



Specifications for Land Surveys
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BROWARD COLLEGE

SPECIFICATIONS FOR LAND SURVEYS

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Broward College (BC) requires surveys to be performed from time to time to support the design of improvements at BC's various campuses. Before beginning field work the surveyor must meet with BC Staff to determine the site limits, scope of work, and gain insight into the purpose of the survey. Field work, in most cases, will take place during normal operational hours, so consideration must be made to not disturb the students or faculty. The surveyor should consult with staff to coordinate access and gain any security clearances that may be needed, before scheduling field work.

All survey work shall meet the Florida Regulations 5J-17.050 - Minimum Technical Standards for Surveying and Mapping, as well as the specifications set forth herein.

DEFINITIONS:

As used in these specifications, the following survey types have the following meanings:

- 1) As-Built Survey or Record Survey: a survey performed to obtain horizontal and/or vertical dimensional data so that constructed improvements may be located and delineated.
- 2) Topographic Survey: a survey of selected natural and artificial features of a part of the earth's surface to determine horizontal and vertical spatial relations.
- 3) Boundary Survey: a survey of which the primary purpose is to document the perimeters, or any one of them, of a parcel or tract of land by establishing or re-establishing corners, monuments, and boundary lines for the purposes of describing the parcel, locating fixed improvements on the parcel, dividing the parcel, or platting the parcel.
- 4) Construction Layout Survey: the measurements made prior to or while construction is in progress to control elevation, configuration, and horizontal position and dimensions.
- 5) Control Survey: a survey which provides horizontal or vertical position data for the support or control of subordinate surveys or for mapping.
- 6) Specific or Special Purpose Survey: a survey performed for a purpose other than the purposes detailed in paragraphs (1-5).
- 7) Map of Survey (or Survey Map): a graphical or digital depiction of the facts of size, shape, identity, and location as determined by a survey. The Map of Survey must clearly state the survey type as defined above.
- 8) Benchmark: a relatively permanent object having a marked point whose elevation is known relative to a defined vertical datum.
- 9) Control Point: a relatively permanent object having a marked point whose horizontal position is known relative to a defined horizontal datum.

SURVEY ACCURACY:

- 1) Horizontal control shall be based on the Florida State Plane Coordinate System, North American Datum (NAD) 83/90, Florida East Zone.
- 2) Vertical control (elevations) shall be based on North American Vertical Datum with 1988 adjustment (NAVD 88) vertical datum.
- 3) The accuracy of the survey measurements shall meet or exceed third-order accuracy as defined by National Geodetic Survey/ National Ocean and Atmospheric Administration (NGS/NOAA).
- 4) Distance Accuracy: Third Order, class II.....1:10,000
- 5) Elevation Accuracy: Third-order
- 6) When statistical procedures are used to calculate survey accuracies, the maximum acceptable positional tolerance, based on the ninety-five (95) percent confidence level, should meet the same equivalent relative distance standards as set forth above.
- 7) Horizontal control established by conventional surveying equipment should be based on a closed traverse.
- 8) Horizontal control established with Global Positioning System (GPS) should be redundantly located to ensure the integrity of the coordinate data.
- 9) Vertical control should be based on a closed level loop. The level loop should originate at a published governmental benchmark and checked to a second benchmark, when possible.
- 10) All measurements shall be made in United States Survey feet.

GENERAL MAP REQUIREMENTS:

- 1) All maps must be drafted in accordance with BC's Computer Aided Drafting (CAD) standards utilizing the latest version of AutoCAD. Unless otherwise specified, all drawings will be produced on 24" x 36" format.
- 2) Clearly state the type of survey (as-built, topographic, boundary, etc.) being performed. In the case of a Specific or Special Purpose Survey clearly state the purpose. For example, Specific Purpose (Tree) Survey.
- 3) All survey maps must reflect a survey date. The survey date is the last date of field data acquisition. When revisions are made to the drawing, the map must list the dates of each revision and a brief description of the revisions made.
- 4) When special conditions exist that effectively prevent the survey from meeting these specifications, the special conditions and any necessary deviation from the specifications will be noted on the map.
- 5) When combinations of survey sources are utilized (aerial mapping, subsurface excavations, etc.) the sources and responsibility for the mapped features must be clearly stated on the map.
- 6) A statement of horizontal and vertical accuracy of the located features must be shown on the map.
- 7) The Intended Display Scale shall be shown on the map: "This map is intended to be displayed at a scale of 1/___ or smaller."

