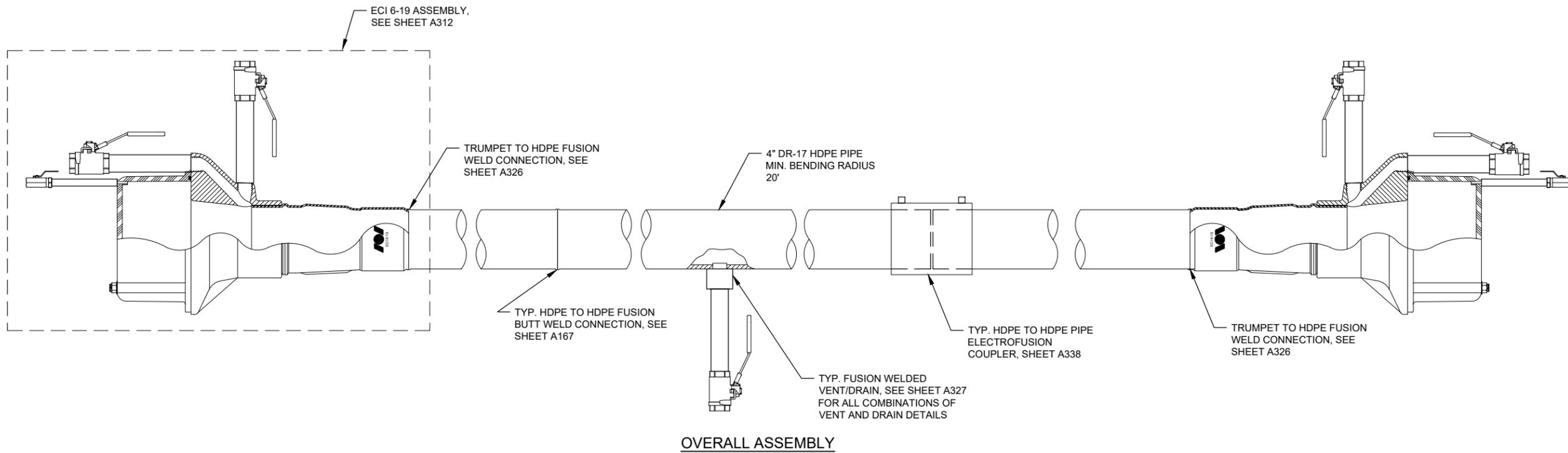


ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal

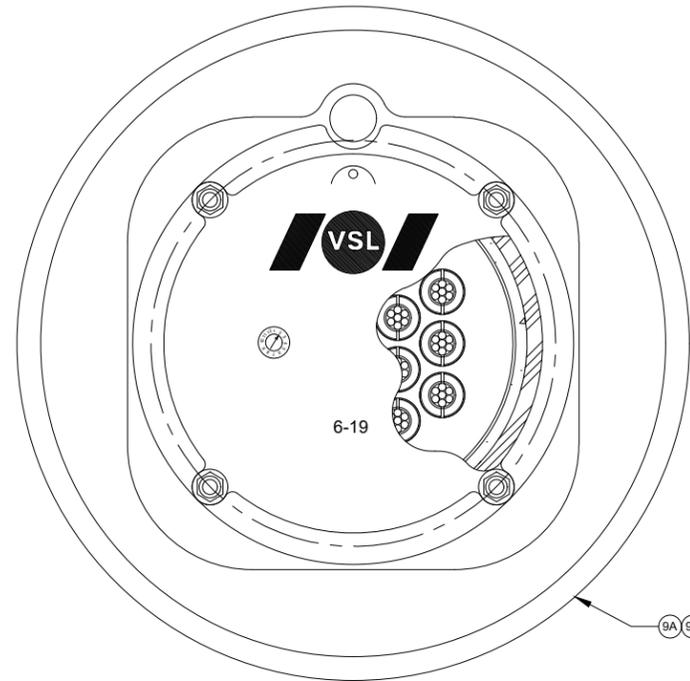


OVERALL ASSEMBLY

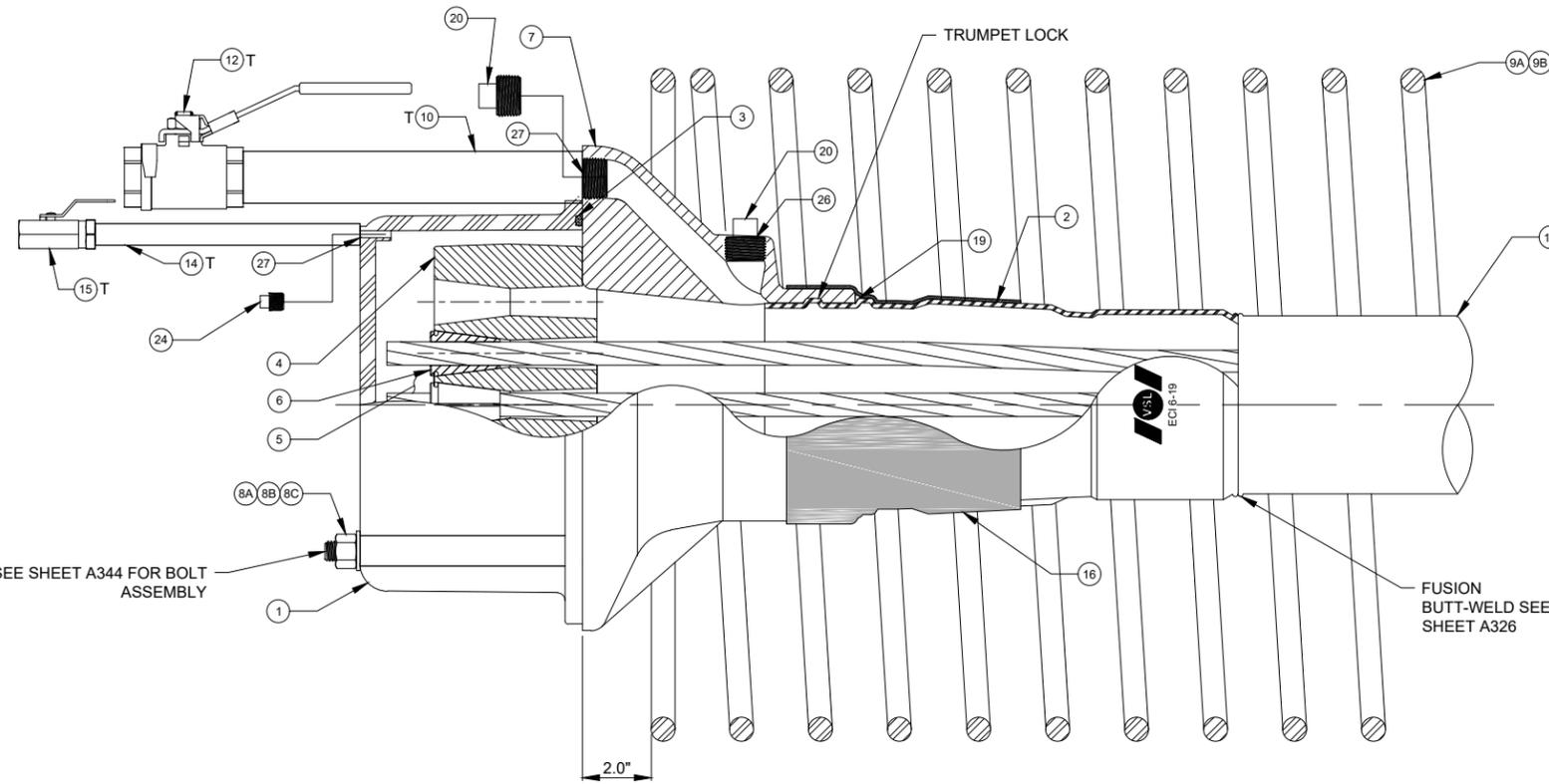
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PROJECT INFORMATION:		SYSTEM DRAWING	
PROJECT NO:	1	SCALE:	NTS
TITLE:		ECI 6-19 OVERALL ASSEMBLY WITH FLEXIBLE FILLER	
SHEET NO:		A313	
FOR APPROVAL		CDL	ZX
NO		BY	CHK
DESCRIPTION		DATE	
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 <p>structural TECHNOLOGIES A Structural Group Company</p> <p>Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p> <p>STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD., SUITE 118 FORT WORTH, TX 76156</p> <p>PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET</p>			

ELECTRONIC FILE LOCATION: \\VSL\System Drawings\Work in Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



END VIEW



ELEVATION VIEW

NOTE: ITEMS MARKED WITH A "T" ARE TEMPORARY AND ARE NOT A PERMANENT PART OF THE SYSTEM.

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	1	6-19 ANCHORAGE CAP W/ 1/4" NPT FRONT PORT	ABS	02GC61902
2	1	ECI 6-19 TRUMPET	HDPE	02BP4322
3	1	6-19 ANCHORAGE CAP O-RING	HNBR	02WX6024
4	1	ECI 6-19 ANCHOR HEAD	A536 GR 80-55-06	02AH0038
5	-	FLEXIBLE FILLER	FDOT APL	-
6	19	1.6G WEDGE .6 1.77 W/GROOVE	AISI 11-L-17/12-L-14	02WG0008
7	1	NCS 6-19 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)	A536 GR80-55-06	02BP6038V
8A	1 SET	1/2"-13 THREADED ROD X 7"	(316L) STAINLESS	02WX5033D
8B	1 SET	1/2"-13 NUT	(316L) STAINLESS	02WX5033D
8C	1 SET	1/2" WASHER	(316L) STAINLESS	02WX5033D
9A	1	SPIRAL ECI 6-19 5500 (#5 15" DIA., 10 1/2 TURNS, 2" PITCH)	A615 GR 60	02BP0094
9B	1	SPIRAL ECI 6-19 3500 (#5 17" DIA., 11 1/2 TURNS, 2" PITCH)	A615 GR 60	02BP0093
10	1	1" NPT STEEL NIPPLE	SCH 40 STEEL	-
12	1	1" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01926
14	1	1/4" NPT STEEL NIPPLE	SCH 40 STEEL	-
15	1	1/4" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01924
16	1	CANUSA KLNN-115 WS BK/L X 9" HEAT SHRINK SLEEVE	POLYOLEFIN	02DT0514
17	-	4" DR-17 PIPE	HDPE	-
19	-	BONDUIIT - SEAL AID 1/4" ALL AROUND	-	-
20	1	1" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01958
24	1	1/4" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01956
26	-	BONDUIIT	-	-
27	-	SILICONE GREASE	-	-

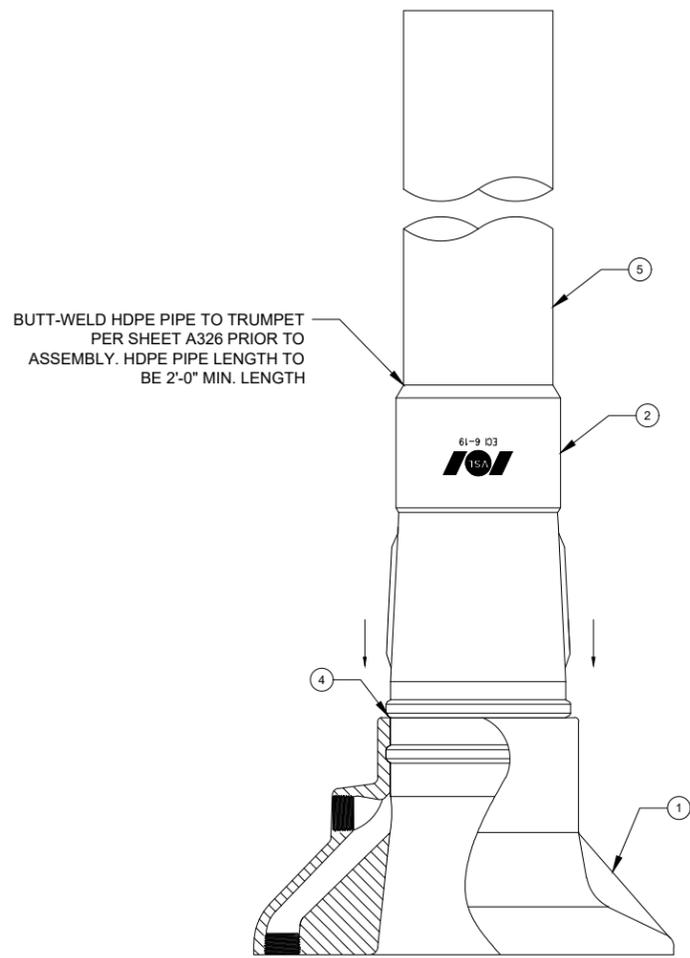
INSTALLATION PROCEDURES (INSTALLATION PROCEDURE IS GENERIC. FOLLOW THE PROJECT SPECIFIC REQUIREMENTS AND THE FDOT SPECIFICATIONS)

- ASSEMBLE TRUMPET INTO THE BEARING PLATE. APPLY 1/4" BONDUIIT ALL AROUND LIP OF BEARING PLATE PRIOR TO INSTALLING TRUMPET. USE SLOT TO ALIGN PLATE AND TRUMPET. INSERT TRUMPET UNTIL LOCKING TABS ENGAGE.
- LIGHTLY GREASE ANCHORAGE CAP BOLTS. USE MOUNTING HOLES IN BEARING PLATE TO MOUNT BEARING PLATE ASSEMBLY TO FORM. SECURE BEARING PLATE ASSEMBLY WITH ANCHORAGE CAP BOLTS. USE CARE NOT TO DAMAGE THREADS.
- INSTALL AND SECURE SPIRAL.
- INSTALL FILLER PORT CONNECTIONS. SEAL ALL TEMPORARY CONNECTIONS WITH PIPE DOPE/SILICONE GREASE (BY OTHERS), AND SEAL ALL PERMANENT CONNECTIONS WITH BONDUIIT OR SIMILAR (BY OTHERS).
- SECURE DUCT SUPPORTS @ 2" MAX. INSERT MANDRELS INTO TRUMPETS.
- PER FDOT SPECIFICATION SECTION 462-8.2.1.2, A VACUUM TEST IS REQUIRED PRIOR TO CONCRETE PLACEMENT.
- CONCRETE PLACEMENT OCCURS BY OTHERS.
- INSTALL STRAND. LEAVE SUFFICIENT STRAND FOR STRESSING EQUIPMENT.
- INSTALL ANCHOR HEADS. MAKE SURE WEDGE CAVITIES ARE CLEAN AND RUST FREE. USE WIRE BRUSH TO CLEAN IF NECESSARY.
- ONLY STRESS STRANDS IF CONCRETE HAS REACHED REQUIRED STRENGTH SPECIFIED ON DRAWINGS.
- ELONGATION SHOULD BE WITHIN ±7%.
- AFTER ENGINEERS APPROVAL, STRAND TAILS MAY BE CUT.
- AFTER FORM WORK IS REMOVED, USE MOUNTING BOLTS TO INSTALL ANCHORAGE CAP. REINSTALL O-RING INTO ANCHORAGE CAP.
- SYSTEM IS NOW READY TO AIR TEST.
- PER THE FDOT SPECIFICATION SECTION 462-8.2.2, A SECOND AIR PRESSURE TEST IS REQUIRED AFTER STRAND STRESSING AND PRIOR TO WAX INJECTION.
- WAX TENDON PER WAX SPEC.

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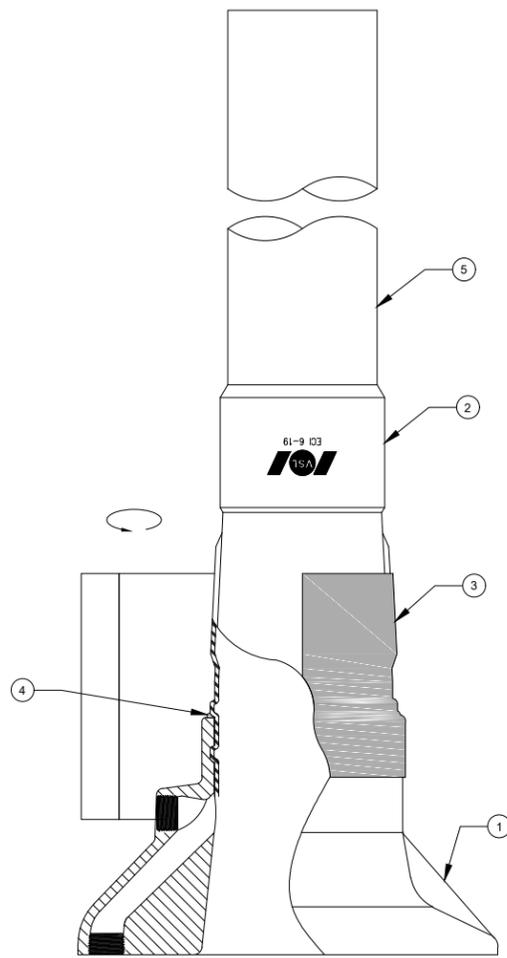
<p style="text-align: center;">structural TECHNOLOGIES A Structural Group Company</p> <p style="text-align: center; font-size: small;">Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p> <p style="text-align: center; font-size: x-small;">STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD, SUITE 118 FORT WORTH, TX 76156 PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET</p>									
PROJECT INFORMATION:									
SYSTEM DRAWING					TITLE: ECI 6-19 ASSEMBLY WITH FLEXIBLE FILLER				
PROJECT NO: --					SCALE: NTS				
SHEET NO: A312									
		CDL ZX		14MAR2018		BY		CHK	
		CDL ZX		14MAR2018		DESCRIPTION		DATE	
		NO		FOR APPROVAL		DESCRIPTION		DATE	
		NO		NO		NO		NO	
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ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work In Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



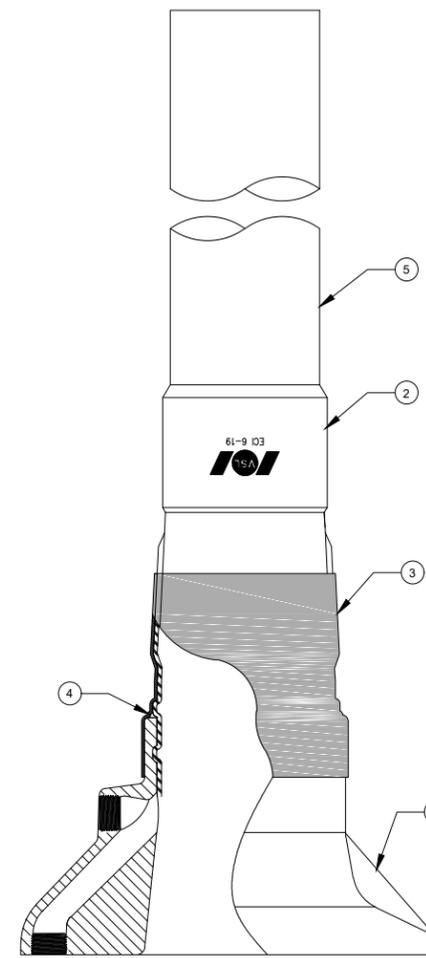
STEP 1

- STEP 1**
- ORIENT BEARING PLATE IN VERTICAL POSITION.
 - INSERT TRUMPET INTO BEARING PLATE, ROTATING UNTIL LOCKED IN PLACE.
 - APPLY BONDUIT AROUND OUTSIDE OF TRUMPET AS SHOWN (1/4" MIN. BEAD).
 - WAIT MIN. 1 HOUR FOR BONDUIT TO SET.



