

1. GENERAL

1.1 THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH ALL OTHER DISCIPLINES' DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND ARCHITECT.

1.2 DESIGN CRITERIA:

A. CODES AND SPECIFICATIONS:

1. GENERAL BUILDING CODE: INTERNATIONAL BUILDING CODE, 2012 EDITION WITH CITY OF MONT BELVIEU AMENDMENTS.
2. CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318-14.

B. DESIGN LOADS (PSF):

1. DEAD LOADS:

ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.

2. WIND LOADS:

BASIC WIND SPEED (3 - SECOND GUST) ----- 139 MPH  
 WIND IMPORTANT FACTOR (IW) ----- 1.0  
 BUILDING CATEGORY ----- B  
 WIND EXPOSURE CATEGORY ----- I  
 INTERNAL PRESSURE COEFFICIENT ----- ±0.18

1.3 CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL WORK FITTING AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.

1.4 SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS. ITEMS MARKED (\*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. ITEMS MARKED (#) SHALL BE SUBMITTED FOR THE STRUCTURAL ENGINEER'S RECORD ONLY.

1. CONCRETE REINFORCING
2. CONCRETE MIX DESIGNS

1.5 THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.

1.6 THE STRUCTURE HAS BEEN DESIGNED TO RESIST DESIGN LOADS ONLY AS A COMPLETED STRUCTURE. APPLICATIONS OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE SHALL BE CONSIDERED BY THE CONTRACTOR AND SO INCLUDED IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED FOR CONSTRUCTION OF THE STRUCTURE. DURING ERECTION AND UNTIL ALL PERMANENT CONNECTIONS ARE MADE, THE CONTRACTOR MUST PROVIDE TEMPORARY BRACING TO BRACE THE STRUCTURE IN ALL DIRECTIONS.

1.7 THE ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR CONSTRUCTION OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2. FOUNDATION NOTES:

2.1 CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING ANY WORK.

2.2 CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE SHOULD ANY DIMENSIONS OR CONDITIONS VARY FROM THE INTENT OF THE DRAWINGS.

2.3 IN AREAS WHERE THERE IS VEGETATION, CONTRACTOR SHALL SCALP VEGETATION COMPLETELY TO A DEPTH OF 4 TO 6 INCHES DEEP AT LEAST FIVE FEET BEYOND THE WALL EDGES. STRIPPED MATERIAL CLASSIFIED AS TOPSOIL SHALL BE STOCKPILED FOR REUSE. OTHER STRIPPED MATERIAL SHALL BE HAULED OFF OR SPREAD ON SITE AS DIRECTED BY OWNER.

2.4 CONTRACTOR SHALL PROOF ROLL THE SUBGRADE TO DETERMINE LOCATION OF SOFT OR LOOSE SOILS WHICH MUST BE REMOVED AND REPLACED WITH SELECT FILL.

2.5 GRADE THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL WALLS. WATER SHALL NOT BE ALLOWED TO POND ADJACENT TO THE WALLS.

2.6 CONTRACTOR SHALL SCARIFY SUBGRADE TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D-698). THE MOISTURE CONTENT SHALL RANGE BETWEEN 0 TO +3 PERCENT OF OPTIMUM MOISTURE CONTENT.

2.7 STRUCTURAL SELECT FILL SHALL BE A CLEAN SANDY CLAY FREE OF DELETERIOUS MATERIAL WITH A LIQUID LIMIT LESS THAN 25 AND A PLASTICITY INDEX (P.I.) BETWEEN 10 AND 20. SELECT FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY TEST (ASTM D-698). THE MOISTURE CONTENT SHALL RANGE BETWEEN 0 TO +3 PERCENT OF OPTIMUM MOISTURE CONTENT.

2.8 SAND SHALL BE CLEAN, SHARP, GRANULAR TYPE, LOCALLY AVAILABLE AND EASILY COMPACTED FREE OF VEGETATION OR OTHER DELETERIOUS MATERIAL.

