2021 LAND DEVELOPMENT CODE AMENDMENTS II

Amendment Report to the Board of Trustees **October 22, 2021**
Prepared by: Development Services Department and Engineering Department

CONTENTS

KEY

- Text with ~~strikethrough~~ to be deleted.
- Text in **red and bolded** to be added.
- Text in ***bold blue italics*** to be moved from one section of the Code to a new location.

SUBSTANTIVE AMENDMENT: REVISE RESIDENTIAL DISTRICT LOT COVERAGE BONUS APPLICATIONS

AMENDMENT SUMMARY

SECTION 6-201.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-202.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-203.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-203.5.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-204.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-204.5.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-205.F

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

SECTION 6-206.G

- Revise lot coverage grades requirements to simplify methods for achieving higher lot coverage.

AMENDMENT EXPLANATION

The existing code allows for three tiers of lot coverage in residential zoning districts. The "Plus" and "Premium" tiers provide methods for achieving higher lot coverage through implementing BMPs to reduce overall site run-off. These strategies present a lot of confusion to homeowners looking to increase their coverage on existing lots and new development. The proposed simplification will provide a menu of easily applied options to increase lot coverage by minimizing impact on public stormwater utilities. The proposed revisions do not change to total lot coverage currently allowed by the Code.

PROPOSED AMENDMENT TEXT

SECTION 6-201.F – E-1 RESIDENTIAL

~~F. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to twenty percent (20%) lot coverage by right for the principal structures, and pavement, plus an additional 5% for an accessory structure. A minimum of seventy-five percent (75%) of the lot shall be green space.~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. Seventy percent (70%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of sixty-five percent (65%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special.** Allows up to seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.

a. The base lot coverage allowed by right is not to exceed twenty-five percent (25%) for the principal structures, pavement, and accessory structures.

b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed thirty-five percent (35%).

1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.

2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.

3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.

4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.

2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-202.F – R-1 RESIDENTIAL

~~F. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to thirty percent (30%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of sixty-five percent (65%) of the lot shall be green space.~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. A minimum of sixty percent (60%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of fifty-five percent (55%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special.** Allows up to seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.

a. The base lot coverage allowed by right is not to exceed thirty-five percent (35%) for the principal structures, pavement, and accessory structures.

b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed forty-five percent (45%).

1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.

2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.
3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.
4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.

2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-203.F – R-2 RESIDENTIAL

~~F. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to thirty percent (30%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of sixty-five percent (65%) of the lot shall be green space. An additional 3% lot coverage allowance is provided for single family homes with side-loaded garages (38% by right/ 62% green space).~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. A minimum of sixty percent (60%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of fifty-five percent (55%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special.** Allows up to seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.

a. The base lot coverage allowed by right is not to exceed thirty-five percent (35%) for the principal structures, pavement, and accessory structures.

1. An additional 3% impervious lot coverage is allowed for single family homes with side-loaded garages.

b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed forty-five percent (45%).

1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.

2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.

3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.

4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.

2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-203.5.F – R-2A RESIDENTIAL

~~F. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to thirty percent (30%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of sixty-five percent (65%) of the lot shall be green space. An additional 3% lot coverage allowance is provided for single family homes with side-loaded garages (38% by right/ 62% green space).~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. A minimum of sixty percent (60%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of fifty-five percent (55%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. Special. Allows up to seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.
    a. The base lot coverage allowed by right is not to exceed thirty-five percent (35%) for the principal structures, pavement, and accessory structures.
        1. An additional 3% impervious lot coverage is allowed for single family homes with side-loaded garages.
    b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed forty-five percent (45%).
        1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.
        2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.
        3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.
        4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.
2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-204.F – R-3 RESIDENTIAL

~~F. Lot Coverage. There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. Base. Allows up to thirty-five percent (35%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of sixty percent (60%) of the lot shall be green space. An additional 3% lot coverage allowance is provided for single family homes with side-loaded garages (43% by right /57% green space).~~

~~2. **Plus**. Allows an additional five percent (5%) from base lot coverage by permit. A minimum of fifty-five percent (55%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium**. Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of fifty percent (50%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1 inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special**. Allows seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.
    a. The base lot coverage allowed by right is not to exceed forty percent (40%) for the principal structures, pavement, and accessory structures.
        1. An additional 3% impervious lot coverage is allowed for single family homes with side-loaded garages.
    b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed fifty percent (50%).
        1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.
        2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.
        3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.
        4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.
2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-204.5.F – R-3A RESIDENTIAL

~~F. Lot Coverage. There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. Base. Allows up to thirty-five percent (35%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of sixty percent (60%) of the lot shall be green space. An additional 3% lot coverage allowance is provided for single family homes with side-loaded garages (43% by right /57% green space).~~

~~2. Plus. Allows an additional five percent (5%) from base lot coverage by permit. Fifty-five percent (55%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. Premium. Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of fifty percent (50%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. Special. Allows seventy percent (70%) lot coverage by right to non-residential land uses. Thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.

a. The base lot coverage allowed by right is not to exceed forty percent (40%) for the principal structures, pavement, and accessory structures.

1. An additional 3% impervious lot coverage is allowed for single family homes with side-loaded garages.

b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed fifty percent (50%).

1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.
2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.
3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.
4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.

2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-205.F – R-4 RESIDENTIAL

~~F. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to forty percent (40%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of fifty-five percent (55%) of the lot shall be green space. For single family attached and multi-family residential uses, sixty percent (60%) lot coverage is allowed by right. A minimum of forty percent (40%) of such lots shall be green space.~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. A minimum of fifty percent (50%) of the lot shall be green space. For single family attached and multi-family residential uses, Plus grade is not an option. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of forty-five percent (45%) of the lot shall be green space. For single family attached and multi-family residential uses, Premium grade is not an option. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special.** Allows up to seventy percent (70%) lot coverage by right to non-residential land uses. A minimum of thirty percent (30%) of the lot shall be green space.~~

F. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.

a. The base lot coverage allowed by right is not to exceed forty-five percent (45%) for the principal structures, pavement, and accessory structures.

1. An additional 3% impervious lot coverage is allowed for single family homes with side-loaded garages.

2. For single family attached and multi-family residential uses, sixty percent (60%) lot coverage is allowed by right.

b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed fifty-five percent (55%).

1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.

2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.

3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.

4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.

2. Non-residential land uses are allowed up to seventy percent (70%) impervious lot coverage by right.

SECTION 6-206.G – RSB RESIDENTIAL AND SUPPORTING BUSINESS

~~G. **Lot Coverage.** There are three (3) grades of residential lot coverage: Base, Plus, and Premium. A fourth grade, Special, is reserved for non-residential uses such as places of worship and/or institutional uses. The following regulations shall permit lots to move between grades to increase or decrease lot coverage at will so long as they meet the following performance criteria associated with each grade. Lot coverage includes the area of a lot covered by building, pavement, storm water storage, and other impervious elements.~~

~~1. **Base.** Allows up to sixty percent (60%) lot coverage by right for the principal structures and pavement, plus an additional 5% for an accessory structure. A minimum of thirty-five percent (35%) of the lot shall be green space.~~

~~2. **Plus.** Allows an additional five percent (5%) from base lot coverage by permit. A minimum of thirty percent (30%) of the lot shall be green space. A lot shall be permitted at Plus grade when it can demonstrate the permanent installation of one of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. Five percent (5%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~c. Five percent (5%) impervious pavement reduction and replacement with approved pervious pavement surface area.~~

~~3. **Premium.** Allows an additional ten percent (10%) from base lot coverage by permit. A minimum of twenty-five percent (25%) of the lot shall be green space. A lot shall be permitted at Premium grade when it can demonstrate the permanent installation of at least two of the following:~~

~~a. A rain sensor system for lawn irrigation (if applicable);~~

~~b. The installation of one type of renewable energy system that supplements at least 10% of household power consumption and installed in compliance with Section 6-314 of these regulations;~~

~~c. One (1) dry well per Section 6-302.H.1.k of these regulations that can capture at least 50% of site storm water generation. The capacity of dry well shall be at least 50% of impervious area times 1-inch (50% impervious area x 1inch);~~

~~d. Ten percent (10%) turf grass reduction and replacement with an equal percentage in rain garden area or naturalized landscape area (see Section 6-305.F.2.c);~~

~~e. Ten percent (10%) pavement reduction and replacement with approved pervious pavement surface area.~~

~~4. **Special.** Allows eighty percent (80%) lot coverage by right to non-residential land uses and mixed-uses. Twenty percent (20%) of the lot shall be green space.~~

G. Lot Coverage. Lot coverage is the measure of impervious area on a property including the area of the building(s), pavement, stormwater storage, and other impervious surfaces. All areas not included in the impervious lot coverage shall be green space.

1. Residential lot coverage regulations are designed to provide a range of impervious lot coverage, when demonstrating compliance with performance criteria.
    a. The base lot coverage allowed by right is not to exceed sixty-five percent (65%) for the principal structures, pavement, and accessory structures.
    b. Additional impervious lot coverage may be earned through permanent installation of Best Management Practices (BMP), as approved by Development Services. Total lot coverage shall not exceed seventy-five percent (75%).
        1. For each square foot of permeable pavers installed in lieu of impervious paving, earn an additional 0.5 sf of lot coverage.
        2. For each square foot of naturalized landscaping installed in lieu of turf grass, earn an additional 1.0 sf of lot coverage.
        3. For each gallon of water detained in a rain barrel, dry well, or rain garden earn an additional 1.5 sf of lot coverage.
        4. All BMP must meet the installation and performance requirements of the Code; must be documented on a site plan; and must be maintained by the property owner.
2. Non-residential land uses are allowed up to eight percent 80% impervious lot coverage by right.

SUBSTANTIVE AMENDMENT: REVISE REQUIREMENTS FOR BICYCLE PARKING

AMENDMENT SUMMARY

SECTION 6-306.H

- Revise language for bicycle parking quantities to simplify the Code.
- Revise bicycle rack requirements to include two-points of contact to prevent the bike from tipping over and provide multiple points of locking both the frame and one or both wheels.
- Add preferred design types.
- Add criteria for locating a portion of bicycle parking within 50' of a building entrance.
- Add requirement for bicycle parking for mixed use and residential planned developments.

AMENDMENT EXPLANATION

The most common bike rack proposed by developers is the wave or undulating bike rack. In practice, this design does not accommodate all types of bikes; and 50% of the spaces do not support the frame and the wheel, and limit locking capacity. Staff recommends the proposed requirements to address the basic elements of good bicycle parking and bring the Code into alignment with industry standards for best practices.

PROPOSED AMENDMENT TEXT

SECTION 6-306.H

H. Bicycle Parking.

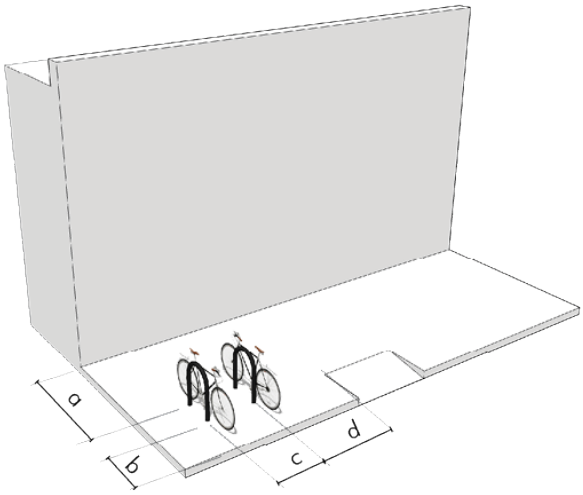
1. All nonresidential uses containing ten (10) or more automobile parking spaces shall provide bicycle parking facilities at the rate of ~~three (3) bicycle parking spaces for the first thirty (30) automobile parking spaces provided and~~ one (1) ~~additional~~ bicycle parking space for each ten (10) ~~additional~~ automobile parking spaces provided, up to a maximum of thirty (30) bicycle parking spaces. Mixed use and residential planned developments, except for townhomes, shall provide one (1) bicycle parking space for every ten (10) residential units, or as approved by Development Services.

