

**OFFICIAL PUBLIC NOTICE**

**AMENDMENT NO. 11 TO THE DESIGN CRITERIA  
AND  
STANDARD SPECIFICATIONS**

**Date:** July 15, 2015

**Attention:** Contractors, Architects and Engineers

**Subject:** Changes to the City of Manhattan Concrete Pavement Mix Design Specifications

Effective **July 1, 2015**, changes in policies, design criteria and construction standard specifications shall take place for all projects that are not currently under design or under construction within the City limits of Manhattan, Kansas. The following changes are as follows:

**Item No. 11.1:** Concrete Paving Mix Design

The following concrete paving design mix is to be used for all concrete paving completed within the City on City right-of-ways, or travel easements that are accessible to the public.

<b>PRODUCT</b>	<b>WEIGHT (lb)</b>	<b>SPECIFIC GRAVITY</b>	<b>VOLUME (cu.ft.)</b>
Type I/II Cement	454	3.15	2.31
Fly Ash (Class F)	110	2.60	.68
Coarse Aggregate	1,020	2.60	6.29
Fine Aggregate	1,929	2.63	11.75
Water	30.5 gal	1	4.08
Admix	Water Reducer	28 lq oz	
Admix	Air Entrained	5 lq oz.	
	Air Content	7% (+/-1%)	1.89
Yield	3,769		27.00

- 1.) Aggregates shall meet the requirements of the Kansas Department of Transportation (KDOT) Section 1116, "Aggregates for on Grade Concrete", 2015 Edition.
- 2.) Aggregate Gradation shall meet KDOT Table 1116-2, Type MA-3 latest edition.
- 3.) Cementations material shall have a minimum of 564 lbs per cubic yard and shall have a minimum 28-day compressive strength of 4,000 lb's/square inch.
- 4.) The minimum amount of ASTM C 150 cement shall be 454 lb of Type I/II Portland Cement per cubic yard.
- 5.) ASTM C 628 Class F fly ash shall be a maximum of 20% of the combined cementations weight per cubic yard.

- 6.) Slag or Class C fly ash is **NOT** an as equal product and shall only be allowed as a substitution with written permission from the City Engineer.
- 7.) Water cement ratio shall not exceed .45. Only potable water shall be used, or water meeting KDOT's requirement for potable water.
- 8.) Air entrainment requirements shall meet the requirements set forth in the current ASTM C269. The percentage of air content by volume shall be 7% (+/- 1%).

**Winter Mix Paving**

Concrete paving between November 1 and March 1 shall have an approved cold weather-paving plan, submitted to the City Engineer for review, and shall detail the additives used to successfully cure the concrete from cold temperatures.

**Item No. 11.2:** Aggregate Base for on Grade Paving

Sub Base Aggregate for on grade paving shall meet the following gradation. Aggregate for sub base shall be either limestone rock, crushed concrete, or asphalt millings.

Sieve No. (% Retained)												
2"	1.5"	1"	¾"	½"	⅜"	4	8	16	30	50	100	200
0	5	10	20	35	50	60	80	85	90	93	95	98

Percent retained shall be +/- 5%

**Item No. 11.3** New standard drawing sheet

New Sheet added to standard drawings. Erosion Control sheet 2850 and will be posted to the City website for inclusion into plan sets that bid after August 1, 2015

**Item No. 11.4** Revised Standard drawing sheet

All sheets have the new city logo. In addition, Sheet Nos. 1130, 2310, 2320, 2350, 2410, 26110, 2620, 2630, 2730, and 5110 have minor changes and will be posted to the City website for inclusion into plan sets that bid after August 1, 2015.

**Item No. 11.5**

Addenda's shall have a signature block for the City Engineer. See attached example

**Item No. 11.6**

The City is transitioning to an electronic plan review format. As of August 1, 2015, all plans and specifications for a City bid will be posted <http://planroom.drexeltech.com/View/Default.aspx>. Interested bidders will need to register with Drexel prior to reviewing bidding documents.

Consultants will send final plans and specifications to the City when a project is ready for advertising. The City will then send those items to Drexel for posting to the plan room. All items shall be in PDF format and sent to Inka Eck, Executive Secretary, [eck@cityofmhk.com](mailto:eck@cityofmhk.com) or Kristen Isch, Senior Administrative Assistant, [isch@cityofmhk.com](mailto:isch@cityofmhk.com) for posting to Drexel.

Sincerely,



Brian D. Johnson, P.E.  
City Engineer

rko/08092

cc: Robert K. Ott, P.E., Director of Public Works  
Ken Hays, City Project Coordinator  
Peter Clark, P.T.O.E., P.E.  
Shane Swope, P.E.  
B.J. Edmonston, P.E.