2.9 REINFORCING STEEL SHALL BE SET AND CONCRETE PLACED IN PIERS IMMEDIATELY AFTER DRILLING AND INSPECTION. UNCLEAN SHAFT BOTTOMS OR SLOUGHED SIDES OF SHAFTS WILL BE CAUSE FOR REJECTION.

2.10 ALL FORM WORK SHALL BE PLACED AND SHORED, ALL REINFORCING STEEL SET AND TIED, ALL CONCRETE PLACED, FINISHED AND CURED PER THE AMERICAN CONCRETE INSTITUTE LATEST EDITION AND PER ALL SAFETY PROCEDURES OF THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

2.11 CONTRACTOR SHALL HAND TAMP BOTTOM OF GRADE BEAM EXCAVATIONS TO A HARD SURFACE BEFORE PLACING REINFORCING STEEL.

2.12 REINFORCING STEEL SHALL BE LAP SPLICED A MINIMUM OF 42 BAR DIAMETERS. MINIMUM 10-FOOT LONG CORNER BARS BENT 90-DEGREES SHALL BE PROVIDED AT ALL GRADE BEAM CORNERS, 5 FEET EACH LEG. MINIMUM REINFORCING STEEL COVER SHALL BE PROVIDED AS FOLLOWS:

3" WHERE CONCRETE CONTACTS EARTH  
 1 1/2" WHERE CONCRETE CONTACTS FORM

2.13 ALL CONCRETE SURFACES SHALL BE PROPERLY CURED AND SUFFICIENT TIME ALLOWED BEFORE PERMITTING TRAFFIC OR CONSTRUCTION TO PROCEED. A HARD STEEL TROWEL FINISH SHALL BE PROVIDED ON ALL CONCRETE.

2.14 THIS FOUNDATION DESIGN WAS COMPLETED WITHOUT A GEOTECHNICAL REPORT. THIS DESIGN ASSUMES A MAXIMUM NET ALLOWABLE BEARING PRESSURE OF 1,500 PSF FOR TOTAL LOAD CONDITIONS BASED ON IBC 2012 SECTION 1806.2.

2.15 FOOTINGS SHALL BE POURED IMMEDIATELY UPON COMPLETION OF EXCAVATION AND CLEANING OF FOOTING BEARING SURFACE. ALL SPOILS FROM THE FOOTING EXCAVATIONS SHALL BE REMOVED FROM THE BUILDING PAD.

2.16 QUALITY CONTROL TESTING IS FOR THE OWNER'S BENEFIT AND FOR HIS ACCOUNT. THE FREQUENCIES AND THE TYPES OF TESTING SHALL BE DIRECTED BY THE OWNER OR HIS AGENT IN FULL COOPERATION WITH AND WITH PRIOR ANNOUNCEMENT TO THE CONTRACTOR.

2.17 CONCRETE IN UNDER-REAMED PIERS SHALL HAVE A MIX DESIGN FOR A MINIMUM OF 3,000 PSI AT 28 DAYS WITH 5 SACKS OF STANDARD TYPE I CEMENT, 1 INCH COARSE AGGREGATE, NARROW GRADED, PLACED BY MEANS OF A METAL CHUTE. DESIGN SLUMP RANGE IS 3 TO 5 INCHES. POURS BETWEEN THE TEMPERATURES OF 50 TO 90 DEGREES F MAY BE MADE WITHOUT SPECIAL PROVISIONS.

2.18 CONCRETE IN GRADE BEAMS SHALL HAVE A MIX DESIGN FOR A MINIMUM OF 3,000 PSI AT 28 DAYS WITH 5 SACKS OF STANDARD TYPE I CEMENT, 1 INCH COARSE AGGREGATE, NARROW GRADED, PLACED BY MEANS OF A METAL CHUTE. ALTERNATE DESIGNS CONTAINING FLY ASH TYPE POZZOLANS BLENDED WITH TYPE I CEMENT ARE ACCEPTABLE PROVIDED 1) THE STRENGTH AT 3, 7, AND 14 DAYS HAS BEEN CONTROLLED TO MATCH AN ALL CEMENT DESIGN BY SUITABLE ADDITIVES OR AIR ENTRAINMENT. 2) THE TIME OF INITIAL SET HAS BEEN CONTROLLED TO MATCH AN ALL CEMENT DESIGN BY SUITABLE ADDITIVE. DESIGN SLUMP RANGE IS 3 TO 5 INCHES. POURS BETWEEN THE TEMPERATURES OF 50 TO 90 DEGREES F MAY BE MADE WITHOUT SPECIAL PROVISIONS.

