

SHEET SCHEDULE

- 1.1 PROJECT LOCATION AND SITE ACCESS
- 1.2 DEMOLITION AND PROTECTION PLAN
- 1.3 SITE PLAN
- 1.4 GRADING AND EROSION CONTROL PLAN
- 1.5 DESIGN COMPUTATIONS

SHEETS 1.0-R1.7: ENGINEERING'S STAMPED DRAWINGS OF ICON HX28TS-P5 SHELTER



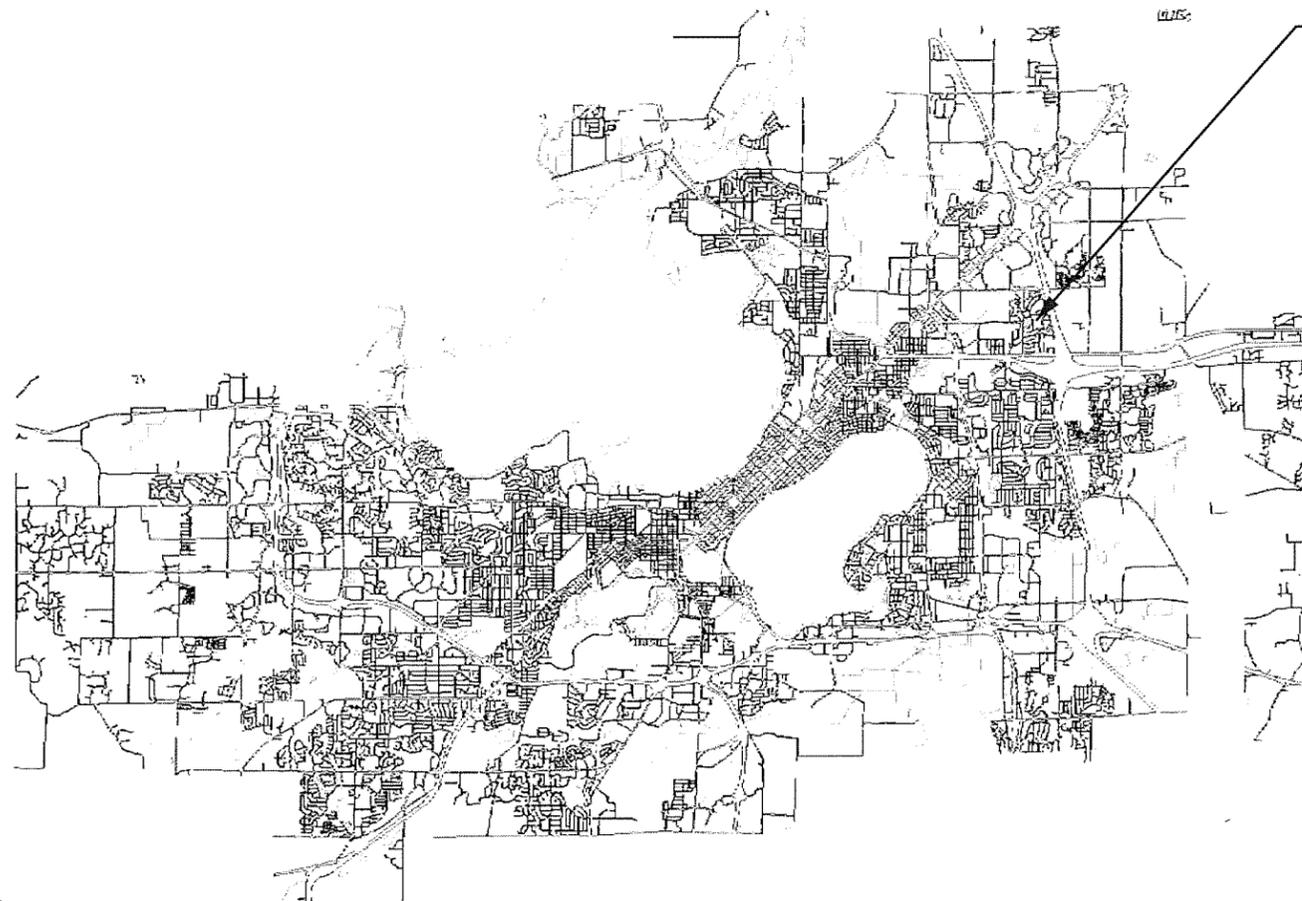
City of Madison  
 Department of Public Works  
**PARKS DIVISION**  
 City-County Building, Suite 104  
 210 Martin Luther King, Jr. Blvd.  
 Madison, WI 53703

*play*  
**MADISON  
 PARKS**



## 2019 GLACIER HILL PARK SUN SHELTER INSTALLATION

### MUNIS NO. 19033-51-140



GLACIER HILL PARK  
 1018 GLACIER HILL DRIVE  
 MADISON, WI 53704

PROJECT:  
*2019 GLACIER  
 HILL PARK SUN  
 SHELTER  
 INSTALLATION*

Although every effort has been made in preparing these plans and checking them for accuracy, the contractor and subcontractors must check all details and dimensions of their trade and be responsible for the same.

ITEM	DATE
Advertised by: KK	06-27-2019

PUBLIC WORKS PROJECT #:  
**8453**

SHEET TITLE:

SHEET NUMBER:

- LEGEND**
-  PRO. CONSTRUCTION FENCE
  -  PRO. SILT SOCK
  -  PRO. CONSTRUCTION ENTRANCE
  -  EX. TREE
  -  EX. CONTOUR (INDEX)
  -  EX. CONTOUR (INTER.)
  -  EX. PROPERTY LINE
  -  EX. DRAINTILE UNDERDRAIN

**GLACIER HILL PARK**

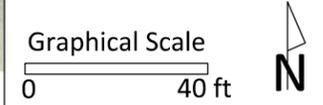
EXISTING BASKETBALL COURT

EXISTING PLAYGROUND

GLACIER HILL DR

City of Madison  
 Department of Public Works  
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**MADISON PARKS**



PROJECT:  
**2019 GLACIER HILL PARK SUN SHELTER INSTALLATION**

**GLACIER HILL PARK  
 1018 GLACIER HILL DRIVE  
 MADISON, WI 53704**

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PUBLIC WORKS PROJECT #:  
**8453**

SHEET TITLE:  
**PROJECT LOCATION AND SITE ACCESS**

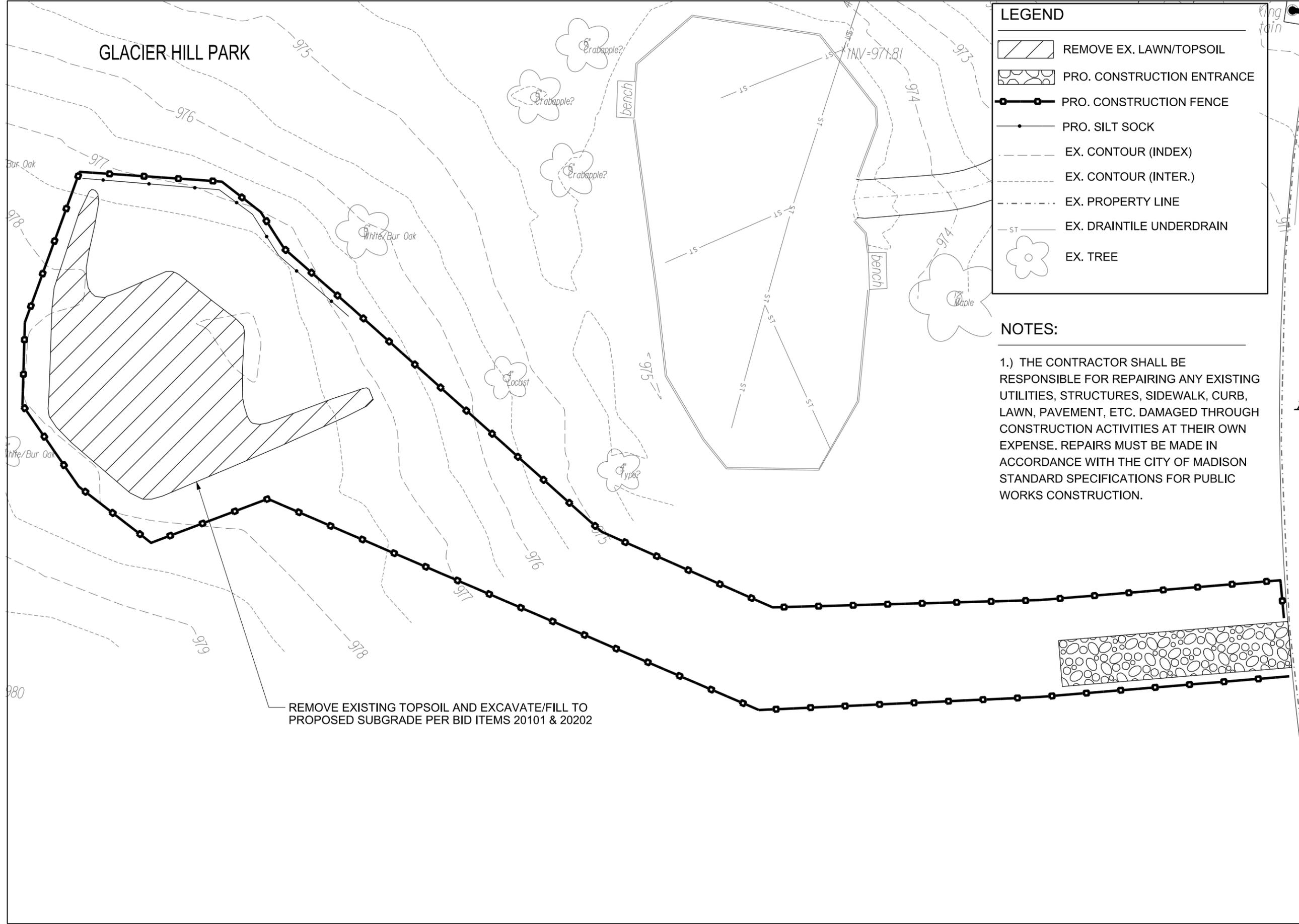
SHEET NUMBER:  
**1.1**

PROPOSED STAGING AREA WITHIN CONSTRUCTION FENCE LIMITS

PROPOSED CONSTRUCTION FENCE, NO CONSTRUCTION OUTSIDE OF FENCE LIMITS.

CONSTRUCTION ACCESS FROM GLACIER HILL DRIVE; PROTECT EXISTING SURFACES (LAWN, CURB, SIDEWALK, ASPHALT PAVEMENT, ETC.) AND UTILITIES. REPAIR OF SURFACES AND UTILITIES IS INCIDENTAL TO THIS CONTRACT PER CITY OF MADISON STANDARDS FOR PUBLIC WORKS CONSTRUCTION.

GLACIER HILL PARK



REMOVE EXISTING TOPSOIL AND EXCAVATE/FILL TO PROPOSED SUBGRADE PER BID ITEMS 20101 & 20202

**LEGEND**

- REMOVE EX. LAWN/TOPSOIL
- PRO. CONSTRUCTION ENTRANCE
- PRO. CONSTRUCTION FENCE
- PRO. SILT SOCK
- EX. CONTOUR (INDEX)
- EX. CONTOUR (INTER.)
- EX. PROPERTY LINE
- EX. DRAINTILE UNDERDRAIN
- EX. TREE

**NOTES:**

1.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY EXISTING UTILITIES, STRUCTURES, SIDEWALK, CURB, LAWN, PAVEMENT, ETC. DAMAGED THROUGH CONSTRUCTION ACTIVITIES AT THEIR OWN EXPENSE. REPAIRS MUST BE MADE IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

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**MADISON PARKS**

Graphical Scale  
 0 20 ft

PROJECT:  
**2019 GLACIER HILL PARK SUN SHELTER INSTALLATION**

**GLACIER HILL PARK  
 1018 GLACIER HILL DRIVE  
 MADISON, WI 53704**

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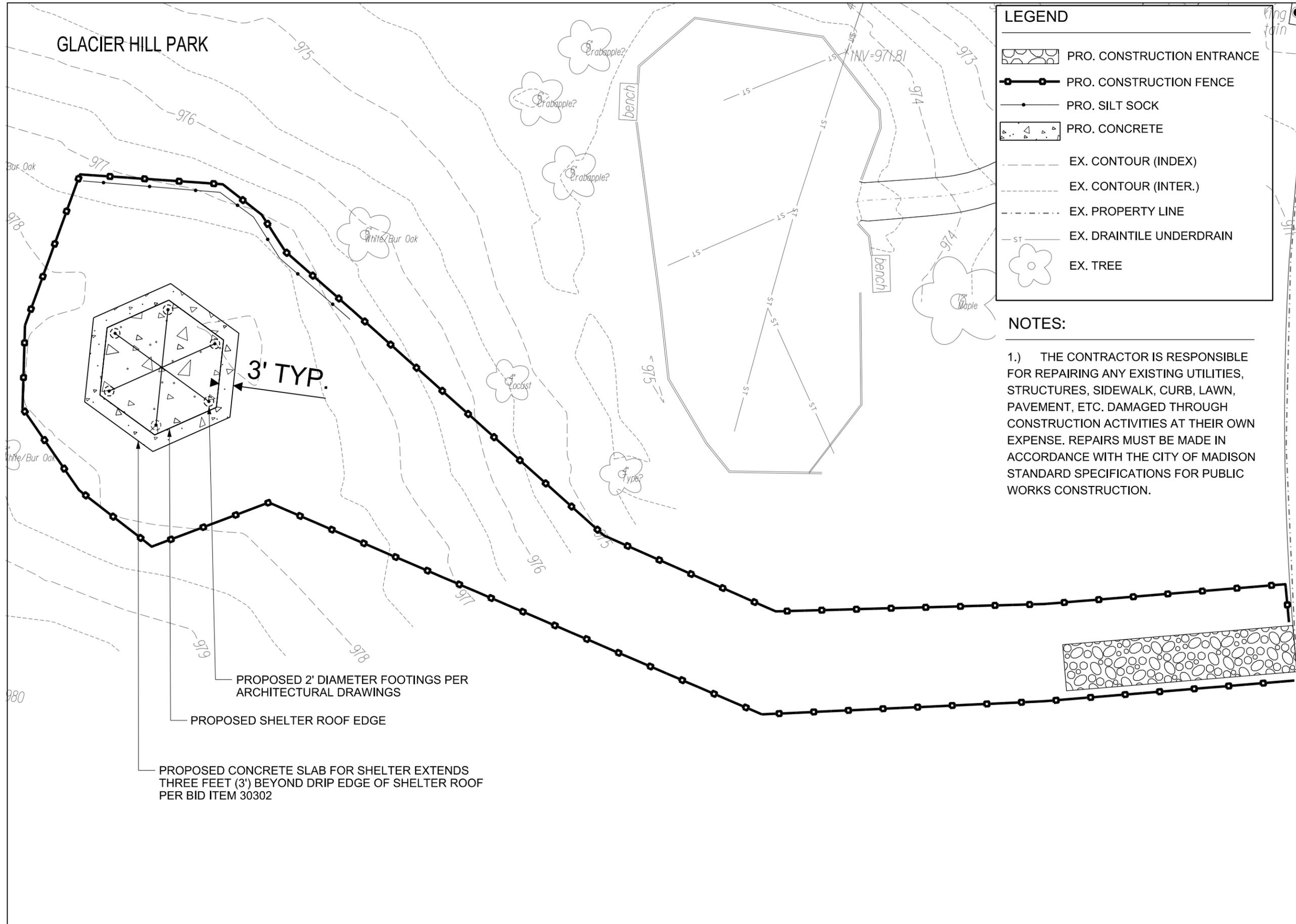
ITEM	DATE
Advised by: KK	06-27-2019

PUBLIC WORKS PROJECT #:  
**8453**

SHEET TITLE:  
**DEMOLITION AND PROTECTION PLAN**

SHEET NUMBER:  
**1.2**

GLACIER HILL PARK



LEGEND

- PRO. CONSTRUCTION ENTRANCE
- PRO. CONSTRUCTION FENCE
- PRO. SILT SOCK
- PRO. CONCRETE
- EX. CONTOUR (INDEX)
- EX. CONTOUR (INTER.)
- EX. PROPERTY LINE
- EX. DRAINTILE UNDERDRAIN
- EX. TREE

NOTES:

1.) THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY EXISTING UTILITIES, STRUCTURES, SIDEWALK, CURB, LAWN, PAVEMENT, ETC. DAMAGED THROUGH CONSTRUCTION ACTIVITIES AT THEIR OWN EXPENSE. REPAIRS MUST BE MADE IN ACCORDANCE WITH THE CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

3' TYP.

PROPOSED 2' DIAMETER FOOTINGS PER ARCHITECTURAL DRAWINGS

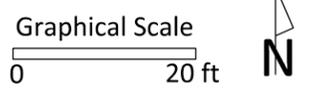
PROPOSED SHELTER ROOF EDGE

PROPOSED CONCRETE SLAB FOR SHELTER EXTENDS THREE FEET (3') BEYOND DRIP EDGE OF SHELTER ROOF PER BID ITEM 30302

City of Madison  
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Madison, WI 53703

*play*  
**MADISON  
PARKS**



PROJECT:  
**2019 GLACIER  
HILL PARK SUN  
SHELTER  
INSTALLATION**

**GLACIER HILL PARK  
1018 GLACIER HILL DRIVE  
MADISON, WI 53704**

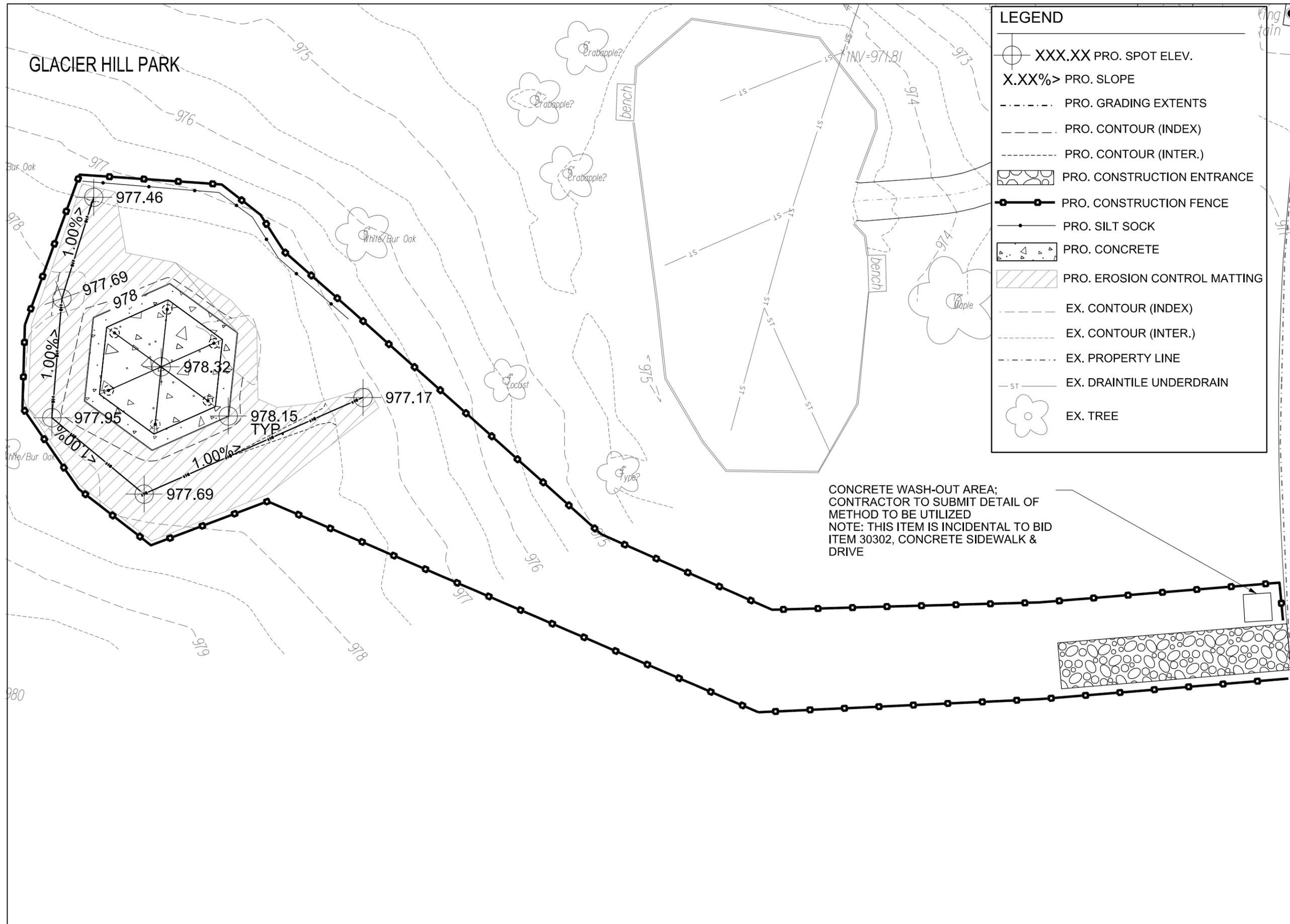
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ITEM	DATE
Advised by: KK	06-06-2019

