

# The Power of Collaboration: Creating Project Success



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PRO Board Chair



THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE











**why women**

Memedroid

**live longer  
than men**



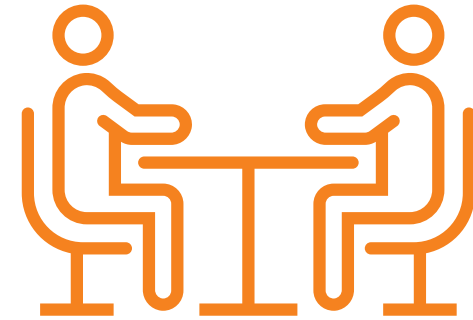
**DANGER**



**HURTS  
ONLY  
WHEN YOU LAND**

# Presentation Outline

- Why collaboration matters
- Case studies: good and bad
- How **PRO** will help the industry







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DIVE BRIEF

## Construction lost as much as \$40B on poor productivity in 2022

About half of contractors see labor inefficiencies worsening, according to a new report, but firms see relief through lean practices.

Published Oct. 12, 2023

*“Zandy, a lean construction proponent, said the real solution lies in people and how they work together, collaborating and connecting early in the preconstruction process.”*

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# OPINIONS

NOT WELCOME HERE.

# Case Studies

THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE







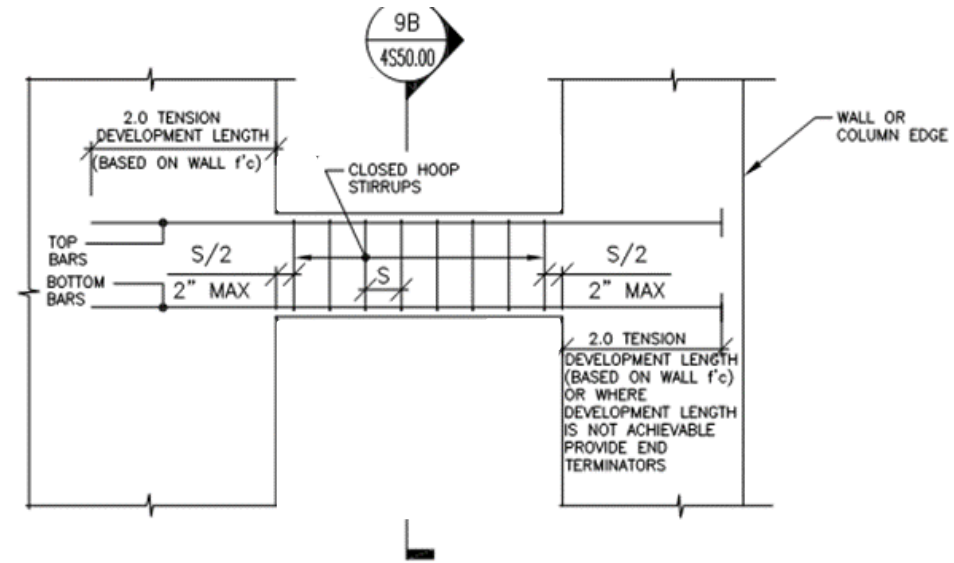
## Harmon Tower Las Vegas

THE WORLD'S GATHERING PLACE FOR ADVANCING CONCRETE



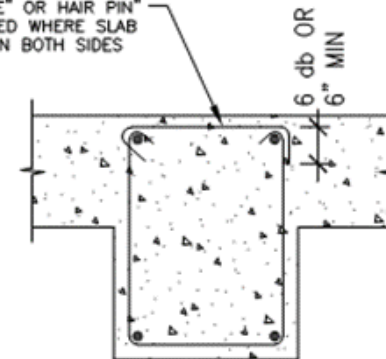


| MARK               | LEVEL   | (THICKNESS) | (KSI) | TOP                | BOTTOM             | HORIZONTAL EACH FACE | STIRRUPS |         |                     |
|--------------------|---------|-------------|-------|--------------------|--------------------|----------------------|----------|---------|---------------------|
|                    |         |             |       |                    |                    |                      | TYPE     | SPACING |                     |
| LB-1 & LB-2        | L27-L30 | 16X33       | 6     | 4#10               | 4#10               | #406"                | T1       | #4010"  |                     |
|                    | L31-L34 | 16X33       | 6     | 4#10               | 4#10               | #406"                | T1       | #4010"  |                     |
|                    | L35-L37 | 16X33       | 6     | 4#10               | 4#10               | #406"                | T1       | #406"   |                     |
|                    | L38-L41 | 14X33       | 5     | 3#9                | 3#9                | #406"                | T1       | #4010"  |                     |
|                    | L42-L45 | 14X33       | 5     | 3#8                | 3#8                | #506"                | T1       | #4010"  |                     |
| LB-3 & LB-4        | L46-L48 | 14X33       | 5     | 3#8                | 3#8                | #506"                | T1       | #4010"  |                     |
|                    | L27-L30 | 10X17       | 6     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
|                    | L31-L34 | 10X17       | 6     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
|                    | L35-L37 | 10X17       | 6     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
|                    | L38-L41 | 10X17       | 5     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
| LB-5 & LB-6 & LB-7 | L42-L45 | 10X17       | 5     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
|                    | L46-L48 | 10X17       | 5     | 3#9 TUL<br>3#9 TLL | 3#9 BUL<br>3#9 BLL | ----                 | T1       | #403"   |                     |
|                    | L27-L30 | 10X17       | 6     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
|                    | L31-L34 | 10X17       | 6     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
|                    | L35-L37 | 10X17       | 6     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
| LB-9               | L38-L41 | 10X17       | 5     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
|                    | L42-L45 | 10X17       | 5     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
|                    | L46-L48 | 10X17       | 5     | 3#8 TUL<br>3#8 TLL | 3#8 BUL<br>3#8 BLL | ----                 | T1       | #403"   |                     |
|                    | L27-L30 | 16X33       | 6     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
|                    | L31-L34 | 16X33       | 6     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
| LB-10              | L35-L37 | 16X33       | 6     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
|                    | L38-L41 | 16X33       | 5     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
|                    | L42-L45 | 16X33       | 5     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
|                    | L46-L48 | 16X33       | 5     | 4-#11              | 4-#11              | ----                 | T1       | #406"   |                     |
|                    | L27-L30 | 12X17       | 6     | 3#10               | 3#10               | ----                 | T1       | #403"   |                     |
| LB-8 & LB-12       | L31-L34 | 12X17       | 6     | 3#10               | 3#10               | ----                 | T1       | #403"   |                     |
|                    | L35-L37 | 12X17       | 6     | 3#10               | 3#10               | ----                 | T1       | #403"   |                     |
|                    | L38-L41 | 10X17       | 5     | 3#9                | 3#9                | ----                 | T1       | #403"   |                     |
|                    | L42-L45 | 10X17       | 5     | 3#9                | 3#9                | ----                 | T1       | #403"   |                     |
|                    | L46-L48 | 10X17       | 5     | 3#9                | 3#9                | ----                 | T1       | #403"   |                     |
| LB-13 & LB-14      | L27-L30 | 16X17       | 6     | 4#10               | 4#10               | ----                 | 2T1      | #403"   |                     |
|                    | L31-L34 | 16X17       | 6     | 4#10               | 4#10               | ----                 | 2T1      | #403"   |                     |
|                    | L35-L37 | 16X17       | 6     | 4#10               | 4#10               | ----                 | 2T1      | #403"   |                     |
|                    | L38-L41 | 14X17       | 5     | 4#9                | 4#9                | ----                 | 2T1      | #403"   |                     |
|                    | L42-L45 | 14X17       | 5     | 4#9                | 4#9                | ----                 | 2T1      | #403"   |                     |
| LB-11              | L46-L48 | 14X17       | 5     | 4#9                | 4#9                | ----                 | 2T1      | #403"   |                     |
|                    | L27-L30 | 16X33       | 6     | 4#10               | 4#10               | ----                 | T1       | #505"   |                     |
|                    | L31-L34 | 16X33       | 6     | 4#11               | 4#11               | ----                 | T1       | #406"   |                     |
|                    | L35-L37 | 16X33       | 6     | 4#10               | 4#10               | ----                 | T1       | #408"   |                     |
|                    | L38-L41 | 16X33       | 5     | 4#9                | 4#9                | ----                 | T1       | #4012"  |                     |
| LB-11              | L42-L45 | 16X33       | 5     | 4#9                | 4#9                | ----                 | T1       | #4012"  |                     |
|                    | L46-L48 | 16X33       | 5     | 4#9                | 4#9                | ----                 | T1       | #4012"  |                     |
|                    | L27-L30 | 12X17       | 6     | 4#7                | 4#7                | ----                 | 2T1*     | #503"   | DOUBLE SET STIRRUPS |
|                    | L31-L34 | 12X17       | 6     | 3#8                | 3#8                | ----                 | 2T1*     | #503"   | DOUBLE SET STIRRUPS |
|                    | L35-L37 | 12X17       | 6     | 4#7                | 4#7                | ----                 | T1       | #503"   |                     |
| LB-11              | L38-L41 | 10X17       | 5     | 3#7                | 3#7                | ----                 | T1       | #403"   |                     |