STEP 2

- STEP 2**
- AFTER BONDUIT HAS SET FOR 1 HOUR, WRAP HEAT SHRINK SLEEVE AROUND BEARING PLATE AND TRUMPET AS SHOWN.



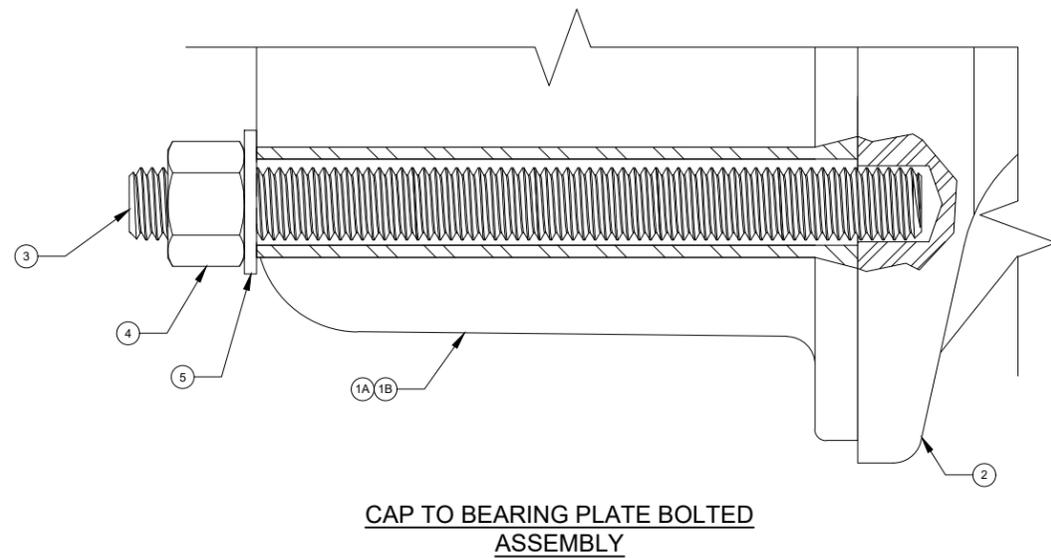
STEP 3

- STEP 3**
- FOLLOW HEAT SHRINK INSTALLATION INSTRUCTIONS (PROVIDED AS A SEPARATE APPENDIX).

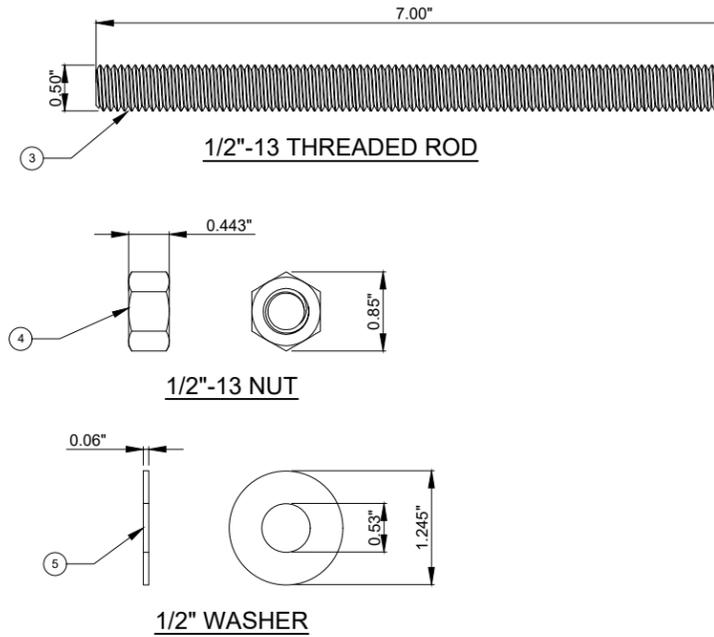
ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	1	ECI 6-19 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)	A536 GR80-55-06	02BP0038V
2	1	ECI 6-19 TRUMPET	HDPE	02BP4322
3	1	CANUSA KLNN-115 WS BK/L X 9" HEAT SHRINK SLEEVE	POLYOLEFIN	02DT0514
4	-	BONDUIT	-	-
5	1	4" DR-17 PIPE	HDPE	-

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<p>PROJECT INFORMATION:</p> <p style="text-align: center;">SYSTEM DRAWING</p> <p style="text-align: center;">ECI 6-19 HEAT SHRINK SLEEVE ASSEMBLY</p>	<p>TITLE:</p> <p style="text-align: center;">ECI 6-19 HEAT SHRINK SLEEVE ASSEMBLY</p>	<p>PROJECT NO:</p> <p style="text-align: center;">SYSTEM</p>	<p>SCALE:</p> <p style="text-align: center;">NTS</p>
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<p>structural TECHNOLOGIES A Structural Group Company</p> <p>Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p> <p>DALLAS OFFICE 15600 TRINITY BLVD., SUITE 118 FORT WORTH, TX 76156</p> <p>PHONE: (817) 545-4807 FAX: (817) 545-4827 WWW.VSL.NET</p>		<p>CDL</p> <p style="text-align: center;">ZX</p>	<p>DATE</p> <p style="text-align: center;">14MAR2018</p>
<p>BY</p> <p style="text-align: center;">CHK</p>		<p>DATE</p> <p style="text-align: center;">14MAR2018</p>	



CAP TO BEARING PLATE BOLTED ASSEMBLY



ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1A	1	6-19 ANCHORAGE CAP W/ 1/4" NPT FRONT PORT	ABS	02GC61902
1B	1	6-19 ANCHORAGE CAP W/ 1/4" NPT TOP PORT	ABS	02GC61903
2	1	ECI 6-19 BEARING PLATE, GALV	A536 GR 80-55-06	02BP6038V
3	1 SET	1/2"-13 THREADED ROD X 7"	(316L) STAINLESS	02WX5033D
4	1 SET	1/2"-13 NUT	(316L) STAINLESS	02WX5033D
5	1 SET	1/2" WASHER	(316L) STAINLESS	02WX5033D

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PROJECT INFORMATION:

SYSTEM DRAWING

ECI 6-19 BOLT ASSEMBLY

PROJECT NO: --
SCALE: NTS
SHEET NO: A344

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 STRUCTURAL TECHNOLOGIES, LLC
 DALLAS OFFICE
 15600 TRINITY BLVD, SUITE 118
 FORT WORTH, TX 76156
 PHONE: (817) 545-4877
 FAX: (817) 545-4827
 WWW.VSL.NET

NO

FOR APPROVAL

CDL

ZX

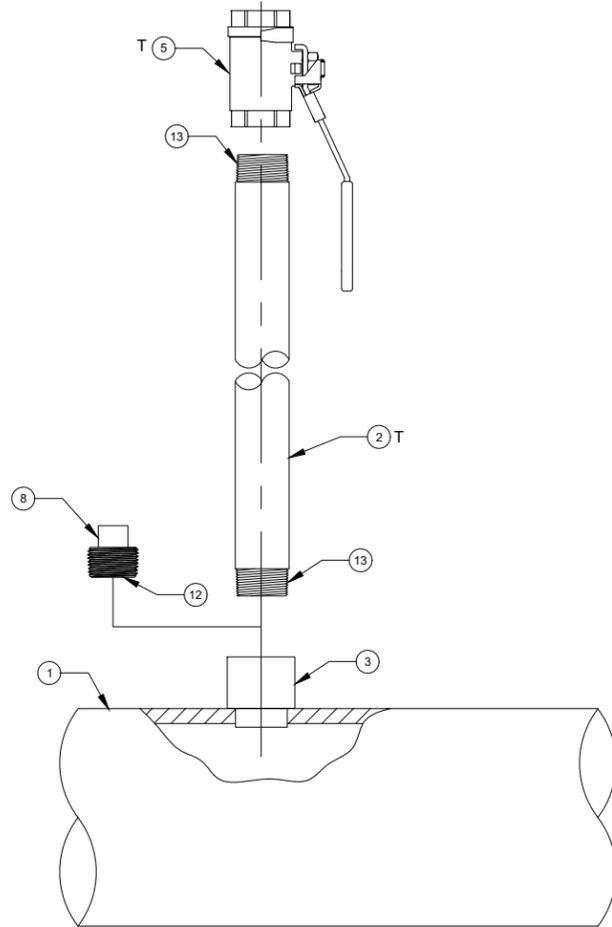
14MAR2018

DATE

BY
CHK

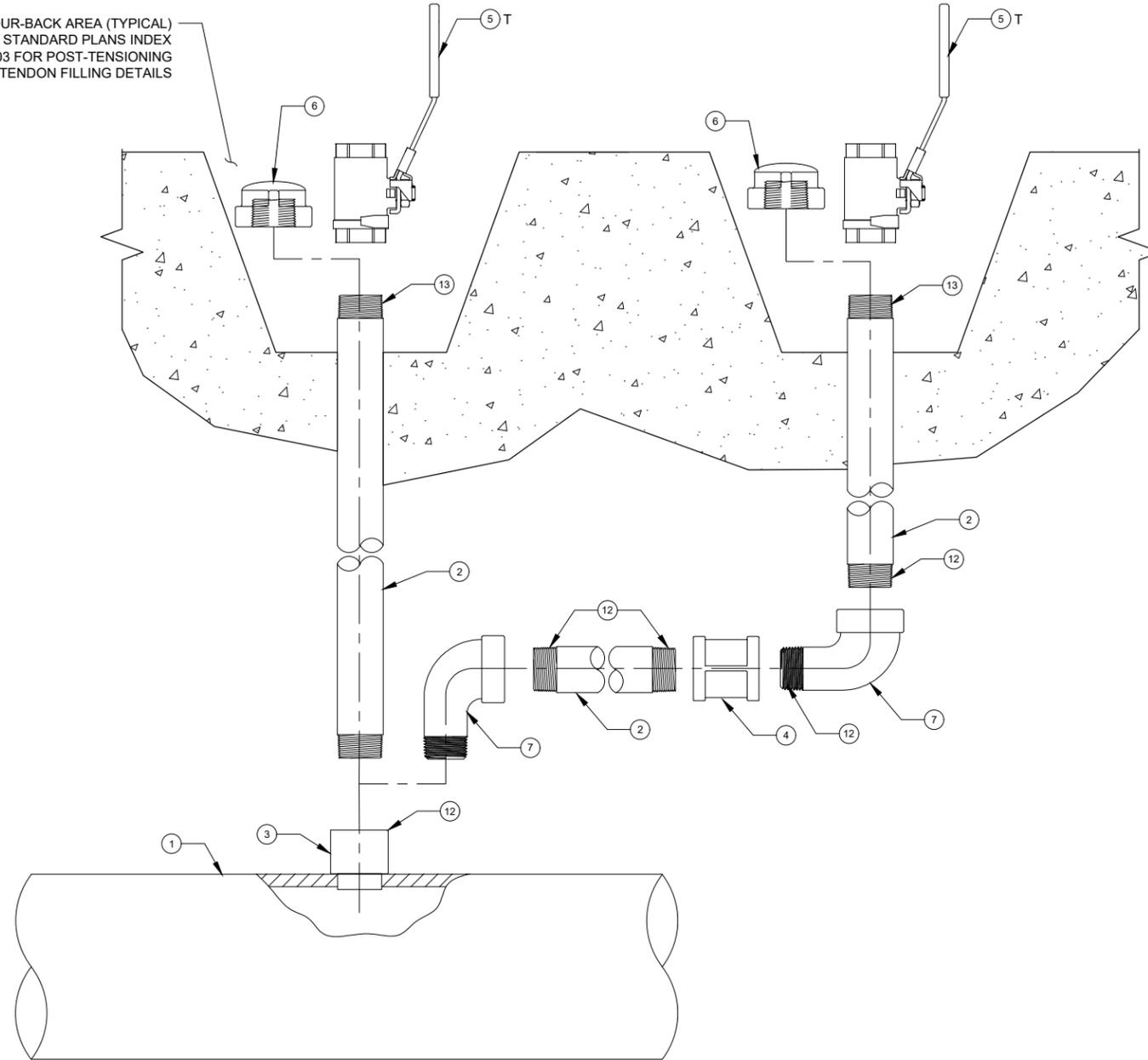
DESCRIPTION

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EXTERNAL OPTION

EPOXY GROUT POUR-BACK AREA (TYPICAL)
- REFER TO FDOT STANDARD PLANS INDEX
462-003 FOR POST-TENSIONING
ANCHORAGE AND TENDON FILLING DETAILS



INTERNAL OPTION

3/4" FNPT SMOOTH GROUT PORT INSTALLATION

1. CLEAN PIPE PRIOR TO GROUT PORT INSTALLATION.
2. DRILL $\varnothing 7/8"$ HOLE INTO PIPE.
3. CONNECT THE SOCKET WELDING DEVICE TO THE POWER SOURCE.
4. ALLOW THE SOCKET WELDING DEVICE TO REACH ITS WORKING TEMPERATURE.
5. SIMULTANEOUSLY, INSERT MALE ADAPTER OF SOCKET WELDING DEVICE FROM DRILLED HOLE AND GROUT PORT FROM FEMALE ADAPTER.
6. APPLY LIGHT PRESSURE FOR 20-25 SECONDS BY PUSHING THE GROUT PORT WITH THE PALM OF HAND.
7. SIMULTANEOUSLY, REMOVE SOCKET WELDING DEVICE FROM DRILLED HOLE AND GROUT PORT FROM FEMALE ADAPTER.
8. INSERT GROUT PORT INTO HOLE UNTIL THE SHOULDER IS REACHED.
9. THIS OPERATION SHOULD BE CARRIED OUT AS QUICKLY AND CAREFULLY AS POSSIBLE, WITHIN 5 SECONDS. FIRMLY HOLD THE PIECES TOGETHER FOR A MINIMUM OF 10 SECONDS.

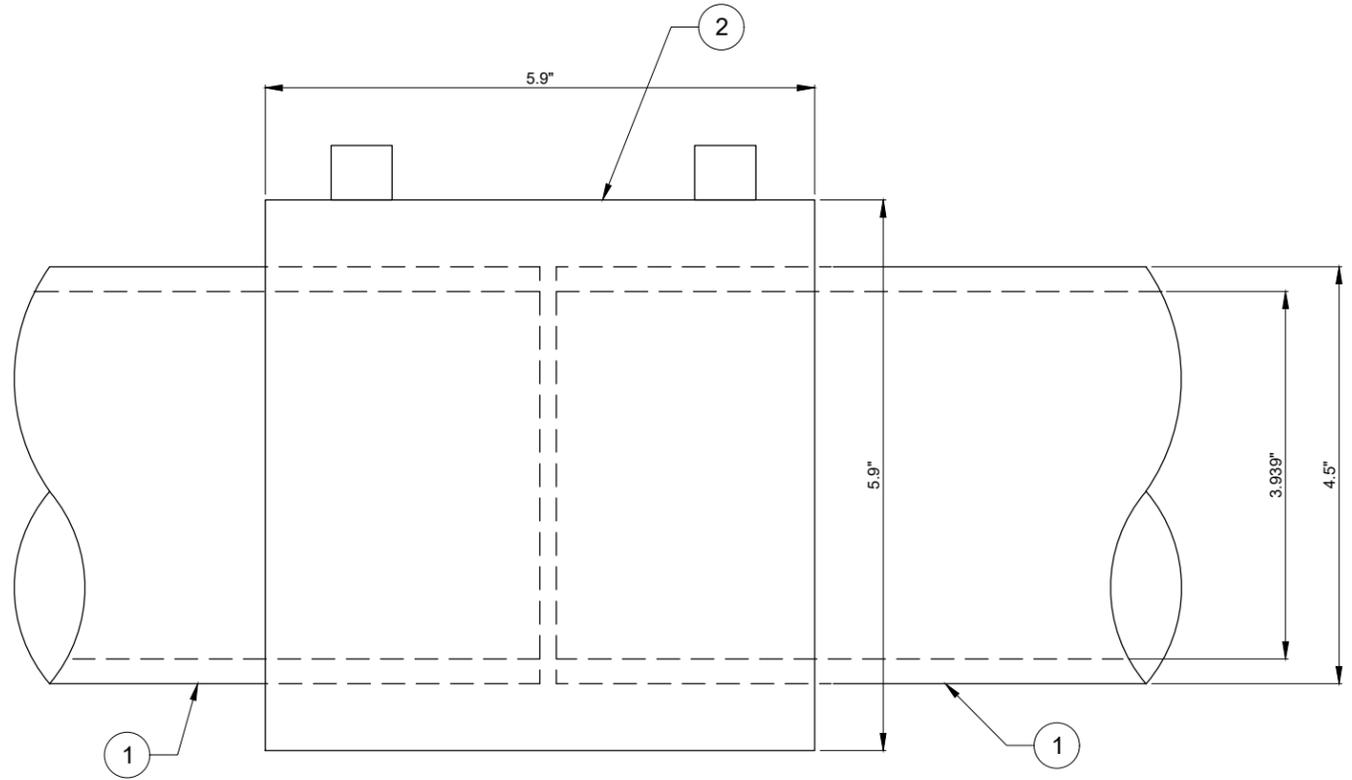
NOTES

1. ITEMS MARKED WITH A "T" ARE TEMPORARY AND ARE NOT A PERMANENT PART OF THE SYSTEM.
2. THIS ASSEMBLY CAN BE APPLIED IN ANY REQUIRED ORIENTATION TO CREATE EITHER A VENT OR A DRAIN.
3. ALL COMPONENTS MUST BE PRESSURE RATED FOR 150 PSI.
4. CONCRETE COVER MUST MEET FDOT STRUCTURES DESIGN GUIDELINES SECTION 1.4.2

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ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	-	4" DR-17 PIPE	HDPE	-
2	1	3/4" NPT STEEL NIPPLE	SCH 40 STEEL	-
3	1	3/4" FNPT SMOOTH GROUT PORT	POLYETHYLENE	02DT0253
4	1	3/4" NPT F/F COUPLER	SCH 40 STEEL	02DT01952
5	1	3/4" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01925
6	1	3/4" NPT STEEL CAP	SCH 40 STEEL	02DT01950
7	2	3/4" FNPT X MNPT STEEL ELBOW	SCH 40 STEEL	02DT01954
8	1	3/4" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01957
12	-	BONDUIIT	-	-
13	-	SILICONE GREASE	-	-

