

FF PUMP PLATFORM LAYOUT
1:100

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PLATFORM FOR FF PUMP	200905.08 747068.06

REFERENCE DRAWINGS:

- 164703-CV-CD-003 - PLATFORM FOR FF PUMP. PLAN AND DETAILS
- 164703-CV-CD-004 - PLATFORM FOR FF PUMP. DETAIL OF PUMP CONNECTION
- 164703-CV-CD-005 - DYKE FOR FUEL TANK. PLAN AND DETAILS

תשתיות נפט ואגריה בע"מ
קו מוצרי דלק בע"מ

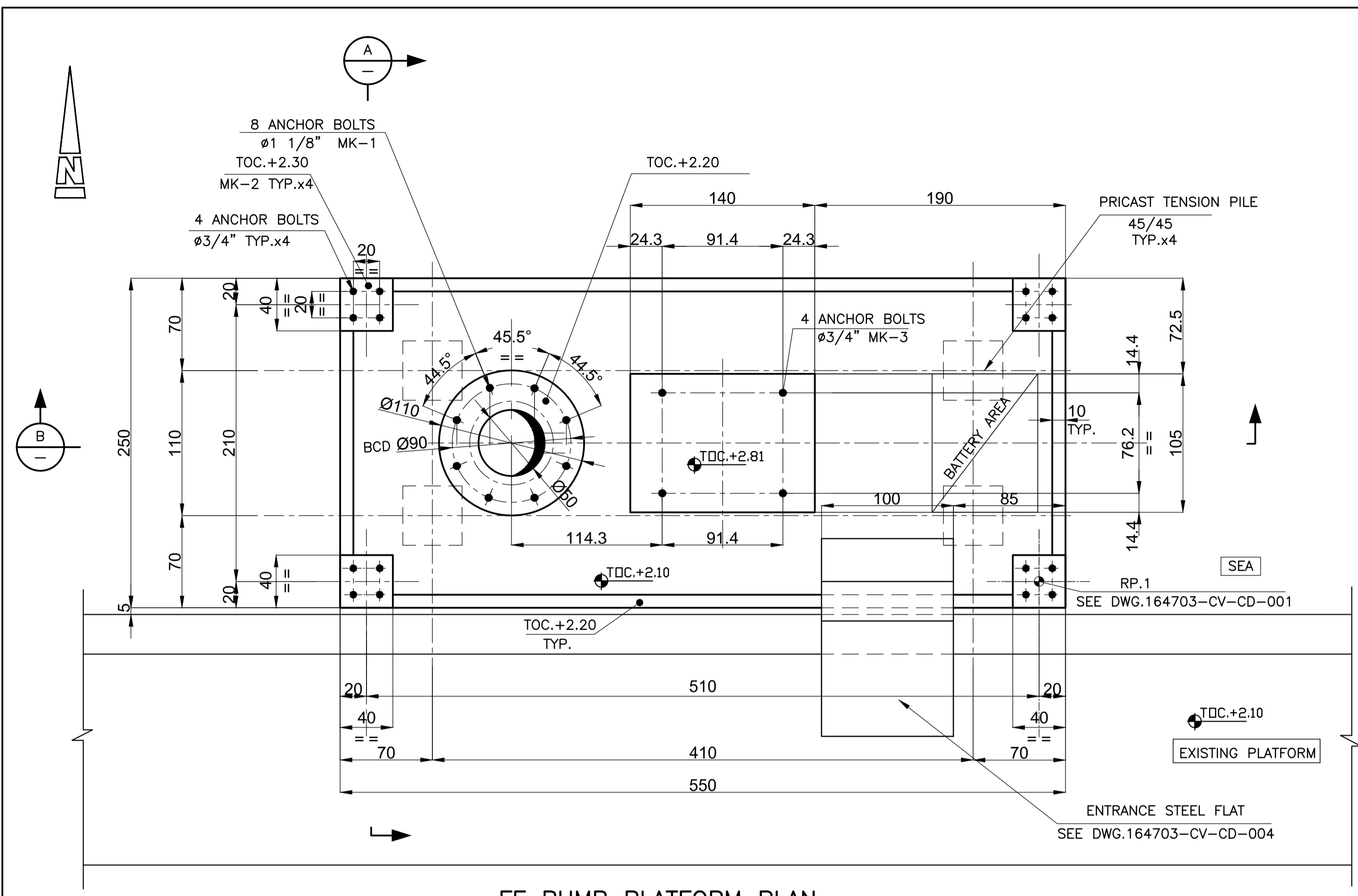
Design: **LUDAN** Engineering Terminal Ltd
Project No: 164703

Drawing Name: **KEY PLAN**
Unit: **HAIFA TERMINAL**
Subject: **PLATFORM FOR FF PUMP**