- 8) A north arrow, graphic scale, and location sketch shall be shown on the map.
- 9) A survey note containing a bearing reference to a well-defined line. A baseline or traverse leg is acceptable for this purpose.
- 10) A note describing the datum of the horizontal and vertical control (see section on "Survey Accuracy,"), together with a description of the benchmarks and control points of origin is required.
- 11) A legend of symbols and abbreviations indicating what each symbol and abbreviation represents is required.
- 12) The map should be certified to Broward College, unless otherwise specified.
All surveys will be drawn utilizing the BC AutoCAD Survey Template File which contains predefined layers, fixed blocks, and attribute blocks.

PRE-CONSTRUCTION DESIGN SURVEY:

Surveys being performed for the design of improvements, such as a new building, may be made up of a single type of survey or a combination of survey types, as specified in the section on "Definitions." At a minimum, Pre-Construction Design Surveys should reflect the following items:

Survey Control:

- 1) See datum and accuracy requirements shown in the section on "Survey Accuracy."
- 2) A minimum of two horizontal control points with coordinates.
- 3) A minimum of two vertical control points (benchmarks) with elevations.
- 4) Horizontal and vertical control can be common to the same two points.

Surface Improvements:

- 1) The surveyor shall consult with the Project Manager and/or designated consultant, to determine the minimum acceptable level of detail to support the design and construction of improvements.
- 2) The location of surface improvements, including, but not limited to, the following: buildings, decks, walks, pavement, walls, curbs, fences, signs and other significant surface improvements that would affect the design.
- 3) Roadways and paved areas shall reflect striping and parking spaces. Parking spaces shall be identified with the type and number of spaces.
- 4) The location of utility structures, including, but not limited to, the following: lift stations, valves, hydrants, stand pipes, irrigation pumps, backflow preventers, manholes, catch basins, meters, wire pull boxes, telephone enclosures, cable enclosures, fiber optic markers, transformers, power poles, overhead wires, ground lights, and street lights.

Topography:

- 1) The surveyors shall consult with the project manager to define the minimum level of detail needed to define drainage patterns and critical slope requirements.
- 2) In open areas, elevations shall be measured at sufficient intervals to identify drainage patterns and grade changes. In paved areas, elevations shall be measured at sufficient intervals to identify drainage patterns and on the edge, centerline, and high and low spots of the pavement.
- 3) Additional elevations and the frequency of elevations collected will be adjusted when necessary to define a special condition or feature.
- 4) Elevations measured on hard surfaces (pavement and concrete) will be accurate to 0.02 feet, plus or minus. Elevations measured on soft surfaces (grass and dirt) will be accurate to 0.1 feet, plus or minus.
- 5) The first floor elevation of existing buildings will be measured at the threshold and so noted on the survey drawing.
- 6) Lakes, ponds, and drainage canals will be located to the edge of water at the time of the survey.

Utilities:

- 1) Before utility locations begin, the surveyor will meet with BC Staff to identify and obtain record documents reflecting utilities within the project limits.
- 2) Before excavation of utilities, the surveyor or utility locating consultant shall contact Sunshine 811, a minimum of 24 hours in advance of any excavations.
- 3) When specified, manholes and catch basins will have the following elements identified: rim, pipe inverts and bottom of structure elevation, pipe sizes and types. If structure is not accessible and as-built measurements cannot be obtained, then the limiting conditions shall be noted on the survey.
- 4) Unless otherwise directed, subsurface utilities will be located. Surveyor shall utilize a qualified utility locator to designate and/or pot hole the subsurface utilities. Subsurface utilities to be located include, but are not limited to, the following: gas, water and sewer mains, water and sewer laterals, chilled water, electric transmission, recycled water, telephone, and fiber optic lines.
- 5) The project architect or engineer will identify potential utility conflicts for identification. The surveyor will coordinate with the utility locator and identify the utilities and location of pot holes. Once the utility is exposed, the size, type of material, and elevation of the utility will be measured and noted on the survey drawing.

Trees and Landscaping:

- 1) The surveyor will coordinate with BC Staff to identify trees and landscaping to be shown on the survey. Unless specifically requested, ground cover, hedges and shrubs will not be located.

