

Section 2.08

Spec.# 2.08 - 2014;

April 22, 2014

The City of New York
Department of Environmental Protection (DEP)
Bureau of Water & Sewer Operations (BWSO)
Department of Design and Construction (DDC)
Bureau of Engineering Design & Construction (BEDC)

**STANDARD SPECIFICATIONS FOR
DRY BARREL FIRE HYDRANTS
& EXTENSION KITS**

April 22, 2014

This revision supersedes the same specification dated July 2013.

This specification supersedes Dry Barrel Fire Hydrant Standard specification Dated July 2011; June 2005 & addendum# 1 Dated December 8, 2005 and November 2006.

The City of New York
Department of Environmental Protection (DEP)
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**STANDARD SPECIFICATIONS FOR
DRY BARREL FIRE HYDRANTS
& EXTENSION KITS**

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April 22, 2014

This specification supersedes Dry Barrel Fire Hydrant Standard specification Dated July 2011; June 2005 & addendum# 1 Dated December 8, 2005 and November 2006.

Standard Specification for Dry Barrel Fire Hydrants & Extension Kits**1.0 PURPOSE**

- 1.1 These specifications describe the requirements of Dry Barrel Fire Hydrants for New York City. All fully assembled fire hydrants; fire hydrant "Top Section" and fire hydrant parts furnished under these specifications must meet or exceed all the requirements of the **AWWA Standard for Dry-Barrel Fire Hydrants, ANSI / AWWA C502 (latest revision)**, except as modified herein. Should any discrepancy be found between AWWA standards and The City of New York specifications, the City of NY specifications shall prevail.

2.0 MANUFACTURER'S QUALIFICATIONS

- 2.1 The manufacturer shall certify that they have been producing dry barrel fire hydrants of a similar design, materials and size in compliance with similar specifications for a minimum of three (3) years and that they are satisfactorily performing in service at verifiable and documented locations. The manufacturer shall provide the names and addresses of the managing Engineer or Superintendent of at least three (3) municipalities or organizations who will verify the quality of the performance of the fire hydrants used by them.
- 2.2 Manufacturers new to NYC DEP-BWSO shall be required to establish that they currently have within their own organization an experienced, competent and adequately staffed operating Quality Control Department responsible for maintaining high standards regarding materials, manufacturing and testing of the work performed in their plant; and they have a production force and plant facilities of a type and size suitable to perform the work required under this contract.
- 2.3 All facilities / foundries proposed to be used for this work are subject to inspection and approval by The City of New York Department of Environmental Protection, Bureau of Water and Sewer Operations, hereinafter referred as DEP-BWSO. The use of any facility/ foundry without the prior approval of the DEP-BWSO- Mechanical Engineering & Quality Assurance Division (ME&QA) is not permitted. If an overseas facility is to be used for any part, its name and location must be indicated at the time of bidding. The foreign castings foundry must be approved by DEP-BWSO-ME&QA Division before production of any casting. The criteria for the approval process will be provided on request.
- 2.4 The manufacturer will be required to machine, assemble and test the completed fire hydrants, fire hydrant "Top Section," and fire hydrant parts with their own production force. Subcontracting or subletting any of the aforementioned portions of the work will not be permitted unless approved by the DEP-BWSO-ME&QA. This approval shall not be unreasonably denied. Regardless of the country in which the fire hydrants, fire hydrant "Top Section" and fire hydrant parts are manufactured and assembled, all testing shall be conducted in accordance with approved procedures and in the United States of America in the presence of DEP-BWSO-ME&QA or DOC - QA inspectors, as applicable.
- 2.5 These fire hydrants/ fire hydrant "Top Section" shall be supplied by approved manufacturers / contractors only. Any manufacturer desiring to manufacture these fire hydrants shall contact DEP-BWSO-ME&QA division for approval.
- 2.5.1 The following manufacturers have been approved:
- A. United States Pipe & Foundry Company
956 Industrial Blvd., Albertville, AL 35950-9803; Tel.# (256) 878-7930

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B. M&H Valve (for O-2-LP).

P.O. Box 2088; Anniston, AL 36202; Tel.# 256-741-6225.

C. Mueller Company

956 Industrial Blvd., Albertville, AL 35950-9803; Tel.# 256-878-7930

3.0 FIRE HYDRANT & NOZZLE SECTION DRAWINGS

3.1 These specifications cover the following two (2) types of **Dry Barrel Fire Hydrants & Extension Kits**:

3.1.1 D-2-LP- Dresser Type Fire Hydrant: Assembly drawing# 43142-Z and Extension Kit assembly drawing# 44045-Z. Drawings set issued April 2014.

3.1.2 S-2-LP - Smith Type Fire Hydrant: Assembly drawing# 50346-Z and Extension Kit assembly drawing# 44027-Z. Drawings set issued April 2014.

3.1.3 Fire Hydrant "**Top Section**" shall include the following items:

3.1.4 D-2-LP - Nozzle Section complete with all the internal parts, nozzle caps, Ground Flange Joint connecting hardware, Stem Breakaway coupling and hardware, Joint Flange Joint Ring Gasket.

3.1.5 S-2-LP - Nozzle Section complete with all the internal parts, nozzle caps, Standpipe Coupling and screws, Main Rod Coupling complete with pins and springs, Standpipe Middle 'O' Ring.

3.2 If **specific type of fire hydrant is required, it will be called for in the purchase order or contract.**

4.0 DESIGN ORAWINGS

4.1 Complete set of drawings for each type fire hydrant is available from DEP-BWSO Procurement as well as NYC-DCAS. Before proceeding with the work, and during the progress thereof, the manufacturer shall check all applicable drawings, material specifications and notify the DEP-BWSO-ME&QA Engineer of any and all errors and omissions discovered therein. The drawings and specifications are intended to be explanatory of each other, but should any error or discrepancy appear or any misunderstanding arise, the decision of the DEP-BWSO-ME&QA Engineer shall be final and binding upon the manufacturer and /or his authorized representative or contractor. The manufacturer/ authorized representative or contractor shall not be compensated for any damage that may result from any error, discrepancy or misunderstanding.

4.2 Complete fire hydrant/ fire hydrant "Top Section"/ fire hydrant extension kit and fire hydrant parts shall be manufactured to the detail drawings listed in these specifications for the Hydrant Type. The assembly drawings refer to the detailed drawing for the specific fire hydrant part.

5.0 MATERIAL SPECIFICATIONS

5.1 All materials specified shall conform to the standard designated for each material as listed on the drawings. When reference is made to the American National Standards Institute (ANSI), American Society for Testing and Material (ASTM), American Water Works Association

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(AWWA) or other industry standards, it is understood that the latest revision at the time of the bid opening or designated otherwise shall apply.

- 5.2 A material equal or better may be submitted to DEP-BWSO-ME&QA for evaluation and approval.

6.0 CASTINGS

- 6.1 All Ductile Iron castings shall meet the requirements of ASTM A536 Grade 60-42-10 or 65-45-12 or 70-50-05.
- 6.2 Plugging, welding or repairing of any defective part without the written permission of the DEP-BWSO-ME&QA Engineer is not permitted; any such act will subject the casting to rejection.

7.0 CASTINGS IDENTIFICATION AND MATERIAL TRACEABILITY

- 7.1 Fire Hydrant Nozzle Section and Standpipe shall have cast markings to meet the requirements of ANSI/AWWA C502 Section 6.1 **PLUS WSNY and heat number.**
- 7.2 The Fire Hydrant Barrel shall have a corrosion resistant metal tag with a unique serial number punched in and permanently attached by rivets or screws at a position (preferably on a flat surface) agreed upon by DEP-BWSO-ME&QA. This tag shall not have any sharp corner. This identification number shall be legible and at least 1/4 inch high letters and numbers. The tag may include the year, month and a unique number. This tag shall also be attached when fire hydrant "Top Section" is ordered.
- 7.3 **In addition to the Material Test Reports (MTRS- physical and chemical) from the cast test bar for the following listed castings, imported castings shall be provided with (where possible) at least one (1) integrally cast bar/ coupon of at least one (1) cubic inch on each casting. This bar / coupon shall be easily removable without damaging the casting. One bar / coupon per heat/ ladle shall be used for the verification of microstructure; this verification shall be conducted in accordance with ASTM A247 procedures in the presence of NYC inspector. The material shall meet a minimum 85% Nodularity of Type I, II, IV & VI combined, but with at least 60% of Type I and Type II; 50 to 100 counts per square millimeter.**

7.3.1 S-2-LP	Components
Part # 2	Seal Plate
Part # 5	Bonnet
Part# 59	Standpipe- Upper (Nozzle) Section
Part # 52	Standpipe - Lower Section
Part# 55	Elbow
7.3.2 D-2-LP	Components
Part 2B	Weather Shield
Part # 3	Bonnet
Part# 10	Nozzle Section
Part # 34	Standpipe
Part # 52	Shoe

Standard Specification for Dry Barrel Fire Hydrants & Extension Kits**7.4 MTRS-Chemical & Physical data for the following parts are also required:**

7.4.1 S-2-LP	Components
Part# 9	Valve Seat Ring
Part # 10	Operating Nut (Yoke Stem Nut)
Part # 28	Key Pin for Valve Rod
Part# 32	Elbow Bolt and Nut
Part# 33	Yoke Bolt & Nut
Part # 34	Bonnet Bolt & Nut
Part# 57	Valve Top Plate
7.4.2 D-2-LP	Components
Part # 4	Stem Nut Lock Nut
Part # 6/6A	Stem Nut
Part# 37	Main Valve Top Plate
Part # 41	Shoe Bolt & Nut
Part # 43	Seat Ring
Part # 45	Seat Ring Retainer

8.0 WORKMANSHIP

- 8.1 These fire hydrants shall meet the requirements of ANSI/ AWWA C502 Section 4.1 for workmanship. except that all repairs shall be approved by the DEP-BWSO-ME&QA inspector/ engineer.
- 8.2 All moving parts threads shall be lubricated with NSF 61 approved lubricant and all non-moving threaded connections shall be sprayed with Dow Coming Molykote G-n Metal OR DEP approved anti seize compound. D-2-LP (Dresser Type) Stem Nut Lock Nut part# 4 (drawing# 43146-Z) threads must be coated with anti-seize compound and shall not be tightened too hard.

9.0 COATING REQUIREMENTS

- 9.1 All ferrous parts shall meet the requirements of ANSI/ AWWA C502 Section 4.2.1. Manufacturer shall submit coating material specifications to DEP-BWSO-ME&QA for approval.
- 9.2 All stainless steel, brass, bronze, and rubber parts shall not be coated.
- 9.3 Gasket sealing surfaces shall have limited coating to avoid corrosion or joint leak.
- 9.4 Exterior surface of Nozzle Section, nozzle caps and Standpipe coupling shall be coated with **black colored** polyurethane or DEP-BWSO-ME&QA approved coating to a minimum dry film thickness of 8 Mils.
- 9.5 The chain assembly for the caps shall be zinc/ chrome/ nickel-plated/ polyurethane coated. It should be freely movable in the cap groove.
- 9.6 The Bonnet, Weather Shield and Operating Nut for D-2-LP shall be coated with Silver/ Aluminum colored polyurethane or a coating approved by DEP-BWSO-ME&QA to a minimum dry film thickness of 8 Mils.
- 9.7 Bonnet for S-2-LP shall be coated with Silver/ Aluminum colored polyurethane a coating approved by DEP-BWSO-ME&QA to a minimum dry film thickness of 8 Mils. Operating

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Nut for S-2-LP shall NOT BE COATED.

- 9.8 Standpipe (D-2-LP) / Standpipe Lower section (S-2-LP) exterior surface shall be coated in black colored polyurethane or other DEP-BWSO-ME&QA approved coating material with a minimum dry film thickness of 8 Mils. Sherwin Williams Polane SP is approved Polyurethane.
- 9.9 Inside and outside surface of the Shoe/ Elbow can be coated Black/ Orange with polyurethane or fusion bonded epoxy applied by fluid or powder coating method approved by DEP-BWSO-ME&QA. The **oversize/ modified (see drawing for dimensions) Shoe/ Elbow outside** surface shall be coated **green** or a 1½ to 2 -inch green colored band applied to the mechanical joint flange. Dry film thickness shall not be less than 8 Mils.
- 9.10 Fire hydrant ferrous parts not listed above shall be coated with black colored polyurethane approved by DEP-BWSO-ME&QA.
- 9.11 Fire hydrant "Top Section" when ordered separately shall be coated according to the coating requirements of complete fire hydrant.
- 9.11 Fire hydrant extension kit shall be coated according to the coating requirements of complete fire hydrant parts.
- 9.12 All other fire hydrant internal or external parts for which the coating requirements are not listed herein shall meet the requirements of ANSI / AWWA C502 Section 4.13 and coated to a minimum dry film thickness of 5 Mils with DEP-BWSO-ME&QA approved enamel or polyurethane. Electrophoretic coating of 0.8 to 1.5 mils prior to coating shall be acceptable. **ASPHALTIC COATING IS NOT ACCEPTABLE.**

10.0 TESTING AND INSPECTION

- 10.1 Production testing shall be as per ANSI/ AWWA C502 Sections 5.1. & 5.3. DEP-BWSO-ME&QA OR DOC-QA (for supply house/ contractor orders) may witness the testing and assembly at the manufacturing and assembly location. Test results shall be recorded even when a DEP-BWSO-ME&QA / DOC-QA inspector is present.
- 10.2 When fire hydrant "Top Section" only is ordered, it shall be attached to a seal plate/ flange of same dimensions as the Standpipe on which it will be fitted and pressurized to three hundred (300) psig as per ANSI/ AWWA C502 section 5.1.3 or as desired by the inspector. Any leakage through the body will subject the "Top Section" to scrap; leakage through the joints or gasket can be repaired and the "Top Section" retested. After the successful hydro testing of the "Top Section", it **shall not be** disassembled except to replace the test "O" ring with a new "O" ring. The "O" ring should be secured inside the coupling or attached in a waterproof pouch for shipping or attached securely to the hydrant or skid holding the hydrant "Top Sections".
- 10.3 Extension kit barrel shall be hydrostatically tested to 300 psig as per ANSI/ AWWA C502 Section 5.1.3 or as desired by the inspector. No leakage is permitted through the barrel.
- 10.4 The hydrant main valve shall open when the Operating Nut is rotated clockwise.
- 10.5 The Hydrant must drain through the drain outlet when the Operating Nut is rotated anti-clockwise to close the hydrant main valve after the hydro-tests.

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11.0 BOLTS, NUTS AND ACCESSORIES

- 11.1 Fully assembled Dry Barrel Fire Hydrants shall be supplied with shoe / elbow connecting hardware as follows:
- 11.1.1 Fire hydrants with **modified (oversize) Shoe/ Elbow (see the drawing)** shall be supplied with modified plain glands to the dimensions given for the Shoe / Elbow. Gland, gasket, nuts and T-bolts shall be packed separately in a carton for each hydrant. The **glands** shall preferably be fully coated GREEN or the gland flange coated green for 1½ to 2-inches. The carton shall be properly identified. If possible, make the carton green color.
 - 11.1.2 Fire hydrants with **Standard size shoe/ elbow** shall be supplied with Wedge Type ductile iron Restraint Glands from EBBA Iron Sales (Megalug 1100 series); Sigma Corp. (One Lok); Romac (Roma Grip); Ford Meter Box Company (Uni-flange); Tyler (Tuf Grip) or Star Pipe (Star Grip) Gland, gasket, bolts and nuts shall be packed separately in a carton for each fire hydrant. The gland shall be coated with corrosion resistant material in black, epoxy coating is acceptable. The gland and hardware carton shall be properly identified.
- 11.2 Fire hydrant "Top Section" shall be supplied with the necessary accessories and hardware to connect it to the Standpipe (D-2-LP) / Standpipe Lower Section (S-2-LP) or as specified in the purchase order.
- 11.3 All Carbon Steel bolts shall be to ASTM A307 Grade B or SAE J429 Grade 2 or Grade 5 with dimensions conforming to ANSI/ AWWAB 18.2.1. All Carbon Steel and Alloy Steel nuts shall be to ASTM A563 Grade A or Grade B or nuts to SAE J995 Grade 2 or Grade 5 with threads conforming to ANSI / AWWA B18.2.2. All carbon steel bolts, nuts and screws (except for Ground Flange joint or Standpipe Lower Coupling) shall be made corrosion resistant with Fluoropolymer coating meeting the requirements of ASTM B117 of salt spray for 1000 hours. The coating company shall have been approved by DEP-BWSO-ME&QA. All other bolts and nuts (other than carbon steel) shall be according to the detailed drawing for that part.
- 11.4 Bolts and nuts for Ground Flange joint (D-2-LP) and Standpipe Lower Section Coupling (S-2-LP) may be coated with the same material (black Polyurethane) as TOP/ Nozzle Section. Fluoropolymer coated bolts and nuts may also be coated with Polyurethane. **Zinc coated bolts and nuts are not acceptable** but stainless steel bolts and nuts may be coated with the same material as the Top section.
- 11.5 T-Bolts, nuts and gasket for the MJ connection for the gland shall meet the requirements of AWWACIII.

12.0 MATERIAL RELEASE AND SHIPPING AUTHORIZATION

- 12.1 At least five business days before the completion of the order, the manufacturer shall submit a request for inspection or "Material Release and Shipping Authorization" to DEP-BWSO-ME&QA as well as to DDC-QA (for supply house/ contractor orders only). **This authorization shall be issued by DEP-BWSO-ME&QA for DEP / DCAS purchase orders and by DDC-QA for the supply house/ contractor purchase orders.** The request shall include a list of serial numbers for the fire hydrants/ fire hydrant "Top section"; legible copies of Material Test Reports (MTRS) for parts as required by this specification.

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- 12.2 An affidavit of Compliance duly Notarized by a Notary Public per ANSI / AWWA C502 Section 1.7 and warranty (per Sec. 13.0) shall be submitted with the request for "Material Release & Shipping Authorization".
- 12.3 All MTRS, photos of the hydrants or Top Sections as bundled with a few close up photos showing the serial numbers as visible in the shipping skid shall be submitted on a CD.

13.0 WARRANTY

- 13.1 Fully assembled fire hydrants and fire hydrant "Top Section" shall be warranted by the manufacturer against defects in materials or workmanship for a period of ten (10) years from the date of manufacture.
- 13.2 This warranty with the serial numbers for the fully assembled fire hydrants and fire hydrant "Top Section" shall be attached with the request for "Material Release and Shipping Authorization".

14.0 SHIPPING

- 14.1 Each shipment shall have the following information in the shipping documents:
 - 14.1.I Uniquely numbered lists of all the fire hydrants/ fire hydrant "Top Section" serial numbers, weight of each item (each list shall contain same length hydrants) and total shipment weight. The list shall also include the purchase order number / bid number/ contract number, delivery location and duly signed-off Material Release and Shipping Authorization from DEP-BWSO-ME&QA or DOC-QA (as applicable).
- 14.2 All fully assembled fire hydrants/ fire hydrant "Top Section" shall be laid in horizontal position with the nozzles facing in one direction, not touching each other and securely banded on wooden skids. The hydrants and Top Sections shall be protected from damage during shipping and storage. Each pallet shall have only three (3) complete fire hydrants and only three (3) such pallets banded together on a skid. The "Top Sections" shall also be packed in similar manner. Steel bands shall not damage the hydrant coating. Packing procedure with drawings of the pallets shall be submitted to DEP-BWSO-ME&QA Engineer for approval.
- 14.3 Each extension kit shall be packed separately in a suitable carton and properly identified. These cartons shall be placed on a skid and saran wrapped. A pallet / skid shall contain same size extension kits.
- 14.4 Each skid shall be wrapped in a translucent wrap and clearly marked in permanent ink on two opposite sides with the following in at least one (1) - inch high letters.

PROPERTY OF THE CITY OF NEW YORK
DEP PURCHASE ORDER#/ CONTRACT#
OR NYC PROJECT NUMBER (AS APPLICABLE)
DESTINATION ADDRESS
CONTENTS AND SIZE
MONTH AND YEAR OF MANUFACTURE
MANUFACTURER'S NAME AND ADDRESS
SKID GROSS WEIGHT

Standard Specification for Dry Barrel Fire Hydrants & Extension Kits

15.0 RECORD OF REVISIONS

STANDARD SPECIFICATIONS FOR
DRY BARREL FIRE HYDRANTS AND EXTENSION KITS

DATE	DESCRIPTION	APPROVED BY: SIGNATURE	TITLE
April 2001	Revised approved coatings.		
January 28, 2002 Addendum of March 22, 2002 Incorporated	Revised as Combined DEP and DDC specification. The manufacturer should review all changes.	Michael Krysko, P.E. s/d	Deputy Director DEP-BWSO s/d
		George Cowan, P.E. s/d	Assistant commissioner, DDC. s/d
June 2005	Specification has been re-written with numerous changes. The manufacturers and vendors should review all changes. Coating schemes, materials, bolts & nuts specifications have changed. D-2-LP Shoe Drawing# 44027-Z has been revised. S-2-LP Nozzle Section drawings have been revised for screwed-in nozzles and a few other changes.	Michael Krysko, P.E. <i>sld</i>	Director, DEP- BWSO s/d
		Tarlock S. Sahansra, P.E. s/d	Chief, Mechanical Engg & QA Division, DEP - BWSO
November 1, 2006	Addendum# I dated 12/8/05 to June 2005 Specification incorporated. Sec. 12.1 revised to include notarized MTRS; Sec. 14.2 added Pallet design and a few other changes.	Tarlock S. Sahansra, P.E. s/d	Chief, Mechanical Engineering & QA Division, DEP - BWSO <i>Sid</i>
		Michael Krysko, P.E. s/d	Director, DEP- BWSO s/d
July 2011	Added requirements for foreign made castings. Added polyurethane coating to chain. Added explanation to MTRS. A few other minor changes or clarifications added.	Tarlock S. Sahansra, P.E. <i>SID</i>	Chief, Mechanical Engineering & QA Division, DEP - BWSO
		Edward Coleman, P.E. <i>SID</i>	Assistant Commissioner
July 2013	Section 11.3 -Added nuts to SAE 1995, removed zinc, plating etc. other than Fluoropolymer to ASTM B117 & changes to submittals, etc. Please see section 8.2 for assembly.	Tarlock S. Sahansra, P.E. SID	Chief, Mechanical Engineering & QA Division, DEP - BWSO
		Edward Coleman, P.E. <i>SID</i>	Assistant Commissioner <i>SID</i>
April 22, 2014	Revised sections 8.2;9.4; 9.6; 9.7; 9.12; 10.2; 11.3 and 11.4	Tarlock S. Sahansra, P.E. SID	Chief, Mechanical Engineering & QA Division, DEP - BWSO
		Edward Coleman, P.E. <i>SID</i>	Assistant Commissioner <i>SID</i>

**The City of New York
Department of Environmental Protection (DEP)
Bureau of Water and Sewer Operations (BWSO)
&
Department of Design and Construction (DDC)**

Fire Hydrant Drawing Book # 2

**Drawings For
D – 2 – LP
DRY BARREL FIRE HYDRANT
& EXTENSION KITS
(Dresser Type)**

Issued: March 2023

Section 1: Fire Hydrant Assembly and Parts Drawings

Section 2: Extension Kit Drawings

Section 1: Fire Hydrant Assembly and Parts Drawings

Table 1: Bill of Materials for D – 2 – LP (Dresser Type Fire Hydrant)

Part #	Part Description	Quantity	Material	Drawing #	Rev. #
1	Weathershield bolt	2	S.S.	43143 - Z	1
2A	Operating nut	1	CI / DI	43144 - Z	2
2B	Weathershield	1	DI		
3	Bonnet	1	DI	43145 - Z	2
4	Stem nut lock nut	1	Bronze	43146 - Z	2
5	Thrust bearing	1	Teflon	43147 - Z	0
6A	Stem nut	1	Al. Bz. / S.S.	43148 - Z - AL	1
6B	Stem nut screw	1	Steel		
7	Stem nut 'O' ring	1	Rubber	43149 - Z	6
8	Stem stop	1	Bronze	43150 - Z	0
9	Bonnet 'O' ring	1	Rubber	43149 - Z	6
10	Nozzle section	1	DI	43151 - Z	6
11	Pumper nozzle gasket	1	Rubber	43149 - Z	6
12	Pumper nozzle	1	Brass/Bronze	43153 - Z	8
13	Pumper nozzle cap	1	DI	43154 - Z	6
14	Pumper cap gasket	1	Rubber	43155 - Z	0
15B	Locking pin (threaded)	4	S.S.	43156 - Z - A - 2	0
17	Chain pear ring	2	Steel	43157 - Z	3
18	Nozzle cap chain	2	Steel		
19	Chain ring	2	Steel		
20	Stem 'O' ring	2	Rubber	43149 - Z	6
21	Hose nozzle	1	Brass/Bronze	43158 - Z	6
22	Hose nozzle gasket	1	Rubber	43149 - Z	6
23	Hose nozzle cap	1	DI	43159 - Z	1
24	Hose cap gasket	1	Rubber	43155 - Z	0
25	Upper stem	1	Steel	43160 - Z	0

CITY OF NEW YORK – DEP
BUREAU OF WATER AND SEWER OPERATIONS
STANDARD LP HYDRANT

TYPE D – 2 – LP

DRAWING NO. 43142 – Z SHEET 1/4

Table 1: Bill of Materials for D – 2 – LP (Dresser Type Fire Hydrant) (Cont'd)

Part #	Part Description	Quantity	Material	Drawing #	Rev. #
26	Stem sleeve	1	Brass/Bronze	43161 - Z	2
27	Stem sleeve 'O' ring	1	Rubber	43149 - Z	6
28	Stem breakaway coupling	1	CI	43162 - Z	0
29	Stem coupling bolt	2	Steel	43143 - Z	1
30	Stem coupling nut	2	Brass		
31	Ground flange joint bolt and nut	8	Steel		
32	Ground flange joint 'O' ring	1	Rubber	43149 - Z	6
33	Breakaway lugs	8	CI	43163 - Z	0
34	Standpipe	1	DI	43164 - Z	1
34A	Standpipe	1	DI	43164 - Z - ALT	1
35	Lower stem	1	Steel	43165 - Z	0
36	Lower stem seal 'O' ring	1	Rubber	43149 - Z	6
37	Main valve top plate	1	Brass/Bronze	43167 - Z	1
38	Drain valve facing	2	Rubber	43168 - Z	2
39	Drain valve facing staple	4	Bronze	43169 - Z	0
41	Shoe bolt and nut	8	Steel	43143 - Z	1
42A	Shoe 'O' ring	1	Rubber	43149-Z	6
43	Seat ring	1	Brass/Bronze	43172 - Z	1
44	Seat ring gasket	2	Rubber	43149 - Z	6
45	Seat ring retainer	1	Brass/Bronze	43173 - Z	1
46	Retainer top 'O' ring	1	Rubber	43149 - Z	6
47	Retainer bottom 'O' ring	1	Rubber		
48	Main valve disk	1	Rubber	43174 - Z	1
49	Valve bottom plate	1	DI	43175 - Z	0
50	Cap nut	1	Brass/Bronze	43166 - A - Z	1
51	Drain outlet bushing	1	Brass/Bronze	43161 - Z	2
52	Shoe (6" mech. joint inlet)	1	DI	43152 - Z	2
53	Gasket	1	Leather	43171 - Z	1

CITY OF NEW YORK – DEP
BUREAU OF WATER AND SEWER OPERATIONS
STANDARD LP HYDRANT

TYPE D – 2 – LP

DRAWING NO. 43142 – Z SHEET 2/4

Table 2: Tools for D - 2 - LP (Dresser Type Hydrant)

