

Depth of foundation (m), H					
S.No.	Foundation code	Vertical Load (kg)	Bending Moment (kg-m)	Diameter d (m)	Implantation (3.0 m to 5.0 m)
1	4105 P	4000	10500	1.5	2.7
2	4115 P	4000	11500	1.5	2.8
3	4125 P	4000	12500	1.5	2.9
4	4135 P	4000	13500	1.5	3.0
5	4145 P	4000	14500	1.5	3.1
6	4155 P	4000	15500	1.5	3.2
7	4165 P	4000	16500	1.5	3.3
8	4175 P	4000	17500	1.5	3.4
9	4185 P	4000	18500	1.5	3.5
10	4195 P	4000	19500	1.5	3.5
11	4205 P	4000	20500	1.5	3.6
12	4215 P	4000	21500	1.5	3.7
13	4225 P	4000	22500	1.5	3.8
14	4235 P	4000	23500	1.5	3.9
15	4245 P	4000	24500	1.5	3.9
16	4255 P	4000	25500	1.5	4.0
17	4260 P	4000	26000	1.5	4.0
18	4265 P	4000	26500	1.5	4.1
19	4270 P	4000	27000	1.5	4.1
20	4275 P	4000	27500	1.5	4.1
21	4280 P	4000	28000	1.5	4.2
22	4285 P	4000	28500	1.5	4.2
23	4290 P	4000	29000	1.5	4.2
24	4295 P	4000	29500	1.5	4.3
25	4300 P	4000	30000	1.5	4.3
26	5105 P	5000	10500	1.5	2.7
27	5115 P	5000	11500	1.5	2.8
28	5125 P	5000	12500	1.5	2.9
29	5135 P	5000	13500	1.5	3.0
30	5145 P	5000	14500	1.5	3.1
31	5155 P	5000	15500	1.5	3.2
32	5165 P	5000	16500	1.5	3.3
33	5175 P	5000	17500	1.5	3.4
34	5185 P	5000	18500	1.5	3.5
35	5195 P	5000	19500	1.5	3.5
36	5205 P	5000	20500	1.5	3.6
37	5215 P	5000	21500	1.5	3.7
38	5225 P	5000	22500	1.5	3.8
39	5235 P	5000	23500	1.5	3.9
40	5245 P	5000	24500	1.5	3.9
41	5255 P	5000	25500	1.5	4.0
42	5260 P	5000	26000	1.5	4.0
43	5265 P	5000	26500	1.5	4.1
44	5270 P	5000	27000	1.5	4.1
45	5275 P	5000	27500	1.5	4.1
46	5280 P	5000	28000	1.5	4.2
47	5285 P	5000	28500	1.5	4.2
48	5290 P	5000	29000	1.5	4.2
49	5295 P	5000	29500	1.5	4.3

Depth of foundation (m), H					
S.No.	Foundation code	Vertical Load (kg)	Bending Moment (kg-m)	Diameter d (m)	Implantation (3.0 m to 5.0 m)
50	5300 P	5000	30000	1.5	4.3
51	6105 P	6000	10500	1.5	2.7
52	6115 P	6000	11500	1.5	2.8
53	6125 P	6000	12500	1.5	2.9
54	6135 P	6000	13500	1.5	3.0
55	6145 P	6000	14500	1.5	3.1
56	6155 P	6000	15500	1.5	3.2
57	6165 P	6000	16500	1.5	3.3
58	6175 P	6000	17500	1.5	3.4
59	6185 P	6000	18500	1.5	3.5
60	6195 P	6000	19500	1.5	3.5
61	6205 P	6000	20500	1.5	3.6
62	6215 P	6000	21500	1.5	3.7
63	6225 P	6000	22500	1.5	3.8
64	6235 P	6000	23500	1.5	3.9
65	6245 P	6000	24500	1.5	3.9
66	6255 P	6000	25500	1.5	4.0
67	6260 P	6000	26000	1.5	4.0
68	6265 P	6000	26500	1.5	4.1
69	6270 P	6000	27000	1.5	4.1
70	6275 P	6000	27500	1.5	4.1
71	6280 P	6000	28000	1.5	4.2
72	6285 P	6000	28500	1.5	4.2
73	6290 P	6000	29000	1.5	4.2
74	6295 P	6000	29500	1.5	4.3
75	6300 P	6000	30000	1.5	4.3