<p>Structural Technologies A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p>					
PROJECT INFORMATION: SYSTEM DRAWING			TITLE: 4" HDPE PIPE VENT ASSEMBLY		
PROJECT NO: --			SCALE: NTS		
SHEET NO:			A327		
FOR APPROVAL					
NO					
DESCRIPTION					
CDL BY CHK					
ZX					
14MAR2018					
DATE					



INSTALLATION PROCEDURE (SEE MANUFACTURER INSTRUCTION MANUAL FOR DETAILED INSTALLATION INSTRUCTIONS):

1. CUT SQUARE ENDS ON PIPE TO BE FUSED
2. CLEAN BOTH PIPE ENDS
3. SCRAPE BOTH PIPES MINIMUM 0.07" WITH PROVIDED SCRAPING TOOL
4. CLEAN BOTH PIPE ENDS USING 90% OR GREATER ISOPROPYL ALCOHOL
5. USE REROUNDING TOOLS PROVIDED TO CORRECT OVAL PIPE IF NECESSARY
6. USE ALIGNMENT CLAMPS PROVIDED TO ENSURE PIPE IS ALIGNED WITH COUPLER
7. SUPPORT PIPE AND COUPLER AND RESTRAIN PIPE TO PREVENT MOVEMENT
8. CHECK FOR GAPS AND ELIMINATE AS NECESSARY
9. ATTACH LEADS OF THE PROVIDED FUSION PROCESSOR TO THE COUPLER
10. SCAN THE BARCODE ON THE COUPLER
11. START FUSION PROCESS
12. WHEN FUSION PROCESS IS COMPLETE, UNPLUG THE LEADS
13. DO NOT MOVE OR PRESSURIZE THE JOINT COMPONENTS BEFORE COOLING TIME HAS COMPLETED

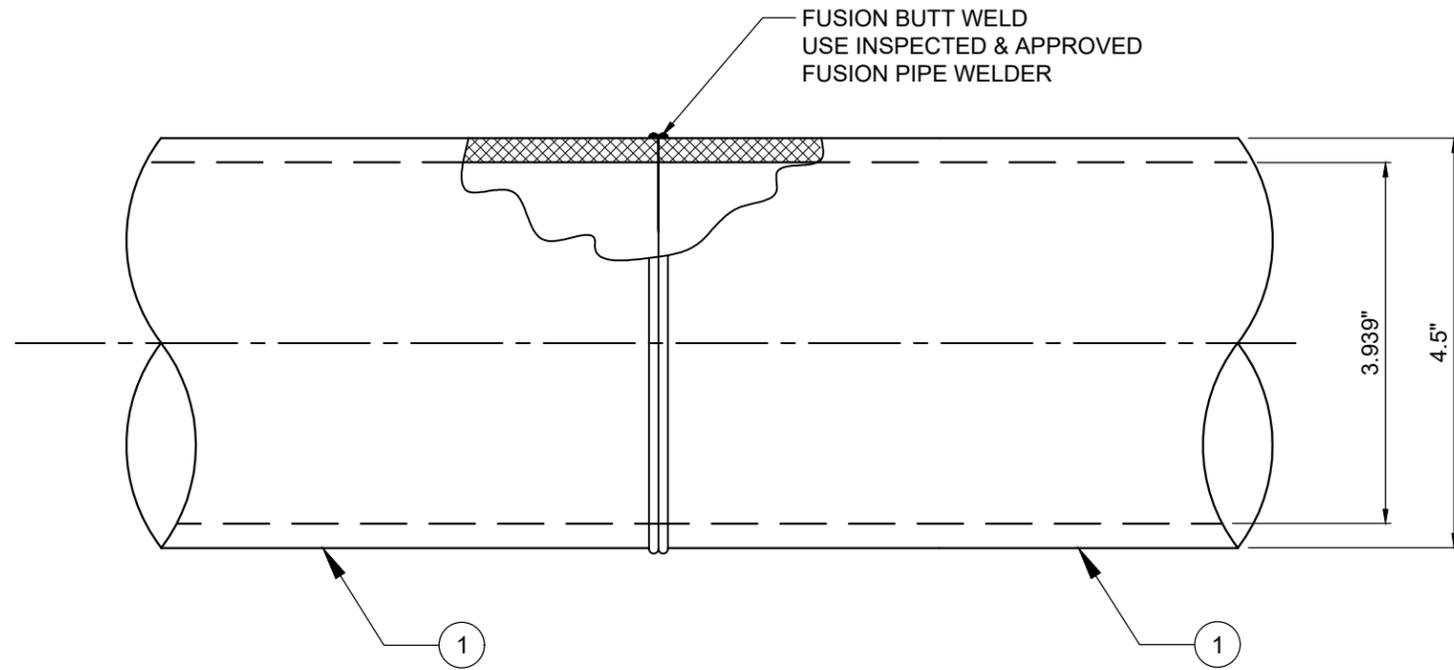
ITEM	QTY	DESCRIPTION	MATERIAL
1	-	4" HDPE PIPE DR-17	ASTM D3035
2	1	4" ELECTROFUSION COUPLER	COMPOSITE

NOTE:
FOLLOW COUPLER MANUFACTURER'S
INSTALLATION INSTRUCTIONS

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PROJECT INFORMATION:	SYSTEM DRAWING				
PROJECT NO: SYSTEM	TITLE: 4" HDPE PIPE TO 4" HDPE PIPE ELECTROFUSION COUPLER CONNECTION	SCALE: NTS	FOR APPROVAL	CDL	ZX
SHEET NO: A338			NO	BY	CHK
			DESCRIPTION		DATE
					14MAR2018

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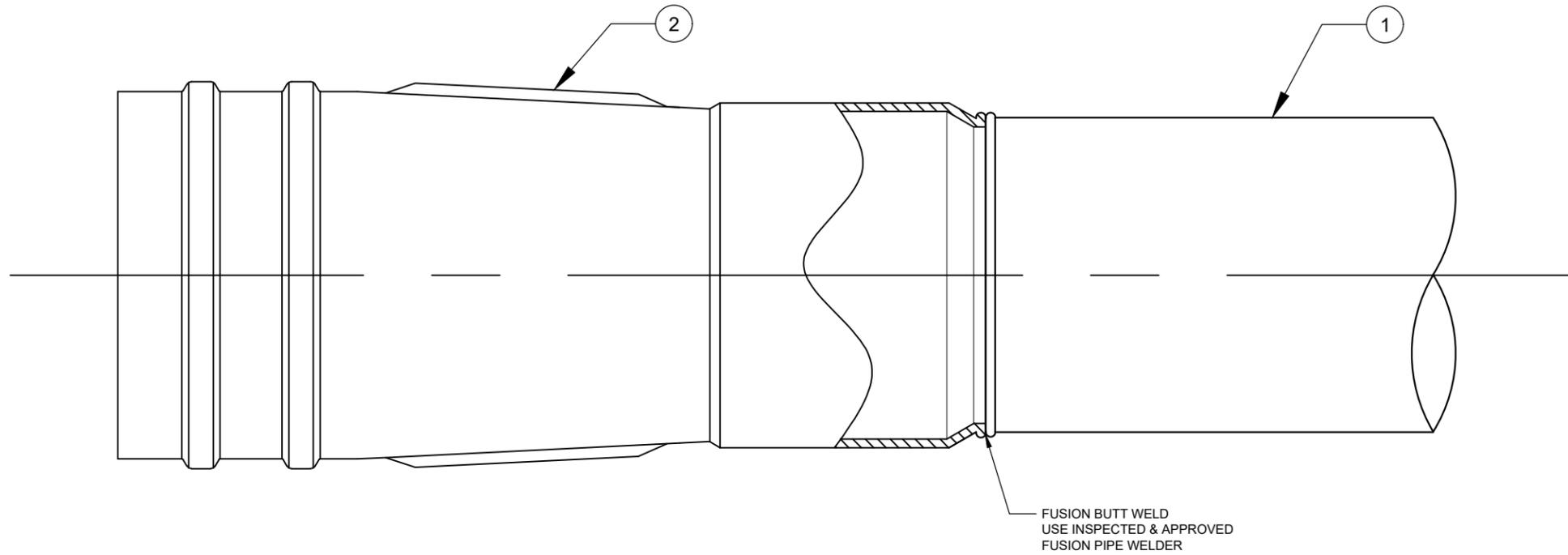
ELEVATION VIEW

ITEM	QTY	DESCRIPTION	MATERIAL
1	2	4" HDPE PIPE DR-17	ASTM D3035

- NOTES:
 1. HDPE 4" IPS/DR-17 MEETS FDOT 960 SPEC.
 2. SEE VSL BUTT-WELDING PROCEDURE IN APPENDIX

THESE SHOP DRAWINGS ILLUSTRATE THE DETAILS OF THE STRUCTURAL TECHNOLOGIES / VSL POST-TENSIONING SYSTEM. THEY WERE PREPARED IN CONFORMANCE WITH THE STRUCTURAL DESIGN PROVIDED TO STRUCTURAL TECHNOLOGIES / VSL BY PROJECT OWNER OR ITS REPRESENTATIVE. STRUCTURAL TECHNOLOGIES / VSL TOOK NO PART IN THE PREPARATION OR REVIEW OF SAID STRUCTURAL DESIGN AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY FOR IT. THE STAMP OR SEAL OF A STRUCTURAL TECHNOLOGIES / VSL EMPLOYEE ON THESE SHOP DRAWINGS PERTAINS ONLY TO THE TRANSFER OF THE FORCES REQUIRED BY THE ENGINEER OF RECORD ON THE STRUCTURAL DRAWINGS, AND NOT TO THE ADEQUACY OF THE STRUCTURAL DESIGN. NO WARRANTY, EXPRESSED OR IMPLIED, AS TO THE ADEQUACY OF THE STRUCTURAL DESIGN IS MADE BY VIRTUE OF ANY SUCH STAMP OR SEAL.

PROJECT INFORMATION:		TITLE BLOCK UPDATED		CDL	ZX	14MAR2018
SYSTEM DRAWING		APPROVED FOR CONSTRUCTION		GDH	ZX	08MAY2006
ECI 6-19 HDPE TO HDPE PIPE FUSION WELDED		APPROVED FOR CONSTRUCTION		GDH	NDS	11MAY2004
SHEET NO: A167		DESCRIPTION		BY	CHK	DATE
STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR REPRODUCTION OF THE INFORMATION, IS RESTRICTED TO THE SITE FOR WHICH IT WAS PREPARED AND TO THE MATERIAL AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.		NO				
 structural TECHNOLOGIES A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL PHONE: (817) 545-4807 FAX: (817) 545-4827 WWW.VSL.NET		STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD., SUITE 118 FORT WORTH, TX 76156				



TRUMPET TO HDPE PIPE ASSEMBLY

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY
1	1	4" HDPE PIPE DR-17	ASTM D3035	-
2	1	ECI 6-19 TRUMPET	HDPE	02BP4322

- NOTES:
 1. HDPE 4" IPS/DR-17 MEETS FDOT 960 SPEC.
 2. SEE VSL BUTT-WELDING PROCEDURE IN APPENDIX

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PROJECT INFORMATION:		STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR REPRODUCTION OF THE INFORMATION, IS RESTRICTED TO THE SITE FOR WHICH IT WAS PREPARED AND TO THE MATERIAL AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.	
PROJECT NO:	SYSTEM	APPROVED FOR CONSTRUCTION	NO
SHEET NO:	NTS	CDL ZX	14MAR2018
TITLE:		BY	DATE
TYPICAL ECI 6-19 TRUMPET TO HDPE PIPE BUTT FUSION CONNECTION		CHK	
SYSTEM DRAWING		CDL	
A326			

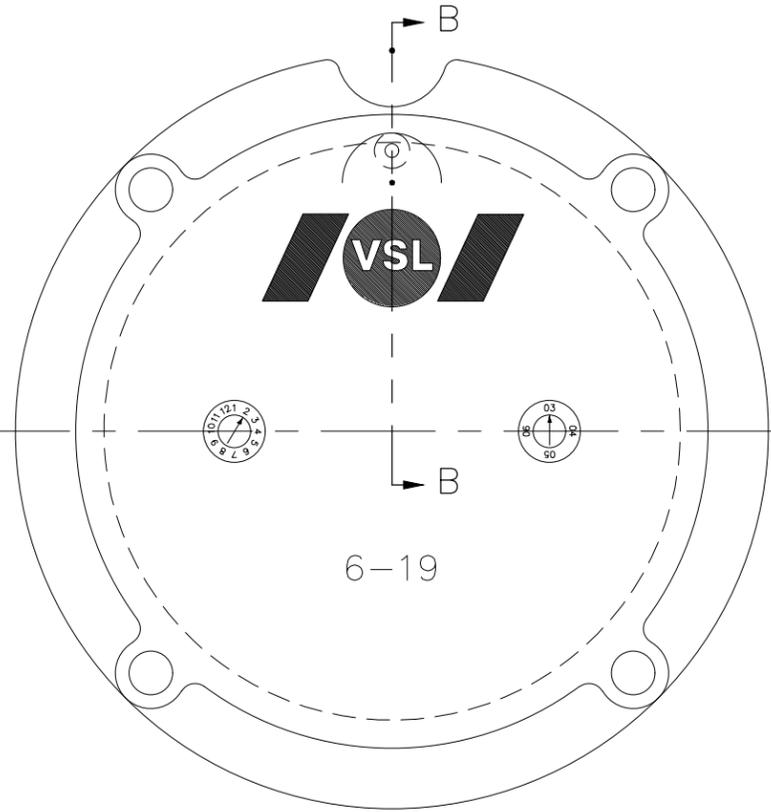
structural TECHNOLOGIES
 A Structural Group Company

Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

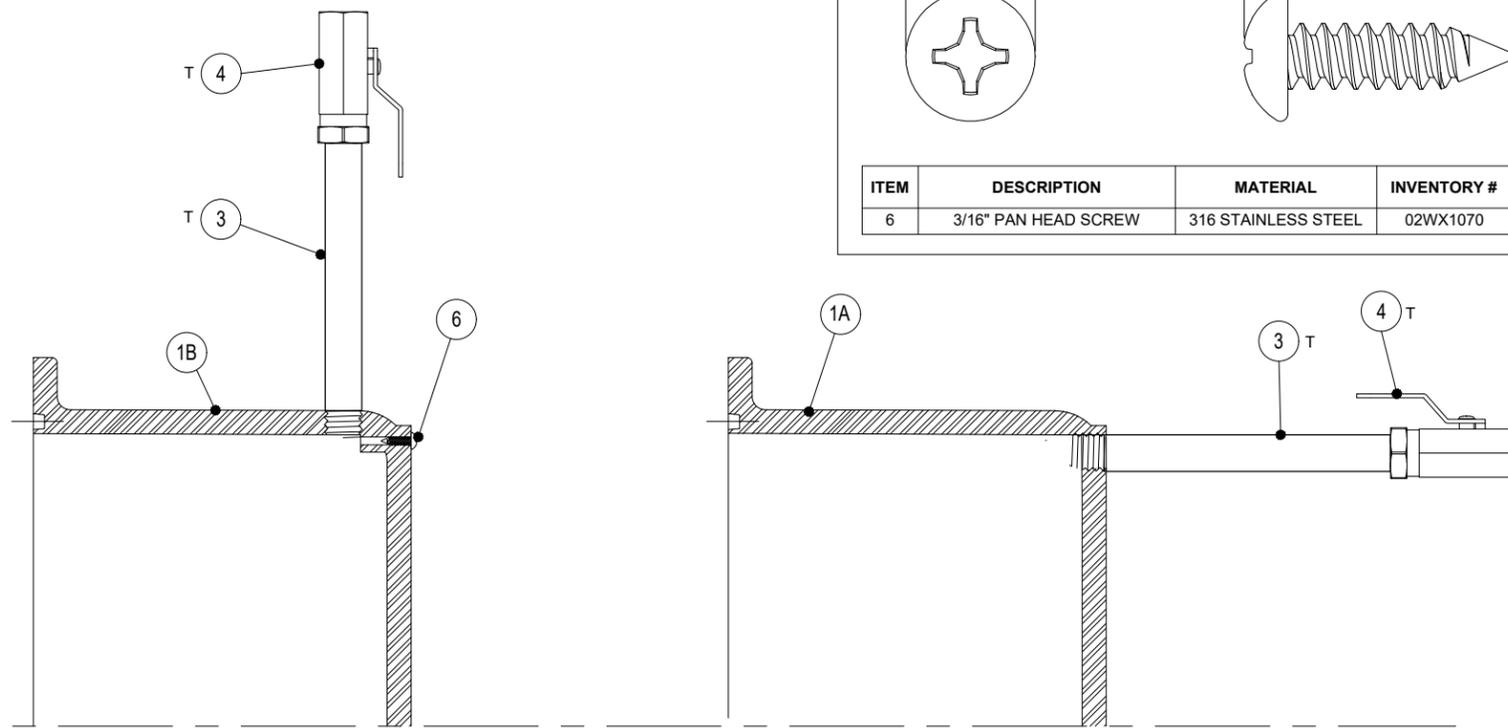
PHONE: (817) 545-4807
 FAX: (817) 545-4827
 WWW.VSL.NET

DALLAS OFFICE
 15600 TRINITY BLVD., SUITE 118
 FORT WORTH, TX 76156

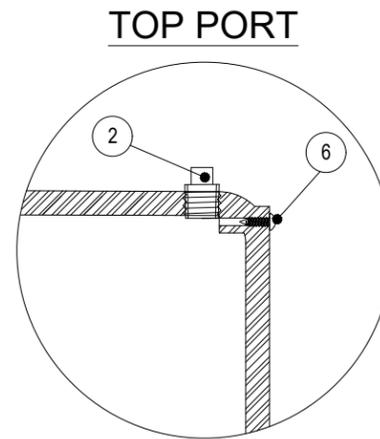
ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



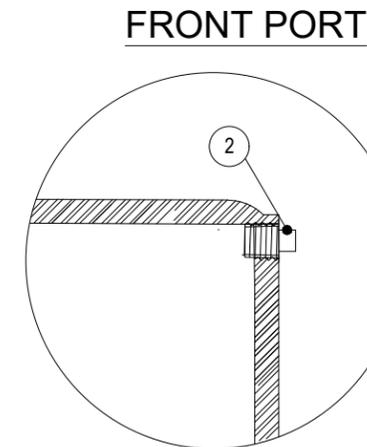
6-19 GROUT CAP



SECTION B-B



AFTER WAX



AFTER WAX

ITEM	DESCRIPTION	MATERIAL	INVENTORY #
6	3/16" PAN HEAD SCREW	316 STAINLESS STEEL	02WX1070

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY
6	1	3/16" PAN HEAD SCREW	316 STAINLESS STEEL	02WX1070
4	2	1/4" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01924
3	1	1/4" NPT STEEL NIPPLE	SCH 40 STEEL	-
2	1	1/4"Ø NPT STEEL PLUG	316 STAINLESS STEEL	02DT01956
1B	1	6-19 GROUT CAP W/ 1/4" NPT TOP PORT	ABS	02GC61903
1A	1	6-19 GROUT CAP W/ 1/4" NPT FRONT PORT	ABS	02GC61902

NOTE: ITEMS MARKED WITH A "T" ARE TEMPORARY AND ARE NOT A PERMANENT PART OF THE SYSTEM.

