**CAUTION:**

- When using high-strength Threadbar Tendons, DO NOT ASSUMED BARS TO BE STRESSED FROM BOTH ENDS.

- Users shall refer to FDOT Standard Specifications and Project Specific Criteria for Tendon Installation, Stressing, & Grouting.

- Required reinforcing bars are not shown on this drawing.

- Maximum angular misalignment when using anchor nut: ±2°.

- Center to center, end and edge distance depends on the location of the bar and concrete strength, (see Table).

- C/C Distance = 2 x End Distance - 2 x Concrete Cover (2" assumed).

- Taller C/C Distance should be evaluated.

- If threaded rod is delivered in straight sections and is not intended to be coiled.

- Bursting reinforcement is not shown and will be included with the shop drawings.

- Threadbar Tendons are stressed from one end only.

---

**MATERIAL LIST**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
<th>MATERIAL SPECIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>B36E CUT</td>
<td>1-3/8&quot; (36mm) THREADBAR</td>
<td>ASTM A722 TYPE II STEEL</td>
</tr>
<tr>
<td>B36E52190</td>
<td>5/8&quot; X 2-3/4&quot; X 2&quot; X 2&quot; CORRUGATED DUCT</td>
<td>POLYPROPYLENE</td>
</tr>
<tr>
<td>B36E52199</td>
<td>NYLON BAR GRAYOUT CAP WITH O-RING</td>
<td>NYLON 6, WHITE</td>
</tr>
<tr>
<td>B36E34100</td>
<td>1-3/8&quot; GROUTABLE ANCHOR NUT</td>
<td>FORGING, NORMALIZED C1045</td>
</tr>
<tr>
<td>B36E26100</td>
<td>1/2&quot; NPT PLUG</td>
<td>NYLON 6, WHITE</td>
</tr>
<tr>
<td>B36E26120</td>
<td>1/2&quot; NPT NIPPLE</td>
<td>PVC</td>
</tr>
<tr>
<td>B36E26160</td>
<td>1/2&quot; NPT BALL VALVE (TEMPORARY)</td>
<td>PVC</td>
</tr>
<tr>
<td>U0022000</td>
<td>2-3/8&quot; (59mm) CORRUGATED DUCT</td>
<td>POLYPROPYLENE</td>
</tr>
<tr>
<td>U0022055</td>
<td>(OPTIONAL) 2-3/8&quot; (59mm) DUCT COUPLER</td>
<td>POLYPROPYLENE</td>
</tr>
<tr>
<td>U00044030</td>
<td>HEAT SHRINK SLEEVE, PMA-90/30-450-BK</td>
<td>ACCORD TO FDOT SPEC. P.T. SEC. 960-2.2.1.8</td>
</tr>
<tr>
<td>U00044000</td>
<td>TELFON TAPE OR PASTE</td>
<td></td>
</tr>
</tbody>
</table>

---

**NOTES:**

1. Users shall refer to FDOT Standard Specifications and Project Specific Criteria for Tendon Installation, Stressing, & Grouting.

2. Required reinforcing bars are not shown on this drawing.


4. Center to center, end and edge distance depends on the location of the bar and concrete strength, (see Table).

5. C/C Distance = 2 x End Distance - 2 x Concrete Cover (2" assumed).

6. Bursting reinforcement is not shown and will be included with the shop drawings.

7. Threadbar Tendons are stressed from one end only.

---

**WARNING:**

Read and comply with all operating instructions and warnings for threaded assembly before starting any work on equipment.

---

**CAP END VIEW**

**BLOCKOUT DETAIL**

**DUCT COUPLER DETAIL**

**SURFACE MOUNT DETAIL**
RIGHT HAND THREAD

<table>
<thead>
<tr>
<th>PART NUMBERS</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR BARE BAR:</td>
<td>B36E CUT</td>
</tr>
<tr>
<td></td>
<td>ASTM A722 TYPE II</td>
</tr>
</tbody>
</table>

**PHYSICAL PROPERTIES**

- EFFECTIVE AREA: 1.58 SQ.IN. (1019 SQ.mm)
- ULTIMATE STRENGTH: 150 KSI (1034 N/SQ.mm)
- ULTIMATE LOAD: 237 KIPS (1054 KN)
- YIELD LOAD: 191.2 KIPS (851 KN)
- WEIGHT: 5.56 LBS./FT. (8.27 Kg/m)
- MAX. BAR Ø INCL. RIBS: 1.63 IN. (41.4mm)
- AVERAGE CORE Ø: 1.40 IN. (35.6mm)
- PITCH: 0.709 IN. (18.0mm)
PLATE MATERIAL: ASTM A36
MECHANICAL TUBE MATERIAL
SHALL BE A512, A513 OR A519

3/8"-16UNC DRILLED & TAPPED
1" [25.4] DEEP, 4/60° PLACES

NOTES:
1. PLATE AND PIPE GALVANIZED ACCORDING TO
   ASTM A123 AFTER WELDING.
2. DIMENSIONS AND TOLERANCES APPLY TO
   UNCOATED PLATE AND TUBING.
3. ENSURE THREADABILITY OF TAPPED HOLES IN
   PLATES IF THEY ARE REQUIRED.
4. 59mm DUCT U00220200 FITS OVER TUBING.

