



February 3, 2021

Mr. Don Nolte, Engineering Operations Manager
Town of Cheshire
84 South Main Street
Cheshire, CT 06410

**Re: Proposed Starbucks
944 South Main Street
Cheshire, Connecticut
SLR #141.17378.00001.0040**

Dear Mr. Nolte,

According to the Federal Emergency Management Agency (FEMA) mapping of the Mill River, the 100-year floodplain projects onto the site with an associated floodplain elevation of 155.5. An analysis has been conducted to provide FEMA floodplain storage under proposed conditions to match or exceed the existing storage volume on site.

Using computer-aided design, a volumetric calculation was performed to determine the volume of storage on site below the FEMA floodplain at elevation 155.5 under existing and proposed conditions. Under existing conditions and within the limit of disturbance, the volume of storage below the floodplain was determined to be approximately 239.0 cubic yards. Under proposed conditions, the total volume of storage below the floodplain was determined to be approximately 241.5 cubic yards, which included site grading and stormwater drainage system storage.

In addition to the 212.2 cubic yards provided by the site grading, 29.3 cubic yards of storage was accounted for in the stormwater collection system up to the floodplain at elevation 155.5. To provide adequate storage volume on site, stormwater pipes from CCB 3 to CCB 4 and CCB 3 to CLCB 5 are required to be 24" pipes. Please see attached volumetric calculations.

It is determined that the proposed site matches or exceeds existing FEMA floodplain storage volume. Should you have any questions, please feel free to contact me at 203-271-1773.

Sincerely,

SLR International Corporation

A handwritten signature in blue ink, appearing to read "Darin L. Overton".

Darin L. Overton, PE
Principal Civil Engineer

Enclosure

17378.00001.0040.f321.ltr.docx

Proposed Starbucks
944 South Main Street
Cheshire, CT
SLR: 141.17378.00001
2/2/2021
Calculated by: KVN

Floodplain Storage Accomodation

Approx. Flood Plain Elevation 155.5

Existing Storage volume below Elev. 155.5 **238.96 CY**

6451.92 CF

Proposed Storage w/ storm system volume **241.81 CY**

Proposed Storage volume below Elev. 155.5 212.29 CY
5731.83 CF

Total Volume of Storm Water System 797.17 CF
29.52 CY

Piping

Length of 12" 136
Length of 24" 155 FT
Volume of pipe 593.76 CF

CDS Unit (1515-3)

Inv. Elev. 151
Ht to FP 4.5
Inner Dia. 3 ft
Volume of CDS 31.81 CF

CLCB 2

Inv. Elev. 151.2
Ht to FP 4.3 FT
CB Area 12 SF
Volume 51.60 CF

CCB 3

Inv. Elev. 151.7
Ht to FP 3.8 FT
CB Area 12 SF
Volume 45.60 CF

CCB 4

Inv. Elev.(24") 152.1
Ht to FP 3.4 FT
CB Area 12 SF
Volume 40.80 CF

CLCB 5

Inv. Elev. (24") 152.7
Ht to FP 2.8 FT
CB Area 12 SF
Volume 33.60 CF

