GENERAL STRUCTURAL NOTES

GENERAL

1: THE DRAWINGS AND SPECIFICATIONS ENCLOSED HERE WITHIN, ARE INSTRUMENTS OF SERVICE AND HENCEFORTH THE PROPERTY OF THE ENGINEER. THE COPYRIGHT IN THE SAME BEING RESERVED TO HIM. NO REPRODUCTION IS PERMITTED WITHOUT HIS WRITTEN PERMISSION AND WHEN MADE, SHALL BEAR THE ENGINEER'S NAME.

2: THE MANUFACTURING AND CONSTRUCTION OF THE COMPONENTS WITHIN THE BUILDING, AS WELL AS THE MATERIALS TO BE USED, ARE TO BE VERIFIED BY A QUALIFIED PROFESSIONAL TO MEET SPECIFICATION.

3: PRIOR TO CONSTRUCTION, VERIFY ALL DIMENSIONS ON DRAWINGS AND REPORT ANY INCONSISTENCIES TO THE ENGINEER. DO NOT SCALE DRAWINGS.

4: DESIGN OF STRUCTURE CONFORMS TO THE FOLLOWING BUILDING DESIGN CODES:

REINFORCED CONCRETE - AMERICAN CONCRETE INSTITUTE - ACI 318-2002
STRUCTURAL STEELWORK - AMERICAN INSTITUTE OF STEEL CONSTRUCTION AISC-LRFD-2001
SEISMIC DESIGN - INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS IBC 2000
WIND DESIGN - BARBADOS ASSOCIATION OF PROFESSIONAL ENGINEERS - ASCE 02

CAST-IN-PLACE CONCRETE

1: CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 318-2002 CODES.

2: CONCRETE MIXES SHALL BE PROPORTIONED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 318-2002 CODES TO MEET THE FOLLOWING SPECIFICATIONS.

	28 DAY CYLINDER STRENGTH	AGGREGATE SIZE	MAX. SLUMP
FOOTINGS:	25 MPa	20	90 ± 20
BEAMS & SLABS	25 MPa	20	90 ± 20
MISC. CONCRETE	20 MPa	20	90 ± 20

3: MAXIMUM W/C RATIO FOR COLUMN FOOTINGS TO BE 0.45.

4: MAXIMUM ENTRAINED AIR IN CONCRETE TO BE 5 % +/- 1%.

5: THE USE OF CALCIUM CHLORIDE IS NOT PERMITTED.

6: CONCRETE CONTRACTOR TO DESIGN ALL FORMWORK FOR LOADS AND LATERAL PRESSURES OUTLINED IN THE AMERICAN CONCRETE INSTITUTE ACI 318 02 CHAPTER 6.

7: PLACE AND VIBRATE CONCRETE WITHOUT DISTURBING PLACED REINFORCING STEEL.

REINFORCING STEEL

1: REINFORCING STEEL TO BE AND COMPLY WITH ASTM A185 FOR WELDED FABRIC AND ASTM 615 FOR REINFORCING RODS Fy = 410 N/mm2 (60 Ksi).

2: ALL REINFORCING STEEL TO BE DETAILED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 315 CODE.

3: CONCRETE COVER TO MAIN REINFORCING BARS, UNLESS OTHERWISE STATED IN DRAWINGS TO BE:

BURIED CONCRETE IN CONTACT WITH THE EARTH - 3" (75mm)
BURIED CONCRETE NOT IN CONTACT WITH THE EARTH - 2" (50mm)
PIERS - 2" (50mm)
STRUCTURAL SLABS - 1" (25mm)
BEAMS & COLUMNS - 1 1/2" (38mm)

4: DETAIL STEEL WITH CORNER BARS ON EXTERIOR CONER; LAPS IN BEAMS, TOP BARS BETWEEN SUPPORTS AND BOTTOM BARS OVER SUPPORTS; ALL LAP LENGTHS TO BE 24x THE BAR DIAMETER.

5: SUPPORT REINFORCING STEEL AT 32" (800mm) EACH WAY MAXIMUM TO OBTAIN THE INDICATED CONCRETE COVER PRIOR TO PLACING CONCRETE.