DIMENSIONS: INCH [mm]
mm FOR REFERENCE ONLY

QUALITY PLAN NUMBER: QBE0021200L

TOLERANCES: ±.020
UNLESS NOTED

WEIGHT: 25.8 LBS.

REV. DATE NAME ECNR

PART NUMBER: B36E22510

DRAWING NUMBER: B36E22510

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PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO
THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.
3/8"-16 UNC DRILLED & TAPPED
1" [25.4] DEEP, 4x90° PLACES

PLATE MATERIAL: ASTM A35
MECHANICAL TUBE MATERIAL
SHALL BE AS52, AS13 OR AS19

RECT. BEARING PLATE WITH EXIT PIPE FOR 1-3/8" THREADBAR

B.C. ø4.375 [111.1]
5.000 [127.0]
0.922 [23.6]
1.050 [26.7]
5.500 [139.7]

"DSN" & PART NUMBER
(MARKINGS)

2-1/4" x 3/16" WALL
MECHANICAL TUBING

3/4" NPT HALF COUPLER
BLACK STEEL

WATERPROOF

NOTES:
1. PLATE AND PIPE GALVANIZED ACCORDING TO
   TO ASTM A123 AFTER WELDING.
2. DIMENSIONS AND TOLERANCES APPLY TO
   UNCOATED PLATE AND TUBING.
3. ENSURE THREADABILITY OF TAPPED HOLES IN
   PLATES IF THEY ARE REQUIRED.
4. 59mm DUCT U00220200 FITS OVER TUBING.
BAR GROUT CAP WITH O-RING
FOR ALL 1" & 1-1/4" NUTS AND 1-3/8" ANCHOR NUT

O-RING MATERIAL:
EPDM MEETING MIL-SPECIFICATION 9820-22112.

#237 O-RING
3-3/8" x 3-5/8" x 1/8"

SCALE: NTS

NOTES:
1. USE 3/8"-16UNC 316L S.S. HEX BOLTS, 2-1/4" LONG OR 7/8" W/ SMALL DIN.
   WASHER AND 7/8" LOCK WASHERS OR 316 SEALS.
2. INSTALL O-RING IN GROOVE USING GRIPS OF LIQUID ADHESIVE BEFORE SHIPMENT.
3. THE NUTS CONFORM TO ASTM 45000, WITH G3 CLASSIFICATION S-F460401
   (ULTIMATE STRENGTH 10,000 PSI MIN. WITH UV STABILIZER ADDED).
4. DRILL 1/2" [12.7] HOLE IN PORT USING CAUTION—RECOMMEND USING HOLE
   SAW CUT OR STAGE HOLE (BY OTHERS), BE CAREFUL TO PREVENT DAMAGE TO
   THREADS OR CAP.
5. WHEN PRESSURIZING GROUT CAPS, DO NOT STAND BEHIND CAPS!
WASHER FOR NYLON CAPS

STAINLESS STEEL 316L BOLTS AND WASHER FOR NYLON CAPS

<table>
<thead>
<tr>
<th>POS.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION (ALL PARTS 316L STAINLESS STEEL UNLESS NOTED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>00 00 771</td>
<td>3/8&quot;-16UNC HEX BOLT, 2-3/4&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>2</td>
<td>00 00 772</td>
<td>3/8&quot;-16UNC HEX BOLT, 3-1/2&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>3</td>
<td>00 00 774</td>
<td>TYPE A NARROW WASHER FOR 3/8&quot;-UNC BOLT</td>
</tr>
<tr>
<td>4</td>
<td>00 00 776</td>
<td>3/8&quot;-16UNC COUPLER, ZINC COATED</td>
</tr>
<tr>
<td>5</td>
<td>00 00 777</td>
<td>5/8&quot;-16UNC HEX NUT</td>
</tr>
<tr>
<td>6</td>
<td>00 00 778</td>
<td>5/16&quot;-18UNC HEX BOLT, 7/8&quot; LONG, ZINC PLATED</td>
</tr>
<tr>
<td>7</td>
<td>00 00 783</td>
<td>3/8&quot;-16UNC HEX BOLT, 3-1/4&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>8</td>
<td>00 00 784</td>
<td>3/8&quot;-16UNC HEX BOLT, 4-1/4&quot; LONG (FULL THREAD)</td>
</tr>
<tr>
<td>9</td>
<td>00 00 789</td>
<td>3/8&quot;-16UNC CARRIAGE BOLT, 4-1/2&quot; LONG</td>
</tr>
<tr>
<td>10</td>
<td>00 00 790</td>
<td>3/8&quot;-16UNC CARRIAGE BOLT, 5-1/2&quot; LONG</td>
</tr>
</tbody>
</table>

