

GENERAL

THE STRUCTURE HAS BEEN DESIGNED FOR THE SERVICE LOADS ONLY. THE METHODS, MEANS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR...

THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS.

THE GENERAL NOTES ON THE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE FULL WRITTEN MATERIAL SPECIFICATIONS (IF ANY) FOR THE PROJECT. IF A DISCREPANCY OCCURS BETWEEN THE NOTES AND THE FULL SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

NO PENETRATIONS THROUGH STRUCTURAL ELEMENTS, OTHER THAN THOSE SHOWN ON THE DRAWINGS, SHALL BE MADE WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

CONCRETE MIX DESIGN SUBMITTAL

THE CONTRACTOR SHALL SUBMIT FOR THE REVIEW OF THE STRUCTURAL ENGINEER A MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE. EACH MIX DESIGN SHALL BE IDENTIFIED BY A MIX NUMBER OR OTHER UNIQUE IDENTIFICATION...

- 1. MIX DESIGN NUMBER OR UNIQUE IDENTIFICATION AND TENDED LOCATION OF PLACEMENT.
2. CEMENT TYPE, PROPORTION AND NAME OF MANUFACTURER.
3. FLY ASH PROPORTION (WHEN USED), LABORATORY ANALYSIS CERTIFICATION, AND NAME AND LOCATION OF SUPPLIER.

SHOP DRAWING SUBMITTALS

THE CONTRACTOR SHALL PREPARE DETAILED SHOP DRAWINGS TO ENABLE HIM TO FABRICATE, ERECT AND CONSTRUCT ALL PARTS OF THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

FOR ELECTRONIC OPTION, SUBMIT SHOP DRAWINGS IN ADOBE PDF FORMAT.

CONCRETE

REINFORCED CONCRETE HAS BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318) AND REINFORCEMENT (ACI 308 AND ACI 308.2R).

MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO THE LATEST EDITION OF THE SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 307). READY-MIXED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C94. IN CASE OF A DISCREPANCY, THE PLANS AND SPECIFICATIONS SHALL GOVERN.

CEMENT SHALL CONFORM TO ASTM C150, TYPE I, UNO.

REINFORCEMENT ANCHORAGE SHALL BE LELAND TERMINATOR BY PENNA OR APPROVED EQUIVALENT.

FLY ASH SHALL CONFORM TO ASTM C918, CLASS C OR F. THE RATIO OF THE AMOUNT (BY WEIGHT) OF FLY ASH TO TOTAL CEMENTITIOUS MATERIALS IN THE MIX SHALL NOT EXCEED 25 PERCENT.

NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C33.

WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494.

AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260 AND SHALL BE CERTIFIED BY THE MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES.

CALCIUM CHLORIDE ADMIXTURES OR ADMIXTURES CONTAINING MORE THAN 0.1 PERCENT CHLORIDE IONS SHALL NOT BE USED.

IN COLD WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 308R, COLD WEATHER CONCRETE.

IN HOT WEATHER CONDITIONS, MIXING, PLACING, FINISHING, CURING AND PROTECTION OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ACI 308R, HOT WEATHER CONCRETE.

USE OF CONSTRUCTION JOINTS AT LOCATIONS OTHER THAN THOSE INDICATED ON THE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.

SUMP FOR PUMPED CONCRETE SHALL BE MEASURED AT POINT OF DISCHARGE.

NORMAL WEIGHT CONCRETE SHALL BE USED IN THE FOLLOWING AREAS AND SHALL HAVE THE PROPERTIES AS SHOWN BELOW:

Table with 8 columns: DESCRIPTION, FC PER MIX, MAXIMUM CHLORIDE ON CONTENT, MAX W/C RATIO, AVERAGE ENTRAINED AIR, MINIMUM CEMENTITIOUS MATERIALS CONTENT, MAXIMUM SLUMP, MAXIMUM SLUMP FOR CONCRETE CONTAINING HIGH-RANGE WATER-REDUCING ADMIXTURE, MAXIMUM COARSE AGGREGATE SIZE.

SHORING AND SHORING

THE SHORING AND/OR RESHORING DESIGN FOR CONCRETE FRAME SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. TEMPORARY BRACING FOR SLABS, BEAMS, AND GIRDERS SHALL BE ADEQUATE TO CARRY THE TOTAL WEIGHT OF THE SLAB-BEAM-GIRDER SYSTEM AND ANY TEMPORARY LOADS TO BE APPLIED ON THE STRUCTURAL SYSTEM...

REMOVAL OF SHORING AND/OR RESHORING SHALL NOT CAUSE OVERSTRESS TO ANY STRUCTURAL ELEMENTS.

CONCRETE SLABS ON GRADE

SLABS ON GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION (ACI 302.1R).

PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAYED TROWELING OPERATIONS UNTIL THE CONCRETE HAS SET SURFACE WATER SHEEN OR ALL FREE WATER DOES NOT SPRINKLE FREE ON THE SLAB.