6: UNLESS SHOWN ON DRAWINGS ALL OPENINGS IN CAST-IN-PLACE CONCRETE TO BE TRIMMED WITH 2-T12 ALL AROUND ON ALL FACES UNLESS OTHERWISE NOTED. PROJECT BARS 2'-0" (600mm) BEYOND OPENING. ALL REQUIRED OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS TO BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

MASONRY WALL CONSTRUCTION

1: MASONRY WALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE ACI 530-02.

2: FILL LINTELS, MASONRY COLUMNS AND BOND BEAMS WITH CONCRETE HAVING A STRENGTH OF 25MPa USE MINIMUM 9Ga. GALVANIZED DEFORMED WIRE TRUSS TYPE REINFORCING EVERY SECOND COURSE. PROVIDE OVER OPENING CONCRETE FILLED LINTEL WITH 2-T10 BOTTOM AND 8" (200mm) BEARING AT ENDS.

3: MASONRY UNITS TO BE NORMALWEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 13MPa ON NET AREA. REFER TO THE DRAWINGS FOR WALL THICKNESSES, BLOCK TYPES AND FINISHES.

4: ALL MASONRY WALLS TO BE PROPERLY BRACED AND SECURED UNTIL COMPLETE STRUCTURE HAS BEEN CLOSED IN.

FOUNDATION - CONCRETE FOOTINGS

1: REPORT OF SOIL CONDITIONS IS NOT AVAILABLE.

2: FOOTINGS ARE DESIGNED FOR 3000 PSF BEARING CAPACITY WITH SURROUNDING SOIL. DESIGN OF FOUNDATION MAY NEED TO BE REVISED TO MEET ACTUAL SOIL CONDITIONS ENCOUNTERED DURING INSTALLATION.

3: INSTALL R.C. PEDESTALS VERTICALLY AND NO MORE THAN 1" (25mm) FROM CENTERS SHOWN, TO LENGTH INDICATED.

4: PLACE CONCRETE ON DRY GROUND IN DESIGNED FORMS.

INSPECTION

1: HAVE CONSTRUCTION INSPECTED BY REGISTERED ENGINEER.

2: SUBMIT SHOP DRAWINGS TO SUPERVISING ENGINEER AND AWAIT HIS APPROVAL BEFORE FRABRICATION.

3: NOTIFY THE SUPERVISING ENGINEER 24 HOURS PRIOR TO COMMENCING STEEL INSTALLATION, PLACING OF CONCRETE AND BEGINNING OF MASONRY WORK.

EXCAVATION AND BACKFILLING

1: EXCAVATE FOR NEW CONSTRUCTION TO INSTALL FOOTINGS AS SHOWN.

2: EXCAVATE TO INSTALL BUILDING FOUNDATIONS AS REQUIRED. REMOVE TOP SOILS, ORGANIC MATTER AND DEBRIS TO EXPOSE COMPETENT SOILS BELOW GROUND FLOOR SLAB. THE SOIL PROFILE IS NOT AVAILABLE FOR REVIEW. COMPACT SUB-GRADE BELOW GROUND FLOOR SLAB PRIOR TO BACKFILLING.

3: ARRANGE TO HAVE FOUNDATION DESIGN CRITERIA CONFIRMED ON SITE BY A REGISTERED SOILS ENGINEER. BACKFILL TO GRADES SHOWN IN LAYERS NOT EXCEEDING 8" (200mm) THICK.

4: GRANULAR FILL TO BE CLEAN NATURAL SAND AND GRAVEL, FREE FROM SILT, LOAM, FRIABLE OR VEGETABLE MATTER - MAXIMUM GRAIN SIZE TO BE 3" (75mm) AND LESS THAN PERCENT PASSING 200 SIEVE. OTHER FILL TO BE APPROVED BY THE OWNER BEFORE USE.

5: PLAN AND CONTROL EXCAVATION WORK TO ENSURE BOTTOM OF EXCAVATION DOES NOT SOFTEN AND SLIDE.

6: COMPACT BACKFILL TO 95 PERCENT STANDARD PROCTOR DENSITY BY USING THE APPROPRIATE EQUIPMENT.

7: SUPPORT CONSTRUCTION DURING BACKFILLING TO PREVENT DISPLACEMENT. ENSURE THAT THE COMPACTION ALONG THE CONSTRUCTION MEETS THE REQUIREMENTS OF 95 PERCENT STANDARD PROCTOR DENSITY.

