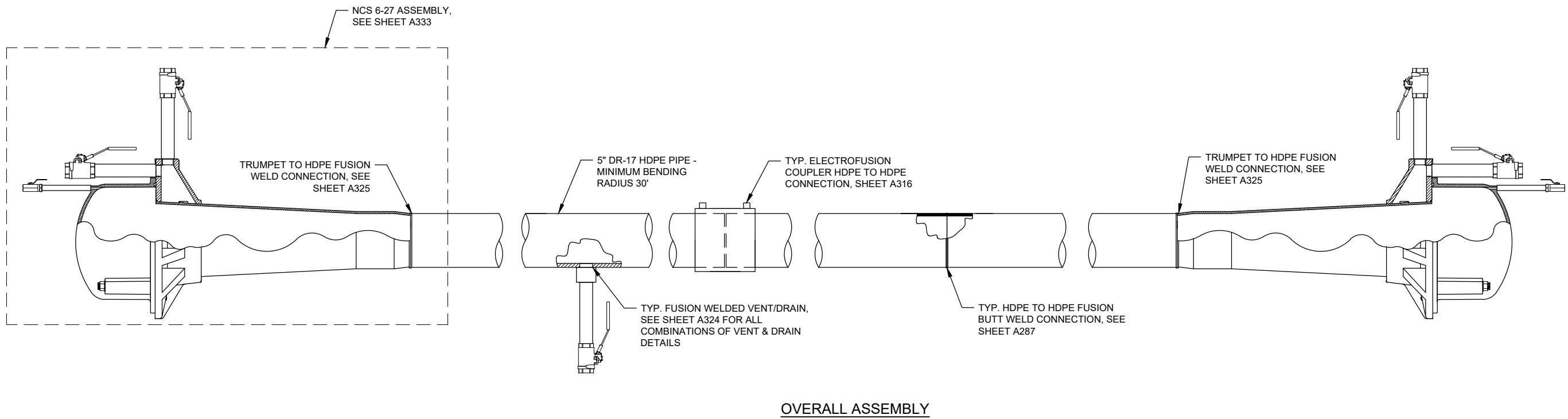


ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\NCS 6-27 Flexible Filler Submittal



**OVERALL ASSEMBLY**

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PROJECT INFORMATION:		NO		FIRST ISSUE		CDL	ZX	14MAR2018
SYSTEM DRAWING		NO		DESCRIPTION		BY	CHK	DATE
TITLE: NCS 6-27 OVERALL ASSEMBLY WITH FLEXIBLE FILLER		NO		DESCRIPTION		BY	CHK	DATE
PROJECT NO:	SCALE: NTS	NO		DESCRIPTION		BY	CHK	DATE
SHEET NO:	A333	NO		DESCRIPTION		BY	CHK	DATE

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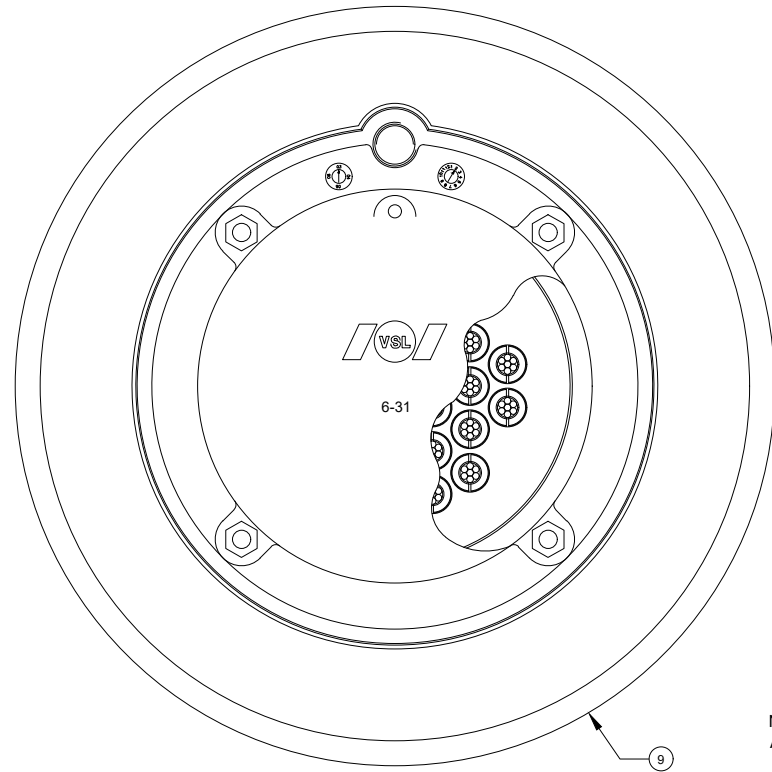
**structural TECHNOLOGIES**  
A Structural Group Company

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

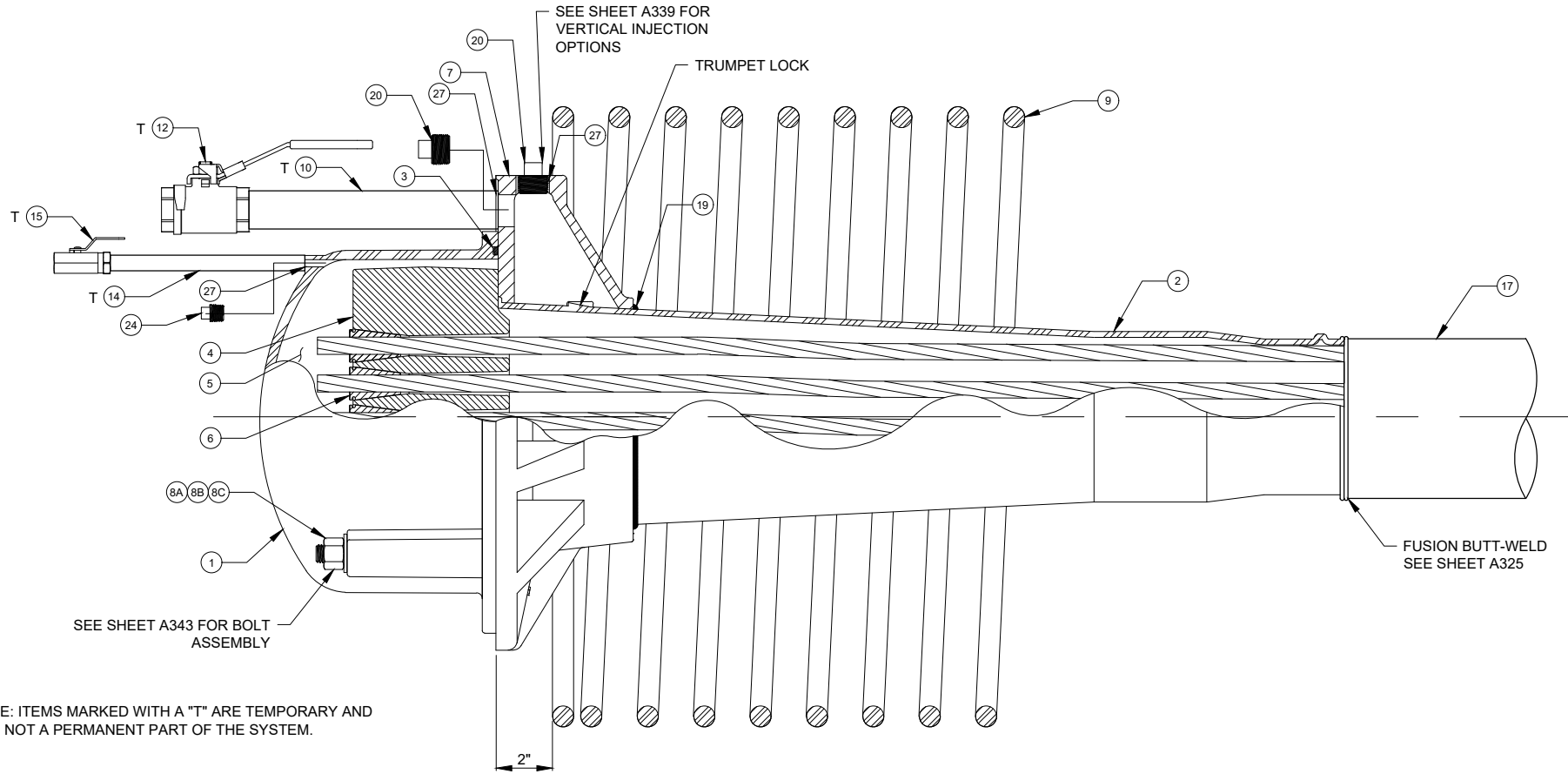
PHONE: (817) 545-4827  
FAX: (817) 545-4827  
WWW.VSL.NET

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

ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work In Progress Drawings\Florida DOT Test 2017\NCS 6-27 Flexible Filler Submittal



END VIEW



ELEVATION VIEW

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

SEE SHEET A343 FOR BOLT ASSEMBLY

SEE SHEET A339 FOR VERTICAL INJECTION OPTIONS

FUSION BUTT-WELD  
SEE SHEET A325

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	1	6-31 ANCHORAGE CAP W/ 1/4" FRONT PORT	ABS	02GC63102
2	1	NCS 6-31 TRUMPET	POLYETHYLENE	02BP4436
3	1	6-31 ANCHORAGE CAP O-RING	HNBR	02WX5044
4	1	NCS 6-27 ANCHOR HEAD CAST	A536 GR80-55-06	02AH6031A
5	-	FLEXIBLE FILLER	FDOT APL	-
6	27	1.6G WEDGE .6 1.77 W/GROOVE	AISI 11-L-17/12-L-14	02WG0008
7	1	NCS 6-31 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)	A536 GR80-55-06	02BP6031V
8A	1 SET	5/8"-11 THREADED ROD X 7"	(316L) STAINLESS	02WX6023D
8B	1 SET	5/8"-11 NUT	(316L) STAINLESS	02WX6023D
8C	1 SET	5/8" WASHER	(316L) STAINLESS	02WX6023D
9	1	SPIRAL NCS 6-31 (#6, DIA. 22", 2" PITCH, 9 TURNS)	A615, GR 60	02BP0098
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
17	-	5" 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
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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PROJECT INFORMATION:

**SYSTEM DRAWING**

TITLE: **NCS 6-27 ASSEMBLY WITH FLEXIBLE FILLER**

PROJECT NO: --- SCALE: NTS

SHEET NO: **A332**

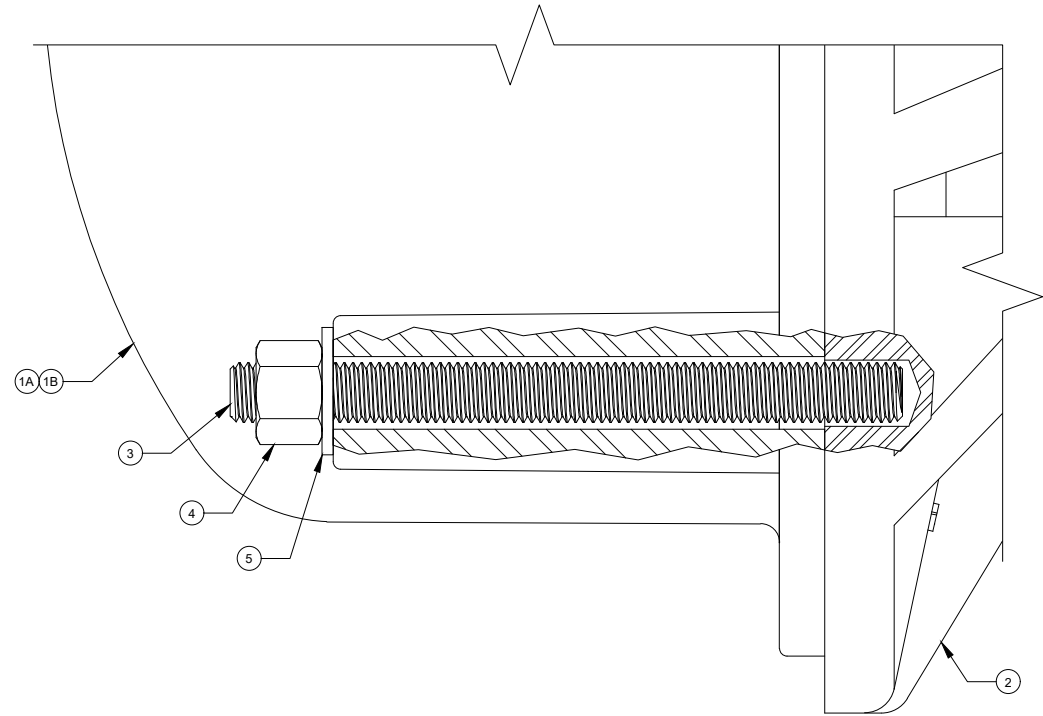
**structural TECHNOLOGIES**  
A Structural Group Company

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

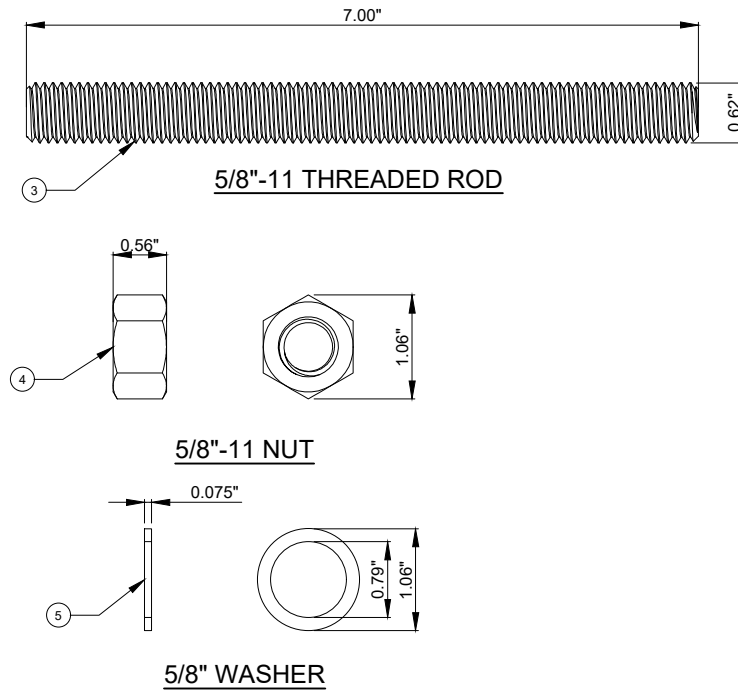
STRUCTURAL TECHNOLOGIES, LLC  
DALLAS OFFICE  
15600 TRINITY BLVD., SUITE 118  
FORT WORTH, TX 76156

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

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**CAP TO BEARING PLATE BOLTED ASSEMBLY**



ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1A	1	6-31 ANCHORAGE CAP W/ 1/4" FRONT PORT	ABS	02GC63102
1B	1	6-31 ANCHORAGE CAP W/ 1/4" TOP PORT	ABS	02GC63103
2	1	NCS 6-31 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)	A536 GR80-55-06	02BP6031V
3	1 SET	5/8"-11 THREADED ROD X 7"	(316L) STAINLESS	02WX6023D
4	1 SET	5/8"-11 NUT	(316L) STAINLESS	02WX6023D
5	1 SET	5/8" WASHER	(316L) STAINLESS	02WX6023D

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PROJECT INFORMATION:

SYSTEM DRAWING

NCS 6-31 BOLT ASSEMBLY

TITLE: NCS 6-31 BOLT ASSEMBLY

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A343

SCALE: NTS

PROJECT NO: ---

SHEET NO: ---

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

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

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

NO

FIRST ISSUE

DESCRIPTION

BY

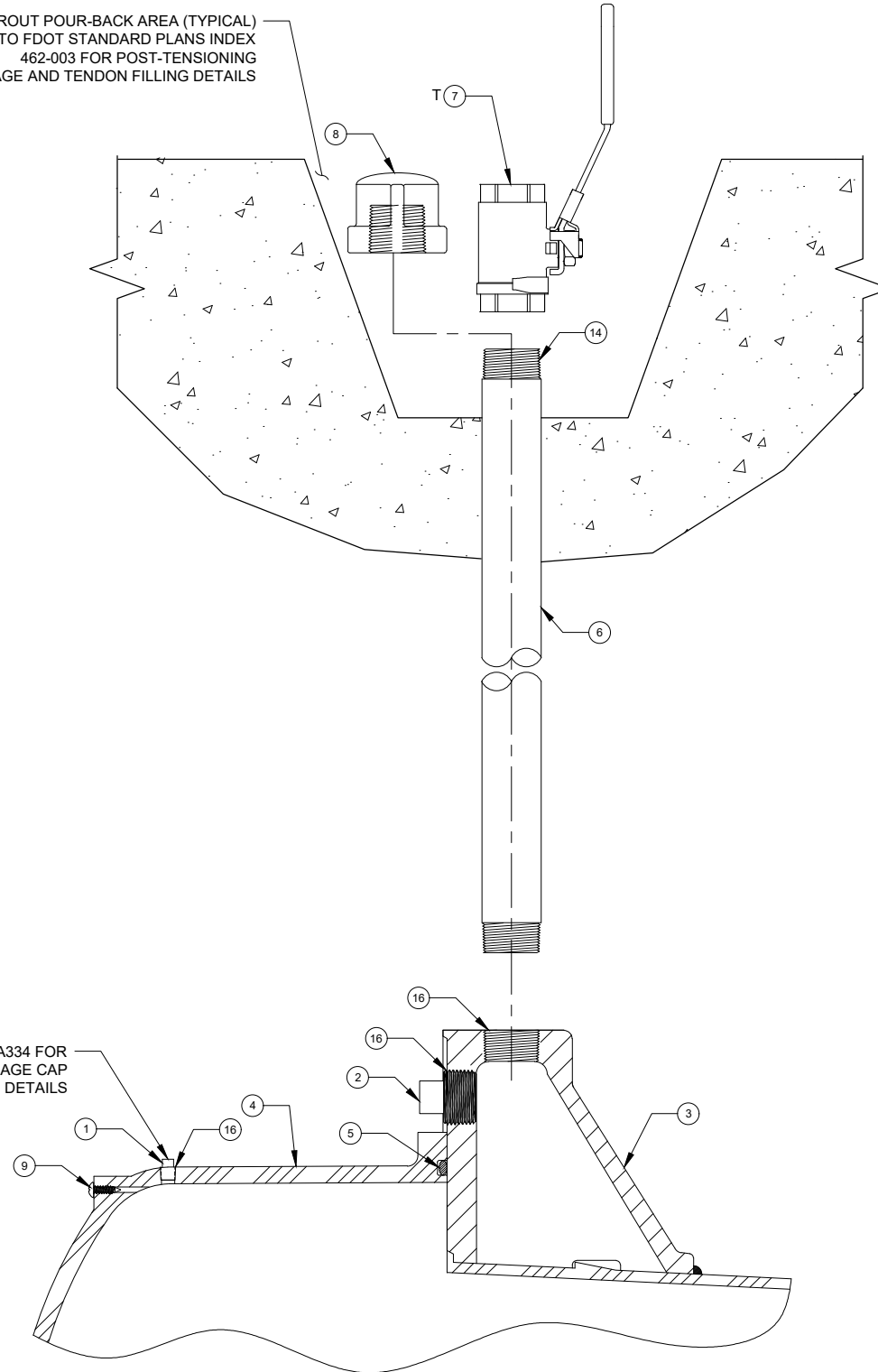
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CDL ZX