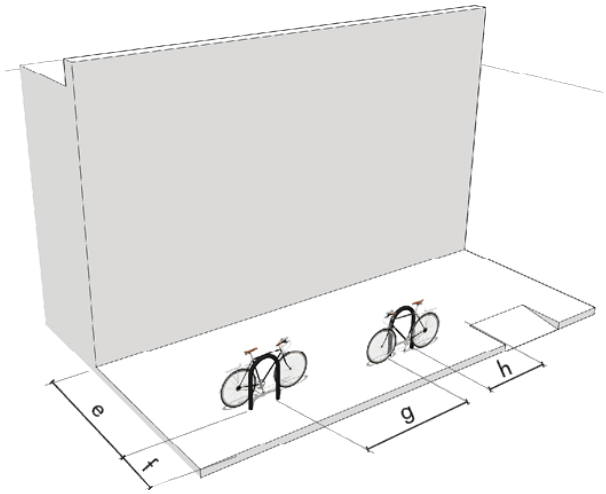
2. Bicycle racks shall be ~~installed to support the frame of the bicycle and not just the wheel.~~ securely anchored to the ground.

3. Bicycle racks shall support the bicycle in at least two places, preventing it from tipping over, and shall provide multiple points of locking to secure both the frame and one or both wheels. Bicycle racks shall accommodate a variety of bicycle types and sizes. The inverted-U or post and ring style racks are preferred.

4. A minimum of 25% of required bicycle parking spaces shall be provided no more than 50' from the entrance to the user it is serving, and clearly visible.

5. Bicycle racks shall be installed in conformance with the minimum spacing requirements shown in Figure 6-306.H.1.





a. 7′-0″ minimum from interior edge of sidewalk.
b. 3′-0″ minimum from rack to back of curb.
c. 3′-0″ minimum between centerline of racks.
d. 5′-0″ minimum from centerline of rack to other site elements.

e. 5′-0″ minimum from interior edge of sidewalk.
f. 3′-0″ minimum from rack to back of curb.
g. 0′-0″ minimum between racks.
h. 5′-0″ minimum from rack to other site elements.

Figure 6-306.H.1

SUBSTANTIVE AMENDMENTS: ADD TRANSPARENCY REQUIREMENTS FOR STOREFRONTS

AMENDMENT SUMMARY

SECTION 6-308

- Add transparency requirements for commercial storefronts.

AMENDMENT EXPLANATION

Development Services has encountered a number of proposed tenant fit-out designs that cover over storefront windows with opaque film or shadowboxes. This results in tenant spaces that lack transparency and create blank facades along commercial corridors in the Village. Increasingly as we implement the Code requirements to place buildings closer to the street -without parking in front- we see buildings with multiple fronts. The proposed amendment is to ensure that building facades fronting public streets uphold the same quality of design and convey business activities as much as the fronts facing the parking lots serving the businesses. Currently, the Code requires minimum transparency in the Village Center District only.

PROPOSED AMENDMENT TEXT

SECTION 6-308.F

16. Unless otherwise approved by Development Services, ground level storefront elevations facing a public right-of-way or parking lot serving the business shall:
    a. Maintain no less than 65% transparent glass in the area measured from 2′-6″ above interior finished floor to 8′-0″ above interior finished floor along elevations. Areas of transparency shall provide a minimum visibility of 5′ into the interior during business hours.
    b. Discreetly blend areas of opaque storefront with the building materials and architecture.
    c. Provide back-of-house doors with the same design standard as pedestrian entrances.

SUBSTANTIVE AMENDMENT: PRIVATE MAINTENANCE OF RESIDENTIAL STORMWATER FACILITIES

AMENDMENT SUMMARY

SECTION 6-409

- Modify the requirements for maintenance of stormwater ponds and infrastructure to require that maintenance be the sole responsibility of the property owners within the subdivision.
- Add a requirement that the developer establish a dormant Special Service Area to be activated in the event that the property owners failed to maintain the stormwater pond or infrastructure and the maintenance work must be conducted by the Village.

AMENDMENT EXPLANATION

The Land Development Code provides regulations for subdivision development including requirements for construction of infrastructure for all lots within the subdivision. The developer of the subdivision is responsible for the construction of infrastructure which typically includes streets, sidewalks, water and sanitary sewer mains, street lights, parkway landscaping, and stormwater management systems. With the exception of stormwater management, all such infrastructure is typically located in the public right of way and becomes the responsibility of the Village after construction is complete. Stormwater management facilities are typically located on private property in easements or commonly owned outlots.

In the past, the Village of Orland Park has required commercial developments to be responsible for maintenance of stormwater management facilities. However, the Village has taken responsibility for maintenance of residential stormwater facilities. Maintenance of such stormwater facilities is a significant burden on Village resources. In that such facilities primarily serve the residents within the subdivision, it has been suggested that the Village require said property owners to maintain stormwater management facilities located on private property. This is a typical practice that many other local governments required in the Chicagoland area.

As an additional measure to ensure the continued maintenance of private stormwater facilities, the amendment also includes a requirement that the developer establish a Special Service Area (SSA) that includes all properties in the subdivision. The SSA would remain dormant unless and until it is needed by the Village to cover costs incurred when the private property owners fail to maintain the stormwater facilities. In other words, if the homeowners fail to perform proper maintenance, the Village could unilaterally enact the SSA which allows the Village to collect revenue from the property owners to cover costs for maintenance.

PROPOSED AMENDMENT TEXT

SECTION 6-409 – STORM SEWERS AND STORM WATER DETENTION

H. Acceptance of Storm Sewers and Storm Water Detention.

1. Once the storm sewer system has been completed according to the specifications set forth in this Section, the Director of Engineering shall, upon the request of the developer, inspect the system and prepare a list of items for repair (punch list). The list shall be given or sent to the developer and when repairs have been made, the Director of Engineering shall ~~accept~~ approve the system for operational use only. During the time after the ~~acceptance~~ approval by the Director of Engineering, the developer shall be responsible for any delinquencies incurred within the system, including but not limited to siltation within the pipe, manholes and inlets, adjustment to manhole frames and leaking joints. Upon reaching approximately eighty (80) percent development of building construction, the Director of Engineering will re-inspect the storm sewer system for any

delinquencies which may have occurred and prepare a list of items for repair. The list shall be given or sent to the developer and when the repairs have been made to the satisfaction of the Director of Engineering, the Director shall ~~accept~~ approve the system ~~for the Village~~.

2. All construction shall meet the requirements of the Metropolitan Water Reclamation District of Greater Chicago prior to the approval by the Director of Engineering.

3. Maintenance of stormwater drainage facilities located on private property shall be the responsibility of the owner of that property in the case of a single lot development and the combined responsibility of the property owners for developments with more than one lot. Before a permit is obtained from the Village, the applicant shall execute a maintenance agreement with the guaranteeing that the applicant and all future owners of the ~~property~~ propert(ies) will maintain its stormwater drainage system. The maintenance agreement shall also specifically authorize representatives of the Village to enter onto the property for the purpose of inspections and maintenance of the drainage system. Such agreement shall be recorded with the Recorder of Deeds of Cook and/or Will Counties in Illinois as applicable. The maintenance agreement shall include a schedule for regular maintenance of each aspect of the property's stormwater drainage system and shall provide for access to the system for inspection by authorized personnel of the Village. The maintenance agreement shall also stipulate that if the Village ~~notify~~ notifies the property owner(s) in writing of maintenance problems which require correction, the property owner(s) shall make such corrections within 30 (thirty) calendar days of such notification. If the corrections are not made within this time period, the Village may have the necessary work completed and assess the cost to the property owner(s).

4. Subdivisions containing two or more lots shall establish a Homeowners' Association or similar governing body which shall be responsible for all maintenance, repair, and/or replacement of the stormwater management system, including but not limited to: detention ponds, green infrastructure, and related storm water management facilities located on and serving the private property. The property owners shall establish a dormant Special Service Area (SSA), including all properties that benefit from the storm water management facilities. The purpose of the dormant SSA is to fund the Village of Orland Park's costs of maintaining, repairing and/or replacing the storm water management facilities located in the subject property in the event that the Homeowners' Association or the owners of the property fail to maintain, repair and/or replace said storm water management facilities as required." ~~The Village has the option of requiring a bond to be filed by the property owner for maintenance of the stormwater drainage system.~~

SUBSTANTIVE AMENDMENTS: REQUIRE THE SCREENING OF POOLS ON CORNER LOTS

AMENDMENT SUMMARY

SECTION 6-302

- Language added to reflect other Sections of the Land Development Code which allow for in-ground pools being located in the side yard.
- Language added to clearly delineate between location requirements for in-ground and above-ground pools.
- Language added for the proposed requirements of screening above-ground and in-ground pools located on corner lots from view from the adjacent public right-of-way.
- Detached Accessory Structures table updated to include for the conditional allowance of pools in the side yard.

SECTION 6-310

- Language added to provide fence requirements surrounding pools located on corner lots for the purpose of screening said pool from public right-of-ways.

SECTION 6-310.1

- Section 6-310.A.1.b.2 is reorganized to clearly separate requirements for above-ground and in-ground pools.
- Language is added to require the screening of above-ground pools on corner lots via a six-foot tall opaque fence.

AMENDMENT EXPLANATION

The Land Development Code currently does not require the screening of pools when visible from an adjacent public right-of-way. It does prescribe requirements for fences and barriers for the protection of the public. On occasion, compliant pools have been reported to appear unsightly when located on a corner lot. On corner lots, the side and rear yard will inherently be adjacent to a public right-of-way, and as such, pools are clearly visible from the adjacent streets. The proposed amendment will require fully screening pools from view when located on a corner lot. In addition, the subsection pertaining to Location and Setbacks has been reorganized to specifically address above-ground and in-ground pools separately.

PROPOSED AMENDMENT TEXT

SECTION 6-302 - ACCESSORY STRUCTURES AND USES.

A. Permitted Accessory Structures and Uses.

Table 6-302.C.1(B) – Detached Accessory Structures

Permitted Structures P = Permitted PC = Permitted withConditions NP = Not permitted	*Residential Zoning Districts*					*Mixed Use Zoning Districts*						*Non-Residential Zoning Districts*			*Setbacks Permitted* F = FrontS = Side R = Rear * = specific limits	*Specific Standards* See Section:
	E-1	R-1	R-2 & R-2A	R-3 & R-3A	R-4	LSPD	OOH	COR	ORI	VCD	RSB	BIZ	MFG	OL		
Swimming Pools	PC	PC	PC	PC	PC	PC	PC	PC	PC	NP	PC	NP	NP	PC	S*, R*	6-302.C.39 6-310.1

39. Swimming Pools: See Section 6-310.1 Swimming Pools. Above-ground pools may be permitted in rear setbacks. In-ground pools may be permitted in either the side or rear setbacks. On corner lots, additional screening requirements are applicable when the pool is located in the side or rear yard that directly abuts a public right-of-way. Refer to Section 6-310.1 of the Land Development Code for screening requirements. Pools are not permitted within ~~May be permitted in rear setbacks in all districts except~~ the BIZ General Business District, Village Center District and the MFG Manufacturing District.~~, and~~ Pools must be at least ten (10) feet from the side and rear lot line.

