

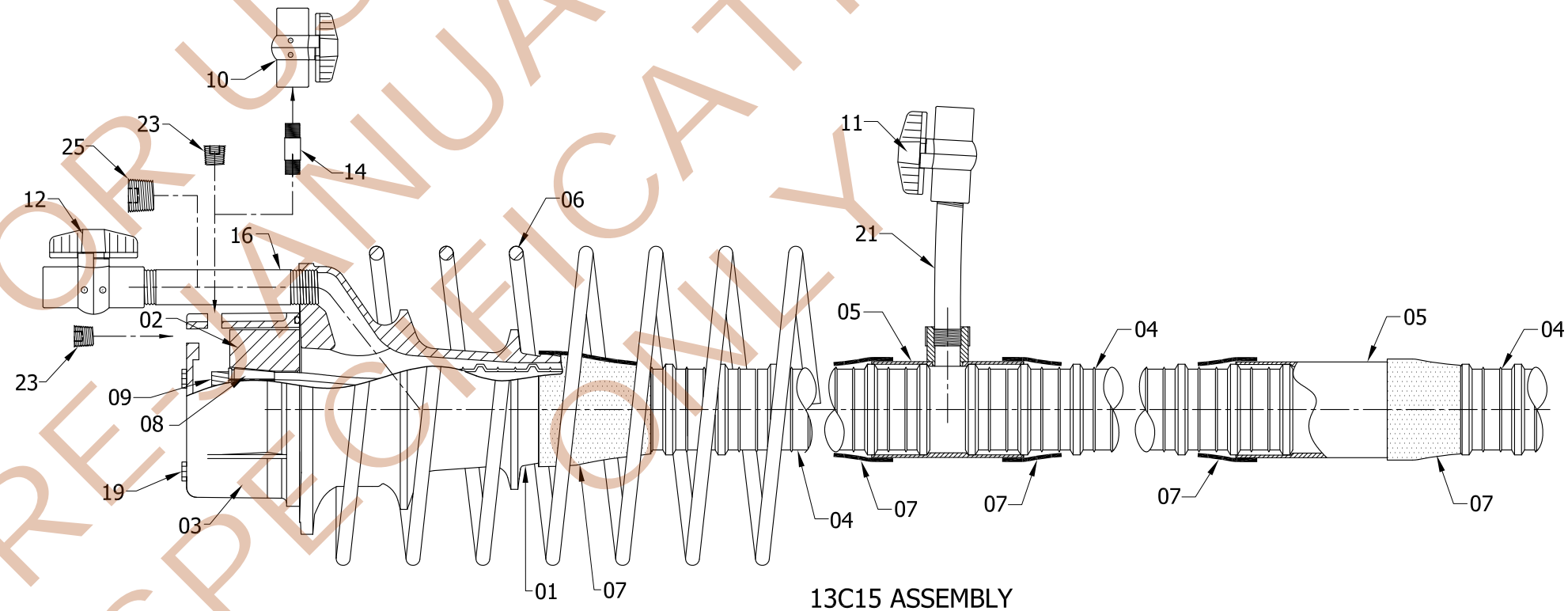
13C15 INSTALLATION PROCEDURE:

- 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.

13C15 ASSEMBLY				
ITEM	DESCRIPTION	MATERIAL	PART # / LABEL	DWG REF.
	13C15 INTERNAL TENDON W/COUPLER OVERALL ASSEMBLY			FINC-13C15-001
	13C15 ANCHORAGE ASSEMBLY			FINC-13C15-002
01	13C15 ANCHORAGE (TRUMPLATE)	ASTM A48, 35B GALV. ASTM A123	FREYSSINET 13C15	FINC-13C15-003
02	13C15 ANCHOR BLOCK (WEDGE PLATE)	AISI C1045/C1050	13C15	FINC-13C15-004
03	12/13C15 GROUT CAP	NYLON ASTM D5989	FREYSSINET 12/13C15	FINC-13C15-005
04	12/13C15 76mm GTI DUCT	POLYPROPYLENE ASTM D4101	220300	FINC-13C15-006
05	12/13C15 76mm GTI SLIP-ON COUPLER W/ OR W/O VENT	POLYPROPYLENE ASTM D4101	220305	FINC-13C15-007
06	13C15 SPIRAL REINFORCEMENT	STEEL GR. 60ksi; ASTM A615	N/A	FINC-13C15-008
07	13C15 HEAT SHRINK SLEEVE	POLYOLEFIN BACKING W/ ADHESIVE	PLA 90	FINC-13C15-009
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
12	1" BALL VALVE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-005
14	1/2" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-007
16	1" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-009
19	3/8" BOLT	316 STAINLESS STEEL ASTM F593	F593	FINC-012
21	3/4" CRESLINE PIPE	HIGH-DENSITY POLYETHYLENE	CRESLINE HD160	FINC-014
23	1/2" PLUG	NYLON ASTM D5989	FREYSSI 1/2"	FINC-016
25	1" PLUG	NYLON ASTM D5989	FREYSSI 1"	FINC-018

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

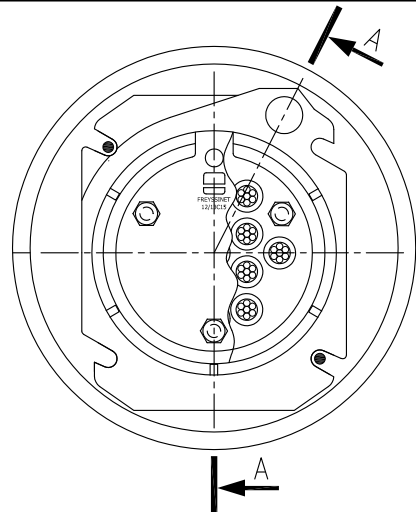


13C15 ASSEMBLY

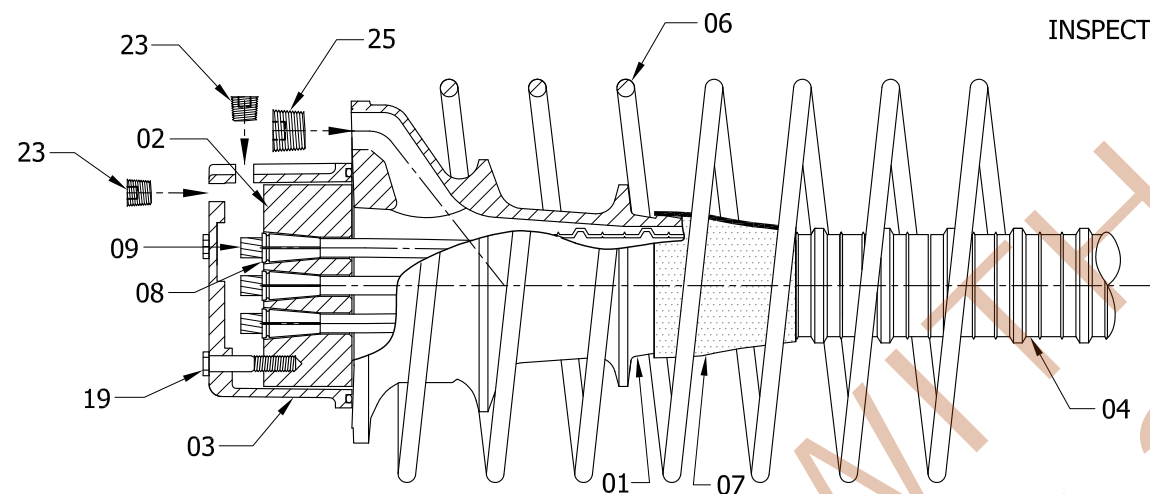
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0	10/1/2012	JF	TG/BG	AM	ORIGINAL



