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SHOP DRAWINGS OR COMMENCING
MANUFACTURE. PROJECT NBR.
PROJECT PHASE
DISCIPLINE REV BY PROJECT NAME: LEGEND: PROGRAMME: NOTES: rooms, staircases, parapets and slabs on lished and carted away by the Contractor. Social and Local Development Programme P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491 UNDP Lebanon CHOUEIFAT Jnited Nation Development Programme Date Support Programme
Support to Integrated Service
Provision at the Local Level ebanese Host Communities KEY PLAN GENERAL REVISION PLAYGROUNDS Description Appr

Sheet

OF

Phase

Type

Drawing Number

CP-

-TD-

**AR-01** 

Title

SIZE

24 FEBRUARY 2017 1: 0.5 mm

GENERAL LAYOUT -

**EXISTING** 

CHOUEIFAT

**PLAYGROUNDS** 

RAWN

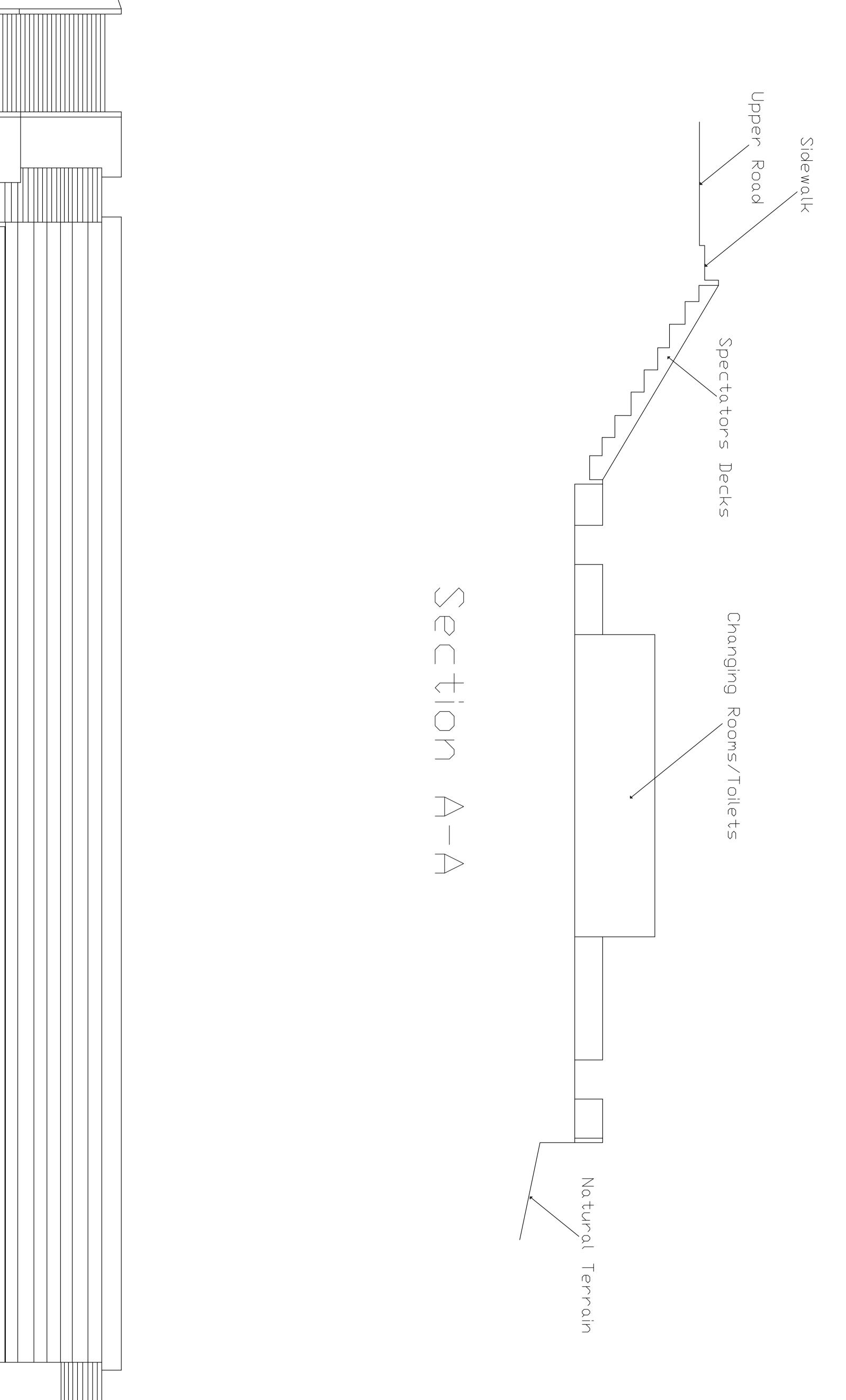
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TENDER
CIVIL ENGINEERING

PPROVED



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PROJECT PHASE

DISCIPLINE

SECTOR

BUILDING

DESIGNED DRAWN
CHECKED
APPROVED REV BY LEGEND: PROJECT NAME: PROGRAMME: NOTES: United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon
Tel: 961 1 962491 SIZE CHOUEIFAT PLAYGROUNDS Date Lebanese Host Communities
Support Programme
Support to Integrated Service
Provision at the Local Level KEY PLAN TENDER
CIVIL ENGINEERING 24 FEBRUARY 2017 1: 0.5 mm GENERAL REVISION

Description Appr.

Sheet 1 OF

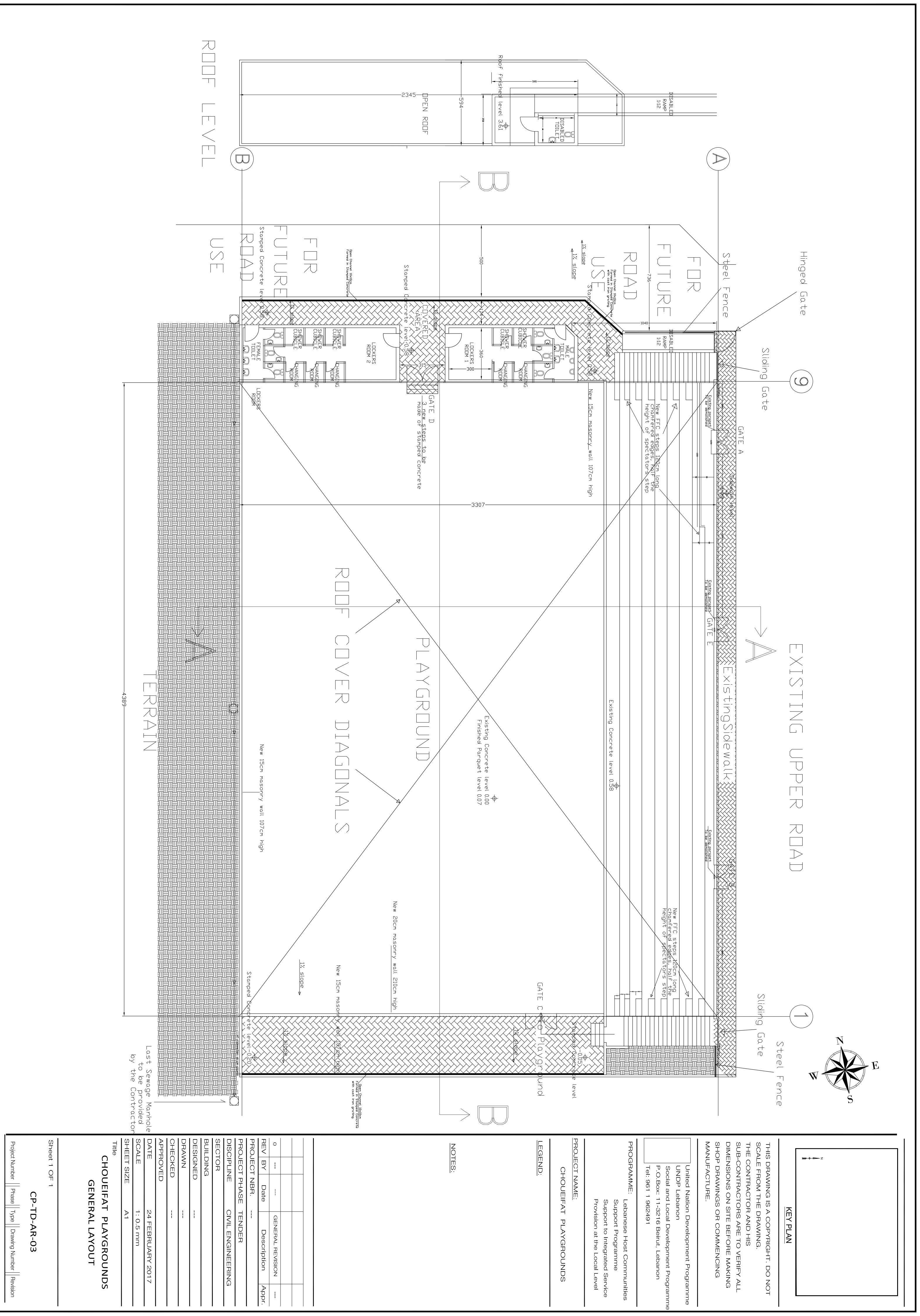
Phase Type Drawing Number

CP-TD-AR-02

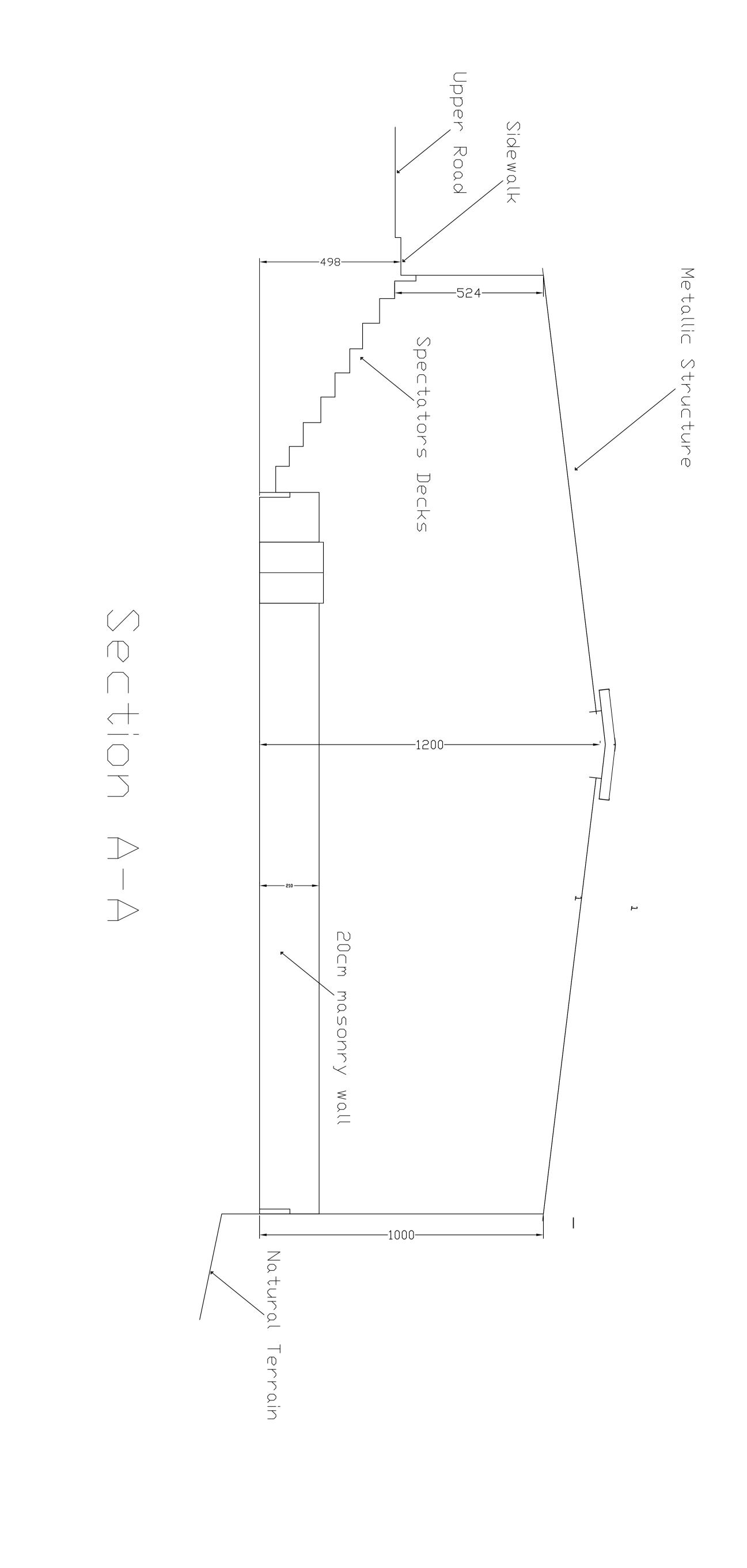
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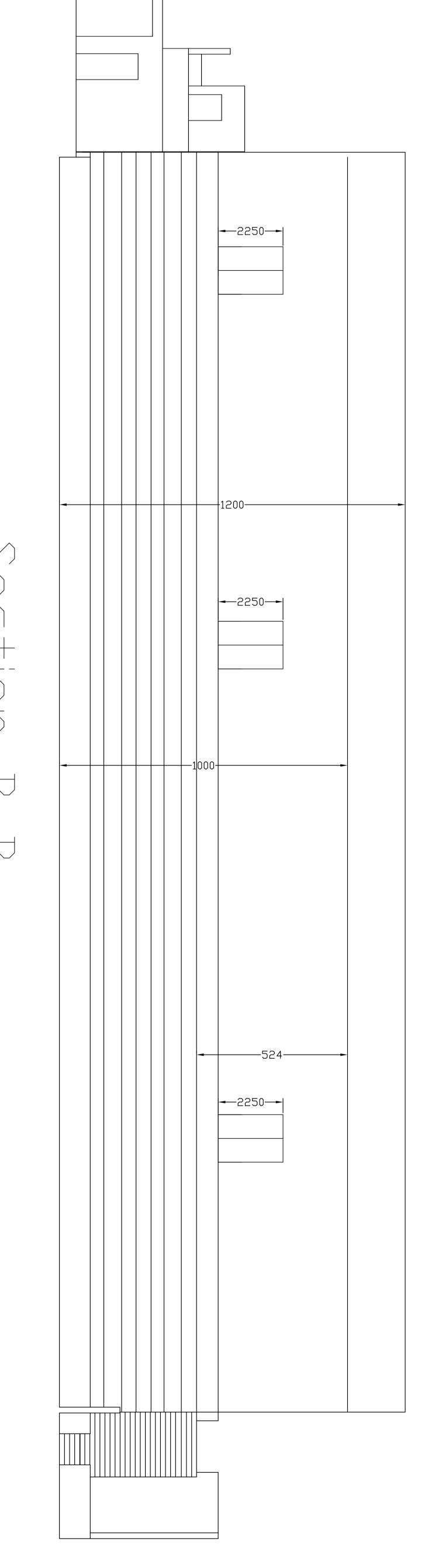
CHOUEIFAT PLAYGROUNDS

**EXISTING SECTIONS** 



Type





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KEY PLAN		
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United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon
Tel: 961 1 962491

PROGRAMME: Lebanese Host Communities
Support Programme
Support to Integrated Service
Provision at the Local Level

LEGEND: CHOUEIFAT PLAYGROUNDS

PROJECT NAME:

NOTES:

PROJECT NBR.

