

The R-7581 Decorative Bollard is made from a versatile ductile iron. It features a wide base with tapered body, decorative fluting and a corniced top casting for simple but elegant stature. Bollard surfaces are protected by a durable powder coating, available in 6 standard colors, to prevent wear and corrosion. Use as fixed, stand-alone bollards or cover impact-resistant security posts. Removable mountings are available.

#### **Specifications:**

Height: 31" Base Diameter: 15" Weight: 112 lbs ( Bollard Only ) Material: Ductile Iron Max. Interior Security Post Size: 4 1/2" x 25" (Diameter x Height)

#### **Finish Options:**

⊙ Polyester Powdercoated

See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

### **Installation Options:**

- Fixed Anchor Casting in New Concrete (see sheet 2 of 12)
- O Fixed Concrete Insert Anchor in Existing Concrete (see sheet 3 of 12)
- O Fixed Adhesive Anchor in Existing Concrete (see sheet 4 of 12)
- Fixed Anchor Casting with Concrete Form (see sheet 5 of 12)
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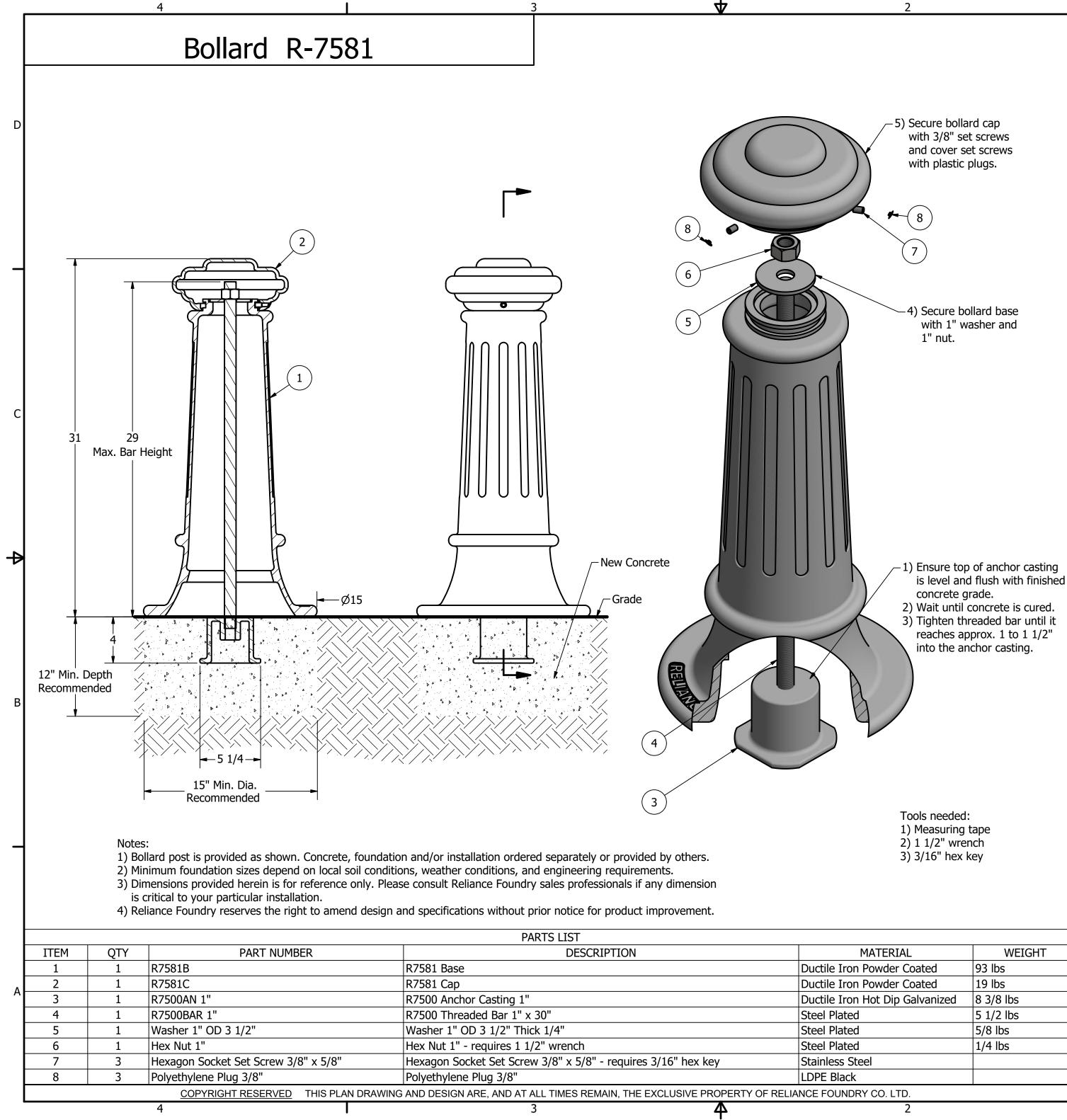
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# **Care and Maintenance:**

Reliance's line of bollards are finished with a long-lasting powder-coating. Proper care and maintenance are required. Regularly-performed inspections and routine cleaning will ensure that a bollard retains its aesthetic appeal and does not become damaged by the elements.

See Reliance Foundry's maintenance guide at: www.reliance-foundry.com/bollard/maintenance-bollards

|                                                                                                                                 | RELIANCE FOUNDRY |     |  |  |  |  |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------|------------------|-----|--|--|--|--|--|--|--|--|
| Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada<br>1-877-789-3245 info@reliance-foundry.com<br>www.reliance-foundry.com |                  |     |  |  |  |  |  |  |  |  |
| TITLE                                                                                                                           |                  |     |  |  |  |  |  |  |  |  |
|                                                                                                                                 | Bollard R-7581   |     |  |  |  |  |  |  |  |  |
| SIZE                                                                                                                            | DWG NO           | REV |  |  |  |  |  |  |  |  |
| C                                                                                                                               | R7581            | C4  |  |  |  |  |  |  |  |  |
| NOT TO SCAL                                                                                                                     | E SHEET 1 OF 12  |     |  |  |  |  |  |  |  |  |
|                                                                                                                                 | 1                |     |  |  |  |  |  |  |  |  |



