

## F/HWD Concrete Mix Design Data

### F/HWD Placement Concrete Mix Per Cubic Yard

Material	750 P1
No. 57 Coarse Aggregate, lbs	1475
No. 8 Intermediate Coarse Aggregate, lbs	490
Concrete Sand, lbs	1225
Water, lbs	230
Type 1 Portland Cement, lbs	500
Air, %	7
Slump, in.	5.5
SIKAair, oz.	5
W/C Ratio	0.46

### No. 57 Coarse Aggregate - Coarse Aggregate Testing

Specific Gravity	2.76
Unit Weight (dry rodded)	101 lb/Cu Ft
Percent Voids	49%
Absorption	0.4%
LA Abrasion Loss %	16.30

#### Gradation

Sieve	%Passing	ASTM C-33
1 1/2"	100.0	100
1"	99.1	95 - 100
3/4"	90.2	
1/2"	52.1	25 - 60
3/8"	25.0	
#4	8.8	0 - 10
#8	3.7	0 - 5

## No. 8 Intermediate Coarse Aggregate - Coarse Aggregate Testing

Specific Gravity	2.76
Unit Weight (dry rodded)	100 lb/Cu Ft
Percent Voids	49%
Absorption	0.6%
LA Abrasion Loss %	N/A

### Gradation

Sieve	%Passing	ASTM C-33
1/2"	100.0	100
3/8"	87.3	85 - 100
#4	19.5	10 - 30
#8	4.0	0 - 10
#16	1.8	0 - 5

## Concrete Sand - Fine Aggregate Testing

Specific Gravity	2.63
Unit Weight (dry rodded)	105 lb/Cu Ft
Percent Voids	37%
Absorption	0.4%
Deleterious Materials	Nil

### Gradation

Sieve	%Passing	ASTM C-33
3/8"	100.0	100
#4	96.9	95 - 100
#8	88.0	80 - 100
#16	74.9	50 - 85
#30	48.6	25 - 60
#50	20.6	10 - 30
#100	1.7	1 - 10
#200	0.4	0 - 3
Fineness Modulus	2.69	2.3 - 3.1