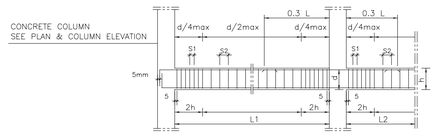
GENERAL DETAILS :

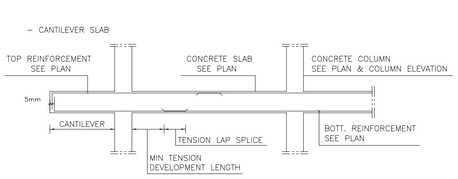


WHERE "L" IS THE LONGER OF THE ADJACENT SPANS

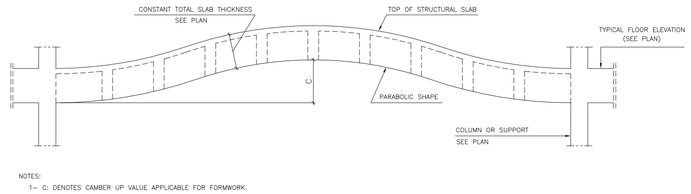
NOTES:

1. AT BOTH ENDS OF BEAM, HOOPS SHALL BE PROVIDED OVER LENGTH NOT LESS THAN 2.H MEASURED FROM THE FACE OF SUPPORTING MEMBER TOWARD MIDSPAN.
2. FIRST HOOP SHALL BE LOCATED AT DISTANCE NOT MORE THAN 5cm FROM THE FACE OF SUPPORTING MEMBER.
3. SPACING OF HOOPS "S1" SHALL NOT EXCEED THE SMALLEST OF d/4, 8xdb, 24xds, 20cm. WHERE:
   H: BEAM'S HEIGHT.
   db: SMALLEST LONGITUDINAL BAR DIAMETER.
   dS: TRANSVERSE HOOP DIAMETER.
   d: BEAM'S EFFECTIVE DEPTH
4. STIRRUPS SHALL BE SPACED AT DISTANCE "S2" NOT MORE THAN d/2 THROUGHOUT THE REST LENGTH OF BEAM.

19 TYPICAL BEAM STIRRUPS SPACING
NTS

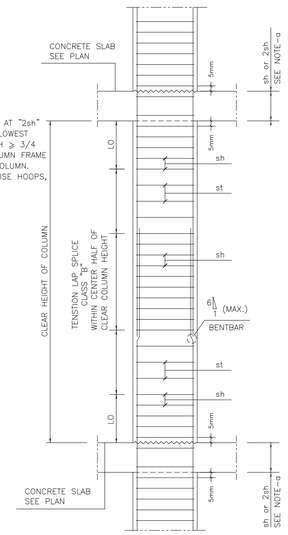


20 2 WAY SLAB DETAIL
NTS



NOTES:
1– C: DENOTES CAMBER UP VALUE APPLICABLE FOR FORMWORK.

21 CAMBER SHAPE DETAIL
NTS



NOTE :

a) JOINT HOOPS MAY BE SPACED AT "2sh" FOR THE DEPTH OF THE SHALLOWEST BEAM WHEN BEAMS WITH WIDTH ≥ 3/4 TIMES THE WIDTH OF THE COLUMN FRAME INTO THE FOUR SIDES OF A COLUMN. FOR ALL OTHER CONDITIONS, USE HOOPS, SPACED AT "sh".

sh : HOOP AND SUPPLEMENTARY CROSS–TIE SPACING NOT TO EXCEED Bs/4 OR $6d_b$ OF VERTICALS 100mm

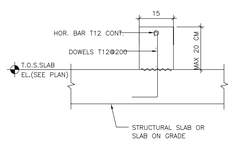
st : COLUMN TIE SPACING, NOT TO EXCEED $6d_b$ OF VERTICALS, Bs OR 150mm

Bs : SMALLER DIMENSION OF COLUMN CROSS–SECTION

LO : LARGERST COLUMN DIMENSION BUT NOT LESS THEN ONE SIXTH CLEAR HEIGHT OR 450mm

d_b : DIAMETER OF VERTICAL BAR.

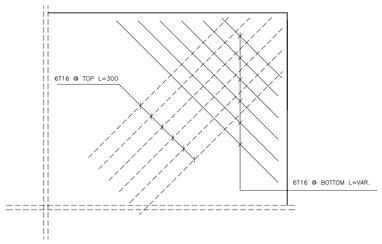
26 TYPICAL COLUMN ELEVATION
NTS



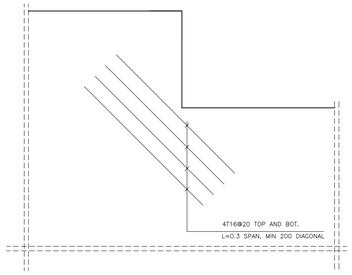
NOTES:

1. PROVIDE 2 DOWELS FOR CURB 250 OR MORE WIDE PROVIDE 2 HOR. BARS FOR CURB 250 OR MORE HIGH
2. SEE ARCH'L., MECH'L., ELECT'L. AND PLUMBING DWGS. FOR CURB SIZES AND LOCATIONS.