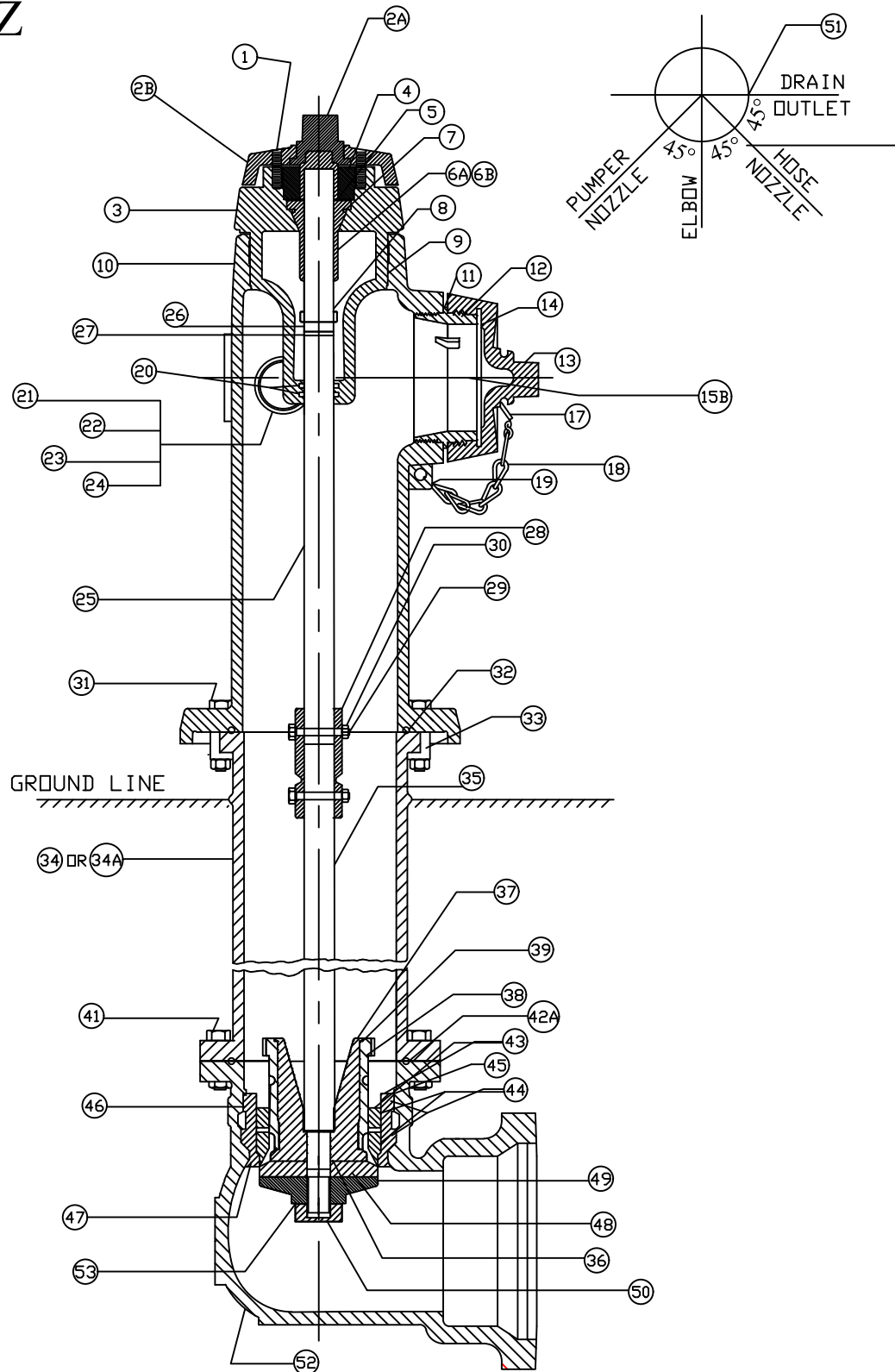
Tool Description	Drawing #
Bonnet assembly and disassembly tool	43177 - Z
Stem nut locknut wrench	43178 - Z
Stem stop wrench	43178 - Z
Valve disassembly wrench	43179 - Z
2½" Hose nozzle wrench	43180 - Z
4½" Pumper nozzle wrench	43181 - Z

CITY OF NEW YORK – DEP
BUREAU OF WATER AND SEWER OPERATIONS
STANDARD LP HYDRANT

TYPE D – 2 – LP

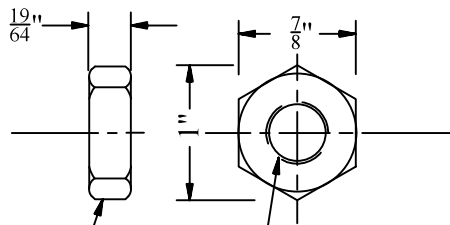
DRAWING NO. 43142 – Z SHEET 3/4

43142-Z



3	ITEM 42 CHANGED TO 'O' RING 42A	7/13	CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS STANDARD LP HYDRANT TYPE D-2-LP DRAWING NO. 43142-Z SHEET 4/4 NOT TO SCALE
2	ITEMS 15, 15A AND 16 REMOVED	2/12	
1	ITEMS 15A AND 15B ADDED	8/08	
0	FLAT SURFACE FOR TAG ADDED	10/06	
REV #	REVISION	DATE	

43143-Z



$\frac{1}{2}$ " - 13 UNC - 2B THREAD
MINOR DIA. - 0.417
PITCH DIA. - 0.450
MAJOR DIA. - 0.500

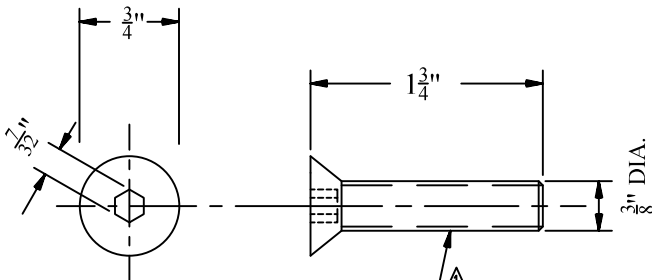
$\frac{1}{2}$ " AMERICAN ST'D. HEAVY HEX JAM
NUT - SEMIFINISHED

MATL: BRASS

(30) STEM COUPLING NUT

NOTE:

1. MATERIAL CHANGED FROM ZINC OR CADMIUM PLATED TO STAINLESS STEEL
2. ALL THREADS FOR BOTH BOLTS SHALL BE COATED WITH DDW CORNING G-n METAL ASSEMBLY SPRAY

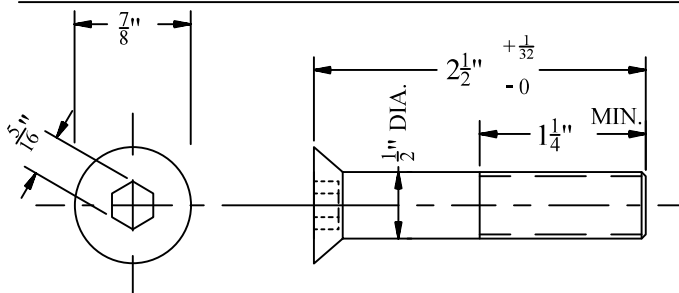


$\frac{3}{8}$ " - 16 UNC - 2A THREAD

ADDED NOTES 1 AND 2
ON 1/94

(1) WEATHERSHIELD BOLT

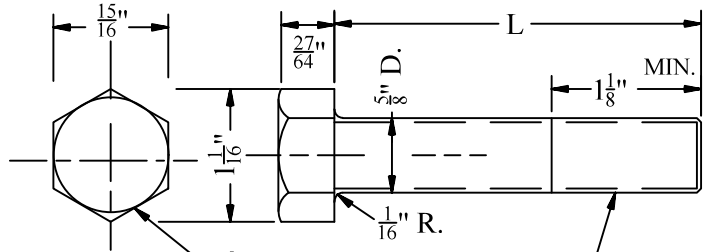
MATERIAL: S.S. STEEL - ASTM A193, GRADE B8
SUPERSEDES DRAWING NO. 43143-Z 10-84



$\frac{1}{2}$ " - 13 UNC - 2A TH'D, FLAT HEAD CAP SCREW, HEX SOC.
MAJOR DIA. - 0.498 ; PITCH DIA. - 0.448 ; MINOR DIA. - 0.404

(29) STEM COUPLING BOLT

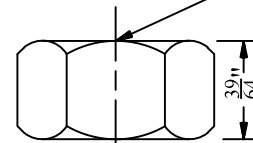
MATERIAL: SAE J429 GRADE 5 - ZINC
OR CADMIUM PLATED
OR FLOURIDOPOLYMER COATED



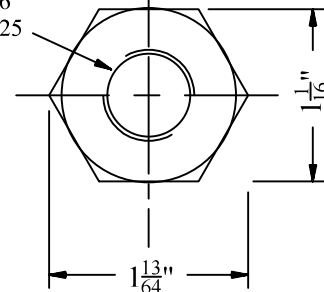
$\frac{5}{8}$ " AMERICAN ST'D. REG
HEX HEAD BOLT

$\frac{5}{8}$ " - 11 UNC - 2A THREAD
MAJOR DIA. - 0.623
PITCH DIA. - 0.564
MINOR DIA. - 0.512

$\frac{5}{8}$ " AMERICAN ST'D. HEAVY HEX NUT



$\frac{5}{8}$ " - 11 UNC - 2B THREAD
MINOR DIA. - 0.527
PITCH DIA. - 0.566
MAJOR DIA. - 0.625



ITEM No.	L	
(31)	3 1/4"	G. F. BOLT & NUT
(41)	2 3/4"	SHOE BOLT & NUT

SEE SPEC. FOR MATERIAL AND COATING

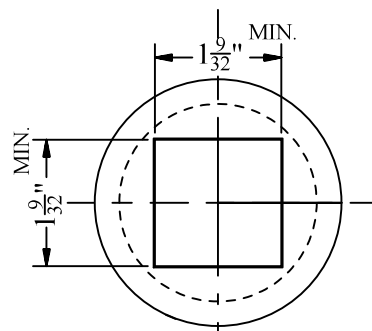
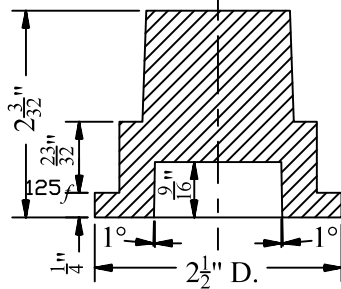
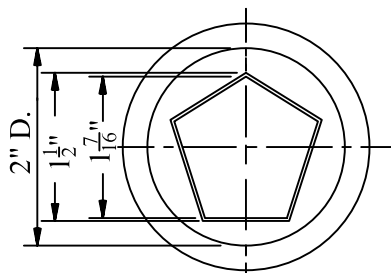
CITY OF NEW YORK - DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43143-Z

2	G. F. BOLT LENGTH CHANGED	2/18
1	BOLT TYPE ADDED; COATING OPTION ADDED	7/13
0	REISSUED	6/05
REV #	REVISION	DATE

43144-Z

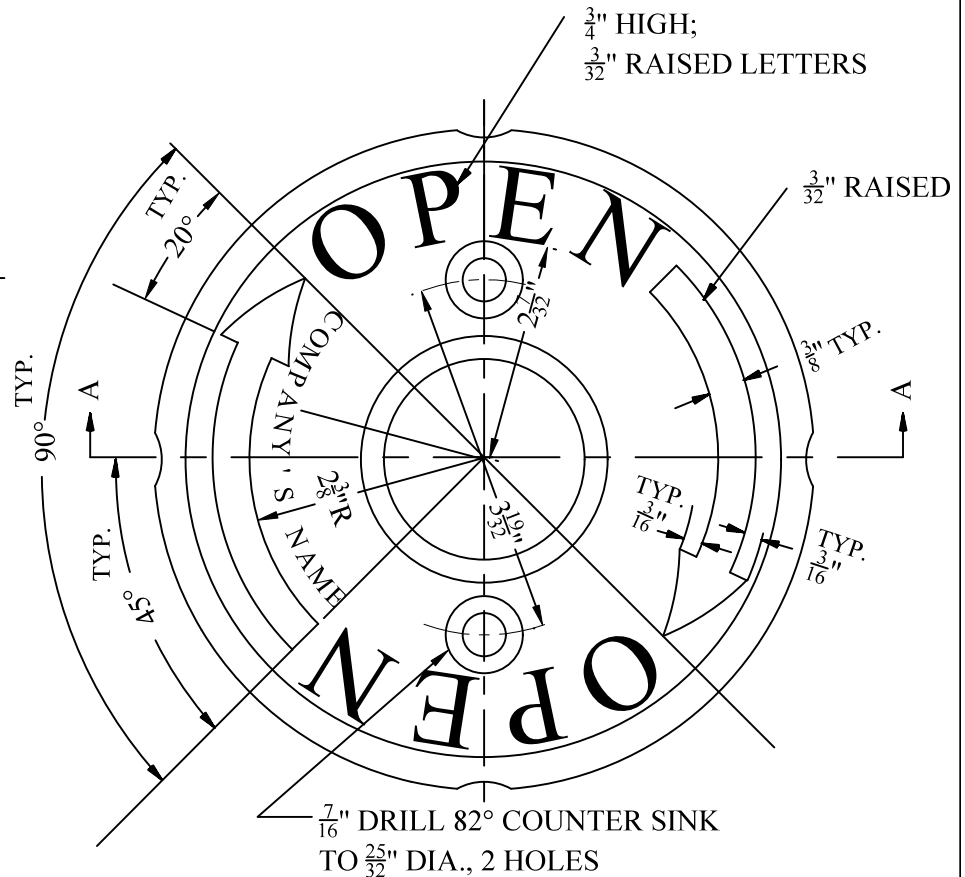


OPERATING NUT (2A)

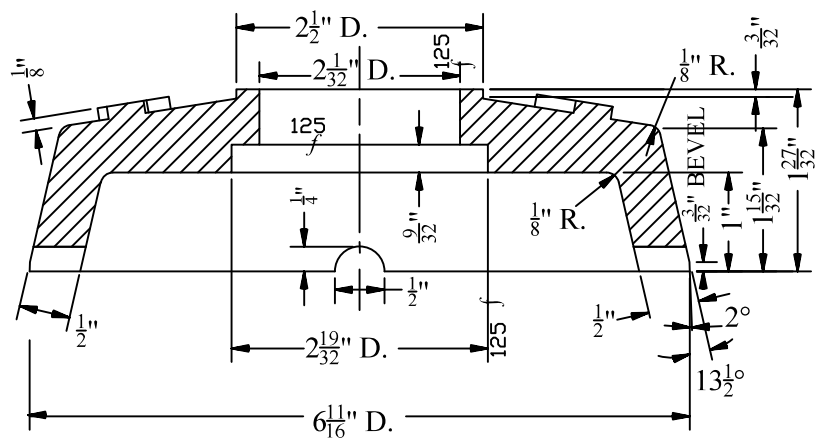
MATERIAL: DUCTILE IRON
ASTM A536 SEE SPEC.

NOTE:

1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS
2. ON THE EXTERIOR OF THE WEATHERSHIELD, THE MANUFACTURER'S MARK SHALL BE CAST IN 3/8 -INCH HIGH RAISED LETTERS.



WEATHERSHIELD (2B) : TOP VIEW

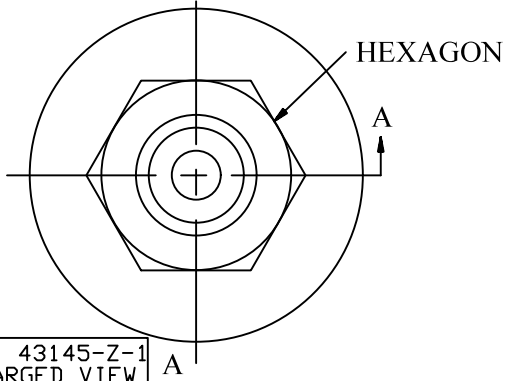


SECTION A-A

MATERIAL: DUCTILE IRON ASTM-A536 SEE SPEC.

2	BOLT HOLES MOVED; ARROWS MOVED; ARROW SIZE CHANGED; LETTERS MOVED; LETTER SIZE CHANGED;	2/12	CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS
1	MTL. CHANGED TO DUCTILE IRON; BOLT HOLES MOVED; ARROWS MOVED; LETTER SIZE CHANGED;	4/06	
REV #	REVISION	DATE	STANDARD LP HYDRANT TYPE D-2-LP DRAWING NO. 43144-Z NOT TO SCALE

43145-Z

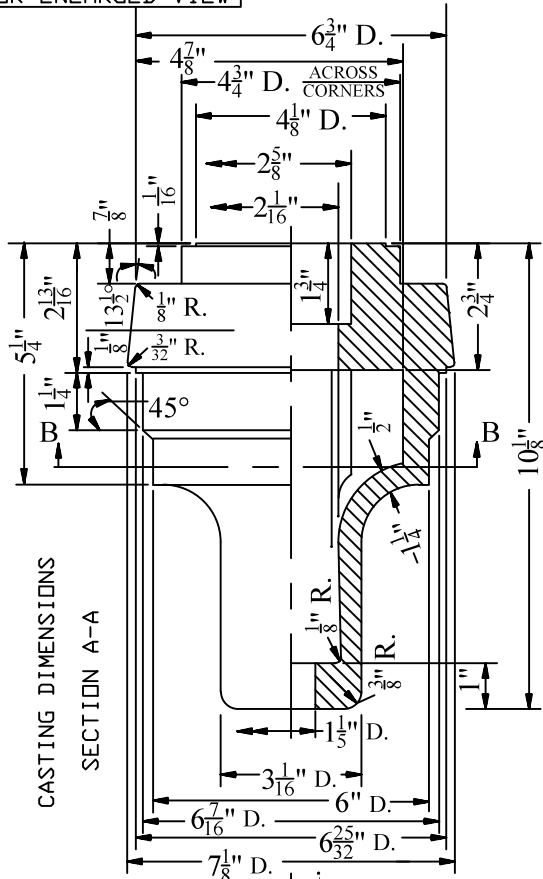


SEE DWG. 43145-Z-2
FOR ENLARGED VIEW

* 2 TAPPED HOLES, 180° APART
MIN. FULL THREAD DEPTH

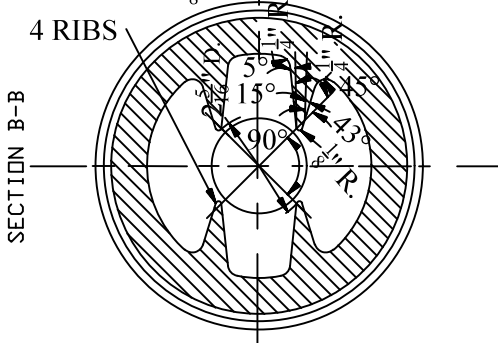
$\frac{3}{8}$ " - 16 UNC - 2B THD. $1\frac{1}{4}$ " DEEP

SEE DWG. 43145-Z-1
FOR ENLARGED VIEW



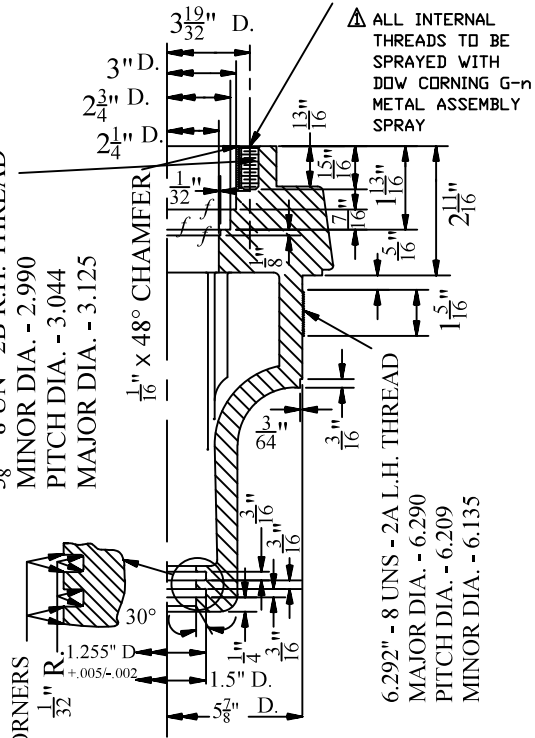
CASTING DIMENSIONS

SECTION A-A



SECTION B-B

3 3/8" - 8 UN - 2B R.H. THREAD
MINOR DIA. - 2.990
PITCH DIA. - 3.044
MAJOR DIA. - 3.125



⚠ ALL INTERNAL
THREADS TO BE
SPRAYED WITH
DOW CORNING G-n
METAL ASSEMBLY
SPRAY

6.292" - 8 UNS - 2A L.H. THREAD
MAJOR DIA. - 6.290
PITCH DIA. - 6.209
MINOR DIA. - 6.135

MACHINING DIMENSIONS

ADDED ON 1/94

* ADDED NOTE, 7-24-84
 Δ ADDED NOTES 1 AND 2, 1-94
 BONNET (3)

MATERIAL: DUCTILE IRON ASTM A536

NOTE:

1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS.
2. ON THE EXTERIOR OF THE BONNET, THE FOLLOWING SHALL BE CAST IN $\frac{1}{4}$ - INCH HIGH RAISED LETTERS:
YEAR
"WSNY"
MANUFACTURER'S MARK

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT TYPE D-2-LP

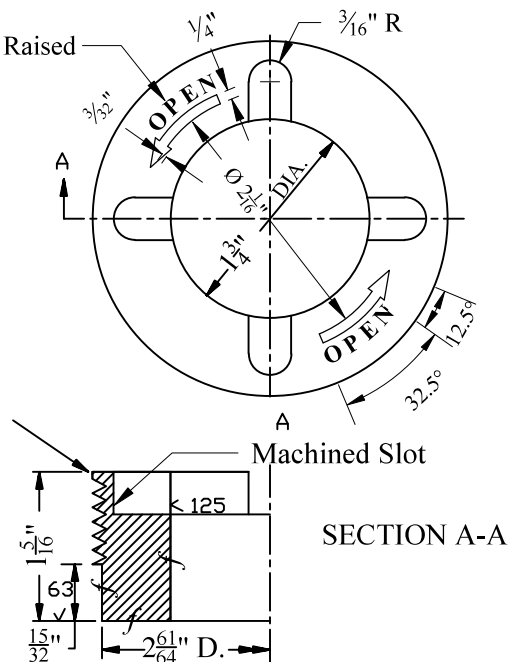
NOT TO SCALE

DRAWING NO. 43145-Z

2	THREAD COATING CHANGED; 1.255" DIM. ADDED;	7/13
1	GROOVE DIMS. CHANGED	10/12
0	REISSUED	6/05
REV #	REVISION	DATE

43146-Z

Letters: $\frac{1}{4}$ " Wide & $\frac{1}{16}$ " Raised
Arrows: $\frac{1}{16}$ " Raised



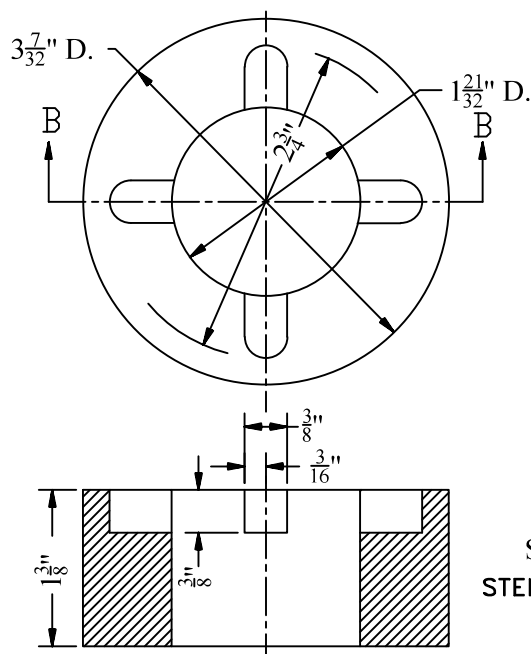
$3\frac{1}{8}$ " - 8 UN - 2A R.H. THREAD
MAJOR DIA. - 3.122
PITCH DIA. - 3.041
MINOR DIA. - 2.969

The threads shall be lubricated by
NSF 61 approved lubricant.
The nut shall not be too tight.

STEM NUT LOCK NUT (4)

MACHINING

MATERIAL: BRONZE-ASTM B62,
COPPER ALLOY NO. C83600
ASTM B584, ALLOY NO. C84400

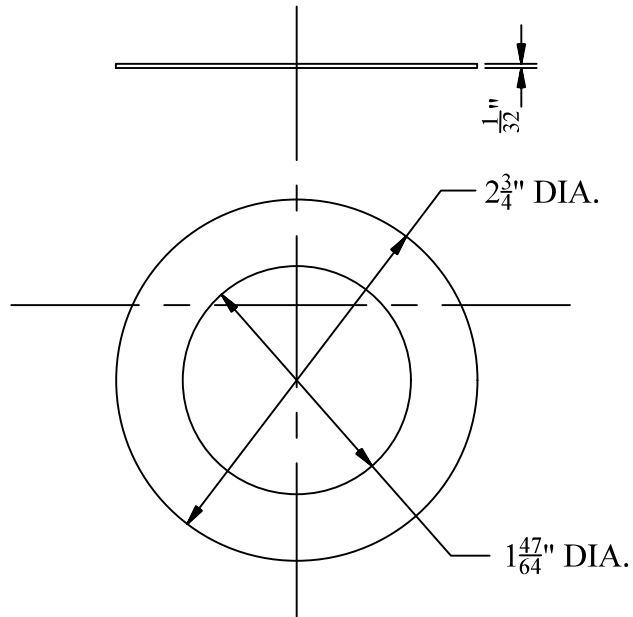


SECTION B-B
STEM NUT LOCK NUT
CASTING

1	NUMBER OF SLOTS INCREASED TO 4; SLOT LENGTH & DEPTH INCREASED; ARROWS AND "OPEN" MARK ADDED; NOTE ADDED;	7/13	CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE DRAWING NO. 43146-Z
0	REISSUED	6/05	
REV #	REVISION	DATE	

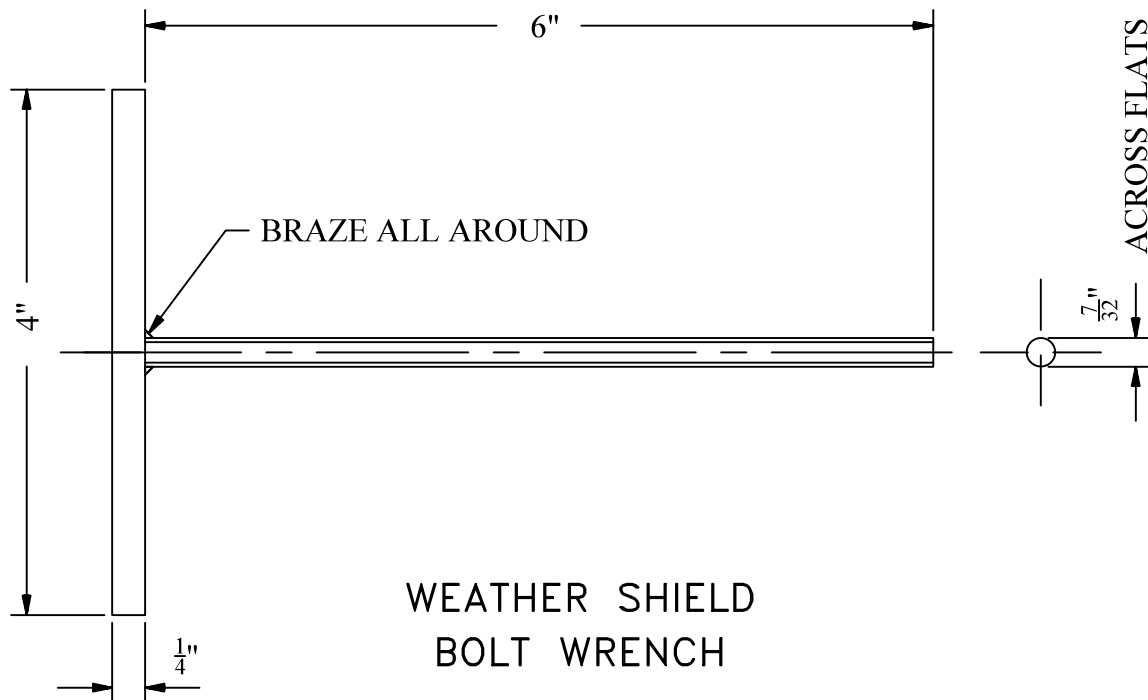
43147-Z

* DU PONT REGISTERED TRADEMARK



THRUST BEARING (5)

MATERIAL: VIRGIN TEFLON*



WEATHER SHIELD
BOLT WRENCH

MATERIAL: (HEX) TOOL STEEL

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43147-Z

0

REISSUED

9/08

REV #

REVISION

DATE

43148-Z-AL

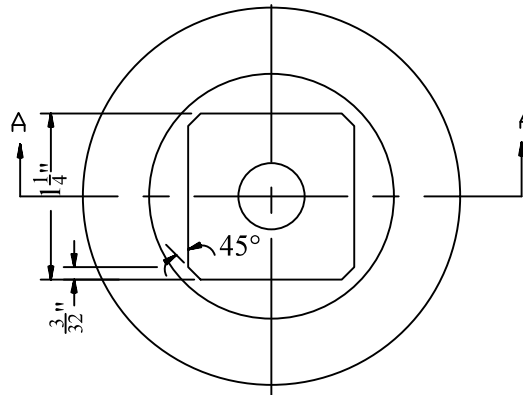
MATERIAL FOR STEM NUT:

ASTM A582, TYPE 303 OR 303SE ANNEALED
AND COLD FINISHED.

