



Layout Design Suggestions

One of the major benefits of TerraGen's mounting solutions is that we are able to accommodate any layout. This gives solar designers the freedom to create layouts that best fit the project site and their PV system goals. That being said, this document has been prepared to offer insight and design suggestions to assist with cost effectiveness of the mounting system, as well as for ease of install and ballast reduction.

- Portrait Orientation: The TGR mounting structure is designed to utilize a portrait orientation. While landscape can be accommodated, it usually will be at a cost premium.
- Square arrays: The squarer the array is, the less the ballast requirements, the reduction or elimination of onsite rail cutting, the less measurements will be needed. In general, squarer arrays creates installation efficiencies as well as racking cost savings through optimizing the rail spacing.
- 10' Walkways: By limiting the walkways to under 10', the field zone selection from our ballast study is not interrupted which will significantly reduce the ballast requirements.
- Square to the building: Whenever possible, this tends to contribute to creating cleaner layouts and avoids a wind calculation factor that must be put on skewed arrays.
- Limiting small sub-arrays: the smaller the sub-array, the more ballast and components it will require. Especially in a portrait orientation, the # of rows high each module is connected to, will significantly impact the ballast requirements for that module. 5 panels high x 5 panels wide produce best results.
- Base Rail Optimization: When space is not an issue, typically an odd # of modules in a row will save 1 base rail & triangle column. This will reduce racking cost and installation time slightly.
- Gap between modules: The gap between modules in the E/W direction should be 20mm when preparing layouts which is essentially the width of our mid-clamp.
- Thermal breaks: When preparing layouts note that we typically have thermal breaks for every 16 modules. This increases the gap between the two modules to 4.75" at thermal break locations.

Feel free to contact us if you have any questions

