

ABBREVIATIONS

D	Angle	L.F.	Lineal Feet
&	And	L.P.	Lov Point / Liquid Petroleum
@	At	LB.	Pound
100 YR.	100 Year Flood Elevation	LGU	Local Government Unit
A.B.	Anchor Bolt	LONG.	Longitudinal
A.D.	Area Drain	LT.	Light / Lighting
A/C	Air Conditioning Unit	MANT.	Maintenance
ADD.	Addendum	MAS.	Masonry
ADDL.	Additional	MATL.	Material
ADJ.	Adjacent / Adjust	MAX.	Maximum
AHJ	Air Handling Unit	MECH.	Mechanical
ALT.	Alternate	MOD.	Module / Modular
ALUM.	Aluminum	MUL.	Mullen
ANOD.	Anodized	N.	North
APPROX.	Approximate	N.I.C.	Not In Contract
ARCH	Architect / Architectural	NO.	Number
AUTO.	Automatic	NO. OR #	Not to Scale
AVG.	Average	NWL	Normal Water Level
B.C.	Back of Curb	O.C.	On Center
B/W	Bottom of Wall	O.D.	Outside Dimension
BFE	Basement Floor Elevation	O.E.	Overhead Electric
BIT	Bituminous (Asphaltic)	OH.	Overhead
BLDG	Building	OH/WL	Ordinary High Water Level
BSIT.	Basement	OPNG.	Opening
C.F.	Cubic Feet	ORIG.	Original
C.F.S.	Cubic Feet Per Second	P.C.	Point of Curvature
C.G.	Corner Guard	P.I.	Point of Intersection
C.J.	Control Joint	P.IV	Post Indicator Valve
C.L.	Centerline	P.L.	Property Line
C.M.U.	Concrete Masonry Unit	P.O.B.	Point of Beginning
C.O.	Cleanout	P.S.F.	Pounds Per Square Foot
C.O.E.	U.S. Army Corps Of Engineers	P.S.I.	Pounds Per Square Inch
C.Y.	Cubic Yards	P.T.	Point of Tangency
CB	Catch Basin	P.V.C.	Point of Vertical Curvature
CBM	Catch Basin Manhole	P.V.I.	Point of Vertical Intersection
CEH.	Cement	P.V.T.	Point of Vertical Tangency
CIP	Cast Iron Pipe	PE	Polyethylene
CMF	Corrugated Metal Pipe	PE	Pedestal / Pedestrian
CONC.	Concrete (Portland)	PERF.	Perforated
CONN.	Connection	PREP.	Preparation
CONST.	Construction	PROJ.	Project
CONT.	Continuous	PROP.	Proposed
CONTR.	Contractor	PVC	Poly-Vinyl-Chloride (Pvna)
COP.	Copper	PVT.	Pavement
CUB.	Cubic	QTR.	Quarter
D.S.	Down Spout	QTY.	Quantity
DEG.	Degree	R	Radius
DEMO.	Demolition / Demolish	RAD.	Radius
DEPT.	Department	RE	Re Elevation (Costing)
DET.	Detail	R.D.	Roof Drain
DIA.	Diameter	R.E.	Remove Existing
DIAG.	Diagonal	R.O.	Rough Opening
DM.	Dimension	R.P.	Radius Point
DIP	Ductile Iron Pipe	RCP	Reinforced Concrete Pipe
DN	Down	R.S.	Rough Slip
DWG.	Drawing	RSD	Roof Storm Drain
E.	East	RE	Reinforced
E.I.	Expansion Joint	RENF.	Reinforced
E.O.	Emergency Overflow	REQ'D	Required
E.O.S.	Emergency Overflow Swale	REV.	Revision / Revised
E.W.	Each Way	RGU	Regulatory Government Unit
EA.	Each	ROW OR R/W	Right of Way
EL.	Elevation	S.	Square Feet
ELEC.	Electrical	SAN.	Sanitary Sewer
ELEV.	Elevation	SECT.	Section
EMER.	Emergency	SE	Side Exit
ENGR.	Engineer	SEW	Side Exit Walk Out
ENTR.	Entrance	SH	Sheet
EQ.	Equal	SH.	Sheet
EQUIP.	Equipment	SLNT.	Slant
EQUIV.	Equivalent	SPEC.	Specification
EXIST.	Existing	SG.	Square
EXP.	Expansion	SSD	Subsurface drain
F & I	Furnish and Install	STMH	Storm Sever Manhole
F.B.O.	Furnished by Others	STD.	Standard
F.C.	Face of Curb	STRUCT.	Structural
F.D.	Floor Drain	SYN.	Symmetrical
F.D.C.	Fire Department Connection	T/R	Thickness
F.V.	Field Verify	T/W	Top of Wall
FB	Full Basement	TEMP.	Temporary
FBWO	Full Basement Walk Out	THK.	Thick / Thickness
FBLO	Full Basement Look Out	T.J.	Tooled Joint
FDN.	Foundation	T.M.	Top Nut Hydrant
FES	Flared End Section	TYP.	Typical
FE	Freshed Floor Elevation	UN.O.	Unless Noted Otherwise
FLR.	Floor	V.B.	Vapor Barrier
FT. OR (')	Foot	V.C.	Vertical Curve
FUT.	Future	V.I.F.	Verify In Field
G.B.	Grade Break	VERT.	Vertical
G.C.	General Contractor	VEST.	Vestibule
GAL.	Gallon	W	Width
GALV.	Galvanized	W.P.T.	Working Point
GFE	Garage Floor Elevation	W.F.F.	Welded Wire Fabric
GL.	Glass	W/O	Without
GR.	Grade	W/O	Walk Out
H.	Height	W/L	Wetland
H.P.	High Point	WP	Waterproof
HDPEP	High Density Polyethylene Pipe	WT.	Weight
HGT.	Height	YD.	Yard
HORIZ.	Horizontal	YR.	Year
HVAC	Heating, Ventilation, Air Conditioning		
HYD	Hydrant		
I.D.	Inside Dimension		
IE. or IE	Invert Elevation		
IN. OR (")	Inches		
INFO.	Information		
INL.	Inlet Elevation		
INSUL.	Insulation		
INV.	Invert Elevation		
JT.	Joint		

