

JOIST DESIGN

Joist Geometry

Span $L = 75$ ft
Joist spacing $s = 8$ ft
Joist Deep $D = 6$ ft

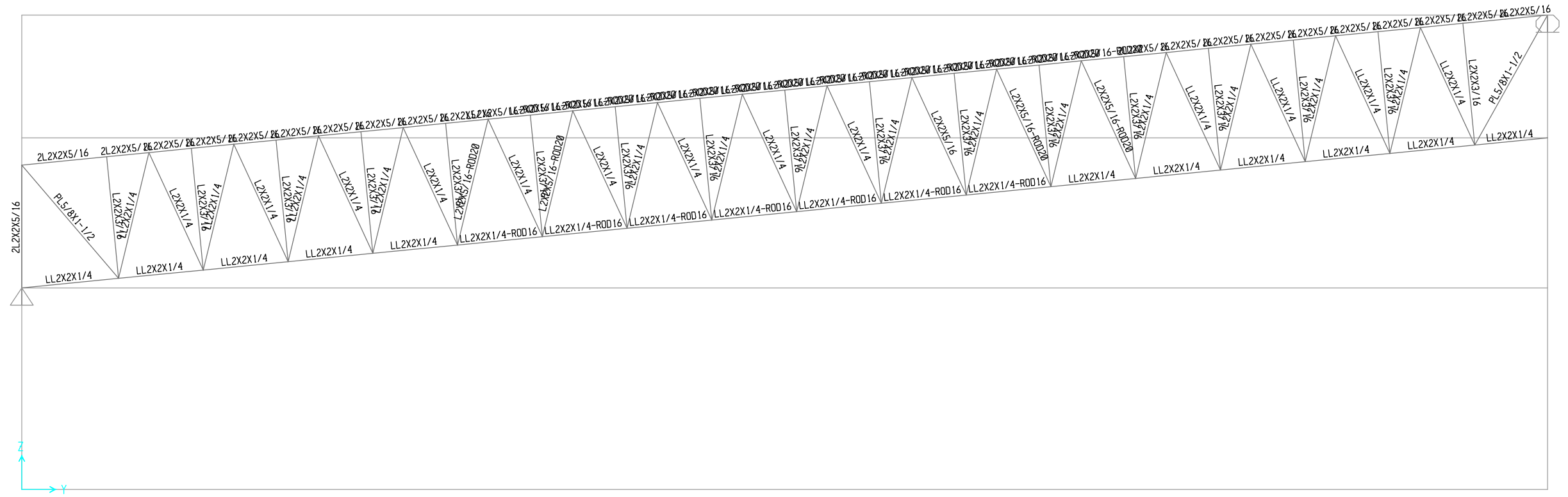
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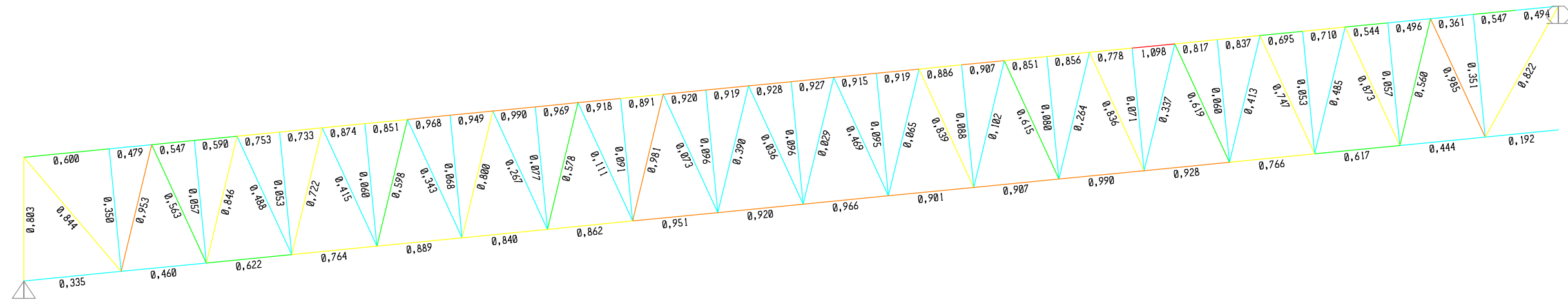
Dead load $DL = 0.53$ kPa (top chord)
 $DL = 0.75$ kPa (bottom chord)

Snow load $SL = 1.14$ kPa

Wind load $WL = 0.45$ kPa

STEEL MEMBERS	SIZE	GRADE
TOP CHORD	LL2X2X5/16	A572-GR50
BOTTOM CHORD	LL2X2X1/4	A572-GR50
VERTICAL WEB PANEL BARS	L2X2X3/16	A572-GR50
DIAGONAL WEB PANEL BARS	LL2X2X1/4 L2X2X5/16 LL2X2X5/16	A572-GR50
START AND END DIAGONAL	PL5/8*1"1/2	A572-GR50