26FEB2018


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



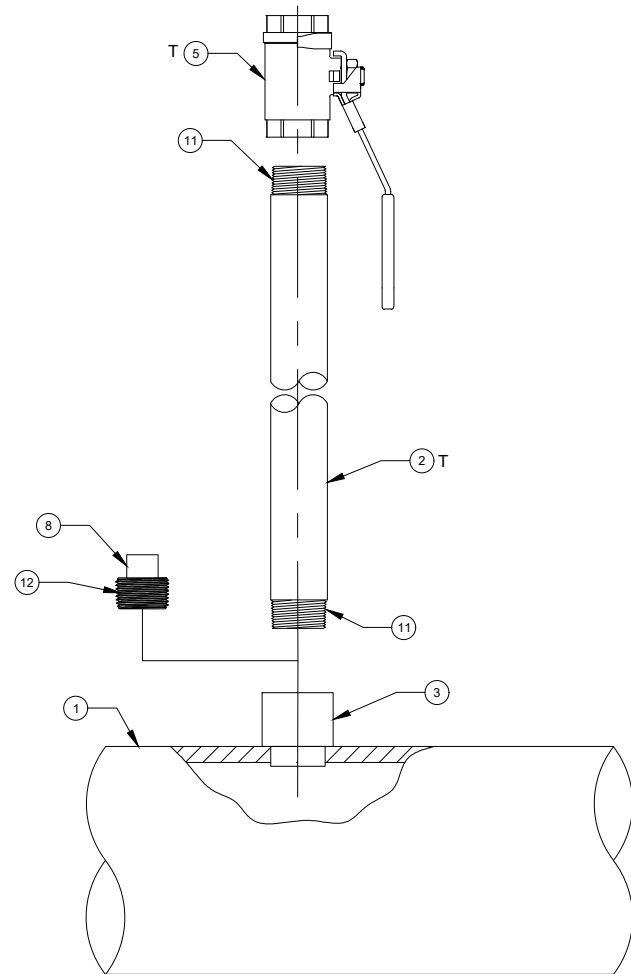
- NOTES:
1. ITEMS MARKED WITH A "T" ARE TEMPORARY AND ARE NOT A PERMANENT PART OF THE SYSTEM.
  2. ALL COMPONENTS MUST BE PRESSURE RATED FOR 150 PSI
  3. CONCRETE COVER MUST MEET FDOT STRUCTURES DESIGN GUIDELINES SECTION 1.4.2

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	1	1/4" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01956
2	1	1" NPT STEEL PLUG	316 STAINLESS STEEL	02DT01958
3	1	NCS 6-31 BEARING PLATE W/ 1" NPT PORT (GALVANIZED)	A536 GR80-55-06	02BP6031V
4	1	6-31 ANCHORAGE CAP W/ 1/4" TOP PORT	ABS	02GC63103
5	1	6-31 ANCHORAGE CAP O-RING	HNBR	02WX5044
6	1	1" NPT NIPPLE	SCH 40 STEEL	-
7	1	1" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01926
8	1	1" NPT STEEL CAP	SCH 40 STEEL	02DT01951
9	1	3/16" PAN HEAD SCREW	316 STAINLESS STEEL	02WX1070
14	-	SILICONE GREASE	-	-
16	-	BONDUIT	-	-

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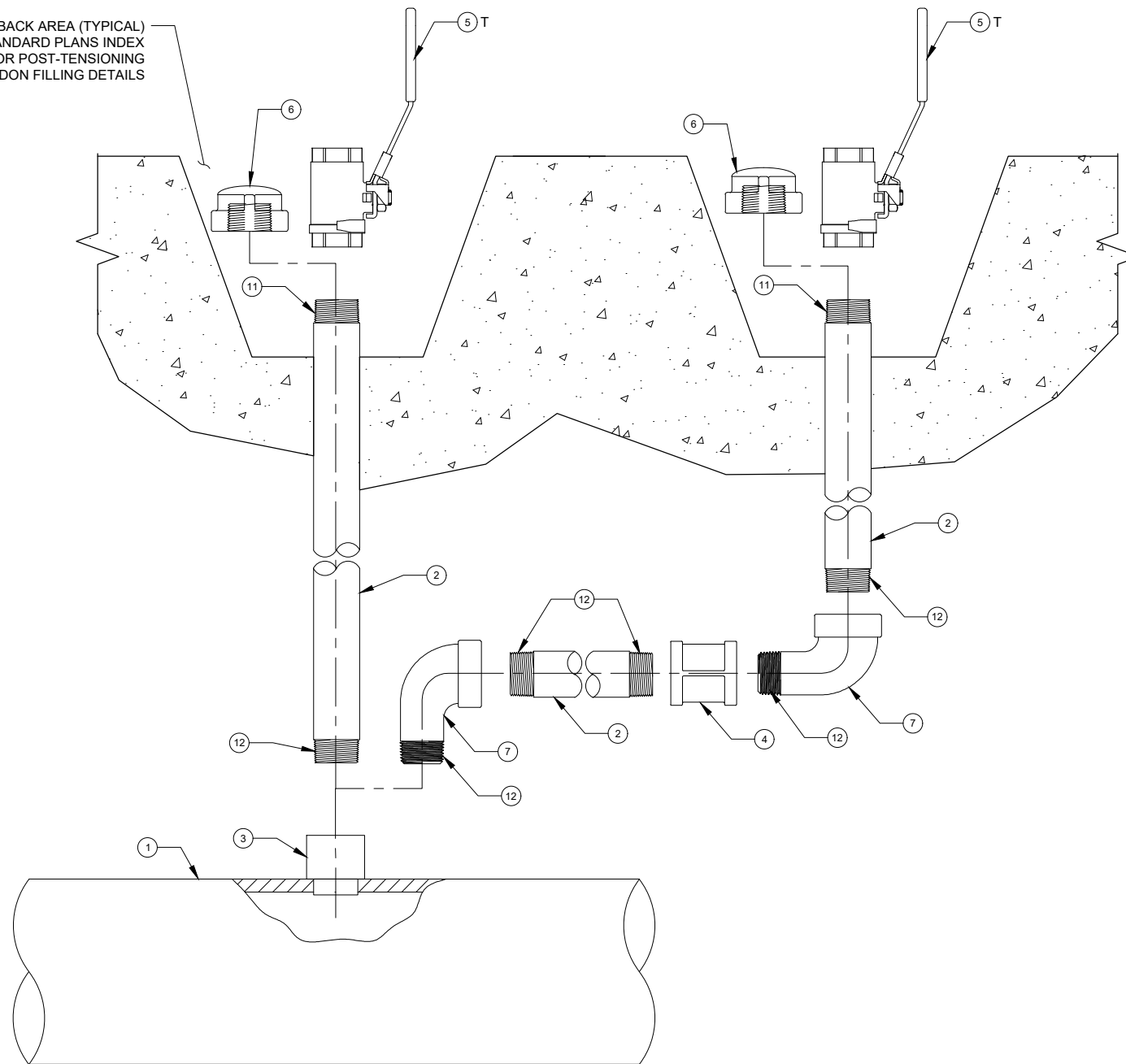
PROJECT INFORMATION:		SYSTEM DRAWING	
PROJECT NO:	---	SCALE:	NTS
SHEET NO:	A339	TITLE:	NCS 6-31 VERTICAL INJECTION OPTIONS
 <p>structural TECHNOLOGIES A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p>		<p>STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY 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 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.</p>	
NO	NO	NO	NO
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CDL	ZX	CDL	ZX
BY	CHK	BY	CHK
26FEB2018		26FEB2018	
			DATE

ELECTRONIC FILE LOCATION: \\VSL\_System\_Drawings\Work in Progress Drawings\Florida DOT Test 2017\NCS 631 Flexible Filler Submittal



**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**

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY #
1	-	5" 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
11	-	SILICONE GREASE	-	-
12	-	BONDUIT	-	-

**3/4" FNPT SMOOTH GROUT PORT INSTALLATION**

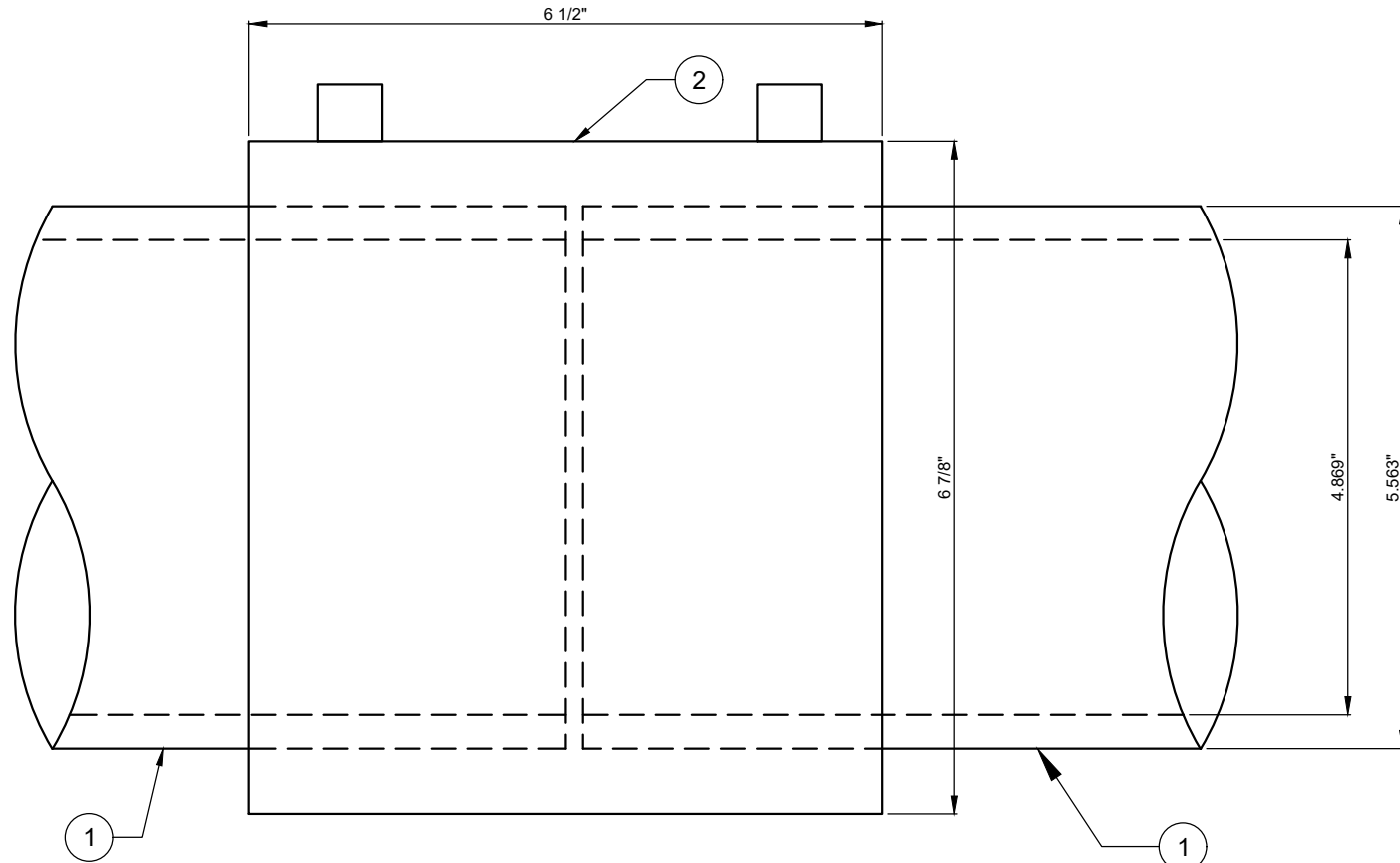
- CLEAN PIPE PRIOR TO GROUT PORT INSTALLATION.
- DRILL Ø7/8" HOLE INTO PIPE.
- CONNECT THE SOCKET WELDING DEVICE TO THE POWER SOURCE.
- ALLOW THE SOCKET WELDING DEVICE TO REACH ITS WORKING TEMPERATURE.
- SIMULTANEOUSLY, INSERT MALE ADAPTER OF SOCKET WELDING DEVICE FROM DRILLED HOLE AND GROUT PORT FROM FEMALE ADAPTER.
- APPLY LIGHT PRESSURE FOR 20-25 SECONDS BY PUSHING THE GROUT PORT WITH THE PALM OF HAND.
- SIMULTANEOUSLY, REMOVE SOCKET WELDING DEVICE FROM DRILLED HOLE AND GROUT PORT FROM FEMALE ADAPTER.
- INSERT GROUT PORT INTO HOLE UNTIL THE SHOULDER IS REACHED.
- 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**

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

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PROJECT INFORMATION:	SYSTEM DRAWING	5" HDPE PIPE VENT ASSEMBLY	FIRST ISSUE	NO	NO
PROJECT NO: --	SCALE: NTS	TITLE: 5" HDPE PIPE VENT ASSEMBLY	CDL	BY	CHK
SHEET NO: A324	DATE: 26FEB2018	DESCRIPTION	ZK	CDL	BY
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**ELEVATION VIEW**

ITEM	QTY	DESCRIPTION	MATERIAL
1	-	5" HDPE PIPE DR-17	ASTM D3035
2	1	5" ELECTROFUSION COUPLER	COMPOSITE

NOTE:  
FOLLOW COUPLER MANUFACTURER'S  
INSTALLATION INSTRUCTIONS

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

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

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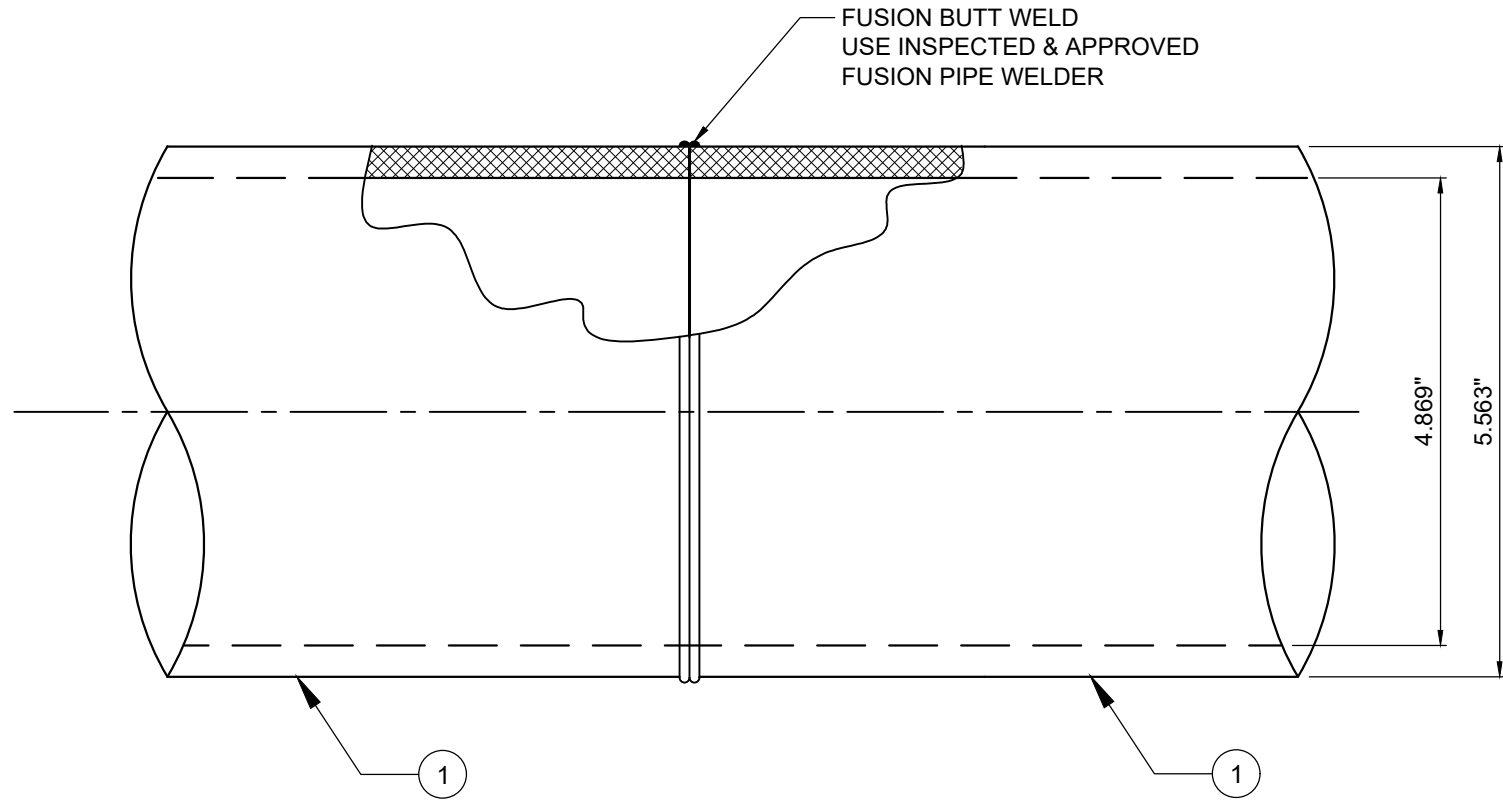
PROJECT INFORMATION:		CDL		26FEB2018	
SYSTEM DRAWING		BY		CHK	
5" HDPE PIPE TO 5" HDPE PIPE ELECTROFUSION COUPLER CONNECTION		NO		FIRST ISSUE	
SCALE: NTS		DESCRIPTION		DATE	
PROJECT NO: SYSTEM		CDL		ZK	
SHEET NO: A316		BY		CHK	

