LEE'S SUMMIT
MISSOURI

# CODE MODIFICATION REQUEST

BUILDING/STRUCTURE NAME: Streets of West Pryor Lot13

PREMISE ADDRESS: 1020 SW Pryor Road

PERMIT NUMBER (if applicable): PL2023290

OWNER'S NAME: SWP XIII, LLC

TO: Director of Development Services

In accordance with the Lee's Summit Building Code, I wish to apply for a modification to one or more provisions of the code as I feel that the spirit and intent of the Lee's Summit Building Code are observed the public health, welfare and safety are assured. The following articulates my request for your review and action. (NOTE: ATTACH ANY ADDITIONAL INFORMATION NECESSARY)
Type of Request: (X) Design ( ) Construction

Replace parking lot base rock with crushed concrete meeting MODOT Type 5 requirements

SUBMITTED BY:
NAME: Adam McEachron ( ) OWNER (X) OWNER'S AGENT
ADDRESS: 1100 W Cambridge Cir Dr #700 Tel.# 913.627.9040
CITY, STATE, ZIP: Kansas City Kansas 66103 SIGNATURE:

Plan Review / Inspections Manager: ( ) APPROVAL ( ) DENIAL

SIGNATURE: DATE:

Director of Development Services: ( ) APPROVED ( ) DENIED

SIGNATURE: DATE:

COMMENTS

A COPY MUST BE ATTACHED TO THE APPROVED PLANS ON THE JOB SITE

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

September 11, 2024

David N. Olson
SWP XIII, LLC
P.O. Box 24302
Overland Park, KS 66283

Re: The Streets of West Pryor
Lot 13 Pavement Section
Lee's Summit, Missouri
CFS # 23-1128

Mr. Olson,

Cook, Flatt & Strobel (CFS) Engineers, P.A. has reviewed the pavement section for the reference project. The contractor plans to utilize crushed concrete granular base in lieu of crushed limestone granular base. The information attached regarding laboratory testing of the crushed concrete shows that the material meets MODOT Type 5 specification for sieve analysis and Atterberg limits. Also, the Florida Department of Transportation recommends the same structural coefficient for crushed concrete base as for crushed limestone base.

See the attached evaluation performed using the Tensar Plus flexible pavement design software. Below is a breakdown of the current Lee's Summit requirements compared with the proposed pavement sections.

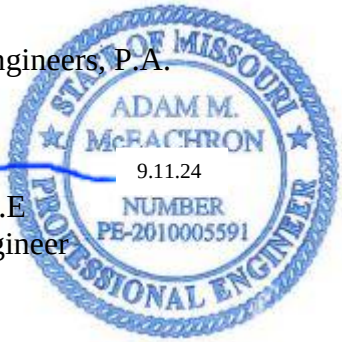
| Material | Lee's Summit Light Duty Pavement (in) | Lee's Summit Heavy Duty Pavement (in) | Proposed Pavement Light Duty (in) | Proposed Pavement Heavy Duty (in) |
|---|---|---|---|---|
| Surface Asphalt APWA Type III | 1.5 | 1.5 | 1.5 | 1.5 |
| Base Asphalt APWA Type I | 4.0 | 5.0 | 4.0 | 5.0 |
| MoDOT Type 5 Base Rock | 6.0 | 6.0 | NA | NA |
| Crushed Concrete Type 5 | NA | NA | 6.0 | 6.0 |
| Geogrid | Yes | Yes | Yes | Yes |
| Sub-Grade Material | Compacted Soil | Compacted Soil | Soil Rock Fill | Soil Rock Fill |
| Structural Number | 3.160 | 3.560 | 3.160 | 3.560 |

A CBR value of 3.3 was utilized for the pavement sub-grade. Based on the input data, the pavement sections are equivalent. This information has been reviewed and approved by the civil engineer of record for the project.

It should be noted that CFS tested the fill material for the site and observed and passed a proof-roll on the sub-grade prior to placement of the geo-grid and base rock. A proof-roll was performed and passed on the base rock prior to asphalt placement as well.