2.19 ALL REINFORCING STEEL SHALL BE CLEAN, NEW AND FREE OF DIRT, RUST OR OIL, AND SHALL MEET OR EXCEED THE REQUIREMENTS OF ASTM A-615, GRADE 60, EXCEPT #3 STIRRUP BARS WHICH MAY BE GRADE 40.

2.20 PLAIN SMOOTH RODS OR DOWELS SHALL CONFORM TO ASTM A-675, GRADE 80.

2.21 JOINT FILLER STRIPS FOR JOINTS SHALL CONFORM TO ASTM D-1751 OR D-1752. JOINT FILLER SHALL BE 1/2 INCH THICK MINIMUM UNLESS SHOWN OTHERWISE ON DRAWINGS. JOINT SEALANT FOR PORTLAND CEMENT CONCRETE PAVEMENTS SHALL CONFORM TO ASTM D-3405.

2.22 WHERE DRILLED FOOTING IS SHOWN ON THE PLAN CLOSER THAN 6'-0" FROM ANOTHER FOOTING, DRILL ONE FOOTING, FILL WITH CONCRETE AND LET CURE 24 HOURS PRIOR TO DRILLING THE ADJACENT FOOTING. (6'-0" DIMENSION IS MEASURED BETWEEN EDGE OF BELL; NOT CENTER TO CENTER)

3. MASONRY:

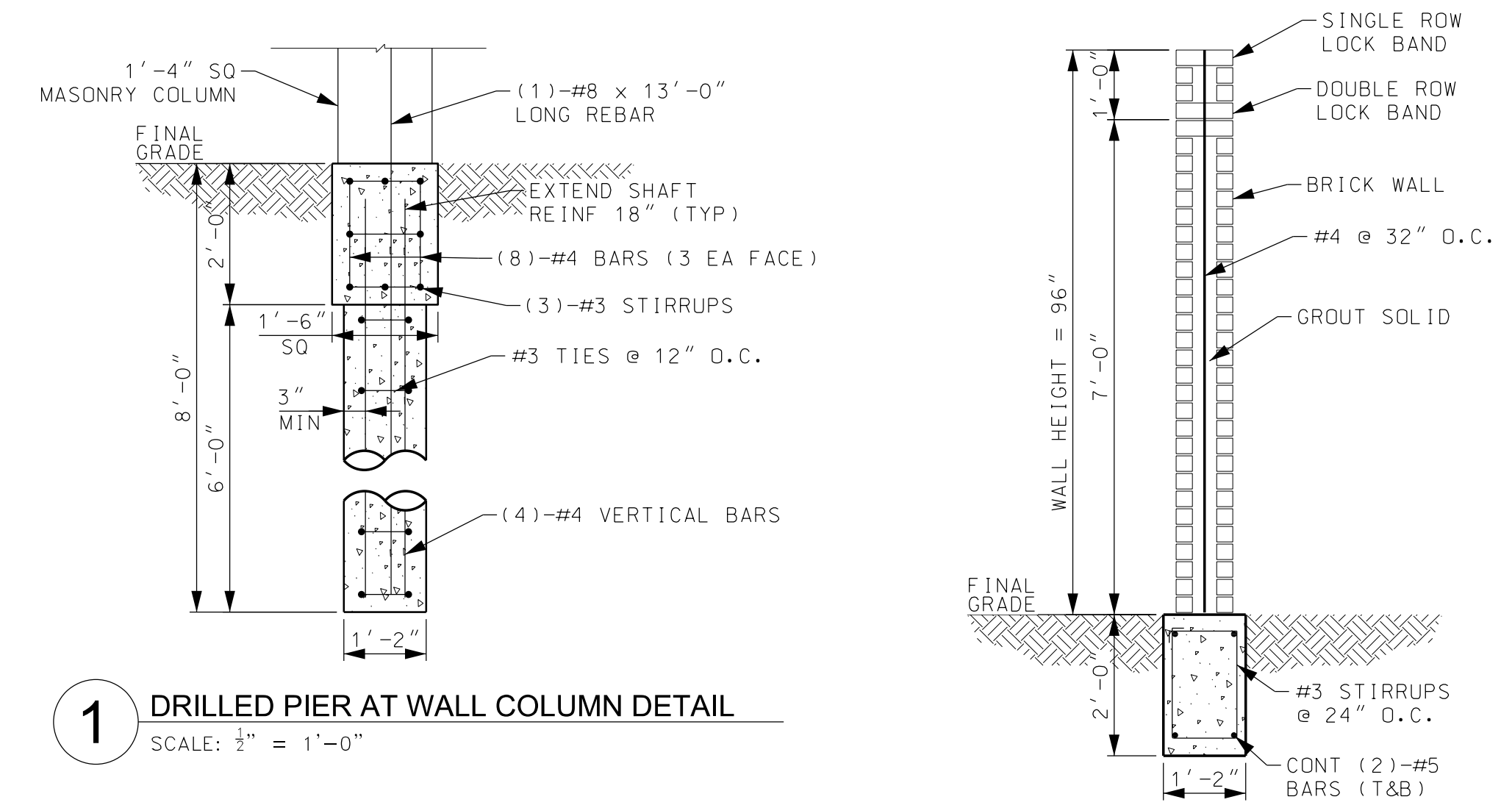
3.1 ALL MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) AND NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) UNITS, ASTM C270. BRICK SHALL BE ACME BRICK SAN FELIPE PLANT, COLOR COMAL RIVER, HERITAGE TEXTURE, KING SIZE (SFP770, 822639), UNLESS NOTED OTHERWISE.