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structural TECHNOLOGIES
A Structural Group Company
Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL
PHONE: (817) 545-4877
FAX: (817) 545-4827
WWW.VSL.NET

PROJECT INFORMATION:
SYSTEM DRAWING

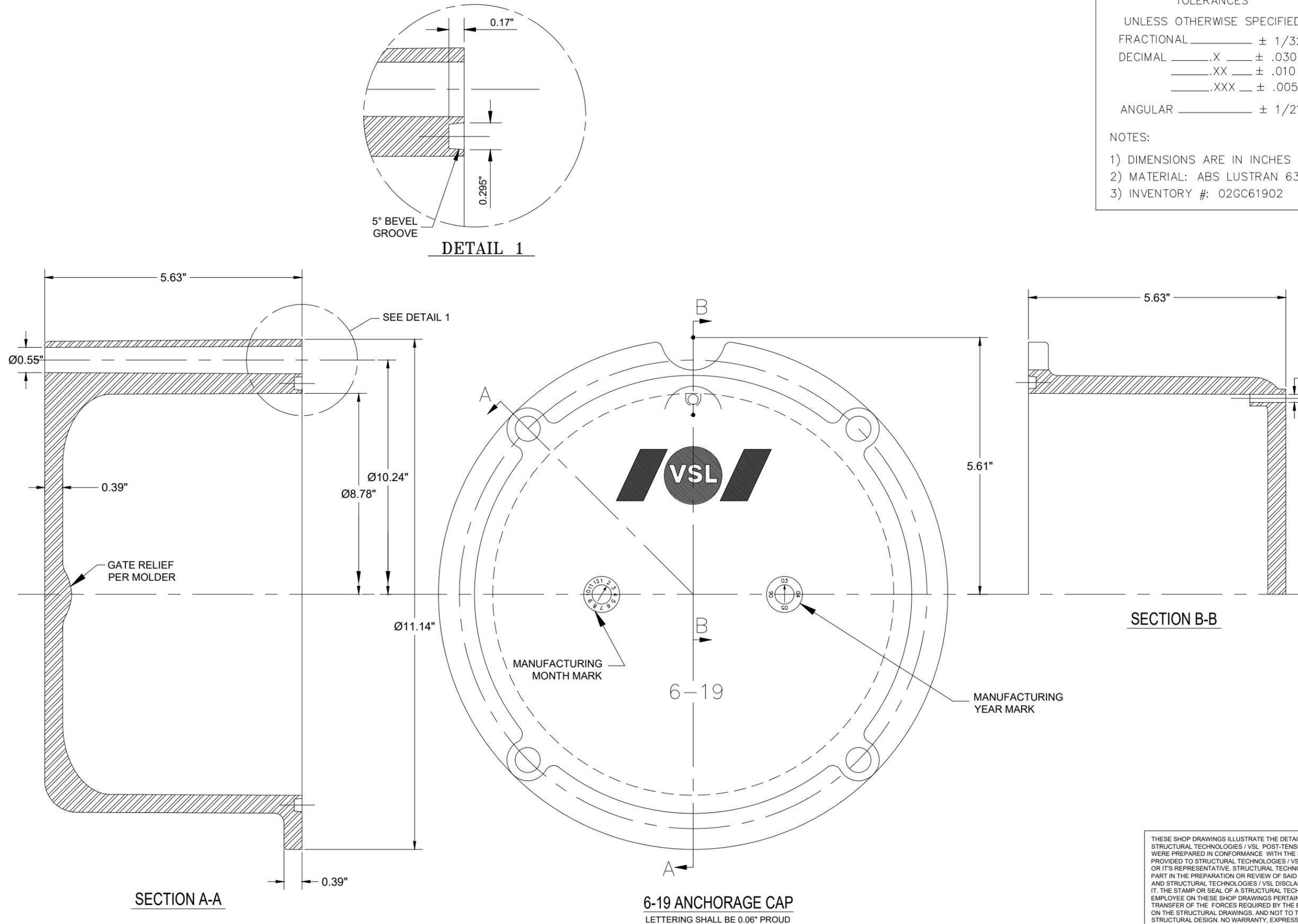
PROJECT NO: --
SCALE: NTS
SHEET NO: A337

TITLE:
ECI 6-19 ANCHORAGE CAP VENT DETAIL

CDL	ZX	DTS	DD	DTS	DD	BY	CHK	DATE

NO	DESCRIPTION
2	TITLE BLOCK UPDATED
1	VENT DETAILS
0	3/4" GROUT PORTS

ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\EC16-19 Flexible Filler Submittal



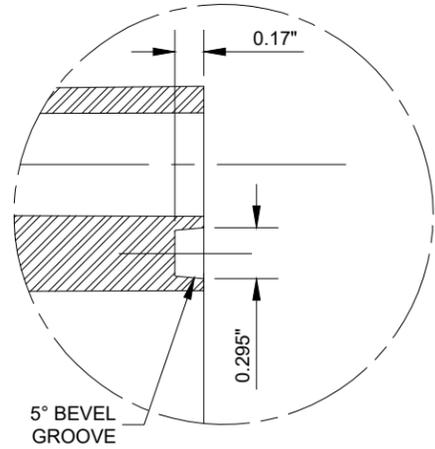
TOLERANCES
 UNLESS OTHERWISE SPECIFIED
 FRACTIONAL _____ ± 1/32
 DECIMAL _____.X ____ ± .030
 _____.XX ____ ± .010
 _____.XXX ____ ± .005
 ANGULAR _____ ± 1/2°

NOTES:
 1) DIMENSIONS ARE IN INCHES
 2) MATERIAL: ABS LUSTRAN 633
 3) INVENTORY #: 02GC61902

PROJECT INFORMATION:	SYSTEM DRAWING	TITLE: EC16-19 ANCHORAGE CAP W/ 1/4" NPT FRONT PORT	
PROJECT NO: ---	SCALE: NTS		
SHEET NO: C549			
<p>STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR ANY REPRODUCTION THEREOF, IS STRICTLY PROHIBITED. THE MATERIAL WAS PREPARED AND PROVIDED BY AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.</p>			
<p>structural technologies A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET</p>			
4	TITLE BLOCK UPDATED	CDL	14MAR2018
3	GATE RELIEF ADDED	GB	01OCT2010
2	ISSUED FOR FABRICATION	LS	29JAN2004
1	ADDED MANUFACTURING MARKS	LS	19JAN2004
NO	DESCRIPTION	BY	DATE
		CHK	

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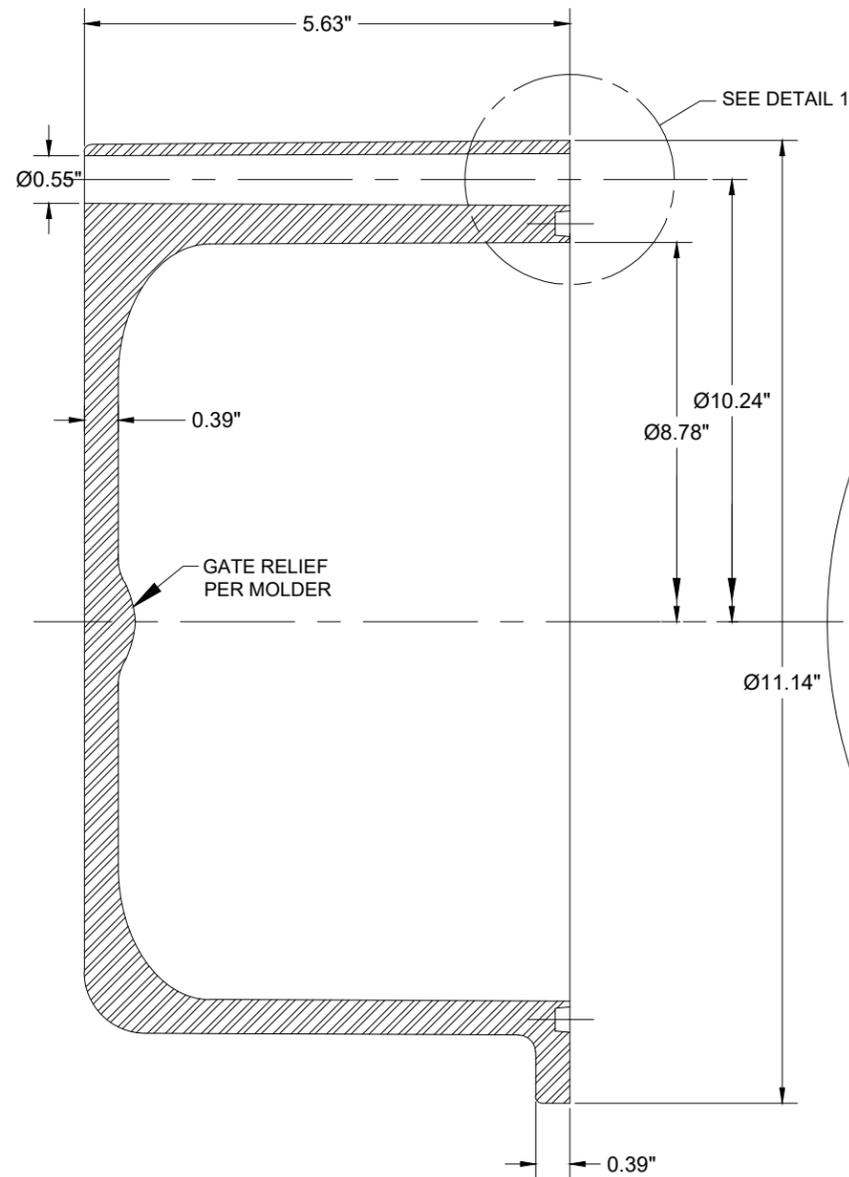
ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\EC16-19 Flexible Filler Submittal



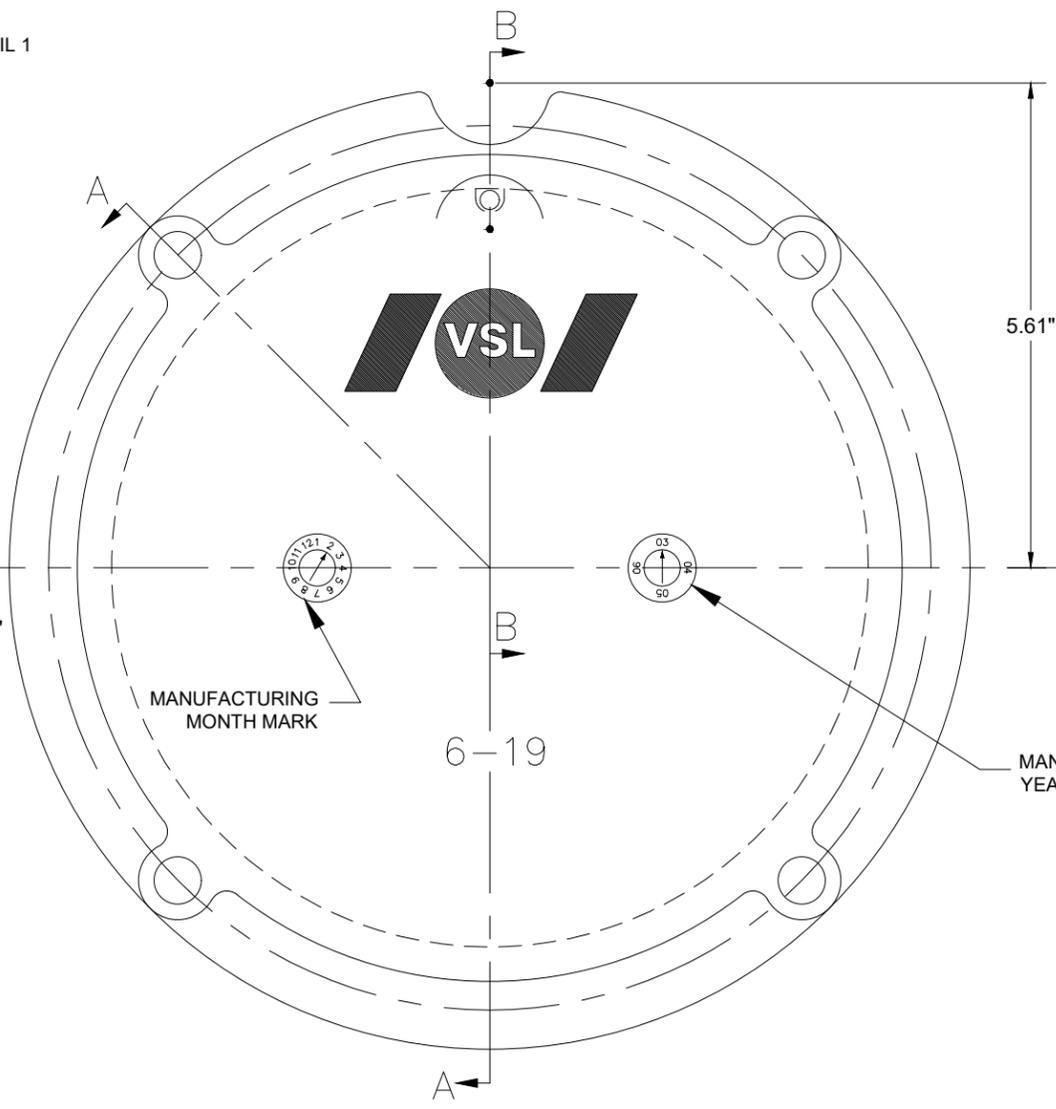
DETAIL 1

TOLERANCES
 UNLESS OTHERWISE SPECIFIED
 FRACTIONAL _____ ± 1/32
 DECIMAL _____.X ____ ± .030
 _____.XX ____ ± .010
 _____.XXX ____ ± .005
 ANGULAR _____ ± 1/2°

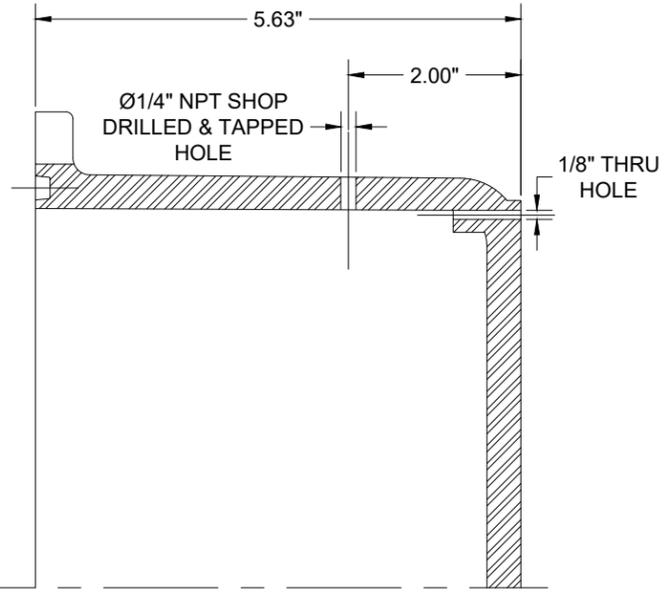
NOTES:
 1) DIMENSIONS ARE IN INCHES
 2) MATERIAL: ABS LUSTRAN 633
 3) INVENTORY #: 02GC61903



SECTION A-A



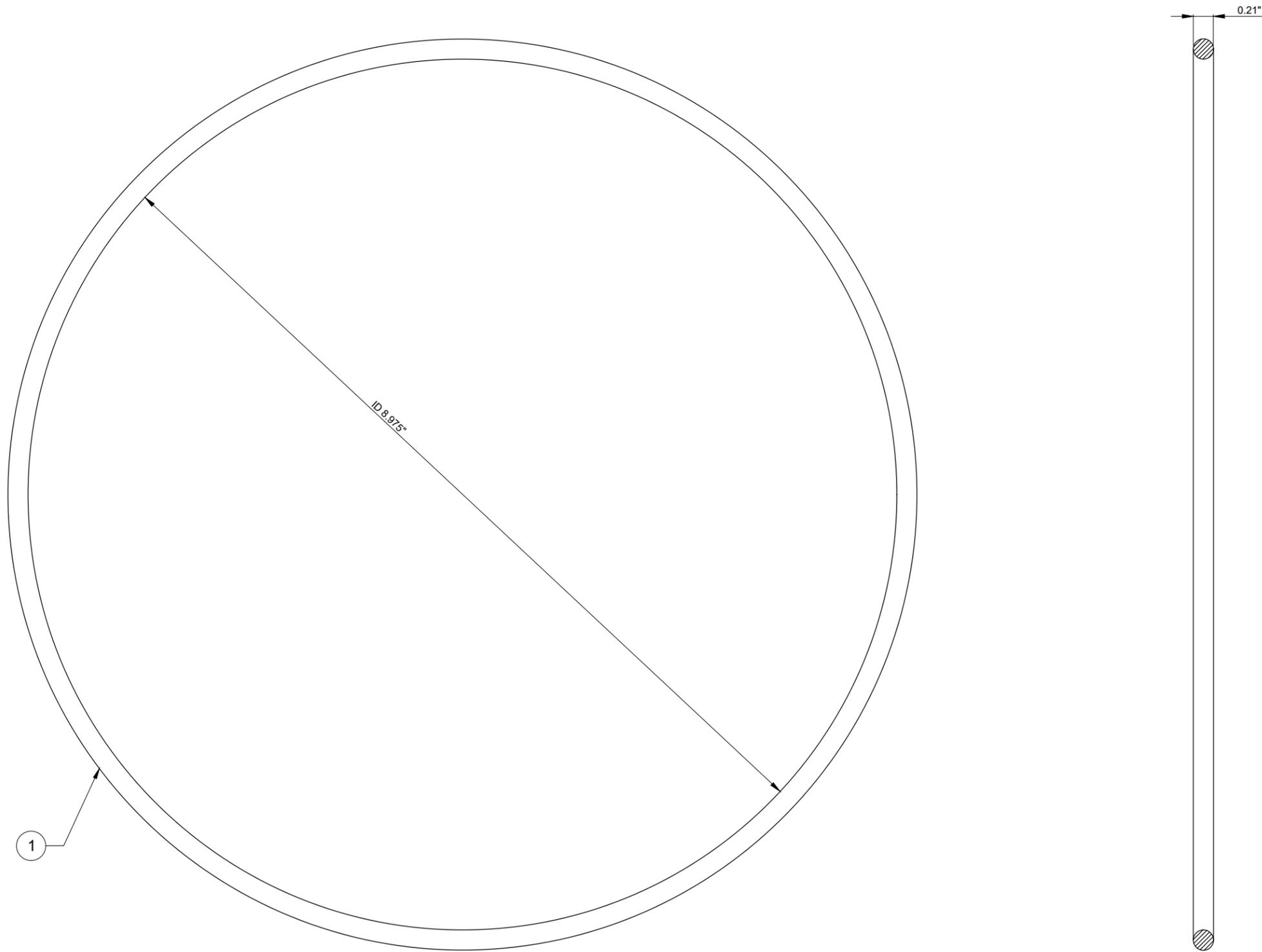
6-19 ANCHORAGE CAP
 LETTERING SHALL BE 0.06" PROUD



