



RENEWABLE ENERGY PROJECT EXPERIENCE

DESIGN AND DEVELOPMENT

Pendleton Ave, Chicopee, MA Solar Development Site – Mortenson Construction/HDR

The Client had a survey of this 110 acre site prepared by others and based on an assumed horizontal and vertical datum. To perform the design of the solar development, the existing survey was required to be horizontally oriented to the MA State Plane Coordinate System (NAD83), and vertically to the North American Vertical Datum of 1988 (NAVD88). In addition, eleven benchmarks had been established throughout the site with coordinates in the assumed datums. ALPHA was contracted to establish the existing project control in the relevant datums. The solar development was proposed to occupy +/- 25 acres of a densely wooded portion of the site. Utilizing GPS, the project was oriented to the pertinent datums, and conventional survey methods were utilized to establish (N, E, Z) coordinates on the existing site benchmarks. The Client was provided with an AutoCAD file containing the benchmarks and project survey control with the site data properly oriented to the relevant datums. The site layout was performed by the contractor installing the panels, and a final as-built was not required.

Tremont Street, Rehoboth, MA Solar Development Site – Mortenson Construction/HDR

The Scope of Work for this project was identical to that of the Chicopee Site in that an existing survey of a 140 acre parcel was provided in an assumed horizontal and vertical coordinate system. Utilizing a combination of GPS and conventional survey the project was referenced to the NAD83/NAVD88 datums and the coordinates of ten existing benchmarks re-observed and adjusted accordingly. The proposed solar development consisted of +/-20 acres of mostly open fields combined with dense woods. The Client was provided with an AutoCAD file containing the benchmarks and project survey control with the site data properly oriented to the relevant datums. The site layout was performed by the contractor installing the panels, and although a final as-built was not required, the client requested the post-construction location of the access road.

Town of Dalton Landfill and abutting Warren Landfill, 40 Gulf Road, Dalton – Proposed Solar Development – Citizen’s Energy Corporation

The project consisted of a boundary survey of two abutting landfills comprising 50 acres, and topographic survey of approximately 15 acres. Boundary and utility research were performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included the location of the existing swales, drainage system, vent pipes, access roads and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, compiled utilities, and elevation model.

Chuckran Landfill, 1221 Bedford Street, Bridgewater, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of this 12 acre former Superfund site. Boundary and utility research was performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included the location of the existing swales, drainage system, vent pipes, access road, abutting retail building, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions, and boundary survey, compiled utilities, and elevation model.

Chicopee Elks Landfill, 431 Granby St, Chicopee, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of this 20 acre site containing a former landfill and the current Elks Lodge and parking. Boundary and utility research were performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included locating a portion of Granby Road, the Lodge and parking lot, utilities, swales, drainage system, vent pipes, access road, abutting retail building, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, compiled utilities, and elevation model. In addition, ALPHA prepared an Access and Utility Easement Plan, a Lease Area Plan, and an ALTA survey. (See construction services below)

Tyngsboro ‘Charles George’ Landfill, 500 Dunstable Road, Tyngsboro, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of 40 acres of this 80 acre former Superfund site. Boundary and utility research were performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included the location of existing swales, drainage system, vent pipes, collection system, and associated buildings, access road, abutting retail building, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions, and boundary survey, compiled utilities, and elevation model.

Westfield Landfill, Twiss St, Westfield, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of +/- 30 acres of this 47 acre site containing the former Westfield Landfill. Boundary and utility research was performed and survey control established in the NAD83 and NAVD88 datums. A boundary and topographic survey were performed locating a portion of Twiss Street and an abutting RR ROW, buildings and access drive to the recycling center and landfill, utilities, swales, drainage system, vent pipes, access road, abutting retail building, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, compiled utilities, and elevation model. In addition, ALPHA prepared a Lease Area Plan, and an ALTA survey. (See construction services below)

Chicopee River Business Park Landfill, Caldwell Dr/Robbins Circle, Springfield/Chicopee, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of +/- 30 acres of this 45 acre former landfill. Boundary and utility research was performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included the location of a portion of Robbins Circle ROW monumentation and pavement and utilities, and the landfill survey included boundary monumentation, swales, drainage system, vent pipes, access road, abutting retail building, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, compiled utilities, and elevation model. In addition, ALPHA prepared an Access and Equipment Easement Plan, a Lease Area Plan, and an ALTA survey. (See construction services below)

Amesbury Landfill, 56 South Hunt Road, Amesbury - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of +/- 45 acres of this 130 acre former landfill. Boundary research was performed and survey control established in the NAD83 and NAVD88 datums. The topographic survey included the location of a portion of South Hunt Road, visible utilities, swales, drainage system, vent pipes and the main leachate pump station, access road, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, and elevation model. In addition, ALPHA prepared a Lease Area Plan and an ALTA survey. (See construction services below)

Hill Street Landfill, Norton, MA - Proposed Solar Development – Citizen’s Energy Corporation

A boundary and topographic survey was performed of +/- 12 acres of the former Norton Landfill. Boundary research was performed and survey control established in the NAD83 and NAVD88 datums. The landfill property comprises 47 acres over five contiguous parcels. The topographic survey included the location of a portion of Hill Street, the access drive, utilities, swales, drainage system, vent pipes, and other features. The Client was provided with a stamped and signed plan, and an AutoCAD file containing the existing conditions and boundary survey, and elevation model. In addition, ALPHA prepared a Lease Area Plan, and an ALTA survey. (See construction services below)

CONSTRUCTION

Chicopee Elks Landfill, 431 Granby St, Chicopee, MA – Construction Layout and As-built Services – Mortenson Construction/Citizens Energy Corporation

ALPHA calculated the location of the panel support structures, utility pads, access road, utility poles, drainage and other features. Portions of the boundary were staked out for installation of privacy fencing, and utility pads and poles. A final as-built was prepared upon completion of the solar development.

Chicopee River Business Park Landfill, Caldwell Dr/Robbins Circle, Springfield/Chicopee, MA – Construction Layout and As-built Services – Mortenson Construction/Citizen's Energy Corporation

ALPHA calculated the location of the panel support structures, utility pads, access road, utility poles, drainage and other features. Layout was performed as requested by the Client. A final as-built was prepared upon completion of the solar development.

Westfield Landfill, Twiss St, Westfield, MA - Construction Layout and As-built Services – Conti Corporation/Citizens Energy Corporation

ALPHA calculated the location of the panel support structures, utility pads, access road, utility poles, drainage and other features. Layout was performed as requested by the Client. A final as-built was prepared upon completion of the solar development.

Hill Street Landfill, Norton, MA – Construction Layout and As-built Services – Conti Corporation/Citizens Energy Corporation

ALPHA calculated the location of the panel support structures, utility pads, access road, utility poles, drainage and other features. Portions of the boundary were staked out for installation of privacy fencing and tree installation as part of the development mitigation with an abutting neighbor. A final as-built was prepared upon completion of the solar development.

Thomas B. Landers Rd. Landfill, Falmouth, MA – Construction Layout and As-Built Services – Conti Corporation/Citizens Energy Corporation

ALPHA calculated the location of the panel support structures, utility pads, access road, utility poles, drainage and other features. A boundary survey was performed to determine the location of a portion of an existing private access road and landfill boundaries for the utility company to establish their utility pole positions. A final as-built was prepared upon completion of the solar development.