5 ROWS BRIDGING	L1.75X1.75X3/16	A572-GR50
REINFORCEMENT	ROD 16	A615-GR40
REINFORCEMENT	ROD 20	A615-GR40





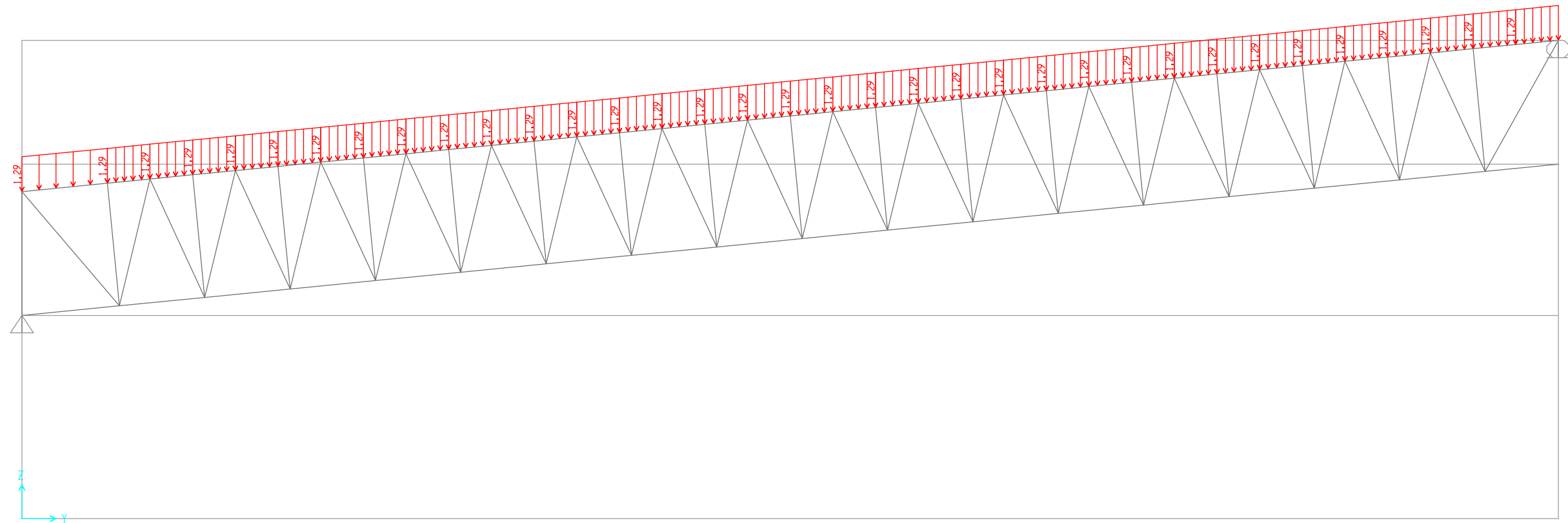
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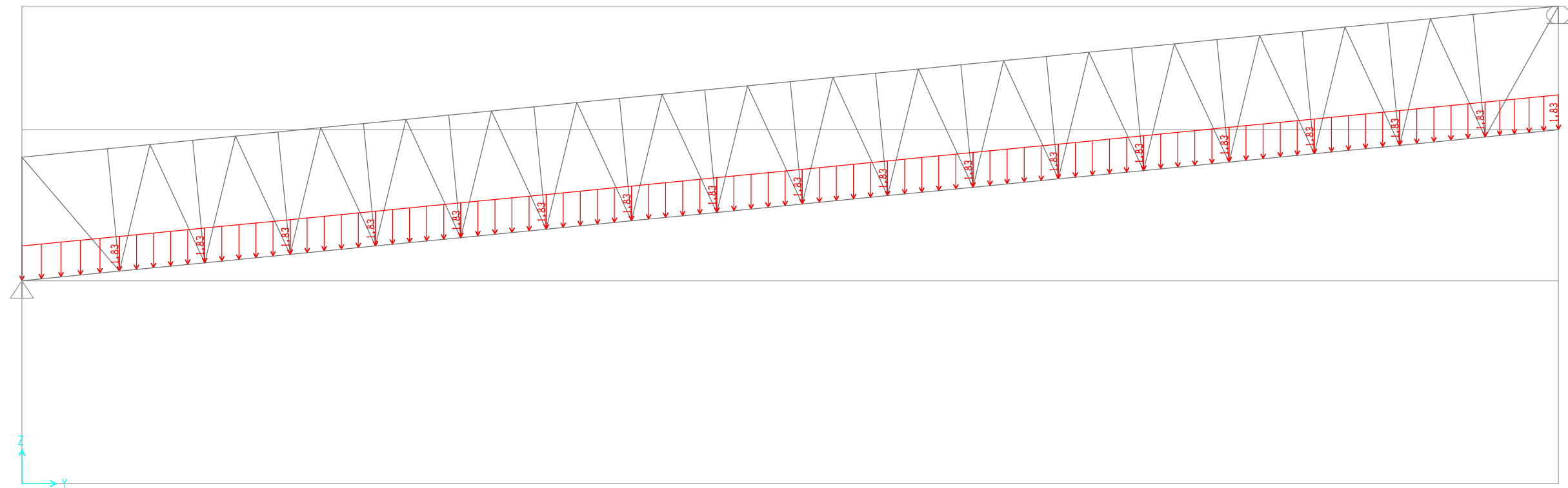
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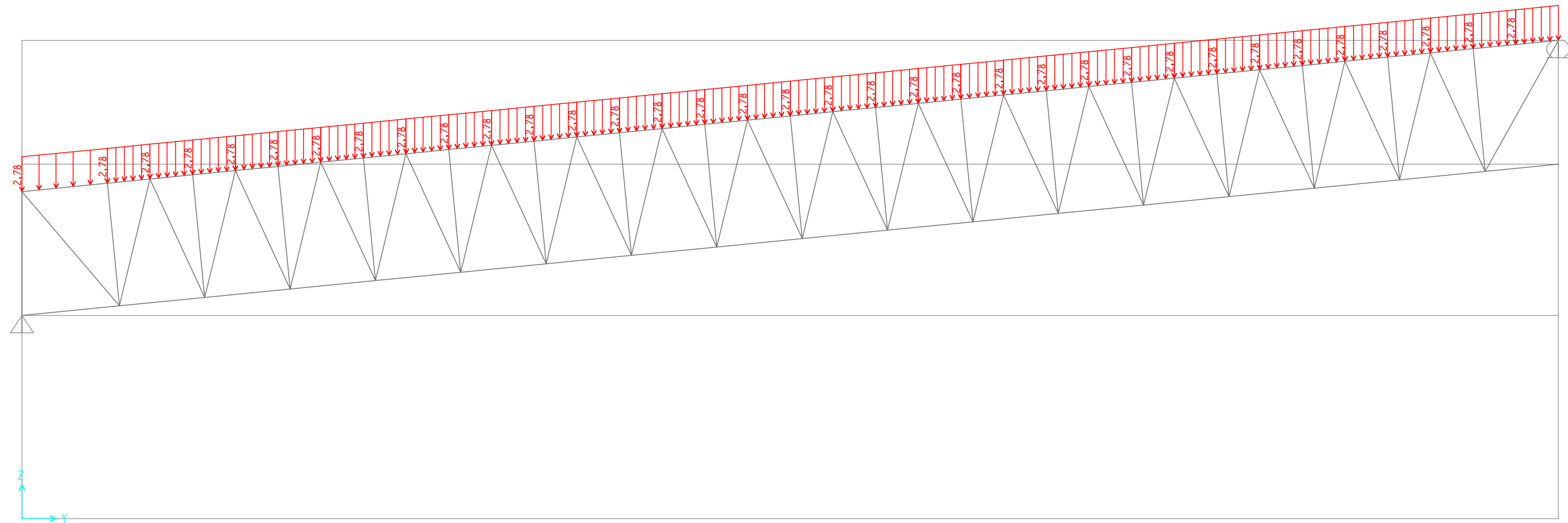
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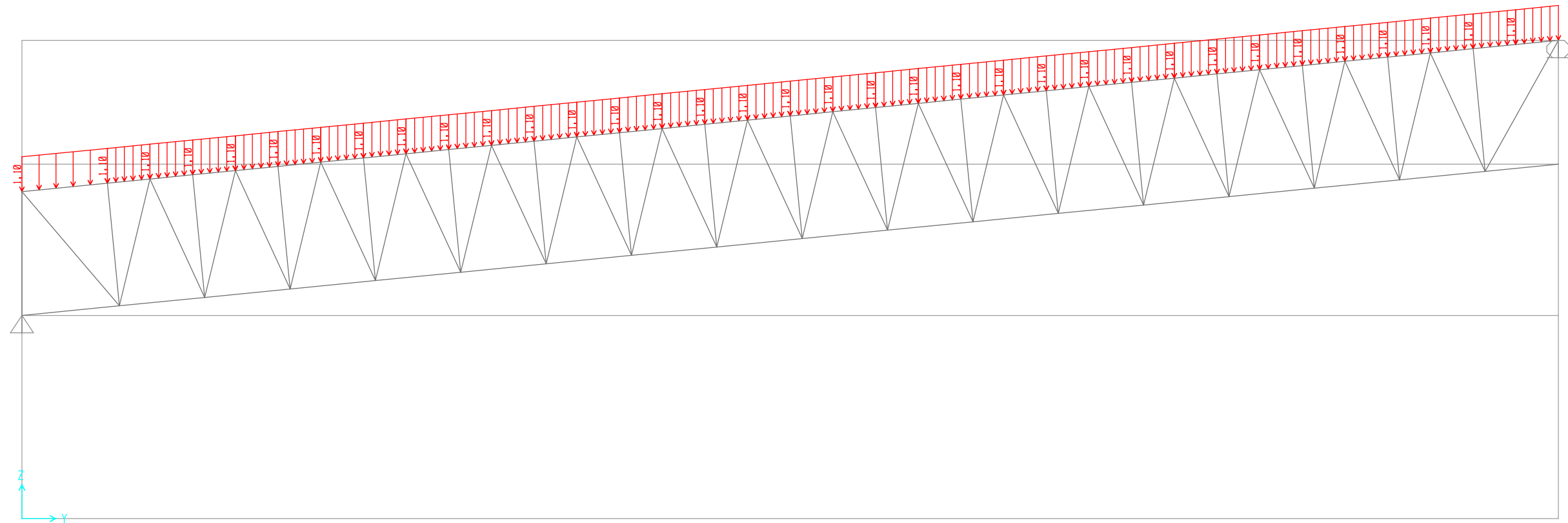
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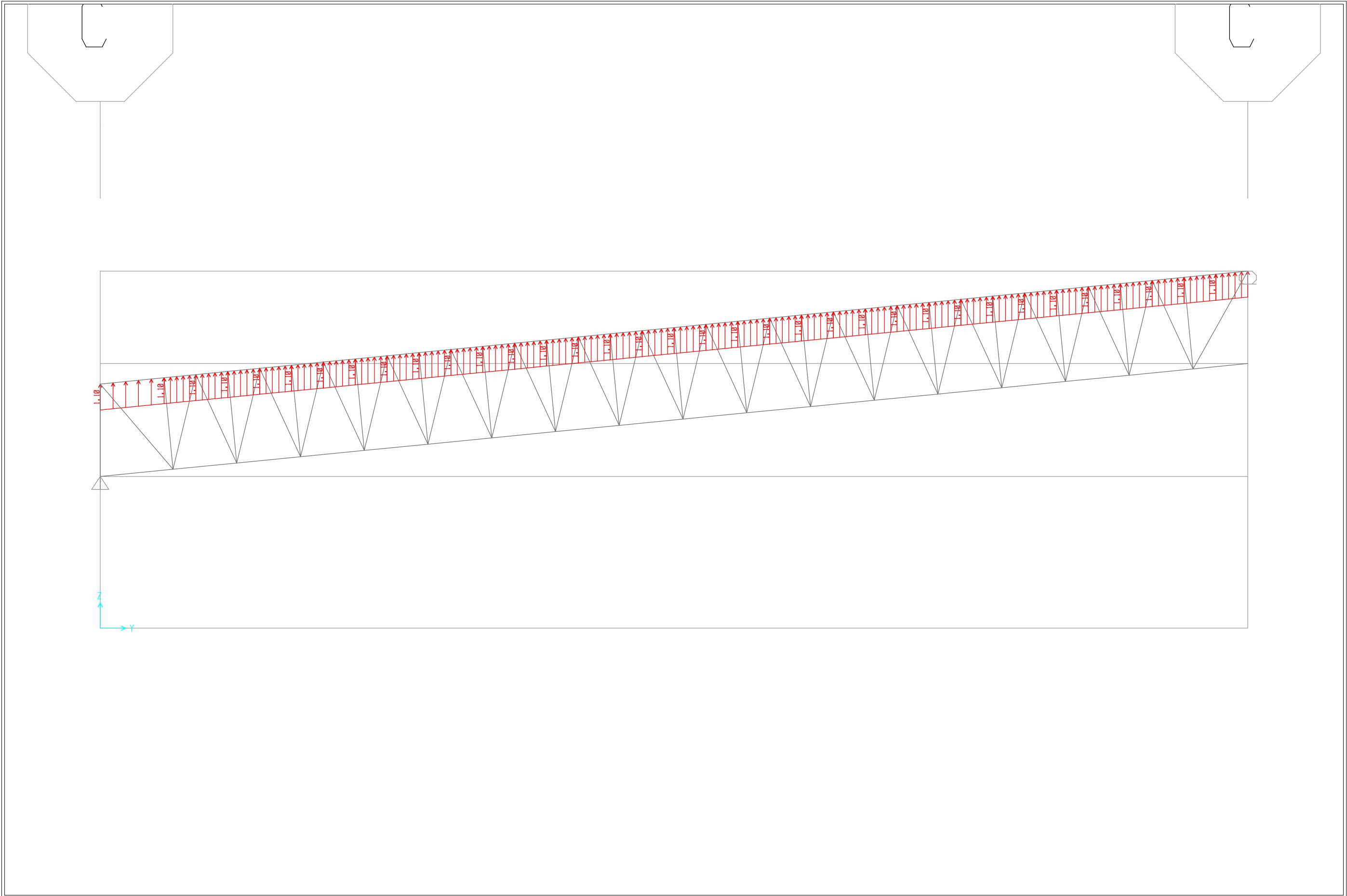
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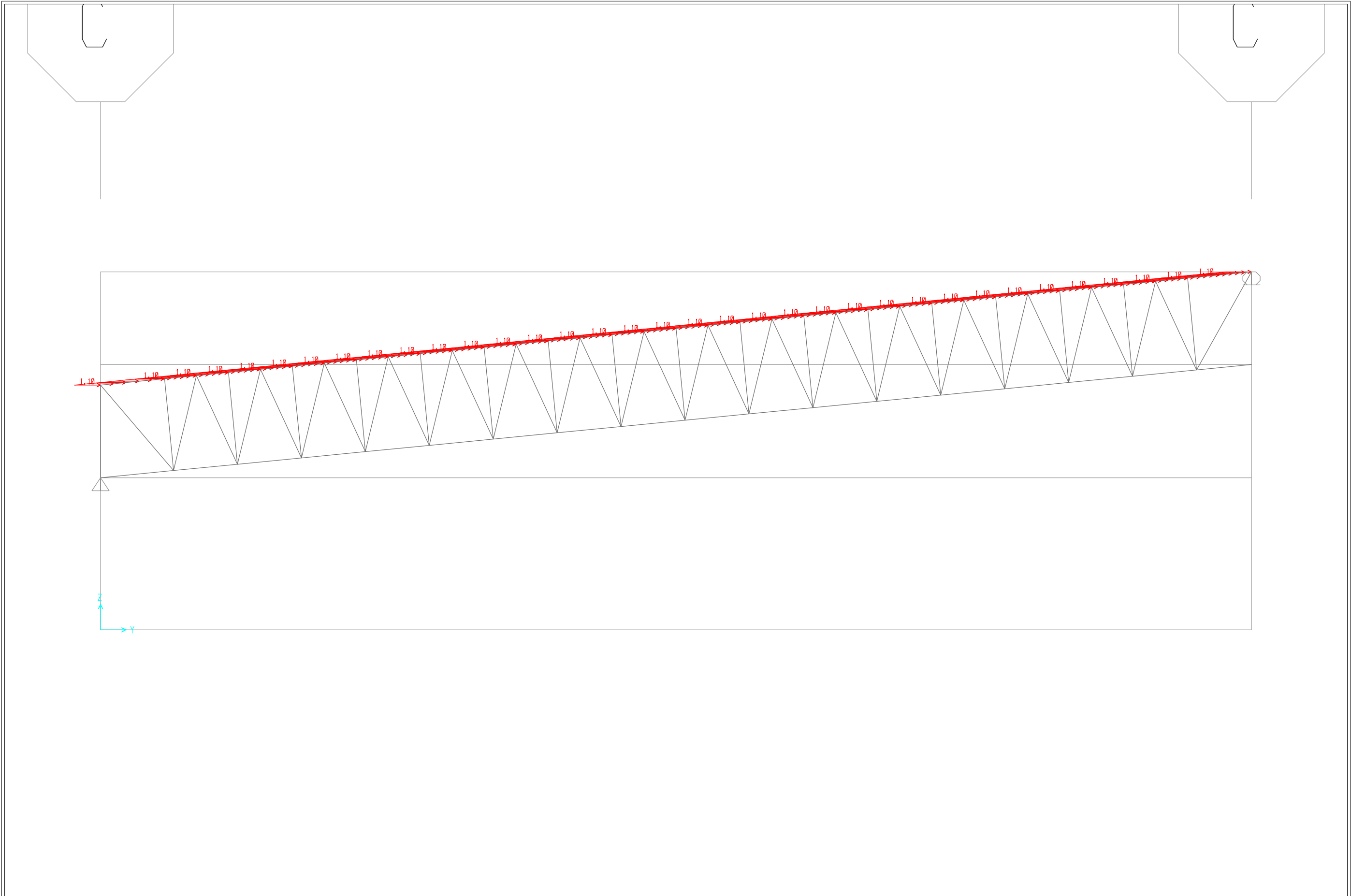