SECTION 6-310 - FENCES

H. Swimming Pool Barrier/Fences.

Fences surrounding swimming pools, spas or other outdoor accessory structures that contain water shall be at least five (5) feet in height. (See Section 2-102 Definitions "Swimming Pools" and Section 6-310.1 Swimming Pools). When pools are located on corner lots, and in a side or rear yard that abuts an adjacent public right-of-way, said pools shall be entirely screened from view via a six (6) foot tall opaque fence.

SECTION 6-310.1 - SWIMMING POOLS

A. Swimming Pools.

1. General Permit, Plan and Site Requirements
    a. Permit(s)
    b. Plans and Specifications
        1. Survey and Site Plan
        2. Location and Setbacks

~~Swimming pools shall be allowed in rear and side yards only with a minimum of ten (10) feet from side and rear lot lines. Pools placed within a side yard shall not be located within twenty (25) feet of a front yard. If any part of the pool structure, pool deck or required pool fencing encroaches on a recorded easement and damage results when the easement is used for its stated purposes, then repair of said damage is the sole responsibility of the homeowner. Pools shall conform to the following conditions:~~

~~a. Pools within a side yard shall not be located within twenty (25) feet of a building front yard setback.~~

~~b. No part of the pool shall be allowed within the minimum required side yard building setback of each zoning district.~~

~~c. Exterior pools shall provide a minimum 48" clear access distance around the pool from other structures located on the lot.~~

~~d. Glass and glazing near a pool shall meet the requirements of the Village Building Code for glass in hazardous locations.~~

~~e. The maximum total lot coverage including the pool area must comply with the applicable zoning district requirement.~~

~~f. Swimming pool fence and barrier enclosures shall comply with Section 6-310 H of this code.~~

~~g. The minimum side yard set back to the edge of the pool (water) shall not be less than 10'-0".~~

a. In-Ground Pools
    1. In-Ground Pools and above-ground appurtenances are permitted within the side and rear yards with a minimum of ten (10) feet from side and rear lot lines.
    2. Pools within a side yard shall not be located within twenty-five (25) feet of a building front yard setback.

3. No part of the pool and above-ground appurtenances shall be allowed within the minimum required side yard building setback of each zoning district.
4. Exterior pools shall provide a minimum 48" clear access distance around the pool from other structures located on the lot.
5. Glass and glazing near a pool shall meet the requirements of the Village Building Code for glass in hazardous locations.
6. The maximum total lot coverage including the pool area must comply with the applicable zoning district requirement.
7. No portion of the swimming pool or its above-ground appurtenances shall be located within any existing easement.
8. Swimming pool fence and barrier enclosures shall comply with Section 6-310.H of this code.
9. In side and rear yards of corner lots, and in side or rear yards that are adjacent to a public right-of-way, in-ground pools shall be screened from view via a six (6) foot tall, opaque fence constructed of wood, vinyl, or masonry. Fences must abide by the rules and regulations as prescribed in Section 6-310.

b. Above-Ground Pools

1. Above-Ground Pools and above-ground appurtenances shall be allowed within the rear yard only with a minimum of ten (10) feet from side and rear lot lines.
2. Exterior pools shall provide a minimum 48" clear access distance around the pool from other structures located on the lot.
3. Glass and glazing near a pool shall meet the requirements of the Village Building Code for glass in hazardous locations.
4. The maximum total lot coverage including the pool area must comply with the applicable zoning district requirement.
5. Swimming pool fence and barrier enclosures shall comply with Section 6-310.H of this code.
6. In rear yards of corner lots, and in rear yards that are adjacent to a public right-of-way, above-ground pools shall be screened from view via a six (6) foot tall, opaque fence constructed of wood, vinyl, or masonry. Fences must abide by the rules and regulations as prescribed in Section 6-310.
7. Above-ground pools shall not be less than four (4) feet from other structures.
8. No portion of the swimming pool or its above-ground appurtenances shall be located within any existing easement.

SUBSTANTIVE AMENDMENT: OUTSIDE STORAGE OF TRUCKS

AMENDMENT SUMMARY

SECTION 6-208.H.2

- Add language to prohibit outside storage of larger trucks unless said storage area complies with all relevant location and screening requirements.

SECTION 6-211.I

- Add language to prohibit outside storage of larger trucks unless said storage area complies with all relevant location and screening requirements.

AMENDMENT EXPLANATION

As directed by the Plan Commission, staff prepared an amendment to the Land Development Code that prohibits outside storage of larger commercial vehicles and trucks in the MFG District unless said storage area is in full compliance with the screening and location requirements for outside storage. Current regulations allow outside storage as a permitted use "…when the storage area does not exceed fifty percent (50%) of the area of the lot, is located at the rear of the principal building, is screened on all sides, and the height of the stored materials, equipment or vehicles does not exceed the height of the screening." A new paragraph is proposed to be added to Section 6-208.H which includes the following:

- Confirmation that parking of passenger vehicles continues to be permitted subject to the off-street parking regulations in the Land Development Code.
- Confirmation that parking of trucks in designated loading zones continues to be permitted.
- Requirement that the parking or storage of trucks exceeding 19,500 pounds is subject to the location and screening requirements for outside storage (i.e. rear yard only with a surrounding 8 foot solid fence and year round landscaping that equals or exceeds the height of the trucks). Attached as Exhibit A is a graphic showing the types of trucks that would be subject to this restriction.

In addition to restrictions in the MFG District, staff to prepared a similar set of regulations for the ORI District. Current regulations allow outside storage as a permitted use "…when the storage area does not exceed fifty percent (25%) of the area of the lot, is located at the rear of the principal building, is screened on all sides, and the height of the stored materials, equipment or vehicles does not exceed the height of the screening." A new paragraph is proposed to be added to Section 6-208.H which includes the following:

- Confirmation that parking of passenger vehicles continues to be permitted subject to the off-street parking regulations in the Land Development Code.
- Confirmation that parking of trucks in designated loading zones continues to be permitted.
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PROPOSED AMENDMENT TEXT

SECTION 6-208.H – MFG MANUFACTURING DISTRICT

H. Required Conditions. All permitted and special uses in the MFG District shall meet the following conditions:

1. All production, fabricating, servicing, assembling, testing, repair, processing and outdoor storage, including all accessory uses and structures, shall be conducted wholly within an enclosed building or behind a uniform solid fence eight (8) feet in height, as provided for in Section 6-208.B.11 Permitted Uses and Section 6-310 Fences.

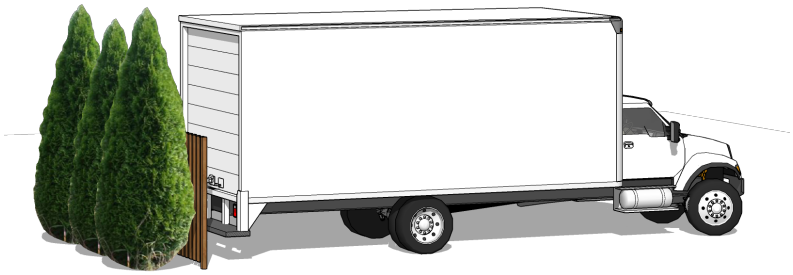


Figure 6-208.H.1

2. Outside storage of Automobiles and Commercial Vehicles and Trucks shall be prohibited except as follows:
   a. Parking of Automobiles as permitted by the Off-Street Parking regulations in Section 6-306 herein.
   b. Temporary parking of Commercial Vehicles and Trucks in loading areas designed and designated for such purposes and for the purpose of loading and unloading.
   c. Parking of Commercial Vehicles or Trucks essential to the operation of a business located on the same lot and with each Commercial Vehicle or Truck not to exceed 19,500 pounds. Outside storage of such vehicles shall comply with Sections 6-208.B.12, Section 208.H.1, and Section 6-308.J unless a special use is granted as per Section 6-208.C.9 herein.

SECTION 6-211.I – ORI MIXED USE DISTRICT

I. Outside storage of Automobiles and Commercial Vehicles and Trucks shall be prohibited except as follows:
   a. Parking of Automobiles is permitted subject to the Off-Street Parking regulations in Section 6-306 herein.
   b. Temporary parking of Commercial Vehicles and Trucks in loading areas designed and designated for such purposes and for the purpose of loading and unloading.

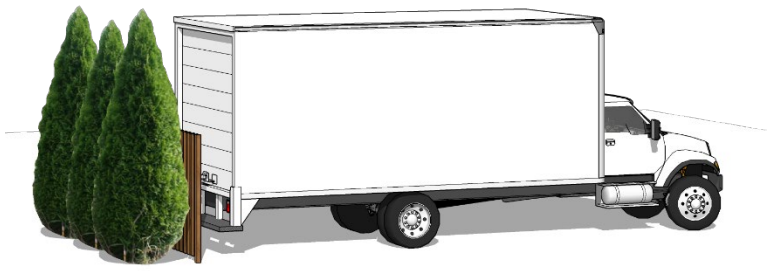
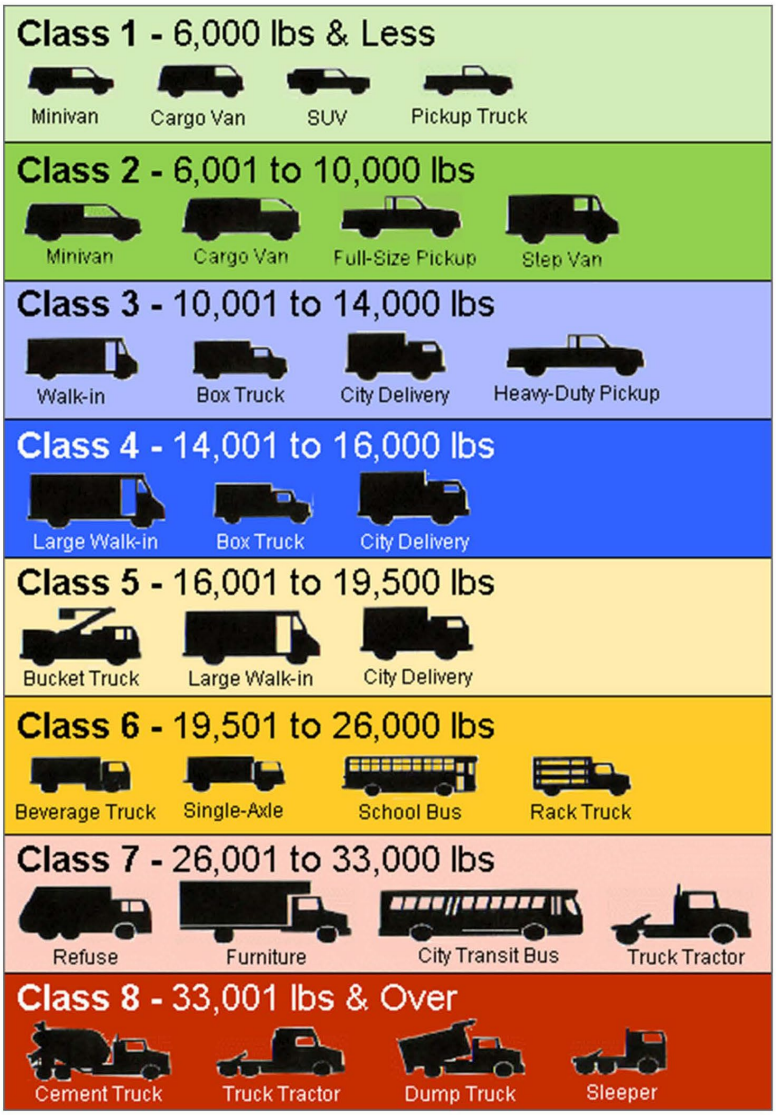


Exhibit A


Class 1 - 6,000 lbs & Less
Minivan
Cargo Van
SUV
Pickup Truck
Class 2 - 6,001 to 10,000 lbs
Minivan
Cargo Van
Full-Size Pickup
Step Van
Class 3 - 10,001 to 14,000 lbs
Walk-in
Box Truck
City Delivery
Heavy-Duty Pickup
Class 4 - 14,001 to 16,000 lbs
Large Walk-in
Box Truck
City Delivery
Class 5 - 16,001 to 19,500 lbs
Bucket Truck
Large Walk-in
City Delivery
Class 6 - 19,501 to 26,000 lbs
Beverage Truck
Single-Axle
School Bus
Rack Truck
Class 7 - 26,001 to 33,000 lbs
Refuse
Furniture
City Transit Bus
Truck Tractor
Class 8 - 33,001 lbs & Over
Cement Truck
Truck Tractor
Dump Truck
Sleeper

CLARIFICATION AMENDMENT: OUTSIDE STORAGE OF TRUCKS

AMENDMENT SUMMARY

SECTION 6-208.B.12

- Add cross reference to the new limitations on truck parking, and existing regulations for location and screening requirements.