SYMBOLS

EXISTING	DESCRIPTION	NEW	DESCRIPTION
	MAJOR CONTOUR		MAJOR CONTOUR
	MINOR CONTOUR		MINOR CONTOUR
	SPOT ELEVATION		SPOT ELEVATION
	BUILDING		BUILDING
	CANOPY / OVERHANG		CANOPY/OVERHANG
	CONCRETE		UNDERGROUND STRUCTURE
	BITUMINOUS		CONCRETE
	LANDSCAPING		CONCRETE CURB
	GRAVEL		EDGE OF PAVEMENT
	PAVING BLOCK		FENCING
	PAVING BLOCK		GUARD RAIL
	STORM SEWER LINE		CONCRETE RETAINING WALL
	SANITARY SEWER LINE		MODULAR RETAINING WALL
	WATER MAIN		FIELDSTONE RETAINING WALL
	OVERHEAD ELECTRIC		EXIT LOCATION
	UNDERGROUND TELEPHONE		LIGHT STANDARD
	UNDERGROUND ELECTRIC		POWER POLE
	GAS LINE		SLOPE DIRECTION
	CONCRETE CURB		CATCH BASIN
	FENCING		MANHOLE
	RETAINING WALL		BOLLARD
	IRON MONUMENT FOUND		STORM SEWER
	SURVEY DISK (BENCHMARK)		ORCE MAN
	POWERPOLE		ROOF DRAIN SYSTEM
	GUY WIRE		WATERMAN
	GUARD POST		FIRE LINE (IF SEPARATE)
	GAS METER		FIRE DEPT. CONNECTION
	TRANSFORMER		SOIL SUBDRAIN
	WATER SHUT-OFF VALVE		GAS LINE-UNDERGROUND
	TRAFFIC SIGN		ELECTRIC-UNDERGROUND
	FLAG POLE		TELEPHONE-UNDERGROUND
	LIGHT POLE		UNDERGROUND CABLE/TV
	TREES		LAWN SPRINKLER SLEEVE
	TREE LINE		
	MANHOLE		
	CATCH BASIN		
	FIRE HYDRANT		
	WATER VALVE		
	FLARED END SECTION		
	MAILBOX		
	NOTE NUMBER		
	MEASURED DISTANCE		
	DISTANCE PER RECORDED PLAT		
	SOIL BORING		

EROSION CONTROL SYMBOLS

SYMBOL	DESCRIPTION
	SEDIMENT CONTROL FENCE
	INLET PROTECTION

DRAWING SYMBOLS

SYMBOL	DESCRIPTION
	NOTE REFERENCE
	PARKING STALL COUNT
	LARGE SHEET DETAIL
	COORDINATE POINT
	REVISION - ADDENDUM, BULLETIN, ETC.
	REVISED AREA (THIS ISSUE)

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CIVIL SHEET INDEX & REVISION MATRIX

SHEET NO.	DESCRIPTION	BY	DATE	REVISION
C0.1	CIVIL TITLE SHEET	X		
C2.1	SITE PLAN	X		
C7.1	RACKING DETAILS	X		
C7.2	RACKING DETAILS	X		
C7.3	RACKING DETAILS	X		
L2.1	LANDSCAPE BUFFER & SCREENING PLAN	X		

