



DETAIL DRAWN BY:



18325 N. ALLIED WAY  
SUITE 200  
PHOENIX, AZ 85054

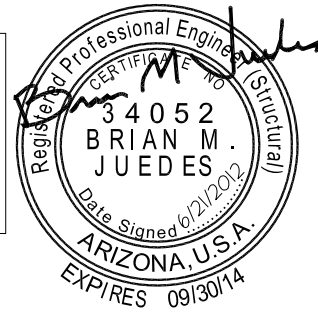
ARIZONA MASONRY GUILD

GENERAL STRUCTURAL NOTES  
FOR MASONRY FENCES

REVISIONS	ENGINEERED BY / DATE
△	G.FELTEN / BMJ
△	06/21/12

SHEET

G5N



\* SEE SHEET S1.I FOR MASONRY FENCE DESIGN

CONCRETE	GRADING AND DRAINAGE	METHOD OF CONSTRUCTION
<ol style="list-style-type: none"> <li>ALL MATERIALS, PROCEDURES, PLACEMENT, FORMWORK, LAPS, ETC. TO CONFORM TO THE LATEST ACI STANDARDS.</li> <li>SHALL MEET ALL THE REQUIREMENTS OF ACI 301, TYPE II CEMENT U.N.O. MINIMUM STRENGTHS AT 28 DAYS SHALL BE AS FOLLOWS, U.N.O.: CONVENTIONAL FOUNDATIONS - 2500 PSI</li> <li>MAXIMUM SIZE OF AGGREGATE SHALL BE 1 INCH. AGGREGATE PER ASTM C57 OR C33.</li> <li>MAXIMUM SLUMP TO BE 8 INCHES.</li> <li>CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED AS ADDITIVES.</li> <li>FLYASH MAY BE USED PROVIDED IT MEETS ASTM C618 TYPE F AND DOES NOT EXCEED 20% OF THE WEIGHT OF TOTAL CEMENTITIOUS MATERIAL FOR CONCRETE STRENGTH UP TO AND INCLUDING 3000 PSI.</li> <li>PROTECT CONCRETE FROM DAMAGE OR REDUCED STRENGTH FROM COLD OR HOT WEATHER IN COMPLIANCE WITH ACI 305 AND ACI 306.</li> <li>THE CONTRACTOR SHALL PROVIDE PROPER CURING TO MINIMIZE SHRINKAGE CRACKING AND ENSURE PROPER STRENGTH GAIN.</li> <li>EVALUATION AND ACCEPTANCE OF CONCRETE SHALL BE BASED ON CYLINDER STRENGTH TESTS AS OUTLINED IN THE APPLICABLE BUILDING CODE</li> <li>CONCRETE THAT IS IN DIRECT CONTACT WITH NATIVE SOILS CONTAINING WATER-SOLUBLE SULFATES SHALL CONFORM TO THE FOLLOWING: FOR SULFATE CONCENTRATIONS GREATER THAN OR EQUAL TO 0.1% BUT LESS THAN 0.2% BY WEIGHT CONCRETE SHALL BE MADE WITH ASTM C 150 TYPE II CEMENT, OR AN ASTM C 545 OR C 1157 HYDRAULIC CEMENT MEETING MODERATE SULFATE-RESISTANT HYDRAULIC CEMENT (M5) DESIGNATION. FOR SULFATE CONCENTRATIONS EQUAL TO OR GREATER THAN 0.2% BY WEIGHT, CONCRETE SHALL BE MADE WITH ASTM C 150 TYPE V CEMENT OR AN ASTM C 545 OR C 1157 HYDRAULIC CEMENT MEETING HIGH SULFATE-RESISTANT HYDRAULIC CEMENT (H5) DESIGNATION AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.</li> </ol>	<ol style="list-style-type: none"> <li>PROPER GRADING SHALL BE PROVIDED DURING CONSTRUCTION AS WELL AS THROUGHOUT THE LIFE OF THE STRUCTURE.</li> <li>LANDSCAPE WATERING SHOULD NOT LEAD TO MOISTURE INFILTRATION OR MOISTURE CONTENT FLUCTUATION IN THE SOILS UNDER THE FOUNDATION. IT IS RECOMMENDED THAT VEGETATION BE KEPT A MINIMUM OF 3 FEET FROM THE STRUCTURE AND THAT THE VEGETATION BE DESERT TYPE. (SHALLOW WATERING, MOISTURE NOT TO PENETRATE INTO THE SOIL MORE THAN 8 INCHES).</li> <li>IT IS RECOMMENDED THAT TREES BE KEPT AWAY FROM THE STRUCTURE SUCH THAT THE DRIP LINE OF THE MATURE TREE DOES NOT OVERLAP THE FOUNDATION.</li> </ol>	<ol style="list-style-type: none"> <li>THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURE.</li> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS.</li> <li>THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OR ENGINEER AND SHALL BE RESOLVED BEFORE PRECEDING WITH THE WORK AFFECTED.</li> </ol>