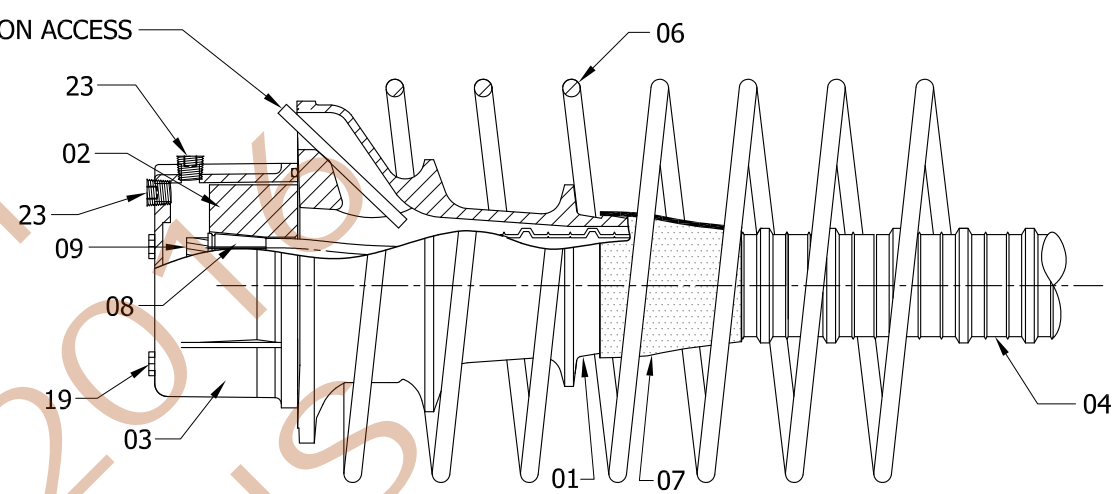
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MATERIAL:	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:6
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-13C15-001	PART NUMBER:	
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166 Telephone: (703) 378-2500 Fax: (703) 378-2700			
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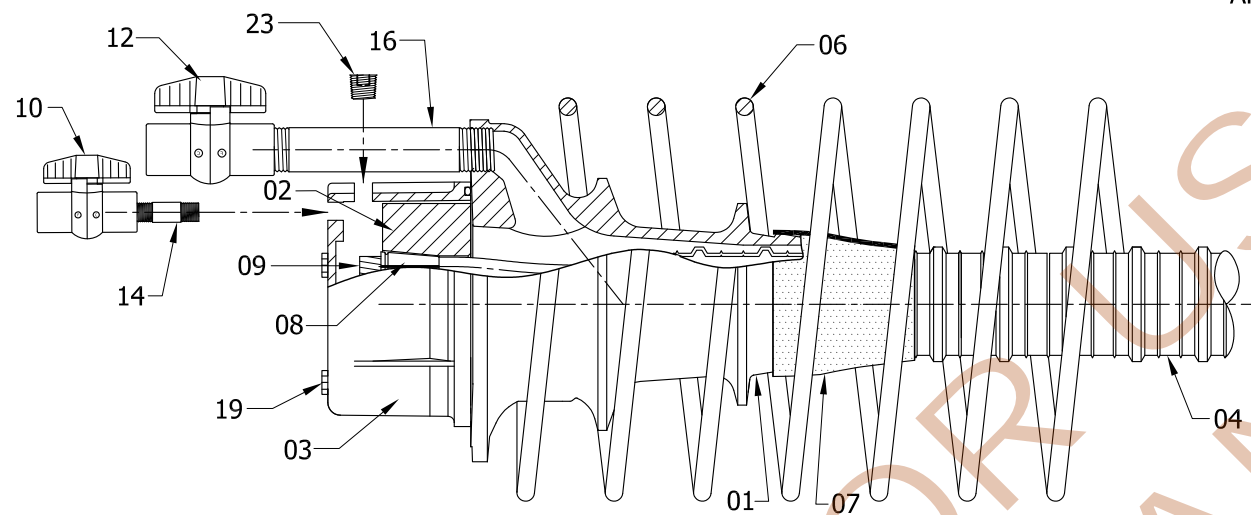
FRONT VIEW
13C15 ANCHORAGE ASSEMBLY



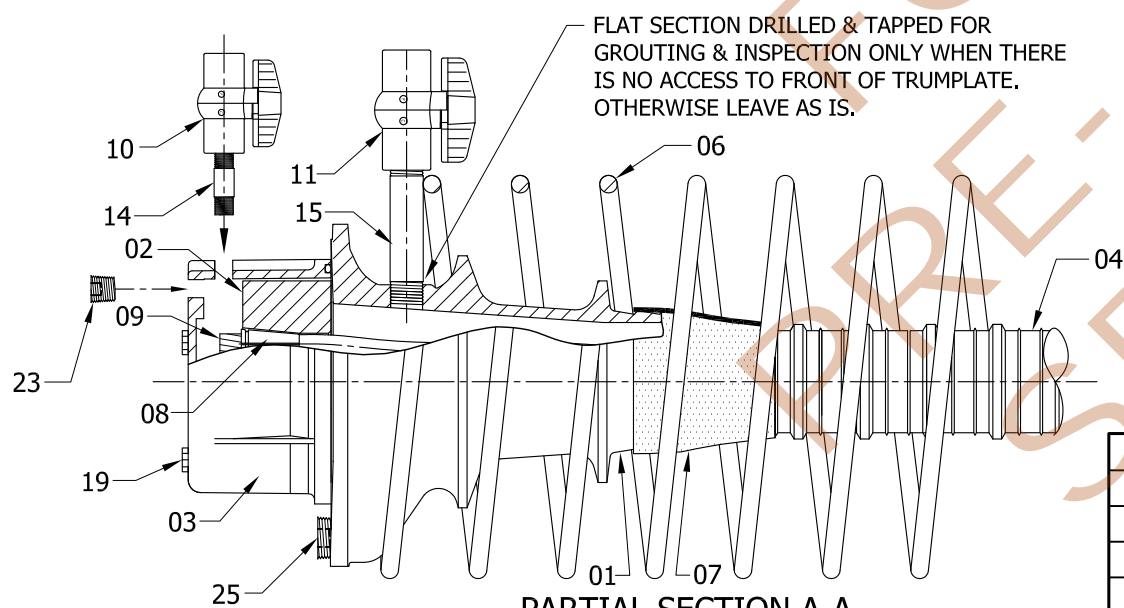
PARTIAL SECTION A-A
AFTER GROUTING



PARTIAL SECTION A-A
AT GROUT INSPECTION



PARTIAL SECTION A-A
GROUT INLET / OUTLET



PARTIAL SECTION A-A
GROUT & INSPECT FROM TOP

FLAT SECTION DRILLED & TAPPED FOR GROUTING & INSPECTION ONLY WHEN THERE IS NO ACCESS TO FRONT OF TRUMPLATE. OTHERWISE LEAVE AS IS.