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12.16.2015

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CIVIL TITLE SHEET

C0.1

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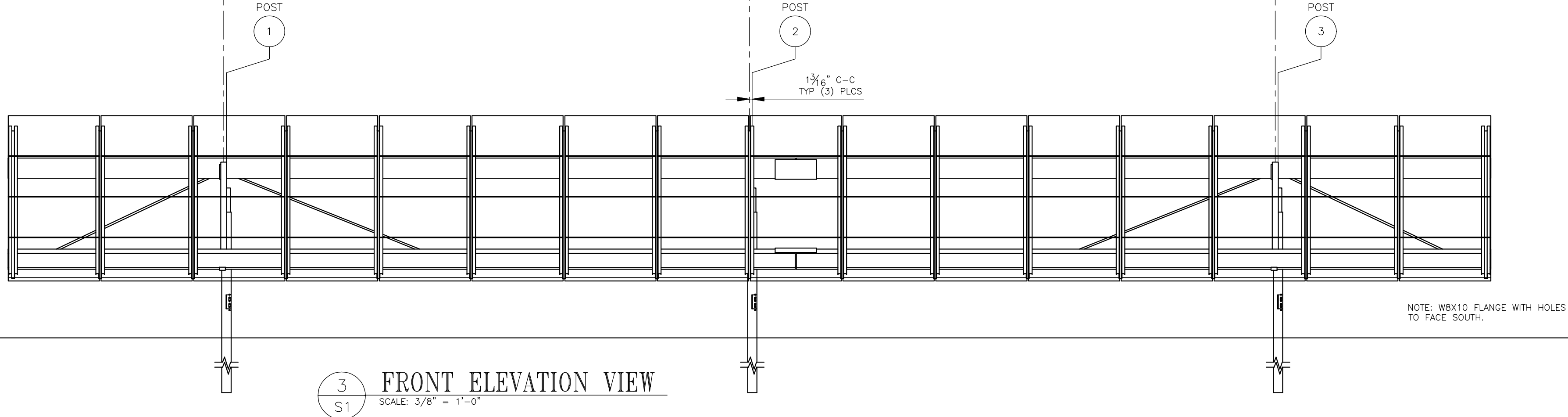
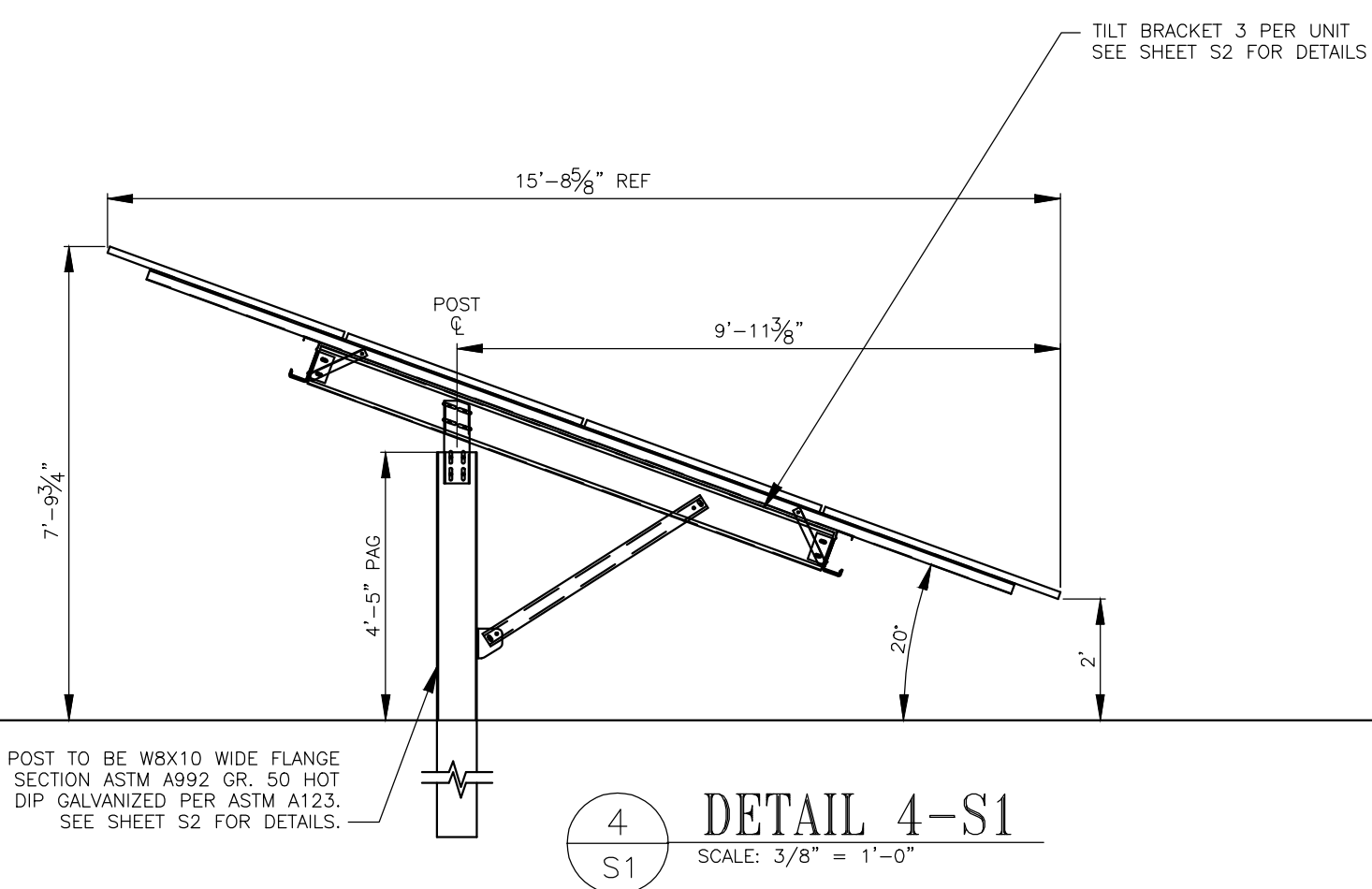