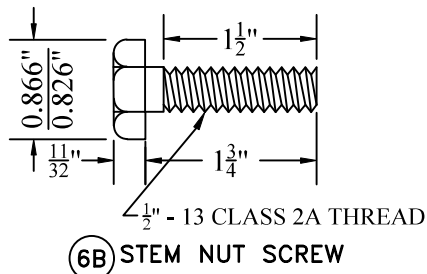
BRINELL HARDNESS > 155 (10 mm BALL &
3 k-kg LOAD).

ALTERNATE:

1. ASTM B148 - C95200; C95500;
2. ASTM A351 - CF8M

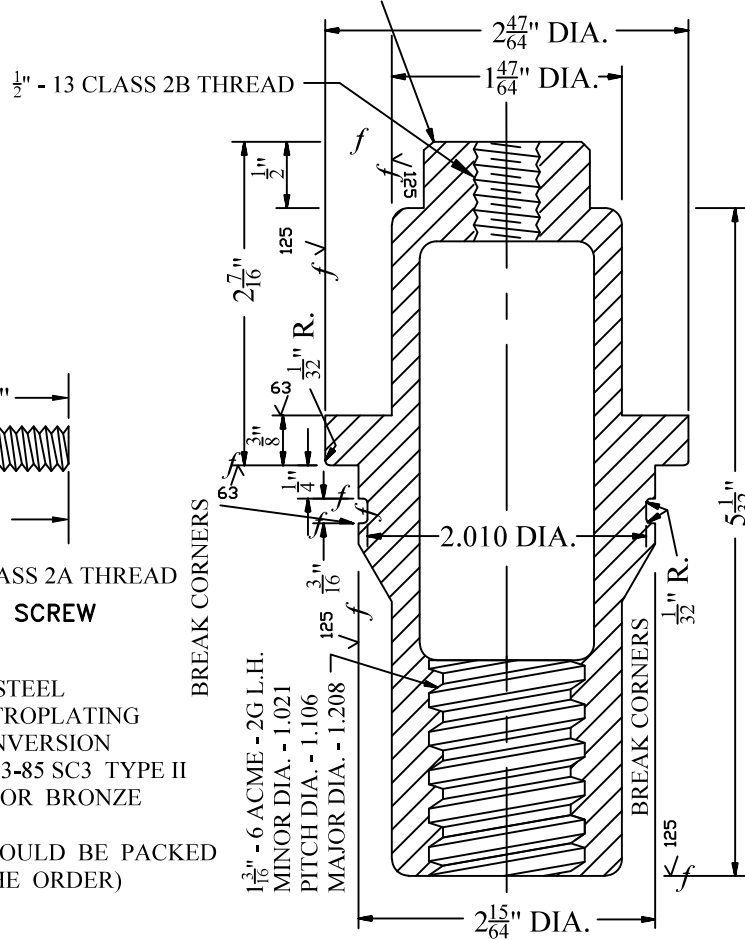


$\frac{1}{16}$ " x 45° CHAMFER



(6B) STEM NUT SCREW

MATERIAL: CARBON STEEL
COATING: ZINC ELECTROPLATING
WITH CHROMATE CONVERSION
COATING AS PER B-633-85 SC3 TYPE II
IRIDESCENT YELLOW OR BRONZE
COLOR
(STEM NUT SCREW SHOULD BE PACKED
SEPARATELY WITH THE ORDER)



SECTION A-A

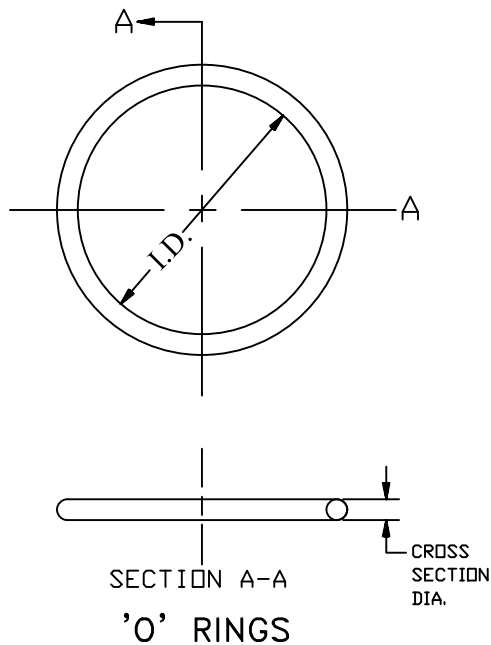
(6A) STEM NUT



BUREAU OF
WATER & SEWER OPERATIONS

1	MATERIALS CHANGED	7/11	Drawn By & Date	Approved By & Date
0	NOTE CHANGED	8/08		
REV #	REVISION	DATE	TYPE D-2-LP STANDARD LP HYDRANT NOT TO SCALE DRAWING NO. 43148-Z-AL	

43149-Z



ITEM NO.	ID X OD X TH	MATERIAL		USE
		AS 568 DASH #	* RUBBER COMPOUND NO.	
20	1 $\frac{1}{4}$ " x 1 $\frac{1}{2}$ " x $\frac{1}{8}$ "	218	8307	STEM RING GASKET
9	5 $\frac{7}{8}$ " x 6 $\frac{1}{8}$ " x $\frac{1}{8}$ "	257	8307	BONNET RING GASKET
7	2" x 2 $\frac{1}{4}$ " x $\frac{1}{8}$ "	226	8307	STEM NUT RING GASKET
47 44	5 $\frac{3}{8}$ " x 5 $\frac{5}{8}$ " x $\frac{1}{8}$ "	253	8307	47-RETAINER BOTTOM RING GKT 44-SEAT RING GASKET
46	6" x 6 $\frac{1}{4}$ " x $\frac{1}{8}$ "	258	8307	RETAINER TOP RING GASKET
32	7 $\frac{1}{4}$ " x 7 $\frac{5}{8}$ " x $\frac{3}{16}$ "	366	8307	GROUND FLANGE JOINT RING GASKET
27	1 $\frac{1}{16}$ " x 1 $\frac{3}{16}$ " x $\frac{1}{16}$ "	023	8307	STEM SLEEVE RING GASKET
36	7 $\frac{7}{8}$ " x 1" x $\frac{1}{16}$ "	020	8307	LOWER STEM SEAL RING GASKET
11	5 $\frac{3}{8}$ " x 5 $\frac{5}{8}$ " x $\frac{1}{8}$ "	253	8307	PUMPER NOZZLE GASKET
22	2 $\frac{7}{8}$ " x 3 $\frac{1}{8}$ " x $\frac{1}{8}$ "	233	8307	HOSE NOZZLE GASKET
42A	7 $\frac{1}{4}$ " x 7 $\frac{5}{8}$ " x $\frac{3}{16}$ "	366	8307	SHOE RING GASKET

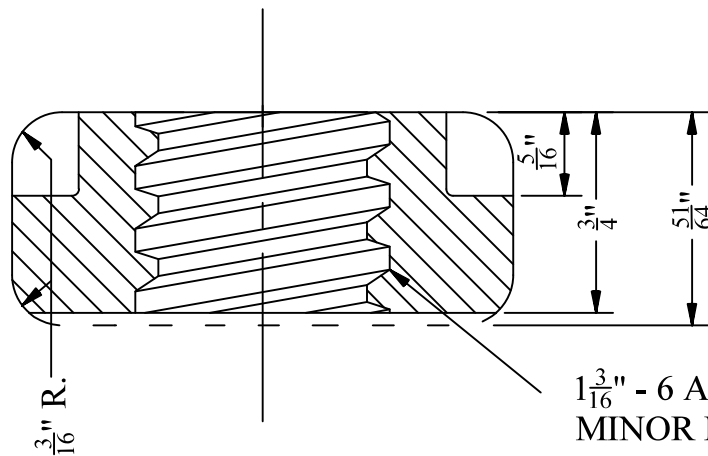
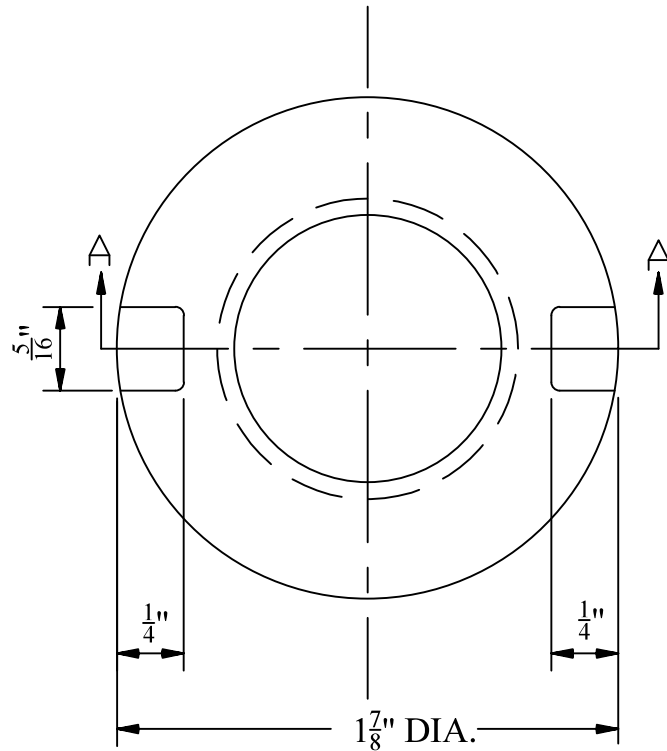
* COMPOUND NO. GIVEN IS THAT OF PRECISION RUBBER PRODUCTS.COMPOUND NO. B-46A OF NATIONAL SEAL DIVISION, FEDERAL-MOGUL CORP. SHALL BE EQUALLY ACCEPTABLE

6	SIZE AND GASKET NUMBER FOR ITEM #22 CHANGED	1/23
5	OD DIMS. FOR ITEMS 32 & 42A, 7 $\frac{5}{8}$ " WAS 7 $\frac{1}{2}$ "	4/14
4	THICKNESS DIMS. FOR ITEMS 32 & 42A, $\frac{3}{16}$ " WAS $\frac{1}{8}$ "	11/13
3	ITEM # 42A ADDED	7/13
2	ITEM # 16 REMOVED	2/12
1	REPLACED "UNIFORM SIZE" TO AS 568 DASH #	8/10
0	RING GASKETS CHANGED TO 'O' RINGS	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43149-Z

43150-Z



SECTION A-A
STEM STOP (8)

1 ³/₁₆" - 6 ACME - 2G L.H.
MINOR DIA. - 1.021
PITCH DIA. - 1.105
MAJOR DIA. - 1.208

MATERIAL: BRONZE-ASTM B62, COPPER ALLOY NO. C83600,
OR ASTM B584 ALLOY NO. C84400

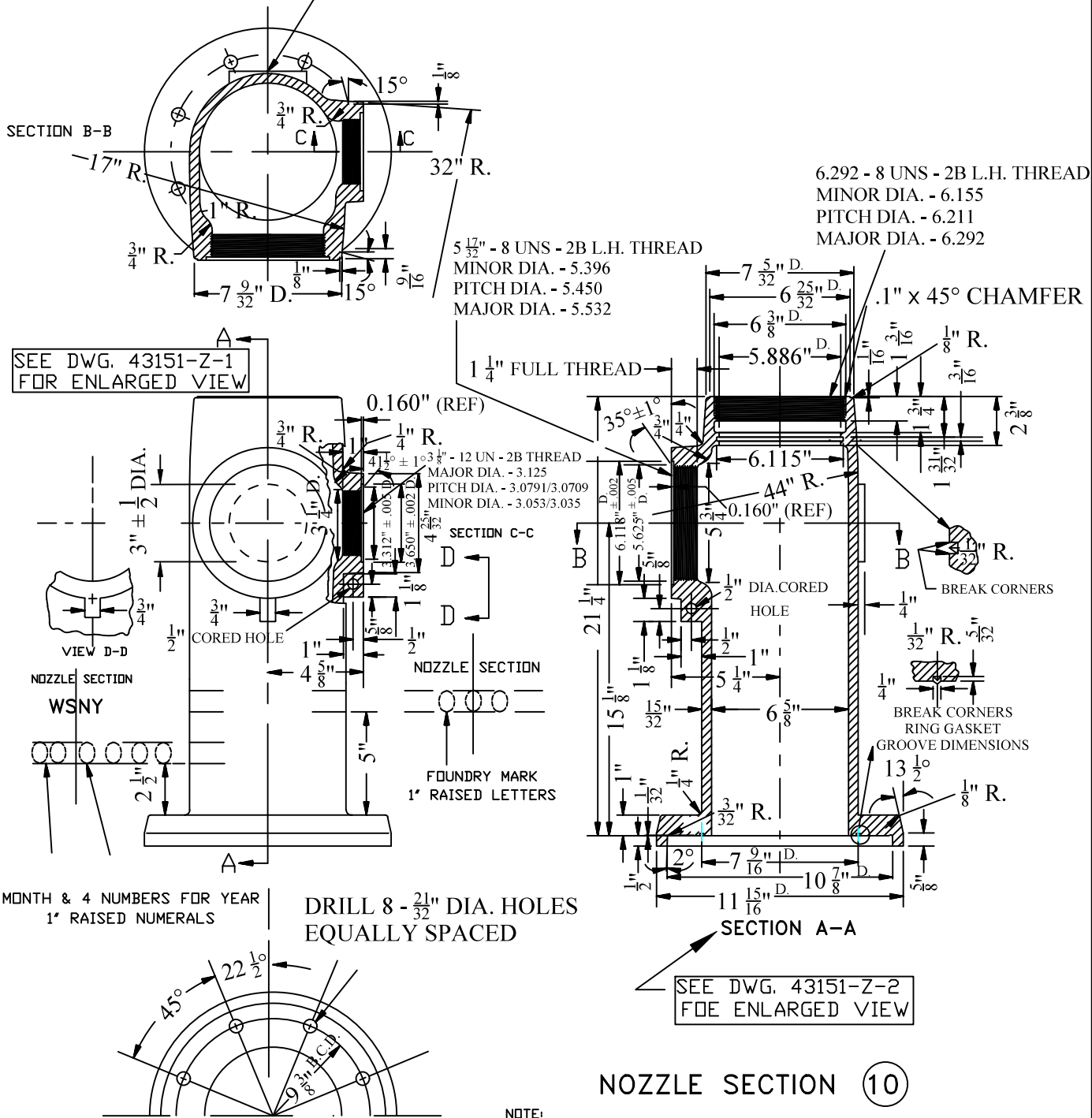
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43150-Z

0	REISSUED	9/08
REV #	REVISION	DATE

43151-Z

FLAT SURFACE FOR SERIAL NO. TAG



NOTE:

1. REFER TO SPECIFICATIONS FOR
COATING REQUIREMENTS

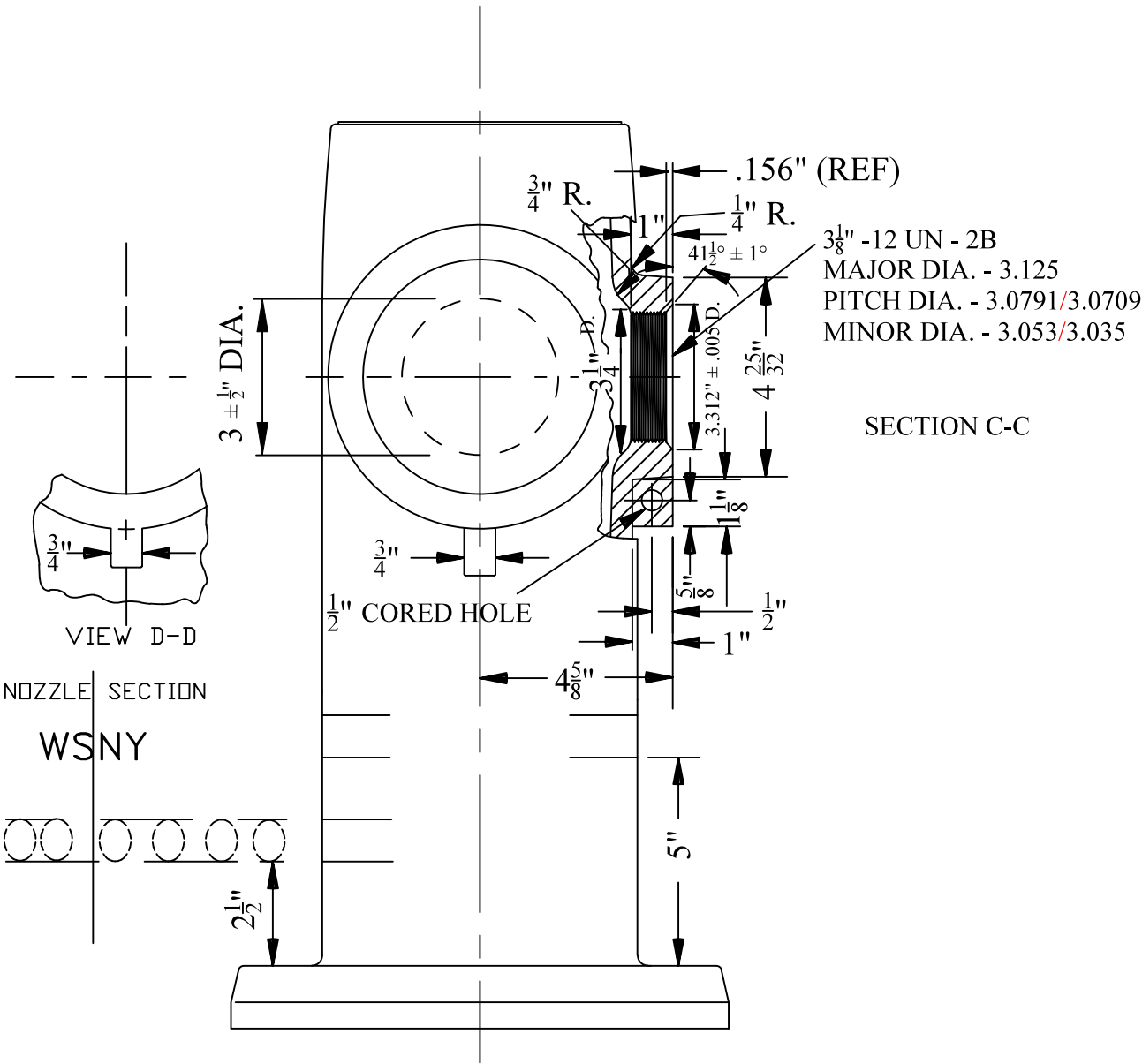
MATERIAL: DUCTILE IRON - ASTM A536

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43151-Z

6	'O' RING GROOVE DIMS. CHANGED	4/14
5	COUNTER-BORES FOR LOCK PINS ADDED	11/13
4	.1" CHAMFER WAS $\frac{1}{16}$ "	7/13
3	$\frac{5}{16}$ " DRILLED HOLES REMOVED	2/12
2	THREAD DIMS. CHANGED	1/07
1	FLAT SURFACE FOR TAG ADDED	10/06
REV #	REVISION	DATE



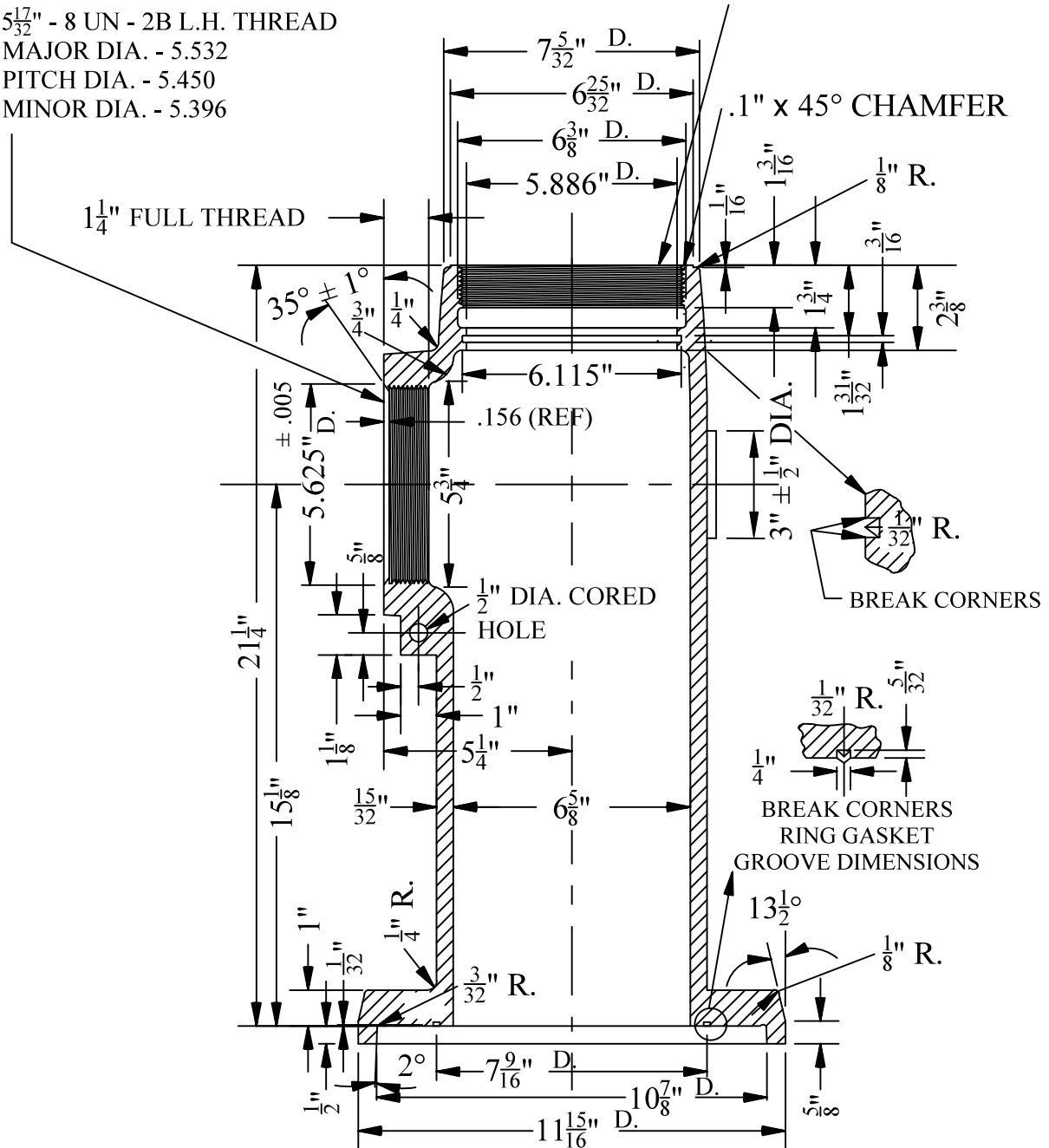
NOZZLE SECTION (10)

CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS			STANDARD LP HYDRANT TYPE D-2-LP DRAWING NO. 43151-Z-1 NOT TO SCALE
2	COUNTER-BORES FOR LOCK PINS ADDED	11/13	
1	THREAD DIMS. CHANGED	1/07	
0	NEW DWG. FOR D-2-LP	10/06	
REV #	REVISION	DATE	

43151-Z-2

5 $\frac{17}{32}$ " - 8 UN - 2B L.H. THREAD
 MAJOR DIA. - 5.532
 PITCH DIA. - 5.450
 MINOR DIA. - 5.396

6.292" - 8 UNS - 2B L.H. THREAD
 MINOR DIA. - 6.155
 PITCH DIA. - 6.211
 MAJOR DIA. - 6.292



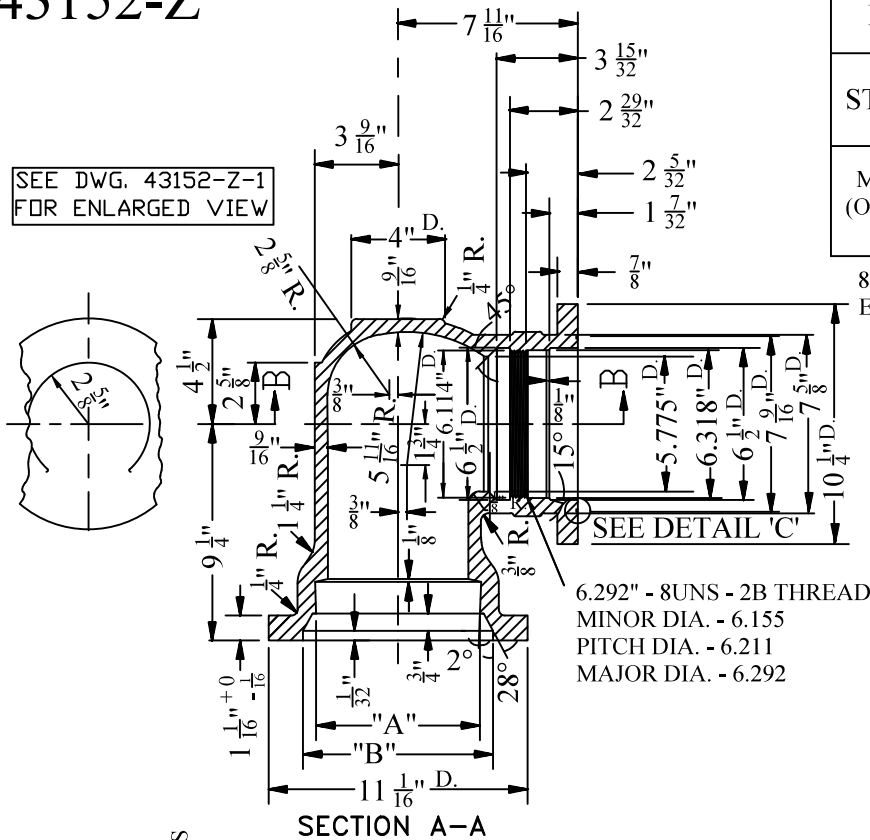
NOZZLE SECTION (10)

SECTION A-A

4	"O" RING GROOVE DIM. CHANGED	4/14	CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS
3	COUNTER-BORES FOR LOCK PINS ADDED	11/13	
2	.1" CHAMFER WAS $\frac{1}{16}$ "	7/13	STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE DRAWING NO. 43151-Z-2
1	THREAD DIMS. CHANGED	1/07	
0	NEW DWG. FOR D-2-LP	6/05	
REV #	REVISION	DATE	

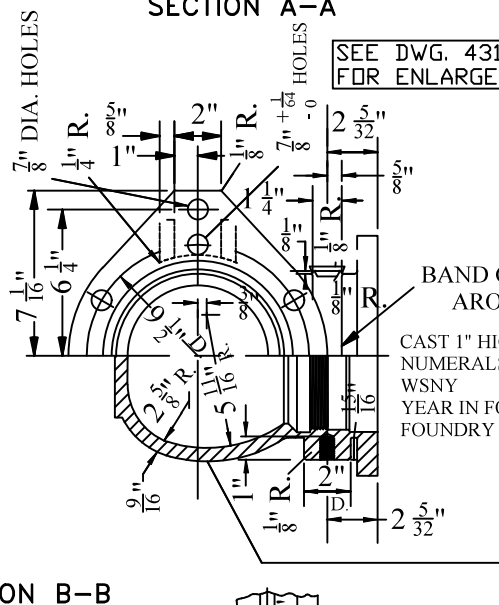
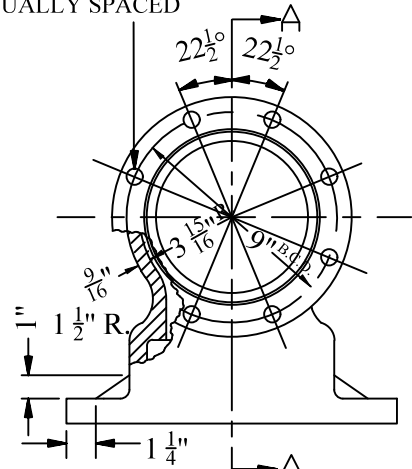
43152-Z

SEE DWG. 43152-Z-1
FOR ENLARGED VIEW



INLET	DIM "A"	DIM "B"
STD. (AB)	7.00" $\begin{smallmatrix} +.06 \\ -.02 \end{smallmatrix}$	8.12" $\begin{smallmatrix} +.06 \\ -.02 \end{smallmatrix}$
MODIFIED (OVER SIZE) (CD)	7.25" ± 0.005	8.32" $\begin{smallmatrix} +.06 \\ -.02 \end{smallmatrix}$

8 - 1/16" DIA. HOLES
EQUALLY SPACED



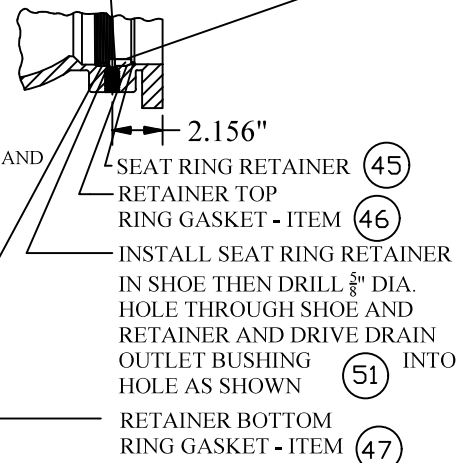
SEE DWG. 43152-Z-2
FOR ENLARGED VIEW

1/32" x 45° CHAMFER

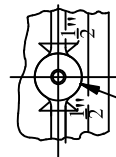
BAND COMPLETELY
AROUND SHOE

CAST 1" HIGH x 1/8" RAISED LETTERS AND
NUMERALS THE FOLLOWING:
WSNY
YEAR IN FOUR DIGITS
FOUNDRY IDENTIFICATION

DRAIN OUTLET BUSHING
MUST NOT EXTEND
INSIDE THIS SURFACE



SECTION B-B



DRAIN BOSS
(1-REQ'D.)