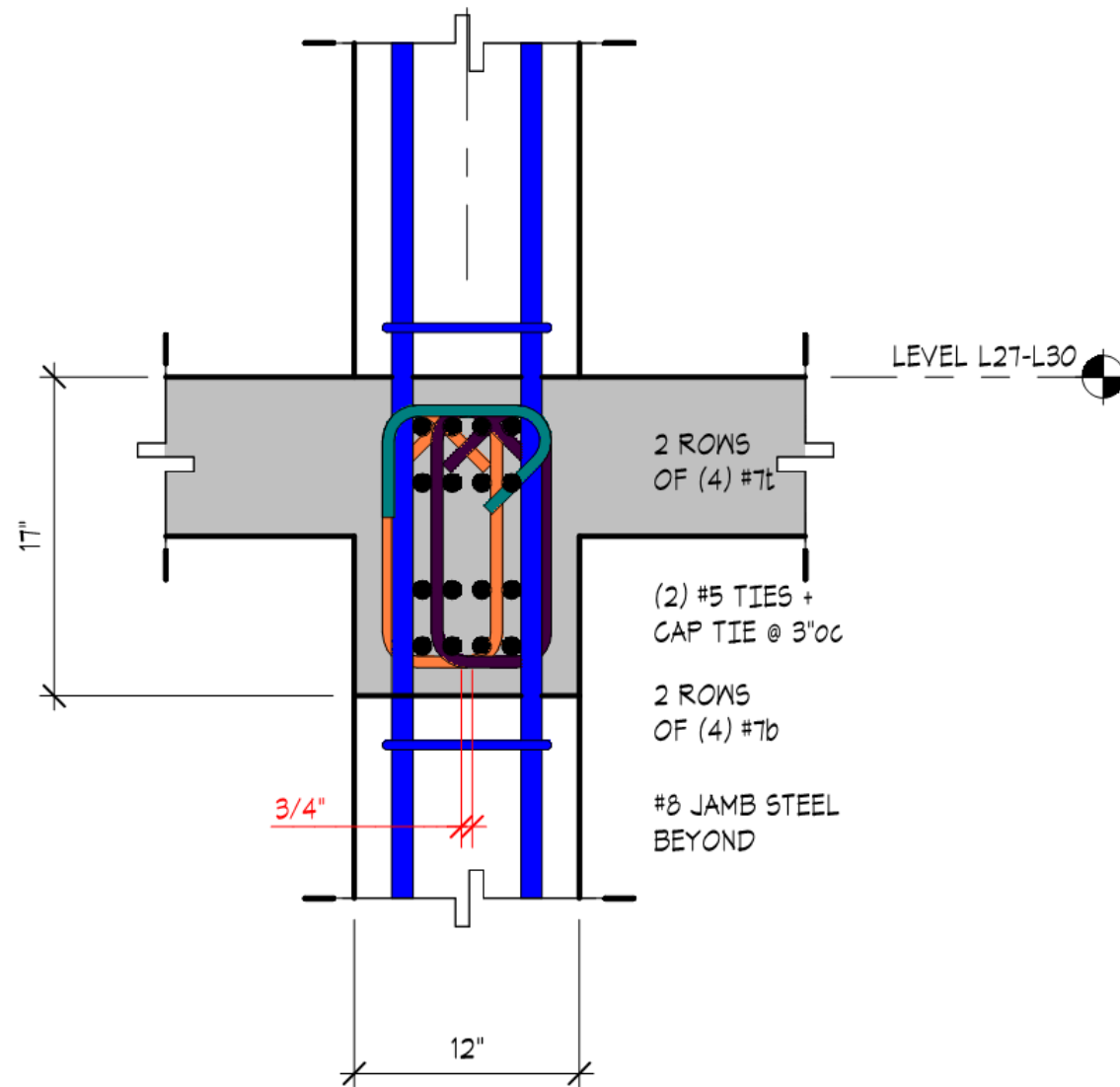


9A  
4S50.00  
TYPICAL LINK BEAM (LB) REINFORCEMENT DETAIL  
AT WALL OR COLUMN EDGE

USE OF "J-TIE" OR HAIR PIN"  
ONLY PERMITTED WHERE SLAB  
IS PRESENT ON BOTH SIDES



