710S.1 Description

This item shall govern Class II and Class III bicycle racks and associated support medium as indicated on the Drawings.

A Class II bicycle rack shall be a rack where both wheels and the frame of a bicycle can be secured with one (1) user-supplied lock without the requirement for wheel removal. The design, type and capacity of a Class II bicycle rack shall be approved by the Engineer or designated representative.

A Class III bicycle rack shall be a rack where both one wheel and the frame can be secured with a user supplied lock (see Standard Detail 710S-1, "Class III Style Bicycle Parking"). The Class III rack shall consist of either a single U/Hoop (Rack 1), multiple inverted U/Hoop (Rack 2), single post (Rack 3), or other Rack approved by the Engineer or designated representative.

This specification is applicable for projects or work involving either inch-pound or SI units. Within the text, the inch-pound units are given preference followed by SI units shown within parentheses.

710S.2 Submittals

The submittal requirements of this specification item include:

A. Class (i.e. II or III) Type and capacity of bicycle rack (i.e. number of bicycles served).

B. Fabrication and installation details, color and finish of the rack(s).

C. Support medium (i.e. existing slab, new pad, concrete filled excavation, etc.) and details of installation.

D. Complete manufacturer's warranty against defects for a period not less than one year from date of installation.

710S.3 Materials

A. Steel elements.

All steel shall be ASTM A-36 1010-1018 low carbon prime steel and the screws, nuts and bolts shall be tamper proof and plated with commercial zinc. The bicycle racks shall be hot dipped galvanized (ASTM A 123) unless the Drawings indicate that the rack assembly shall be provided in a specific color with a polyester-vinyl coated finish, a powder coated finish, or a polyvinyl thermoplastic finish.

B. Portland Cement Concrete

Portland cement concrete shall be Class A conforming to Specification Item No. 403S, "Concrete for Structures" or Specification Item No. 407S, "Fibrous Concrete".

C. Reinforcement
Reinforcement shall conform to Specification Item No. 406S, "Reinforcing Steel" or Specification Item No. 407, "Fibrous Concrete".

D. Expansion Joint Materials

Expansion joint materials shall conform to Specification Item No. 408, "Expansion Joint Materials".

E. Membrane Curing Compound

Membrane curing compound shall conform to Specification Item No. 409, "Membrane Curing".

710S.4 Construction of Racks

A. Class II Bicycle Rack.

The Class II Rack shall consist of a locking system, which will secure both bicycle wheels and the frame with one (1) lock without the removal of either wheel.

B. Class III Bicycle Rack.

1. The Class III Rack Type 1 (Standard Detail 710S-1, sheet 1 of 3) shall consist of a one piece welded inverted U/Hoop assembly of Schedule 40 steel pipe with a minimum outside diameter (OD) of 1.5 inches (38 mm) on a minimum .25" (6.35 mm) thick base plate.

2. The Class III Rack Type 2 (Standard Detail 710S-1, sheet 2 of 3) shall consist of a single Schedule 40 steel pipe with a minimum outside diameter (OD) of 2 3/8 (60 mm) set in Portland cement concrete below the ground surface as indicated on the Drawings. The steel pipe shall be topped with a 7 1/2 inch (190 mm) polymer molded sphere that is secured with a hardened steel pin.

3. The Class III Rack Type 3 (Standard Detail 710S-1, sheet 3 of 3) shall consist of a one piece welded inverted U/Hoop assemble of Schedule 40 steel pipe with an minimum outside diameter (OD) of 2 3/8 inches (60 mm) supported with a minimum .25" (6.35 mm) thick circular base plate at one end of the rack and an in ground anchor mount on the other end.

4. The base plates can be round, square, or rectangular. If round, the diameter of the base plate must be at least 6" (150 mm) with a 4.5" (114 mm) bolt circle. If square, the base plate must be at least 4" by 4" (100 mm by 100 mm). If rectangular, the base plate must be 6" by 2" (150 mm by 50 mm). All base plates must be pre-drilled with two 3/8" (9.5 mm) diameter holes per plate for mounting. Each entire unit shall be hot dip galvanized after fabrication.

C. The bicycle racks shall be supported as indicated on the Drawings. The Class II racks and the Class III Rack Type 1 shall be supported on either existing or newly placed Portland cement concrete slabs. The Class III, Rack Types 2 and 3, can be placed on either existing or new slabs; however, these racks require additional underslab support of the steel pipe with p.c. concrete encasement as indicated in Standard Detail 710S-1 (sheets 2 and 3).
The construction of the new slabs shall be completed in accordance with Standard Specification Item Number 432S, “Concrete Sidewalks”. Unless noted otherwise on the Drawings, the slab shall be 4 inches (100 mm) in thickness.

