



TORRE REFORMA  
THE TALLEST BUILDING IN MEXICO CITY

GENERAL INFORMATION

- Official Name: Torre Reforma [1]
- Location: Mexico City, Mexico [1]
- Usage: Office [1]
- Architecture: LBR&A Arquitectos [1]
- Structural Engineering: Anup [1]
- Owner/ Developer: Fondo Hexa, S.A. de C.V. [1]
- Architectural Height: 246 meter [1]
- Aspect Ratio: 6.56
- Stories: 56 [1]
- Total Floor Area: 77,053 m<sup>2</sup> [1]
- Structural System: Shear Wall System [2]
- Structural Material: Composite [1]
- Status: Completed [1]
- Construction Start/End: 2009/2016 [1]
- Energy Label: LEED Platinum BD+C: Core and Shell [1]
- Global Ranking: #364 Tallest in the World [1] (2017, June)

[1] Retrieved from <https://www.skyscraper.com/building/torre-reforma/942>  
[2] Classification reference to METU BS536 course  
Figure is retrieved from <http://legacy.alpacacenter.com/mexico-city/torre-reforma/942/>



- Located near the junction of the most renowned avenues
- Provide panoramic view to city and Chapultepec Park with glass clad side of open book form

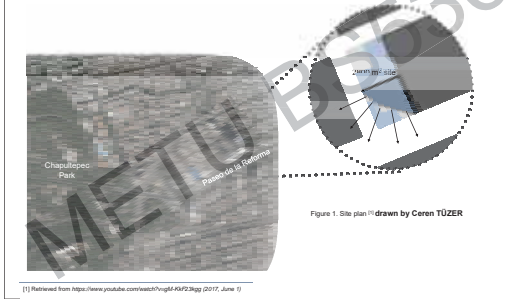


Figure 1. Site plan [1] drawn by Ceren Tüzer

[1] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, June 1)

ARHITECTURAL INFORMATION

- The tallest building in Mexico City
- Understanding of vertical continuation of the city



Figure 2. Torre Reforma and surrounding buildings [1]

Figure 3. Torre Reforma [1]

[1] Retrieved from <https://www.skyscraper.com/building/torre-reforma/942> (2017, May 23)  
[2] Retrieved from [https://www.citymayor.com/news/2016/04/2017-04/2017\\_May\\_23/](https://www.citymayor.com/news/2016/04/2017-04/2017_May_23/)

ARHITECTURAL INFORMATION

- Tall horizontal strips 700 millimeter in height
- Inspiration from Pre-Hispanic and colonial Mexican architecture

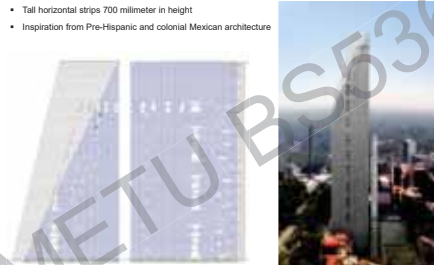


Figure 4. Pattern in solid walls [1]

Figure 5. Hollow shear walls [1]

[1] Retrieved from <http://www.archdaily.com/820020/torre-reforma-101> (2017, June 1)

ARHITECTURAL INFORMATION

- Gradual transition from human scale to high-rise building scale by the historic house



Figure 6. Torre Reforma entrance and historic house [1]

Figure 7. Torre Reforma and the historic house in front of the skybridge [1]

Figure 8. Lobby and the historic house [1]

[1] Retrieved from <http://www.metuonline.com.tr/mexico-city/torre-reforma-101> (2017, April 22)  
[2] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, April 22)

PROGRAM ORGANIZATION

- The building contains sport facilities, open spaces and terraces, bars and restaurants, gardens, an auditorium and common meeting rooms.



Figure 9. Program organization with top view [1] drawn by Ceren Tüzer

Figure 10. Program organization with section [1] drawn by Ceren Tüzer

[1] Written values are approximate dimensions and compiled from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)  
[2] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, March 29)  
[3] Compiled from <http://www.youtube.com/watch?v=IqgkKAF23gg> (2017, June 1)

CLUSTERS

- 14 clusters with 4 floors in one each
- Triple height atria in each cluster
- Buildings within the building that allows users to interact with their workspaces on a smaller scale. [1]

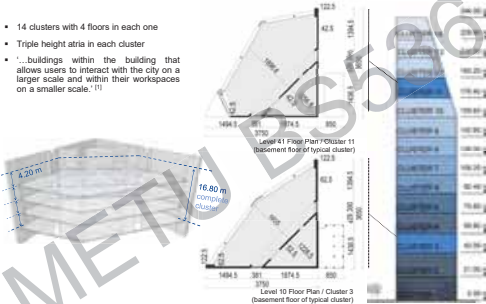


Figure 11. Perspective view of cluster 8 [1] drawn by Ceren Tüzer

Figure 12. 10th and 41st floor plans [1] drawn by Ceren Tüzer

Figure 13. Clusters with levels [1] drawn by Ceren Tüzer

[1] Retrieved from <http://www.archdaily.com/820020/torre-reforma-101> (2017, March 29)  
[2] Written values are approximate dimensions and compiled from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)