PUBLIC WORKS PROJECT #:  
**9414**

SHEET TITLE:  
**SITE PLAN**

SHEET NUMBER:  
**1.3**



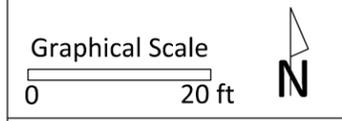
CONCRETE WASH-OUT AREA;  
 CONTRACTOR TO SUBMIT DETAIL OF  
 METHOD TO BE UTILIZED  
 NOTE: THIS ITEM IS INCIDENTAL TO BID  
 ITEM 30302, CONCRETE SIDEWALK &  
 DRIVE

**LEGEND**

- XXX.XX PRO. SPOT ELEV.
- X.XX%> PRO. SLOPE
- PRO. GRADING EXTENTS
- PRO. CONTOUR (INDEX)
- PRO. CONTOUR (INTER.)
- PRO. CONSTRUCTION ENTRANCE
- PRO. CONSTRUCTION FENCE
- PRO. SILT SOCK
- PRO. CONCRETE
- PRO. EROSION CONTROL MATTING
- EX. CONTOUR (INDEX)
- EX. CONTOUR (INTER.)
- EX. PROPERTY LINE
- EX. DRAINTILE UNDERDRAIN
- EX. TREE

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**PARKS**



PROJECT:  
**2019 GLACIER  
 HILL PARK SUN  
 SHELTER  
 INSTALLATION**

**GLACIER HILL PARK  
 1018 GLACIER HILL DRIVE  
 MADISON, WI 53704**

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ITEM	DATE
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PUBLIC WORKS PROJECT #:  
**8453**

SHEET TITLE:  
**GRADING AND  
 EROSION CONTROL  
 PLAN**

SHEET NUMBER:  
**1.4**



PROJECT:  
**2019 GLACIER  
 HILL PARK SUN  
 SHELTER  
 INSTALLATION**

**GLACIER HILL PARK  
 1018 GLACIER HILL DRIVE  
 MADISON, WI 53704**

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ITEM DATE  
 Advertised by: KK 06-27-2019

PUBLIC WORKS PROJECT #:  
**8453**

SHEET TITLE:  
**DESIGN  
 COMPUTATIONS**

SHEET NUMBER:  
**1.5**

**Glacier Hill Park Sun Shelter Calculations**

City of Madison, WI Parks Div  
 Date Revised: 5/24/2019

**Notes:**  
 Positive volumes are cuts, negative volumes are fills.  
 Not all parts of all surface models (Digital Terrain Models) are used for computations or intended for actual construction.

Existing: GlacHill\_Survey2018-10-22.dtm  
 Proposed: Pro1.dtm

Grp	Material	Item	From Surface Model	To Surface Model	area (sq ft)	depth (ft)	Unfactored volume (cu ft)	Unfactored volume (cu yd)	Expansion Factor (%)	Factored (Uncompacted) Volume (cu yd)
Grass to Concrete	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	850	0.50	425	15.7	0%	15.7
Grass to Concrete	Subsoil Excavate	Cut subsoil to proposed subgrade	Ex-6in	Pro-13in	850	varies	238	8.8	0%	8.8
Grass to Concrete	Subsoil Place	Fill subsoil to proposed subgrade	Ex-6in	Pro-13in	850	varies	0	0.0	0%	0.0
Grass to Concrete	Gravel (for Pavement) Place	Place 6in gravel base	n/a	n/a	850	-0.50	-425	-15.7	0%	-15.7
Grass to Concrete	Concrete Place	Place 7in concrete	n/a	n/a	850	-0.58	-493	-18.3	0%	-18.3
Grass to Grass	Topsoil Excavate	Strip 6in topsoil	n/a	n/a	1108	0.50	554	20.5	0%	20.5
Grass to Grass	Subsoil Excavate	Cut subsoil to proposed subgrade	Ex-6in	Pro-6in	1108	varies	74	2.7	0%	2.7
Grass to Grass	Subsoil Place	Fill subsoil to proposed subgrade	Ex-6in	Pro-6in	1108	varies	-55	-2.0	0%	-2.0
Grass to Grass	Topsoil Place	Place 6in topsoil	n/a	n/a	1108	-0.50	-554	-20.5	0%	-20.5

**Glacier Hill Park Shelter Calculations**

City of Madison, WI Parks Division  
 Date Revised: 5/23/2019

Derived from more detailed spreadsheet available from Parks Division

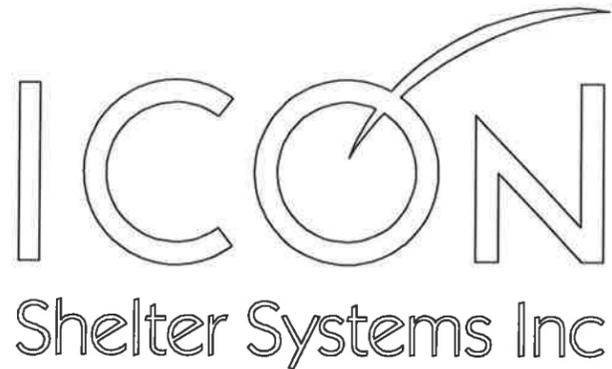
**Glacier Hill Park Sun Shelter Computation Summary**

Positive volumes are cuts (material available), negative volumes are fills (material needed)

Row Labels	Sum of Factored (Uncompacted) Volume (cu yd)
Concrete Place	-18.3
Gravel (for Pavement) Place	-15.7
Subsoil Excavate	11.5
Subsoil Place	-2.0
Topsoil Excavate	36.3
Topsoil Place	-20.5
<b>Grand Total</b>	<b>-8.8</b>

**Reorganized into bid table items**

Bid Item	Quantity	Units	Relation to Table Above
20101 Excavation Cut	54	CY	= Subsoil Excavate + Topsoil Excavate and 6 CY allowance for concrete footings
20202 Fill Borrow	9	CY	= difference of Subsoil Place & Subsoil Excavate
20221 Topsoil	123	SY	= (Topsoil Place)/-.167
40102 Crushed Aggregate Base Course Gradation No. 2	31	tons	= ( Gravel Place ) * -2 ton/cubic yard



JOB NUMBER: 6145  
 JOB NAME: GLACIER HILLS PARK  
 JOB LOCATION: MADISON, WI

REVISION: A  
 A - INITIAL SUBMITTAL REVISION (JMD 4/26/2019)

**ICON**  
 Shelter Systems Inc  
 DISTINCTIVE STEEL SHELTERS  
 WWW.ICONSHelters.COM  
 COPYRIGHT 2004, ICON SHELTER SYSTEMS, INC.  
 1455 LINCOLN AVE.  
 HOLLAND MI, 49423  
 616.396.0919  
 800.748.0985  
 616.396.0944 FX

TABLE OF CONTENTS

- 1.0 COVER SHEET
- 2.0 ELEVATION
- 3.0 ANCHOR BOLT LAYOUT
- 4.0 FRAME LAYOUT
- 5.0-5.1 FRAME CONNECTIONS
- 6.0 T&G ROOF LAYOUT
- 7.0 STANDING SEAM ROOF LAYOUT
- R1.0-R1.7 ROOF DETAILS

DESIGN LOADS

CODE: 2015 INTERNATIONAL BUILDING CODE  
 TOTAL DEAD: 10.10 P.S.F.  
 FRAME DEAD: 4.10 P.S.F.  
 ROOF DEAD: 3.50 P.S.F.  
 COLLATERAL DEAD: 2.50 P.S.F.  
 ROOF LIVE LOAD: 20.00 P.S.F.  
 GROUND SNOW LOAD: 30.00 P.S.F.  
 ROOF SNOW LOAD: 25.20 P.S.F.  
 WIND SPEED: 115.00 M.P.H.  
 EXPOSURE: C  
 SEISMIC USE GROUP: I  
 SEISMIC SITE CLASS: D  
 SEISMIC DESIGN CATEGORY: A  
 SEISMIC ANALYSIS: SIMPLIFIED

NOTES

MATERIALS (ASTM DESIGNATION)  
 TUBE STEEL (HSS HOLLOW STRUCTURAL SECTION) A-500 GRADE B  
 STRUCTURAL STEEL PLATE A-992  
 ROOF PANELS (STEEL) A-36  
 ANCHOR BOLTS A-446  
 CONNECTION BOLTS F1554 GRADE 55 A-325

ALL WELDING CONFORMS TO THE LATEST EDITION OF AWS D1.1 OR D1.3 AS REQUIRED. ALL WELDING IS PERFORMED BY AWS CERTIFIED WELDERS.

IF THESE DRAWINGS ARE SEALED, THE SEAL APPLIES ONLY TO THE MATERIALS SUPPLIED BY ICON SHELTER SYSTEMS INC. AND IS NOT INTENDED AS THE SEAL OF THE ENGINEER OF RECORD FOR THE ENTIRE PROJECT.

DUE TO STANDARDIZED FABRICATION PARTS SHOWN MAY BE UPGRADED. REFER TO THE SHIPPING BILL OF MATERIALS FOR POSSIBLE SUBSTITUTIONS.

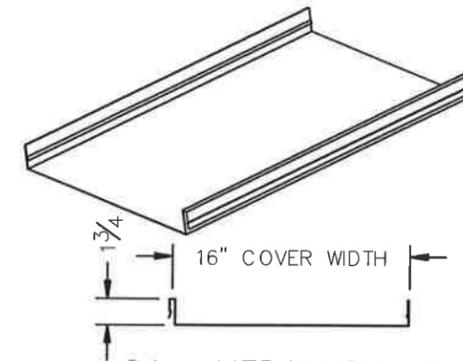
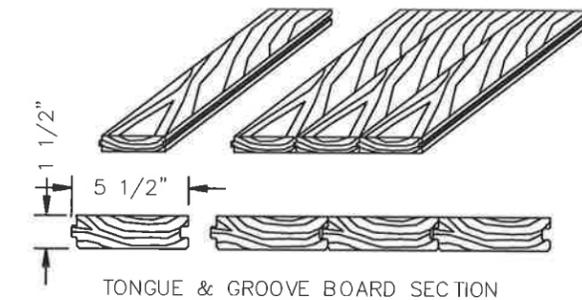
ICON SHELTER SYSTEMS INC. RECOMMENDS THAT THE PRIMARY FRAMING INSTALLER AND THE ROOF INSTALLER HAVE A MINIMUM OF FIVE (5) YEARS OF DOCUMENTED EXPERIENCE INSTALLING THIS TYPE OF PRODUCT.

HIGH STRENGTH BOLTING  
 ALL HIGH STRENGTH BOLTS ARE A-325 BOLTS WITH HEAVY HEX NUTS. THE BOLTS ARE TO BE INSTALLED UTILIZING THE "SPECIFICATION FOR STRUCTURAL JOINTS ASTM A325 OR A490 BOLTS" (6/30/2004) AS PREPARED BY RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) FOR THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). THE BOLTS SHALL BE INSTALLED AS SNUG TIGHTENED WHICH IS DEFINED AS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE PLIES INTO FIRM CONTACT, WHICH IS THE CONDITION WHEN THE PLANES OF CONTACT BETWEEN TWO PLIES ARE SOLIDLY SEATED AGAINST EACH OTHER, BUT NOT NECESSARILY IN CONTINUOUS CONTACT WITH UTILIZATION OF THE SNUG TIGHTENING METHOD, NO WASHERS ARE REQUIRED.  
 ALL CONNECTIONS ARE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSURE PROPER TIGHTNESS.

PROPER ERECTION OF THE FRAMING MEMBERS REQUIRES THE MAIN COLUMNS TO BE PLUMB & SQUARE. COLUMNS, RAFTER, AND TIE BEAM CONNECTIONS MUST BE TIGHTENED BEFORE INSTALLING THE PURLINS. PURLINS MUST BE PARALLEL TO THE TIE BEAMS AND EAVE BEAMS.

ROOF



COVER SHEET

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK

MADISON, WI

SHEET

1.0



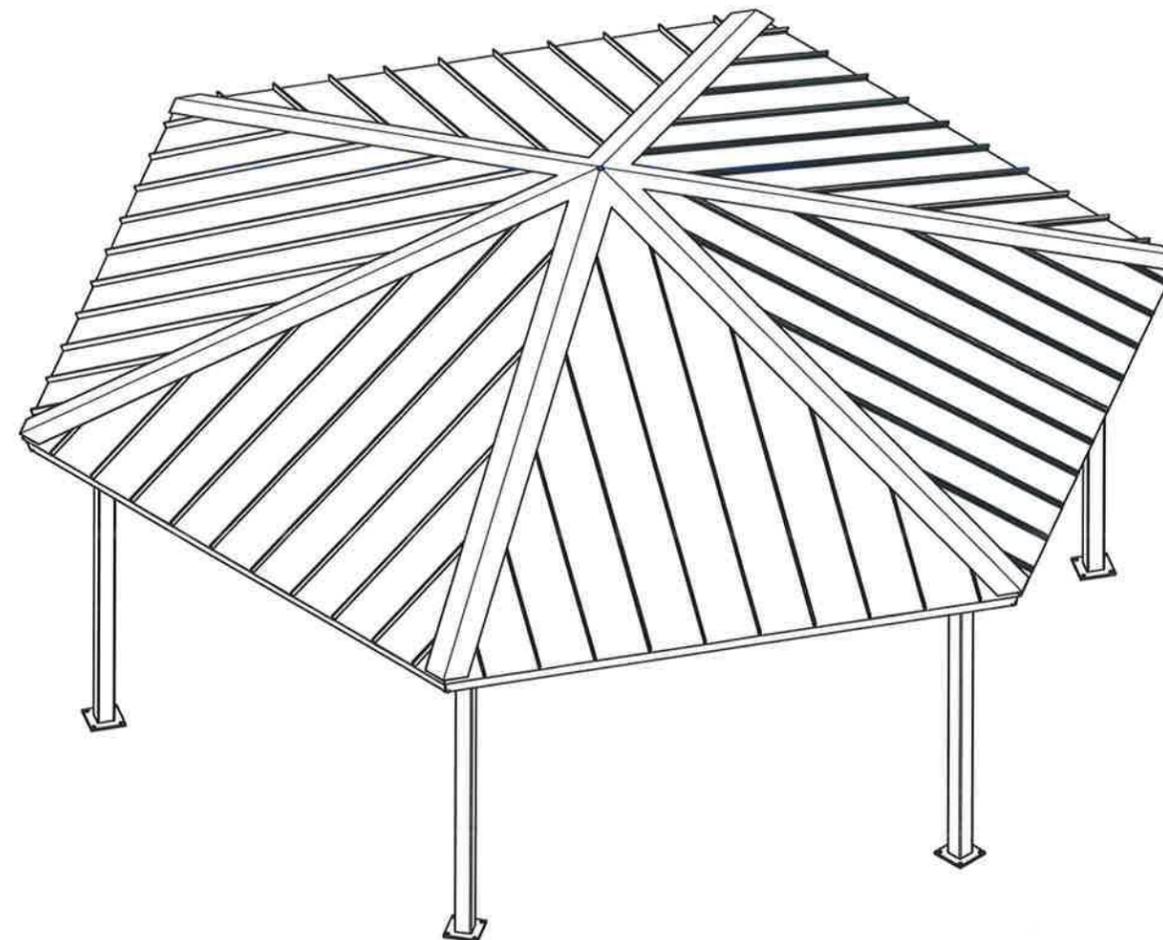
*4/26/19*

THIS SEAL PERTAINS ONLY TO THE MATERIALS AND INFORMATION SHOWN ON THESE DRAWINGS. THIS SEAL DOES NOT SERVE AS OR REPRESENT THE PROJECT ENGINEER OF RECORD AND SHALL NOT BE CONSTRUED AS SUCH.

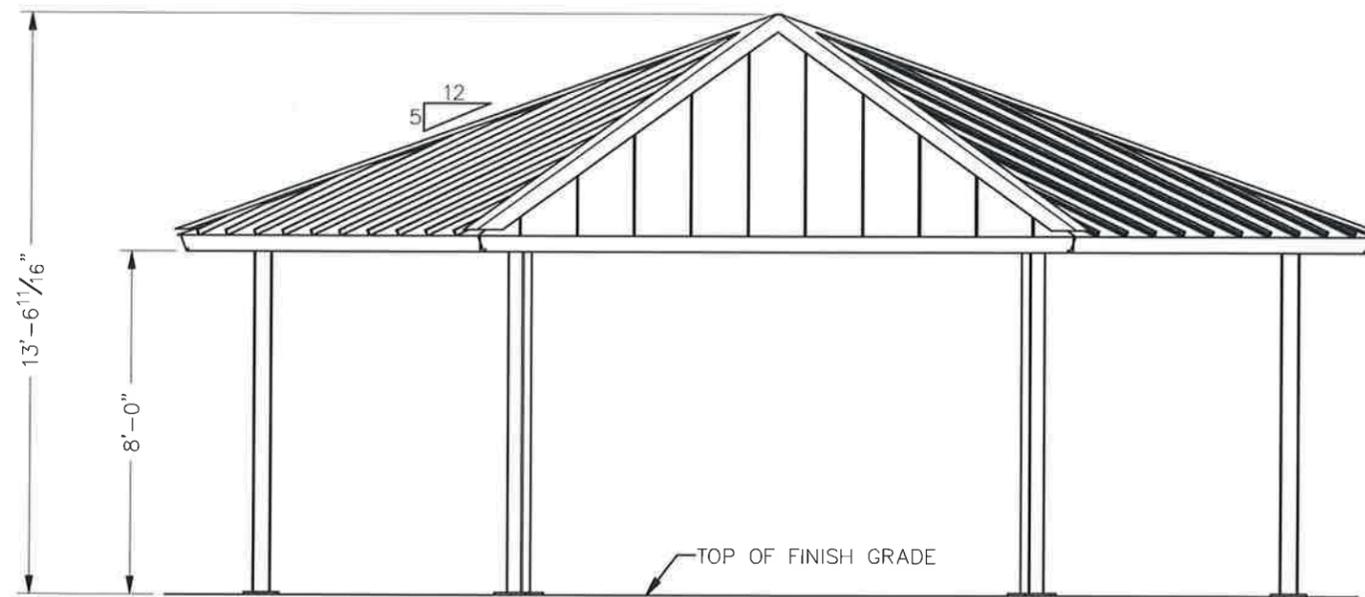
FABRICATOR APPROVALS

CLARK COUNTY STEEL FABRICATOR NUMBER: 707  
 CITY OF LOS ANGELES FABRICATOR NUMBER: FB03254

ELEVATION



ISOMETRIC VIEW



FRONT VIEW

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

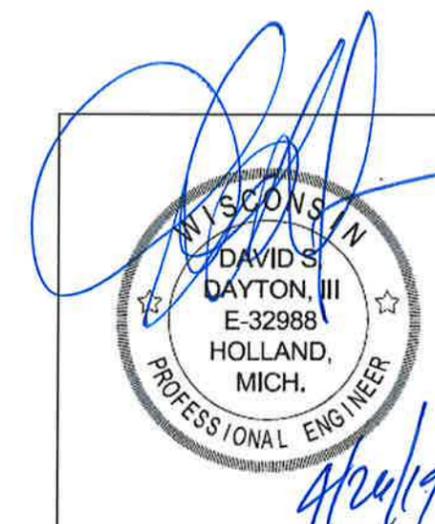
PROJECT NAME:

GLACIER HILLS PARK

MADISON, WI

SHEET

2.0



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ANCHOR BOLT LAYOUT

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK

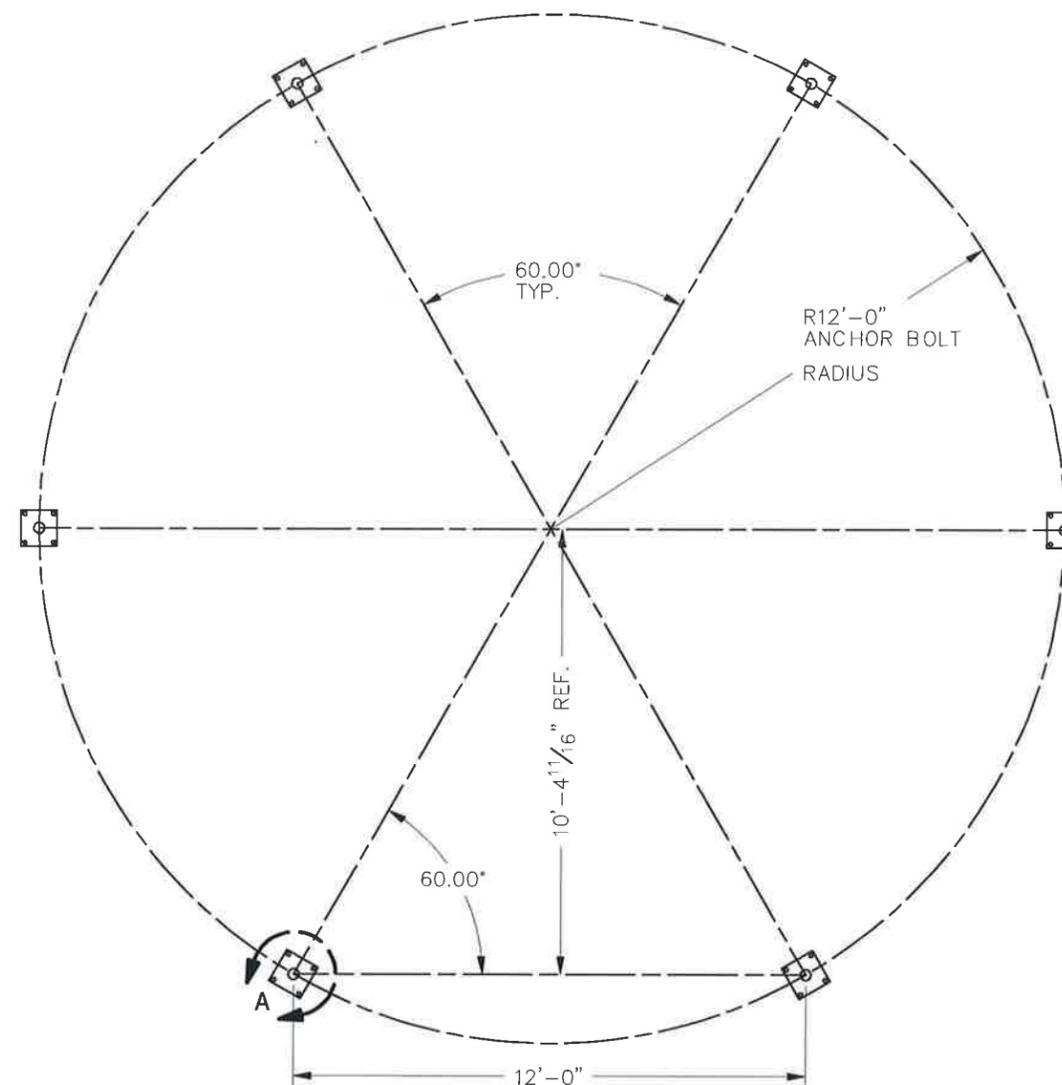
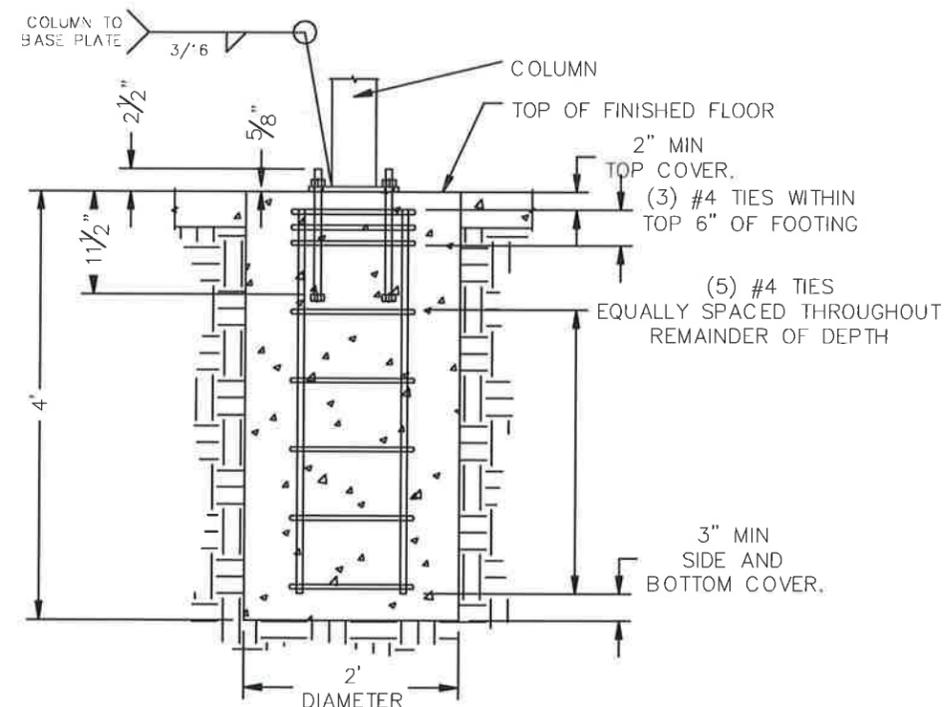
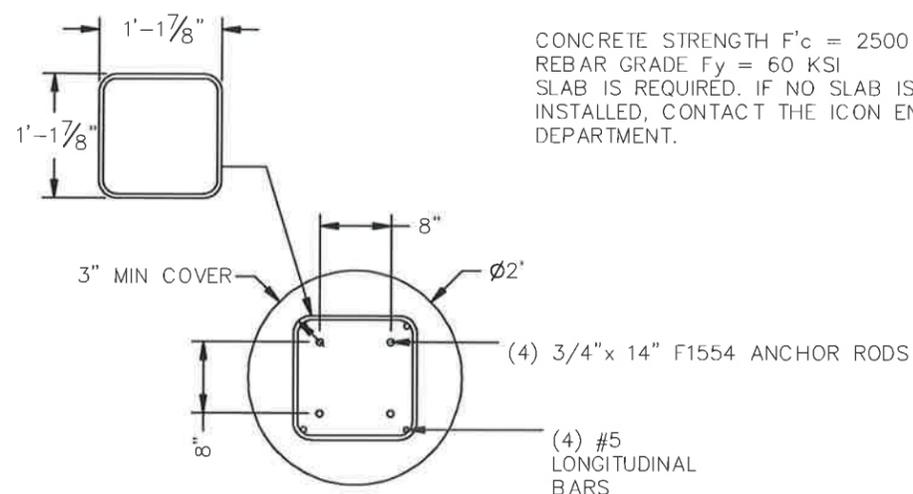
MADISON, WI

SHEET

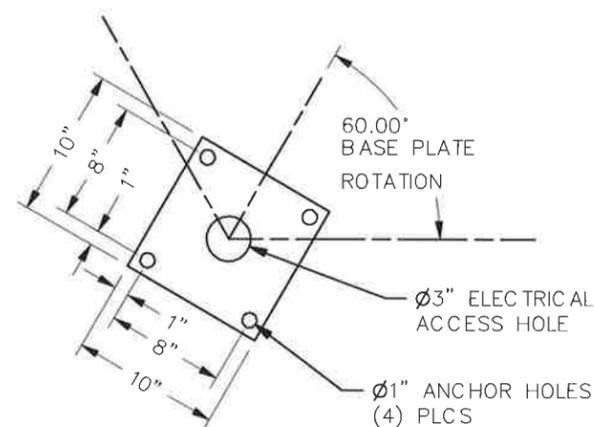
3.0

PRINTED ON : 4/26/2019

CONCRETE STRENGTH  $F'_c = 2500$  PSI  
REBAR GRADE  $F_y = 60$  KSI  
SLAB IS REQUIRED. IF NO SLAB IS TO BE  
INSTALLED, CONTACT THE ICON ENGINEERING  
DEPARTMENT.



ANCHOR BOLT LAYOUT



DETAIL A  
BASE PLATE MATERIAL  
5/8" THICK GR50



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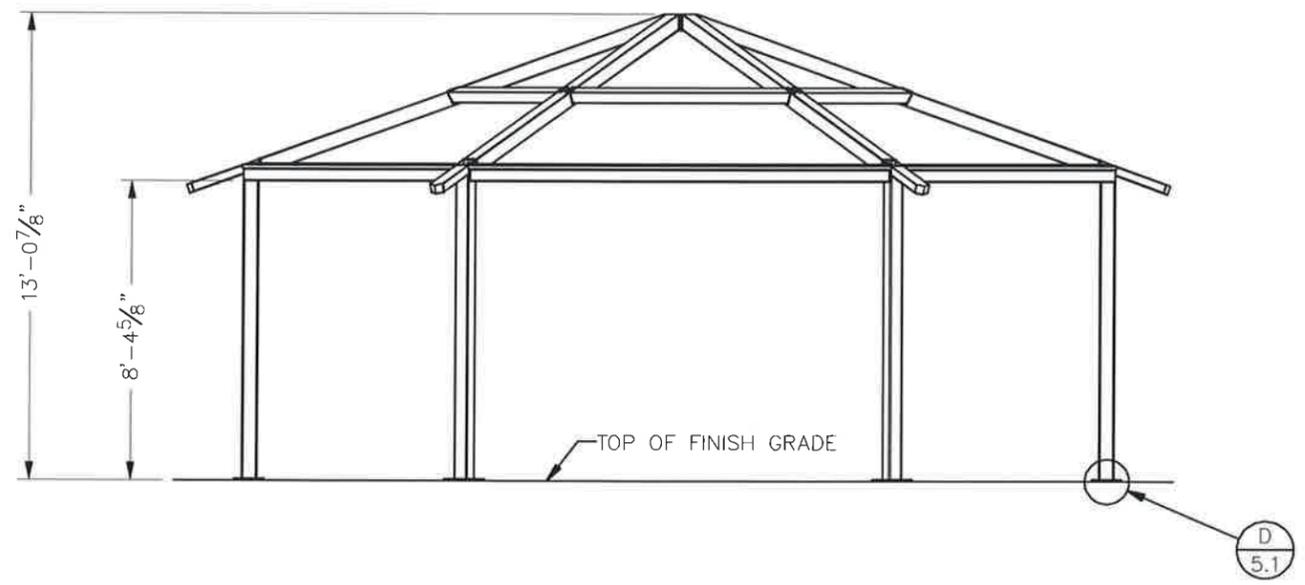
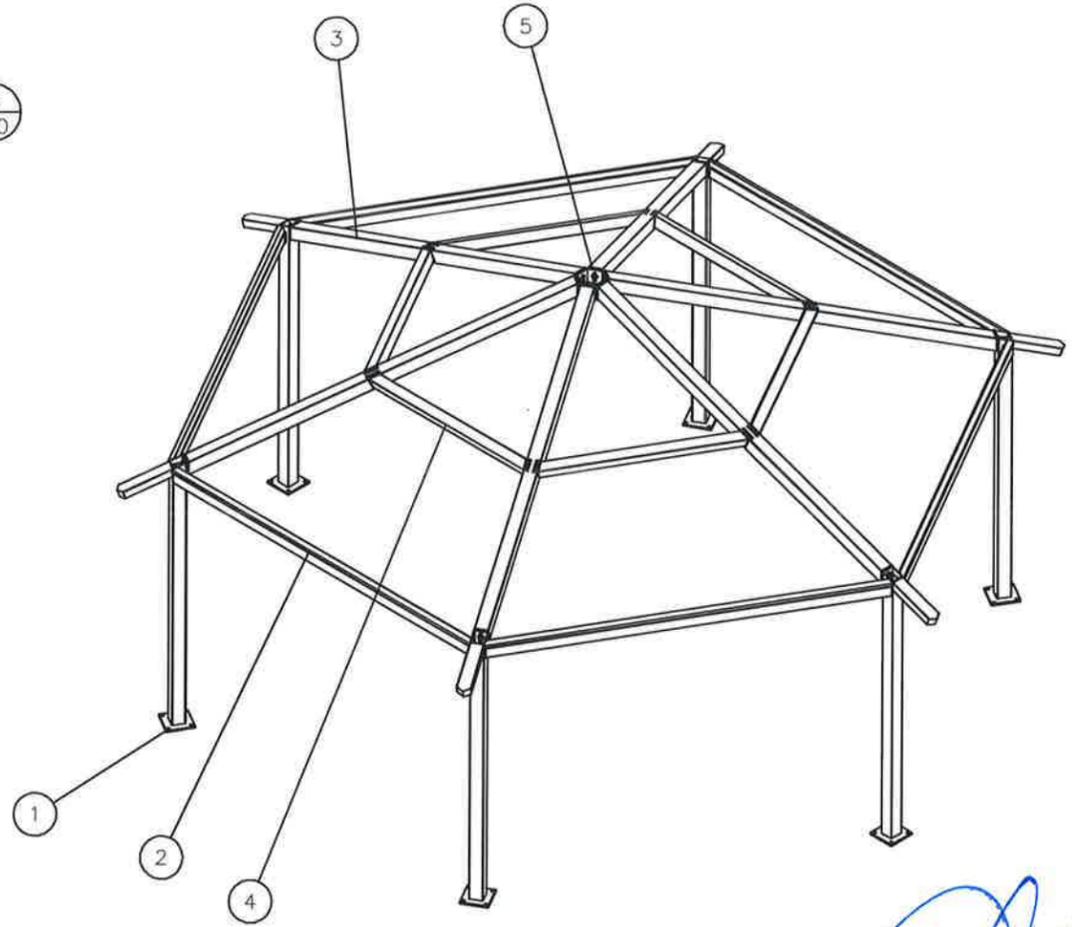
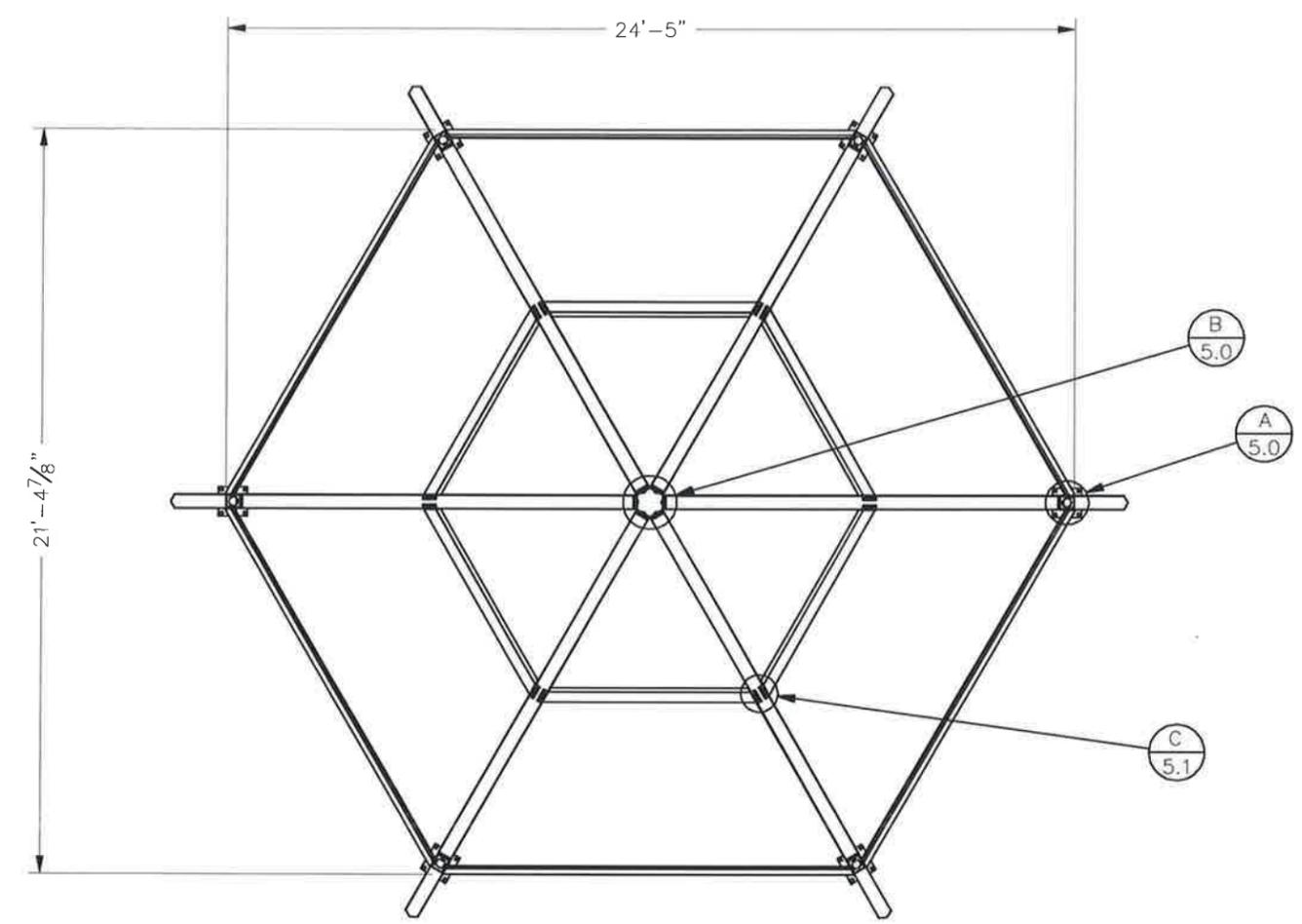
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ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	LENGTH	UNIT WEIGHT
1	6		COLUMN	HSS5X5X0.1875		118 lbmass
2	6		TIE BEAM	HSS4X3X0.125		88 lbmass
3	6		RAFTER	HSS5X5X0.125		108 lbmass
4	6		PURLIN	HSS4X4X0.125		40 lbmass
5	1		COMPRESSION RING	5/8" PLATE		29 lbmass

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616.396.0919  
800.748.0985  
616.396.0944 FX