- 2) When specified, trees 2 caliper inches and larger will be located and have the following information identified: tree species (common name), trunk diameter measured at breast height, and tree number.
- 3) An aluminum tag will be affixed to the tree, with a non-destructive fastener, inscribed with the identifying tree number.
- 4) Invasive trees such as Melaleuca, Brazilian Pepper, and Australian Pines will not be located. For a complete list of invasive trees refer to the Broward County Land Development Code.
- 5) Irrigation pumps, wells, and water intakes in lakes will be located and shown on the survey. Unless specifically requested sprinklers and irrigation lines will not be shown on the survey.
- 6) A tree table will be placed on the survey drawing listing the tree number, species, and diameter at breast height.
- 7) A Microsoft Excel file containing the tree table shall be sent to the Project Manager.

DURING CONSTRUCTION:

As the project is constructed, BC Staff requires that the contractor maintain an ongoing record of the improvements. This should be accomplished through a series of As-Built Surveys. Underground utility as-builts are to be provided on a monthly basis to BC and prior to the utility being covered and backfilled.

- 1) The contractor will retain a Florida Licensed Surveyor & Mapper to perform, record, document, and certify any as-built measurements.
- 2) After a building's foundation or ground floor is constructed the surveyor will locate the structure and determine the relationship to controlling structures and features. BC staff or their designated consultant will review the as-built location and confirm that the location meets the design specifications. The elevation of the ground floor will be measure and then verified.
- 3) The infrastructure will be as-built during the construction phase to facilitate an accurate record of the placement and construction. The horizontal and vertical location of key fittings will be noted on the design plans. All water and sewer main fittings will be located along with the alignment of piping. At conflict locations, the clearance between piping will be noted. Any deviation from the plan design will be clearly noted. The BC Staff or their designated consultant will review the as-built data and confirm that it meets the design specifications.
- 4) Gravity and storm sewer will have the rim and invert elevations; pipe sizes and types verified and placed on the design plans. The BC Staff or design consultant will review the as-built data and confirm that it meets the design specifications.
- 5) Rock as-built elevations will be measured in advance of paving. Elevations will be measured approximately every 25 feet and at the following locations: High and Low Points, edges of pavement and along flow lines, including all proposed design elevation locations, to ensure that the finished rock has been graded in conformance with design

This Document Prepared By:

plans. As-built data will be marked on the design plans and BC Staff or design consultant will review the as-built data and confirm that it meets design specifications.

- 6) Americans with Disabilities Act (ADA) ramps and parking spaces will have detailed elevations measured as needed to insure that they meet the ADA requirements. As-built data will be marked on the design plans and BC Staff or there designated consultant will review the as-built data and confirm that it meets the design specifications.

POST CONSTRUCTION AS-BUILT SURVEY:

- 1) Post construction the contractor will have the surveyor prepare a final survey of the newly constructed improvements. The final survey will reflect the new buildings, decks, walks, pavement, walls, curbs, fences, signs and other significant surface improvements.
- 2) Roadways and paved areas shall reflect striping and parking spaces. Parking spaces shall be identified with the type and number of spaces.
- 3) The location of utility structures, including, but not limited to, the following: lift stations, valves, hydrants, stand pipes, irrigation pumps, backflow preventers, manholes, catch basins, meters, wire pull boxes, telephone enclosures, cable enclosures, fiber optic markers, transformers, power poles, overhead wires, ground lights and street lights.
- 4) The first floor elevation of the building will be measured and a FEMA Flood Elevation Certificate will be prepared for the completed building.

BROWARD COLLEGE CAD STANDARDS FOR LAND SURVEYS:

Survey Consultants are encouraged to familiarize themselves with recent existing BC project files prior to commencing a project for BC, in order to achieve true conformity with the way drawing files are to be produced. Below are some of the criteria, which must be followed. This document may not cover all circumstances; therefore it is up to the consultant to secure the pertinent information to any situation that may arise in a particular case that is not covered here. All files submitted to BC shall be free of passwords or any other impediment to free their use. BC reserves the right to direct a consultant as to the desired manner to proceed when a situation is not addressed here.

Version:

All drawings shall be produced in AutoCAD and saved in AutoCAD 2014 version. Drawing files submitted will be 100% AutoCAD DWG format and 100% editable, but at BC's discretion, may be submitted in an un-editable media such as CD-ROM.

The subsequent standards apply to 2D drawings only. Prior to producing any drawings from 3D modeling software the project manager shall consult with the BC Staff.