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

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




Adam M. McEachron, P.E
Senior Geotechnical Engineer

Sam Malinowski, P.E.
Project Civil Engineer

Attachments: FDOT Flexible Pavement Design Coefficients
MDOT Section 1007 Aggregate Base
Laboratory Testing of Crushed Concrete Utilized

## TABLE 5.4

## STRUCTURAL COEFFICIENTS FOR DIFFERENT PAVEMENT LAYERS (New Construction or Reconstruction)

| Layer Type | Layer Coeff. per inch | Spec. Sec. |
|---|---|---|
| FC-5 | 0.00 | 337 |
| FC-12.5, FC-9.5 | 0.44 | 337 |
| Superpave Type SP (SP-9.5, SP-12.5, SP-19.0) | 0.44 | 334 |
| Limerock (LBR 100) | 0.18 | 200 |
| Cememted Coquina (LBR 100) | 0.18 | 200 |
| Shell Rock (LBR 100) | 0.18 | 200 |
| Bank Run Shell (LBR 100) | 0.18 | 200 |
| Graded Aggregate (LBR 100) | 0.15 | 204 |
| Recycled Concrete Aggregate (LBR 120) | 0.15 | 204 |
| Type B-12.5 | 0.30 | 234 |
| Limerock Stab. (LBR 70) | 0.12 | 230 |
| Shell Stab. (LBR 70) | 0.10 | |
| Sand Clay (LBR 75) | 0.12 | |
| Soil Cement (500 psi) | 0.20 | |
| Soil Cement (300 psi) | 0.15 | |
| Type B Stab. (LBR 40) | 0.08 | |
| Type B Stab. (LBR 30) | 0.06 | |
| Type C Stab. | 0.06 | |
| Cement Treated (300 psi) | 0.12 | |
| Lime Treated | 0.08 | |

## SECTION 1007
## AGGREGATE FOR BASE

**1007.1 Scope.** This specification covers aggregate to be used for base.

**1007.2 Type 1 Aggregate.**

**1007.2.1** Type 1 aggregate for base shall consist of crushed stone, sand and gravel or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing No. 40 sieve shall have a maximum plasticity index of six. Any sand, silt and clay and any deleterious rock and shale shall be uniformly distributed throughout the material.

**1007.2.2** The aggregate shall be in accordance with the following gradation requirements:

| Sieve | Percent by Weight |
|---|---|
| Passing 1-inch | 100 |
| Passing 1/2-inch | 60-90 |
| Passing No. 4 | 35-60 |
| Passing No. 30 | 10-35 |

**1007.3. Type 5 Aggregate.**

**1007.3.1** Type 5 aggregate for base shall consist of crushed stone, sand and gravel or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing the No. 40 sieve shall have a plasticity index not to exceed six. Any sand, silt and clay, and any deleterious rock and shale shall be uniformly distributed throughout the material.

**1007.3.2** Type 5 aggregate shall be in accordance with the following gradation requirements:

| Sieve | Percent by Weight |
|---|---|
| Passing 1-inch | 100 |
| Passing 1/2-inch | 60-90 |
| Passing No. 4 | 35-60 |
| Passing No. 30 | 10-35 |
| Passing No. 200 | 0-15 |