3.2 MORTAR USED TO BOND MASONRY UNITS SHALL BE TYPE M OR S, IN ACCORDANCE WITH ASTM 270.

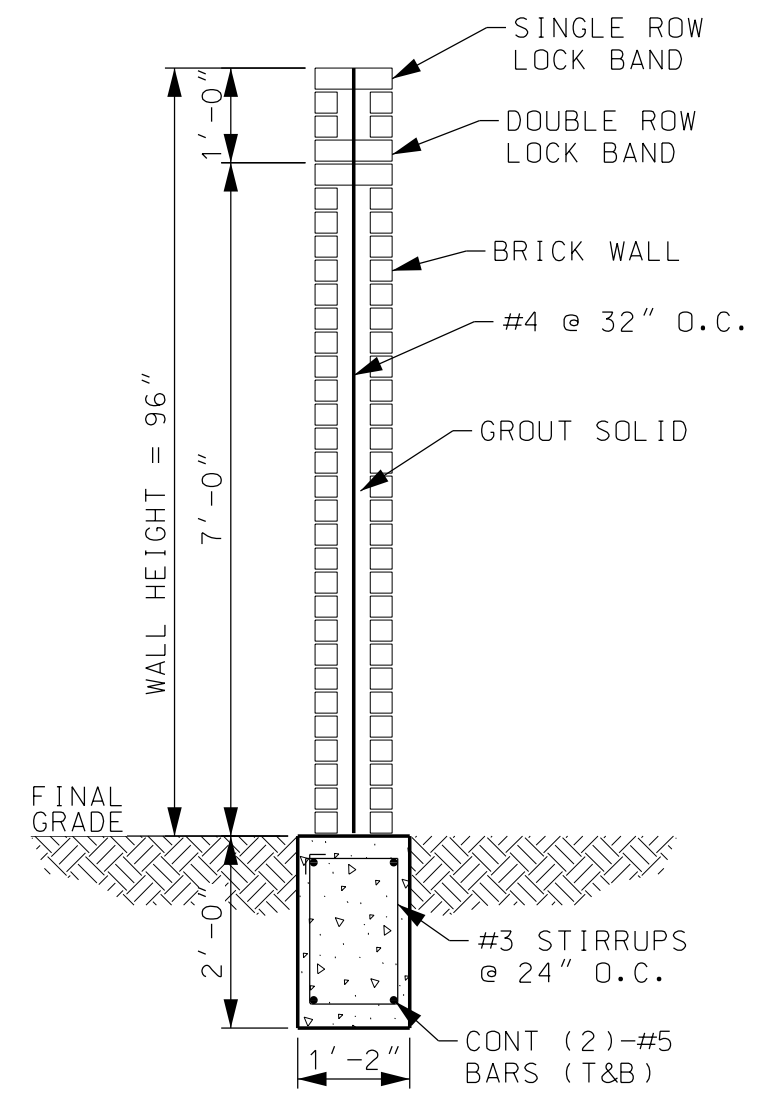
3.3 MASONRY UNITS SHALL HAVE BEEN CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE.

