## Introduction:

The goal of this document is to provide a primer to customizing your site-specific work order. The site-specific work order is your final contract with the vendor. After executing this contract, work can begin. It is not an exhaustive list, but rather a starting place. The document begins with a checklist for the work order and concludes with a list of steps to expect after the work has begun.

## Site-specific work order:

1. Cover page. The cover page lists the most critical information to executing the contract: deadlines and points of contact.
	1. Fill out the highlighted and relevant red text.
	2. Please complete the list of accompanying documents and exhibits (i.e., Notification of Contract Award, Exhibits ordered and titled in a logical manner).
2. Notification of Contract Award. This document is where all respective signatures must be collected. Because the Department of Administration “owns” the master contract, the Commissioner or Designee must sign the contract.
3. Exhibit SS-1 Site Information
	1. This exhibit is where site-specific (SS) information should go. Only the necessary data is needed: address, requested capacities, the basic information.
	2. Roles and Responsibilities
		1. It is recommended that you include roles and responsibilities in the site-specific work order. The master contract does include several responsibilities for the vendor, however, it helps to get these in front of the vendor again.
		2. These should be the high-level responsibilities agreed upon in the negotiations. For example:
			1. Soliciting entity’s responsibilities: removing brush or trees/shrubs at the site prior to work beginning. And replanting native grasses after construction has concluded.
			2. Contractor’s responsibilities: All necessary permits, plan reviews, and inspections required for the work per the master contractor. Responsible for trenching the site. Contractor is responsible for taking meeting notes and providing an updated construction schedule at each weekly meeting.
	3. The entire RFP response should be attached. The vendor should be held contractually responsible for the proposal. Be sure to include all elements of the response and attachments. Ensure that you have included a timeline of the response.
	4. Planning and Design Criteria
		1. Here, you should list planning and design criteria. The Master Contract RFP contains several special terms and conditions regarding planning and design. We recommend reviewing the master contract and including a copy of those terms and conditions in the work order for emphasis.
			1. Example criteria:
				1. The contractor must work on Mondays, Wednesdays, and Fridays during normal business hours.
				2. From the master contract: II. Special Terms and Conditions. 3.D. “The Contractor must obtain all required permits, interconnection agreements, and any other regulatory approval.
				3. Another example might be that the vendor must submit CAD file drawings of the array designs.
4. AIA Documents
	1. While not required for local government units, it is highly recommended that you include the American Institutes of Architects (AIA) Contract Documents. State agencies use the A201-2017 “General Conditions of the Contract for Construction.”
	2. We cannot provide you a direct copy of this AIA document. However, you can easily obtain and incorporate your own AIA document by using the AIA website and software.
		1. <https://www.aiacontracts.org/contract-documents/25131-general-conditions-of-the-contract-for-construction>
5. SS-3 Prevailing Wage Rates.
	1. The master contract requires that vendors adhere to prevailing wage rates. It can be helpful to the vendor to simply include the relevant wage rates in the work order. The wages vary by county. More information on Prevailing-Wage can be found at the [Department of Labor and Industry’s webpage](https://www.dli.mn.gov/business/employment-practices/prevailing-wage-information).
6. Payment details.
	1. Per your organization’s requirements and construction practices, it is advised that you include payment details and procedures at the end of the work order. For all parties involved, the procedure and method of payment will thus be clear and understood. There is no one template for how to arrange this. Generally, payment is conducted at certain intervals throughout the construction process. A certain percentage of retainage is held until the project is fully operational—producing power.

## What to expect after execution of contracts:

1. **No work before execution**. We must stress that under State of Minnesota law, no entity can request work before contracts are executed and a notice to proceed is issued.
	1. This is particularly problematic with applications like interconnection agreements and incentive programs.
	2. Your entity could face significant issues if you violate these rules.
2. Notice to proceed. After signing contracts, your entity should issue a letter of the “notice to proceed” and sign the letter. The letter is a formal notice that the work is to be commenced.
3. Arrange a pre-con meeting. After your notice to proceed, your entity should arrange a pre-construction meeting with the vendor. Here, you should review the timelines submitted in the response and the roles and responsibilities in the work order contract.
	1. Request the vendor take meeting notes and disseminate typed notes one day after each meeting.
	2. Arrange regular meetings regarding the project.
	3. Hone lines of communication. Who should be communicated to for what? Etc.. these are critical items to determine in a pre-construction meeting.
4. Interconnection agreement. The interconnection agreement process comes with quick turn-arounds. Ask the vendor right away about the process. Be ready to have the respective authority sign off on interconnection agreements. The process can differ depending on utility, however, it is something that requires speedy response.
5. Installation and work highlights: Rooftops. The installation typically follows the below steps for rooftops:
	1. Design and engineering. The vendor will bring in their licensed structural engineer to evaluate the integrity of the rooftop. If you have construction drawings, it is best to deliver these to the vendor as soon as possible. If given a green light, the vendor will continue with 50%, 90%, and 100% drawing sets.
	2. Pay attention to fine details with these drawings. Be sure to ask questions about the layout. Ensure that the layout allows for the proper setbacks and doesn’t cover up important rooftop elements like soffits and roof drains.
	3. Ensure that you do not lose electrical capacity that you have already contracted. If an unforeseen issue arises, you may need to amend the work order contract. It is likely that you may lose a module or two once they bring in engineers and more precise measurements.
	4. Ensure that necessary parts are ordered ahead of time. If there are no major barriers with structural, zoning, and electrical circumstances, make sure that equipment can arrive in a timely manner. Often, projects can be installed because a balance of system is ordered and will take another two weeks to arrive.
6. Installation and work highlights: ground mount.
	1. Ground mounts are more involved than rooftops.
	2. Per the master contract, the vendor is required to obtain all necessary permits.
		1. This includes zoning permits. Zoning and variances are often unpredictable in certain jurisdictions. It is best to screen and understand what zoning laws apply *well* before your organization issues a site specific RFP. Ensure that the vendor is aware of this and all permitting requirements and understand the steps necessary.
	3. Civil engineering work. Depending on the situation, and
	4. Pull testing. Although the vendor should have soil boring tests, they will still need to conduct pull testing to ensure that they are installing the correct type of pile to the correct depth.
	5. Trench work. Typically, the electrical line supplying current from the solar system to the load must be conveyed using underground conduit. The trenching can take a significant work.
7. Plan for shutdowns.
	1. The electrical work will require that the building be shut down.
8. Method of Procedure Documents.
	1. As part of the construction process, ensure the vendor provides a “Method of Operation.” This is especially important if you are installing on top of a large commercial building with many sub panels that need to be shut off. The Method of Operation document, or MOP, helps to keep track of every step that was taken. This is important so that you do not forget what has been done, and no step is missed when returning power back to sections of the building.

For more detailed information on the solar PV construction process, we recommend reviewing publications from the National Renewable Energy Laboratory and the Dept. of Energy. One good document is the “[On-Site Commercial Solar PV Decision Guide](https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/On_Site_Solar_Decision_Guide.pdf)”