

GENERAL NOTES:

1. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
2. AT CONSTRUCTION ISSUE, THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.

CONCRETE NOTES AND SPECIFICATIONS:

1. ALL CONCRETE WORK SHALL CONFORM TO THE "A.C.I. BUILDING CODE", ACI 318 AND ACI 301, LATEST EDITION.
2. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-90, "ACI DETAILING MANUAL 1990".
3. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS #4 AND LARGER SHALL CONFORM TO ASTM A-615 GRADE 60 (80,000 PSI YIELD) AND ALL #2 AND #3 BARS SHALL CONFORM TO GRADE 40 (40,000 PSI YIELD). REINFORCING SHALL BE FREE FROM OIL, DIRT AND OTHER MATERIALS THAT WOULD REDUCE THE BOND WITH THE CONCRETE.
4. WELDED WIRE MESH (WWM) SHALL CONFORM TO ASTM A-185.
5. UNLESS OTHERWISE NOTED, CONCRETE PROTECTION FOR REINFORCING SHALL BE AS SPECIFIED IN THE "A.C.I. BUILDING CODE", (ACI 318 LATEST EDITION).
6. CONCRETE STRENGTH AND PROTECTION FOR REINFORCEMENT OF POURED-IN-PLACE MEMBERS; SEE SECTION 7.7 ACI 318 LATEST EDITION.

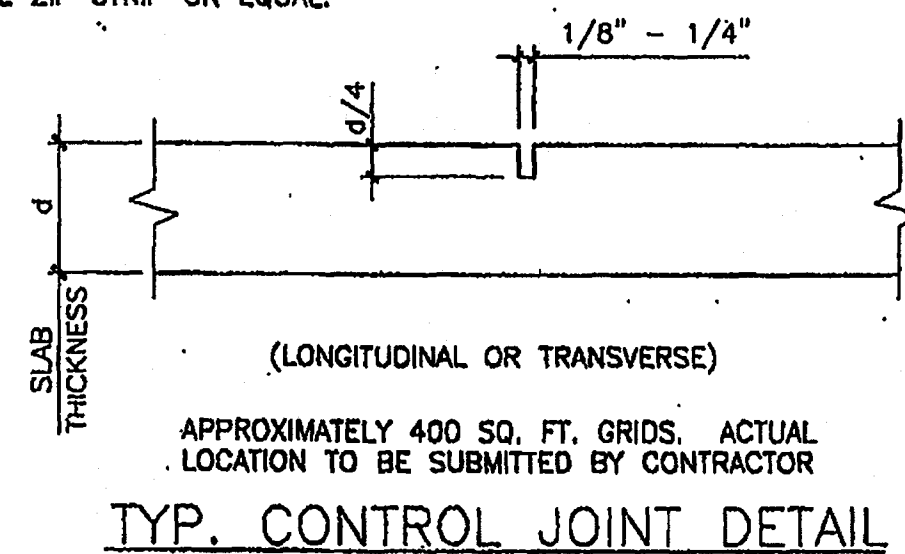
STRUCTURAL ELEMENT	MINIMUM COVER (INCHES)	CONCRETE STRENGTH (PSI)		W/C RATIO
		AT 28 DAYS	AT 7 DAYS	
FOOTINGS	3" ALL SURFACES	3000	3000	50%
GRADE BEAMS	3" BOTTOM, 2" SIDES, 1 1/2" TOP	3000	3000	50%
SLAB ON GRADE	1 1/2" TOP & BOTTOM	3000	3000	50%

- PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE 1. MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD.
7. FLYASH MAY BE USED TO REPLACE A PORTION OF THE PORTLAND CEMENT. THE RATIO OF FLYASH TO THE TOTAL OF THE FLYASH AND CEMENT IN A MIX SHALL NOT EXCEED 20%. FLYASH SHALL CONFORM TO ASTM C618, TYPE C OR F.
 8. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOBSITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CONCRETE SUPPLIER TO ENSURE A PUMPABLE AND WORKABLE MIX WITHOUT THE ADDITION OF WATER AT THE JOBSITE. THE USE OF PLASTICIZERS, RETARDANTS AND OTHER ADDITIVES SHALL BE AT THE OPTION OF THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER. FOLLOW THE RECOMMENDATIONS OF THE MANUFACTURER FOR THE PROPER USE OF ADDITIVES. THE USE OF CALCIUM CHLORIDE OR OTHER CHLORIDE BEARING SALTS SHALL NOT BE PERMITTED.
 9. CONCRETE SLUMP TESTS SHALL BE MADE BEFORE AND AFTER THE ADDITION OF ADMIXTURES AND MAY BE TAKEN AT THE BACK OF THE TRUCK. CONCRETE FOR THE PREPARATION OF TEST CYLINDERS SHALL BE TAKEN FROM THE HOSE END FOR CONCRETE PLACED BY PUMP.
 10. ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED PER THE "REINFORCING SPLICE SCHEDULE" AT SPLICES AND AROUND CORNERS OR INTERSECTIONS WITH A STANDARD 90 DEGREE BEND ON CORNER BARS. LAP TOP BARS AT CENTER OF SPAN; LAP BOTTOM BARS AT SUPPORTS. LAP WELDED WIRE MESH ONE FULL MESH AT SIDE AND END LAPS.

REINFORCING SPLICE SCHEDULE											
CLASS A REINFORCING SPLICES						CLASS B REINFORCING SPLICES					
REINF. SIZE	CONCRETE STRENGTH (PSI)					REINF. SIZE	CONCRETE STRENGTH (PSI)				
	3000	4000	5000	6000	7000		3000	4000	5000	6000	7000
#3	17"	15"	13"	12"	12"	#3	22"	19"	17"	16"	14"
#4	22"	19"	17"	16"	15"	#4	29"	25"	23"	21"	19"
#5	28"	24"	22"	20"	18"	#5	36"	31"	28"	26"	24"
#6	33"	29"	26"	24"	22"	#6	43"	37"	34"	31"	28"
#7	48"	42"	38"	34"	32"	#7	63"	54"	49"	45"	41"
#8	55"	48"	43"	39"	36"	#8	72"	62"	56"	51"	47"
#9	62"	54"	48"	44"	41"	#9	81"	70"	63"	57"	53"
#10	70"	61"	54"	50"	46"	#10	91"	79"	71"	64"	60"
#11	78"	67"	60"	55"	51"	#11	101"	87"	78"	71"	66"

NOTE:

- LAP SPLICES OF DEFORMED BARS IN TENSION SHALL BE CLASS B SPLICES EXCEPT THAT CLASS A SPLICES MAY BE USED WHEN:
- A. THE AREA OF REINFORCEMENT PROVIDED IS AT LEAST TWICE THAT REQUIRED BY DESIGN OVER THE ENTIRE LENGTH OF THE SPLICE, AND
 - B. ONE HALF OR LESS OF THE TOTAL REINFORCEMENT IS SPLICED WITHIN THE REQUIRED LAP LENGTH.
11. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY OTHER ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC., NOT SHOWN ON STRUCTURAL PLANS THAT MIGHT BE REQUIRED.
 12. PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING OPERATIONS UNTIL CONCRETE HAS LOST SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FREE CEMENT ON THE SLAB SURFACE. FINISHING OF SLAB SURFACES SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI 302.1 AND 304.
 13. UNLESS NOTED OTHERWISE ON PLAN, CONTROL JOINTS TO BE LOCATED AT APPROXIMATELY 400 SQ. FT. GRIDS. ACTUAL LOCATION TO BE DETERMINED BY OWNER OR CONTRACTOR. CONTROL JOINT TO BE ZIP STRIP OR EQUAL.