STRUCTURAL STEEL

1: DO FABRICATION, BOLTING, WELDING, ERECTION, TORQUING TO AISC LRFD 2001.

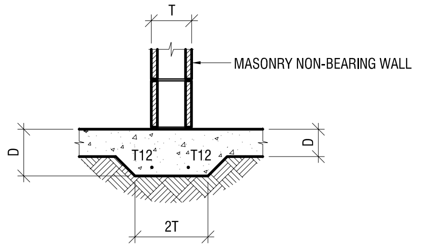
2: STRUCTURAL STEEL TO CONFORM TO ASTM A992, EXCEPT HOLLOW STRUCTURAL SECTIONS WHICH SHALL CONFORM TO ASTM A513. OTHER STRUCTURAL STEEL SHALL ALSO CONFORM TO THE FOLLOWING:

STRUCTURAL STEEL TO BE GRADE 50
W SHAPES TO CONFORM TO ASTM A992
ANGLES, PLATES & BARS TO CONFORM TO ASTM A36
STRUCTURAL TUBING TO CONFORM TO ASTM A500, GRADE B (Fy = 46Ksi)
STRUCTURAL PIPE - ASTM 53
WELDING ELECTRODES - E70XX

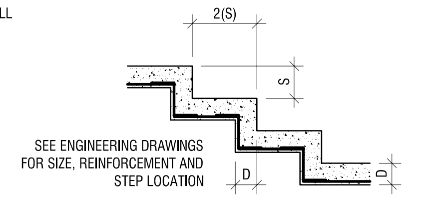
3: BOLTS SHALL CONFORM TO ASTM A325, USING BEARING TYPE BOLTS, MINIMUM OF TWO PER CONNECTION. WELDS SHALL DEVELOP THE FULL STRENGTHS OF THE CONNECTING MEMBERS. REFER TO DRAWINGS FOR HOLES IN BEAMS REQUIRED FOR WOOD BUCKS AND NAILERS.

4: THE STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY BRACING TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE, UNTIL ALL RELATED STRUCTURAL FRAMING ARE ERECTED AND COMPLETELY INSTALLED.

5: THE STEEL FABRICATOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.

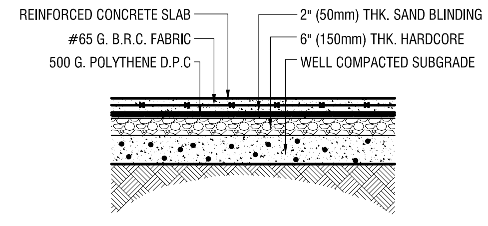


1 / S01 TYPICAL THICKENED SLAB ON GRADE DETAIL N.T.S

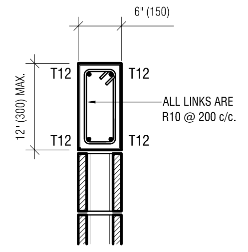


2 / S01 TYPICAL DETAIL TO STEP IN R.C. FOUNDATION N.T.S

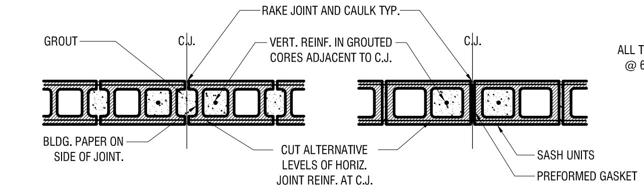
VERT. REINF. IN GROUTED CORES ADJACENT TO C.J.