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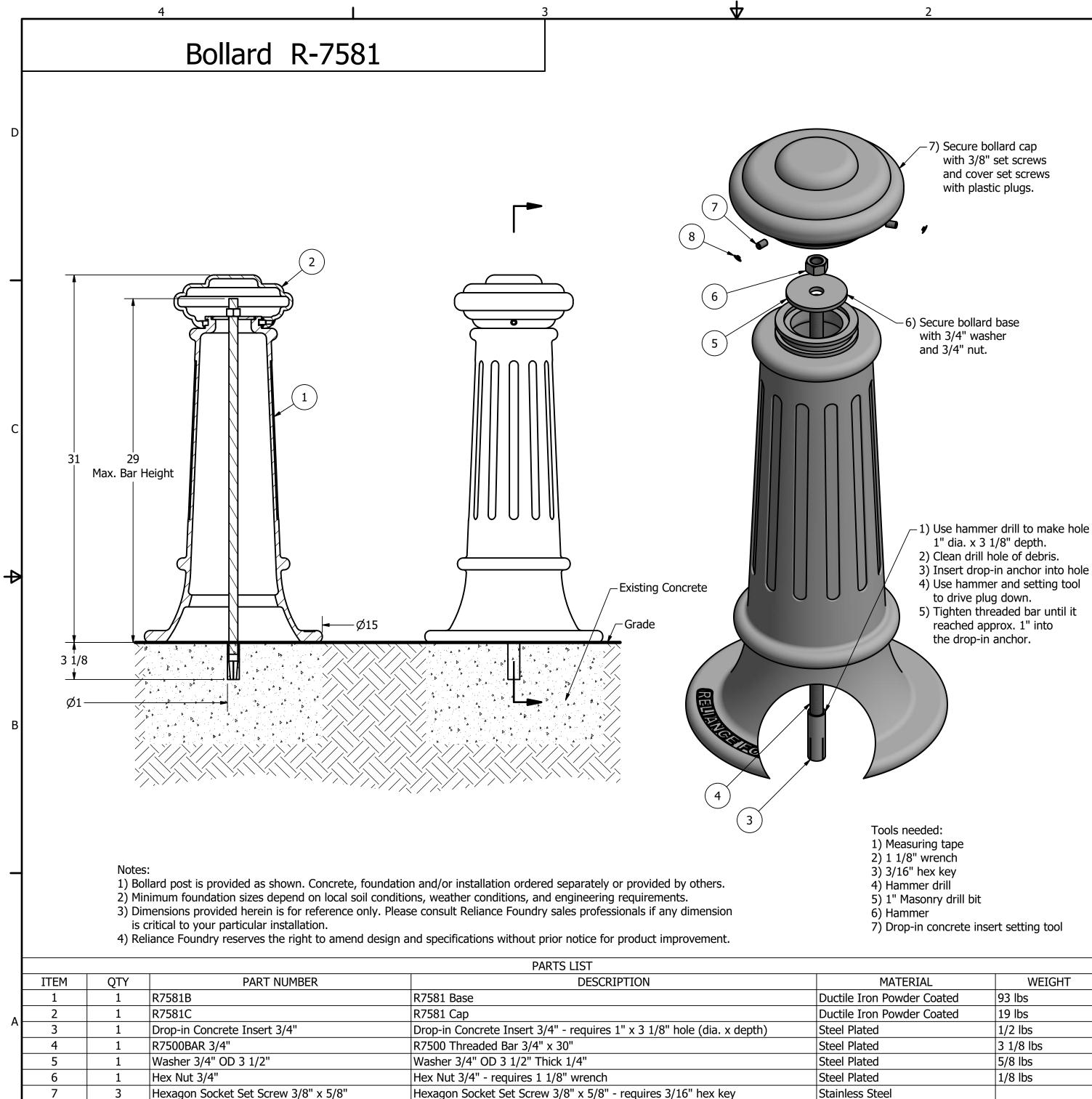
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|                       |           |        | R     |                  | <b>FC</b><br>DE 1925 — | UNDRY                |     |
|-----------------------|-----------|--------|-------|------------------|------------------------|----------------------|-----|
|                       | 1         | U      |       |                  |                        | y, BC V3S 7G7, Canad | da  |
| MATERIAL              | WEIGHT    |        | 1-8   | 77-789-3245 info |                        | •                    |     |
| on Powder Coated      | 93 lbs    |        |       | www.relianc      | e-found                | dry.com              |     |
| on Powder Coated      | 19 lbs    | TITLE  |       |                  |                        |                      |     |
| on Hot Dip Galvanized | 8 3/8 lbs |        |       |                  |                        |                      |     |
| ted                   | 5 1/2 lbs |        |       | Bollard          | R-7                    | 7581                 |     |
| ted                   | 5/8 lbs   |        |       |                  |                        |                      |     |
| ted                   | 1/4 lbs   |        |       |                  |                        |                      |     |
| Steel                 |           | SIZE   |       | DWG NO           |                        |                      | REV |
| ck                    |           | - C    |       | R7581            |                        |                      | C4  |
| IDRY CO. LTD.         |           | NOT TO | SCALE |                  |                        | SHEET 2 OF 12        |     |
| 2                     |           |        |       |                  |                        | 1                    |     |



3

8

Polyethylene Plug 3/8"

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Polyethylene Plug 3/8"

2

LDPE Black

4

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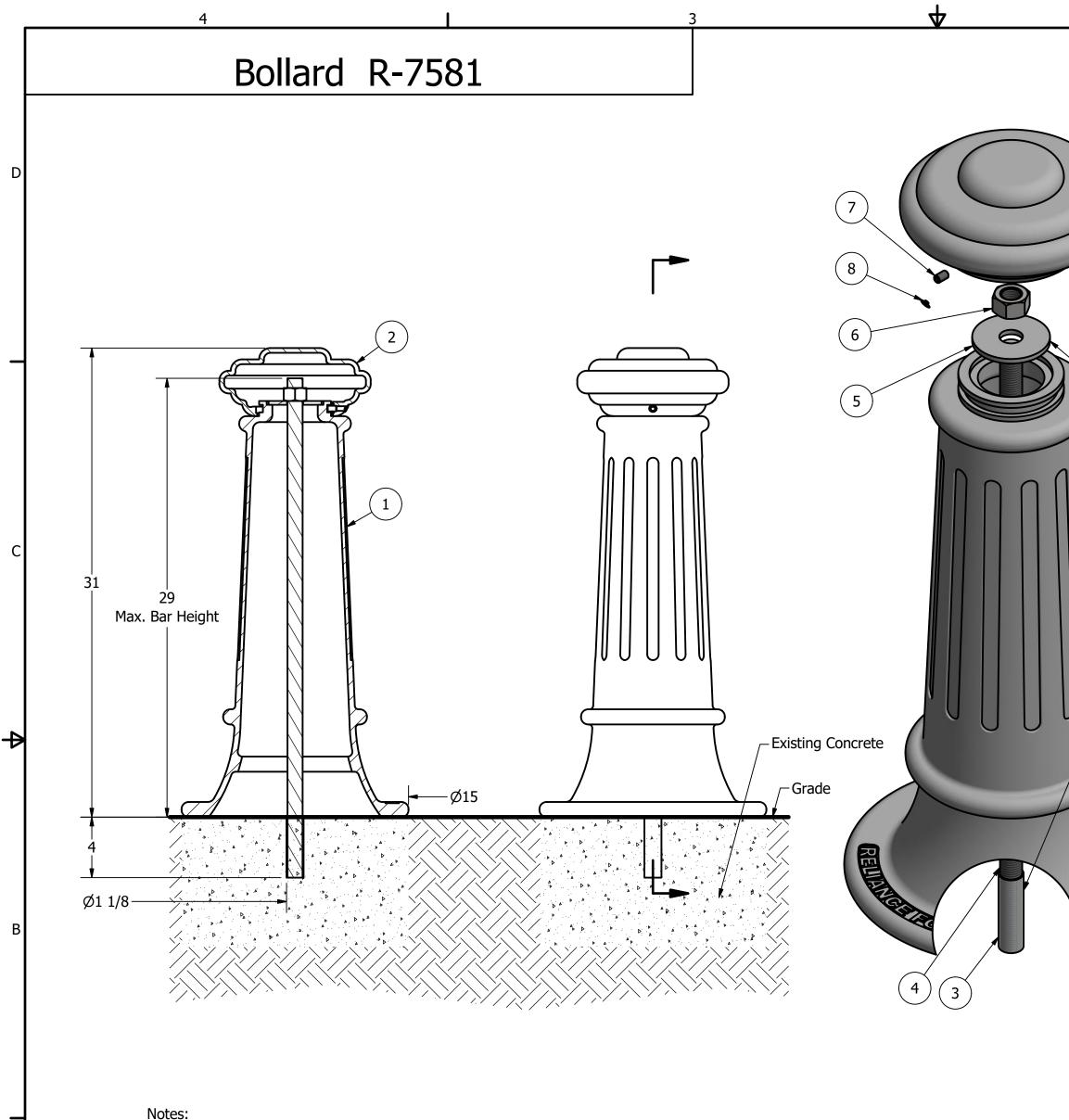
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| rt setting tool |              | RELIANCE FOUNDRY                          |     |
|-----------------|--------------|-------------------------------------------|-----|
|                 |              | 7, 6450 - 148 Street, Surrey, BC V3S 7G7, |     |
| WEIGHT          | 1            | -877-789-3245 info@reliance-foundry.com   | n   |
| 93 lbs          |              | www.reliance-foundry.com                  |     |
| 19 lbs          | TITLE        |                                           |     |
| 1/2 lbs         | ]            |                                           |     |
| 3 1/8 lbs       |              | Bollard R-7581                            |     |
| 5/8 lbs         |              |                                           |     |
| 1/8 lbs         |              |                                           |     |
|                 | SIZE         | DWG NO                                    | REV |
|                 | C            | R7581                                     | C4  |
|                 | NOT TO SCALE | SHEET 3 OF 12                             |     |
|                 |              | 1                                         |     |



1) Bollard post is provided as shown. Concrete, foundation and/or installation ordered separately or provided by others.

2) Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.

3) Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.

4) Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

|          |                                                                                                                                   |     |                                      | PARTS LIST                                                    |                            |  |  |  |  |  |
|----------|-----------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------------|---------------------------------------------------------------|----------------------------|--|--|--|--|--|
|          | ITEM                                                                                                                              | QTY | PART NUMBER                          | DESCRIPTION                                                   | MATERIAL                   |  |  |  |  |  |
|          | 1                                                                                                                                 | 1   | R7581B                               | R7581 Base                                                    | Ductile Iron Powder Coated |  |  |  |  |  |
| <u>_</u> | 2                                                                                                                                 | 1   | R7581C                               | R7581 Cap                                                     | Ductile Iron Powder Coated |  |  |  |  |  |
| ^[       | 3                                                                                                                                 | 1   | Adhesive Anchor                      | AC100+ Gold Adhesive Anchoring System                         | Vinylester Adhesive Mortar |  |  |  |  |  |
|          | 4                                                                                                                                 | 1   | R7500BAR 1"                          | R7500 Threaded Bar 1" x 33"                                   | Steel Plated               |  |  |  |  |  |
|          | 5                                                                                                                                 | 1   | Washer 1" OD 3 1/2"                  | Washer 1" OD 3 1/2" Thick 1/4"                                | Steel Plated               |  |  |  |  |  |
|          | 6                                                                                                                                 | 1   | Hex Nut 1"                           | Hex Nut 1" - requires 1 1/2" wrench                           | Steel Plated               |  |  |  |  |  |
|          | 7                                                                                                                                 | 3   | Hexagon Socket Set Screw 3/8" x 5/8" | Hexagon Socket Set Screw 3/8" x 5/8" - requires 3/16" hex key | Stainless Steel            |  |  |  |  |  |
|          | 8                                                                                                                                 | 3   | Polyethylene Plug 3/8"               | Polyethylene Plug 3/8"                                        | LDPE Black                 |  |  |  |  |  |
|          | COPYRIGHT RESERVED THIS PLAN DRAWING AND DESIGN ARE, AND AT ALL TIMES REMAIN, THE EXCLUSIVE PROPERTY OF RELIANCE FOUNDRY CO. LTD. |     |                                      |                                                               |                            |  |  |  |  |  |
|          |                                                                                                                                   |     | 4                                    | 3 4                                                           | 2                          |  |  |  |  |  |
|          |                                                                                                                                   |     |                                      | •                                                             |                            |  |  |  |  |  |

8) Secure bollard cap with 3/8" set screws and cover set screws with plastic plugs.

7) Secure bollard base with 1" washer and 1" nut.

- -1) Use hammer drill to make hole 1 1/8" dia. x 4" depth.
- 2) Clean drill hole of debris.
- 3) Caulk adhesive into hole from bottom up and fill 1/4 full.
- 4) Push threaded bar into adhesive and turn to ensure bonding.
- 5) Ensure bar is perpendicular and extend no more than 29" above grade.
- 6) Wait at least 45 minutes for adhesive to set.

- Tools needed:
- 1) Measuring tape
- 2) 1 1/2" wrench
- 3) 3/16" hex key
- 4) Hammer drill

- 5) 1 1/8" Masonry
- 6) Caulking gun ar

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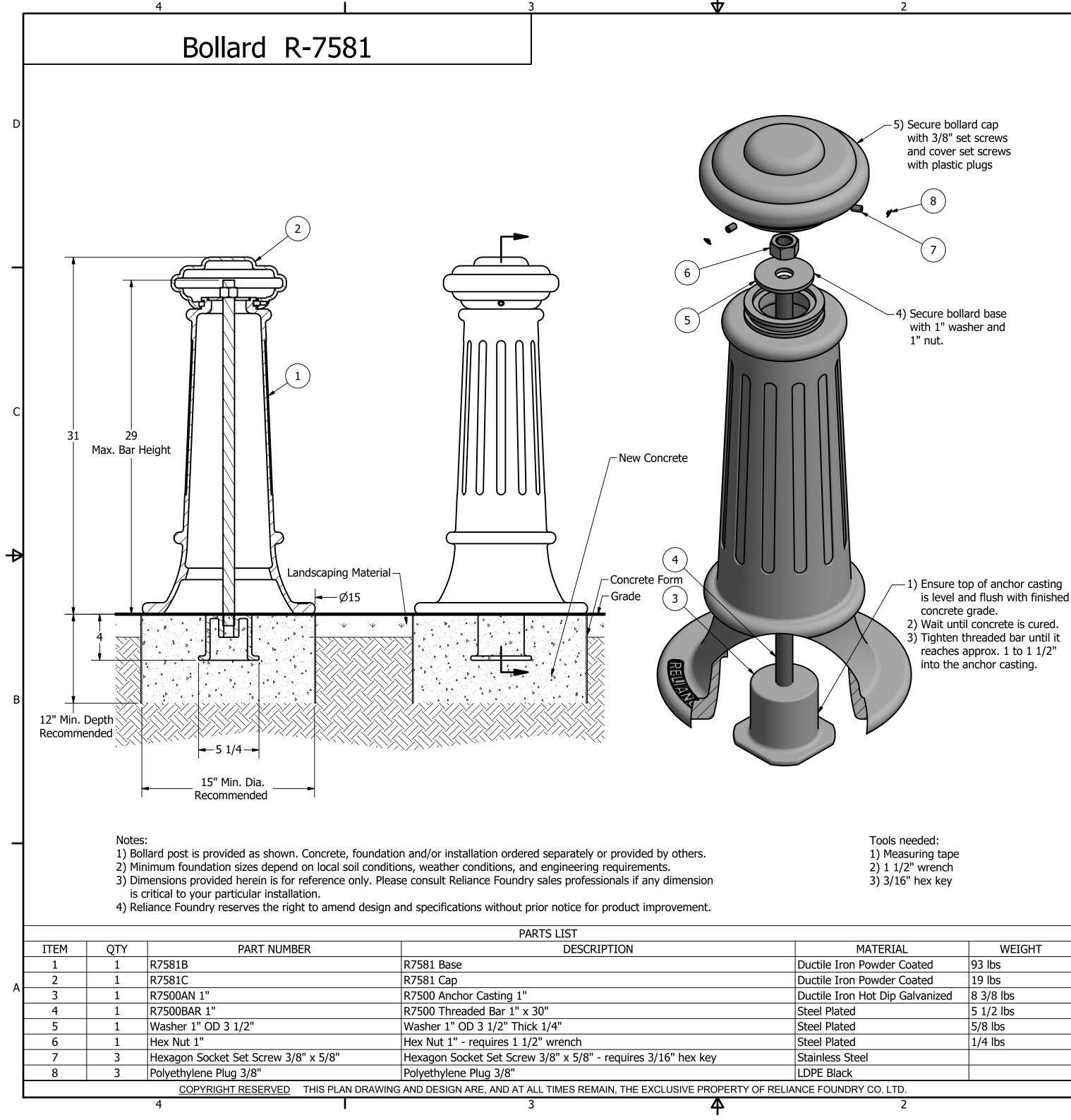
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| у                                  |          |          |              |           |         |                   | -   | 4 |
|------------------------------------|----------|----------|--------------|-----------|---------|-------------------|-----|---|
| nry drill bit<br>and utility knife |          | F        | RELIA        |           | FO      | UNDRY             |     |   |
|                                    | Ur       | nit 207, | , 6450 - 148 | 3 Street, | Surrey  | , BC V3S 7G7, Can | ada |   |
| WEIGHT                             |          | 1-8      |              |           | -       | nce-foundry.com   |     |   |
| 93 lbs                             |          |          | WWW          | reliance  | e-found | lry.com           |     |   |
| 19 lbs                             | TITLE    |          |              |           |         |                   |     |   |
| 5/8 lbs                            |          |          |              | _         |         |                   |     | A |
| 6 1/8 lbs                          |          |          | Boll         | ard       | R-7     | 7581              |     |   |
| 5/8 lbs                            |          |          |              |           | ,       |                   |     |   |
| 1/4 lbs                            |          |          |              |           |         |                   |     |   |
|                                    | SIZE     |          | DWG          | NO        |         |                   | REV |   |
|                                    | □ C      |          | R75          | 581       |         |                   | C4  |   |
|                                    | NOT TO S | SCALE    |              |           |         | SHEET 4 OF 12     |     |   |
|                                    |          |          |              |           |         | 1                 |     | - |



| Tools needed:     |
|-------------------|
| 1) Measuring tape |
| 2) 1 1/2" wrench  |