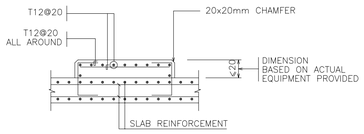
22 TYPICAL CONCRETE CURB DETAIL
NTS



23 TYPICAL REINFORCEMENT @ CORNERS OF SOLID SLABS.
NTS



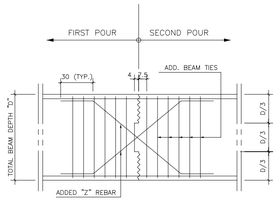
24 SLAB REENTRANT CORNER DETAIL
NTS



NOTES:

1– FOR SIZE & LOCATION REFER TO ARCHITECTURAL & MECHANICAL DRWGS.

25 EQUIPMENT PAD DETAIL ON SLAB
NTS

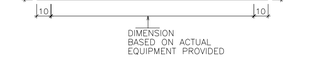


BEAM ELEVATION

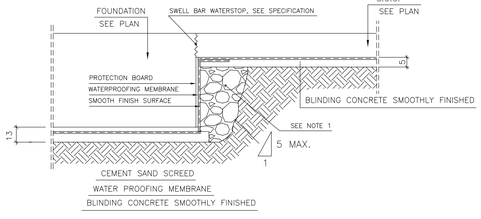
NOTES :

1–CLEAN ROUGHEN SURFACE USING HIGH PRESSURE WATER JET BEFORE POURING THE SECOND POUR.
2–ALL BEAM REINFORCEMENT SHALL CONTINUE UNINTERRUPTED.
3–CONSTRUCTION JOINT SHALL BE WITHIN MIDDLE THIRD OF SPAN.
4– "Z" REBAR SHALL BE EQUAL TO
   1xT20 E.W. FOR BEAM WIDTH < 200.
   2xT20 E.W. IF 200 ≤ BEAM WIDTH < 500.
   4xT20 E.W. IF 500 ≤ BEAM WIDTH < 1000.
   6xT20 E.W. IF BEAM WIDTH ≥1000.

29 BEAM CONSTRUCTION JOINT (BULK HEAD).
NTS

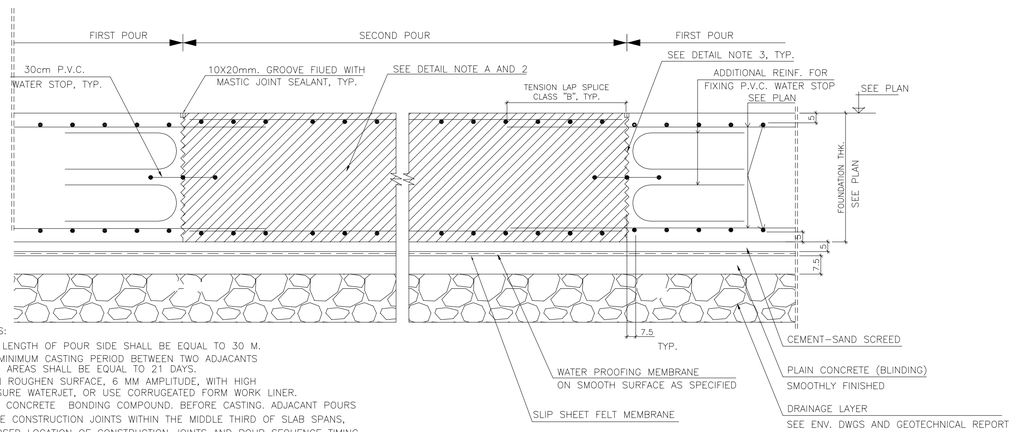


27 EQUIPMENT PAD DETAIL ON GRADE
NTS



1– CYCLOPEAN CONCRETE OR CONCRETE WITH F'C28 EQUAL TO 10 MPa. TO BACK FILL ANY OVER EXCAVATED AREA UNDERNEATH OR SIDE OF FOUNDATION WIDTH SHALL BE AS MINIMUM AS PERMITED PER CONSTRUCTION.
2– FOR EDGE OF OPEN EXCAVATION MAXIMUM SLOPE, REFER TO GEOTECHNICAL REPORT.