The current version of AutoCAD at the time these standards are established is AutoCAD 2014. These standards can only address those issues pertaining to that version of AutoCAD. If a new version of AutoCAD is released prior to revising these standards, projects shall still be submitted in AutoCAD 2014. Once BC upgrades to the newer version of AutoCAD, that version shall be the official version and at the time BC shall determine if submittals in earlier versions are acceptable. All drawing files in a project shall be saved in the same version of AutoCAD.

Scales:

All drawing plan-views and horizontal scale of profiles and cross-sections will be drawn in scale 1 : 1 in model space, and drawing accuracy shall be 0.01' or better. That is, on a 'DIST' inquiry between consecutive 100-foot stations on a baseline, the result should be 100.00'.

All surveys and details will be drawn 1:1 and then scaled in a paper space window. Certain details need to be drawn with a different horizontal and vertical scale for clarity (canal or lake cross-section); here all horizontal work must be proportional to itself and vertical work must be proportional to itself.

Profiles shall be drawn as a contiguous entity and preferably in the same file as the plan view is located.

There are however very few instances where it is not practical to draw details to any scale; Where drawings are intended to be diagrammatic or schematic, and for those instances only, a scale will not be required. Such drawings will be noted "NOT TO SCALE" or "NO SCALE".

Plots for projects will be produced at a scale commonly used by the engineering and surveying profession; (e.g. 1" = 20', 1" = 30', etc.). Following are examples of unacceptable scales: 1" = 27', 1"=70', etc.

Survey projects shall use decimal as linear units at all times, angular units shall be surveyor (bearings) units.

Vertical scale for cross-sections and profiles will be drawn to a scale in the same ratio as the final plotted product. i.e. if the final plot is horizontal 1"= 20', and the vertical 1"= 2', then the vertical scale is 10 times that of the horizontal so it will be drawn 10 times larger than 1 : 1.

The practice of drawing at a scale different to 1:1, then making a block with the parts and inserting the block to represent a 1:1 scale will be not be permitted, and such work is unacceptable.

Drawing files that are not scale relevant, like index sheet, notes and schedules, shall fill the scale attribute box with the notation "N/A". The notation "NTS" or "NOT TO SCALE" shall be left to those drawing files that are scalable, but are shown in a scale not measurable with a typical engineer's scale, like details, schematics, etc.

All measurements shall be made in U.S. Survey Feet. Projects shall use decimals as linear units at all times. Angular units shall be surveyors (bearing) units. Angles shall be measured counterclockwise and zero (0) shall be to the east.

Drawing:

Surveys in AutoCAD format shall not be cut or disseminated into several files in order to create individual sheets.

Survey files shall not have parts deleted just because the proposed project does not cover those portions. In that case open a paper space window that will show just the portion of survey needed or use XCLIP.

Surveys SHALL NOT BE MOVED SPATIALLY within the drawing file, nor shall the consultant or BC Staff, change the coordinate system to anything other than what was received from survey, UNDER ANY CIRCUMSTANCE. If a consultant furnished the survey it shall be in World Coordinate System (WCS) and the survey shall have the north towards the top of the screen.

Sheets:

The standard title block/sheet border shall be inserted in "paper space"; it shall be inserted at an XYZ scale of 1. Then the viewports can be zoomed at the appropriate XP scale, to produce the desired final scale within the viewport, (several scales in various viewports are then possible) and that way it will be plotted with a final size of 36" X 24" at scale 1:1.

All projects will be made to plot in a standard "ARCH D 36" X 24" sheet. The BC standard title block/sheet border SHALL NOT be inserted with dissimilar 'x' and 'y' scales in order to plot in a final size other than the standard.

Symbols & Entities:

Blocks will be issued with the most common symbols used in BC projects. From time to time these symbols will be revised and/or new symbols will be added. If for any reason there is a need to create a block either for local use or to keep for future projects, that block shall comply with all BC CAD standards.

Standard issue symbols shall NOT be exploded, renamed or changed in any way. Objects that are repeated throughout and/or that are depicted in an exaggerated scale for clarity (fire hydrants, power poles, catch basins, street lamps, etc) shall be represented by a symbol. If a symbol CAN be used it SHALL be used.

Whenever possible, make use of BC's standard symbols and blocks. If a new symbol or block is created, it shall be submitted to BC for approval. Approved symbols and blocks will be made part of BC's symbols library, royalty free. North arrows, graphical scales, logos, location maps and other similar symbols shall be inserted as blocks and left unexploded.