3.4 REINFORCE WALLS WITH 2-#3 CONT OR TRUSS TYPE HORIZONTAL WALL REINFORCING @ 24" O.C. UNLESS NOTED OTHERWISE.

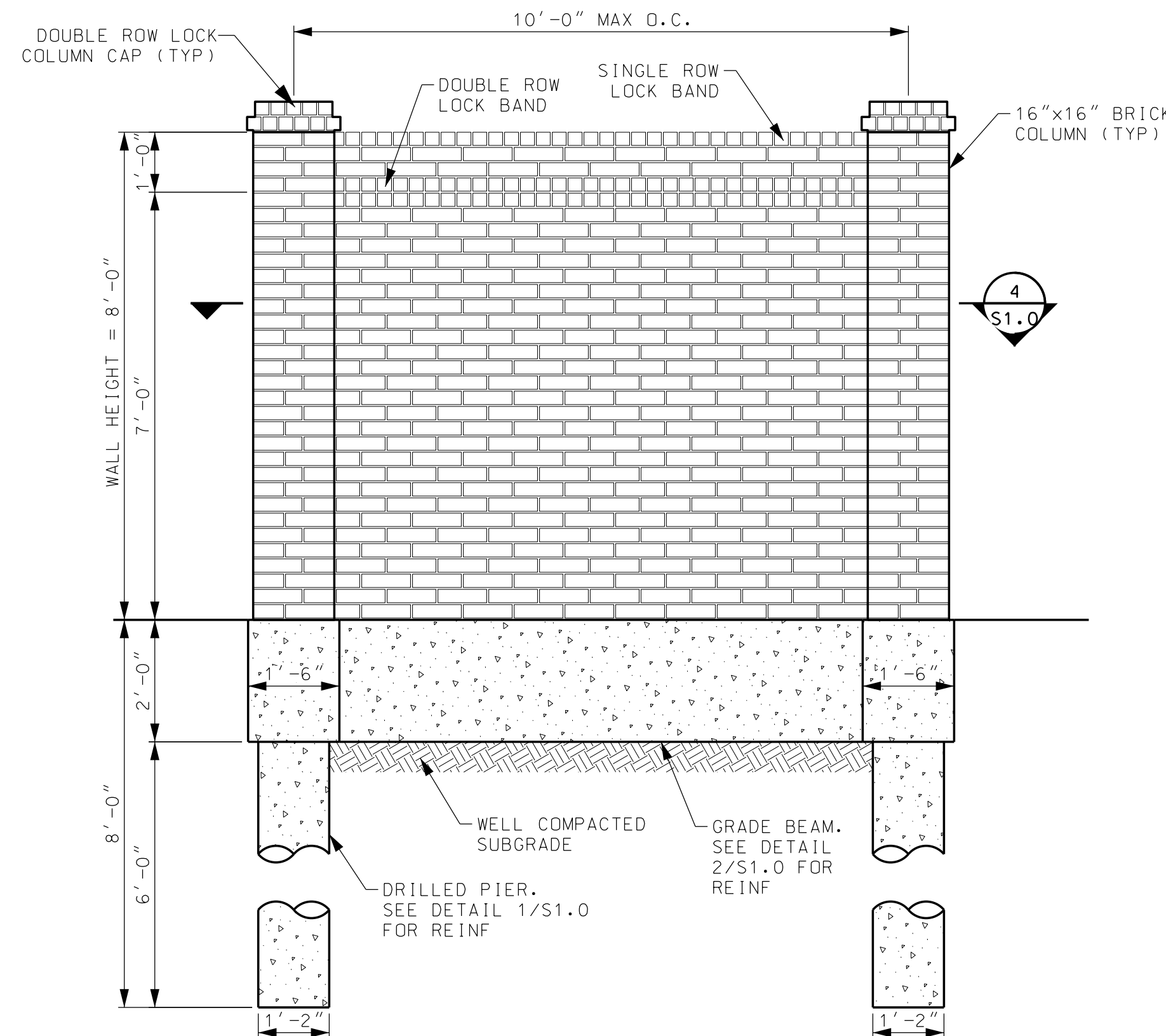
3.5 THE GROUT USED IN VERTICALLY REINFORCED WALLS SHALL ATTAIN A 28 DAY STRENGTH OF 2500 PSI AND 8" TO 11" SLUMP IN ACCORDANCE WITH ASTM C476. THE USE OF ADMIXTURES WILL NOT BE PERMITTED IN GROUT OR MORTAR, UNLESS APPROVED BY THE STRUCTURAL ENGINEER.



