Provided By:

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PEDESTAL-SET SLABS FOR ROOFS
SECTION 32 14 13.16

Note: This guide specification for the U.S. is for paving slabs supported by pedestals for pedestrian roof plaza decks. Slabs installed with these methods are not recommended for areas subject to vehicular traffic. Paving slabs 12 x 12 in. (300 x 300 mm) in length and width or larger are typically pedestal set. See detail drawing ICPI-66.

This Section includes the term "Architect." Edit this term as necessary to identify the design professional in the General Conditions of the Contract. ***The text must be edited by a qualified, licensed design professional to suit specific project requirements. ICPI makes no representations or warranties of any kind, expressed or implied, and disclaims any liability for damages resulting in the use of this guide construction specification.***

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Concrete paving slabs with pedestals.
2. [Cleaning and Sealing].

B. Related Work.

1. Section [ ] - Membrane roofing.
2. Section [ ] - Roof drains.
3. Section [ ] - Roof accessories.
4. Section [ ] - Roof and Deck Insulation.
5. Section [ ] - Sheet Metal Flashing and Trim.

Note: Pavements should be designed in consultation with a qualified civil engineer, in accordance with established pavement design procedures and in accordance with the ICPI Tech Spec technical bulletins. Use the current year reference.

1.02 REFERENCES

A. Canadian Standards Association (CSA)

1. A231.1 Precast Concrete Paving Slabs.

B. Interlocking Concrete Pavement Institute (ICPI) Technical Bulletins

1. Tech Spec 5 Cleaning, Sealing and Joint Sand Stabilization of Interlocking Concrete Pavement.
2. Tech Spec 14 Segmental Concrete Paving Units for Roof Decks.

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1.03 SUBMITTALS

A. Shop drawings: Indicate perimeter conditions, relationship to adjoining materials and assemblies, expansion and control joints, paving slab [layout,] [patterns,] [colour, arrangement,] installation [and setting] details.

B. Four (4) pedestal samples.

C. Paving slabs:

1. [Four] representative full-size samples of each slab type, thickness, colour, finish. Select samples to indicate the extremes of colour and texture expected in the finished installation.
2. Accepted samples become the standard of acceptance for the work in this Section.
3. Laboratory test reports certifying compliance of the paving slabs with CSA A231.1.
4. Manufacturer's catalog literature and material safety data sheets for the safe handling of the specified materials and products.

1.04 QUALITY ASSURANCE

A. Paving Subcontractor Qualifications:

1. Utilize an installer having successfully completed concrete paving slab installation similar in design, material, and extent indicated on this project.
2. Utilize an installer holding a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.

B. Regulatory Requirements and Approvals: [Specify applicable licensing, bonding or other requirements of regulatory agencies.].

C. Mock-Ups:

1. Install a 2 x 2 m area.
2. Use this area to determine pedestal height and shimming requirements, joint sizes, lines, laying pattern(s), colour(s), and texture of the job.
3. This area will be used as the standard by which the work will be judged.
4. Subject to acceptance by owner, mock-up may be retained as part of finished work.
5. If mock-up is not retained, remove and properly dispose of mock-up.

1.05 DELIVERY, STORAGE & HANDLING

A. General: Comply with Division 1 Product Requirement Section.

B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers packaging with identification labels intact.

1. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
2. Deliver concrete paving slabs to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift.
3. Unload slabs at job site in such a manner that no damage occurs to the product.

D. Storage and Protection: Store materials protected such that they are kept free from mud, dirt, and other foreign materials. [Store concrete paving slab cleaners and sealers per manufacturer's instructions.]

1.06 PROJECT/SITE CONDITIONS

A. Environmental Requirements:

1. Do not install pedestals and slabs during heavy rain or snowfall.

1.07 MAINTENANCE

A. Extra Materials: Provide [Specify area] [Specify percentage.] additional material for use by owner for maintenance and repair including pedestals.

B. Slabs shall be the same production run as installed materials.

PART 2 PRODUCTS

2.01 CONCRETE PAVING SLABS

A. Manufacturer: [Specify ICPI member manufacturer name.].

1. Contact: [Specify ICPI member manufacturer contact information.].

B. Concrete paving slabs:

1. Slab type: [Specify name of product group, family, series, etc.].
   a. Material Standard: Comply with CSA A231.1
   b. 5 MPa average flexural strength. Freeze-thaw test requirements shall be waived for applications not exposed to freezing conditions.
   c. Colour [and finish]: [Specify colour.] [Specify finish].
   d. Size: [Specify mm] x [Specify mm] x [Specify mm] thick.
   e. Manufactured in a plant where paving products are certified by ICPI as having passed manufacturer designated CSA requirements in this specification.