<p style="text-align: center;"><b>MASONRY</b></p> <ol style="list-style-type: none"> <li>ALL MATERIALS, PROCEDURES, PLACEMENT, LAPS, ETC. TO CONFORM TO THE LATEST ACI STANDARDS.</li> <li>CONCRETE MASONRY UNITS - NET AREA COMPRESSIVE STRENGTH OF CMU = 1400 PSI, ASTM C90, F<sub>m</sub> = 1500 PSI</li> <li>GROUT - 2000 PSI CONFORMING TO ASTM C416.</li> <li>MORTAR - TYPE S - 2000 PSI PORTLAND CEMENT / LIME OR MORTAR CEMENT CONFORMING TO ASTM C270. MORTAR MAY BE USED IN LIEU OF GROUT IN THE PILASTER CELL PROVIDED THAT THE MORTAR IS PLACED IN 8 INCH LIFTS AS THE FENCE IS BUILT</li> <li>JOINT REINFORCING f<sub>y</sub> = 70000 PSI CONFORMING TO ASTM A451.</li> <li>JOINT REINFORCING TO BE CONTINUOUS (NO SPLICES) AT THE BOTTOM OF THE FIRST AND THIRD COURSE FROM THE TOP OF THE WALL AS SHOWN IN THE DRAWINGS. AS AN ALTERNATE, JOINT REINFORCING MAY BE SPLICED WITH NO LAP PROVIDED THAT AN ADDITIONAL ROW OF JOINT REINFORCING IS PLACED AT THE BOTTOM OF THE SECOND AND FOURTH COURSE FROM THE TOP OF THE WALL AND PROVIDED THAT THE SPLICES BETWEEN ADJACENT ROWS OF JOINT REINFORCEMENT ARE STAGGERED BY A MINIMUM OF 4 FEET</li> <li>ALL REINFORCED CELLS OR PILASTERS SHALL BE SOLID GROUTED.</li> <li>MASONRY UNITS AND MORTAR THAT ARE IN DIRECT CONTACT WITH NATIVE SOILS CONTAINING WATER SOLUBLE SULFATES SHALL BE ADDRESSED BY THE CONTRACTOR.</li> <li>CMU EXPOSURE TO WATER (BOTH ABOVE AND BELOW GRADE) IS NOT ADDRESSED IN THIS DESIGN AND SHALL BE ADDRESSED BY THE CONTRACTOR.</li> </ol>	<p style="text-align: center;"><b>SOIL</b></p> <ol style="list-style-type: none"> <li>SEE SHEET S1.I FOR GEOTECHNICAL REPORT INFORMATION</li> <li>IN THE ABSENCE OF A GEOTECHNICAL REPORT, PRESUMPTIVE SOIL DESIGN VALUES SHALL BE USED. THE CLIENT ACCEPTS FULL RESPONSIBILITY FOR THE ADEQUACY OF THE PRESUMPTIVE SOIL DESIGN VALUES USED FOR THE PROJECT. THE CLIENT ALSO ASSUMES FULL RESPONSIBILITY FOR THE ADEQUACY OF THE ASSUMED NON-EXPANSIVE, NON-COLLAPSABLE AND NON-CORROSIVE SOIL PROPERTIES</li> <li>PRESUMPTIVE SOIL DESIGN VALUES ARE: ALLOWABLE SOIL BEARING = 1000 P.S.F. 12" BELOW GRADE, EQUIVALENT FLUID PRESSURE =35 psi/ft, PASSIVE PRESSURE =200 psi/ft, COEFFICIENT OF FRICTION =.35</li> <li>SOIL IS ASSUMED TO BE NON-EXPANSIVE NON-COLLAPSABLE, AND NON-CORROSIVE.</li> <li>ALL EXCAVATION, FILL (INCLUDING RETAINING COMPACTION, AND SOIL RELATED OPERATIONS SHALL BE PERFORMED ACCORDING TO THE GEOTECHNICAL REPORT.