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PHONE: (817) 545-4877  
FAX: (817) 545-4827  
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STRUCTURAL TECHNOLOGIES, LLC  
DALLAS OFFICE  
15000 TRINITY BLVD, SUITE 118  
FORT WORTH, TX 76156



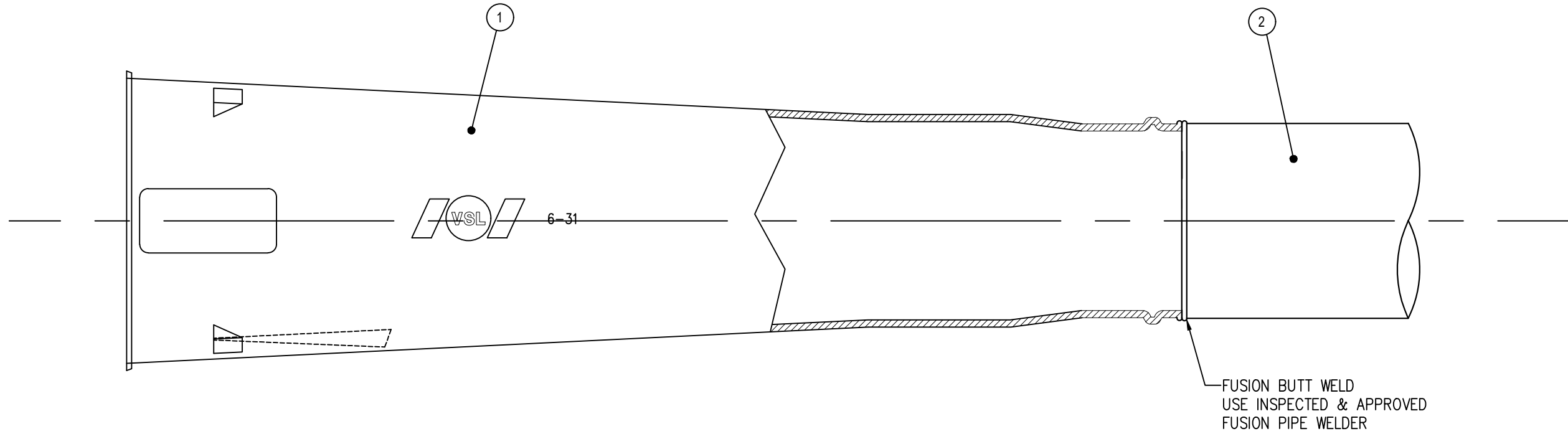
ELEVATION VIEW

ITEM	QTY	DESCRIPTION	MATERIAL
1	2	5" HDPE PIPE DR-17	ASTM D3035

- NOTES:  
 1. HDPE 5" 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.

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<p>APPROVED FOR CONSTRUCTION</p>		<p>GB</p>	<p>MM</p>	<p>BY</p>	<p>CHK</p>
<p>DESCRIPTION</p>		<p>DATE</p>			
<p>SYSTEM DRAWING</p>		<p>TYPICAL 5" HDPE PIPE TO 5" HDPE PIPE FUSION WELDED CONNECTION</p>			
<p>PROJECT NO: SYSTEM</p>	<p>SCALE: NTS</p>	<p>SHEET NO: A287</p>			
<p>PROJECT INFORMATION:</p>		<p>STRUCTURAL TECHNOLOGIES, LLC 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>structural TECHNOLOGIES A Structural Group Company</p>		<p>VSL</p> <p>Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p>			




## TRUMPET TO HDPE PIPE ASSEMBLY

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY#
2	-	5" HDPE PIPE	HDPE	-
1	1	NCS 6-31 TRUMPET	HDPE	02BP4436

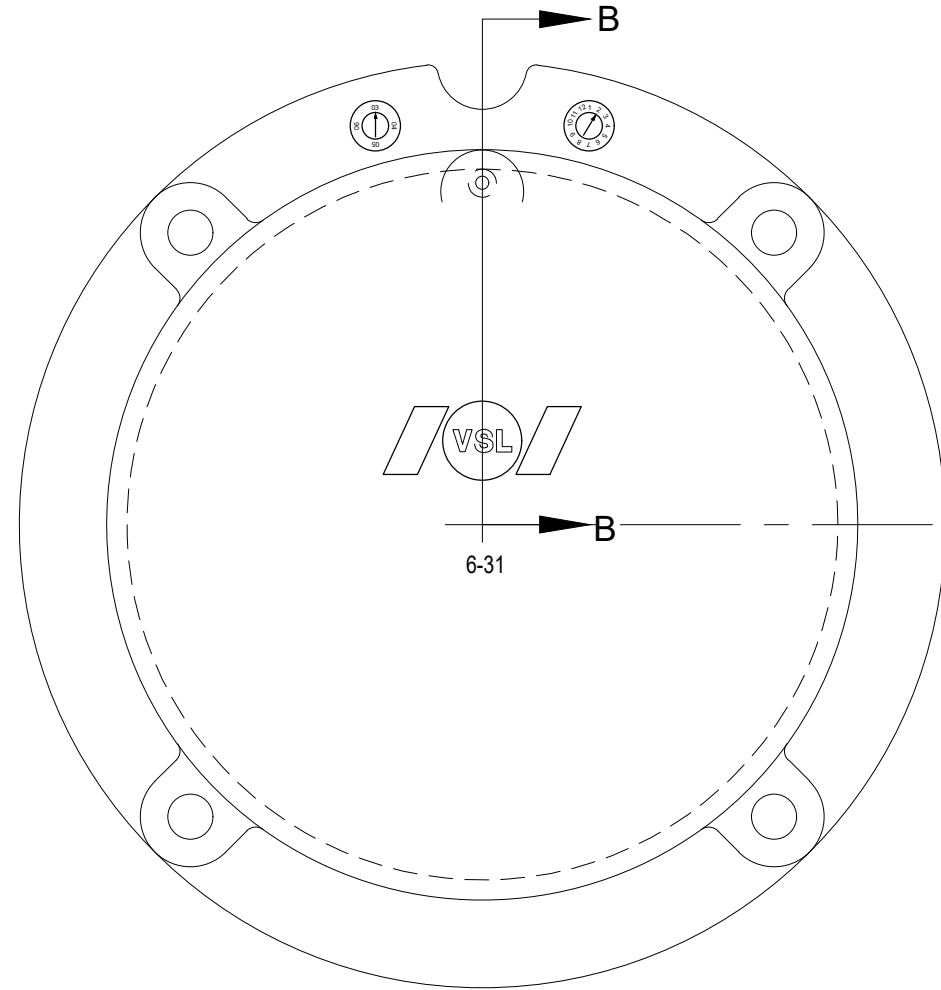
- NOTES:  
 1. HDPE 5" IPS/DR-17 MEETS FDOT 960 SPEC.  
 2. SEE VSL BUTT-WELDING PROCEDURE IN APPENDIX

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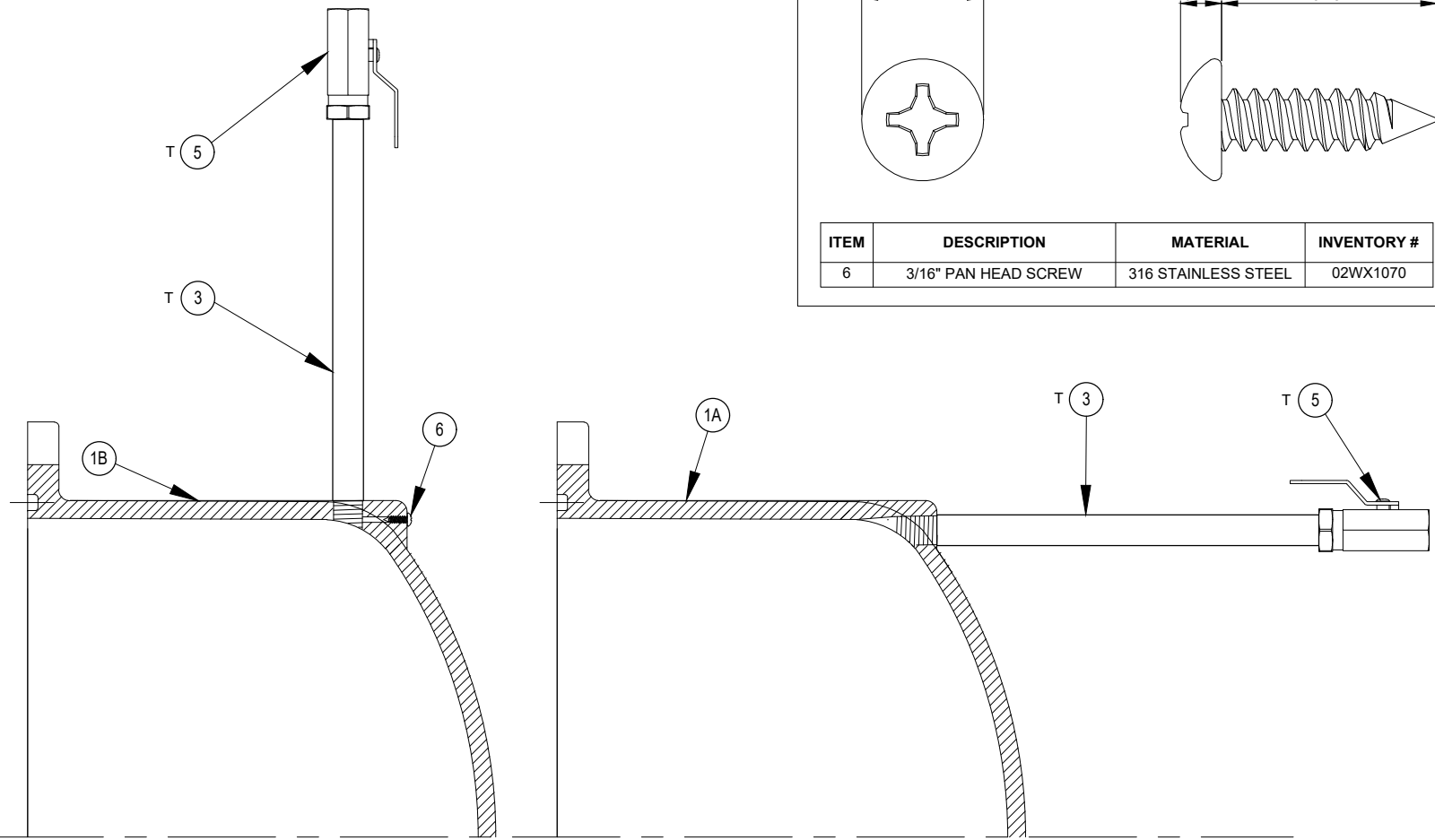
PROJECT INFORMATION:		SYSTEM DRAWING	
TITLE: TYPICAL NCS 6-31 TRUMPET TO HDPE PIPE BUTT FUSION CONNECTION		SCALE: NTS	
PROJECT NO: SYSTEM		SHEET NO: A325	
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DESCRIPTION		BY	DATE
		CHK	



ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\NCS 6-31 Flexible Filler Submittal



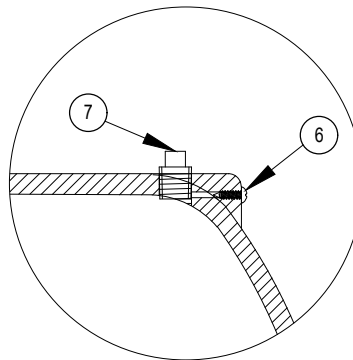
**6-31 ANCHORAGE CAP**



**SECTION B-B**

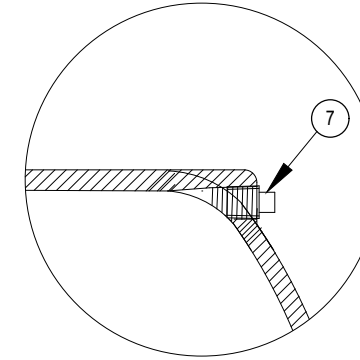
NOTE: ITEMS MARKED WITH A "T" ARE TEMPORARY AND ARE NOT A PERMANENT PART OF THE SYSTEM.

**TOP PORT**

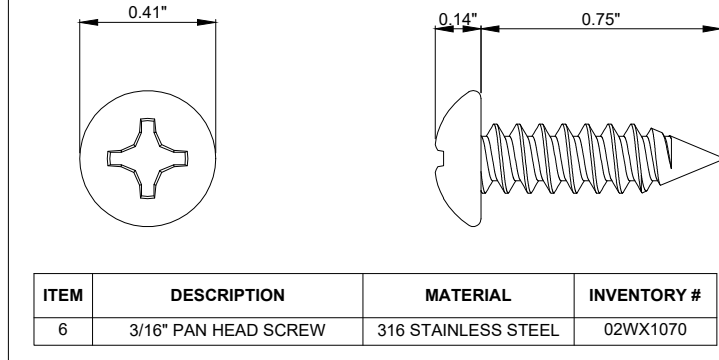


**AFTER WAX**

**FRONT PORT**



**AFTER WAX**



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

ITEM	QTY	DESCRIPTION	MATERIAL	INVENTORY No.
7	1	1/4"Ø NPT STEEL PLUG	316 STAINLESS STEEL	02DT01956
6	1	3/16" PAN HEAD SCREW	316 STAINLESS STEEL	02WX1070
5	1	1/4" NPT STEEL 1/4 TURN BALL VALVE	SCH 40 STEEL	02DT01924
3	1	1/4" NPT STEEL NIPPLE	SCH 40 STEEL	-
1B	1	6-31 ANCHORAGE CAP W/ 1/4" TOP PORT	ABS	02GC63103
1A	1	6-31 ANCHORAGE CAP W/ 1/4" FRONT PORT	ABS	02GC63102

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FORT WORTH, TX 76156

**SYSTEM DRAWING**

**NCS 6-31 ANCHORAGE CAP VENT DETAIL**

PROJECT INFORMATION:

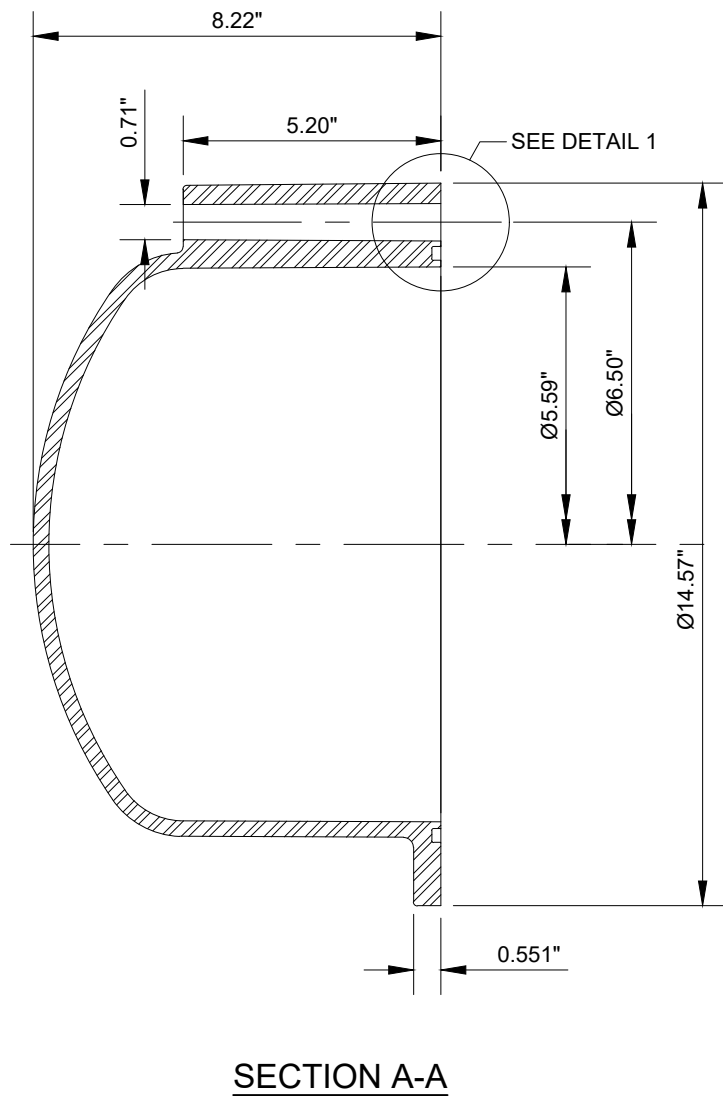
PROJECT NO:	SYSTEM	SCALE:	NTS
SHEET NO:			<b>A334</b>

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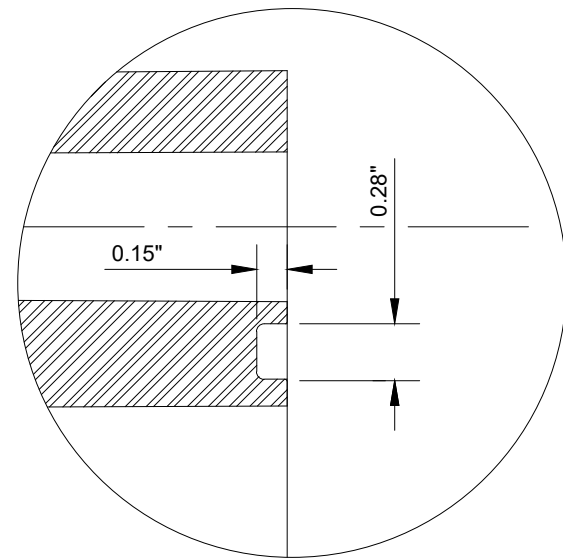
CDL	ZX	26FEB2018
DTS	DD	03JUL2012
DTS	DD	18MAY2012
BY	CHK	DATE