PROVIDE CURING OF CONCRETE SLABS IMMEDIATELY AFTER FINISHING. SPRAY ON OR BRUSH ON CURING COMPOUND OR CURING COMPOUND MAY BE USED WITH APPROVAL BY THE STRUCTURAL ENGINEER.

UNLESS SHOWN OR NOTED OTHERWISE, PROVIDE CONTROL JOINTS AT MAXIMUM SPACING OF 36 TIMES THE SLAB THICKNESS. PROVIDE JOINTS AT ALL COLUMN LOCATIONS. LOCATE JOINTS TO ELIMINATE REINFORCING AND TO CREATE SQUARE OR RECTANGULAR SECTIONS WITH MAXIMUM LONG SIDE TO SHORT SIDE RATIO OF 1 TO 1.

CONTROL JOINTS IN SLABS ON GRADE SHALL BE REINFORCED WITH STEEL REINFORCEMENT UNLESS NOTED OTHERWISE.

STRUCTURAL PRECAST CONCRETE (GENERAL)

SUPPLIER OF STRUCTURAL PRECAST CONCRETE SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, AND INSTALLATION OF THE PRECAST MEMBERS AND CONNECTIONS. THE DESIGN SHALL BE IN ACCORDANCE WITH THE DESIGN MANUAL FOR PRECAST CONCRETE (ACI 308) AND THE PRECAST CONCRETE DESIGN MANUAL (ACI 308.1R).

THE PRECAST SUPPLIER SHALL ENGAGE A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED TO PERFORM THE DESIGN AND DETAILING OF THE PRECAST CONCRETE SYSTEM AND DECKING INSTALLATION ARE COMPLETE AND FINAL STABILITY IS ACHIEVED.

THE CONTRACTOR SHALL DESIGN ALL PRECAST MEMBERS AND ERECTION ASSEMBLIES FOR DESIGN AND TEMPORARY ERECTION FORCES, ERECTION SEQUENCING, STAYING AND SHORING. CONTRACTOR SHALL CONFIRM ALL APPROPRIATE CONNECTIONS ARE COMPLETED AND REQUIRED GRROUTING OCCURS TO ENSURE STABILITY DURING CONSTRUCTION BEFORE ERECTING STRUCTURE VERTICALLY.

REINFORCING STEEL ITEMS TO BE EMBEDDED IN THE PRECAST ARE TO BE PROVIDED AND INSTALLED BY THE PRECASTER, UNLESS NOTED OTHERWISE.

MEMBERS AND OTHER ITEMS TO BE EMBEDDED IN CAST-IN-PLACE CONCRETE SHALL BE SUPPLIED BY THE PRECASTER AND INSTALLED BY THE CONCRETE CONTRACTOR, UNLESS NOTED OTHERWISE.

DETAILS INDICATED ON THESE DRAWINGS NEED TO BE MODIFIED TO ACCOMMODATE THE PRECAST SUPPLIER'S FABRICATION OR INSTALLATION STANDARDS. THE PRECASTER MUST INFORM THE STRUCTURAL ENGINEER AND ALL AFFECTED FABRICATORS AND CONTRACTORS PRIOR TO FABRICATION OF AFFECTED MATERIALS. MODIFICATIONS MADE BY THE PRECASTER AFTER THE PRECAST ITEMS ARE FABRICATED SHALL BE SOLELY THE RESPONSIBILITY OF THE PRECASTER (INCLUDING ENGINEERING MATERIAL AND INSTALLATION) AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE PROJECT.

COORDINATE ALL OPENINGS, REVEALS, DRIP EDGES, BLOCKOUTS, INSERTS, ETC. TO BE CAST INTO PRECAST MEMBERS WITH STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. AS PART OF THE SUBMITTAL PROCESS COORDINATION OF EXACT SIZES IS REQUIRED AND SHALL BE RESPONSIBILITY OF THE CONTRACTOR.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL PRECAST CONCRETE TO HAVE CAST-IN-PLACE CONCRETE WASH PLACED ON IT TO HAVE A RAKED FINISH.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

ALL LIFTING POCKETS TO BE FILLED WITH GROUT. GROUT COLOR TO MATCH PRECAST.

FIBER REINFORCEMENT

FIBER REINFORCEMENT SHALL BE 24% DRY WEIGHT (NON-ASYCLED) NYLON OR POLYPROPYLENE FIBERS. IT IS PROVIDED IN THE CONCRETE MIX AT THE BATCH PLANT. IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, DOSAGE SHALL BE 1.5 POUNDS PER CUBIC YARD OF CONCRETE.

CONCRETE TESTING

MAKE ONE SET OF TEST CYLINDERS IN ACCORDANCE WITH ASTM C31 FOR EACH DAY'S POUR AND FOR EACH 100 CUBIC YARDS. EACH SET SHALL INCLUDE ONE SPECIMEN TESTED AT 7 DAYS, 2 SPECIMENS TESTED AT 28 DAYS AND ONE SPECIMEN RETAINED IN RESERVE TO BE TESTED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. SPARE CYLINDERS MAY BE ORDERED 90 DAYS AFTER CASTING UNLESS DIRECTED OTHERWISE BY THE STRUCTURAL ENGINEER. THIS SET OF TEST CYLINDERS SHALL BE PROTECTED AGAINST FREEZING.