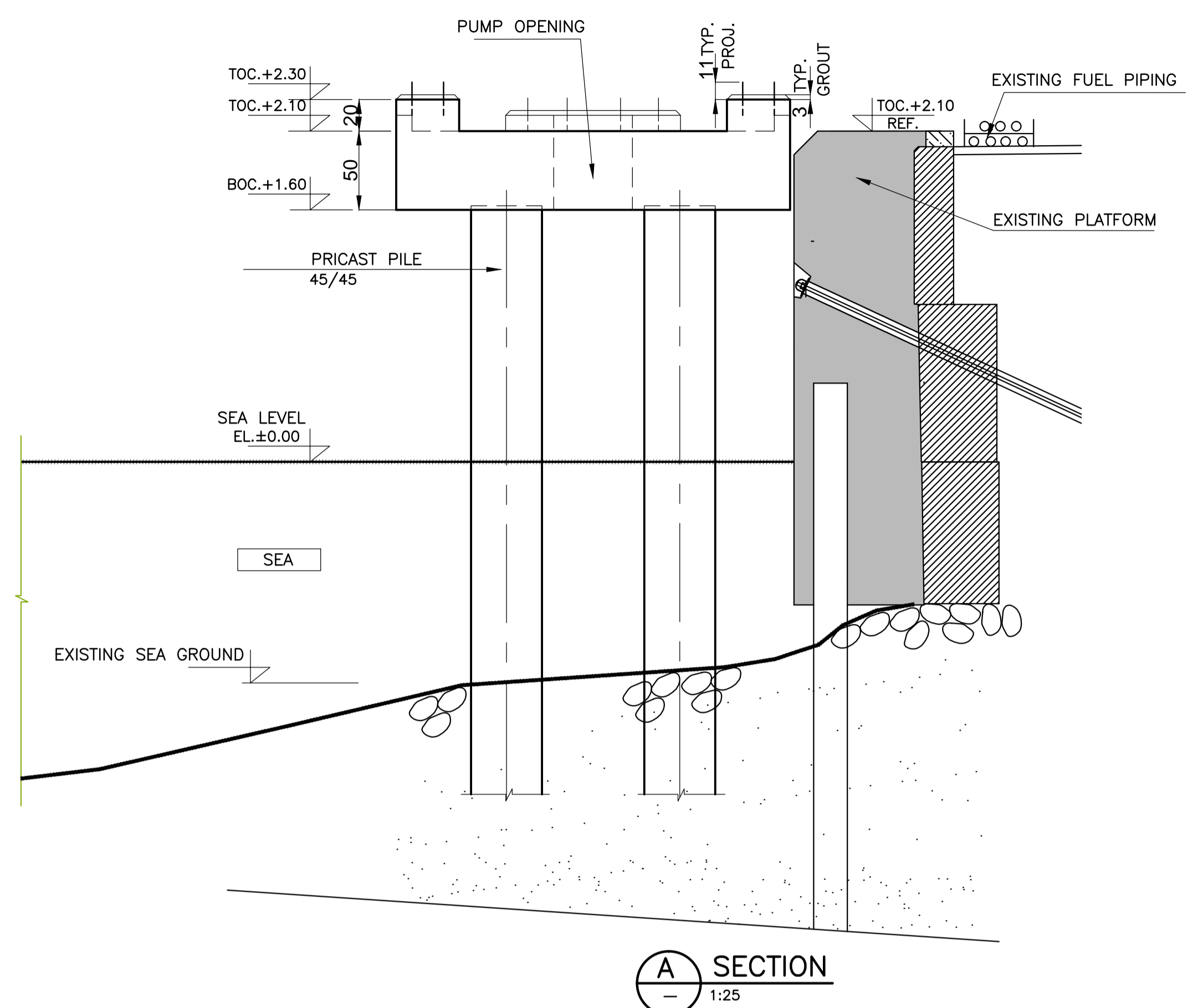
Drawing No.	By	Sign	Date
164703-CV-CD-001	YDV		25.09.17
164703-CV-CD-001	LAN		25.09.17
164703-CV-CD-001	AES		25.09.17
164703-CV-CD-001	IAZ		25.09.17

IAZ	LAN	FOR APPROVAL	Date	No.
Sign	App.	By	Description	REVISIONS

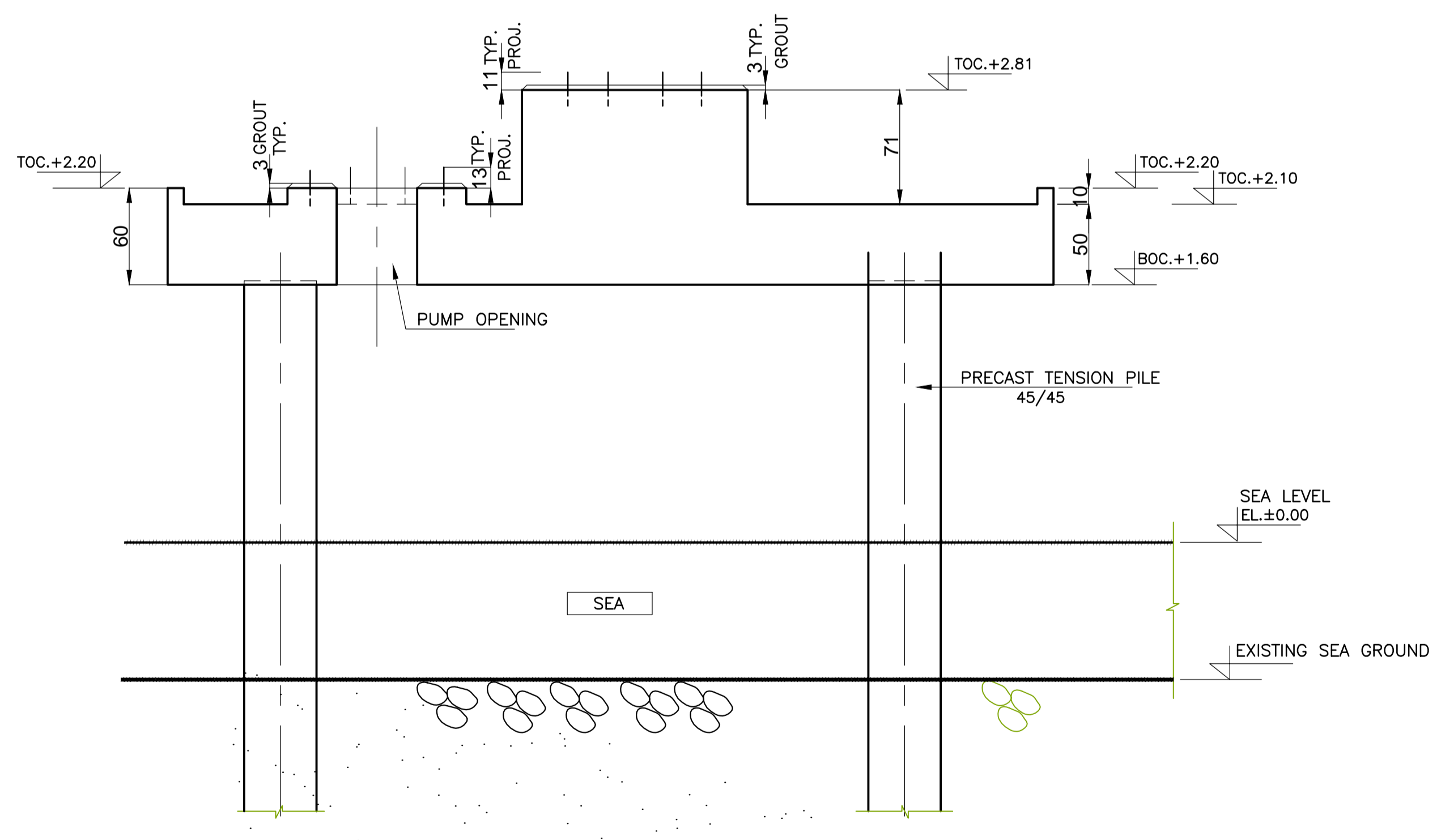
Scale: 1:100



FF PUMP PLATFORM PLAN
1:25



A SECTION
1:25



B SECTION
1:25

REFERENCE DRAWINGS:

- 164703-CV-CD-001 - PLATFORM FOR FF PUMP. KEY PLAN
- 164703-CV-CD-004 - PLATFORM FOR FF PUMP. DETAIL OF PUMP CONNECTION
- 164703-CV-CD-005 - DYKE FOR FUEL TANK. PLAN AND DETAILS

NOTES:

1. ALL LEVELS ARE ABSOLUTE IN METERS.
2. ALL DIMENSION ARE IN MM.
3. CONCRETE CLASS IS B-40 ACC. TO ISRAELI STANDARD.
4. REINFORCEMENT SHALL BE COMFORMING TO ISRAELI STANDARD 4466 PART 2 AND 3.
5. MINIMUM CONCRETE COVERAGE FOR REINFORCEMENT SHALL BE 5cm.
6. ALL EXPOSED CORNERS TO BE CHAMFERED 1.5x1.5cm.
7. BEFORE CONCRETE POURING MAKE SURE INSTALLATION ALL THE NECESSARY EMBEDDED PIPING AND ELECTRICAL ITEMS.
8. FOR GROUNDING DETAILS SEE ELECTRICAL DRAWINGS.
9. CONCRETE MIX INCLUDING ALL NEEDED SUPPLEMENTS-HOLD.
10. CONCRETE SURFACE COATING-HOLD.

תשתיות נפט ואנרגיה בע"מ
קו מוצרי דלק בע"מ

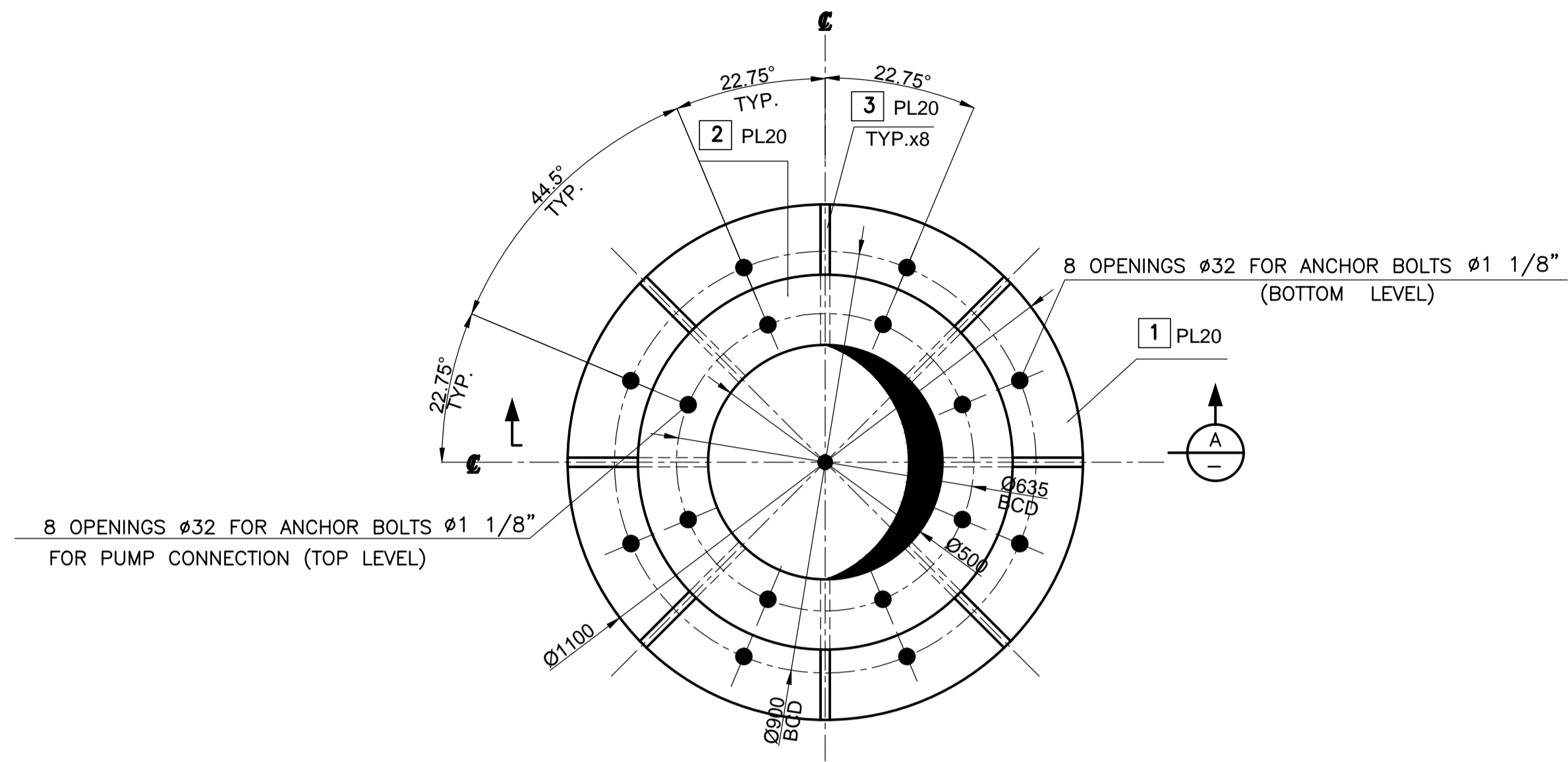
Design: **LUDAN** Engineering Terminal Ltd
Project No: 164703

Unit: HAIFA TERMINAL
Subject: PLATFORM FOR FF PUMP

Drawing No.		By		Sign		Date	
164703-CV-CD-003		YDV		RNA		19.09.17	
164703-CV-CD-003		AES		AES		19.09.17	
164703-CV-CD-003		IAZ		IAZ		19.09.17	

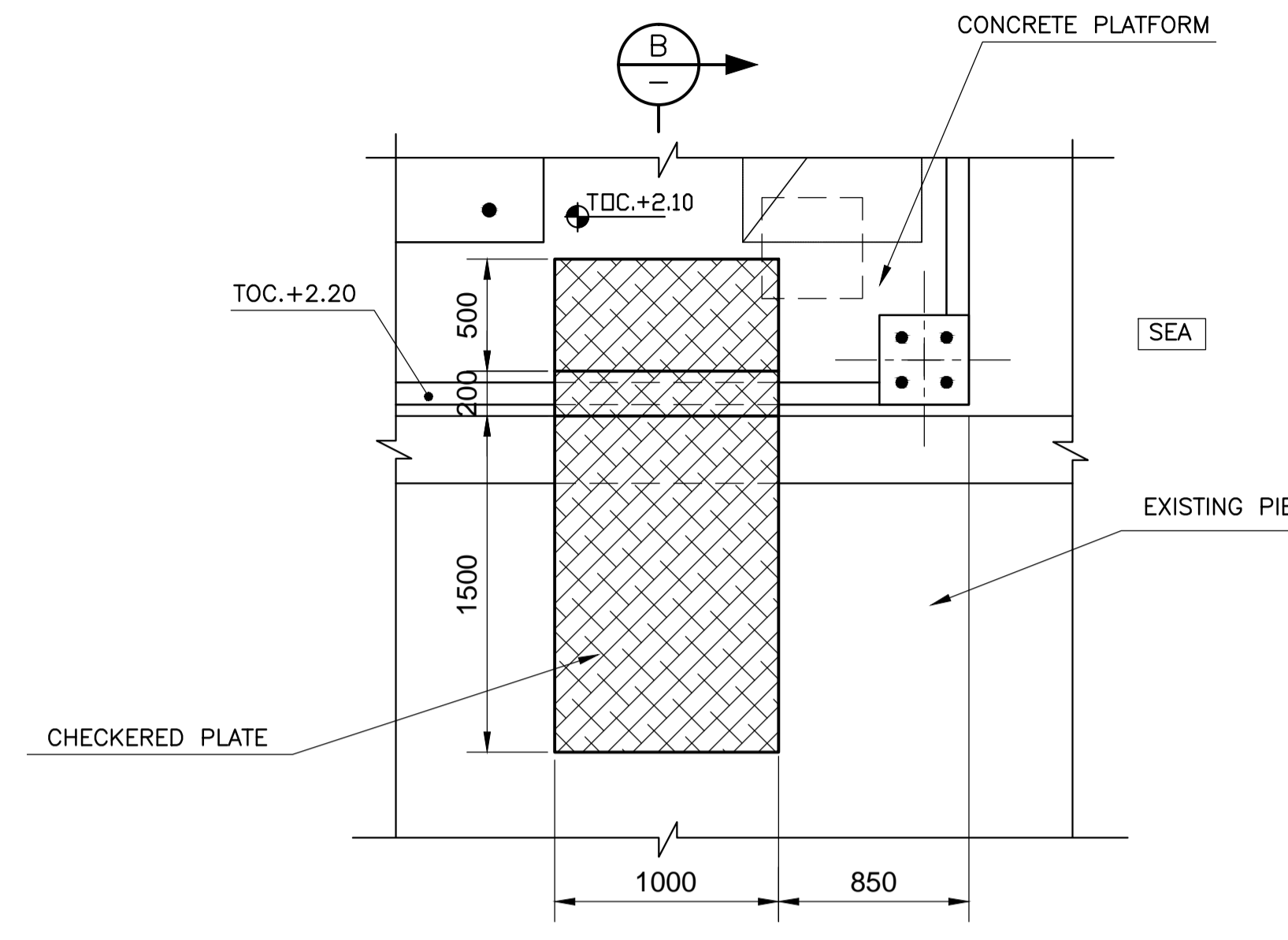
IAZ	LAN	FOR APPROVAL	Date	No.
Sign	App.	By	27.09.17	27

