CIGNA POINT BUILDING ONE

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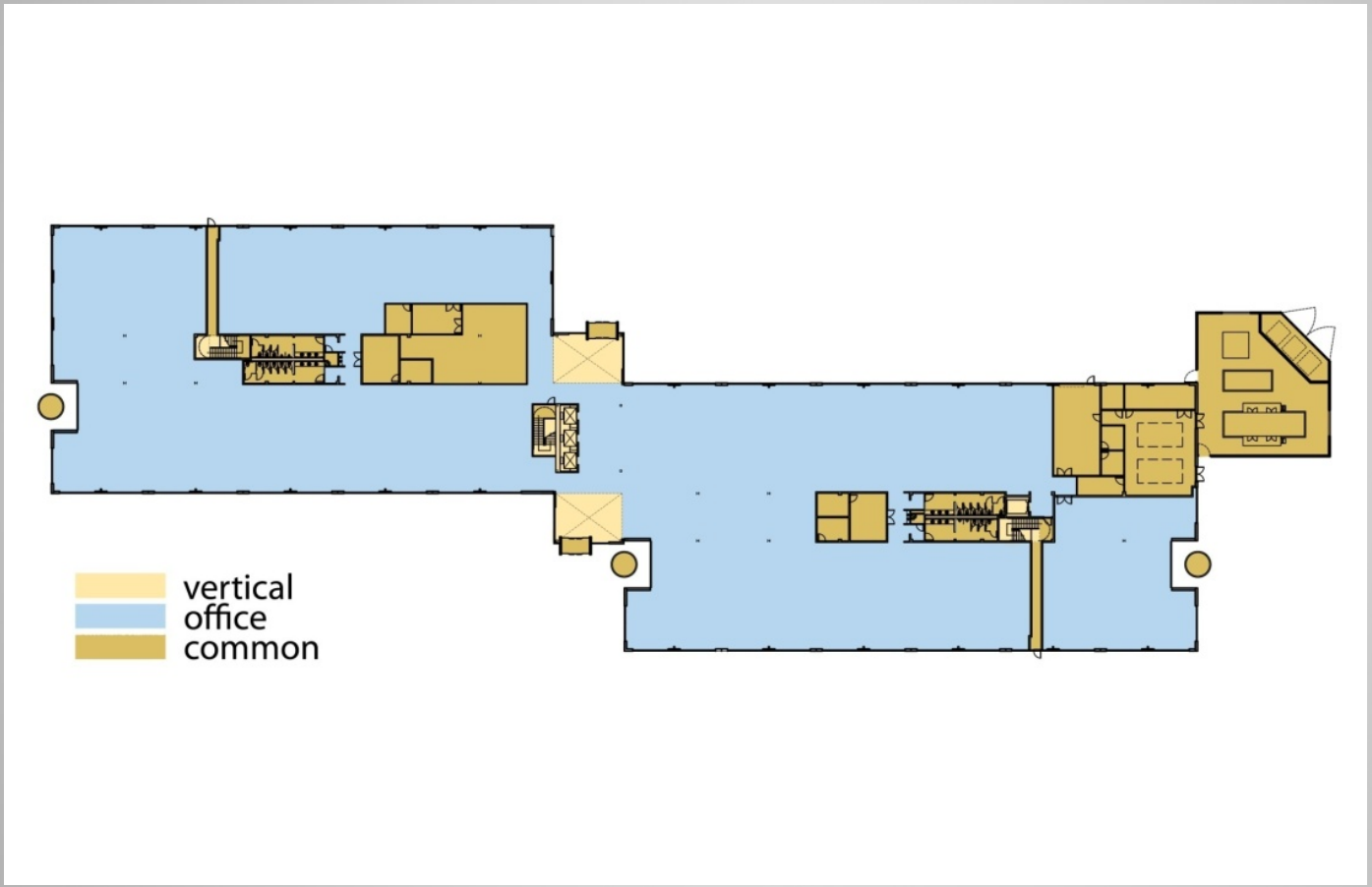
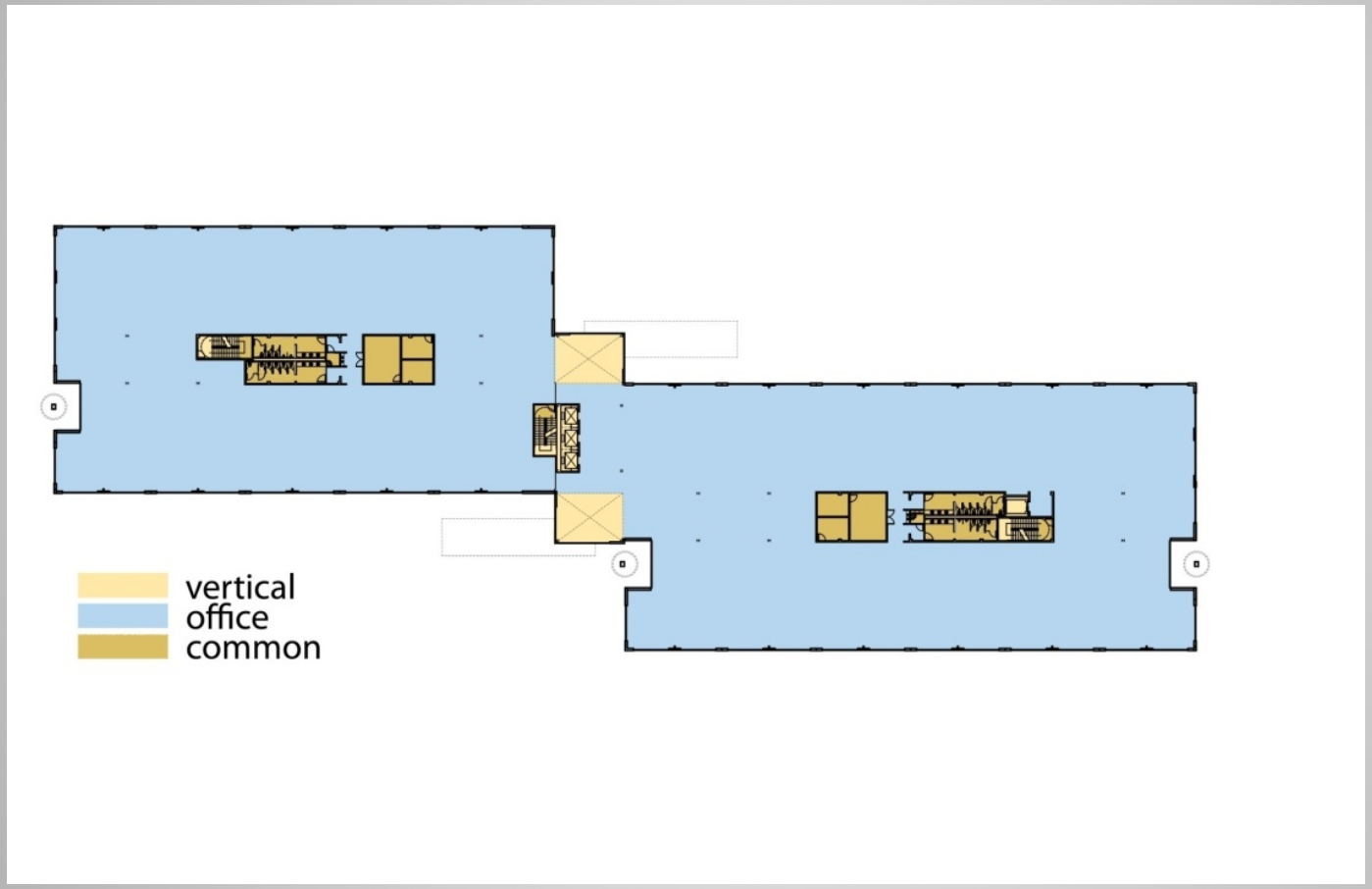
BACKGROUND

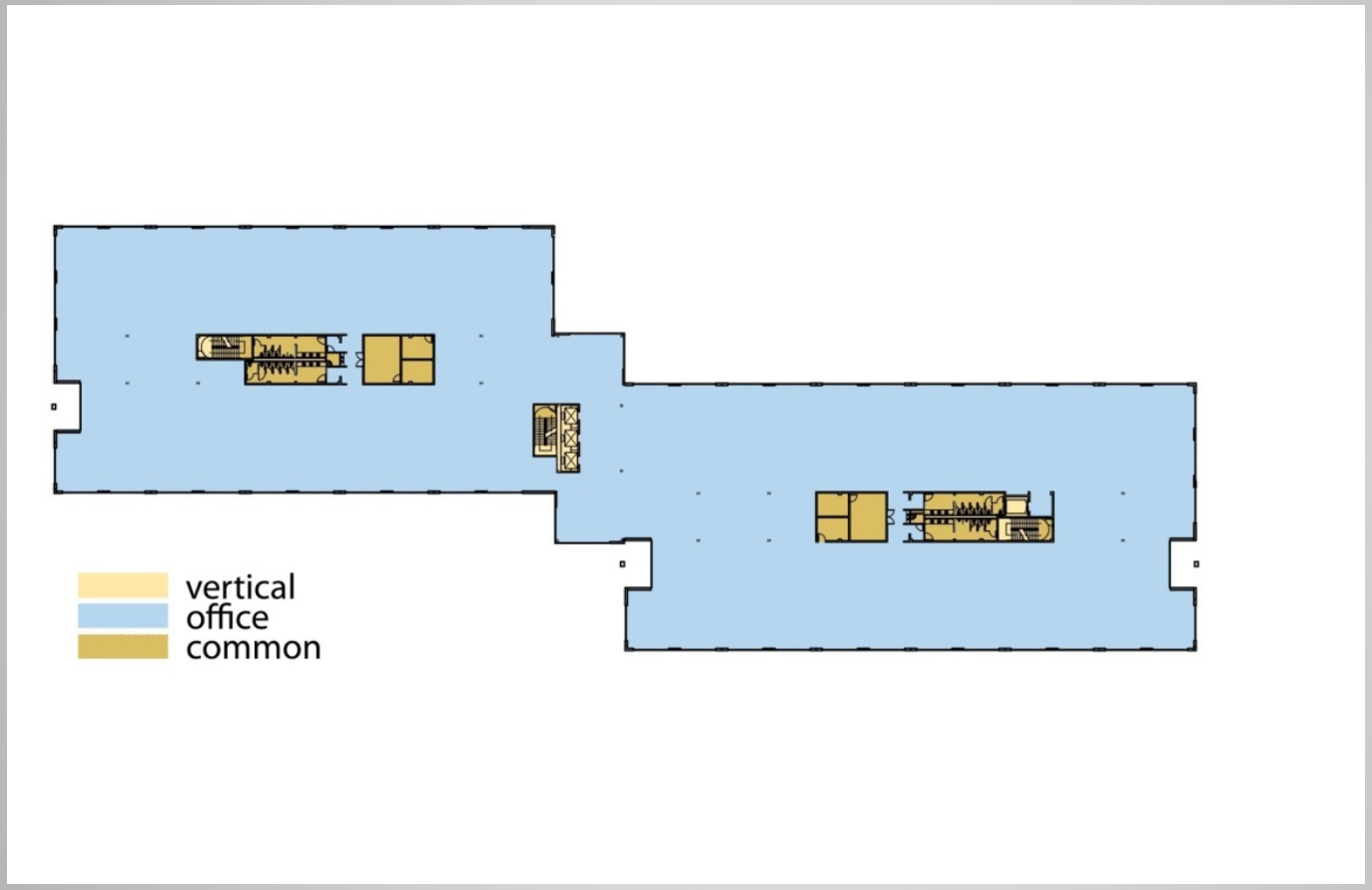

DALLAS NORTH TOLLWAY
PARKWOOD BOULEVARD
PLANO PARKWAY
TRUE NORTH
A 13.03 Ac.
B 8.50 Ac.
C 5.37 Ac.
D 2.93 Ac.
E 2.71 Ac.
F 1.10 Ac.
G 1.09 Ac.
H 1.03 Ac.
J 1.37 Ac.
K 1.15 Ac.
L 2.34 Ac.
M 2.55 Ac.

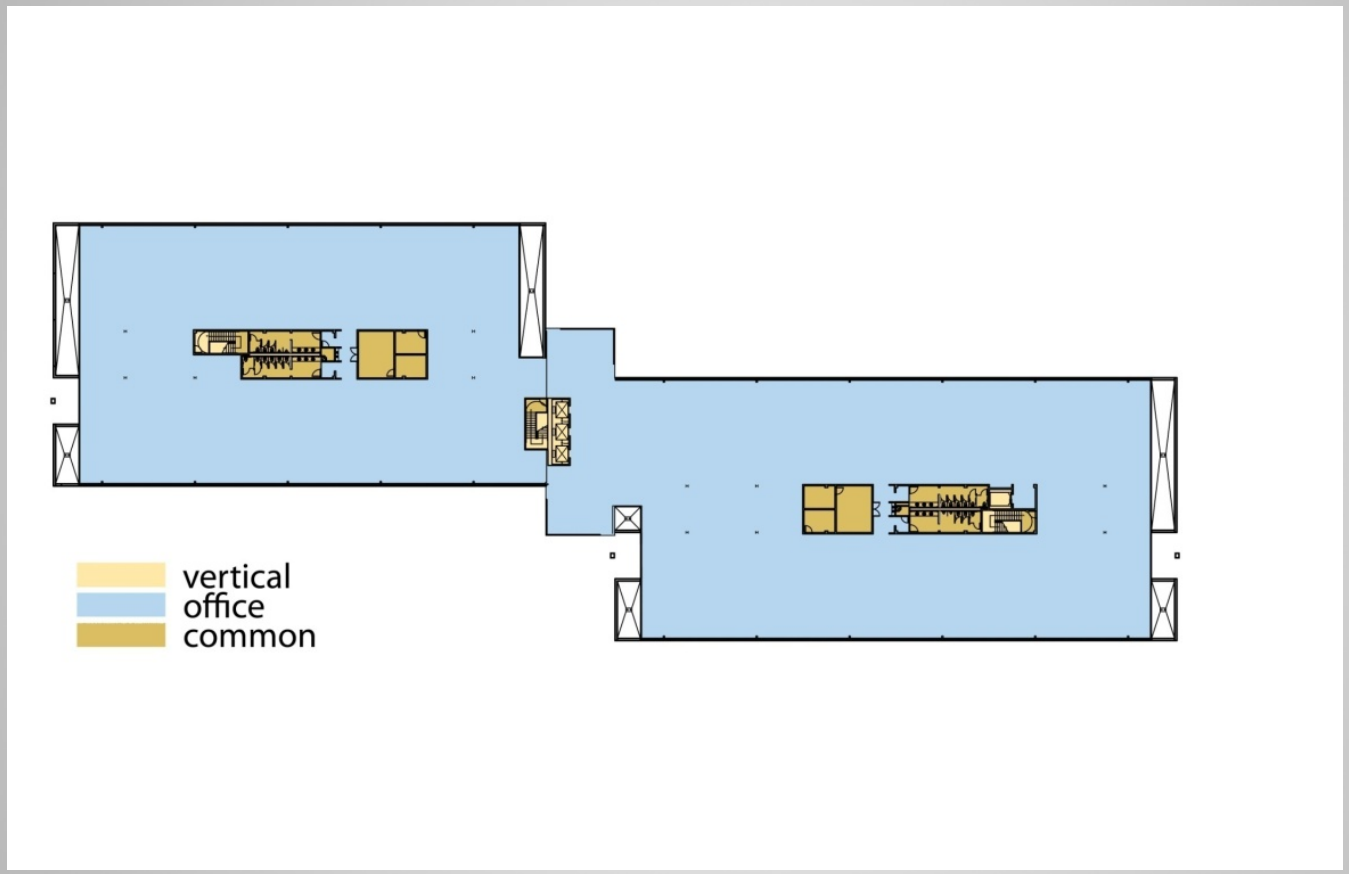

COMMUNITY COMMERCIAL
15' SANITARY SEWER EASEMENT (VOL. 2751, PG. 909)
50' TEMPORARY CONSTRUCTION EASEMENT (VOL. 2751, PG. 909)
CONCRETE PAVEMENT
CONCRETE
N 89°20'29" E
S 89°20'29" W
COMPACT CAR PARKING
65' DRAINAGE EASEMENT NO. 1
50' BUILDING SETBACK
DALLAS NORTH TOLLWAY
(VARIABLE WIDTH RIGHT-OF-WAY)
BARKWOOD BOULEVARD
PROPOSED LOT 2, BLOCK A
CIGNA POINT ADDITION
Δ=00°49'39"
R=5553.36'
L=80.21'
T=40.11'
CB=S 00°39'39" E

FLOOR PLANS

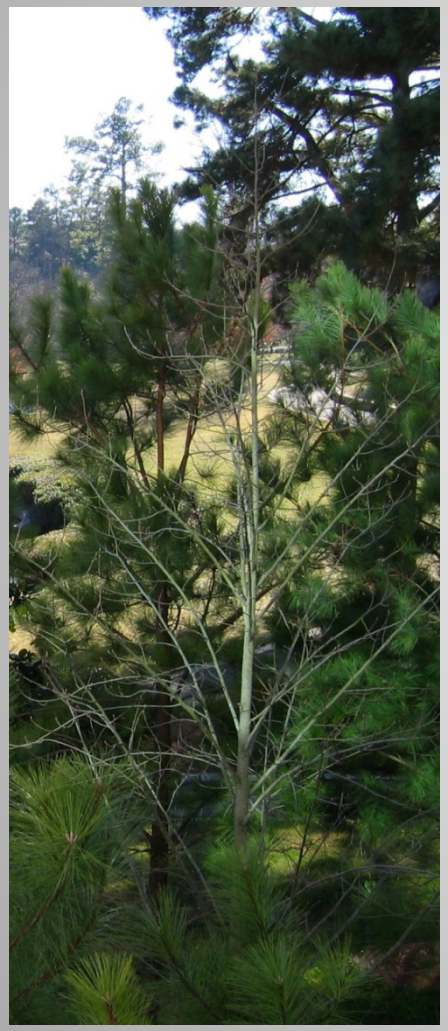



vertical
office
common


vertical
office
common


vertical
office
common

LEED/SUSTAINABLE CONSIDERATIONS FOR THE PROJECT



PROTECT OR RESTORE WILDLIFE

PROMOTION OF ALTERNATIVE TRANSPORTATION

PROTECT AND RESTORE HABITAT

MITIGATE HEAT ISLAND EFFECT

WATER EFFICIENT LANDSCAPING

WATER USE REDUCTION

OPTIMIZE ENERGY PERFORMANCE

GREEN POWER

CONSTRUCTION WASTE MANAGEMENT

USE OF RECYCLED CONTENT

USE OF RAPIDLY RENEWABLE MATERIALS

INDOOR CHEMICAL AND POLLUTANT SOURCE CONTROL

USE OF REGIONAL MATERIALS

THERMAL COMFORT DESIGN

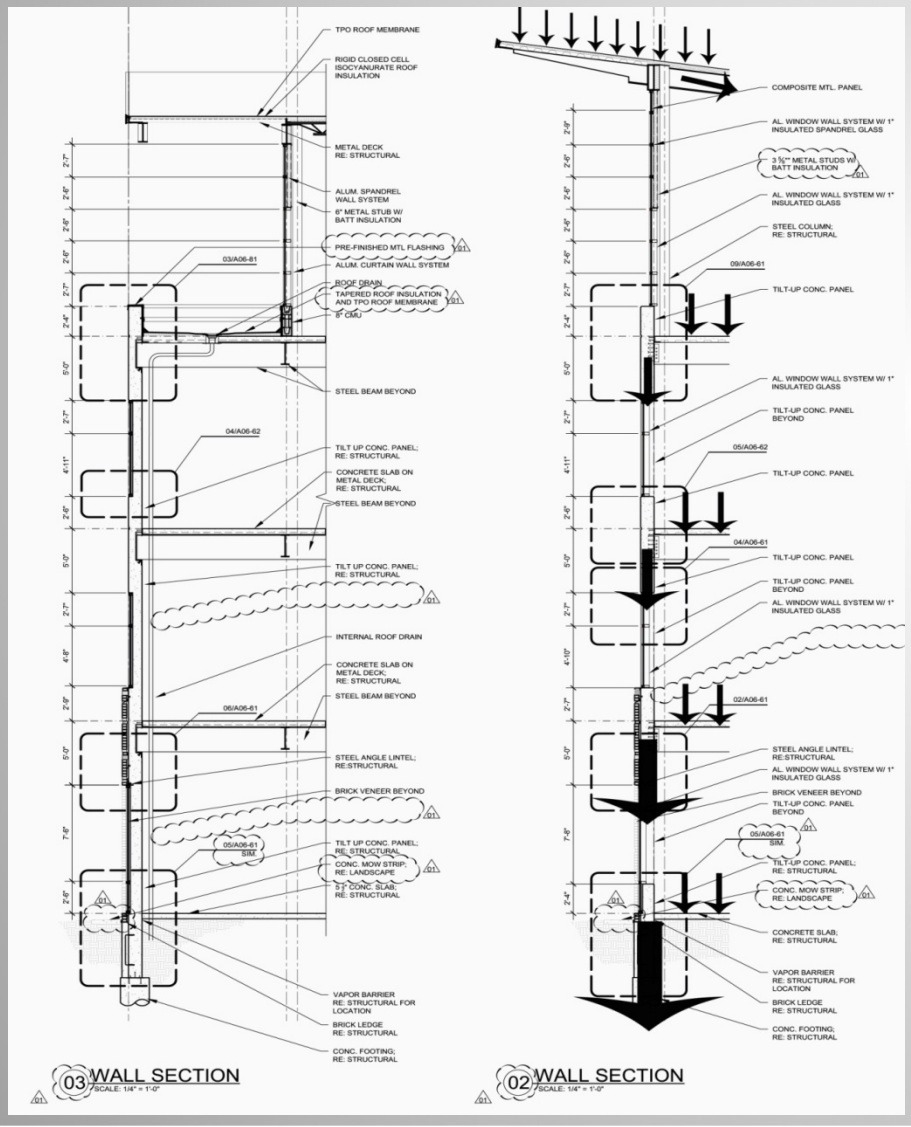
OPTIMIZE DAYLIGHT & VIEWS

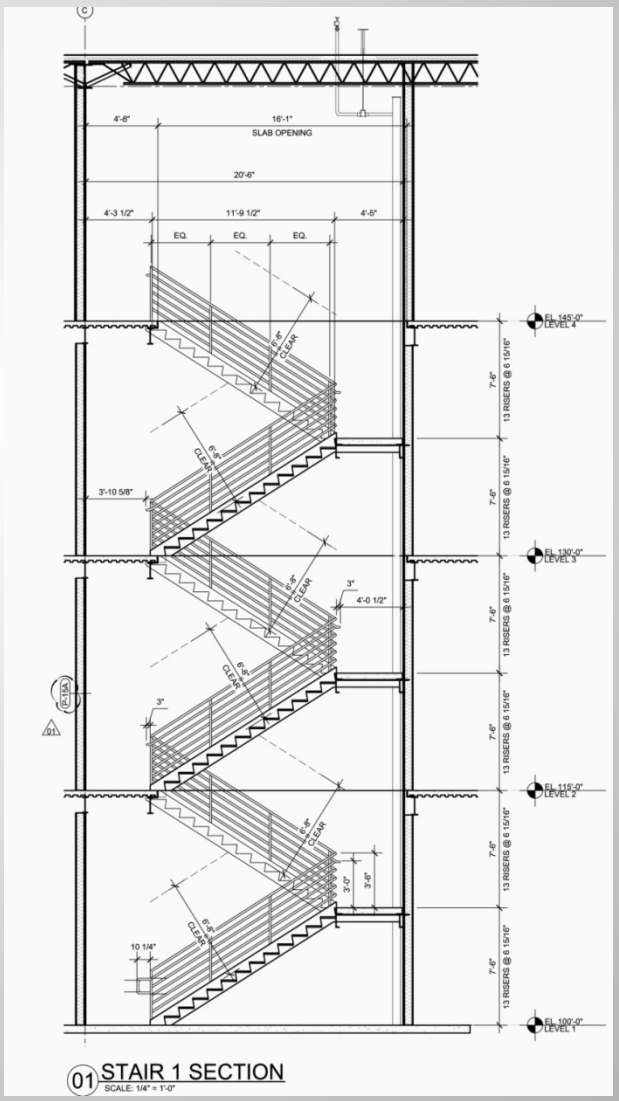
STORAGE & COLLECTION OF RECYCLABLES


CIGNA

THE WINGS

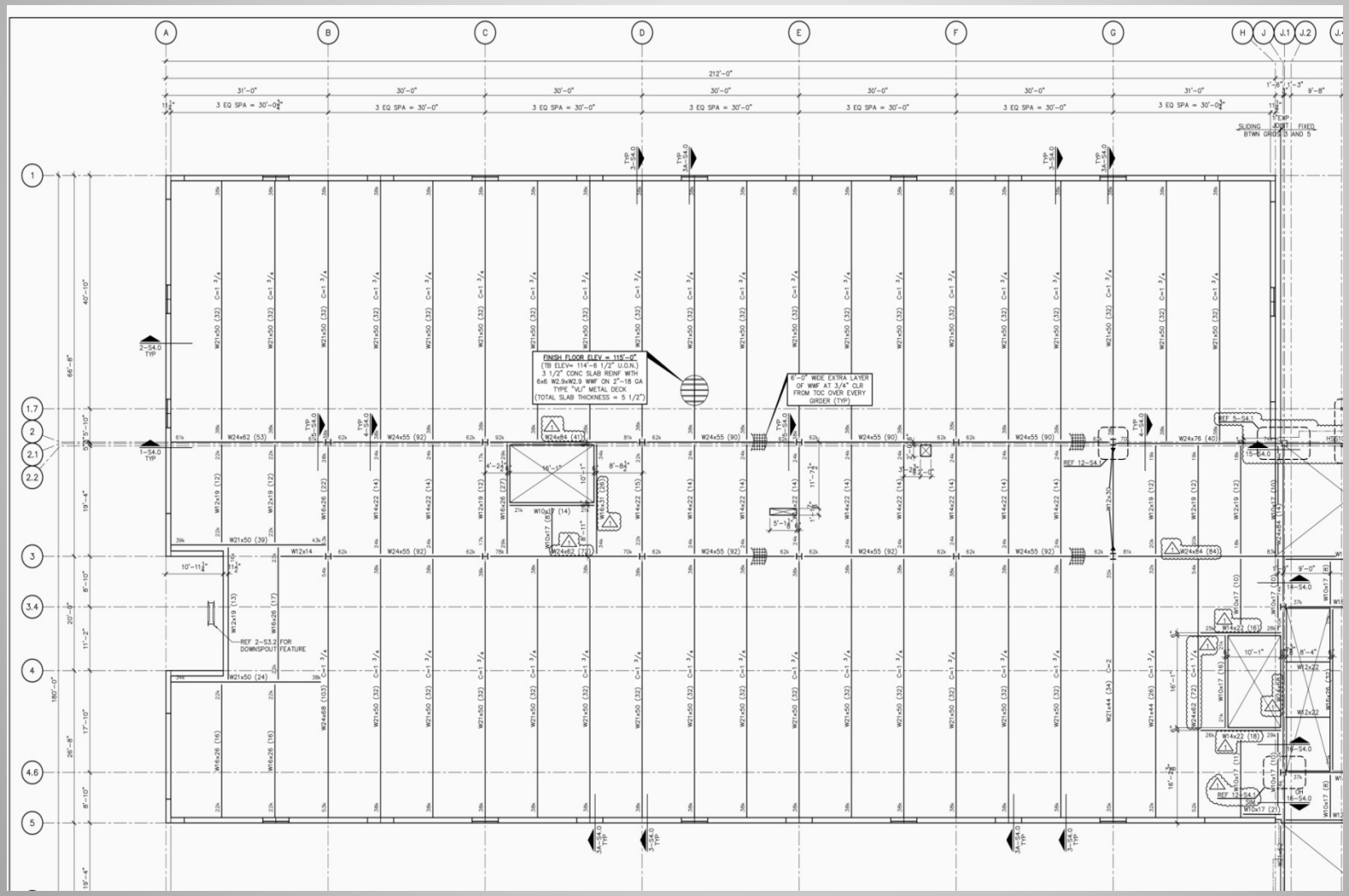
- First three floors are shear walls
- Fourth Floor has a curtain window
- Both wings have a vertical core, with stairs

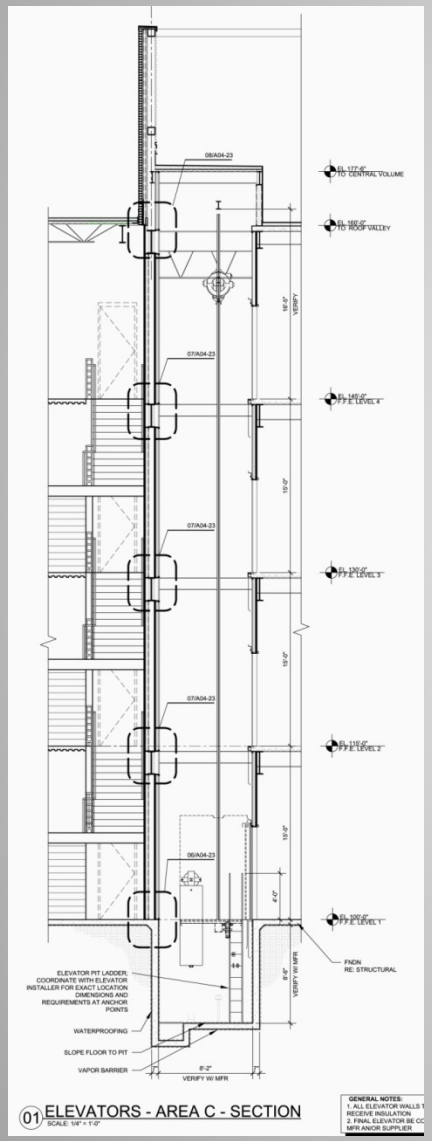


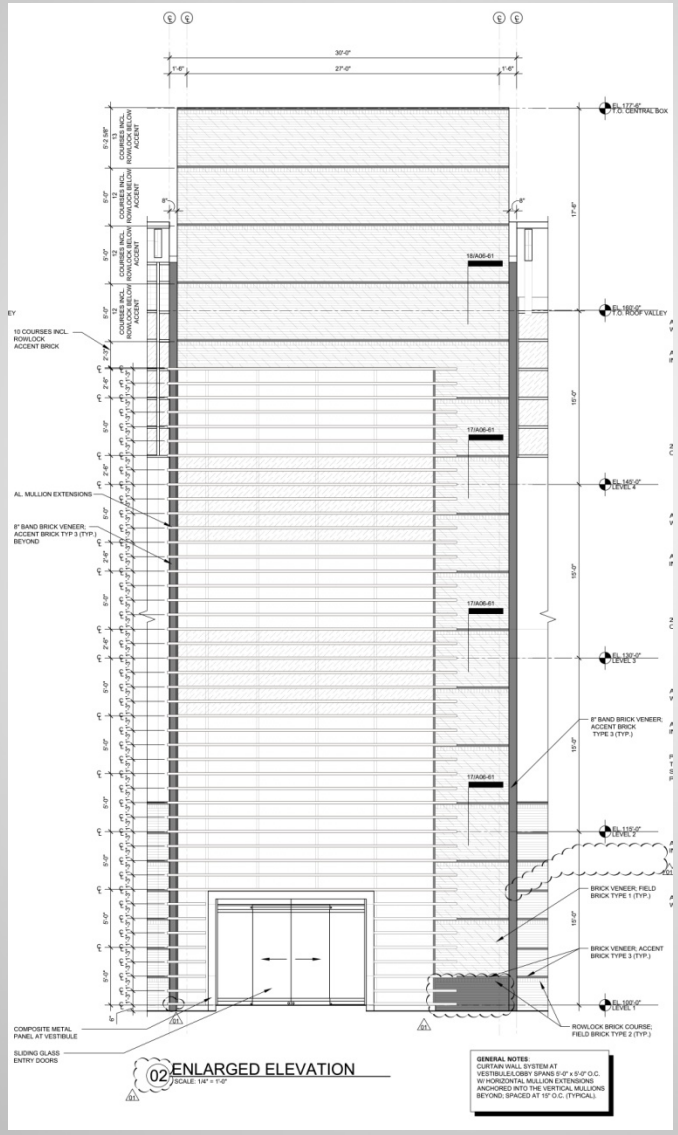


THE FLOORS

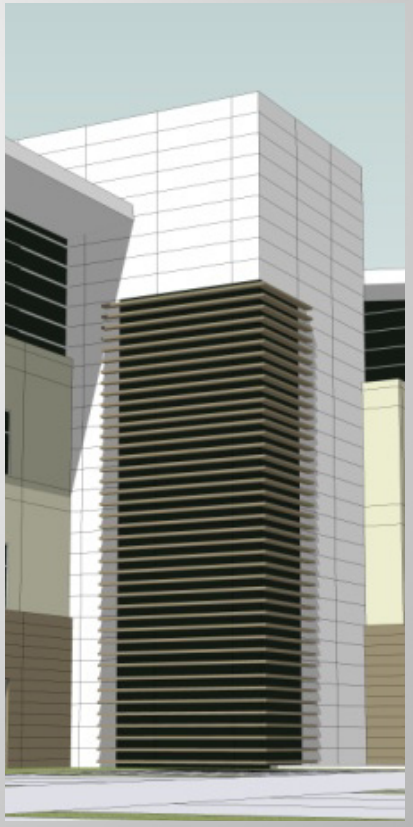
- Spandrel (edge) beams
- W21X50, W14X22, W12X19 beams
- 2 rows of I-beams



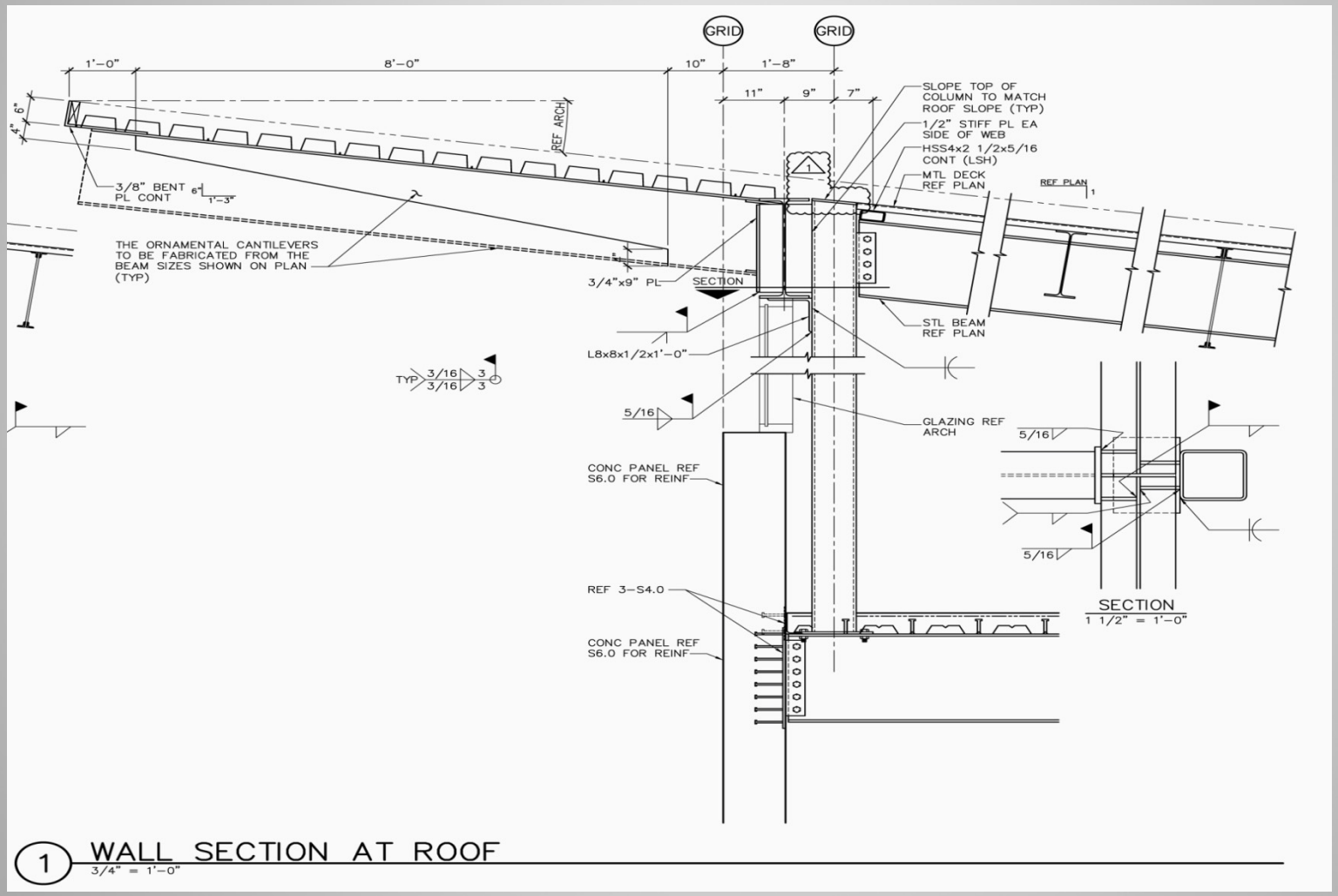




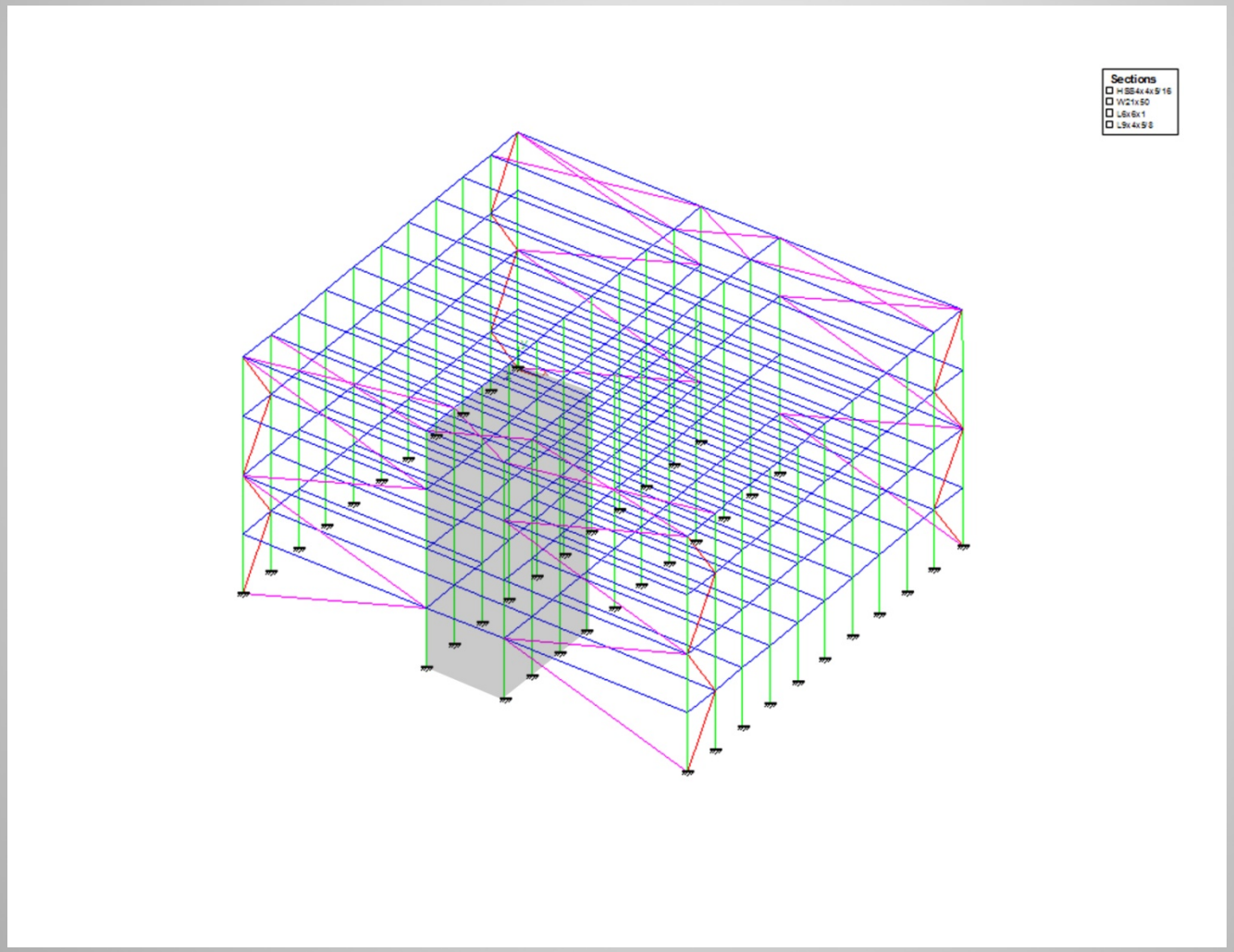
- Steel columns with cross bracing and a brick façade



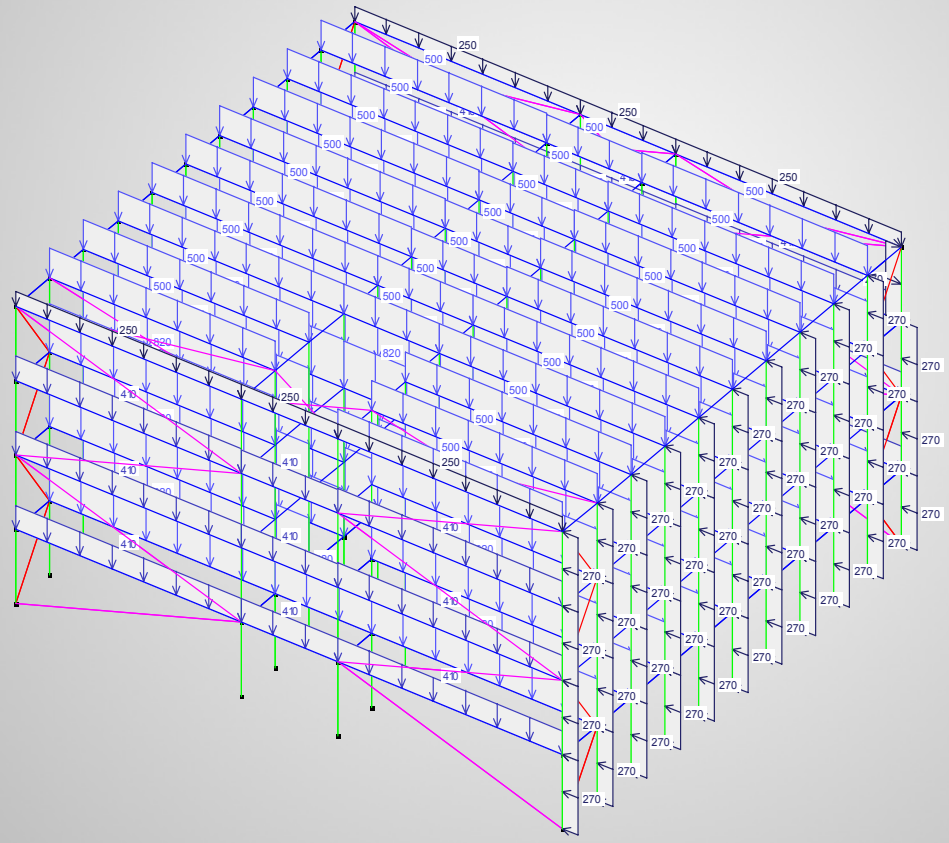
THE ROOF


GRID
GRID
1'-0"
8'-0"
10"
1'-8"
11"
9"
7"
6"
4"
REF ARCH
SLOPE TOP OF COLUMN TO MATCH ROOF SLOPE (TYP)
1/2" STIFF PL EA SIDE OF WEB
HSS4x2 1/2x5/16 CONT (LSH)
MTL DECK REF PLAN
REF PLAN
3/8" BENT PL CONT
6"
1'-3"
THE ORNAMENTAL CANTILEVERS TO BE FABRICATED FROM THE BEAM SIZES SHOWN ON PLAN (TYP)
3/4"x9" PL
SECTION
STL BEAM REF PLAN
L8x8x1/2x1'-0"
TYP 3/16 3/16 3 3
5/16
GLAZING REF ARCH
5/16
CONC PANEL REF S6.0 FOR REINF
5/16
REF 3-S4.0
CONC PANEL REF S6.0 FOR REINF
SECTION
1 1/2" = 1'-0"
1
WALL SECTION AT ROOF
3/4" = 1'-0"

MULTIFRAME

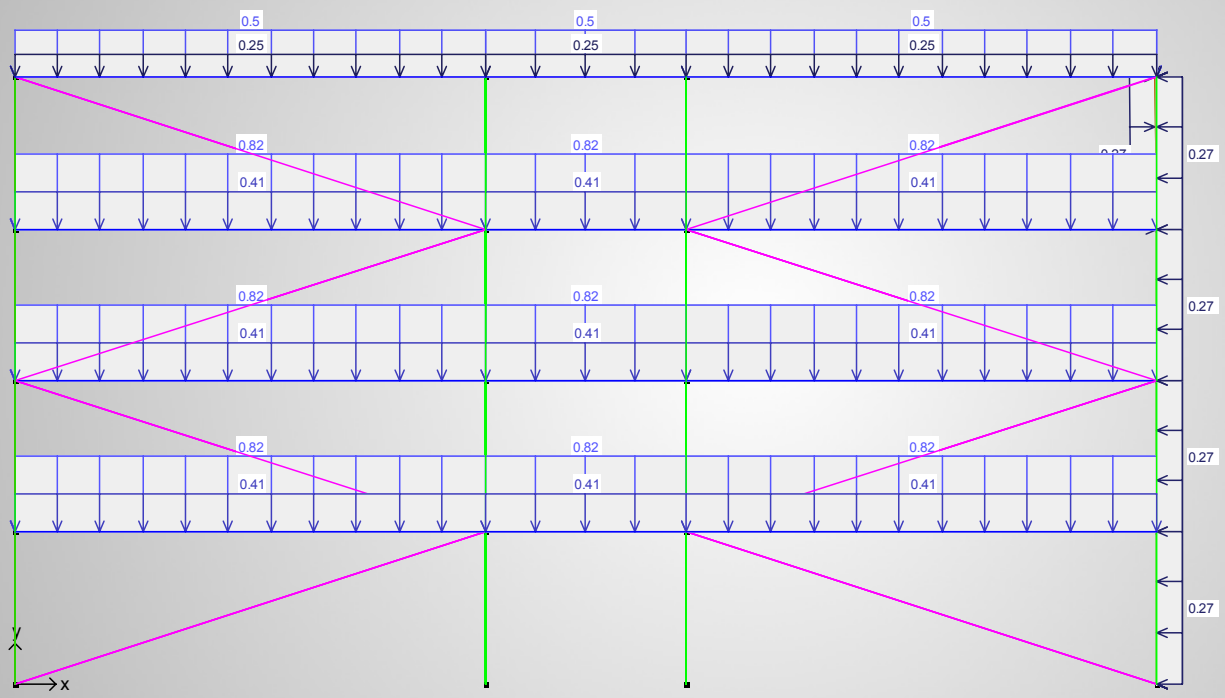


MULTIFRAME WITH LOADS

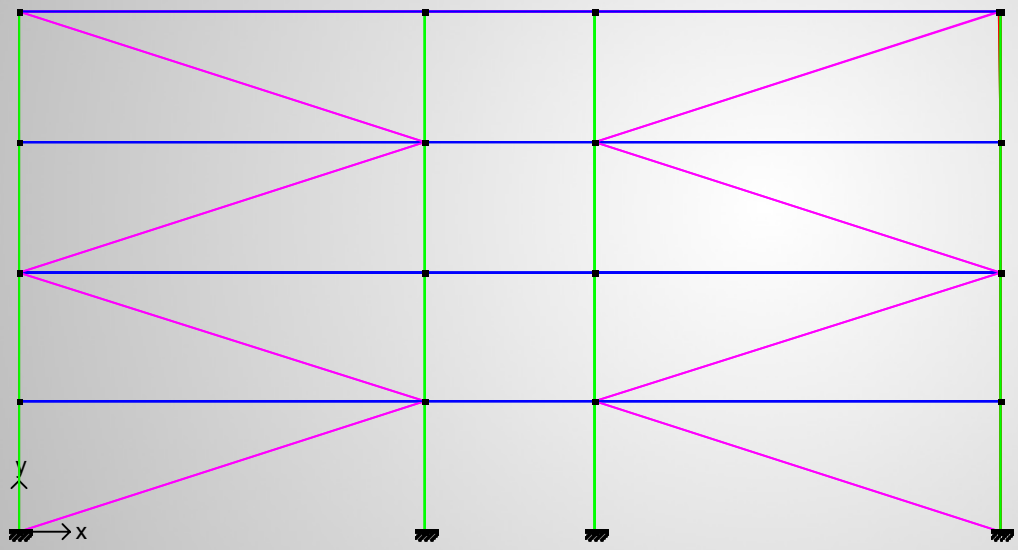


Load Case 1

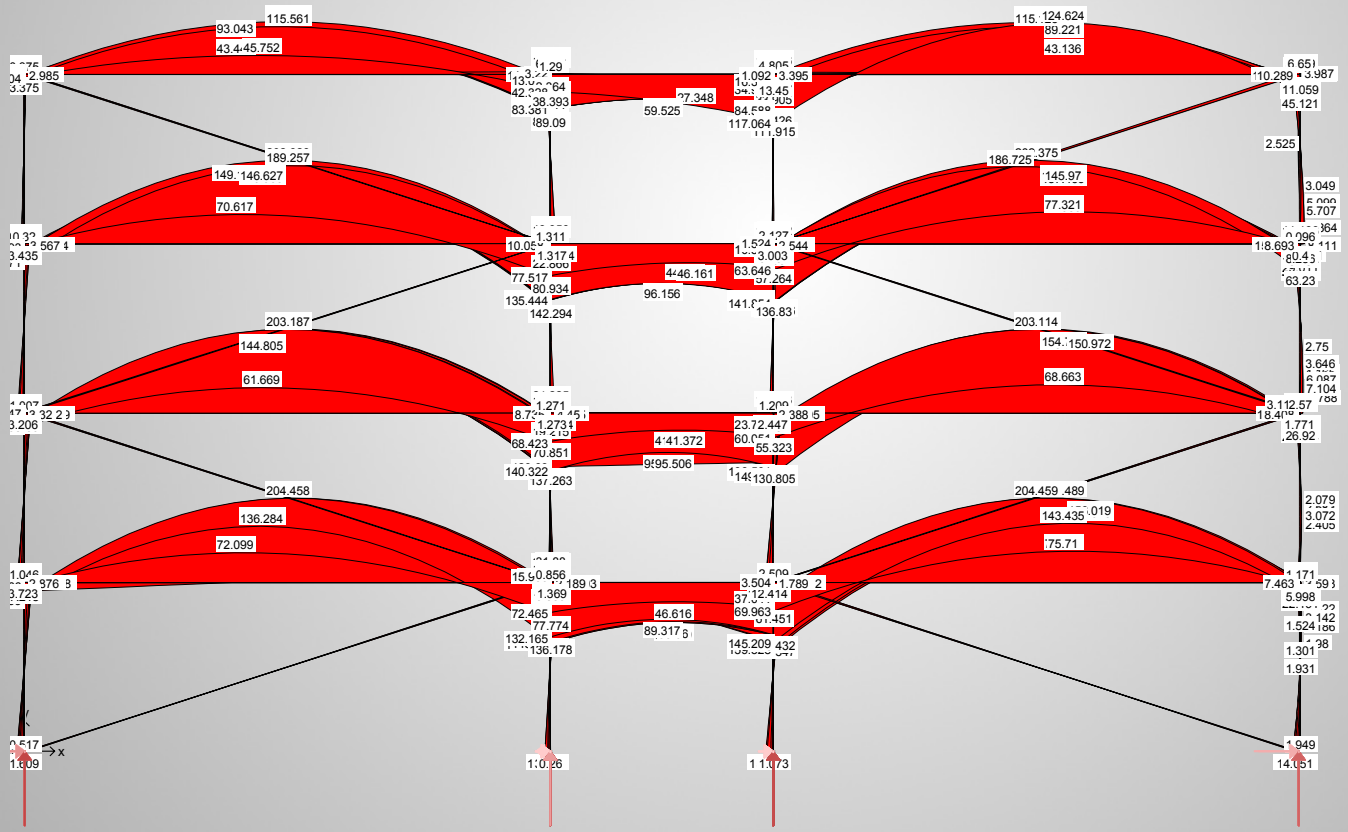
FRONT VIEW OF LOADS



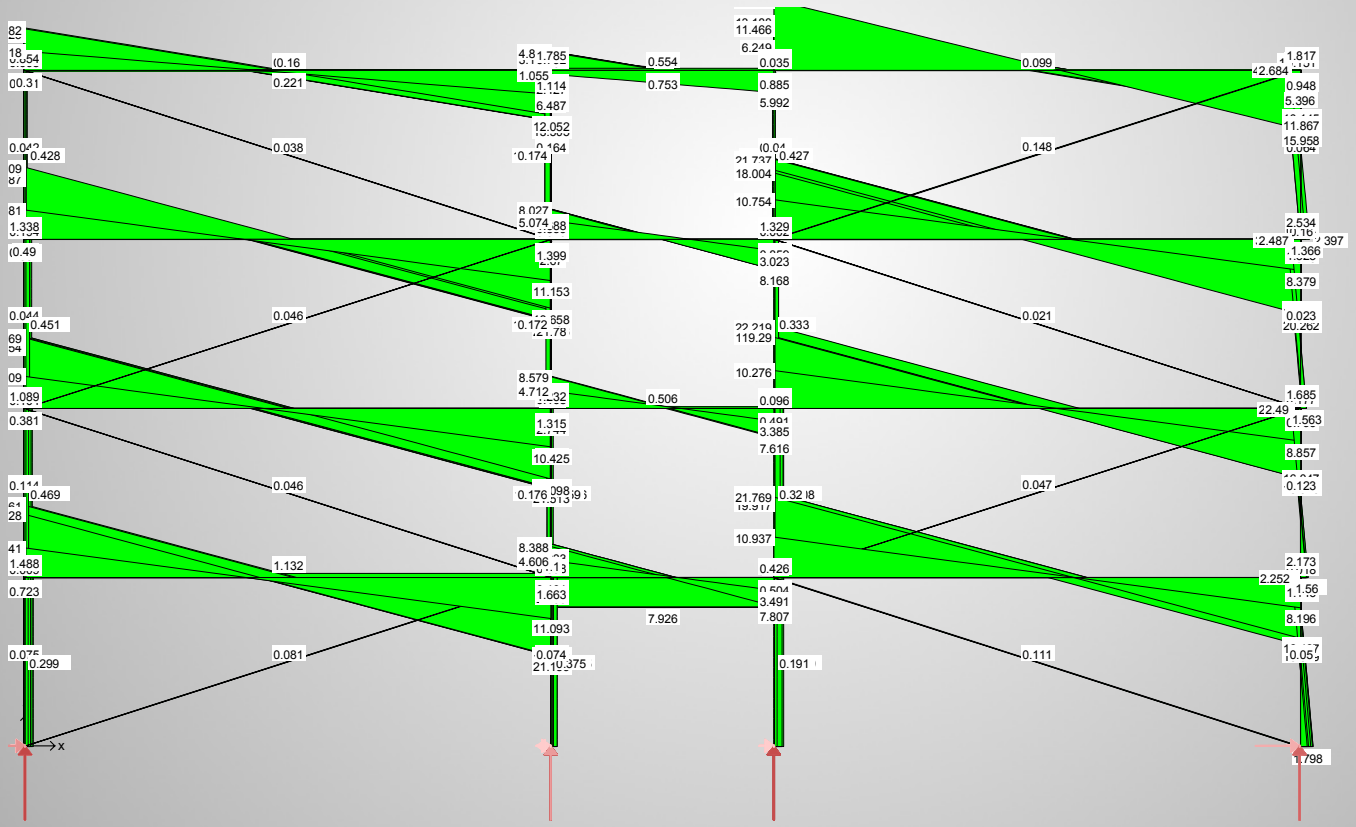
FRONT VIEW NO LOADS



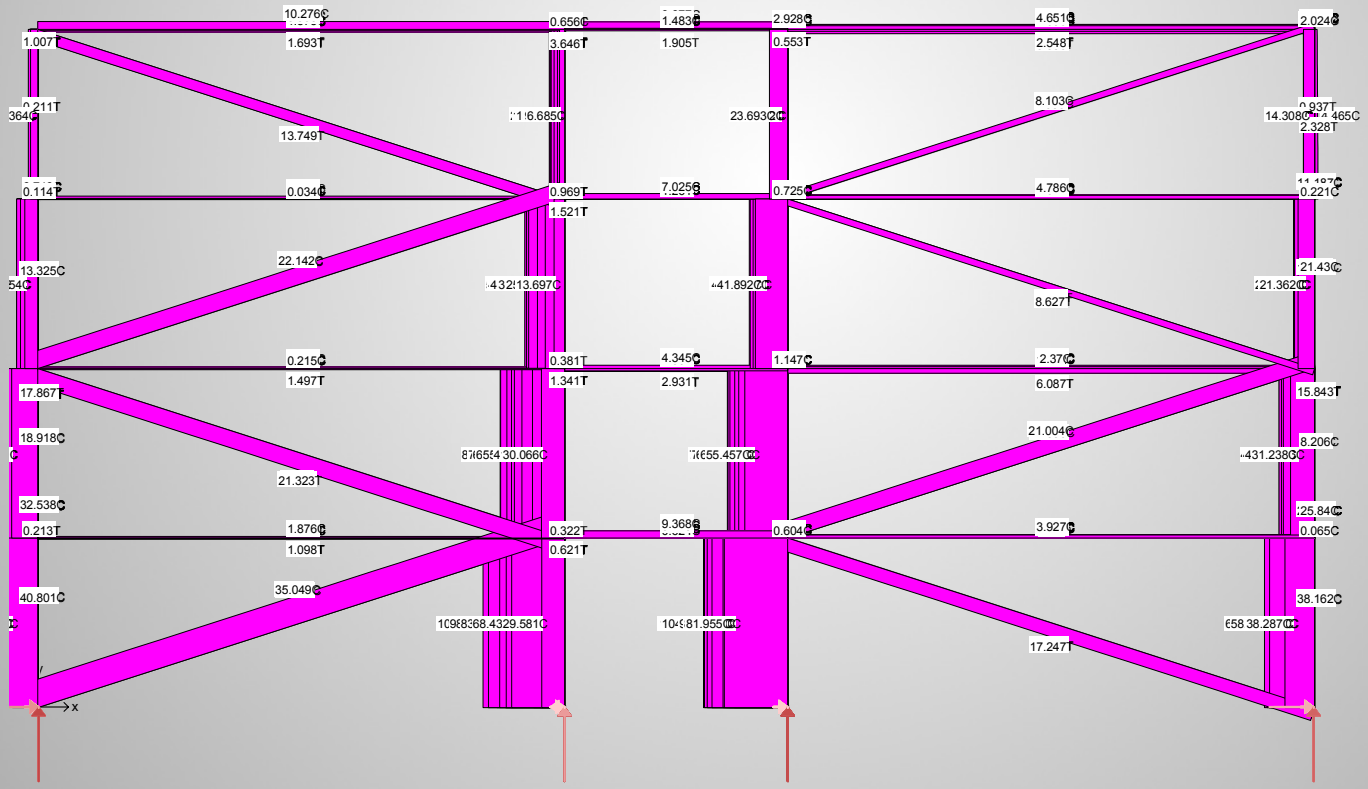
BENDING MOMENT DIAGRAM



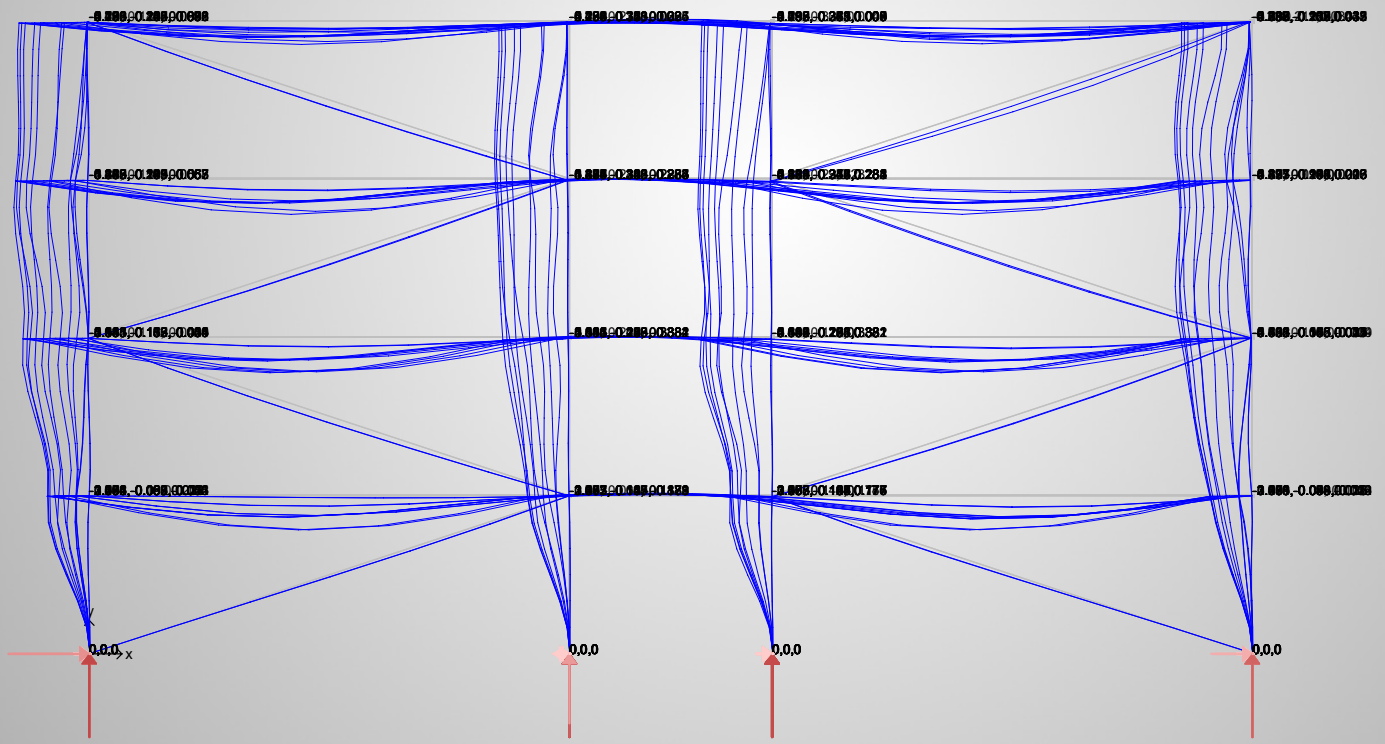
SHEAR WALLS


0.16
0.221
0.554
0.753
0.099
0.038
0.148
0.046
0.021
0.046
0.047
0.081
0.111
0.191
7.926
x

AXIAL FORCE DIAGRAM



DEFLECTIONS DIAGRAM



LATERAL LOADING & CONNECTIONS

SHEAR WALLS

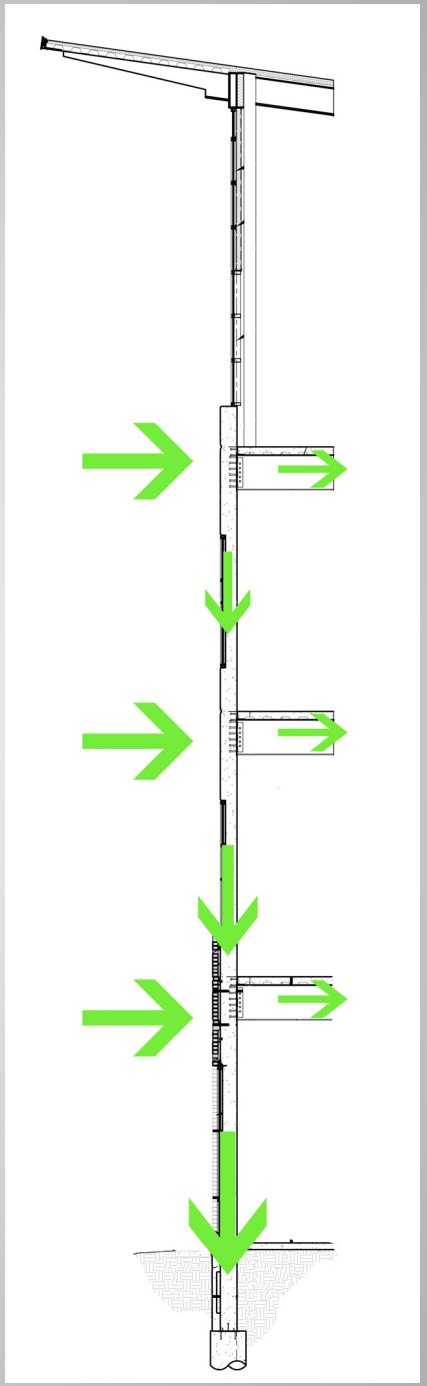
The tilt-wall panels act as shear walls surrounding the perimeter of the building.

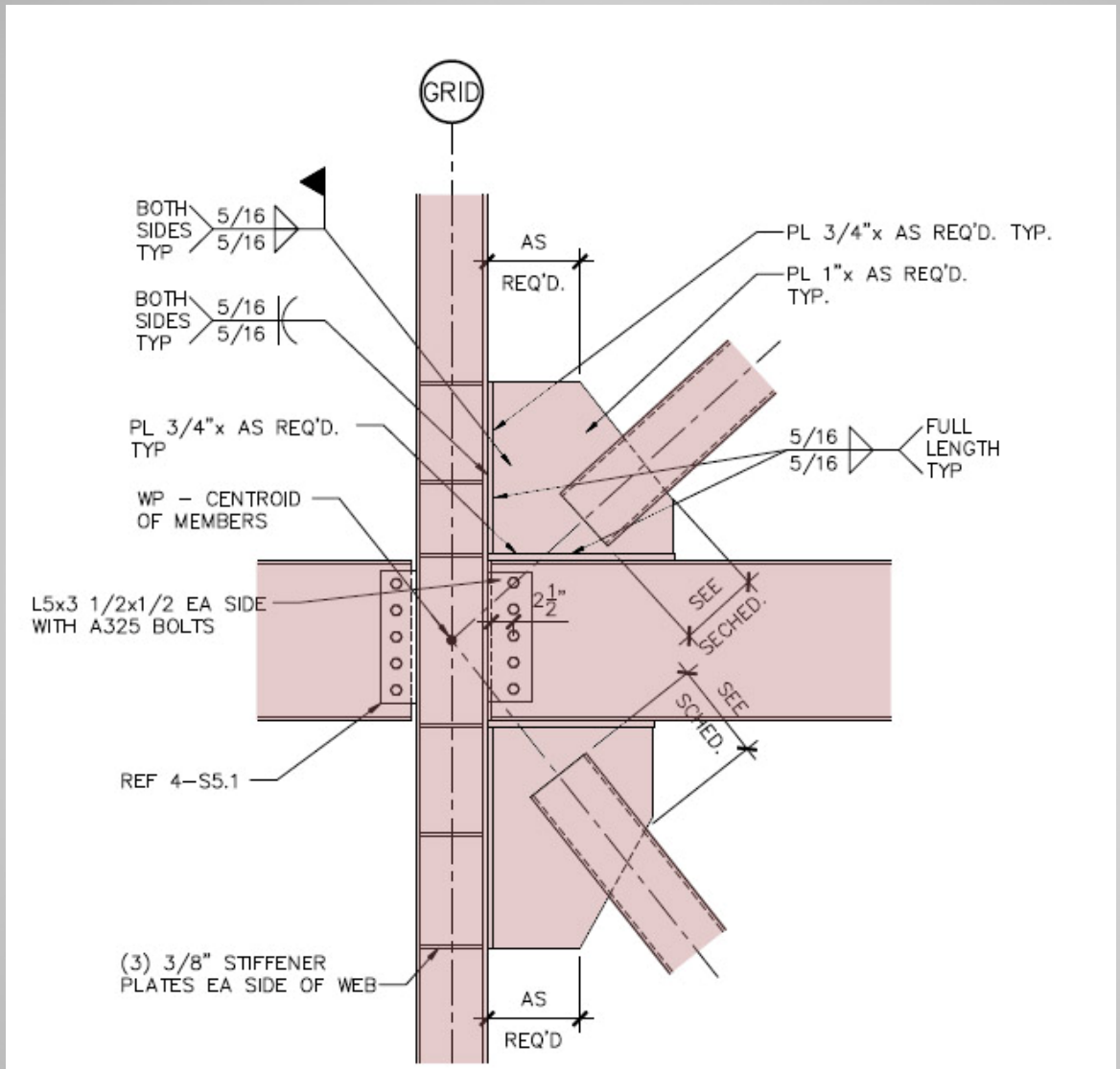
Lateral load is accepted, transferred down the wall and into the foundation, and transmitted into the steel structure.

THE DIAPHRAM

Frame action of the “guts” of the building help maintain rigidity throughout the structure.

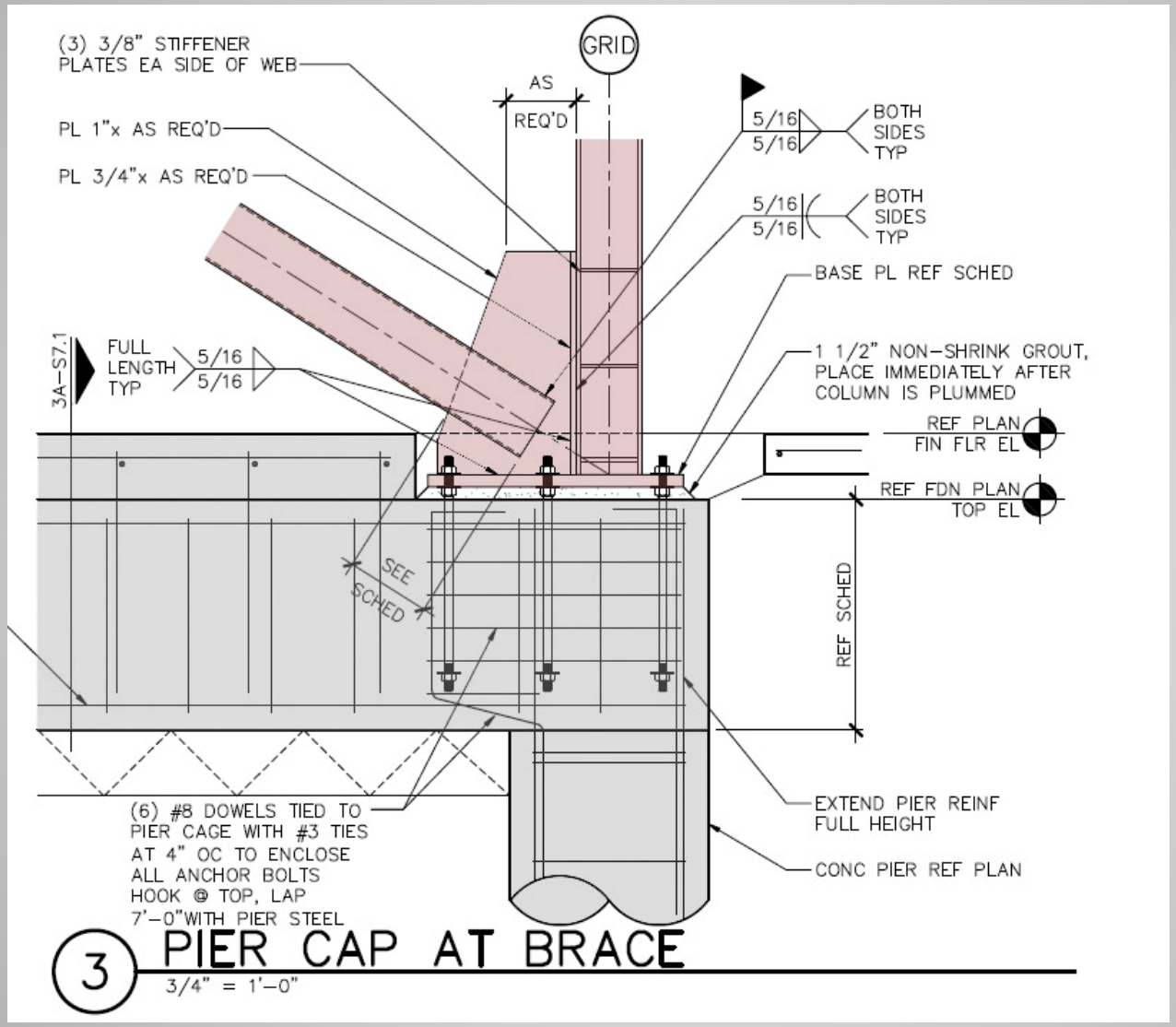
All of the lateral bracing (cross bracing and chevron bracing) is located in the center of each wing and in the core.

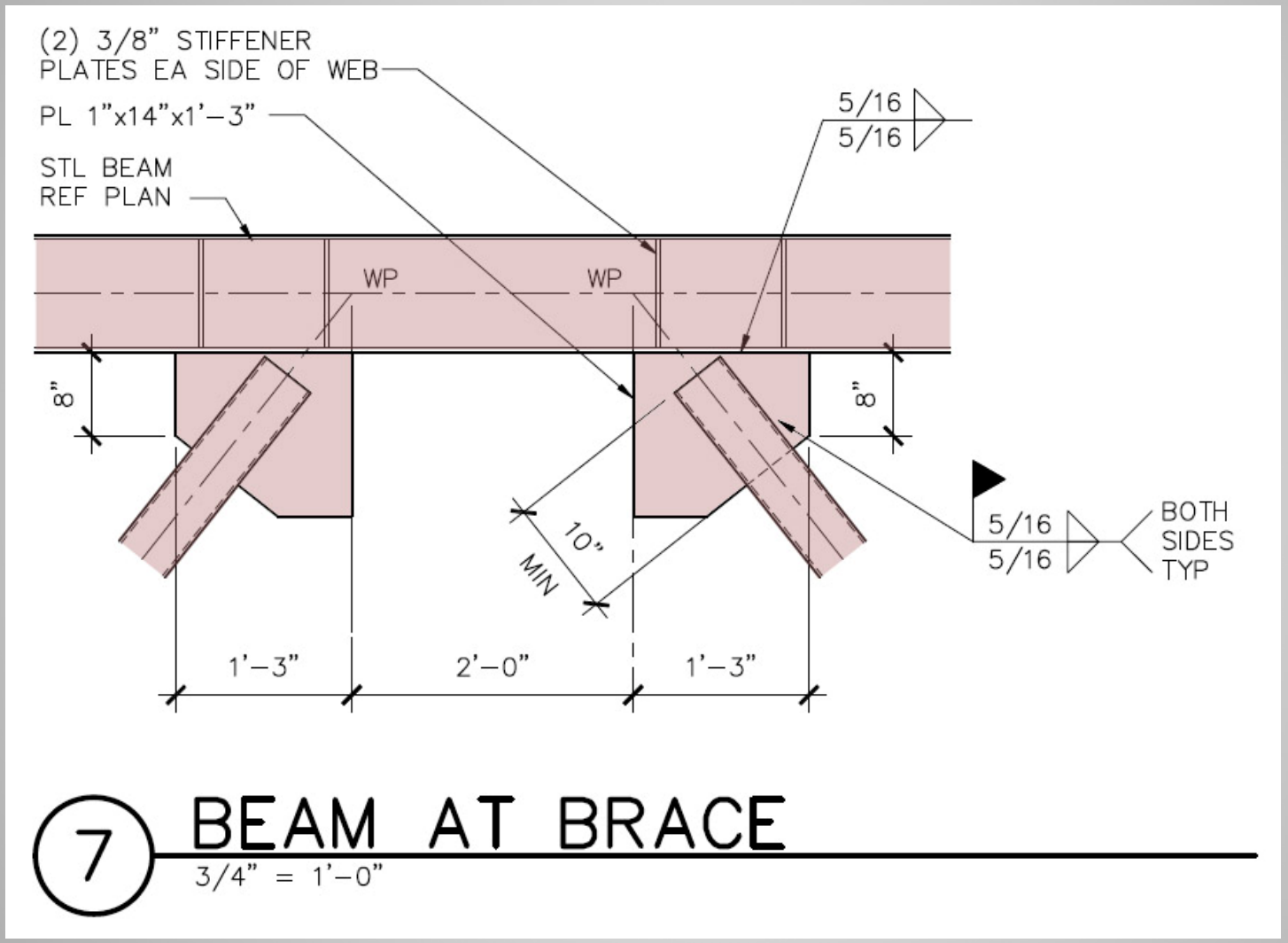




4 BEAM AT BRACE

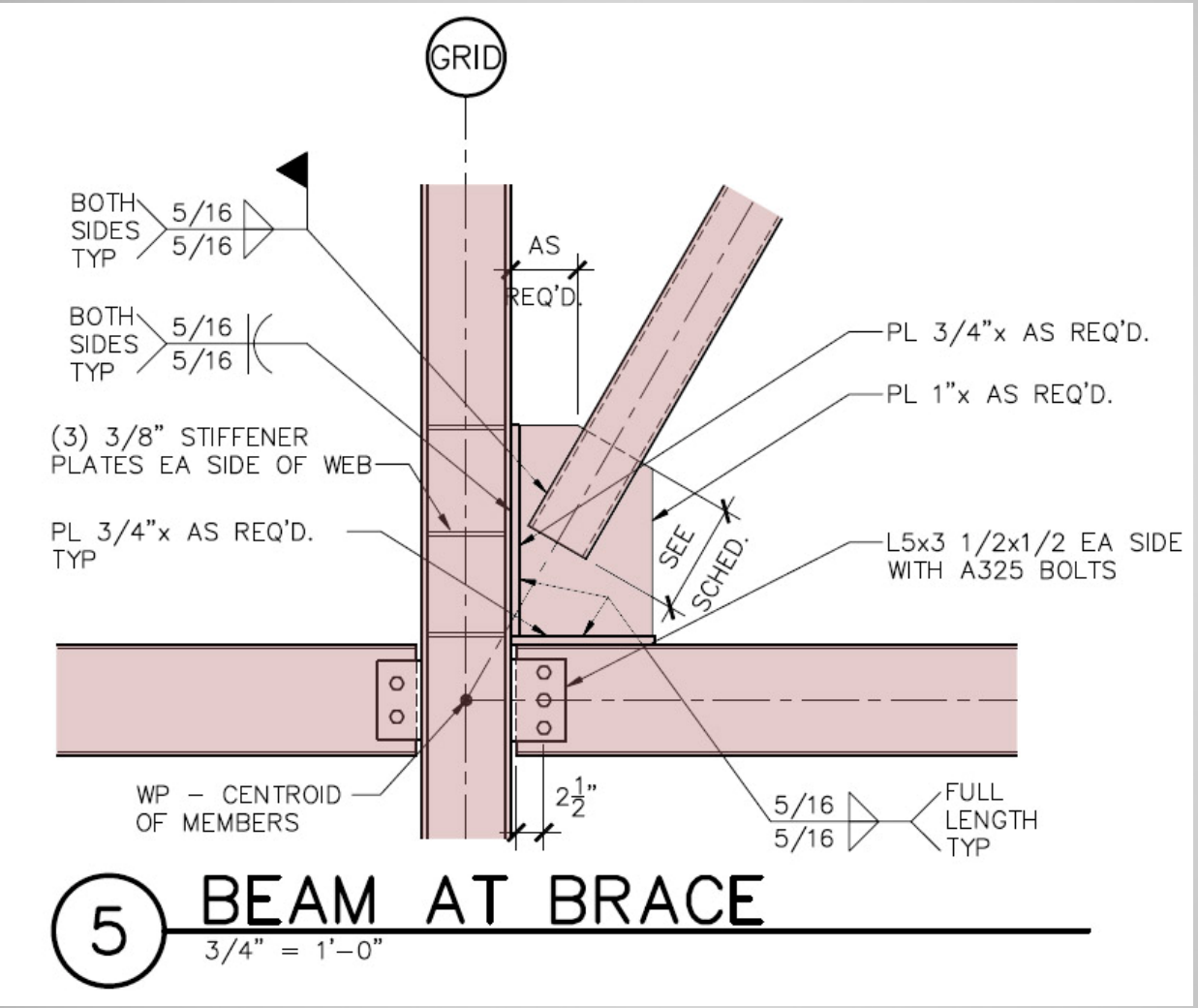
3/4" = 1'–0"


(3) 3/8" STIFFENER PLATES EA SIDE OF WEB
PL 1"x AS REQ'D
PL 3/4"x AS REQ'D
GRID
AS REQ'D
5/16
5/16
BOTH SIDES TYP
5/16
5/16
BOTH SIDES TYP
BASE PL REF SCHED
1 1/2" NON-SHRINK GROUT, PLACE IMMEDIATELY AFTER COLUMN IS PLUMMED
3A-S7.1
FULL LENGTH TYP
5/16
5/16
REF PLAN FIN FLR EL
REF FDN PLAN TOP EL
SEE SCHED
REF SCHED
EXTEND PIER REINF FULL HEIGHT
CONC PIER REF PLAN
(6) #8 DOWELS TIED TO PIER CAGE WITH #3 TIES AT 4" OC TO ENCLOSE ALL ANCHOR BOLTS HOOK @ TOP, LAP 7'-0"WITH PIER STEEL
3
PIER CAP AT BRACE
3/4" = 1'-0"



7 BEAM AT BRACE

3/4" = 1'-0"

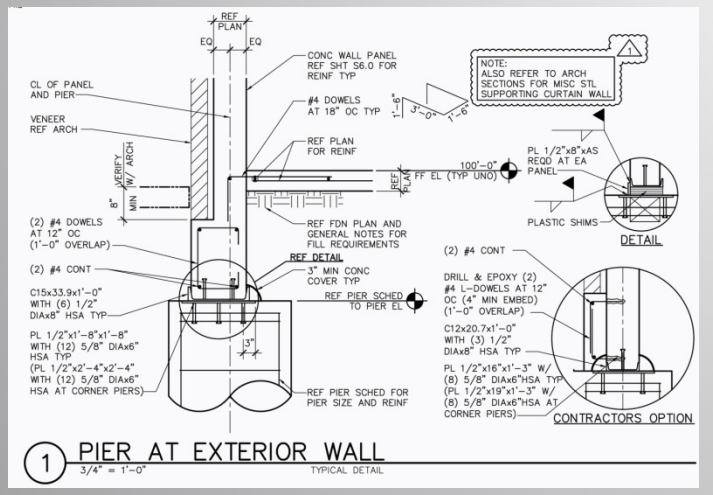


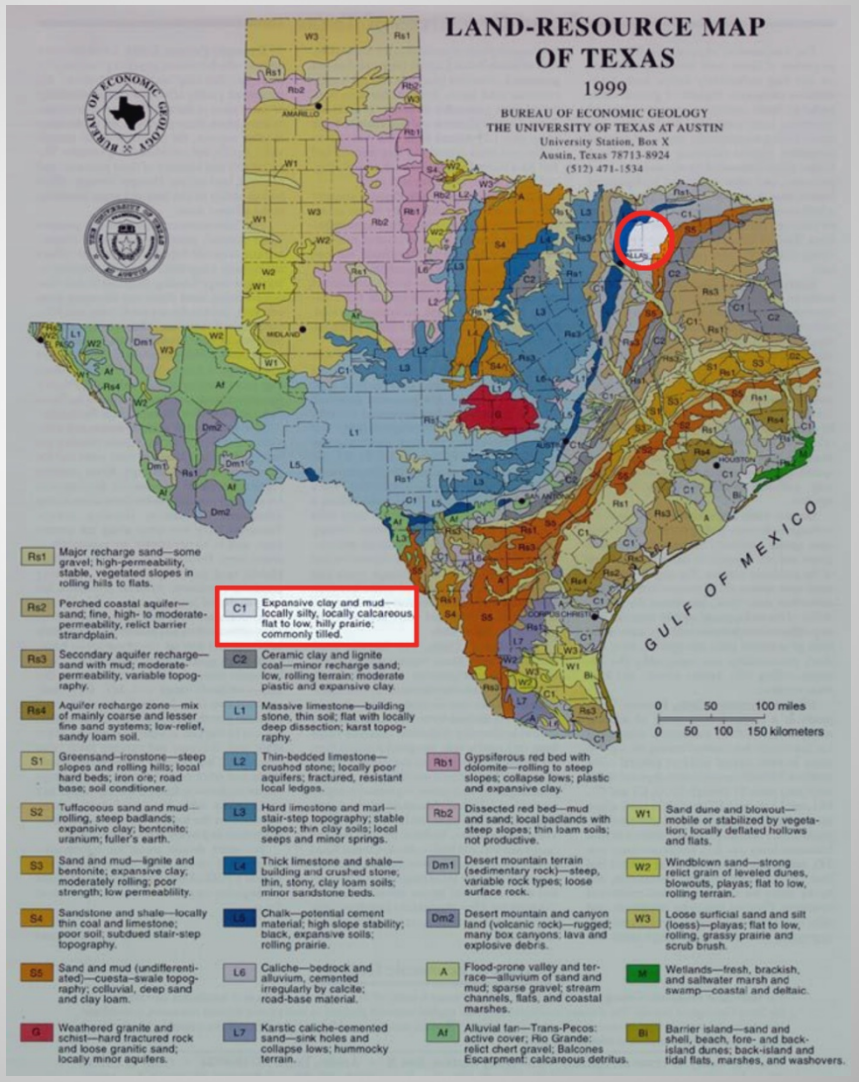
5 BEAM AT BRACE

3/4" = 1'–0"

SOIL CONDITIONS

- Expansive clay
  - differential movement
- Benefits of pier construction
  - anchors for concrete slab – prevent rise and fall of soil
  - deeper soil – less moisture





Cigna Point's soil support system: the subgrade will consist of engineered select fill material and will be be proof-rolled to help compact subgrade prior to the concrete placement. The vapor retarder will be located directly below the concrete slab.