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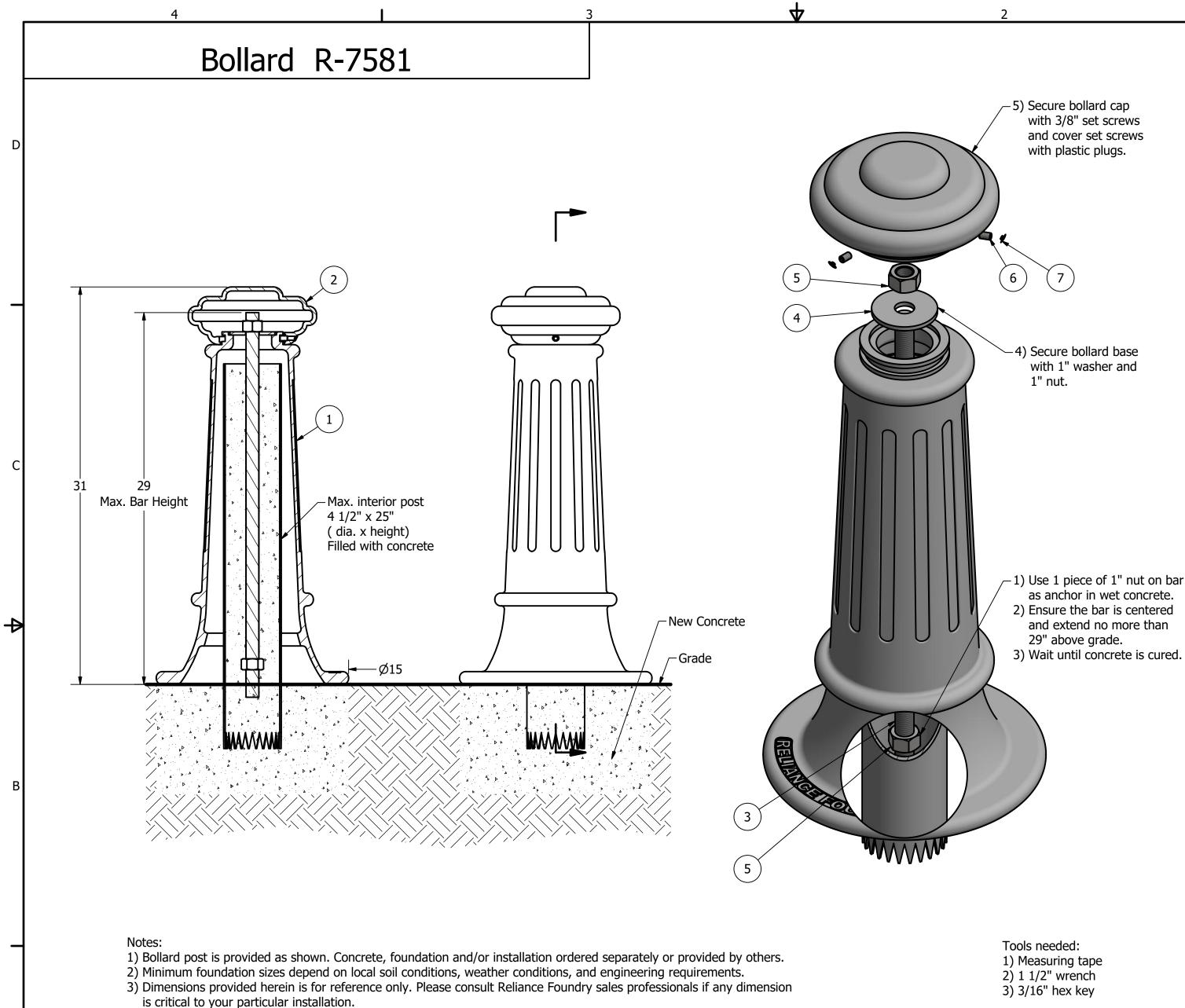
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| 2) 1 1/2" wrench<br>3) 3/16" hex key |           |        | R       |                                       | L FOL | JNDRY             |     |   |
|--------------------------------------|-----------|--------|---------|---------------------------------------|-------|-------------------|-----|---|
| MATERIAL                             | WEIGHT    | l      | ,       | 6450 - 148 Street<br>77-789-3245 infe |       | BC V3S 7G7, Canad | la  |   |
| Powder Coated                        | 93 lbs    |        | 1-0     | www.relianc                           | -     | ,                 |     |   |
| Powder Coated                        | 19 lbs    | TITLE  |         |                                       |       |                   |     |   |
| Hot Dip Galvanized                   | 8 3/8 lbs |        |         |                                       |       |                   |     | A |
| ·                                    | 5 1/2 lbs |        |         | Bollard                               | R-7!  | 581               |     |   |
|                                      | 5/8 lbs   |        |         | Bollara                               |       |                   |     |   |
|                                      | 1/4 lbs   |        |         |                                       |       |                   |     |   |
| el                                   |           | SIZE   |         | DWG NO                                |       |                   | REV |   |
|                                      |           |        |         | R7581                                 |       |                   | C4  |   |
| Y CO. LTD.                           |           | NOT TO | ) SCALE |                                       | SI    | HEET 5 OF 12      |     |   |
| 2                                    |           |        |         |                                       | 1     |                   |     | , |



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|   |                                                                                                                                   |     |                                      | PARTS LIST                                                    |                            |  |  |  |  |  |  |
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|   | 1                                                                                                                                 | 1   | R7581B                               | R7581 Base                                                    | Ductile Iron Powder Coated |  |  |  |  |  |  |
|   | 2                                                                                                                                 | 1   | R7581C                               | R7581 Cap                                                     | Ductile Iron Powder Coated |  |  |  |  |  |  |
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|   | 7                                                                                                                                 | 3   | Polyethylene Plug 3/8"               | Polyethylene Plug 3/8"                                        | LDPE Black                 |  |  |  |  |  |  |
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| • |                                                                                                                                   |     | 4                                    | 3 4                                                           | 2                          |  |  |  |  |  |  |

