

35% Design Review
KABUL UNIVERSITY DINING AND LAUNDRY FACILITIES
drawings dated May 28, 2010
WO-A-0044

Response Legend
A - Agree
D - Disagree
O - Out of Scope
AE - Agree with exception

Comment #	Reviewer	Reference	Comment	Response Code	Response	Back-Check
STRUCTURAL COMMENTS - Bldg #28 Dining Facility						
S1	FRS	28-S01	Add typical legend, abbreviations and symbols.	A	Requested change will be addressed in our 65% submittal	Accepted.
S2	FRS	28-S01 General Notes 1st Note	US Standard Building Code is referenced? Design should be in accordance with a current international code, IBC-2006.	A	Requested change will be addressed in our 65% submittal	Accepted.
S3	FRS	28-S01 General Notes 4th Note	Building grid layout to match structural layout/design calculations and multidiscipline features of the building systems. Delete this note which seems to state an unacceptable latitude in what will be constructed compared to what was designed. If this note is trying to convey that layout is schematic at this time, and will be finalized during the design process, please reword the note to be clear.	A	Requested change will be addressed in our 65% submittal	Accepted.
S4	FRS	28-S01 Shop Dwg Review 1st Note	Suggest rewording note to indicate review for compliance with the design drawings and specifications - not design intent of construction documents.	A	Requested change will be addressed in our 65% submittal	Accepted.
S5	FRS	28-S01 Shop Dwg Review 3rd Note	Last sentence, indicate drawings submitted without an approved review status from the design-build engineer/architect will be returned and required to be re-submitted.	A	Requested change will be addressed in our 65% submittal	Accepted.
S6	FRS	28-S01 Gravity Loading	Show floor live loadings.	A	Requested change will be addressed in our 65% submittal	Accepted.
S7	FRS	28-S01 Gravity Loading	Show ground snow load value (psf)	A	Requested change will be addressed in our 65% submittal	Accepted.
S8	FRS	28-S01 Seismic Loading (not shown)	Should include a subsection for Seismic Design Loading Criteria. The structural design must consider seismic loading combinations. Based upon suggested values listed in UFC 3-301-01 27January2010; Ss=1.28g, S1=0.51g, Sds=0.64g, Sd1=0.26g. Seismic Design Category D. Site classification. Occupancy category. All of which should be verified by a site-specific geotechnical analysis.	A	Requested change will be addressed in our 65% submittal	Accepted.
S9	FRS	28-S01 Wind Loading (not shown)	Show Wind Loading design parameters in new section.	A	Requested change will be addressed in our 65% submittal	Accepted.
S10	FRS	28-S01 Concrete Note 2	For economy of design and construction, it is suggested to use a higher strength concrete mix say 4000psi (27.5MPa) in conjunction with 60,000psi (grade 60) reinforcing to minimize the size of the concrete frame superstructure, foundation and associated excavation. Less mass will also reduce the seismic loadings.	AE	We will use the same G40 reinforcing bar and consider to use high strength concrete. We will provide you updates in our 65% submittal.	Accepted.