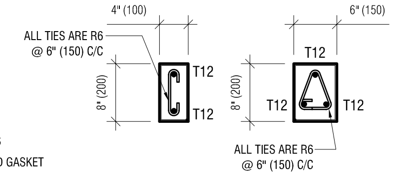
3 / S01 TYPICAL DETAIL TO R.C. SLAB ON GRADE N.T.S



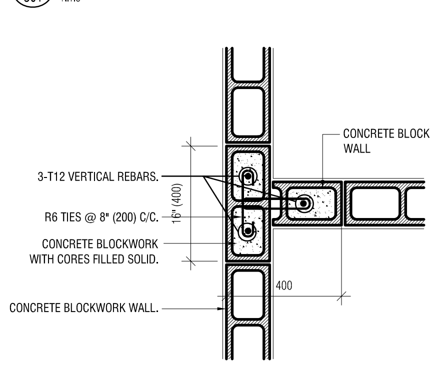
4 / S01 TYPICAL DETAIL TO R.C. RING BEAM N.T.S



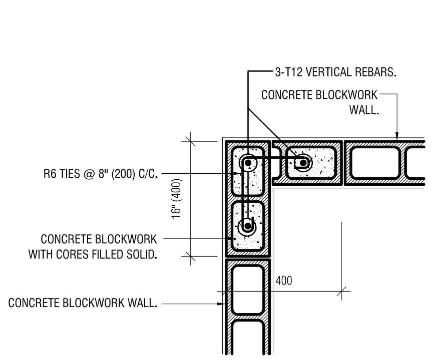
5 / S01 TYPICAL DETAIL TO MASONRY WALL CONTROL JOINT N.T.S



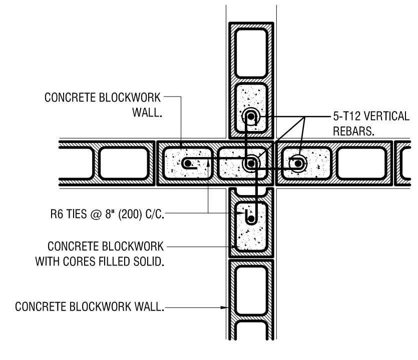
6 / S01 TYPICAL DETAIL TO R.C. LINTELS. N.T.S



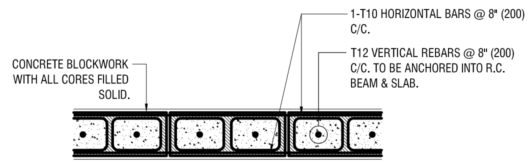
7 / S01 TYPICAL MASONRY WALL STIFFENER DETAIL. N.T.S



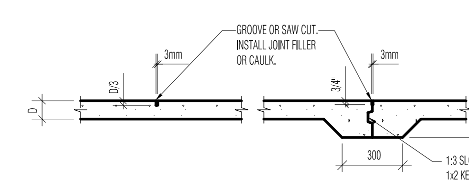
8 / S01 TYPICAL MASONRY WALL STIFFENER DETAIL. N.T.S



9 / S01 TYPICAL MASONRY WALL STIFFENER DETAIL. N.T.S



10 / S01 TYPICAL DETAIL TO LOAD BEARING MASONRY WALL. N.T.S

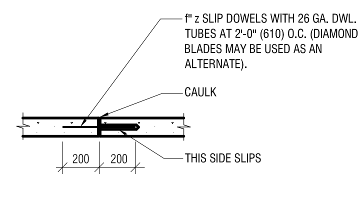


TYP. SLAB CONTROL JOINT

TYP. SLAB CONSTR.-CONTROL JOINT

NOTE: A CONSTRUCTION JOINT WHICH IS NOT INTENDED TO ALSO SERVE AS A CONTROL JOINT IS TO HAVE ALL REINFORCING EXTEND THROUGH IT AND TO HAVE NO GROOVE / SAW-CUT.

11 / S01 TYPICAL SLAB CONTROL/CONSTRUCTION JOINT DETAILS. N.T.S



ALTERNATE CONSTR.-CONTROL JOINT

NOTE: CONSTRUCT A SLAB EXPANSION-CONTRACTION JOINT THE SAME EXCEPT ADD P" COMPRESSIBLE MATERIAL THROUGH JOINT.

12 / S01 TYPICAL SLAB CONTROL/CONSTRUCTION JOINT DETAILS. N.T.S

Project:

HILLSIDE SUITES
CABLE BAY RESORT
ST. KITTS

Drawing Title:

GENERAL STRUCTURAL NOTES
& DETAILS

Designed	P. Kitson		Eng. Check	-	
Drawn	J. Minguel		Drawing Check	-	
Scale	As Shown		Approved	-	
Date	2006-02-20	Drawing No.:	S01		
Status	Preliminary	Project No.:	MF/085/0123		
Revision					

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