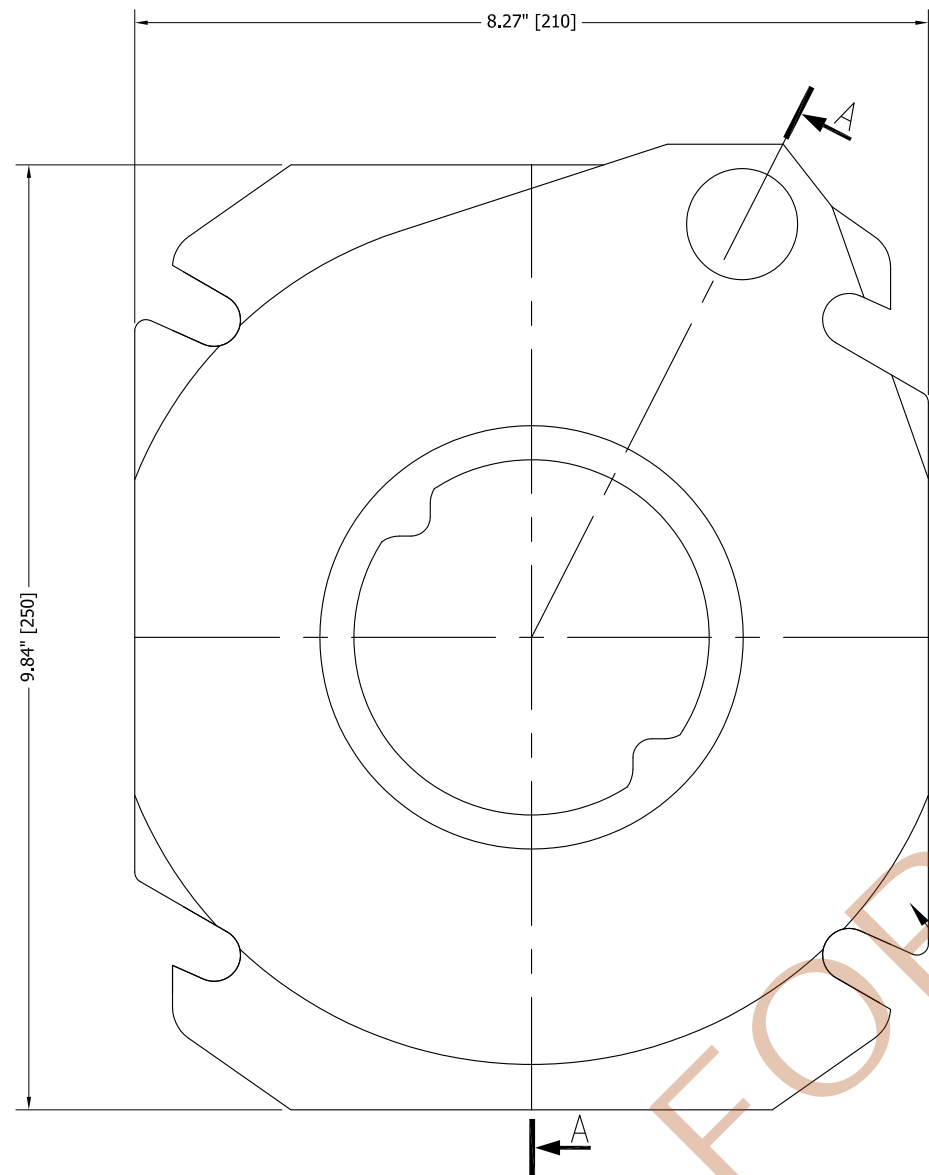
13C15 ASSEMBLY				
ITEM	DESCRIPTION	MATERIAL	PART # / LABEL	DWG REF.
	13C15 INTERNAL TENDON W/COUPLER OVERALL ASSEMBLY			FINC-13C15-001
	13C15 ANCHORAGE ASSEMBLY			FINC-13C15-002
01	13C15 ANCHORAGE (TRUMPLATE)	ASTM A48, 35B GALV. ASTM A123	FREYSSINET 13C15	FINC-13C15-003
02	13C15 ANCHOR BLOCK (WEDGE PLATE)	AISI C1045/C1050	13C15	FINC-13C15-004
03	12/13C15 GROUT CAP	NYLON ASTM D5989	FREYSSINET 12/13C15	FINC-13C15-005
04	12/13C15 76mm GTI DUCT	POLYPROPYLENE ASTM D4101	220300	FINC-13C15-006
06	13C15 SPIRAL REINFORCEMENT	STEEL GR. 60ksi; ASTM A615	N/A	FINC-13C15-008
07	13C15 HEAT SHRINK SLEEVE	POLYOLEFIN BACKING W/ ADHESIVE	PLA 90	FINC-13C15-009
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
12	1" BALL VALVE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-005
14	1/2" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-007
15	3/4" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-008
16	1" NIPPLE	PVC SCH. 80 PRESSURE RATING ≥ 150 psi	N/A	FINC-009
19	3/8" BOLT	316 STAINLESS STEEL ASTM F593	F593	FINC-012
23	1/2" PLUG	NYLON ASTM D5989	FREYSSI 1/2"	FINC-016
25	1" PLUG	NYLON ASTM D5989	FREYSSI 1"	FINC-018