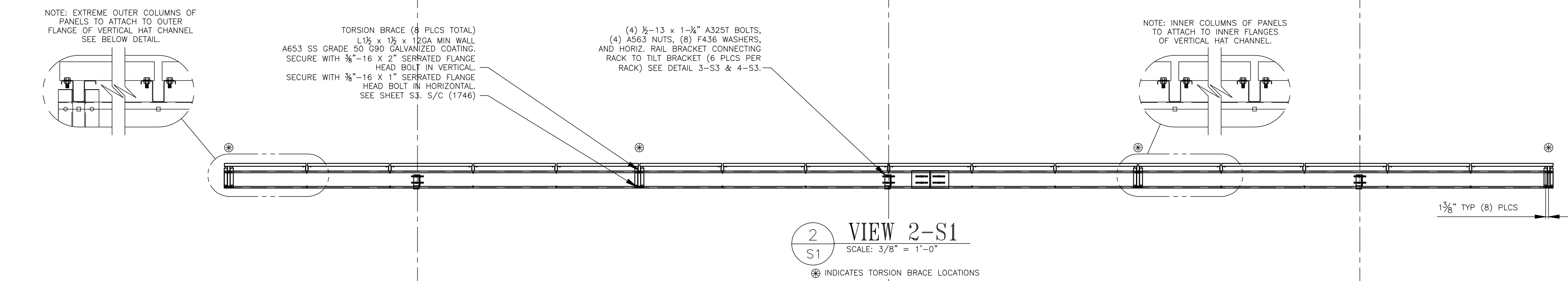
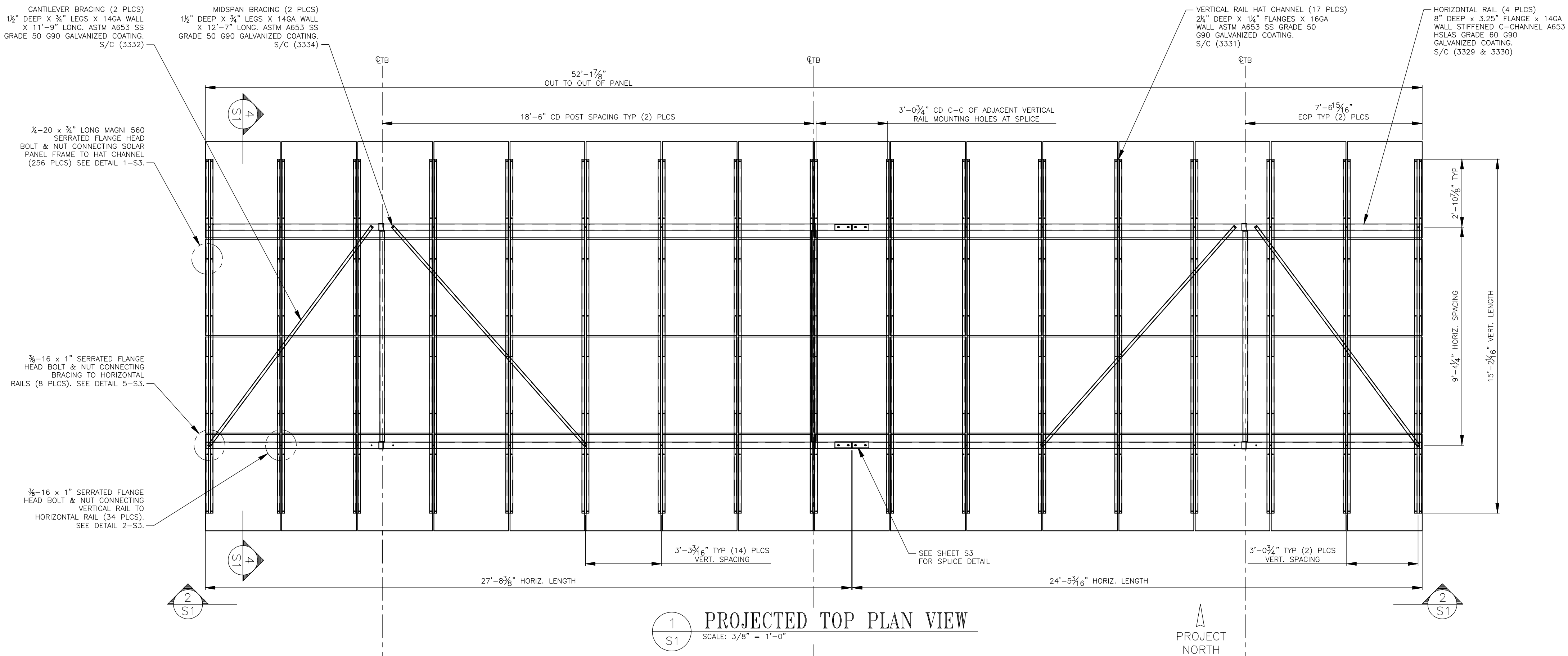
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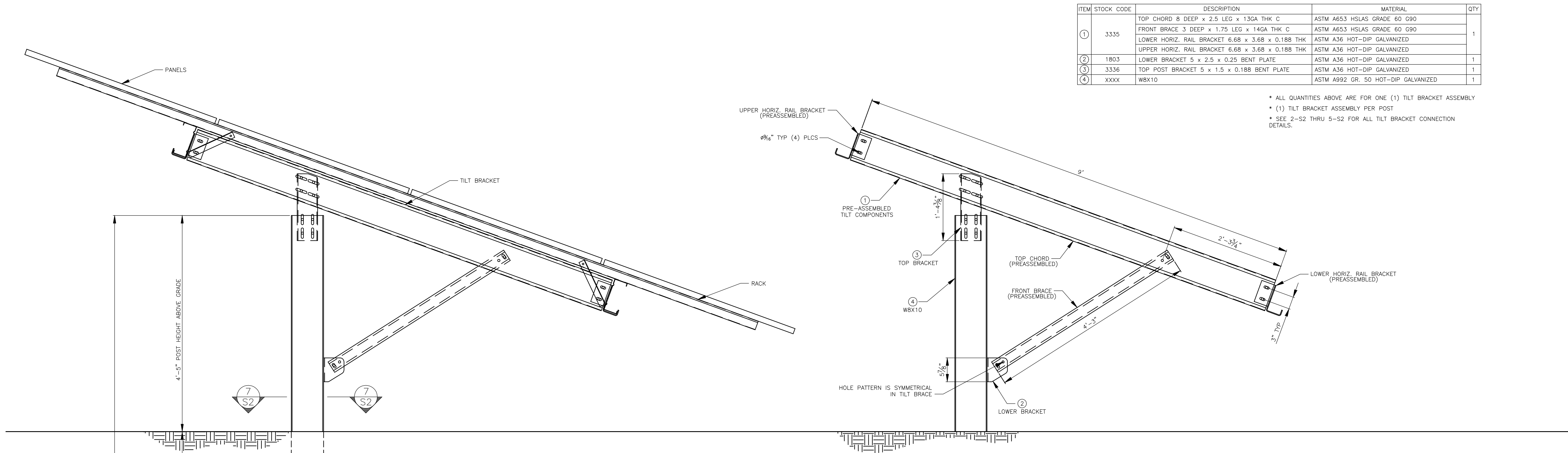
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**RACKING
DETAILS
C7.1**