File No.	Description	Date	No.
164703-CV-CD-003	REVISIONS		



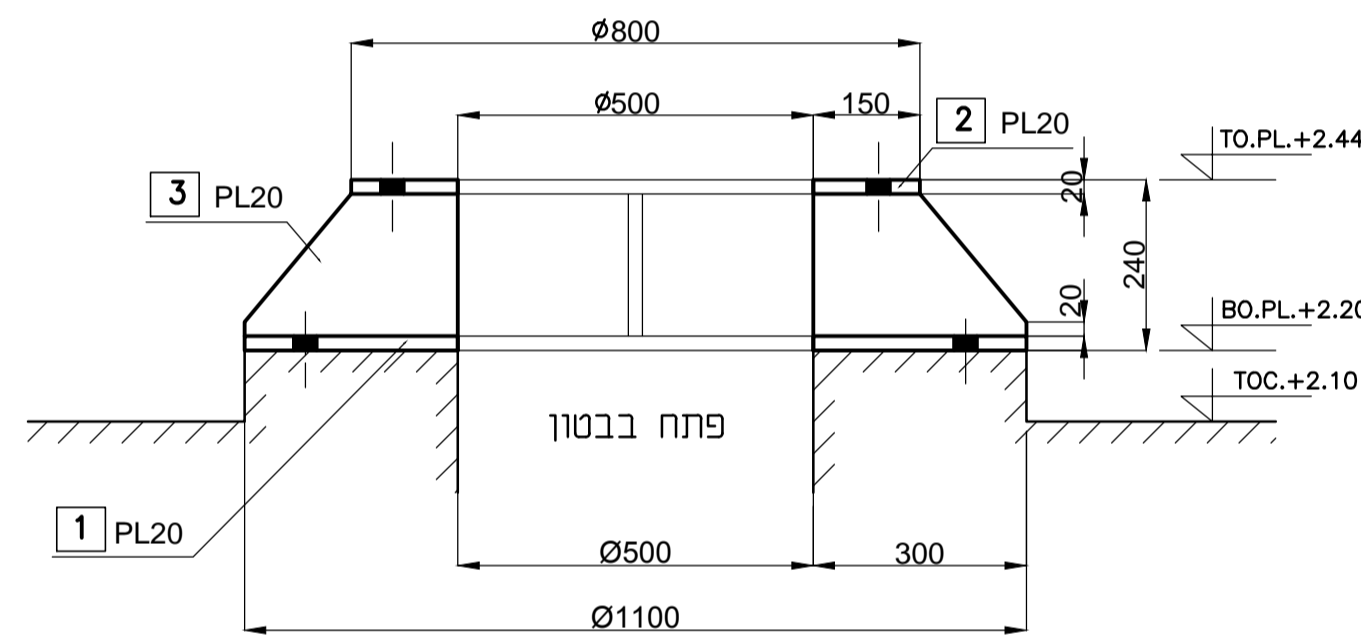
SUPPORT FOR PUMP CONNECTION

1:10
LOCATION SEE DWG.:164703-CV-CD-003



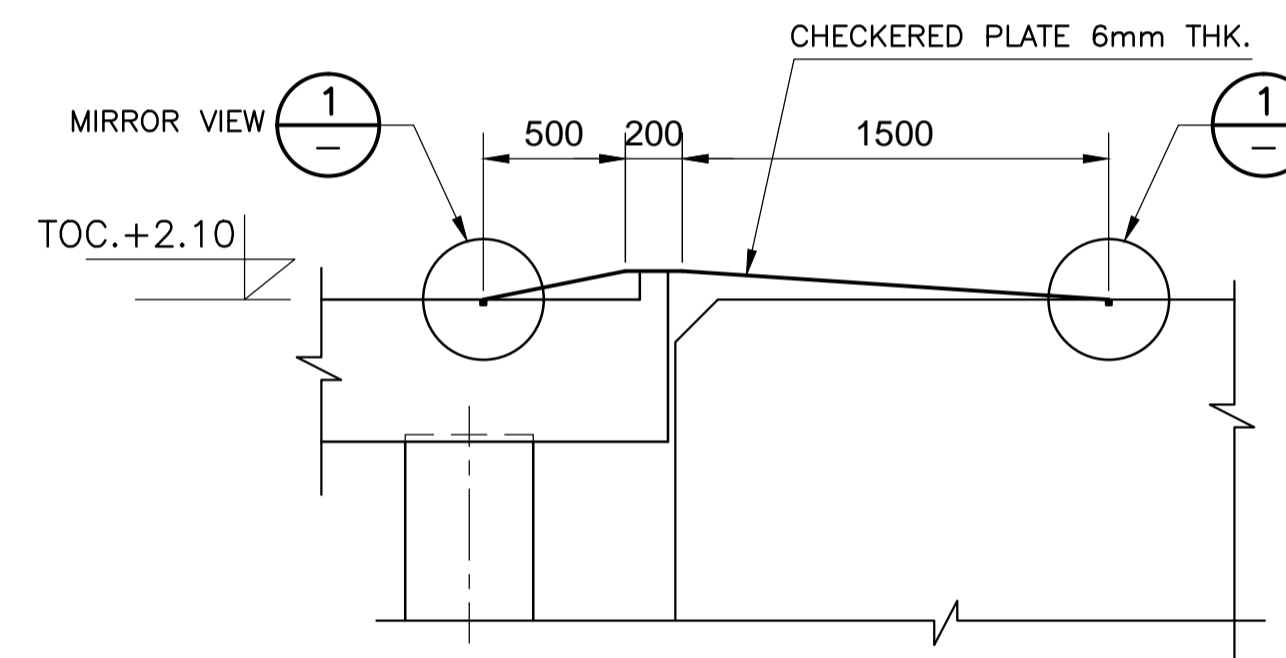
ENTRANCE FLAT

1:25



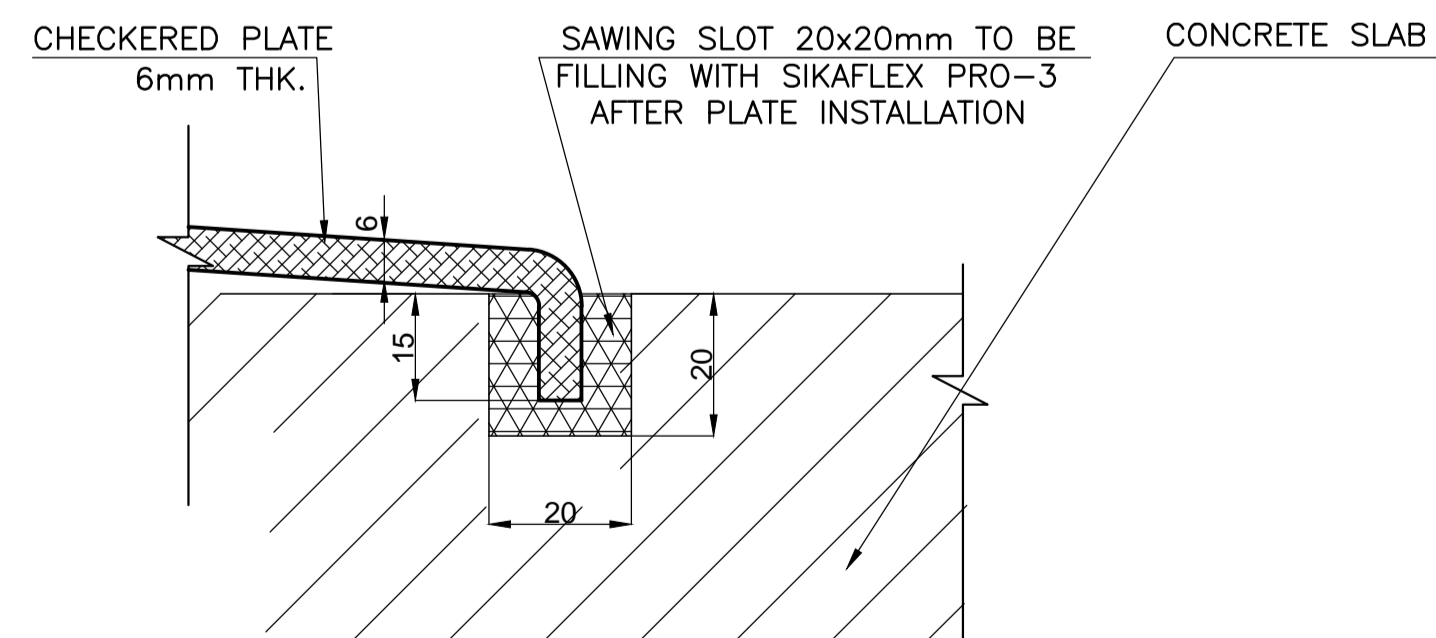
SECTION A

1:10



SECTION B

1:25



DETAIL 1

1:10

REFERENCE DRAWINGS:

- 164703-CV-CD-001 – PLATFORM FOR FF PUMP. KEY PLAN
- 164703-CV-CD-003 – PLATFORM FOR FF PUMP. PLAN AND DETAILS
- 164703-CV-CD-005 – DYKE FOR FUEL TANK. PLAN AND DETAILS

NOTES:

- ALL DIMENSIONS ARE IN MM ,ALL LEVELS ARE IN METERS.
- ALL WELDS TO BE FULL AND CONTINUOUS, ALL AROUND ELEMENTS. FILLET WELDS SIZE SHALL BE 0.7 OF THE MIN. PLATE THK. AND NOT LESS THAN 6mm.
- ALL BOLTS SHALL BE HIGH STRENGTH BOLTS M20 ACC. TO ISRAELI STANDARD 1225, CLASS 8.8. BOLT DIMENSIONS ACC. TO DIN STANDARD 931,934 OR 6916, 6915, 6914.
- STEEL ELEMENTS COATING ACC. TO PLANT SPECIFICATIONS.

THE CONTRACTOR SHALL CHECK DIMENSIONS ON SITE BEFORE START OF WORKS.

