PART 1 GENERAL

1.1 SUMMARY

A. Includes But Not Limited To
   2. Furnish and install granular base for cast-in-place concrete site elements as described in Contract Documents.
   3. Furnish and install cast-in-place concrete site elements as described in Contract Documents.

B. Products Installed But Not Supplied Under This Section
   1. Lightpole base anchors
   2. Flagpole base and foundation sleeve
   3. Pipe bollards

C. Related Sections
   1. Section 02051 - General Site Construction Requirements
   2. Section 02315 - Compaction procedures and tolerances
   3. Section 02813 - Sleeves for underground irrigation system
   4. Section 05129 - Furnishing of pipe for pipe bollards
   5. Section 10352 - Furnishing of flagpole base and foundation sleeve
   6. Section 16520 - Furnishing of lightpole base anchors

1.2 REFERENCES

A. American Society For Testing And Materials

1.3 QUALITY ASSURANCE

A. Pre-Installation Conferences
   1. Participate in pre-installation conference specified in Section 02311.
   2. Schedule concrete site element pre-installation conference after installation of sleeves, placing of base, and installation of forms, but before placing of concrete.

B. Meet quality assurance / control requirements specified in Section 03313.

PART 2 PRODUCTS

2.1 MATERIALS

A. Formwork - Meet requirements specified in Section 03120.

B. Granular Base
   1. Road Base type gravel or crushed rock, graded as follows -

<table>
<thead>
<tr>
<th>Sieve</th>
<th>Percent by Weight Passing Sieve</th>
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<tbody>
<tr>
<td>1 inch</td>
<td>100</td>
</tr>
<tr>
<td>3/4 inch</td>
<td>85 - 100</td>
</tr>
<tr>
<td>No. 4</td>
<td>45 - 60</td>
</tr>
<tr>
<td>No. 10</td>
<td>30 - 50</td>
</tr>
<tr>
<td>No. 200</td>
<td>5 - 10 (non-plastic)</td>
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C. Expansion Joints
   1. 1/2 inch thick.
   2. Manufactured commercial fiber type -
      a. Meet requirements of ASTM D 1751
      b. Acceptable Products -
         1) Conflex by Masonite Building & Industrial Products Group, Chicago, IL (800) 257-7885 www.masonite.com
         2) Sealtight by W R Meadows Inc, Hampshire, IL (800) 342-5976 www.meadows.com
         3) Equal as approved by Architect before installation.
   3. Recycled Vinyl -
      a. Light gray color
      b. Approved Products -
         1) Proflex by Oscoda Plastics Inc, Oscoda, MI (800) 544-9538 www.oscodaplastics.com

D. Concrete - Meet requirements specified in Section 03313 for exterior concrete.

PART 3 EXECUTION

3.1 PREPARATION

A. Sub-Base - Compact sub-base as specified in Section 02315.

3.2 INSTALLATION

A. Granular Base - Except under mow strips, place 4 inches minimum of granular base, level, and compact as specified in Section 02315.

B. Joints
   1. Align joints of sidewalk and curb and gutter.
   2. Expansion And Contraction Joints -
      a. Spacing -
         1) Sidewalks And Curbs - 50 feet on center
         2) Mow Strips - 10 feet on center
         3) Flat Drainage Structures - 50 feet on center
         4) Retaining Walls - 36 feet on center
      b. Install so top of expansion joint material is 1/4 inch below finished surface of concrete.
      c. No expansion joint required between curbs and walks parallel to curb.
      d. Provide expansion joint at end of walks perpendicular to and terminating at curb.
   3. Scored Control Joints -
      a. Spacing -
         1) Curbs - 10 feet on center
         2) Sidewalks - 5 feet on center
         3) Mow Strips - 5 feet on center
         4) Flat Drainage Structures - 10 feet on center
         5) Retaining Walls - 6 feet on center
      b. Depth of control joints shall be approximately one quarter of concrete slab thickness, but not less than one inch.

C. Finish
   1. Curb, Gutter, Sidewalks, Mow Strips, Flat Drainage Structures, Stairs, And Miscellaneous -
      a. Broom finish.
      b. Round edges including edges formed by expansion joints.
      c. Remove edger marks.
   2. Light Pole And Flagpole Bases - Exposed portion to have rubbed finish.
   3. Retaining Walls -
      a. Immediately after removing forms, remove joints, marks, bellies, projections, loose materials, and cut back metal ties from surfaces to be exposed.
      b. Point up voids with cement mortar, 1:2 mix, and rub exposed surface with carborundum to smooth, even surface.
D. Special Requirements
1. Form vertical surfaces full depth. Do not allow concrete to flow out from under forms in any degree.
2. Sidewalks, Exterior Stairs, And Landings -
   a. Slope to drain.
      1) Slope sidewalks with cross slope of 1/8 to 1/4 inch per ft in direction of intended drainage.
      2) Slope sidewalks away from building one percent minimum.
   b. Dusting with cement not permitted.
3. Mow Strips -
   a. Granular base not necessary under mow strips.
   b. Form and cast mow strips in place.
   c. Set top of mow strip 1-1/2 inches above finish grade.
   d. Compact topsoil on both sides of mow strip to density of undisturbed earth.
4. Light Pole Bases - Install bond breaker consisting of three layers of 30 lb roofing felt between pole base and adjoining sidewalk.
5. Pipe Bollards - Install plumb and fill with concrete.

3.3 FIELD QUALITY CONTROL

A. Inspection - To allow Architect's verification of grades and elevations, notify Architect three days minimum prior to placing concrete for specified concrete site elements.

END OF SECTION