

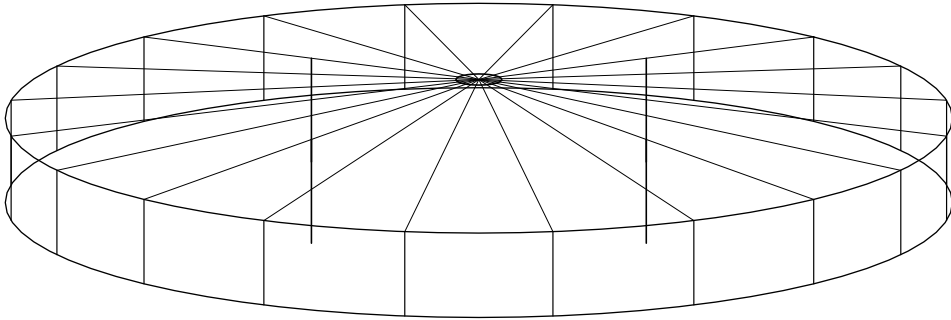
165 ft DIAMETER ROUND PEB

GENERAL ARRANGEMENT DRAWING SET - PRELIMINARY (P4, A572-light)

GENERAL NOTES:

- 1. Structure: 165'-0" dia. circular PEB, conical roof, slope 1:10.
- 2. Eave height 18'-0"; apex 26'-3"; internal column head 22'-1".
- 3. 20 No. perimeter columns @ 25'-11" arc c/c on R 82'-6".
- 4. 4 No. internal columns on R 41'-3" at 90 deg spacing.
- 5. 20 No. long rafters ISMB 450, 41'-6"; 4 No. short rafters ISMB 450, 37'-6".
- 6. Central ring: 8'-0" dia. CHS 406.4 x 12.5 torus at apex.
- 7. Purlins Z200 x 75 x 1.6 @ 1500 mm c/c along rafters (199 No.).
- 8. Structural steel: ASTM A572 Grade 50 (Fy = 345 MPa) - ACTIVE.
- 9. A36 alternative permitted (Fy = 250 MPa) where allowed by design.
- 10. Reinforcement: ASTM A615 Gr.60. Concrete design to ACI 318.
- 11. All eave connections PINNED; bases pinned with M25 J-bolts.
- 12. Dimensions in feet-inches unless noted. Do not scale drawing.
- 13. PRELIMINARY - issued for estimation only.
- 14. COLUMNS ISMB 400 (was ISMB 600); RAFTERS UNCHANGED ISMB 450 (rev P4, A572 Gr50).
- 15. LOWEST-WEIGHT OPTIMIZED - columns ISMB 400, total 48.40 t (was 58.49 t). ISMB 350 alt 46.6 t (marginal).

ISOMETRIC (SCHEMATIC)