תשתיות נפט ואגריה בע"מ
קו מוצרי דלק בע"מ

Design: **LUDAN** Engineering Israel Ltd
Project No: 164703

Drawing Name: **DETAIL OF PUMP CONNECTION** Unit: **HAIFA TERMINAL**

Subject: **PLATFORM FOR FF PUMP**

Drawing No: **164703-CV-CD-004**

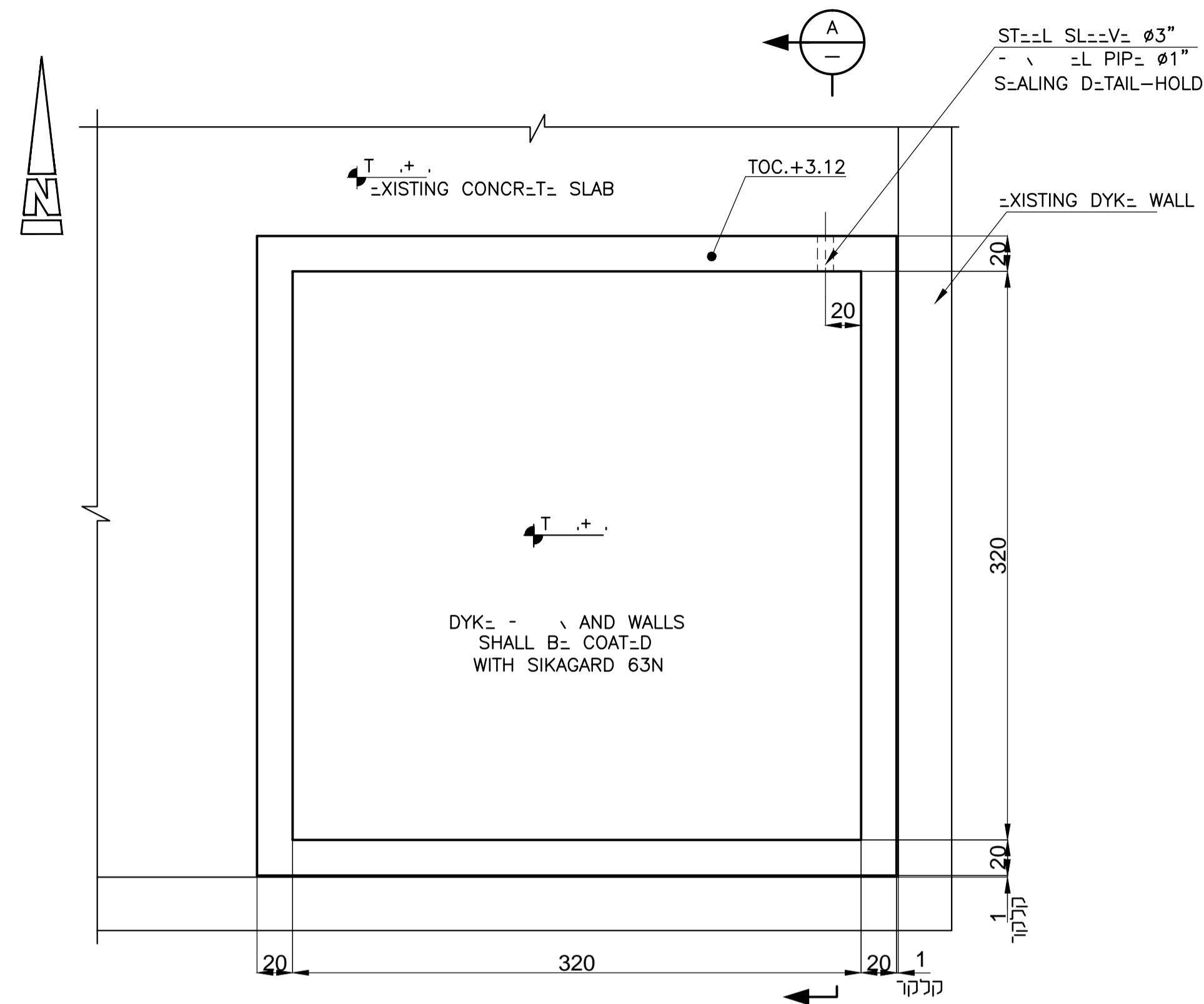
Designed: YDV By: Sign: Date: 19.09.17

Drawn: RNA Date: 19.09.17

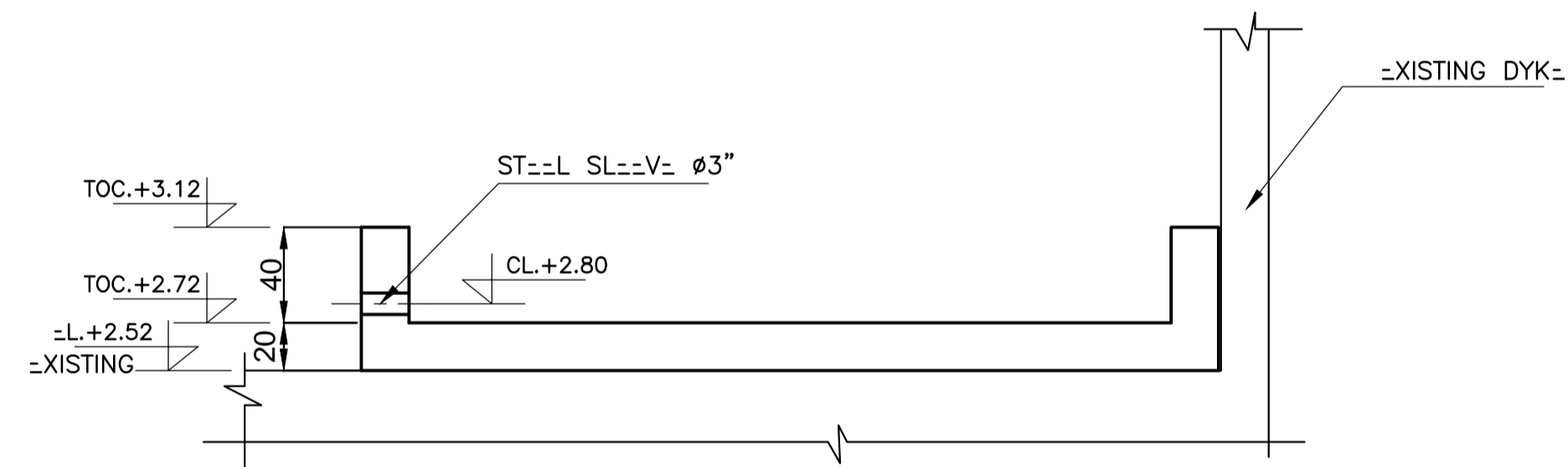
Checked: A.E. Date: 19.09.17

Approved: IAZ Date: 19.09.17

IAZ	LAN	FOR APPROVAL	Date	No.	File No:	Scale:
Sign	App.	By	27.09.17	27	164703-CV-CD-004	1:25
REVISIONS						



-L DYK- PLAN
:25
LOCATION S= DWG.:164703-CV-CD-001



A SECTION
1:25

NC DRAWINGS:

- 164703-CV-CD-001 - PL-T M - - . K=Y PL-
- CV-CD-003 - PL-T M - - . PL =T-ILS
- 164703-CV-CD-004 - PL-T M - - . D=T-IL O =CTION

NOTES:

NOTES DWG.:164703-CV-CD-002

תשתיות נפט ואגריה בע"מ
קו מוצרי דלק בע"מ

Design: **LUDAN** Engineering Israel Ltd
Project: 5

Drawing Name: DYKI TANK PLAN AND DETAILS
Unit: HAI - TMINAL
Subject: PLAT M - -

Drawing No: 164703-CV-CD-005
Designed: YDV
By: Sign: Do:

File No: 164703-CV-CD-005
Checked: AsS
Date: 19.09.17

Approved: i- .0917

Rev	App	By	Description	Date	PO
1			REVISIONS		

Scale: 1:5



FIRE FIGHTING WATER PUMP



CUSTOMER:	TASHAN	JOB No. 164703
PROJECT:	ADDITION OF ONE (1) FF PUMP	ITEM NO. P-XXX
PLANT:	TASHAN, HAIFA PORT	DOC. NO. 164703-PR-DS-001
SERVICE OF UNIT:	FIRE WATER PUMP	PAGE 1 OF 1

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1	No. REQ'D	1	TYPE	VERTICAL SHAFT TURBINE		
2	MAKE	*	MODEL NUMBER	*	SERIAL No.	*
3	DRIVE	DIESEL ENGINE				

OPERATING CONDITIONS

5	DESIGN FLOW	800	m ³ /h	DIFFERENTIAL HEAD	120	m	NPSH available	11.4	m
6	PUMPING TEMP.	min: 5, max: 40 °C		SUCTION HEAD	MIN. 1.585	m	NPSH required	*	m
7	FLUID: SEA WATER	Max. DISCHARGE PRESSURE			*	barg			

DESIGN

9	MOUNTING	OVER EXISTING WET PIT			NOZZLES	POSITION	SIZE	FACE	WEIGHTS:		
10	IMPELLER TYPE	ENCLOSED	NUMBER	*	COLUMN PIPE	BOTTOM	*		PUMP COLUMN	*	kg
11	DESIGN TEMP.	50	°C	DISCHARGE.	SIDE	*		*	PUMP TOTAL	*	kg
12	BEARING LUBRICATION	WATER			AUTOMATIC AIR RELEASE			*	ENGINE + GEAR	*	kg
13	LINESHAFT	OPEN			CIRCULATION RELIEF VALVE			*	TOTAL	*	kg

