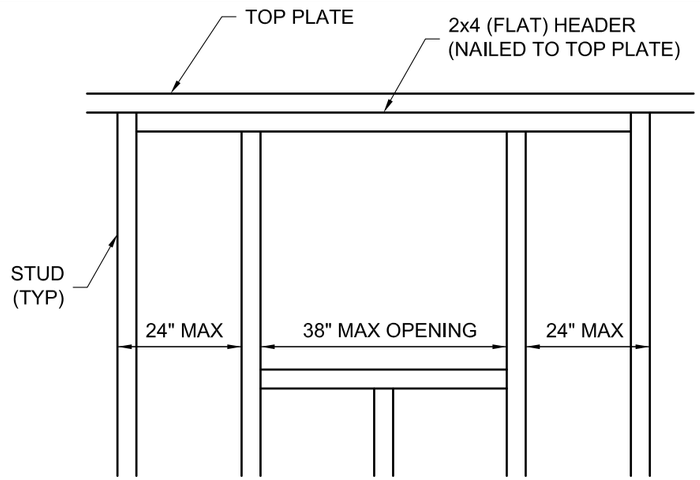
1-END WALL WINDOW/DOOR FRAMING



2-SIDE WALL WINDOW/DOOR FRAMING

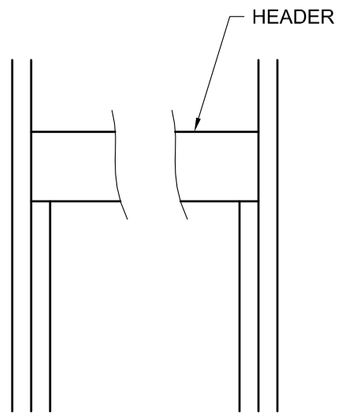


BUILDINGS UP TO 14' WIDE

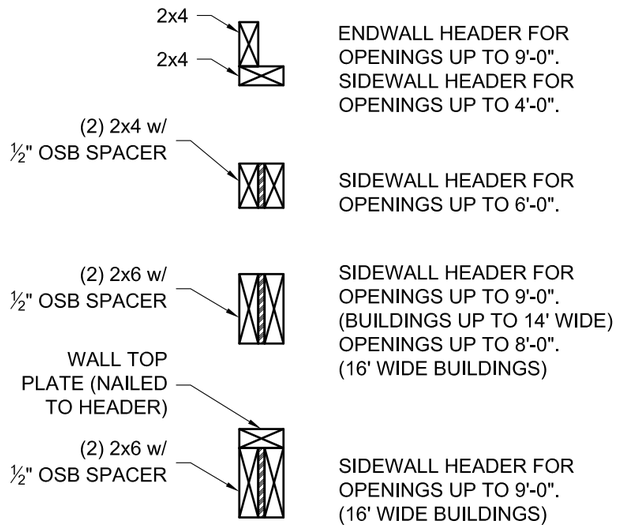


16' WIDE BUILDINGS

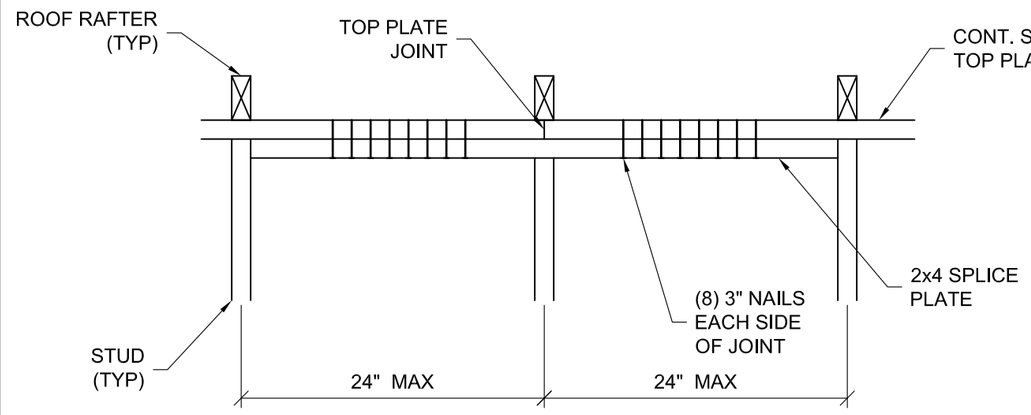
3-SIDE WALL WINDOW/DOOR FRAMING



NOTE: PROVIDE A JACK STUD UNDER EACH END OF LOAD BEARING HEADERS. NOT REQUIRED AT END WALLS.



4-HEADER SCHEDULE



5- WALL TOP PLATE SPLICE DETAIL

NORTH CAROLINA PROFESSIONAL SEAL 040950 ENGINEER KEVIN L. NOLAN

2-27-2020

LOFTED BARN--NORTH CAROLINA--WIND=150 MPH--2018 NCBC

DURA-BUILT, LLC

PROJECT NO:	
DATE:	02-27-2020
DRAWN BY:	KLN
CHECKED BY:	KLN
REVISION:	

SHEET NUMBER

S-4.1-LB

SCALE: 1"=1'-0