9B  
4S50.00



LB11 SECTION





## The Bellevue

Bellevue, Washington

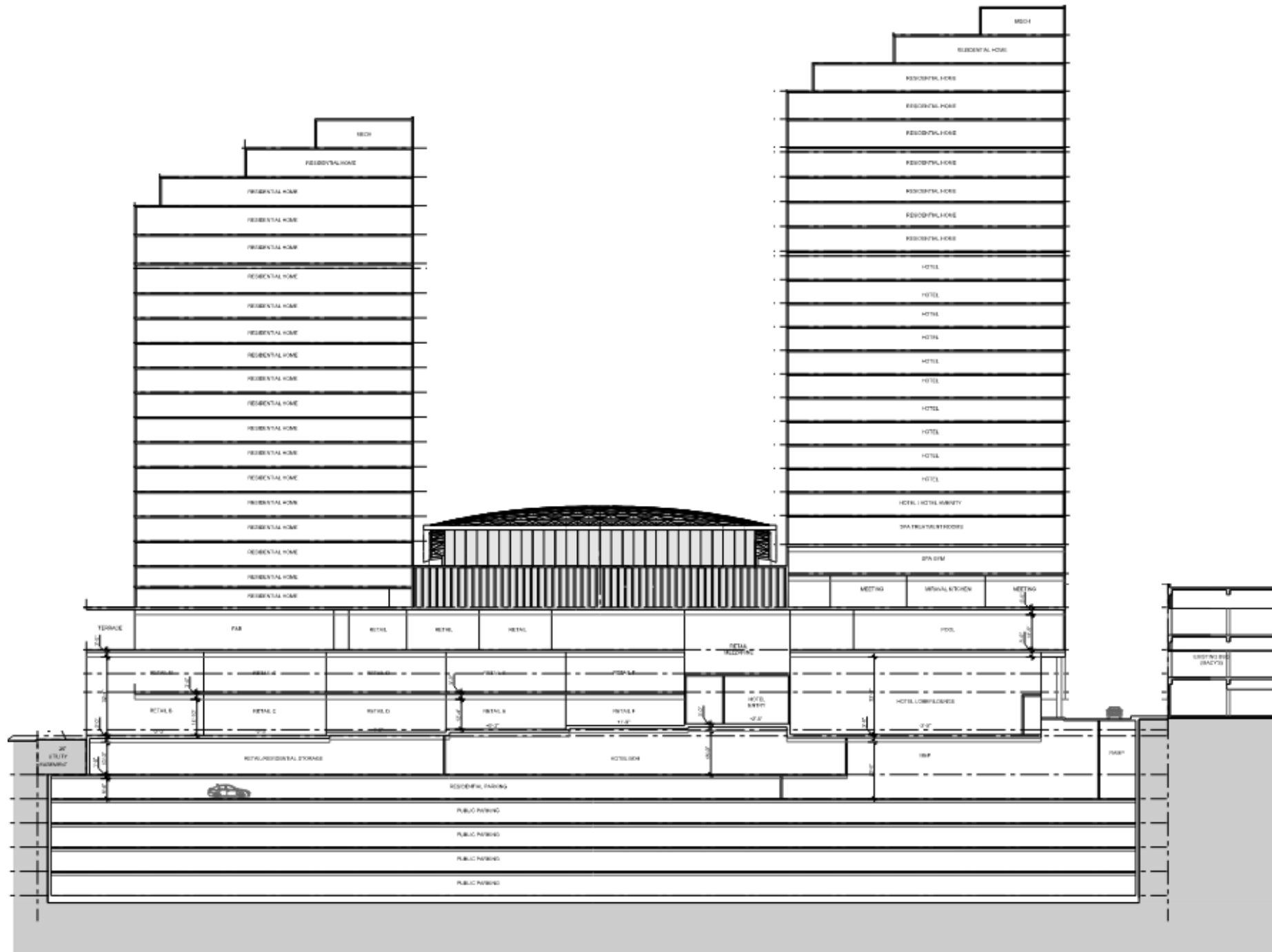
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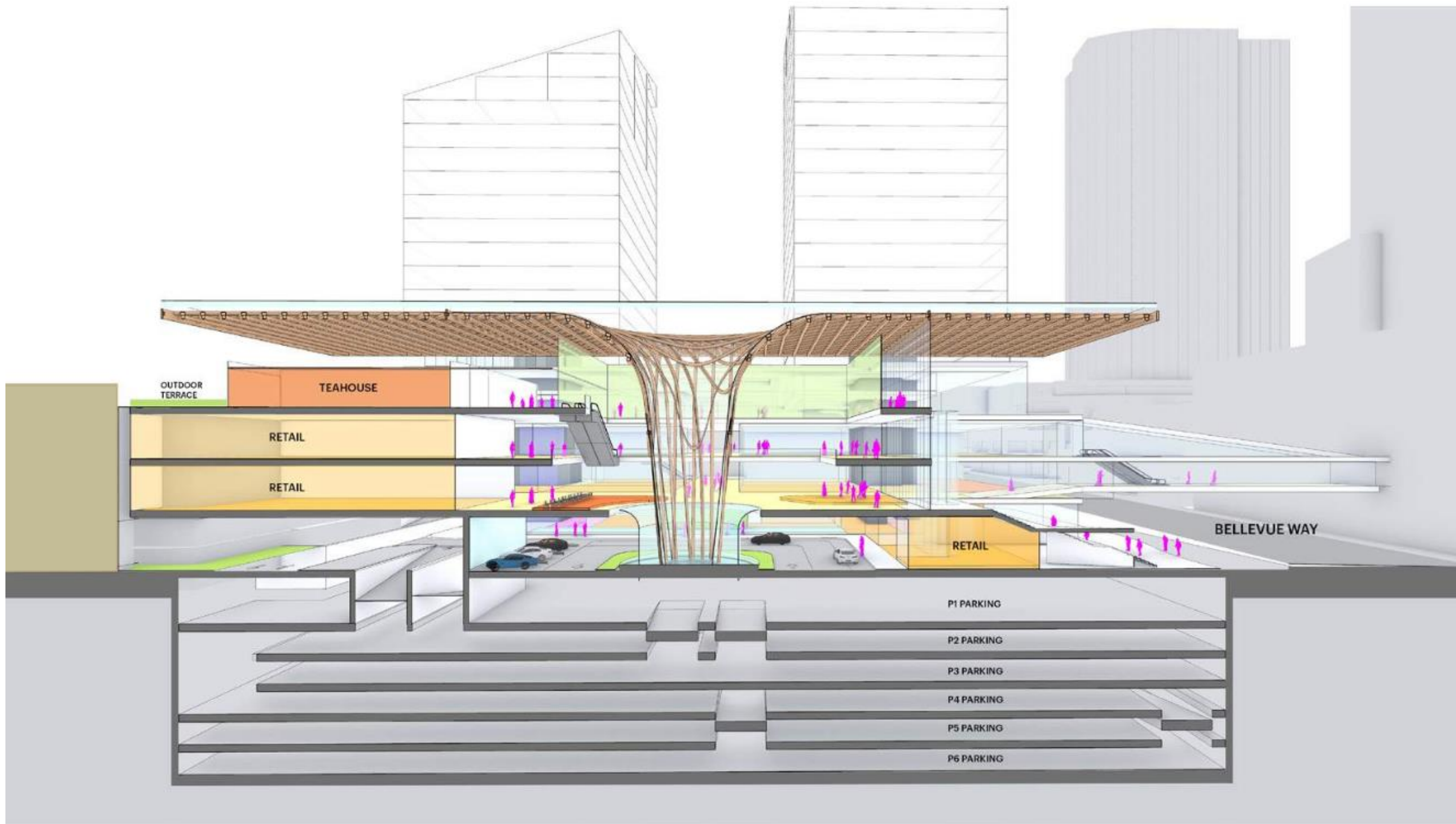