FRAME LAYOUT



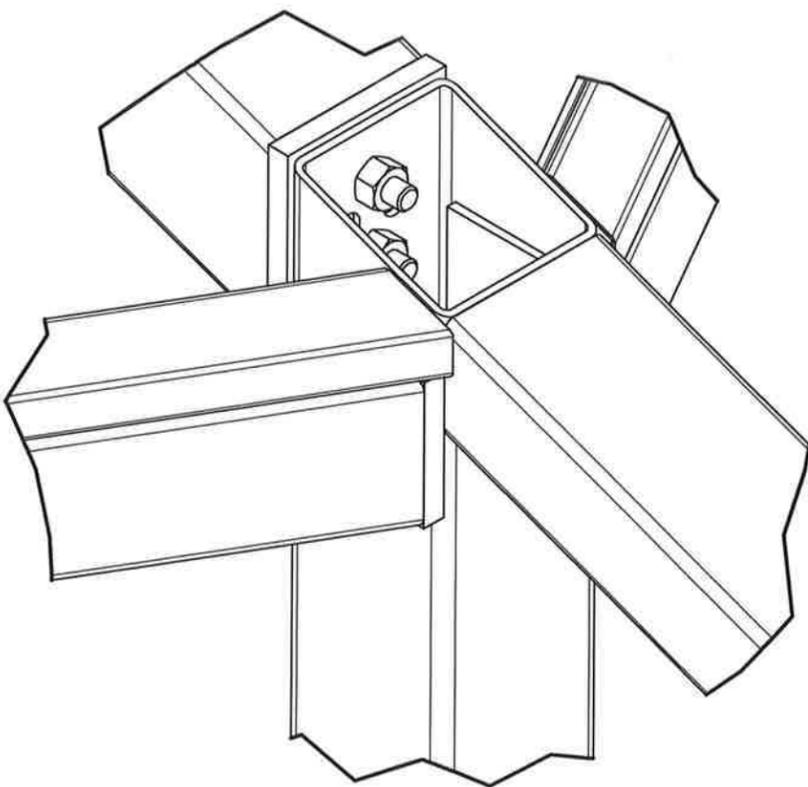
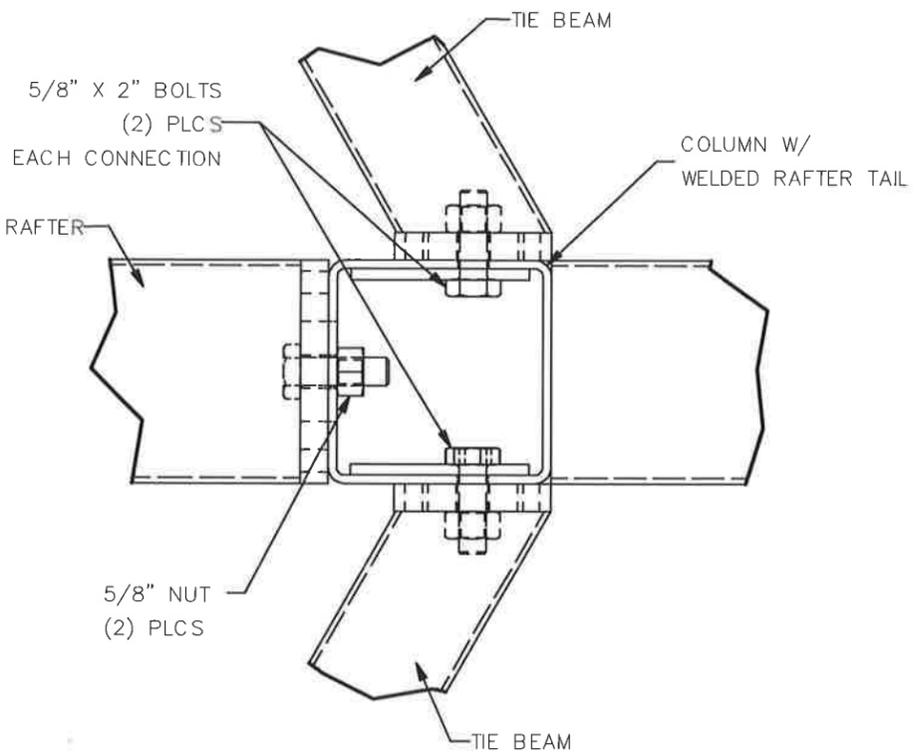
DRAWN BY:  
jeremy  
DATE:  
4/26/2019  
JOB NO.:  
6145  
REVISION:  
A  
BUILDING TYPE:  
HX28TS-P5  
PROJECT NAME:  
GLACIER HILLS PARK  
MADISON, WI

*David S. Dayton, III*  
WISCONSIN  
DAVID S.  
DAYTON, III  
E-32988  
HOLLAND,  
MICH.  
PROFESSIONAL ENGINEER  
4/26/19

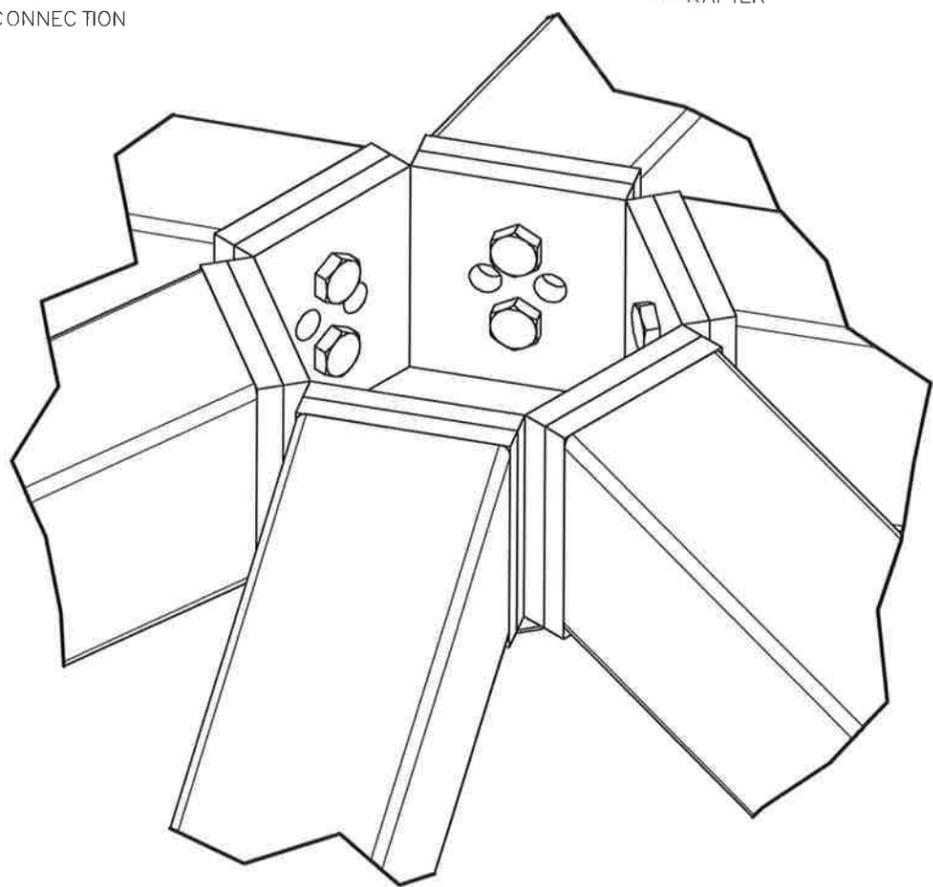
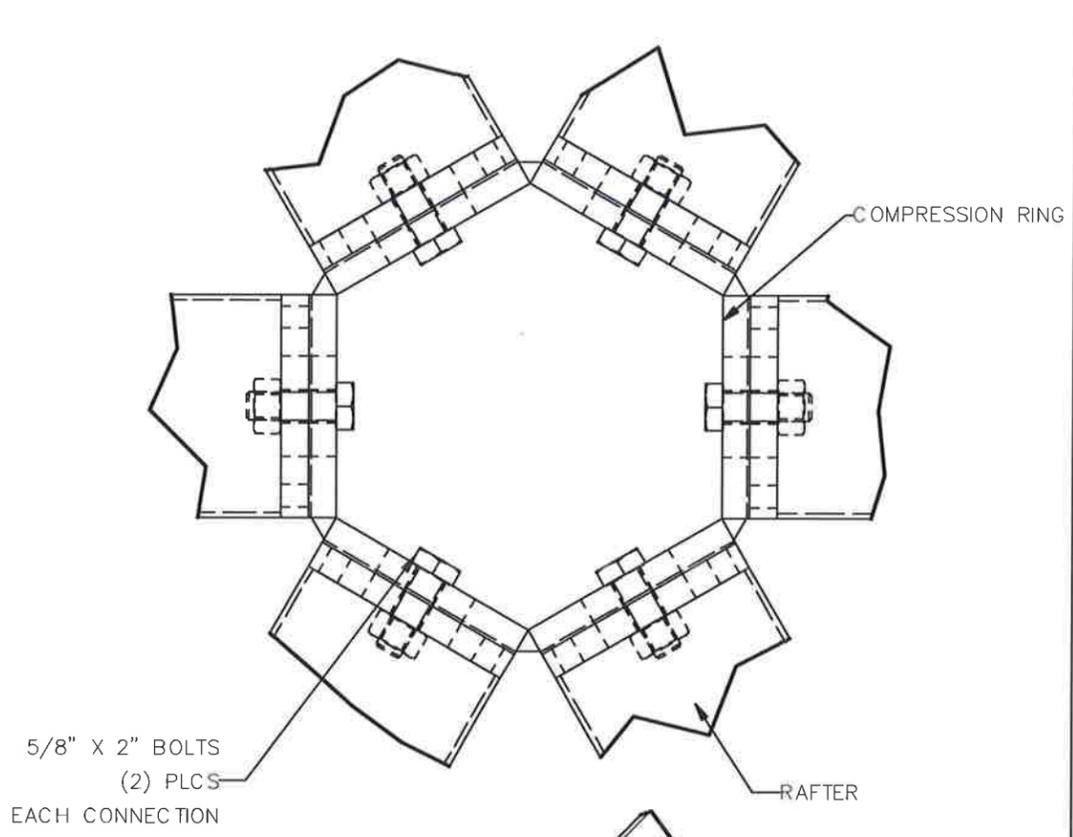
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SHEET  
**4.0**

FRAME CONNECTIONS



RAFTER & TIE BEAM CONNECTION @ COLUMN DETAIL A



RAFTER CONNECTION @ COMPRESSION RING DETAIL B

**NOTE TO INSTALLERS:**  
 WITH FACTORY POWDERCOATED SHELTERS, PAINT EXPOSED FASTENERS OF COMPRESSION RINGS, ORNAMENTATION, KNIFE PLATES, ETC. WITH PROVIDED TOUCH UP PAINT TO PREVENT RUSTING OF FASTENERS

PAINT EXPOSED FASTENERS

*(Handwritten signature)*  
  
*(Handwritten date: 4/26/19)*

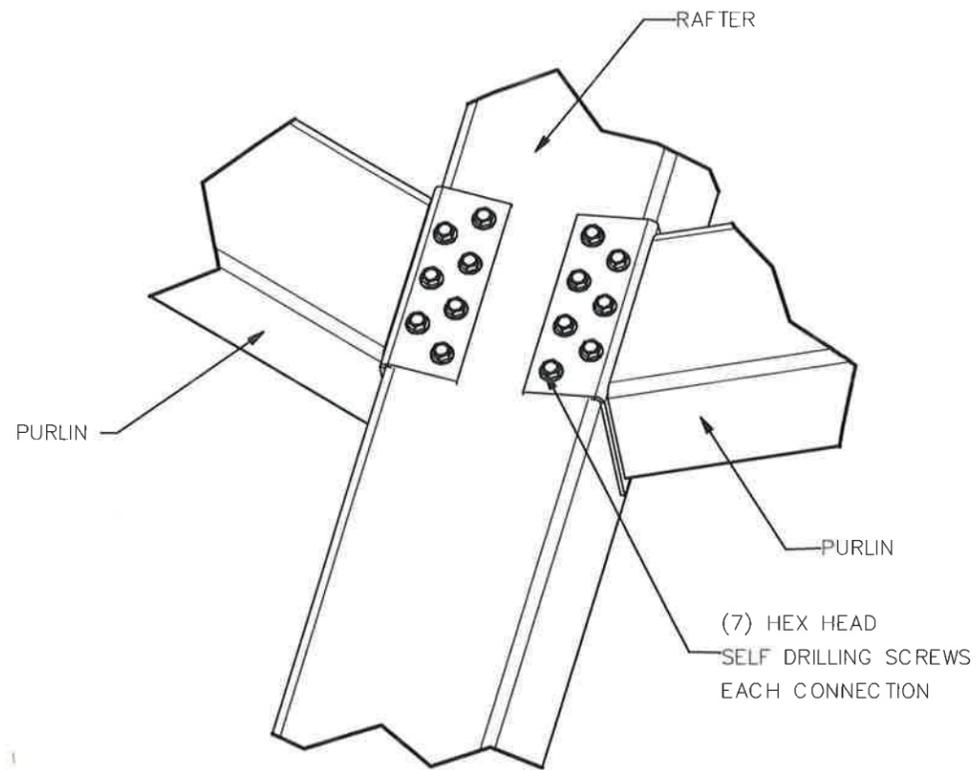
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DRAWN BY:	jeremy
DATE:	4/26/2019
JOB NO.:	6145
REVISION:	A
BUILDING TYPE:	HX28TS-P5
PROJECT NAME:	GLACIER HILLS PARK MADISON, WI

SHEET  
5.0



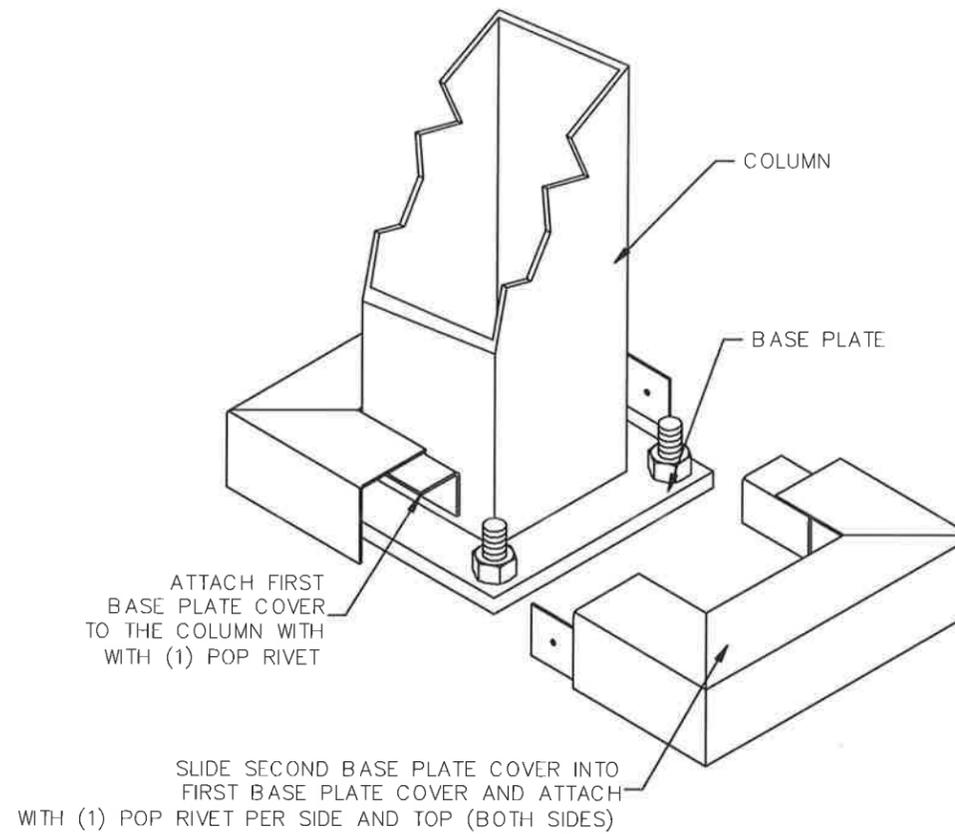
HEX HEAD SELF DRILLING SCREW  
1/4" - 14x1"



- 1). SLIDE PURLIN INTO PLACE BETWEEN RAFTERS
- 2). FASTEN PURLIN W/ (7) HEX HEAD SCREWS ON EACH END

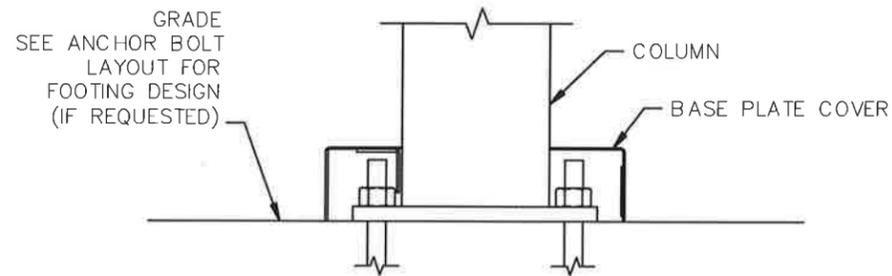
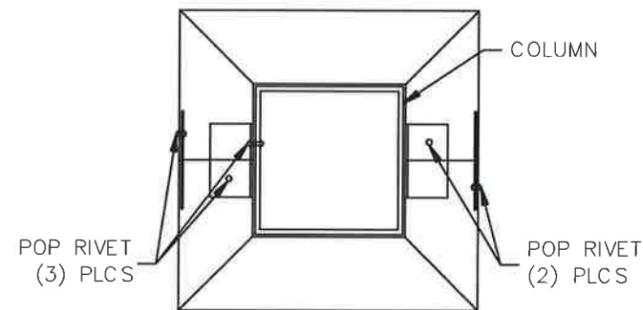
PURLIN CONNECTION  
@ RAFTER

DETAIL C



ATTACH FIRST BASE PLATE COVER TO THE COLUMN WITH (1) POP RIVET

SLIDE SECOND BASE PLATE COVER INTO FIRST BASE PLATE COVER AND ATTACH WITH (1) POP RIVET PER SIDE AND TOP (BOTH SIDES)



BASE PLATE COVER CONNECTION  
@ COLUMN

DETAIL D

NOTE TO INSTALLERS:  
WITH FACTORY POWDERCOATED SHELTERS, PAINT EXPOSED FASTENERS OF COMPRESSION RINGS, ORNAMENTATION, KNIFE PLATES, ETC. WITH PROVIDED TOUCH UP PAINT TO PREVENT RUSTING OF FASTENERS

PAINT EXPOSED FASTENERS



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FRAME CONNECTIONS

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DATE:

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JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

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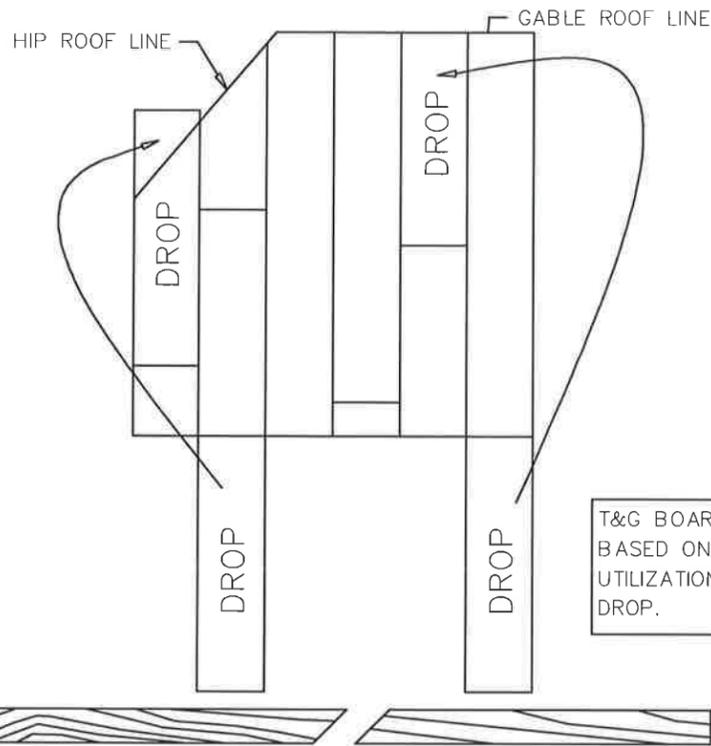
PROJECT NAME:

GLACIER HILLS PARK

MADISON, WI

SHEET

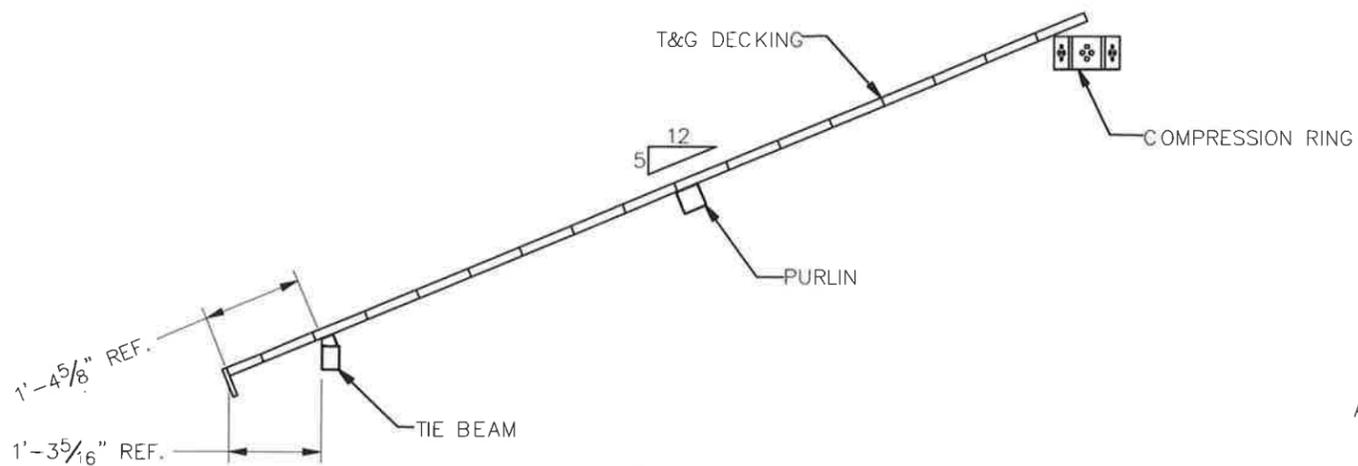
5.1



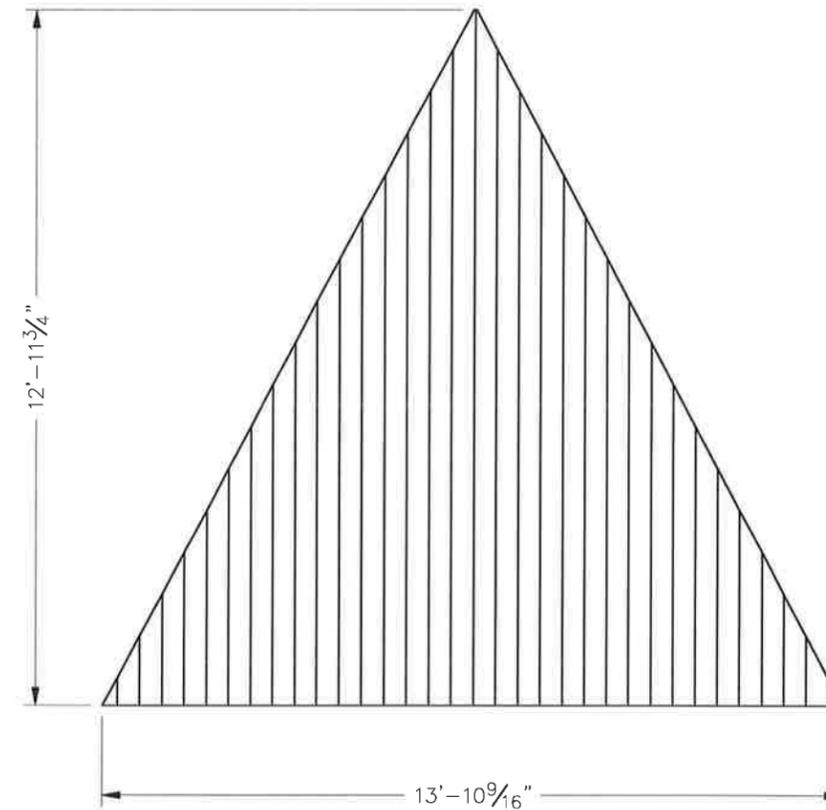
T & G ROOF DECK: 2X6 TONGUE AND GROOVE WOOD ROOF DECK, WESTERN LODGEPOLE PINE, KILN DRIED, #2 OR BETTER, ONE EDGE V'D, ONE EDGE GROOVED. IF REQ'D, FASCIA SHALL BE PINE.

T&G BOARD QTY IS BASED ON UTILIZATION OF DROP.

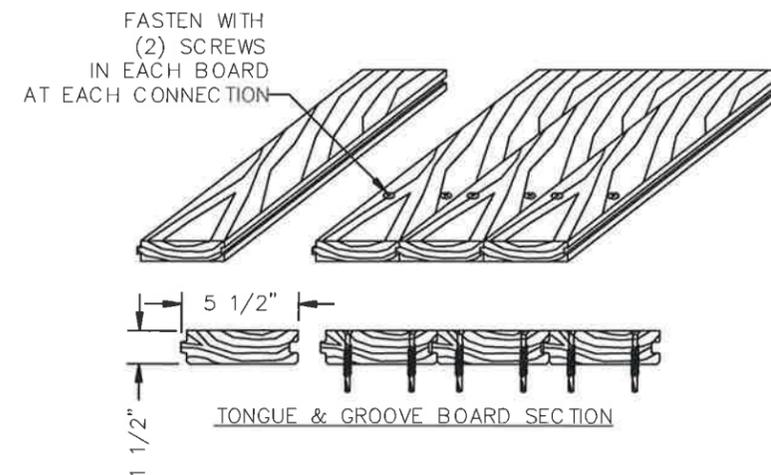
SPLICING T&G BOARD  
MITER ENDS OF T&G AT 45° WHEN SPLICING TWO BOARDS TOGETHER. STAGGER SPLICES ON ADJACENT BOARD AT LEAST 24" APART. SPLICES MAY OR MAY NOT FALL OVER TOP OF A PURLIN.



T&G ROOF SECTION



T&G ROOF LAYOUT



TONGUE & GROOVE BOARD SECTION

*[Handwritten Signature]*  
  
*4/26/19*

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T&G ROOF LAYOUT

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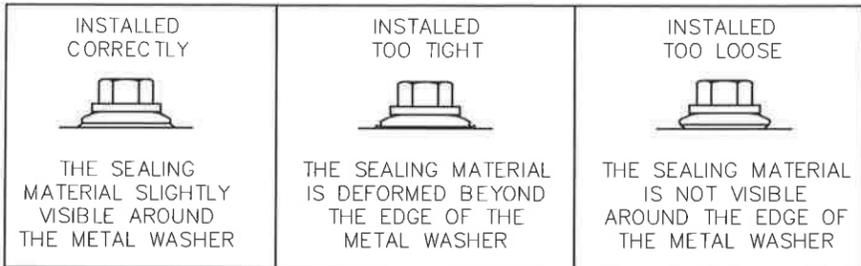
PROJECT NAME:

GLACIER HILLS PARK

MADISON, WI

SHEET

6.0



THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE METAL ROOFING SYSTEM. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS OR CODES. CHANGES TO THE DETAILS MAY BE REQUIRED DUE TO FIELD CONDITIONS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL INSTALLATION INSTRUCTION MATERIAL BEFORE STARTING WORK.

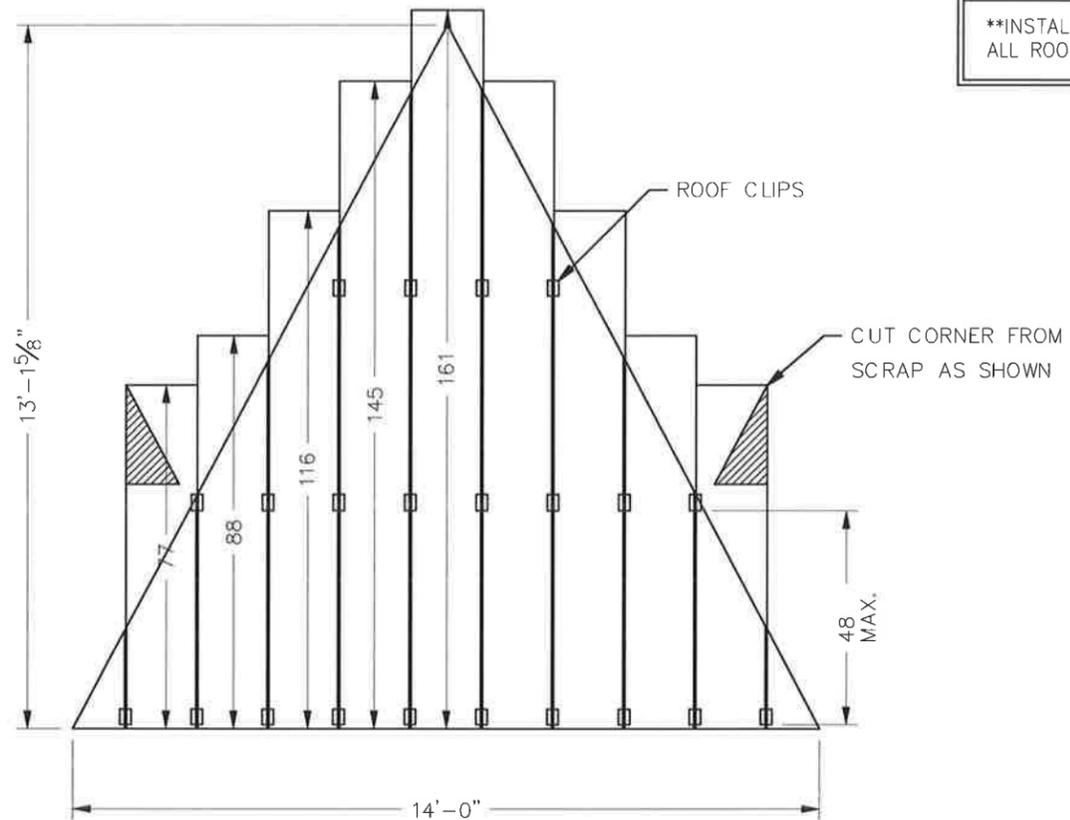
THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

ERECTORS SHALL BE RESPONSIBLE TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

FOR THE BEST APPEARANCE ALL TRIM AND FLASHING SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ALL EXPOSED FASTENERS EQUALLY SPACED.

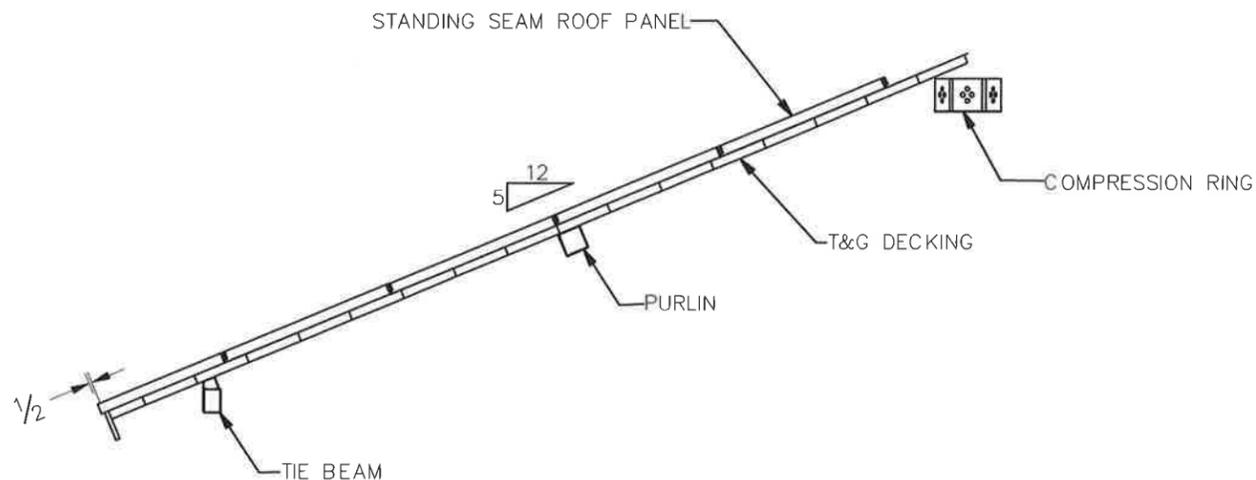
SOME FIELD CUTTING AND/OR FITTING OF PANELS, TRIM AND FLASHING IS TO BE EXPECTED BY THE ERECTOR. MINOR FIELD CORRECTIONS ARE PART OF NORMAL ERECTION WORK.

THE INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN AND WORKMANSHIP SHALL MEET THE BEST INDUSTRY STANDARDS.



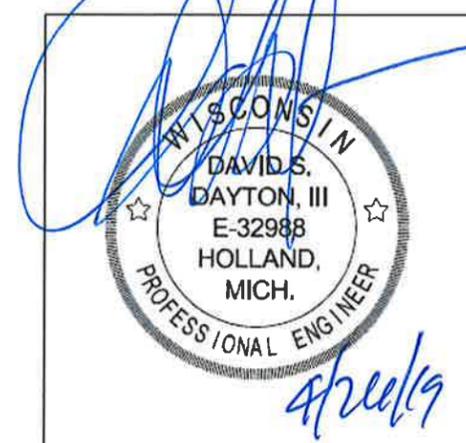
**\*\*INSTALLER TO FIELD CUT ALL ROOF PANELS\*\***

STANDING SEAM ROOF LAYOUT



STANDING SEAM ROOF SECTION

**ATTENTION INSTALLERS:**  
METAL SHAVINGS LEFT ON ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH!  
  
DRILLING OR INSTALLING ROOF FASTENERS WILL CAUSE METAL SHAVINGS. THESE SHAVINGS MUST BE CAREFULLY REMOVED AT THE END OF EACH DAY BY EITHER SWEEPING OR BRUSHING THE INSTALLED ROOF.



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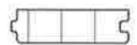
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SS ROOF LAYOUT

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DATE:	4/26/2019
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PROJECT NAME:	GLACIER HILLS PARK MADISON, WI

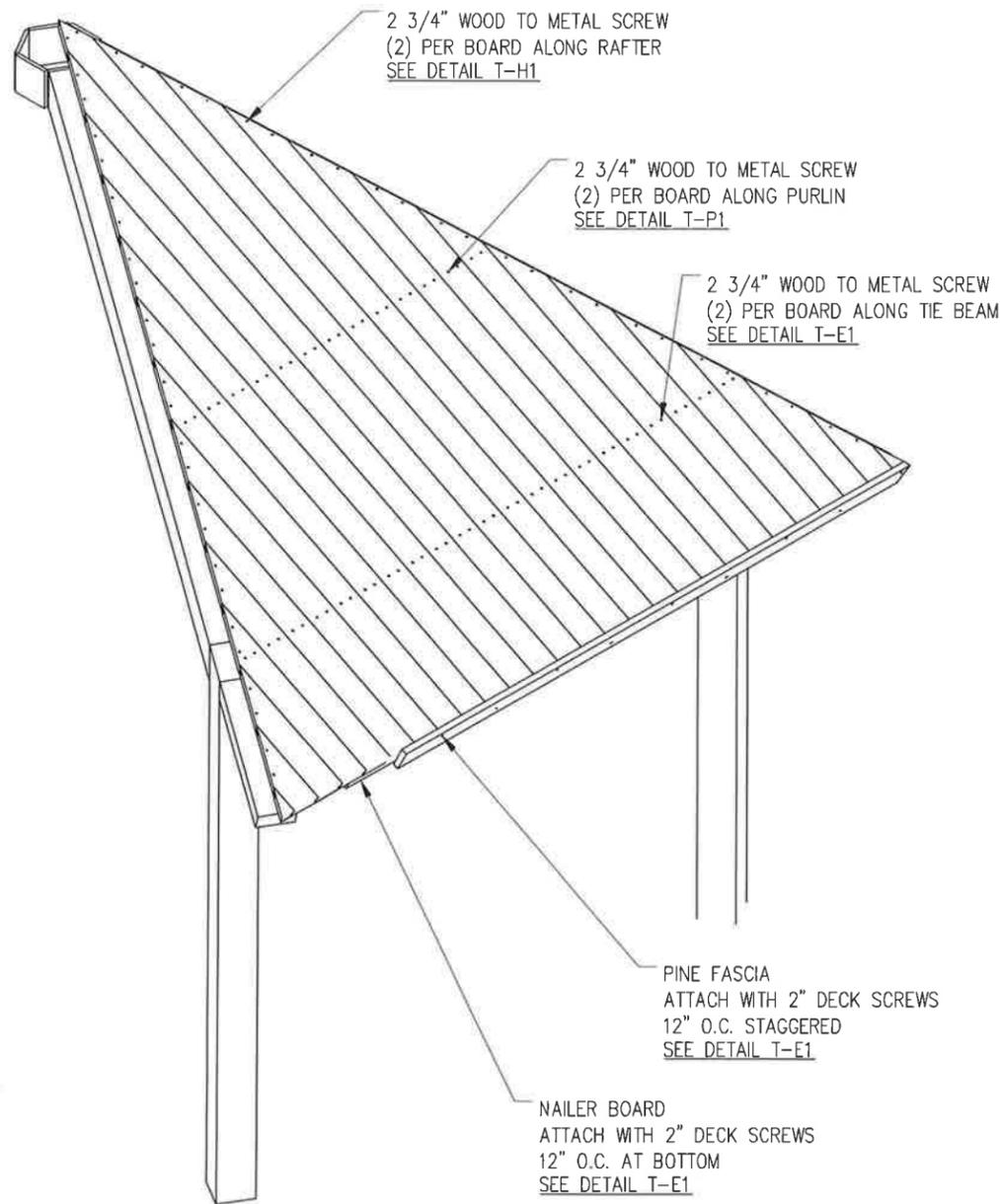
SHEET  
**7.0**

ORDER OF INSTALLATION

-  T&G BOARD  
SEE DETAILS T-E1, T-H1 & T-P1
-  NAILER - RIP THREE PER  
T&G BOARD AS SHOWN  
SEE DETAIL T-E1
-  1"x6" PINE FASCIA  
SEE DETAILS T-E1

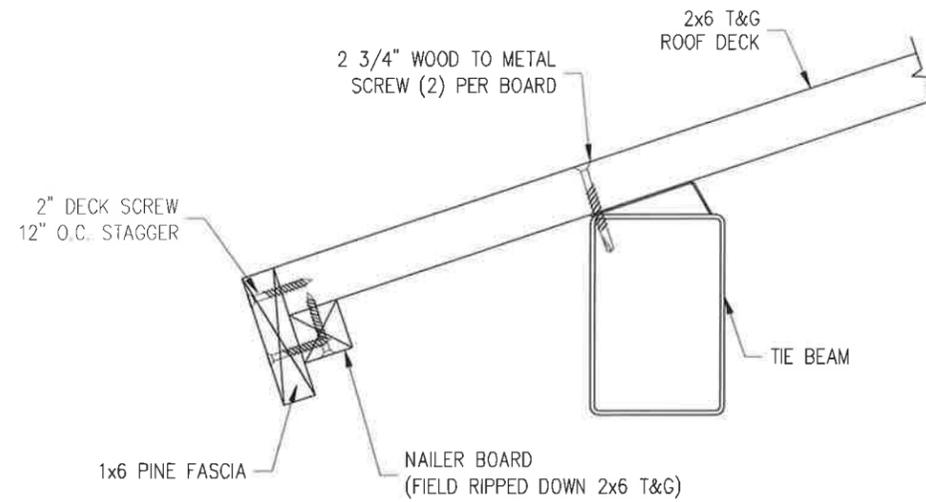
FASTENERS

-  2 3/4" WOOD TO METAL  
SCREW
-  2" DECK SCREW

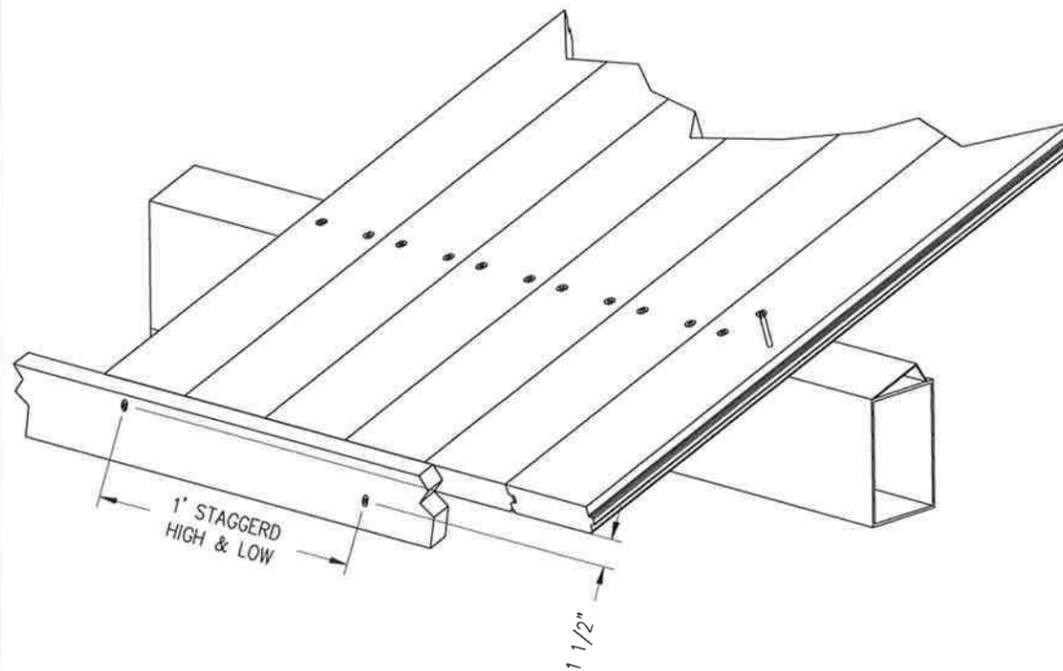


T&G INSTALLATION

ROOF



-  2" DECK SCREW
-  2 3/4" WOOD TO METAL  
SCREW



T&G ROOF DECKING

© TIE BEAM

T-E1

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ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

