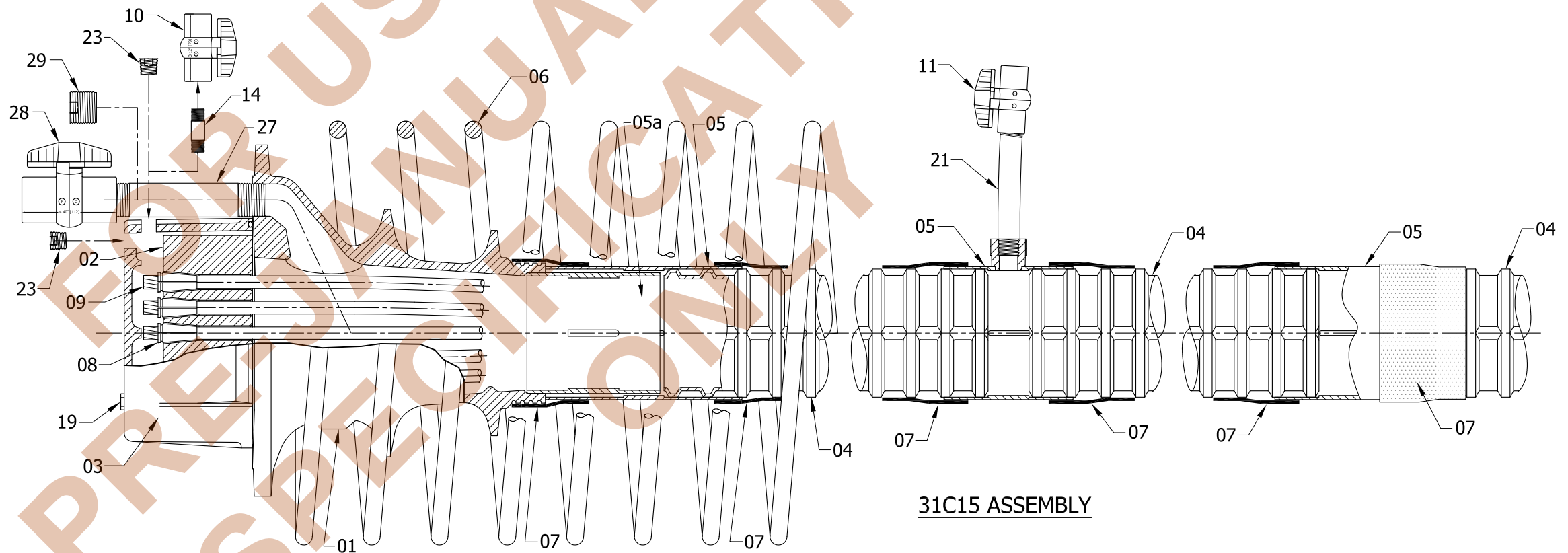


- 1) LAYOUT EACH TENDON ANCHORAGE AND DUCT LOCATION ACCORDING TO THE SPACING SHOWN ON THE TENDON LAYOUT PLANS.
- 2) BOLT THE ANCHORAGE TRUMPLATE SECURELY AND PERPENDICULAR TO THE BLOCK-OUT FORM.
- 3) INDIVIDUAL DUCT LENGTHS SHALL BE COUPLED TOGETHER TO OBTAIN THE CORRECT LENGTH FROM ANCHORAGE TO ANCHORAGE. INSTALL VENTED COUPLERS AS SHOWN ON THESE DRAWINGS AND THE APPLICABLE CONTRACT PLANS.
- 4) USE HEAT SHRINK TO SEAL DUCT TO DUCT AND DUCT TO TRUMPLATE CONNECTIONS FOLLOWING THE MANUFACTURER'S RECOMMENDED PROCEDURE. CARE MUST BE OBSERVED TO AVOID BURNS ON THE DUCT.
- 5) PLACE ALL REINFORCEMENTS AS SHOWN ON THESE DRAWINGS AND THE APPLICABLE CONTRACT PLANS.
- 6) PROCEED WITH CONCRETING, TAKING CARE TO NOT DAMAGE OR DISPLACE THE DUCT.
- 7) PLACE THE CORRECT QUANTITY OF STRAND IN EACH DUCT LEAVING MINIMUM STRESSING TAILS AT EACH END. THIS CAN BE ACCOMPLISHED BY PUSHING OR PULLING THE STRAND THROUGH THE DUCT.
- 8) INSTALL THE ANCHOR BLOCK AT EACH END OF THE TRUMPLATE. INSERT THE WEDGES INTO THE ANCHOR BLOCK.
- 9) STRESSING MAY PROCEED ONCE THE CONCRETE HAS ATTAINED THE REQUIRED COMPRESSIVE STRENGTH AS INDICATED IN THE PLANS AND AS CONFIRMED BY TESTS.
- 10) ALL TENDONS SHALL BE STRESSED BY JACKING FROM ONE OR TWO ENDS IN THE APPROVED SEQUENCE. ONCE APPROVED, CUT TAILS TO 1.5" MAXIMUM LENGTH.
- 11) INSTALL GROUT CAPS, INLET AND OUTLET ACCESSORIES.
- 12) PERFORM DUCT PRESSURE FIELD TEST AS REQUIRED BY APPLICABLE SPECIFICATIONS.
- 13) GROUTING SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE PTI GUIDE SPECIFICATIONS FOR GROUTING OF POST TENSIONING STRUCTURES OR APPLICABLE SPECIFICATION.

- THE ABOVE IS A GENERIC INSTALLATION PROCEDURE - JOB SPECIFIC PROCEDURES SHALL ACCOMPANY EACH PROJECT.

31C15 ASSEMBLY				
ITEM	DESCRIPTION	MATERIAL	PART # / LABEL	DWG REF.
	31C15 INTERNAL TENDON W/COUPLER OVERALL ASSEMBLY			FINC-31C15-001
	31C15 ANCHORAGE ASSEMBLY			FINC-31C15-002
01	31C15 ANCHORAGE (TRUMPLATE)	ASTMA536, GR. 80-55-06 GALV . ASTM A123	FREYSSINET 31C15	FINC-31C15-003
02	31C15 ANCHOR BLOCK (WEDGE PLATE)	AISI C1045/C1050	31C15	FINC-31C15-004
03	27/31C15 GROUT CAP	NYLON ASTM D5989	FREYSSINET 27/31C15	FINC-31C15-005
04	31C15 130mm GTI DUCT	POLYPROPYLENE ASTM D4101	220500	FINC-31C15-006
05	31C15 130mm GTI SLIP-ON COUPLER W/ OR W/O VENT	POLYPROPYLENE ASTM D4101	220505	FINC-31C15-007
05a	31C15 115mm GTI SLIP-ON COUPLER W/O VENT	POLYPROPYLENE ASTM D4101	220465	FINC-31C15-007a
06	31C15 SPIRAL REINFORCEMENT	STEEL GR. 60 ASTM A615	N/A	FINC-31C15-008
07	31C15 HEAT SHRINK SLEEVE	POLYOLEFIN BACKING W/ ADHESIVE	PLA 170	FINC-31C15-009
08	WEDGE	12L14 ASTM A240	N/A	FINC-001
09	0.6" DIA. STRAND	STEEL ASTM A416	N/A	FINC-002
10	1/2" BALL VALVE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-003
11	3/4" BALL VALVE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-004
14	1/2" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-007
19	3/8" BOLT	316 STAINLESS STEEL ASTM F593	F593	FINC-012
21	3/4" PE TUBE	HIGH-DENSITY POLYETHYLENE	CRESLINE HD160	FINC-014
23	1/2" PLUG	NYLON ASTM D5989	FREYSSI 1/2"	FINC-016
27	1 1/4" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-020
28	1 1/4" BALL VALVE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-021
29	1 1/4" PLUG	NYLON ASTM D5989	FREYSSI 1 1/4"	FINC-022