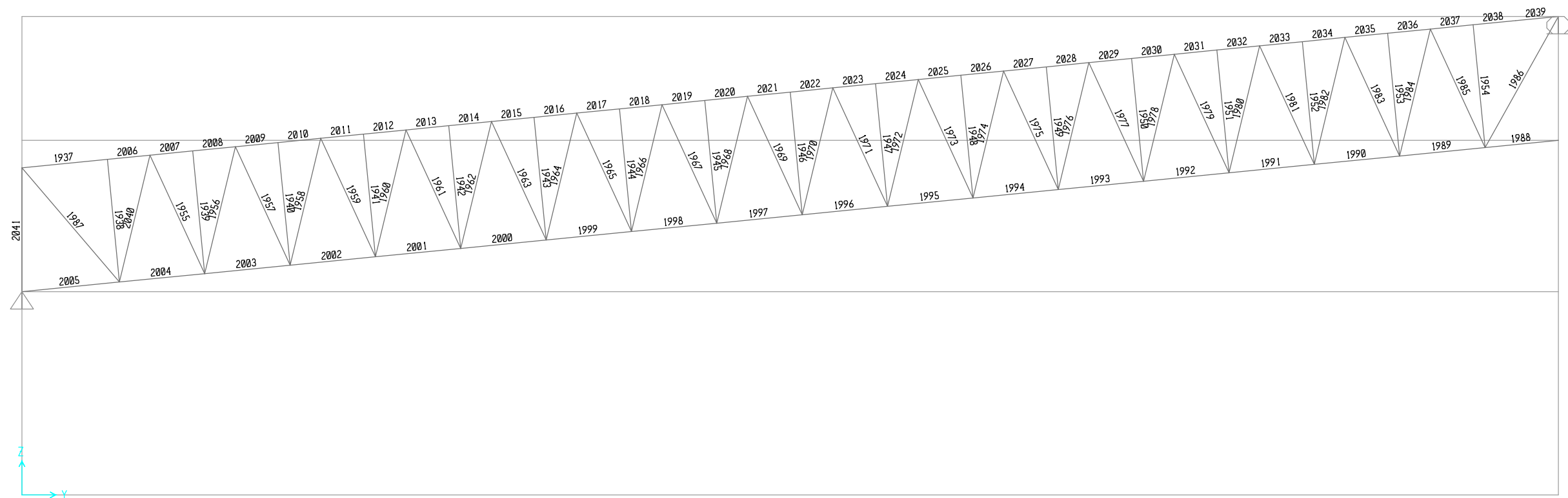








MARKS



Element Forces - Frames			
Frame	P	SECTION TYPE	LOCATION
Text	KN		
2006	-88,91	2L2X2X5/16	TOP CHORD
2007	-157,13	2L2X2X5/16	TOP CHORD
2008	-156,69	2L2X2X5/16	TOP CHORD
2009	-216,18	2L2X2X5/16	TOP CHORD
2010	-215,74	2L2X2X5/16	TOP CHORD
2011	-266,21	2L2X2X5/16	TOP CHORD
2012	-265,77	2L2X2X5/16	TOP CHORD
2013	-307,19	2L2X2X5/16	TOP CHORD
2014	-306,75	2L2X2X5/16	TOP CHORD
2015	-338,81	LL2X2X5/16-ROD16	TOP CHORD
2016	-338,36	LL2X2X5/16-ROD16	TOP CHORD
2017	-361,02	LL2X2X5/16-ROD20	TOP CHORD
2018	-360,57	LL2X2X5/16-ROD20	TOP CHORD