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

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

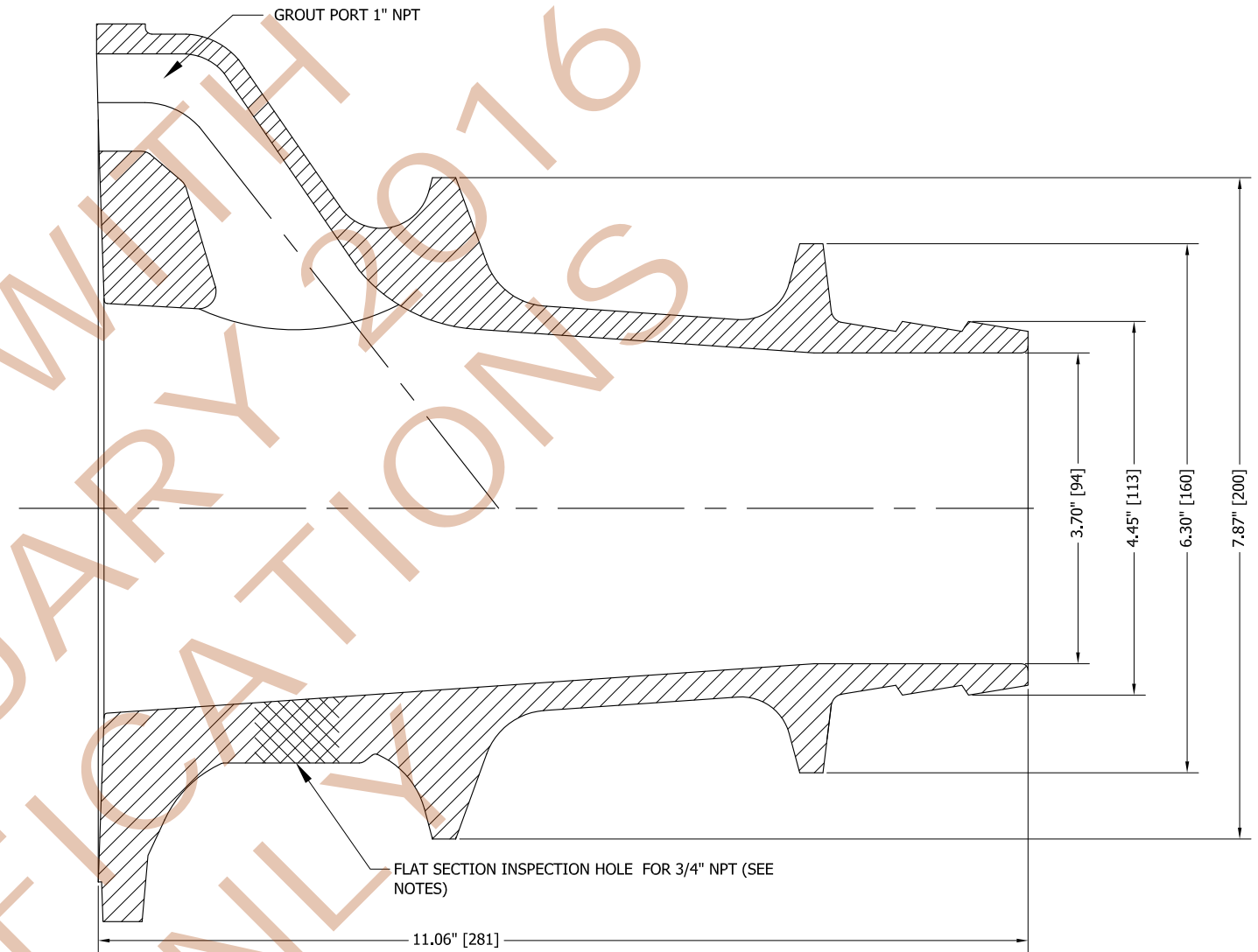


DRAWING TITLE: 13C15 ANCHORAGE ASSEMBLY			
MATERIAL:	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:6
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY		DRAWING NUMBER: FINC-13C15-002	PART NUMBER:
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166		COPYRIGHT & MODIFICATION RESERVED Telephone: (703) 378-2500 Fax: (703) 378-2700	
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FRONT VIEW

PART NUMBER LOCATED ON SIDE OF TRUMPLATE: "FREYSSINET 13C15"



SECTION A-A

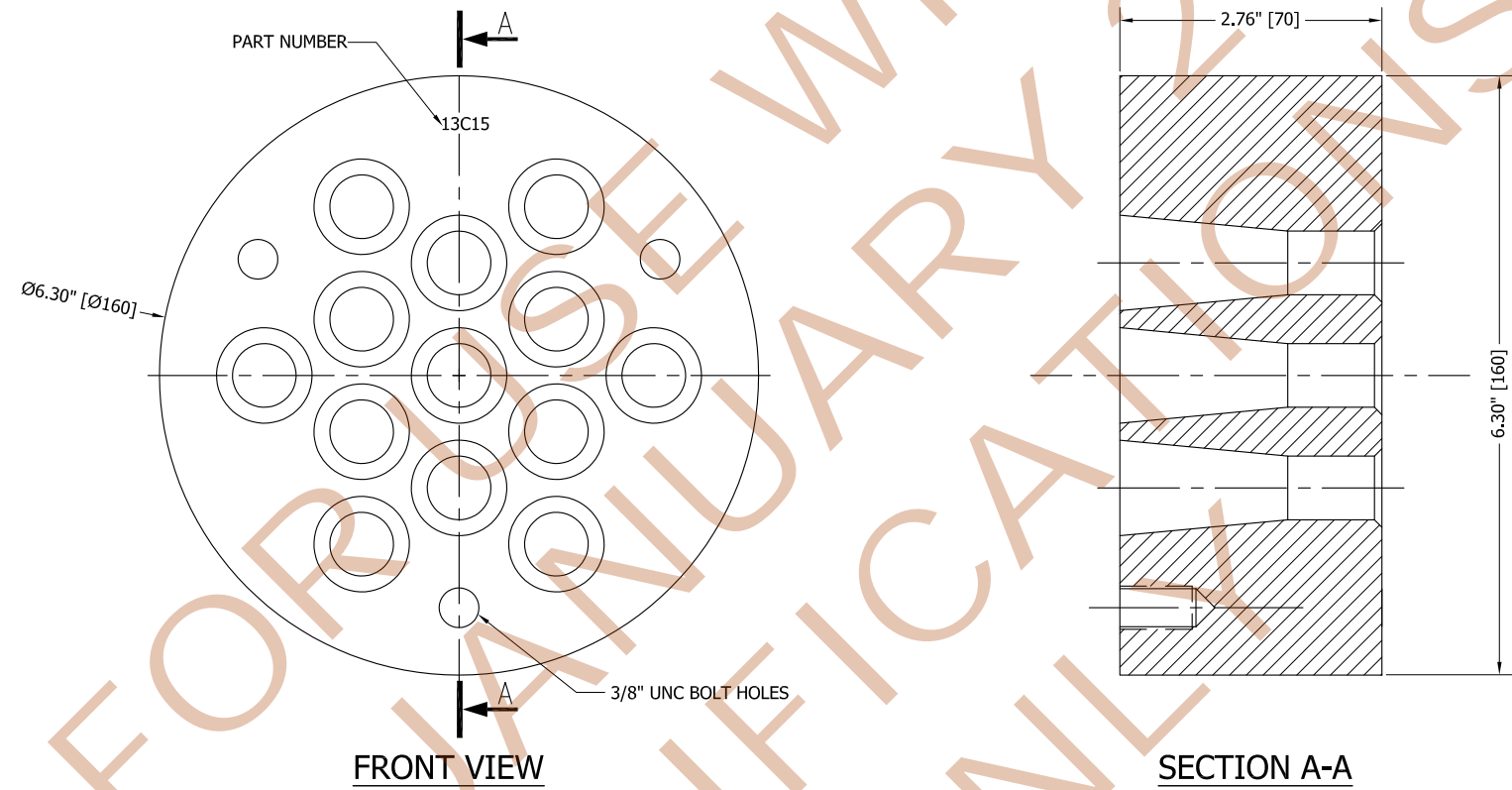
NOTES:

- MATERIAL: ASTM A48, 35B GALV. ASTM A123
- FLAT SECTION DRILLED & TAPPED FOR GROUTING & INSPECTION ONLY WHEN THERE IS NO ACCESS TO FRONT OF TRUMPLATE. OTHERWISE LEAVE AS IS.