Survey Consultants can insert their company logo or identification information in the form of a block (symbol) and left unexploded. This block can be placed in all sheets including the cover sheet within the drawing area of each sheet.

Dimensions shall be associative at all times and left at their default value, and shall NOT be exploded.

Hatch patterns shall NOT be exploded. Hatch patterns and closed polylines forming the hatch boundary shall be the only entities permitted on hatch layers.

Paper Space:

Paper space shall be used for title block/sheet border and viewports. No other entities shall be placed there, especially notes that describe parts of model space entities (notes with a leader); (exceptions: logos, captions, legends, general notes, etc.).

Title block/sheet borders or cover sheets shall NOT be reference file.

All drawing entities will be confined within the sheet border. Extents of the drawing files shall be to the edge of title block/sheet border. Multiple layouts are permitted, however only one sheet border per layout is allowed.

Colors and Line weights:

BC will provide a color-dependent plot style table (CTB) to be used.

Drawing files submitted, shall make use of one of BC's AutoCAD templates and symbol library.

All entities shall be located in their appropriate layer, and have a color and line type "BYLAYER".

The project manager shall be the final judge of the plotted appearance of the drawings. Consultant shall furnish a printed copy of all drawing files using BC's CTB file for approval by BC.

Fonts:

Since fonts are not carried with the drawing files and are depend on the computer that is running AutoCAD to find and use these font files, no third party or proprietary fonts shall be used. Drawing files shall not make use of SHAPE files.

It is possible to automatically substitute fonts not found in the AutoCAD path. BC may (at their discretion) substitute odd fonts with STANDARD.SHX.

Layers:

BC will provide a list of layer names, in .DWT format to be used. If there is a project for which there are no layer names, the consultant shall provide a list of proposed layer names, for BC's approval, prior to their use. Once approved by BC, those layer names will become part of BC's list of layer names for all projects thereon or until revised.

No layer names, other than those in BC's layer name list, will be present in drawing files. Exceptions are those layer names automatically created by AutoCAD; "0", "DEFPOINTS", "ASHADE".

NOT ACCEPTED are layer names created by third party software or add-ons, including Autodesk add-ons.

GENERAL ISSUES BEFORE SUBMITTAL:

All drawing files shall have all tabs (layouts) zoomed to EXTENTS, prior to any submittal to BC, whether it is the final or a working submittal.

Consultants shall fill in total number of sheets in the tile block, prior to final submittal of drawing files.

Consultants shall submit a hardcopy (bond, 36" X 24"), DWG and PDF files of the project drawings together with any submittal in electronic format (CD, etc), when making partial and final submittal of drawing files. Prior to all submittals, consultants shall coordinate with BC's project manager as to the method of creating PDF files, which will make prints satisfactory to BC. All files submitted to BC shall be free of passwords or any other impediment to their free use. PDFs shall be combined into a single file. Sheets shall be oriented landscape with the title block to the right of the screen, arranged in the order that they are to be printed and the set assembled matching the drawing index order.

DWG AutoCAD files shall not be compressed using zip or rar or any other compression scheme when submitting files in an optical media (CD, DVD).

Submittals via FTP sites are not official submittals; and optical media (CD, DVD) is required.

When a project is assigned to a consultant who utilizes the collaboration of other sub-consultants, said prime-consultant shall be responsible for all submittals of drawing files and plot files. Said submittals shall be in the form of a single media (1 CD/DVD) to include the entire project.

MISCELLANEOUS:

"MTEXT" (multiline text) shall be used in all cases where more than one line of text occurs and where leaders are used.

These standards are a detailed description of aspects in the creation of drawing files within Surveying Profession. It is by no means the complete description of all the methods used, and it is the consultant's responsibility to alert BC of any point or situation which is not described in these specifications, and which should be addressed. Also if a consultant, after reading these standards and prior to commencing any drafting work, feels that there are points or items in these standards which are not logical, or are onerous to abide by, they should notify BC Staff at their earliest convenience and their views will be open to discussion.

Post Construction

Upon completion of construction, the contractor shall submit to the engineer of record one complete set of "Record" construction drawings and a digital copy. These drawings shall be made to show "As-Built" construction changes and dimensioned locations and elevations of all improvements and shall be signed and sealed by a Florida licensed Surveyor and Mapper.