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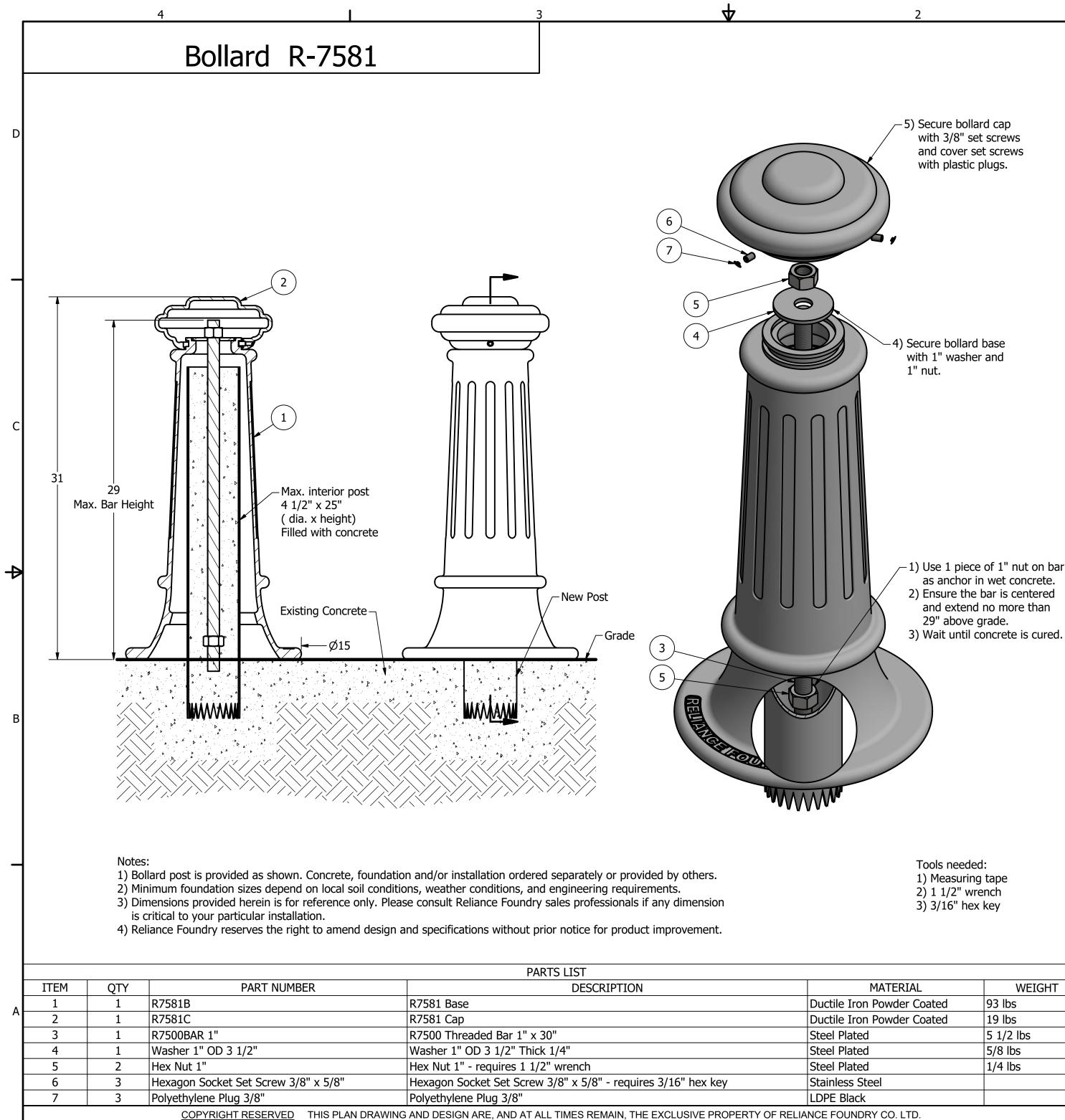
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| " wre<br>' hex |           |        | Jnit 207, | 6450 | IANCE FC<br>SINCE 1925 -<br>9 - 148 Street, Surrey<br>89-3245 info@relia | , BC V3S 7G7, Cana | da  |
|----------------|-----------|--------|-----------|------|--------------------------------------------------------------------------|--------------------|-----|
|                | WEIGHT    | _      |           |      | www.reliance-found                                                       | ,                  |     |
|                | 93 lbs    | TITLE  |           |      |                                                                          |                    |     |
|                | 19 lbs    |        |           |      |                                                                          |                    |     |
|                | 5 1/2 lbs |        |           | E    | Bollard R-7                                                              | 7581               |     |
|                | 5/8 lbs   |        |           | _    |                                                                          |                    |     |
|                | 1/4 lbs   |        |           |      |                                                                          |                    |     |
|                |           | SIZE   |           |      | DWG NO                                                                   |                    | REV |
|                |           | C      |           |      | R7581                                                                    |                    | C4  |
|                |           | NOT TO | ) scale   |      | -                                                                        | SHEET 6 OF 12      |     |
|                |           |        |           |      |                                                                          | 1                  |     |



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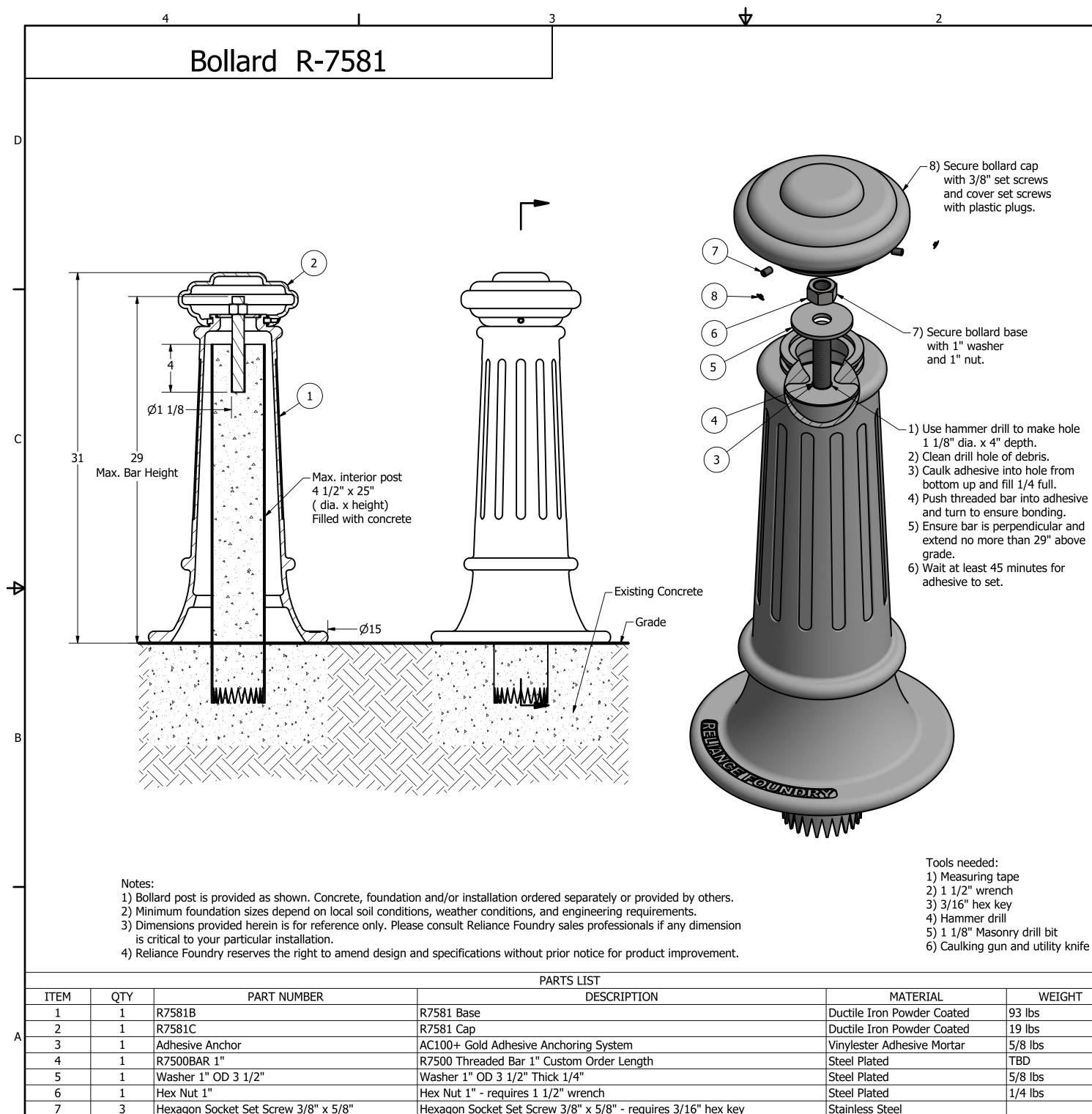
○ Removable - Premium Retractable in New Concrete (see sheet 12 of 12)

For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

#### **Care and Maintenance:**

Reliance's line of bollards are finished with a long-lasting powder-coating. Proper care and maintenance are required. Regularly-performed inspections and routine cleaning will ensure that a bollard retains its aesthetic appeal and does not become damaged by the elements.

| _               |           |        |       |       |              |             |                 |     |
|-----------------|-----------|--------|-------|-------|--------------|-------------|-----------------|-----|
| 2" wre<br>" hex |           | U      |       |       | SINC         | CE 1925 —   | UNDRY           | ada |
|                 |           |        | 1-8   | 77-78 | 9-3245 info  | o@relia     | nce-foundry.com |     |
|                 | WEIGHT    |        |       |       | www.reliance | e-found     | lry.com         |     |
|                 | 93 lbs    | TITLE  |       |       |              |             |                 |     |
|                 | 19 lbs    |        |       |       |              |             |                 |     |
|                 | 5 1/2 lbs |        |       | E     | Bollard      | <b>R-</b> 7 | 7581            |     |
|                 | 5/8 lbs   |        |       | _     |              |             |                 |     |
|                 | 1/4 lbs   |        |       |       |              |             |                 |     |
|                 |           | SIZE   |       |       | DWG NO       |             |                 | REV |
|                 |           | - C    |       |       | R7581        |             |                 | C4  |
|                 |           | NOT TO | SCALE |       |              |             | SHEET 7 OF 12   |     |
|                 |           |        |       |       |              |             | 1               |     |



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8

Polyethylene Plug 3/8"

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Polyethylene Plug 3/8"

4

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LDPE Black

### **General Description:**

The R-7581 Decorative Bollard is made from a versatile ductile iron. It features a wide base with tapered body, decorative fluting and a corniced top casting for simple but elegant stature. Bollard surfaces are protected by a durable powder coating, available in 6 standard colors, to prevent wear and corrosion. Use as fixed, stand-alone bollards or cover impact-resistant security posts. Removable mountings are available.