NOTE: ALL PVC SCH. 80 MATERIALS TO BE TEMPORARY FITTING

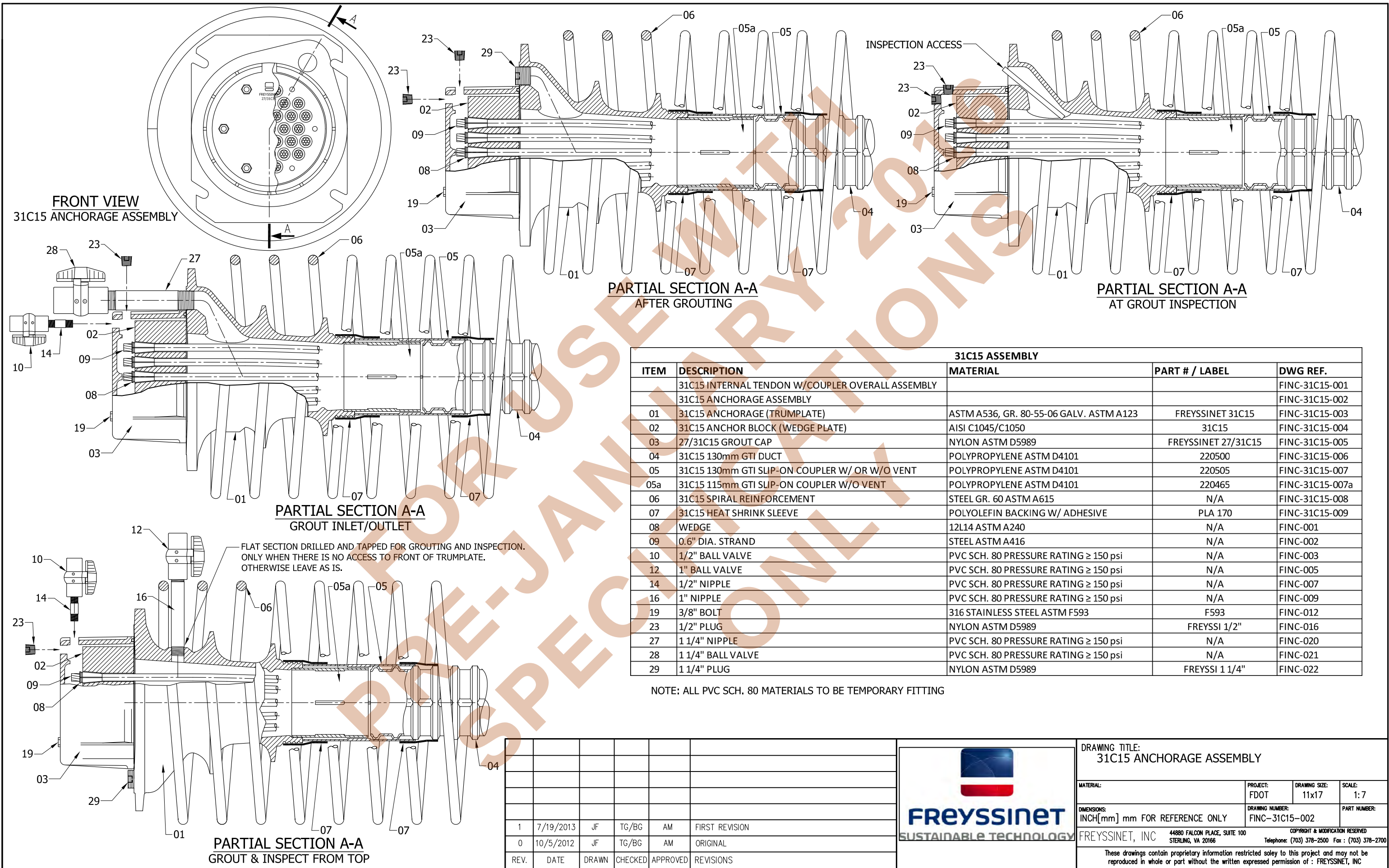


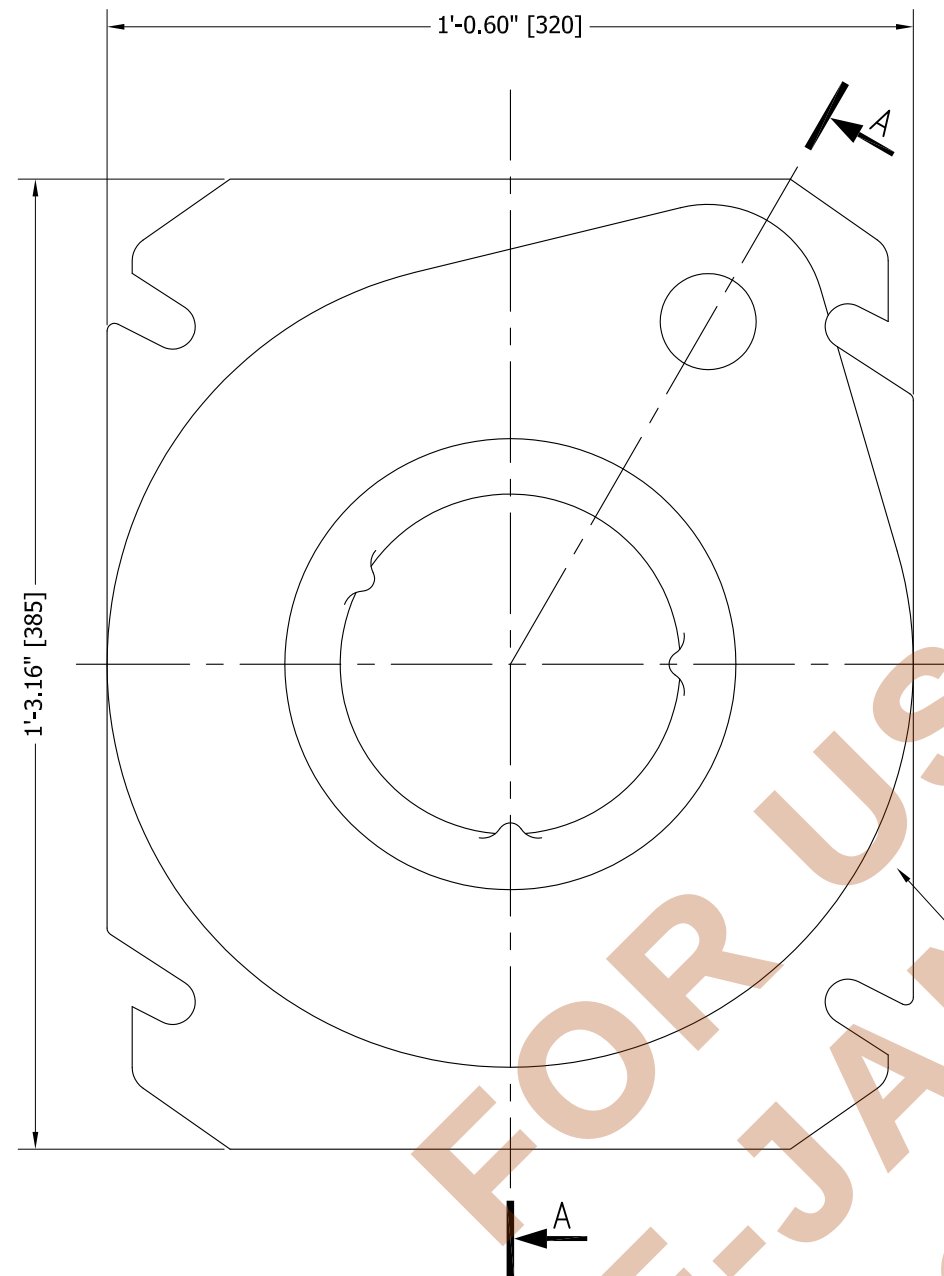
31C15 ASSEMBLY

1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL
REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS



DRAWING TITLE: 31C15 INTERNAL TENDON W/COUPLER OVERALL ASSEMBLY			
MATERIAL:	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:6
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15--001	PART NUMBER:	
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166		COPYRIGHT & MODIFICATION RESERVED Telephone: (703) 378-2500 Fax : (703) 378-2700	
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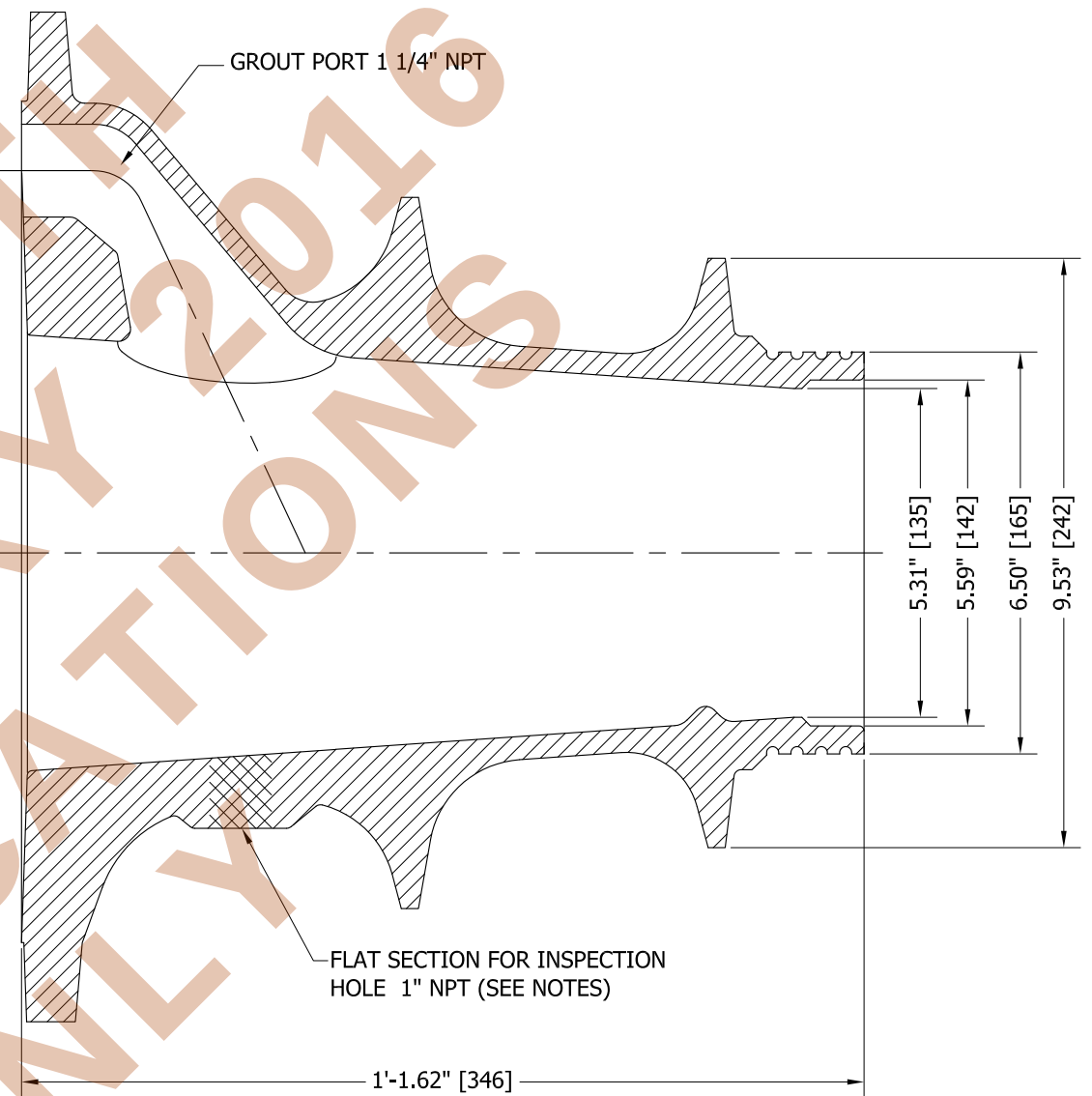


FRONT VIEW

NOTES:

- MATERIAL: ASTM A536, GR. 80-55-06
- GALV. ASTM A123
- FLAT SECTION DRILLED AND TAPPED FOR GROUTING AND INSPECTION. ONLY WHEN THERE IS NO ACCESS TO FRONT OF TRUMPLATE. OTHERWISE LEAVE AS IS.

PART NUMBER LOCATED
ON SIDE OF TRUMPLATE:
"FREYSSINET 31C15"

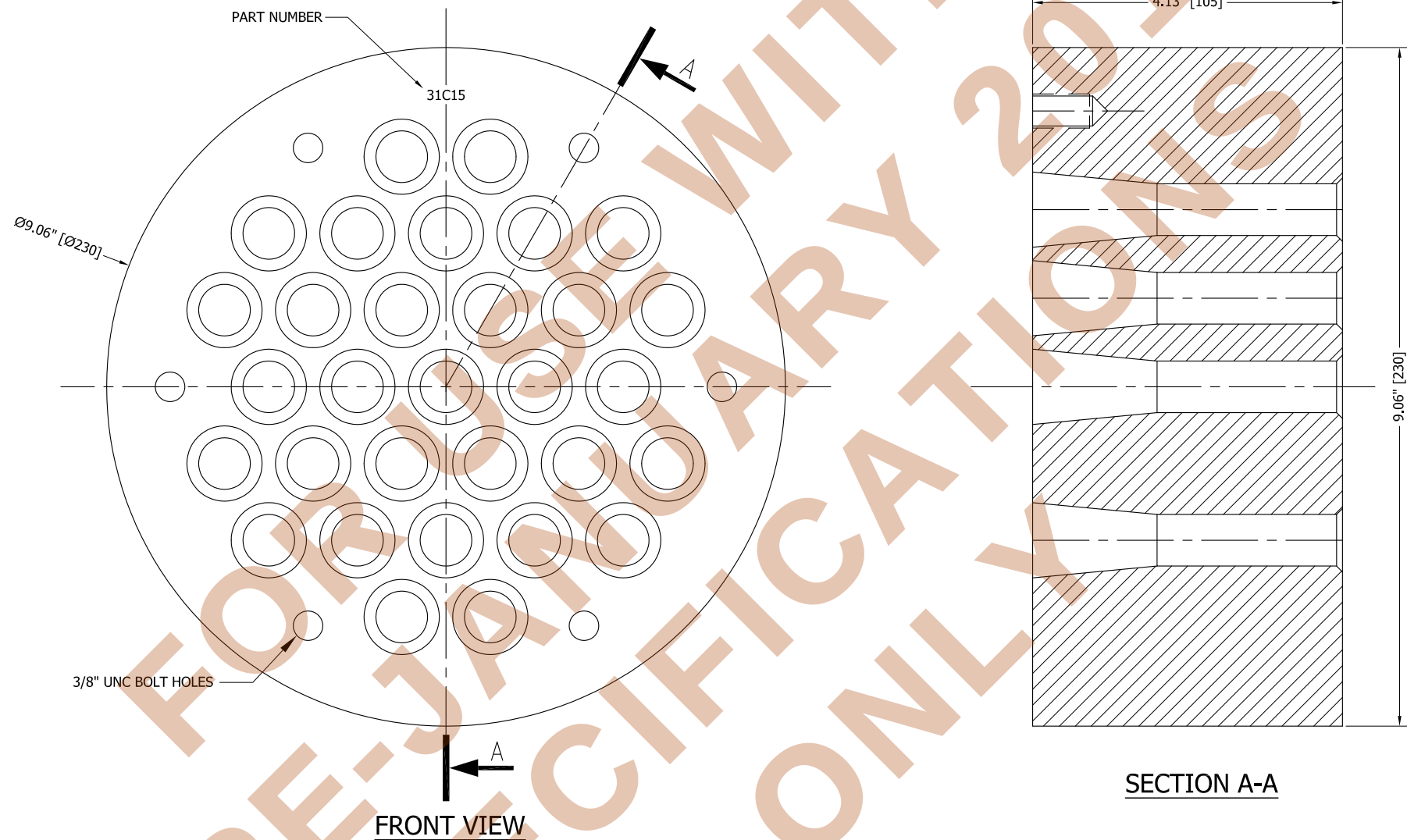


SECTION A-A

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL



DRAWING TITLE: 31C15 ANCHORAGE (TRUMPLATE)			
MATERIAL: ASTM A536,GR. 80-55-06; GALV. ASTM A123	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:3
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-003		PART NUMBER: FREYSSINET 31C15
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166		COPYRIGHT & MODIFICATION RESERVED Telephone: (703) 378-2500 Fax : (703) 378-2700	
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NOTE:

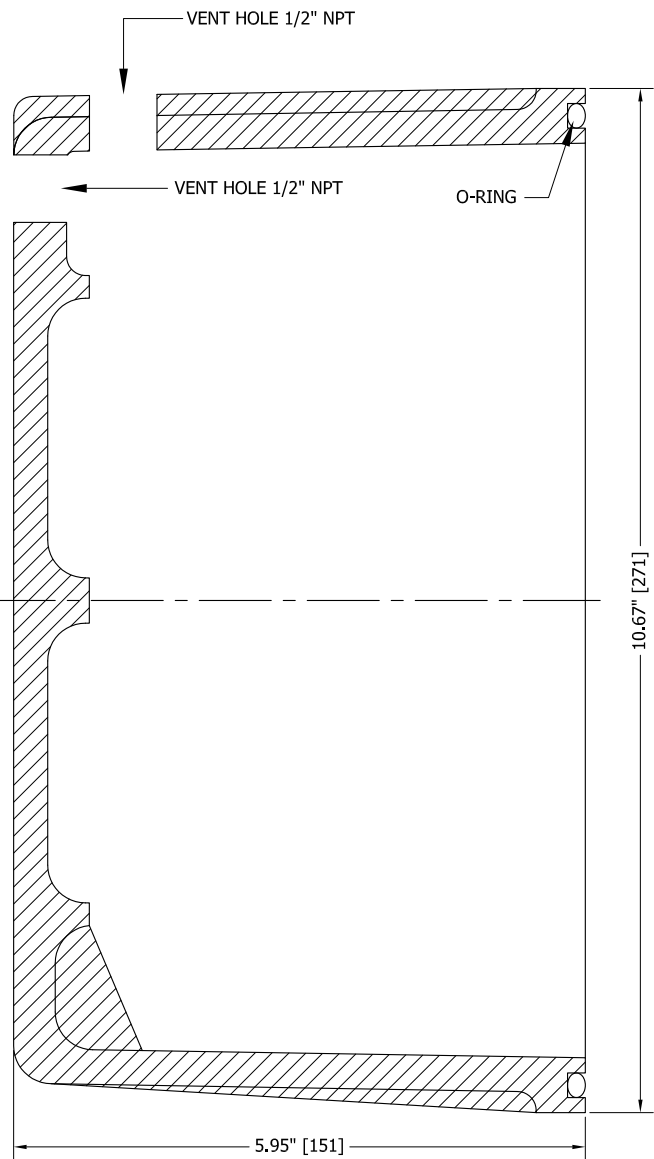
- MATERIAL: AISI C1045 / C1050

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL

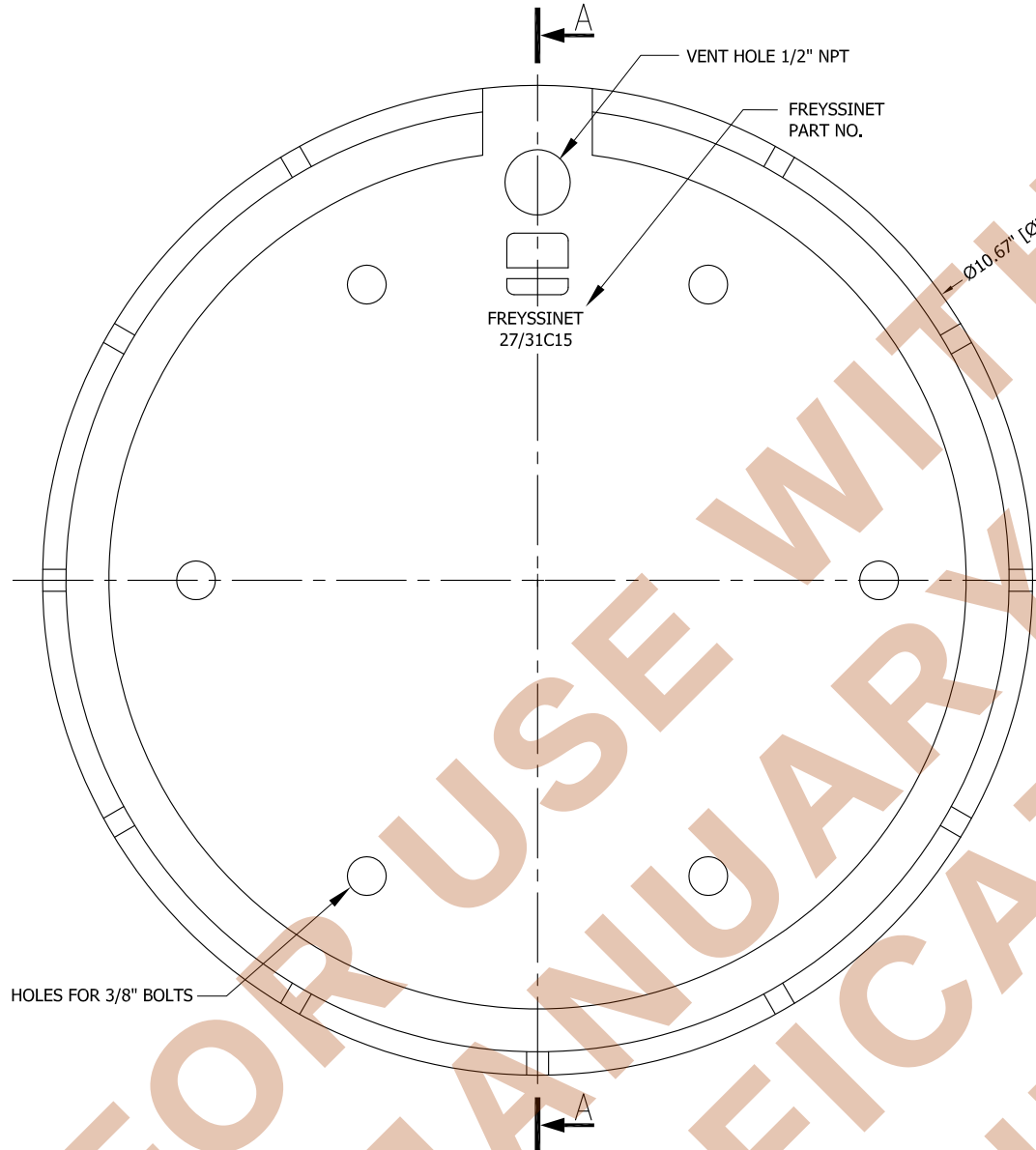


FREYSSINET
SUSTAINABLE TECHNOLOGY

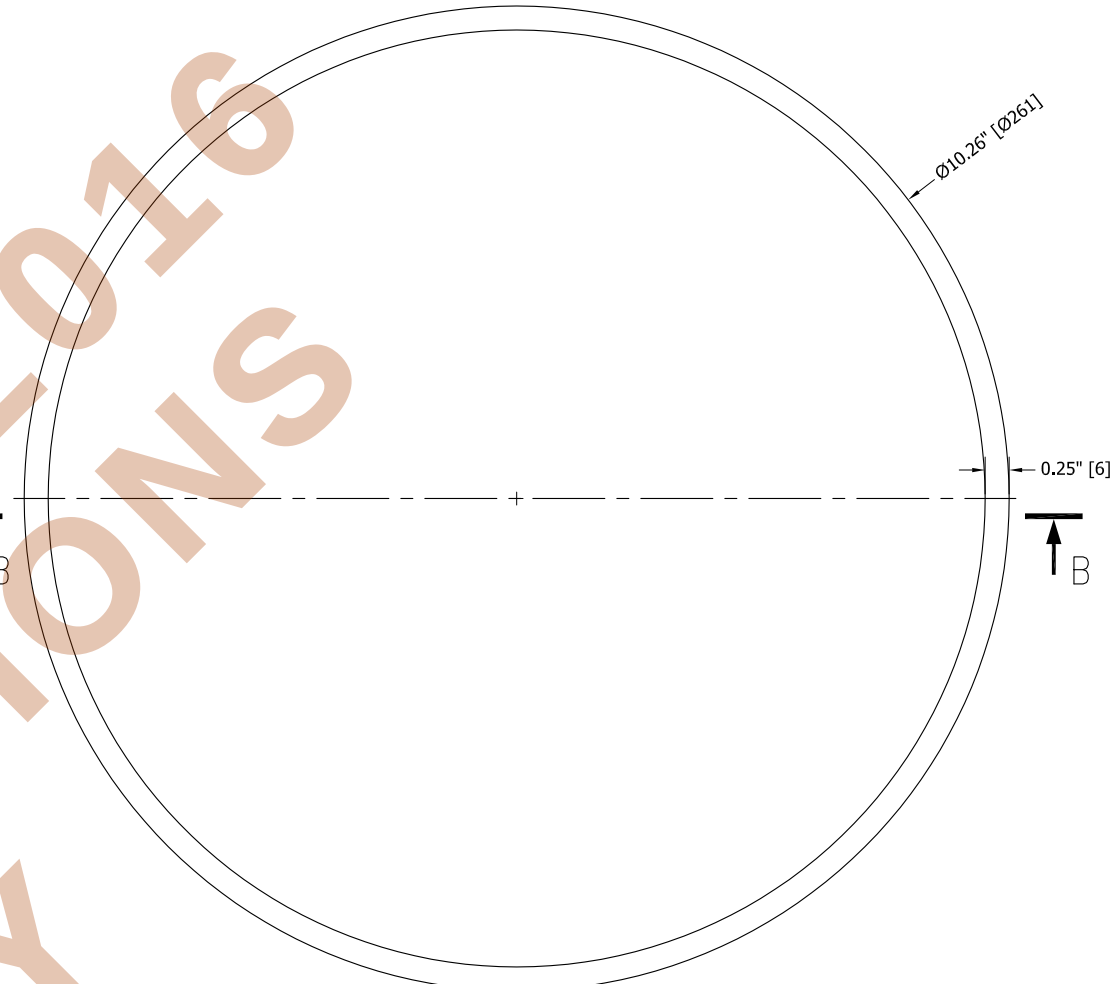
DRAWING TITLE: 31C15 ANCHOR BLOCK (WEDGE PLATE)			
MATERIAL: AISI C1045 / C1050	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-004	PART NUMBER: 31C15	
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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SECTION A-A



GROUT CAP



TOP VIEW



SECTION B-B

O-RING

NOTES:

- MATERIAL: NYLON ASTM D5989
- USE O-RING IN GROOVE FOR SEALING AGAINST TRUMPLATE (DWG. FINC-31C15-002)
- USE 3/8" S.S. BOLT ASTM F593
- PRESSURE RATING = 150 psi
- GROUT CAP MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTIONS 960-2.2.2.1 AND 960-2.4.1

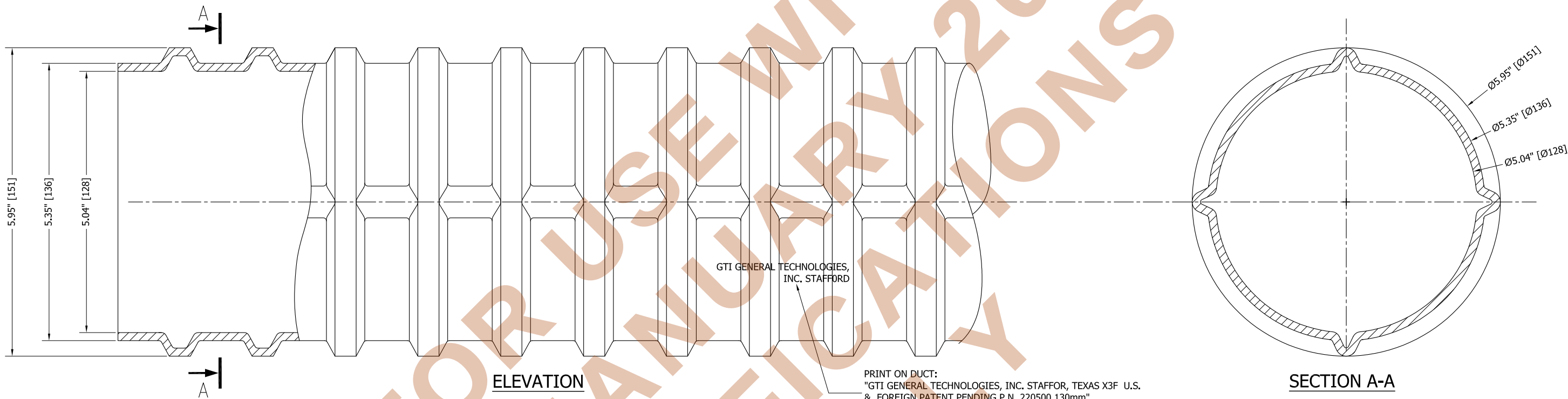
