Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

The materials presented in this checklist are intended for the individual use of the Design Engineers in the performance of their assignments. The contents of the checklist are not all-inclusive nor are they intended to substitute for **sound professional judgment**. The City of Houston reserves the right to delete or add items as necessary. Refer to the latest City of Houston Infrastructure Design Manual, Chapter 2, Survey Requirements and Professional Land Surveying Practice Act of the State of Texas:

50% Final Design Submittal Review Requirements:

No.	Description	Complies (1) Yes/No/NA	QC (2) Check	QC (3) Check	Survey Section (4) Check
1.	Survey Control Map.				
2.	Section 2.07 B. Control monuments are shown and swing ties to said monuments shown. Set control monuments at a maximum of 1,000 feet on long lines. Monuments must be of a permanent nature, such as iron rods, spikes, nails, etc.				
3.	Section 2.07 C. Show ties from existing right-of-way monuments, property corners, control points, and baseline points to the City of Houston **Survey Marker** System, if it exists within 2,000 feet.				
4.	Section 2.07 D. Temporary benchmarks are listed. Temporary benchmarks must be set within 200 feet of each end of the project baseline(s) and at no more than 1,000 foot intervals.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

No.	Description	Complies (1) Yes/No/NA	QC (2) Check	QC (3) Check	Survey Section (4) Check
5.	Section 2.07 E. Show intersecting centerlines and their respective bearings or intersecting.				
6.	Section 2.08 A. Show coordinates for any control points, found or set monuments, curve data, or baseline points.				
7.	Section 2.09 B. Give swing ties (reference drawings similar to C. O. H. **Survey Marker** System) for control points or centerline points.				
8.	Section 2.09 C. Datum must be noted for any benchmarks.				
9.	Section 2.09 D. See 2.07 E above. Show source of bearings and show bearings on both control line and project centerline when they are not the same line.				
10.	List of benchmarks and temporary benchmarks.				
11.	Standard scale is 1" = 100'.				
12.	Land Surveyor's interim review notation with the Surveyor's name, registration number and date.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

70% Final Design Submittal Review Requirements:

No.	Description	Complies (1) Yes/No/NA	QC (2) Check	QC (3) Check	Survey Section (4) Check
1.	Section 2.06 E. If the horizontal control exceeds a distance of 2,000 feet from a found City of Survey marker, a Site Control Monument shall be set. Additional Site Control Monuments shall be set should the horizontal control exceed a radial distance of 2,000 feet from an existing City survey marker or newly set Site Control Monument. Obtain disk and designation number from the City Surveyors Office.				
2.	Section 2.07 A. The City of Houston field book number must be displayed on sheets. A field book number must be obtained from the City of Houston, Survey Section.				
3.	Section 2.09 A. Show stations and offset distances for any existing property monuments or right-of-way monuments. "Control Points" (existing monuments used to determine the existing Right-Of-way) must be noted on sheets. The stationed baseline must be set on the ground at the proper intervals.				
4.	Section 2.09C. Each sheet should have a Temporary Benchmark that is located within 500 feet of any station on that particular sheet in a station/offset description and elevation format.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

No.	Description	Complies (1) Yes/No/NA	QC (2) Check	QC (3) Check	Survey Section (4) Check
5.	City of Houston markers with location. Identification number and year adjustment.				
6.	Baselines and horizontal control lines (control points, stations and bearings).				
7.	Each sheet of the plan and profile shall have a benchmark elevation and description defined. List the TBM located closest to that particular sheet in station/offset, description and elevation.				

90% Final Design Submittal Review Requirements:

Comply with correct requirements of 50% and 70% submittal. Otherwise, this 90% Final Design submittal will considered 70% Final Design submittal and will require another 90% Final Design submittal.

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

TABLE A

OPTIONAL SURVEY RESPOSIBILITIES AND SPECIFICATIONS

NOTE: The items of Table A must be negotiated between the surveyor and client for the following types of projects: facilities, right-of-way acquisition, remodeling of existing facilities, addition to existing facilities, land acquisition, etc.. It may be necessary for the surveyor to qualify or expand upon the description of these items, e.g. in reference to Item 6, there may be a need for an interpretation of restriction. The surveyor cannot make a certification on the basis of interpretation.

If checked, the following optional items are to be included in the ALTA/ACSM LAND TITLE SURVEY:

No.	Description	Complies (1) Yes/No/NA	QC (2) Check	QC (3) Check	Survey Section (4) Check
1.	**Survey markers** placed (or reference **survey marker** or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by an existing **survey marker** or witness to the corner.				
2.	Vicinity map showing the property surveyed in reference to nearby highway(s) or major street intersection(s).				
3.	Flood zone designation (with proper annotation based on Federal Flood Insurance Rate Maps or the state or local equivalent, by scaled map location and graphic plotting only).				
4.	Land area as specified by the client.				
5.	Contours and the datum of the elevations.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

6.	Identify and show if possible, setback, height, and floor space area restrictions of record or disclosed by applicable zoning or building codes (in addition to those recorded in subdivision maps). If none, so state.				
7.	Exterior dimensions of all buildings at ground level.				
8.	Square footage of exterior dimensions of all buildings at ground level.				
9.	Square footage of gross floor area of all buildings.				
10.	Square footage of other areas to be defined by the client, if applicable.				
11.	Measured height of all buildings above grade at a defined location. If no defined location is provided, the point of measurements shall be shown.				
12.	Substantial, visible improvements (in addition to buildings) such as signs, parking areas or structures, swimming pools, etc.				
13.	Parking areas and, if striped, the striping and the type (e.g. handicapped, motorcycle, regular, etc.) and number of parking spaces.				
14.	Indication of access to public way such as curb cuts and driveways.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

15.	Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by observed evidence.				
16.	Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by observed evidence together with plans and markings provided by client, utility companies, and other appropriate sources (with reference as to the source of information railroad tracks and sidings.				
17.	Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by observed evidence together with plans and markings provided by client, utility companies, and other appropriate sources (with reference as to the source of information) manholes, catch basins, valve vaults or other surface indications of subterranean uses.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ File No.: _____

Project Title: _____

Design Consultant: _____

18.	Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by observed evidence together with plans and markings provided by client, utility companies, and other appropriate sources (with reference as to the source of information) wires and cables (including their function) crossing the surveyed premises, all poles on or within ten feet of the surveyed premises, and the dimensions of all crosswires or overhangs affecting the surveyed premises.				
19.	Location of utilities (representative examples of which are shown below) existing on or serving the surveyed property as determined by observed evidence together with plans and markings provided by client, utility companies, and other appropriate sources (with reference as to the source of information) utility company installations on the surveyed premises.				
20.	Government Agency survey-related requirements as specified by the client.				
21.	Names of adjoining owners of platted lands.				
22.	Observable evidence of earth moving work, building construction or building additions within recent months.				

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section

Survey Check List

GFS No.: _____ **File No.:** _____

Project Title: _____

Design Consultant: _____

23.	Any changes in street right of way lines either completed or proposed, and available from the controlling jurisdiction. Observable evidence of recent street or sidewalk construction or repairs.				
24.	Observable evidence of site use as a solid waste dump, sump or sanitary landfill.				

Additional Comments:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

(1) To be completed by Design Engineer
(2) To be completed by Design Engineer's Quality Control Reviewer
(3) To be completed by City's Project Manager
(4) To be completed by City's Survey Section