

Charter Township of White Lake
Checklist of As-Built Drawing Requirements

- A. Grading
 - 1. Rear yard swale elevations and enough on site elevations to clearly indicate drainage patterns and confirm that the site was built in substantial conformance with the construction drawings.
 - 2. Finish floor elevation of all commercial buildings.
 - 3. Location and height and type of retaining walls and extent of associated protective railing.

- B. Storm Sewer
 - 1. Pipe lengths, sizes and slopes.
 - 2. Rim elevations of drainage structures.
 - 3. Pipe inverts.
 - 4. Pipe material and class.
 - 5. Joint type
 - 6. Two dimensional ties to manholes, not required for CB's or inlets in pavement. Back of curb is sufficient for one tie, property corners are not acceptable, existing building corners, trees, other utility structures and hydrants are acceptable, preferably at a distance of less than 100 feet.
 - 7. Structure numbers.
 - 8. Pipe and structure manufacturer name.
 - 9. Casting types by manufacturer catalog number.
 - 10. Verification of special features such as trapped catch basins, water quality structures or leaching basins.

- C. Detention/Retention Basins
 - 1. As-built volume with calculations.
 - 2. Elevations of primary and secondary overflows.
 - 3. Elevations of inlet and outlet pipe.
 - 4. Berm and spillway weir elevations.
 - 5. Outlet restrictor location and size.
 - 6. Certification must be provided and sealed by an engineer licensed in the State of Michigan to verify that the detention or retention basin volume and restrictor size is in substantial conformance with the construction documents.
 - 7. Bottom and top of slope elevations to determine that side slopes meet plan slopes.
 - 8. As-built open basin contours at one foot intervals

- D. Sanitary Sewer
 - 1. Length between manholes, pipe sizes and slopes.
 - 2. Rim elevations of manholes.
 - 3. Casing size, length, thickness and annular space filling material and location along sewer run.
 - 4. Two dimensional ties to manholes and cleanouts and leads. Back of curb is sufficient for one tie, property corners are not acceptable, existing building

- corners, trees, other utility structures and hydrants are acceptable, preferably at a distance of less than 100 feet.
- 5. Pipe material and joint type.
- 6. Pipe and manhole manufacturer name and casting make and model number.
- 7. Pipe inverts at structures.
- 8. Manhole numbers.
- 9. Wye locations.
- 10. Special detail for force main structure, including part manufacturer and model nos.
- 11. Indicate size and type (interior, exterior) drop structures.
- 1211. All start-up data and O. & M. manuals for pump station

E. Watermain

- 1. Length between valves and wells, tees, bends, other fittings
- 2. Size of pipe.
- 3. Pipe material class and joint type.
- 4. Manufacturer of pipe, gate wells, valves, hydrants (including model) and fittings.
- 5. At least two dimensional ties to gate valves and wells. Back of curb is sufficient for one tie, property corners are not acceptable, existing building corners, trees, other utility structures and hydrants are acceptable, preferably at a distance of less than 100 feet such that it can be taped by the water department after development is complete.
- 6. Finish grade of hydrants, rim elevation of gate wells.
- 7. Special details for utility crossings showing location of vertical bends, pipe clearances, type of restraints, encasement, frost protection, etc.
- 8. Casing size, length, thickness and filling material.
- 9. Hydrant and gate valve numbers.
- 10. Verification that the watermain is no closer than 6 feet to the edge of and is within the easement or public right-of-way line

Information must be placed on a copy of the construction plans with design information crossed out, not erased. Provide two blueprints for review prior to providing digital copy.

It is not necessary to provide duplicate information in both the plan view and profile view however, the location of all as-built information must be clearly referenced.

A legend to identify as-built information must be provided.

Redraw profiles if pipe elevations vary by more than 1.0 feet or pipe lengths change by more than 20 feet or if there are significant changes in pipe diameter.

All as-built information must be presented in a clear and concise manner.

When approved, an Adobe PDF compatible digital file shall be submitted to Johnson & Anderson, Inc. If that is not possible, mylars will be accepted. In either case, two sealed sets of prints are required. All site plan sheets except standard details and including the cover sheet shall be provided.