14. PROVIDE 7 DAY CURING OF SLAB IMMEDIATELY AFTER FINISHING USING ONE OF THE FOLLOWING METHODS:
 - A. CONTINUOUSLY WATERED BURLAP
 - B. WATERPROOF MEMBRANES
 - C. SPRAYED-ON LIQUID MEMBRANE
15. PROTECT THE CONCRETE SURFACE BETWEEN FINISHING OPERATIONS ON HOT, DRY DAYS OR ANY OTHER TIME THAT PLASTIC SHRINKAGE CRACKS COULD DEVELOP BY USING WET BURLAP, PLASTIC MEMBRANE OR FOGGING. PROTECT CONCRETE SLAB AT ALL TIMES FROM RAIN, HAIL OR OTHER INJURIOUS EFFECTS.
16. UNLESS SPECIFIED, CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28-DAY COMPRESSIVE STRENGTH (F'c), BEFORE FORMS MAY BE REMOVED.

WALLS, COLUMNS, & BEAM SIDES	40%
JOIST PANS & BEAM BOTTOMS (IF RESHORED)	70%
SHORING FOR FLOOR SYSTEMS (IF NOT RESHORED)	85%
17. RESHORING WHEN REQUIRED, TO EXTEND AT LEAST TWO FLOORS BELOW FLOOR SUPPORTING FALSEWORK (OR GROUND FLOOR). LAYOUT AND PROCEDURE TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL.

18. AN INDEPENDENT CERTIFIED TESTING LABORATORY SHALL VERIFY AND PROVIDE REPORTS CERTIFYING THE FOLLOWING:
- A. CONCRETE PLANT BATCH TICKETS FOR EACH TRUCK VERIFY THAT THE CONCRETE MATCHES THE APPROVED DESIGN MIX.
 - B. CONCRETE SLUMP IS IN ACCORDANCE WITH APPROVED DESIGN MIX.
 - C. CONCRETE PLACEMENT OPERATIONS ARE IN ACCORDANCE WITH ACI SPECIFICATIONS.
 - D. CONTROL JOINTS ARE INSTALLED WITHIN THE ACI TIME ALLOWANCE.
 - E. PROPER CURING METHODS ARE BEING UTILIZED.

19. NO CONCRETE SHALL BE PLACED OUTSIDE OF THESE SPECIFICATIONS WITHOUT THE OWNER'S PRIOR APPROVAL. ANY ITEMS NOT IN COMPLIANCE WITH THE OUTLINED SPECIFICATION SHALL BE REPORTED TO THE OWNER AND STRUCTURAL ENGINEER WITHIN 24 HOURS.
20. CONSTRUCTION VEHICLE LOADS SHALL NOT BE PERMITTED ON ELEVATED SLABS AT ANY TIME.

FOUNDATION NOTES:

1. FOOTINGS SHALL BEAR ON SOIL SUITABLE FOR SUPPORTING 2000 P.S.F. NET ALLOWABLE BEARING. IF QUESTIONABLE SOIL IS ENCOUNTERED, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. RE: REPORT # 387-15087 BY: P.S.I. ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS MUST BE FOLLOWED.
2. EXCAVATION FOR FOOTINGS SHALL BE NEAT.
3. FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.
4. ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED PER THE "REINFORCING SPLICE SCHEDULE" AT SPLICES AND AROUND CORNERS OR INTERSECTIONS WITH A STANDARD 90 DEGREE BEND ON CORNER BARS. LAP WELDED WIRE MESH ONE FULL MESH AT TOP AND END LAPS.
5. LAP TOP BARS AT CENTER OF SPAN; LAP BOTTOM BARS AT SUPPORTS.
6. THERE SHALL BE NO PLUMBING LINES RUNNING PARALLEL TO, WITHIN OR UNDER ANY FOUNDATION BEAM.

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Review Issue xxxxx	
Bid Issue 12-10-2001	
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