PROJECT PHASE

DISCIPLINE

SECTOR

BUILDING

DESIGNED DRAWN
CHECKED
APPROVED REV BY Date TENDER
CIVIL ENGINEERING 24 FEBRUARY 2017 1: 0.5 mm GENERAL REVISION

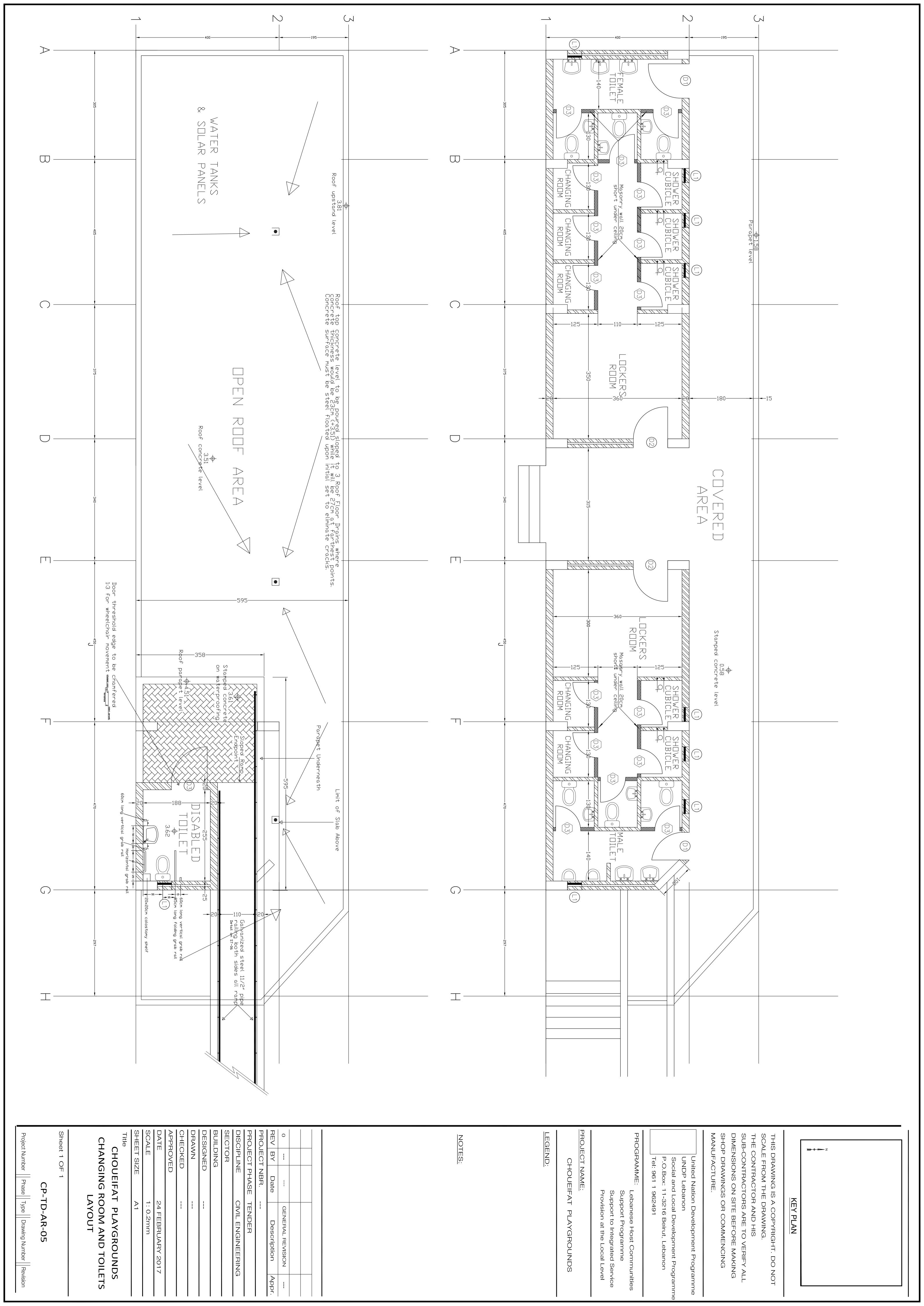
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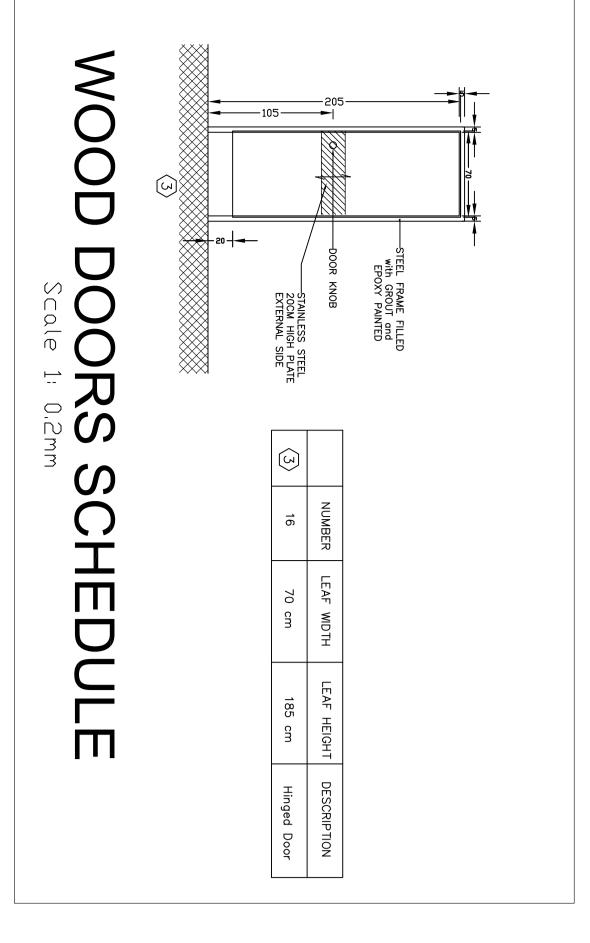
SECTIONS WITH STEEL STRUCTURE Title CHOUEIFAT **PLAYGROUNDS** 

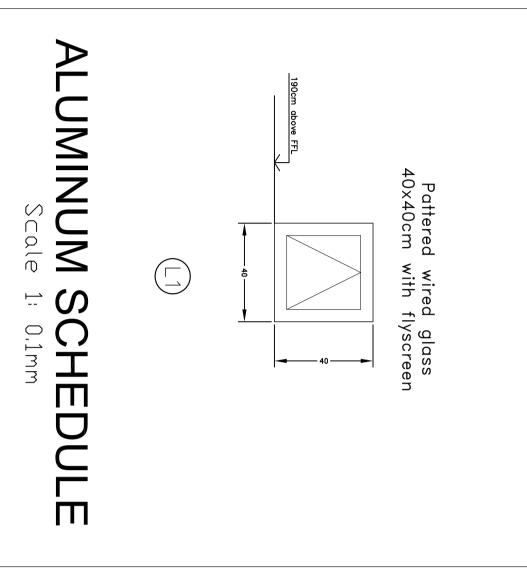
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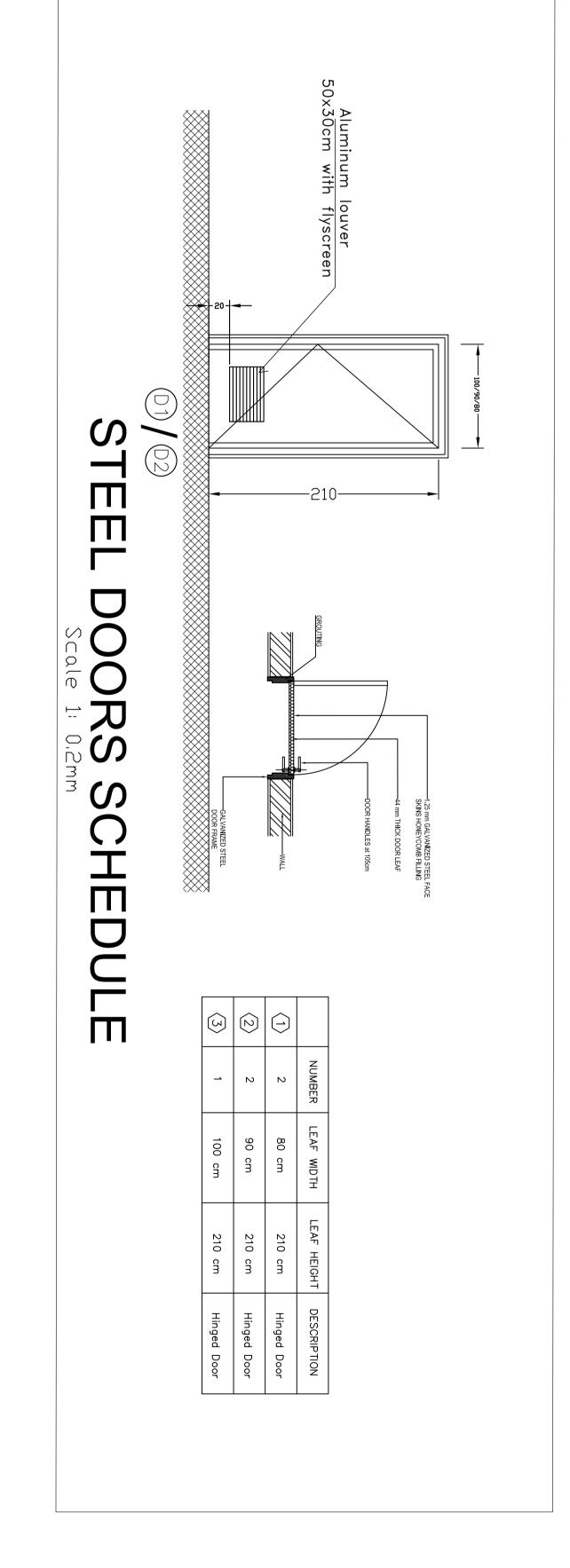
Sheet 1 OF

