Claims

1. A mounting structure comprising:

a structural member having a first surface adapted to engage a support and at least one first flange extending outwardly from a second surface, wherein the first surface is distal from the first flange; and

at least one securing member comprising at least one second flange extending outwardly from a surface of the securing member, wherein the securing member is operable to juxtapose with the structural member via the first surface, and engage with the structural member to secure a side of a panel between the first flange and the second flange, wherein the first surface comprises one or more strut channels, and wherein the first surface is adapted to engage the support via at least one channel securing element and the one or more strut channels.

2. The mounting structure according to claim 1, wherein the second surface adjoins the first surface.

3. The mounting structure according to claim 1 or 2, wherein the structural member is a beam and the second surface is parallel to a longitudinal axis of the beam.

4. The mounting structure according to any preceding claim, wherein the number of strut channels is three.

5. The mounting structure according to any preceding claim, wherein the structural member comprises one or more alignment guides located at an end of the structural member.

6. The mounting structure according to any preceding claim wherein the mounting structure further comprises a water-resistant cap adapted to

juxtapose with the structural member via a surface opposing the first surface.

7. The mounting structure according to any preceding claim, wherein the securing member comprises a length that is substantially shorter than a length of the structural member.

8. The mounting structure according to any preceding claim, wherein the securing member comprises a bracket having a cross-sectional shape that corresponds to a cross-sectional shape of the structural member.

9. The mounting structure according to claim 8, wherein the bracket comprises a U-shaped channel having a width wider than a width of the structural member.

10. A mounting structure assembly comprising a plurality of mounting structures each according to any preceding claim, the mounting assembly for supporting a plurality of panels, preferably an array of photovoltaic solar panels.

11. The mounting structure assembly according to claim 10, further comprising at least one joint member for sealingly connecting a plurality of structural members to each other.

12. The mounting structure assembly according to claim 11 when dependent from claim 6, wherein the joint member has one or more alignment notches to align with the one or more alignment guides of the structural member.

13. The mounting structure assembly according to claim 11 or 12 wherein the joint member is a cross-joint having four engaging ends, each end adapted to abut against an end of a structural member of a mounting structure.

14. The mounting structure assembly according to any of claims 11 to 13, wherein the joint member is adapted to be covered by a water-resistant cap.

15. A method of assembling a mounting structure assembly, the method comprising the steps of:

(a) connecting a plurality of structural members and joint members together, wherein the structural member has a first surface adapted to engage a support and at least one first flange extending outwardly from a second surface, and wherein the first surface is distal from the first flange;

(b) engaging the first surface of at least one structural member to the support; and

(c) engaging at least one securing member comprising at least one second flange extending outwardly from a surface of the securing member, with at least one structural member via the first surface, to secure a side of a panel between the first flange and the second flange,

wherein the first surface comprises at least one strut channel and the step of engaging the first surface to the support comprises forming one or more contact points by receiving and locking a channel securing element extending from the support, within one strut channel.

16. The method according to claim 17, wherein the one or more contact points define the corners of a quadrilateral.

17. A bottom-up method of assembling a mounting structure for mounting at least one photovoltaic solar panel having a top surface and a bottom surface, the method comprising the steps of:

(a) engaging a bottom first surface of a structural member to a support, the structural member comprising at least one first flange

extending outwardly from a second surface, wherein the bottom first surface is distal from the first flange;

(b) juxtaposing at least one securing member comprising at least one second flange extending outwardly from a surface of the securing member, with the structural member via the bottom first surface;

(c) contacting the bottom surface of the photovoltaic solar panel with the second flange, and urging the panel towards the first flange and to abut its top surface with the first flange; and

(d) engaging the securing member with the structural member to secure a side of the photovoltaic panel between the first flange and the second flange,

wherein the bottom first surface comprises at least one strut channel and the step of engaging the bottom first surface to the support comprises forming one or more contact points by receiving and locking a channel securing element extending from the support, within one strut channel.

18. The bottom-up method of claim 17, the method comprising connecting a plurality of structural members and joint members together to form a mounting structure assembly.