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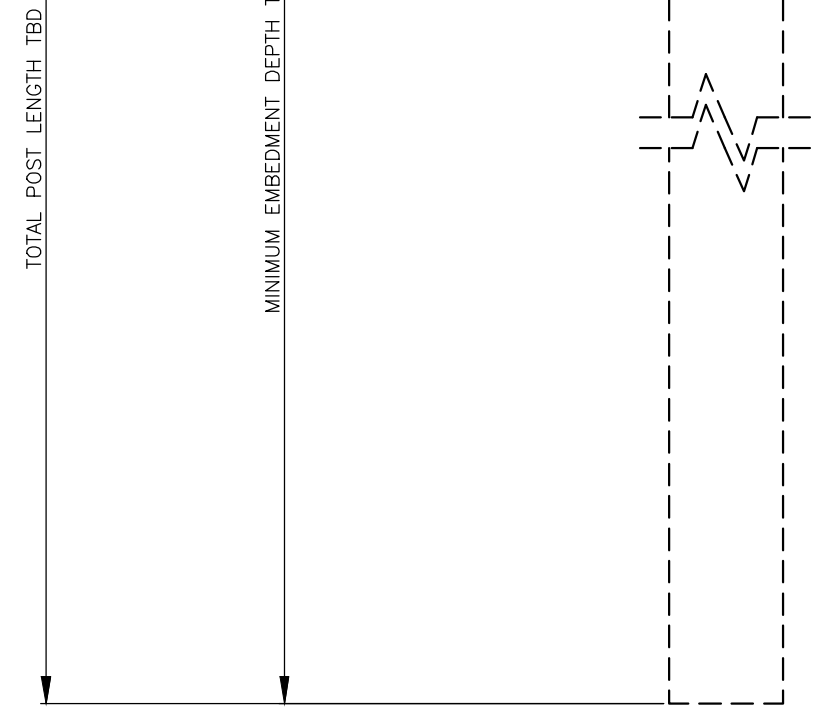