CLUSTERS

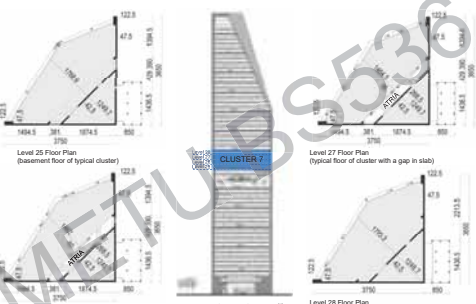


Figure 14. Cluster 7 floor plans [1] drawn by Ceren Tüzer

Figure 15. Cluster 7 floor plans [1] drawn by Ceren Tüzer

[1] Written values are approximate dimensions and compiled from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)

STRUCTURAL ELEMENTS

- The main load bearing elements of the building are two exposed concrete walls and the steel bracing over glass which gives an open book form to the building.
- Shear wall (with HP and HD profile)
- Exterior bracing
- Interior bracing
- Steel beams
- Space truss



Figure 16. Torre Reforma construction/auditorium [1]

Figure 17. Torre Reforma construction/auditorium [1]

[1] Retrieved from <https://www.skyscraper.com/building/torre-reforma/942> (2017, March 29)  
[2] Retrieved from <http://www.alpacacenter.com/mexico-city/torre-reforma-101> (2017, May 23)

STRUCTURAL SYSTEM EVOLUTION

- Designed to withstand lateral loads, high winds, and the full range of earthquake activity projected for a period of 2,500 years.



Figure 18. Previous design [1] and current design [1] of structure

Figure 19. Facade illustrations of current design [1]

[1] Retrieved from <https://www.metuonline.com.tr/mexico-city/torre-reforma-101> (2017, June 1)  
[2] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, June 1)  
[3] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, June 1)  
[4] Retrieved from <https://www.youtube.com/watch?v=IqgkKAF23gg> (2017, June 1)

STRUCTURAL SYSTEM

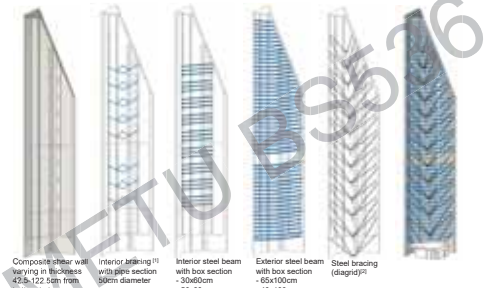


Figure 21. Images of structural elements [1] drawn by Ceren Tüzer

[1] Proposed in 2D images of the building with the help of Figure 14 from <http://www.archdaily.com/820020/torre-reforma-101> (2017, April 22)  
[2] Retrieved from <http://www.archdaily.com/820020/torre-reforma-101> (2017, May 23)  
[3] Written values are approximate dimensions and compiled from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)

STRUCTURAL SYSTEM

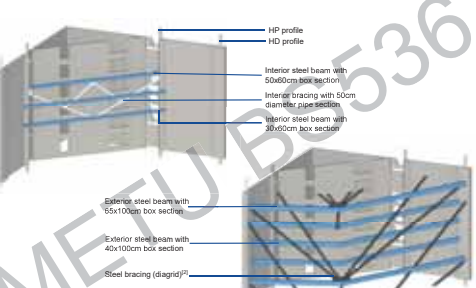


Figure 22. Aeronomic view of structural elements [1] drawn by Ceren Tüzer

[1] Written values are approximate dimensions and compiled from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)  
[2] Expression from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, May 23)

STRUCTURAL SYSTEM

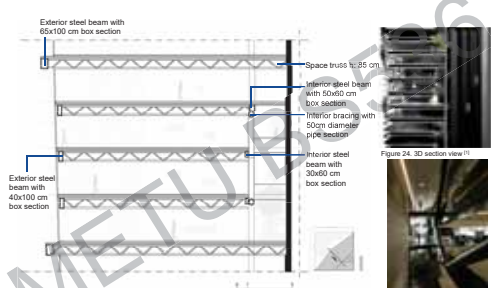


Figure 23. Section drawing of cluster 8 [1] drawn by Ceren Tüzer

[1] Retrieved from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)

HOLLOW SHEAR WALLS

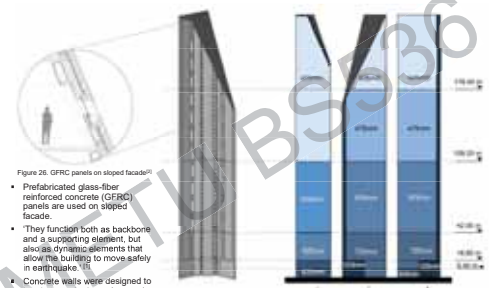


Figure 26. GFRP panels on sloped facade [1]

Figure 27. Shear wall thickness [1] drawn by Ceren Tüzer

[1] Retrieved from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, May 23)  
[2] Retrieved from <http://www.archdaily.com/79272/torre-reforma-br-plus-a> (2017, March 29)