#### **Specifications:**

Height: 31" Base Diameter: 15" Weight: 112 lbs ( Bollard Only ) Material: Ductile Iron Max. Interior Security Post Size: 4 1/2" x 25" (Diameter x Height)

#### **Finish Options:**

⊙ Polyester Powdercoated

See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

#### **Installation Options:**

- Fixed Anchor Casting in New Concrete (see sheet 2 of 12)
- O Fixed Concrete Insert Anchor in Existing Concrete (see sheet 3 of 12)
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For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

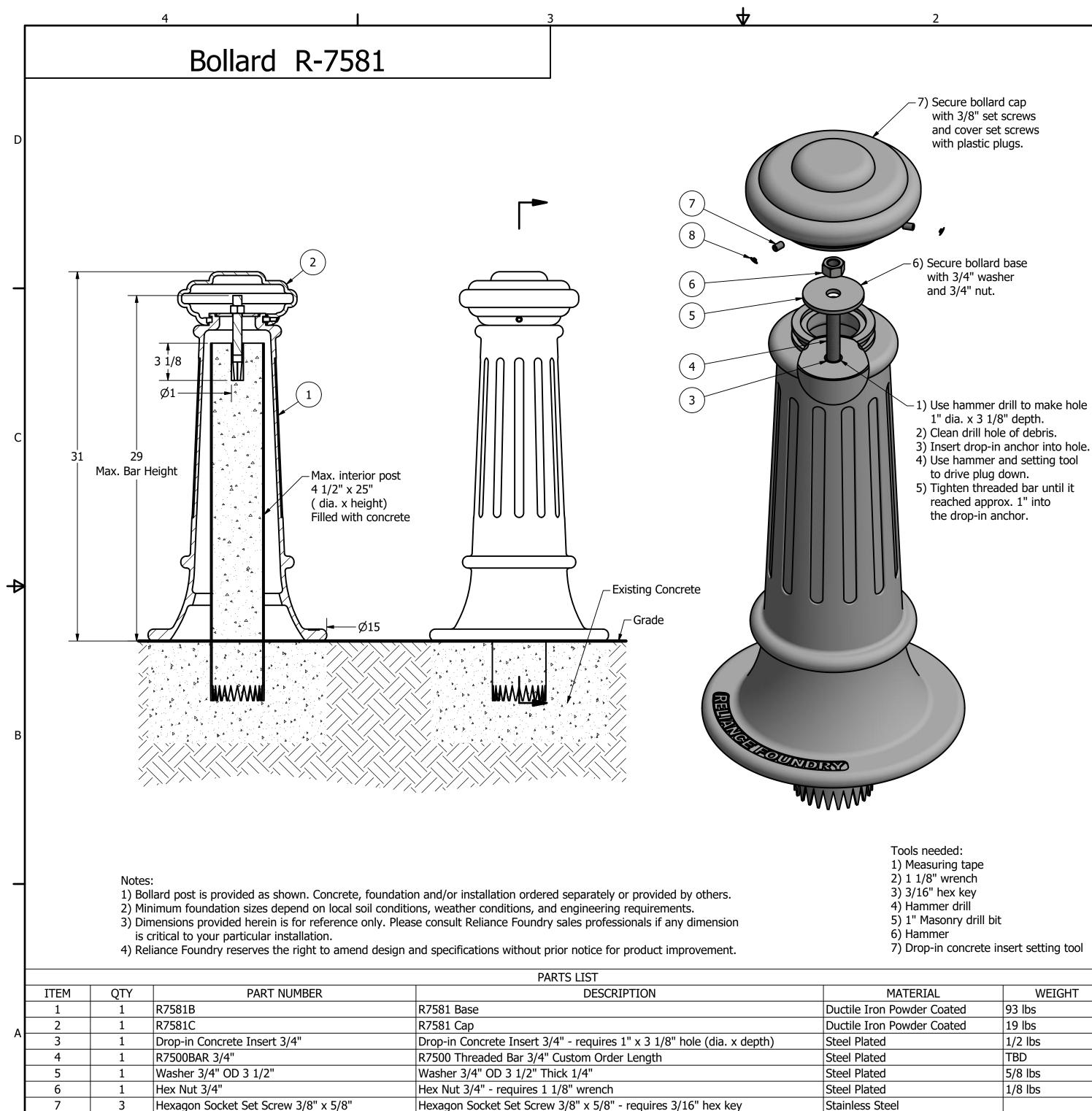
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See Reliance Foundry's maintenance guide at: www.reliance-foundry.com/bollard/maintenance-bollards

| ex key                                                   |           |             |                       |                     |     |
|----------------------------------------------------------|-----------|-------------|-----------------------|---------------------|-----|
| er drill<br>Masonry drill bit<br>g gun and utility knife |           | REI         | LIANCE FC             | UNDRY               |     |
|                                                          | Unit      | t 207, 6450 | ) - 148 Street, Surre | , BC V3S 7G7, Canad | da  |
| WEIGHT                                                   |           | 1-877-78    | 89-3245 info@relia    | •                   |     |
| 93 lbs                                                   |           |             | www.reliance-found    | dry.com             |     |
| 19 lbs                                                   | TITLE     |             |                       |                     |     |
| 5/8 lbs                                                  |           |             |                       |                     | ļ   |
| TBD                                                      |           | F           | Bollard R-            | 7581                |     |
| 5/8 lbs                                                  |           | -           |                       |                     |     |
| 1/4 lbs                                                  |           |             | -                     |                     |     |
|                                                          | SIZE      |             | DWG NO                |                     | REV |
|                                                          | C         |             | R7581                 |                     | C4  |
|                                                          | NOT TO SC |             |                       | SHEET 8 OF 12       |     |
|                                                          |           |             |                       | 1                   |     |

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Polyethylene Plug 3/8"

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Polyethylene Plug 3/8"

LDPE Black

4

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See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

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For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