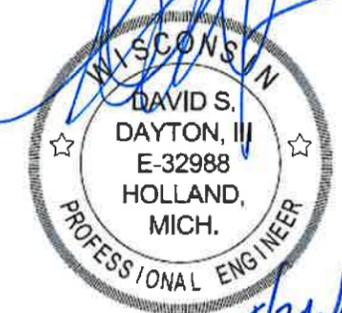
HX28TS-P5

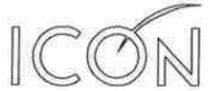
PROJECT NAME:

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R1.0





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ROOF DETAILS

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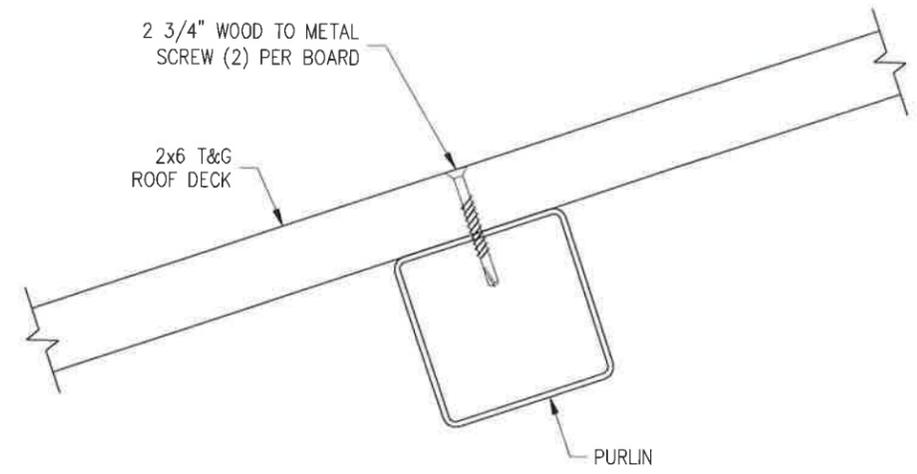
PROJECT NAME:

GLACIER HILLS PARK  
MADISON, WI

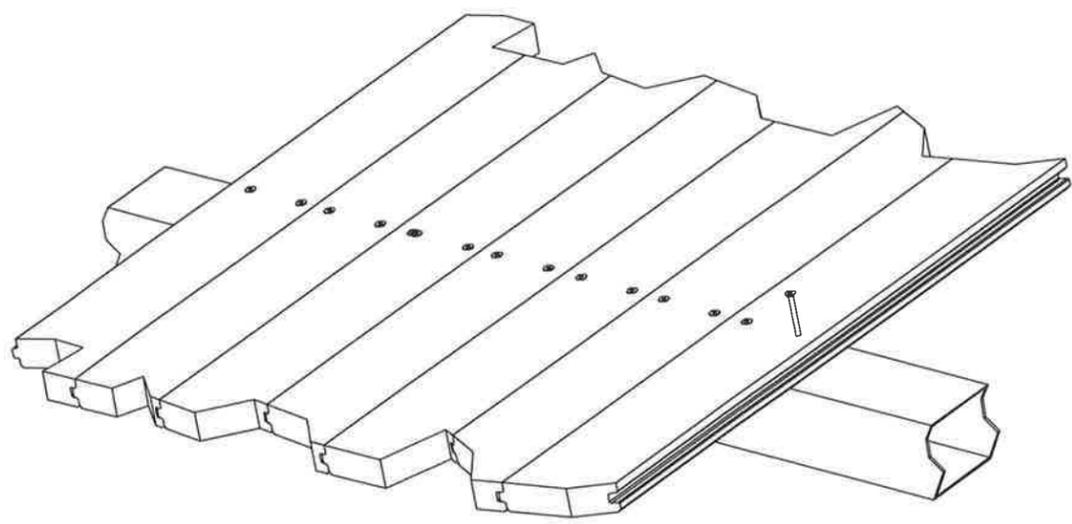
SHEET

R1.1

PRINTED ON: 4/26/2019

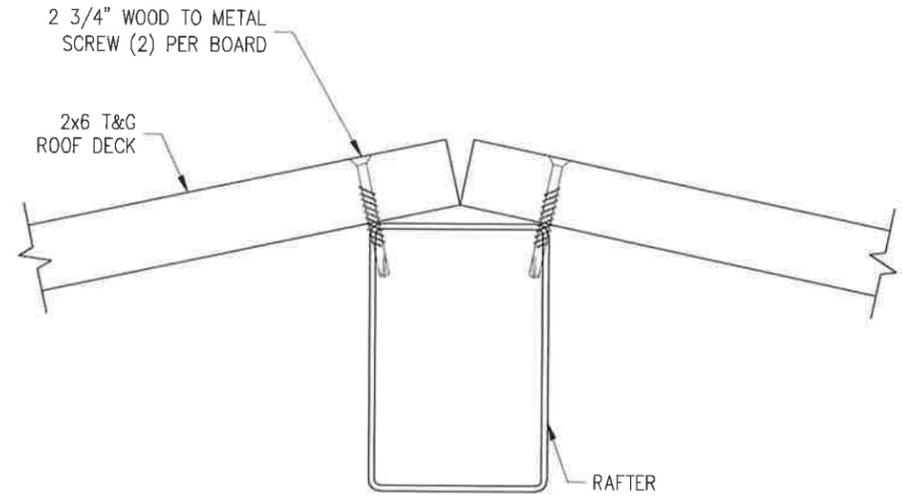


2 3/4" WOOD TO METAL SCREW

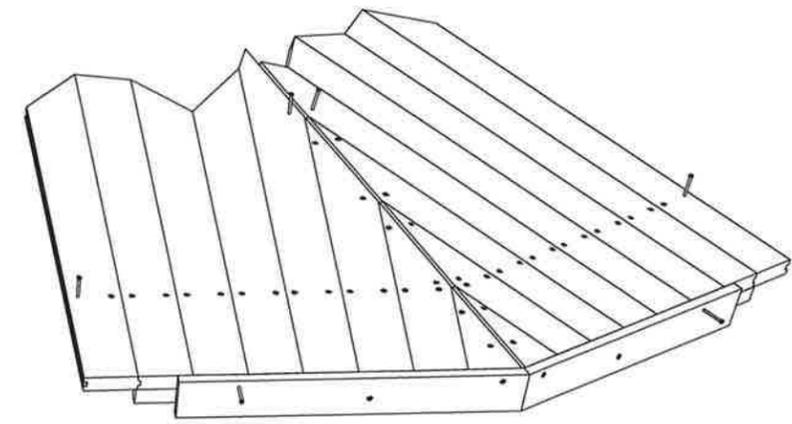


T&G ROOF DECK CONNECTION DETAIL @ PURLIN

T-P1

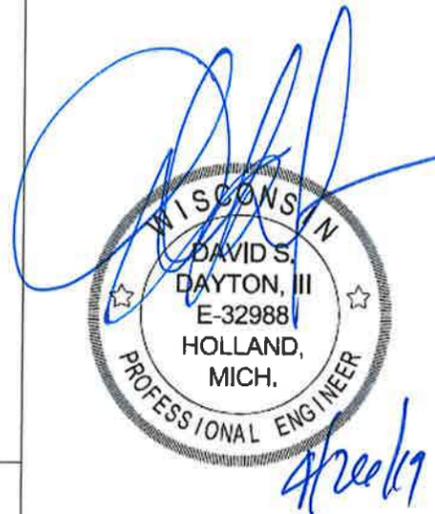


2 3/4" WOOD TO METAL SCREW

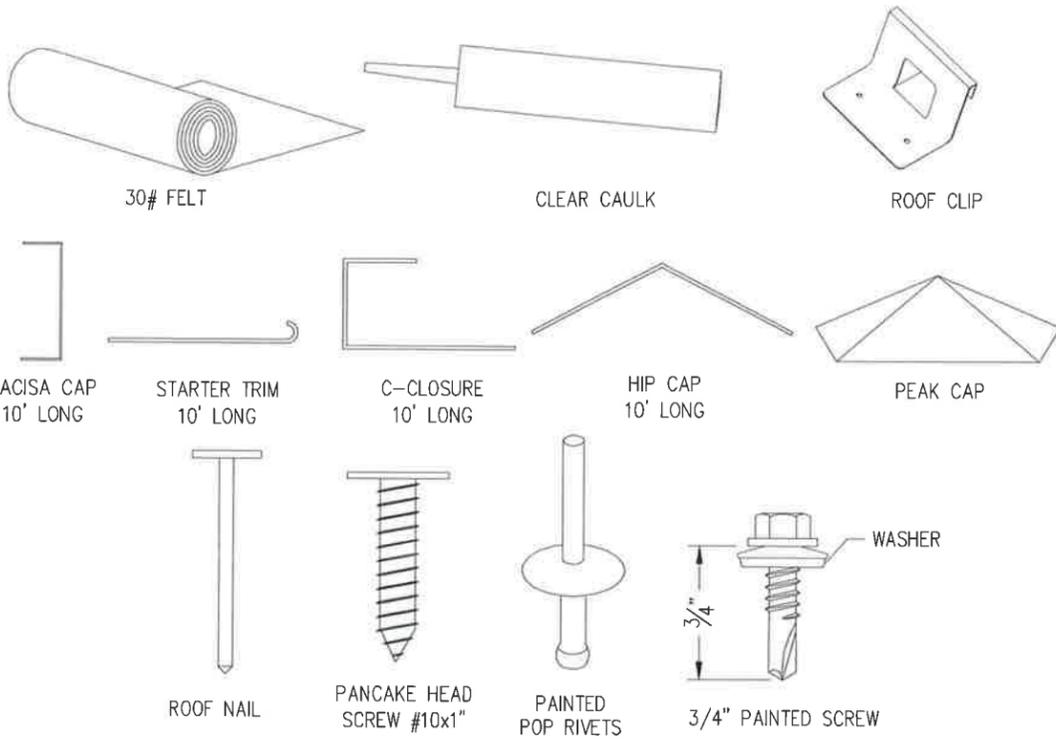


T&G ROOF DECK CONNECTION @ RAFTER

T-H1



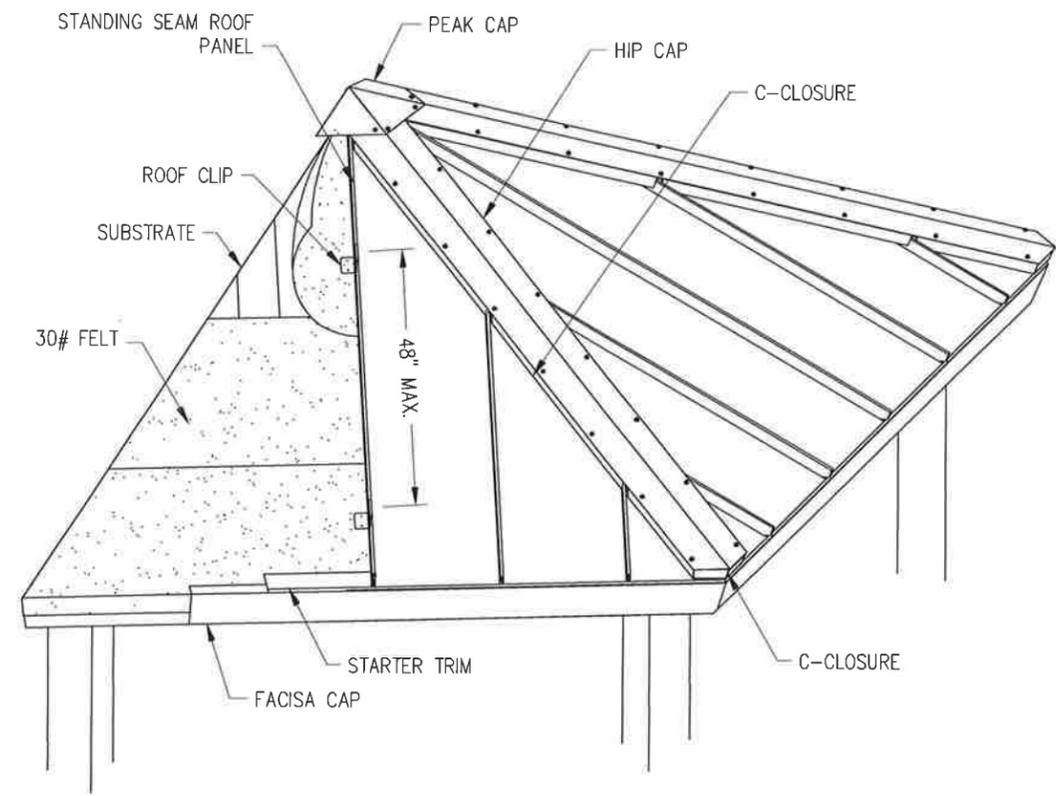
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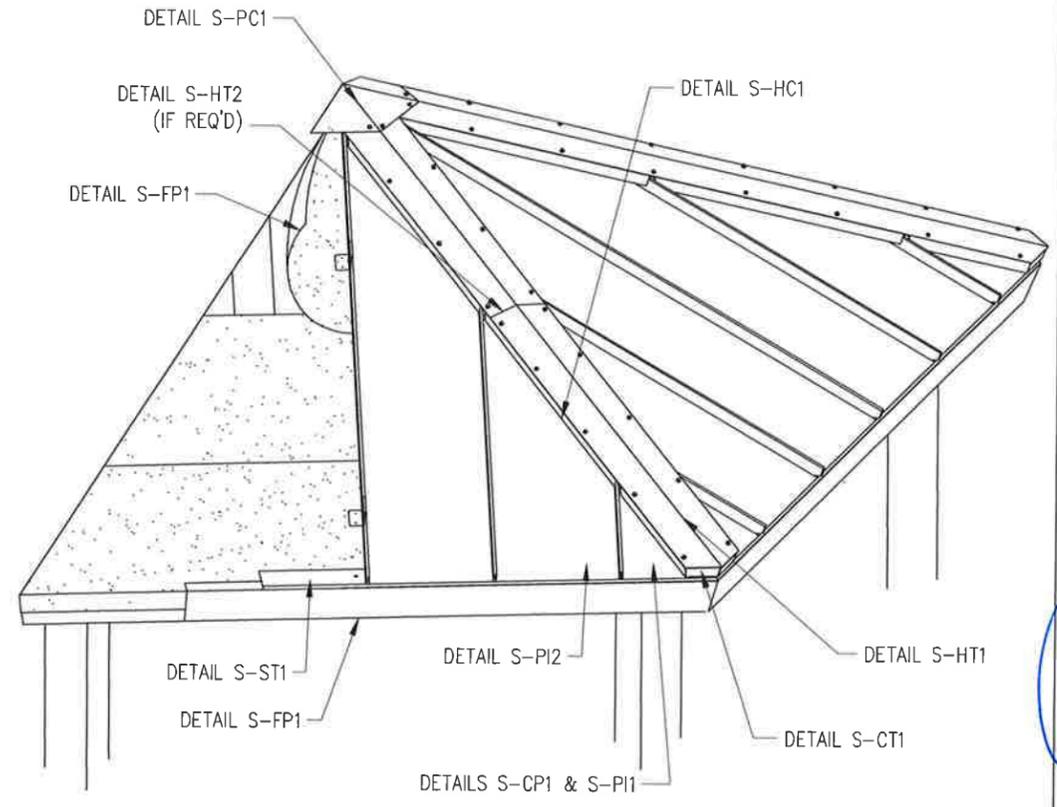
THESE DETAILS ASSUME THAT ALL COMPONENTS OF THIS ROOF SYSTEM WILL BE INSTALLED PLUMB AND SQUARE. CAULK AND TRIM SHOULD ALSO BE INSTALLED TO INSURE WATER TIGHTNESS

READ ALL DETAILS IN THIS INSTALLATION MANUAL BEFORE STARTING

- S-FP1 FELT & FASCIA CAP
- S-ST1 STARTER TRIM
- S-CP1 ROOF PANEL PREPARATION
- S-PI1 FIRST ROOF PANEL
- S-PI2 SECOND ROOF PANEL
- S-HC1 C-CLOSURE
- S-CT1 CORNER TRIM
- S-HT1 HIP CAP
- S-HT2 LAPPING HIP CAP (IF REQ'D)
- S-PC1 PEAK CAP



TRIM REFERENCE



ORDER OF INSTALLATION



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ROOF DETAILS

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SHEET  
**R1.2**

DWG: Jobs\6145\RI~000027 - 6145.dwg

**INSTALLATION OF FELT PAPER**

TO START MEASURE EAVE LENGTH AND CUT THE 30# FELT PAPER TO LENGTH + 6"

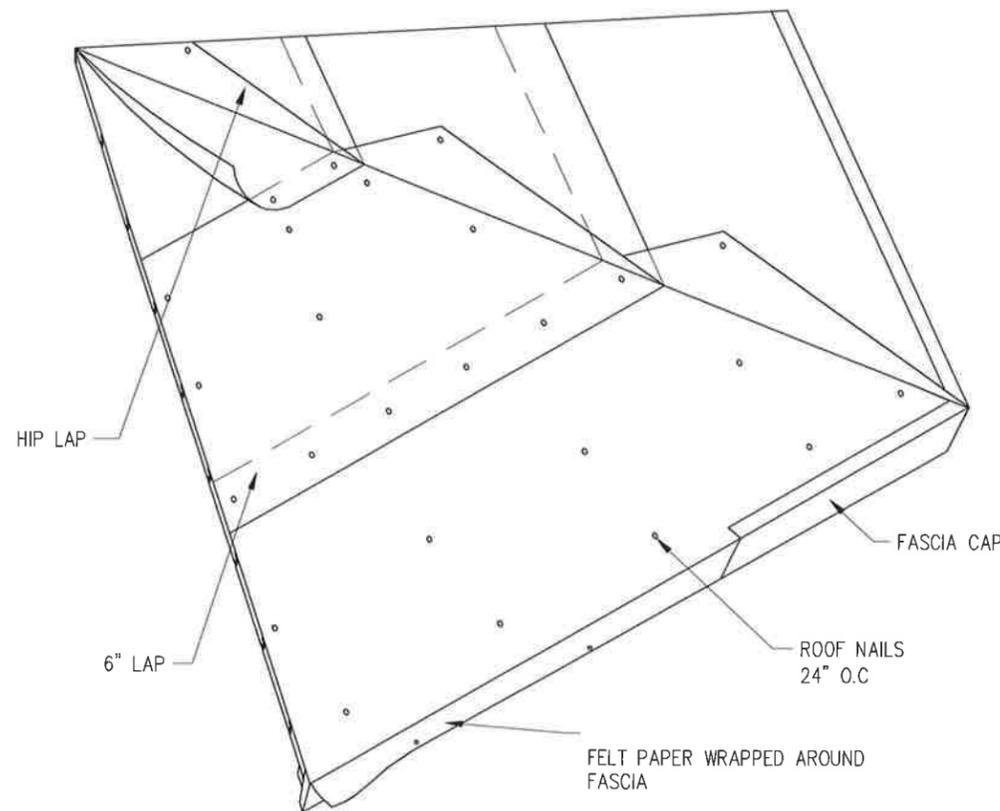
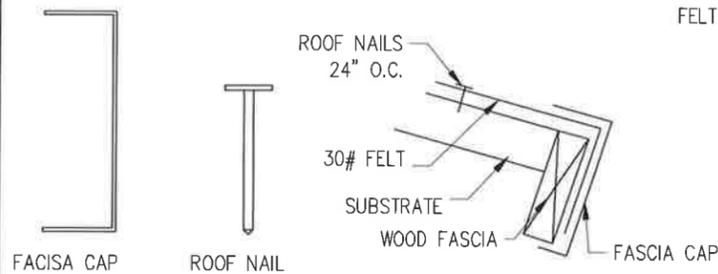
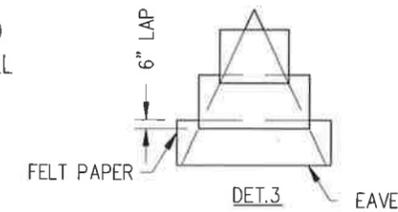
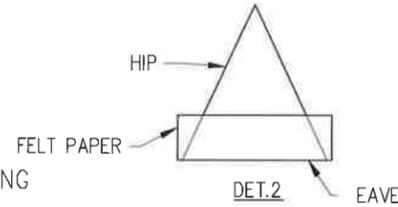
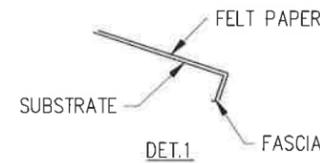
PLACE FELT ON ROOF AND WRAP THE PAPER OVER THE FASCIA SEE DET.1

ALLOW THE FELT TO LAY OVER THE HIP SEE DET.2

NAIL FELT DOWN WITH ROOFING NAILS 24" O.C.