SECTION 6-208.C.9

- Add cross reference to the new limitations on truck parking, and existing regulations for location and screening requirements.

SECTION 6-211.B.13

- Add cross reference to the new limitations on truck parking, and existing regulations for location and screening requirements.

SECTION 6-211.C.7

- Add cross reference to the new limitations on truck parking, and existing regulations for location and screening requirements.

SECTION 6-302.I

- Add cross reference to the new limitations on truck parking, and existing regulations for location and screening requirements to re-affirm that outside storage is also limited by District regulations.

PROPOSED AMENDMENT TEXT

SECTION 6-208 – MFG MANUFACTURING DISTRICT

B. Permitted Uses. The following uses may be established as permitted uses in the MFG District in buildings up to 50,000 square feet unless otherwise limited below, in accordance with the procedures established in Sections 5-101 through 5-104 and the conditions of subsection H of this regulation:

12. Outside Storage, when the storage area does not exceed fifty percent (50%) of the area of the lot, is located at the rear of the principal building, is screened on all sides, and the height of the stored materials, equipment or vehicles does not exceed the height of the screening. (See also Section 6-208.H Required Conditions, Section 6-308.J Screening and Section 6-302 Accessory Structures and Uses for further terms and conditions).

C. Special Uses. The following uses may be established as special uses in the MFG District, in accordance with the procedures and standards set forth in Section 5-105 and the conditions of subsection H of this regulation:

9. Outside Storage, for a storage area that does not meet the requirements of Section 6-208.B.12 or Section 6-208.H.2. (See also Section 208.H, Section 6-308.J Screening, and Section 6-302 Accessory Structures and Uses for further terms and conditions)

SECTION 6-211 – ORI MIXED USE DISTRICT

B. Permitted Uses. The following uses may be established as permitted uses in the ORI Mixed Use District in buildings up to 50,000 square feet unless otherwise limited below in accordance with the procedures set forth in Sections 5-101 through 5-104, provided that all other applicable regulations are met:

13. Outside Storage, when the storage area does not exceed 25% of the area of the lot, is located at the rear of the principal building, is screened on all sides, and the height of the stored materials, equipment or vehicles does not exceed the height of the screening. (See also Section 6-211.I

Required Conditions, Section 6-308.J Screening and Section 6-302 Accessory Structures and Uses for further terms and conditions)

C. Special Uses. The following uses may be established as special uses in accordance with the procedures and standards set forth in Section 5-105:

7. Outside Storage, for a storage area that does not meet the requirements of Section 6-2111~~08~~.B or Section 6-211.I. (See Section 6-308.J Screening and Section 6-302 Accessory Structures and Uses)

SECTION 6-302 - ACCESSORY STRUCTURES AND USES

I. Outside Storage. Outside storage, where permitted in a specific zoning district and as specifically regulated in said district, shall be located at the rear of the principal building. It shall be screened on all sides. Stored materials, equipment or vehicles shall not exceed the height of the screening, and shall not be visible from any adjacent streets or residential areas.

CLARIFICATION AMENDMENT: OFF SITE MOTOR VEHICLE STORAGE IN THE MFG DISTRICT

AMENDMENT SUMMARY

SECTION 6-208

- Move land use regulations for off-site motor vehicle storage located in the "Accessory Structures and Uses" and apply only to the MFG Manufacturing District to Section 6-208 MFG Manufacturing District.

SECTION 6-302.I

- Remove land use regulations for off-site motor vehicle storage located in the "Accessory Structures and Uses" and apply only to the MFG Manufacturing District from Section 6-302.I.

AMENDMENT EXPLANATION

Section 302.I of the Land Development Code provides general regulations for outside storage for all districts as well as specific provisions for off-site storage of motor vehicles in the MFG District. The regulations that are specific to the MFG District includes:

- Paragraph I.2 states that use of a property in the MFG District for the outdoor storage of vehicles essential to the operation of a business in the BIZ Business District is permitted subject to Appearance Review approval. Again, since this "permitted use" is limited to properties in the MFG District, it is recommended that the listing be relocated to the list of permitted uses in the MFG District. No substantive changes are recommended at this time.
- Paragraph I.1 requires special use approval for the storage of materials, equipment or vehicles for in the MFG District for a business located on a separate property. Since this is a very specific special use classification that applies only to the MFG District, staff is recommending relocation to the special use section of the MFG District. No substantive changes are recommended at this time.

PROPOSED AMENDMENT TEXT

Section 6-208.B - Moved from Section 6-302.I

B. Permitted Uses. The following uses may be established as permitted uses in the MFG District in buildings up to 50,000 square feet unless otherwise limited below, in accordance with the procedures established in Sections 5-101 through 5-104 and the conditions of subsection H of this regulation:

13. Outside storage of vehicles essential to the operation of a business, on land other than the lot on which the business is located, shall be considered as part of the Appearance Review process if the land is in the MFG Manufacturing District and is a lot with or without an existing primary use that is owned or leased, in full or in part, by a business establishment granted a special use for Motor Vehicle Sales or Rental or Motor Vehicle Services located within the Village's BIZ General Business District for the purpose of the storage of new or used motor vehicle inventory with the following conditions:

a. The vehicle storage area shall not be open to the public;

b. No signage shall be allowed that advertises the BIZ General Business District business establishment or contents of the vehicle storage area; and

c. No vehicle sales, rental, or leasing shall take place on the premises. (See Section 6-208.B and C).

d. Review - Landscape and engineering review fees shall be collected per Land Development Code requirements. All engineering review requirements apply. Landscape review requirements are detailed below. All project related fees shall be paid prior to appearance review approval;

e. Site Plan - At minimum, the following information shall be provided on proposed site plans:

1. The total number of proposed parking spaces;

2. *The hours of operation for the facility;*
3. *An estimate of frequency of daily ingress/egress of vehicles;*
4. *The location of an address marker, visible from abutting frontage;*
5. *The location of proposed vehicle storage area(s), ingress/egress points, a general parking plan for the vehicle storage area, proposed lot coverage and a description of base material to be used;*
6. *The location of required fence. See below for fence requirements. Plans must include an elevation drawing showing proposed material, dimension, post footing and color details of the fence and entry gate;*
7. *If an electric gate will be used, include where meter will be located, how electricity will be brought to site and any underground utility details;*
8. *The location of all required setbacks, as outlined below in Section 6-302.I.2.f.;*
9. *Any additional information deemed necessary by the Development Services Department for the review of a project.*

f. Screening - A uniform, 8' tall wood or vinyl opaque fence shall be installed around the entire vehicle storage area. Vehicles shall not exceed the height of the screening. A 25' front setback shall apply to all fences abutting a public right of way. A 15' setback shall apply to all fences not abutting a public right of way;

g. Landscape - Parkway tree requirements per Section 6-305 apply to all projects. Foundation landscaping requirements per Section 6-305.D.5.a shall apply to all fences abutting a public right of way. One (1) ornamental tree shall be planted for every 30' of fence length not abutting a public right of way. No landscape requirements apply to the interior vehicle storage area. Submittal of a Tree Survey and Tree Mitigation Plan is required per Section 6-305.F.3.h. Tree mitigation requirements apply per Section 6-305.F.3.f.

SECTION 6-208.C - MOVED FROM SECTION 6-302.I

C. Special Uses. The following uses may be established as special uses in the MFG District, in accordance with the procedures and standards set forth in Section 5-105 and the conditions of subsection H of this regulation:

10. Outside storage of materials, equipment or vehicles essential to the operation of a business, on land other than the lot on which the business is located, shall be considered as a special use if the land is in the MFG Manufacturing District and is on a lot adjacent to and in possession of the same title holder of record as the lot occupied by the business for which the outside storage items are accessory.

CLARIFICATION AMENDMENTS: CLARIFY SIGN CODE LANGUAGE

AMENDMENT SUMMARY

SECTION 6-307

- Clarify tenant frontage only applies to parking lots serving the business.
- Clarify sign face area bonus for building setback to include distance from a private right-of-way within a planned development.

AMENDMENT EXPLANATION

Based on the existing sign code language certain tenants have made the claim that they have tenant frontage along the rear of their building because they face a parking lot that serves another business. This is not allowed and the language below will clarify that the parking lot must serve the business claiming to have frontage. Language is also being added to clarify that a sign bonus can be gained due to building setback distance from a private street as well as a public right-of-way.

PROPOSED AMENDMENT TEXT

SECTION 6-307.F.3.G – PERMANENT SIGN BONUSES

a. **Bonuses for Sign Face Area for Wall/Channel Letter/Cloud Sign/Push-Thru Letters.** The following bonuses shall apply to the calculation for SFA for the aforementioned sign types. Bonuses for Tenant Gross Floor Area may apply to any valid tenant frontage. Bonuses for Building Setback from Public Right-of-Way shall only apply to signs installed on the tenant frontage(s) eligible for the bonus. **Bonuses for Building Setback from a Public Right of Way may include a private right-of-way internal to a Planned Development.** *Note: The maximum formula for SFA is 2 SF per linear foot of tenant frontage where the sign will be installed.*

SECTION 6-307.K - DEFINITIONS

3. **Frontage, Tenant:** The horizontal distance between a tenant's lease lines along a façade facing a public right-of-way, private access drive, and/or parking lot **serving the business**. Tenant Frontage shall not include frontage along outdoor sales areas and accessory structures.

SUBSTANTIVE AMENDMENT: ESTABLISH ENGINEERING DEPARTMENT

AMENDMENT SUMMARY

SECTION 3-108 – ENGINEERING DEPARTMENT

- Create the Engineering Department and establish the jurisdiction, authority and duties that are within the department.

AMENDMENT EXPLANATION

Currently the Village Land Development code does not recognize an independent Engineering Department. This addition to the code establishes an Engineering Department and identifies the departments jurisdiction, authority and duties.

PROPOSED AMENDMENT TEXT

SECTION 3-108 – ENGINEERING DEPARTMENT

A. General. The Engineering Department shall perform the engineering functions for the Village, provide technical support and guidance for action on applications for development approval, capital improvements and perform such other functions as may be requested by the Board of Trustees, the Plan Commission, or the Village Manager. The Engineering Department shall coordinate the review of all applications for development and capital improvements with other Village departments, as appropriate.

B. Director of Engineering

1. Creation and Appointment. The Director of Engineering shall be the department head of the Engineering Department and shall be appointed by and serve at the pleasure of the Village Manager.