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



DRAWING TITLE: 13C15 ANCHORAGE (TRUMPLATE)			
MATERIAL: ASTM A48, 35B GALV. ASTM A123	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-13C15-003	PART NUMBER: FREYSSINET 13C15	
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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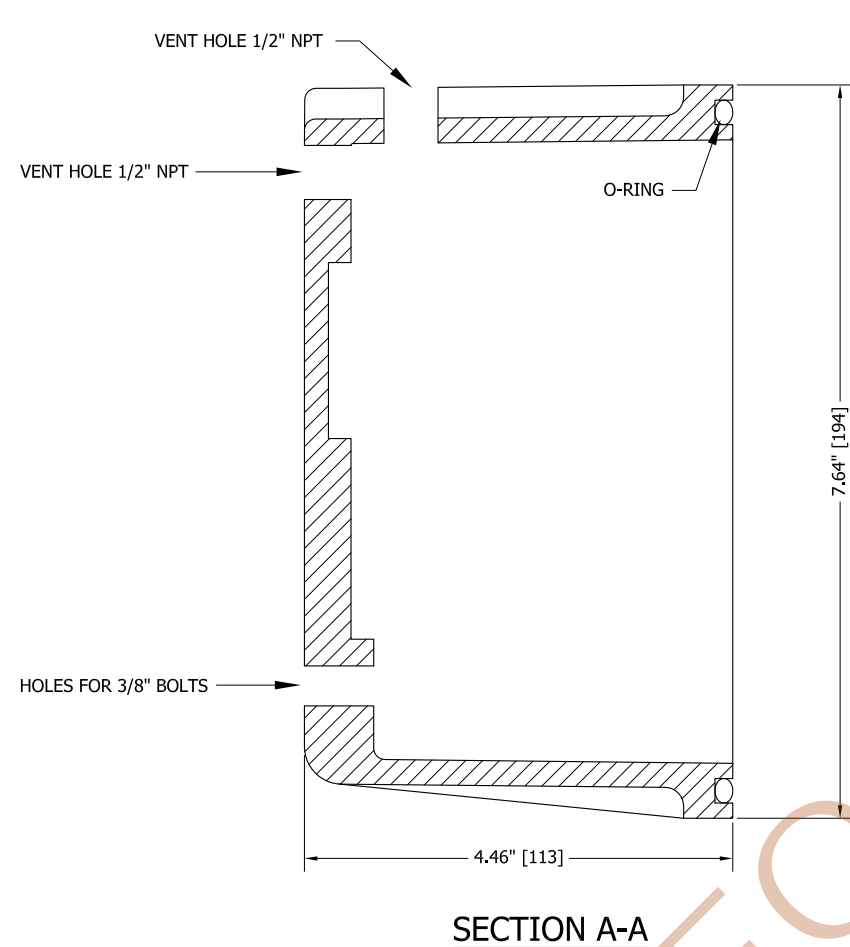


NOTE:
 • MATERIAL: AISI C1045 / C1050

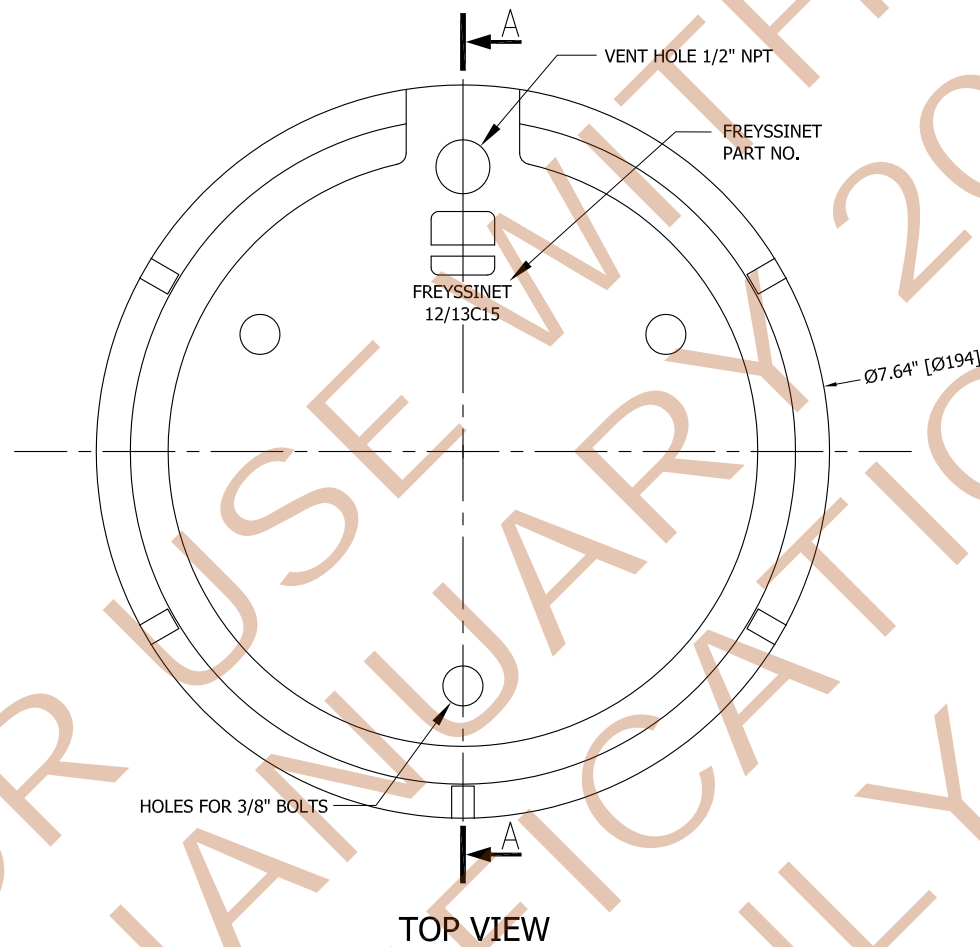
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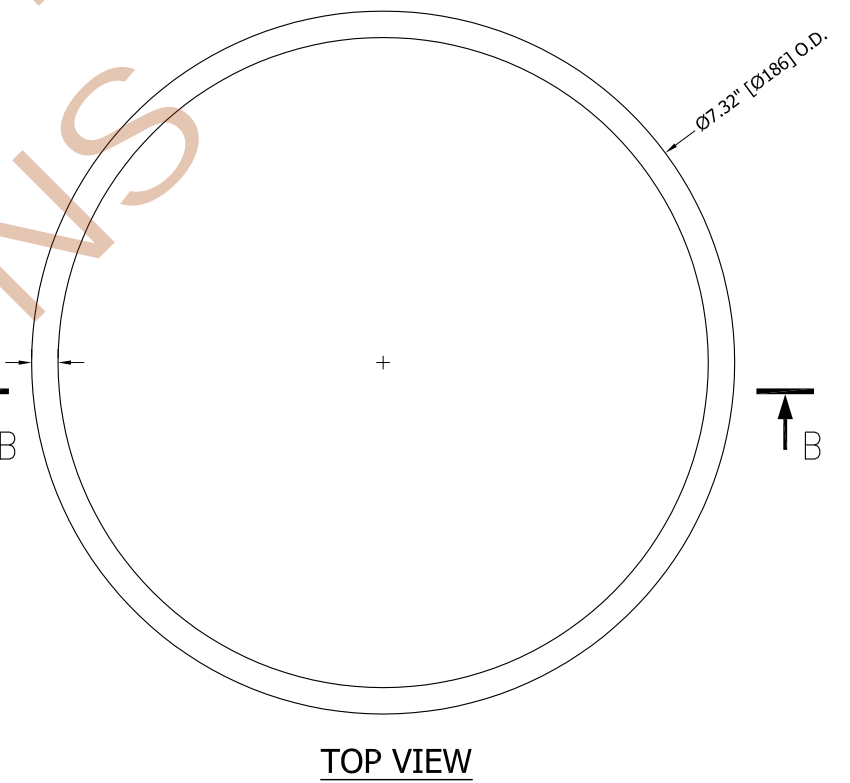
DRAWING TITLE: 13C15 ANCHOR BLOCK (WEDGE PLATE)			
MATERIAL: AISI C1045 / C1050	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY		DRAWING NUMBER: FINC-13C15-004	PART NUMBER: 13C15
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166	
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SECTION A-A