SECTION B-B

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PROJECT INFORMATION:		ISSUED FOR PRODUCTION		CDL	ZX	14MAR2018	
SYSTEM DRAWING		DESCRIPTION		BY	CHK	DATE	
PROJECT NO: --		NO					
SHEET NO: C740							
TITLE: EC16-19 ANCHORAGE CAP W/ 1/4" TOP PORT							
SCALE: NTS							
PROJECT INFORMATION:		STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR ANY REPRODUCTION THEREOF, IS STRICTLY PROHIBITED. THE MATERIAL WAS PREPARED AND TO THE MATERIAL AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.					
PROJECT INFORMATION:		 structural TECHNOLOGIES A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL		PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET			
PROJECT INFORMATION:		STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD., SUITE 118 FORT WORTH, TX 76155					



ITEM	QTY	DESCRIPTION	MATERIAL	SIZE	INVENTORY
1	-	6-19 ANCHORAGE CAP O-RING	HNBR	8.975"x9.395"x0.21"	02WX6024

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PROJECT INFORMATION:

SYSTEM DRAWING

6-19 ANCHORAGE CAP O-RING

TITLE: 6-19 ANCHORAGE CAP O-RING

SCALE: NTS

PROJECT NO: SYSTEM

SHEET NO: C731

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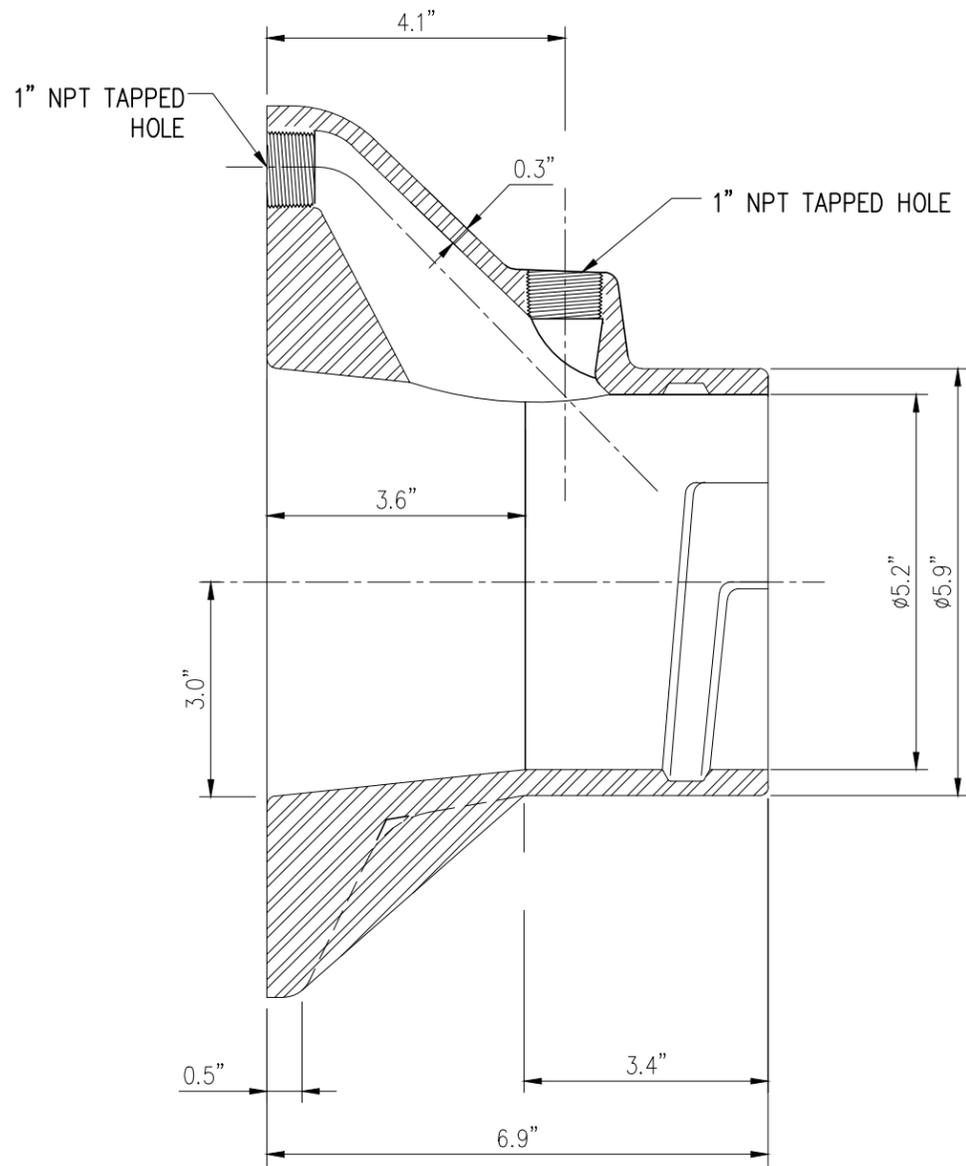
STRUCTURAL TECHNOLOGIES
A Structural Group Company
Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15600 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156

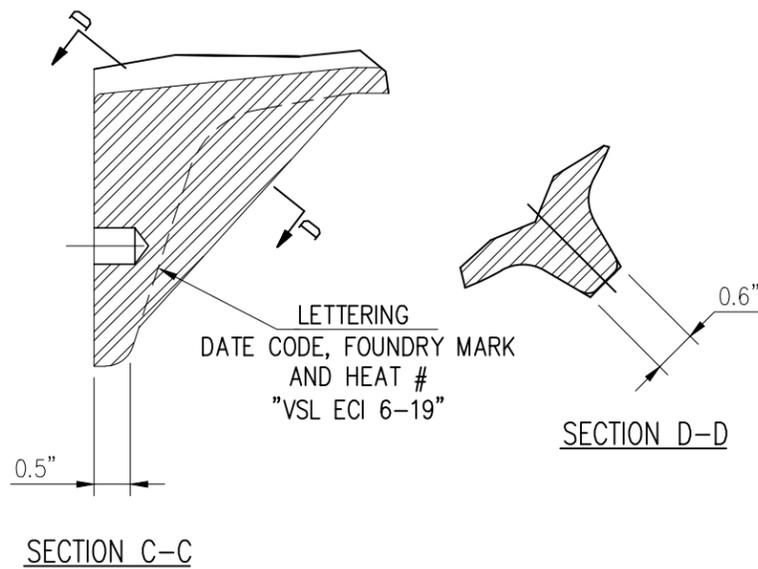
PHONE: (817) 545-4877
FAX: (817) 545-4827
WWW.VSL.NET

NO	NO	NO	NO	NO	NO
FOR APPROVAL					
CDL	CDL	CDL	CDL	CDL	CDL
ZX	ZX	ZX	ZX	ZX	ZX
14MAR2018	14MAR2018	14MAR2018	14MAR2018	14MAR2018	14MAR2018
BY	BY	BY	BY	BY	BY
CHK	CHK	CHK	CHK	CHK	CHK
DATE	DATE	DATE	DATE	DATE	DATE

ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work In Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



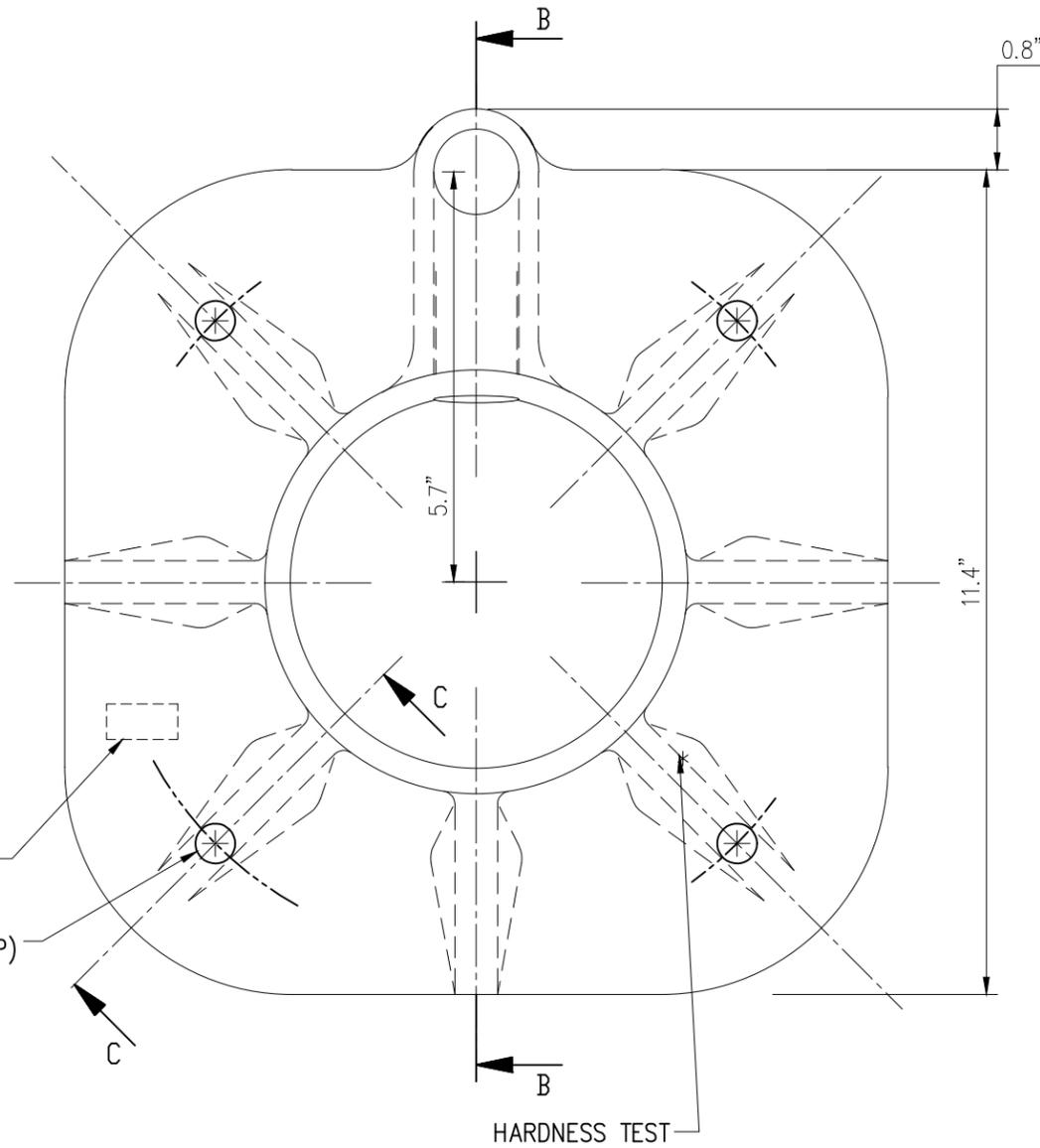
SECTION B-B



SECTION C-C

LETTERING REVERSE SIDE
SEE SECTION C-C

(27/64" DRILL x 3/4" DEEP)
(1/2"-13 x 1/2" DEEP)
4 PLC. TYP.



GENERAL NOTES

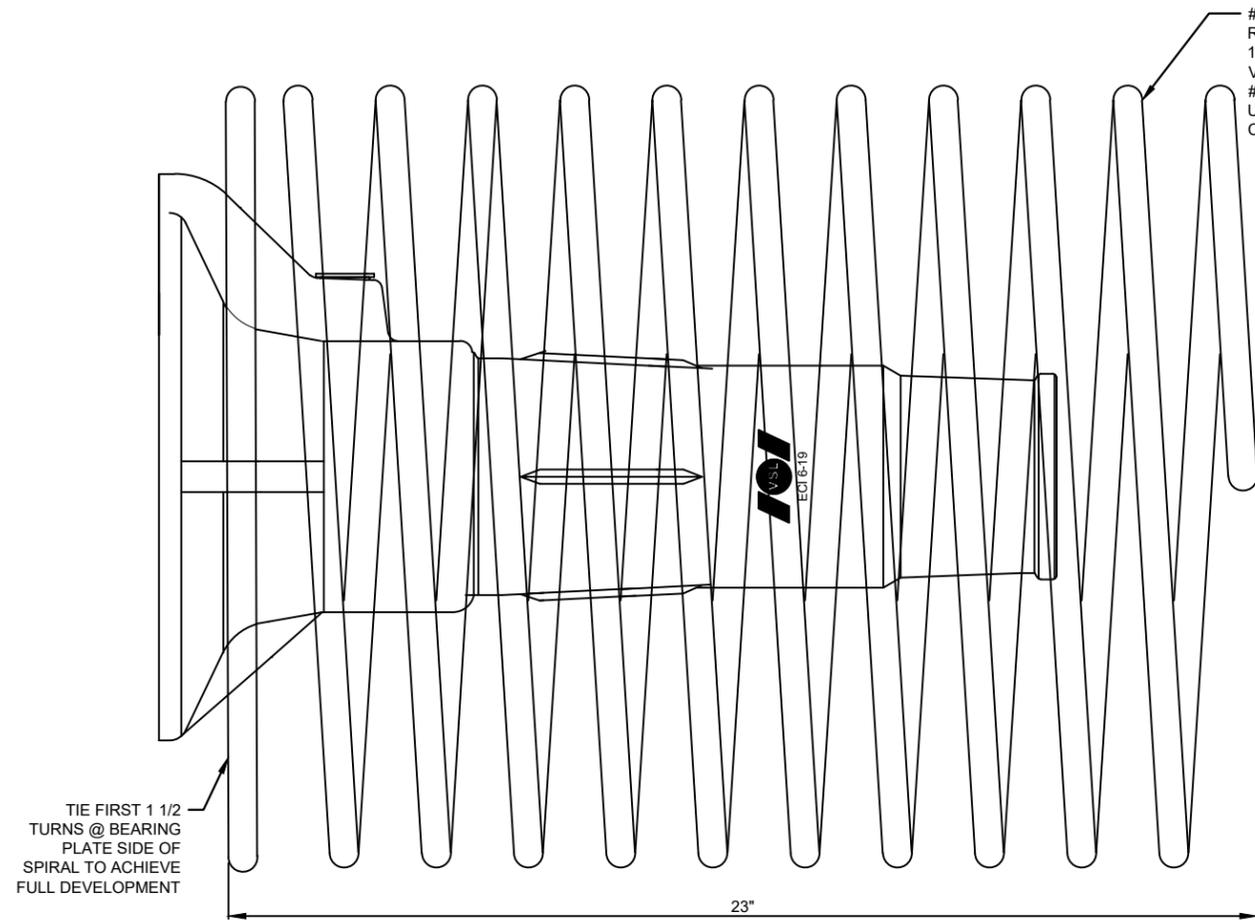
- 1) ALL HOLES TO BE FREE FROM BURRS
- 2) MATERIAL: ASTM A536 GR 80-55-06 GALVANIZED

INVENTORY No. 02BP0038V

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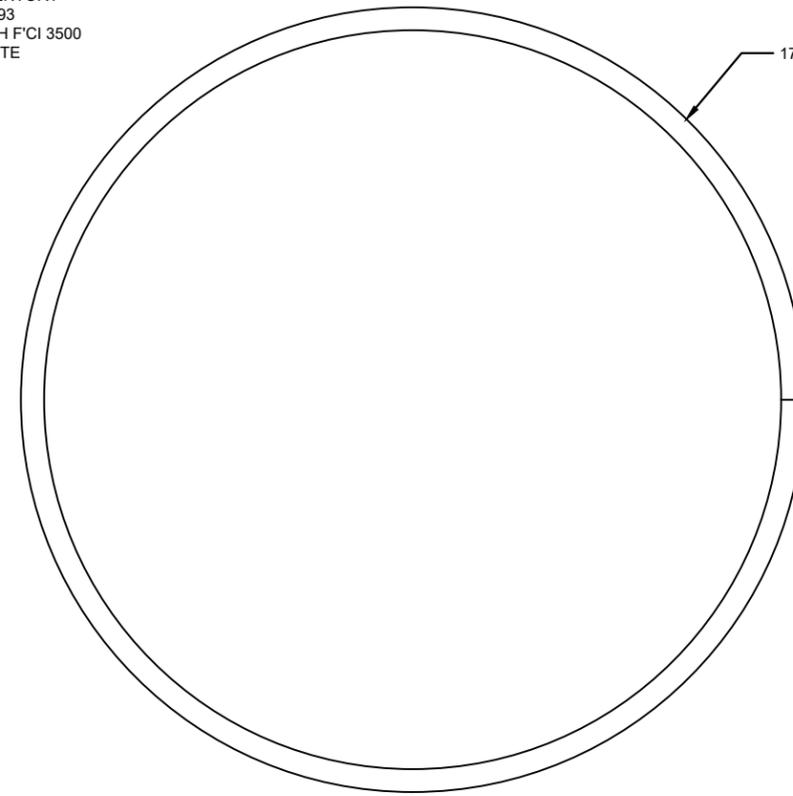
PROJECT INFORMATION:		ISSUED FOR PRODUCTION		CDL	ZX	14MAR2018			
SYSTEM DRAWING		DESCRIPTION		BY	CHK	DATE			
ECI 6-19 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)		NO							
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DALLAS OFFICE		STRUCTURAL TECHNOLOGIES, LLC		DALLAS OFFICE		15600 TRINITY BLVD., SUITE 118			
FORT WORTH, TX 76156		FORT WORTH, TX 76156		FORT WORTH, TX 76156		WWW.VSL.NET			
PROJECT NO: SYSTEM		SCALE: NTS		SHEET NO: C738					

ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work In Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