SHOE (52) (6" MECHANICAL JOINT INLET)

MATERIAL: DUCTILE IRON - ASTM A536
GRADE 70-50-05

NOTE:

1. REFER TO SPECIFICATIONS FOR
COATING REQUIREMENTS

2	DIM "A" FOR THE MODIFIED INLET WAS REVISED	12/16
1	'O' RING GROOVE ADDED	7/13
0	FLAT SURFACE ADDED TO BOTTOM OF SHOE; DWG # WAS 44027-Z; TOLERANCES TO DIMENSIONS A & B ADDED;	6/05
REV #	REVISION	DATE

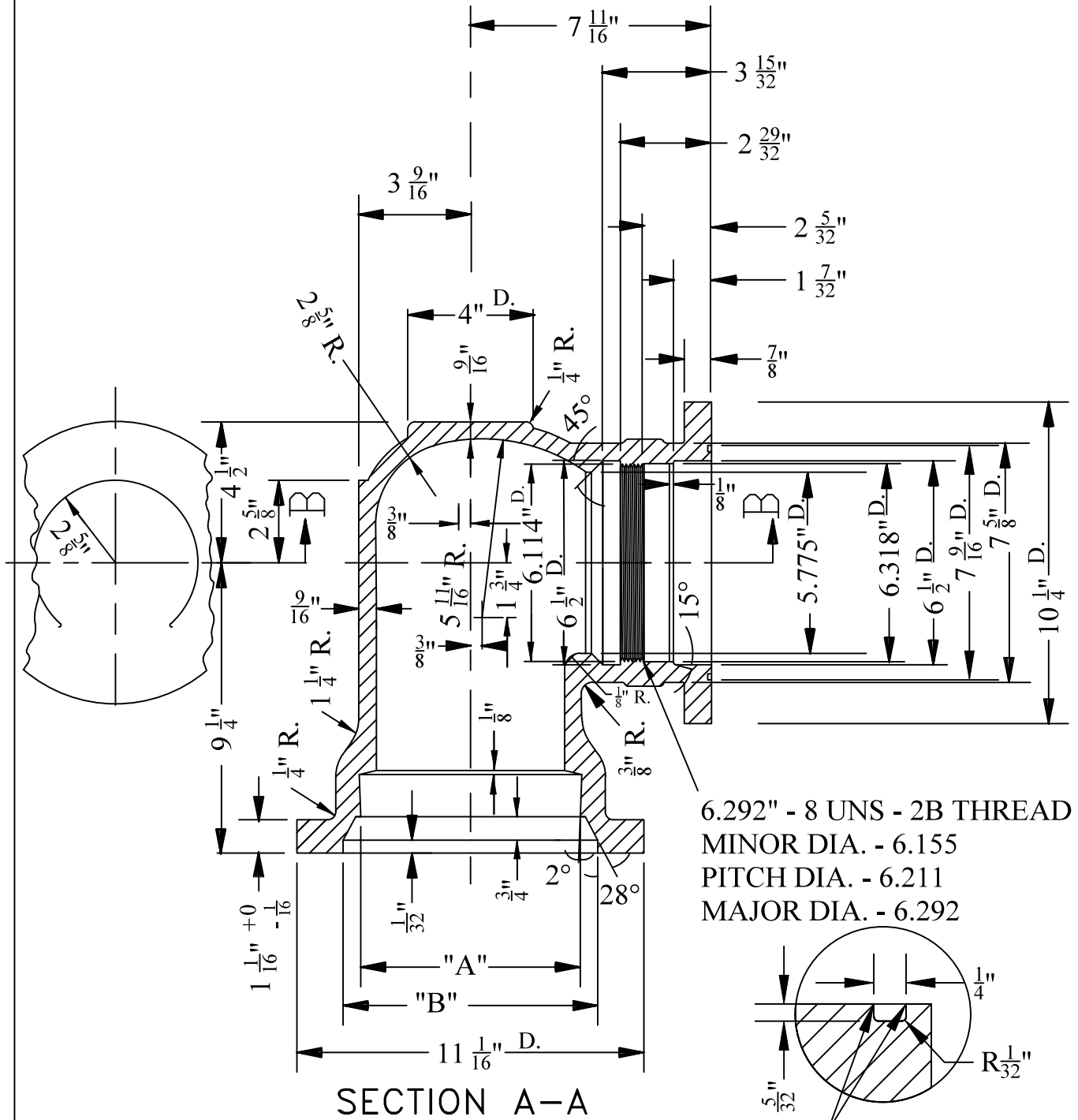
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP

NOT TO SCALE

DRAWING NO. 43152-Z

43152-Z-1



SECTION A-A

BREAK CORNERS

'O' RING GROOVE
DETAIL 'C'

SHOE (52) <6" MECHANICAL JOINT INLET>

ENLARGED VIEW

2	'O' RING GROOVE DIMS. CHANGED	4/14
1	'O' RING GROOVE ADDED	7/13
0	ENLARGED SECTION A-A	6/05
REV #	REVISION	DATE

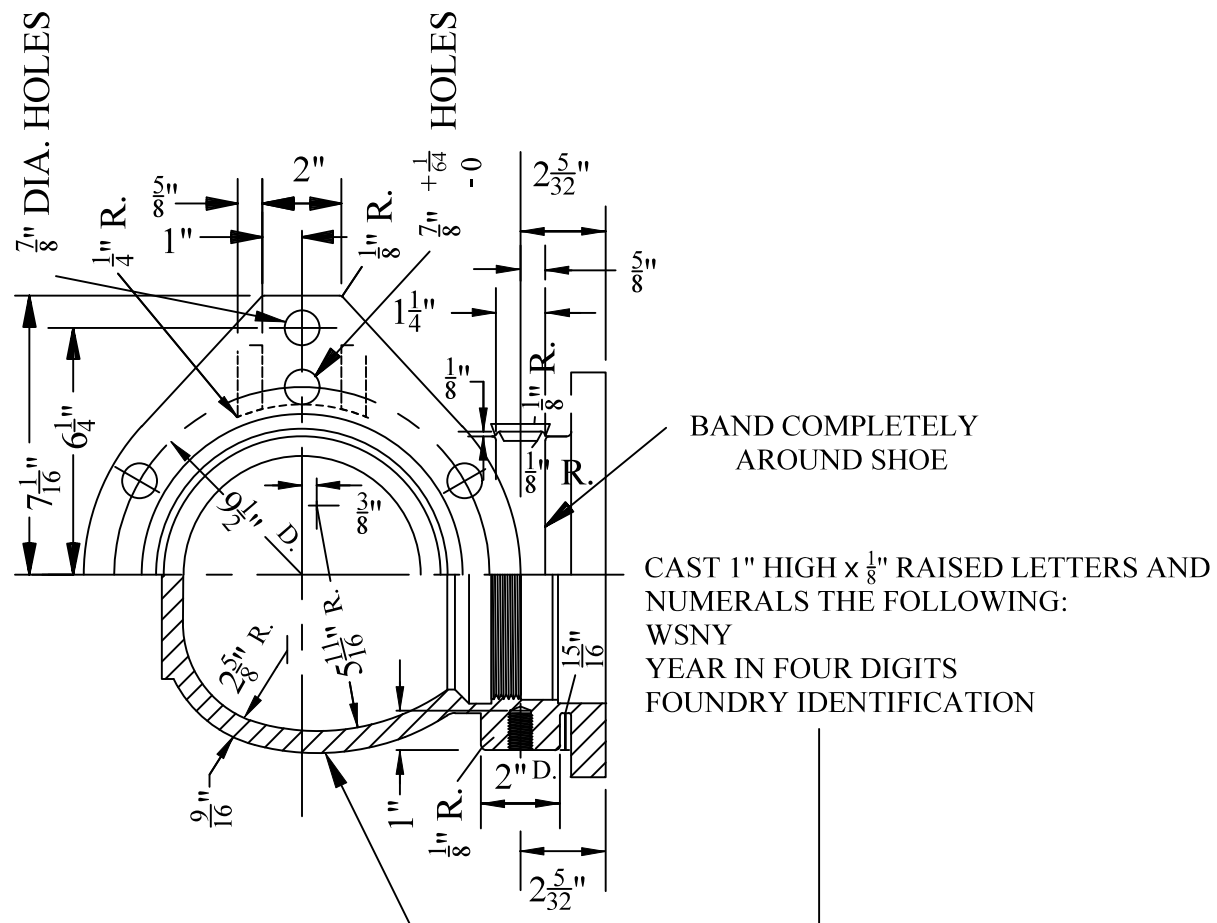
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP

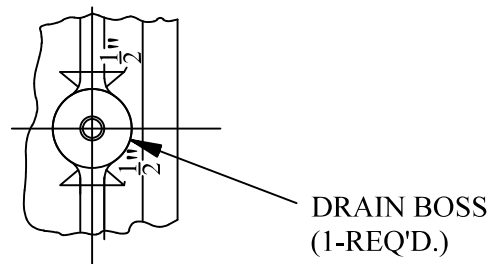
NOT TO SCALE

DRAWING NO. 43152-Z-1

43152-Z-2



SECTION B-B



SHOE (52) (6" MECHANICAL JOINT INLET)

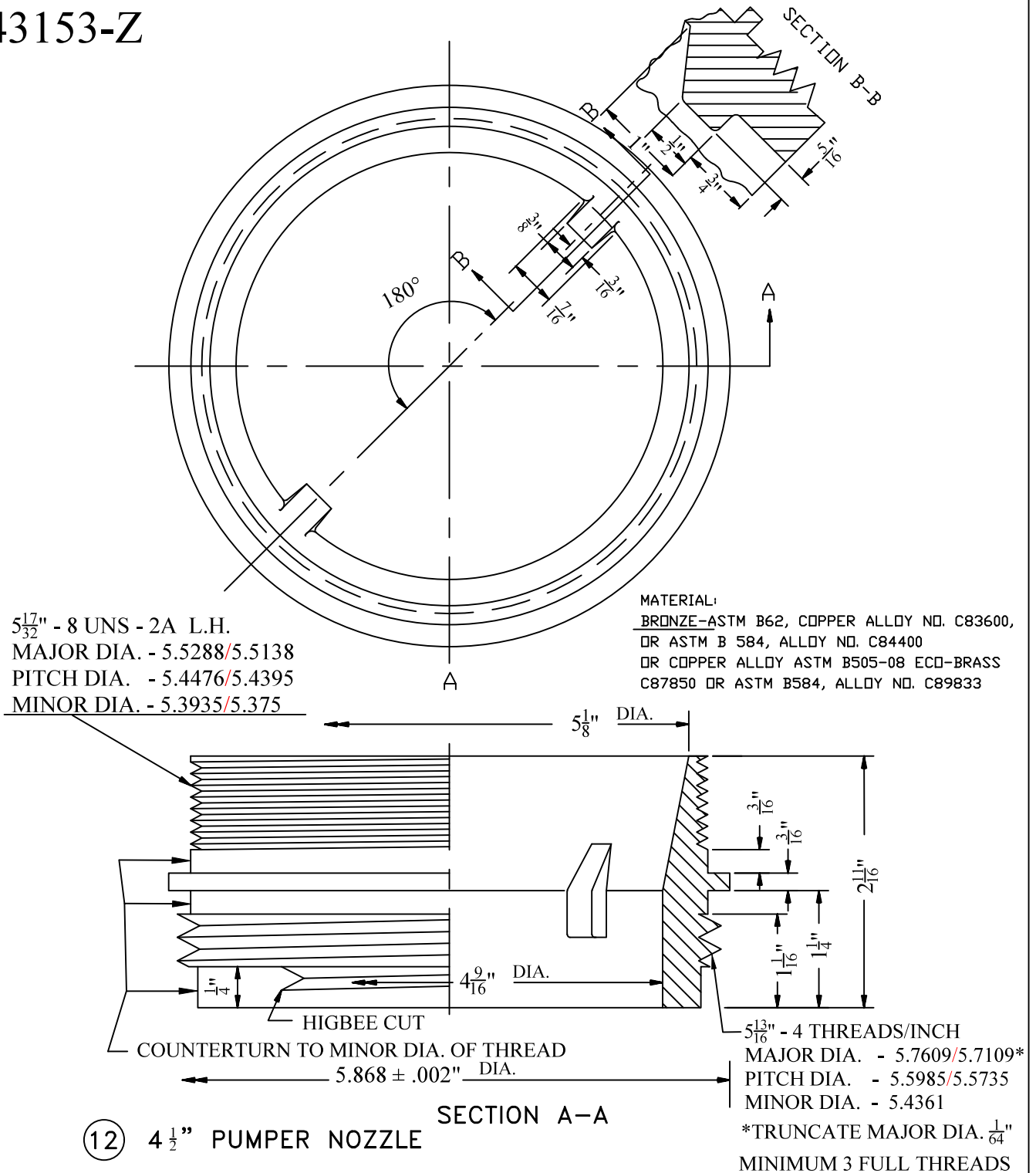
ENLARGED VIEW

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT TYPE D-2-LP	NOT TO SCALE DRAWING NO. 43152-Z-2
------------------------------------	---------------------------------------

0	ENLARGED SECTION B-B	6/05
REV #	REVISION	DATE

43153-Z



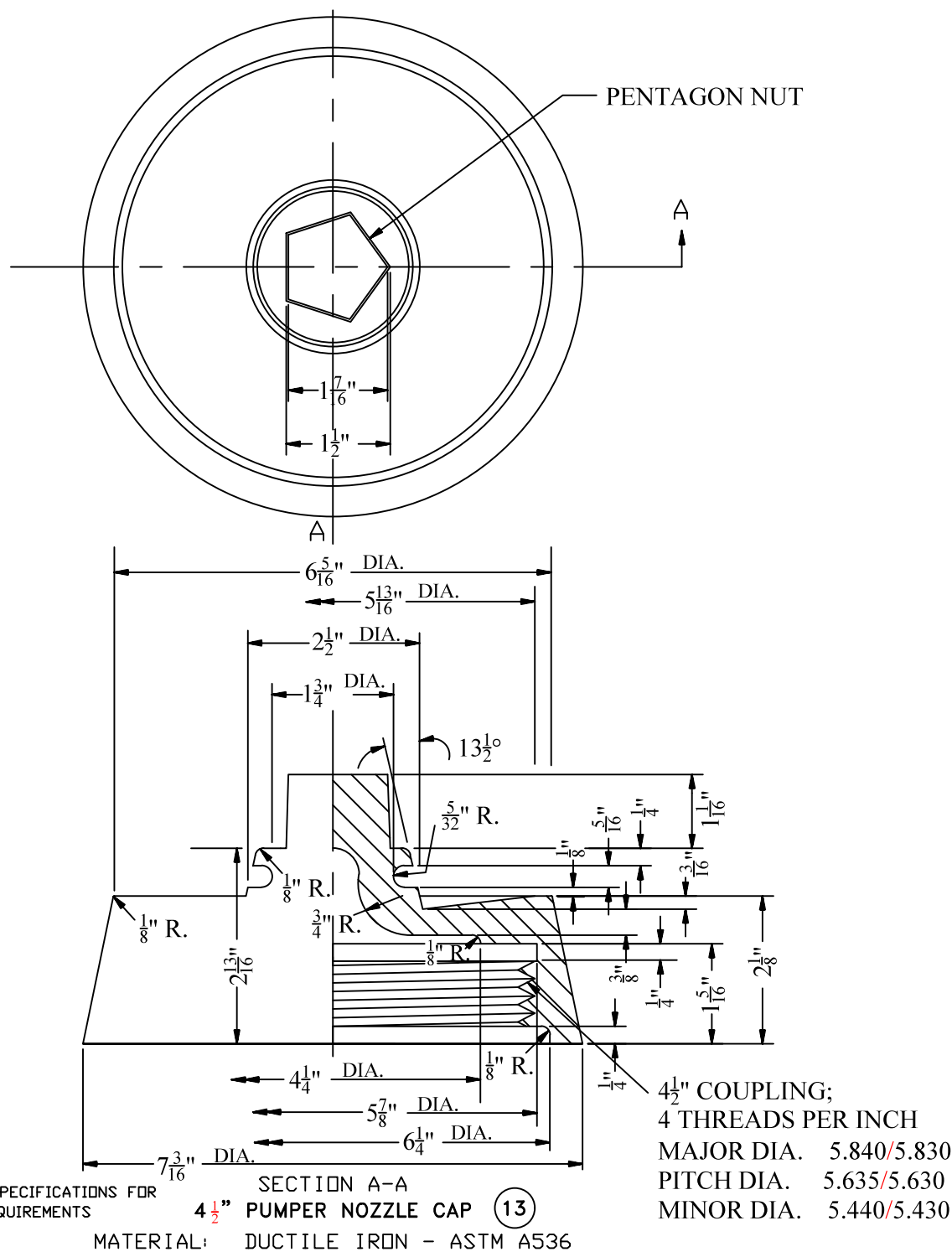
8	THREAD DIMS. CHANGED	4/14
7	THREAD DIMS. CHANGED	12/13
6	DIM. 5.868" WAS 5 7/8"; DIM 3 3/16" WAS 1 1/4"; DIM 1 1/16" WAS 1"; DIM 1 1/4" WAS 7/16"	7/13
5	THREAD DIMS. CHANGED	5/07
4	THREAD NOTE CHANGED	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP

NOT TO SCALE

DRAWING NO. 43153-Z



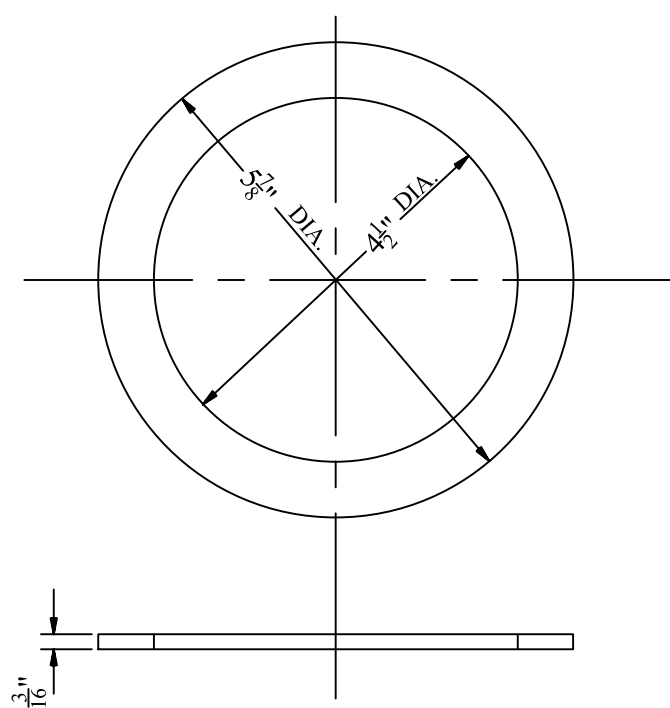
6	DIM. 1 5/16" WAS 1 3/16"	7/13
5	DIM. 1 3/16" WAS 1 7/16"	8/12
4	THREAD DIMS. CHANGED	1/07
3	48" RADIUS REMOVED	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP

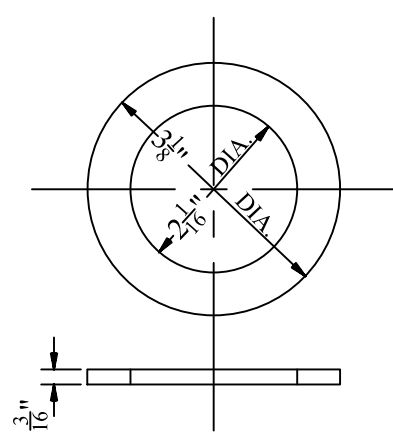
NOT TO SCALE

DRAWING NO. 43154-Z



4 1/2" PUMPER CAP GASKET (14)

MATERIAL: RUBBER
ASTM D2000, IBC815



2 1/4" HOSE CAP GASKET (24)

MATERIAL: RUBBER
ASTM D2000, IBC815

CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS		
STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE		
DRAWING NO. 43155-Z		

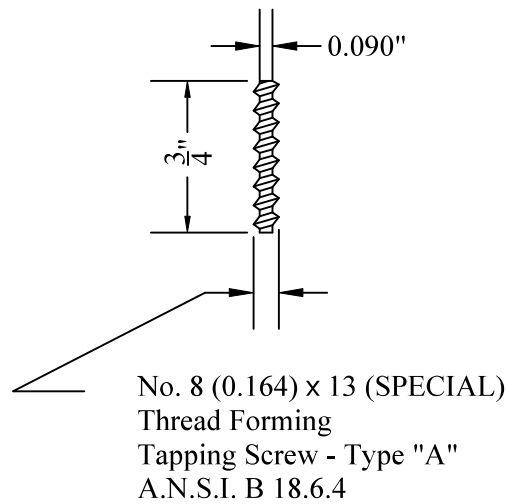
0	REISSUED	9/08
REV #	REVISION	DATE

43156-Z-A-2



END VIEW

NOTE: INSTALL NOZZLE LOCKING
PIN ON OPPOSITE SIDES OF OUTER
CIRCUMFERENCE OF NOZZLES



NOTE: Type 410 Stainless Steel
Hardness Rockwell "C" 40

PLAN VIEW

(15B) LOCKING PIN (THREADED)

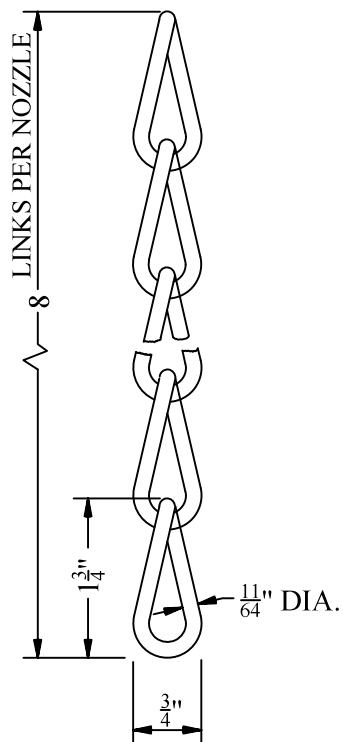
NOTE:
1. THE PREFERRED METHOD FOR
LOCKING THE NOZZLES IN PLACE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43156-Z-A-2

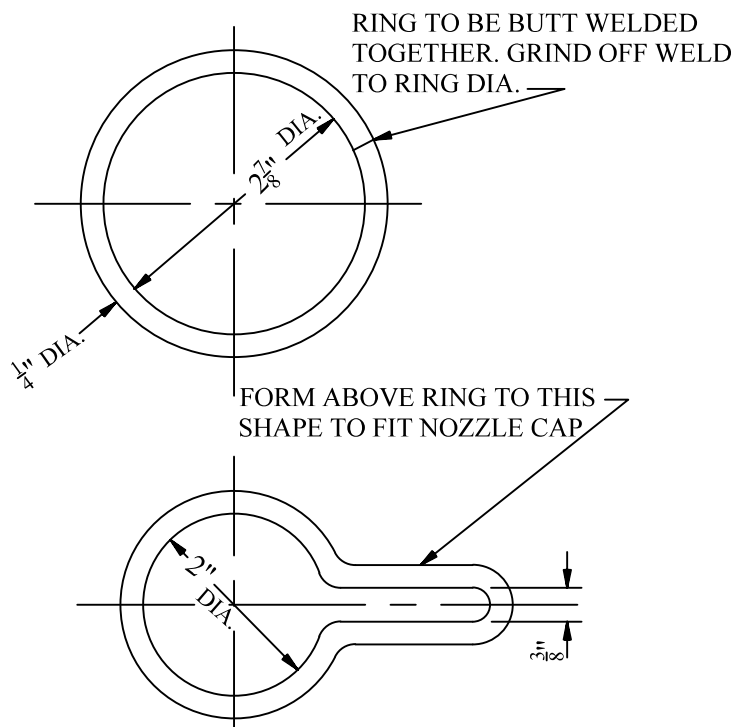
0	NEW DWG. FOR D-2-LP	8/08
REV #	REVISION	DATE

43157-Z

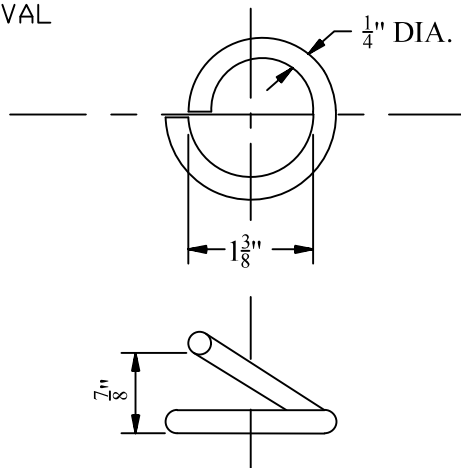


NOZZLE CAP CHAIN (18)