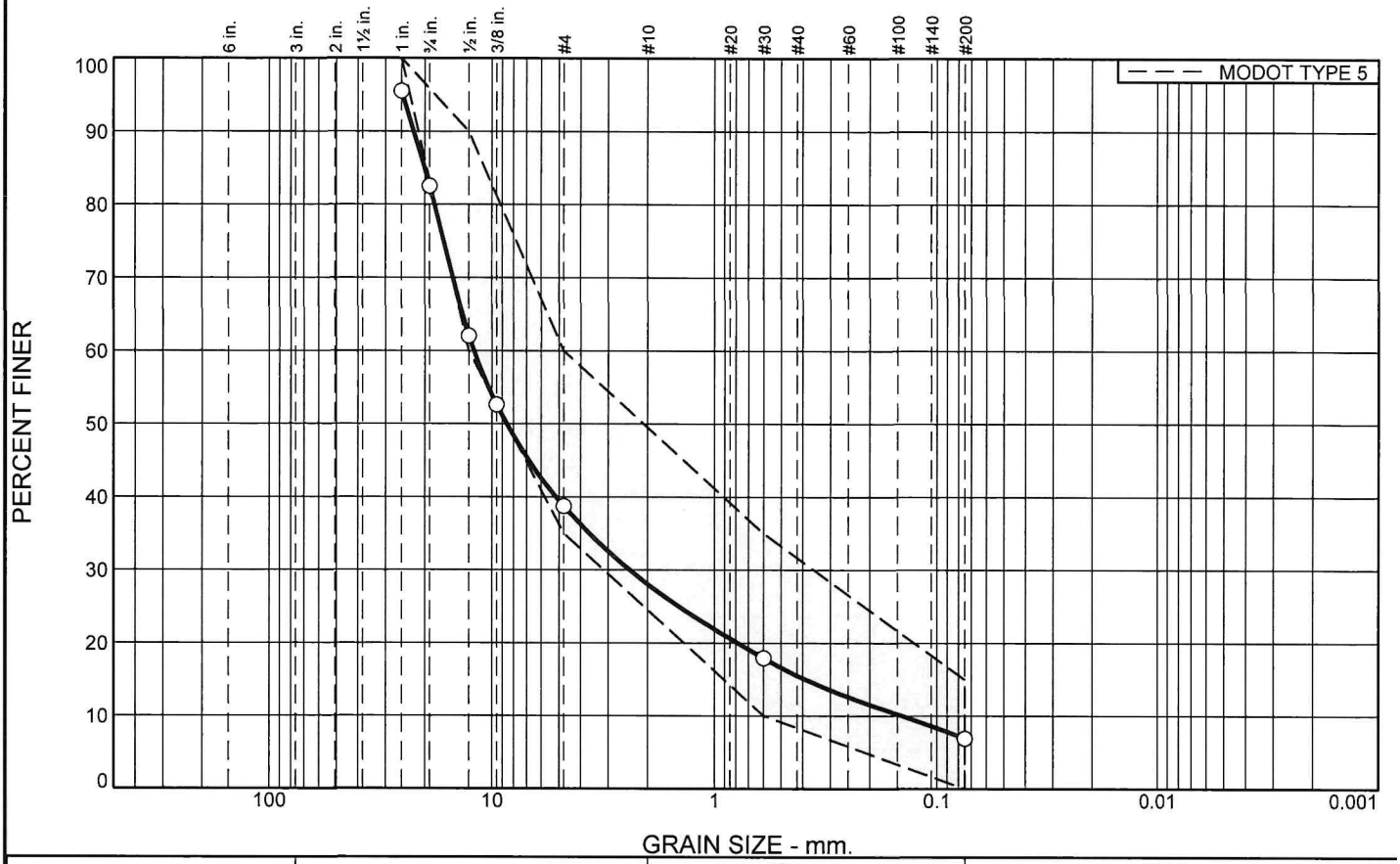
**1007.4. Type 7 Aggregate.**

**1007.4.1** Type 7 aggregate for base shall consist of crushed stone, sand and gravel, or reclaimed asphalt or concrete. The aggregate shall not contain more than 15 percent deleterious rock and shale. The fraction passing the No. 40 sieve shall have a plasticity index not to exceed six. Any sand, silt and clay, and any deleterious rock and shale shall be uniformly distributed throughout the material.

**1007.4.2** Type 7 aggregate shall be in accordance with the following gradation requirements:

| Sieve | Percent by Weight |
|---|---|
| Passing 1 1/2-inch | 100 |
| Passing 1-inch | 70-100 |
| Passing No. 8 | 15-50 |
| Passing No. 200 | 0-12 |

# Particle Size Distribution Report




| % +3" | % Gravel | % Sand | | % Fines | |
|---|---|---|---|---|---|
| | | Coarse | Fine | Silt | Clay |
| | | 12.6 | 8.6 | 6.9 | |

| SIEVE SIZE OR DIAMETER | PERCENT FINER | SPEC.* PERCENT | PASS? (X=NO) |
|---|---|---|---|
| 1" | 95.5 | 100 | X |
| 3/4" | 82.6 | | |
| 1/2" | 62.0 | 60-90 | |
| 3/8" | 52.6 | | |
| #4 | 38.7 | 35-60 | |
| #30 | 17.9 | 10-35 | |
| #200 | 6.9 | 0-15 | |

* MODOT TYPE 5

**Source of Sample:** .025 Bulk Sample

**Soil Description**

Client Drop 1" minus Recycled Concrete

**Atterberg Limits**

PL= 23 LL= 28 PI= 5

**Coefficients**

$D_{90}$= 22.4263 $D_{85}$= 20.0697 $D_{60}$= 12.0633
$D_{50}$= 8.5750 $D_{30}$= 2.4053 $D_{15}$= 0.3905
$D_{10}$= 0.1428 $C_u$= 84.49 $C_c$= 3.36

**Classification**

USCS= GP-GM AASHTO= A-1-a

**Remarks**

KTI Report No.418162C.025

**Date:** 3/19/24

KTI

**Client:** Metropolitan Concrete Recycle
**Project:** Metropolitan Concrete Recycle-Testing

**Project No:** 418162C **Figure**

**Tested By:** DD **Checked By:** Otto J. Kruger, Jr., PE