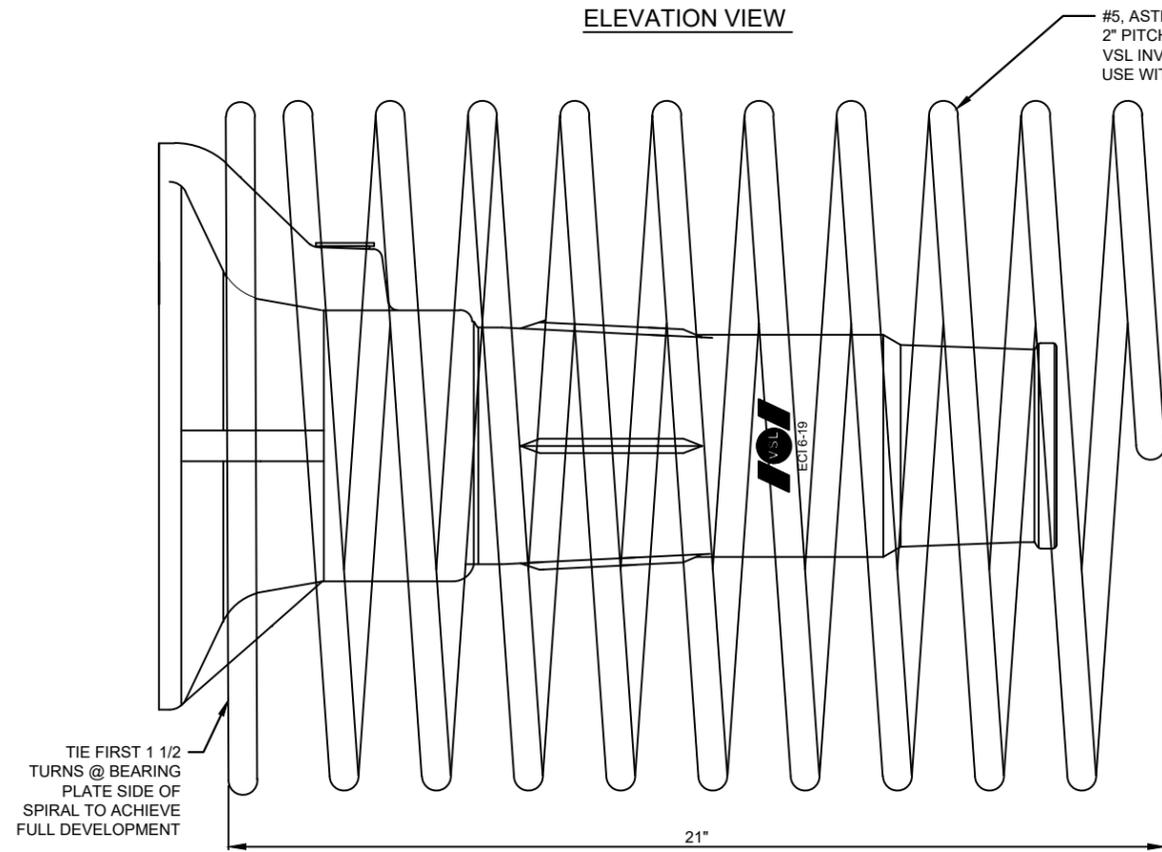
ELEVATION VIEW

#5, ASTM A615 60 KSI REBAR, Ø17", 2" PITCH, 11 1/2 TURNS TOTAL
VSL INVENTORY #02BP0093
USE WITH F'CI 3500 CONCRETE



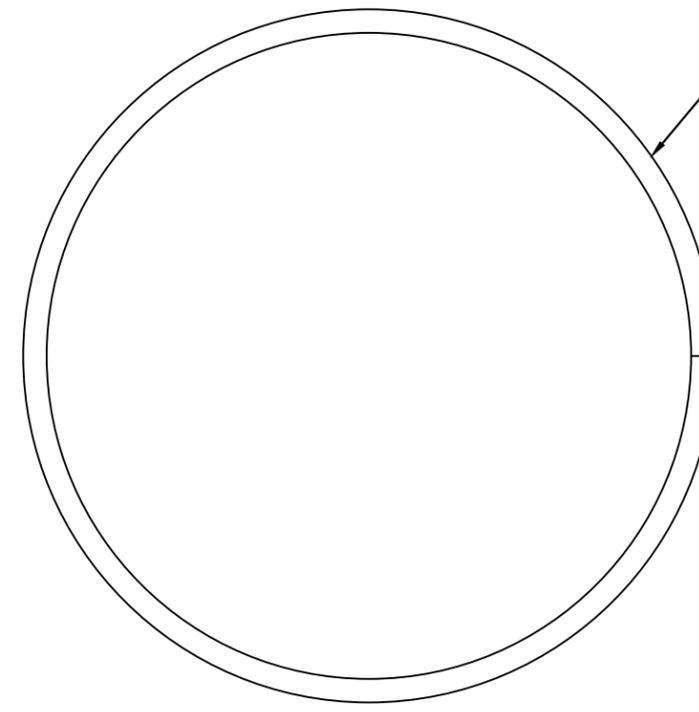
FRONT VIEW

17" OUTSIDE DIAMETER



ELEVATION VIEW

#5, ASTM A615 60 KSI REBAR, Ø15", 2" PITCH, 10 1/2 TURNS TOTAL
VSL INVENTORY #02BP0094
USE WITH F'CI 5500 CONCRETE



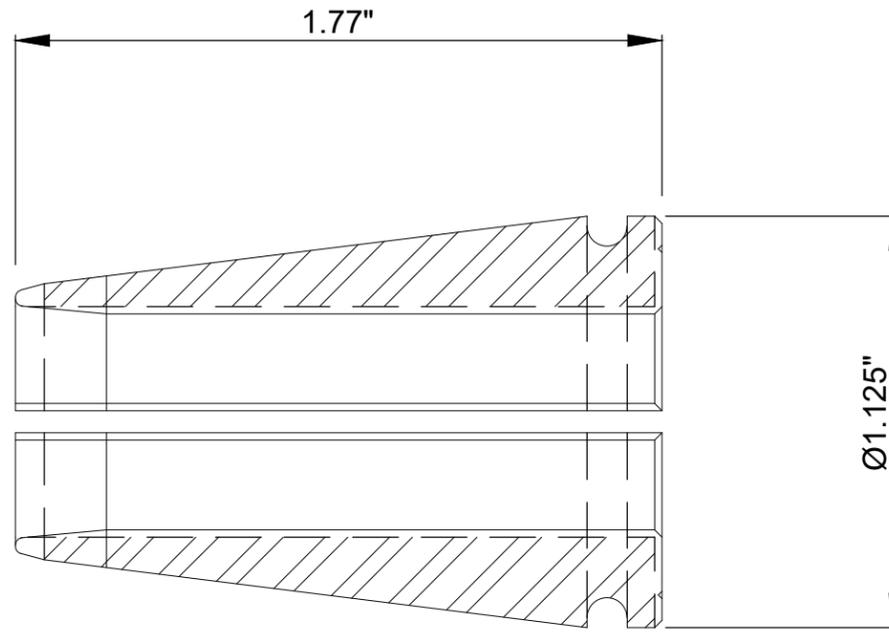
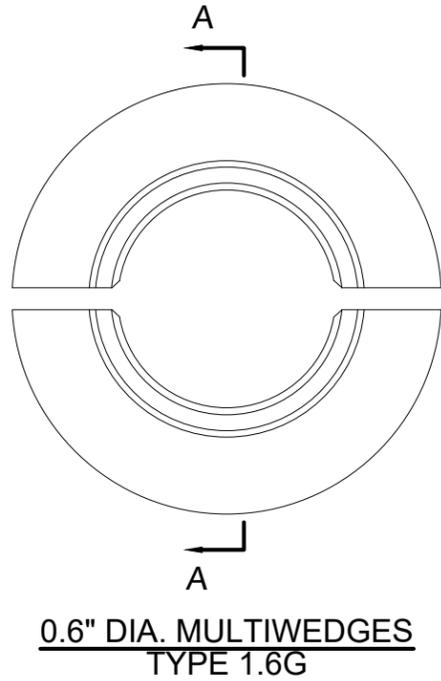
FRONT VIEW

15" OUTSIDE DIAMETER

NOTE: THESE SPIRALS ARE TO BE IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND CONTRACT DRAWINGS

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PROJECT NO:	SYSTEM	TITLE BLOCK UPDATED	CDL ZX
SHEET NO:	NTS	RELEASED FOR CONSTRUCTION	SAN MM
		DESCRIPTION	BY CHK DATE
			NO
<p>structural TECHNOLOGIES A Structural Group Company</p> <p>Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p> <p>DALLAS OFFICE 15600 TRINITY BLVD., SUITE 118 FORT WORTH, TX 76156</p> <p>PHONE: (817) 545-4807 FAX: (817) 545-4827 WWW.VSL.NET</p>		<p>14/MAR/2018</p> <p>31/MAY/2010</p>	
SYSTEM DRAWING		ECI 6-19 SPIRALS	
		C679	



- NOTES:**
1. MATERIAL: AISI 11L17/12L14, PRODUCED IN STRICT ACCORDANCE WITH VSL MS 3.1.006
 2. WEIGHT: 0.197 LBS. (APPROX.)
 3. HEAT TREATMENT: CASEHARDENED
 4. INVENTORY NO. 02WG0008

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<p>PROJECT INFORMATION:</p> <p>SYSTEM DRAWING</p> <p>PROJECT NO: SYSTEM</p> <p>SHEET NO: C218</p>	<p>5</p>	<p>TITLE BLOCK UPDATED</p>	<p>CDL</p>	<p>ZX</p>	<p>26FEB2018</p>
	<p>4</p>	<p>UPDATED TITLE BLOCK</p>	<p>SK</p>	<p>ZX</p>	<p>09JAN2015</p>
	<p>3</p>	<p>UPDATED BORDER</p>	<p>GDH</p>		<p>29APR2004</p>
	<p>2</p>	<p>ADDED INVENTORY NUMBER</p>	<p>TKW</p>		<p>01JAN1989</p>
	<p>NO</p>	<p>DESCRIPTION</p>	<p>BY</p>	<p>CHK</p>	<p>DATE</p>

structural TECHNOLOGIES
A Technical Group Company

Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

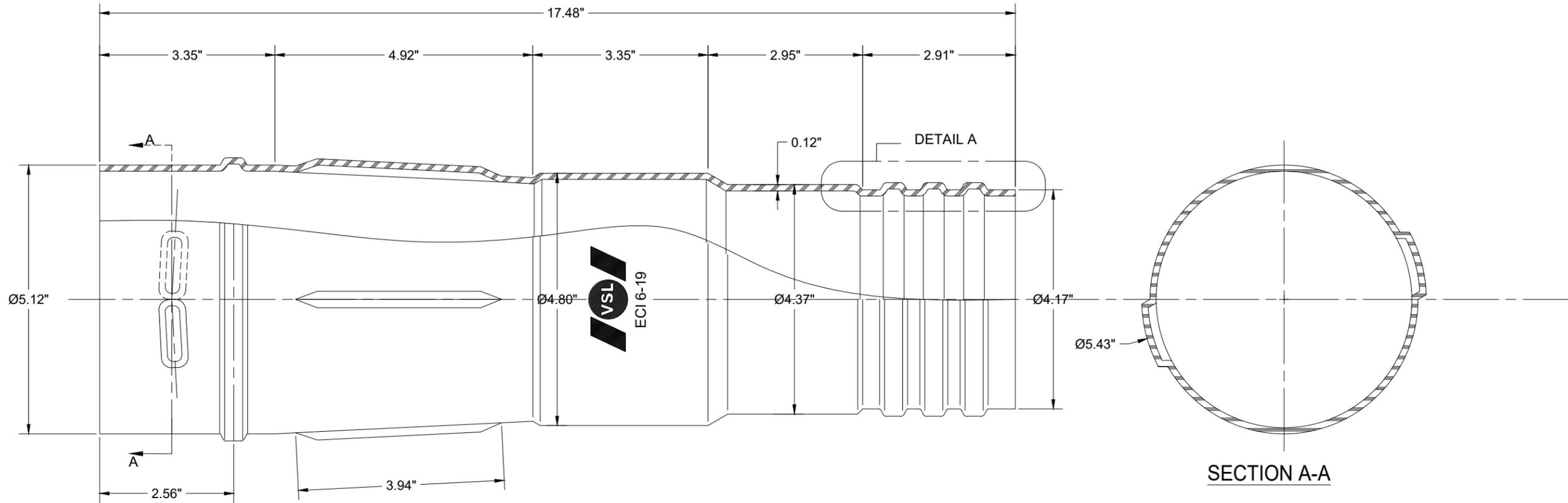
STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15600 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156

VSL

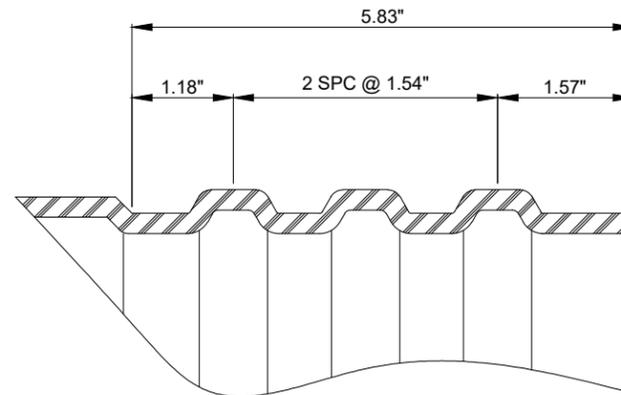
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ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\ECI 6-19 Flexible Filler Submittal



ECI 6-19 TRUMPET



DETAIL A

SECTION A-A

TOLERANCES

UNLESS OTHERWISE SPECIFIED

FRACTIONAL _____ ± 1/32

DECIMAL _____ .X _____ ± .030

 . XX _____ ± .010

 . XXX _____ ± .005

ANGULAR _____ ± 1/2°

NOTES:

- 1) DIMENSIONS ARE IN INCHES
- 2) MATERIAL: HDPE
- 3) INVENTORY #: 02BP4322

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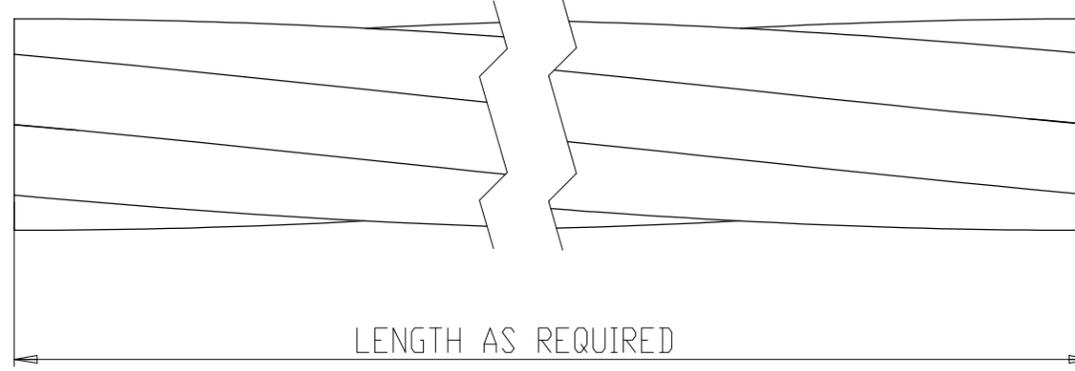
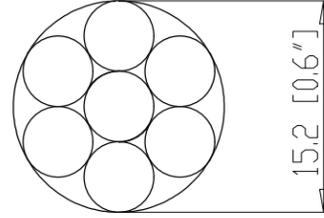
3	2	1	NO	CDL	ZK
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				UPDATED INFORMATION	06DEC2012
				APPROVED FOR PRODUCTION	01APR2004
				DESCRIPTION	DATE
				BY	CHK
				LS	JC
				GDH	ZK
				CDL	ZK
				NO	DATE

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A Structural Group Company

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PHONE: (817) 545-4877
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SYSTEM DRAWING	ECI 6-19 TRUMPET
PROJECT INFORMATION:	TITLE:
PROJECT NO: -	SCALE: NTS
SHEET NO: A337	



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PROJECT INFORMATION:

SYSTEM DRAWING

VSL POST TENSIONING 0.6" BARE STRAND
ASTM A416, 270KSI

PROJECT NO:
SYSTEM

SCALE:
NTS

SHEET NO:
C674



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STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15600 TRINITY BLVD., SUITE 118
FORT WORTH, TX 76156
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NO

NO

TITLE BLOCK UPDATED

FOR FDOT

CDL ZX

MM

BY

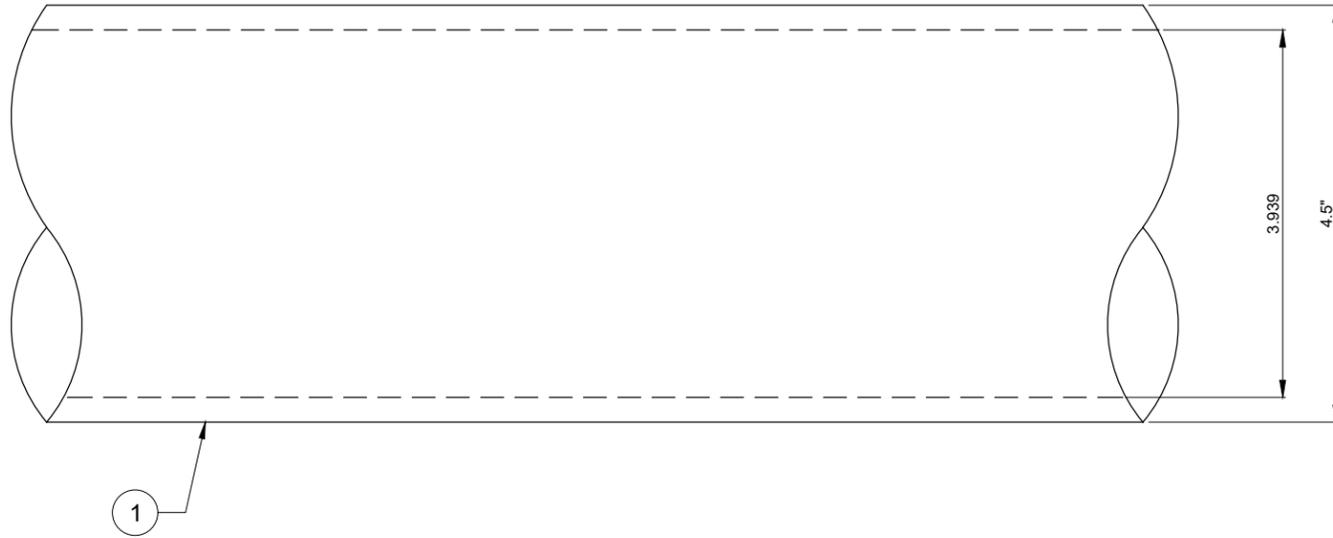
CHK

DESCRIPTION

DATE

26FEB2018

04FEB2010



ITEM	QTY	DESCRIPTION	MATERIAL
1	-	4" HDPE PIPE DR-17	ASTM D3035

NOTE: MINIMUM BEND RADIUS = 20'-0"

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PROJECT INFORMATION:

PROJECT NO:
SYSTEM

SHEET NO:

SCALE:
NTS

C732

SYSTEM DRAWING

TITLE:
4" HDPE PIPE

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DALLAS OFFICE
15000 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156

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NO

FOR APPROVAL

CDL

ZX

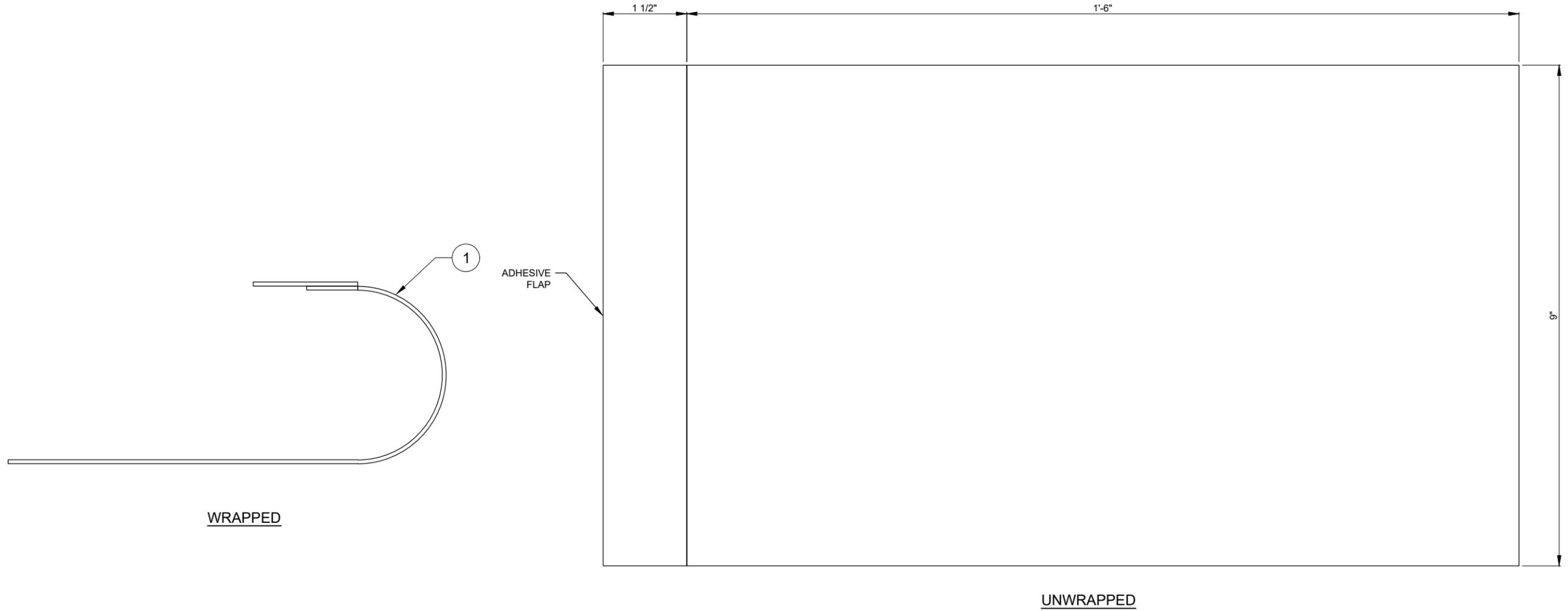
14MAR2018

DESCRIPTION

BY

CHK

DATE



ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	CANUSA KLNN-115 WS BK/L 9" HEAT SHRINK SLEEVE	POLYOLEFIN	02DT0514

NOTE: REFERENCE THE MANUFACTURER'S INSTALLATION INSTRUCTIONS IN THE APPENDIX.