FUSION DEVELOPERS

165 ft Round PEB — A572 Gr50 / 4 Internal Columns

GENERAL ARRANGEMENT - COVER SHEET

DWG No: G-01

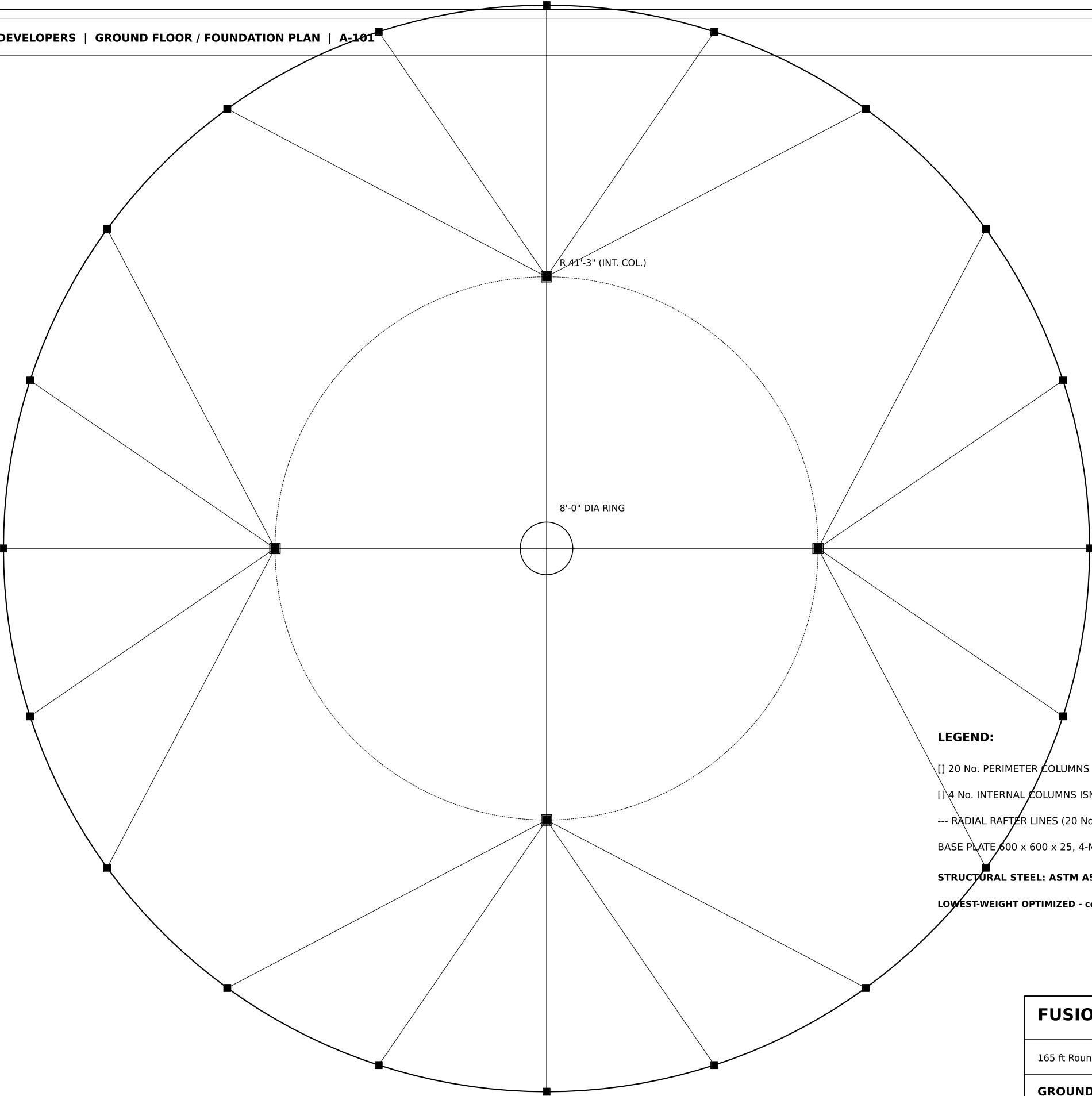
SCALE: NTS

REV: P4 (A572-light)

DRAWN: FD-STR CHECKED: Kamran Ahmed

DATE: 2026-08-04

PRELIMINARY - NOT FOR CONSTRUCTION



LEGEND:

[] 20 No. PERIMETER COLUMNS ISMB 400, 18'-0"

[] 4 No. INTERNAL COLUMNS ISMB 400, 22'-1"

--- RADIAL RAFTER LINES (20 No.) ISMB 450

BASE PLATE 600 x 600 x 25, 4-M25 J-BOLTS

STRUCTURAL STEEL: ASTM A572 Grade 50 (Fy = 345 MPa) - ACTIVE. A36 alt. permitted (Fy=250 MPa).

LOWEST-WEIGHT OPTIMIZED - columns ISMB 400, total 48.40 t (was 58.49 t). ISMB 350 alt 46.6 t (marginal).