CONTINUE INSTALLING FELT UP THE ROOF SECTION LAPPING THE PREVIOUSLY INSTALLED PIECE 6" SEE DET.3

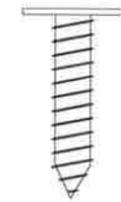
INSTALL THE FASCIA CAP BY SLIDING IT OVER THE WOOD FASCIA (FASTENERS USED TO ATTACH STARTER TRIM WILL SECURE FASCIA CAP)



FELT PAPER INSTALLATION

S-FP1

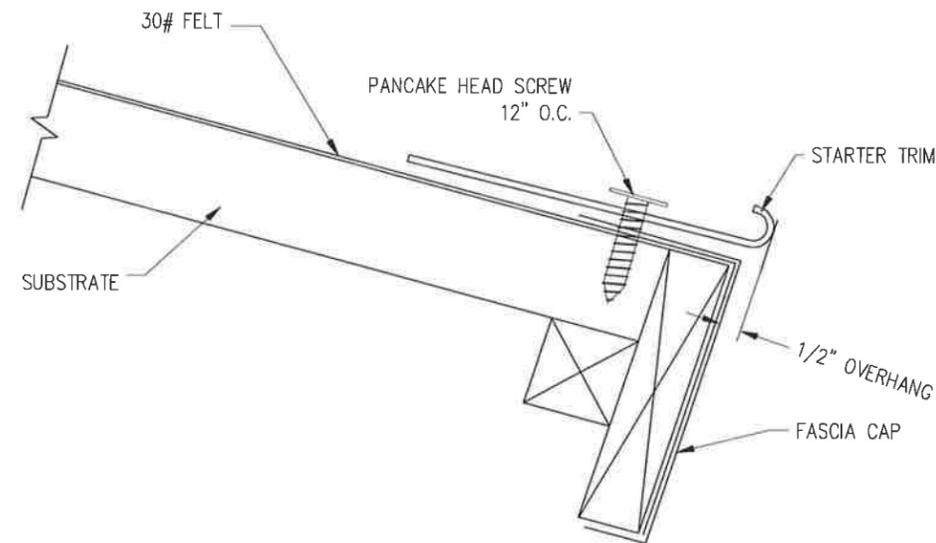
INSTALL STARTER TRIM OVERHANGING THE EDGE OF THE FASCIA CAP 1/2". ATTACH STARTER TRIM WITH PANCAKE HEAD SCREWS 12" O.C.



PANCAKE HEAD SCREW #10x1"



STARTER TRIM



STARTER INSTALLATION

S-ST1

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ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

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MADISON, WI

SHEET

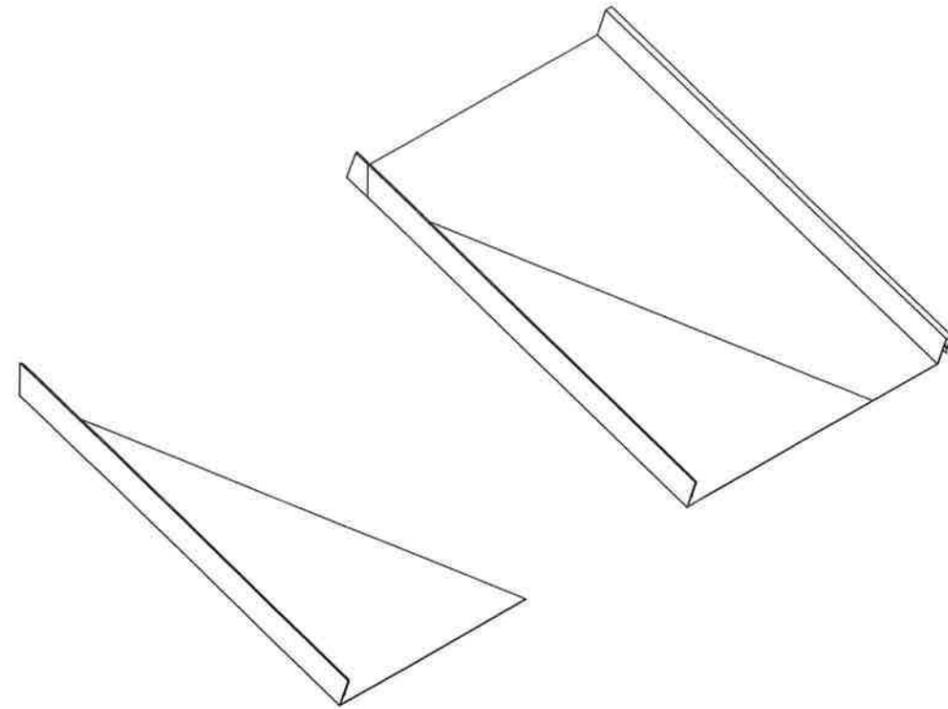
R1.3



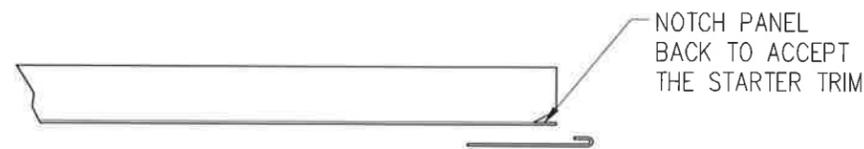
*4/26/19*

DWG: Jobs\6145\RI-000027 - 6145.dwg

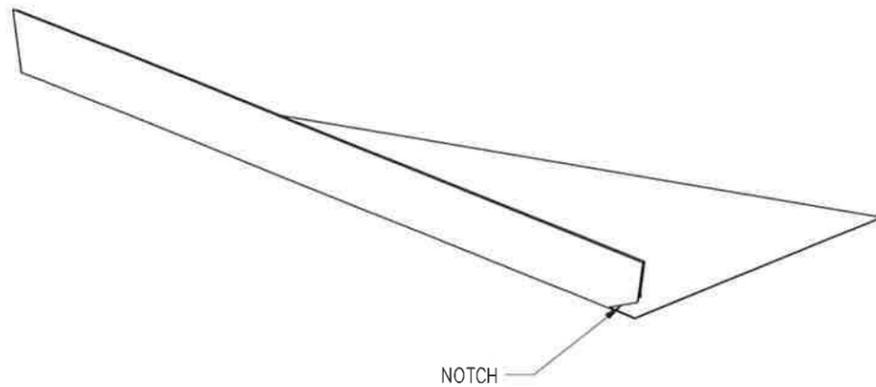
MEASURE, MARK & CUT THE FIRST ROOF PANEL



NOTCH RIB TO ALLOW PANEL TO SLIDE INTO STARTER TRIM



NOTCH PANEL BACK TO ACCEPT THE STARTER TRIM

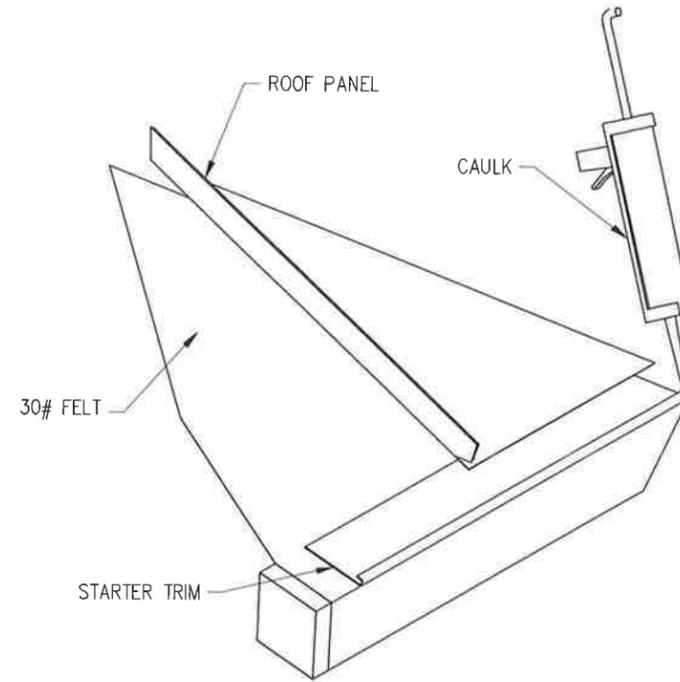


NOTCH

FIELD CUTTING ROOF PANELS

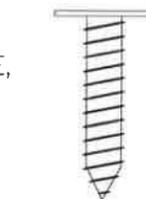
S-CP1

AFTER THE ROOF PANEL HAS BEEN CUT TO SIZE (IF NECESSARY) AND NOTCHED, TEST FIT THE PANEL. THEN APPLY A 1/4" BEAD OF CAULK THE APPROXIMATE LENGTH OF THE PANEL. SLIDE THE PANEL INTO PLACE, AND SQUARE IT UP TO THE ROOF.

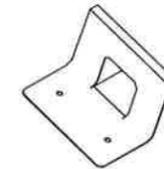


WITH THE ROOF PANEL IN PLACE AND SQUARE, INSTALL THE ROOF CLIPS WITH (2) PANCAKE HEAD HEAD SCREWS.

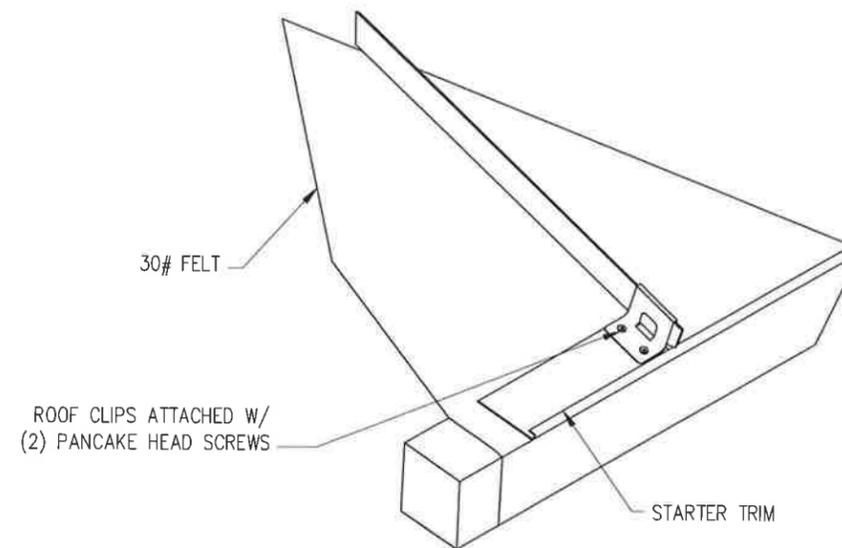
ROOF CLIPS SHOULD BE NO MORE THEN 48" APART



PANCAKE HEAD SCREW #10x1"



ROOF CLIP (2) SCREWS



30# FELT

ROOF CLIPS ATTACHED W/ (2) PANCAKE HEAD SCREWS

STARTER TRIM

INSTALLATION OF FIRST ROOF PANEL

S-PI1

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ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

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BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK  
MADISON, WI

SHEET

R1.4



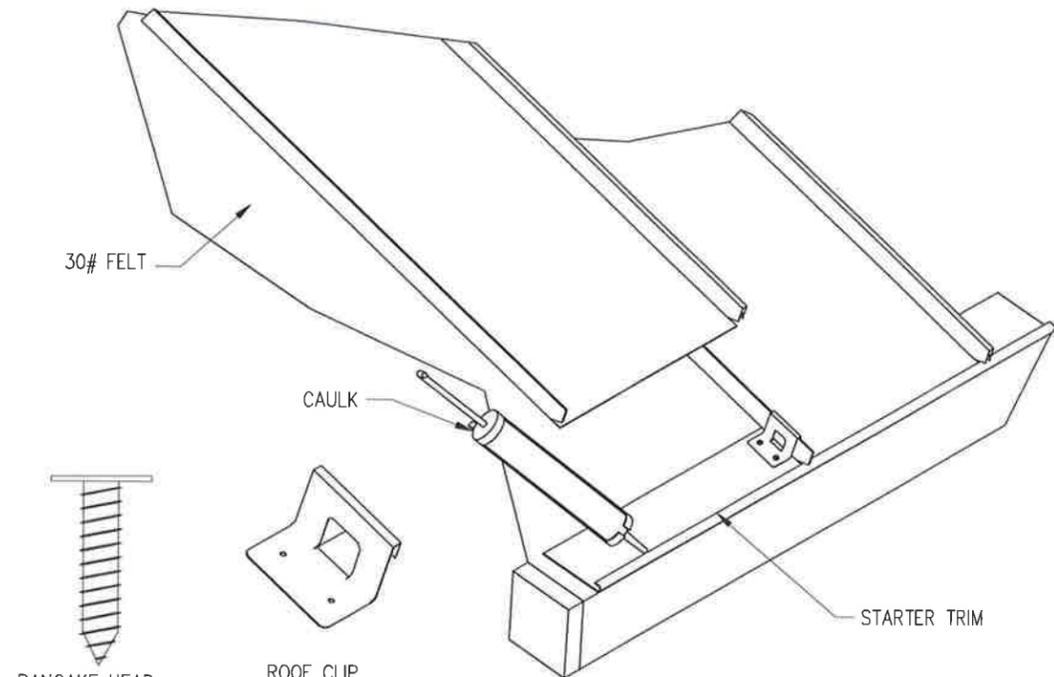
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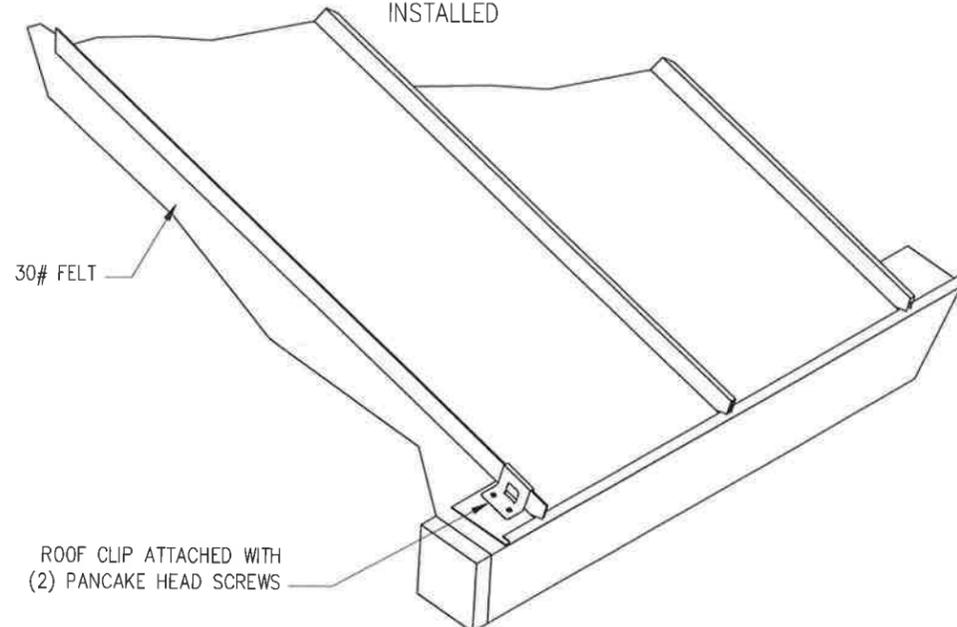
DWG: Jobs\6145\RM-000027 - 6145.dwg

AFTER THE SECOND ROOF PANEL HAS BEEN CUT TO LENGTH (IF NECESSARY) AND NOTCHED, TEST FIT PANEL. THEN APPLY A 1/4" BEAD OF CAULK INSIDE THE STARTER TRIM

SLIDE THE SECOND ROOF PANEL IN PLACE AND SNAP IT OVER THE BATTEN OF THE FIRST PANEL



WITH THE SECOND ROOF PANEL IN PLACE AND SQUARE, INSTALL THE ROOF CLIPS WITH (2) PANCAKE HEAD SCREWS. REPEAT THIS STEP UNTIL ALL ROOF PANELS ARE INSTALLED