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S11	FRS	28-S01 Concrete Note 4	Slab bar clearances show 20 mm for slab. Suggest making the clearance deep enough to avoid the depth of saw cut, tooled or formed contraction joints. Also, there will likely be slight variation in achievable "flatness" of the slab during finishing and bar placement tolerance that would diminish a very shallow clear cover.	A	Requested change will be addressed in our 65% submittal	Accepted.
S12	FRS	28-S01 Concrete (not shown)	Suggest indicating that reinforcing steel shop drawings will be submitted for review and approval.	A	Requested change will be addressed in our 65% submittal	Accepted.
S13	FRS	28-S01 Concrete Note 9	Should delete "When applicable". Concrete mix designs and test results are necessary submittals to determine the acceptability of the proposed concreting program, and to conform with ACI recommendations.	A	Requested change will be addressed in our 65% submittal	Accepted.
S14	FRS	28-S01 Reinforcing Steel Note 1	See comment S9 above, concerning grade 60 reinforcement. If material is available, Gr 60 is desirable.	A	Requested change will be addressed in our 65% submittal	Accepted.
S15	FRS	28-S01 Reinforcing Steel Note 2	Bar splice lap lengths vary according to ACI code, greater for "top" bars. 48 diameters inadequate for all cases. Suggest providing a table for the lap length by bar size for top bars and bottom bars.	A	Requested change will be addressed in our 65% submittal	Accepted.
S16	FRS	28-S01 Masonry Note 7	If steel ladder reinforcement/cmu lintel blocks are not readily available, cast-in-place bond beams using deformed reinforcing bars, at regular vertical intervals may be an alternative to consider.	A	Requested change will be addressed in our 65% submittal	Accepted.
S17	FRS	28-S01 Masonry Note 8	Indicate maximum grout placement lift height. Indicate block cells fully grouted with reinforcement at wall control joints, above lintels and at the required horizontal interval to splice the wall to concrete foundation stem wall.	A	Requested change will be addressed in our 65% submittal	Accepted.
S18	FRS	28-S01 Foundation Note 1	Suggest that geotechnical engineer provides site specific recommendations to verify the allowable foundation bearing pressures, subgrade conditions and seismic design criteria. Site investigation program prior to the foundation work is highly recommended.	A	Requested change will be addressed in our 65% submittal	Accepted.
S19	FRS	28-S01 Foundation Note 2	Suggest at least 200 deep crushed stone directly beneath slab on-grade vapor barrier to act as a capillary break to groundwater - typical for all areas.	A	Requested change will be addressed in our 65% submittal	Accepted.
S20	FRS	28-S01 Foundation (not shown)	Suggest a note to restrict heavy construction vehicle traffic on slab on grade during construction unless appropriate measures are provided to distribute the loads.	A	Requested change will be addressed in our 65% submittal	Accepted.
S21	FRS	28-S01 Foundation Note 4	Indicate design by rational analysis. It would be more appropriate to state ACI-318 specific reference.	A	Requested change will be addressed in our 65% submittal	Accepted.

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S22	FRS	28-S01 Foundation Note 5	Please describe PAD certificate letter from geotechnical engineer. If this information is available now, it would be convenient and valuable to include any design parameters in these notes. Also see comment S18 above.	A	Requested change will be addressed in our 65% submittal	Accepted.
S23	FRS	28-S02 slab note	See Comment S19 above.	A	Requested change will be addressed in our 65% submittal	Accepted.
S24	FRS	28-S02 drawing	Text was clipped by upper border.	A	Requested change will be addressed in our 65% submittal	Accepted.
S25	FRS	28-S02 drawing	Indicate slab joints.	A	Requested change will be addressed in our 65% submittal	Accepted.
S26	FRS	28-S02 drawing	Show floor penetrations for floor drains, cleanouts, pipe and conduit.	D	See details Penetration Firestop, 6, 7 and 8 on sheet 28-P05	Accepted.
S27	FRS	28-S02 drawing	Indicate slope for top of slab toward floor drains.	A	Requested change will be addressed in our 65% submittal	Accepted.
S28	FRS	28-S03 drawing	Indicate top of concrete elevations.	A	Requested change will be addressed in our 65% submittal	Accepted.
S29	FRS	28-S04 (not shown)	Show details for floor slab penetrations / embedments such as floor drains.	A	Requested change will be addressed in our 65% submittal	Accepted.
S30	FRS	28-S04 Detail 1	Show wall dowel hook to footing reinforcement layer - to satisfy ACI development length.	A	Requested change will be addressed in our 65% submittal	Accepted.
S31	FRS	28-S04 Detail 1	12mm expansion joint "epoxy" filler at slab should be an elastomeric material and does not need to be full depth - could use a standard depth with backer rod to conserve material.	A	Requested change will be addressed in our 65% submittal	Accepted.
S32	FRS	28-S04 Detail 1	Indicate minimum depth instead of deferring to frost line comparison. Frost line depth is depth from surface to bottom of footing.	A	Requested change will be addressed in our 65% submittal	Accepted.
S33	FRS	28-S04 Detail 1	Will cmu foundation stem wall be adequate to resist design load combinations including seismic? Can enough reinforcement be incorporated. CMU blocks can degrade below grade in the right conditions. Consider using cast-in-place concrete stem walls.	A	Requested change will be addressed in our 65% submittal	Accepted.
S34	FRS	28-S04 Detail 2	Non bearing walls should also be anchored at the top and bottom into the load resisting structure for stability.	A	Requested change will be addressed in our 65% submittal	Accepted.
S35	FRS	28-S04 Detail 2	Epoxy filler? See S33 above. This comment is repeated on other details as well.	A	Requested change will be addressed in our 65% submittal	Accepted.
S36	FRS	28-S04 Detail 3	Recommend 50mm or similar radius for forming tread nosing if concrete will not receive finished material surface.	A	Requested change will be addressed in our 65% submittal	Accepted.
S37	FRS	28-S04 Detail 6	With 200mm wall width, there will not be sufficient space to bend stirrup and maintain side clearance. Consider single ties alternating orientation every other bar.	A	Requested change will be addressed in our 65% submittal	Accepted.
S38	FRS	28-S04 Detail 7	Provide confinement reinforcement ion beam for 12mm roof anchors per ACI requirements.	A	Requested change will be addressed in our 65% submittal	Accepted.