FUSION DEVELOPERS

165 ft Round PEB — A572 Gr50 / 4 Internal Columns

GROUND FLOOR / FOUNDATION PLAN

DWG No: A-101

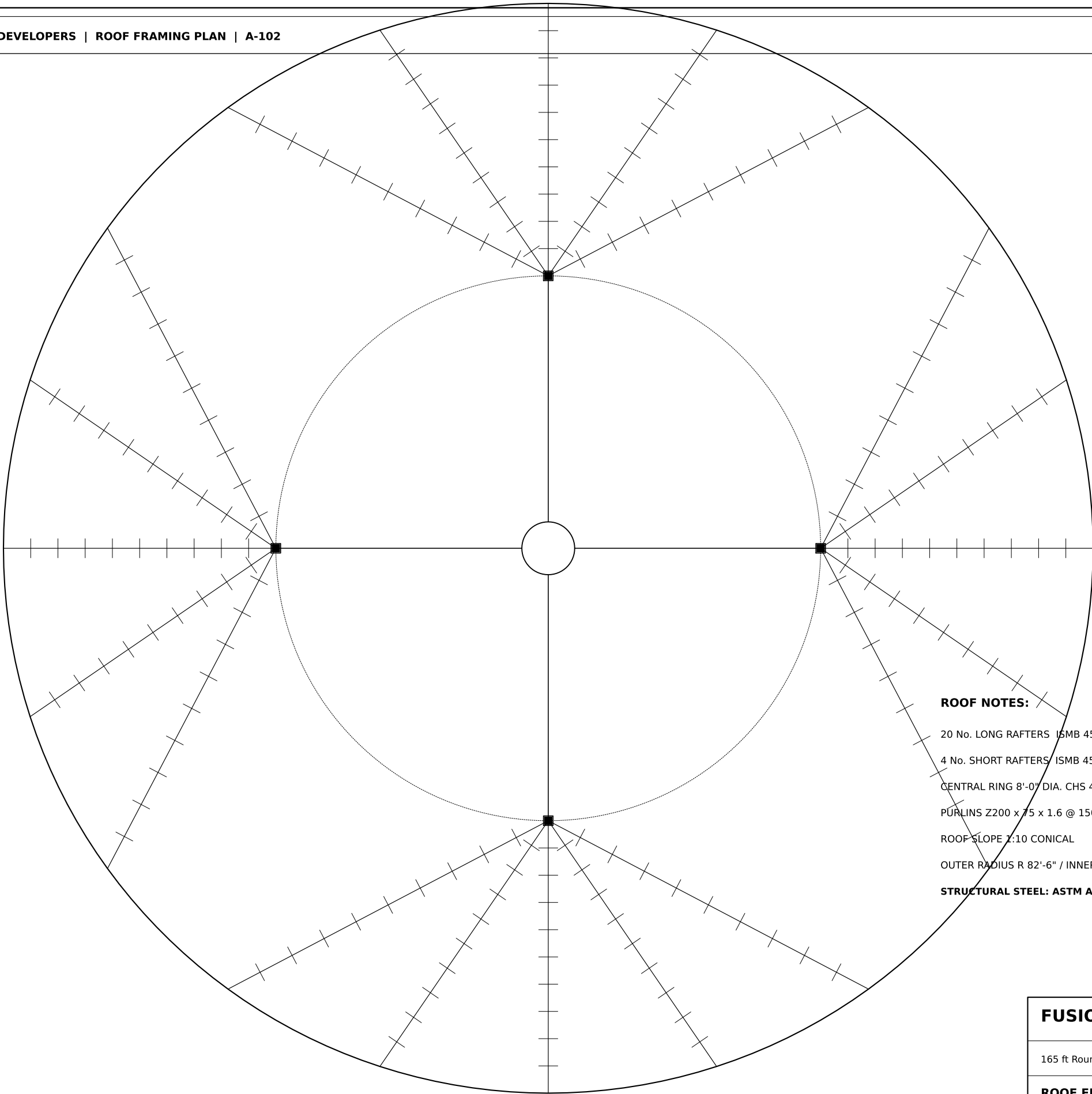
SCALE: 1:200 @ A3

REV: P4 (A572-light)

DRAWN: FD-STR CHECKED: Kamran Ahmed

DATE: 2026-08-04

PRELIMINARY - NOT FOR CONSTRUCTION



ROOF NOTES:

20 No. LONG RAFTERS ISMB 450 L = 41'-6"

4 No. SHORT RAFTERS ISMB 450 L = 37'-6"

CENTRAL RING 8'-0" DIA. CHS 406.4 x 12.5

PURLINS Z200 x 75 x 1.6 @ 1500 c/c (199 No.)

ROOF SLOPE 2:10 CONICAL

OUTER RADIUS R 82'-6" / INNER R 41'-3"

STRUCTURAL STEEL: ASTM A572 Grade 50 (Fy = 345 MPa) - ACTIVE. A36 alt. permitted (Fy=250 MPa).