# **Care and Maintenance:**

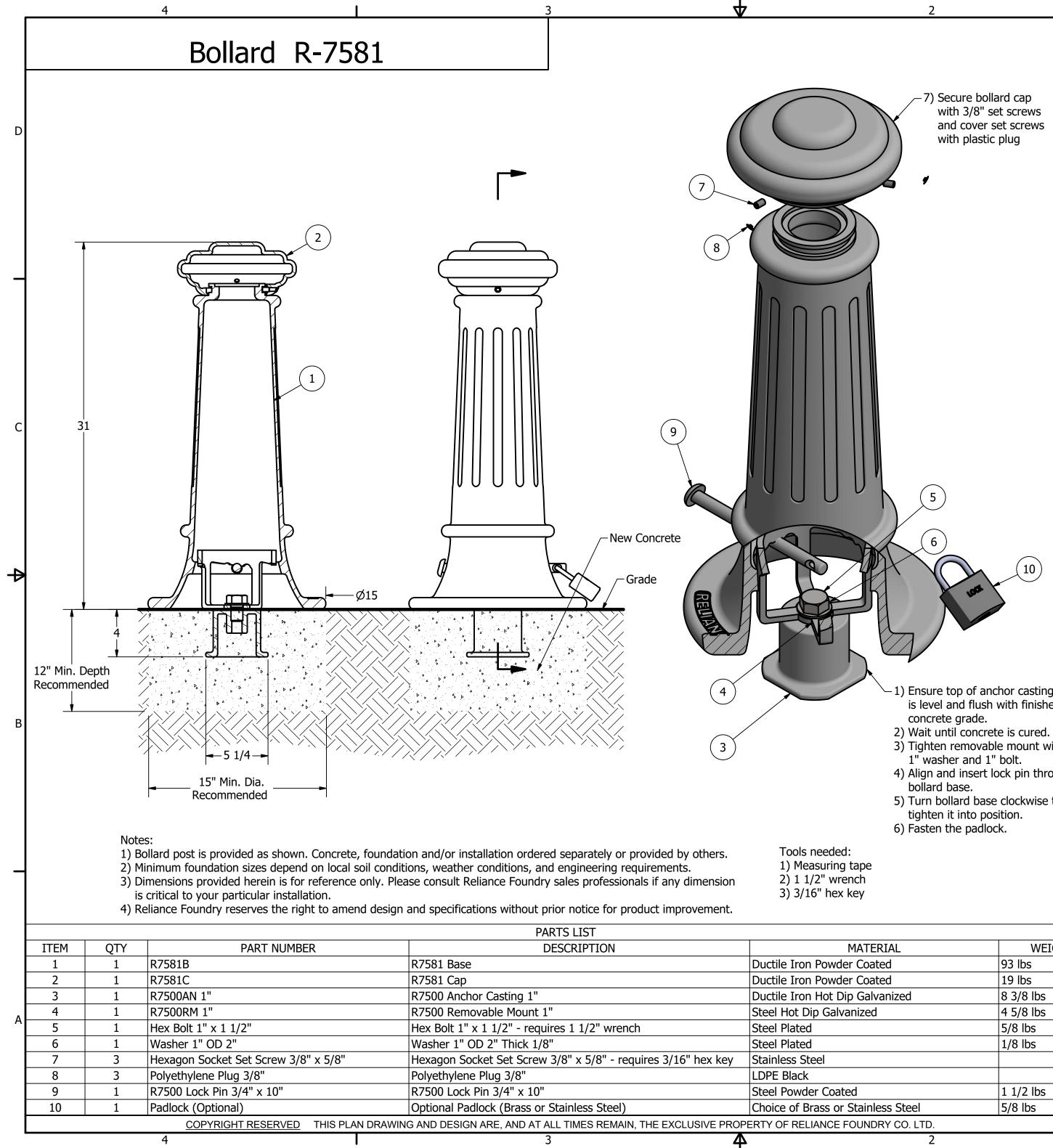
Reliance's line of bollards are finished with a long-lasting powder-coating. Proper care and maintenance are required. Regularly-performed inspections and routine cleaning will ensure that a bollard retains its aesthetic appeal and does not become damaged by the elements.

See Reliance Foundry's maintenance guide at: www.reliance-foundry.com/bollard/maintenance-bollards

| tting tool |       | RELIANCE FOUNDRY                                       |     |
|------------|-------|--------------------------------------------------------|-----|
|            | Ι ι   | Jnit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canad | la  |
| WEIGHT     |       | 1-877-789-3245 info@reliance-foundry.com               |     |
|            |       | www.reliance-foundry.com                               |     |
|            | TITLE |                                                        |     |
| 5          |       |                                                        |     |
|            |       | Bollard R-7581                                         |     |
| 6          |       |                                                        |     |
| 5          |       |                                                        |     |
|            | SIZE  | DWG NO                                                 | REV |
|            | C     | R7581                                                  | C4  |
|            |       |                                                        |     |

NOT TO SCALE

SHEET 9 OF 12



- 1) Ensure top of anchor casting is level and flush with finished
- 3) Tighten removable mount with
- 4) Align and insert lock pin through
- 5) Turn bollard base clockwise to

The R-7581 Decorative Bollard is made from a versatile ductile iron. It features a wide base with tapered body, decorative fluting and a corniced top casting for simple but elegant stature. Bollard surfaces are protected by a durable powder coating, available in 6 standard colors, to prevent wear and corrosion. Use as fixed, stand-alone bollards or cover impact-resistant security posts. Removable mountings are available.

#### **Specifications:**

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#### **Finish Options:**

⊙ Polyester Powdercoated

See Reliance Foundry's standard color options at: www.reliance-foundry.com/bollard/colors-bollards

# **Installation Options:**

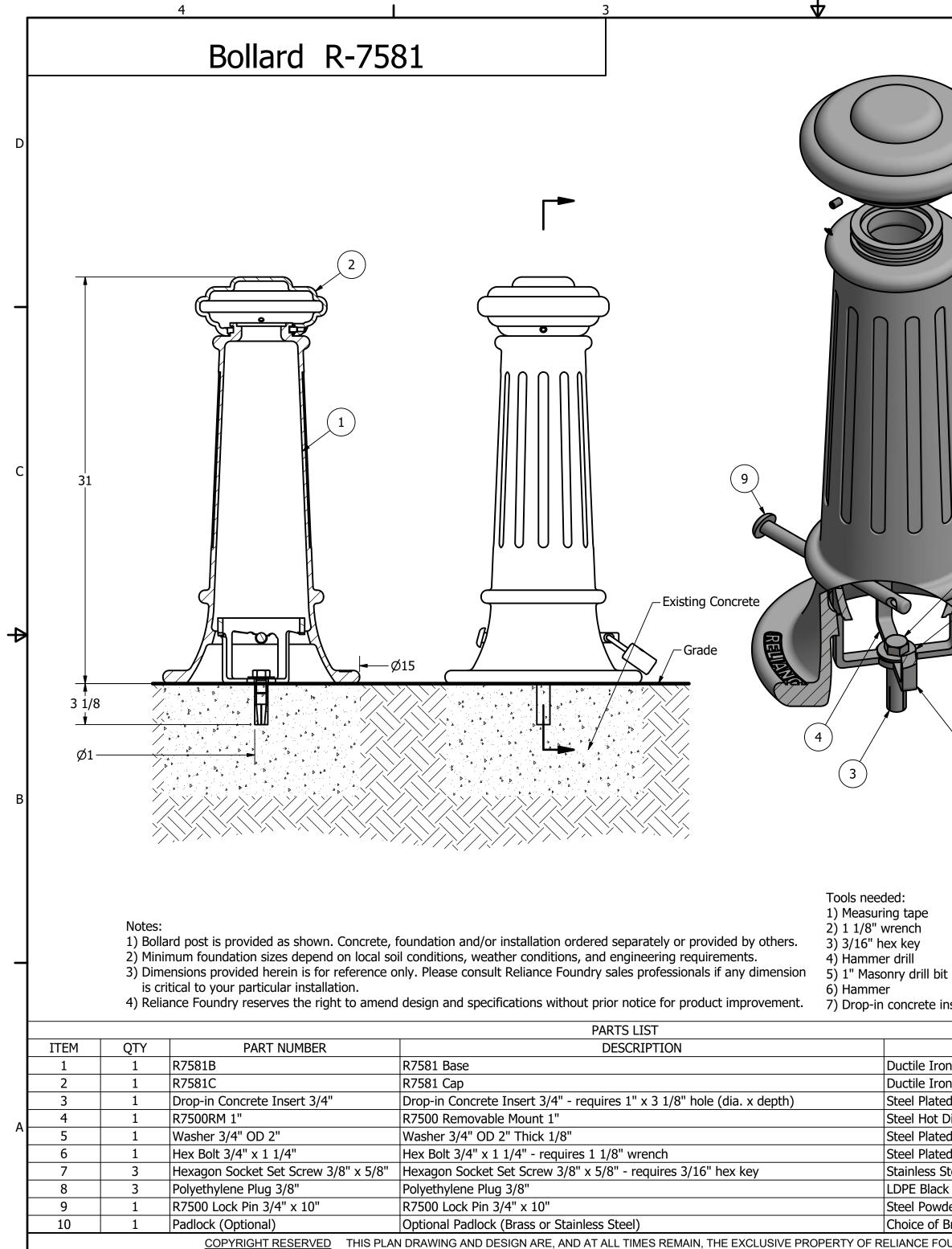
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For more information on bollard post installation, please visit: www.reliance-foundry.com/bollard/installation-bollards