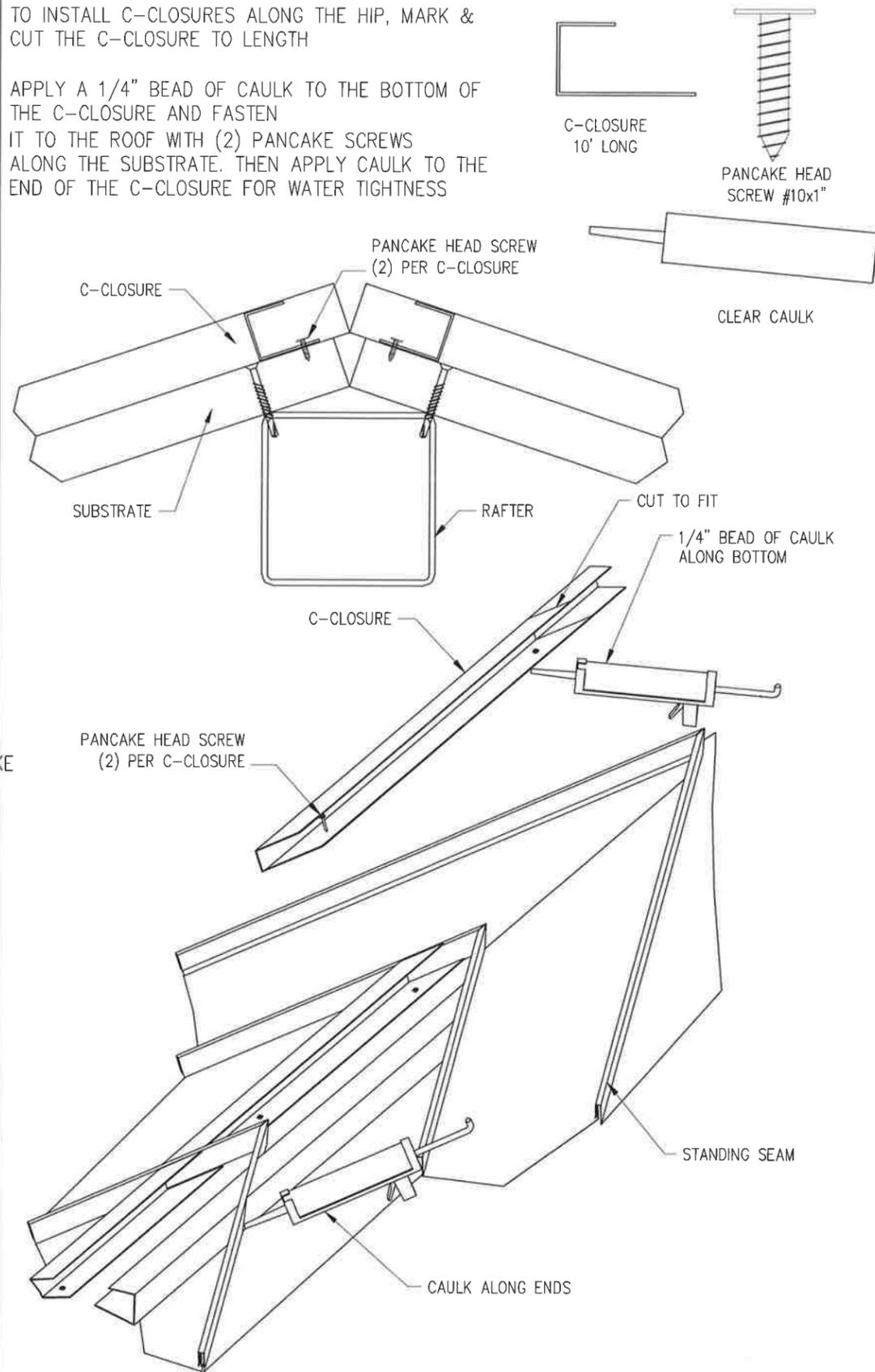
ROOF CLIPS SHOULD BE NO MORE THEN 48" APART

INSTALLATION OF SECOND ROOF PANEL

S-PI2

TO INSTALL C-CLOSURES ALONG THE HIP, MARK & CUT THE C-CLOSURE TO LENGTH

APPLY A 1/4" BEAD OF CAULK TO THE BOTTOM OF THE C-CLOSURE AND FASTEN IT TO THE ROOF WITH (2) PANCAKE SCREWS ALONG THE SUBSTRATE. THEN APPLY CAULK TO THE END OF THE C-CLOSURE FOR WATER TIGHTNESS



INSTALLATION OF HIP C-CLOSURE

S-HC1

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ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

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REVISION:

A

BUILDING TYPE:

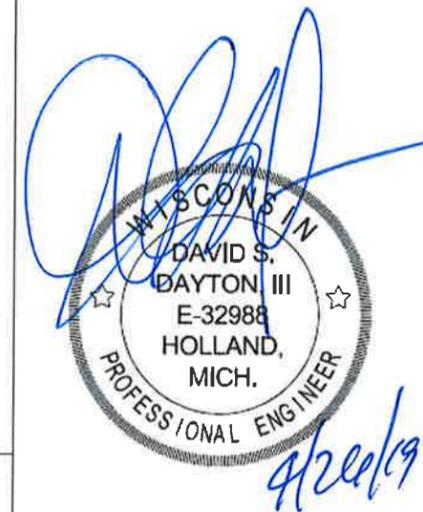
HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK  
MADISON, WI

SHEET

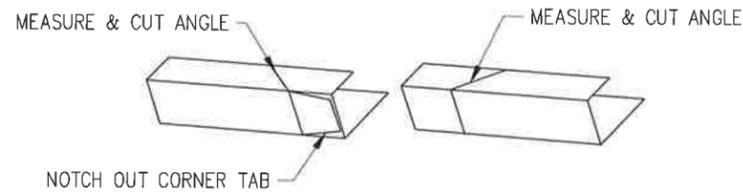
R1.5



TO FINISH OFF THE END OF THE HIP, MAKE A CORNER CAP BY CUTTING TWO PIECES OF C-CLOSURE TO LENGTH

MEASURE AND CUT A MITER AND CORNER TAB ON (1) PIECE OF C-CLOSURE

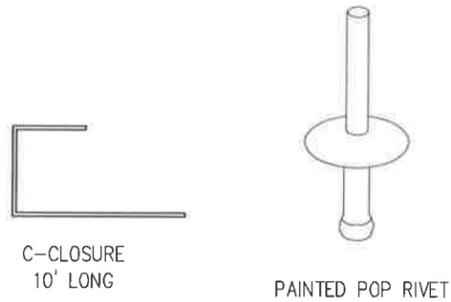
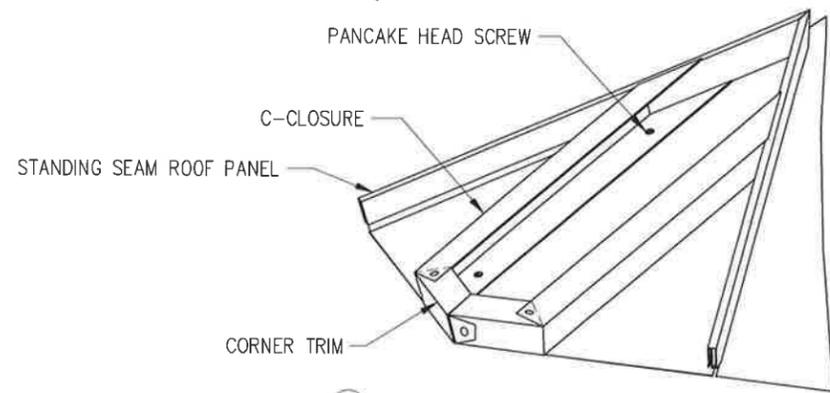
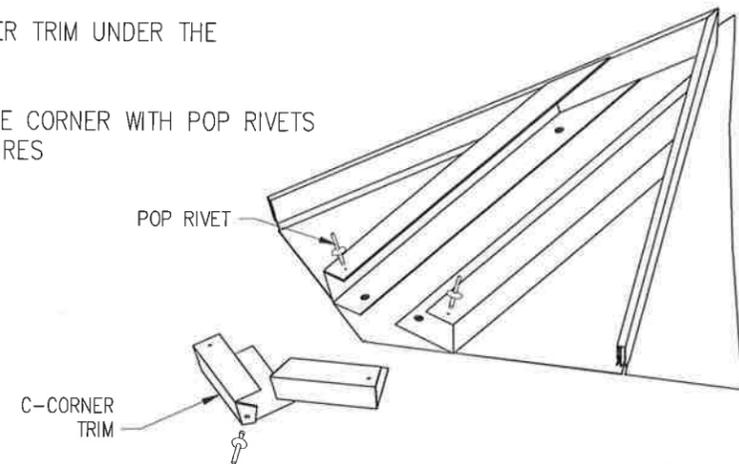
CUT AN OPPOSITE MITER ON THE SECOND C-CLOSURE



APPLY A 1/4" BEAD OF CAULK TO THE BOTTOM OF THE CORNER TRIM

SLIDE THE CORNER TRIM UNDER THE C-CLOSURES

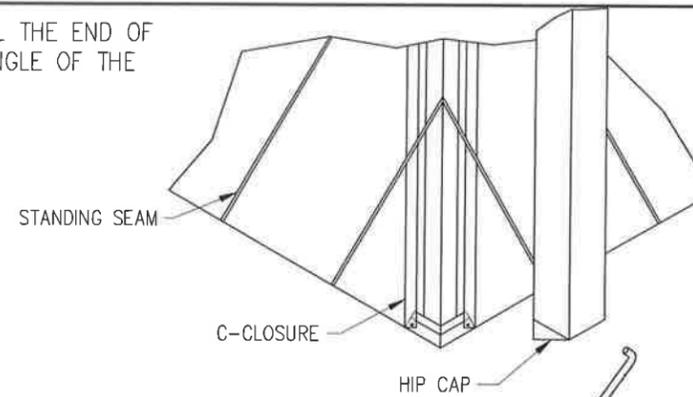
THEN ATTACH THE CORNER WITH POP RIVETS TO THE C-CLOSURES



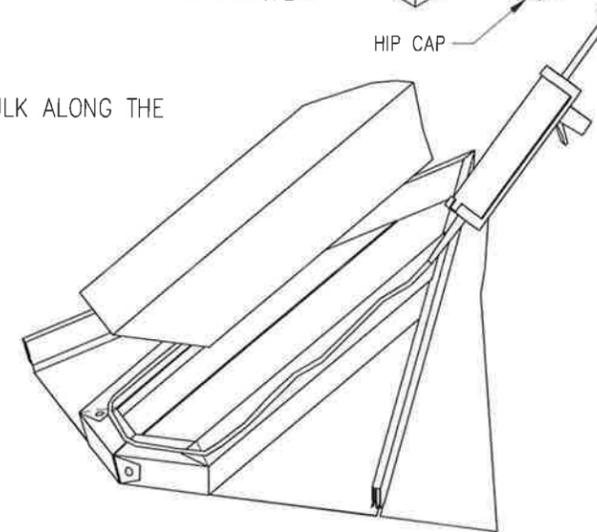
INSTALLATION OF CORNER TRIM

S-CT1

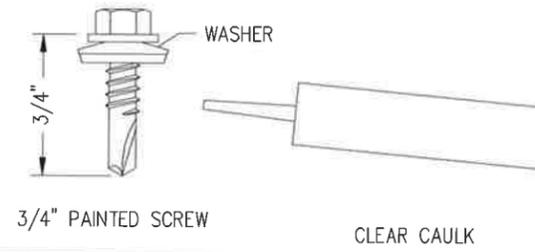
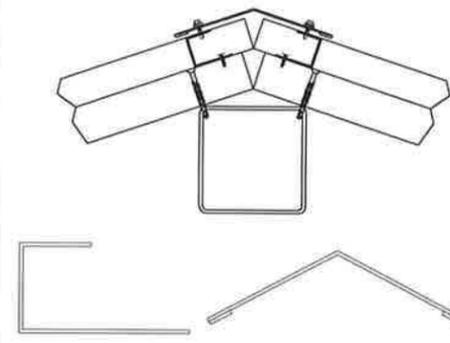
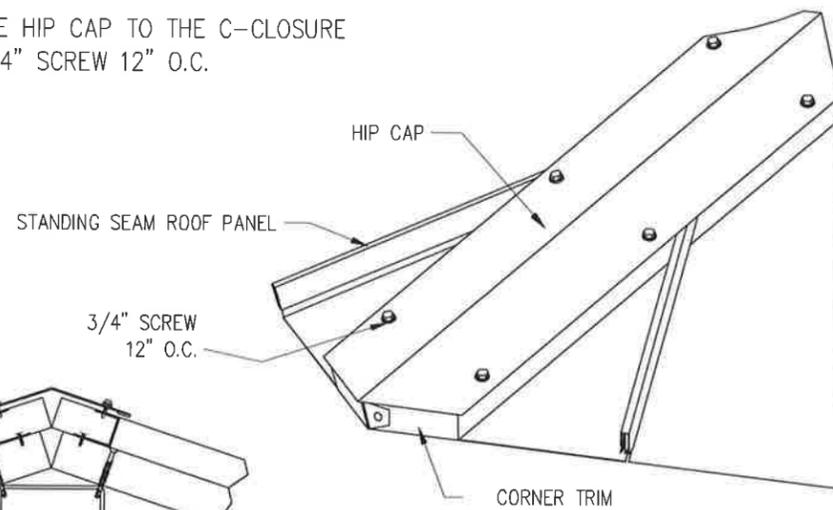
TO INSTALL THE HIP CAP, BEVEL THE END OF THE HIP CAP TO MATCH THE ANGLE OF THE ROOF



NEXT APPLY A 1/4" BEAD OF CAULK ALONG THE TOP OF THE C-CLOSURES



THEN FASTEN THE HIP CAP TO THE C-CLOSURE WITH PAINTED 3/4" SCREW 12" O.C.



CLEAR CAULK

INSTALLATION OF HIP CAP

S-HT1

**ICON**  
Shelter Systems Inc  
DISTINCTIVE STEEL SHELTERS  
WWW.ICONSHELTERS.COM  
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1455 LINCOLN AVE.  
HOLLAND MI, 49423

616.396.0919  
800.748.0985  
616.396.0944 FX

ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK  
MADISON, WI

SHEET

R1.6

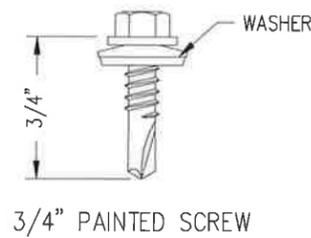
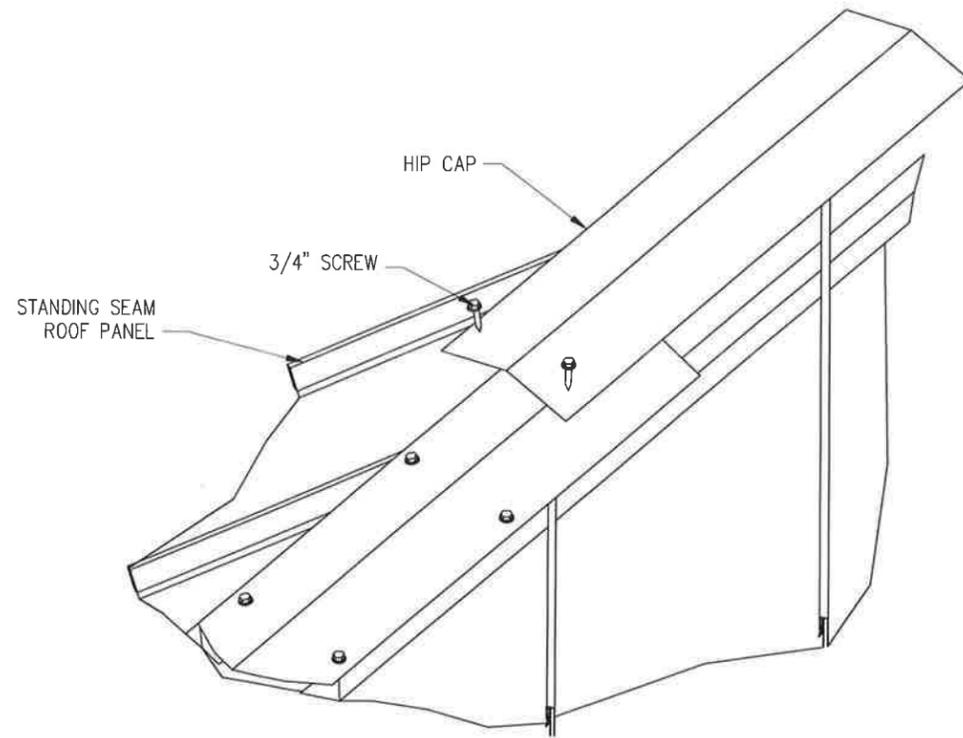
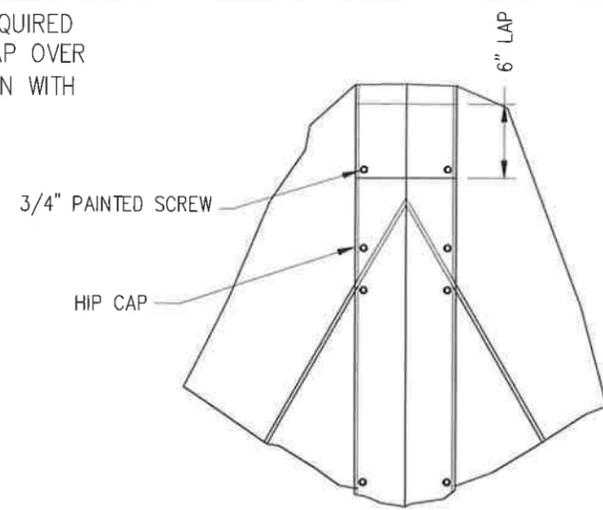


*Handwritten signature*

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DWG: Jobs\6145\RI-000027 - 6145.dwg

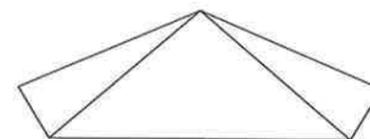
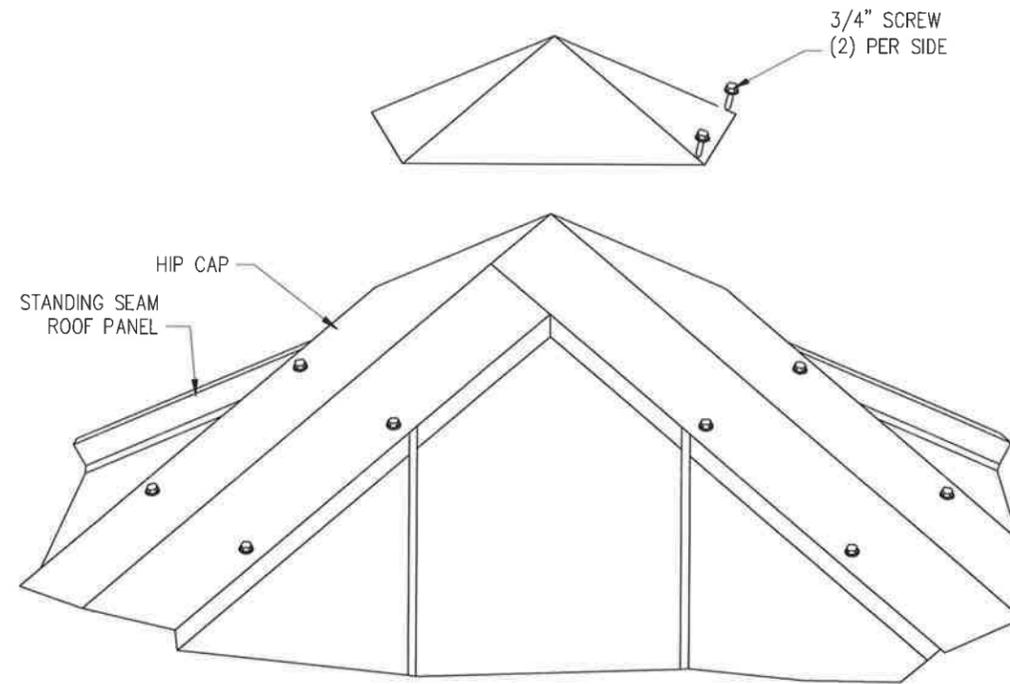
IF MULTIPLE PIECES OF HIP CAP ARE REQUIRED THEN LAP THE SECOND PIECE OF HIP CAP OVER THE FIRST PIECE 6". CAULK AND FASTEN WITH 3/4" PAINTED SCREWS.



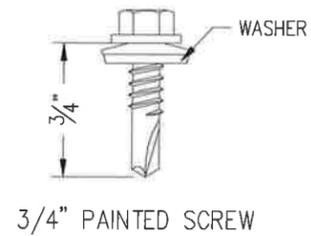
MULTIPLE HIP CAPS

S-HT2

FASTEN THE ROOF PEAK CAP WITH (2) 3/4" PAINTED SCREWS ON EACH SIDE



ROOF PEAK CAP



3/4" PAINTED SCREW

PEAK CAP

S-PC1

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616.396.0919  
800.748.0985  
616.396.0944 FX

ROOF DETAILS

DRAWN BY:

jeremy

DATE:

4/26/2019

JOB NO.:

6145

REVISION:

A

BUILDING TYPE:

HX28TS-P5

PROJECT NAME:

GLACIER HILLS PARK  
MADISON, WI

SHEET

R1.7



*Signature*

PRINTED ON: 4/26/2019

DWG: Jobs\6145\RI~000027 - 6145.dwg