

## **RIGID PAVING**

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**General:** Exterior walks and paved areas constructed in conjunction with new building projects shall conform to the requirements of these standards.

**Snow Removal Considerations:** The requirement for snow removal from all paved surfaces shall be recognized in the layout and construction of walks and paving. Areas which can only be cleaned by hand removal should be kept to an absolute minimum. Ramps should be provided between changes of level in paved areas to allow movement of tractor-mounted plows and/or blowers. Walks and steps with snow melt systems shall include provisions to intercept and remove melted water so that it will not refreeze on adjacent paved areas which do not have snow melt systems.

**Walks:**

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5. Slump measured at point of placement shall have a tolerance of +/- 1.5" for specified (from mix design) slump greater than 4" and +/- 1" for specified slump of 4" or less. Specified slumps shall be permitted to be increased to a maximum of 9" by using mid-range water reducing agents or high-range water reducing agents.

G. All rigid paving shall receive a light broom finish unless otherwise noted. Broom lines are to run perpendicular to foot traffic. All exposed concrete edges to have one half inch (1/2") radius

H. Immediately after the concrete has been finished, the concrete surface shall be sealed with a uniform application, no less than 1 gallon per 200 square feet, of white pigmented membrane cure ASTM designation C309, Type 1, Class A.

I. Control joints shall be cut in green concrete (less than 24 hours old) using a diamond blade with a crack chaser. Depth shall be one-fourth (1/3) of slab depth. Joint locations shall be approved by UNL prior to placement. A longitudinal control joint is required if walk width is greater than 8'-0".

J. Full depth expansion joints are to be installed at 50' O/C. Preformed expansion joint material shall be 1/2" and meet ASTM D1751. Joint shall be sealed with polyurethane sealant. Joint shall be cleaned and inspected prior to sealing. Joint locations shall be approved by UNL prior to placement.

K. Sidewalk curves shall be formed true and smooth. Project specific jointing patterns may be required by UNL Landscape Services.

L. All curb ramps shall conform to 2011 City of Lincoln Standards (LSP 600) as well as 2002 ADA accessibility guidelines. Detectible warning panels shall be made cast iron and approved by UNL prior to installation. Warning plates must comply with ADA dimensions and shall be installed as per the manufacturer's instructions. All curb ramps shall have a minimum width of seven feet (7') measured at intersection with street/gutter line.

M. Curb and gutter construction shall meet 2011 City of Lincoln Standards (LSP 651).

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Q. The following product and material submittals must be submitted to UNL for approval a minimum of 14 days prior to scheduled use. No unapproved products or materials shall be used.

1. Concrete mix design and compressive strength test results.
2. Any concrete admixture to be added either at the batch plant or work site.
3. Cure
4. Expansion joint material
5. Joint sealant
6. Reinforcing steel or mesh
7. Detectible warning panel

### ***Exterior stairs and ramps:***

A. Protection: All stairs and ramps associated with a building shall be covered by the building roof or an overhead canopy.

B. Stair Proportions: Exterior stairs, including those providing direct access to a building entrance, shall have a tread riser proportion of not more than 6:12.

3. Litter Containers: Parking lots shall be designed with space for placement of litter containers.
4. Landscaping: Parking lot layout shall allow appropriate landscape enhancement.
  - a. Curb islands shall be a minimum of 10' with a minimum planting area of 100 sq. ft. The extent of the landscaping and landscape screening to be included within the scope of the project shall be established during the design process in conjunction with the UNL Project Manager, UNL Landscape Services and UNL Campus Landscape Architect.
5. Manholes in Paved Areas: Manhole rims or covers projecting more than ¼" above the surrounding paved surface create problems for snow plows and blowers. Project details and specifications shall require the correction of this defect when it occurs.

### B. Drainage:

1. All parking lots shall be designed to develop proper site drainage, directed at the disposal of all storm water accumulated on the site.
2. Parking lots constructed on UNL campuses and other facility sites which contain an area of 2,500 square feet or more; and which are located within 150 feet of an existing storm sewer or other drainage way, including an open channel or creek, shall be designed to direct storm water runoff into such storm sewers or drainage ways. The parking lot shall be graded and surfaced such that storm water runoff from the site is collected on the site by a parking lot drainage system and carried to the storm sewer system, and not allowed to discharge through the driveway entrances and exits onto the public way. Proposed finished elevations of the parking lot must be indicated on appropriate plans. The calculations for storm runoff shall be designed in accordance with City of Lincoln Storm Sewer Design Criteria. All storm sewer construction procedures shall conform to the Construction and Material Specifications section of the Standard Specifications of the City of Lincoln, Nebraska.

### C. Parking Barriers:

1. Approved parking barriers shall be provided around parking lots, to prevent the parking of vehicles overhanging the sidewalk space, public alley, or other public property, and adjacent residential property. Approved barriers are also required as necessary to protect any required landscaping or landscape screen planting and to prevent the parking of vehicles in a minimum front yard setback in which parking is prohibited.
2. Approved Barriers: Approved barriers include the following type barriers. Other barriers may be approved, subject to the approval of the UNL Project Representative.
  - a. Poured concrete curb, nominal 6" x 6" exposed.
  - b. Prefab barriers, firmly and permanently anchored. The use of prefabricated barriers must be approved by UNL Landscape Services and UNL Parking and Transit Services.
3. Location: Barriers shall be located to contain the parking with the approved parking lot. When a concrete curb is used as a barrier for perpendicular or angle parking, it shall be offset at least two (2) feet from the edge of the parking lot to allow for the front overhand of the vehicle. Other type barriers may be located at the edge of the parking lot.

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