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STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15000 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76155

PHONE: (817) 545-4877
FAX: (817) 545-4827
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PROJECT INFORMATION:

PROJECT NO: -

SHEET NO: -

SYSTEM DRAWING

TITLE: KLNN-115 9" HEAT SHRINK SLEEVE

SCALE: NTS

NO

FIRST ISSUE

CDL ZK

BY CHK

14MAR2018

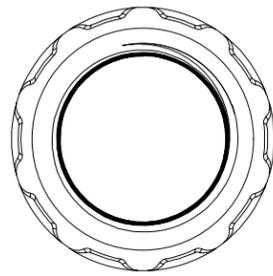
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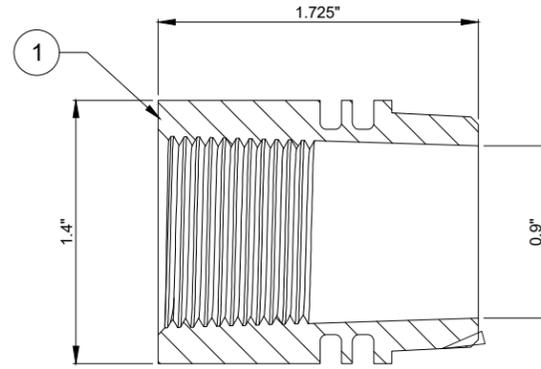
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END VIEW



SIDE VIEW

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" FNPT SMOOTH GROUT PORT	POLYETHYLENE	02DT0253

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PROJECT INFORMATION:

SYSTEM DRAWING

TITLE:
3/4" FNPT SMOOTH GROUT PORT

PROJECT NO:

SCALE:
NTS

SHEET NO:

C743

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NO

FIRST ISSUE

DESCRIPTION

CDL

BY

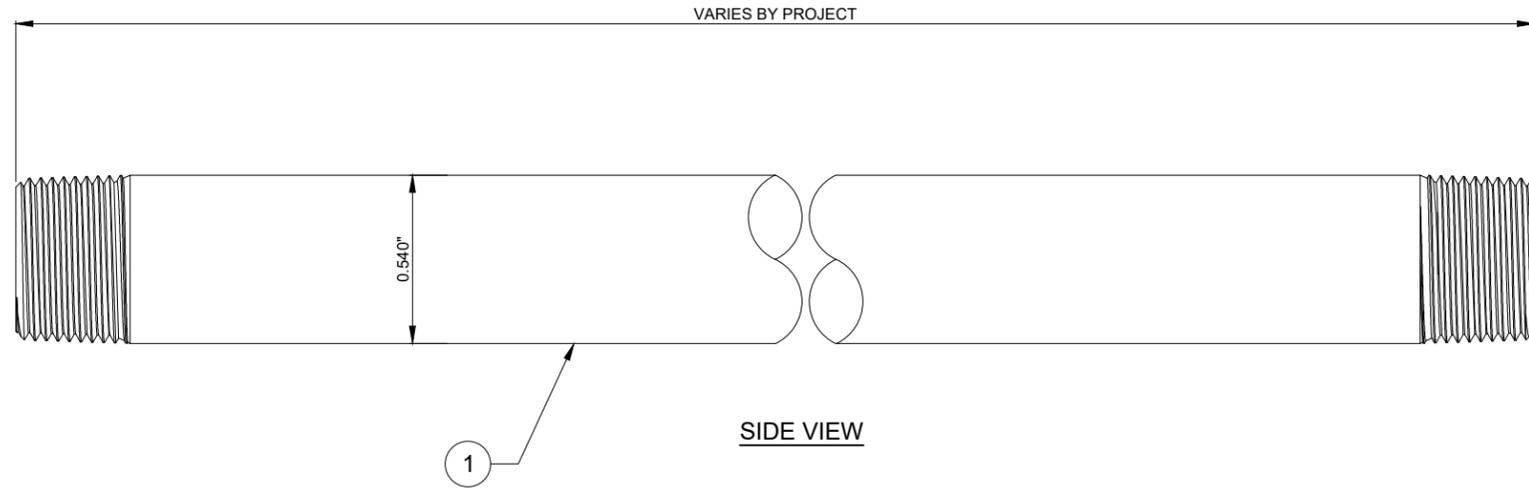
ZX

CHK

26FEB2018

DATE

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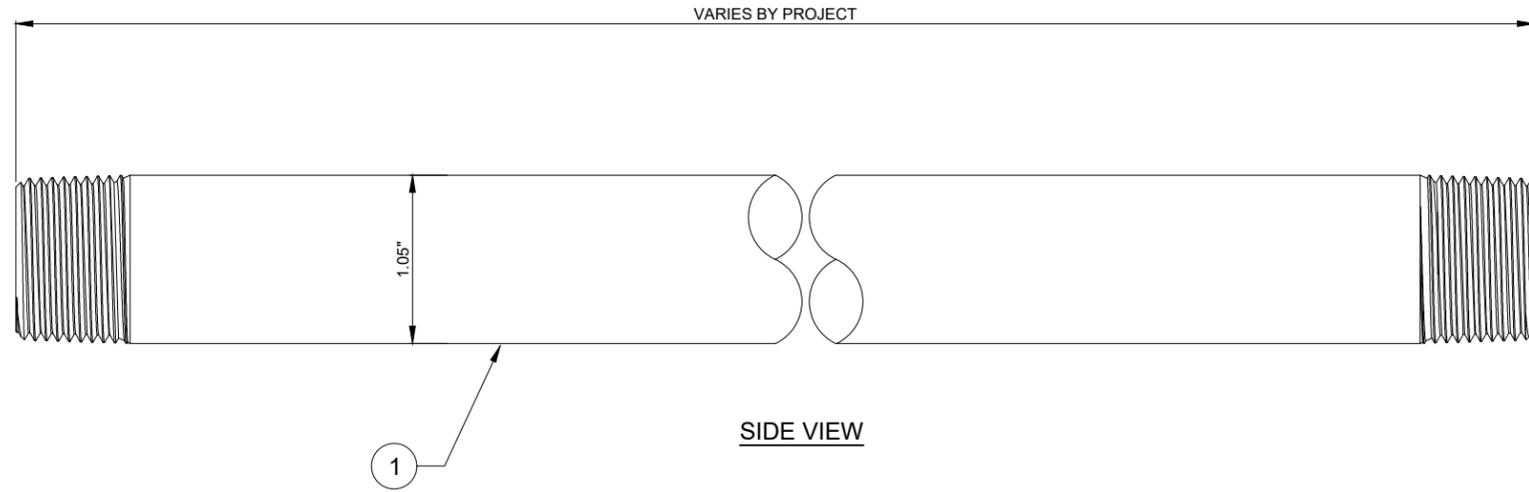


ITEM	QTY	DESCRIPTION	MATERIAL
1	-	1/4" NPT STEEL NIPPLE	SCH 40 STEEL

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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
SYSTEM DRAWING		FIRST ISSUE	
TITLE:		DESCRIPTION	
1/4" NPT STEEL NIPPLE			
SCALE:		DATE	
NTS		26FEB2018	
C749			

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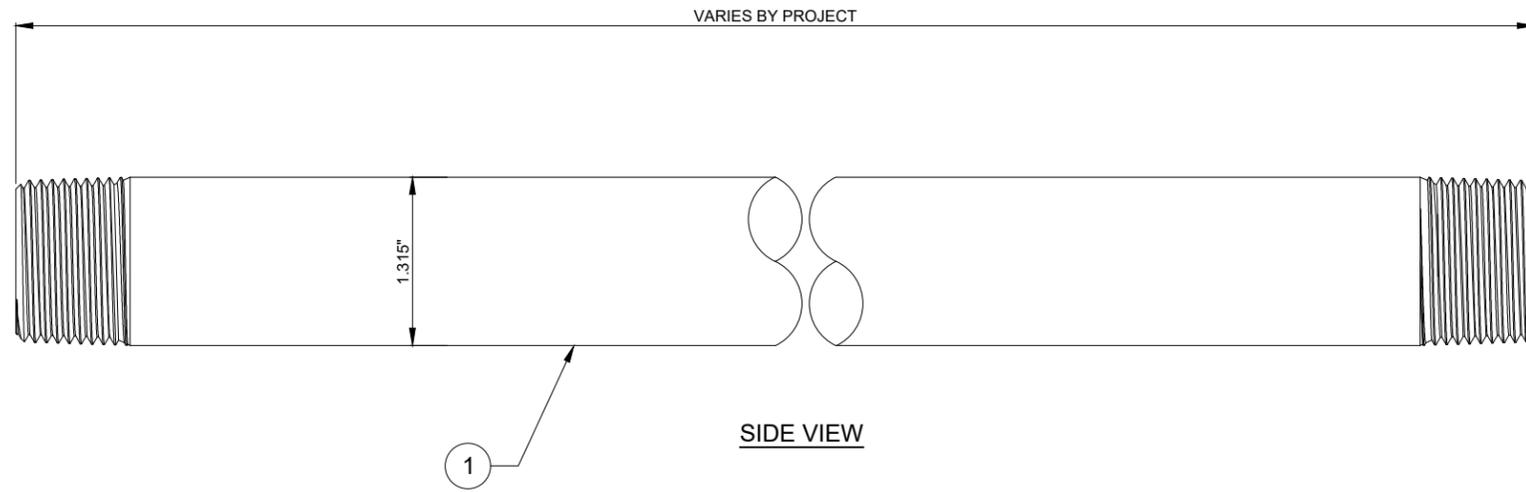


ITEM	QTY	DESCRIPTION	MATERIAL
1	-	3/4" NPT NIPPLE	SCH 40 STEEL

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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
TITLE:		FIRST ISSUE	
SCALE:		NO	
DESCRIPTION:		NO	
SYSTEM DRAWING		26FEB2018	
3/4" NPT STEEL NIPPLE		DATE	

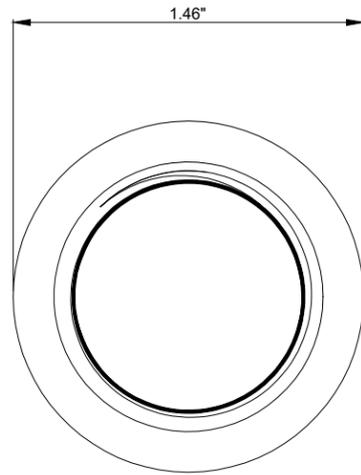
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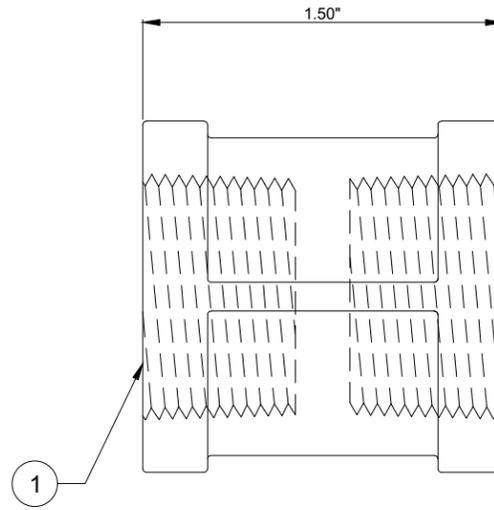
ITEM	QTY	DESCRIPTION	MATERIAL
1	-	1" NPT STEEL NIPPLE	SCH 40 STEEL

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PROJECT INFORMATION:		STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR ANY REPRODUCTION THEREOF, IS STRICTLY PROHIBITED, AND TO THE MATERIAL AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.	
PROJECT NO:	1	CDL	ZX
SHEET NO:	C725	BY	CHK
TITLE:	1" NPT STEEL NIPPLE	DESCRIPTION	FIRST ISSUE
SCALE:	NTS	DATE	26FEB2018



END VIEW



SIDE VIEW

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" NPT F/F COUPLER	SCH 40 STEEL	02DT01952

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PROJECT INFORMATION:

SYSTEM DRAWING

PROJECT NO: -

SHEET NO: -

TITLE:
3/4" NPT F/F COUPLER

SCALE:
NTS

C728

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A Structural Group Company
Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15600 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156
PHONE: (817) 545-4877
FAX: (817) 545-4827
WWW.VSL.NET



NO

FIRST ISSUE

DESCRIPTION

CDL

ZX

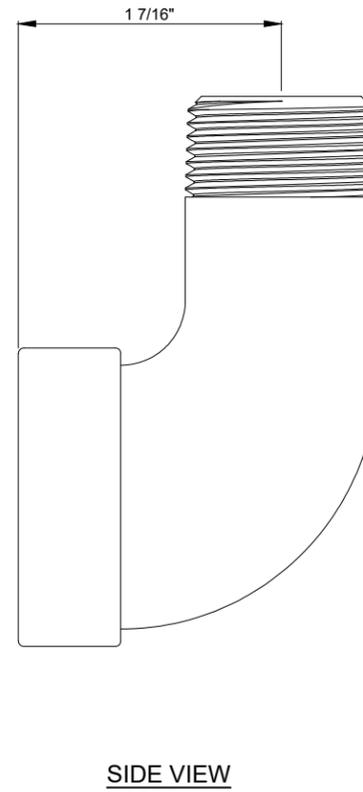
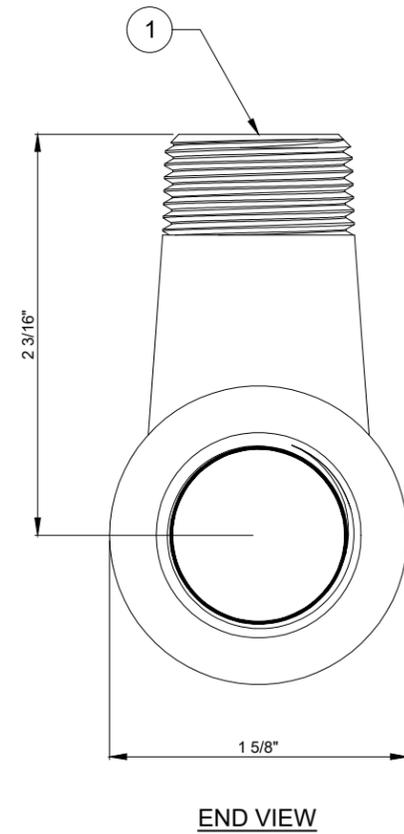
BY

CHK

DATE

26FEB2018

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" FNPT X MNPT STEEL ELBOW	SCH 40 STEEL	02DT01954



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PROJECT NO:	1	CDL	ZX
SHEET NO:	C750	BY	CHK
TITLE:		FIRST ISSUE	
SCALE:		NO	
DESCRIPTION:		NO	
DATE:		26FEB2018	

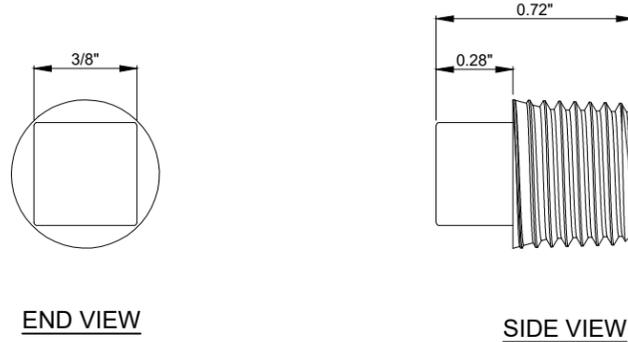
structural TECHNOLOGIES
A Structural Group Company

Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

PHONE: (817) 545-4807
FAX: (817) 545-4827
WWW.VSL.NET

STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
15000 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156

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ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	1/4" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01956

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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
TITLE:		FIRST ISSUE	
SCALE:		NO	
DESCRIPTION:		NO	
DATE:		26FEB2018	

structural TECHNOLOGIES
A Structural Group Company

Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

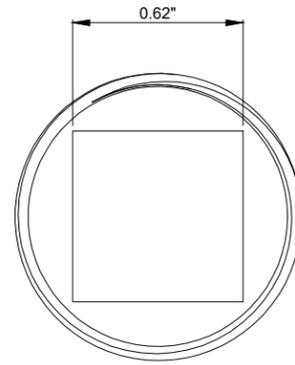
PHONE: (817) 545-4877
FAX: (817) 545-4827
WWW.VSL.NET