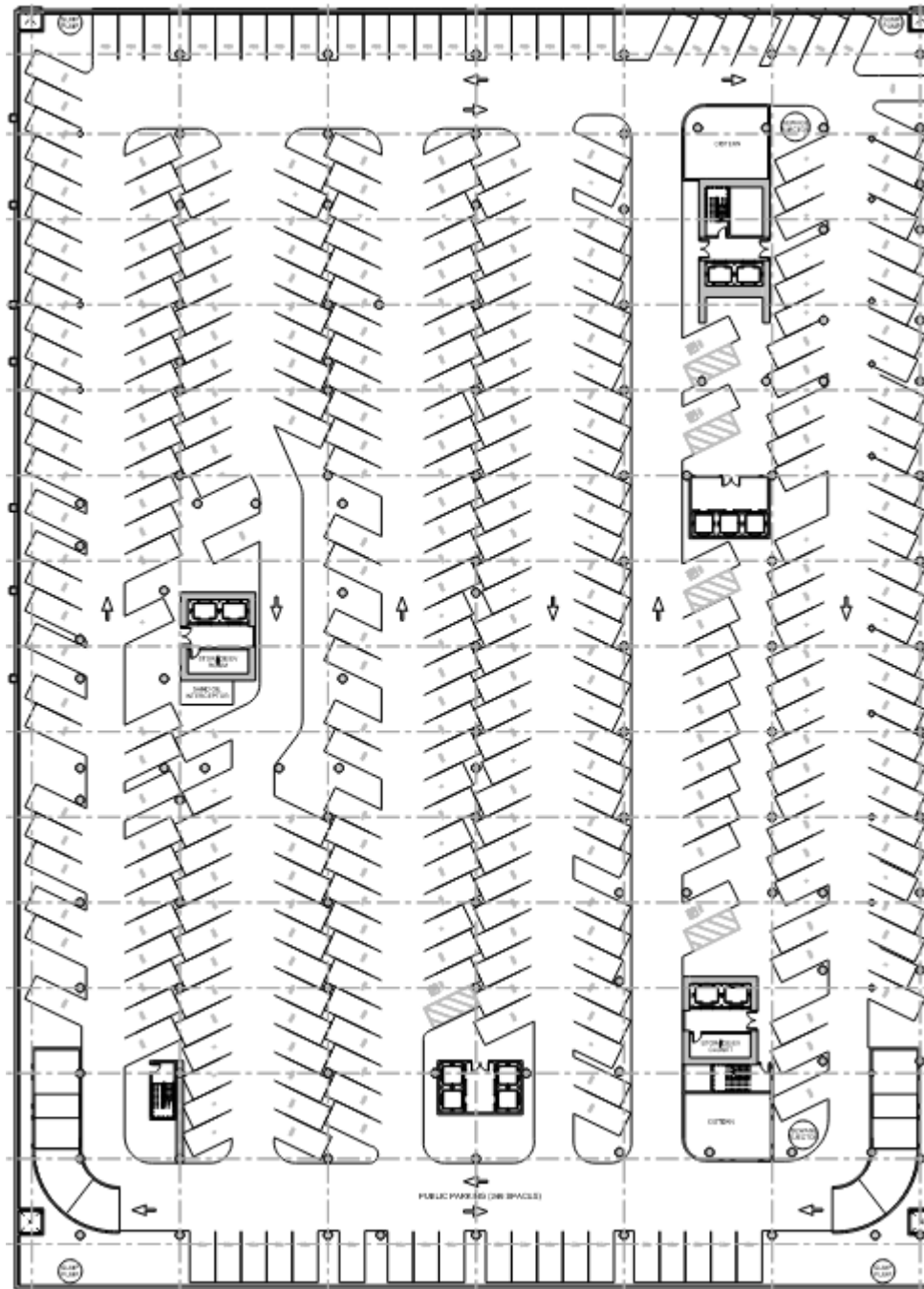






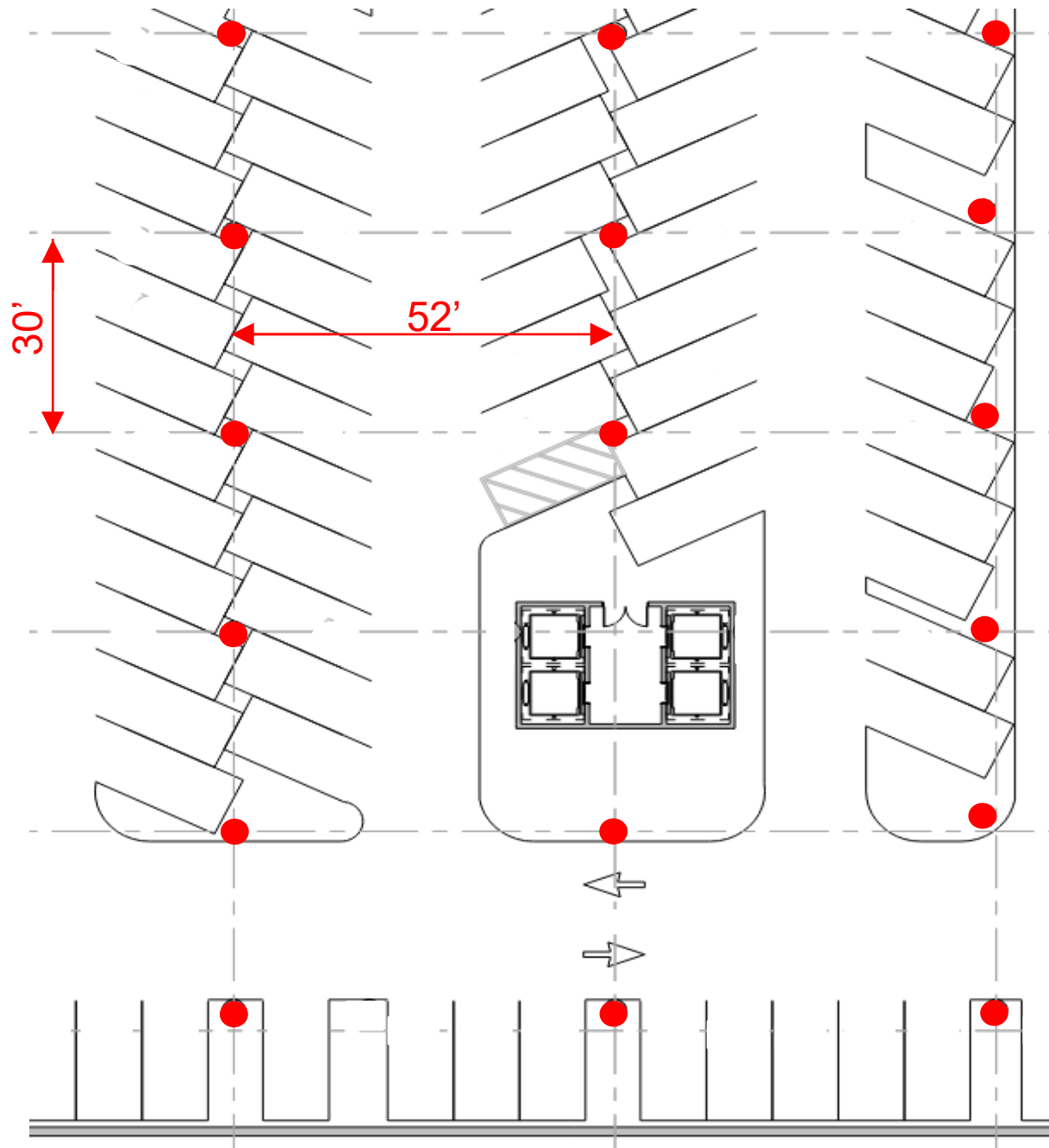




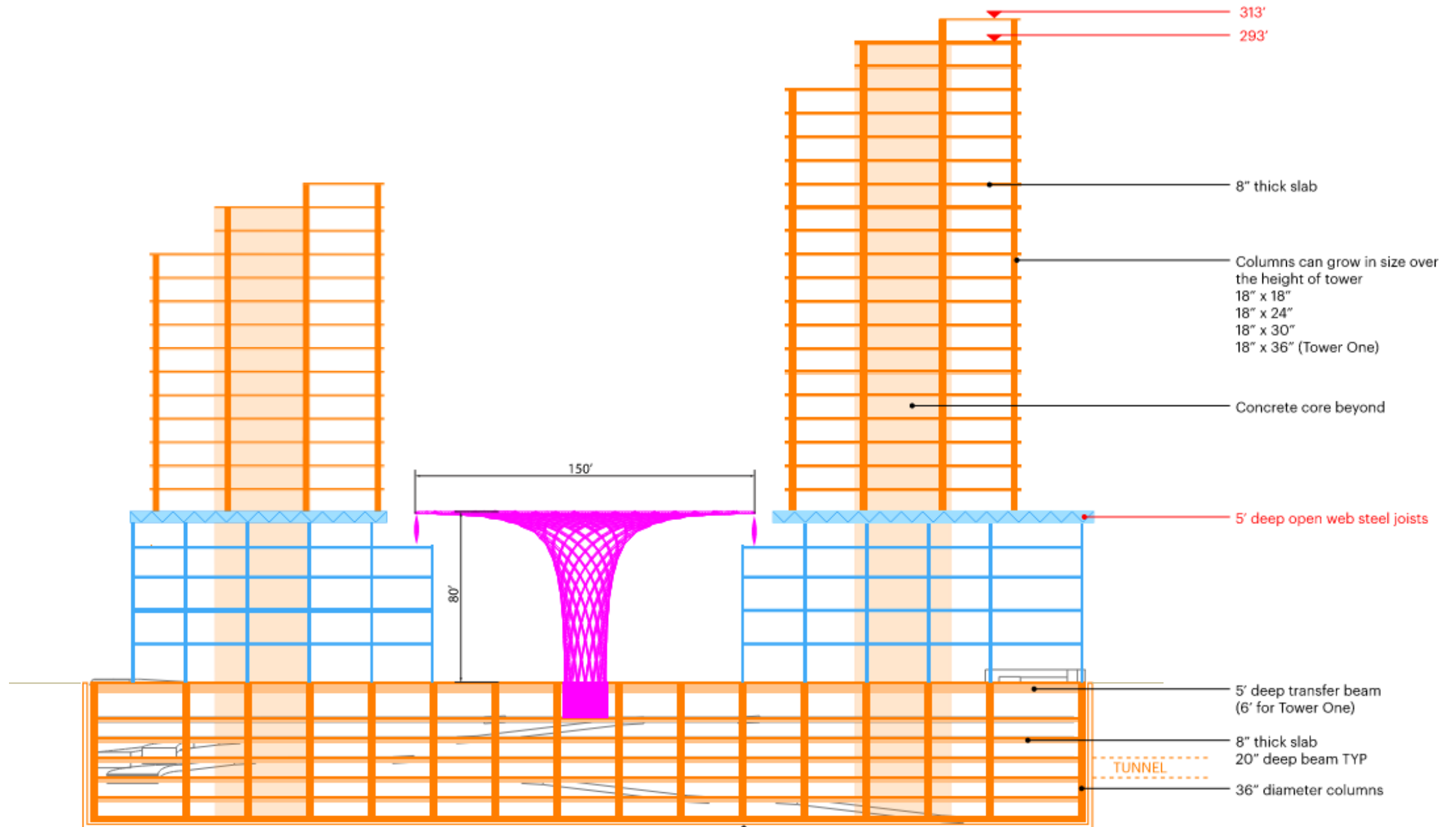