2019	-373,80	LL2X2X5/16-ROD20	TOP CHORD
2020	-373,35	LL2X2X5/16-ROD20	TOP CHORD
2021	-377,26	LL2X2X5/16-ROD20	TOP CHORD
2022	-376,81	LL2X2X5/16-ROD20	TOP CHORD
2023	-371,34	LL2X2X5/16-ROD20	TOP CHORD
2024	-370,89	LL2X2X5/16-ROD20	TOP CHORD
2025	-356,08	LL2X2X5/16-ROD20	TOP CHORD
2026	-355,63	LL2X2X5/16-ROD20	TOP CHORD
2027	-331,37	LL2X2X5/16-ROD20	TOP CHORD
2028	-330,92	LL2X2X5/16-ROD20	TOP CHORD
2029	-297,27	LL2X2X5/16-ROD20	TOP CHORD
2030	-296,82	2L2X2X5/16	TOP CHORD
2031	-253,77	2L2X2X5/16	TOP CHORD
2032	-253,33	2L2X2X5/16	TOP CHORD
2033	-201,00	2L2X2X5/16	TOP CHORD
2034	-200,56	2L2X2X5/16	TOP CHORD
2035	-139,21	2L2X2X5/16	TOP CHORD
2036	-138,77	2L2X2X5/16	TOP CHORD
2037	-68,90	2L2X2X5/16	TOP CHORD
2038	-68,46	2L2X2X5/16	TOP CHORD
2039	-68,03	2L2X2X5/16	TOP CHORD
1937	-89,99	2L2X2X5/16	TOP CHORD
1988	-13,70	LL2X2X1/4	BOTTOM CHORD
1989	100,62	LL2X2X1/4	BOTTOM CHORD
1990	165,76	LL2X2X1/4	BOTTOM CHORD
1991	221,72	LL2X2X1/4	BOTTOM CHORD
1992	268,56	LL2X2X1/4	BOTTOM CHORD
1993	305,87	LL2X2X1/4	BOTTOM CHORD
1994	333,98	LL2X2X1/4-ROD16	BOTTOM CHORD
1995	352,48	LL2X2X1/4-ROD16	BOTTOM CHORD
1996	361,79	LL2X2X1/4-ROD16	BOTTOM CHORD

1997	361,62	LL2X2X1/4-ROD16	BOTTOM CHORD
1998	352,27	LL2X2X1/4-ROD16	BOTTOM CHORD