TITLE BLOCK UPDATED  
VENT DETAILS  
3/4" GROUT PORTS  
DESCRIPTION

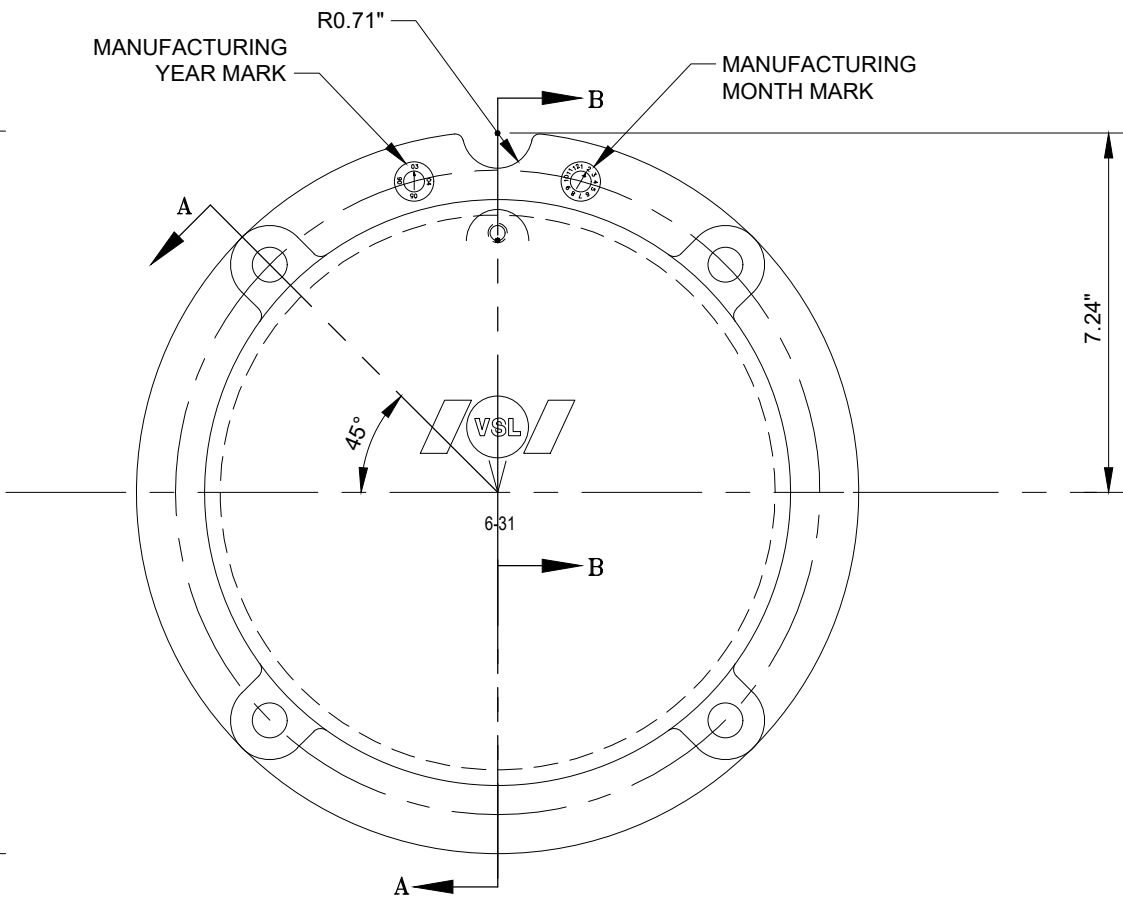
ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\NCS 631 Flexible Filler Submittal



**SECTION A-A**



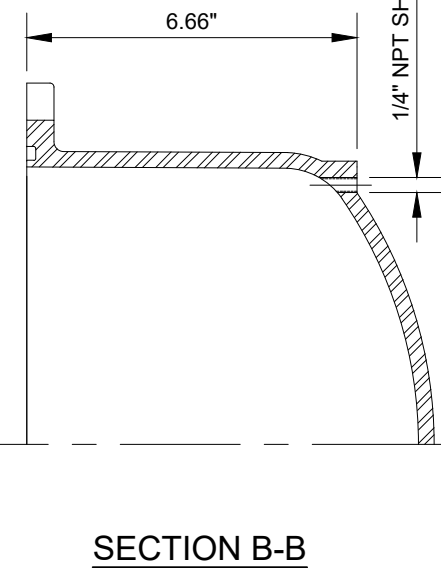
**DETAIL 1**



**6-31 ANCHORAGE CAP**  
LETTERING SHALL BE 0.06" PROUD

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 #: 02GC63102



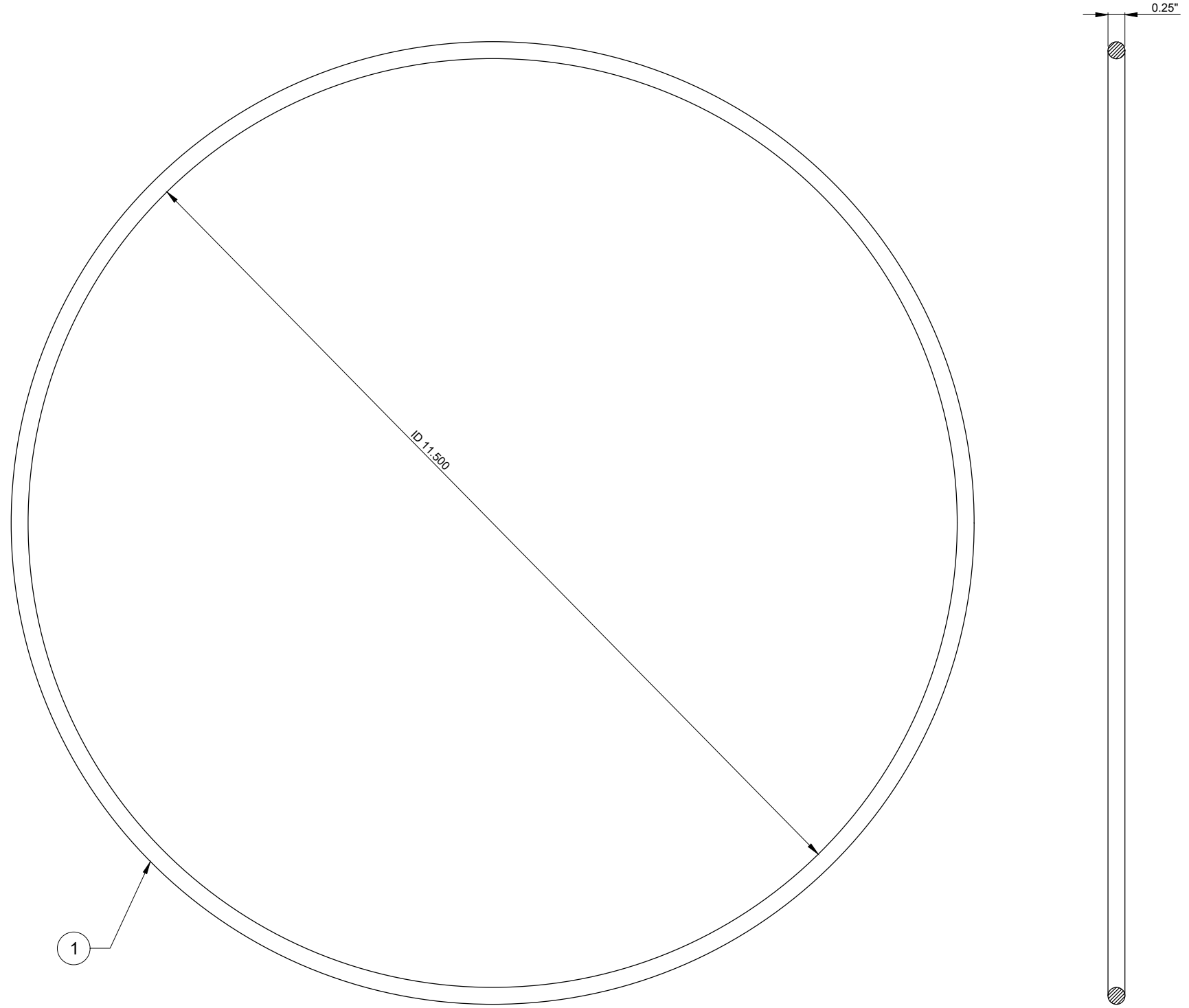
**SECTION B-B**

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PROJECT INFORMATION:		SYSTEM DRAWINGS																					
TITLE:	6-31 ANCHORAGE CAP W/ 1/4" NPT FRONT PORT	PROJECT NO:	SCALE: NTS																				
SHEET NO:	C551	SHEET NO:	C551																				
<p>THIS DOCUMENT, INCLUDING ANY DRAWINGS, SPECIFICATIONS, AND CALCULATIONS HEREIN, CONTAINS INFORMATION THAT IS PROPRIETARY TO STRUCTURAL TECHNOLOGIES / VSL. THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND MAY NOT BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN PERMISSION OF STRUCTURAL TECHNOLOGIES / VSL. FURTHER, THE USE OF THIS DOCUMENT OR ANY INFORMATION PRESENTED HEREIN IS RESTRICTED TO THE PROJECT FOR WHICH IT WAS PREPARED. ANY OTHER USE IS STRICTLY PROHIBITED. STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY FOR ANY IMPERMISSIBLE USE OF THIS DOCUMENT OR ANY INFORMATION IT CONTAINS.</p>		<p>REVISIONS:</p> <table border="1"> <tr> <th>NO</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHK</th> <th>DATE</th> </tr> <tr> <td>3</td> <td>REVISED TITLE BLOCK</td> <td>CDL</td> <td>ZX</td> <td>26FEB2018</td> </tr> <tr> <td>2</td> <td>REVISED PORT HOLES</td> <td>CDL</td> <td>ZX</td> <td>01MAR2017</td> </tr> <tr> <td>1</td> <td>ADD MANUFACTURING DATE MARKS</td> <td>LS</td> <td></td> <td>19JAN2004</td> </tr> </table>		NO	DESCRIPTION	BY	CHK	DATE	3	REVISED TITLE BLOCK	CDL	ZX	26FEB2018	2	REVISED PORT HOLES	CDL	ZX	01MAR2017	1	ADD MANUFACTURING DATE MARKS	LS		19JAN2004
NO	DESCRIPTION	BY	CHK	DATE																			
3	REVISED TITLE BLOCK	CDL	ZX	26FEB2018																			
2	REVISED PORT HOLES	CDL	ZX	01MAR2017																			
1	ADD MANUFACTURING DATE MARKS	LS		19JAN2004																			

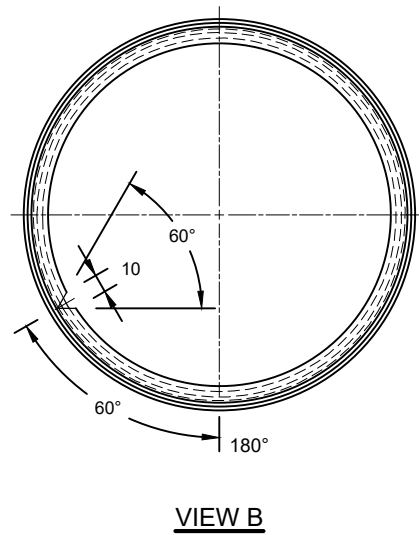
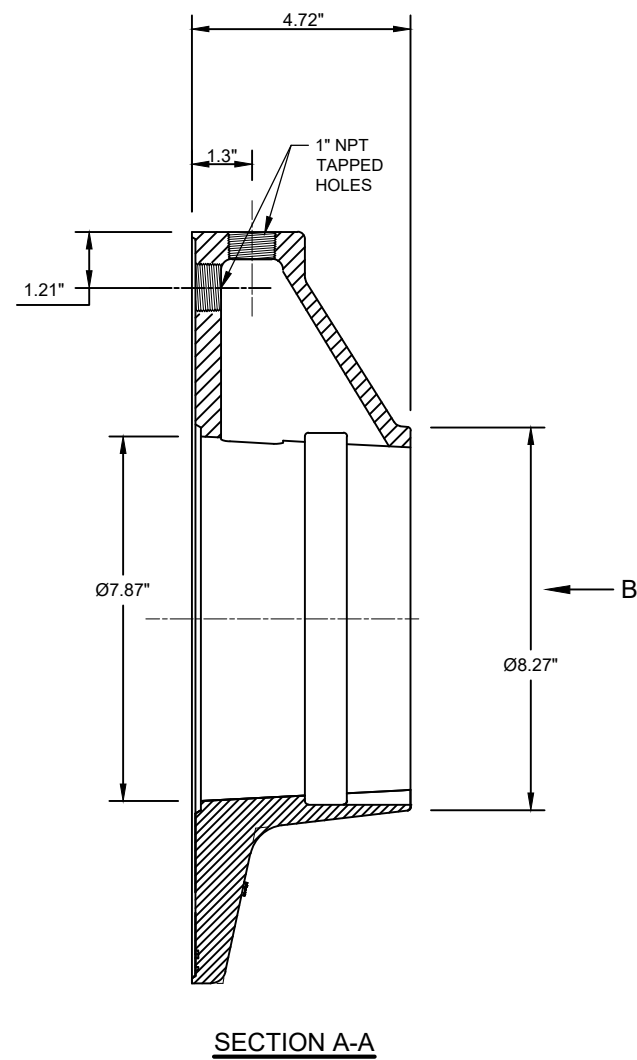


ITEM	QTY	DESCRIPTION	MATERIAL	SIZE	INVENTORY#
1	-	6-31 ANCHORAGE CAP O-RING	HNBR	11.5"x12"x0.25"	02WX5044



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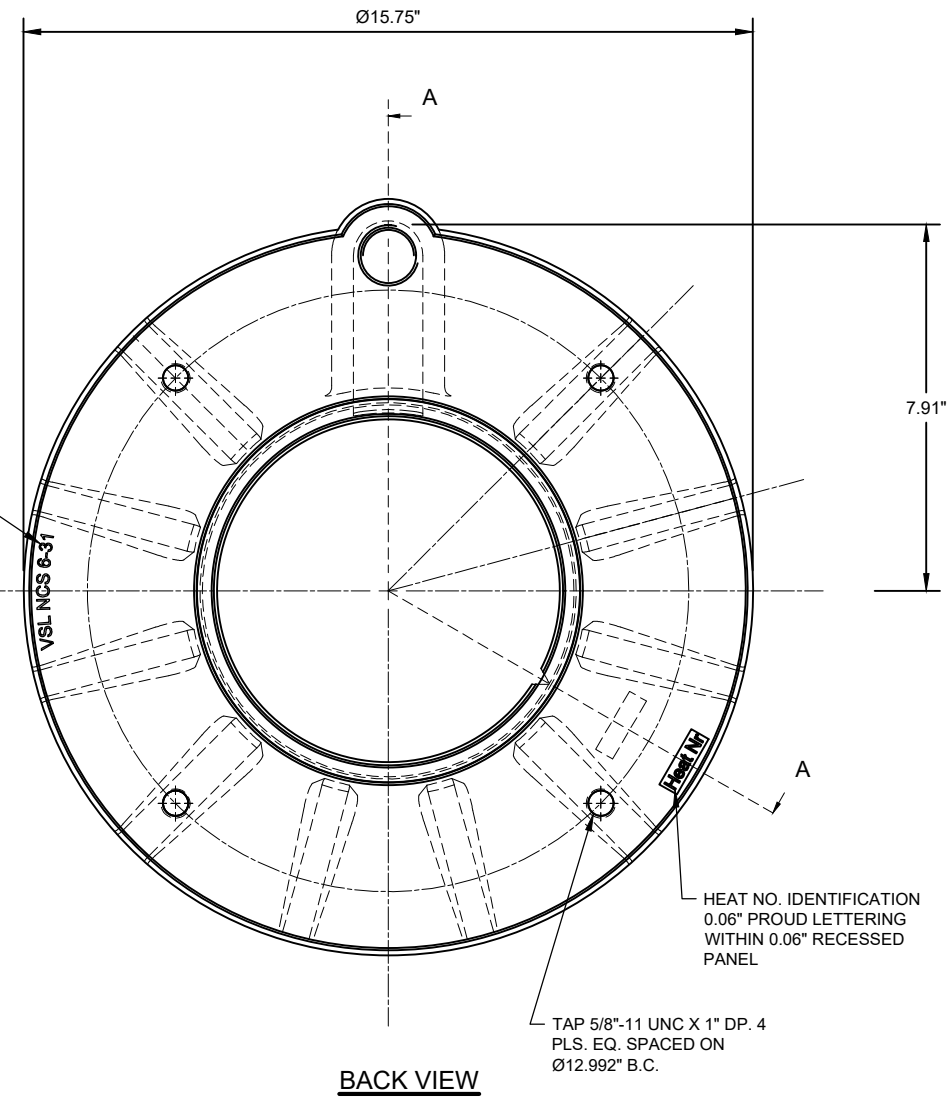
<p><b>structural TECHNOLOGIES</b> A Structural Group Company</p> <p>Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL</p> <p>STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD, SUITE 118 FORT WORTH, TX 76156</p> <p>PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET</p>		<p>THIS DOCUMENT, INCLUDING ANY DRAWINGS, SPECIFICATIONS, AND CALCULATIONS HEREIN, CONTAINS INFORMATION THAT IS PROPRIETARY TO STRUCTURAL TECHNOLOGIES / VSL. THIS DOCUMENT AND THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND MAY NOT BE REPRODUCED OR DISCLOSED WITHOUT THE WRITTEN PERMISSION OF STRUCTURAL TECHNOLOGIES / VSL. FURTHER, THE USE OF THIS DOCUMENT OR ANY INFORMATION PRESENTED HEREIN IS RESTRICTED TO THE PROJECT FOR WHICH IT WAS PREPARED. ANY OTHER USE IS STRICTLY PROHIBITED. STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY FOR ANY IMPERMISSIBLE USE OF THIS DOCUMENT OR ANY INFORMATION IT CONTAINS.</p>	
<p>PROJECT INFORMATION:</p> <p>PROJECT NO: SYSTEM</p> <p>SHEET NO:</p>		<p>SYSTEM DRAWING</p> <p>6-31 ANCHORAGE CAP O-RING</p> <p>TITLE: 6-31 ANCHORAGE CAP O-RING</p> <p>SCALE: NTS</p>	
<p>NO</p>		<p>DESCRIPTION</p>	
<p>△ 1</p>		<p>△ 0</p>	
<p>PART NUMBER UPDATED</p>		<p>FIRST ISSUE</p>	
<p>CDL ZX</p>		<p>CDL ZX</p>	
<p>BY</p>		<p>CHK</p>	
<p>NO</p>		<p>DATE</p>	
<p>26FEB2018</p>		<p>26FEB2018</p>	