2. Jurisdiction, Authority and Duties. In addition to the jurisdiction, authority and duties which may be conferred upon the Director of Engineering by other ordinances, the Director of Engineering shall have the following jurisdiction, authority and duties:

a. To serve as staff to the Plan Commission and to inform such body of all facts and information at his disposal with respect to the engineering related aspects of applications for development approval or any other matters brought before it;

b. To assist the Plan Commission in the review and preparation of the Comprehensive Plan, any special area plans, the Capital Improvements Program, these regulations and proposed amendments thereto;

c. To maintain development review files and other public records related to the Department's affairs;

d. To review and approve or disapprove permits requiring engineering oversight;

e. To review, or cause to be reviewed, all applications for plat approval;

f. To render interpretations of the Comprehensive Plan;

g. To coordinate relevant local, regional, state and federal environmental and other land development and capital improvement project permitting processes affecting development in the Village;

h. To plan for and evaluate all transportation improvements for the Village, and coordinate such activities with the Department of Transportation of the State of Illinois and Cook County Department of Transportation and Highways;

n. To establish such rules of procedure as are necessary for the administration of his/her responsibilities under these regulations; and

o. Whenever requested to do so by the Board of Trustees with the assistance of other Village departments, to conduct or cause to be conducted surveys, investigations and studies, and to prepare or cause to be prepared such reports, maps, photographs, charts and exhibits as may be requested.

C. Engineering Review Disclaimer

a. All reviews by the Village of Orland Park Engineering Department and/or its consultants (and follow up approvals and permits that may be issued by the Village on the basis of this review) was performed solely to determine general conformance of the proposed development with the Village of Orland Park's Codes, Ordinances, Policies, Criteria and Standards and is limited to project related items under the Village's jurisdiction. The review and findings made after the review are not intended as, nor are they to be construed as a guarantee of any kind. The review does not include coordination with permits previously issued by various government agencies, field verification of existing and proposed conditions, utility information, above or below ground stormwater information, elevations, grades, topography and other information as shown on the plans and documents submitted by the Petitioner and/or its Design Professional(s). The Village staff and its consultants have not performed this review for the purpose of determining design errors or omissions and assume neither responsibility nor liability for errors and omissions in any of these submitted designs and documents. The Petitioner and its Design Professional(s) have the sole responsibility for the correct and complete representation of project information, technical details, performing/checking all design computations, dimensions, coordination of information available from other government agencies, and providing design and documents that complies with design criteria established by the Village. The Petitioner and its Design Professional(s) are responsible for completing its own reviews for technical accuracy, performing internal quality control and quality assurance reviews. The Village review does not relieve the Petitioner and its Design Professional(s) of the responsibility of preparing design and related documents that meet all Village codes, appropriate industry codes, other government agencies' requirements and best practices of related development industry. Additionally, the Petitioner and its Design Professional(s) are responsible for meeting all related design requirements, submitting permit applications with all required documents, and acquiring appropriate permits from all government agencies that may have jurisdictions over their development. These include, but are not limited to: MWRDGC, IDOT, IDNR, U.S. Army Corps of Engineers, Cook County, Will County, and FEMA. It is not intended that this review conflict or interfere with any ordinance or statute. If any discrepancies are identified between this review and any legal document, the ordinance or statute governs.

SUBSTANTIVE AMENDMENT: REVISE GUARANTEE FOR IMPROVEMENT AMOUNT

AMENDMENT SUMMARY

SECTION 5-112.E – DEVELOPMENT AND SUBDIVISION REQUIREMENTS

- Revise to align with current Village process for performance guarantees
- Update oversight and review to Director of Engineering and Engineering Department.

AMENDMENT EXPLANATION

The proposed amendment will reference the current total amount of performance guarantee required by the Village to be used for development in the Village and change the review to the Engineering Department, which performs this task, and oversight of process to the Director of Engineering.

PROPOSED AMENDMENT TEXT

SECTION 5-112.E – DEVELOPMENT AND SUBDIVISION REQUIREMENTS

E. Guarantees for Improvement Completion

2. Performance Guarantee. A performance guarantee acceptable to the Village must be provided in accordance with the provisions of this Section and shall constitute part of the final approval required by the Board of Trustees. The guarantee shall constitute an agreement signed by the applicant and the Village Manager, and approved by the Village Attorney, that guarantees the completion of all required improvements within a specified time. The agreement shall indicate the title and date of the final engineering plans reviewed by the designee of the ~~Development Services Department~~ Engineering Department, for the purpose of establishing the guarantee amount, and that security as provided in this section, equal to ~~125%~~ 132% of the total projected costs of public improvements. This shall be submitted to the Village.

7. Guarantee Amount

a. ~~One hundred twenty-five percent (125%) of the estimated construction cost of all public improvements, including public improvements on private property, as approved and designated by the Village Engineer;~~ The guarantee amount required by the Village as stated under Section 5-112.E.2 Performance Guarantee shall include all public improvements and other improvements necessary to meet Village and other regulatory agency requirements, as approved and designated by the Director of Engineering.

8. Reduction in Amount of Guarantee.

a. The applicant may from time to time as the public improvements are constructed, request a reduction in the amount of guarantee furnished. Said request shall be made by the applicant to the ~~Public Works Department~~ Engineering Department by filing the below documents. The Village Manager's Office shall provide final approval of the request for a reduction in the amount guarantee furnished.

3. An estimate by the applicant's engineer containing the following information:

a. The estimated cost of construction as defined in Section 5-112.E.7.a. ~~of the public improvements then not completed (less sidewalks on buildable lots)~~;

~~d. Twenty-five percent (25%) of the estimated cost of sidewalks on buildable lots, not to be reduced until at least seventy-five percent (75%) of the sidewalks are completed.~~

~~b. The Village Engineer shall submit the above documents in writing to the Public Works Department, with the exception of those documents provided in accordance with Subsection 5-112.E.3.a of this Section.~~ The ~~Public Works Department~~ Engineering Department shall recommend to the Village Manager's Office approval or disapproval of said request. No reduction in the guarantee furnished shall be granted which would reduce said guarantee below a sum which is referenced in 5-112.E.8.a.3.

SUBSTANTIVE AMENDMENT: REVISE REQUIREMENTS FOR DRYWELLS/ STORMWATER CISTERNS

AMENDMENT SUMMARY

SECTION 6-302.H – ACCESSORY STRUCTURES AND USES

- Revise requirements for installing a drywell or underground water cistern.

AMENDMENT EXPLANATION

The proposed amendment adds language stating the soil permeability required to install a drywell or underground water cistern. Furthermore, if that soil permeability cannot be met then the drywell or underground water cistern must connect to the Village storm water system in order for it to be allowed.

PROPOSED AMENDMENT TEXT

SECTION 6-302.H – ACCESSORY STRUCTURES AND USES

H. Storm Water Best Management Practices.

1. Best Management Practices.

k. Underground Storm Water Cistern/ Dry Well. An underground storm water cistern/ dry well is a process where storm water run-off is funneled into an underground rock-filled trench or vault, temporarily detained and infiltrated back into the surrounding soils. Dry wells can reduce the volume of storm water run-off generated by the roofs of structures, a significant source of run-off volume that enters storm drain systems (they can also potentially recharge local aquifers by diverting storm water into the soils). Dry wells should be placed near areas that accumulate standing water or receive rooftop run-off from gutter downspouts. They can be manufactured, made by filling a trench with stone and gravel, or utilize a perforated pipe made of concrete or plastic, and surrounded by gravel. Dry wells shall have positive drainage to a Village approved system if soil infiltration is less than 0.50 inches per hour.

SUBSTANTIVE AMENDMENT: REVISE FENCE INSTALLATION FOR STORMWATER

AMENDMENT SUMMARY

SECTION 6-310.C – FENCES

- Revise fencing installation requirements.

AMENDMENT EXPLANATION

The proposed amendment updates the code to allow for storm water drainage to flow underneath fences and, in rare cases, require open grated type fencing for larger overland flows.

PROPOSED AMENDMENT TEXT

SECTION 6-310.C. – FENCES

C. General Construction Requirements.

5. No fence shall be constructed in such a manner as to impede or alter the natural or engineered surface water drainage of the property upon which the fence is constructed or any adjoining property. A fence shall be installed three inches above the ground as measured from grade to bottom of fence panel to allow for natural surface water drainage. Exceptions may be made for open-
style fences. Fences located in overland flow routes may have additional requirements pertaining to height above ground and being an open fence style in order to maintain storm water flow as determined by the Director of Engineering.

SUBSTANTIVE AMENDMENT: REVISE FLEXIBLE PAVEMENT THICKNESS AND SPECIFICATION REFERENCE

AMENDMENT SUMMARY

SECTION 6-405.B – STREETS AND TRAFFIC SIGNALS
SECTION 6-406.C – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

- Revise pavement thickness stated and revise reference to IDOT specification.

AMENDMENT EXPLANATION

The proposed amendments updates flexible pavement thickness to current industry standards and clarifies reference to IDOT specifications.

PROPOSED AMENDMENT TEXT

SECTION 6-405.B – STREETS AND TRAFFIC SIGNALS

B. Pavements.

10. Design of Pavement Thickness.

a. The following minimum structural numbers and minimum pavement thickness shall be required in the design of pavements:

FLEXIBLE AND RIGID PAVEMENTS

FLEXIBLE PAVEMENTS	THICKNESS*	
Minimum Structural Number	Binder Course	Surface
2.00 to 3.00	~~3~~ 2.25"	~~1~~ 1.50"
3.01 to 3.99	3 1/2"	~~1~~ 1.50"
4.00 and greater	4"	~~1~~ 1.50"

RIGID PAVEMENTS**	THICKNESS***
3.00 to 3.99	6" to 8"
4.00 to 4.99	8" to 10"

*Bituminous Concrete Binder and Surface Course, Class I (See Standard Specification for Road and Bridge Construction, latest edition, from the Illinois Department of Transportation ~~SSR & BC, Section 406~~).
**Concrete pavement shall be reinforced with 6" x 6", #6 steel fabric.
***Thickness shall be rounded up to the nearest one-half (1/2) inch.

SECTION 6-406.C.2.A - SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

C. Driveway, Driveway Apron, and Parking Construction.

2. Asphalt.

a. Residential driveways shall be constructed in two (2) courses and shall not be less than eight (8) inches in thickness after compaction. The crushed stone base course shall be six (6) inches in thickness and compacted until all voids are filled with finely crushed stone or sand. The asphalt surface~~d~~ course shall be ~~two~~ one and one-half (~~2~~1.50) inches in thickness after compaction and

shall be constructed of bituminous plant-mix Type B-4 or B-5 conforming to the Standard Specifications for Road and Bridge Construction as prepared ~~by the Division of Highways, Department of Public Works, State of~~ Illinois Department of Transportation, most recent edition.

SUBSTANTIVE AMENDMENT: REVISE REQUIREMENTS FOR TRAFFIC STUDIES

AMENDMENT SUMMARY

SECTION 6-405.A – STREETS AND TRAFFIC SIGNALS

- Revise threshold for a traffic study requirement.
- Revise references for Director of Engineering.

AMENDMENT EXPLANATION

The proposed amendment changes responsibility for this section to the Director of Engineering from the Village Engineer and lower the square footage from 40,00 square feet to 10,00 square feet for a traffic study requirement. The proposed amendment also allows the Director of Engineering to request traffic studies for unique circumstances

PROPOSED AMENDMENT TEXT

SECTION 6-405.A – STREETS AND TRAFFIC SIGNALS

A. Streets.

1. General. Streets shall be installed by developers or owners as designated on the Transportation Element of the Villages Comprehensive Plan in accordance with the following criteria and as required by the ~~Village Engineer~~ Director of Engineering.
2. Traffic Studies. Traffic studies shall be required of all proposed residential developments of fifty (50) dwelling units or more, for all commercial and industrial developments of ~~40,000~~ 10,000 square feet of floor area or more and for businesses with drive-through facilities or as determined by the Director of Engineering. The traffic study shall be prepared by firms with demonstrated competence in traffic engineering and traffic studies related to development. The traffic study will be submitted to the Village for review.