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S39	FRS	28-S04 Detail 8	Splice lengths per ACI requirements, see S15 above.	A	Requested change will be addressed in our 65% submittal	Accepted.
S40	FRS	28-S04 Detail 13	I would expect it will be necessary to level the steel column base plate on the footing. It should be provided with at least 40mm nonshrink grout gap beneath. Stem wall concrete placement would have a very difficult time getting under it for uniform plate bearing.	A	Requested change will be addressed in our 65% submittal	Accepted.
S41	FRS	28-S04 Detail 13	Provide required amount of concrete pedestal reinforcement per ACI Appendix D, and appropriate seismic detailing if column base is composite.	D	Column base is not composite. Revise detail will incorporate in the 65% submittal	If concrete surround only protects the steel column from corrosion, we suggest providing a nominal amount of reinforcing to minimize shrinkage crack widths that could admit moisture and air to the steel surface.
S42	FRS	28-S04 Detail 13	At a minimum, slab penetrations need additional reinforcing to control early-age cracking at re-entrant corners. This applies to all other corners as well.	A	Requested change will be addressed in our 65% submittal	Accepted.
S43	FRS	28-S04 Detail 14	What is purpose of rubber filler? Is it a membrane over steel roof structure?	A	The purpose of the Rubber filler is to fill the gaps left by the beams and roof structure in order to protect the building against weather conditions.	Accepted.
S44	FRS	28-S04 Detail 15	Are the roof anchors supplied with the pre-engineered roof? A-325 for structural bolts, revise with specific reference assuming mechanical anchor bolts are intended.	A	Requested change will be addressed in our 65% submittal	Accepted.
S45	FRS	28-S05 Detail 1	Call out top of railing and handrail height, spacing between posts, clear spacing between balusters, clear to landing.	A	Requested change will be addressed in our 65% submittal	Accepted.
S46	FRS	28-S05 Detail 3	Call out concrete thickness below and around side of embedded post and indicate reinforcing.	A	Requested change will be addressed in our 65% submittal	Accepted.
S47	FRS	28-S05 Detail 7	See S42 comment on grout base above.	A	Requested change will be addressed in our 65% submittal	Accepted.
S48	FRS	28-S06 Schedules	No calculations were submitted to verify the indicated reinforcement schedules.	A	Requested change will be addressed in our 65% submittal	Accepted.
S49	FRS	28-S06 Schedules	Suggest showing a typical concrete column to beam connection detail and a typical beam elevation to indicate reinforcing slices and bar cut-off positions.	A	Requested change will be addressed in our 65% submittal	Accepted.