NOTE:

- O-RING MATERIAL: 65-75 DUROMETER BLACK NITRILE WITH A SHORE A DUROMETER = 72 AS PER ASTM D2240
- MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.1.7

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL



DRAWING TITLE: 27/31C15 GROUT CAP			
MATERIAL: NYLON ASTM D5989	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-005	PART NUMBER: FREYSSINET 27/31C15	
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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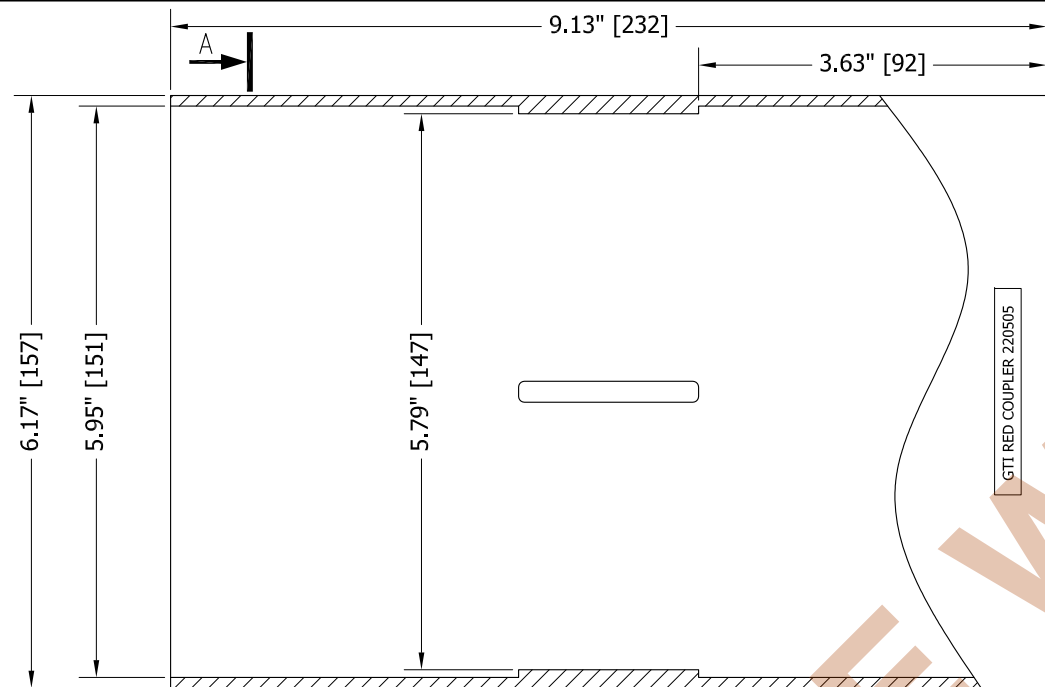
- NOTES:
- MATERIAL: POLYPROPYLENE (ASTM D4101)
 - STANDARD FIT FOR 31C15
 - DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
 - DUCT MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTIONS 960-2.2.1.1 AND 960-2.4.4

1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL
REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS

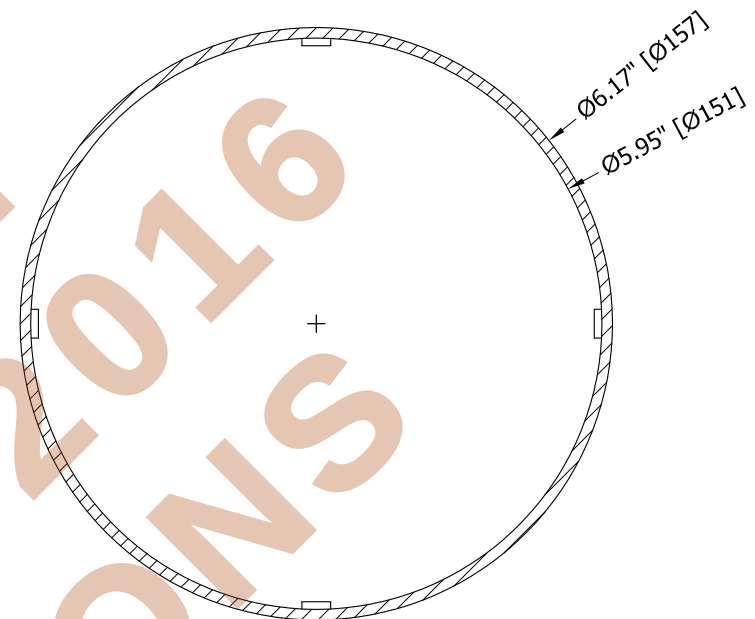


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SUSTAINABLE TECHNOLOGY

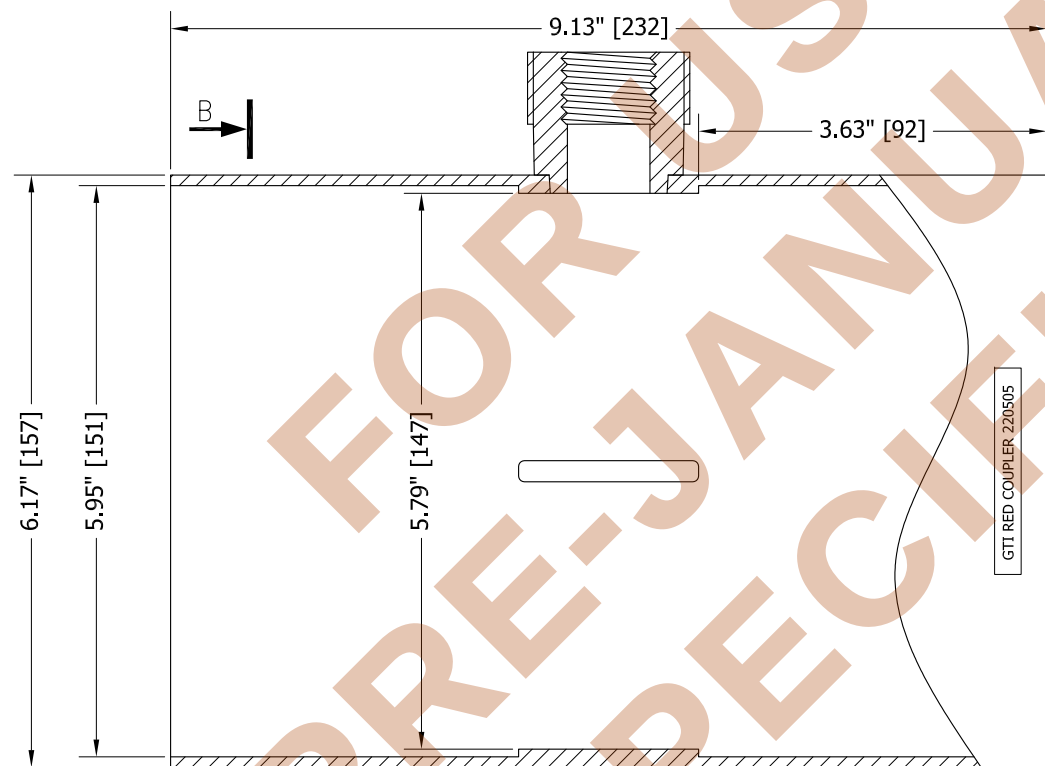
DRAWING TITLE: 31C15 130mm GTI DUCT			
MATERIAL: POLYPROPYLENE (ASTM D4101)	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-006	PART NUMBER: 220500	
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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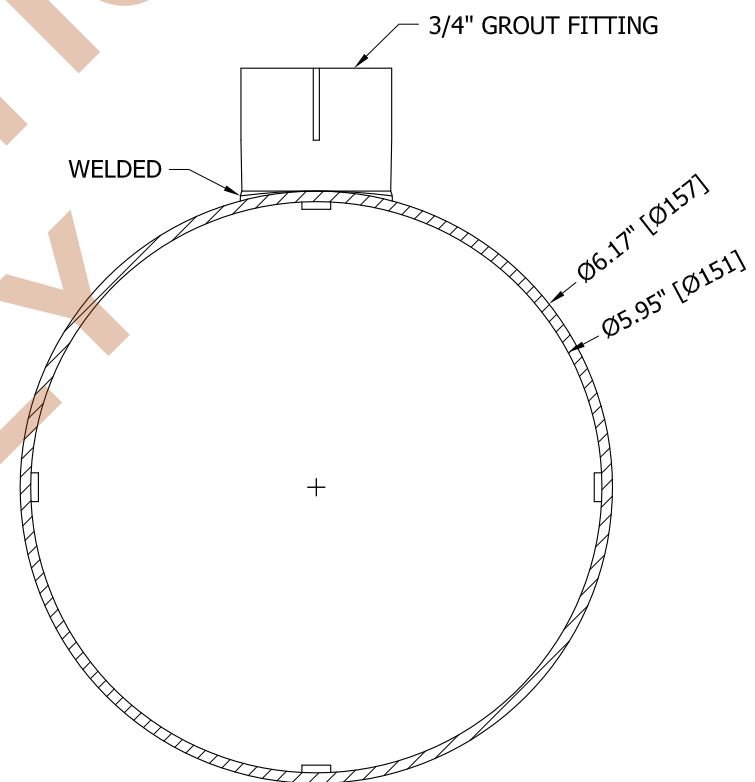
ELEVATION COUPLER W/O VENT