STRUCTURAL TECHNOLOGIES, LLC
DALLAS OFFICE
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FORT WORTH, TX 76156

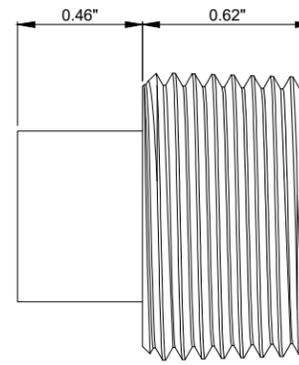
SYSTEM DRAWING

1/4" NPT STEEL PLUG

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01957



END VIEW



SIDE VIEW

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PROJECT INFORMATION:

SYSTEM DRAWING

PROJECT NO: -

SHEET NO: -

TITLE:
3/4" NPT STEEL PLUG

SCALE:
NTS

C748

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NO

FIRST ISSUE

DESCRIPTION

CDL

BY

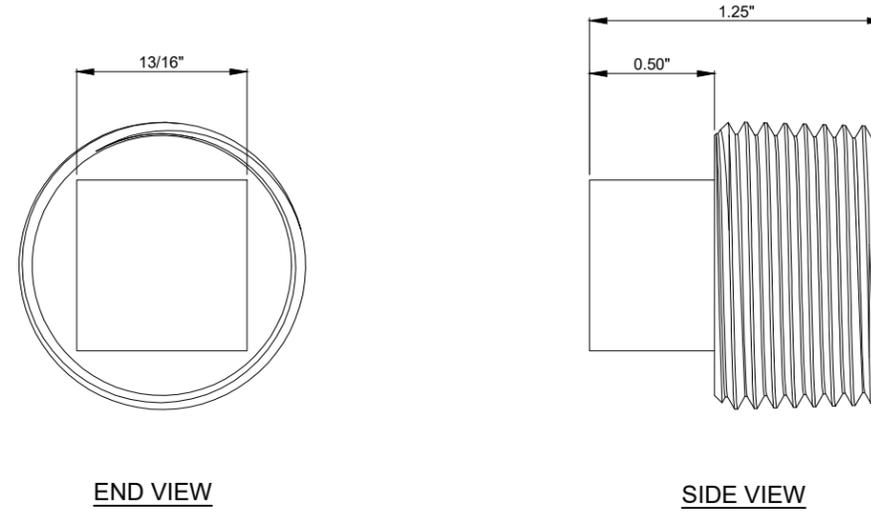
ZX

CHK

26FEB2018

DATE

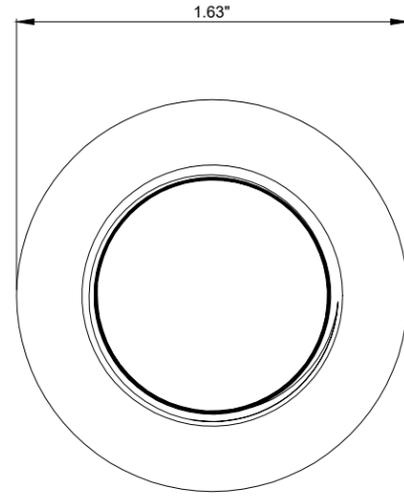
ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	1" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01958



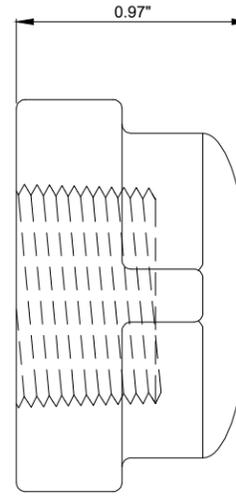
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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
TITLE:		FIRST ISSUE	
SCALE:		NO	
DESCRIPTION:		NO	
SYSTEM DRAWING		26FEB2018	
1" NPT STEEL PLUG		DATE	

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" NPT STEEL CAP	SCH 40 STEEL	02DT01950



END VIEW

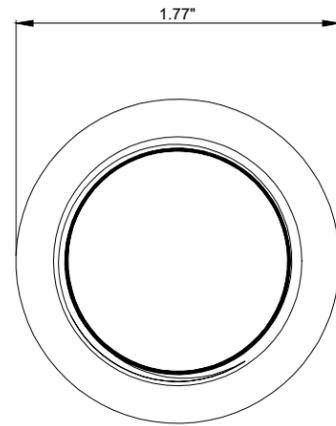


SIDE VIEW

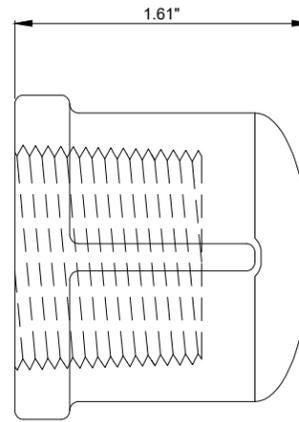
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PROJECT NO:	1	CDL	ZX
SHEET NO:	C724	BY	CHK
TITLE:	3/4" NPT STEEL CAP	NO	DATE
SCALE:	NTS	DESCRIPTION	26FEB2018
SYSTEM DRAWING		NO	DATE

THESE SHOP DRAWINGS ILLUSTRATE THE DETAILS OF THE STRUCTURAL TECHNOLOGIES / VSL POST-TENSIONING SYSTEM. THEY WERE PREPARED IN CONFORMANCE WITH THE STRUCTURAL DESIGN PROVIDED TO STRUCTURAL TECHNOLOGIES / VSL BY PROJECT OWNER OR ITS REPRESENTATIVE. STRUCTURAL TECHNOLOGIES / VSL TOOK NO PART IN THE PREPARATION OR REVIEW OF SAID STRUCTURAL DESIGN AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY FOR IT. THE STAMP OR SEAL OF A STRUCTURAL TECHNOLOGIES / VSL EMPLOYEE ON THESE SHOP DRAWINGS PERTAINS ONLY TO THE TRANSFER OF THE FORCES REQUIRED BY THE ENGINEER OF RECORD ON THE STRUCTURAL DRAWINGS, AND NOT TO THE ADEQUACY OF THE STRUCTURAL DESIGN. NO WARRANTY, EXPRESSED OR IMPLIED, AS TO THE ADEQUACY OF THE STRUCTURAL DESIGN IS MADE BY VIRTUE OF ANY SUCH STAMP OR SEAL.



END VIEW



SIDE VIEW

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	1" NPT STEEL CAP	SCH 40 STEEL	02DT01951

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PROJECT INFORMATION:

SYSTEM DRAWING

1" NPT STEEL CAP

PROJECT NO:

SCALE:

NTS

SHEET NO:

C727

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 PHONE: (817) 545-4877
 FAX: (817) 545-4827
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STRUCTURAL TECHNOLOGIES, LLC
 DALLAS OFFICE
 15600 TRINITY BLVD, SUITE 118
 FORT WORTH, TX 76156

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FIRST ISSUE

DESCRIPTION

CDL

ZX

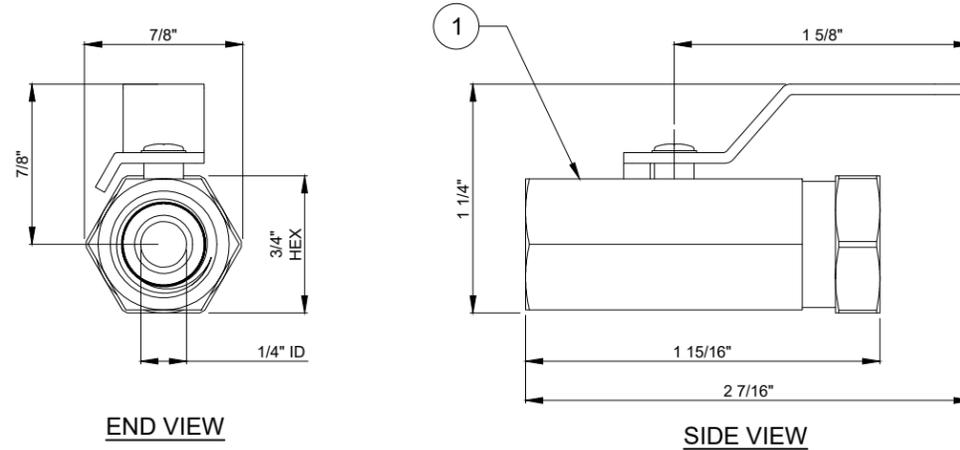
BY

CHK

DATE

26FEB2018

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	1/4" F/F NPT 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01924



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PROJECT INFORMATION:

SYSTEM DRAWING

TITLE:
1/4" F/F NPT 1/4 TURN BALL VALVE

PROJECT NO:

SCALE:
NTS

SHEET NO:

C744

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DALLAS OFFICE
15600 TRINITY BLVD, SUITE 118
FORT WORTH, TX 76156
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FAX: (817) 545-4827
WWW.VSL.NET

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FIRST ISSUE

DESCRIPTION

CDL

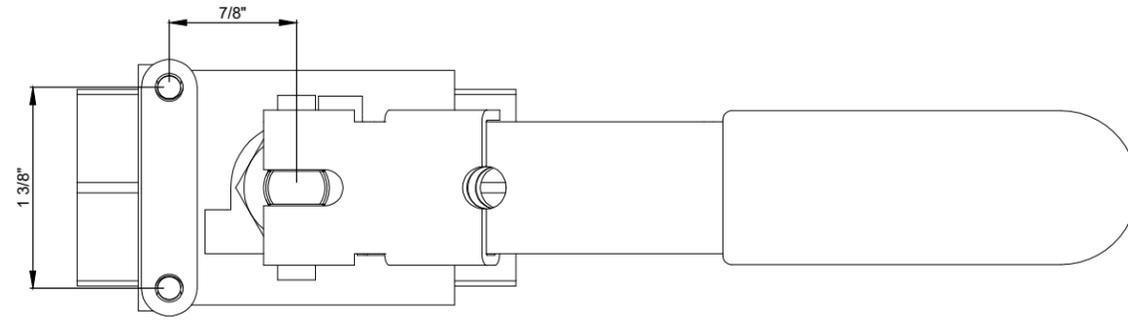
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BY

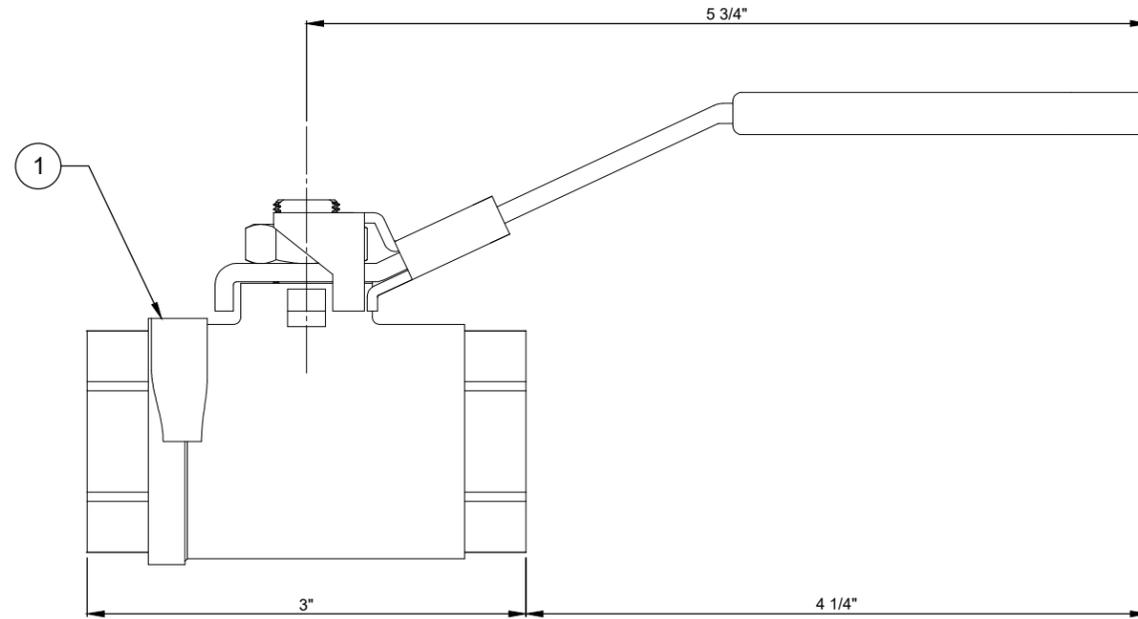
CHK

DATE

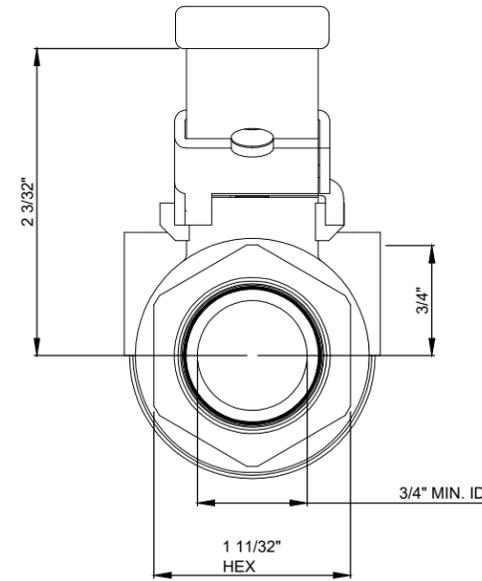
26FEB2018



TOP VIEW



SIDE VIEW



END VIEW

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	3/4" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01925

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PROJECT INFORMATION:

SYSTEM DRAWING

TITLE: 3/4" NPT STEEL 1/4 TURN BALL VALVE

PROJECT NO: 1

SCALE: NTS

SHEET NO: C745

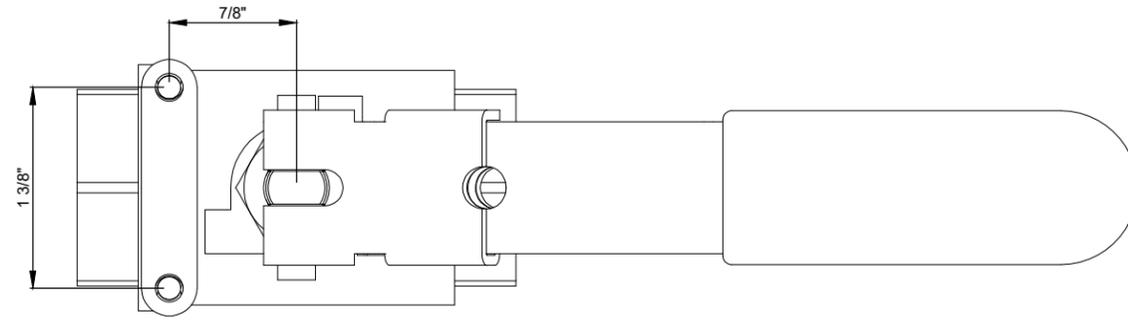
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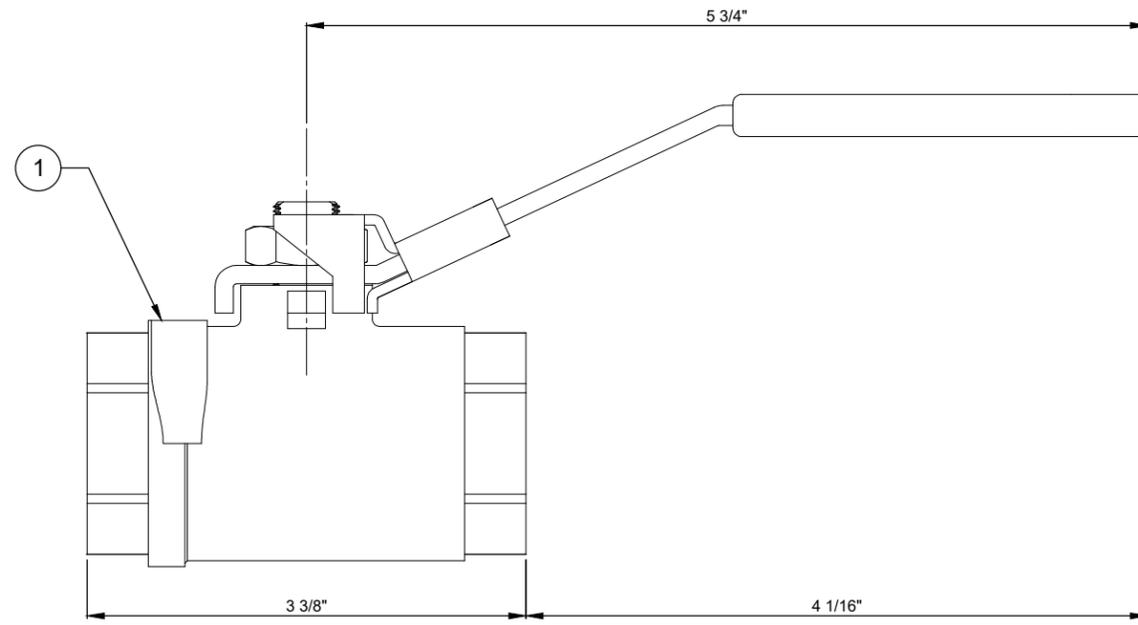
structural TECHNOLOGIES
 A Structural Group Company
 Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL
 PHONE: (817) 545-4877
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STRUCTURAL TECHNOLOGIES, LLC
 DALLAS OFFICE
 15600 TRINITY BLVD, SUITE 118
 FORT WORTH, TX 76156

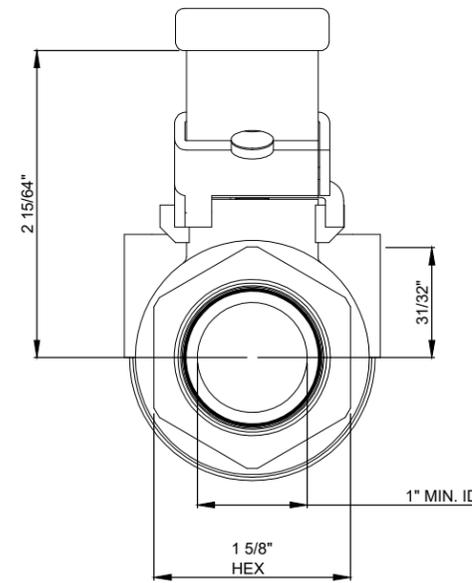
NO	△	FIRST ISSUE	DESCRIPTION	BY	CHK	DATE
				CDL	ZX	26FEB2018



TOP VIEW



SIDE VIEW



END VIEW

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
1	-	1" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01926

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PROJECT NO:	1	DATE:	26FEB2018
SHEET NO:	C746	BY:	CDL
TITLE:	1" NPT STEEL 1/4 TURN BALL VALVE	CHK:	ZX
SCALE:	NTS	DESCRIPTION:	FIRST ISSUE
			NO

structural TECHNOLOGIES
A Structural Group Company

Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL

PHONE: (817) 545-4877
FAX: (817) 545-4827
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