Record drawings are to represent actual field construction of the improvements. They are to be signed and sealed by a Florida Professional Surveyor and Mapper, along with the proper certification statement (further described below). The name, address and telephone number of the firm of the certifying surveyor along with the contractor will also be included.

Upon project close-out, it may be necessary to prepare and provide a sketch and legal description for incorporation into an agreement with a utility provider such as Florida Power & Light or city utility department. Said sketch and legal description shall be prepared in a format, suitable for recording in the public records of Broward County. All AutoCAD standards previously mentioned shall apply.

The Record drawings are to include, but not be limited to the following information:

- "Record" in large bold letters.
- Applicable scales: plans, profiles, details.
- Location sketch and north arrow.
- Identify right-of-way lines and clearly show property boundary lines. Give the names of streets and public right-of-ways along with widths of proposed streets.
- Location and elevation and datum of bench marks and source.
- Location of building lines together with building numbers.
- Show building finish floor elevations.
- Fully identify all easements with their widths.

- Clearly show all utilities to be covered by an easement and verify they are within the required easement.
- All planned installations per the approved design drawings shall be shown on the As-Built drawings, including the buildings, storm drainage, other utilities, asphalt roadways, concrete walks, etc.
- Any changes to the planned installations made during construction must be shown on the as-built drawings.
- Distances from right-of-way lines to utilities.
- Service lines to be located at main and terminus.
- Type of pipe – size and material.
- Meter size and location.
- Unless instructed by the engineer or utility provider, the water and sewer system will be located with station and offset from a baseline using the manholes of the sewer system as the baseline. If it is not practical to utilize the sewer system manholes as a baseline then the surveyor will contact the engineer of record so that a substitute baseline may be chosen.
- Elevations of the water system will be taken and shown at the:
 - Top of pipe every 100 feet and at all deflection points or changes in direction.
 - Top of all fittings, including the bends, tees, gate valves, backflow preventer's, DDCV, fire hydrants, etc.
 - Tie-ins to existing lines.
 - The ends of all water services to the building or homes or where the water line terminates.
- Elevations of the sewer system will be taken and shown at:
 - All structures to include the rim and inverts.
 - The stub ends of all sewer laterals, including the inverts of all cleanouts.
- The length, size, material and slope of all sewer mains will be shown.
- Drainage structures shall show the rim/grate elevation and inverts of all pipes. Pipe information will include the size, material and length and if it's perforated or non-perforated. The length and width will also be shown for any adjoining exfiltration trench.
- Roadway elevations will be shown at the crown, edge of pavement, high and low points, and right of way line at 100' (Max.) or fraction thereof and at every location on the approved design drawings shown with an elevation. If the as-built roadway elevations shown were not taken on finish asphalt or concrete, a note will be boldly shown indicating what stage of construction the elevations were taken, such as finish rock, first lift of asphalt, etc.)

- Lake, pond, canal, and/or waterways shall be cross-sectioned at 100 foot (Max.) intervals or fractions thereof. The cross section shall be referenced to a property line or easement line, if possible or practical. Elevations will be shown at the top of bank, edge of water, planted wetland vegetation, slope breakpoint(s), and bottom. The design template shall be shown superimposed on each section.
- Perimeter berms shall be cross-sectioned at 100 foot (Max.) intervals or fractions thereof. The cross section shall be referenced to the property line with elevations shown at the top of berm, property line, and toe of berm.
- Drainage swales shall have flow line elevations shown at 100 foot (Max.) intervals or fraction thereof.
- Dry retention areas shall show top and bottom elevations at 100 foot (Max.) grid points or fraction thereof.
- Identify private systems such as lift stations, sewer, water and drainage lines and force mains, not maintained by BC or utility providers.
- Locate and identify any abandoned utility lines.
- The following certification statement shall appear on all As-Built Submittals:

Surveyor’s Certification:

I hereby certify that the As-Built measurements shown hereon are true and correct to the best of my knowledge and belief as surveyed in the field under my direction on _____, 20____.
 _____, P.S.M. # _____

“Record Drawing”

The information shown on this record drawing was supplied by:
 _____, Licensed Surveyor & Mapper #
 _____, in the State of Florida.

The Engineer’s signature and seal affixed to this drawing is only to be interpreted to confirm that the information provided has been reviewed for conformance with all applicable engineering design standards.