2.02 PRODUCT SUBSTITUTIONS

A. Substitutions: No substitutions permitted.

2.03 PEDESTALS

A. [Name/number] Manufactured by [company].

PART 3 EXECUTION

Note: The elevations and surface tolerance of the roof deck determine the final surface elevations of concrete paving slabs. The slab installation contractor cannot correct deficiencies in elevations of the deck. Therefore, the surface elevations of the base should be checked and accepted by the General Contractor or designated party, with written certification to the paving subcontractor, prior to placing pedestals and paving slabs.

3.01 EXAMINATION

A. Acceptance of Site Verification of Conditions:

1. General Contractor shall inspect, accept and certify in writing to the slab installation subcontractor that roof conditions meet specifications for the following items prior to installation of concrete paving slabs.
   a. Verify that geotextiles, if applicable, have been placed according to drawings and specifications.
   b. Verify that roof deck materials, thickness, surface tolerances and elevations conform to specified requirements.
   c. Provide written test results for roof deck materials to the Owner, General Contractor and paving slab installation subcontractor.
   d. Verify location, type, and elevations of edge restraints, drains, drain holes, holes and inlets.

2. Do not proceed with installation of bedding materials until roof conditions are corrected by the General Contractor or designated subcontractor.

3.02 EXAMINATION

A. Verify that all surfaces, waterproofing membrane(s), protection board, insulation, drains, are free from dirt, oil, grease or any deleterious substances and debris which may prevent installation, drainage, and stability of the paving slab installation.

B. Verify that roof deck has a minimum of 2% slope to drains.

C. Do not begin paving work until such conditions have been corrected [to the Architect's satisfaction] and are ready to receive leveling materials and paving slabs.

3.03 INSTALLATION

Note: Some waterproofing membranes are subject to softening at high ambient temperatures. Protection board is recommended in such situations under pedestal systems to decrease point load pressure on the membrane, subsequent indentations and ponding. Check with the membrane manufacturer for compatibility between the membrane and pedestals. Revise specification to include protection board as required.

A. Locate pedestals according to manufacturer's recommendations and as indicated on the drawings.

B. Place paving slabs on pedestals so they are supported according to pedestal manufacturer's recommendations.

C. Align pedestals in all directions and shim elevations of slabs as work progresses and according to the manufacturer's recommendations.

D. Trim and remove uncovered portion of pedestals to fit tightly with slabs against parapets, walls, and protrusions in the roof. Cut paving slabs with a masonry saw to fit in these areas. Cut slabs without damage to exposed faces and edges. Cut units should be no smaller than [1/2] of a whole slab.

E. Maintain consistent joint widths and joints aligned in all directions as indicated on the drawings. Do not install cracked or broken paving slabs.

F. Remove cut pieces and other debris from the surface and on the roof deck. Sweep slab surfaces clean.

3.03 FIELD QUALITY CONTROL

A. Check final surface elevations for conformance to drawings.

B. Lippage: Maximum 1.5 mm height variation between adjacent paving slabs.

Note: Cleaning and sealing may be required for some applications. See ICPI Tech Spec 5 Cleaning, Sealing and Joint Sand Stabilization of Interlocking Concrete Pavement for guidance on when to clean and seal the slab surfaces. Delete article below if cleaners and sealers are not applied.

3.04 [CLEANING] [SEALING]

A. [Clean] [Seal] concrete slabs in accordance with the manufacturer's written recommendations.

3.05 PROTECTION

A. After work in this section is complete, the General Contractor shall be responsible for protecting work from damage due to subsequent construction activity on the site.

END OF SECTION

ABOUT CMHA

The Concrete Masonry & Hardscapes Association (CMHA) represents a unification of the Interlocking Concrete Pavement Institute (ICPI) and National Concrete Masonry Association (NCMA). CMHA is a trade association representing US and Canadian producers and suppliers in the concrete masonry and hardscape industry, as well as contractors of interlocking concrete pavement and segmental retaining walls. CMHA is the authority for segmental concrete products and systems, which are the best value and preferred choice for resilient pavement, structures, and living spaces. CMHA is dedicated to the advancement of these building systems through research, promotion, education, and the development of manufacturing guides, design codes and resources, testing standards, and construction practices.

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