CP-TD-AR-04



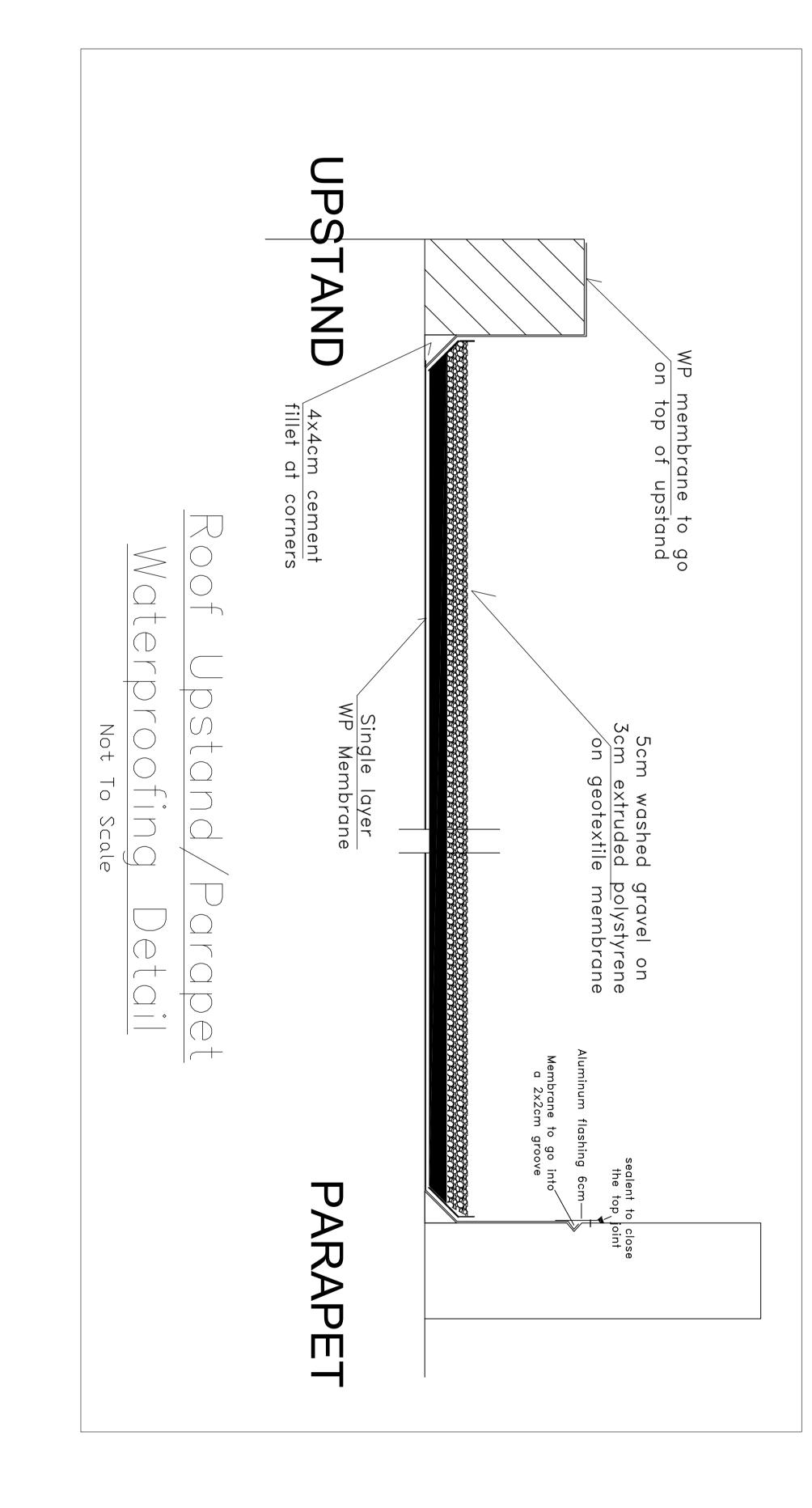


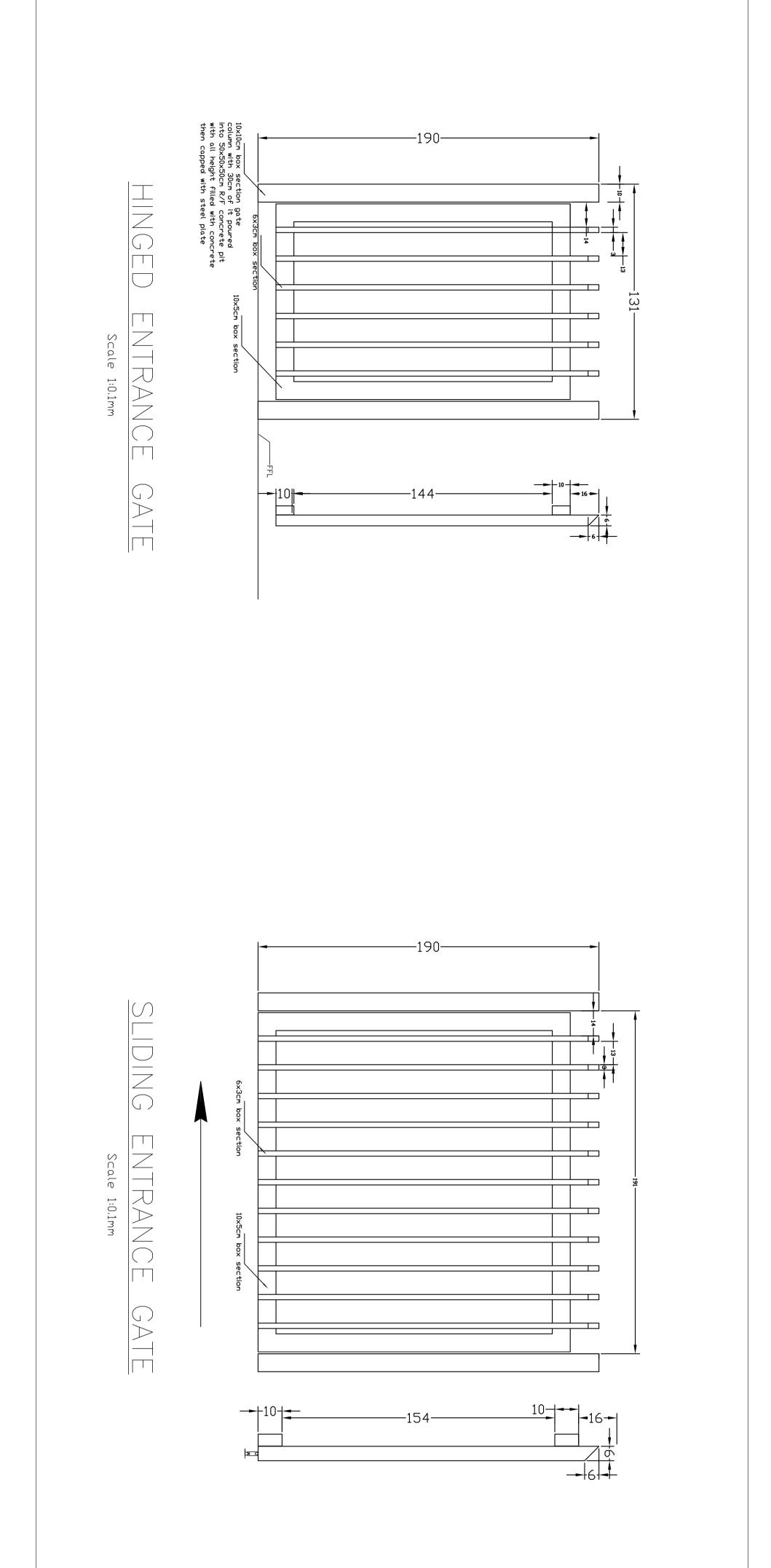


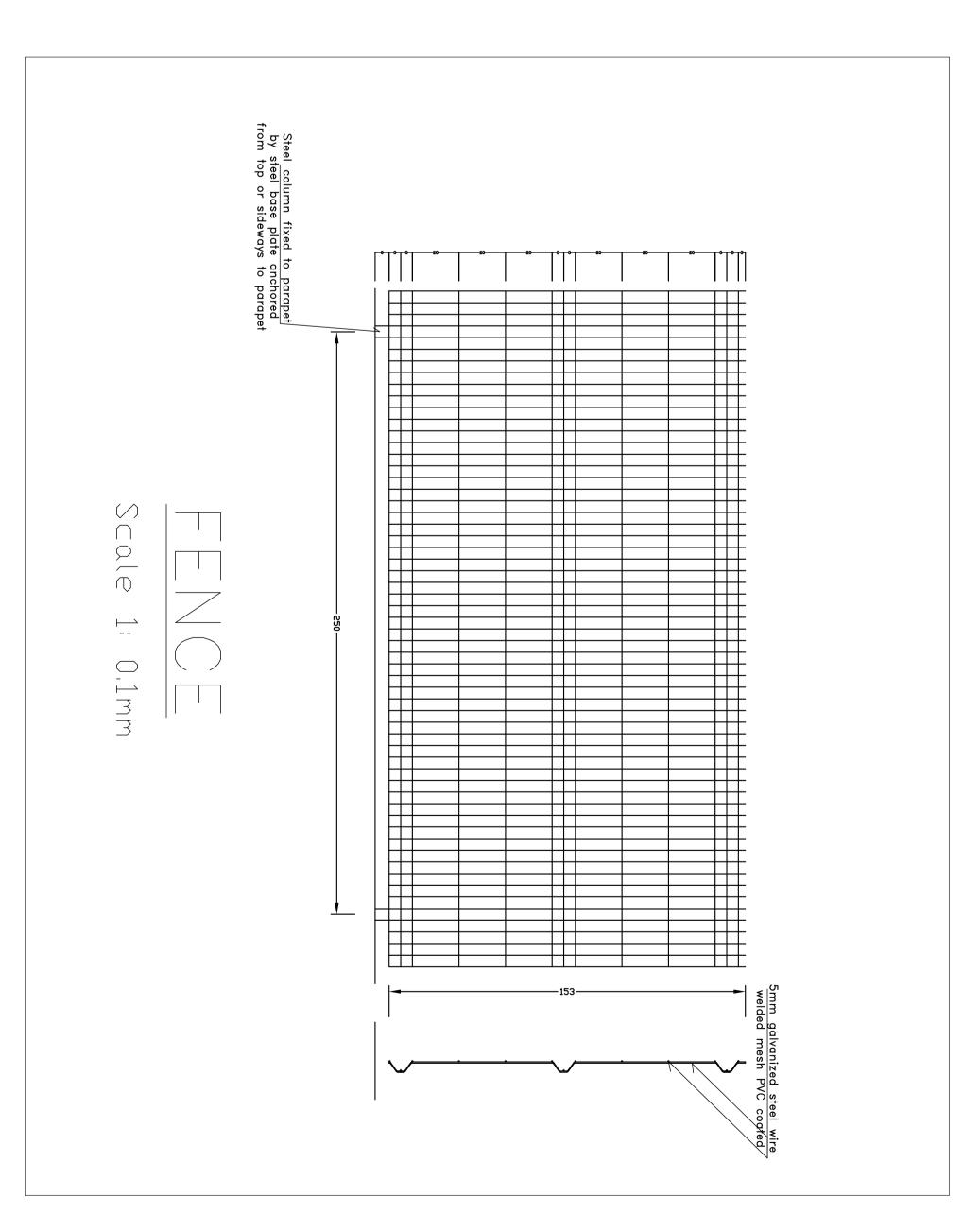


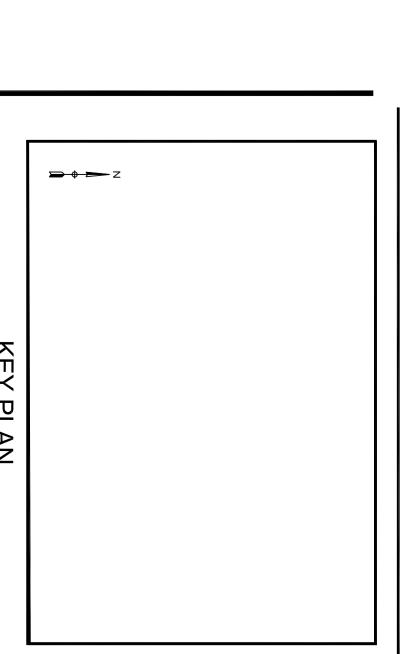


# FINISHING









## KEY PLAN

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UNDP Lebanon Jnited Nation Development Programme

Social and Local Development Programme P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME: Support Programme
Support to Integrated Service
Provision at the Local Level ebanese Host Communitie

PROJECT NAME: CHOUEIFAT PLAYGROUNDS

LEGEND:

NOTES:

REV BY Date GENERAL REVISION Description

PROJECT PHASE DISCIPLINE RAWN PPROVED ECTOR
JILDING
ESIGNED TENDER
CIVIL ENGINEERING 24 FEBRUARY 2017 Appr

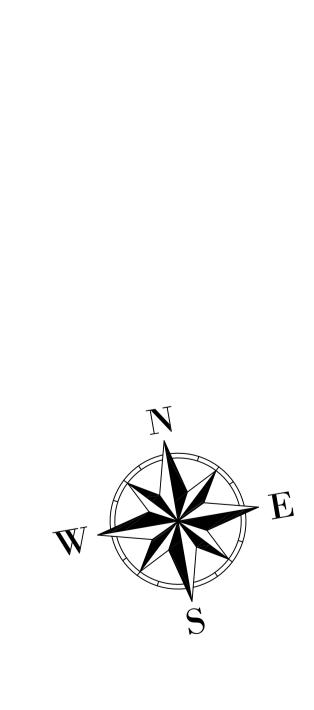
CHOUEIFAT ARCHITECTURAL DETAILS **PLAYGROUNDS** 

Title

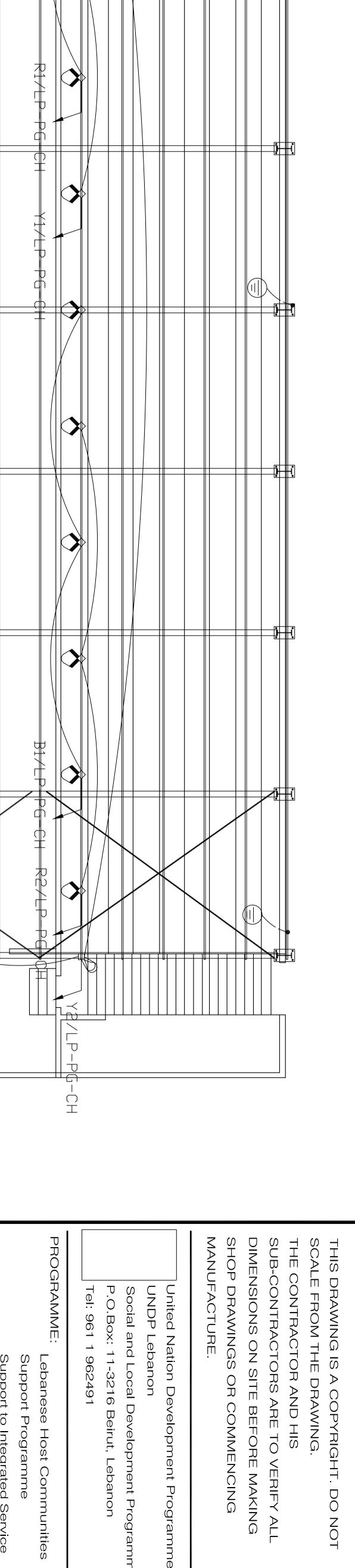
SIZE

CP. TD-AR-06 Sheet

OF



KEY PLAN



United Nation Development Programme
UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon
Tel: 961 1 962491

PROJECT NAME:

: Lebanese Host Communities Support Programme Support to Integrated Service Provision at the Local Level

CHOUEIFAT PLAYGROUNDS

LEGEND:

NOTES:

OPEN ROOF AREA

PROJECT NBR.

PROJECT PHASE

DISCIPLINE

SECTOR

BUILDING

DESIGNED DRAWN
CHECKED
APPROVED REV BY Date 24 FEBRUARY 2017 1:0.5mm TENDER
CIVIL ENGINEERING GENERAL REVISION

Description

1 OF

Title

CHOUEIFAT

PLAYGROUNDS

ELECTRICAL LAYOUT AND DETAILS

CP-TD-EL-01

	<u> </u>	1		T	<u> </u>		T	T		T	
LSP						TYPE E	TYPE D	TYPE C	TYPE B	TYPE A	SYMBOL
LIGHTING SWITCH PANEL COMPOSED OF 9 SWITCHES TO CONTROL CIRCUITS R1 TO B3 (PLAYGROUND AND ENTRANCE LIGHTING)	LIGHTING AND SOCKETS PANELBOARD	SINGLE SOCKET OUTLET, 16 Amp, 2p+E, 230 VOLT	ONE WAY, ONE GANG, 20A SWITCH	ISOLATOR SWITCH, IP 65, TO BE PLACED NEAR EQUIPMENT	VOLTAGE TRANSFORMER FOR LED FIXTURE. TO BE PLACED OUTSIDE ROOM IN WET LOCATIONS	<ul> <li>SURFACE MOUNTED LIGHTING FIXTURE</li> <li>ROUND 12" BODY</li> <li>POLYCARBONATE BODY</li> <li>POLYCARBONATE REFLECTOR</li> <li>EQUIPPED WITH 24 W LED LAMPS</li> <li>IP44</li> <li>4000K, 1900 LUMEN</li> </ul>	- RECESSED LIGHTING FIXTURE - POLYCARBONATE BODY - POLYCARBONATE REFLECTOR - EQUIPPED WITH 13 W LED LAMPS - IP44 - 4000K, 950 LUMEN - CAN BE SUPPLIED WITH VOLTAGE TRANSFORMER FOR WET AREAS	<ul> <li>Area LIGHTING FLOODLIGHT</li> <li>DIE-CAST ALUMINUM HOUSING</li> <li>DIRECTIONAL REFLECTORS TO OPTIMIZE EFFICIENCY AND MINIMIZE GLARE</li> <li>EQUIPPED WITH HIGH BRIGHTNESS LEDS, 470W, ASYMMETRIC FORWARD</li> <li>OPTIC</li> <li>IP65</li> <li>4000K, 50000 LUMEN, CRI 70</li> <li>SIMILAR TO GE EVOLVE LED AREA LIGHT, EASC-Y4FX50</li> </ul>	<ul> <li>SURFACE MOUNTED LIGHTING FIXTURE</li> <li>POLYCARBONATE METALLIZED REFLECTOR</li> <li>FLAT DIFFUSER IN CLEAR, FROSTED ANTIGLARE PLEXIGLASS</li> <li>EQUIPPED WITH 2X18W FLC LAMPS</li> <li>IP40</li> <li>4000K, 1800 LUMEN</li> <li>SIMILAR TO DISANO CILINDRO COMPACT 782</li> </ul>	<ul> <li>PROJECTOR MOUNTED ON METALLIC STRUCTURE</li> <li>HOUSING AND COVER MADE FROM HIGH-PRESSURE DIE CAST ALUMINUM</li> <li>EXTRA WHITE GLASS OPTICAL COVER</li> <li>BUILD-IN LED MODULE 100W, 230 V</li> <li>ASYMMETRICAL BEAM</li> <li>IP66</li> <li>NEUTRAL WHITE COLOR, 6760 LUMEN</li> <li>SIMILAR TO PHILIPS DECOFLOOD2 LED BVP646</li> </ul>	DESCRIPTION

ALL OUTLET E WITH 30mA R	60A BUSBARS, 3 F 50 HZ, SURFACE I						×6 EE	OA DII	T								T - 16								<u> </u>				RATING OF INCOMER/IC	PANEL BOARD
RANC	ACE N	9	9	9	00	00	$\infty$	7	7	7	0	0	0	U	U	U	4	4	4	3	3	3	2	2	2				R Ef	
H BR	MOUNT	B	~	R	$\Box$	~	ZJ	B	~	æ	$\Box$	~	カ	$\Box$	~	カ	B	$\prec$	カ	₪	$\prec$	R	₪	$\prec$	ZJ	₿	$\prec$	<b>7</b>	~ 77 B	
EAKERS	PHASES, 4 WIF	20	20	20	20	20	20	20	20	20	20	25	25	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	MCB RTG IN AMP	
SHALL	7.1		1			4×4+1×4			4×4+1×4		I	2x6+1x6	l	2×4+1×4	I	l	I	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	2×4+1×4	WIRE SIZE mm <sup>2</sup>	
BE EQI	0 /		I			4			4		I	6	I	4	I	I	I	4	4	4	4	4	4	4	4	4	4	4	ECC WIRE mm <sup>2</sup>	
QUIPPED T D I	TS, T.C.L.		SPARE			EWH-2			EWH-1		SPARE	CP-BP	SPARE	SOCKETS LOCKERS	SPARE	SPARE	SPARE	FANS	LIGHTING LOCKERS + TOILETS 3 Fans	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND	LIGHTING ENTRANCE	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND	LIGHTING PLAYGROUND		LOAD DESCRIPTION
	8636			I			1333			1333			I			l			1650			1620			1620			1080	R VOL	
	8456		ı			1333			1333			1800			ı			500			1620			250			1620		LOAD IN VOLT AMPERE  R Y B	
	8186	ı			1333			1333			ı			1200			I			1620			1080			1620			ERE B	
	25 KVA																	WITH TIMER											REMARKS	

LEGEND:

NOTES:

UNDER MECHANICAL CONTRACT FED FROM LP-PG-CH	CP-BP	-		 ZX60A DOLL	2X20A
TRACT	D,L= 1,5 KVA		CX4MM-+4MM-E BOOSTER PUMP 2 1.5 KW (STANDBY)	CX4MM +4MM E BOOSTER PUMP 1 1,5 KW	

REV BY Date
PROJECT NBR.