</li> </ol>	<p style="text-align: center;"><b>GENERAL</b></p> <ol style="list-style-type: none"> <li>ALL WORK SHALL COMPLY WITH THE GENERAL NOTES, DRAWINGS, APPLICABLE BUILDING CODES AND ALL LOCAL ORDINANCES, LAWS, REGULATIONS, AND PROTECTIVE COVENANTS GOVERNING THE SITE OF WORK.</li> <li>IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN</li> <li>TYPICAL DETAILS SHALL APPLY UNLESS SHOWN OTHERWISE IN THE DRAWINGS.</li> <li>NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN ADVANCE OR AS SHOWN ON THESE DRAWINGS.</li> <li>THE STANDARD OF CARE FOR ALL PROFESSIONAL ENGINEERING, AND RELATED SERVICES PERFORMED OF FURNISHED BY FELTEN GROUP, WILL BE THE CARE AND SKILL ORDINARILY USED BY MEMBERS OF THE SUBJECT PROFESSION PRACTICING UNDER SIMILAR CIRCUMSTANCES AT THE SAME TIME AND IN THE SAME LOCALITY. FELTEN GROUP MAKES NO WARRANTIES, EXPRESS OR IMPLIED, OR OTHERWISE, IN CONNECTION WITH FELTEN GROUP'S SERVICES. FELTEN GROUP AND ITS CONSULTANTS MAY USE OR RELY UPON THE DESIGN SERVICES OF OTHERS, INCLUDING, BUT NOT LIMITED TO, ENGINEERS, ARCHITECTS, DESIGNERS, CONTRACTORS, MANUFACTURERS, AND SUPPLIERS.</li> <li>ALL DESIGN DOCUMENTS PREPARED OR FURNISHED BY FELTEN GROUP ARE INSTRUMENTS OF SERVICE, AND FELTEN GROUP RETAINS OWNERSHIP AND PROPERTY INTEREST (INCLUDING THE COPYRIGHT) IN SUCH DOCUMENTS, WHETHER OR NOT THE PROJECT IS COMPLETED. CLIENT SHALL NOT REUSE THE DOCUMENTS WITHOUT WRITTEN PERMISSION FROM FELTEN GROUP.</li> <li>THE CONTRACTOR, NOT FELTEN GROUP, IS RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT, AND FELTEN GROUP IS NOT RESPONSIBLE FOR THE ACTS OR OMISSIONS OF ANY CONTRACTOR, SUBCONTRACTOR OR MATERIAL SUPPLIER; FOR SAFETY PRECAUTIONS, PROGRAMS OR ENFORCEMENT; OR FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES EMPLOYED BY THE CONTRACTOR. FELTEN GROUP SHALL NOT AT ANY TIME SUPERVISE, DIRECT, OR HAVE CONTROL OVER ANY CONTRACTORS WORK. FELTEN GROUP NEITHER GUARANTEES THE PERFORMANCE OF ANY CONTRACTOR NOR ASSUMES RESPONSIBILITY FOR ANY CONTRACTOR'S FAILURE TO FURNISH AND PERFORM ITS WORK IN ACCORDANCE WITH THE CONTRACT BETWEEN CLIENT AND SUCH CONTRACTOR.</li> <li>FELTEN GROUP WILL NOT HAVE CONTROL OVER NOR BE NEITHER RESPONSIBLE NOR LIABLE IN ANY WAY FOR SAFETY PROCEDURES, SAFETY TRAINING AND PROGRAMS OR OTHER SAFETY RELATED ASPECTS OF THE WORK OF THE PROJECT SINCE THESE ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.</li> <li>WALL HEIGHT SHOWN BASED ON ACTUAL 8" TALL BLOCK HEIGHT</li> <li>TOP OF FENCE SHALL NOT STEP BETWEEN PILASTERS</li> </ol>
