Clark County Department of Building & Fire Prevention

4701 West Russell Road, Las Vegas, NV 89118 ~ (702) 455-3000

Concrete Mix Design Review Checklist

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DATE: _____ MIX DESIGN No.: _____ PERMIT No.: _____

PROJECT NAME: _____

The above concrete mix design was reviewed and found to be in non-compliance with the requirements of Clark County Building Department (CCBD-IS). The following information is required on the mix design prior to approval:

- ☐ Clark County Building Division Permit Number
- ☐ Project name and address
- ☐ Total of Three (3) copies must be submitted - one (1) original + two (2) copies
- ☐ Use in the structure (i.e., to be used in columns, beams, slabs, etc.)
- ☐ Approved Batch Plant
- ☐ Stamped by Nevada registered engineer designing the mix (**FIGURE 1**)
- ☐ Accepted by the design professional who specified the concrete parameters. Original review stamp is required (**FIGURE 2**)
- ☐ Mix design is less than 12 months old
- ☐ Concrete aggregates comply with ASTM Standard Methods (C 33, C 330, or C 404)
- ☐ Concrete aggregates gradation tests are less than 12 months old
- ☐ Backup data and calculations, in accordance with ACI 301 & ACI 318, are required when f 'c is EQUAL TO/GREATER THAN 6000 psi
- ☐ Mix is going to be used in adverse weather conditions, special procedures and instructions are noted
- ☐ Air-entrainment is required for Mount Charleston environments above an elevation of 5,000 feet per 2006 IBC, Section 1904.2.1
- ☐ Slump prior to the addition of water reducing admixtures must be indicate
- ☐ Concrete durability shall comply with 2006 IBC, Section 1904 and 2006 ACI 318 4.3 (**FIGURE 3**)
- ☐ Other CCBD-IS comments: _____

_____

_____

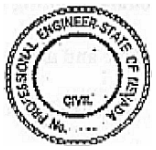
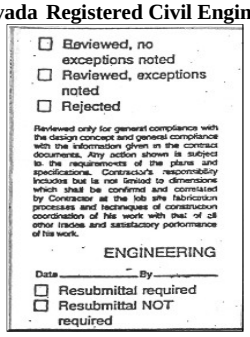


FIGURE 1
Nevada Registered Civil Engineer


☐ Reviewed, no exceptions noted
☐ Reviewed, exceptions noted
☐ Rejected

Reviewed only for general compliance with the design concept and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor's responsibility includes but is not limited to dimensions which shall be confirmed and correlated by Contractor at the job site fabrication processes and techniques of construction coordination of his work with that of all other trades and satisfactory performance of his work.

ENGINEERING

Date _____ By _____

☐ Resubmittal required
☐ Resubmittal NOT required

FIGURE 2 - Structural Engineer's Submittal Review Stamp

TABLE 4.3.1—REQUIREMENTS FOR CONCRETE EXPOSED TO SULFATE-CONTAINING SOLUTIONS

Sulfate exposure	Water soluble sulfate (SO_4) in soil, percent by weight	Sulfate (SO_4) in water, ppm	Cement type	Maximum water-cementitious material ratio, by weight, normalweight concrete*	Minimum f'_c, normalweight and lightweight concrete, psi*
Negligible	$0.00 \le SO_4 < 0.10$	$0 \le SO_4 < 150$	—	—	—
Moderate†	$0.10 \le SO_4 < 0.20$	$150 \le SO_4 < 1500$	II, IP(MS), IS(MS), P(MS), I(PM)(MS), I(SM)(MS)	0.50	4000
Severe	$0.20 \le SO_4 \le 2.00$	$1500 \le SO_4 \le 10,000$	V	0.45	4500
Very severe	$SO_4 > 2.00$	$SO_4 > 10,000$	V plus pozzolan‡	0.45	4500

* When both Table 4.3.1 and Table 4.2.2 are considered, the lowest applicable maximum water-cementitious material ratio and highest applicable minimum f'_c shall be used.
† Seawater.
‡ Pozzolan that has been determined by test or service record to improve sulfate resistance when used in concrete containing Type V cement.

FIGURE 3 - ACI 318-05 Table 4.3.1

ATTACHMENT D

Reviewed by: _____

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