SUBSTANTIVE AMENDMENT: ADD DRIVEWAY SLOPE REQUIREMENT

AMENDMENT SUMMARY

SECTION 6-406.B – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

- Add maximum allowable slope for driveways.

AMENDMENT EXPLANATION

The proposed amendment creates a maximum allowable slope for driveways and driveway aprons.

PROPOSED AMENDMENT TEXT

SECTION 6-406.B – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

B. Driveways and Driveway Aprons.

16. Driveway and Apron Slope. The maximum grade for a driveway and driveway apron shall be 8%, unless otherwise approved by the Director of Engineering. An existing driveway with a slope greater than 8% may maintain the existing slope.

SUBSTANTIVE AMENDMENT: REVISE SANITARY SEWER REQUIREMENTS

AMENDMENT SUMMARY

SECTION 6-408.E – SANITARY SEWER SYSTEM
SECTION 6-408.J – SANITARY SEWER SYSTEM

- Revise to require more effective methods of construction for sealing sanitary manholes.
- Specify requirements for tee and/or wye saddle installations for new construction
- Update reference to Director of Engineering.

AMENDMENT EXPLANATION

The proposed amendment will align sanitary sewer installation with industry best practices.

PROPOSED AMENDMENT TEXT

SECTION 6-408.E – SANITARY SEWER SYSTEM

E. Material Specifications

5. Manholes (Sanitary Manhole Standard Details SS-01, SS-02, SS-03).

d. Sealing. All mating surfaces of concrete adjustment riser(s), structure sections, and frames shall be sealed with an external seal ~~mastic sealant~~. No mastic sealant, concrete mortar or epoxy mortar shall be allowed as a sealant for adjustment risers, structure sections or frames. ~~If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Rubber adjustment risers must be sealed with an approved sealant such as XSeal brand hydrophobic non-shrinking polyurethane sealant, or approved equal.~~ A manhole encapsulation system or external sealing system, as approved by the Director of Engineering, shall be used.

J. Laying of Pipe.

3. Sanitary Sewer Services. (Sanitary Service Riser SS-05 and SS-05-20):

Sanitary sewer services shall be a minimum of six (6) inches in diameter and connected to the sewer main with a manufactured wye at a minimum angle of thirty (30) degrees and a maximum angle of forty-five (45) degrees. Sanitary sewer services shall be extended to the property line or building at a minimum gradient of one (1) percent. Sanitary sewer service connections to sewer mains twelve (12) feet or more in depth shall be constructed with a six (6) inch tee and riser and backfilled with select granular material or encased in concrete at the option of the ~~Village Engineer~~ Director of Engineering. On a temporary basis, sanitary services may be terminated with a manufactured plug in which case the location shall be staked and an accurate record kept of the stub distance from the nearest downstream manhole along the sewer main. Sanitary sewer service connections to existing sewer mains shall be made with a dedicated tapping machine and the saddle shall be tightly secured to the existing sanitary sewer.

a. An all stainless steel designed tee and/or wye saddle, per ASTM A240, with a large branch-side mat gasket and of two-piece construction, as approved by the Director of Engineering, shall be required by the Village for new construction.

SUBSTANTIVE AMENDMENT: UPDATES RELATING TO STORM SEWER PIPE

AMENDMENT SUMMARY

SECTION 6-409.E – STORM SEWERS AND STORM WATER DETENTION
SECTION 6-409.F – STORM SEWERS AND STORM WATER DETENTION

- Add High-density Polyethylene (HDPE) pipe use in storm water system.
- Revise the minimum allowable storm sewer pipe size.

AMENDMENT EXPLANATION

The proposed amendment increase the minimum storm water pipe size requirement excepts for areas where is existing piping is smaller and differentiate the requirement between public and private storm sewer. The proposed amendment allows for HDPE pipe and fittings to be used in Village storm water system.

PROPOSED AMENDMENT TEXT

SECTION 6-409 – STORM SEWERS AND STORM WATER DETENTION

E. Basic Design Standards.

3. Storm Sewer, Stream Improvement and Open Channel Hydraulics.
   b. Roughness coefficients (n) shall be as follows:
      7. High-Density Polyethylene (HDPE) 0.012

9. Minimum Sewer Size.
   a. Storm sewer ~~serving inlets~~ shall not be less than ~~ten~~ twelve (~~10~~12) inch diameter except where existing storm sewer pipe is smaller in size downstream.
   b. Private s~~S~~torm sewer serving sump pumps and roof drains shall not be less than eight (8) inch diameter.

12. Storm Sewer Manholes.
    a. Manholes shall be located as follows:
       5. Access spacing shall be:

Sewer Pipe Size (in inches)	Maximum Interval (in feet)
~~6~~ 10 - 24	350
27 - 36	400
42 - 54	500
60 or larger	1000

F. Material Specifications. All storm sewer system elements shall conform to the following specifications:

1. Sewer Pipe.
   d. High Density Polyethylene (HDPE) Pipe (12" diameter to 60" diameter), ASTM D3350, ASTM F2648
   ~~d.~~ e. Reinforced concrete arch culvert pipe – double line reinforcement, minimum Class 3, ASTM C506.
   ~~e.~~ f. Reinforced concrete elliptical culvert pipe –minimum class HE-III or VE-III, ASTM C507.
   ~~f.~~ g. PVC underdrain pipe (4", 6", and 8") – ASTM D2729, SDR35.
2. Sewer Pipe Joints.
   e. HDPE Pipe – ASTM F2648, ASTM F477, Fittings per ASTM F2306

CLARIFICATION AMENDMENT: PROHIBIT ENCROACHMENTS INTO EASEMENTS

AMENDMENT SUMMARY

SECTION 6-302.C – ACCESSORY STRUCTURES AND USES

- Add language to prohibit retaining walls from encroaching into any existing easement.
- Remove and add language to prohibit sheds and storage buildings from encroaching into any existing easement.
- Revise "Tennis and Basketball" to "Sport" to broaden the code to cover multiple uses. The proposed amendment also prohibits sport courts from encroaching into easements and affecting overland drainage.

PROPOSED AMENDMENT TEXT

SECTION 6-302.C – ACCESSORY STRUCTURES AND USES

C. Permitted Accessory Structures and Uses.

31. Retaining Walls: May be permitted in front, side, and rear setbacks, so long as the wall does not encroach ~~they are located at least three (3) feet two feet (2) inside~~ into any existing easement ~~the lot lines~~ and does not obstruct storm water flow. Retaining walls shall be limited to a maximum three (3) feet in height. Any retaining wall in a side yard associated with a side loading garage or driveway cannot exceed two (2) feet in height~~, nor be closer than three (3) feet to the nearest side property line~~. When the consequence of grading land results in the necessity for a total retaining wall height greater than three (3) feet, the retaining wall must be tiered and each wall on the tiered retaining wall system shall be limited to three (3) feet in height. The formula for determining the tiered wall setback shall be two (2) times the lower wall height. A structural permit is required if the retaining wall system exceeds three (3) feet (triggering the need for a second wall or more) in total height.

33. Sheds and Storage Buildings:

b. Located ~~off~~ outside of any easements~~, at least~~ not less than five (5) feet from the lot lines and does not obstruct storm water flow; and no closer than ten (10) feet to the principal building; and

41. ~~Tennis and Basketball~~ Sport Courts:

d. Sport courts shall not be allowed in easements and shall not adversely affect overland drainage for the subdivision/property.

CLARIFICATION AMENDMENT: UPDATE UNDERDRAIN REQUIREMENT FOR DRY DETENTION BASINS

AMENDMENT SUMMARY

SECTION 6-409.E – STORM SEWERS AND STORM WATER DETENTION

- Add additional engineering judgement for the underdrain installation requirement.

PROPOSED AMENDMENT TEXT

SECTION 6-409.E – STORM SEWERS AND STORM WATER DETENTION

E. Basic Design Standards.

18. Storm Water Detention Facilities.

d. In order to prevent soil erosion and weed problems, "dry" detention basins must be landscaped including the establishment of a groundcover over all unpaved areas through sodding of native natural growth plant material or material as designated by the Director of Development Services. Such groundcover shall not be of a plant type which can be carried by water plow to aggressively invade other downstream lands or properties, and crown vetch shall be prohibited. Native natural plant growth may comprise a variety of techniques that employ in concert according to the needs of the site. Some of these include biologs, aquatic plants, wattles, natural native grasses, tri lok, and vegetated geogrids. Detention Basins shall be designed so that the portion of their bottom area which is intended to be dry shall have standing water no longer than seventy two (72) hours for all runoff events less than the 100 year frequency storm.
If detention facilities are proposed, they shall also be reviewed by the Director of Recreation and Parks for usability as active recreational areas during dry weather conditions. Additional underdraining may be required at the discretion of the Director of Engineering. Pipe runs and spacing shall be designed to ensure good drainage. Detention facilities shall be designed so that the cross slope is at least two (2) percent. The bottom of the facility shall be provided with an underdrain (minimum six (6) inch diameter perforated drain tile) covered on all sides with a minimum of six (6) inches of crushed stone conforming to ASTM C33, Size No. 67. The underdrain shall be installed to drain the basin below grade during periods of low flow and shall connect to a storm sewer outfall pipe. Detention facilities shall be designed with side slopes not steeper than four (4) horizontal to one (1) vertical (4:1). The inflow storm piping system shall be constructed in such a manner so as to allow for "low" flows to by pass the basin.

CLARIFICATION AMENDMENT: ADD NEW OUTSIDE AGENCY FORMS

AMENDMENT SUMMARY

SECTION 6-305.D – LANDSCAPE AND TREE PRESERVATION
SECTION 6-305.E – LANDSCAPE AND TREE PRESERVATION.

- Clarify paperwork required by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) for a Watershed Management Ordinance (WMO) Permit.

PROPOSED AMENDMENT TEXT

SECTION 6-305.D – LANDSCAPE AND TREE PRESERVATION

D. Landscape Zones.

8. Stormwater Management Area Landscape.

b. Requirements.

4. A Monitoring and Management Plan (M&M Plan) shall be submitted along with the required landscape plan for all applicable projects, as determined by the Development Services Department. M&M Plans shall coincide with the project Watershed Management Ordinance (WMO) Permit Schedule R, if applicable. For further details see Section 6-305.F.2 Naturalized Landscaping Area Management Standards. Monitoring and Management Plans and Schedule R shall be recorded with the county recorder of deeds in which the project is located. For projects with stormwater management features, an Annual Monitoring Report must be submitted to the Village before annual acceptance may be granted. (Amd. Ord. 5221 – 9/18/17)

E. Landscape Plan.

3. Additional Requirements.

d. A WMO Permit shall be obtained for all qualifying developments. All WMO permitted projects require a Monitoring and Maintenance Plan and Schedule R. Qualifying developments shall reference the WMO Maintenance Plan when preparing the Monitoring and Maintenance Plan in conjunction with a Landscape Plan. See Section 6-305.F.2.b Monitoring and Management Plan for details.