<p style="text-align: center;"><b>STEEL REINFORCEMENT</b></p> <ol style="list-style-type: none"> <li>SHALL BE SUPPLIED AND INSTALLED PER THE LATEST ACI STANDARDS.</li> <li>USE ASTM A615 GRADE 60</li> <li>THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH                   3" EXPOSED TO EARTH OR WEATHER   1 1/2" NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND                   3/4"</li> <li>UNLESS NOTED OTHERWISE, LAP SPLICES SHALL BE 48 BAR DIAMETERS MINIMUM. STAGGER ALTERNATE SPLICES A MINIMUM OF 1 LAP LENGTH. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS.</li> <li>SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.</li> </ol>	<p style="text-align: center;"><b>WIND</b></p> <ol style="list-style-type: none"> <li>10 PSF LATERAL WIND PRESSURE. 2006/2009 IBC, 90 MPH, EXP. B ASCE 7-05/10 NOTE: ASCE 7-02 FIGURE 6-20 TO REPLACE 7-05 FIGURE 6-20 TO KEEP LATERAL WIND FORCE CONSISTENT FOR RESIDENTIAL FENCES AND IS A AN ACCEPTED PRACTICE FOR MANY JURISDICTIONS IN ARIZONA. (FOR EXAMPLE THE CITY OF PHOENIX ADDED EXCEPTION 5 TO 2006 IBC SECTION 1609.11 "FOR DESIGN WIND LOADS ON SOLID FREESTANDING WALLS AND SOLID SIGNS PER ASCE 7-05, SECTION 6.5.14, FIGURE 6-20 OF ASCE 7-02 MAY BE USED")</li> <li>12.5 PSF LATERAL WIND PRESSURE. 2006/2009 IBC, 90 MPH, EXP. C ASCE 7-05/10 NOTE: ASCE 7-02 FIGURE 6-20 TO REPLACE 7-05 FIGURE 6-20 TO KEEP LATERAL WIND FORCE CONSISTENT FOR RESIDENTIAL FENCES AND IS A AN ACCEPTED PRACTICE FOR MANY JURISDICTIONS IN ARIZONA. (FOR EXAMPLE THE CITY OF PHOENIX ADDED EXCEPTION 5 TO 2006 IBC SECTION 1609.11 "FOR DESIGN WIND LOADS ON SOLID FREESTANDING WALLS AND SOLID SIGNS PER ASCE 7-05, SECTION 6.5.14, FIGURE 6-20 OF ASCE 7-02 MAY BE USED")</li> </ol>	<p style="text-align: center;"><b>SUBSTITUTIONS</b></p> <ol style="list-style-type: none"> <li>ALL PRODUCT SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. CONTRACTOR TO SUBMIT DOCUMENTATION TO DEMONSTRATE THAT THE PROPOSED SUBSTITUTION IS EQUAL TO THE SPECIFIED PRODUCT. PRODUCT SUBSTITUTIONS MAY BE USED PROVIDED THEY ARE APPROVED BY THE ENGINEER OF RECORD IN WRITING.</li> </ol>
<p style="text-align: center;"><b>DAMP-PROOFING</b></p> <ol style="list-style-type: none"> <li>DAMP-PROOFING OF THOSE PORTIONS OF FENCES BELOW GRADE IS NOT REQUIRED PER CODE, BUT MAY BE USED BY CONTRACTOR AT THEIR DISCRETION.</li> <li>AS AN ALTERNATE TO DAMP-PROOFING, INTEGRAL WATER REPELLANT UNITS AND WATER REPELLANT MORTAR MAY BE USED.</li> </ol>	<p style="text-align: center;"><b>DISCREPANCIES</b></p> <ol style="list-style-type: none"> <li>THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND CONDITIONS WITH THE DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT OR ENGINEER OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCIES, OMISSIONS, OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.</li> <li>NOTED DIMENSIONS TAKE PRECEDENT OVER SCALED.</li> </ol>	<p style="text-align: center;"><b>SPECIAL INSPECTION</b></p> <ol style="list-style-type: none"> <li>SPECIAL INSPECTION SHALL BE PROVIDED AS REQUIRED BY THE LOCAL BUILDING OFFICIAL.</li> </ol>