**GENERAL NOTES**

1. ALL HOLES TO BE FREE FROM BURRS
2. MATERIAL: A536 GR80-55-06 GALVANIZED
3. INVENTORY# 02BP6031V

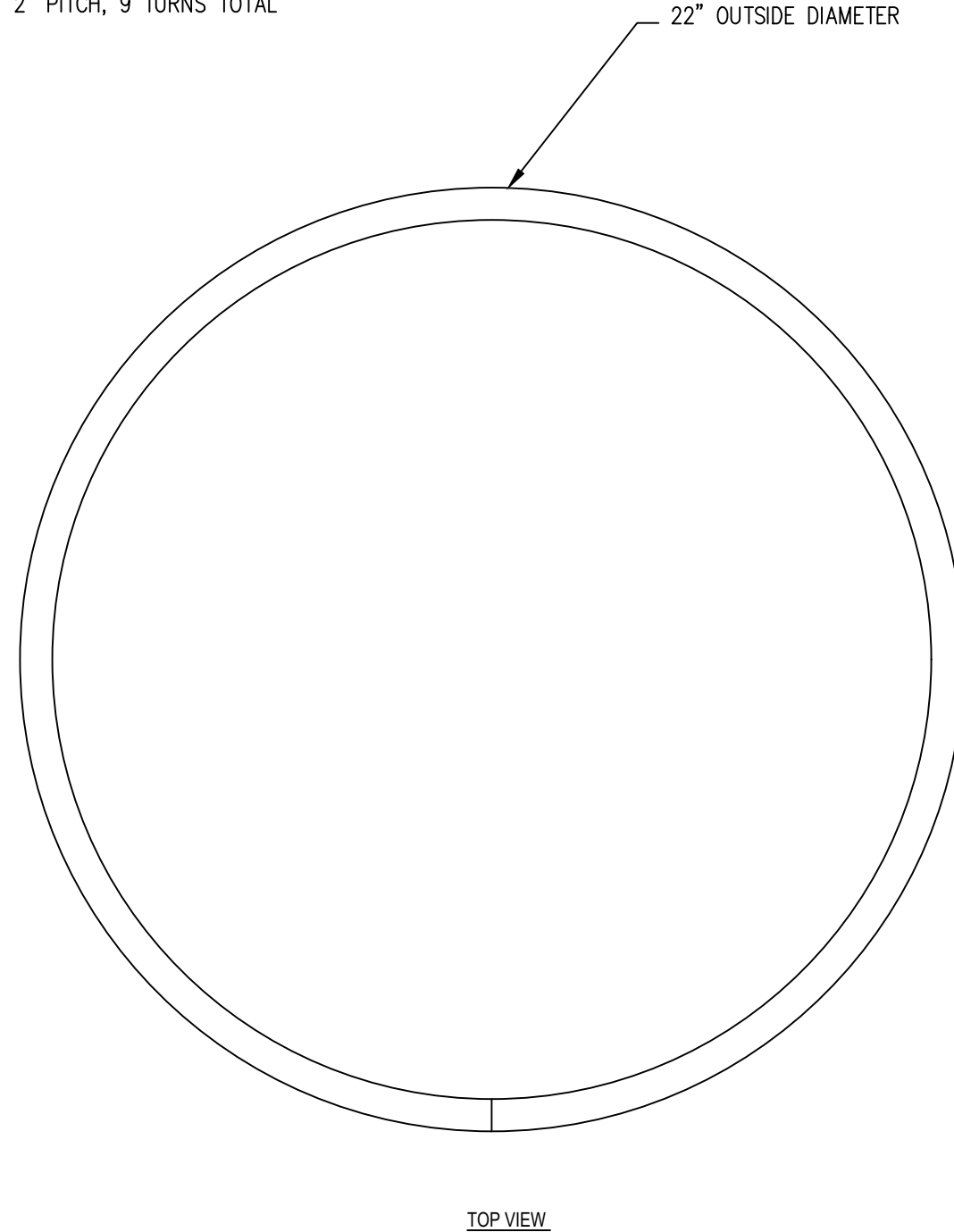
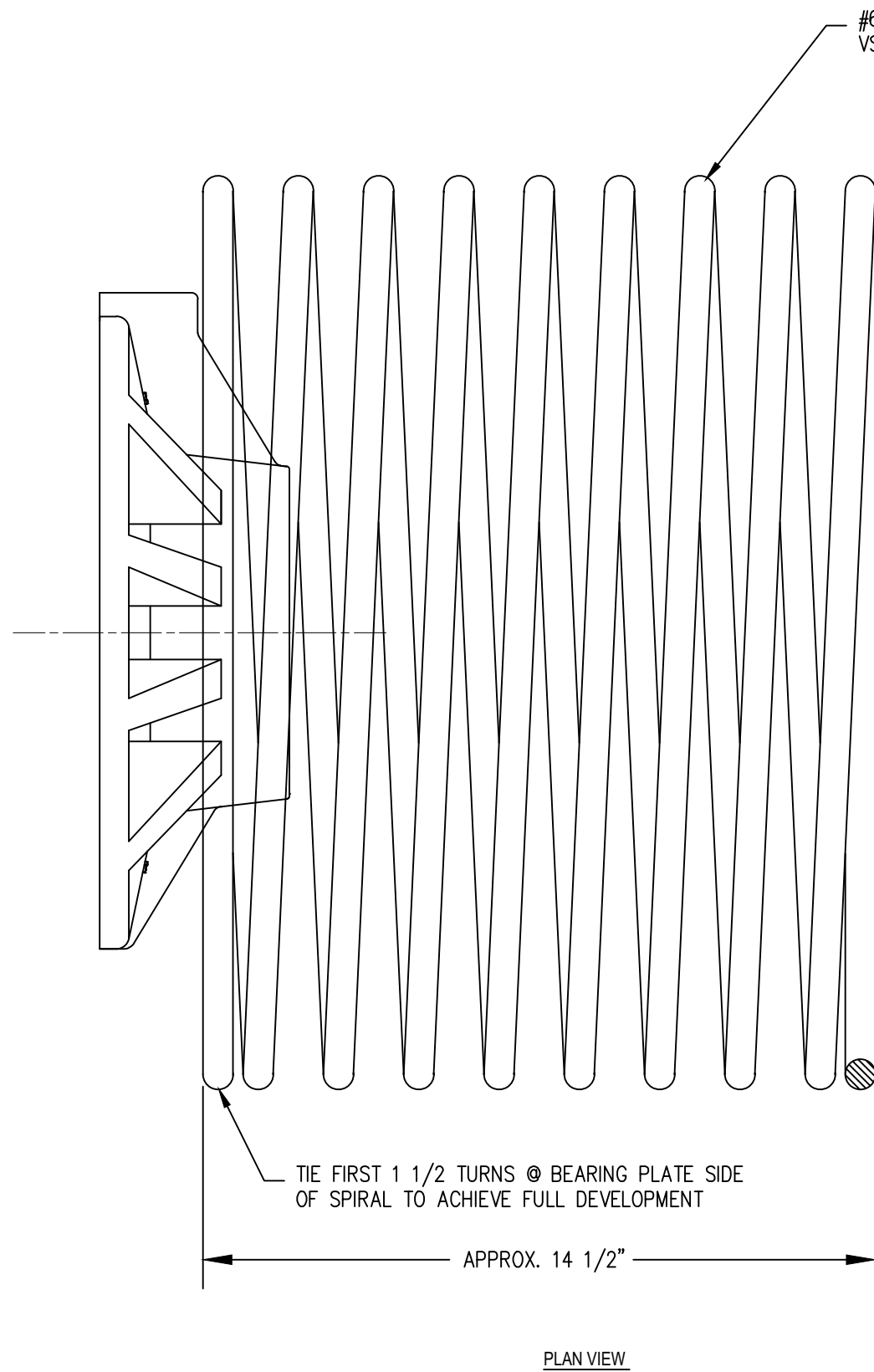
TYPE IDENTIFICATION  
LETTERING 0.06"  
RECESSED



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SYSTEM DRAWING		PRELIMINARY NOT FOR PRODUCTION	
PROJECT NO: SYSTEM		CDL	ZX
SHEET NO:		BY	CHK
TITLE: NCS 6-31 BEARING PLATE W/ 1" NPT PORT		DATE: 26FEB2018	
SCALE: NTS		DESCRIPTION	
C735			

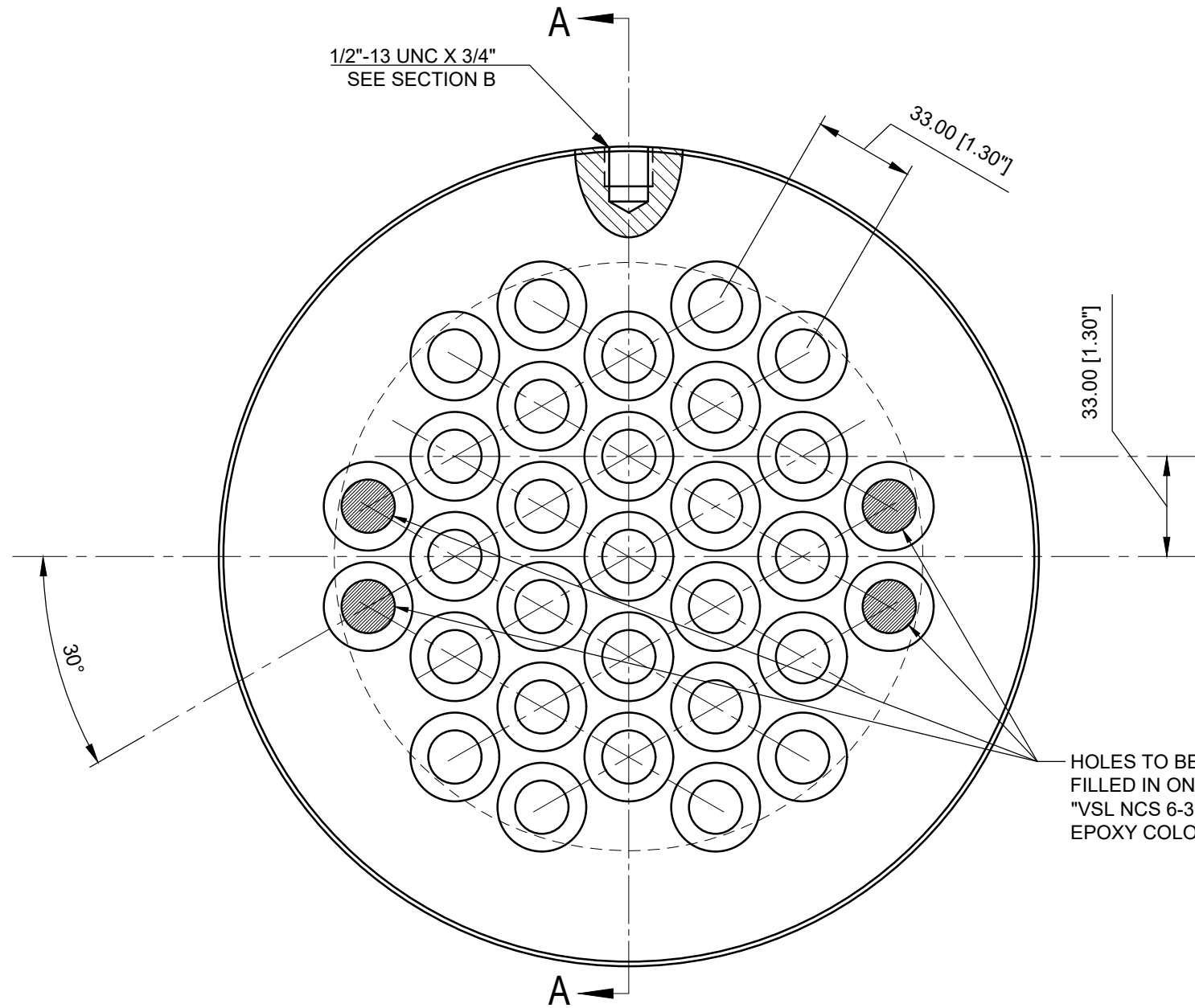
ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work In Progress Drawings\Florida DOT Test 2017\NCS 6-31 Flexible Filler Submittal



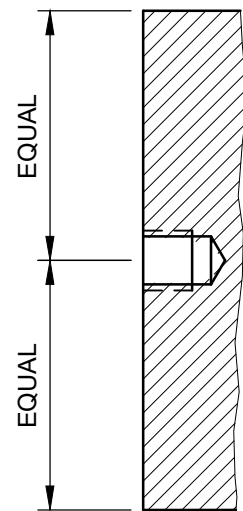
THESE SHOP DRAWINGS ILLUSTRATE THE DETAILS OF THE STRUCTURAL TECHNOLOGIES / VSL POST-TENSIONING SYSTEM. THEY WERE PREPARED IN CONFORMANCE WITH THE STRUCTURAL DESIGN PROVIDED TO STRUCTURAL TECHNOLOGIES / VSL BY PROJECT OWNER OR ITS REPRESENTATIVE. STRUCTURAL TECHNOLOGIES / VSL TOOK NO PART IN THE PREPARATION 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:		CDL	ZX	26FEB2018
SYSTEM DRAWING		TB	MM	06JUL2011
TITLE: NCS 6-31 SPIRAL		GDH	GY	24SEP2009
SCALE: NTS		BY	CHK	DATE
SHEET NO: C644		DESCRIPTION		
PROJECT NO: SYSTEM		TITLE BLOCK UPDATED		
SHEET NO:		REVISED AS NOTED FOR CONSTRUCTION		
		RELEASED FOR CONSTRUCTION		
		NO		
<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 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.</p>				
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ELECTRONIC FILE LOCATION: I:\VSL System Drawings\Work in Progress Drawings\Florida DOT Test 2017\NCS 6-27 Flexible Filler Submittal



PLAN VIEW



SECTION B

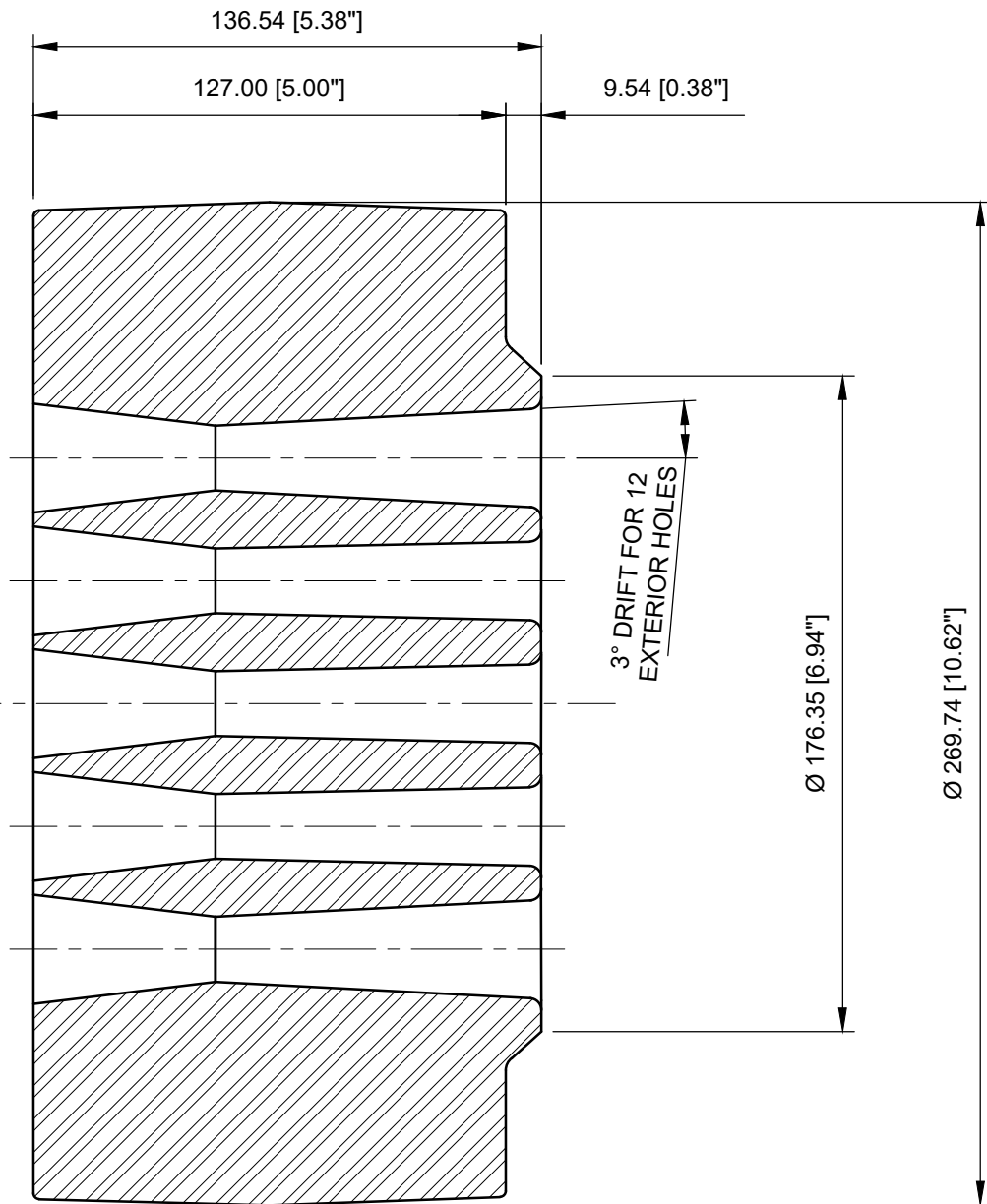
HOLES TO BE EPOXY FILLED IN ON STANDARD "VSL NCS 6-31" EPOXY COLOR: GREY

**ANCHORHEAD NCS 6-27**

**GENERAL CASTING NOTES**

- 1) ALL HOLES TO BE FREE FROM BURRS
- 2) ALL RADII 1mm UNO
- 3) MATERIAL: ASTM A536 GR 80-55-06  
VSL Q.A. DOC MS 1.1.005
- 4) MANUFACTURERS IDENTIFICATION AND BATCH No. MUST BE CLEARLY VISIBLE ON CASTING
- 5) SCALE: DRAWING NOT TO SCALE
- 6) WEIGHT: 106 LBS. est.

