

A. GENERAL REQUIREMENTS

- ALL CODES AND STANDARDS REFERENCED SHALL BE THE LATEST EDITION UNLESS NOTED OTHERWISE. THE APPLICABLE BUILDING CODE IS THE UNIFORM BUILDING CODE (U.B.C.), 1997 EDITION.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURES AND UTILITIES AT THE JOB SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT SUCH STRUCTURES AND UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY CONFLICTS BETWEEN EXISTING STRUCTURES AND NEW CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE FABRICATION AND INSTALLATION OF STRUCTURAL MEMBERS.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR FLOOR SLOPES, LOCATIONS OF DEPRESSED FLOOR AREAS, FLOOR FINISHES, TOPPING SLABS, EXTERIOR WALKS, ETC. ALL SLAB RECESSES SHALL BE PROVIDED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL DRAWINGS AND REPORT ALL DISCREPANCIES TO THE ARCHITECT BEFORE FABRICATION AND INSTALLATION OF STRUCTURAL MATERIALS.
- PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR REQUIRED OPENINGS AND COORDINATE ALL DISCREPANCIES WITH THE ARCHITECT. THE CONTRACTOR SHALL VERIFY THE SIZES AND LOCATIONS OF ALL OPENINGS.
- THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL SUBCONTRACTORS.
- ANY REQUIRED CHANGES TO THE STRUCTURAL DRAWINGS RESULTING FROM THE ACCEPTANCE OF ALTERNATES AND/OR SUBSTITUTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- THE CONTRACTOR SHALL NOT BE COMPENSATED FOR ANY DELAY OR INEFFICIENCY RESULTING FROM HIS FAILURE TO PROMPTLY AND ADEQUATELY REVIEW THE PROJECT DRAWINGS, SPECIFICATIONS AND RELATED PROJECT DOCUMENTS.
- THE USE OF REPRODUCTIONS OF THESE CONTRACT DRAWINGS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS IS FORBIDDEN.
- INFORMATION CONTAINED IN THE SPECIFICATIONS SHALL SUPERCEDE ANY CONFLICTING INFORMATION PRESENTED IN THESE CONSTRUCTION DRAWINGS.