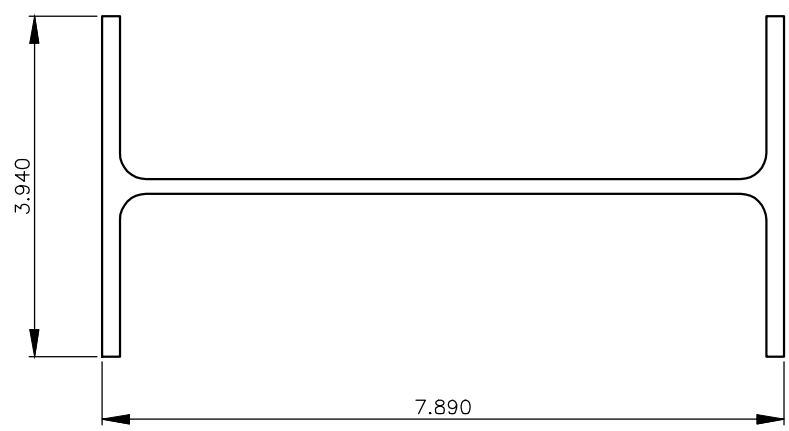
ITEM	STOCK CODE	DESCRIPTION	MATERIAL	QTY
①	3335	TOP CHORD 8 DEEP x 2.5 LEG x 13GA THK C	ASTM A653 HSLAS GRADE 60 G90	1
		FRONT BRACE 3 DEEP x 1.75 LEG x 14GA THK C	ASTM A653 HSLAS GRADE 60 G90	
		LOWER HORIZ. RAIL BRACKET 6.68 x 3.68 x 0.188 THK	ASTM A36 HOT-DIP GALVANIZED	
		UPPER HORIZ. RAIL BRACKET 6.68 x 3.68 x 0.188 THK	ASTM A36 HOT-DIP GALVANIZED	
②	1803	LOWER BRACKET 5 x 2.5 x 0.25 BENT PLATE	ASTM A36 HOT-DIP GALVANIZED	1
③	3336	TOP POST BRACKET 5 x 1.5 x 0.188 BENT PLATE	ASTM A36 HOT-DIP GALVANIZED	1
④	XXXX	WBX10	ASTM A992 GR. 50 HOT-DIP GALVANIZED	1

- ALL QUANTITIES ABOVE ARE FOR ONE (1) TILT BRACKET ASSEMBLY
- (1) TILT BRACKET ASSEMBLY PER POST
- SEE 2-S2 THRU 5-S2 FOR ALL TILT BRACKET CONNECTION DETAILS.

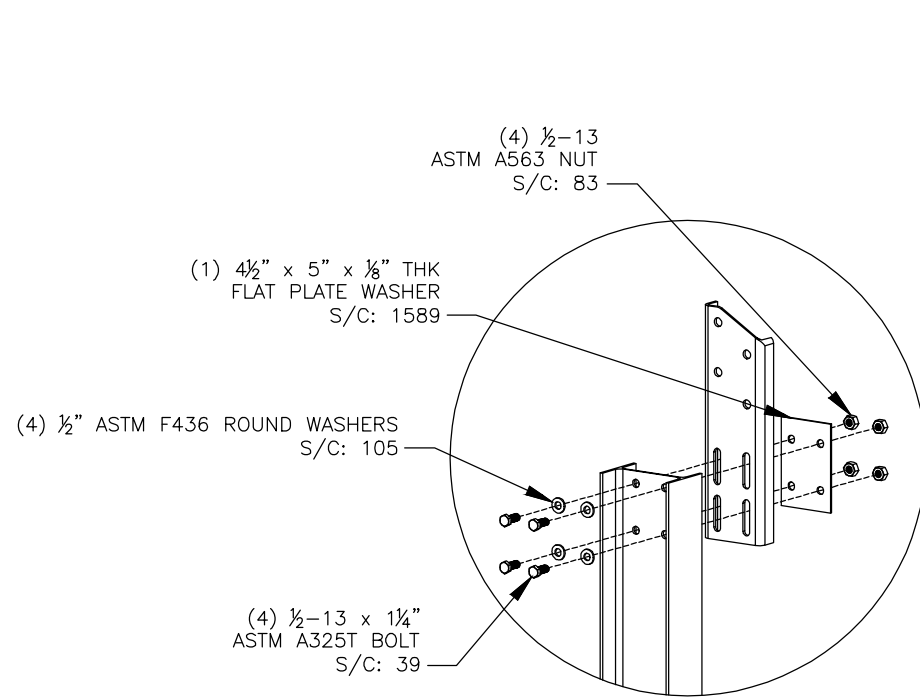
1
S2
TILT BRACKET SIDE ELEVATION
SCALE: 1" = 1'-0"



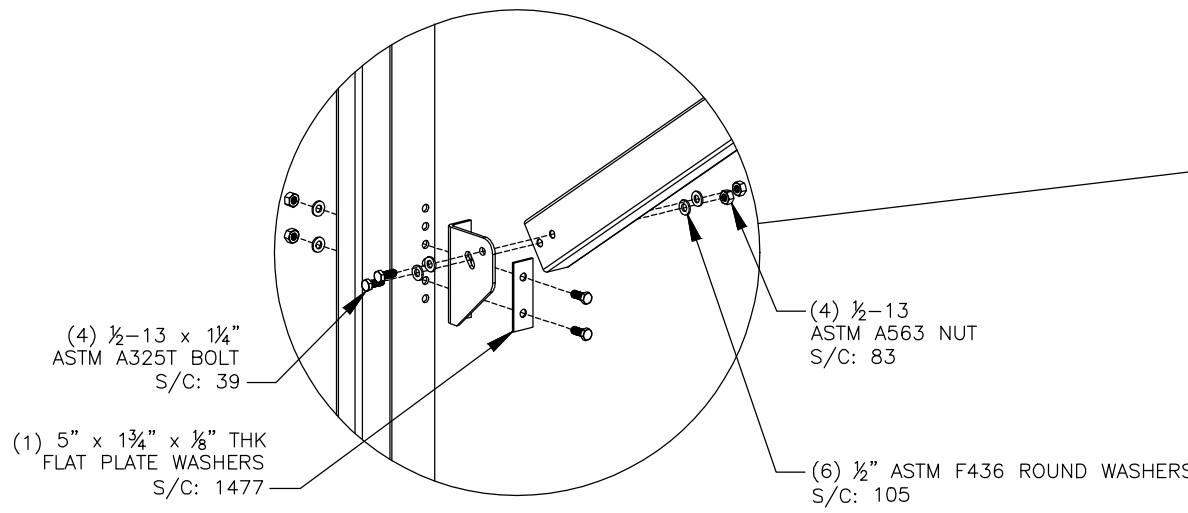
6
S2
FOUNDATION DETAIL
SCALE: 1" = 1'-0"