NOTE:
The 316L S.S. BOLTS ARE SPECIAL ORDER. ALL WASHERS, HEX NUTS & COUPLERS HAVE NO MARKINGS.

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100
320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405

DRAWING NUMBER: 00 00 770
1-3/8" GROUTABLE ANCHOR NUTS
FOR THREADBAR GR. 150

**Dimensions:**
- Ø3.150
- Ø80.0
- 3.531
- 89.7
- 2.390
- 60.7

**Thread According to Tolerance**
- Drawing 8341/722
- Minor Diameter: 1.429–1.433
  (36.30–36.40)

**Materials:**
- ASTM A521-CF MOD.
- Normalized
- BHN = 180–220

**Weight:** 3.2 lbs.

**Scale:** 1/2
1/2" NPT NYLON PLUG

MATERIAL: NYLON 6
COLOR: WHITE

PRESSURE RATED: 150 PSI
1/2" NPT PIPE NIPPLES

LENGTH VARIES

DIA. 0.840 [21.3] (NOMINAL)

1/2" NPT THREAD TYP.

PRESSURE RATED: 150 PSI

DIMENSIONS: INCH [mm]

QUALITY PLAN NUMBER: Q000000020P

REV. DATE NAME

MATERIAL: SCH 40
BLACK WELDED STEEL

SCALE: 1:1

PART NUMBER: 00 00 678

DRAWING NUMBER: 00 00 678

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320 MARMON DRIVE - BOLINGBROOK, IL 60440
PHONE: 630-739-1100 FAX: 630-739-1405

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3/4" NPT PIPE NIPPLES

PRESSURE RATED: 150 PSI

DIMENSIONS: INCH [mm]

QUALITY PLAN NUMBER: Q000000000P

REV. DATE NAME EDN

PART NUMBER: 00 00 878

DRAWING NUMBER: 00 00 878

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3/4" NPT THREAD TYP.

LENGTH VARIES

ø1.050 [26.7] (NOMINAL)

MATERIAL: SCH 40 BLACK WELDED STEEL

SCALE 1:1
3/4" NPT NYLON PLUG

PRESSURE RATED: 150 PSI

DIMENSIONS: INCH (mm)  QUALITY PLAN NUMBER:

MATERIAL:
NYLON 6
COLOR: WHITE

WEIGHT
.009
LBS.

REV. DATE NAME

SCALE
1:1

DRAWING NUMBER:
00 00 849

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THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
320 MARMON DRIVE - BOLINGBROOK, IL 60440
PHONE: 630-739-1100  FAX: 630-739-1405
1/2" NPT BALL VALVE

Dimensions: Inch [mm]

- 2.130 [54.1]
- 1.480 [37.6]
- 2.760 [70.1]
- 1.145 [29.1]

Material: PVC

Scale: 1:1

Weight: 0.138 lbs.

Date: 01-11-19

Note: Pressure rated: 150 PSI.
NOTE:
PRESSURE RATED: 150 PSI.

3/4" NPT BALL VALVE

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
320 MARMON DRIVE - BOLINGBROOK, IL 60440
PHONE: 630-739-1100 FAX: 630-739-1405
2-3/8" (59mm) CORRUGATED PP DUCT

MATERIAL: POLYPROPYLENE
CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
MATERIAL MEETS FDOT SPECS. 960-2.4.3.

NOTES:
1. STANDARD FIT FOR 5-0.6", 7-0.5", 7-0.6" & 9-0.5" STRANDS AND 1", 1-1/4", & 1-3/8" THREADBARS.
2. MIN. BENDING RADIUS, Rmin = 22.8 FT.
3. DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
MATERIAL: POLYPROPYLENE

CELL CLASS RANGE: PP0340B44541 TO PP0340B67884

MATERIAL MEETS FDOT SPECS. 960-2.4.3.