B. FOUNDATION NOTES

- REMAINS OF ANY PREVIOUS CONSTRUCTION DETERMINED TO BE IN CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED FROM THE SITE DURING SITE PREPARATION. VOIDS LEFT ON THE SITE FROM THE REMOVAL OF PREVIOUS CONSTRUCTION SHALL BE FILLED IN ACCORDANCE WITH THE SPECIFICATIONS.
- FOOTING ELEVATIONS SHOWN ON THE DRAWINGS ARE FOR ESTIMATING PURPOSES ONLY, AND SHALL BE VERIFIED IN THE FIELD.
- EXCAVATION FOR FOOTINGS SHALL BE NEAT AND FREE OF DEBRIS AND LOOSE MATERIAL. THE LAST 6 INCH DEPTH OF EXCAVATION FOR FOOTINGS SHALL NOT BE REMOVED UNTIL REINFORCING STEEL AND CONCRETE ARE READY TO BE PLACED. REINFORCING STEEL AND CONCRETE SHALL BE PLACED AS SOON AS PRACTICAL AFTER FINAL EXCAVATION AND INSPECTION. OPEN EXCAVATIONS SHALL BE PROTECTED FROM RAINFALL AND EXCESSIVE DRYING TO MAINTAIN THE FOUNDATION SUBGRADE IN A SATISFACTORY, UNDISTURBED CONDITION. WATER ACCUMULATION IN PREPARED EXCAVATIONS EXCEEDING 1 INCH SHALL BE PUMPED OUT BEFORE CONCRETE IS PLACED.
- DESIGN SOIL BEARING PRESSURES FOR FOOTINGS ARE AS FOLLOWS:
 CONTINUOUS FOOTINGS _____ 1200 PSF
 INDIVIDUAL SQUARE FOOTINGS _____ 1200 PSF
 ALL FOOTINGS SHALL BE FOUNDED ON MATERIAL CAPABLE OF SUPPORTING THESE PRESSURES WITHOUT SIGNIFICANT SETTLEMENT.
- ALL FOOTINGS SHALL BE ESTABLISHED AT LEAST 1'-6" BELOW THE LOWEST ADJACENT FINAL COMPACTED SUBGRADE.
- ALL VEGETATION SHALL BE STRIPPED AND REMOVED FROM THE SITE IN THE AREAS WHERE SLABS-ON-GROUND ARE TO BE CONSTRUCTED.
- PIPE TRENCHES BENEATH THE BUILDING SLAB-ON-GRADE SHALL BE MADE BY OPEN CUT METHODS MAINTAINING THE SIDES OF THE TRENCHES AS VERTICAL AS PRACTICAL. THE BOTTOMS OF TRENCHES SHALL BE GRADED ACCURATELY TO ACHIEVE UNIFORM BEARING ALONG THE ENTIRE LENGTH OF PIPES. BACKFILL AROUND THE PIPES SHALL NOT BE PLACED UNTIL THE PIPES HAVE BEEN INSPECTED. BACKFILL IN PIPE TRENCHES SHALL BE SAND, PLACED IN UNIFORM LAYERS, CAREFULLY TAMPED TO MEET THE SPECIFIED COMPACTION FOR THE ADJACENT SUB-GRADE.
- STRUCTURAL FILL SHALL BE USED BENEATH ALL BUILDING SLABS-ON-GROUND AS REQUIRED TO BRING THE SUBGRADE TO THE DESIRED ELEVATION. MATERIALS USED AS STRUCTURAL FILL SHALL BE GRANULAR WITH A PLASTICITY INDEX NOT TO EXCEED 20. STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS. STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM STANDARD DENSITY IN ACCORDANCE WITH ASTM D1557 AT A MOISTURE CONTENT NEAR OPTIMUM.
- GRAVEL FOR USE UNDER BUILDING SLABS ON GROUND SHALL CONFORM TO CLARK COUNTY TYPE II SPECIFICATIONS.
- SAND FOR USE UNDER THE BUILDING SLABS-ON-GROUND SHALL BE REASONABLY CLEAN, COARSE SAND FROM AN APPROVED SOURCE. SAND SHALL HAVE A MOISTURE CONTENT OF 16% TO 20% AT THE TIME OF CONCRETE PLACEMENT.
- A LAYER OF 10-MIL POLYETHYLENE SHEETING SHALL BE PLACED BENEATH ALL BUILDING SLABS-ON-GROUND. LAP ALL JOINTS A MINIMUM OF 6 INCHES.
- THE CONTRACTOR SHALL OBTAIN COPIES OF THE GEOTECHNICAL REPORT FOR THIS PROJECT TO ENSURE COMPLIANCE WITH THE GEOTECHNICAL RECOMMENDATIONS AND TO REVIEW BORING LOGS OF SUBSURFACE MATERIALS. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY NUNYO & MOORE, 3155 EAST PATRICK LANE, LAS VEGAS, NEVADA. REFER TO REPORT NO. 300679-01, DATED JANUARY, 8, 2001.

C. REINFORCED CONCRETE NOTES

- CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318.
- ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:
 FOOTINGS _____ 4,000 PSI
 FLOOR SLAB _____ 4,000 PSI
 CEMENT USED IN CONCRETE SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150, TYPE V. CONCRETE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO (BY WEIGHT) OF 0.50. CONCRETE SHALL BE PLACED WITH A SLUMP NOT TO EXCEED FOUR (4) INCHES. *48275*

REINFORCED CONCRETE NOTES (CONT.)