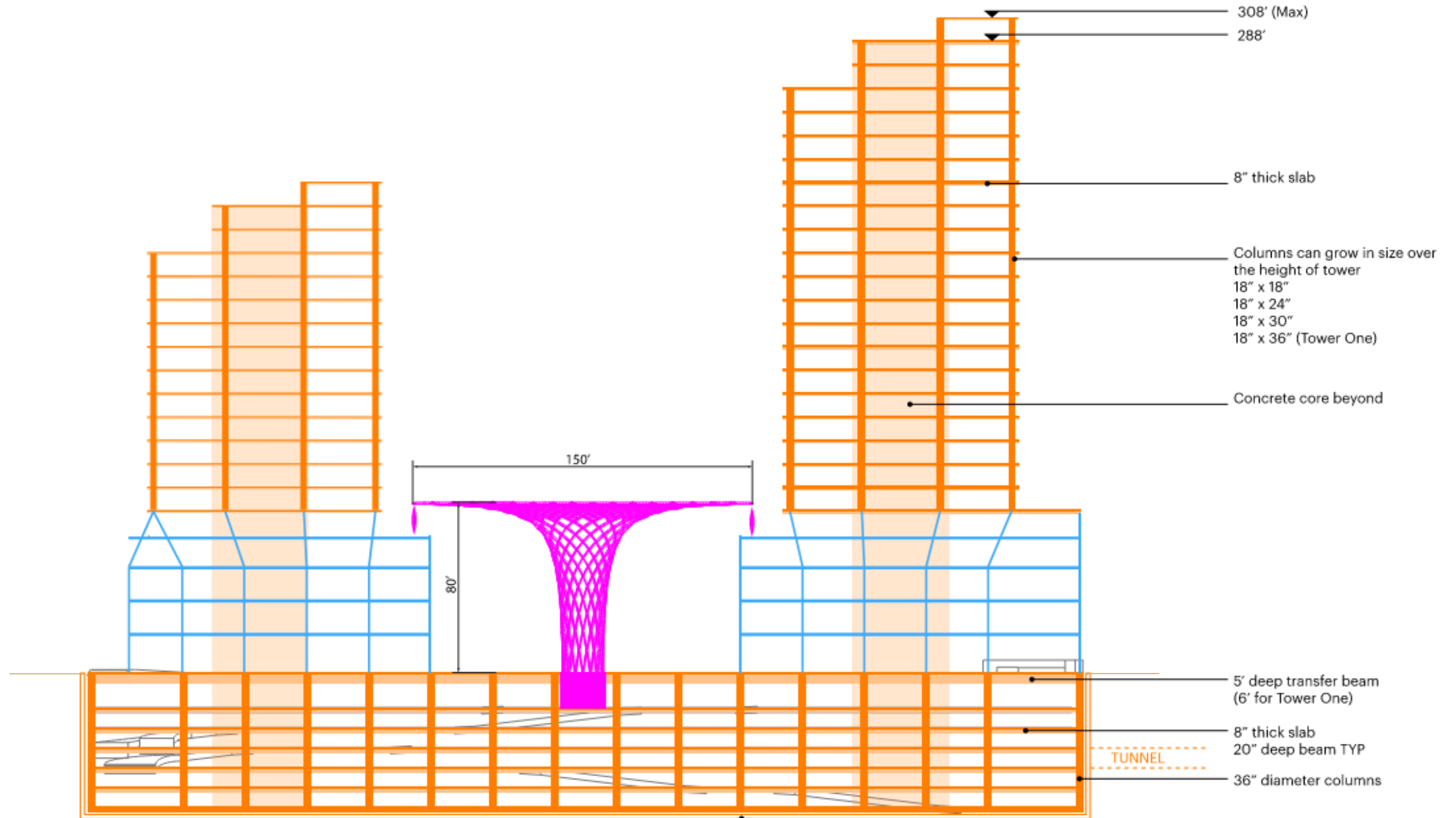
# Typical Parking Plan - 6 Levels Total

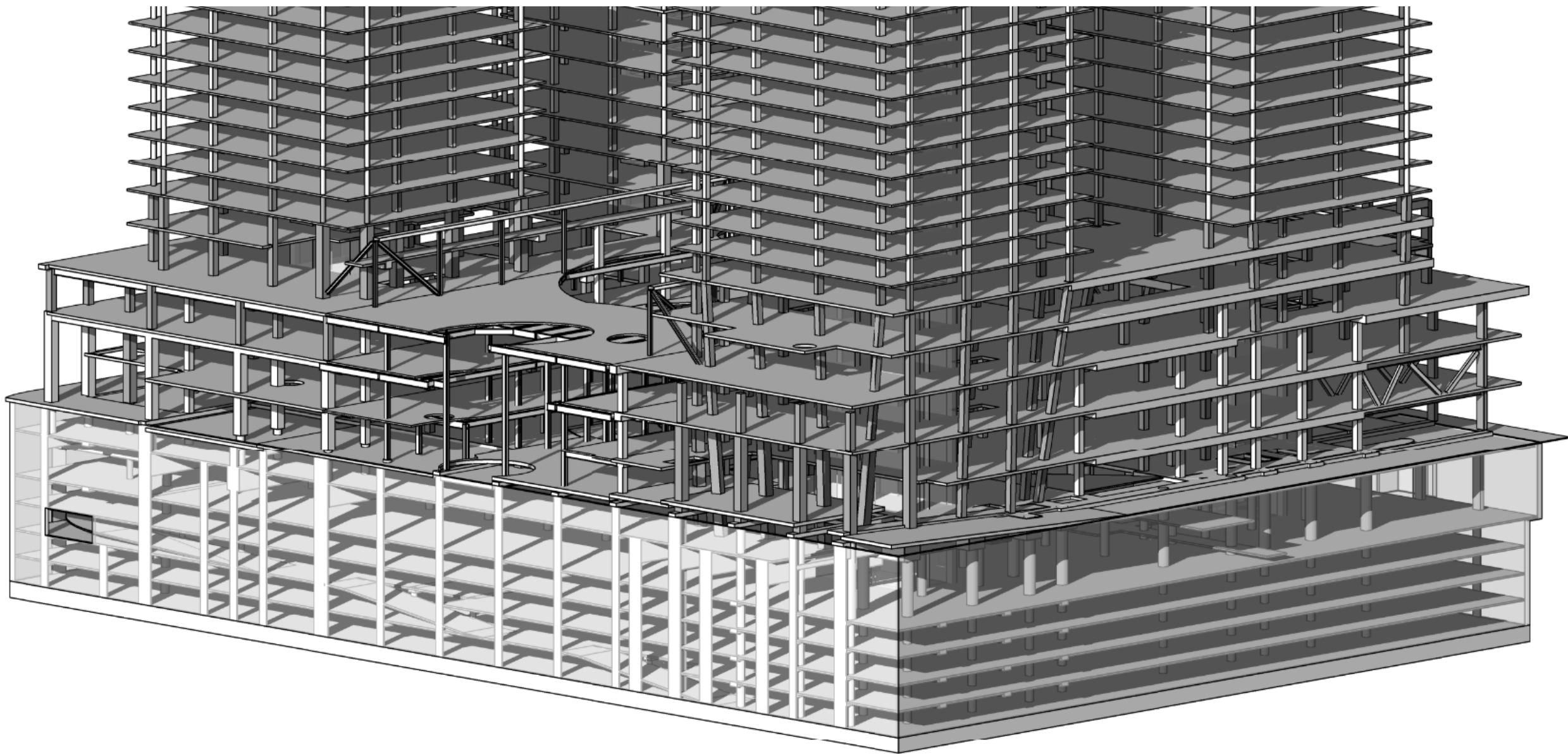




