CITY OF LIVONIA
ENGINEERING DIVISION
GRADE CERTIFICATION REQUIREMENTS – COMMERCIAL

The final measure plans will be prepared as follows:

1. The Design Engineer will be responsible for submitting a final measured plan to the City of Livonia Engineering Division. The following information should be incorporated onto a signed and sealed blueprint:

    a. The as-built rim elevations of all storm sewer, sanitary sewer and water main structures.
    b. As-built inverts and lengths of all the utilities (including sump pump and sanitary leads) updated on both the plan and profile view.
    c. The Designer should also set a benchmark on all hydrants. The benchmark is to be located on the arrow, next to the operating nut.
    d. The as-built top-of-curb elevations adjacent to all utility structures.
    e. As-built information of swales on the grading plan.
    f. As-built information of the finished grade of the building and entrances.
    g. The as-built information should be acquired after final inspections have determined that structures do not require adjustments.
    h. Topographic as-builts of all berms should be shown on the final measure plans with contour lines.
    i. The original topographic survey of the undeveloped site must be included in the final measures.
    j. The original stormwater design calculations and drawings must be included in the final measure.

2. **The Design Engineer will be responsible for submitting an as-built detention pond certificate.** The following information should be incorporated into a signed and sealed blueprint and acquired prior to the stabilization of the side slopes:

    a. As-built contours should be indicated at 1-foot vertical increments and each contour shall be designed with its elevation.
    b. As-built permanent water contours shall be depicted on the plans.
    c. All proposed contours should be eliminated except for bottom of pond, 100-year storage, and top of bank contours. As-built and proposed contours shall have different line styles.
    d. As-built volumes should be indicated in 1-foot increments.
    e. Proposed volumes should be indicated along with the detention calculations per the approved plans.
    f. Random spot elevations shall be provided along the banks of the detention pond.
    g. Provide as-built locations, rim elevations and invert elevations of all the structures for the ponds.

h. Provide the as-built invert elevations of the weep holes located in the riser pipe that determine the bank full volume elevation.
i. Verification that the slope shall not be steeper than 1 on 6. All open detention basins must be fenced if side slopes exceed 1 vertical to 6 horizontal. This may be waived by the Engineering Division when the design is an integral part of the landscaping and the location and depth does not present a potential hazard.
j. Identify areas of stone around the risers and locations where riprap has been placed.
k. Provide elevations of the top of the retaining walls and the elevation at the face of the wall. Per the plans there should not be more than 18-inches of face showing.
l. Reveal the size and locations of the pond conduits.

3. One copy of the draft final measures must be submitted to the City of Livonia Engineering Division.

4. Upon the Engineering Division of the City of Livonia's review and approval, a complete mylar copy and four paper copies of the final measured plans must be forwarded to the City of Livonia.

5. City of Livonia Engineering Division will forward the completed plans as follows: one set of blueprints to The City of Detroit Water and Sewer Department and one set of blueprints to the Project Sponsor.