PROJECT PHASE
DISCIPLINE

SECTOR

BUILDING

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APPROVED

SCALE

SHEET SIZE

GENERAL REVISION

Description

Appr.

TENDER
CIVIL ENGINEERING

Sheet 1 OF

Phase Type Drawing Number Revision

CP-TD-EL-02

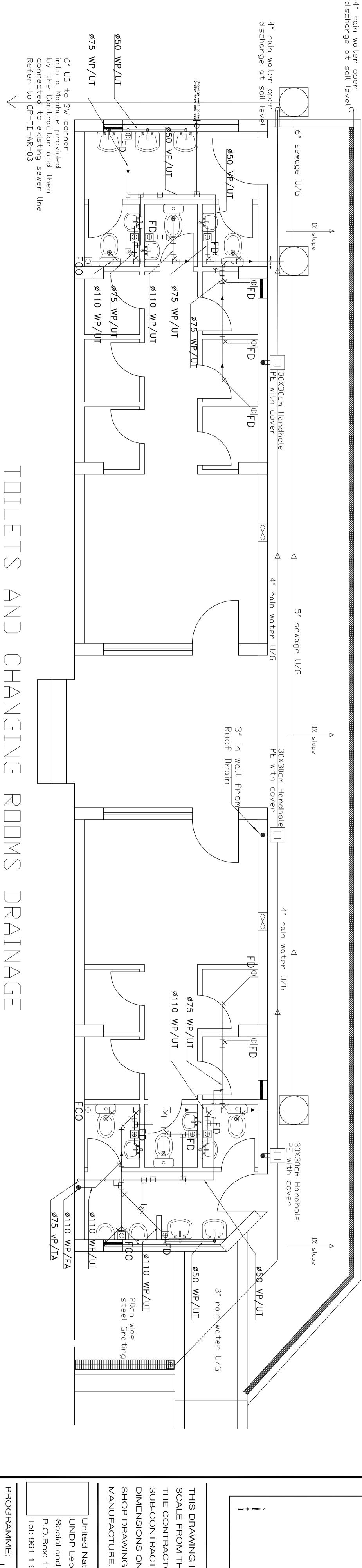
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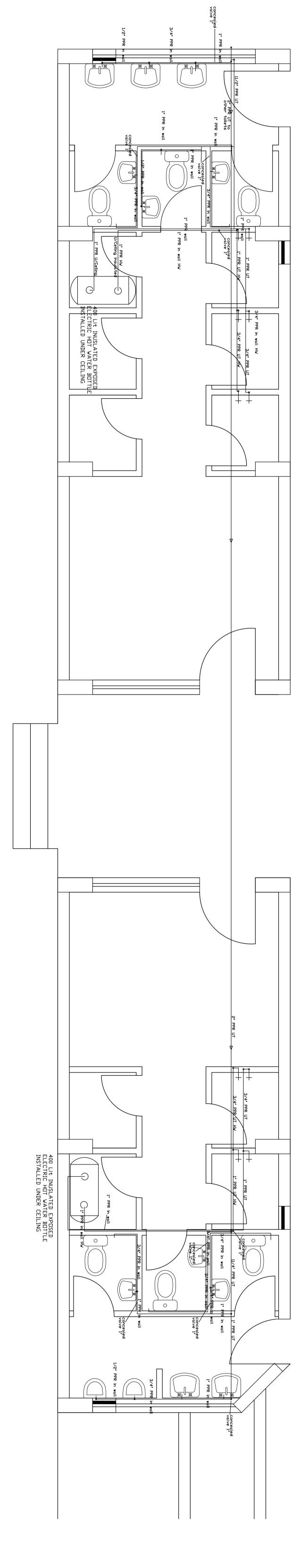
24 FEBRUARY 2017

CHOUEIFAT PLAYGROUNDS
PANELBOARD AND LEGEND

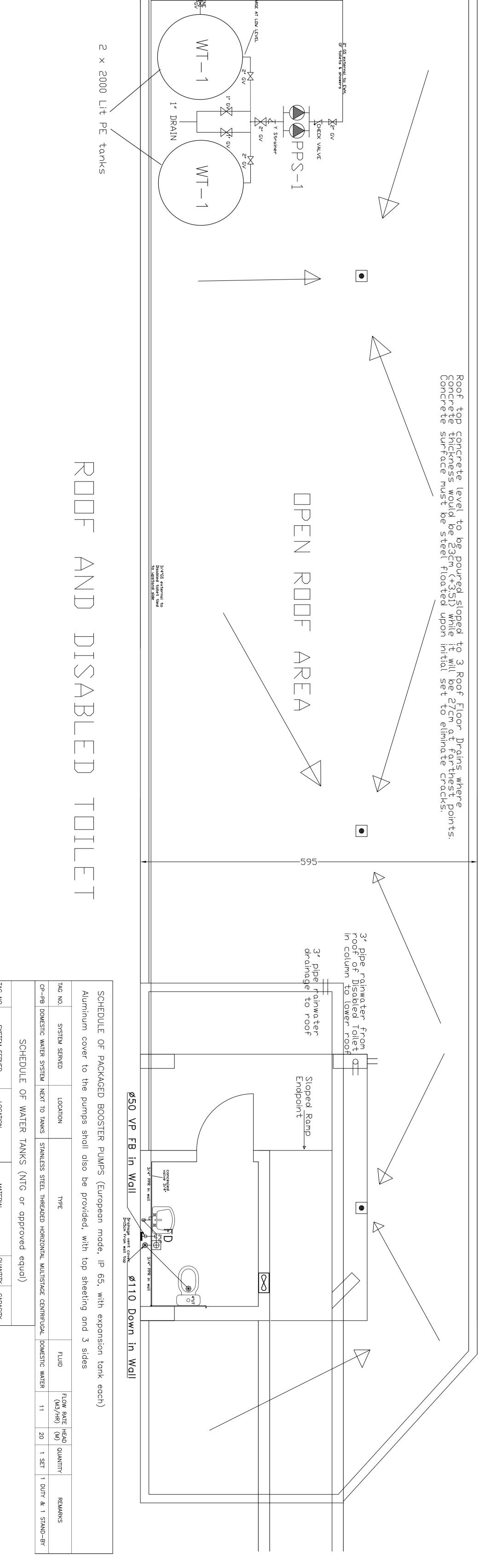
KEY PLAN	➤ ◆ ► Z	

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PROJECT NAME:  CHOUEIFAT PLAYGROUNDS	PROGRAMME: Lebanese Host Communities Support Programme Support to Integrated Service Provision at the Local Level	United Nation Development Programme UNDP Lebanon Social and Local Development Programme P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491	THIS DRAWING IS A COPYRIGHT. DO NOT SCALE FROM THE DRAWING. THE CONTRACTOR AND HIS SUB-CONTRACTORS ARE TO VERIFY ALL DIMENSIONS ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING MANUFACTURE.	KEY PLAN





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KEY PLAN

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UNDP Lebanon Jnited Nation Development Programme

Social and Local Development Programme P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

PROGRAMME: Support Programme
Support to Integrated Service
Provision at the Local Level ebanese Host Communities.

PROJECT NAME: CHOUEIFAT PLAYGROUNDS

4 Floor Clean U t,

20x20cm

COVER

LEGEND:

Floor

Drain,

20x20cm

COVER

3" 30×30cm Roof PE Handhole Drain

1- It will be the Municipality responsibility to make sure that the existing toilets sewage pipe is functional outside the playgrounds at its South West corner, otherwise they will have to provide for an alternate pipe starting at that point (SW corner). Connecting the new toilets main sewage line up to that corner shall be within the Contractor's scope of works including a manhole at the connection point.

NOTES:

60x60cm manhole, airtight

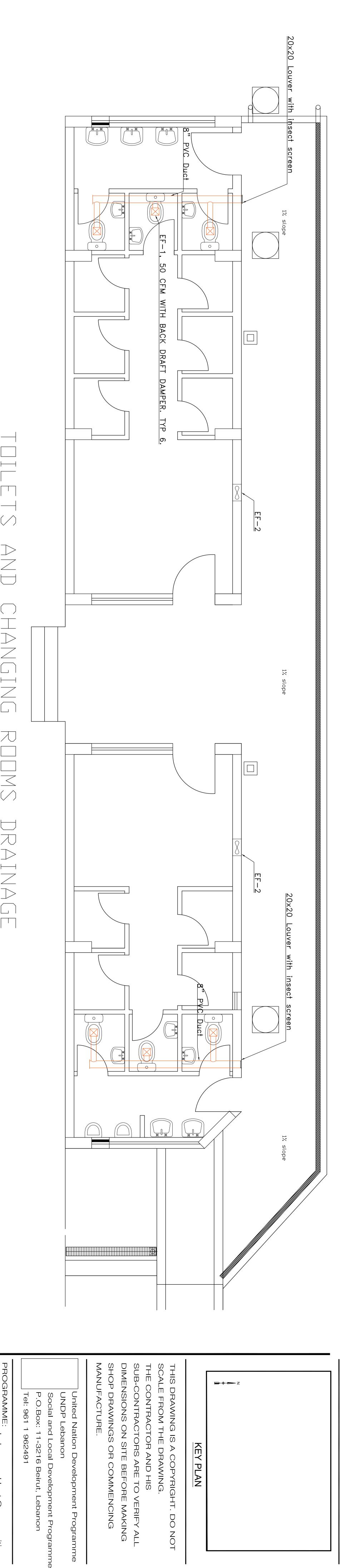
cast

2— It will be the Municipality responsibility to provide for a public water supply source next to the Playgrounds NE entrance agte/ramp, Connecting that source to th Roof tanks shall be within the Contractor's scope of works,

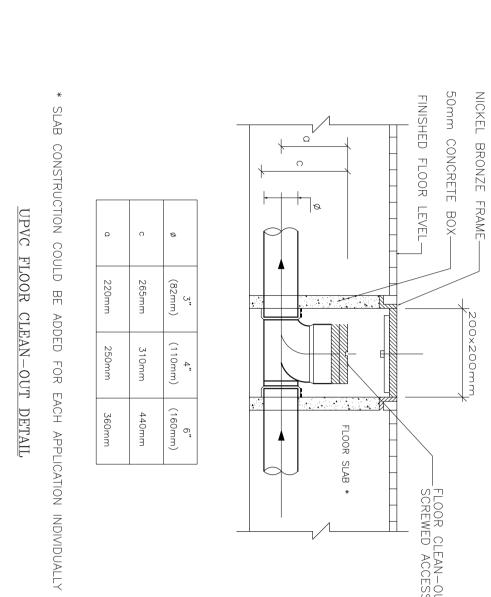
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APPROVED	ROVE	D		
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SHEET SIZE	71S T	ZE	A1	

Title DRAINAGE AND PLUMBING PLANS CHOUEIFAT **PLAYGROUNDS** 

CP. -TD-ME-01 9



KEY PLAN



1- It will be the Municipality responsibility to make sure that the existing toilets sewage pipe is functional outside the playgrounds at its South West corner, otherwise they will have to provide for an alternate pipe starting at that point (SW corner). Connecting the new toilets main sewage line up to that corner shall be within the Contractor's scope of works including a manhole at the connection point.

2- It will be the Municipality responsibility to provide for a public water supply source next to the Playgrounds NE entrance agte/ramp. Connecting that source to th Roof tanks shall be within the Contractor's scope of works.

PROJECT NAME:

: Lebanese Host Communities Support Programme Support to Integrated Service Provision at the Local Level

CHOUEIFAT

PLAYGROUNDS

ωωωχ

Roof

Drain

□ 30×30cm

PE Handhole

NOTES:

60x60cm manhole, airtight

cast

X 4" Floor

Clean

20x20cm

COVER

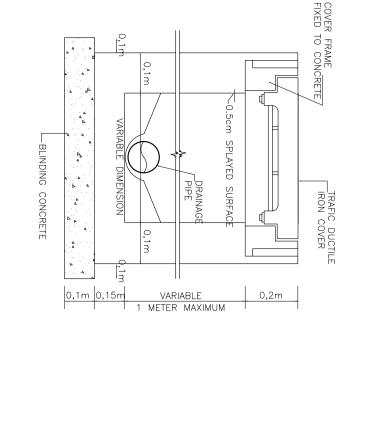
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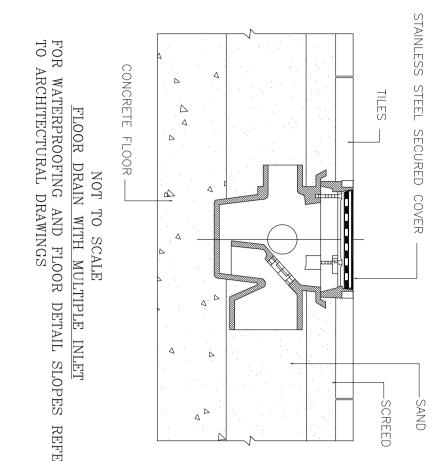
Floor

Drain,

20x20cm

COVER





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						CIVIL ENGINEERING	TENDER		Description	GENERAL REVISION		
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Title VENTILATION PLAN AND DETAILS CHOUEIFAT **PLAYGROUNDS** 