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- NOTES-**
- DRAWING NOT TO BE SCALED AND ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE SPECIFIED.
  - THE CONCRETE SHALL HAVE MINIMUM 28 DAYS CHARACTERISTIC COMPRESSIVE CUBE STRENGTH FOR SEVERE EXPOSURE CONDITIONS:  
(A) FOUNDATION - M20  
(B) GROUTING - M20
  - CLEAR COVER TO REINFORCEMENT SHALL BE 75mm.
  - (A) THE DEPTH OF CYLINDRICAL FOUNDATION AS SHOWN IN THE TABLE ARE NOT SUITABLE IF:  
(i) SOIL DENSITY IS LESS THAN 1.5 T/M<sup>3</sup>.  
(B) THIS DRAWINGS OF CYLINDRICAL FOUNDATION IS NOT VALID FOR THE FOLLOWING SOIL TYPES:-  
(i) BLACK COTTON SOIL  
(ii) ROCK STRATA
  - FOR DETAILED DESIGN REFER DOCUMENT NO. DOC/EMP-16/DGN/DC/073(REV-0).
  - THIS DRAWING SHOULD BE READ IN CONJUGATION WITH DRAWING NO-5/OH/TD/1235(REV-A), SHEET 1 OF 2.
  - CENTER LINE OF FOUNDATION AND CENTER LINE OF PORTAL NEED TO BE MATCHED BEFORE EXECUTION.
  - THE CONSTRUCTION TOLERANCE OF ±10mm IN THE FOUNDATION WALLS THICKNESS IS ALLOWED BEFORE PORTAL GROUTING IS DONE. HOWEVER THE OVERALL DIAMETER OF FOUNDATION SHALL BE ENSURED TO 1500mm AFTER GROUTING OF PORTAL IS DONE.
  - THIS DRAWING IS VALID ONLY WHEN A MINIMUM 300mm SOIL CUSHION IS AVAILABLE FROM OUTER EDGE OF FOUNDATION TO THE CREST OF FORMATION SLOPE AS SHOWN IN THE SKETCH.

PMC 2R		DFCCIL	
DESIGNATION	SIGNATURE	DESIGNATION	SIGNATURE
PM/PMC		CPM/DFCCIL	
CEE/ELECT.		ACPM/ELECT.	
DESIGN EXP		APM/ELECT	
ISSUED BY :-			
ENGINEERING DESIGN & RESEARCH CENTRE- ELECTRICAL, LARSEN & TOUBRO LIMITED		DEEPAK GUPTA HEAD OF DEPT- ELECTRICAL DESIGN	

REV. NO.	DATE	DESCRIPTION	SIGNATURE
A	16/01/2020	INITIAL SUBMISSION	

PROJECT : DEDICATED FREIGHT CORRIDOR PROJECT (WESTERN CORRIDOR, PACKAGE EMP 16 - JNPT TO MAKARPURA)

ORGANIZATION

EMPLOYER: DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED

ENGINEER: OCG CONSORTIUM

CONTRACTOR: SOJITZ-L&T CONSORTIUM

CONSULTANT: ARDANUY INGENIERIA S.A.

TITLE : TYPICAL DETAILS OF CYLINDRICAL FOUNDATION FOR ONE PORTAL WITH 1.5m DIAMETER AT JNPT YARD

JOB No : WDFCC-EMP-16

DESIGN	CHKD	VERI	APPD	DATE	SCALE	REVISION	SHEET NO.	DATE
AN	AK	AK	DEEPAK GUPTA		N.T.S.		2 OF 2	16/01/2020

RELEASED FOR:  PRELIMINARY,  INFORMATION,  REVIEW,  CONSTRUCTION,  AS BUILT

LEGEND	
SYMBOL	DESCRIPTION
P	PORTAL FOUNDATION