FUSION DEVELOPERS

165 ft Round PEB — A572 Gr50 / 4 Internal Columns

ROOF FRAMING PLAN

DWG No: A-102

SCALE: 1:200 @ A3

REV: P4 (A572-light)

DRAWN: FD-STR CHECKED: Kamran Ahmed

DATE: 2026-08-04

PRELIMINARY - NOT FOR CONSTRUCTION

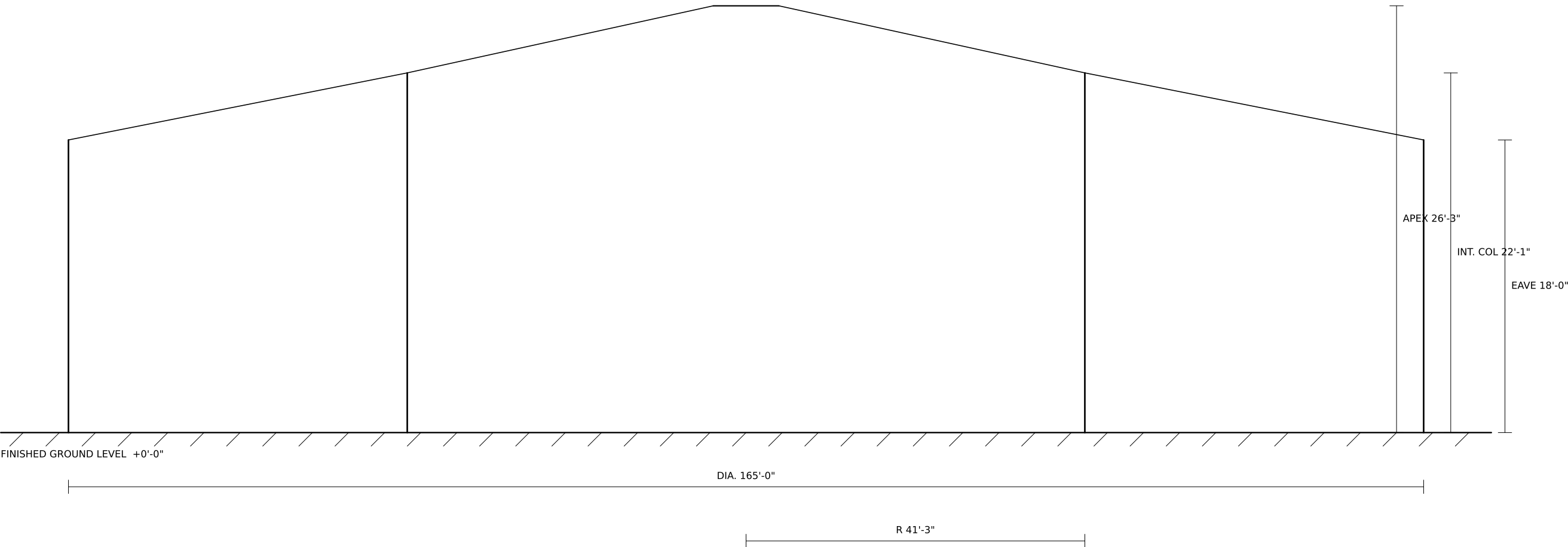
DIA. 165'-0"

STRUCTURAL STEEL: ASTM A572 Grade 50 (Fy = 345 MPa) - ACTIVE. A36 alt. permitted (Fy=250 MPa).

VERTICAL SCALE EXAGGERATED FOR CLARITY

PINNED EAVE CONNECTION (TYP.)

ROOF SLOPE 1:10 (RISE 4'-1" OVER RUN 41'-3")



FUSION DEVELOPERS

165 ft Round PEB — A572 Gr50 / 4 Internal Columns

ELEVATION / SECTION A-A

DWG No: A-103

SCALE: 1:100 @ A3

REV: P4 (A572-light)

DRAWN: FD-STR CHECKED: Kamran Ahmed

DATE: 2026-08-04

PRELIMINARY - NOT FOR CONSTRUCTION

MARK	QTY	LOCATION	SECTION	HEIGHT	BASE PLATE	ANCHOR	REMARKS
C1-01	1	PERIMETER @ 0 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-02	1	PERIMETER @ 18 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-03	1	PERIMETER @ 36 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-04	1	PERIMETER @ 54 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-05	1	PERIMETER @ 72 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-06	1	PERIMETER @ 90 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-07	1	PERIMETER @ 108 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-08	1	PERIMETER @ 126 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-09	1	PERIMETER @ 144 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-10	1	PERIMETER @ 162 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-11	1	PERIMETER @ 180 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-12	1	PERIMETER @ 198 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-13	1	PERIMETER @ 216 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-14	1	PERIMETER @ 234 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-15	1	PERIMETER @ 252 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-16	1	PERIMETER @ 270 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-17	1	PERIMETER @ 288 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-18	1	PERIMETER @ 306 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-19	1	PERIMETER @ 324 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
C1-20	1	PERIMETER @ 342 deg	ISMB 400	18'-0"	600x600x25	4-M25 J	PINNED BASE
IC-1	1	INTERNAL R 41'-3" @ 0 deg	ISMB 400	22'-1"	600x600x25	4-M25 J	PINNED BASE
IC-2	1	INTERNAL R 41'-3" @ 90 deg	ISMB 400	22'-1"	600x600x25	4-M25 J	PINNED BASE
IC-3	1	INTERNAL R 41'-3" @ 180 deg	ISMB 400	22'-1"	600x600x25	4-M25 J	PINNED BASE
IC-4	1	INTERNAL R 41'-3" @ 270 deg	ISMB 400	22'-1"	600x600x25	4-M25 J	PINNED BASE