**INVENTORY No. 02AH6031A**



SECTION A-A

**TOLERANCES**  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN MILLIMETERS.

0 THROUGH 50mm	±0.5
51mm THROUGH 100mm	±1.0
MORE THAN 100mm	±1.5
ANGULAR	±1/2°
SURFACE QUALITY	✓

NOTES:  
 1) BREAK SHARP EDGES  
 2) REMOVE ALL BURRS.  
 3) DO NOT SCALE DRAWING.  
 4) ALL DRAFT ANGLES 2° UNO

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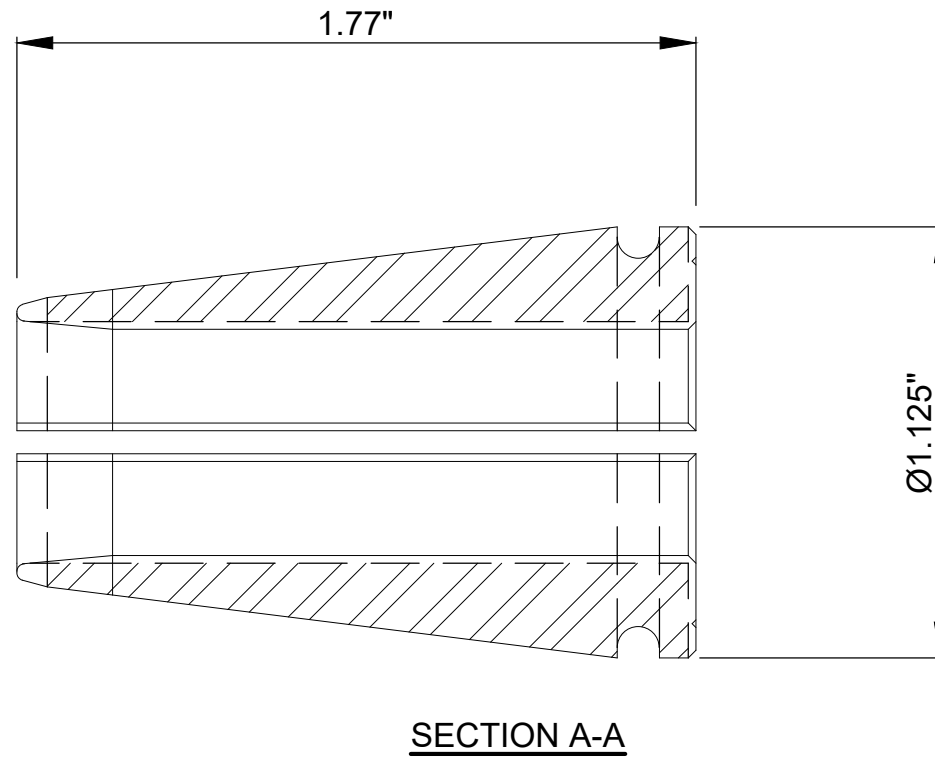
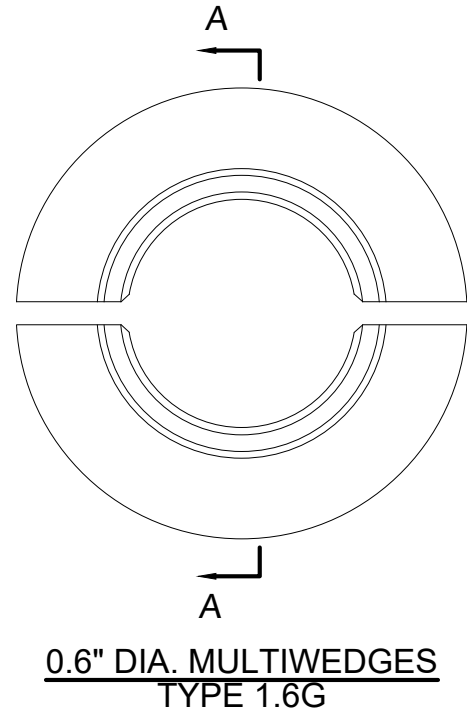
PROJECT INFORMATION:		TITLE: NCS 6-27 ANCHOR HEAD	
PROJECT NO: SYSTEM	SCALE: NTS	SHEET NO: C677	
SYSTEM DRAWING		NCS 6-27 ANCHOR HEAD	
<p>THIS DOCUMENT, INCLUDING ANY DRAWINGS, SPECIFICATIONS, AND CALCULATIONS HEREIN, CONTAINS INFORMATION THAT IS PROPRIETARY TO STRUCTURAL TECHNOLOGIES LLC (VSL). THIS INFORMATION IS CONFIDENTIAL AND MAY NOT BE REPRODUCED OR DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF STRUCTURAL TECHNOLOGIES LLC. THE USE OF THIS DOCUMENT FOR ANY INFORMATION PRESENTED HEREIN IS RESTRICTED TO THE SPECIFIC PROJECT AND PURPOSE FOR WHICH IT WAS PREPARED. STRUCTURAL TECHNOLOGIES LLC (VSL) DISCLAIMS ANY LIABILITY FOR ANY UNAUTHORIZED, UNINTENDED OR OTHER INFORMATION CONTAINED IN THIS DOCUMENT.</p>		<p>5</p>	
<p>4</p>		<p>3</p>	
<p>2</p>		<p>NO</p>	
TITLE BLOCK UPDATED		DESCRIPTION	
CDL	ZX	14MAR2018	DATE
GDH	ZX	09JAN2018	DATE
JOB	GAH	09JAN2018	DATE
GDH	GAH	04APR2011	DATE
BY	CHK		

**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 76155

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



- 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><b>SYSTEM DRAWING</b></p> <p>PROJECT NO: <b>SYSTEM</b></p> <p>SHEET NO:</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>	

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A Technical Group Company

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DALLAS OFFICE  
15600 TRINITY BLVD, SUITE 118  
FORT WORTH, TX 76155

VSL

PHONE: (817) 545-4877  
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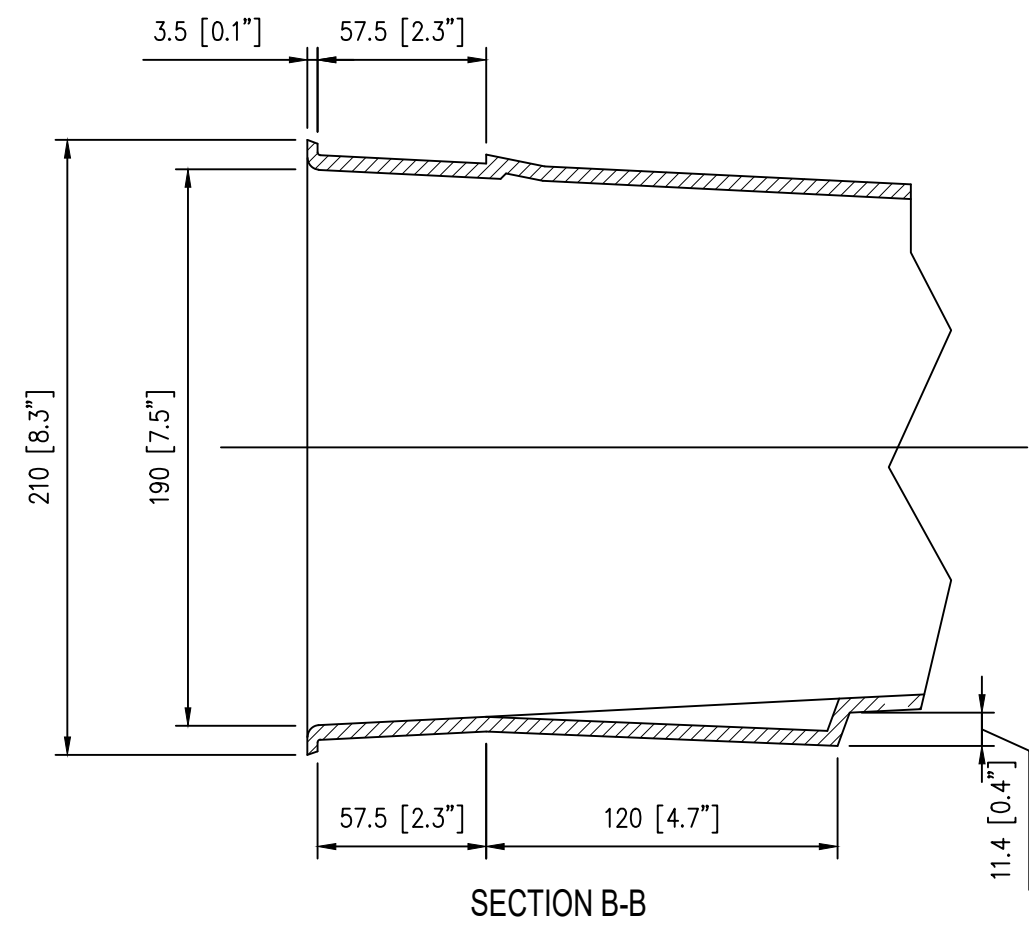
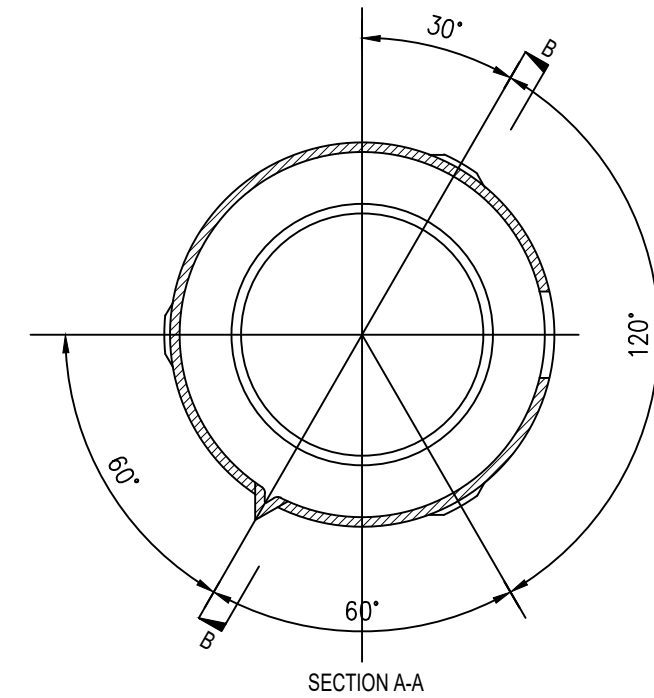
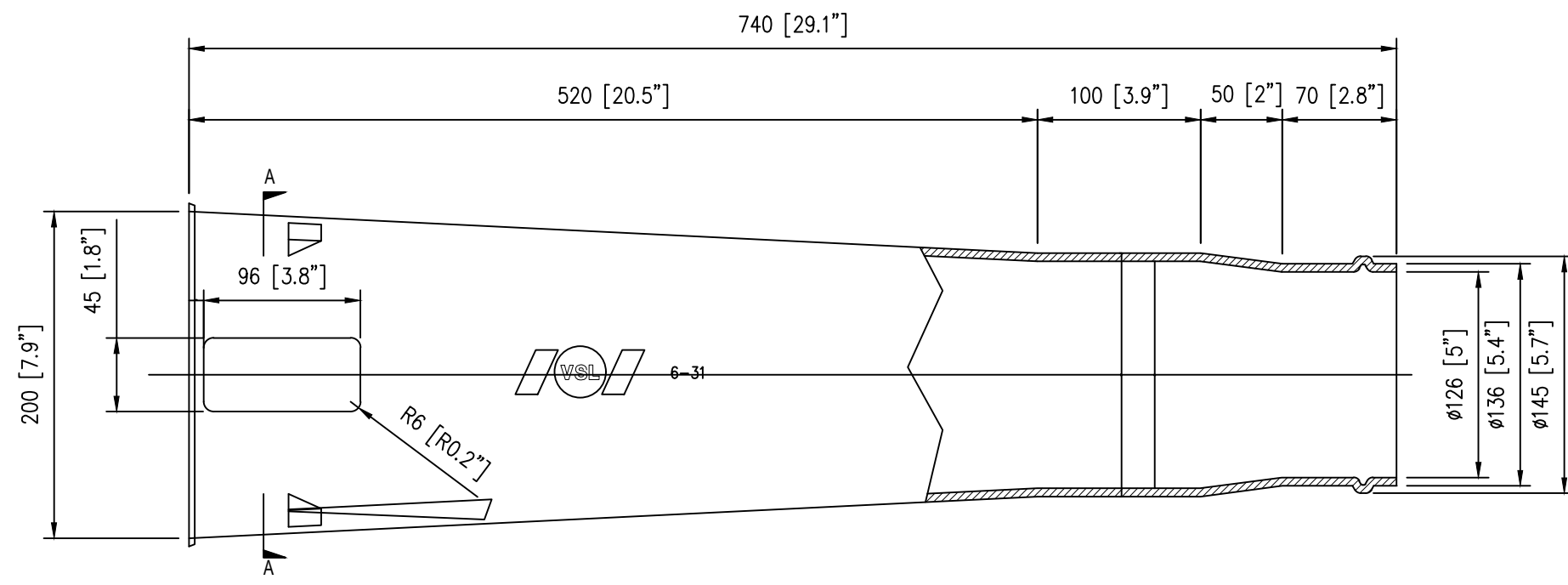
TITLE:  
**0.6" MULTIWEDGE TYPE 1.6G**

SCALE:  
NTS

**C218**



ELECTRONIC FILE LOCATION: I:\VSL\System Drawings\Work In Progress Drawings\Florida DOT Test 2017\NCS 6-31 Flexible Filler Submittal



**TOLERANCES**  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN MILLIMETERS.

0 THROUGH 50mm  
51mm THROUGH 100mm ±0.5  
MORE THAN 100mm ±0.5  
ANGULAR ±1.0  
SURFACE QUALITY ±1.5  
NOTES: ±1/2'

- 1) BREAK SHARP EDGES
- 2) REMOVE ALL BURRS. ✓
- 3) DO NOT SCALE DRAWING.
- 4) ALL RADII 1mm UNO
- 5) MATERIAL: HDPE

INVENTORY No. 02BP4436

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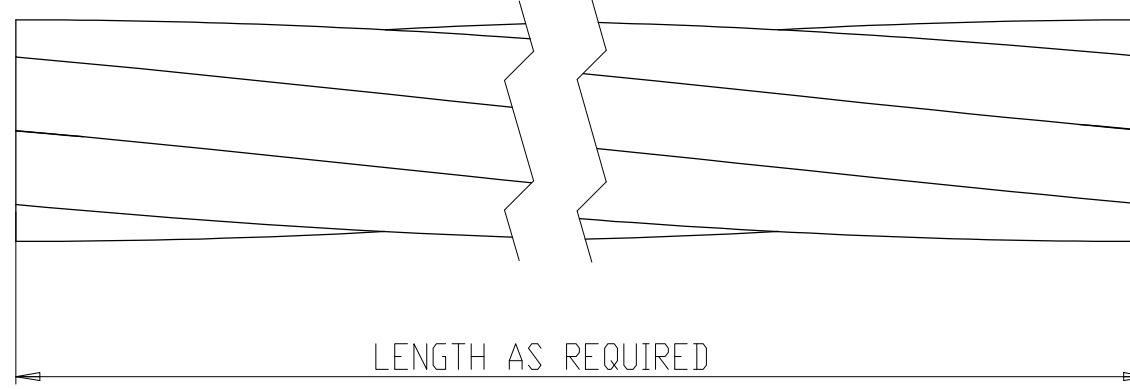
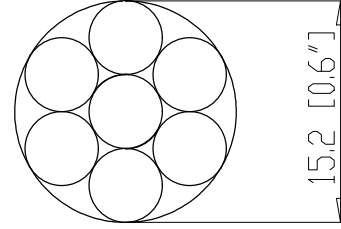
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DALLAS OFFICE  
15600 TRINITY BLVD., SUITE 118  
FORT WORTH, TX 76156

PROJECT INFORMATION:	SYSTEM DRAWING	TITLE:	NCS 6-31 TRUMPET
PROJECT NO:	SYSTEM	SCALE:	NTS
SHEET NO:			C645
NO	DESCRIPTION	BY	DATE
2	TITLE BLOCK UPDATED	CDL ZX	26FEB2018
1	ISSUED FOR CONSTRUCTION	JE	27OCT2009
		CHK	



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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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NO