 Диаметр 3.031 [77.0]
 Диаметр 2.871 [72.9]
 Высота 1.800 [45.7]
 Высота 1.600 [40.6]
 Высота 5.200 [132.1]

Ø2-3/8" (59mm) DUCT COUPLER
**STANDARD ORDERING OPTIONS**

- **YE - YELLOW, BK - BLACK**
  - 300mm, 450mm, 600mm, 900mm (12", 18", 24", 36")
  - 63mm - 315mm (2-1/2" - 12")
- **A - 0.75 mm (30 mils)**
- **L - 0.80 mm (31 mils)**
- **P - Tubular**

**DIMENSIONS & ORDERING INFO**

- **PLA**
  - XXX - YYY - ZZ
- **COLOR**
- **SLEEVE WIDTH**
- **SLEEVE SIZE**
- **ADHESIVE (thickness as supplied)**
- **BACKING (thickness as supplied)**
- **CONFIGURATION**

**TUBULAR SLEEVE**

- **PLA 63-YYY YE**
  - 3.5" [90mm]
  - 2.5" [63mm]
- **PLA 90-YYY YE**
  - 4.8" [120mm]
  - 3.3" [81mm]
- **PLA 115-YYY BK**
  - 5.5" [145mm]
  - 3.8" [98mm]
- **PLA 125-YYY YE**
  - 6.3" [160mm]
  - 4.3" [110mm]
- **PLA 150-YYY BK**
  - 7.5" [190mm]
  - 5.2" [130mm]
- **PMA 90/30-YYY BK**
  - 3.5" [90mm]
  - 1.2" [30mm]
- **PMA 120/40-YYY BK**
  - 4.7" [120mm]
  - 1.6" [40mm]

YYY = SLEEVE WIDTH: 300/450/600/900/1500 (mm)
COLOR: YE = YELLOW, BK = BLACK

**NOTES:**

1. ORDER DIRECT FROM CANUSA
   TEL. 281 367 - 8866
   FAX. 281 367 - 4304
2. SELECT ORDER LENGTH AS A MULTIPLE OF THE ACTUAL LENGTH.
3. OTHER COLORS SLEEVE MAY BE AVAILABLE UPON REQUEST.
4. ALWAYS HEAT THE DUCT ENDS FIRST.

**MATERIAL:**

- ACCORDING TO FDOT SPECIFICATION POST TENSIONING, SECTION 462 - 4, 2, 6, 3.

**HEAT SHRINK SLEEVE**

- **PMA - HIGH SHRINK SLEEVE.**
- **HIGH SHRINK TUBULAR BACKING.**

**CORRUGATED DUCT**

<table>
<thead>
<tr>
<th>DUCT SIZE</th>
<th>STRAND SYSTEM</th>
<th>BAR SYSTEM</th>
<th>HEAT SHRINK SLEEVE SIZE</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; x 3&quot; (25mm x 76mm)</td>
<td>4 - 0.6&quot;</td>
<td>X</td>
<td>PLA-63-450 YE</td>
<td>U00044063</td>
</tr>
<tr>
<td>2 - 3/8&quot; (59mm)</td>
<td>7 - 0.6&quot;</td>
<td>X</td>
<td>PLA-450 YE</td>
<td>U00044063</td>
</tr>
<tr>
<td>3&quot; (76mm)</td>
<td>1 - 3/4&quot;</td>
<td>X</td>
<td>PMA-90/30-450 BK</td>
<td>U00044030</td>
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<tr>
<td>3 - 3/8&quot; (85mm)</td>
<td>12 - 0.6&quot;</td>
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<td>PLA-90-450 YE</td>
<td>U00044090</td>
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<td>4&quot; (100mm)</td>
<td>2 - 1/2&quot;</td>
<td></td>
<td>PLA-450 YE</td>
<td>U00044090</td>
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<tr>
<td>4&quot; (100mm)</td>
<td>19 - 0.6&quot;</td>
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<td>PLA-115-450 BK</td>
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<td>4 - 1/2&quot; (115mm)</td>
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<td>PLA-125-450 YE</td>
<td>U00044125</td>
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<tr>
<td>5 - 1/8&quot; (130mm)</td>
<td>31 - 0.6&quot;, 37 - 0.6&quot;</td>
<td></td>
<td>PLA-160-450 BK</td>
<td>U00044160</td>
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**SMOOTH DUCT**

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<th>BAR SYSTEM</th>
<th>HEAT SHRINK SLEEVE SIZE</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; SDR 17 HDPE PIPE</td>
<td></td>
<td></td>
<td>PLA-63-450 YE</td>
<td>U00044063</td>
</tr>
</tbody>
</table>

**HEAT SHRINK SLEEVE SIZES FOR INTERNAL GROUTED APPLICATIONS**

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**DRAWING NUMBER:** U00044000

**DATE:** 06-28-20

**NAME:** S.L.

**PHONE:** 630-739-1100
**FAX:** 630-739-1405

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
320 MARMON DRIVE - BOLINGBROOK, IL 60440

TEMPERATURES: