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CONSULTING ENGINEER
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alexjacob@unitedconsultants.in
Web : www.unitedconsultants.in

08.03.2024

STABILITY CERTIFICATE

It is Certified that the Proposed Construction of Residential Building comprised in Survey No.99/6C1A2B, in Muttukadu Village, Thiruporur Taluk, Chengelpet District, (formerly Chengelpet Taluk, Kancheepuram District), having Ground + 5 Floors, is designed to resist earth quake. Check has been made and found safe and I hereby certify that,

1. The minimum grade of concrete is M 25.

2. The design and analysis using the Code of Practice for Plain and Reinforced concrete as per IS 456, Design Loads as per IS-875 Part I to V and Design of Earthquake Resistant Structures as per IS 1893 are carried out.

The building will be sound and stable when used for the purpose for which it is designed.

(Dr.ALEX JACOB)

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41/A, BEACH ROAD, KALAKSHETRA COLONY,
CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

THE PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING COMPRISED IN SURVEY NO.99/6C1A2B, IN MUTTUKADU VILLAGE, THIRUPORUR TALUK, CHENGELPET DISTRICT, (FORMERLY CHENGELPET TALUK, KANCHEEPURAM DISTRICT).

GENERAL NOTE ON STRUCTURAL DESIGN

1.0 GENERAL

1.1 DESIGN BASIS

The design of this building is carried out based on frame analysis using STAAD Pro V8i.

The Building is having Ground + 5 Floors.

1.2 CODES AND STANDARDS

All structural design is carried out conforming to the provisions in National Building Code of India and other relevant Indian Codes and Standards.

1. I.S. 456
2. I.S. 875 - Part I to V
3. I.S.1893
4. I.S.13920
5. I.S.800

2.0 BASIC CIVIL DESIGN LOADS

2.0 DEAD LOADS & LIVE LOADS

Typical slab dead load is calculated as follows

Residential Building

Self weight of slab	=	2.0kN/m²
Floor finish	=	2.0kN/m²
Live load	=	3.0kN/m²
		7.0kN/m²

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3.0 SOIL DETAILS

Based on Soil Test Report Isolated footing is adopted.

4.0 DESIGN METHODS

General design and detailing of concrete members/elements are done conforming to the provisions of I.S: 456 and other relevant I.S codes. Limit State method is followed for the design.

Seismic Zone III load is taken into account for the analysis. The predominant direction of vibration is horizontal. Relevant combination of forces has been taken into account.

4.1

Load Combination	Ultimate Limit Load	Serviceability Limit State
DL+LL+WL Or DL+LL+EL	1.2DL+1.2LL+1.2WL Or 1.2DL+1.2LL+1.2EL	DL+LL+WL Or DL+LL+EL

-

4.2.1 MINIMUM COVER

Slab	20 mm
Beam	25 mm
Columns	40 mm
Foundations	50 mm

Structure will be sound and stable when used for the purpose for which it is designed.

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CHENNAI - 600 090.
REG No. SE/GR-I/19/02/001
REG No. RSE100392019

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*          STAAD.Pro CONNECT Edition             *
*          Version  22.12.00.142                 *
*          Proprietary Program of                *
*          Bentley Systems, Inc.                 *
*          Date=    MAY 17, 2023                 *
*          Time=    12:20:28                     *
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*  Licensed to: United Consultanta               *
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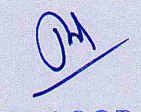
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     2. START JOB INFORMATION
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     4. JOB NAME THE PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING COMPRISED IN -
     5. SURVEY NO.99/6C1A2B, IN MUTTUKADU VILLAGE, THIRUPORUR TALUK, CHENGELPET -
     6. DISTRICT, (FORMERLY CHENGELPETTALUK, KANCHEEPURAM DISTRICT), HAVING GROUND + -
     7. 5 FLOORS
     8. ENGINEER NAME KAVIYARASU R
     9. CHECKER NAME ALEX JACOB
    10. APPROVED NAME ALEX JACOB
    11. CHECKER DATE 5/17/2023
    12. APPROVED DATE 5/17/2023
    13. END JOB INFORMATION
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    17. 1 0 0 0; 2 5.7 0 0; 3 11.145 0 0; 4 13.845 0 0; 5 19.695 0 0; 6 24.995 0 0
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    21. 22 13.845 9.15 0; 23 19.695 9.15 0; 24 24.995 9.15 0; 25 0 12.2 0
    22. 26 5.7 12.2 0; 27 11.145 12.2 0; 28 13.845 12.2 0; 29 19.695 12.2 0
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    25. 38 5.7 18.3 0; 39 11.145 18.3 0; 40 13.845 18.3 0; 41 19.695 18.3 0
    26. 42 24.995 18.3 0
    27. MEMBER INCIDENCES
    28. 6 1 7; 7 2 8; 8 3 9; 9 4 10; 10 5 11; 11 6 12; 12 7 13; 13 8 14; 14 9 15
    29. 15 10 16; 16 11 17; 17 12 18; 18 13 19; 19 14 20; 20 15 21; 21 16 22; 22 17 23
    30. 23 18 24; 24 19 25; 25 20 26; 26 21 27; 27 22 28; 28 23 29; 29 24 30; 30 25 31
    31. 31 26 32; 32 27 33; 33 28 34; 34 29 35; 35 30 36; 36 31 37; 37 32 38; 38 33 39
    32. 39 34 40; 40 35 41; 41 36 42; 42 7 8; 43 8 9; 44 9 10; 45 10 11; 46 11 12
    33. 47 13 14; 48 14 15; 49 15 16; 50 16 17; 51 17 18; 52 19 20; 53 20 21; 54 21 22
    34. 55 22 23; 56 23 24; 57 25 26; 58 26 27; 59 27 28; 60 28 29; 61 29 30; 62 31 32
    35. 63 32 33; 64 33 34; 65 34 35; 66 35 36; 67 37 38; 68 38 39; 69 39 40; 70 40 41
    36. 71 41 42
    37. DEFINE MATERIAL START
    38. ISOTROPIC CONCRETE
```

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Reg.No.CGLRGN/SE/Gr-I/2019/09/041

```
39. E 2.17185E+07
40. POISSON 0.17
41. DENSITY 23.5616
42. ALPHA 1E-05
43. DAMP 0.05
44. G 9.28139E+06
45. TYPE CONCRETE
46. STRENGTH FCU 27579
47. END DEFINE MATERIAL
48. MEMBER PROPERTY
49. 6 TO 11 PRIS YD 0.6 ZD 0.3
50. 12 TO 41 PRIS YD 0.6 ZD 0.2
51. 42 TO 71 PRIS YD 0.5 ZD 0.2
52. CONSTANTS
53. MATERIAL CONCRETE ALL
54. SUPPORTS
55. 1 TO 6 FIXED
56. DEFINE WIND LOAD

*** NOTE: If any floor diaphragm is present in the model Wind Load definition
          should be defined after Floor Diaphragm definition. Otherwise wind
          load generation may be unsuccessful during analysis.

57. TYPE 1 WIND 1
58. <! STAAD PRO GENERATED DATA DO NOT MODIFY !!!
59. IS875-2015:PARAMS 0 0 0 0.000 0.000 5.000 0 50.000 0 1.000 0 0 1.000 2 1.000 -
60. 1.000 0 0.000 0.000 0.000 0 0 0 1.000 0 0 0.200 1.000 0 1.000 1.000 1.000
61. !> END GENERATED DATA BLOCK
62. INT 1 1 1.671 1.709 HEIG  5  10  15  18.3
63. DEFINE IS1893 2016 LOAD
64. ZONE 0.16 RF 2.5 I 1.2 SS 2 ST 1 DM 0.05 PX 0.67 PZ 0.67
65. SELFWEIGHT -1
66. MEMBER WEIGHT
67. 42 TO 71 UNI -10.2 0 0
68. 42 TO 71 UNI -7.8 0 0
69. LOAD 1 LOADTYPE SEISMIC-H  TITLE EQ X
70. 1893 LOAD X 1
71. LOAD 2 LOADTYPE SEISMIC-H  TITLE EQ -X
72. 1893 LOAD X -1.
73. LOAD 3 LOADTYPE SEISMIC-H  TITLE EQ Z
74. 1893 LOAD Z 1
75. LOAD 4 LOADTYPE SEISMIC-H  TITLE EQ -Z
76. 1893 LOAD Z -1.
77. LOAD 5 LOADTYPE DEAD  TITLE DL
```



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```
78. SELFWEIGHT Y -1
79. MEMBER LOAD
80. 42 TO 71 UNI GY -10.2
81. LOAD 6 LOADTYPE LIVE  TITLE LL
82. MEMBER LOAD
83. 42 TO 71 UNI GY -7.8
84. LOAD 7 LOADTYPE WIND  TITLE WL Z
85. WIND LOAD Z 1 TYPE 1
86. LOAD 8 LOADTYPE WIND  TITLE WL -Z
87. WIND LOAD -Z -1 TYPE 1
88. LOAD COMB 9 1.5(DL+LL)
89. 5 1.5 6 1.5
90. LOAD COMB 10 1.2(DL+LL+EQX)
91. 5 1.2 6 1.2 1 1.2
92. LOAD COMB 11 1.2(DL+LL-EQX)
93. 5 1.2 6 1.2 2 1.2
94. LOAD COMB 12 1.2(DL+LL+EQZ)
95. 6 1.2 5 1.2 3 1.2
96. LOAD COMB 13 1.2(DL+LL-EQZ)
97. 5 1.2 6 1.2 4 1.2
98. LOAD COMB 14 1.5(DL+EQX)
99. 5 1.5 1 1.5
100. LOAD COMB 15 1.5(DL-EQX)
101. 5 1.5 2 1.5
102. LOAD COMB 16 1.5(DL+EQZ)
103. 5 1.5 3 1.5
104. LOAD COMB 17 1.5(DL-EQZ)
105. 5 1.5 4 1.5
106. LOAD COMB 18 0.9DL+1.5EQX
107. 5 0.9 1 1.5
108. LOAD COMB 19 0.9DL-1.5EQX
109. 5 0.9 2 1.5
110. LOAD COMB 20 0.9DL+1.5EQZ
111. 5 0.9 3 1.5
112. LOAD COMB 21 0.9DL-1.5EQZ
113. 5 0.9 4 1.5
114. LOAD COMB 22 1.2(DL+LL+WLZ)
115. 5 1.2 6 1.2 7 1.2
116. LOAD COMB 23 1.2(DL+LL-WLZ)
117. 5 1.2 6 1.2 8 1.2
118. LOAD COMB 24 1.5(DL+WLZ)
119. 5 1.5 7 1.5
120. LOAD COMB 25 1.5(DL-WLZ)
121. 5 1.5 8 1.5
122. LOAD COMB 26 0.9DL+1.5WLZ
123. 5 0.9 7 1.5
124. LOAD COMB 27 0.9DL-1.5WLZ
125. 5 0.9 8 1.5
126. PERFORM ANALYSIS
```

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P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	42	NUMBER OF MEMBERS	66
NUMBER OF PLATES	0	NUMBER OF SOLIDS	0
NUMBER OF SURFACES	0	NUMBER OF SUPPORTS	6

Using 64-bit analysis engine.

SOLVER USED IS THE IN-CORE ADVANCED MATH SOLVER

TOTAL PRIMARY LOAD CASES = 8, TOTAL DEGREES OF FREEDOM = 216
TOTAL LOAD COMBINATION CASES = 19 SO FAR.

**WARNING: IF THIS UBC/IBC ANALYSIS HAS TENSION/COMPRESSION
OR REPEAT LOAD OR RE-ANALYSIS OR SELECT OPTIMIZE, THEN EACH
UBC/IBC CASE SHOULD BE FOLLOWED BY PERFORM ANALYSIS & CHANGE.

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*******************************************************
* UNITS - KN    METE                                  *
* TIME PERIOD FOR X 1893 LOADING =    0.67000 SEC     *
* SA/G PER 1893=    2.030, LOAD FACTOR= 1.000         *
* VB PER 1893=    0.0779 X     2009.79=     156.66 KN  *
* VB Act Based on Clause 7.2.1 =      156.66 KN       *
* VB Min based on Clause 7.2.2 =       22.11 KN       *
*                                                     *
*******************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*******************************************************
* UNITS - KN    METE                                  *
* TIME PERIOD FOR X 1893 LOADING =    0.67000 SEC     *
* SA/G PER 1893=    2.030, LOAD FACTOR=-1.000         *
* VB PER 1893=    0.0779 X     2009.79=    -156.66 KN  *
* VB Act Based on Clause 7.2.1 =     -156.66 KN       *
* VB Min based on Clause 7.2.2 =      -22.11 KN       *
*                                                     *
*******************************************************
```

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THE PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING AT MUT -- PAGE NO. 5

BASE SHEAR AND TIME PERIOD IN Z

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR= 1.000           *
* VB PER 1893=    0.0779 X     2009.79=     156.66 KN   *
* VB Act Based on Clause 7.2.1 =      156.66 KN         *
* VB Min based on Clause 7.2.2 =       22.11 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6

BASE SHEAR AND TIME PERIOD IN Z

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR=-1.000           *
* VB PER 1893=    0.0779 X     2009.79=    -156.66 KN   *
* VB Act Based on Clause 7.2.1 =     -156.66 KN         *
* VB Min based on Clause 7.2.2 =      -22.11 KN         *
*                                                       *
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127. FINISH

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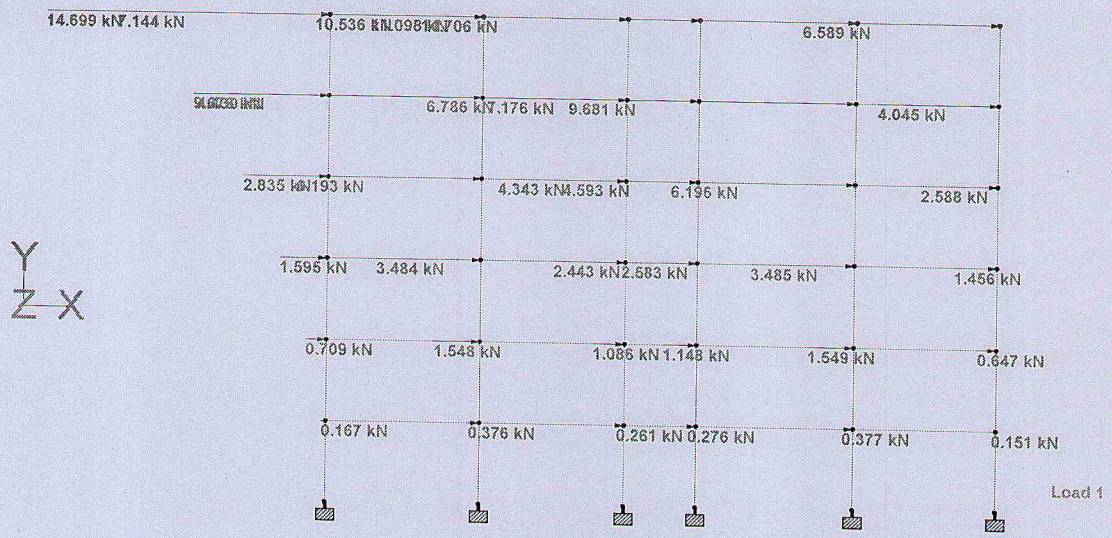
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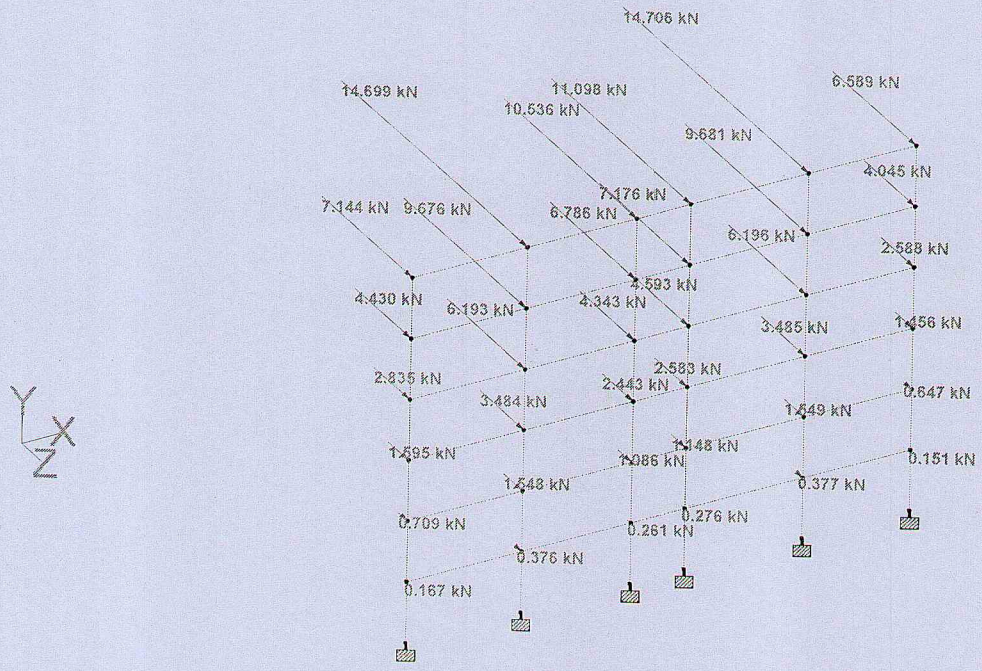
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*   For technical assistance on STAAD.Pro, please visit     *
*   http://www.bentley.com/en/support/                      *
*                                                           *
*   Details about additional assistance from                *
*   Bentley and Partners can be found at program menu       *
*   Help->Technical Support                                 *
*                                                           *
*          Copyright (c) Bentley Systems, Inc.              *
*              http://www.bentley.com                       *
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Reg.No.CGLRGN/SE/Gr-I/2019/09/041

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	Part		
Job Title the Proposed Construction of Residential Building comprised in Survey No.99/6C1A2B, in Muttukadu Village, Thiruporur Taluk, Chengelpet District,	Ref		
	By KAVIYARASU R Date 17-May-23		Chd ALEX JACOB
Client	File PROPOSED RESIDENTI	Date/Time 17-May-2023 12:20	

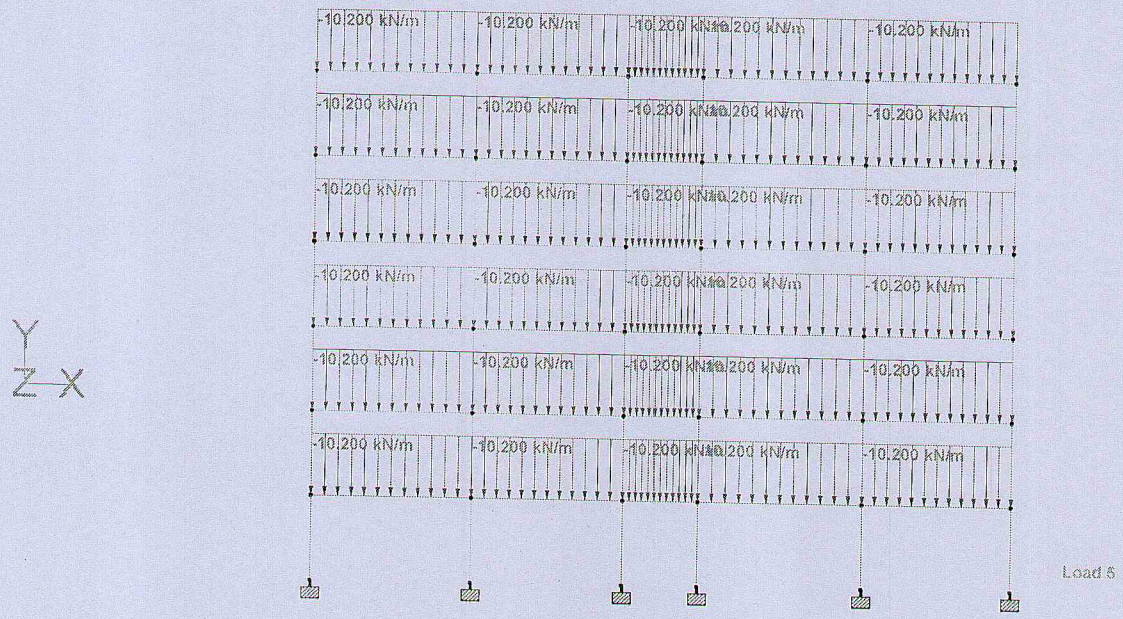


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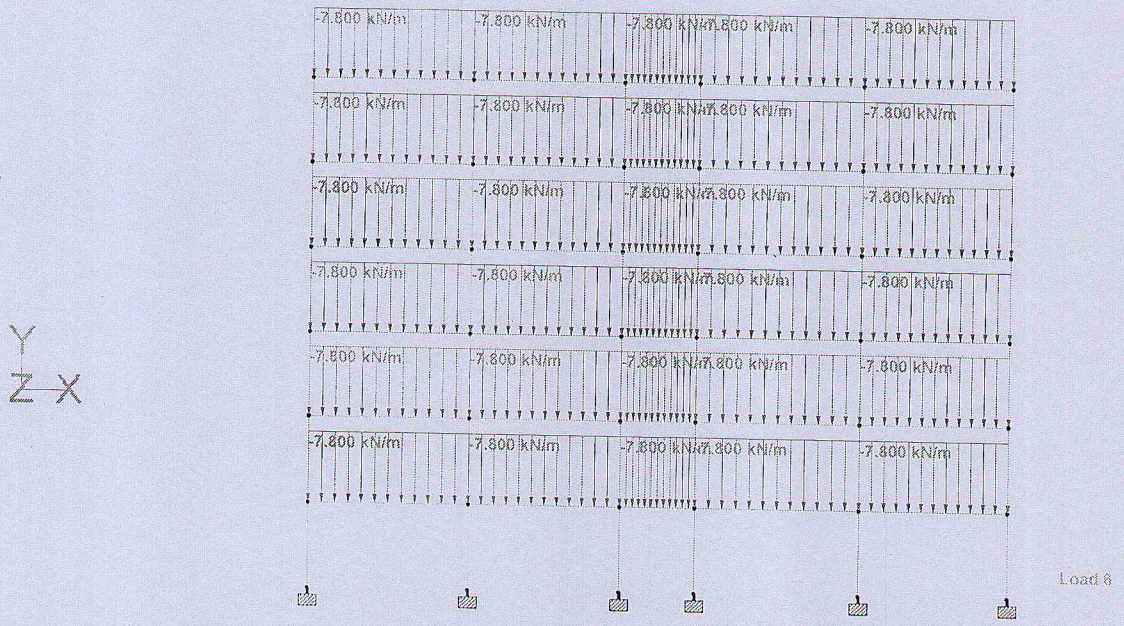


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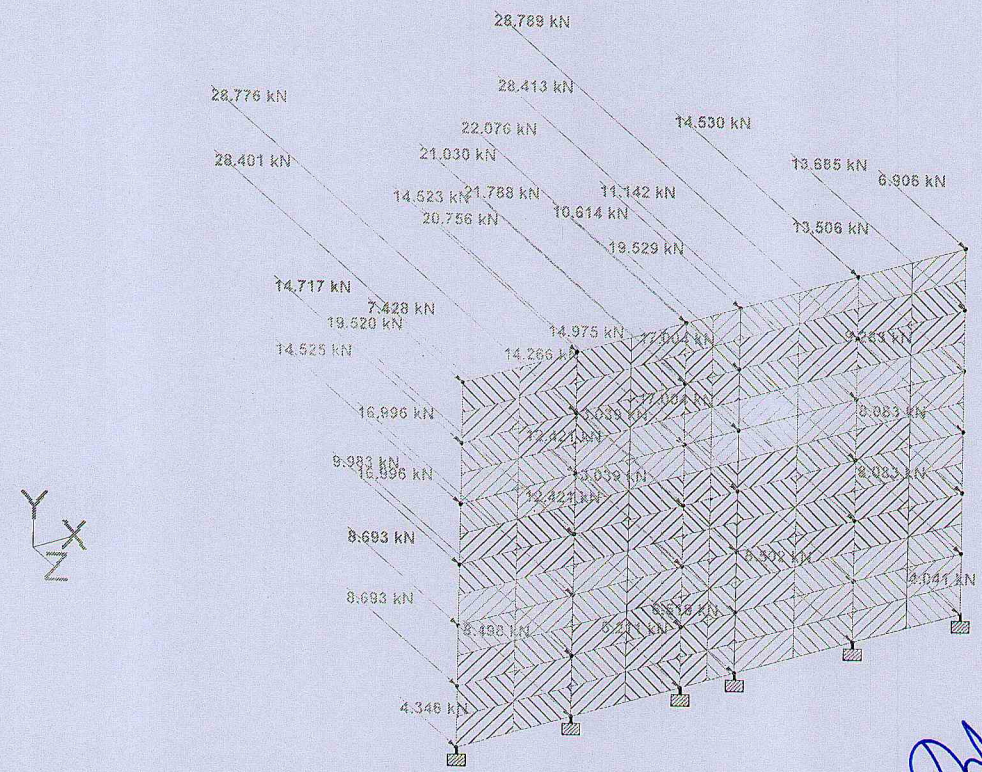
Dr. ALEX JACOB
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Load 7

Dr. ALEX JACOB
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Reg.No.CGLRGN/SE/Gr-I/2019/09/041

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*          STAAD.Pro CONNECT Edition             *
*          Version  22.12.00.142                 *
*          Proprietary Program of                *
*          Bentley Systems, Inc.                 *
*          Date=    MAY 17, 2023                 *
*          Time=    12:20:28                     *
*                                                *
*  Licensed to: United Consultanta               *
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    3. ENGINEER DATE 17-MAY-23
    4. JOB NAME THE PROPOSED CONSTRUCTION OF RESIDENTIAL BUILDING COMPRISED IN -
    5. SURVEY NO.99/6C1A2B, IN MUTTUKADU VILLAGE, THIRUPORUR TALUK, CHENGELPET -
    6. DISTRICT, (FORMERLY CHENGELPETTALUK, KANCHEEPURAM DISTRICT), HAVING GROUND + -
    7. 5 FLOORS
    8. ENGINEER NAME KAVIYARASU R
    9. CHECKER NAME ALEX JACOB
   10. APPROVED NAME ALEX JACOB
   11. CHECKER DATE 5/17/2023
   12. APPROVED DATE 5/17/2023
   13. END JOB INFORMATION
   14. INPUT WIDTH 79
   15. UNIT METER KN
   16. JOINT COORDINATES
   17. 1 0 0 0; 2 5.7 0 0; 3 11.145 0 0; 4 13.845 0 0; 5 19.695 0 0; 6 24.995 0 0
   18. 7 0 3.05 0; 8 5.7 3.05 0; 9 11.145 3.05 0; 10 13.845 3.05 0; 11 19.695 3.05 0
   19. 12 24.995 3.05 0; 13 0 6.1 0; 14 5.7 6.1 0; 15 11.145 6.1 0; 16 13.845 6.1 0
   20. 17 19.695 6.1 0; 18 24.995 6.1 0; 19 0 9.15 0; 20 5.7 9.15 0; 21 11.145 9.15 0
   21. 22 13.845 9.15 0; 23 19.695 9.15 0; 24 24.995 9.15 0; 25 0 12.2 0
   22. 26 5.7 12.2 0; 27 11.145 12.2 0; 28 13.845 12.2 0; 29 19.695 12.2 0
   23. 30 24.995 12.2 0; 31 0 15.25 0; 32 5.7 15.25 0; 33 11.145 15.25 0
   24. 34 13.845 15.25 0; 35 19.695 15.25 0; 36 24.995 15.25 0; 37 0 18.3 0
   25. 38 5.7 18.3 0; 39 11.145 18.3 0; 40 13.845 18.3 0; 41 19.695 18.3 0
   26. 42 24.995 18.3 0
   27. MEMBER INCIDENCES
   28. 6 1 7; 7 2 8; 8 3 9; 9 4 10; 10 5 11; 11 6 12; 12 7 13; 13 8 14; 14 9 15
   29. 15 10 16; 16 11 17; 17 12 18; 18 13 19; 19 14 20; 20 15 21; 21 16 22; 22 17 23
   30. 23 18 24; 24 19 25; 25 20 26; 26 21 27; 27 22 28; 28 23 29; 29 24 30; 30 25 31
   31. 31 26 32; 32 27 33; 33 28 34; 34 29 35; 35 30 36; 36 31 37; 37 32 38; 38 33 39
   32. 39 34 40; 40 35 41; 41 36 42; 42 7 8; 43 8 9; 44 9 10; 45 10 11; 46 11 12
   33. 47 13 14; 48 14 15; 49 15 16; 50 16 17; 51 17 18; 52 19 20; 53 20 21; 54 21 22
   34. 55 22 23; 56 23 24; 57 25 26; 58 26 27; 59 27 28; 60 28 29; 61 29 30; 62 31 32
   35. 63 32 33; 64 33 34; 65 34 35; 66 35 36; 67 37 38; 68 38 39; 69 39 40; 70 40 41
   36. 71 41 42
   37. DEFINE MATERIAL START
   38. ISOTROPIC CONCRETE
```

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Reg.No.CGLRGN/SE/Gr-I/2019/09/041

```
39. E 2.17185E+07
40. POISSON 0.17
41. DENSITY 23.5616
42. ALPHA 1E-05
43. DAMP 0.05
44. G 9.28139E+06
45. TYPE CONCRETE
46. STRENGTH FCU 27579
47. END DEFINE MATERIAL
48. MEMBER PROPERTY
49. 6 TO 11 PRIS YD 0.6 ZD 0.3
50. 12 TO 41 PRIS YD 0.6 ZD 0.2
51. 42 TO 71 PRIS YD 0.5 ZD 0.2
52. CONSTANTS
53. MATERIAL CONCRETE ALL
54. SUPPORTS
55. 1 TO 6 FIXED
56. DEFINE WIND LOAD

*** NOTE: If any floor diaphragm is present in the model Wind Load definition
          should be defined after Floor Diaphragm definition. Otherwise wind
          load generation may be unsuccessful during analysis.

57. TYPE 1 WIND 1
58. <! STAAD PRO GENERATED DATA DO NOT MODIFY !!!
59. IS875-2015:PARAMS 0 0 0 0.000 0.000 5.000 0 50.000 0 1.000 0 0 1.000 2 1.000 -
60. 1.000 0 0.000 0.000 0.000 0 0 0 1.000 0 0 0.200 1.000 0 1.000 1.000 1.000
61. !> END GENERATED DATA BLOCK
62. INT 1 1 1.671 1.709 HEIG  5  10  15  18.3
63. DEFINE IS1893 2016 LOAD
64. ZONE 0.16 RF 2.5 I 1.2 SS 2 ST 1 DM 0.05 PX 0.67 PZ 0.67
65. SELFWEIGHT -1
66. MEMBER WEIGHT
67. 42 TO 71 UNI -10.2 0 0
68. 42 TO 71 UNI -7.8 0 0
69. LOAD 1 LOADTYPE SEISMIC-H  TITLE EQ X
70. 1893 LOAD X 1
71. LOAD 2 LOADTYPE SEISMIC-H  TITLE EQ -X
72. 1893 LOAD X -1.
73. LOAD 3 LOADTYPE SEISMIC-H  TITLE EQ Z
74. 1893 LOAD Z 1
75. LOAD 4 LOADTYPE SEISMIC-H  TITLE EQ -Z
76. 1893 LOAD Z -1.
77. LOAD 5 LOADTYPE DEAD  TITLE DL
```

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```
78. SELFWEIGHT Y -1
79. MEMBER LOAD
80. 42 TO 71 UNI GY -10.2
81. LOAD 6 LOADTYPE LIVE  TITLE LL
82. MEMBER LOAD
83. 42 TO 71 UNI GY -7.8
84. LOAD 7 LOADTYPE WIND  TITLE WL Z
85. WIND LOAD Z 1 TYPE 1
86. LOAD 8 LOADTYPE WIND  TITLE WL -Z
87. WIND LOAD -Z -1 TYPE 1
88. LOAD COMB 9 1.5(DL+LL)
89. 5 1.5 6 1.5
90. LOAD COMB 10 1.2(DL+LL+EQX)
91. 5 1.2 6 1.2 1 1.2
92. LOAD COMB 11 1.2(DL+LL-EQX)
93. 5 1.2 6 1.2 2 1.2
94. LOAD COMB 12 1.2(DL+LL+EQZ)
95. 6 1.2 5 1.2 3 1.2
96. LOAD COMB 13 1.2(DL+LL-EQZ)
97. 5 1.2 6 1.2 4 1.2
98. LOAD COMB 14 1.5(DL+EQX)
99. 5 1.5 1 1.5
100. LOAD COMB 15 1.5(DL-EQX)
101. 5 1.5 2 1.5
102. LOAD COMB 16 1.5(DL+EQZ)
103. 5 1.5 3 1.5
104. LOAD COMB 17 1.5(DL-EQZ)
105. 5 1.5 4 1.5
106. LOAD COMB 18 0.9DL+1.5EQX
107. 5 0.9 1 1.5
108. LOAD COMB 19 0.9DL-1.5EQX
109. 5 0.9 2 1.5
110. LOAD COMB 20 0.9DL+1.5EQZ
111. 5 0.9 3 1.5
112. LOAD COMB 21 0.9DL-1.5EQZ
113. 5 0.9 4 1.5
114. LOAD COMB 22 1.2(DL+LL+WLZ)
115. 5 1.2 6 1.2 7 1.2
116. LOAD COMB 23 1.2(DL+LL-WLZ)
117. 5 1.2 6 1.2 8 1.2
118. LOAD COMB 24 1.5(DL+WLZ)
119. 5 1.5 7 1.5
120. LOAD COMB 25 1.5(DL-WLZ)
121. 5 1.5 8 1.5
122. LOAD COMB 26 0.9DL+1.5WLZ
123. 5 0.9 7 1.5
124. LOAD COMB 27 0.9DL-1.5WLZ
125. 5 0.9 8 1.5
126. PERFORM ANALYSIS
```

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P R O B L E M S T A T I S T I C S

NUMBER OF JOINTS	42	NUMBER OF MEMBERS	66
NUMBER OF PLATES	0	NUMBER OF SOLIDS	0
NUMBER OF SURFACES	0	NUMBER OF SUPPORTS	6

Using 64-bit analysis engine.

SOLVER USED IS THE IN-CORE ADVANCED MATH SOLVER

TOTAL PRIMARY LOAD CASES = 8, TOTAL DEGREES OF FREEDOM = 216
TOTAL LOAD COMBINATION CASES = 19 SO FAR.

**WARNING: IF THIS UBC/IBC ANALYSIS HAS TENSION/COMPRESSION
OR REPEAT LOAD OR RE-ANALYSIS OR SELECT OPTIMIZE, THEN EACH
UBC/IBC CASE SHOULD BE FOLLOWED BY PERFORM ANALYSIS & CHANGE.

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR X 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR= 1.000           *
* VB PER 1893=    0.0779 X     2009.79=     156.66 KN   *
* VB Act Based on Clause 7.2.1 =      156.66 KN         *
* VB Min based on Clause 7.2.2 =       22.11 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6
BASE SHEAR AND TIME PERIOD IN X

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR X 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR=-1.000           *
* VB PER 1893=    0.0779 X     2009.79=    -156.66 KN   *
* VB Act Based on Clause 7.2.1 =     -156.66 KN         *
* VB Min based on Clause 7.2.2 =      -22.11 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6

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BASE SHEAR AND TIME PERIOD IN Z

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR= 1.000           *
* VB PER 1893=    0.0779 X     2009.79=     156.66 KN   *
* VB Act Based on Clause 7.2.1 =      156.66 KN         *
* VB Min based on Clause 7.2.2 =       22.11 KN         *
*                                                       *
*********************************************************
```