- STRUCTURAL DESIGN OF FOUNDATIONS IS BASED ON A CONCRETE STRENGTH OF 2,500 PSI AT 28 DAYS, AND SHALL NOT REQUIRE SPECIAL INSPECTION PER U.B.C. CHAPTER 17.
- CONCRETE PLACEMENT IN HOT OR COLD WEATHER SHALL CONFORM TO THE PROVISIONS OF ACI 305R OR 306R RESPECTIVELY. REVIEW OF THE PROPOSED PROCEDURE WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR THE QUALITY OF THE FINISHED PRODUCT.
- DETAILING FABRICATION AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL REINFORCING STEEL SHALL BE NEW STOCK FREE OF RUST, GREASE, MILL SCALE, OR ANY MATERIAL WHICH MIGHT AFFECT ITS BOND TO CONCRETE.
- DEFORMED STEEL REINFORCING BARS SHALL BE GRADE 60 (#3 BARS AND SMALLER MAY BE GRADE 40) AND SHALL CONFORM TO ASTM A 615. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185. WELDED WIRE FABRIC SHALL BE PROVIDED IN FLAT SHEETS.
- ALL BAR BENDS SHALL BE MADE COLD. REBENDING OF BARS SHALL NOT BE PERMITTED.
- MINIMUM REINFORCING STEEL COVERAGES SHALL BE AS OUTLINED IN SECTION 7.7 OF ACI 318 UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTINUOUS UNSCHEDULED REINFORCING BARS SHALL BE LAPPED IN ACCORDANCE THE SPLICE SCHEDULE BELOW:

| BAR SIZE | LAP LENGTH (INCHES) |
|----------|---------------------|
| 3 | 25 |
| 4 | 33 |
| 5 | 41 |
| 6 | 49 |
| 7 | 89 |
| 8 | 102 |

- SLAB-ON-GROUND REINFORCEMENT SHALL BE SUPPORTED ON PRECAST CONCRETE BLOCKS OR HIGH CHAIRS WITH BASE PLATES TO ACHIEVE PROPER LOCATION OF REINFORCEMENT IN THE SLAB.
- REINFRANT CORNERS IN CONCRETE SLABS SHALL BE REINFORCED WITH TWO #4 BARS, 48 INCHES LONG. BARS SHALL BE PLACED ON THE DIAGONAL WITH 1 INCH CLEARANCE FROM THE CORNER OF THE SLAB. THIS REINFORCEMENT SHALL ALSO BE PROVIDED AT RECTILINEAR OPENINGS RESULTING FROM STANDARD CONSTRUCTION PRACTICES.
- REFER TO THE PLAN FOR THE LOCATION OF CONTROL JOINTS IN SLABS-ON-GROUND.
- CONSTRUCTION JOINTS IN FOOTINGS SHALL BE MADE WITH VERTICAL BULKHEADS. SCHEDULED REINFORCING STEEL SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS EXCEPT WHERE SHOWN ON THE DRAWINGS.
- CONCRETE KEYWAYS INDICATED ON THE CONSTRUCTION DRAWINGS SHALL BE PREFORMED, NOMINAL 2 INCHES BY 4 INCHES. METHODS OF OBTAINING A KEYWAY OTHER THAN PREFORMING SHALL NOT BE ACCEPTABLE. KEYWAYS SHALL BE FREE OF DEBRIS BEFORE PLACING CONCRETE ON THE KEYED JOINT.
- CONCRETE SHALL NOT BE PLACED PRIOR TO APPROVAL OF THE CONCRETE MIX DESIGN BY THE ARCHITECT. THE MIX DESIGN SHALL NOT BE APPROVED PRIOR TO RECEIPT OF COMPRESSIVE TEST RESULTS FROM AN INDEPENDENT TESTING LABORATORY CERTIFYING ADEQUATE STRENGTH OF THE MIX DESIGN AT 28 DAYS.
- CONCRETE SHALL NOT BE ALLOWED TO FALL IN EXCESS OF 3 FEET DURING PLACEMENT. THE CONTRACTOR SHALL USE A TREMIE TO PLACE CONCRETE IN AREAS WHERE THE FALL OF CONCRETE MIGHT EXCEED 3 FEET.
- THE CONTRACTOR SHALL PREVENT FRESHLY DEPOSITED CONCRETE FROM PREMATURE DRYING BY PONDING, CONTINUOUS SPRINKLING, MEMBRANE FORMING, WITH WET FABRIC, WITH A CURING COMPOUND APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, OR BY OTHER METHODS APPROVED BY THE ARCHITECT.
- THE CONTRACTOR SHALL PROVIDE A 3/4-INCH CHAMFER AT ALL EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL ENSURE THAT ALL ITEMS WHICH MUST BE EMBEDDED IN THE CONCRETE ARE DELIVERED TO THE SITE IN A TIMELY FASHION AND INSTALLED IN THE FORMWORK PRIOR TO PLACING CONCRETE. THE DRAWINGS AND SPECIFICATIONS OF ALL DISCIPLINES SHALL BE THOROUGHLY EXAMINED TO ENSURE THAT ALL EMBEDDED ITEMS ARE PROVIDED AND PROPERLY INSTALLED.
- ALL REINFORCEMENT BARS REQUIRED TO BE WELDED TO STRUCTURAL STEEL PLATES AND/OR STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A706, GRADE 60. WELDED REINFORCEMENT BARS SHALL BE DEFORMED. WELDING OF REINFORCEMENT BARS SHALL CONFORM TO THE STRUCTURAL WELDING CODE-REINFORCING STEEL, AWS D1.4, PUBLISHED BY THE AMERICAN WELDING SOCIETY, IN CONJUNCTION WITH USC STANDARD 19-1. WELDS FOR REINFORCEMENT BARS SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCEMENT BAR.

D. POST-TENSIONING NOTES

- POST-TENSIONED CONCRETE SLABS SHALL BE 6" THICK OVER 2" OF SAND OVER 10 MIL-POLYETHYLENE VAPOR BARRIER OVER 6" OF TYPE II GRANULAR MATERIAL. IT IS THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR TO EXERCISE GREAT CARE SO AS NOT TO DISTURB THE LOCATIONS OF THE TENDONS DURING CONCRETE PLACEMENT.
- PRE-STRESSING STEEL SHALL BE A SEVEN-WIRE LOW RELAXATION STRAND IN ACCORDANCE WITH ASTM A416, GRADE 270 KSI, WITH A GUARANTEED ULTIMATE TENSILE STRENGTH OF 41.3 KPS. ALL MATERIAL SHALL BE CLEAN AND FREE FROM RUST.
 NOMINAL DIAMETER _____ 1/2 INCH
 NOMINAL AREA _____ 0.153 SQUARE INCHES
 MAXIMUM TEMPORARY JACKING FORCE _____ 33 KIPS
- ALL TENDONS SHALL BE UNBONDED. FABRICATION AND MANUFACTURE OF THE UNBONDED SYSTEM SHALL BE IN ACCORDANCE WITH THE GUIDE SPECIFICATIONS AS OUTLINED BY THE POST-TENSIONING INSTITUTE.
- ANCHORAGE SHALL BE MONOSTRAND TYPE ANCHOR SYSTEM WITH CURRENT ICBO APPROVAL USING A DUCTILE IRON CASTING OF AT LEAST 2-1/4 INCHES BY 4-1/2 INCHES OF BEARING. REUSABLE POCKET-FORMERS ARE TO BE USED ON ALL STRESSING ENDS. THE POCKET-FORMER SHALL PROVIDE ADEQUATE CONCRETE COVERAGE FOR THE ANCHOR AS REQUIRED. DIPPING POCKET-FORMERS IN OIL OR OTHER MATERIALS, FOR EASE OF REMOVAL, IS ACCEPTABLE. ALL DEAD END ANCHORAGES SHALL BE SHOP FABRICATED, PRESETTED WEDGES.

POST-TENSIONING NOTES (CONT.)

- EFFECTIVE TENDON ELONGATIONS REQUIRED ARE SHOWN ON THE DRAWINGS.
- STRESS POCKETS SHALL BE BLENDED TO MATCH AT RUBBED, PAINTED OR FORM FINISHED SURFACES.
- IN CASE OF CONFLICTS IN THE FIELD BETWEEN TENDONS AND EITHER REINFORCING STEEL, CONDUIT, OR OTHER EMBEDMENTS, THE TENDON LOCATIONS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING A FORM WHICH WILL BE USED TO RECORD STRESSING INFORMATION. THIS FORM SHALL BE SUBMITTED TO ENGINEER PRIOR TO FIRST STRESSING OPERATION.
- USE OF RAMSETS OR OTHER FASTENING DEVICES SHALL BE CAREFULLY COORDINATED SUCH THAT NO TENDONS ARE DAMAGED. THE USE OF EMBEDDED ITEMS IN SLABS SHOULD BE USED WHENEVER POSSIBLE TO AVOID THE POSSIBILITY OF DAMAGING TENDONS.
- PLACEMENT OF MILD STEEL REINFORCEMENT SHALL BE COORDINATED WITH THE PLACEMENT OF POST-TENSIONING TENDONS. PROPER TENDON PLACEMENT HAS PRIORITY OVER PLACEMENT OF MILD REINFORCEMENT. REFER TO POST-TENSIONING REINFORCEMENT PLAN FOR LOCATION OF EACH TENDON.
- INTERIOR TENDON LOCATIONS (AWAY FROM SLAB EDGE OF OPENING) SHOWN ON POST-TENSION REINFORCEMENT PLAN SHALL BE PLACED AT 2"± OF THAT LOCATION. DRILL A 13/16" DIAMETER HOLE IN THE FORM BOARD AS NOTED ON THE TYPICAL DETAILS. TENDON LOCATIONS SHOWN ON PLAN SHALL BE PLACED AT APPROXIMATELY EQUAL SPACES BETWEEN CONTROL POINTS.
- SECURE ALL TENDONS AT EACH INTERSECTION WITH AN APPROPRIATE CHAIR. PLASTIC CHAIRS WHICH PROVIDE SADDLE OR SIDE CLIPS FOR THE TENDONS NEED ONLY BE TIED AT EVERY THIRD TENDON INTERSECTION. OTHER CHAIRS WHICH ALLOW TENDONS TO MOVE, LATERALLY SHALL BE TIED AT EACH TENDON INTERSECTION. THE ALL TENDON INTERSECTION AT THE PERIMETER OF THE SLAB. ALL TENDON OVERLAPS SHALL BE CENTERED IN DEPTH OF CONCRETE SLAB UNLESS NOTED OTHERWISE.
- UNROLL TENDON COIL STARTING AT THE DEAD END FIRST AT THE STRESSING END PASS THE TENDON THROUGH THE ANCHOR AND POCKET-FORMER, REMOVING THE PLASTIC SHEATHING WITHIN 3 INCHES OF THE BACK ANCHOR. SECURE THE DEAD ENDS AND STRESSING ENDS WITH NAILS. PROVIDE THE PROPER CONCRETE COVERAGE AT THE DEAD END.
- ALL TENDON STRESSING OPERATIONS MUST BE PERFORMED UNDER THE IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN POST-TENSIONING STRESSING OPERATIONS. THE PERSON IN CONTROL SHALL MAINTAIN STRICT SAFETY PRECAUTIONS AND A RIGID CONTROL OF GAUGE PRESSURE READINGS AND ELONGATION MEASUREMENTS.
- TENDON STRESSING MAY PROCEED WHEN THE CONCRETE STRENGTH OBTAINS 2000 P.S.I. SEE INSPECTION SECTION (TO FOLLOW) FOR CONCRETE TESTING REQUIREMENTS. FOR BEST RESULTS STRESS SLABS AS SOON AS POSSIBLE. STRESS ALL TENDONS BEFORE PLACING SECOND STORY FLOOR SHEATHING OR ROOF SHEATHING ON THE FRAMED STRUCTURE - PARTIAL STRESSING (25% OF TOTAL FORCE) THE DAY AFTER, CONCRETING IS RECOMMENDED FOR ALL CABLES WHEN THE STRUCTURES LENGTH EXCEEDS 100 FEET.
- ALL TENDONS SHALL BE STRESSED BY MEANS OF HYDRAULIC JACK, EQUIPPED WITH A CALIBRATED PRESSURE GAUGE. EACH JACK SHALL BE ACCOMPANIED BY A CURRENT CALIBRATION CHART. IF THE MEASURED ELONGATION DOES NOT CORRESPOND TO THE CALCULATED ELONGATION BY PLUS OR MINUS 10 PERCENT, REPORT DISCREPANCIES TO THE ENGINEER BEFORE CUTTING THE STRESSING ENDS. ON TENDONS 25 FEET IN LENGTH OR LESS, GAUGE PRESSURE GOVERNS OVER ELONGATION. DO NOT STAND BEHIND JACK DURING STRESSING.

