



LEE'S SUMMIT MISSOURI

DESIGN AND CONSTRUCTION MANUAL DESIGN MODIFICATION REQUEST

PROJECT NAME: Streets of West Pryor - Lot 7a - Signature at West Pryor

PREMISE ADDRESS: 2100 NW Lowenstein Drive, Lee's Summit, MO 64081

PERMIT NUMBER: 20214153

OWNER'S NAME: Streets of West Pryor, LLC

TO: The City Engineer

In accordance with the Lee's Summit Design and Construction Manual (DCM) Section 1002.A, I wish to apply for a modification to one or more specification (s). The following articulates my request for your review and action. (NOTE: Cite specific code sections and engineering justification and drawings.)

CFS requests to alter the parking lot improvement for the project in accordance with the attached letter.

The original section to be revised in the Lee's Summit specification is Table 8-5, "Parking Lot Pavement", Section 8.620.f.1a(1).

SUBMITTED BY:

NAME: Adam McEachron, P.E.

() OWNER (X) OWNER'S AGENT

ADDRESS: 1100 W. Cambridge Cir. Dr. #700

Tel.# 913.627.9041

CITY, STATE, ZIP: Kansas City, KS 66103


Email: adammm@cfse.com

SIGNATURE: 

FORWARDING MANAGER: Kent Monte RECOMMENDATION ☒ APPROVAL () DENIAL

SIGNATURE:  DATE: 29 Nov 21

GEORGE BINGER III, P.E. – CITY ENGINEER: ☒ APPROVED () DENIED

SIGNATURE:  DATE: 12/8/2021

COMMENTS APWA Type 1 has a max lift thickness of 4", so base must be laid in 2 lifts. However, suggested min thickness is 3" based on nominal agg size. Suggested alternates could be (a) 2.5" Type 3 surface with

A COPY MUST BE ATTACHED TO THE APPROVED PLANS

4" Type 1 Base (each layer could be placed in one lift) or (b) 1.5" Type 3 surface

Development Services

220 SE Green Street | Lee's Summit, MO 64063 | P: 816.969.1200 | F: 816.969.1221 | cityofLS.net

with 5" Type 2 base placed in 2 lifts (total of lifts required to place).



Cook, Flatt & Strobel Engineers
1100 W. Cambridge Circle Drive, Suite 700
Kansas City, Kansas 66103
913.627.9040

November 18, 2021

David N. Olson
Streets of West Pryor, LLC

Re: Alternative Pavement Submission
Streets of West Pryor – Lot 7A – Signature at West Pryor
Permit #: 20214153
Address: 2100 NW Lowenstein Drive

Cook, Flatt & Strobel (CFS) Engineers, P.A. has reviewed the pavement section for the reference project. The current proposed pavement section is Lee's Summit's standard section for heavy duty, private roads. It is understood that this pavement section is designed to be supported by a compacted soil sub-grade.

During excavation, it has been discovered that the pavement in some areas will be supported by limestone bedrock. Due to this increased strength of the sub-grade material, the chemical treatment of the sub-grade is not necessary. See the attached evaluation performed using the SpectraPave software. Below is a breakdown of the current Lee's Summit requirements compared with the proposed pavement sections.

Material	Lee's Summit Heavy Duty Pavement (in)	Proposed Pavement (Soil Subgrade) (in)	Proposed Pavement (Bedrock Subgrade) (in)
Surface Asphalt APWA Type III	1.5	1.5	1.5
Base Asphalt APWA Type I	5.0	5.0	5.0
MoDOT Type 5 Base Rock	6.0	6.0	6.0
Cement Treated Sub-Base	6.0	12.0	NA
Sub-Grade Material	Compacted Soil	Compacted Soil	Bedrock
ESAL's (millions)	0.987	3.218	17.092

A CBR value of 3 was utilized for the current pavement sections that would typically bear on compacted clay. A CBR of 40 was utilized for the proposed pavement section that will be bearing on shale or limestone bedrock. A CBR of solid bedrock cannot be re-created in the laboratory to the ASTM requirements. This value should be conservative as well graded crushed stone CBR values range from 15 to 40, solid bedrock should be significantly higher than this. For drainage purposes, weep holes will be added to the adjacent storm sewer inlets below the asphalt pavement.

There will be a transition zone from where the bedrock enters the 12 inches of stabilized sub-grade that will not be treatable due to the depth of the bedrock. In this zone, the soils will be replaced with additional base rock. If the cement treated soil and/or base rock needs to be excavated for utilities after placement, the excavation will be entirely replaced with compacted MOTDOT Type 5 base rock. If the asphalt is in place and utilities need to be placed after construction, APWA recommendations for utilities through existing pavement will be followed.

Please contact CFS with further questions. 913-627-4090

Respectfully,
Cook, Flatt & Strobel Engineers, P.A.

Adam M. McEachron, P.E.
Senior Geotechnical Engineer