***NOTE: Equivalent Static Analysis should preferably be performed for regular structures with approximate natural time period less than 0.4s and regular structures with height less than 15m in Seismic Zone II. Ref Cl.6.4.3 and 7.6

BASE SHEAR AND TIME PERIOD IN Z

```
*********************************************************
* UNITS - KN    METE                                    *
* TIME PERIOD FOR Z 1893 LOADING =    0.67000 SEC       *
* SA/G PER 1893=    2.030, LOAD FACTOR=-1.000           *
* VB PER 1893=    0.0779 X     2009.79=    -156.66 KN   *
* VB Act Based on Clause 7.2.1 =     -156.66 KN         *
* VB Min based on Clause 7.2.2 =      -22.11 KN         *
*                                                       *
*********************************************************
```

127. FINISH

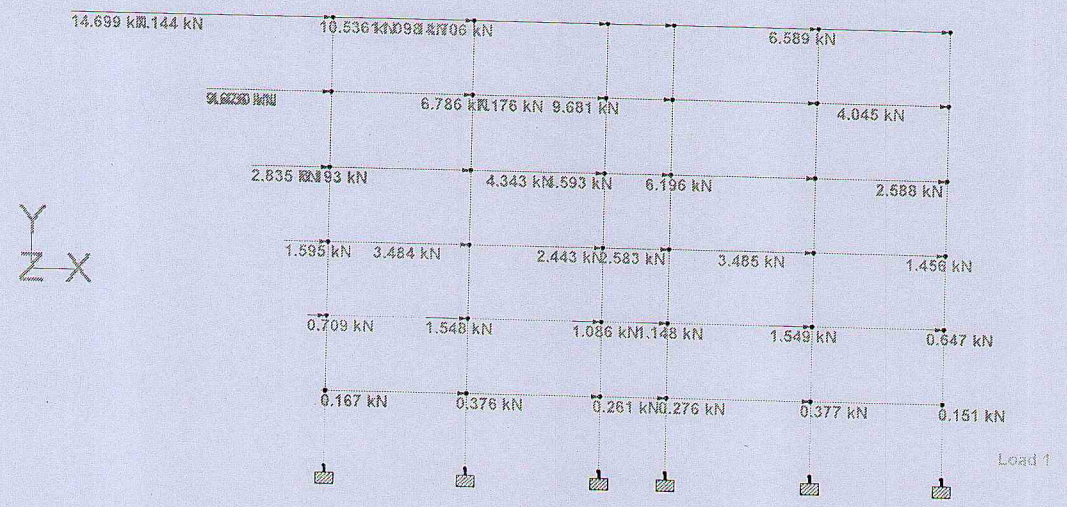
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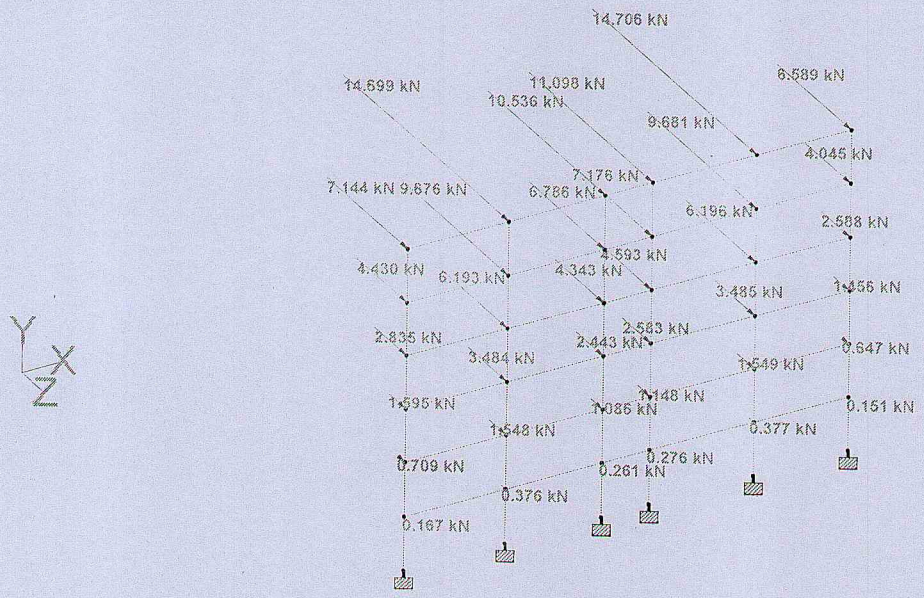
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```
*************************************************************
*   For technical assistance on STAAD.Pro, please visit     *
*   http://www.bentley.com/en/support/                      *
*                                                           *
*   Details about additional assistance from                *
*   Bentley and Partners can be found at program menu       *
*   Help->Technical Support                                 *
*                                                           *
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*************************************************************
```

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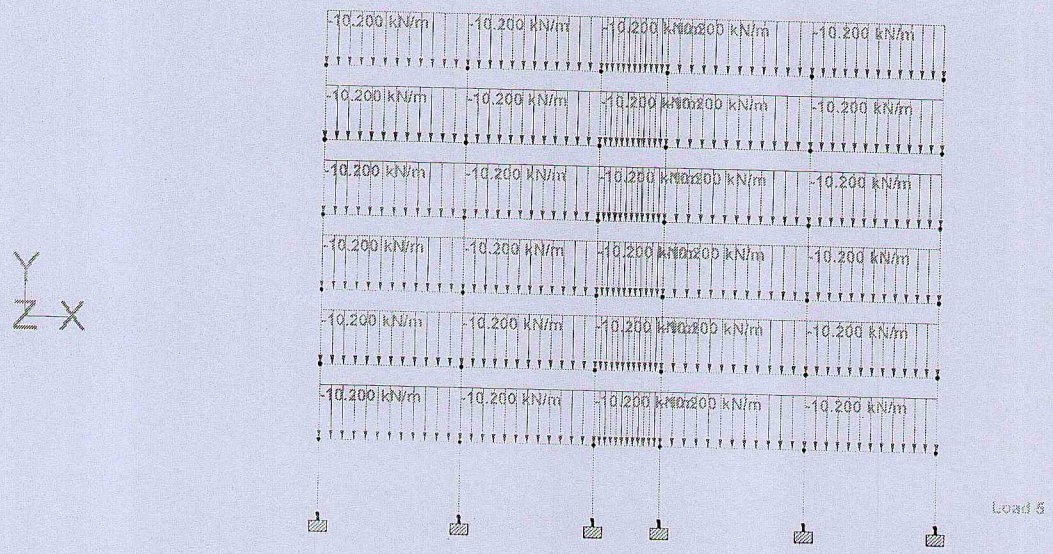


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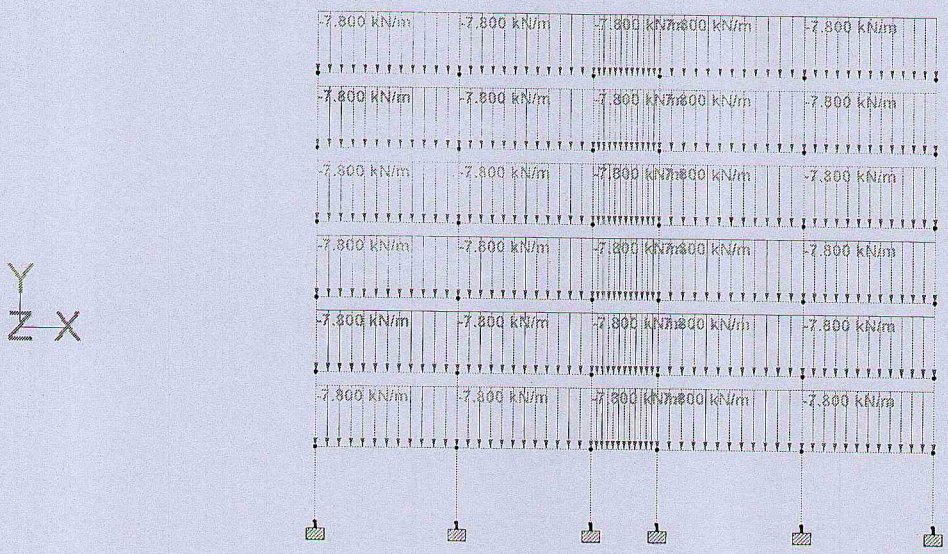
Load 3

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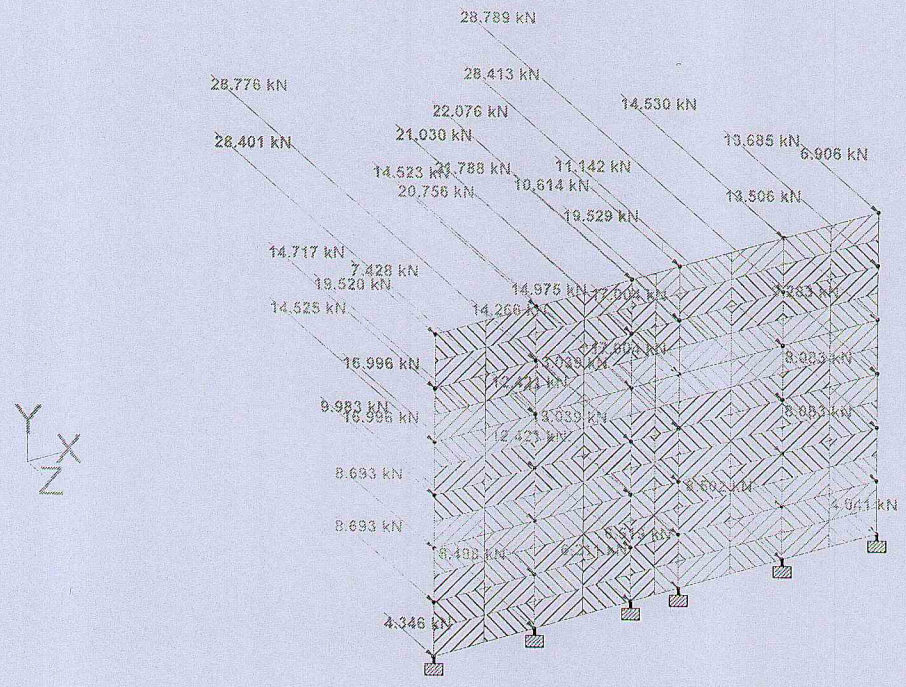


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Bentley Software licensed to United Consultanta CONNECTED User: Alex Jacobuc	Job No	Sheet No 1	Rev
	Part		
Job Title the Proposed Construction of Residential Building comprised in Survey No.99/6C1A2B, in Muttukadu Village, Thiruporur Taluk, Chengelpet District,	Ref		
	By KAVIYARASU R Date 17-May-23		Chd ALEX JACOB
Client	File PROPOSED RESIDENTI	Date/Time 17-May-2023 12:20	



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Load 7

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