E. REINFORCED CONCRETE MASONRY NOTES

- CONCRETE MASONRY UNIT (CMU) CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY", NATIONAL CONCRETE MASONRY ASSOCIATION.
- CONCRETE MASONRY CONSTRUCTION SHALL NOT REQUIRE SPECIAL INSPECTION PER U.B.C. CHAPTER 17.
- LOAD BEARING CMU SHALL BE HOLLOW, MEDIUM WEIGHT CONCRETE UNITS CONFORMING TO ASTM C 90, GRADE N, TYPE 1, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI ON THE NET AREA. CEMENT USED IN CONCRETE MASONRY UNITS BELOW GRADE SHALL CONFORM TO ASTM C 150, TYPE V. CEMENT USED IN CONCRETE MASONRY UNITS ABOVE GRADE SHALL CONFORM TO ASTM C 150, TYPE II.
- MORTAR SHALL CONFORM TO ASTM C 270. MORTAR AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 144. STANDARD SPECIFICATION FOR AGGREGATE FOR MASONRY MORTAR. TYPE S MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI, SHALL BE USED FOR ALL CONCRETE MASONRY.
- COARSE GROUT SHALL CONFORM TO ASTM C 476, WITH A MAXIMUM AGGREGATE SIZE OF 3/8 INCH, AND A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI. AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 404, STANDARD SPECIFICATION FOR AGGREGATES FOR MASONRY GROUT.
- CEMENT USED FOR MORTAR AND GROUT SHALL BE A LOW ALKALI TYPE CONFORMING TO ASTM C 150. CEMENT USED IN MASONRY MATERIALS BELOW GRADE SHALL BE TYPE V. CEMENT USED IN MASONRY MATERIALS ABOVE GRADE SHALL BE TYPE II.
- BOND BEAMS SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS. REINFORCING STEEL IN BOND BEAMS SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS. IN ADDITION TO SCHEDULED OR DETAILED REINFORCING, TWO #4 BARS SHALL BE PROVIDED IN BOND BEAMS AT CORNERS AND INTERSECTIONS.
- VERTICAL CONTROL JOINTS SHALL BE INSTALLED AT LOCATIONS INDICATED ON THE ARCHITECTURAL DRAWINGS. A SHEAR KEY SHALL BE REQUIRED TO LATERALLY STABILIZE CMU STRUCTURES ACROSS VERTICAL JOINTS.
- HORIZONTAL AND VERTICAL WALL REINFORCEMENT SHALL BE PROVIDED AS INDICATED ON THE DRAWINGS.
- REINFORCEMENT IN CONCRETE MASONRY STRUCTURES SHALL BE LAPPED 48 BAR DIAMETERS AT ALL SPLICE LOCATIONS.
- SHORING AND BRACING FOR ALL MASONRY STRUCTURES SHALL REMAIN IN PLACE UNTIL THE MASONRY HAS REACHED A PRISM STRENGTH OF 1500 PSI.

