

Client Reference No.: 4084/LDP/103/MSA/04/340

Dated: 13-10-2025

SOM Lab Ref: CED/SOM/1951

Dated: 16-10-2025

Test Type: Load Test of RPC Manhole Cover

Test Standard: Non-standard test was performed as per requirement of the client [Application of load at the center of the Manhole Cover through circular thick steel plate of 15 Inch diameter]

Test Performed by: Dr. Asad Ali Gillani

Muhammad Sohail Akhtar

Resident Engineer

Nespak Allama Iqbal Zone. Lahore.

[Rehb/Impro of Street Sewerage/Drainage UC-268 Allama Iqbal Zone MCL]

This is with reference to your above-mentioned letter and SOM receipt No.1951 dated: 16-10-2025. The samples of RPC Manhole Cover submitted in the Laboratory has been tested and the result is provided below.

Load Test Result

| Sr. No | Diameter of Manhole Cover | Average Thickness of Manhole Cover | Maximum Load | Observations/Remarks |
|--------|---------------------------|------------------------------------|--------------|-------------------------------------|
| 1 | 640 mm | 70.2 mm | 12900 kg | The sample was cracked at this load |

Javed Aslam

Test Performed By:

Dr. /Engr. Asad Ali Gillani

ME Banu Mukhtar Contracting(Pvt.) Ltd.(Senate Hill University, Canal Bank Rd Jati Umrah Lahore)

Client Reference: SHU/BMC/03/2025

SOM Lab

Ref: 1947 (P-1/1)

Dated: 16-10-2025

Dated: 16-10-2025

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Mughal Steel)

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.617 | 8 | 0.990 | 0.79 | 0.769 | 26.68 | 34.78 | 74480 | 76510 | 97100 | 99750 | 1.30 | 8.0 | 16.3 | |
| 2 | 2.613 | 8 | 0.989 | 0.79 | 0.768 | 25.79 | 34.27 | 72000 | 74060 | 95680 | 98420 | 1.40 | 8.0 | 17.5 | |
| 3 | 1.491 | 6 | 0.747 | 0.44 | 0.438 | 14.50 | 19.34 | 72660 | 72990 | 96930 | 97370 | 1.20 | 8.0 | 15.0 | |
| 4 | 1.489 | 6 | 0.747 | 0.44 | 0.438 | 14.44 | 19.37 | 72400 | 72730 | 97080 | 97520 | 1.30 | 8.0 | 16.3 | |
| 5 | 0.664 | 4 | 0.498 | 0.20 | 0.195 | 6.83 | 8.38 | 75320 | 77250 | 92400 | 94770 | 1.10 | 8.0 | 13.8 | |
| 6 | 0.663 | 4 | 0.498 | 0.20 | 0.195 | 6.88 | 8.41 | 75880 | 77820 | 92740 | 95120 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|------------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engr.M Kashif Saeed

Test Performed By:

Dr. /Engr. Asad Ali Gillani

P & C Engr Muhammad Ramzan Construction Lhr.(Const of Commercial Building for Mrs Sana Imran at DHA Ph-8C Lhr)

Client Reference: Nil

SOM Lab

Ref: 1948 (P-1/1)

Dated: 16-10-2025

Dated: 16-10-2025

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.599 | 8 | 0.986 | 0.79 | 0.764 | 21.89 | 34.93 | 61100 | 63180 | 97530 | 100850 | 1.30 | 8.0 | 16.3 | |
| 2 | 1.496 | 6 | 0.748 | 0.44 | 0.440 | 13.25 | 18.81 | 66430 | 66430 | 94270 | 94270 | 1.20 | 8.0 | 15.0 | |
| 3 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 5.73 | 9.19 | 63180 | 64800 | 101390 | 103990 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|-----------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Mohsin Abbas

Test Performed By: Dr. /Engr. Asad Ali Gillani

QAQC Manager Zameen Development.(Const. Of Vault Project by Zameen Development,Lahore)

Client Reference: ZD/QAQC/SS-2510-000075/Vault/01

SOM Lab

Ref: 1949 (Page-1/1)

Dated: 16-10-2025

Dated: 16-10-2025

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Def. Bar

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.519 | 6 | 0.754 | 0.44 | 0.446 | 13.40 | 20.87 | 67190 | 66290 | 104590 | 103190 | 1.40 | 8.0 | 17.5 | H-144 |
| 2 | 1.517 | 6 | 0.754 | 0.44 | 0.446 | 13.30 | 20.90 | 66680 | 65780 | 104750 | 103340 | 1.20 | 8.0 | 15.0 | H-144 |
| 3 | 0.661 | 4 | 0.497 | 0.20 | 0.194 | 6.01 | 9.25 | 66320 | 68370 | 101960 | 105110 | 1.40 | 8.0 | 17.5 | H-38 |
| 4 | 0.663 | 4 | 0.498 | 0.20 | 0.195 | 5.98 | 9.45 | 65990 | 67680 | 104200 | 106880 | 1.10 | 8.0 | 13.8 | H-38 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|------------------------------------------------------------------|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | <p>Note:-</p> <p>Only Six Samples Received and Tested</p> |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Zaheer Uz Zaman
Site Incharge Naturals Farms Faisalabad.

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: Nil

SOM Lab

Ref: 1950 (P-1/1)

Dated: Nil

Dated: 16-10-2025

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Mughal Steel)

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | lb/ft | # | in | in ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.620 | 8 | 0.990 | 0.79 | 0.770 | 25.43 | 33.38 | 71000 | 72850 | 93200 | 95620 | 1.30 | 8.0 | 16.3 | |
| 2 | 2.618 | 8 | 0.990 | 0.79 | 0.769 | 25.59 | 33.46 | 71430 | 73380 | 93400 | 95950 | 1.30 | 8.0 | 16.3 | |
| 3 | 1.478 | 6 | 0.743 | 0.44 | 0.434 | 14.29 | 19.06 | 71640 | 72630 | 95550 | 96870 | 1.50 | 8.0 | 18.8 | |
| 4 | 1.477 | 6 | 0.743 | 0.44 | 0.434 | 14.19 | 19.03 | 71130 | 72110 | 95400 | 96710 | 1.40 | 8.0 | 17.5 | |
| 5 | 0.660 | 4 | 0.497 | 0.20 | 0.194 | 6.88 | 8.61 | 75880 | 78220 | 94990 | 97920 | 1.40 | 8.0 | 17.5 | |
| 6 | 0.654 | 4 | 0.494 | 0.20 | 0.192 | 6.42 | 8.33 | 70820 | 73770 | 91840 | 95670 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|------------------------------------------------------------------|---------------------------------------------------------------|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
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