CLARIFICATION AMENDMENT: UPDATE TASKS ASSIGNED TO ENGINEERING DEPARTMENT

AMENDMENT SUMMARY

SECTION 5-112– DEVELOPMENT AND SUBDIVISION REQUIREMENTS
SECTION 6-305– LANDSCAPE AND TREE PRESERVATION
SECTION 6-406.A – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS
SECTION 6-415.C – BIKEWAYS AND BIKEPATHS

- The proposed amendment will reference Engineering Department since the section identified is a Village task performed by said department.
- The proposed amendment revised wording for approval and added Engineering Department for oversight.
- The proposed amendment will reference Engineering Department since the section identified is a Village task performed by said department
- The proposed amendment revises code to reference the Development Services Department, Engineering Department, and Director of Engineering for their respective areas of oversight.
- The proposed amendment revises code to reference the Development Services Department and Engineering Department for their respective areas of oversight. Also the notification time for placing concrete was increased from three hours to one full business day.

SECTION 5-112.F – DEVELOPMENT AND SUBDIVISION REQUIREMENTS

F. Acceptance of Improvements.

1. Letter of Acceptance from the Village Manager's Office. The Village Manager's Office, with a written recommendation from the ~~Public Works Department~~ Engineering Department, shall issue a letter of acceptance to the petitioner/ applicant that states that all required improvements have been fully completed, and that said improvements meet the design and operating standards and requirements of the Village and other agencies, including the Metropolitan Water Reclamation District of Greater Chicago, the Illinois Environmental Protection Agency, and the Illinois Department of Transportation. A copy of that letter shall be filed with the Development Services Department and the Village Manager's Office.

SECTION 6-305.D – LANDSCAPE AND TREE PRESERVATION

D. Landscape Zones

8. Stormwater Management Area Landscape.

b. Requirements.

8. An "as -built" landscape plan of all stormwater management areas is required before ~~acceptance~~ final approval by the Village including but not limited to topographic information, planting limits and normal and high water level elevations, or any additional information requested by the Village. Additional information may be required, as determined by the Development Services or Engineering Departments.

SECTION 6-406 – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

A. Sidewalks.

2. Public Roads.

b. Multi-use paths, such as bicycle paths, shall replace sidewalks in those areas of the Village indicated by the Comprehensive Plan's Recommended Bikeway System subject to review by the ~~Development Services Department~~ Engineering Department. Multi-use paths shall use IDOT standards in IDOT or County rights-of-way or be a minimum of eight (8)

feet wide with a maximum of four (4) feet of planting strip between the path and the roadway's back of curb. In cases where paths terminate, provisions shall be made to loop the sidewalk and multi-use path network. In cases where the network is divided between off-street paths and on-street routes, provisions shall be made to safely transition from either medium and ensure continuity of travel.

c. Sidewalks or multi-use paths as identified by the Comprehensive Plan's Recommended Bikeway System, as reviewed by the ~~Development Services Department~~ Engineering Department, shall be required for arterial and collector rights-of-way on the perimeter of subdivisions or developments (e.g. sidewalks on roadways where the backs of properties front the right-of-way).

f. Sidewalks and multi-use paths per the Comprehensive Plan's Recommended Bikeway System, as reviewed by the ~~Development Services Department~~ Engineering Department, are required for streets and rights-of-way that are below standard widths. Such streets and rights-of-way shall be subject to review by the ~~Development Services Department~~ Engineering Department and shall consider such options as carriage walks, reduced parkways, bike lanes, woonerfs etc. to accommodate pedestrian and cyclist mobility.

B. Driveways and Driveway Aprons.

1. Driveways Across Sidewalks and Parkways. No person, firm or corporation shall construct or alter any driveway over, across or upon any public sidewalk or parkway without first obtaining a permit from the ~~Building Division~~ Development Services Department. Where ingress and egress is to be made from adjoining real estate to a public street and where Section 6-306 requires off-street parking, such off-street parking shall be made accessible to the public street and the ingress and egress shall be made across the parkway and sidewalks by means of a driveway constructed in accordance with this Section.

2. Permit Application. Application for a permit to construct a driveway shall be in writing, signed by the applicant, and filed with the ~~Building~~ Development Services Department. The application shall designate the location of the proposed driveway, the name and address of the applicant, the name and address of the owner of the property to be served by the proposed driveway, and the address of the applicant, if other than the owner, and a plat of survey indicating the driveway location and sizes proposed. In those instances, where a driveway is required to comply with the requirements of Section 6-306, the permit application shall accompany the application for the issuance of a building permit authorizing the new building construction.

3. Permit Issuance and Fees. The ~~Building~~ Development Services Department shall issue a permit to construct a driveway provided that the permit application is complete and is in accordance with these regulations and that the permit fee has been paid.

4. Permit Revocation. All permits for driveways issued pursuant to this Section may be revoked at any time without the consent of the permittee by order of the Board of Trustees and the Director of the ~~Building~~ Development Services Department. Upon such revocation, all rights granted under the permit shall be revoked, and the sidewalk, space, parkways and curbs shall be restored to their former condition, at the expense of the permittee or of the owner of the property served by the driveway at the time of such revocation.

6. Widths and Lengths. Single-family residential driveways and driveway aprons shall have a maximum width of twenty (20) feet for one (1) car garages, twenty-six (26) feet for two (2) car garages, and thirty-six (36) feet for three (3) car garages. The maximum width of a driveway is applicable to the entire driveway length between the building line and sidewalk. The maximum width of a driveway apron is applicable to the entire driveway length between the sidewalk and the street. The maximum width for driveway lane for single family residences shall be forty (40) percent of the lot width up to thirty-six (36) feet, applicable to the entire driveway length between the building line and curb line. The maximum width for circle driveway lane shall be twenty (20)

feet, applicable to the entire driveway length between the building line and curb line. The minimum driveway length shall be eighteen (18) feet, excluding right-of-way and sidewalks. No driveway shall encroach upon any portion of the parkway in front of the adjoining parkway. The maximum width for driveways for all other uses shall be as approved by the Board of Trustees upon recommendation of the Engineering Department ~~of Engineering~~.

7. Grades and Curbs. Driveways shall conform to the existing sidewalk grade. Where it is necessary to break the existing curb for the driveway opening, the curb and gutter shall be completely removed and a new section constructed or as approved by the ~~Village Engineer~~ Director of Engineering. Each such driveway shall be constructed and maintained so as to permit free and unobstructed passage on, over or across the sidewalk and in such a manner as not to interfere with the proper drainage and safe grading of the streets. Each such driveway shall be so constructed and maintained that its surface at the point of crossing any sidewalk pavement shall be flush with the adjoining sections of such sidewalk.

12. All Other Driveway Aprons. Multi-family developments, business, office research, and industrial district driveway aprons shall be constructed with a ten (10) foot radius return unless otherwise required by the Engineering Department ~~of Engineering~~. Driveways shall not be closer than five (5) feet to adjacent driveways at the curb line.

J. Placing and Finishing Concrete.

1. The ~~Department of Code Enforcement~~ Development Service Department and/or Engineering Department shall be notified when the subgrade has been finished. A minimum of ~~three hours~~ one (1) full business day notice shall be given prior to placing concrete. No concrete shall be placed until the subgrade has been inspected and approved by the ~~Building~~ Development Services Department and/or Engineering Programs and Services Department.

SECTION 6-415.C – BIKEWAYS AND BIKEPATHS

C. Construction Requirements. The latest edition of the construction requirements and other standards ~~set out in the Guide For Development of New Bicycle Facilities, 1981, or as hereinafter updated~~, published by the American Association of State Highway and Transportation Officials (AASHTO), 444 North Capital Street, N.W., Suite 225, Washington, D.C. 20001, that pertain to the planning, operation and maintenance of roadways, bikeways and bikepaths shall be applicable to all development located within the Village. Copies of this Guide shall be kept on file at the Department of Development Services and the ~~Building~~ Engineering Department.

CLARIFICATION AMENDMENT: UPDATE REFERENCED DOCUMENTS

AMENDMENT SUMMARY

SECTION 6-406.G – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS
SECTION 6-406.K – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS
SECTION 6-408.A – SANITARY SEWER SYSTEM

- Add reference to IDOT specification.

PROPOSED AMENDMENT TEXT

SECTION 6-406 – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

G. Granular Base. A granular base of two (2) inch minimum thickness shall be placed on the prepared subgrade. The base shall extend the full width of the sidewalk or driveway apron. The granular base shall consist of CA6 aggregate conforming to the Standard Specifications for Road and Bridge Construction as prepared by the Illinois Department of Transportation, latest edition ~~SSR & BC~~.

K. Protection from Low Temperatures.
After the first seasonal frost, concrete shall be protected from freezing in accordance with the Standard Specifications for Road and Bridge Construction as prepared by the Illinois Department of Transportation, latest edition ~~"Recommended Practice for Cold-Weather Concreting" (ACI 306)~~. The developer shall be responsible for all concrete damaged by low temperatures, and any damaged concrete shall be removed and replaced by the developer at the developer's expense.

SECTION 6-408.A – SANITARY SEWER SYSTEM

A. General.
All sanitary sewer improvements shall be installed in accordance with the material installation and testing requirements of the "Standard Specifications for Water and Sewer Main Construction in Illinois," ~~Sixth Edition July 2009~~ latest edition, unless otherwise modified in this Section. Sanitary sewer improvements shall conform to all applicable requirements of the current Metropolitan Water Reclamation District of Greater Chicago ("MWRDGC") Watershed Management Ordinance ("WMO").

CLARIFICATION AMENDMENT: UPDATE REFERENCES FOR ENGINEERING DEPARTMENT APPROVALS TO DIRECTOR OF ENGINEERING

AMENDMENT SUMMARY

SECTION 5-112 – DEVELOPMENT SUBDIVISION REQUIREMENTS
SECTION 6-305 – LANDSCAPE AND TREE PRESERVATION
SECTION 6-310 – SWIMMING POOLS
SECTION 6-405 – STREETS AND TRAFFIC SIGNALS
SECTION 6-406 – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS
SECTION 6-407 – STREET LIGHTING
SECTION 6-408 – SANITARY SEWER SYSTEM
SECTION 6-410 – WATER SUPPLY
SECTION 6-411 – SOIL EROSION AND SEDIMENTATION CONTROL
SECTION 6-412 – LOCAL STREAM AND WATERBODY PROTECTION
SECTION 6-413 – WETLANDS PROTECTION
SECTION 6-415 – BIKEWAYS AND BIKEPATHS
SECTION 7-101 – CONSTRUCTION PROCEDURES

- Revise references for Director of Engineering and Engineering Department duties.

AMENDMENT EXPLANATION

The proposed amendment will reference the latest rainfall data approved and provided by the Illinois State Water Survey and will be worded so it will not have to be updated going forward with future bulletin releases. This will ensure that the latest rainfall data is used by the developers and/or developers' consultants to calculate storm water detention/retention will always be used for development in the Village.

PROPOSED AMENDMENT TEXT

SECTION 5-112 - DEVELOPMENT SUBDIVISION REQUIREMENTS

E. Guarantees for Improvement Completion

3. Security Methods. One of the following security methods shall be utilized to guarantee the completion of public improvements:

a. Letter of Credit

2. Terms: The letter of credit shall be in an amount sufficient to pay for the cost of construction of the public improvements, landscaping on private and public property for single family and multi-family residential developments and all non-residential developments, and all engineering costs if deemed necessary by the ~~Village Engineer~~ Director of Engineering. The Village will collect an additional 7% of the total cost of construction to recover for management and administrative time and expenses incurred by the Village staff in processing and administering the public improvements and landscaping. Any conditions that the applicant or issuing financial institution seeks to attach to collection or use of the funds, must be included in the terms of the letter of credit. The letter of credit shall provide that the issuing financial institution shall pay to the Village, or as the Village directs, such amounts as may be required to complete the improvements according to the approved specifications. The letter of credit should provide that its amount will be reduced from time to time as payments for improvements approved by the ~~Village Engineer~~ Director of Engineering are made, but at no time shall

the available balance be less than percent fifteen (15%) of the total estimated cost of the improvements yet to be accepted by the Village.