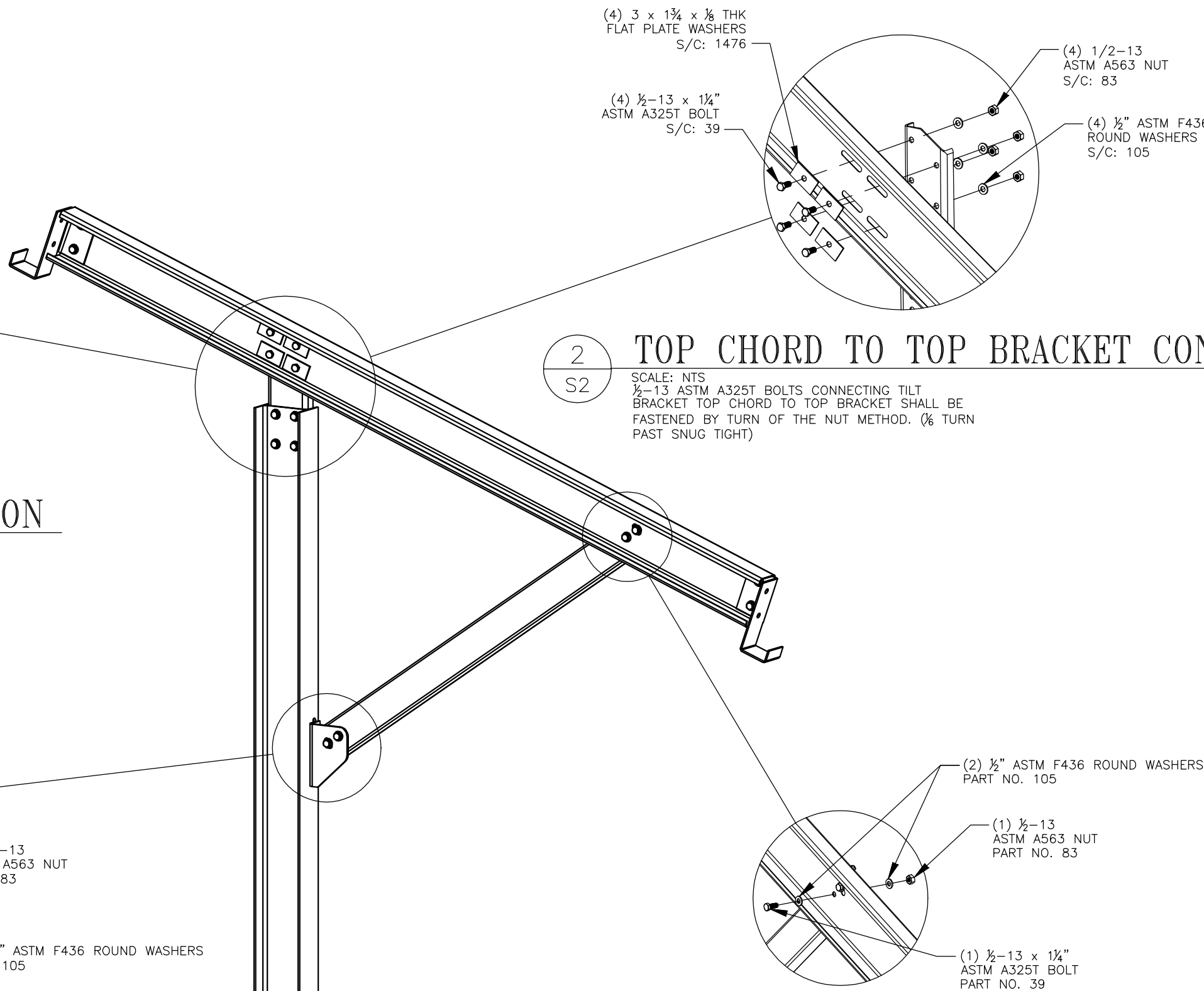
7
S2
W8X10 CROSS SECTION
SCALE: 6" = 1'-0"