SECTION A-A



SECTION / ELEVATION COUPLER W/ VENT



SECTION B-B

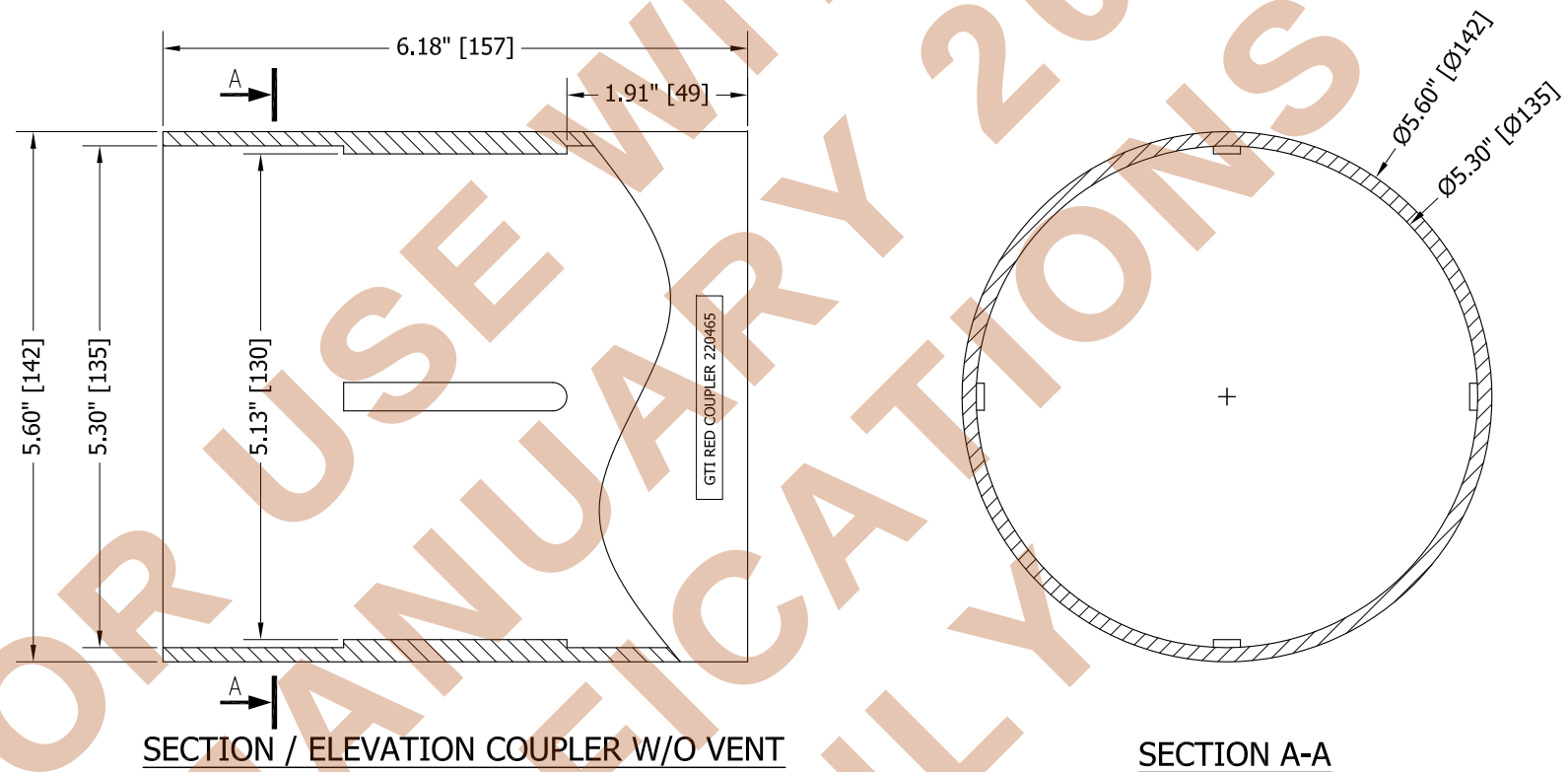
NOTES:

- MATERIAL: POLYPROPYLENE (ASTM D4101)
- STANDARD FIT FOR 130mm DUCT
- COUPLER MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTIONS 960-2.2.1.5 AND 960-2.4.4

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL



DRAWING TITLE: 31C15 130mm GTI SLIP-ON COUPLER W/ OR W/O VENT			
MATERIAL: POLYPROPYLENE (ASTM D4101)	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-007		PART NUMBER: 220505
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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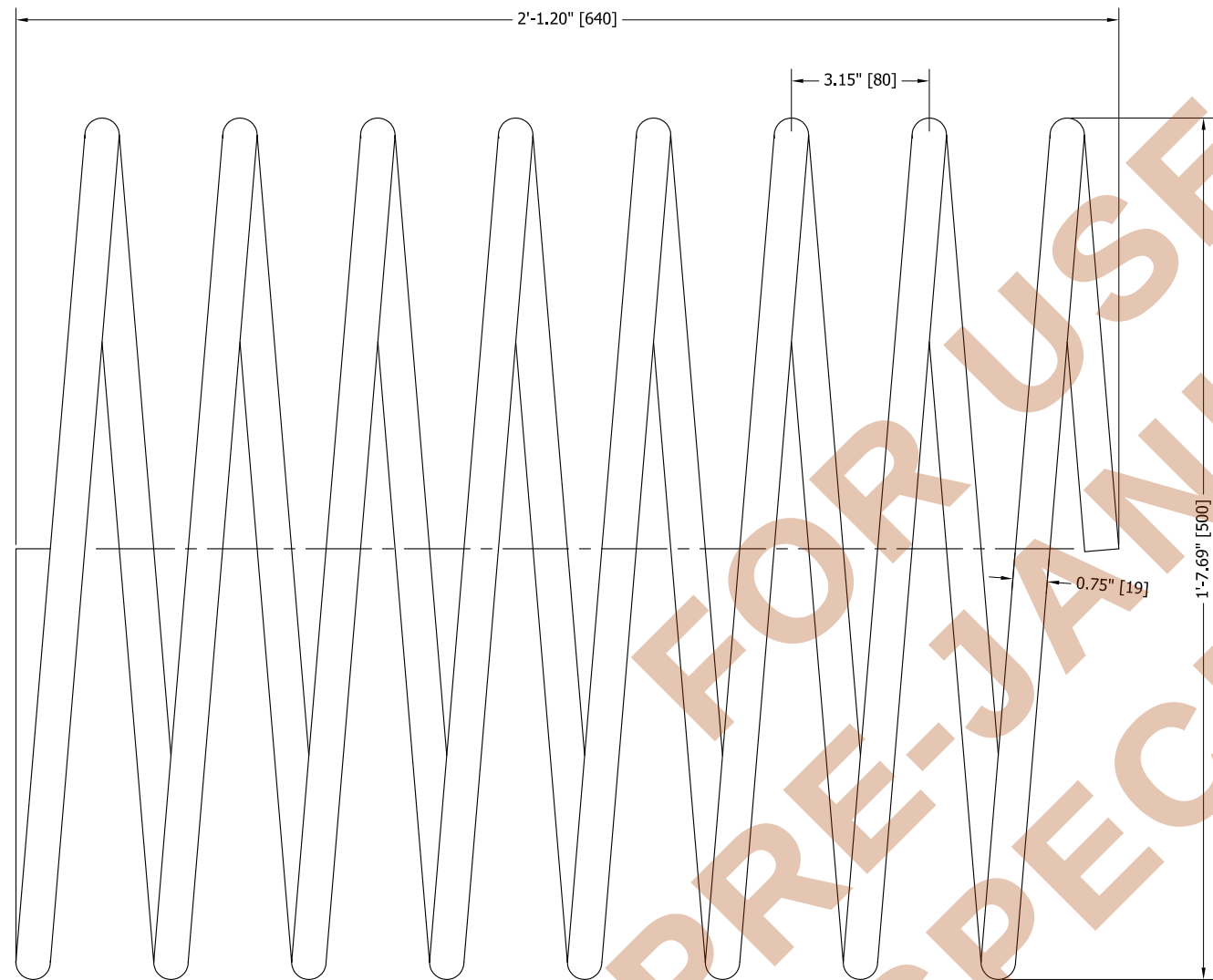
- NOTES:
- MATERIAL: POLYPROPYLENE (ASTM D4101)
 - COUPLER MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTIONS 960-2.2.1.5 AND 960-2.4.4

1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL
REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS



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DRAWING TITLE: 31C15 115mm GTI SLIP-ON COUPLER W/O VENT			
MATERIAL: POLYPROPYLENE (ASTM D4101)	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-007a	PART NUMBER: 220465	
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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DETAIL 1
ELEVATION

