CONCRETE TABLE
Quantities Per Cubic Meter
Aggregates (SSD)

Mix 1 (Fly Ash)

Aggregate Type	Fine Aggregate (kg)	#8 Coarse Aggregate (kg)	Total (kg)	Cement Content (kg)	Fly Ash (kg)	Water to Cementitious Ratio Max	Air Content +/-2%
Gravel	783	878	1661	314	101	0.38	7
Limestone	783	887	1670	314	101	0.38	7
Slag	783	771	1554	314	101	0.38	7

Mix 2 (GGBF Slag)

Aggregate Type	Fine Aggregate (kg)	#8 Coarse Aggregate (kg)	Total (kg)	Cement Content (kg)	GGBF Slag (kg)	Water to Cementitious Ratio Max	Air Content +/-2%
Gravel	792	878	1670	291	125	0.38	7
Limestone	792	887	1679	291	125	0.38	7
Slag	792	768	1560	291	125	0.38	7

Mix 3 (Fly Ash + Microsilica)

Aggregate Type	Fine Aggregate (kg)	#8 Coarse Aggregate (kg)	Total (kg)	Cement Content (kg)	Fly Ash (kg)	Micro-Silica (kg)	Water to Cementitious Ratio Max	Air Content +/-2%
Gravel	804	875	1679	285	89	18	0.40	7
Limestone	804	884	1688	285	89	18	0.40	7
Slag	804	768	1572	285	89	18	0.40	7

Mix 4 (GGBF Slag + Microsilica)

Aggregate Type	Fine Aggregate (kg)	#8 Coarse Aggregate (kg)	Total (kg)	Cement Content (kg)	GGBF Slag (kg)	Micro-Silica (kg)	Water to Cementitious Ratio Max	Air Content +/-2%
Gravel	813	875	1688	261	113	18	0.40	7
Limestone	813	884	1697	261	113	18	0.40	7
Slag	813	768	1581	261	113	18	0.40	7

200mm maximum slump at placement for all mixes.

The weights specified in the concrete table were calculated for materials of the following bulk specific gravities (SSD): natural sand and gravel 2.62, limestone sand 2.68, limestone 2.65, slag 2.30, fly ash 2.65, GGBF slag 2.90, Microsilica solids 2.20, and Portland cement 3.15. For aggregates of specific gravities differing more than plus or minus 0.02 from these, the weights in the table will be corrected.

If, during the progress of work, the specific gravity of one or both of the aggregates changes, the batch weight will be adjusted to conform to the new specific gravity.

The water cement ratio will be calculated based upon the total cementitious material. Cementitious material will include Portland cement, fly ash, GGBF slag and Microsilica (solids).

The proportions of coarse and fine aggregate will be adjusted to provide the maximum amount of coarse aggregate possible and still provide a workable and finishable mix. The Contractor may modify the mixes shown by adjusting the coarse and fine aggregates up to 100 pounds (50 kg) each, unless otherwise approved by the Engineer.

844.05 PROVISIONS. An approved high range water reducer (Type F or G) will be used to achieve the desired workability level at the specified water cementitious ratio. These chemical admixtures will conform to 705.12 (ASTM C 494) Type F or G and be approved by the Office of Materials Management. The majority of these admixtures will be added at the plant.

Type A or D chemical admixture conforming to 705.12 (ASTM C494) will be added to the concrete at the plant. The addition of these admixtures will supersede the concrete temperature requirements under items 899.03 and 842.06. The trial batch, as specified below, will be repeated until the mix exhibits the necessary finishability characteristics.

The moisture content of the coarse aggregate will be above the saturated surface dry (SSD) condition immediately prior to being incorporated into the mix.

The cementitious content will be maintained and the maximum water cementitious ratio will not be exceeded. The Type F or G admixture will be added and mixed in accordance with the manufacturer's recommendations. The Contractor will furnish a volumetric dispenser for the Type F or G or have a gage on each truck-mounted Type F or G dispensing tank. After discharging concrete and prior to reloading, all wash water will be removed, by reversing each truck drum at the plant.

If Type F or G admixture is added at the job site, the load will be mixed a minimum of 5 minutes at mixing speed.

If during discharge any mechanical balling or microsilica balling whatsoever is observed, the load shall be rejected and the mixing process revised to prevent further balling.

If slump loss occurs before placement of the concrete, the concrete may be "replasticized" with the admixture to restore plasticity. The slump range and air content will be rechecked to ensure conformance to the specifications. If the consistency of the load after "replasticizing" is such as to cause segregation of the components, this will be cause for rejection of the load. Discharge will be complete within 90 minutes after the combining of the water and the cementitious material.

The Contractor will perform sufficient advance testing to ensure conformance with these specifications prior to placement of the concrete.

Sampling and testing for entrained air content and slump will be measured at the point of placement. For deck pours, this will be at the point of placement on the deck.

The Contractor will make one or more trial batches of concrete meeting these specifications, of the size to be hauled, at least four days before the deck concrete is to be placed. The Contractor will cast one or more test slabs, 8 feet (2.4m) x 4 feet (1.2m) x 4 inches (0.1m), finished and textured in accordance with these requirements. The