MATERIAL OF CONSTRUCTION

15	DISCHARGE HEAD	*	HEADSHAFT	*	BOWLS	*
16	STUFFING BOX	*	LINESHAFT	*	IMPELLERS	*
17	COLUMN PIPE	*	LINESHAFT COUPLING	*	IMPELLER COLLETS	*
18	COLUMN PIPE COUPLING	*	BOWLSHAFT	*	BOWL WEAR RING	*
19	TOP COLUMN FLANGE	*	SHAFT SLEEVE	*	SUCTION CASE WEAR RING	*
20	COLUMN ADAPTOR/DISCHARGE CASE	*	STUFFING BOX BEARING	*	SUCTION CASE	*
21			LINESHAFT BEARING	*	SAND COLLAR	*
22			BEARING RETAINER	*	SUCTION SCREEN	*
24			BOWL BEARING	*		
24			SUCTION BEARING	*		

PERFORMANCE

26	HEAD @ 100% RATED CAPACITY	*	m	OVERALL LENGTH	mm	IMPELLER DIAMETER	*	mm
27	SPEED	*	rpm	OVERALL DEEP	mm	DISTANCE BETWEEN IMPELLERS	*	mm
28	EFFICIENCY	*	%	OVERALL WIDTH	mm			
29	ABSORBED POWER	*	kW	OUTLINE DRG. No.		HYDRO TEST PRESSURE		barg
	HEAD @ 150% RATED CAPACITY	*	m	CROSS SECTION DWG. No.				

TESTING

31	SHUT OFF HEAD (3)	*	m					
32	Min. CONT. FLOW	*	m ³ /h					
33	CURVE NO.	*						
34				SHOP INSPECTION	REQ'D			
35	ENGINE DIESEL	*	kW	*	rpm	HYDROSTATIC	YES	
36	GEAR (IF APPLICABLE)	*	rpm	PERFORMANCE	OPTIONAL			
37	ELECTRICAL ENCLOSURE	IP 55 or HIGHER		NPSH	NO			
38	HAZARD CLASSIFICATION	GENERAL						

NOTES

- 40 * VENDOR TO SPECIFY
- 41 1. PUMP IS TO COMPLY WITH ALL THE REQUIREMENTS OF NFPA 20; STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION, LATEST ED.
- 42 2. PUMP IS TO BE LISTED BY UNDERWRITERS LABORATORIES AND APPROVED BY FACTORY MUTUAL FOR USE IN FIRE-FIGHTING SYSTEMS.
- 43 3. THE MAXIMUM ALLOWABLE SHUTOFF PRESSURE IS 140% OF THE RATED HEAD = 170 m.

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Rev	DESCRIPTION	BY	DATE	CHK'D	DATE	APP'D	DATE
P0	FOR COMMENTS	B.S.	28.06.16				
0	FOR RFQ	B.S.	12.07.16				
1	REVISED FOR RFQ	B.S.	26.03.17				

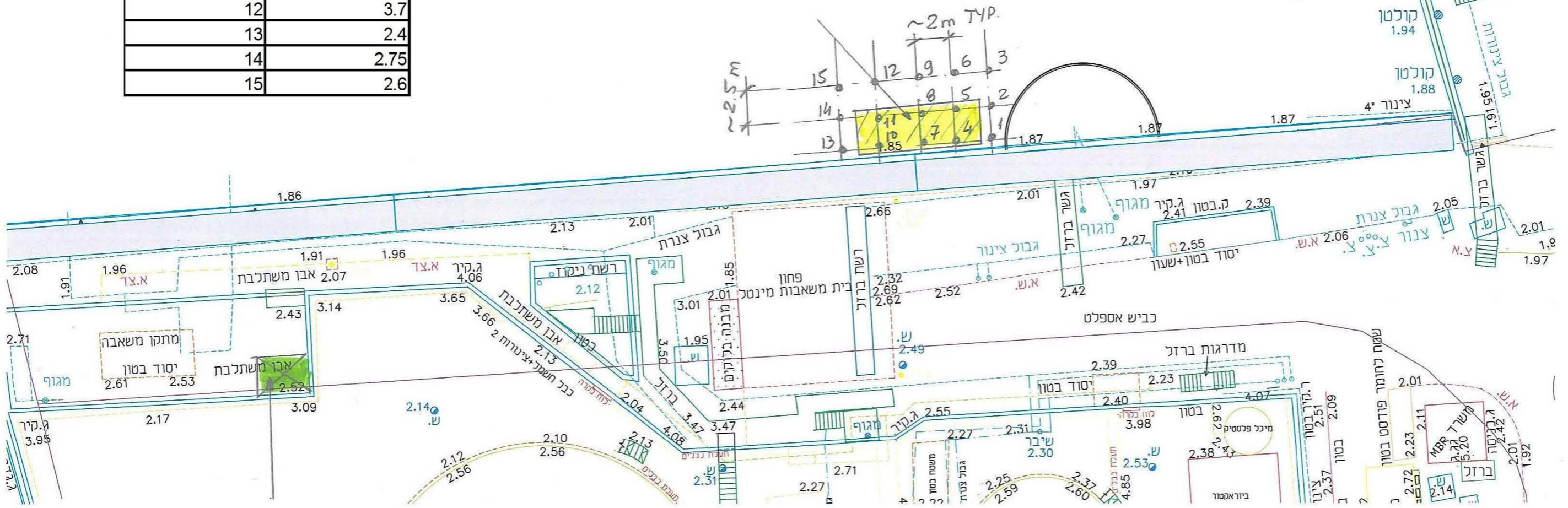
**REQUEST TO CHECK
THE SEA WATER DEPTH**

sea depth measurement	
point number	depth in meters
1	2.55
2	2.2
3	3.2
4	2.4
5	2.3
6	3
7	2.2
8	2.2
9	3.1
10	2.5
11	2.35
12	3.7
13	2.4
14	2.75
15	2.6

LEGEND

- preliminary location of the platform
- check points of the sea water depth (15 at total)
- preliminary location of the fuel tank

preliminary location of the platform



preliminary location of the fuel tank

Y.P.
18.09.2017