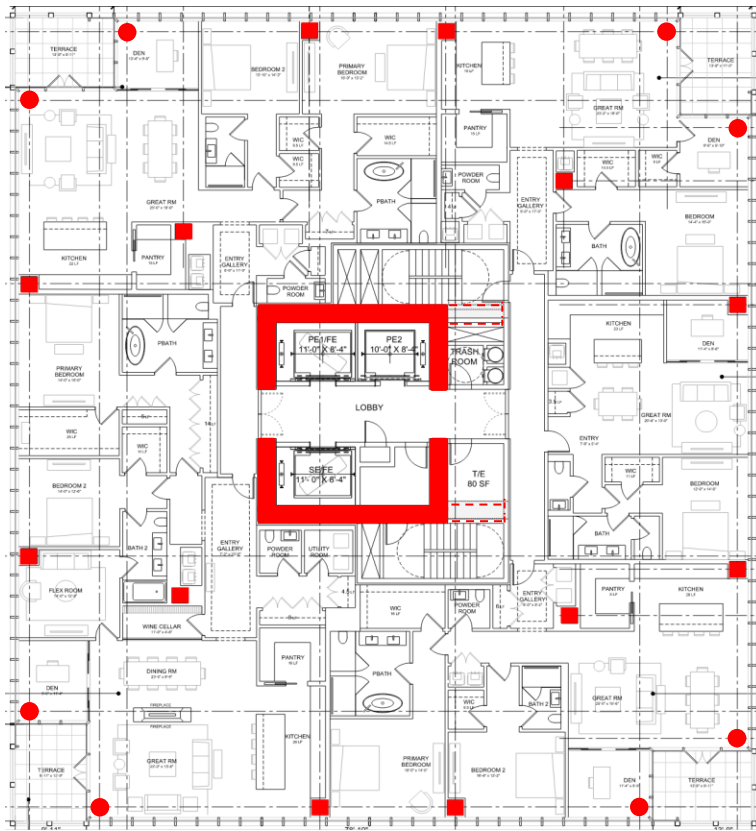
Typical Parking  
Column Grid



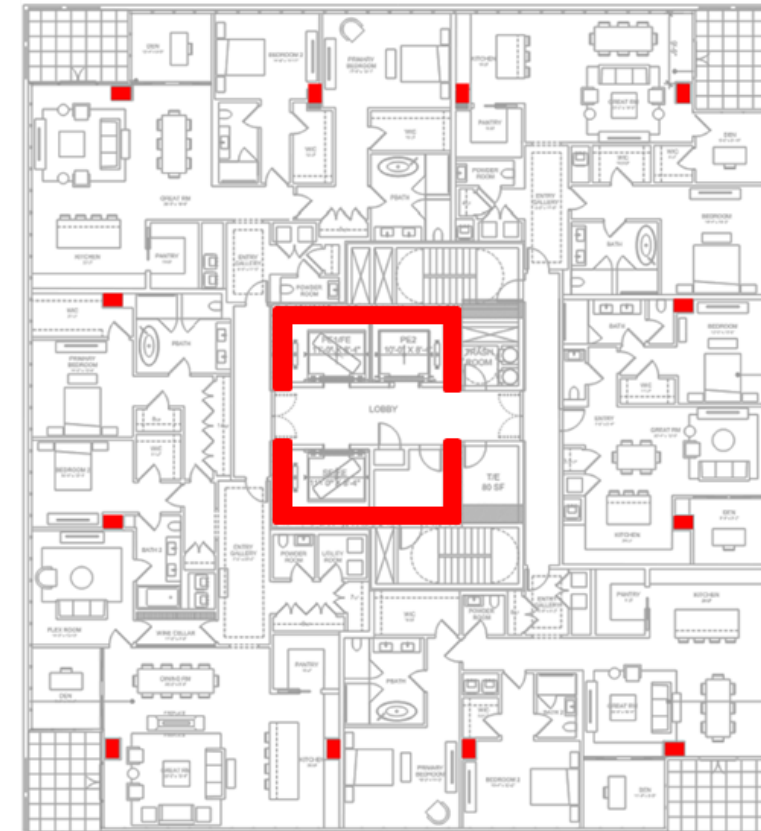






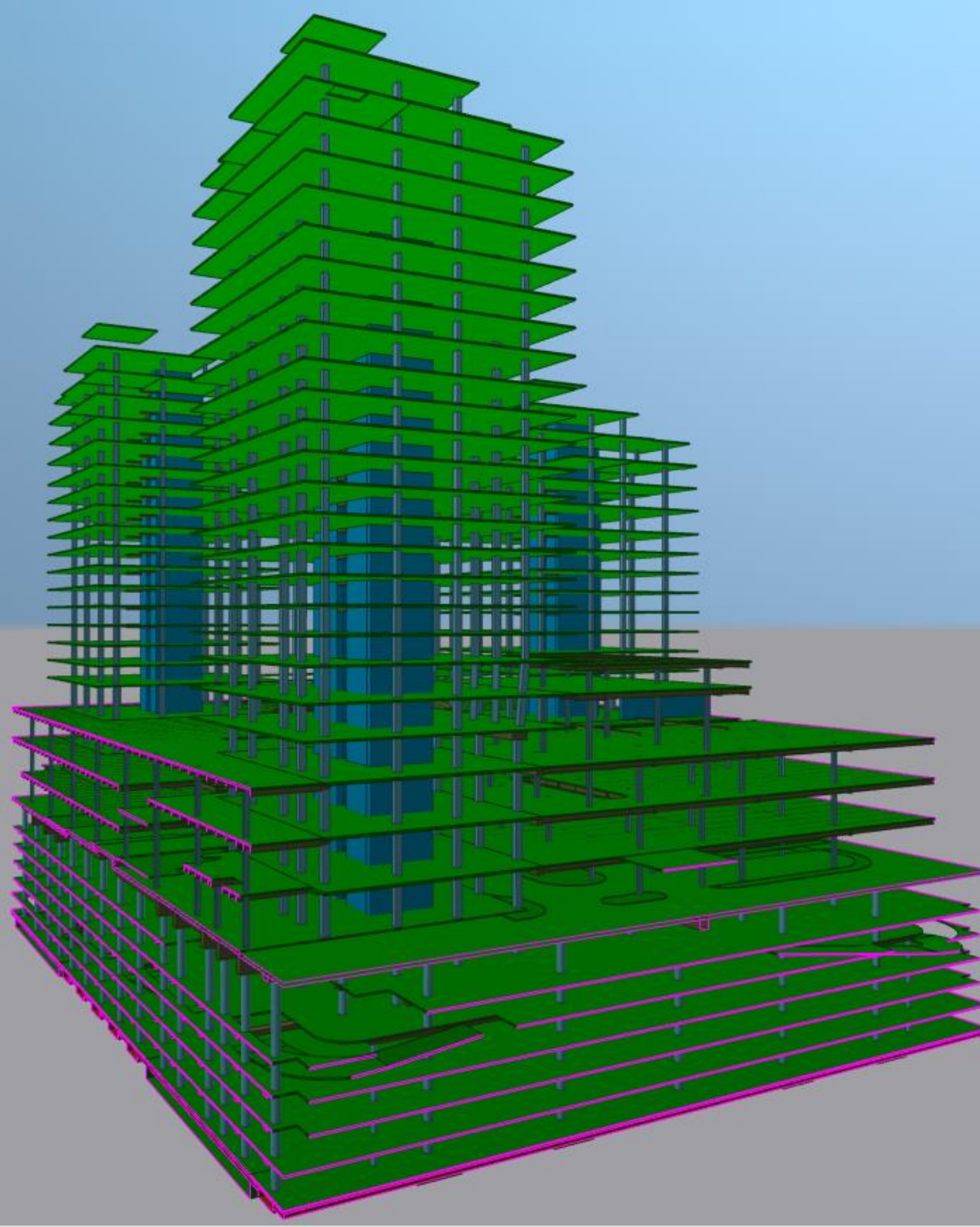