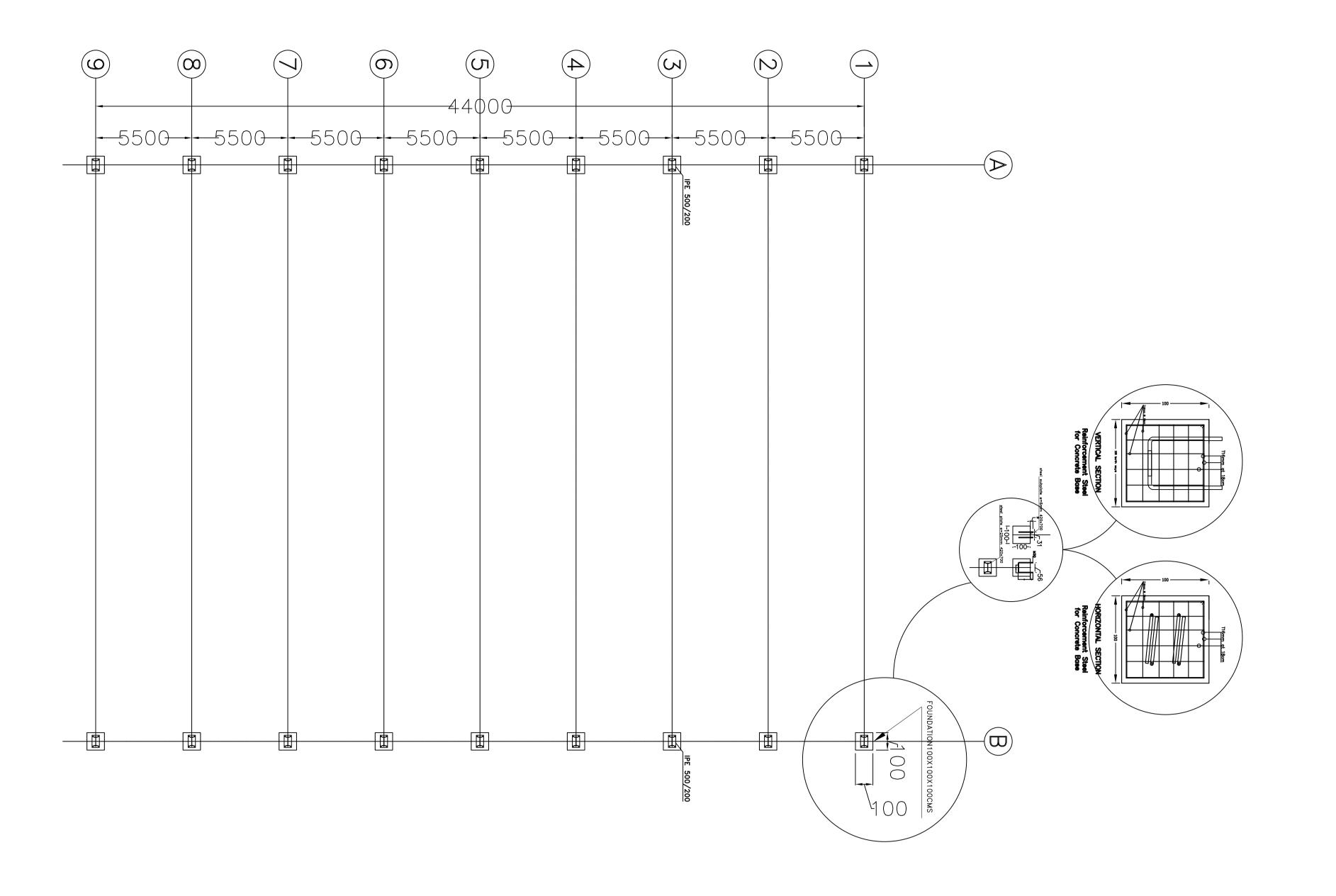
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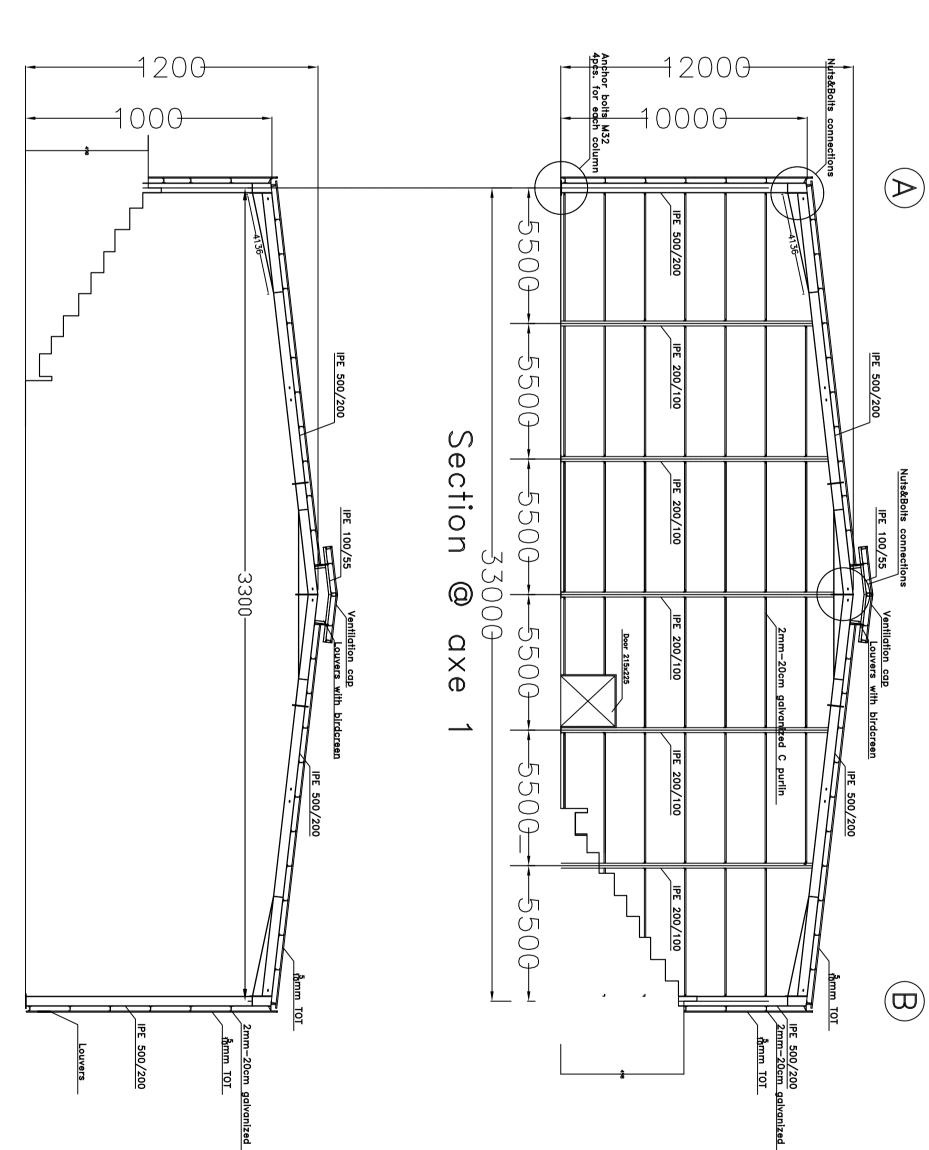
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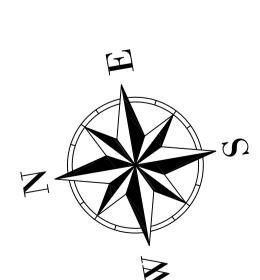
CP-TD-ME-02

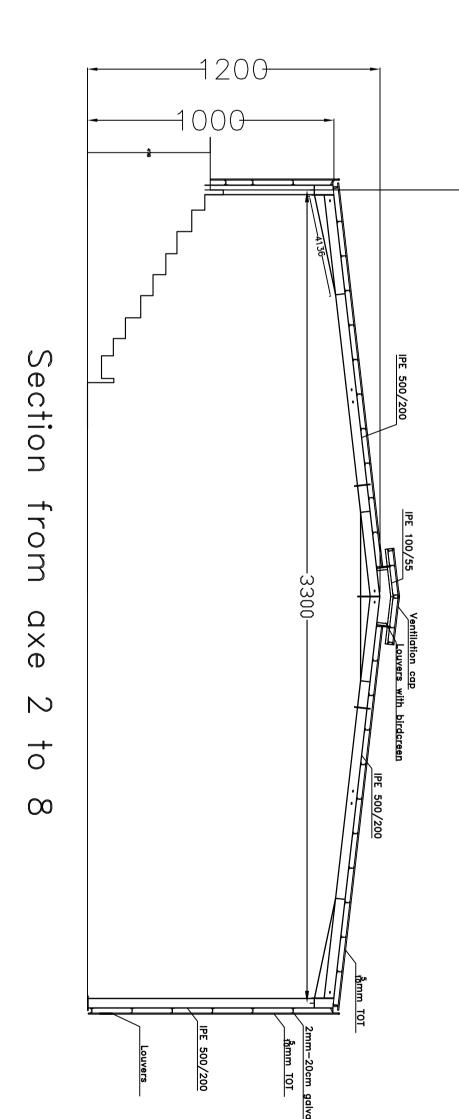
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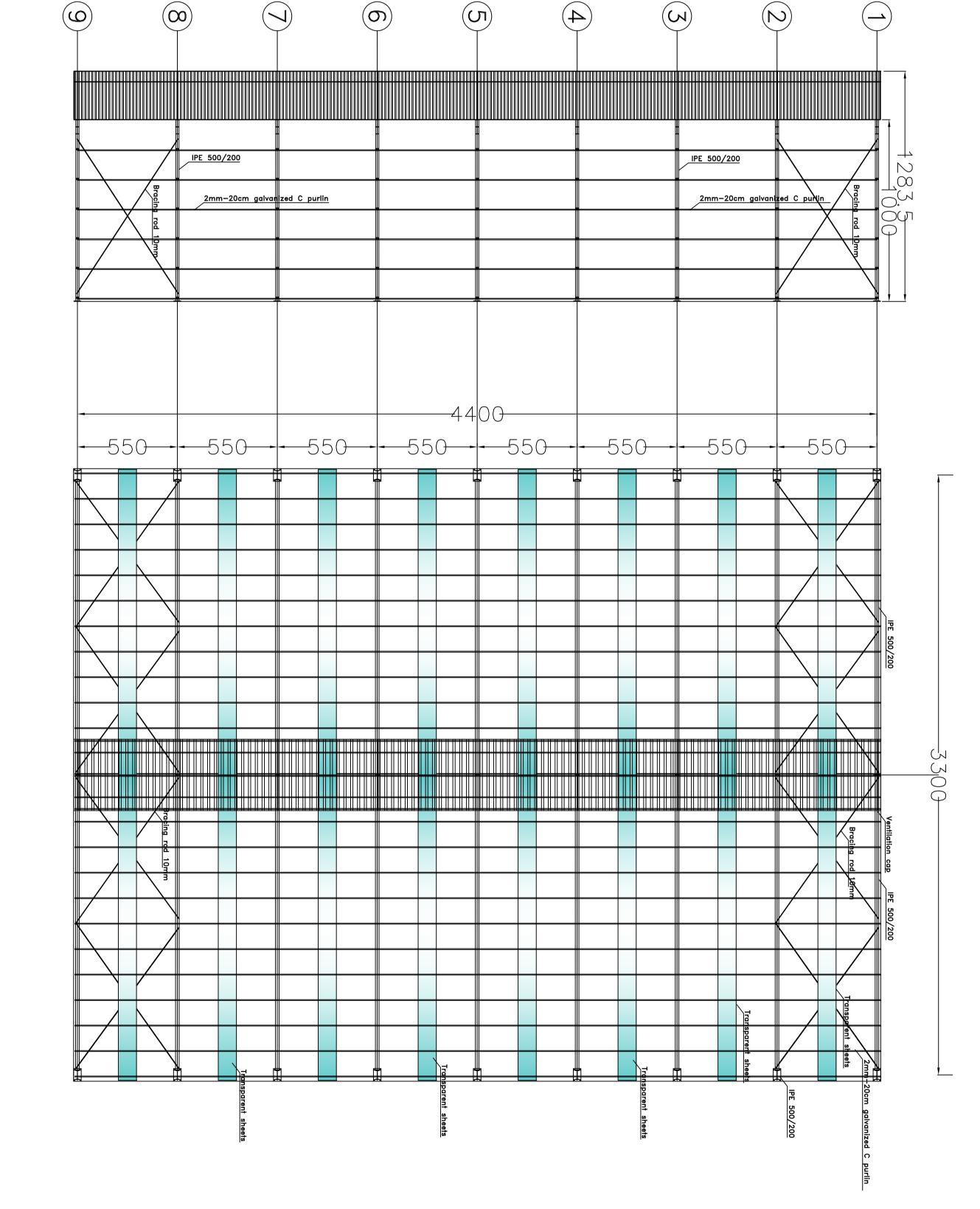
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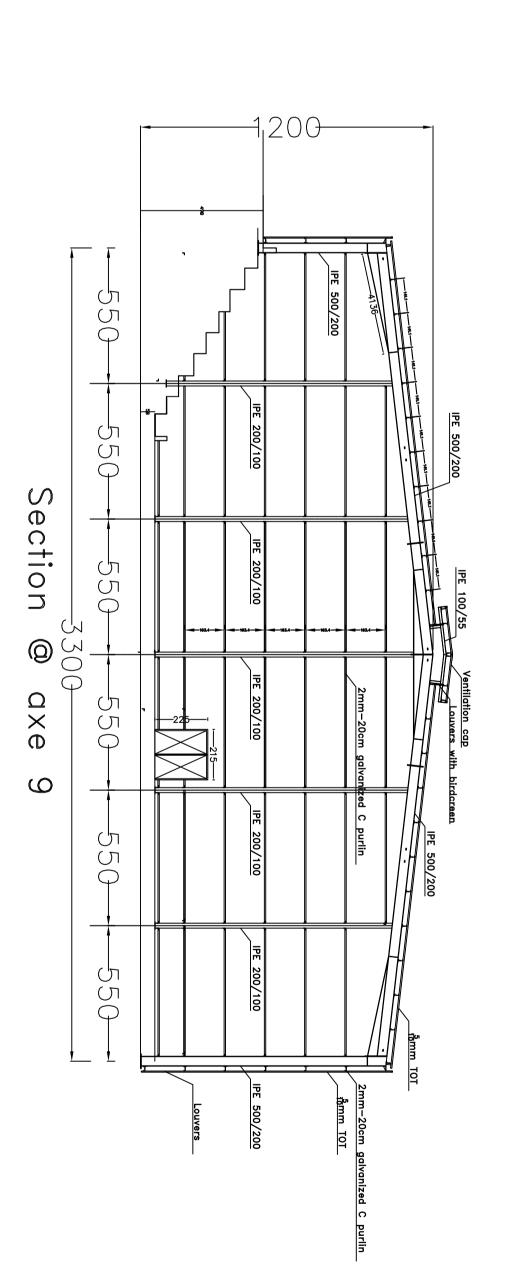








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MANUFACTURE.

Social and Local Development Programme
UNDP Lebanon
United Nation Development Programme

Provision at the Local Level
Support to Integrated Service
Support Programme
PROGRAMME: Lebanese Host Communities
Tel: 961 1 962491

CHOUFIFAT PI AYGROUNDS
PROJECT NAME:

N 0 5 0 -1	1. This is a general design for a steel structure as cover to paygrounds. It consistes of pre-engineered IPE 500 steel sections as columns and beams, with bolts and nuts connections, roof and side wall 0.5mm TOT steel cladding and ventilation cap.  2. The Contractor shall submit for approval a final study and execution drawings that provide the following details which shall be executed by the Contractor as part of BOQ Item A, Division 5,  a- Details of nuts and bolts connections, type, size, number b- Connection plates dimensions and thicknesses
0 < 0 -1	. This is a general design for a steel structure as cover to consistes of pre—engineered IPE 500 steel sections as colunwith bolts and nuts connections, roof and side wall 0.5mm and ventilation cap.
N	. The Contractor shall submit for approval a final study c drawings that provide the following details which shall the Contractor as part of BOQ Item A, Division 5,
	<ul> <li>a— Details of nuts and bolts connections, type, size,</li> <li>b— Connection plates dimensions and thicknesses</li> </ul>
	<ul> <li>c— Details of roof and walls cladding installation as to sheets overlapping, fixing details, self drilling bolts installation d— Watertight Ventilation cap and walls louver details</li> </ul>
	<ul> <li>e— Galvanized steel gutter with necessary 8No. 6" piping downwards</li> <li>f— All required details at connections, corners, joints, louvers and ventilation cap that would render the structure absolutely waterp</li> </ul>
N.	7 Transferent polices to shooting shall form assemble 15 00% of the start