NOTE: OTHER TYPE OF CHAINS
MAY BE SUBMITTED FOR
DEP APPROVAL



CHAIN PEAR RING (17)



CHAIN RING (19)

(17), (18), (19)

MATERIAL: ASTM A108
GRADE 1018
OR DEP APPROVED EQUAL
COATING: REFER TO
SPECIFICATIONS

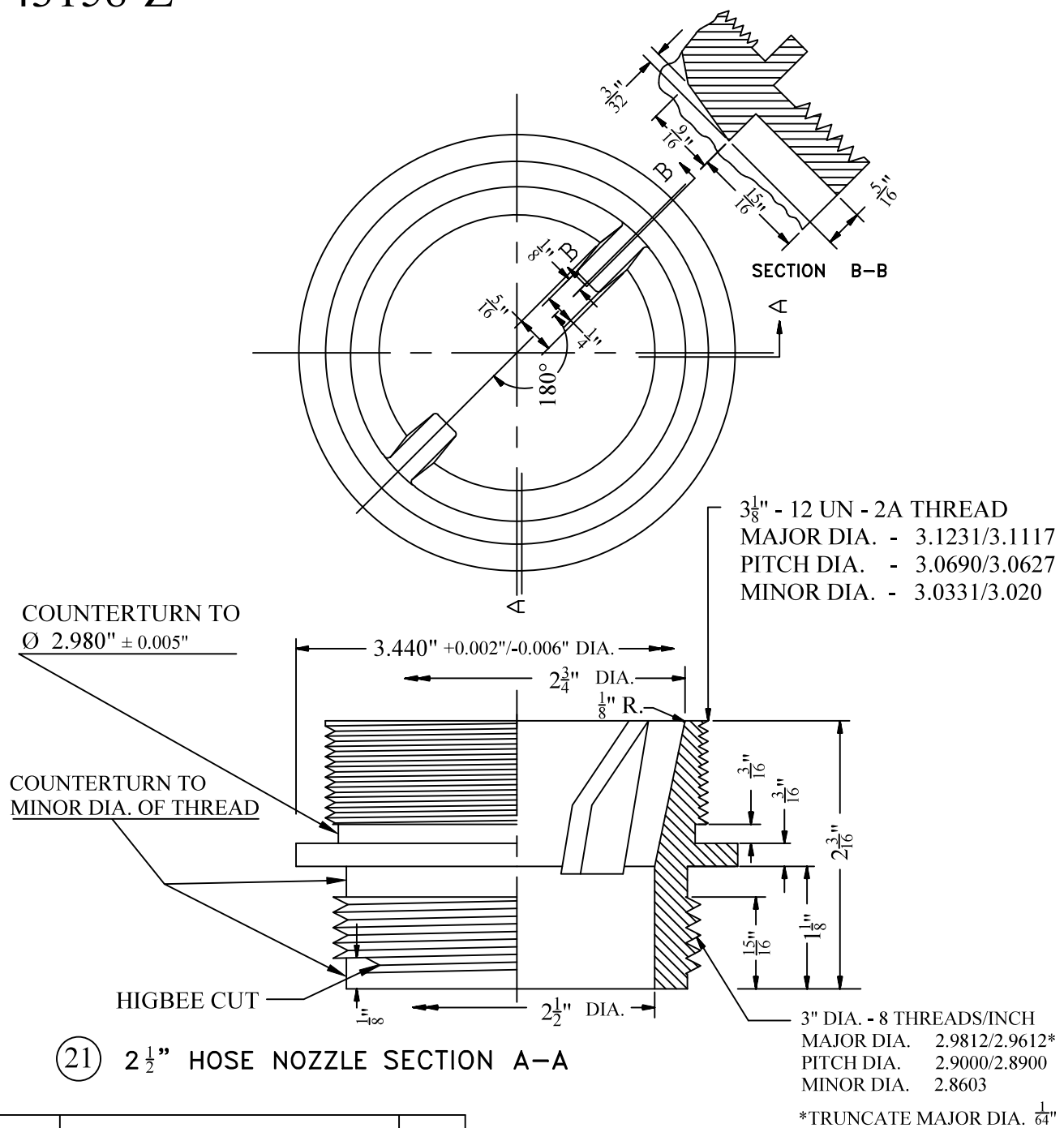
3	NOZZLE CAP CHAIN LENGTH INCREASED	10/06
2	NOTE CHANGED	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43157-Z

43158-Z



6	NOZZLE O.D. CHANGED FROM 3.0331" / 3.020" TO 2.980"±0.005"; COLLAR DIA. CHANGED FROM 3.400" ±0.002" TO 3.440" +0.002/-0.006"	1/23
5	MATERIAL ADDED	12/13
4	DIM. $\frac{1}{4}$ " WAS $\frac{3}{16}$ "	7/13
3	DIM. $\frac{3}{16}$ " WAS $\frac{1}{4}$ "; DIM. $\frac{1}{8}$ " WAS $\frac{1}{4}$ "; DIM. $\frac{15}{16}$ " WAS $\frac{3}{4}$ "; DIM. $1\frac{1}{8}$ " WAS 1"; DIM. 3.400" WAS $3\frac{7}{16}$ ";	7/13
2	MINOR DIA. CHANGED TO 2.8063"	7/11
1	THREAD DIMS. CHANGED	5/07
0	THREAD NOTE CHANGED	1/07
REV #	REVISION	DATE

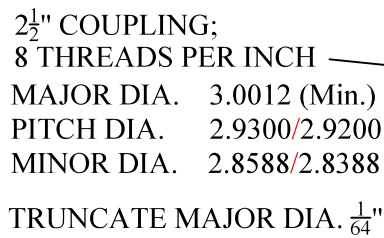
MATERIAL: BRONZE, ASTM B62, COPPER ALLOY NO. C83600,
OR ASTM B584, ALLOY NO. C84400
OR COPPER ALLOY ASTM B505-08 ECO-BRASS
C87850 OR ASTM B584, ALLOY NO. C89833

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43158-Z

43159-Z



MATERIAL: DUCTILE IRON - ASTM A536

1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43159-Z

43160-Z

INSERT RING GASKET (27) IN GROOVE
APPLY BAND OF LOCTITE NO. 75-21 AROUND STEM
AND SLIDE STEM SLEEVE (26) ONTO STEM.

ROLL SLEEVE INTO GROOVE AT
THREAD END.

1 $\frac{3}{16}$ " - 6 ACME - 2G L.H.
MAJOR DIA. - 1.183
PITCH DIA. - 1.096
MINOR DIA. - 1.001

COUNTERTURN TO MINOR
DIA. OF THREAD.

ASSEMBLY OF STEM SLEEVE ON STEM

UPPER STEM (25)

MATERIAL: STEEL-ASTM A 108 GRADE 1018
OR DEP APPROVED EQUAL

NOTE:

1. REFER TO SPECIFICATIONS FOR
COATING REQUIREMENTS

$\frac{17}{32}$ " DIA. DRILL

1 $\frac{1}{4}$ " SQUARE

+ 0
- $\frac{1}{32}$

$\frac{7}{8}$ "

$\frac{5}{8}$ "

$\frac{1}{4}$ " R.

$\frac{3}{4}$ "

$\frac{3}{32}$ "

$\frac{1}{8}$ " R.

$\frac{1}{4}$ " R.

$\frac{1}{8}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ "

$\frac{1}{4}$ "

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43160-Z

0

MATERIAL CHANGED

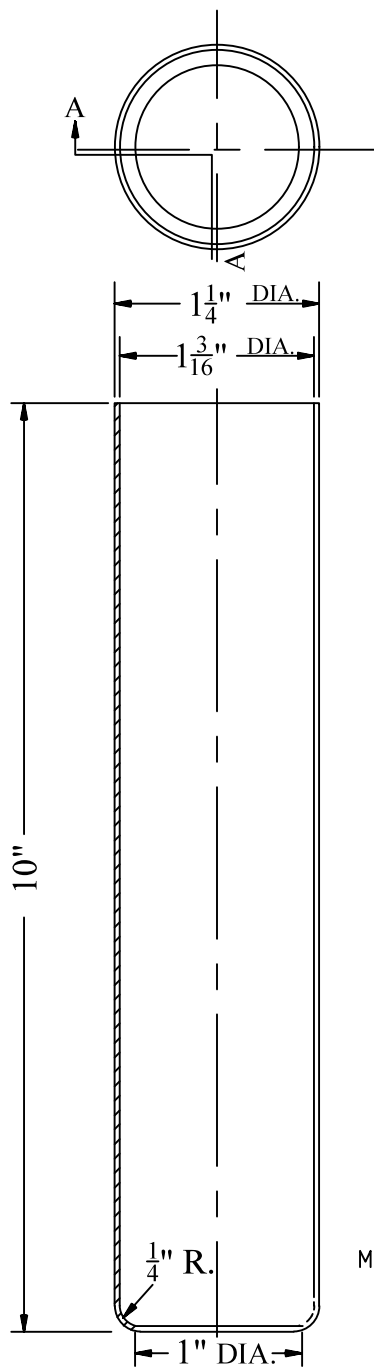
6/05

REV #

REVISION

DATE

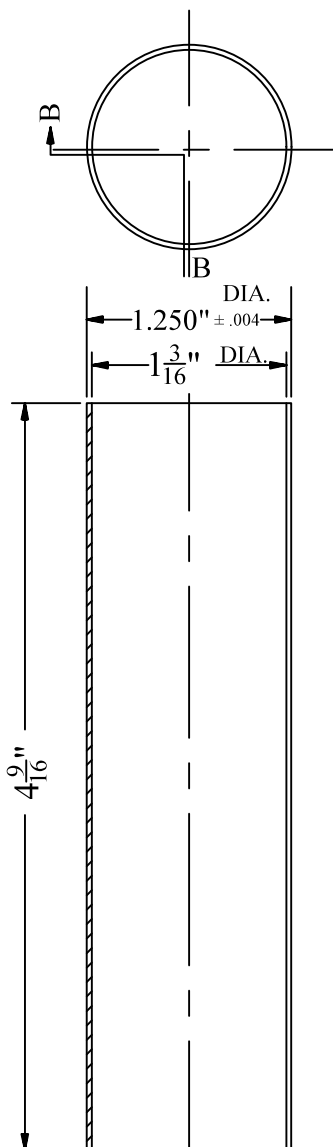
43161-Z



SECTION - A-A

TUBULAR SLEEVE THREAD COVER TOOL

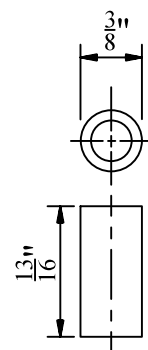
MATERIAL: BRASS TUBING - ASTM B135,
COPPER ALLOY NO. C26000 OR C23000



SECTION - B-B

UPPER STEM SLEEVE (26)

MATERIAL: BRASS TUBING - ASTM B135,
COPPER ALLOY NO. C26000



DRAIN OUTLET BUSHING (51)

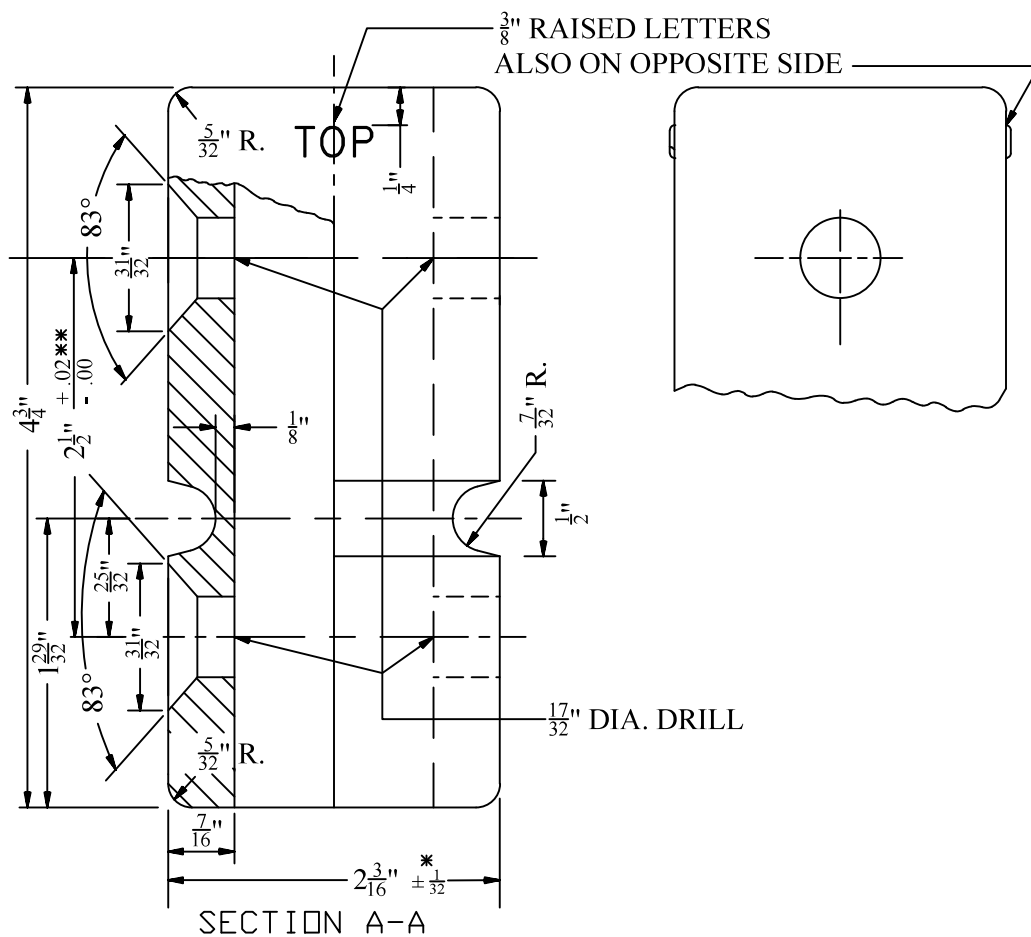
MATERIAL: 3/8" O.D. x 1/4" I.D. BRASS TUBING
ASTM B135, COPPER ALLOY NO. C26000,
OR C23000 OR ASTM B505-08 ECO-BRASS
C87850 OR ASTM B584 C89833

2	MATERIAL ADDED FOR ITEM 51	4/14
1	ADDED TOL. ± .004 ; ADDED COPPER ALLOY OPTION	7/13
0	REISSUED	9/08
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

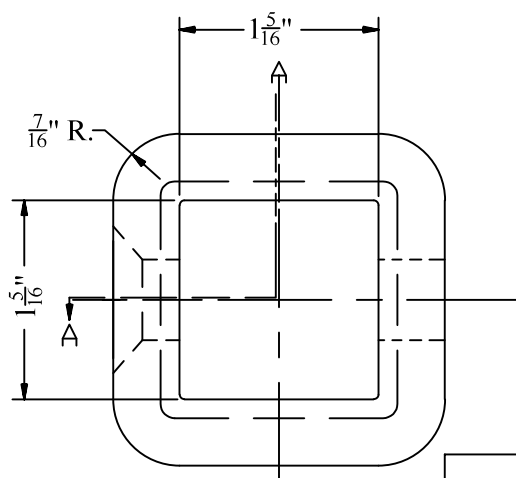
STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43161-Z

43162-Z



STEM BREAKAWAY COUPLING (28)

MATERIAL: CAST IRON, ASTM A126, CLASS B



*ADDED DIM. & TOLERANCE 2-84
** ADDED TOLER. 2-84

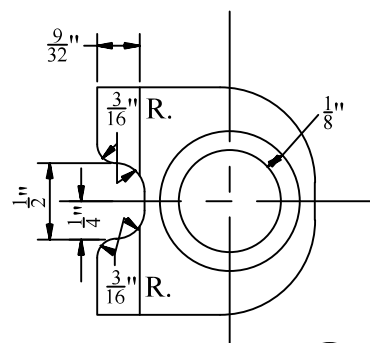
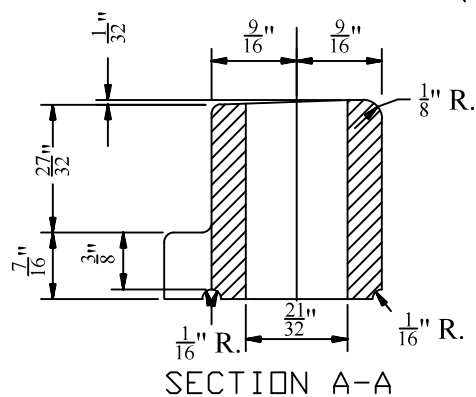
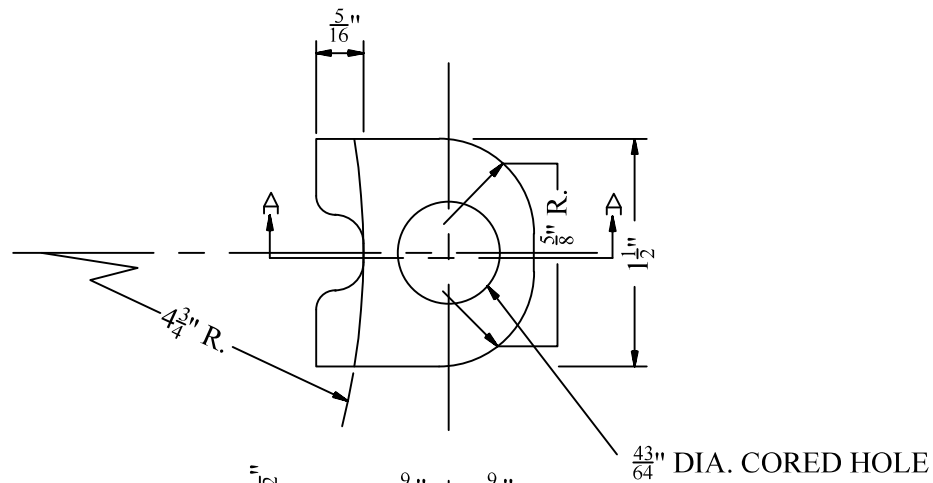
NOTE:
1. REFER TO SPECIFICATIONS FOR
COATING REQUIREMENTS

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43162-Z

0	REISSUED	9/08
REV #	REVISION	DATE

43163-Z



△ ADDED NOTES 1 AND 2 - 1/94

BREAKAWAY LUG (33)

MATERIAL: CAST IRON - ASTM A126,
CLASS B

NOTE:

1

1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS

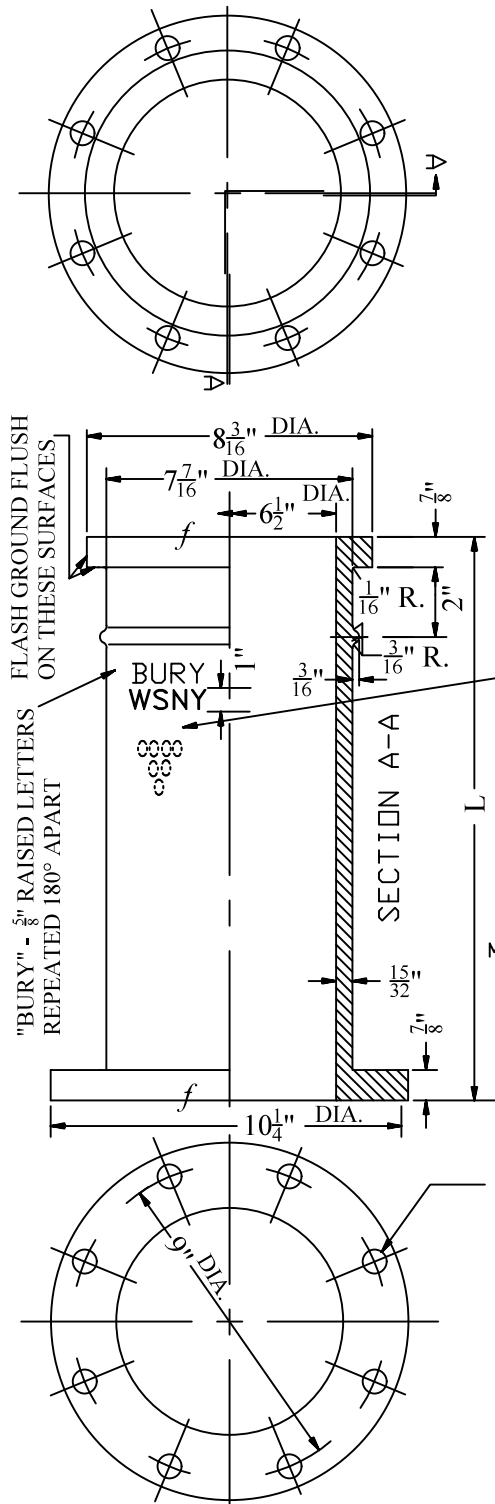
2. FURNISH EIGHT (8) LUGS PER HYDRANT WITH EIGHT (8) BOLTS AND EIGHT (8) NUTS. BOLTS AND NUTS SHALL BE PLATED WITH THE SAME MATERIAL; ZINC OR CADMIUM PLATED. NUTS SHALL FIT BOLTS AND LUGS.

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43163-Z

0	REISSUED	9/08
REV #	REVISION	DATE

43164-Z



BURY OR TRENCH	"L" LENGTH
2' - 0"	16 3/4"
2' - 6"	22 3/4"
3' - 0"	28 3/4"
3' - 6"	34 3/4"
4' - 0"	40 3/4"
4' - 6"	46 3/4"
5' - 0"	52 3/4"

BURY OR TRENCH	"L" LENGTH
5' - 6"	58 3/4"
6' - 0"	64 3/4"
6' - 6"	70 3/4"

CAST 1" HIGH $\times$ 1/8" RAISED LETTERS AND NUMERALS THE FOLLOWING
 WSNY
 YEAR IN FOUR DIGITS
 FOUNDRY IDENTIFICATION
 CAST 3/4" MINIMUM HEIGHT $\times$ 1/8" RAISED LETTERS FOR THE SERIAL NUMBER

STANDPIPE (34)

MATERIAL: DUCTILE IRON - ASTM A536

NOTE:
 1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS

8 - 11/16" DIA. HOLES EQUALLY SPACED

NOTE:
 1. SEE DWG. NO. 43164-Z-ALT FOR FABRICATED STANDPIPE

1	SERIAL NUMBER SIZE CHANGED FROM 1" TO 3/4"	7/13
0	NOTE ADDED	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
 BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
 TYPE D-2-LP NOT TO SCALE

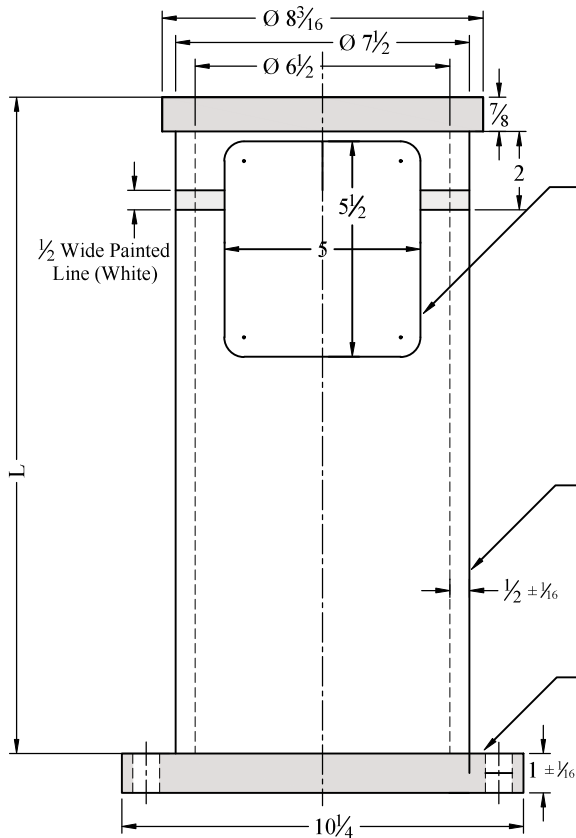
DRAWING NO. 43164-Z

ALT



The diagram shows a circular cross-section of a pipe. It consists of two concentric circles. A horizontal dashed line and a vertical dashed line intersect at the center, representing the pipe's axis of symmetry. The label 'ALT' is positioned to the left of the circles.

ITEM NO.	BURY OR TRENCH	"L" LENGTH
1	2'-0"	16 $\frac{3}{4}$ "
2	2'-6"	22 $\frac{3}{4}$ "
3	3'-0"	28 $\frac{3}{4}$ "
4	3'-6"	34 $\frac{3}{4}$ "
5	4'-0"	40 $\frac{3}{4}$ "
6	4'-6"	46 $\frac{3}{4}$ "
7	5'-0"	52 $\frac{3}{4}$ "
8	5'-6"	58 $\frac{3}{4}$ "
9	6'-0"	64 $\frac{3}{4}$ "
10	6'-6"	70 $\frac{3}{4}$ "



Fabricated Standpipe - Alternate to Cast Standpipe for Dresser Type Fire Hydrant

Screwed / Riveted Stainless Steel or Copper alloy plate (no sharp corner / edge) with the following markings at least one-inch high letters and numerals:

First Line: Manufacturer / Foundry Mark

Second Line: Year of Manufacture in 4 digits

Third Line: WSNY

Fourth Line: Serial Number

(First and Second Line above the Bury Line)

STAND PIPE

34A

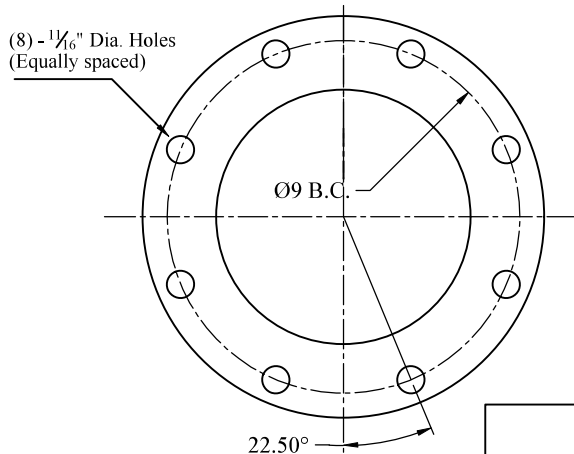
Material: D.I. ASTM A536 : 60-42-10
Centrifugally Cast to AWWA C151-02
Except pipe thickness.

- Flanges: (Solid only - No pockets)

Material: D.I. ASTM A536: 70-50-05
Machine tightened to 500 ft-lbs torque with
NSF-61 approved sealant on threads.
Threads to: ANSI B2.1 or as approved.

Coating: To NYC Specification for Fire Hydrant

All dimensions are in inches, unless noted otherwise.



CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP
DRAWING NO. 43164-Z-ALT

NOT TO SCALE

1	REDRAWN; DIM. 7 1/2 WAS 7 1/32; PLATE DIM. ADDED	3/23
0	NEW DWG. FOR D-2-LP	2/04
REV #	REVISION	DATE

43165-Z

BURY OR	STANDPIPE	"L "
TRENCH	LENGTH	LENGTH
2' - 0"	16 $\frac{3}{4}$ "	21 $\frac{11}{16}$ "
2' - 6"	22 $\frac{3}{4}$ "	27 $\frac{11}{16}$ "
3' - 0"	28 $\frac{3}{4}$ "	33 $\frac{11}{16}$ "
3' - 6"	34 $\frac{3}{4}$ "	39 $\frac{11}{16}$ "
4' - 0"	40 $\frac{3}{4}$ "	45 $\frac{11}{16}$ "
4' - 6"	46 $\frac{3}{4}$ "	51 $\frac{11}{16}$ "
5' - 0"	52 $\frac{3}{4}$ "	52 $\frac{3}{4}$ "
5' - 6"	58 $\frac{3}{4}$ "	57 $\frac{11}{16}$ "
6' - 0"	64 $\frac{3}{4}$ "	69 $\frac{11}{16}$ "
6' - 6"	70 $\frac{3}{4}$ "	75 $\frac{11}{16}$ "

NOTE:

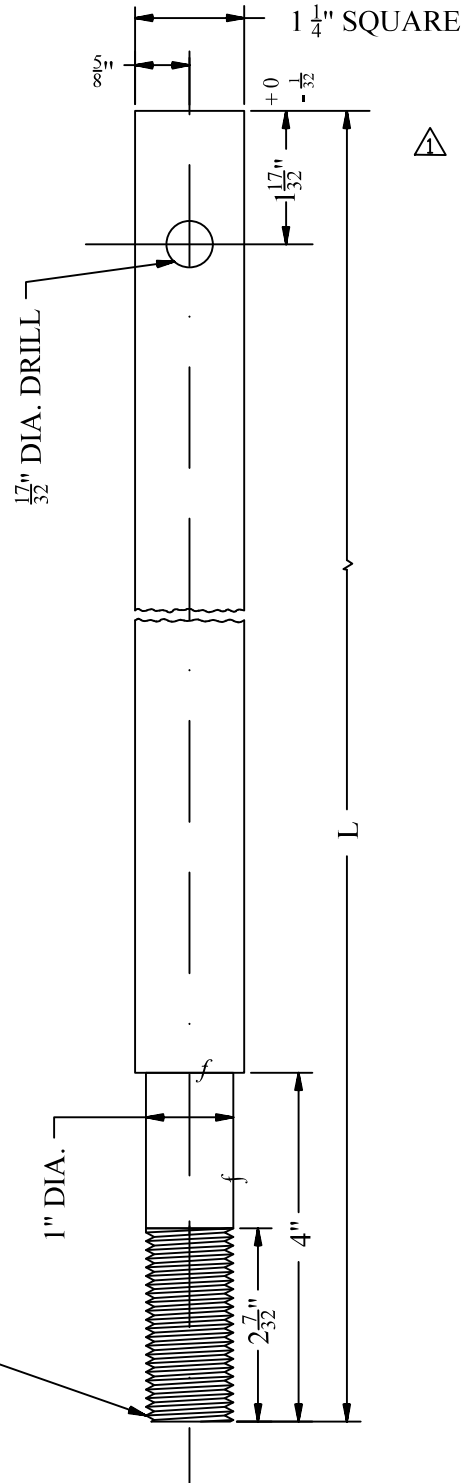
1. REFER TO SPECIFICATIONS
FOR COATING REQUIREMENTS

LOWER STEM (35)

1" - 8 UNC - 2A THREAD
MAJOR DIA. - 0.998
PITCH DIA. - 0.916
MINOR DIA. - 0.844

MATERIAL: STEEL - ASTM A108 GRADE 1018
OR EQUIVALENT

1 ADDED TOLER. 2-84

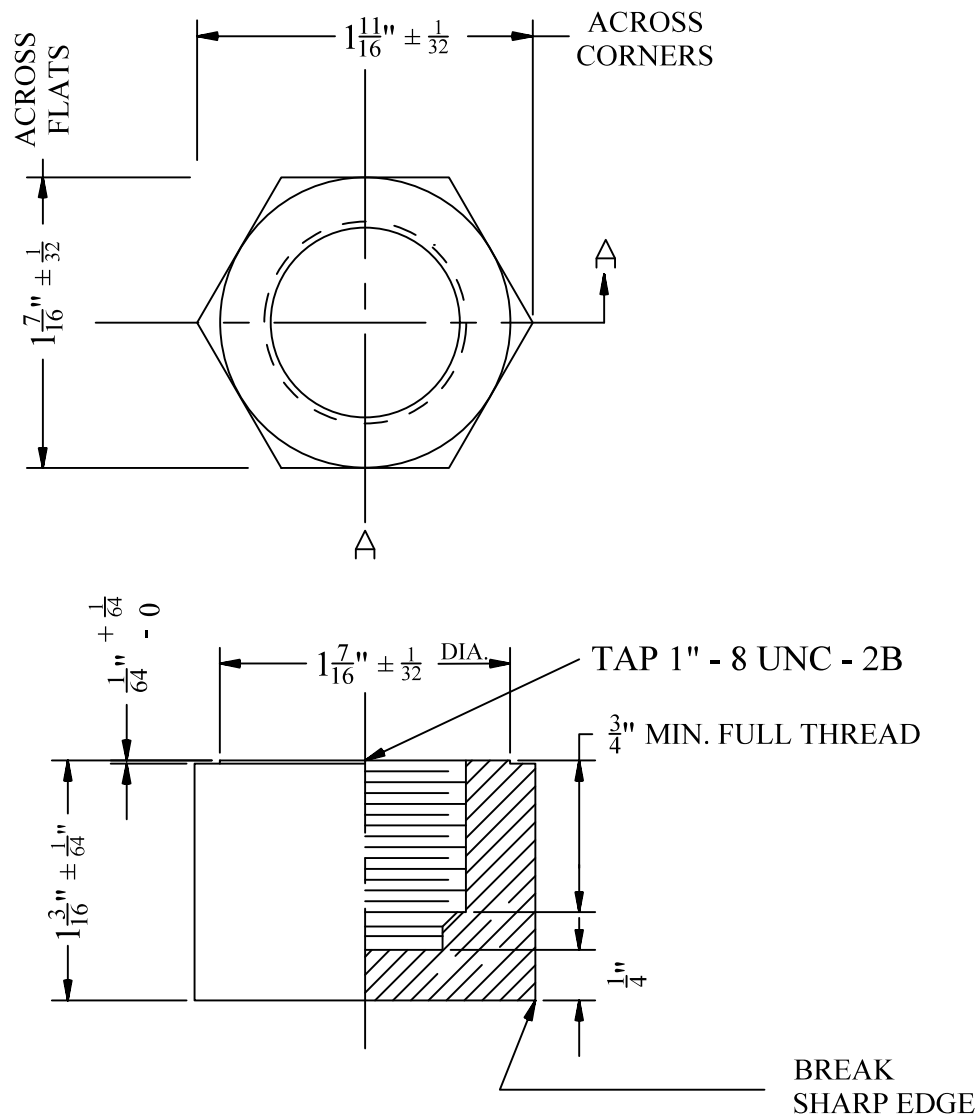


CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43165-Z

0	MATERIAL CHANGED	6/05
REV #	REVISION	DATE

43166-A-Z



SECTION A-A

CAP NUT (50)

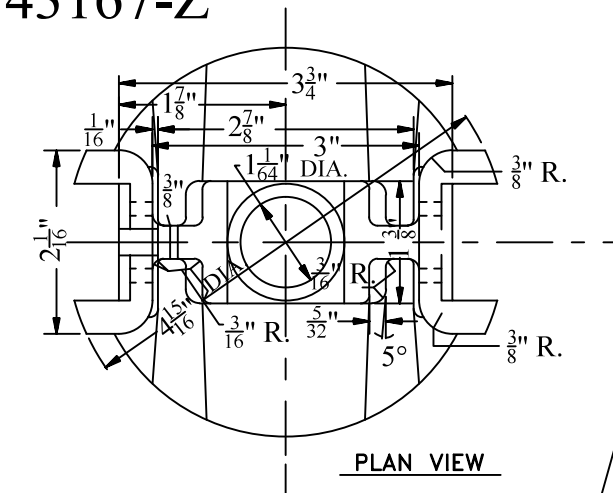
MATERIAL: BRASS ASTM B-16, ALLOY NO. C36000, HALF HARD
 OR COPPER ALLOY B505-08 ECO-BRASS C87850
 OR ASTM B584 C89833

CITY OF NEW YORK -DEP
 BUREAU OF WATER AND SEWER OPERATIONS

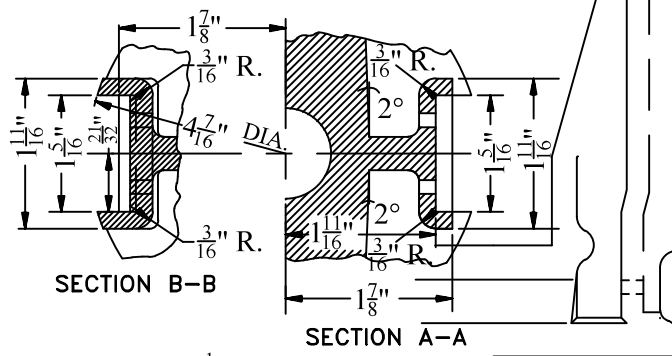
STANDARD LP HYDRANT
 TYPE D-2-LP NOT TO SCALE
 DRAWING NO. 43166-A-Z

1	MATERIAL ADDED	4/14
0	REISSUED	9/08
REV #	REVISION	DATE

43167-Z

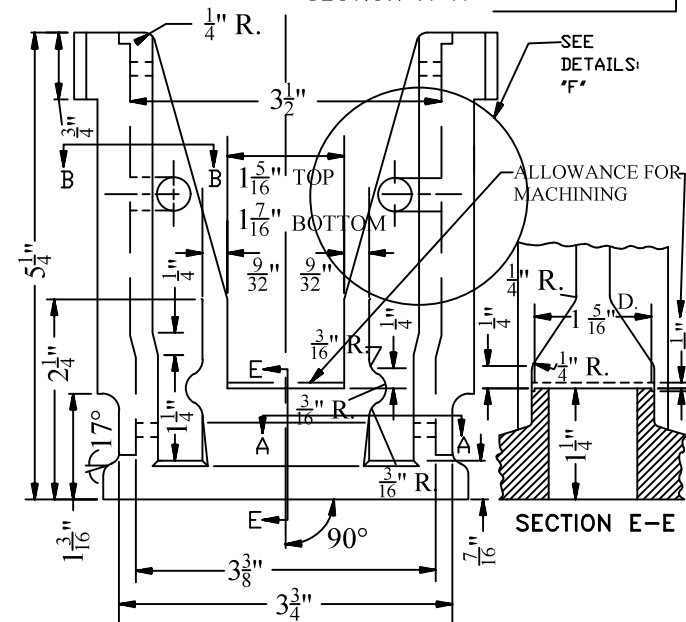


PLAN VIEW

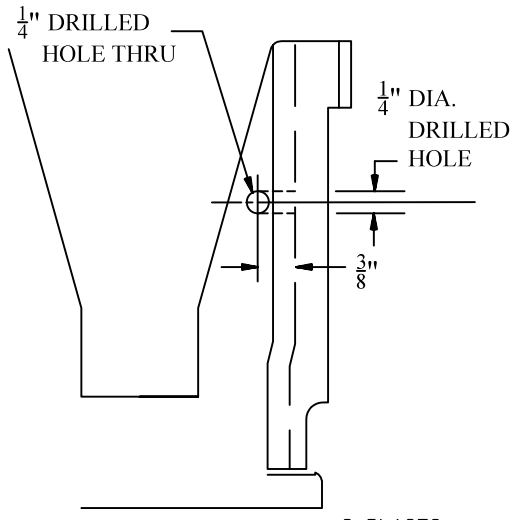


SECTION B-B

SECTION A-A

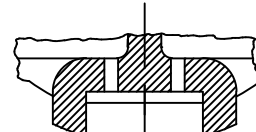


SECTION E-E

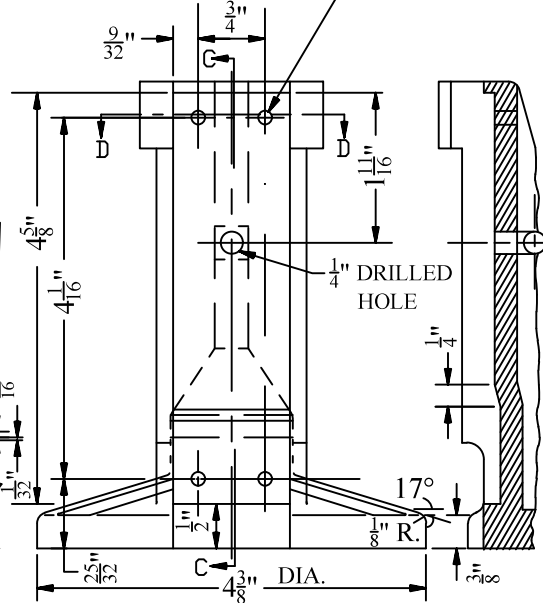


DETAIL: 'F', TYPICAL -2 PLACES
 DET. 'F' ADDED, 6-2001

5/32\"/>



SECTION D-D



SIDE VIEW

SECTION C-C

MAIN VALVE TOP PLATE

(37)

MATERIAL:

BRONZE - ASTM B62, COPPER ALLOY NO. C83600
 OR ASTM B584, ALLOY NO. C84400 OR
 COPPER ALLOY - ASTM B505-08 ECD-BRASS C87850
 OR ASTM B584, ALLOY NO. C89833

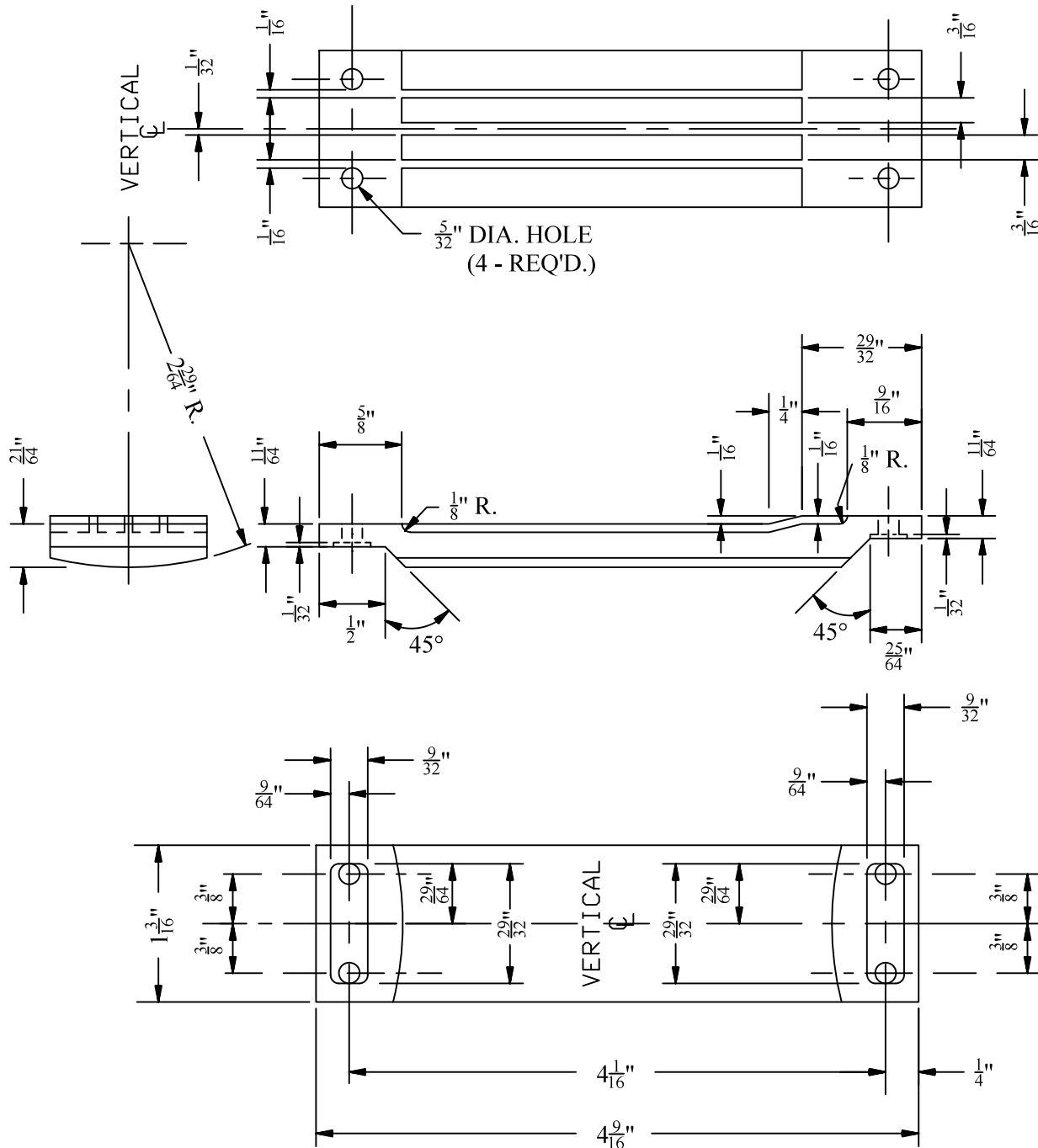
CITY OF NEW YORK -DEP
 BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
 TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43167-Z

1	MATERIAL ADDED	4/14
0	RE-ISSUED	9/08
REV #	REVISION	DATE

43168-Z



DRAIN VALVE FACING (38)

NOTE: DIMENSIONS SYMMETRICAL ABOUT VERTICAL $\mathcal{C}$

MATERIAL: RUBBER - BUNA-S 65 SHORE D DUROMETER

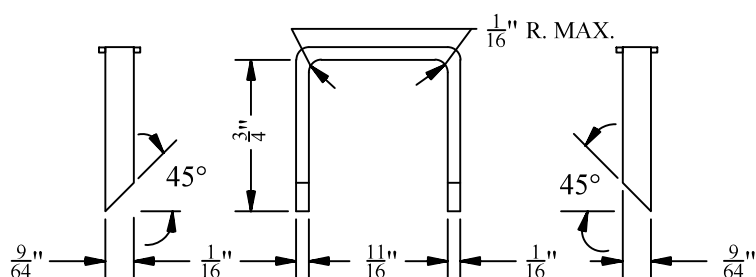
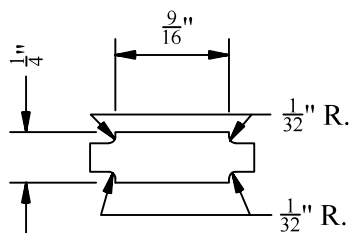
2	MAT. BUNA S WAS 65 SHORE D DUROMETER	4/14
1	MAT. BUNA S WAS 45 SHORE D. DUROMETER	6/05
REV #	REVISION	DATE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43168-Z

43169-Z



DRAIN VALVE FACING STAPLE (39)

MATERIAL: BRONZE-ASTM B98
 COPPER ALLOY No. C65500, $\frac{1}{4}$ HARD
 OR ASTM B103, COPPER ALLOY
 No. C51000, $\frac{1}{2}$ HARD

CITY OF NEW YORK -DEP
 BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
 TYPE D-2-LP NOT TO SCALE
 DRAWING NO. 43169-Z

0

REISSUED

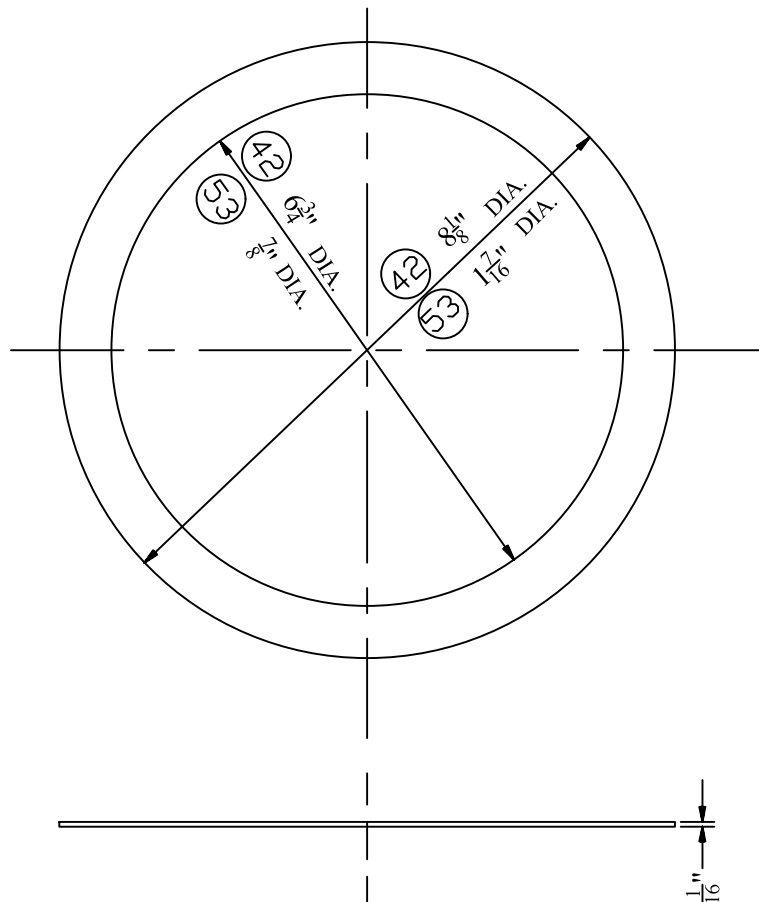
9/08

REV #

REVISION

DATE

43171-Z



FLANGE GASKET (42)

NOTE: ITEM 42 CHANGED TO 42A (SHOE 'O' RING GASKET)

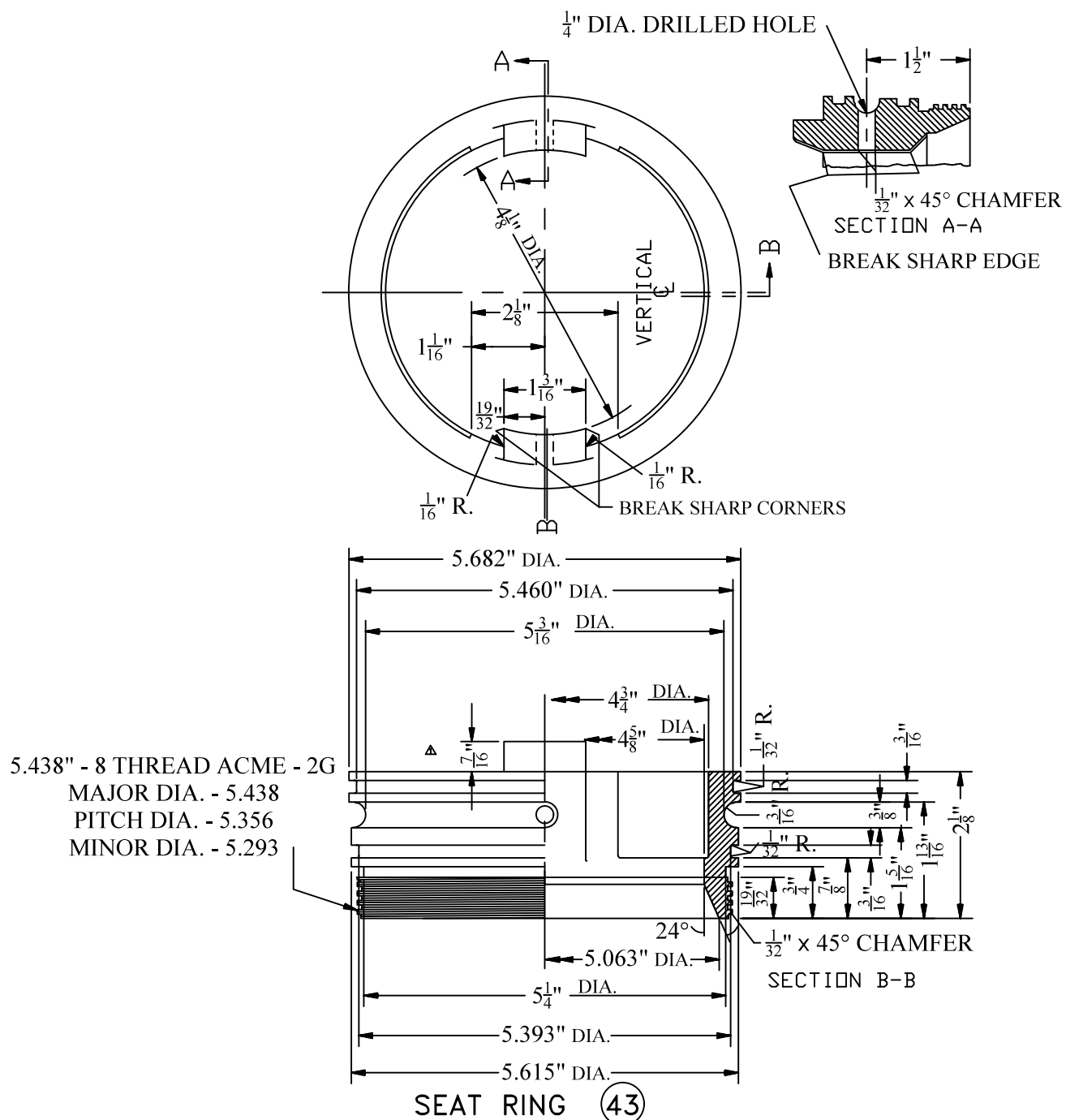
MATERIAL: ARMSTRONG N-8090 OR DEP APPROVED EQUAL

GASKET (53)

MATERIAL: LEATHER, OR CELLULOSE FIBER, BY GARLOCK
OR AS DEP APPROVED EQUAL

CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS			STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE DRAWING NO. 43171-Z
1	ITEM # 42 CHANGED TO 42A; NOTE ADDED	7/13	
0	MTL. NOTE CHANGED	6/05	
REV #	REVISION	DATE	

43172-Z



MATERIAL: BRONZE-ASTM B-62, COPPER ALLOY NO. C83600,
OR COPPER ALLOY ASTM B505-08 ECO-BRASS C87850
OR ASTM B584, ALLOY NO. C84400 OR C89833

△ ADDED $\frac{7}{16}$ " DIM. 3/84
REV. 2/82

1	MATERIAL ADDED	4/14
0	REISSUED	9/08
REV #	REVISION	DATE

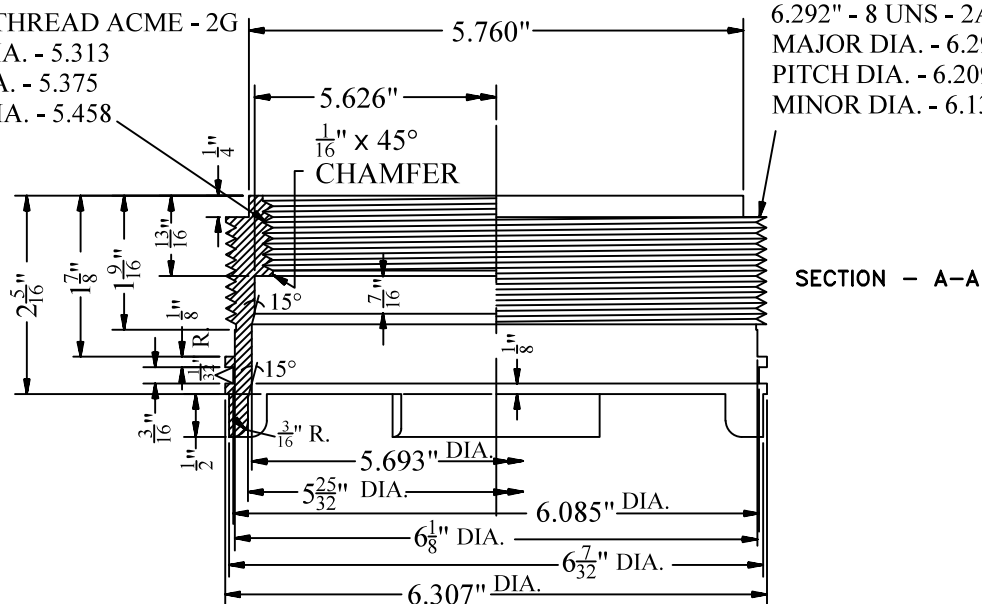
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43172-Z