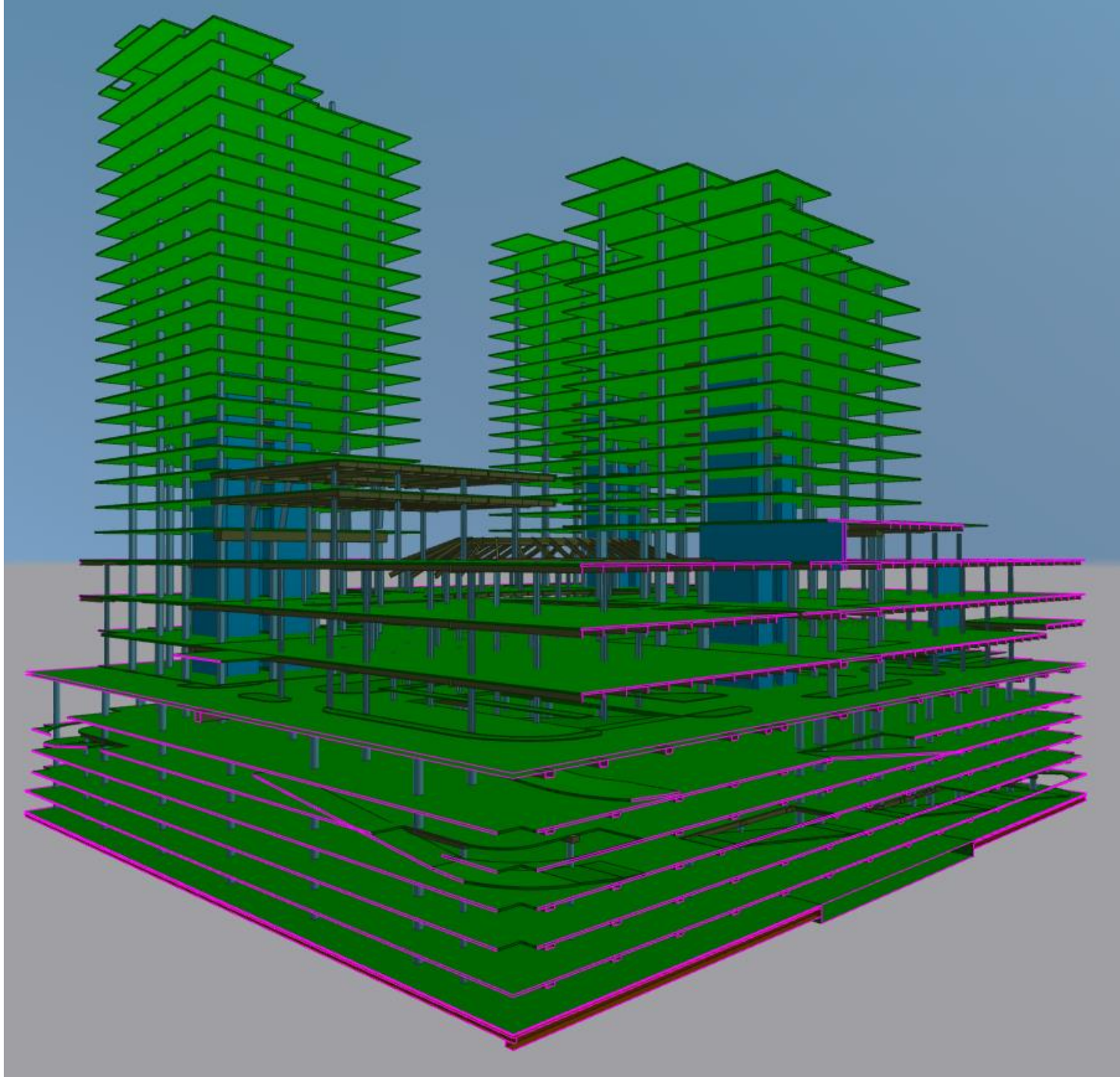
Original Scheme  
 20 Columns  
 2 Outrigger Beams  
 14 Transfers at Podium