TOP VIEW



TOP VIEW



SECTION B-B

GROUT CAP

O-RING

NOTES:

- GROUT CAP MATERIAL: NYLON ASTM D5989
- USE O-RING IN GROOVE FOR SEALING AGAINST TRUMPLATE (DWG. FIN-13C15-002)
- USE 3/8" S.S. BOLT ASTM F593
- PRESSURE RATING = 150 psi
- GROUT CAP MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.2.1 AND 960-2.4.1

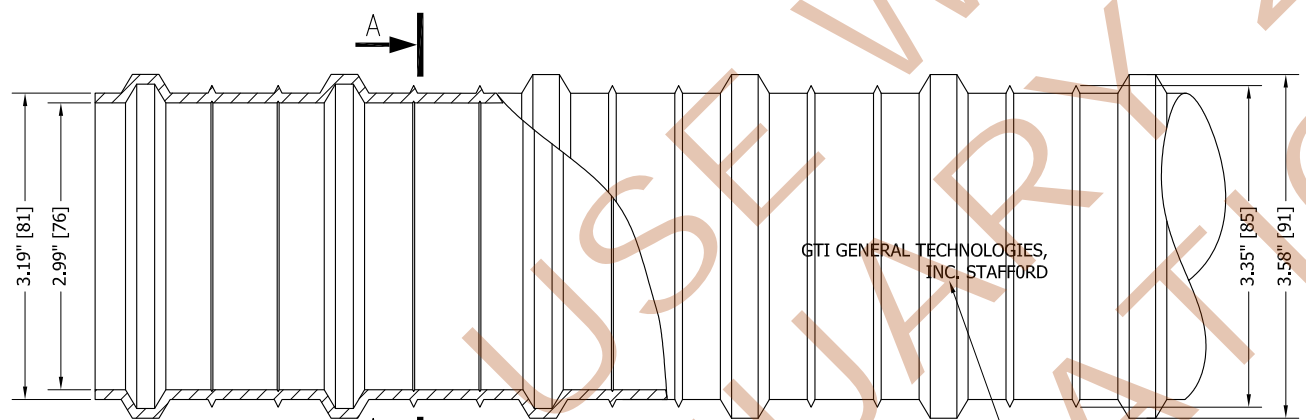
NOTES:

- 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	10/1/2012	JF	TG/BG	AM	ORIGINAL



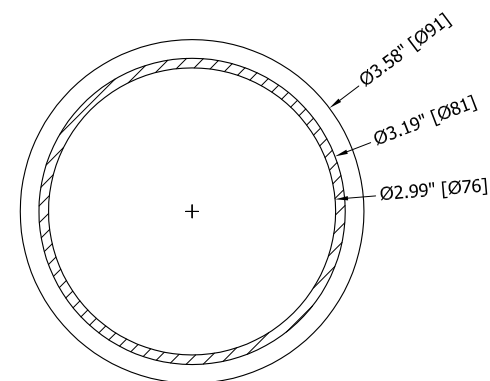
DRAWING TITLE: 12/13C15 GROUT CAP			
MATERIAL: NYLON ASTM D5989	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY		DRAWING NUMBER: FINC-13C15-005	PART NUMBER: FREYSSINET 12/13C15
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166 Telephone: (703) 378-2500 Fax: (703) 378-2700			
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ELEVATION

GTI GENERAL TECHNOLOGIES, INC. STAFFORD

PRINT ON DUCT:
 "GTI GENERAL TECHNOLOGIES, INC. STAFFOR, TEXAS X3F
 U.S. & FOREIGN PATENT PENDING P.N. 220300 76mm"



SECTION A-A

NOTES:

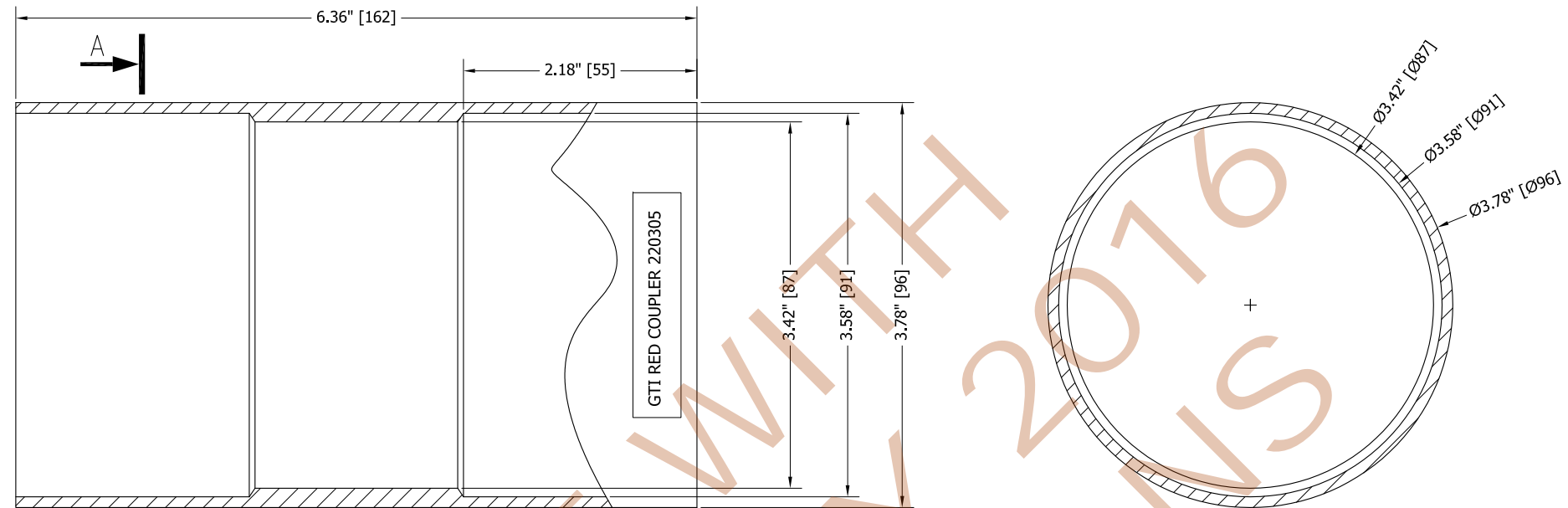
- MATERIAL: POLYPROPYLENE (ASTM D4101)
 - STANDARD FIT FOR 12/13C15
 - DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
- DUCT MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.1.1 AND 960-2.4.4