NO

TITLE BLOCK UPDATED

FOR FDOT

DESCRIPTION

CDL ZX

MM

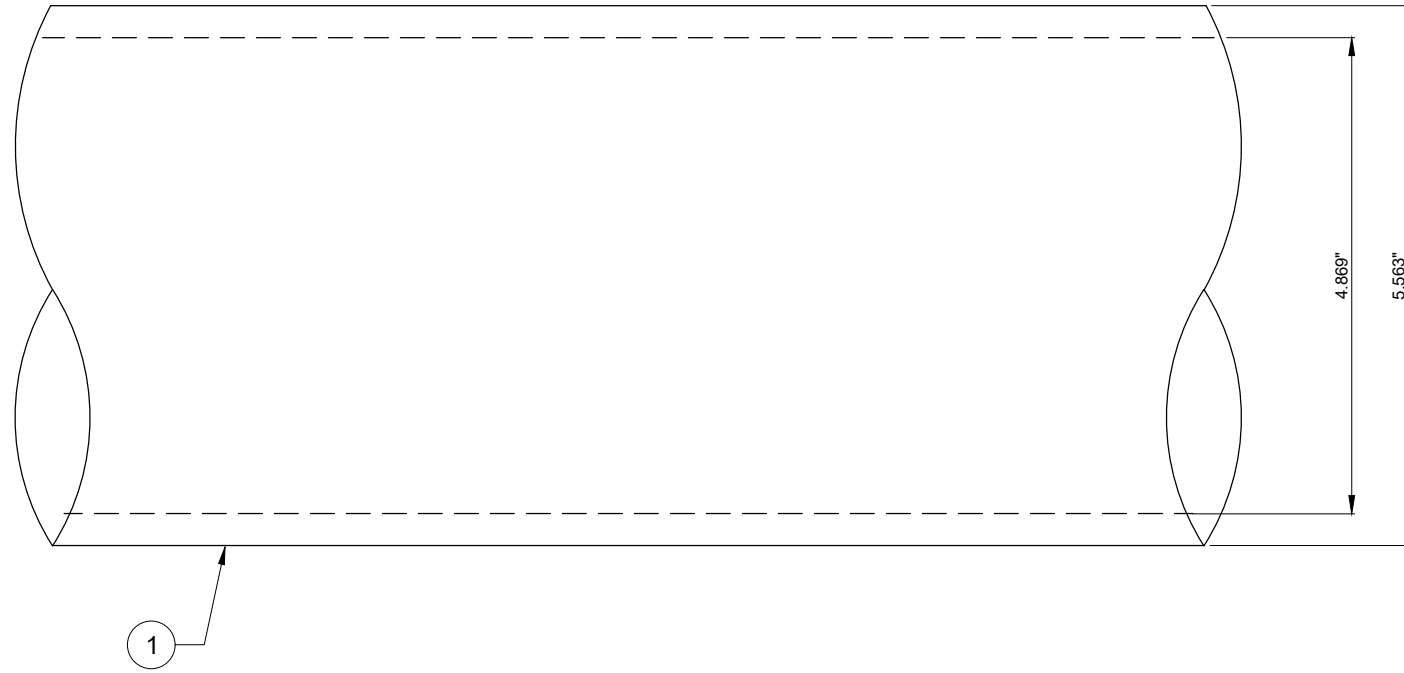
BY

CHK

DATE

26FEB2018

04FEB2010



ITEM	QTY	DESCRIPTION	MATERIAL
1	-	5" HDPE PIPE DR-17	ASTM D3035

NOTE: MINIMUM BEND RADIUS = 30'-0"

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PROJECT INFORMATION:

SYSTEM DRAWING

PROJECT NO:  
SYSTEM

SCALE:  
NTS

SHEET NO:  
C718

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DALLAS OFFICE  
15000 TRINITY BLVD, SUITE 118  
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NO

FIRST ISSUE

DESCRIPTION

BY

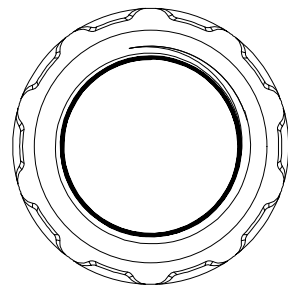
CDL ZX

CHK

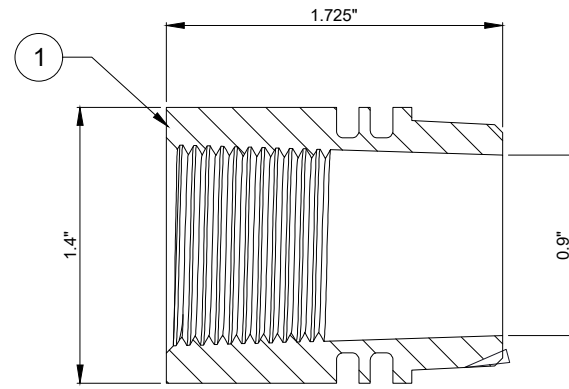
DATE

26FEB2018

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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

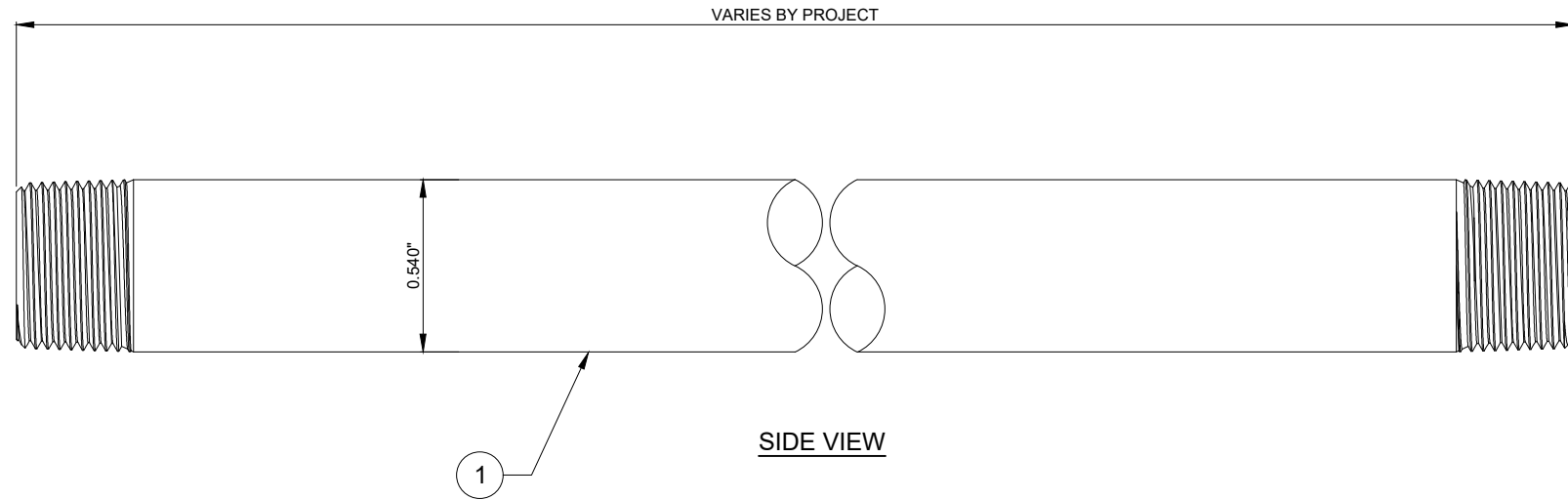
ZX

CHK

26FEB2018

DATE

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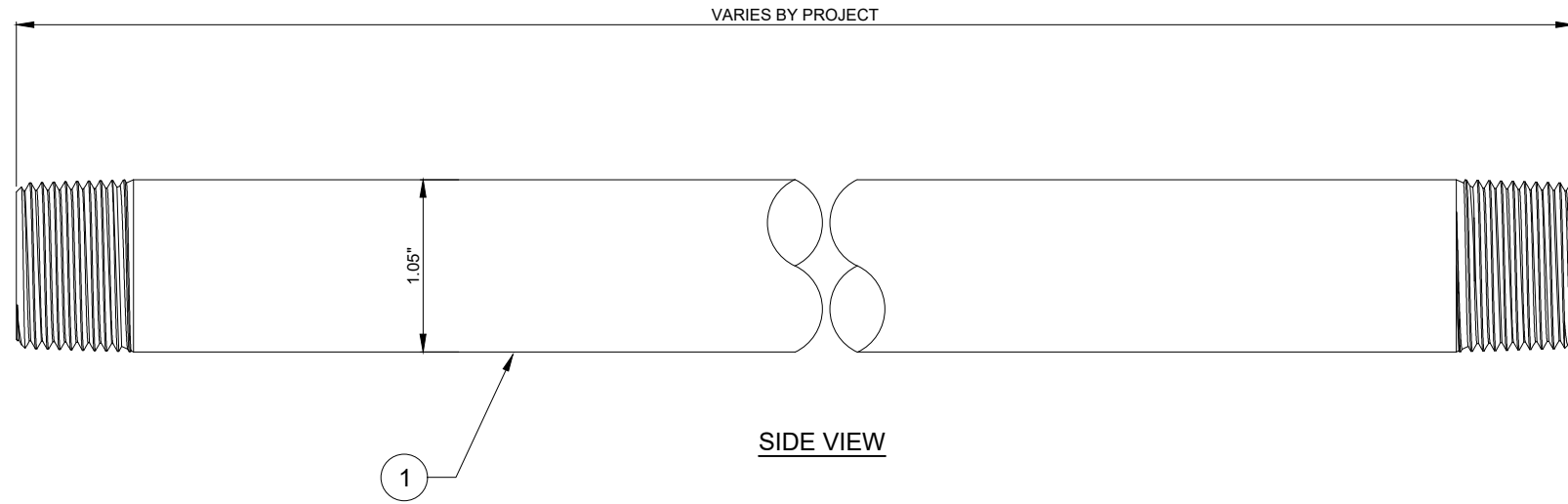


ITEM	QTY	DESCRIPTION	MATERIAL
1	-	1/4" NPT STEEL NIPPLE	SCH 40 STEEL

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PROJECT 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	SCALE:	NTS
SHEET NO:	C749	TITLE:	1/4" NPT STEEL NIPPLE
SYSTEM DRAWING			
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		Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL	
NO	△	FIRST ISSUE	CDL ZX
NO	△	DESCRIPTION	BY CHK
			DATE
			26FEB2018

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ITEM	QTY	DESCRIPTION	MATERIAL
1	-	3/4" NPT 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:		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

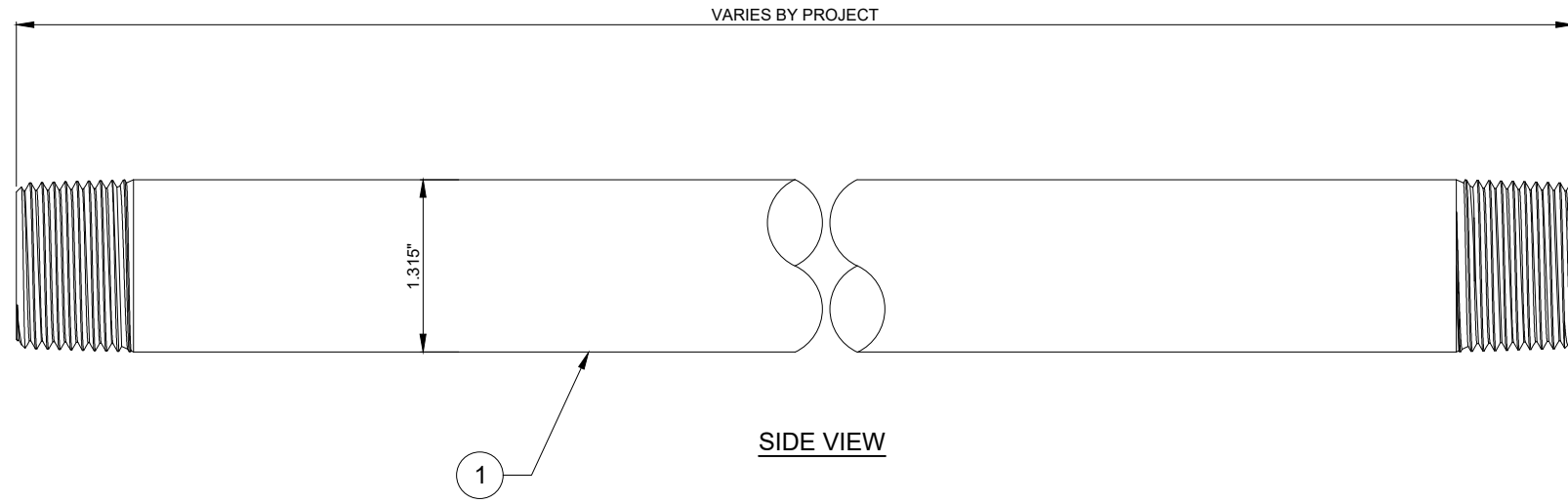
STRUCTURAL TECHNOLOGIES, LLC  
DALLAS OFFICE  
15600 TRINITY BLVD, SUITE 118  
FORT WORTH, TX 76156

SYSTEM DRAWING

3/4" NPT STEEL NIPPLE

C722

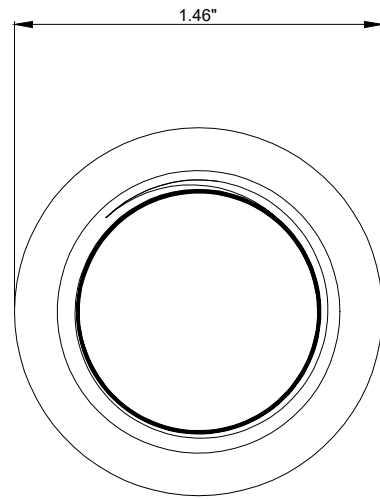
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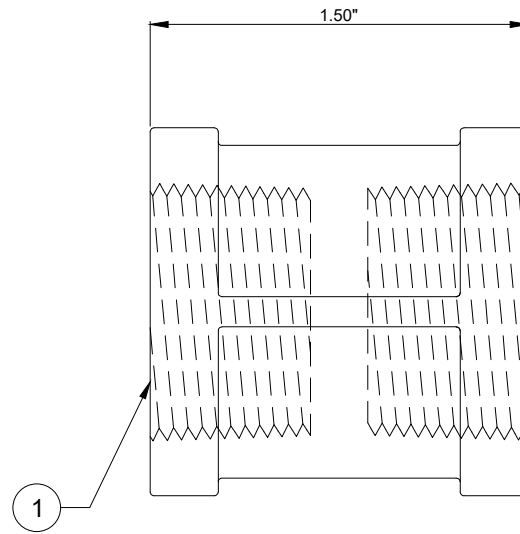
ITEM	QTY	DESCRIPTION	MATERIAL
1	-	1" NPT STEEL NIPPLE	SCH 40 STEEL

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.

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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
SYSTEM DRAWING		FIRST ISSUE	
TITLE:		DESCRIPTION	
1" NPT STEEL NIPPLE			
SCALE:	NTS	NO	NO
		CDL	ZX
		BY	CHK
		26FEB2018	
		DATE	
		C725	



END VIEW



SIDE VIEW

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

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:

SYSTEM DRAWING

PROJECT NO: -

SHEET NO:

TITLE:  
3/4" NPT F/F COUPLER

SCALE:  
NTS

C728

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 WITHOUT THE WRITTEN AND/OR SERVICE PROVIDED BY STRUCTURAL TECHNOLOGIES / VSL. ANY OTHER USE IS STRICTLY PROHIBITED, AND STRUCTURAL TECHNOLOGIES / VSL DISCLAIMS ANY LIABILITY THEREFORE.

NO

FIRST ISSUE

DESCRIPTION

CDL

BY

ZX

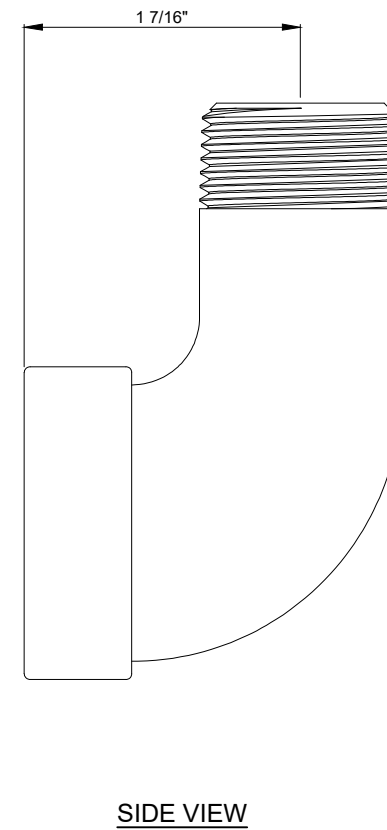
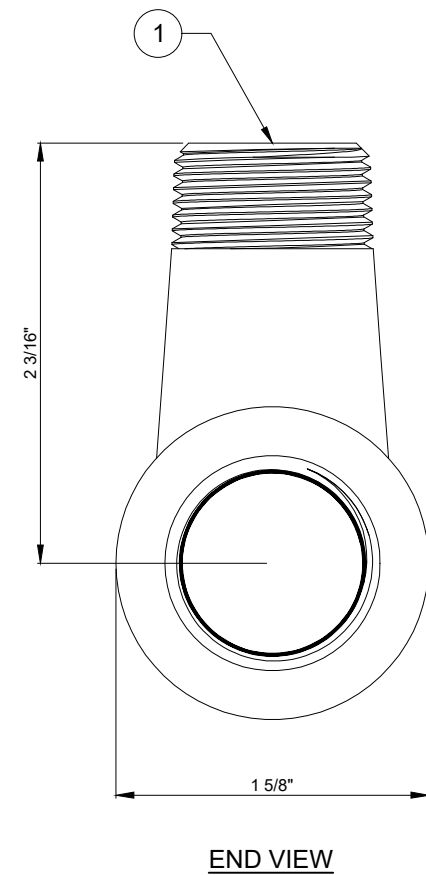
CHK

26FEB2018

DATE



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



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:

SYSTEM DRAWING

PROJECT NO: -  
SHEET NO:

TITLE:  
3/4" FNPT X MNPT STEEL ELBOW

SCALE:  
NTS

C750

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

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

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

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NO

FIRST ISSUE

DESCRIPTION

CDL

ZX

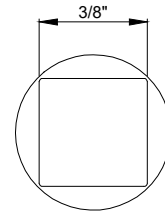
BY

CHK

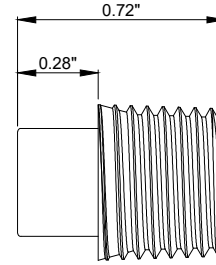
DATE

26FEB2018

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



END VIEW



SIDE VIEW

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:

SYSTEM DRAWING

1/4" NPT STEEL PLUG

PROJECT NO:

SCALE:

NTS

SHEET NO:

**C747**

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NO

FIRST ISSUE

DESCRIPTION

CDL

BY

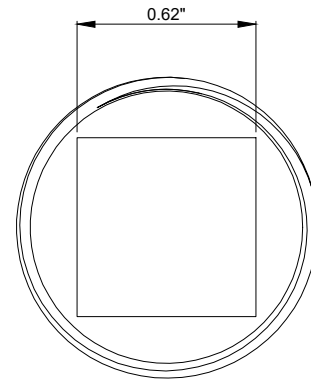
ZX

CHK

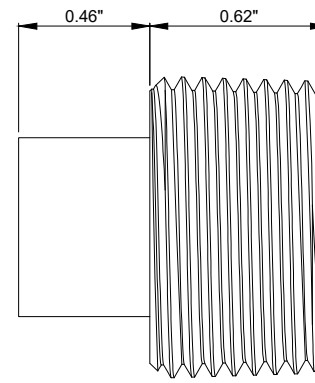
26FEB2018

DATE

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



END VIEW

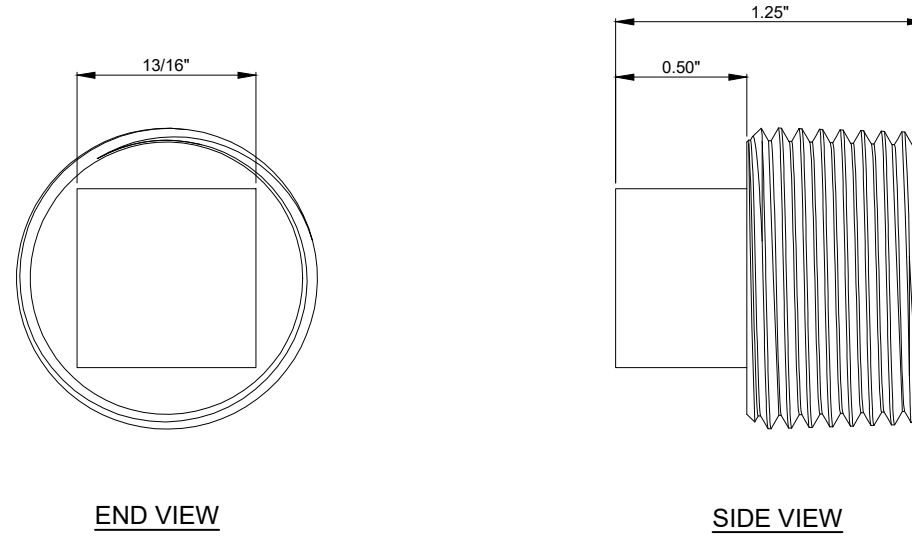


SIDE VIEW

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PROJECT NO:	1	CDL	ZX
SHEET NO:		BY	CHK
SYSTEM DRAWING		FIRST ISSUE	
TITLE:		DESCRIPTION	
3/4" NPT STEEL PLUG		NO	
SCALE:		DATE	
NTS		26FEB2018	
C748			

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	
DATE:		26FEB2018	

**structural TECHNOLOGIES**  
A Structural Group Company

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

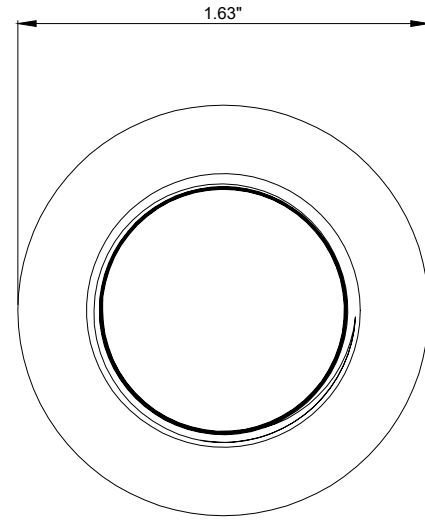
PHONE: (817) 545-4877  
FAX: (817) 545-4827  
WWW.VSL.NET

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

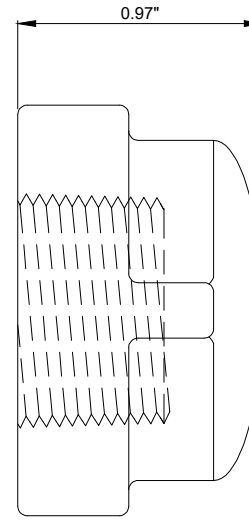
SYSTEM DRAWING

1" NPT STEEL PLUG

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



END VIEW

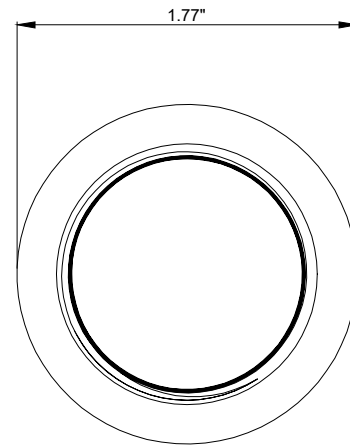


SIDE VIEW

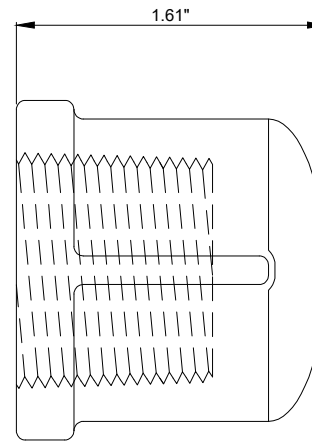
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PROJECT NO:	1	CDL	ZX
SHEET NO:	C724	BY	CHK
TITLE:	3/4" NPT STEEL CAP	NO	DATE
SCALE:	NTS	DESCRIPTION	26FEB2018
SYSTEM DRAWING		NO	DATE

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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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NO

FIRST ISSUE

DESCRIPTION

CDL

ZX

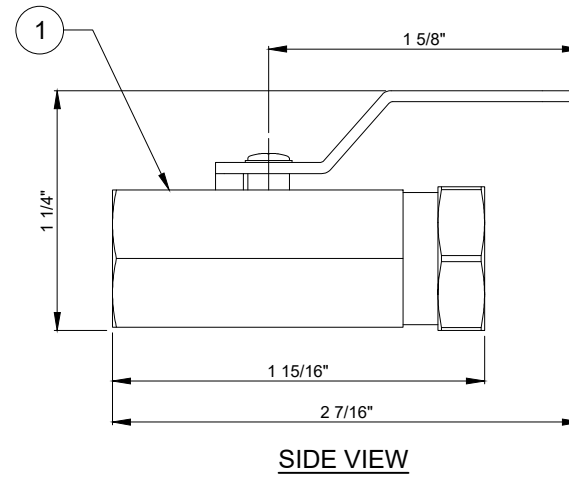
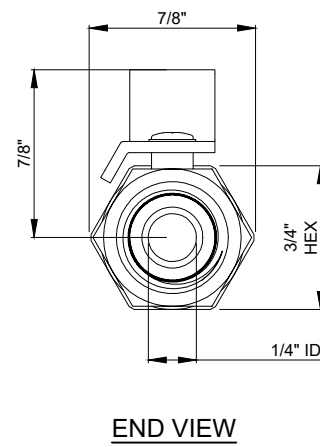
BY

CHK

DATE

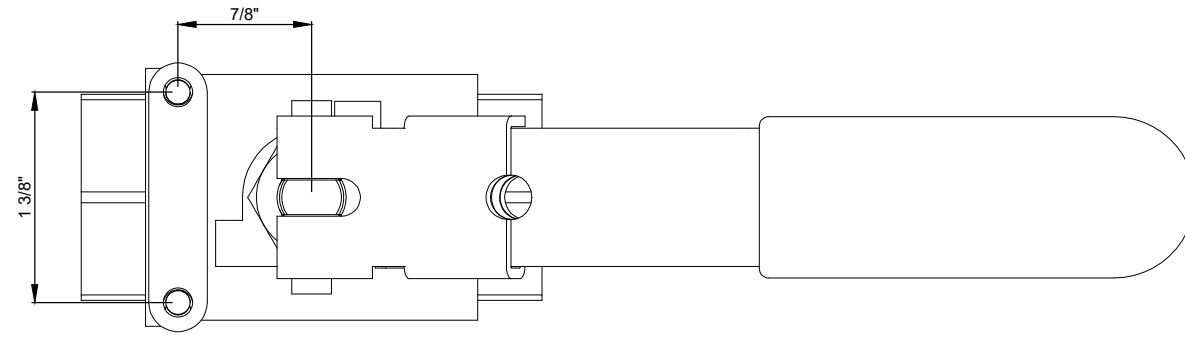
26FEB2018

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

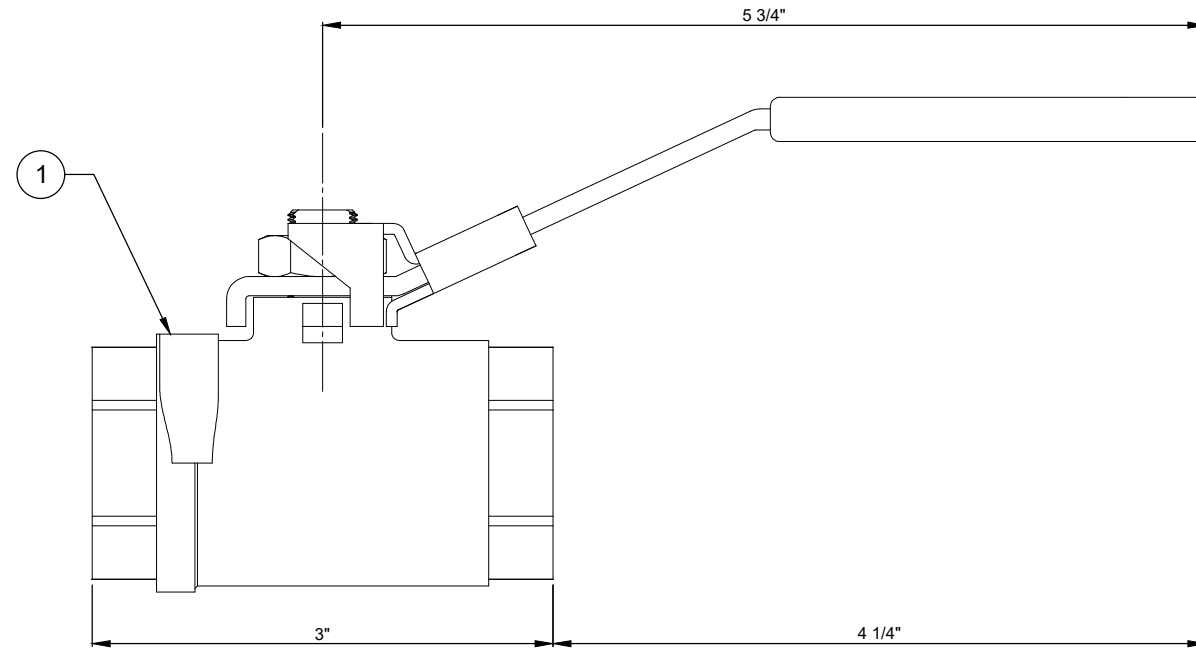


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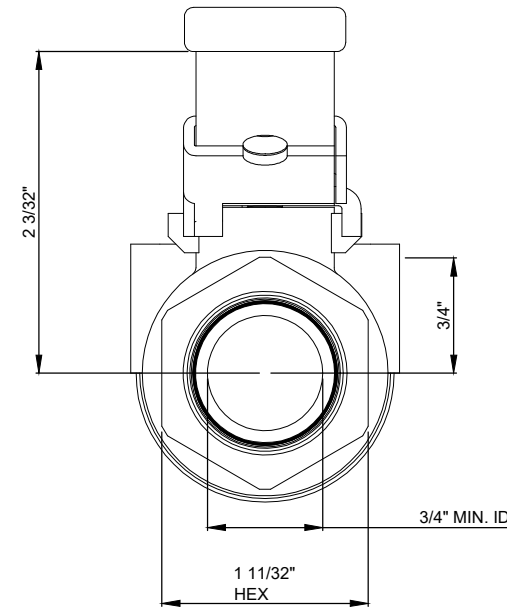
PROJECT INFORMATION:		SYSTEM DRAWING		PROJECT NO: -		SHEET NO: C744	
TITLE: 1/4" F/F NPT 1/4 TURN BALL VALVE		SCALE: NTS		DESCRIPTION: FIRST ISSUE		NO	
STRUCTURAL TECHNOLOGIES, LLC CLAIMS A STRICT PROPRIETARY RIGHT IN ALL DRAWINGS, SPECIFICATIONS AND CALCULATIONS ("INFORMATION") SET FORTH ON THIS SHEET. THE USE OF SUCH INFORMATION IN WHOLE OR IN PART, OR ANY REPRODUCTION THEREOF, IS STRICTLY PROHIBITED WITHOUT THE WRITTEN PERMISSION OF STRUCTURAL TECHNOLOGIES / VSL. 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.		STRUCTURAL TECHNOLOGIES, LLC DALLAS OFFICE 15600 TRINITY BLVD, SUITE 118 FORT WORTH, TX 76156		VSL A Structural Group Company Dallas, TX / Washington, DC / Denver, CO / Pompano Beach, FL		PHONE: (817) 545-4877 FAX: (817) 545-4827 WWW.VSL.NET	
NO	BY	CDL	ZX	26FEB2018	DATE	CHK	DATE



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 NO:	1	DATE:	26FEB2018
SHEET NO:	C745	BY:	CDL
TITLE:	3/4" NPT STEEL 1/4 TURN BALL VALVE	CHK:	ZX
SCALE:	NTS	DESCRIPTION:	FIRST ISSUE
			NO

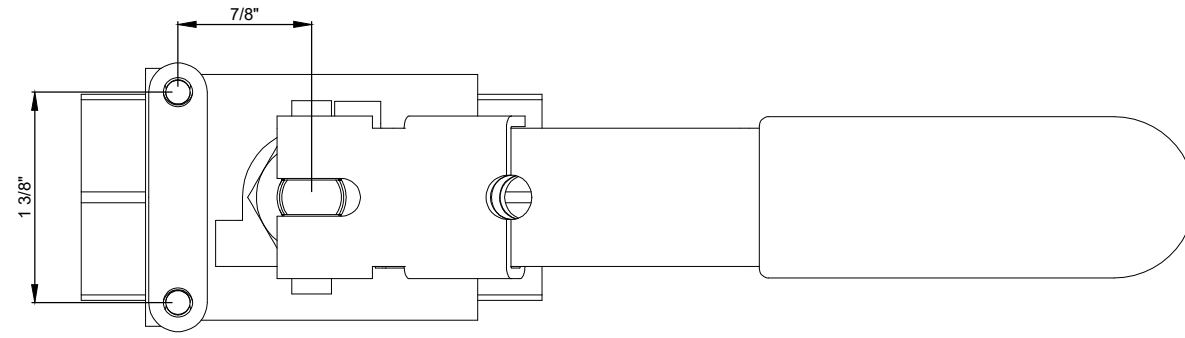
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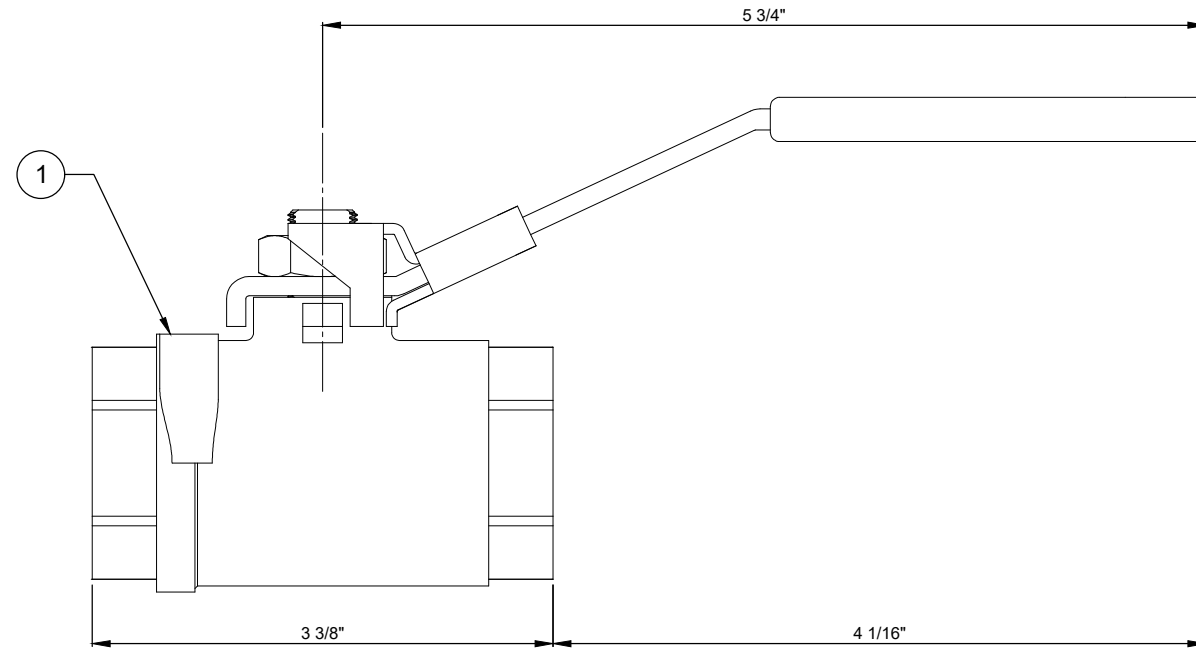
PHONE: (817) 545-4877  
FAX: (817) 545-4827  
WWW.VSL.NET

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

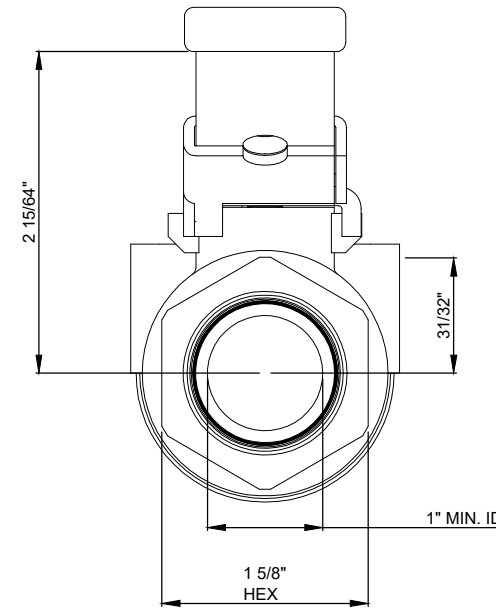




TOP VIEW



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  
WWW.VSL.NET

STRUCTURAL TECHNOLOGIES, LLC  
DALLAS OFFICE  
15600 TRINITY BLVD, SUITE 118  
FORT WORTH, TX 76155