NOTES: Steel ASTM A572 Grade 50 (Fy=345 MPa). Base plates ASTM A36. Grout 50 mm non-shrink.

TOTAL 24 No. COLUMNS (20 PERIMETER + 4 INTERNAL). PRELIMINARY SIZES.

LOWEST-WEIGHT OPTIMIZED - columns ISMB 400, total 48.40 t (was 58.49 t). ISMB 350 alt 46.6 t (marginal).

FUSION DEVELOPERS	
165 ft Round PEB — A572 Gr50 / 4 Internal Columns	
COLUMN SCHEDULE	DWG No: S-101
SCALE: NTS	REV: P4 (A572-light)
DRAWN: FD-STR CHECKED: Kamran Ahmed	DATE: 2026-08-04
PRELIMINARY - NOT FOR CONSTRUCTION	

MARK	QTY	FROM	TO	SECTION	LENGTH	GUSSET	CONNECTION
LR-01	1	C1-01 (EAVE)	IC-1	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-02	1	C1-02 (EAVE)	IC-1	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-03	1	C1-03 (EAVE)	IC-1	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-04	1	C1-04 (EAVE)	IC-2	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-05	1	C1-05 (EAVE)	IC-2	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-06	1	C1-06 (EAVE)	IC-2	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-07	1	C1-07 (EAVE)	IC-2	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-08	1	C1-08 (EAVE)	IC-2	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-09	1	C1-09 (EAVE)	IC-3	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-10	1	C1-10 (EAVE)	IC-3	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-11	1	C1-11 (EAVE)	IC-3	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-12	1	C1-12 (EAVE)	IC-3	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-13	1	C1-13 (EAVE)	IC-3	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-14	1	C1-14 (EAVE)	IC-4	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-15	1	C1-15 (EAVE)	IC-4	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-16	1	C1-16 (EAVE)	IC-4	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-17	1	C1-17 (EAVE)	IC-4	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-18	1	C1-18 (EAVE)	IC-4	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-19	1	C1-19 (EAVE)	IC-1	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
LR-20	1	C1-20 (EAVE)	IC-1	ISMB 450	41'-6"	450x300x16	PINNED @ EAVE
SR-1	1	IC-1	APEX RING	ISMB 450	37'-6"	450x300x16	BOLTED TO RING
SR-2	1	IC-2	APEX RING	ISMB 450	37'-6"	450x300x16	BOLTED TO RING
SR-3	1	IC-3	APEX RING	ISMB 450	37'-6"	450x300x16	BOLTED TO RING
SR-4	1	IC-4	APEX RING	ISMB 450	37'-6"	450x300x16	BOLTED TO RING

APEX RING: 8'-0" DIA. TORUS, CHS 406.4 x 12.5, CIRCUMFERENCE 25'-2"

PURLINS: Z200 x 75 x 1.6 @ 1500 mm c/c ALONG RAFTERS - 199 No. TOTAL.

ALL EAVE CONNECTIONS PINNED. GUSSET PLATES 450 x 300 x 16, M20 HSFG BOLTS.

TOTAL 24 No. RAFTERS (20 LONG + 4 SHORT). ISMB 450, A572 Gr50. PRELIMINARY.

STRUCTURAL STEEL: ASTM A572 Grade 50 (Fy = 345 MPa) - ACTIVE. A36 alt. permitted (Fy=250 MPa).

FUSION DEVELOPERS	
165 ft Round PEB — A572 Gr50 / 4 Internal Columns	
RAFTER & CONNECTION SCHEDULE	DWG No: S-102
SCALE: NTS	REV: P4 (A572-light)
DRAWN: FD-STR CHECKED: Kamran Ahmed	DATE: 2026-08-04
PRELIMINARY - NOT FOR CONSTRUCTION	