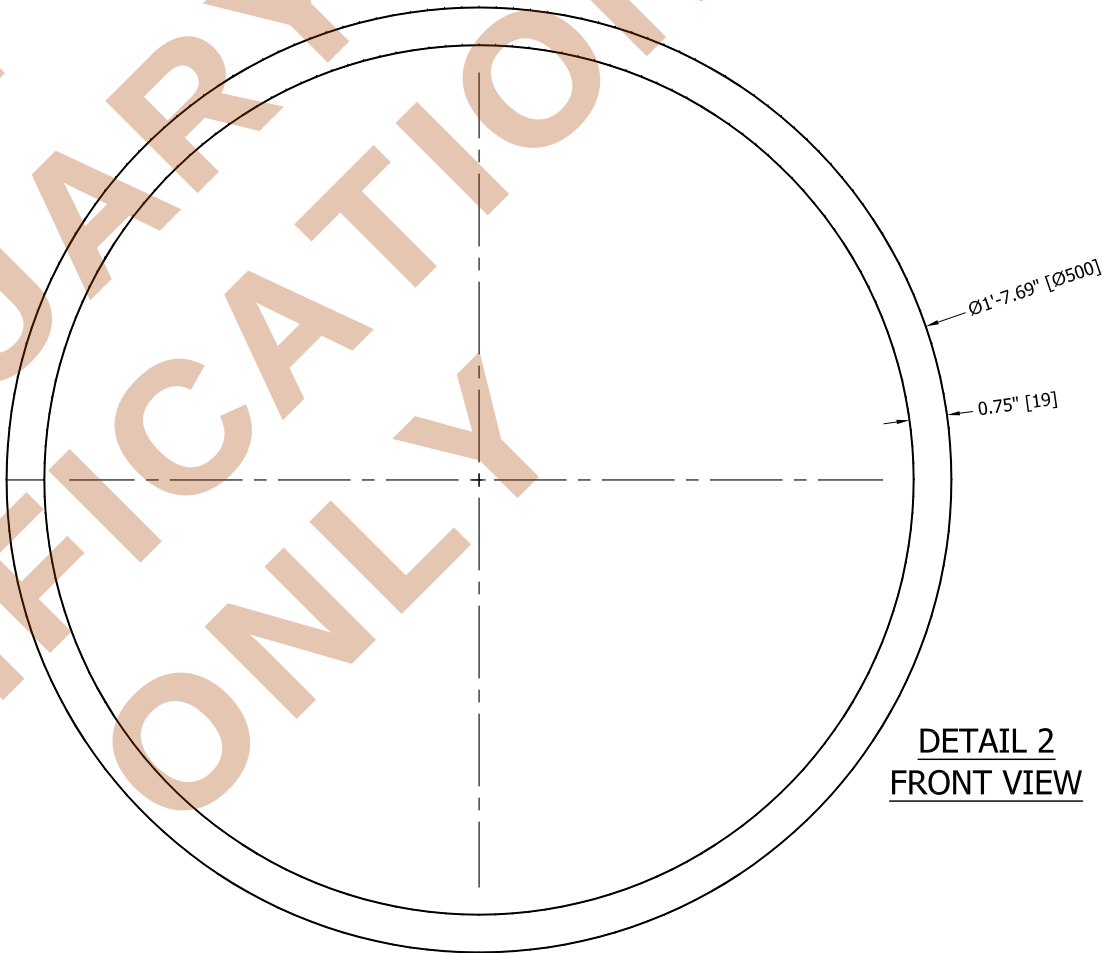
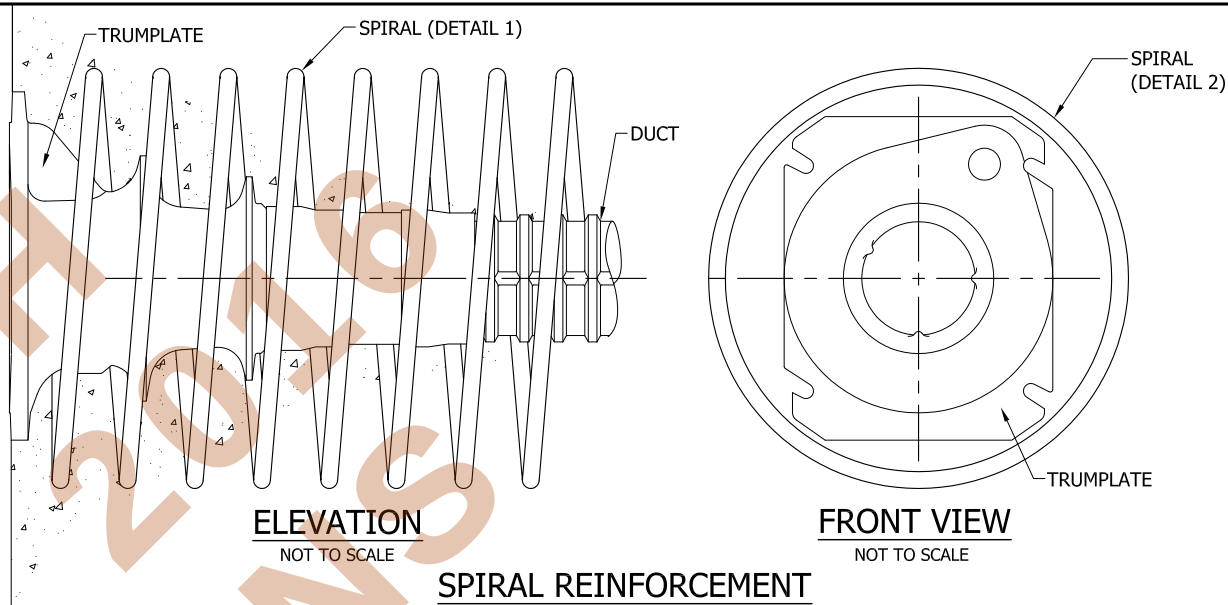
NOTES:

- MATERIAL: STEEL GR. 60ksi; ASTM A615
- #6 REBAR
- 8 TURNS IN TOTAL
- 3.15" PITCH
- ϕ 19.69"

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL



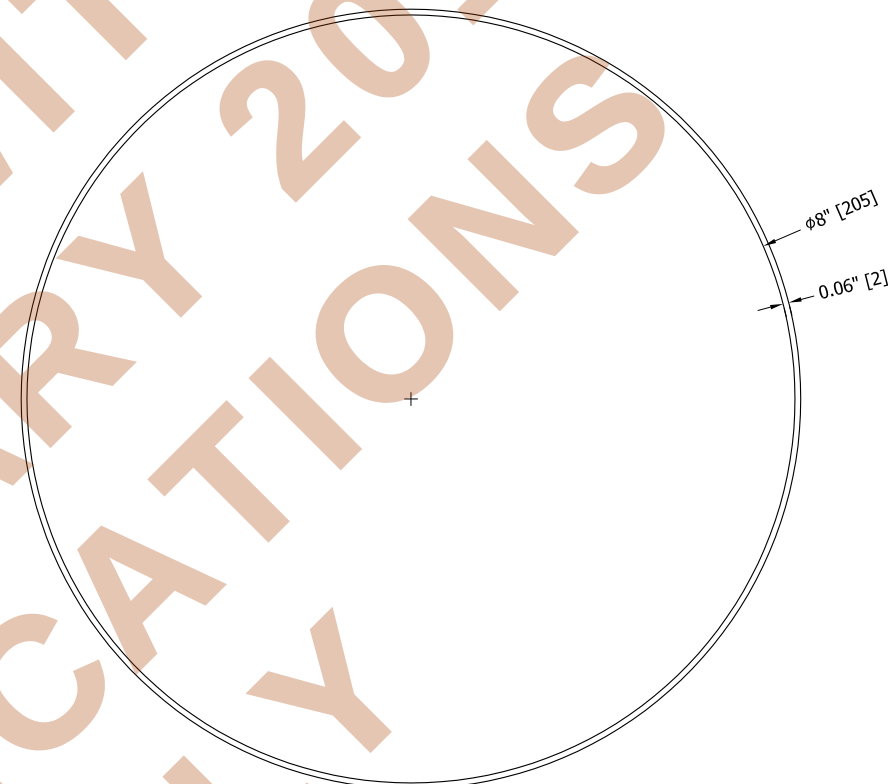
DRAWING TITLE: 31C15 SPIRAL REINFORCEMENT			
MATERIAL: STEEL GR. 60 ksi; ASTM A615	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:4
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-008	PART NUMBER: N/A	
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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DETAIL 2
FRONT VIEW



ELEVATION



SECTION A-A

NOTES:

- MATERIAL: POLYOLEFIN W/ ADHESIVE
- TUBULAR SLEEVE DIAMETER: 8" [205mm] AS SUPPLIED
5.5" [140mm] FULLY RECOVERED
- HEAT SHRINK SLEEVE MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.1.8

1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/5/2012	JF	TG/BG	AM	ORIGINAL
REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS



DRAWING TITLE: 31C15 HEAT SHRINK SLEEVE			
MATERIAL: POLYOLEFIN BACKING W/ ADHESIVE	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-31C15-009	PART NUMBER: PLA 170	
FREYSSINET, INC	44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	COPYRIGHT & MODIFICATION RESERVED Telephone: (703) 378-2500 Fax : (703) 378-2700	
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