710S.5 Installation of Bicycle Racks

Bicycle parking racks shall be installed in existing paver sidewalks, new paver sidewalks and concrete sidewalks in accordance with Standard Details 710S-3, 710S-4 and 710S-5, respectively.

710S.6 Measurement

Bicycle Parking Racks shall be measured per each, complete and in place and any new p.c. concrete slab will be measured by the square foot (square meter: 1 square meter is equal to 10.764 square feet) of surface area of "Bicycle Parking Concrete Pad".

710S.7 Payment

The installation of Bicycle Parking Racks, as described by this Specification Item, will be paid for at the unit bid price per each. The construction of a p.c. concrete bicycle-parking pad will be paid for at the unit bid price per square foot for "Concrete Bicycle Parking Pad".

The unit bid prices shall include full compensation for the specified equipment items; the excavation, removal and disposal of existing sidewalk, location, placement and installation of parking racks; all materials, including all steel pipe and plate, screws, nuts and bolts, reinforcing steel and concrete; placing and finishing the concrete pad, and all labor, tools, and incidentals necessary to complete the work.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item No.</th>
<th>Description</th>
<th>Unit Price</th>
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<tbody>
<tr>
<td>710S-A</td>
<td>Class II Bicycle Rack</td>
<td>Per Each.</td>
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<tr>
<td>710S-B</td>
<td>Class III, Type 1 Bicycle Rack</td>
<td>Per Each.</td>
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<td>710S-C</td>
<td>Class III, Type 2 Bicycle Rack</td>
<td>Per Each.</td>
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<td>710S-D</td>
<td>Class III, Type 3 Bicycle Rack</td>
<td>Per Each.</td>
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<tr>
<td>710S-E</td>
<td>Class III, Other Type Bicycle Rack</td>
<td>Per Each.</td>
</tr>
<tr>
<td>710S-F</td>
<td>4 inch Concrete Bicycle Parking Pad</td>
<td>Per Square Foot</td>
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SPECIFIC CROSS REFERENCE MATERIALS

City of Austin Standard Specifications

<table>
<thead>
<tr>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No. 403S</td>
<td>Concrete for Structures</td>
</tr>
<tr>
<td>Item No. 406S</td>
<td>Reinforcing Steel</td>
</tr>
<tr>
<td>Item No. 407S</td>
<td>Fibrous Concrete</td>
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<tr>
<td>Item No. 408</td>
<td>Expansion Joint Materials</td>
</tr>
<tr>
<td>Item No. 409</td>
<td>Membrane Curing</td>
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</table>
Item No. 410          Concrete Structures
Item No. 432S         Concrete Sidewalks

<table>
<thead>
<tr>
<th>Standard Specification Item Number 710S, “Bicycle Racks”</th>
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<tbody>
<tr>
<td><strong>City of Austin Standard Details</strong></td>
</tr>
<tr>
<td><strong>Designation</strong></td>
</tr>
<tr>
<td>710S-1</td>
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<td>710S-2</td>
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<td>710S-3</td>
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<th>American Society for Testing and Materials (ASTM)</th>
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<td>ASTM A 36</td>
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<td>ASTM A 123</td>
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<tr>
<th>RELATED CROSS REFERENCE MATERIALS</th>
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<tbody>
<tr>
<td><strong>City of Austin Standard Contract Documents</strong></td>
</tr>
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| **City of Austin Standard Specifications**               |
| **Designation** | **Description**                        |
| Item No. 102S  | Clearing and Grubbing                  |
| Item No. 104S  | Removing Concrete                      |
| Item No. 110S  | Street Excavation                      |
| Item No. 111S  | Excavation                            |
| Item No. 132S  | Embankment                             |
| Item No. 201S  | Subgrade Preparation                   |
| Item No. 405   | Concrete Admixtures                    |
| Item No. 406   | Reinforced Steel Tolerances            |
| Item No. 411   | Surface Finishes for Concrete          |
| Item No. 602S  | Sodding for Erosion Control            |
| Item No. 604S  | Seeding for Erosion Control            |
| Item No. 610S  | Preservation of Trees and Other Vegetation |
| Item No. 642S  | Silt Fence                            |

<p>| Texas Department of Transportation: Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges |
| <strong>Designation</strong> | <strong>Description</strong>                        |
| Item 420        | Concrete Structures                     |
| Item 421        | Hydraulic Cement Concrete               |
| Item 427        | Surface Finishes for Concrete           |
| Item 437        | Concrete Admixtures                     |
| Item 440        | Reinforcing Steel                       |</p>
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