1999	333,48	LL2X2X1/4-ROD16	BOTTOM CHORD
2000	305,42	LL2X2X1/4-ROD16	BOTTOM CHORD
2001	267,76	LL2X2X1/4	BOTTOM CHORD
2002	221,04	LL2X2X1/4	BOTTOM CHORD
2003	165,26	LL2X2X1/4	BOTTOM CHORD
2004	100,31	LL2X2X1/4	BOTTOM CHORD
2005	-13,72	LL2X2X1/4	BOTTOM CHORD
1938	-8,02	L2X2X3/16	VERTICAL
1939	-2,47	L2X2X3/16	VERTICAL
1940	-2,28	L2X2X3/16	VERTICAL
1941	-2,59	L2X2X3/16	VERTICAL
1942	-2,96	L2X2X3/16	VERTICAL
1943	-3,41	L2X2X3/16	VERTICAL
1944	-4,03	L2X2X3/16	VERTICAL
1945	-4,26	L2X2X3/16	VERTICAL
1946	-4,27	L2X2X3/16	VERTICAL
1947	-4,20	L2X2X3/16	VERTICAL
1948	-3,90	L2X2X3/16	VERTICAL
1949	-3,52	L2X2X3/16	VERTICAL
1950	-3,14	L2X2X3/16	VERTICAL
1951	-2,60	L2X2X3/16	VERTICAL
1952	-2,28	L2X2X3/16	VERTICAL
1953	-2,48	L2X2X3/16	VERTICAL
1954	-8,04	L2X2X3/16	VERTICAL
1955	101,53	L2X2X1/4	DIAGONAL
1956	-95,26	LL2X2X1/4	DIAGONAL
1957	87,49	L2X2X1/4	DIAGONAL
1958	-81,42	LL2X2X1/4	DIAGONAL
1959	73,88	L2X2X1/4	DIAGONAL
1960	-67,48	LL2X2X1/4	DIAGONAL
1961	60,33	L2X2X1/4	DIAGONAL
1962	-53,31	L2X2X5/16-ROD20	DIAGONAL
1963	46,06	L2X2X1/4	DIAGONAL
1964	-38,51	L2X2X5/16-ROD20	DIAGONAL
1965	32,23	L2X2X1/4	DIAGONAL
1966	-23,96	L2X2X1/4	DIAGONAL
1967	18,06	L2X2X1/4	DIAGONAL
1968	-9,54	L2X2X1/4	DIAGONAL
1969	4,05	L2X2X1/4	DIAGONAL
1970	4,46	L2X2X1/4	DIAGONAL
1971	-10,36	L2X2X1/4	DIAGONAL
1972	18,79	L2X2X1/4	DIAGONAL
1973	-24,48	L2X2X5/16	DIAGONAL
1974	32,65	L2X2X1/4	DIAGONAL
1975	-39,17	L2X2X5/16-ROD20	DIAGONAL

1976	47,02	L2X2X1/4	DIAGONAL
1977	-53,45	L2X2X5/16-ROD20	DIAGONAL
1978	60,81	L2X2X1/4	DIAGONAL
1979	-68,12	LL2X2X1/4	DIAGONAL
1980	75,00	L2X2X1/4	DIAGONAL
1981	-82,25	LL2X2X1/4	DIAGONAL
1982	88,60	L2X2X1/4	DIAGONAL
1983	-96,09	LL2X2X1/4	DIAGONAL
1984	102,65	L2X2X1/4	DIAGONAL
1985	-107,93	LL2X2X1/4	DIAGONAL
1986	138,32	PL5/8X1-1/2	DIAGONAL
1987	137,53	PL5/8X1-1/2	DIAGONAL
2040	-106,54	LL2X2X1/4	DIAGONAL
2041	-117,22	2L2X2X5/16	VERTICAL