WHEN THE AMBIENT TEMPERATURE IS EXPECTED TO FALL BELOW 40 DEGREES DURING THE COURSE OF A CONCRETE POUR OR SUBSEQUENT CURING PROCESS, AN ADDITIONAL SET OF CONCRETE TEST CYLINDERS SHALL BE ORDERED AND TESTED. THESE CYLINDERS SHALL BE STORED IMMEDIATELY ADJACENT TO, AND CURED UNDER THE SAME AMBIENT CONDITIONS AS THE BUILDING CONCRETE. CURING BOXES ARE NOT PERMITTED FOR THESE TEST CYLINDERS.

FORWARD COPIES OF TEST RESULTS TO THE ARCHITECT, STRUCTURAL ENGINEER, READY MIX SUPPLIER AND CONTRACTOR WITHIN 24 HOURS AFTER TESTING.

MASONRY

CONCRETE MASONRY HAS BEEN DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES (ACI 530).

CONCRETE MASONRY SHALL CONSIST OF HOLLOW UNITS CONFORMING TO THE REQUIREMENTS OF ASTM C90, WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1800 PSI. CONCRETE MASONRY ASSEMBLAGES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (FM) OF 1500 PSI AT 28 DAYS.

MORTAR SHALL BE TYPE S PROPORTIONED IN ACCORDANCE WITH ASTM C270.

GROUT FOR REINFORCED MASONRY SHALL BE PROPORTIONED IN ACCORDANCE WITH ASTM C918. COARSE AND FINE AGGREGATES SHALL CONFORM TO ASTM C661. USE COARSE GROUT FOR ALL GROUTING EXCEPT HIGH-LIFT PORTS DEFINED BY ACI 530 TABLE 1.18.1. WHERE FINE GROUT SHALL BE USED.

PROVIDE 9-GAUGE GALVANIZED STEEL WIRE JOINT REINFORCEMENT AT ALL MASONRY CONSTRUCTION. REINFORCEMENT SHALL BE CONTINUOUS AND BE LAPPED 8 INCHES AT SPICES. CUT REINFORCEMENT AT ALL CONTROL AND EXPANSION JOINTS. SPACE REINFORCEMENT AT 16 INCHES ON CENTER FOR PARAPETS AND BELOW GRADE FLOOR ELEVATION. ELSEWHERE SPACE REINFORCEMENT AT 18 INCHES ON CENTER.

BEAMS AND LINTELS SHALL BEAR A MINIMUM OF 6 INCHES ON SUPPORTING MASONRY. UNLESS NOTED OTHERWISE, BEARING FOR ALL BEAMS, LINTELS, JOISTS, ETC. SHALL BE GROUTED SOLID A MINIMUM OF ONE COURSE (8 INCHES) BELOW BEARING ELEVATION. UNLESS NOTED OTHERWISE.

EXPANSION ANCHORS

EXPANSION ANCHORS SHALL BE CARBON STEEL ANCHORS AS MANUFACTURED BY HLTI FASTENERS SYSTEMS OR AN EQUIVALENT SUBSTITUTE APPROVED BY THE STRUCTURAL ENGINEER. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

EXPANSION ANCHORS SHALL NOT BE INSTALLED IN CONCRETE UNITS THAT HAVE A MINIMUM OF 28 DAYS COMPRESSIVE STRENGTH.

ADHESIVE ANCHORS

ADHESIVE ANCHORS SHALL BE EPOXY RESIN TYPE 2007 FOR SOLID SUBSTRATES AND HLTI FASTENERS SYSTEMS SUBSTITUTES OR AN EQUIVALENT AS APPROVED BY THE STRUCTURAL ENGINEER. ANCHORS SHALL BE INSTALLED OTHERWISE ON PLANS. ANCHORS SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BY INSTALLERS TRAINED BY THE MANUFACTURER. PRESENTATION SHALL BE AS MANUFACTURED.

MINIMUM EMBEDMENT DEPTH SHALL BE 8 INCHES UNLESS NOTED OTHERWISE.

GROUTING

GROUT SHALL BE A NON-METALLIC, SHRINKAGE REDUCING TYPE, TESTED IN ACCORDANCE WITH THE LATEST EDITION OF ASTM C109 OR C109.2M. PORTLAND CEMENT, SHRINKAGE REDUCING AGENTS AND FLUORIDATED IMPROVING COMPOUNDS. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (FM) OF 1500 PSI IN 28 DAYS.

WATERSTOPS

SE-FLEX MEMBRANE WATERSTOPS SHALL BE VULCANIZED WATERSTOP-RK 101 UNLESS NOTED OTHERWISE. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.

REINFORCING STEEL

REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI.

REINFORCING BAR DETAILING, FABRICATION, AND PLACING SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING STANDARDS: ACI 303.1, AC