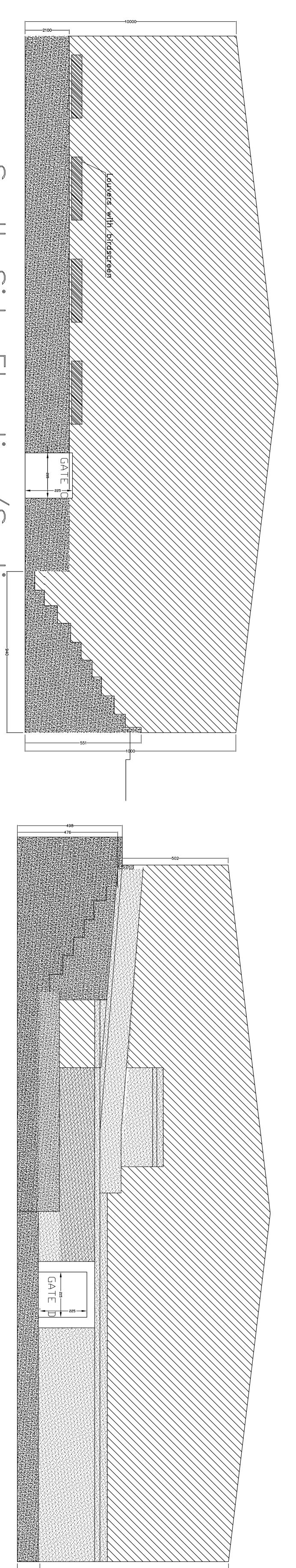
<ol> <li>The Contractor shall submit for approval a final study and execution drawings that provide the following details which shall be executed by the Contractor as part of BOQ Item A, Division 5,</li> </ol>
b— Details of lights and polits conflections, type, size, lightness b— Connection plates dimensions and thicknesses c— Details of roof and walls cladding installation as to sheets sizing, overlapping, fixing details, self drilling bolts installation d— Watertight Ventilation cap and walls louver details
<ul> <li>e— Galvanized steel gutter with necessary 8No. 6" piping downwards</li> <li>f— All required details at connections, corners, joints, louvers and ventilation cap that would render the structure absolutely waterproopers.</li> </ul>
3. Translucent polycarbonate sheeting shall form around 15—20% of the roo corrugated colored metal sheeting 0.5mm thick and shall be evenly distribut as per the drawing detail.
4. Wall cladding on the 4 sides of the Playgrounds must extend downwards beyond the 1m high parapet on the west side, 2m high wall on the south side, changing rooms/toilets block roof upstand North side and sidewalk parapet on th East side. Where the wall cladding comes in touch with the Spectators decks sides, the Contractor must propose a detail for approval and later execution to make sure water will not pass under the cladding to the spectators deck.
5. Five Gates on both sides of the Hangar shall be provided. Those gates shall be side hinged, made of painted steel frame and corrugated sheeting so as to look as a continuity to the Hangar external wall cladding. When closed, those 5 gates must be completely watertight. They should be

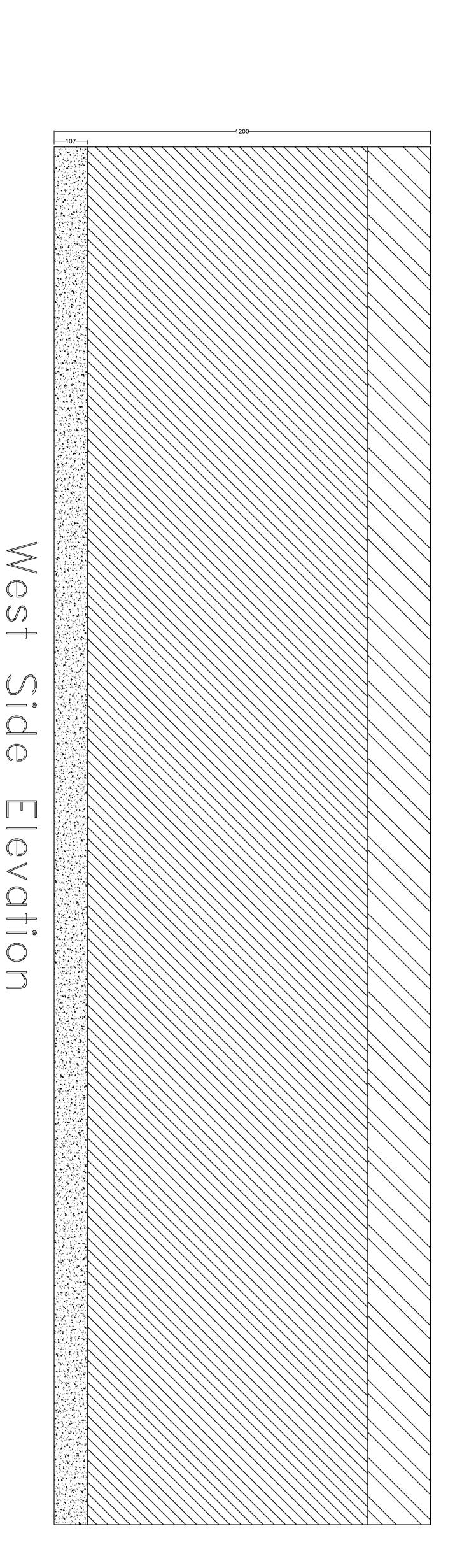
PROJEC:	PROJECT NBR.	REV BY	0		
PROJECT PHASE TENDER	T NBR.	Date			
TENDER		Description	GENERAL REVISION		
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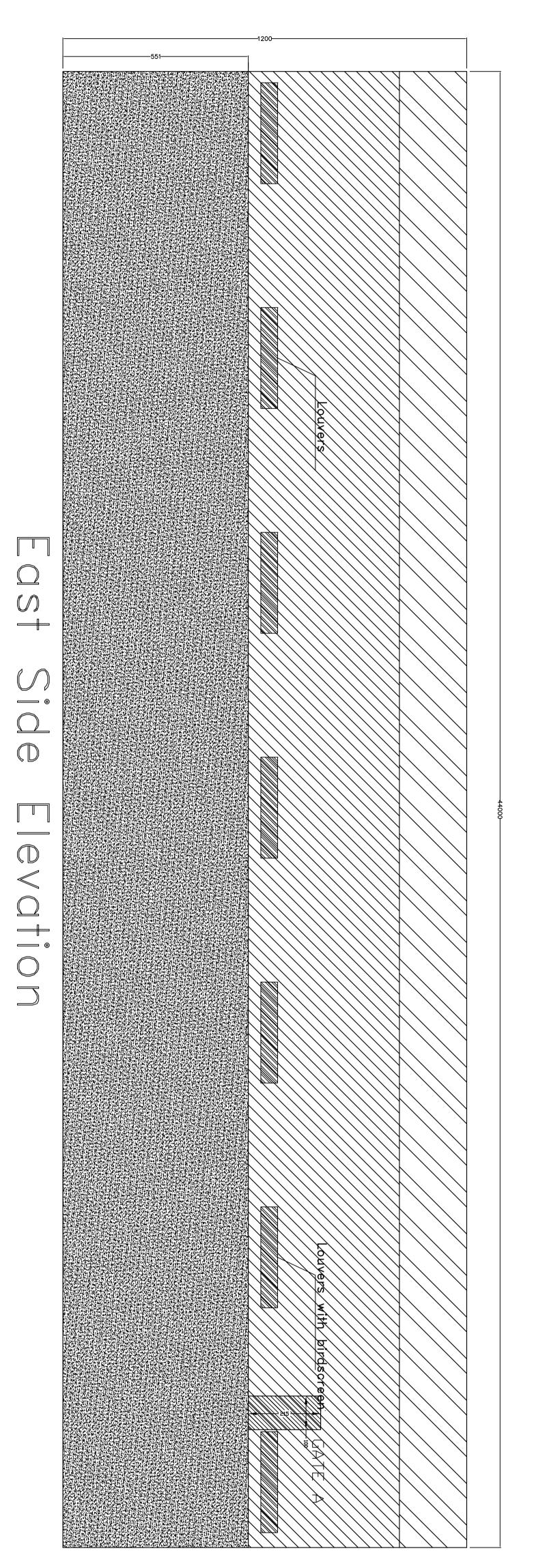
BUILDING  DESIGNED  DRAWN  CHECKED  APPROVED	
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CHECKED	
APPROVED	
DATE	24 FEBRUARY 2017
SCALE	1:1 mm
SHEET SIZE	A1

STRUCTL	CHOUEIFAT	Itle
STRUCTURAL STEEL HANGAR	FAT PLAYGROUNDS	
GAR	VDS	

## CP-TD-ST-01







DRAWN
CHECKED
APPROVED

24 FEBRUARY 2017 1: 0.5 mm

Title

CHOUEIFAT

**PLAYGROUNDS** 

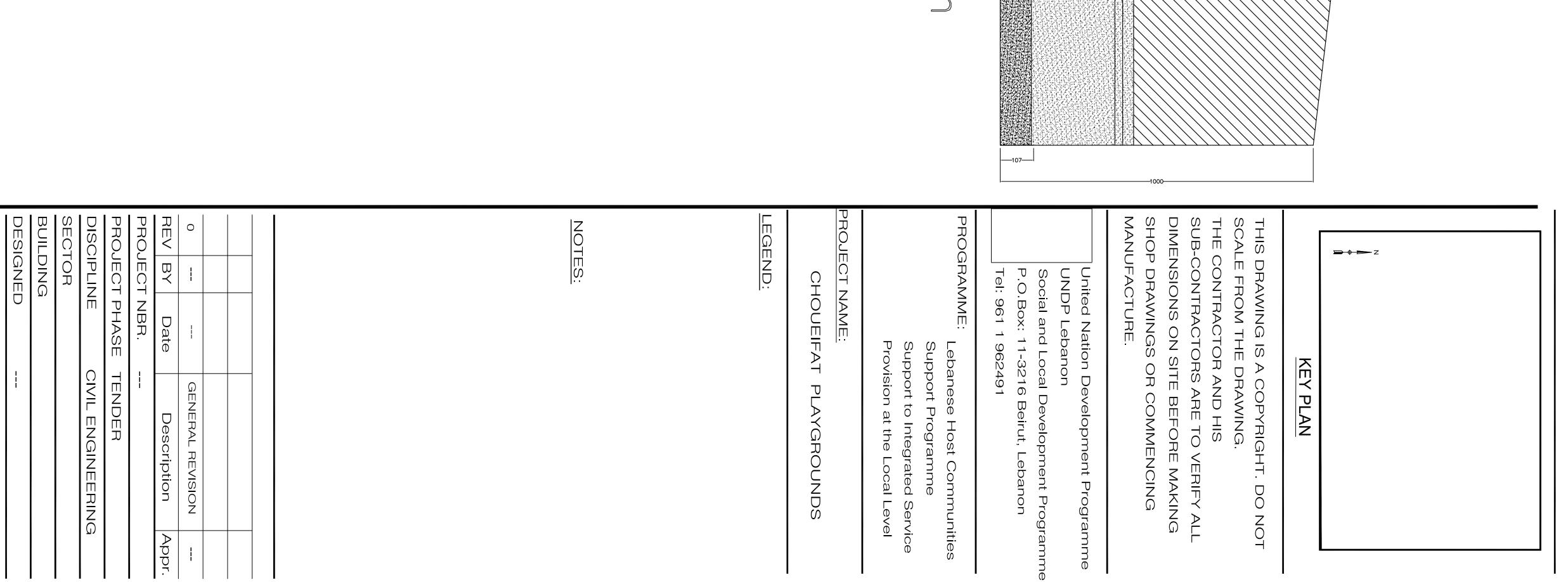
**FACADES** 

CLADDING

Sheet 1 OF

Phase Type Drawing Number

CP-TD-ST-02



# MAX. MIN. MM. N.T.S. FFL REINF. STIRR. TH or th Top&Bot T.O.B. T.O.P. T.O.S. TYP. U.O.N. W.W.MESH Ø MAXIMUM MINIMUM MINIMU

SPECIFICATIONS

ITHOD. STRENGTH DESIGN (USD) FOR E STRESS DESIGN (ASD) FOR

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8. UBC 1997	ANSI / ASCE 7-95-MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES	AWS CODE	(ASD) 9TH EDITION	5. AISC MANUAL OF STEEL CONSTRUCTION	CRSI 2002	PRESTRESSED CONCRETE, FOURTH EDITION	BOI DESIGN HANDBOOK FOR BRECAST /	ACL MANUALS OF CONCRETE PRACTICE 2001	1. ACI 318-08 BUILDING CODE
UNIFORM BUILDING CODE, USA	AMERICAN NATIONAL STANDARDS INSTITUTE AND THE AMERICAN SOCIETY OF CIVIL ENGINEERS	AMERICAN WELDING SOCIETY	CONSTRUCTION	AMERICAN INSTITUTE OF STEEL	CONCRETE REINFORCING STEEL INSTITUTE	PRECAST / PRESTRESSED CONCRETE INSTITUTE		AMFRICAN CONCRETE INSTITUTE	AMERICAN CONCRETE INSTITUTE REQUIREMENTS FOR STRUCTURAL CONCRETE

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A STRICTION STEEL AND ACCESSORIES:	NON-PRESTRESSED DEFORMED REINFORCING STEEL BARS, ASTM 615 GRADE 60	2. CAST-IN-SITE CONCRETE	I. CAST-IN-SITE PLAIN CONCRETE	MATERIAL DESCRIPTION		
	MINIMUM YIELD STRENGTH OF 4200 KG/CM <sup>2</sup> (60,000 psi)	280 KG/CM² 28-DAYS CYLINDER STRENGTH	140 KG/CM <sup>2</sup> 28-DAYS CYLINDER STRENGTH	MINIMUM STRENGTH		

1.4 LOAD ASSUMPTIONS 1.4.1 DESIGN GRAVITY LOADS.	
DESCRIPTION	DEAD LOAD
MATERIAL UNIT WEIGHTS:	
REINFORCED CEMENT CONCRETE, PRECAST AND PRESTRESSED CONCRETE	2500 KG/M3
LIGHTWEIGHT CONCRETE	600 KG/M3
CONCRETE BLOCK WALLS, SOLID	2100 KG/M3
CEMENT PLASTER / CEMENT-SAND SCREED	2000 KG/M3
MARBLE / GRANITE FOR CLADDING	2600 KG/M3
STRUCTURAL STEEL	7800 KG/M3
	1000 100 117

	3-	
THE NOTES SHALL APPLY TO ALL (	GENERAL NOTES	

- FOR CERTAIN DETAILS THAT ARE NOT SHOWN, BUT ARE REQUIRED AS PER DESIGN INTENT, THE CONSTRUCTION SHALL BE OF SIMILAR NATURE TO THOSE WHICH ARE SHOWN OR INDICATED, IN SUCH CASES ENGINEER'S DECISION WILL BE FINAL, AND NO CLAIM SHALL BE ENTERTAINED ON THIS ACCOUNT.

  DISCREPANCIES IN ARCH'L, STRUCTURAL AND OTHER SERVICES SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER AND HIS DECISION SHALL BE FINAL AS PER DESIGN INTENT.

  CONTRACTOR TO INCLUDE IN HIS PRICE ALL ITEMS NOT SHOWN BUT ARE SPECIFICALLY REQUIRED TO COMPLETE THE PROJECT. THE PROJECT AND STRUCTURAL STEEL STEEL STEEL AND STRUCTURAL STEEL SPECIFICATIONS SHALL BE BROUGHT TO THE NOTICE OF ENGINEER AND IN SUCH CASES ENGINEER'S DECISION WILL FINAL.

- ALL DIMENSIONS ARE TO BE READ AND NOT TO BE MEASURED.
  IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND
  CONFIRM ALL DIMENSIONS WITH THE ARCHITECTURAL, ELECTRICAL
  AND MECHANICAL DRAWINGS BEFORE PROCEEDING WITH ANY WORK.

  ALL DIMENSIONS ARE IN CENTIMETERS U.O.N.

  REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DWGS.
  FOR MASONRY WALLS, FINISHES, CANTS, CURBS, SLEEVES, INSERTS
  BLOCKOUTS AND ALL ITEMS EMBEDDED IN CONCRETE WORKS.
  THE STRUCTURAL DRAWINGS SHALL GOVERN WHERE THE
  ARCHITECTURAL DRAWINGS SHALL GOVERN WHERE THE
  STRUCTURAL ELEMENTS. IT IS THE RESPONSIBILITY
  OF THE CONTRACTOR TO VERIFY THESE DRAWINGS
  WITH OTHER TRADES AND IN CASE OF CONFLICT GET ENGINEER'S
  APPROVAL PRIOR TO EXECUTION OF WORKS.

  CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL OR BEAM
  (OTHER THAN THOSE MERELY PASSING THROUGH) SHALL SATISFY
  THE FOLLOWING:

  a) THE OUTSIDE DIAMETER SHALL NOT BE LARGER THAN 1/3 THE
  OVERALL THICKNESS OF THE SLAB, WALL OR BEAM WIDTH IN
  WHICH THEY ARE EMBEDDED.

  b) THE SPACING OF THE CONDUITS SHALL NOT BE CLOSER THAN
  3 CONDUIT DIAMETERS ON CENTER.

  c) THE CONDUITS SHALL BE POSITIONED AT THE CENTER OF THE
  SLAB, WALL OR BEAM THICKNESS.

  d) THE LOCATION OF THE CONDUIT RELATIVE TO THE SPAN OF BEAM
  OR WALL SHALL BE UPON THE DIRECTION OF ENGINEER. HE CONDUITS SHALL NOT BE CLOSER THAN FRS ON CENTER.

  LL BE POSITIONED AT THE CENTER OF THE AM THICKNESS.

  THE CONDUIT RELATIVE TO THE SPAN OF BEAM E UPON THE DIRECTION OF ENGINEER.
- NO HOLE SHALL BE MADE OR NO PIPE SHALL BE PLACED IN CONCRETE AFTER CONCRETE HAS BEAM CAST UNLESS APROVED BY THE ENGINEER
- ALL SLAB, BEAM AND WAL THROUGH OR BE ANCHORE USING STANDARD. HOOKS LL REINFORCEMENT SHALL CONTINUE ED INTO SUPPORTING MEMBERS AND MIN. DEVELOPMENT LENGTHS U.O.N.

- 11. CONTRACTOR TO OBTAIN STRUCTURAL ENGINEER'S APPROVAL
  REGARDING LOCATION AND REINFORCEMENT FOR A/C OPENING
  IN BEAMS OR SLABS THAT ARE NOT SHOWN IN THE DRAWINGS.

  12. ALL CONCRETE FOR FOUNDATIONSSHALL BE
  LAID OVER 5 TO 10 CM THICK PLAIN CONCRETE.
  ALL FOUNDATIONS, TIE BEAMS, SLAB ON GRADE AND BASEMENT WALLS,
  MUST BE POURED USING CEMENT TYPE v.

  13. NO WATER TANKS, CHILLERS, LANDSCAPING, PLANTERS OR HEAVY EQUIPMENTS
  ARE ALLOWED TO BE PLACED AT THE ROOFS UNLESS OTHERWISE MENTIONED IN THE DRAWINGS.

  14. THE CONTRACTOR SHALL READ STRUCTURAL DRAWINGS AS PART OF THE COMPLETE TENDER DOCUMENTS
  INCLUDING DRAWINGS AND SPECIFICATIONS OF ALL DISCIPLINES. HE SHALL ALSO VERIFY THE
  CONFORMITY OF THESE DRAWINGS WITH ACTUAL SITE DIMENSIONS AND CONDITIONS. ANY DISCREPANCIES
  SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

  15. THE CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY SLEEVES, OPENINGS, EMBEDDED CONDUITS OR BOXES
  AS REQUIRED, BEFORE PROCEEDING WITH CASTING CONCRETE.

  SHAFTS, OPENINGS & RESERVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE FOR INDICATIVE PURPOSES.
  THE CONTRACTOR SHALL PREPARE COMPOSITE SHOP DRAWINGS FOR ALL MECHANICAL AND ELECTRICAL RESERVATIONS
  IN COORDINATION WITH ELECTROMECHANICAL DRAWINGS AND SUBMIT FOR APPROVAL BEFORE CASTING CONCRETE.
- FOUNDATION DESIGN
- CAVITY DETECTION PROGRAM TO INFILL CAVITIES MUST BE CONDUCTED BY THE CONTRACTOR DEPTH OF 7M. AND WITH A MINIMUM OF ONE BORE HOLE UNDER EACH ISOLATED FOOTING IF CAVITIES ARE ENCOUNTERED, THEY SHALL BE FILLED WITH LEAN CONCRETE OR GROUT.

TO

- ANY EXPOSED CAVITES OR LOOSE SOIL OBSERVED AT THE FOOTING DESIGN ELEVATIONS SHOULD BE CLEARED FROM ANY SOIL MATERIAL AND FILLED WITH CONCRETE.

  THE FOOTINGS MUST BE FULLY EMBEDDED IN HARD SOIL AT LEAST THEIR HEIGHT.

  EXCAVATIONS FOR ISOLATED FOOTINGS MUST BE CARRIED OUT IN DEPTH UNTILL A SOLID, STIFF AND HARD SOIL IS REACHED CAPABLE TO PROVIDE THE ALLOWABLE SOIL BEARING PRESSURE AS INDICATED IN THE SOIL REPORT. THEN COLUMN AND WALL SHALL BE EXECUTED AND CAST UP TO THE BOTTOM OF TIE BEAMS AND SLAB ON GRADE.

NOTE: US - NOMINAL DAN DANIETEN (MIN)	
CAST-IN-PLACE CONCRETE (NONPRESTRESSED)	MINIMUM CONCRETE COVER (MILLIMETER)
(A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH (FOUNDATIONS)	75
(B) CONCRETE EXPOSED TO EARTH OR WEATHER:	
16MM BAR, W31 OR D31 WIRE, AND SMALLER	40
20MM AND LARGER BARS	40
(C) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS	30
WALLS	25
BEAMS	40
RIBS	35
COLUMNS: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	40
SHFLLS, FOLDED PLATE MEMBERS	20

CLEAR SPACING BETWEEN BARS AND LAYERS OF BETWEEN SPLICES AND ADJACENT BARS SHALL REINFORCEMENT PER L BAR DIAMETER (MM) BARS AS WELL AS CLEAR SP COMPLY TO THE FOLLOWING: 18-1999 SECTION 7.6

	<u> </u>			
BETWEEN PRETENSIONING TENDONS LOCATED AT THE MIDDLE PORTION OF A SPAN.	(C) BETWEEN PRETENSIONING TENDONS AT EACH END OF A MEMBER:	(B) FOR ALL COLUMN VERTICAL BARS, AND ALSO BETWEEN CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS IN COLUMNS:  (NOTE: FOR COLUMN BAR BUNDLES, Db SHALL BE DIAMETER OF AN EQUIVALENT SINGLE BAR)	(A) BETWEEN PARALLEL BARS BARS IN BEAMS, BETWEEN CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS IN BEAMS:  (NOTE : FOR BEAM BAR BUNDLES, Db SHALL BE THE DIAMETER OF AN EQUIVALENT SINGLE BAR)	
CLOSER VERTICAL SPACING AND BUNDLING OF TENDONS ARE PERMITTED IN THE MIDDLE PORTION OF A SPAN.	NOT LESS THAN THE GRETATER OF: (4/3)*MAXIMUM AGGREGATE SIZE, 4 STRAND DIAMETERS, OR 5 WIRE DIAMETERS. HOWEVER, IF CONCRETE STRENGTH AT PRESTRESS TRANSFER, Fci, IS 27.5 MPa OR MORE, THE MINIMUM CENTER TO CENTER STRAND SPACING SHALL BE 45MM FOR 12.7MM NOMINAL STRAND DIAMETER OR SMALLER, OR 50MM FOR STRANDS OF 15.2MM NOMINAL DIAMETER.	NOT LESS THAN THE GREATER OF:  (4/3)*MAXIMUM AGGREGATE SIZE,  1.5 X (COLUMN BAR Db),  OR 40 MM	NOT LESS THAN THE GREATER OF: (4/3)*MAXIMUM AGGREGATE SIZE, 1.0 X (BEAM BAR Db), OR 25 MM  WHERE PARALLEL BARS ARE PLACED IN TWO OR MORE LAYERS, BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE BARS IN THE BOTTOM LAYER, WITH A CLEAR DISTANCE BETWEEN LAYERS NOT LESS THAN 25 MM.	MINIMUM CLEAR SPACING BETWEEN PARALLEL REINFORCEMENT (MILLIMETER)

- S, HOOKS, OFFSET LATEST EDITION.

- 6- REINFORCING STEEL

  1. ALL BAR PLACEMENT, BAR SUPPORTS, CHAIRS, TIE BARS, BENDS, HOOKS, CITHE ACI 315STD. DETAILING MANUAL FOR REINFORCED CONCRETE, LATEST EDITION OF REINFORCING BARS SPACING, SIZE AND NUMBER ARE TO BE READ AND NOT TO BE MEASURED OR COUNTED FROM THE DRAWINGS.

  3. WELDING OF REINFORCEMENT IS NOT PERMITTED, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

  4. BEAM REINFORCEMENT PLACED IN MULTIPLE LAYERS SHALL HAVE 2.5cm BAR SPACERS @ 120cm ON CENTERS.

  5. BEAMS HAVING A DEPTH OF MORE THAN 80cm SHALL HAVE 12mm @ 20cm REINFORCING BARS PLACED ON EACH FACE OF THE BEAMS UNLESS SHOWN OTHERWISE.

  6. PROVIDE 0.4% MINIMUM VERTICAL REINFORCEMENT AND 0.25% MINIMUM HORIZONTAL REINFORCEMENT IN WALLS UNLESS OTHERWISE NOTED ON DRAWINGS. ALL HAVE 12mm @ 20cm ON UNLESS SHOWN OTHERWISE.
- ORTED BY SPACERS LAYED ON THE
- ALL REINFORCEMENTS IN SLABS AND WATHE REQUIRED CONCRETE COVER .

- OVERLAPS SHALL BE STAGGERED IN CASE OF CONGESTION OF REINFORCEMENT OR MECHANICAL SPLICE SHALL BE USED DEVELOPMENT OF STEEL BARS AND THE OVERLAP LENGTH SHALL FOLLOW THE REQUIREMENTS OF CHAPTER 12 OF THE ACI-318-TENSION SPLICE LENGTH OF NORMAL UNCOATED BARS FOR THE SPECIFIED CONCRETE STRENGTH MAY BE TAKEN AS FOLLOWS:

  48x BAR DIAMETER FOR BAR SIZE <#18mm
  60x BAR DIAMETER FOR BARS SIZE <#18mm
  60x BAR DIAMETER FOR BARS TO BE DEVELOPED IS NOT LESS THAN ONE BAR DIAMETER.

   CLEAR SPACING OF BARS TO BE DEVELOPED IS NOT LESS THAN ONE BAR DIAMETER.

   CLEAR COVER IS NOT LESS THAN ONE BAR DIAMETER.

   CLEAR COVER IS NOT LESS THAN ONE BAR DIAMETER.

   CLEAR COVER IS NOT LESS THAN ONE BAR DIAMETER.

  OVERLAP LENGTH OF BARS HAVING MORE THAN 30cm OF FRESH CONCRETE CAST BELOW SHALL BE FURTHER INCREASED BY 30:

  DEVELOPMENT LENGTH OF BARS IN TENSION MAY BE TAKEN AS 77% OF THE SPLICE LENGTH.

  DEVELOPMENT OF STANDARD HOOKS IN TENSION AS DESCRIBED IN 12.5 OF ACI-318-08 SHALL BE 19x BAR DIAMETER.

  SPLICE LENGTH OF BARS IN COMPRESSION SHALL BE 30x BAR DIAMETER.

END

omm MIN) DIAMETER

OF BAR

STRUCTURAL SOLID SLABS

ALL REINFORCEMENT (BOTH TOP AND BOTTOM) SHALL BE SUPPORTED BY TIE BARS AND CHAIRS AT PROPER HEIGHT AT A MAXIMUM SPACING OF 60Cms EACH WAY.

THE CHAIRS SHALL BE OF PLASTIC FOR ALL FAIR FACE SU

### $\infty$ RETAINING AND BASEMENT WALLS

THESE NOTES APPLY TO ALL EARTH RETAINING WALLS.

NO FILL SHALL BE PLACED AGAINST THE WALLS UNLESS THE WALLS AND ALL FRAMING TO WHICH EACH WALL ABUTTS HAS ATTAINED SUFFICIENT STRENGTH.

THE CONTRACTOR AND HIS
SUB-CONTRACTORS ARE TO VERIFY ALI
DIMENSIONS ON SITE BEFORE MAKING

SIHT

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KEY PLAN

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MANUFACTURE.

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UNDP Lebanon

Social and Local Development Programme

P.O.Box: 11-3216 Beirut, Lebanon Tel: 961 1 962491

SHOP DRAWINGS OR COMMENCING

- WHERE BACKFILL MUST BE PLACED TO PROCEED WITH WORK OR TO FULFILL REQUIREMENTS OF A DETAIL, THE CONTRACTOR SHALL DESIGN AND TAKE ENGINEER'S APPROVAL FOR BRACING THE WALL PRIOR TO PLACING ANY SUCH BACKFILL.

THE EXTERNAL MEMBRANE WATERPROOFING OF THE BASEMENT WALLS SHALL BE INSTALLED AND PROTECTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

THE WATERPROOFING OF CONCRETE ROOFS AND DESIGNATED WET AREAS SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL DETAILS AND THE TECHNICAL SPECIFICATIONS.

THE TYPE OF MEMBRANE WATERPROOFING, THE MATERIAL COMPOSITION, THE NUMBER OF PLIES, AND THE METHOD OF APPLICATION AND PROTECTION, SHALL STRICTLY COMPLY WITH THE TECHNICAL SPECIFICATIONS.

AND MUST BE APPROVED BY THE ENGINEER BEFORE EXECUTION

PROGRAMME:

Lebanese Host Communities Support Programme

Provision at the Local Level

Support to Integrated Service

## CONSTRUCTION

- THE CONTRACTOR SHALL SUBMIT HIS PROPOSED LOCATION OF THE CONSTRUCTION JOINTS FOR APPROVAL OF THE ENGINEER, WAY AHEAD OF TIME. CONSTRUCTION JOINTS SHALL BE LOCATED AS PER REQUIREMENTS OF THE ACI CODE, AND AS APPROVED OR DIRECTED BY THE ENGINEER.

  THE CONTRACTOR SHALL PROVIDE WATER STOPS IN CONSTRUCTION JOINTS FOR THE GROUND SLAB AND CONCRETE BASEMENT WALLS, RAFT AND WALL FOOTINGS.

  HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHALL BE LOCATED AS APPROVED BY THE ENGINEER PRIOR TO CASTING CONCRETE. ALL JOINTS SHALL BE FORMED WITH A STANDARD KEY AND REINFORCING BARS SHALL BE EXTENDED TO PROVIDE THE REQUIRED TENSION LAPPING LENGTH BUT NOT LESS THAN 50 BAR DIAMETER.
- 12-SHOP DRAWINGS
- 1. THE CONTRACTOR SHALL SUBMIT DETAILED, COORDINATED AND SCALED SHOP DRAWINGS, WHICH SHALL INCLUDE, BUT NOT LIMITED TO, THE EXACT SIZE AND LOCATION OF ALL OPENINGS, SLEEVES, INSERTS, BLOCKOUTS AND ALL ITEMS PASSING THROUGH OR EMBEDDED IN CONCRETE, DETAILS OF BAR CUTTING, BENDING, HOOKS, SPLICES, ETC. SHOWING THE EXACT NUMBER OF BARS, SIZE AND DIMENSIONS, INCLUDING PROPOSED LOCATION OF CONSTRUCTION JOINTS, ETC., FOR ENGINEER'S APPROVAL BEFORE STARTING THE CONSTRUCTION.
- ADDITIONAL REINFORCEMENTS (TOP, BOTTOM, STIRRUPS OR SIDE BARS) THAT ARE NECESSARY AROUND OPENINGS, BUT NOT SHOWN IN THE DR. OR AS DIRECTED BY THE ENGINEER, SHALL BE INCLUDED, AND NO CLAIFOR TIME OR MONEY SHALL BE ENTERTAINED ON THIS ACCOUNT.
- 13-
- STRIPPING TIME

  FORMS SHALL BE STRUCK ONLY UPON THE DIRECTION
  OF THE ENGINEER.

  FORMS SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO FINAL AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE DESIGN DRAWIN SPECIFICATIONS. GRADES, GS AND

ALL BACKFILL SHALL CONSIST OF WELL GRADED GRANULAR MATERIAL COMPACTED WITH MECHANICAL COMPACTORS TO 95% OF MAXIMUM DRY DENSITY.

ALL HEAVY MACHINERY SHALL STAY MINIMUM 2m CLEAR AWAY FROM

CHOUEIFAT PLAYGROUNDS

PROJECT NAME:

LEGEND:

NOTES:

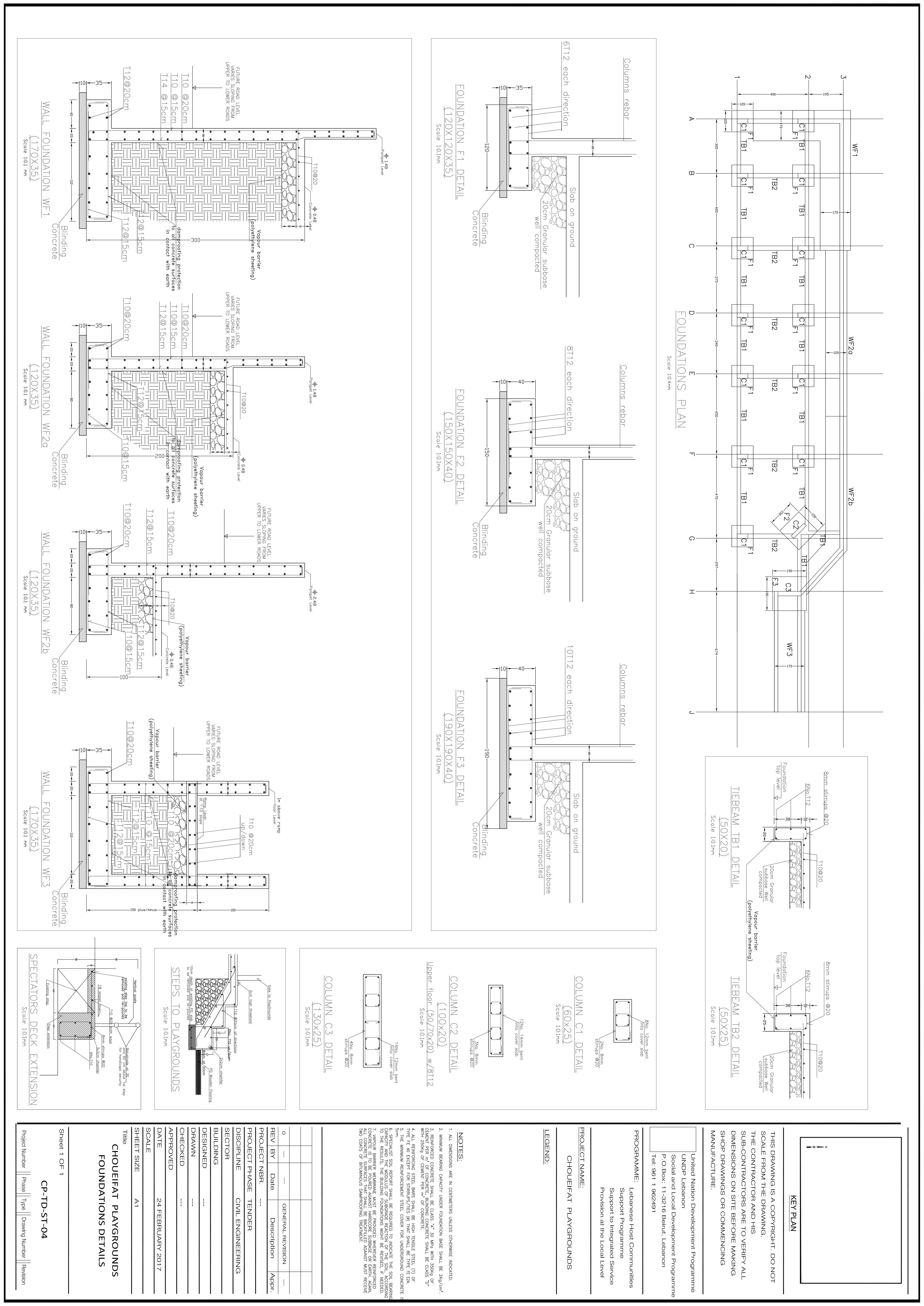
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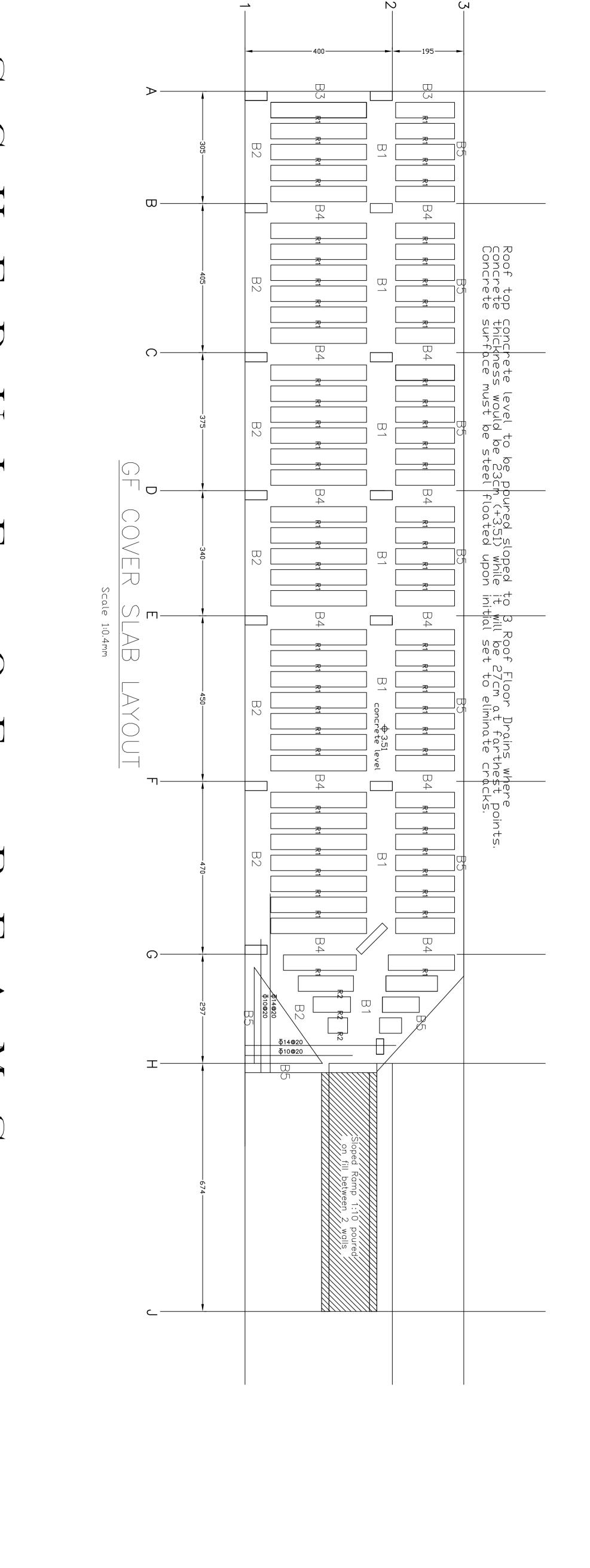
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PROJECT PHASE	TENDER
DISCIPLINE	CIVIL ENGINEERING
SECTOR	
BUILDING	
DESIGNED	
DRAWN	
CHECKED	
APPROVED	
DATE	24 FEBRUARY 2017
SCALE	
TELS TELES	<b>7</b> 1

Title GENERAL CHOUEIFAT **STRUCTURAL PLAYGROUNDS** DETAIL

P-TD--ST-03

Type Drawing Num





## 1Ф10 Hourdie 42x14x20 Roof Upstand Scale 1:,05 mm Hourdie 42x14x20 +3.51

Scale 1:,05 mm

2Φ16 x 600 10 2Φ16 x 600 10 580 10 2Φ12 x 600 RIB R1 (15 x 23)	3Φ12×600 590 10 2Φ8 @15 B3- (30×23)	10 10 3 Ф 16 × 600	308 @15 B2- (70x23)	10 340 6 Ф 16 × 350	10 840 6 <b>1</b> 14 x 850	81- (80x23)	7 ₱ 16 × 350	10 840 7 <b>♦</b> 14 × 850
108 @15 RIB R1 (15x23)	B3- (30x23)		[[[]]] 3\$\psi \emptyseq 15]  B2- (70x23)	6Φ16×450		81- (80x23)	7 Φ16 x 450	
2Φ16×VAR  2Φ14×VAR  2Φ15  RIB R2 (15×23)	5Φ12×600 590 10 2Φ8 @15 B4- (55×23)	10 580 10 5	82- (70x23)	6Φ16×400	6Φ14×700	[	7Φ16 x 400	7⊕14×700
	[ ] 2φ8 @15 B4- (55×23)		[ ] 3\$\psi \equiv 15  B2- (70x23)	6Φ16×400	6Φ14×650	[	7Φ16×400	7Φ14×650
	2Φ10 x Continuous  1Φ8 @20  B5- (25x23)	2Ф10×Continuous	3\$\psi \text{\tinite\text{\ti}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\text{\text{\text{\text{\texi}\til\tint{\text{\texi}\tint{\text{\ti}}\tilitt{\text{\text{\text{\text{\text{\text{\texi}\text{\texit{	6Ф16×500	6Ф14×800	[ ] 3\$\psi \equiv 15  B1- (80\times23)	7Φ16 x 500	7 ₱ 14 × 800
			3\phi 8\phi 15  B2- (70x23)	6Ф16×500	6Φ14×800_	81- (80x23)	7Φ16 x 500	
			3\$\pi \ \text{\text{\text{0}}} \] \text{B2- (70x23)}	6Ф16×450 ————————————————————————————————————	6Ф14×500	[	7	7 ₱ 14 × 500

KEY PLAN	<b>→ ♦ →</b> Z		

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UNDP Lebanon
Social and Local Development Programme
P.O.Box: 11-3216 Beirut, Lebanon
Tel: 961 1 962491

PROGRAMME: Lebanese Host Communities
Support Programme
Support to Integrated Service
Provision at the Local Level

PROJECT NAME: CHOUEIFAT PLAYGROUNDS

LEGEND:

NOTES:

PROJECT NBR.

PROJECT PHASE

DISCIPLINE

SECTOR

BUILDING

DESIGNED REV BY TENDER
CIVIL ENGINEERING GENERAL REVISION

Description

Appr

Title **GROUND FLOOR COVER SLAB** CHOUEIFAT **PLAYGROUNDS** 

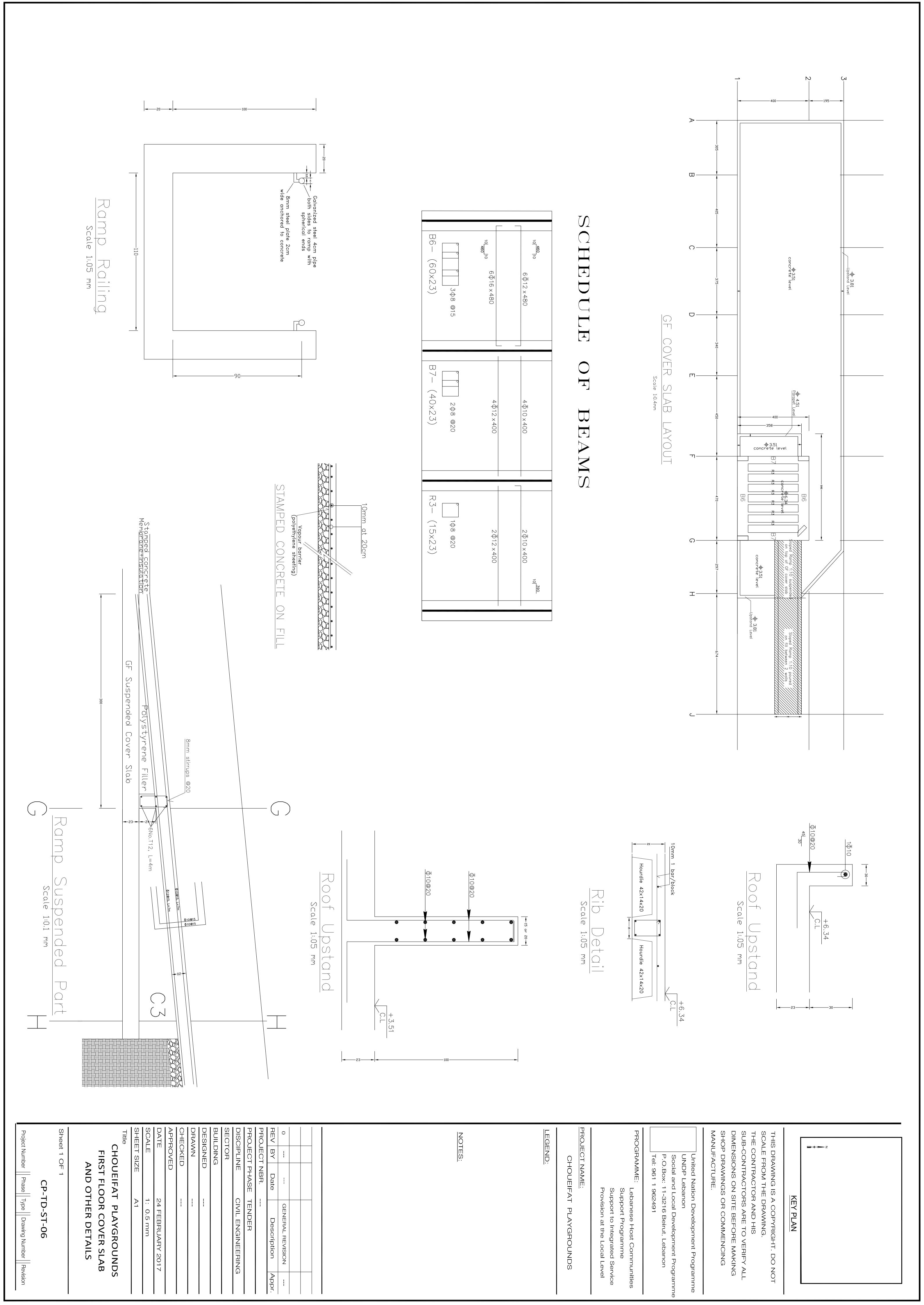
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CHECKED
APPROVED

24 FEBRUARY 2017

Sheet 1 OF

CP-TD-ST-05

Project Number | Phase | Type | Drawing Number | Revisi



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