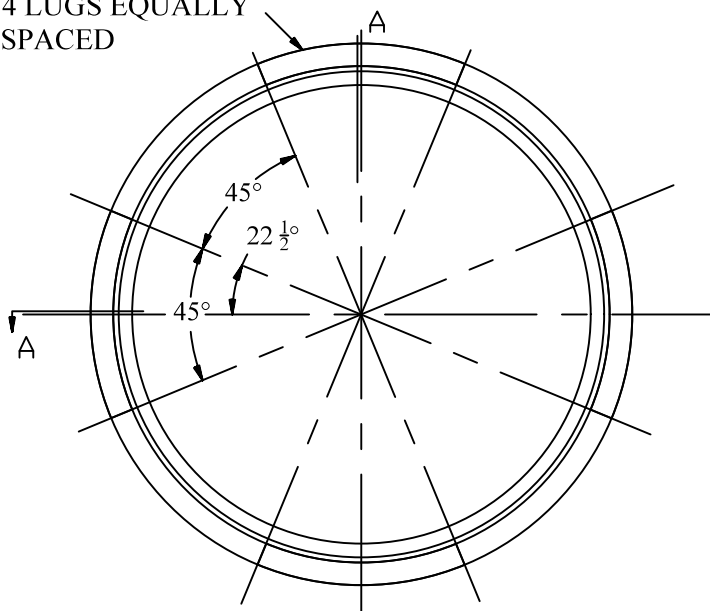
43173-Z

5.438" - 8 THREAD ACME - 2G
MINOR DIA. - 5.313
PITCH DIA. - 5.375
MAJOR DIA. - 5.458

6.292" - 8 UNS - 2A THREAD
MAJOR DIA. - 6.290
PITCH DIA. - 6.209
MINOR DIA. - 6.135



4 LUGS EQUALLY SPACED



SEAT RING RETAINER (45)

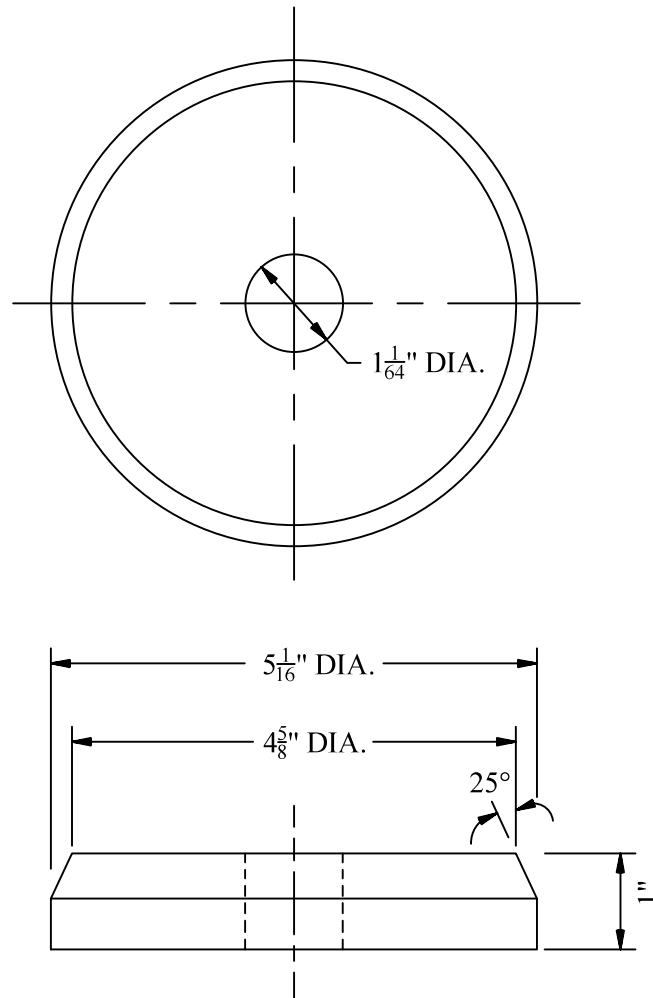
MATERIAL: BRONZE - ASTM B62, COPPER ALLOY NO. C83600,
OR ASTM B584, ALLOY # C84400
OR COPPER ALLOY B505-08 ECO-BRASS C87850
OR ASTM B584 C89833

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43173-Z

1	MATERIAL ADDED	4/14
0	MINOR DIA. CORRECTED	6/05
REV #	REVISION	DATE

43174-Z



MAIN VALVE DISK (48)

MATERIAL: SBR COMPOUND

MATERIAL SHALL BE FREE OF ANY RECLAIMED RUBBER, SHALL HAVE A HARDNESS OF 90 ± 5 SHORE A, TENSILE STRENGTH OF 1500 PSI MINIMUM, VOLUME CHANGE OF $1\frac{1}{2}\%$ MAXIMUM AFTER 168 HRS. WATER IMMERSION AT 70°F , COMPRESSION SET OF 20% MAXIMUM AFTER 22 HRS. AT 158°F (ASTM) ALL SURFACES SHALL BE SMOOTH. TOLERANCES SHALL BE $\pm \frac{1}{32}$ INCHES ON DIAMETERS AND $\pm \frac{1}{64}$ INCHES ON THICKNESS.

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

1

PART NAME CHANGED
FROM MAIN VALVE

6/05

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

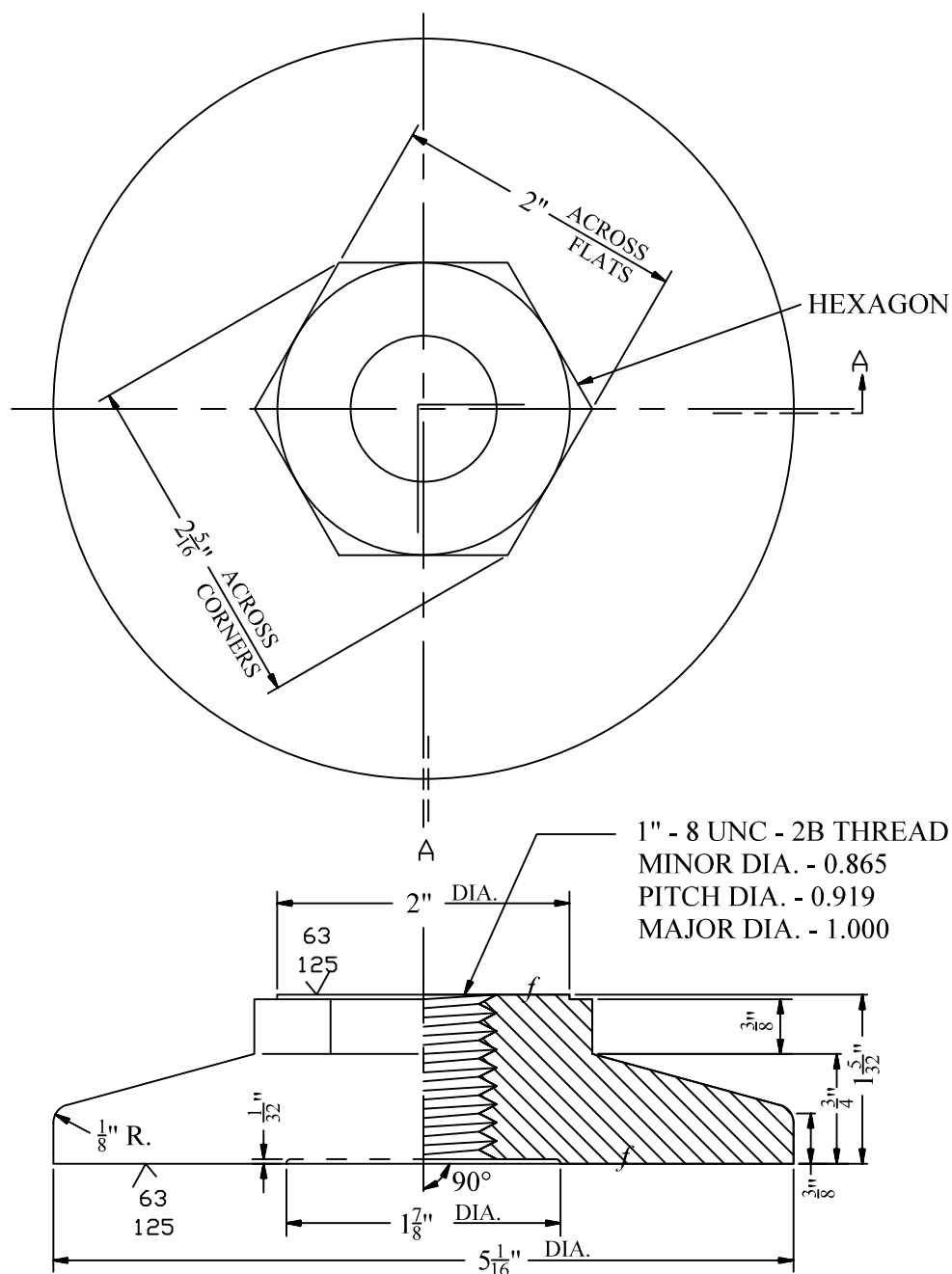
DRAWING NO. 43174-Z

REV #

REVISION

DATE

43175-Z



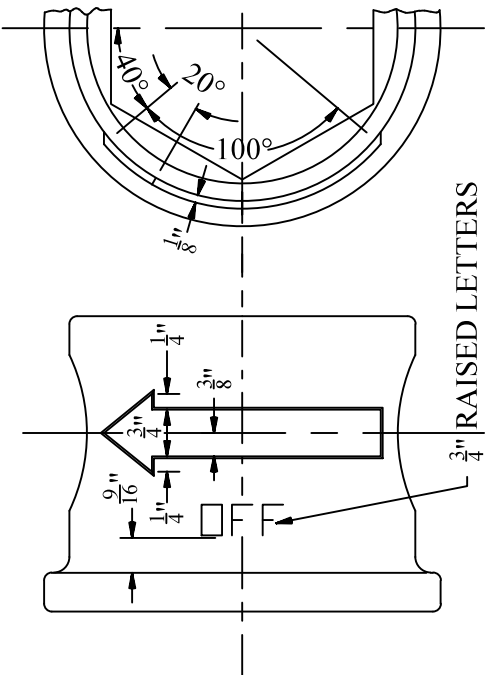
VALVE BOTTOM PLATE (49) SECTION A-A
 MATERIAL: DUCTILE IRON - ASTM A536

NOTE:
 1. REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS

CITY OF NEW YORK -DEP
 BUREAU OF WATER AND SEWER OPERATIONS

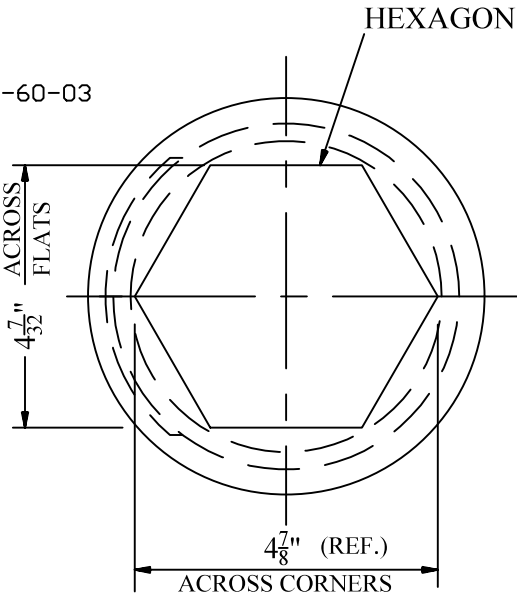
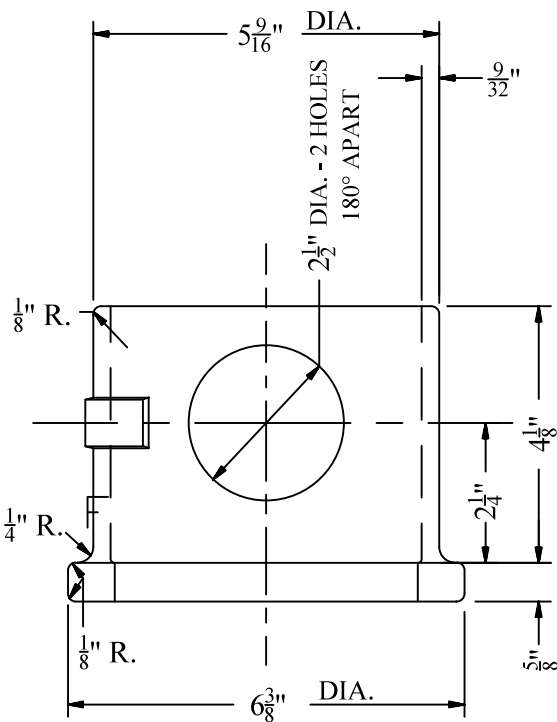
STANDARD LP HYDRANT
 TYPE D-2-LP NOT TO SCALE
 DRAWING NO. 43175-Z

0	REISSUED	9/08
REV #	REVISION	DATE



BONNET ASSEMBLY &
DISASSEMBLY TOOL

NATERIAL:
ASTM A536, DUCTILE IRON, GRADE 80-60-03



CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

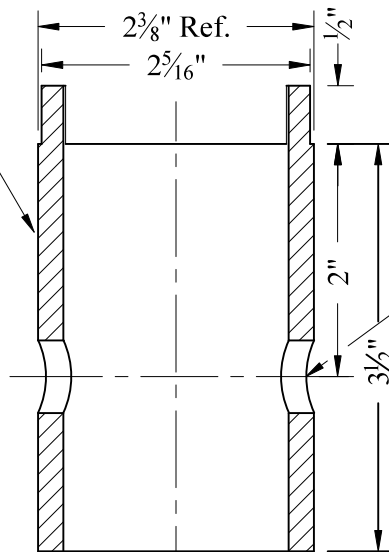
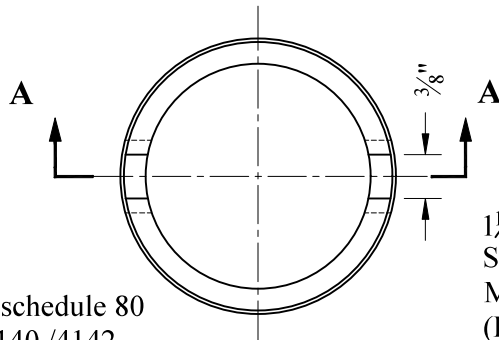
STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43177-Z

0	REISSUED	9/08
REV #	REVISION	DATE

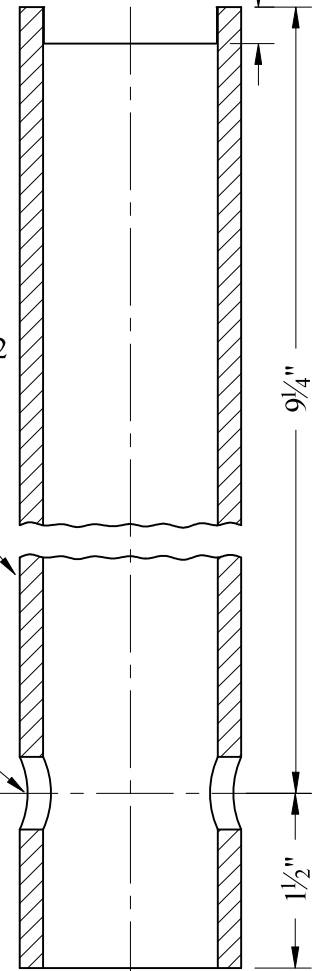
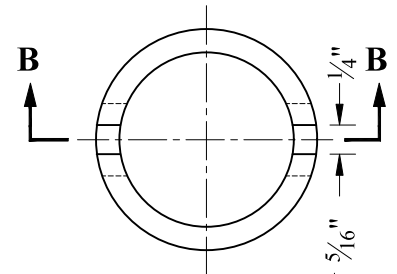
43178-Z

2" Nominal dia. pipe, schedule 80
MATERIAL : AISI 4140 /4142
(Hardened to Rockwell C-34
to C-37; Brinell 350 to 370
(or DEP approved equal).



SECTION A - A

STEM NUT LOCKNUT WRENCH



SECTION B - B

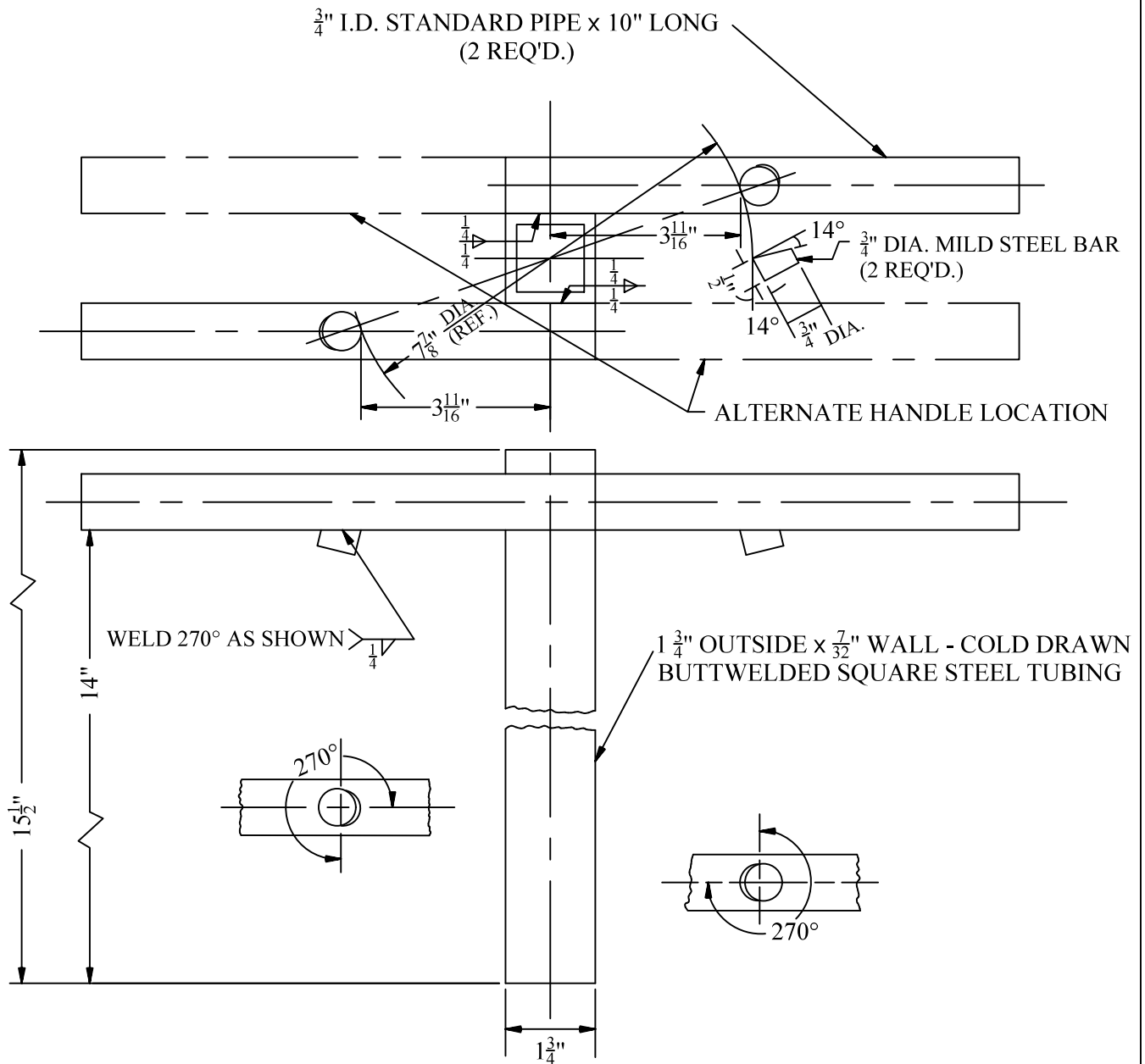
STEM STOP WRENCH

1/2" Nominal dia. pipe,
Schedule 80
MATERIAL : AISI 4140/4142
(Hardened to Rockwell C-34
to C-37; Brinell 350 to 370
(or DEP approved equal).

5/8" DIA. HOLE
2 REQ'D.
180° APART

2	NEW DRAWING; SEPARATE WRENCHES FOR STEM NUT LOCKNUT & STEM STOP;	7/13	CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE DRAWING NO. 43178-Z
1	MATERIAL CHANGED;	8/12	
0	REISSUED	9/08	
REV #	REVISION	DATE	

43179-Z



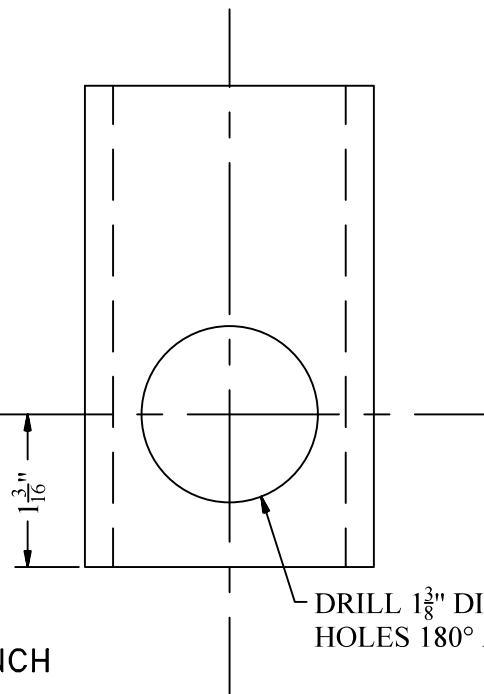
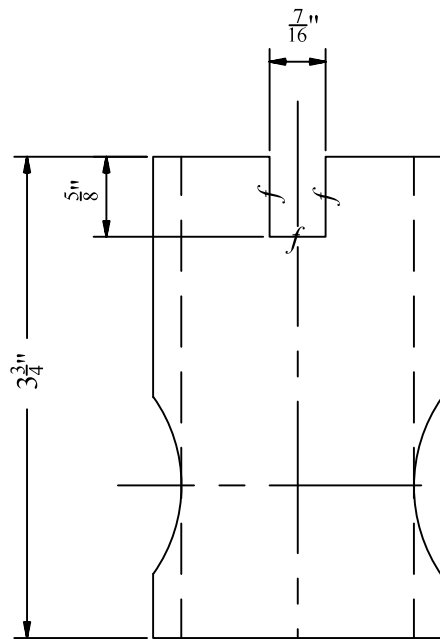
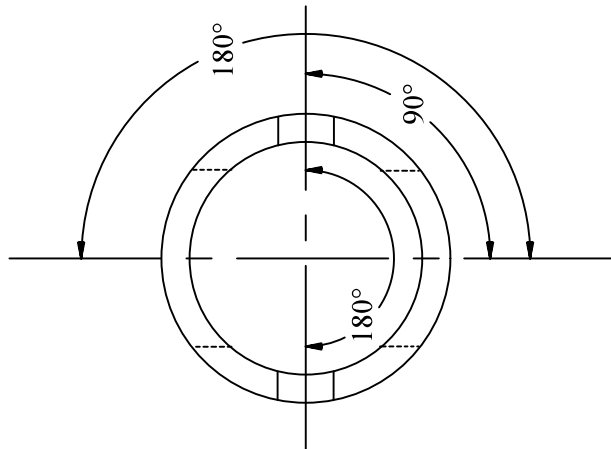
VALVE DISASSEMBLY WRENCH

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43179-Z

0	REISSUED	9/08
REV #	REVISION	DATE

43180-Z



$2\frac{1}{2}"$ HOSE NOZZLE WRENCH

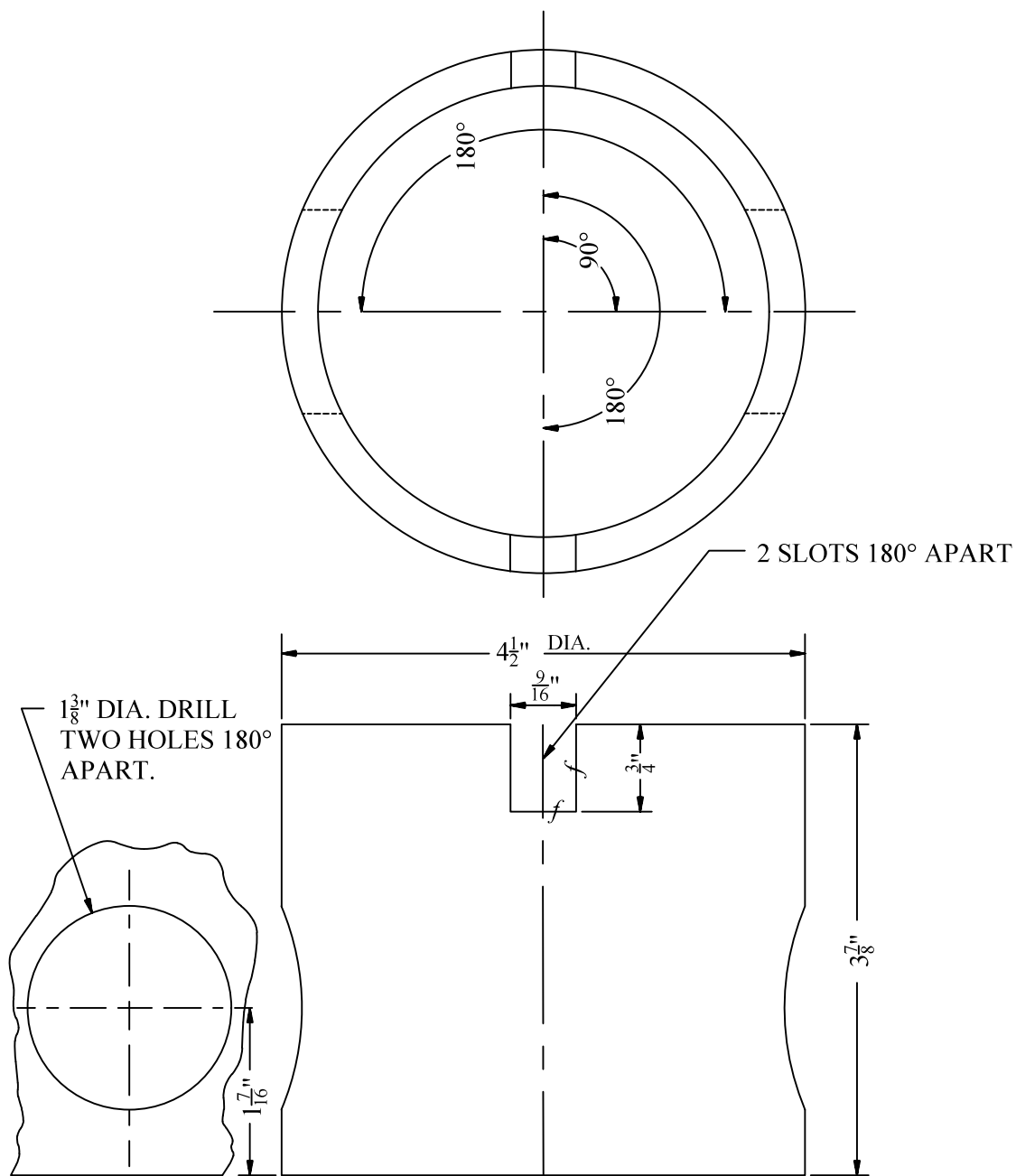
MATERIAL: $2\frac{1}{8}"$ O.D. $\times$ $\frac{7}{32}"$ WALL - COLD
DRAWN SEAMLESS
MECHANICAL TUBING

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43180-Z

1	CHANGED $2\frac{1}{4}"$ TO $2\frac{1}{2}"$	6/05
REV #	REVISION	DATE

43181-Z



4 1/2" PUMPER NOZZLE WRENCH

MATERIAL: 4 1/2" O.D. SCHEDULE 40
STEEL PIPE

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43181-Z

0	REISSUED	9/08
REV #	REVISION	DATE

Section 2: Extension Kit Drawings

EXTENSION KIT

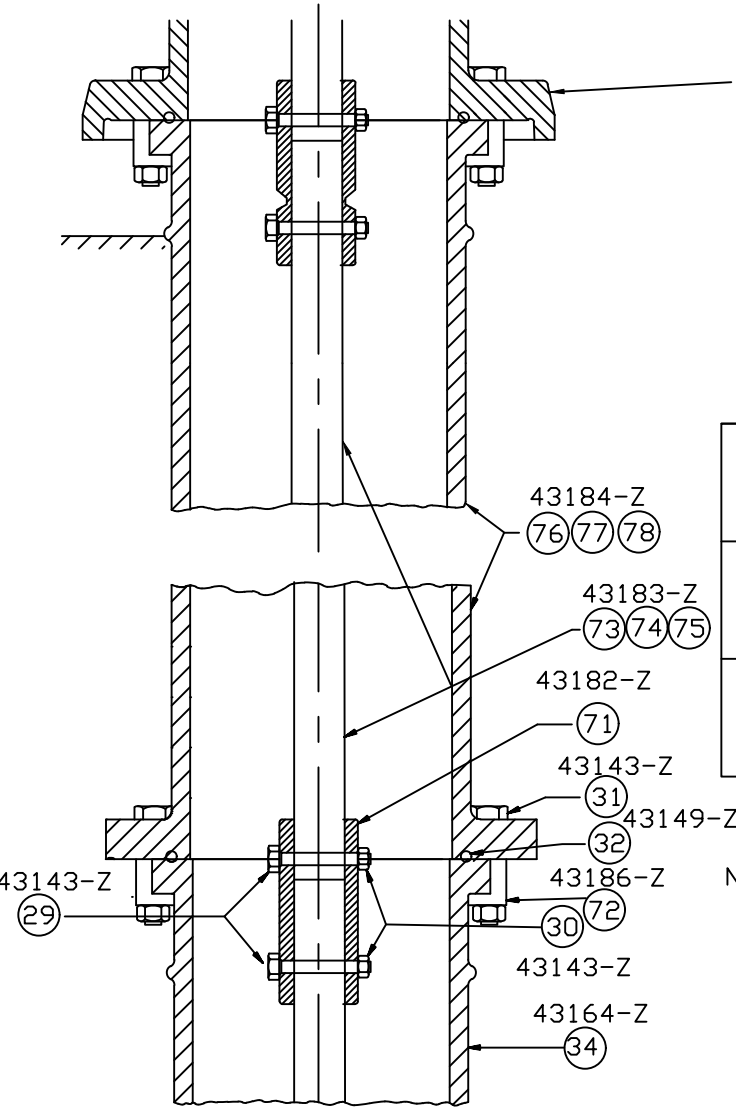
Table 3: Bill of Materials for D – 2 – LP (Dresser Type Fire Hydrant)

Part #	Part Description	Quantity	Material	Drawing #
29	Stem coupling bolt	2	Steel	43143 - Z - EXT
30	Stem coupling nut	2	Brass	
31	Ground flange joint bolt and nut	8	Steel	
32	Ground flange joint 'O' ring	1	Rubber	43149 - Z - EXT
71	Stem non-frangible coupling	1	DI	43182 - Z
72	Non-frangible lugs	8	DI	43186 - Z
73, 74, 75	Stem extension	1	Steel	43183 - Z
76, 77, 78	Standpipe extension	1	DI	43184 - Z

CITY OF NEW YORK – DEP
BUREAU OF WATER AND SEWER OPERATIONS
STANDARD LP HYDRANT

TYPE D – 2 – LP
DRAWING NO. 44045 – Z SHEET 1/2

44045-Z EXTENSION KIT ASSEMBLY



BREAKAWAY COUPLING & HARDWARE
FOR REFERENCE ONLY
(NOT TO BE SUPPLIED)

PART NAME	EXTENSION SIZE		
	6"	12"	18"
STEM EXTENSION	73	74	75
STAND PIPE EXTENSION	76	77	78

NOTE: THE EXTENSION KIT FITS BETWEEN
PARTS 10 AND 34 OF THE
STANDARD HYDRANT.