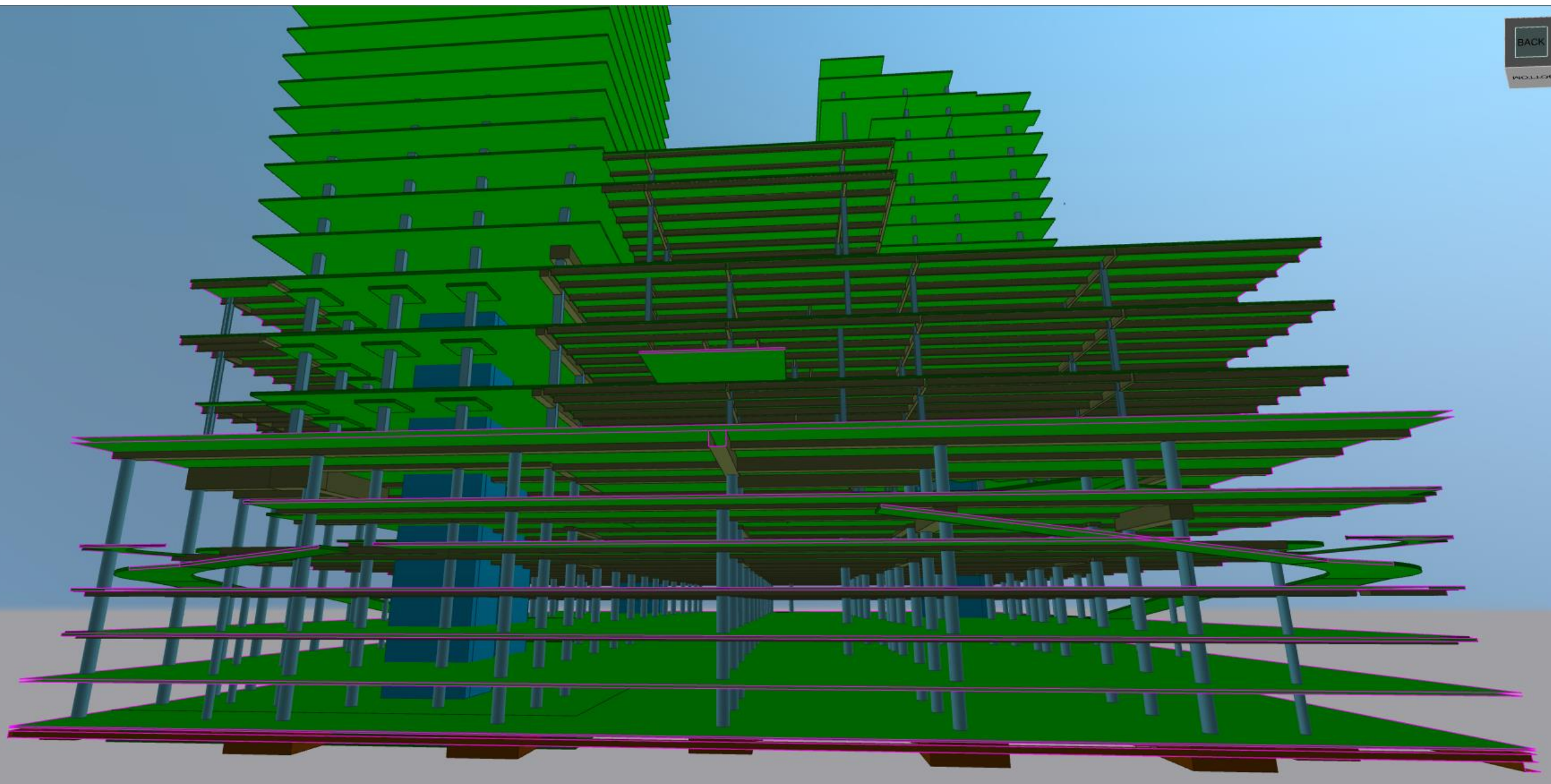
Revised Scheme  
 12 Columns  
 No Outrigger Beams  
 8 Transfers at Podium

# Typical Tower Plans



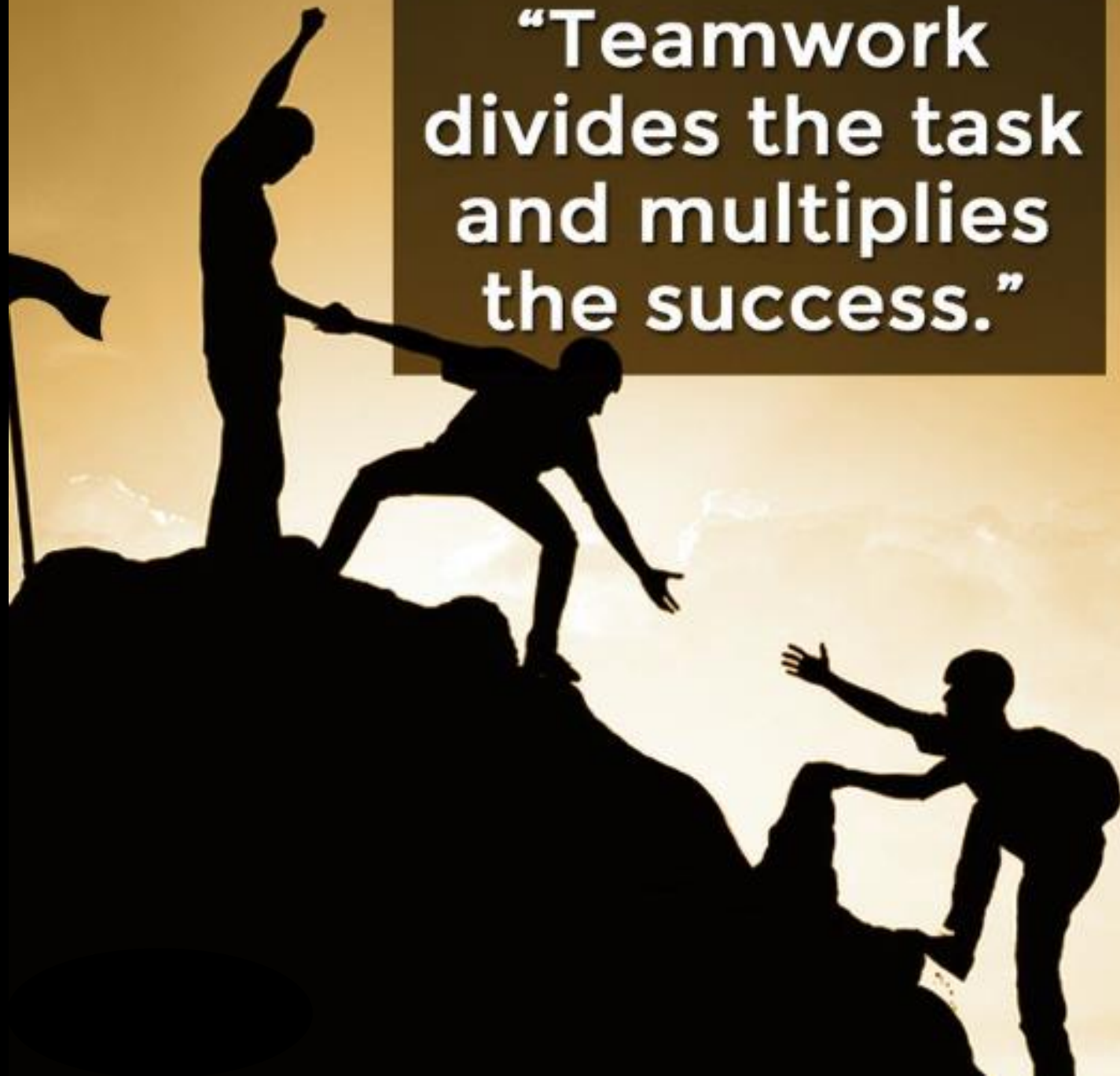








**“Teamwork  
divides the task  
and multiplies  
the success.”**



# *Thank you*

*For more information, please visit PRO at:  
[www.concreteproductivity.org](http://www.concreteproductivity.org)*