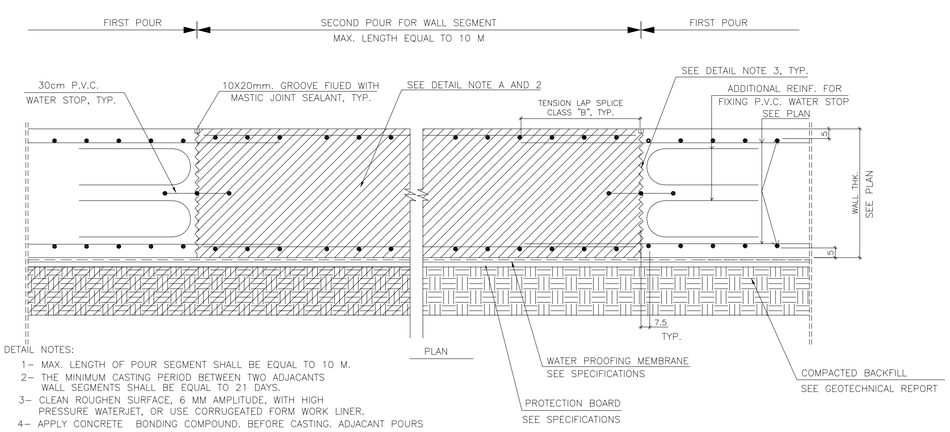
28 TYPICAL DETAIL FOR STEP IN EXCAVATION LEVEL
NTS



DETAIL NOTES:

1– MAX. LENGTH OF POUR SIDE SHALL BE EQUAL TO 30 M.
2– THE MINIMUM CASTING PERIOD BETWEEN TWO ADJACANTS POUR AREAS SHALL BE EQUAL TO 21 DAYS.
3– CLEAN ROUGHEN SURFACE, 6 MM AMPLITUDE, WITH HIGH PRESSURE WATERJET, OR USE CORRUGEATED FORM WORK LINER.
4– APPLY CONCRETE BONDING COMPOUND. BEFORE CASTING. ADJACANT POURS
5– LOCATE CONSTRUCTION JOINTS WITHIN THE MIDDLE THIRD OF SLAB SPANS, PROPOSED LOCATION OF CONSTRUCTION JOINTS AND POUR SEQUENCE TIMING SHALL BE APPROVED BY ENGINEER.
6– ALL SURFACES IN CONTACT WITH WATER SHALL BE IWATERPROOFED, SEE PROJECT SPECIFICATIONS.
7– NO REINFORCING SHALL BE CONTINUOUS THROUGH THREE CONSECUTIVE SEGMENTS.

30 TYPICAL CONSTRUCTION JOINS AT FOUNDATION SLAB
NTS



DETAIL NOTES:

1– MAX. LENGTH OF POUR SEGMENT SHALL BE EQUAL TO 10 M.
2– THE MINIMUM CASTING PERIOD BETWEEN TWO ADJACANTS WALL SEGMENTS SHALL BE EQUAL TO 21 DAYS.
3– CLEAN ROUGHEN SURFACE, 6 MM AMPLITUDE, WITH HIGH PRESSURE WATERJET, OR USE CORRUGEATED FORM WORK LINER.
4– APPLY CONCRETE BONDING COMPOUND. BEFORE CASTING. ADJACANT POURS
5– WALLS CONSTRUCTION JOINTS TO MATCH SLAB JOINTS WHEN POSSIBLE, PROPOSED LOCATION OF CONSTRUCTION JOINTS AND POUR SEQUENCE TIMING SHALL BE APPROVED BY ENGINEER.
6– ALL SURFACES IN CONTACT WITH WATER SHALL BE IWATERPROOFED, SEE PROJECT SPECIFICATIONS.
7– NO REINFORCING SHALL BE CONTINUOUS THROUGH THREE CONSECUTIVE WALL SEGMENTS.

31 TYPICAL CONSTRUCTION JOINS AT RETAINING WALLS
NTS

NOTES

No.	REVISION	APP'D	DATE

CLIENT
الجمهورية اللبنانية
مجلس الإنماء والإعمار

CONSULTANT
خطيب وعلمي
Khatib & Alami
consolidated engineering company S.A.L

PROJECT TITLE
CHHIM GOVERNMENTAL OFFICES BUILDING

DRAWING TITLE
GENERAL NOTES AND GENERAL DETAILS
(SHEET 3 OF 4)

	NAME	DRAWING No.
DESIGNED	G.N.	S002
DRAWN	A.M.	
COORDINATED	H.J.	PROJECT No.
CHECKED	F.K.	BY151600
APPROVED	I.F.K.	
SCALE	N.T.S.	FILE NAME
DATE	February 2016	BY1516–SG–GEN–01

APPROVED FOR CONSTRUCTION
TENDER SUBMISSION
SHEET No.