# **Care and Maintenance:**

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| ey             |           |                                                         |             |                |     |  |
|----------------|-----------|---------------------------------------------------------|-------------|----------------|-----|--|
|                | WEICHT    |                                                         |             |                |     |  |
| ATERIAL        | WEIGHT    | I                                                       |             |                |     |  |
| Coated         | 93 lbs    | Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada |             |                |     |  |
| Coated         | 19 lbs    | 1-877-789-3245 info@reliance-foundry.com                |             |                |     |  |
| Galvanized     | 8 3/8 lbs |                                                         | www.relianc | e-foundry.com  |     |  |
| ized           | 4 5/8 lbs | TITLE                                                   |             |                |     |  |
|                | 5/8 lbs   |                                                         |             |                |     |  |
|                | 1/8 lbs   | Bollard R-7581                                          |             |                |     |  |
|                |           |                                                         |             |                |     |  |
|                |           |                                                         |             |                |     |  |
|                | 1 1/2 lbs | SIZE                                                    | DWG NO      |                | REV |  |
| ainless Steel  | 5/8 lbs   |                                                         | R7581       |                | C4  |  |
| UNDRY CO. LTD. |           | NOT TO SC                                               | ALE         | SHEET 10 OF 12 | 2   |  |
| 2              |           |                                                         |             | 1              |     |  |



4

-9) Secure bollard cap with 3/8" set screws and cover set screws with plastic plugs. 7 8 6 5 (10)

- 1) Use hammer drill to make hole 1" dia. x 3 1/8" depth.
- 2) Clean drill hole of debris.
- 3) Insert drop-in anchor into hole
- 4) Use hammer and setting tool
- to drive plug down. 5) Tighten removable mount with 3/4" washer and 3/4" bolt.
- 6) Align and insert lock pin through bollard base.
- 7) Turn bollard base clockwise to tighten it into position.
- 8) Fasten the padlock.

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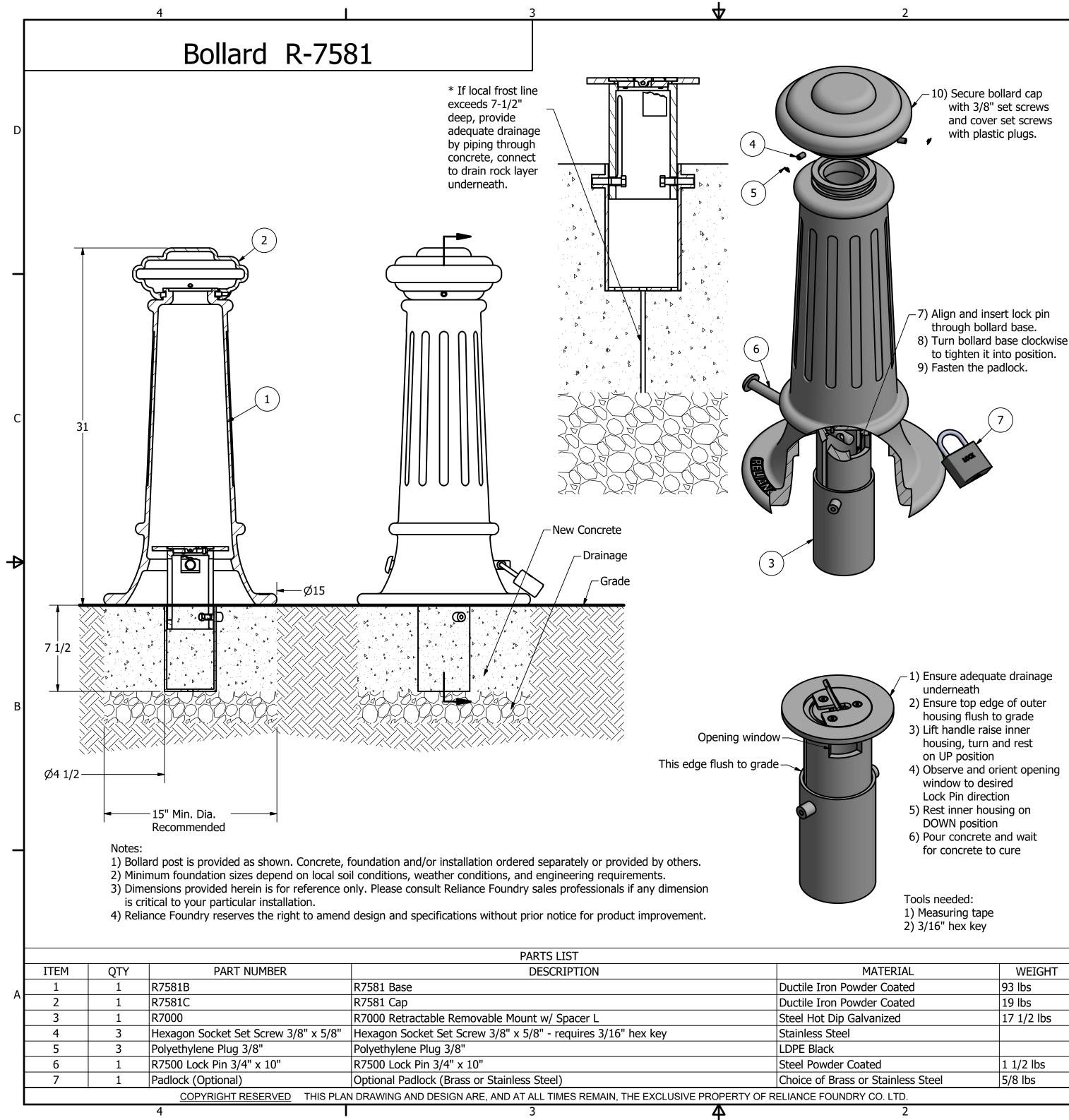
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| nsert setting tool       |           | RELIANCE FOUNDRY                                        |     |  |  |  |  |
|--------------------------|-----------|---------------------------------------------------------|-----|--|--|--|--|
| MATERIAL                 | WEIGHT    |                                                         |     |  |  |  |  |
| n Powder Coated          | 93 lbs    | Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada |     |  |  |  |  |
| n Powder Coated          | 19 lbs    | 1-877-789-3245 info@reliance-foundry.com                |     |  |  |  |  |
| d                        | 1/2 lbs   | www.reliance-foundry.com                                |     |  |  |  |  |
| Dip Galvanized           | 4 5/8 lbs | TITLE                                                   |     |  |  |  |  |
| d                        | 1/8 lbs   |                                                         |     |  |  |  |  |
| d                        | 1/4 lbs   | Bollard R-7581                                          |     |  |  |  |  |
| iteel                    |           |                                                         |     |  |  |  |  |
| K                        |           |                                                         |     |  |  |  |  |
| ler Coated               | 1 1/2 lbs | SIZE DWG NO                                             | REV |  |  |  |  |
| Brass or Stainless Steel | 5/8 lbs   | C   R7581                                               | C4  |  |  |  |  |
| UNDRY CO. LTD.           |           | NOT TO SCALE SHEET 11 OF 12                             |     |  |  |  |  |
| 2                        |           | 1                                                       |     |  |  |  |  |



-1) Ensure adequate drainage

- 4) Observe and orient opening

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| RELIANCE FOUNDRY |  |
|------------------|--|
| • SINCE 1925     |  |

Unit 207, 6450 - 148 Street, Surrey, BC V3S 7G7, Canada 1-877-789-3245 info@reliance-foundry.com www.reliance-foundry.com

|                            | 55 105     |                |       |   |        |   |                |     | A |  |  |
|----------------------------|------------|----------------|-------|---|--------|---|----------------|-----|---|--|--|
| ron Powder Coated          | 19 lbs     |                |       |   |        |   | 1^             |     |   |  |  |
| t Dip Galvanized           | 17 1/2 lbs | Bollard R-7581 |       |   |        |   | Bollard R-7581 |     |   |  |  |
| Steel                      |            |                |       | _ |        |   |                |     |   |  |  |
| ck                         |            |                |       |   |        |   |                |     |   |  |  |
| vder Coated                | 1 1/2 lbs  | SIZE           |       |   | DWG NO |   |                | REV |   |  |  |
| f Brass or Stainless Steel | 5/8 lbs    | C              |       |   | R7581  |   |                | C4  |   |  |  |
| FOUNDRY CO. LTD.           |            | NOT TO         | SCALE |   |        | 9 | SHEET 12 OF 12 |     |   |  |  |
| 2                          |            |                |       |   |        | 1 |                |     | • |  |  |

TITLE