PRELIMINARY SPECIFICATIONS ONLY FOR USE WITH 2016

REV.	DATE	DRAWN	CHECKED	APPROVED	REVISIONS
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0	10/1/2012	JF	TG/BG	AM	ORIGINAL

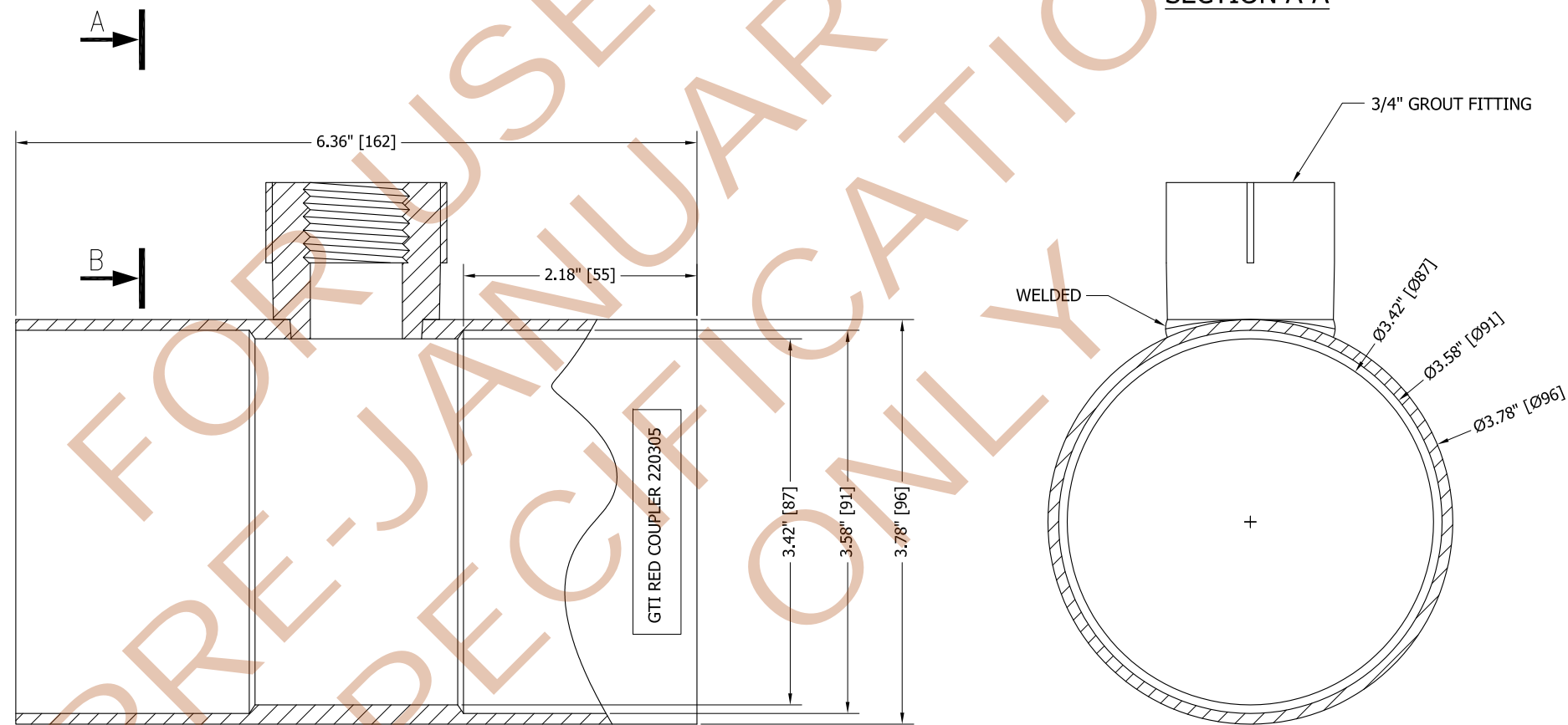


DRAWING TITLE: 12/13C15 76mm GTI DUCT			
MATERIAL: POLYPROPYLENE (ASTM D4101)	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:2
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-13C15-006	PART NUMBER: 220300	
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166 Telephone: (703) 378-2500 Fax : (703) 378-2700 <small>COPYRIGHT & MODIFICATION RESERVED</small>			
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SECTION / ELEVATION COUPLER W/O VENT

SECTION A-A



SECTION / ELEVATION COUPLER W/ VENT

SECTION B-B

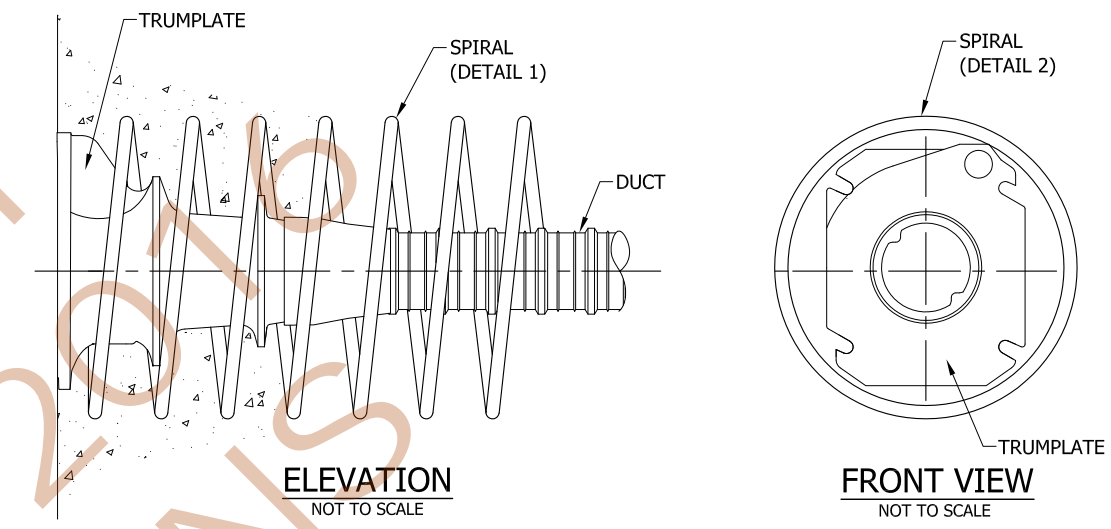
NOTES:

- MATERIAL: POLYPROPYLENE (ASTM D4101)
- STANDARD FIT FOR 76mm DUCT
- COUPLER MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.1.5 AND 960-2.4.4

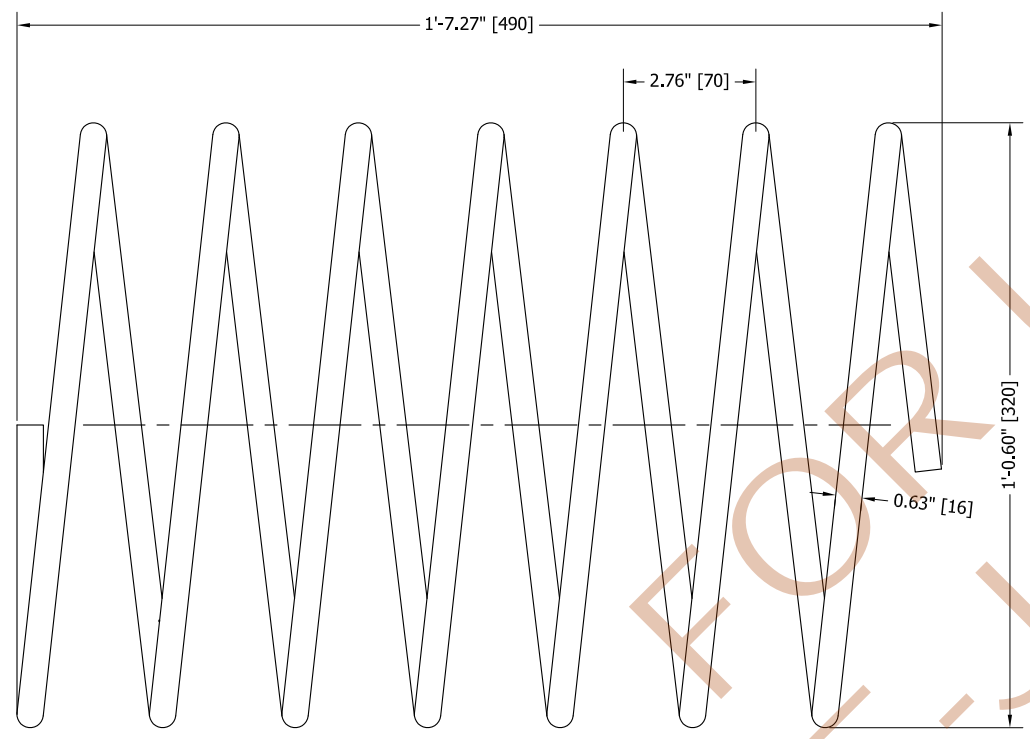
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1	7/19/2013	JF	TG/BG	AM	FIRST REVISION
0	10/1/2012	JF	TG/BG	AM	ORIGINAL



DRAWING TITLE: 12/13C15 76mm GTI SLIP-ON COUPLER W/ OR W/O VENT			
MATERIAL: POLYPROPYLENE (ASTM D4101)	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:1.5
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY		DRAWING NUMBER: FINC-13C15-007	PART NUMBER: 220305
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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SPIRAL REINFORCEMENT



**DETAIL 1
ELEVATION**



**DETAIL 2
FRONT VIEW**

NOTES:

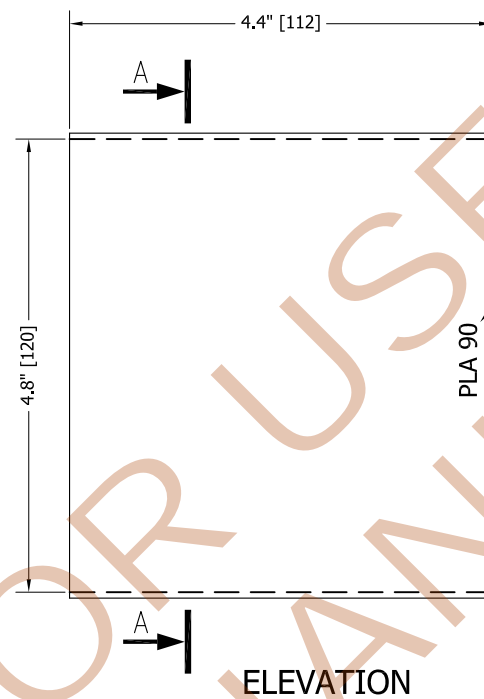
- MATERIAL: STEEL GR. 60ksi; ASTM A615
- #5 REBAR
- 7 TURNS IN TOTAL
- 2.76" PITCH
- ϕ 12.6"

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

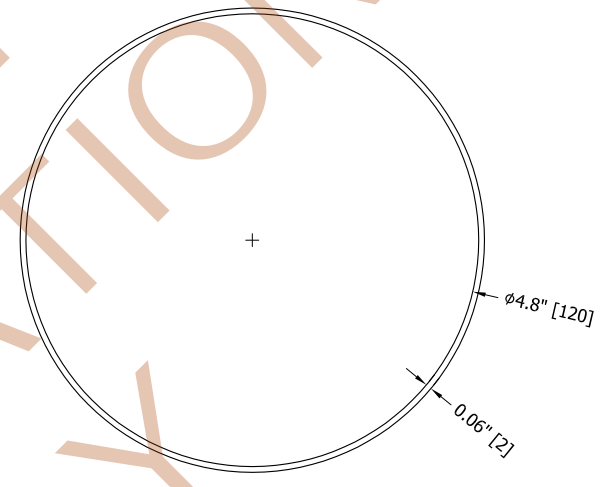


DRAWING TITLE: 13C15 SPIRAL REINFORCEMENT			
MATERIAL: STEEL GR. 60ksi; ASTM A615	PROJECT: FDOT	DRAWING SIZE: 11x17	SCALE: 1:4
DIMENSIONS: INCH[mm] mm FOR REFERENCE ONLY	DRAWING NUMBER: FINC-13C15-008	PART NUMBER: N/A	
FREYSSINET, INC 44880 FALCON PLACE, SUITE 100 STERLING, VA 20166		<small>COPYRIGHT & MODIFICATION RESERVED</small> Telephone: (703) 378-2500 Fax: (703) 378-2700	
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FOR USE WITH JANUARY 2016 SPECIFICATIONS ONLY



ELEVATION



SECTION A-A

- NOTES:
- MATERIAL: POLYOLEFIN W/ ADHESIVE
 - TUBULAR SLEEVE DIAMETER: 4.8" [120mm] AS SUPPLIED
3.3" [81mm] FULLY RECOVERED
 - HEAT SHRINK SLEEVE MEETS OR EXCEEDS FDOT REQUIREMENTS OF SECTION 960-2.2.1.8

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



DRAWING TITLE: 12/13C15 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-13C15-009	PART NUMBER: PLA 90
FREYSSINET, INC		44880 FALCON PLACE, SUITE 100 STERLING, VA 20166 Telephone: (703) 378-2500 Fax : (703) 378-2700	
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