REFER TO SPECIFICATIONS FOR COATING REQUIREMENTS

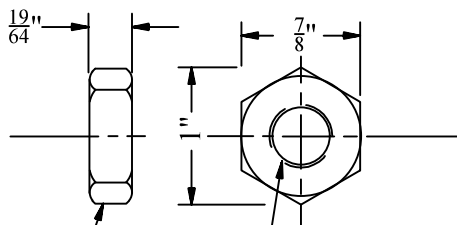
NOTE: BILL OF MATERIALS ON SHEET #2

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 44045-Z SHEET 2/2

3	DWG. #S ADDED	6/05
REV #	REVISION	DATE

43143-Z-EXT EXTENSION KIT DRAWING



1/2" - 13 UNC - 2B THREAD
MINOR DIA. - 0.417
PITCH DIA. - 0.450
MAJOR DIA. - 0.500

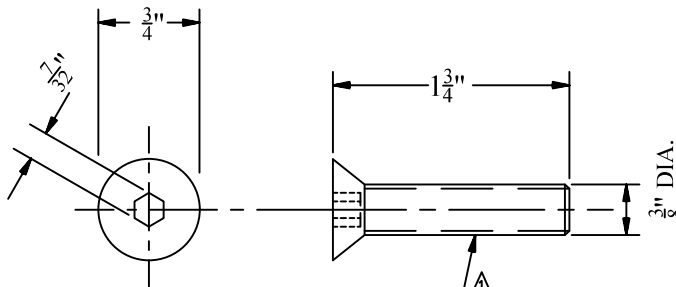
1/2" AMERICAN ST'D. HEAVY HEX. JAM
NUT - SEMIFINISHED

MATL: BRASS

(30) STEM COUPLING NUT

NOTE:

1. MATERIAL CHANGED FROM ZINC OR CADMIUM PLATED TO STAINLESS STEEL
2. ALL THREADS FOR BOTH BOLTS SHALL BE COATED WITH DOW CORNING G-n METAL ASSEMBLY SPRAY

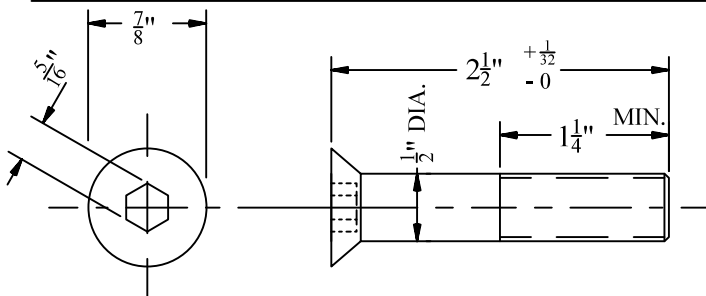


3/8" - 16 UNC - 2A THREAD

ADDED NOTES 1 AND 2
ON 1/94

(1) WEATHERSHIELD BOLT

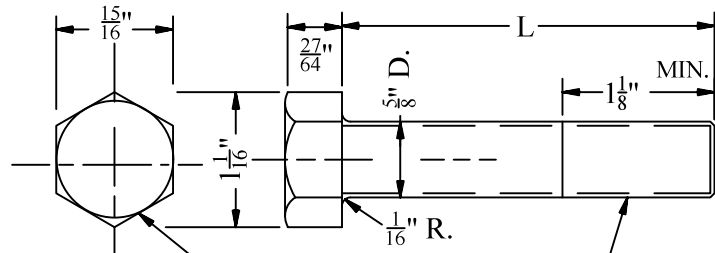
MATERIAL: S.S. STEEL - ASTM A193, GRADE B8
SUPERSEDES DRAWING NO. 43143-Z 10-84



1/2" - 13 UNC - 2A TH'D, FLAT HEAD CAP SCREW, HEX. SOC.
MAJOR DIA. - 0.498
PITCH DIA. - 0.448
MINOR DIA. - 0.404

(29) STEM COUPLING BOLT

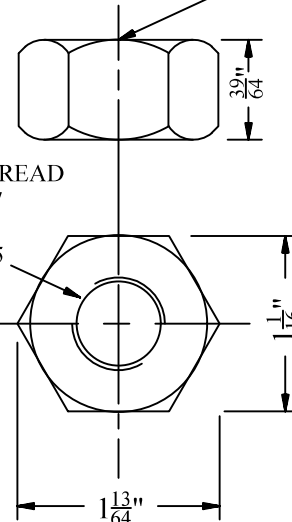
MATERIAL: SAE J429 GRADE 5 - ZINC
OR CADMIUM PLATED
OR FLOURDPOLYMER COATED



5/8" AMERICAN ST'D. REG
HEX. HEAD BOLT

5/8" - 11 UNC - 2A THREAD
MAJOR DIA. - 0.623
PITCH DIA. - 0.564
MINOR DIA. - 0.512

5/8" AMERICAN ST'D. HEAVY HEX. NUT



5/8" - 11 UNC - 2B THREAD
MINOR DIA. - 0.527
PITCH DIA. - 0.566
MAJOR DIA. - 0.625

ITEM NO.	L	
(31)	3 1/4"	G. F. BOLT & NUT
(41)	2 3/4"	SHOE BOLT & NUT

PARTS **(29)(30)(31)** ARE FOR EXTENSION KIT ONLY

SEE SPEC. FOR MATERIAL AND COATING

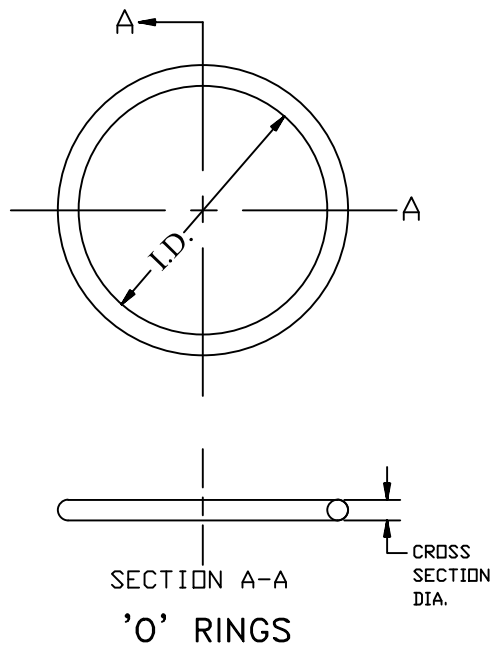
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43143-Z-EXT

2	G. F. BOLT LENGTH CHANGED	2/18
1	BOLT TYPE ADDED; COATING OPTION ADDED	7/13
0	REISSUED	9/08
REV #	REVISION	DATE

43149-Z-EXT EXTENSION KIT DRAWING



ITEM NO.	ID X OD X TH	MATERIAL		USE
		AS 568 DASH #	* RUBBER COMPOUND NO	
20	1 1/4" x 1 1/2" x 1/8"	218	8307	STEM RING GASKET
9	5 7/8" x 6 1/8" x 1/8"	257	8307	BONNET RING GASKET
7	2" x 2 1/4" x 1/8"	226	8307	STEM NUT RING GASKET
47 44	5 3/8" x 5 5/8" x 1/8"	253	8307	47-RETAINER BOTTOM RING GKT 44-SEAT RING GASKET
46	6" x 6 1/4" x 1/8"	258	8307	RETAINER TOP RING GASKET
32	7 1/4" x 7 5/8" x 3/16"	366	8307	GROUND FLANGE JOINT RING GASKET
27	1 1/16" x 1 3/16" x 1/16"	023	8307	STEM SLEEVE RING GASKET
36	7/8" x 1" x 1/16"	020	8307	LOWER STEM SEAL RING GASKET
11	5 3/8" x 5 5/8" x 1/8"	253	8307	PUMPER NOZZLE GASKET
22	2 7/8" x 3 1/8" x 1/8"	233	8307	HOSE NOZZLE GASKET
42A	7 1/4" x 7 1/2" x 1/8"	263	8307	SHOE RING GASKET

ITEM # 32 IS ONLY FOR THE EXTENSION KIT

6	SIZE AND GASKET NUMBER FOR ITEM #22 CHANGED	1/23
5	OD DIMS. FOR ITEMS 32 & 42A, 7 5/8" WAS 7 1/2"	4/14
4	THICKNESS DIMS. FOR ITEMS 32 & 42A, 3/16" WAS 1/8"	11/13
3	ITEM # 42A ADDED	7/13
2	ITEM # 16 REMOVED	2/12
1	REPLACED "UNIFORM SIZE" TO AS 568 DASH #	8/10
0	RING GASKETS CHANGED TO 'O' RINGS	6/05
REV #	REVISION	DATE

* COMPOUND NO. GIVEN IS THAT OF PRECISION RUBBER PRODUCTS.COMPOUND NO. B-46A OF NATIONAL SEAL DIVISION, FEDERAL-MOGUL CORP. SHALL BE EQUALLY ACCEPTABLE

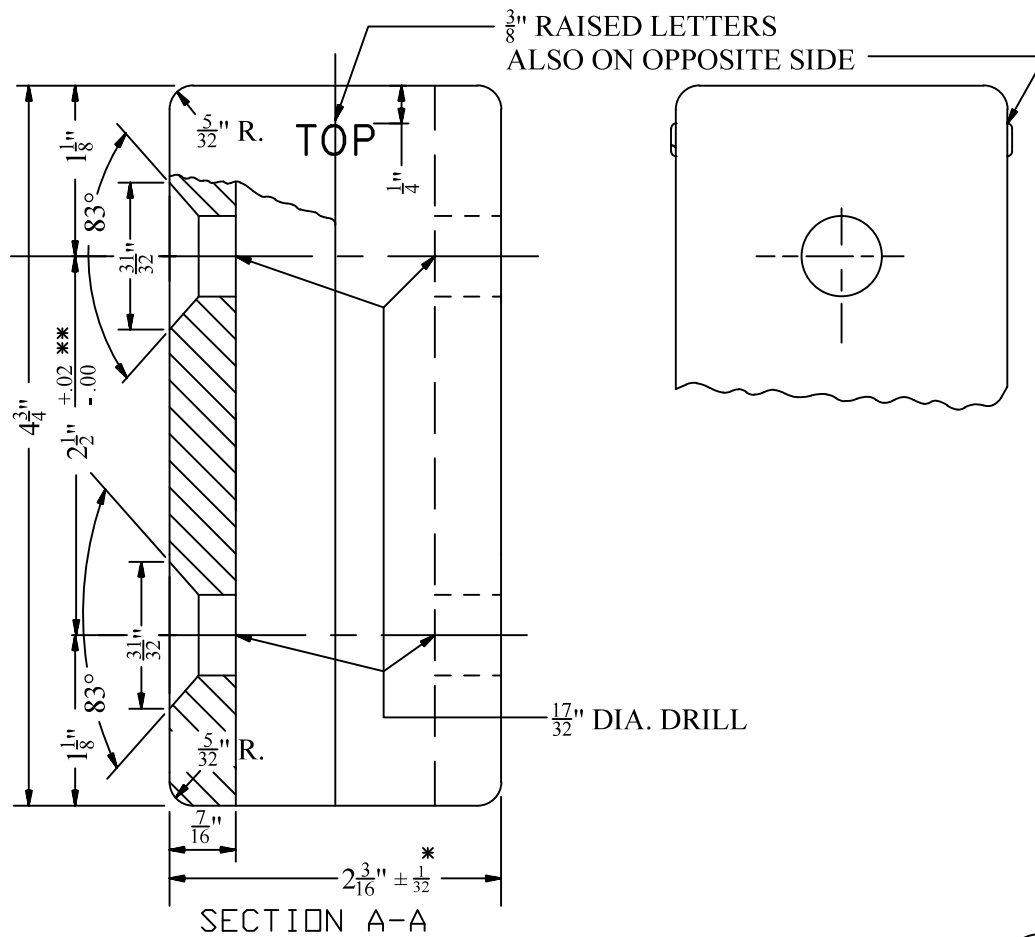
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP

NOT TO SCALE

DRAWING NO. 43149-Z-EXT

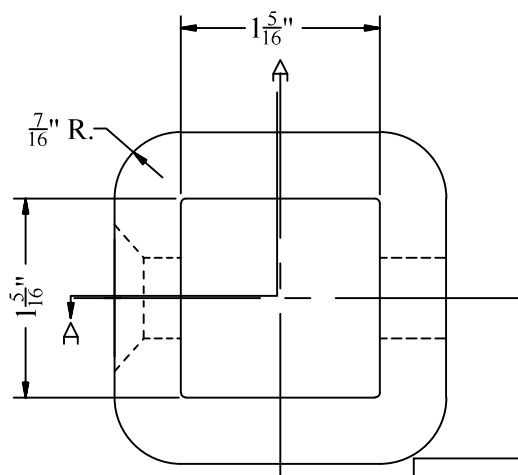
43182-Z EXTENSION KIT DRAWING



STEM NON-FRANGIBLE COUPLING

71

MATERIAL: DUCTILE IRON, ASTM A-536 GRADE 70-50-05



*ADDED DIM. & TOLERANCE 2-84
** ADDED TOLER. 2-84

NOTE:
1. REFER TO SPECIFICATIONS FOR
COATING REQUIREMENTS

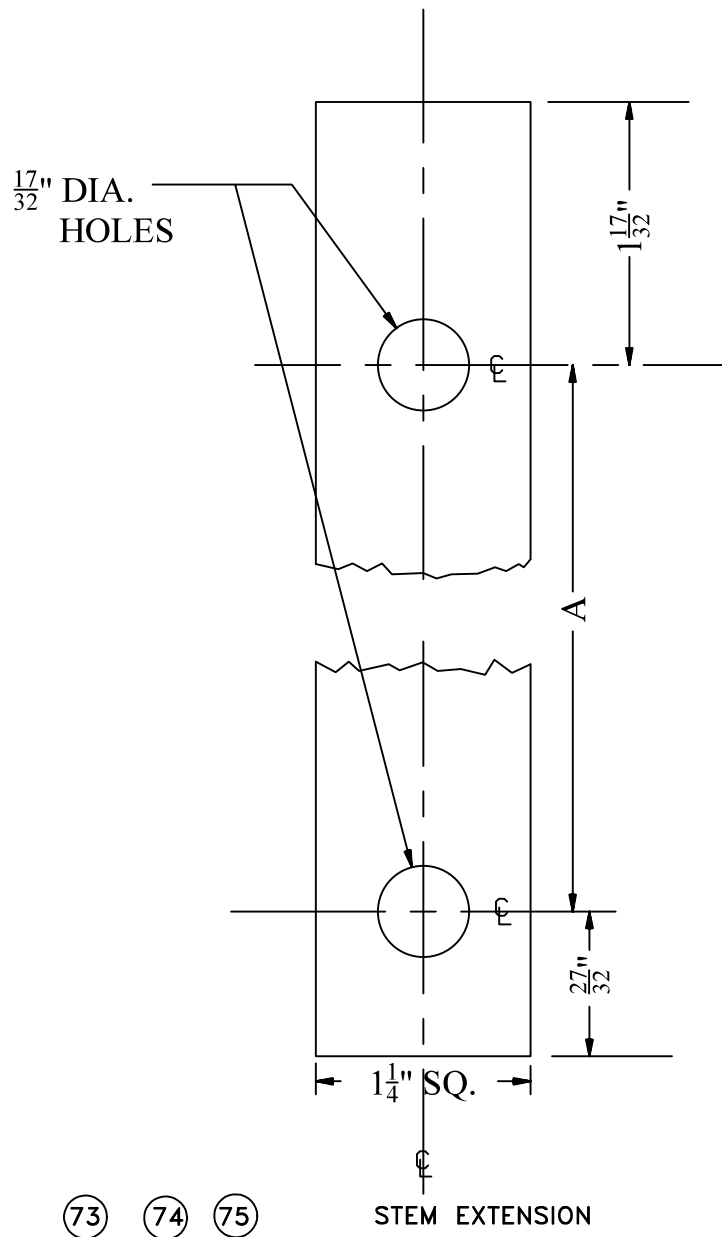
CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43182-Z

2	PART # CHANGED FROM 28 TO 71	6/05
REV #	REVISION	DATE

43183-Z EXTENSION KIT DRAWING

PART NO.	NOMINAL LENGTH	A
(73)	6"	3 $\frac{1}{2}$ "
(74)	12"	9 $\frac{1}{2}$ "
(75)	18"	15 $\frac{1}{2}$ "



MATERIAL: STEEL - ASTM A-108 GRADE 1018
OR DEP EQUAL

SEE SPECIFICATION
FOR COATING

CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

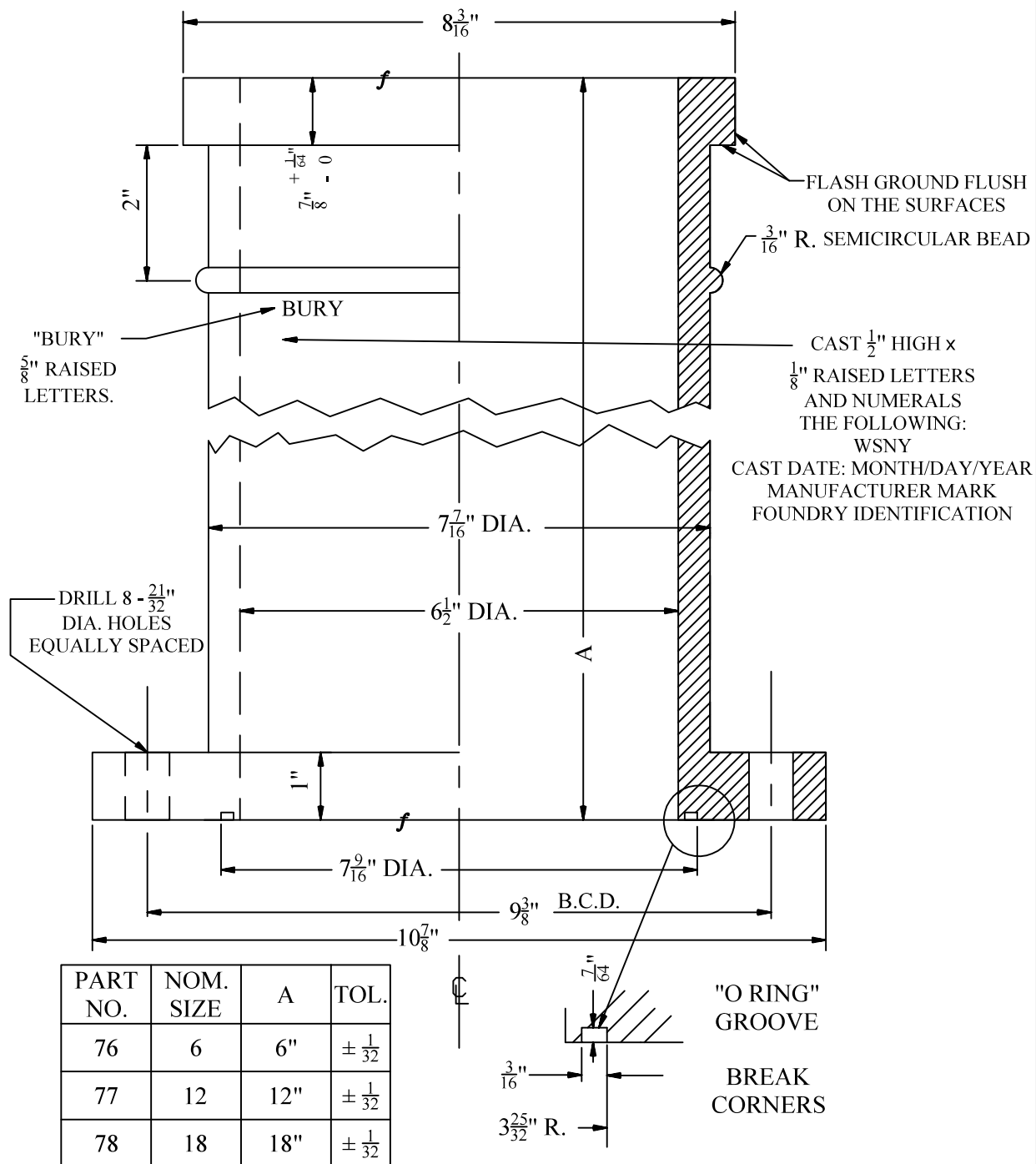
STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE

DRAWING NO. 43183-Z

3	MTL. NOTE CHANGED	6/05
REV #	REVISION	DATE

43184-Z EXTENSION KIT DRAWING

STANDPIPE EXTENSION

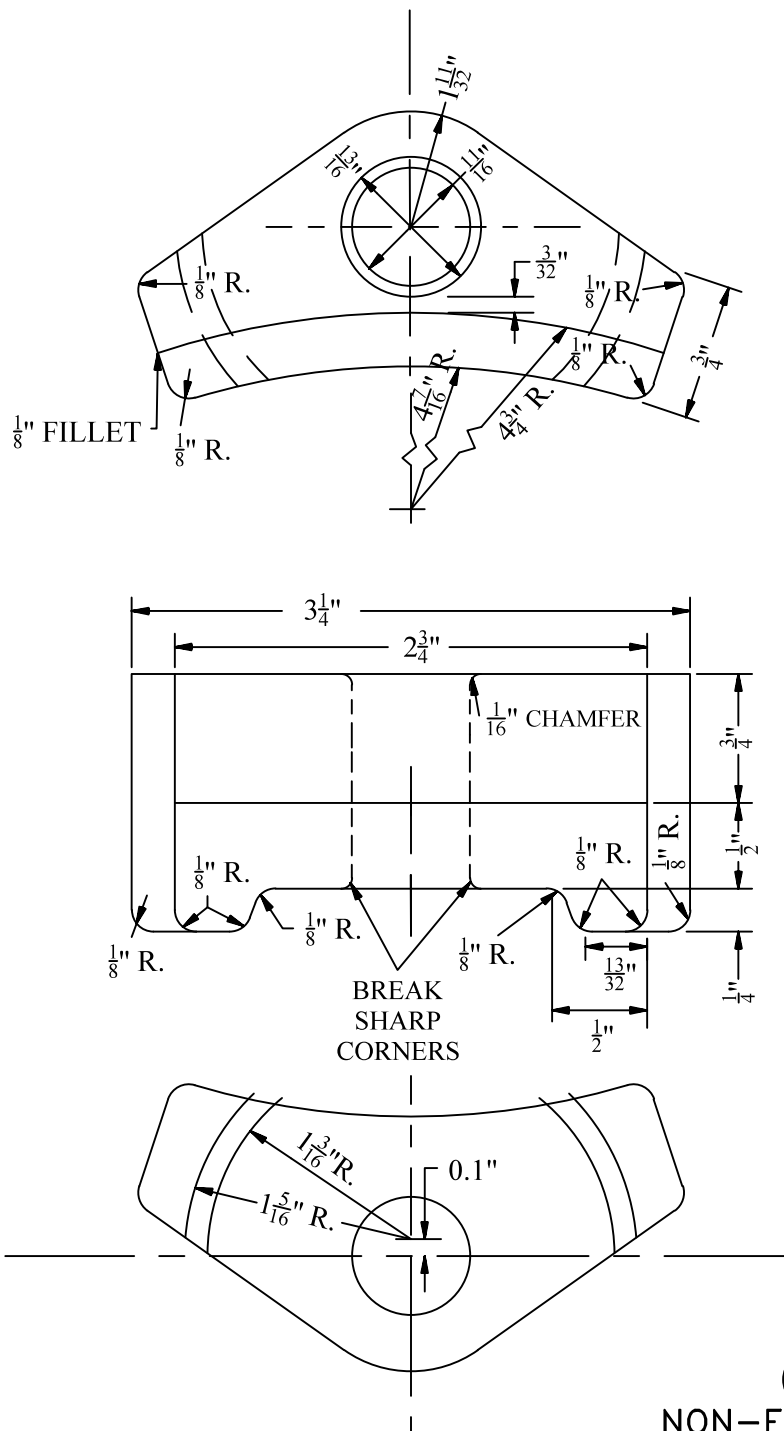


CITY OF NEW YORK -DEP
BUREAU OF WATER AND SEWER OPERATIONS

STANDARD LP HYDRANT
TYPE D-2-LP NOT TO SCALE
DRAWING NO. 43184-Z

1	PART NAME ADDED	6/05
REV #	REVISION	DATE

43186-Z EXTENSION KIT DRAWING



72
NON-FRANGIBLE
LUGS

MATERIAL: DUCTILE IRON, ASTM A-536,
SEE SPECIFICATION FOR MATERIAL & COATING

			CITY OF NEW YORK -DEP BUREAU OF WATER AND SEWER OPERATIONS	
5	HOLE DIMS. CHANGED	7/13	STANDARD LP HYDRANT TYPE D-2-LP NOT TO SCALE DRAWING NO. 43186-Z	
4	MTL. NOTE CHANGED	6/05		
REV #	REVISION	DATE		