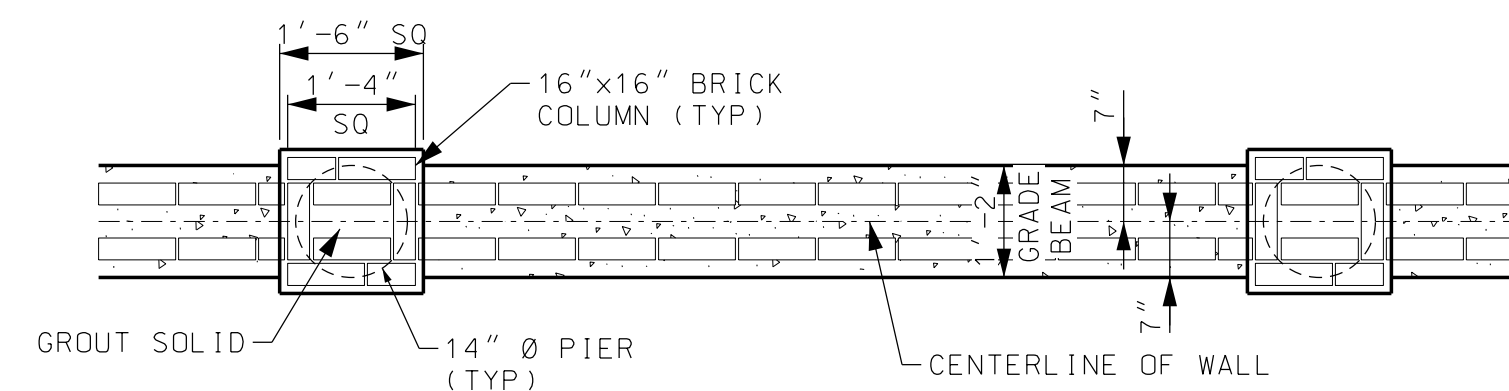
1 DRILLED PIER AT WALL COLUMN DETAIL  
 SCALE: 1/2" = 1'-0"



2 GRADE BEAM AT WALL DETAIL  
 SCALE: 1/2" = 1'-0"



3 BRICK WALL ELEVATION  
 SCALE: 1/2" = 1'-0"



4 BRICK WALL SECTION  
 SCALE: 1/2" = 1'-0"

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	01/08/2018

**H2B, INC.**  
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MASONRY WALL DETAILS  
 CITY OF MONT BELVIEU, TEXAS

MASONRY WALL DETAILS

SARAH J. BRISCOE  
 104912  
 LICENSED PROFESSIONAL ENGINEER  
 STATE OF TEXAS  
 Sarah Briscoe  
 01/08/2018

DESIGNED BY : RMW  
 DRAWN BY : RMW  
 SCALE: 1/2" = 1'-0"  
 SHEET NO. 1 OF 1 SHEETS

**S1.0**