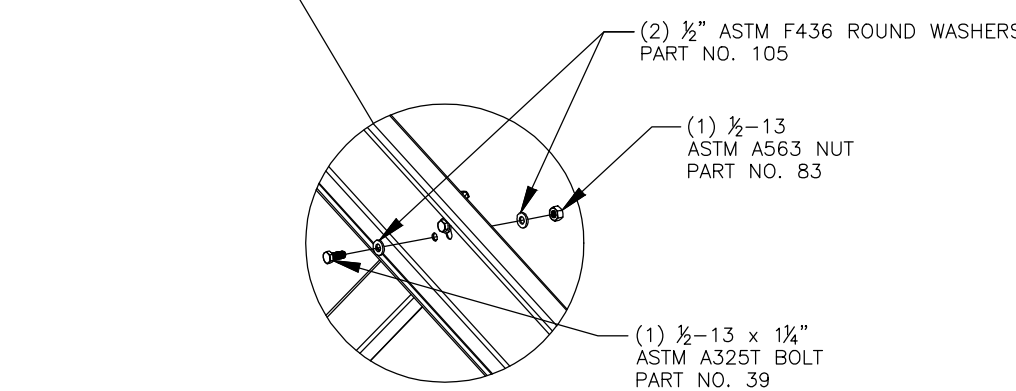
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S2
POST TO TOP BRACKET CONNECTION
SCALE: NTS
5/8-13 ASTM A325T BOLTS CONNECTING TOP BRACKET TO POST SHALL BE FASTENED BY TURN OF THE NUT METHOD. (5/8 TURN PAST SNUG TIGHT)



4
S2
BRACE TO LOWER BRACKET CONNECTION
SCALE: NTS
5/8-13 ASTM A325T BOLTS CONNECTING LOWER BRACKET TO POST SHALL BE FASTENED BY TURN OF THE NUT METHOD. (5/8 TURN PAST SNUG TIGHT)



2
S2
TOP CHORD TO TOP BRACKET CONNECTION
SCALE: NTS
5/8-13 ASTM A325T BOLTS CONNECTING TILT BRACKET TOP CHORD TO TOP BRACKET SHALL BE FASTENED BY TURN OF THE NUT METHOD. (5/8 TURN PAST SNUG TIGHT)



3
S2
TOP CHORD TO BRACE CONNECTION
SCALE: NTS

• TOP CHORD, FRONT BRACE, AND SEAT BRACKETS WILL BE DELIVERED PREINSTALLED AND FOLDED.

• BOLTS THAT HAVE BEEN PREINSTALLED WILL HAVE SILICONE ON THEM FOR TRANSPORTING PURPOSES. BOLTS WILL HAVE TO BE TIGHTENED.

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RACKING
DETAILS

C7.2



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RACKING
DETAILS
C7.3



- LANDSCAPE NOTES
1.

LANDSCAPE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO BECOME FAMILIAR WITH SITE CONDITIONS. THE LANDSCAPE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES LOCATED 72 HOURS PRIOR TO ANY DIGGING. THE LANDSCAPE CONTRACTOR SHALL COORDINATE INSTALLATION WITH GENERAL CONTRACTOR AND/OR ANY OTHER CONTRACTORS PERFORMING RELATED WORK.
2.

ALL PLANT MATERIALS SHALL CONFORM WITH THE MOST CURRENT ADDITION OF THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM INFESTATION, DISEASE, DAMAGE AND DISFIGURATION. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS ON THE LIST AND THE NUMBER SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
3.

PLANTS SHALL BE PLACED ACCORDING TO LAYOUT WITH PROPER NOMINAL SPACING.
4.

QUANTITIES FOR THE BUFFER/SCREENING AREAS SHALL BE DETERMINED BY MEASURING THE TOTAL LINEAR FEET OF SECURITY FENCING AND DIVIDING IT BY 80' (TYPICAL BUFFER/SCREENING SECTION). EACH 80' SECTION SHALL HAVE THE QUANTITIES AND SPECIES IDENTIFIED IN THE TYPICAL BUFFER/SCREENING SECTION.
5.

SEED, SOD, MULCH AND FERTILIZER SHALL MEET THE FOLLOWING SPECIFICATIONS, AS MODIFIED.

ITEM	SPECIFICATION NUMBER
SEED	MNDOT 3876
MULCH (MNDOT TYPE 1 @ 2 TON/AC, DISC ANCHORED)	MNDOT 3882
FERTILIZER	MNDOT 3881
GENERAL PLACEMENT	MNDOT 2575

- SEEDING LEGEND
- 6

SHORT/DRY NATIVE GRASS MIX
(PER PRAIRIE RESTORATIONS OR EQUAL.
SEEDED AT RATE OF 17 LBS/ACRE)

SEED MIX SPECIES:
LITTLE BLUESTEM
SIDEOTS GRAMMA
BLUE GRAMMA
POVERTY OAT GRASS
JUNE GRASS
SAND DROPSEED
PRAIRIE DROPSEED
- 7

LOW MAINTENANCE TURF- MN SEED MIX 25-131
(SEEDED AT RATE OF 220.0 LBS/ACRE)

SEED MIX SPECIES:
RED FESCUE
CHEWING'S FESCUE
LOW MAINTENANCE KENTUCKY BLUEGRASS
HARD FESCUE
SHEEP FESCUE
PERENNIAL RYEGRASS

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LANDSCAPE BUFFER
& SEEDING PLAN
L2.1

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