F. STRUCTURAL STEEL NOTES

- DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL COMPLY WITH AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, AISC CODE OF STANDARD PRACTICE AND ALL UPDATING PUBLICATIONS.
- STRUCTURAL STEEL BEAMS, GIRDERS & COLUMNS SHALL CONFORM TO ASTM A992 EXCEPT AS NOTED.
- STRUCTURAL STEEL CHANNELS, ANGLES, BASEPLATES, STIFFENER PLATES, CONNECTION PLATES AND MISCELLANEOUS METALS SHALL CONFORM TO ASTM A36 EXCEPT AS NOTED.
- STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500, GRADE B WITH A MINIMUM YIELD STRENGTH OF 46 KSI.
- STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A 53, TYPE E OR S, GRADE B, WELDED OR SEAMLESS. HYDROSTATIC TESTS ARE NOT REQUIRED.
- STEEL CONNECTIONS SHALL BE PROVIDED AS DETAILED ON THE DRAWINGS, OR AS DESIGNED PER REACTIONS SHOWN ON THE FRAMING PLANS. ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL BOLTS IN BOLTED CONNECTIONS SHALL BE HIGH STRENGTH, TENSION CONTROL BOLTS CONFORMING TO ASTM A 325.
- WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ELECTRODES SHALL CONFORM TO AWS A5.5, E70XX.
- MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE THE MINIMUM SIZE FILLET WELD (ALL AROUND) IN ACCORDANCE WITH AISC. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16-INCH FILLET WELD AT 12 INCHES O.C., STAGGERED EACH SIDE, UNLESS NOTED OTHERWISE. COLUMN BASE PLATES, COLUMN CAP PLATES AND ALL STIFFENER PLATES SHALL BE WELDED ALL AROUND. INSPECTION OF FIELD WELDS SHALL BE PROVIDED IN ACCORDANCE WITH U.B.C. CHAPTER 17.
- SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER AS TO THE LOCATION AND TYPE OF SPLICE. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON THE SHOP DRAWINGS WILL BE REJECTED.
- BURNING OF HOLES IN STRUCTURAL STEEL IS PROHIBITED. ANY MEMBER WITH BURNED HOLES SHALL BE REJECTED.
- PRE-GROUTING OF BASE PLATES IS PROHIBITED.
- ANCHOR BOLTS WITH SUITABLE NUTS AND WASHERS SHALL CONFORM TO ASTM A 307. ALL ANCHOR BOLTS SHALL BE SET IN CONCRETE USING RIGID TEMPLATES.
- NATURAL BEAM CAMBER IN BEAMS SHALL BE PLACED UP. SHOP CAMBER BEAMS AS SHOWN ON THE DRAWINGS.
- ALL STRUCTURAL STEEL ELEMENTS NOT SPECIFIED TO BE GALVANIZED SHALL RECEIVE ONE (1) SHOP COAT OF PAINT IN CONFORMANCE WITH THE PROJECT SPECIFICATIONS UNLESS NOTED OTHERWISE. DO NOT PAINT ITEMS ENCASED IN CONCRETE, AREAS INTENDED TO BE FIELD WELDED, OR SCHEDULED TO BE GALVANIZED. FIELD TOUCH-UP ALL DAMAGED SURFACES AND FIELD WELDED CONNECTIONS AFTER STEEL ERECTION IS COMPLETE.
- ALL STEEL FABRICATION AND WELDING SHALL BE PERFORMED IN THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.

G. SPECIAL INSPECTION REQUIREMENTS

- THE FOLLOWING WORK SHALL REQUIRE SPECIAL INSPECTION PER THE UNIFORM BUILDING CODE, CHAPTER 17, AND THE LOCAL BUILDING OFFICIAL:
- STRUCTURAL FIELD WELDING.
 - INSTALLATION OF EXPANSION ANCHORS.
 - BOLTS AND FABRICATED STEEL ITEMS EMBEDDED IN CONCRETE.
 - GROUTING BENEATH STEEL BASE PLATES.

H. DESIGN CRITERIA:

- WIND LOAD (1997 UBC) _____ 75 MPH, EXPOSURE "B"
- SEISMIC LOAD (1997 UBC) _____ ZONE 2B

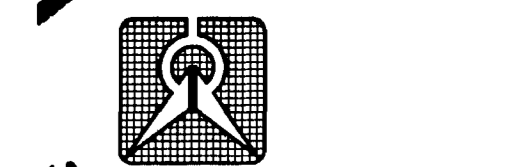


REVISIONS 3-20-02
 RECORD DRAWINGS

CONSULTANT



900 FLEET ROAD, SUITE A
 LAS VEGAS, NEVADA 89109
 (702) 888-7711



R. L. BALOGH
 CONSULTING ENGINEERS, INC
 2800 South Rainbow Boulevard, Suite 208
 Las Vegas, Nevada 89146
 (702) 248-8700 FAX (702) 248-8754

DEPARTMENT OF PUBLIC WORKS
 ELKHORN SPRINGS
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 STRUCTURAL GENERAL NOTES

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DEPARTMENT OF PUBLIC WORKS
 ARCHITECTURAL SERVICES
 400 EAST STEWART AVENUE
 LAS VEGAS, NEVADA 89101
 PHONE: (702) 229-4534
 FAX: (702) 382-3232
 TDD: (702) 388-9108

STRUCTURAL ENGINEER
 RICHARD L. BALOGH, P.E., S.E.
 DRAWN PYE
 FILE 011530116
 (650-64)
 DATE MARCH 9, 2001
 SCALE NONE
 PROJECT 00058
 SHT NO
 650F 90

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