4. Insufficient Fund Balance. If, at any time before the construction of all required improvements has been completed, the balance of funds remaining undisbursed under any guarantee provided in accordance with this section is not sufficient, in the judgment of the ~~Village Engineer~~ Director of Engineering, to cover the costs of construction of said improvements and all engineering costs (including the engineering and inspection fees of the Village) or if by reason of any order, decree or writ of any court, or for any other reason, the said undisbursed balance of funds shall be withheld, diminished or otherwise unavailable for the purposes provided herein, the applicant agrees to cause the balance to be increased to such amount as shall be required by the Village for such purposes, in the exercise of its judgment, or shall provide such other guarantee of performance as may be required by the Village.

6. Default. In the event the ~~Village Engineer~~ Director of Engineering determines, in the exercise of his judgment, that the applicant has failed to install proposed improvements in accordance with the approved plans and specifications, or has failed to comply with the terms of the guarantees provided in this Section, the Board of Trustees may take any of the following actions:

a. Disbursement of Letter of Credit. The Board of Trustees may advise the applicant in writing of the failure to install improvements, and give the applicant thirty (30) days to cure such failure. If the applicant fails to cure said failure, the Village may, at its option, declare the applicant in default, and all monies on deposit pursuant to the letter of credit shall be disbursed by the letter of credit provider upon authorization of the ~~Village Engineer~~ Director of Engineering.

b. Disbursement of Other Security Guarantees. The Board of Trustees may advise the applicant in writing of the failure to install improvements, and give the applicant thirty (30) days to cure such failure. If the applicant fails to cure said failure, the Village may, at its option, declare the applicant in default, and all monies on deposit pursuant to the specified security guarantee shall be disbursed by the guarantee provider upon authorization of the ~~Village Engineer~~ Director of Engineering.

9. Inspection and Certification of Improvements.

a. General. Unless otherwise specifically provided, inspection of the construction of the improvements shall be by the ~~Village Engineer~~ Director of Engineering or Village Consultant, and shall be paid for by the applicant should the Village require compensation for its efforts. No improvements shall be constructed, and therefore no improvements shall be inspected, prior to final plan approval.

b. Certification. Upon completion of all required construction, the applicant's engineer shall certify that the improvements comply in all respects with the plans and specifications approved by the Board of Trustees. All work shall at all times be subject to inspection by the Village Manager, the ~~Village Engineer~~ Director of Engineering, other Village officials, and their representatives. Regardless of contracts, agreements, or inspections performed, the final responsibility for the construction of all improvements in accordance with the applicable standards rests with the applicant. Certification by the applicant's engineer shall not constitute a waiver by the Village of the right to draw funds under the security

provided herein on account of defects in or failure of any improvement that is detected or which occurs following such certification.

c. Notice of Defects. The ~~Village Engineer~~ Director of Engineering shall provide timely notice to the developer whenever inspection reveals that an improvement does not conform to the 1 standards and specifications required by these regulations. The developer shall have thirty (30) days from the issuance of such notice to cure or to substantially cure such defect. The Village may not declare a default during the thirty (30) day cure period on account of any such defect unless it is clear that the developer does not intend to cure the defect.

d. Exemptions. Because neighboring jurisdictions and other utility districts are responsible for inspecting construction sites within their territorial limits, and because the Village desires to avoid duplicating the inspection of these projects, the Village shall only inspect development located within its corporate limits. The Village shall be entitled to rely on the written inspection reports submitted by the engineers of such neighboring jurisdictions and utility districts. The ~~Village Engineer~~ Director of Engineering shall be entitled to verify any inspection report received from a neighboring jurisdiction or utility district, and shall be given access to the construction site to conduct such independent analyses.

e. Engineering Plan Review and Inspection Fee.

2. Engineering Inspections. All public and private improvements located within the Village's corporate limits that are guaranteed under the provisions of this Section shall be inspected during the course of construction by the ~~Village Engineer~~ Director of Engineering, the Village's Engineering Consultant, or their designee. As compensation for such inspection by Village staff, a fee if determined by ordinance of the Village Board of Trustees shall be paid to the Village at the time the final engineering plans are approved by the ~~Village Engineer~~ Director of Engineering. In addition, compensation for engineering inspection by an engineering consultant for the Village shall be equal to the amount charged to the Village by the consultant and shall be paid by the applicant to the Village prior to the issuance of building permits.

11. Damage and Nuisance Guarantee.

c. Release of Funds. Upon completion of all required development or subdivision improvements, the applicant's engineer shall prepare a certified statement that the improvements comply with the plans and specifications approved by the Board of Trustees, and shall forward the statement to the Village, together with a request for preliminary approval of improvements. The ~~Village Engineer~~ Director of Engineering shall verify whether the improvements comply with the approved plans and specifications, and, pursuant to Section 5-112.E.10 shall prepare a statement of preliminary approval for the Board of Trustees. Upon acceptance of that statement of preliminary approval, the Board of Trustees shall direct the financial institution issuing the letter of credit or other security guarantee to pay over to the applicant, without further demand or notice, any balance of funds then remaining undisbursed under said letter of credit or other security guarantee.

F. Acceptance of Improvements.

1. Letter of Acceptance from the Village Manager's Office.

a. The applicant's engineer shall provide to the ~~Village Engineer~~ Director of Engineering one hard copy and one copy in electronic format compatible with current Village software of "as built" drawings. All utilities and public improvements located within the development, including right-of-way lines, lot numbers, lot lines, geographic positioning system coordinate data of all utilities, and development mapping data compatible with

the current Village geographic information system shall be included as overlay maps for the purposes of review.

SECTION 6-305 – LANDSCAPE AND TREE PRESERVATION

E. Landscape Plan

3. Additional Requirements

e. Letter of Credit. A letter of credit covering the estimated cost of required landscaping, including naturalized landscape installation, monitoring and establishment management shall be posted as part of the final landscape plan approval process. The letter of credit shall be provided to the Village by the owner or developer prior to the issuance of a building permit in accordance with the provisions of Section 5-112 Development and Subdivision Requirements. The letter of credit shall cover costs associated with earthwork, planting, inspections, maintenance or any other cost necessary to achieve Village acceptance standards. The amount of the letter of credit associated with naturalized landscape areas shall be held for the duration of period outlined in the Village approved Monitoring and Management Plan or until the naturalized landscape meets acceptance criteria, whichever is later, as determined by the ~~Development Services Department~~ Director of Engineering.

5. Criteria for Approval of Landscape Plans.

a. Design Guidelines.

12. All earth berm locations shall be reviewed by the ~~Village Engineer~~ Director of Engineering to determine how the berms shall relate to drainage and public utilities. Berms shall not exceed a maximum slope of 3:1;

SECTION 6-310 – SWIMMING POOLS

A. Swimming Pools.

2. Definitions:

Above-ground/On ground pool:
Any pool of water installed completely above final exterior grade elevations which have been approved by the Village. Final exterior grades are those approved by the ~~Village~~ Director of Engineering ~~Department~~. See definition of private swimming pool.

In-ground pool:
Any pool of water installed below final exterior grade elevations which have been approved by the Village. Final exterior grades are those approved by ~~Village~~ Director of Engineering ~~Department~~. See definition of private swimming pool.

SECTION 6-405 – STREETS AND TRAFFIC SIGNALS

A. Streets

2. Roadway Design Criteria.

e. Proposed developments that are adjacent to existing development shall be designed to accept the alignment and corresponding widths of existing pavements. The ~~Village Engineer~~ Director of Engineering shall determine the proper adjustment where the widening merges with the existing narrow pavement at the boundary of the property, and shall require the lanes to be painted to designate driving and parking lanes.

B. Pavements.

3. Pavement Design Requirements. Pavement design shall relate to the street classification as set forth on the Official Map and as described in this Section. The proposed roads indicated on the Official Map are desired to be eventually constructed, but their actual alignment will be decided upon when a preliminary plan is submitted to the Plan Commission and the Board of Trustees for review and approval. The classification of new streets, as well as variations to street classifications for a given street, shall be submitted to the ~~Village Engineer~~ Director of Engineering for review when the preliminary plan is submitted.

4. Pavement Construction Design.

b. Pavement Design. The pavement design standards shall conform to those set forth in Table 6-405(B)(4), Table of Pavement Design. A copy of all design assumptions and computations on which the proposed pavement design is based shall be submitted to and accepted by the ~~Village Engineer~~ Director of Engineering.

c. Composite Pavement Strength.

2. Prior to the installation of the bituminous surface course, but after the installation of the binder course, the developer shall notify the ~~Village Engineer~~ Director of Engineering that he intends to surface the street. The ~~Village Engineer~~ Director of Engineering may obtain a Dynaflect Pavement Evaluation Program Report of the completed pavement improvements at developer's expense.

3. The Dynaflect Pavement Evaluation Program shall be performed according to the Dynaflect Pavement Evaluation Specification on file in the office of the ~~Village Engineer~~ Director of Engineering. The program shall generally embody the following testing/pavement evaluation techniques:

6. If the pavement section is not projected to meet a life expectancy of fifteen (15) years or more, then the report shall propose asphalt overlays in excess of the surface course design thickness or pavement reconstruction to bring the new pavement section to a fifteen-year life expectancy. The ~~Village Engineer~~ Director of Engineering shall evaluate the results of the report and shall inform the developer of any required pavement repair for each section. These repairs shall be completed before the final surface is applied.

8. In the case of rigid pavements, the developer shall notify the ~~Village Engineer~~ Director of Engineering that he is ready for final inspection on the streets. The ~~Village Engineer~~ Director of Engineering will obtain a Dynaflect Pavement Evaluation Program report of the complete improvements as outlined in Subsection B(4)(c) above.

6. Subgrade Preparation.

b. At least one Standard Proctor Density Test, performed in accordance with AASHTO T99, shall be taken in each embankment section, with the maximum distance between tests of three hundred (300) feet. One standard proctor density test shall be taken from each different source of borrowed material. The density tests must be submitted for review to the ~~Village Engineer~~ Director of Engineering. Upon review of these tests, an inspection of the subgrade shall be made by the engineer and a report of acceptable subgrade and preparation must be submitted to the ~~Village Engineer~~ Director of Engineering prior to placing any curb and gutter or base material.

7. Grading.

b. Where the grade of the street warrants installation of vertical type curb and other special design of improvements because of right-of-way conditions, such as double inlets, the ~~Village Engineer~~ Director of Engineering is authorized to require such design.

8. Sight Distances. At points of intersection of proposed roads with existing roads, the minimum stopping sight distance indicated below for the legal speed limits shall be provided on existing roads. Clear visibility, at any point of movement along the road measured along the center line

of the street, shall be provided for at least three hundred fifty (350) feet on all major streets, two hundred (200) feet on collector and local streets, or as designated by an engineering study.

Legal Speed Limit (MPH)*	Minimum Stopping Sight Distance
25-30	200 Ft.
35-40	275 Ft.
45-50	350 Ft.
55	475 Ft.

*If the ~~Village Engineer~~ Director of Engineering determines that the projected future legal speed limit established in accordance with the State of Illinois "Policy for Establishing and Posting Speed Limits" is higher than the existing legal speed limit, the higher speed limit shall be used to determine the minimum stopping sight distance.

9. Curb and Gutter.

e. Unless otherwise directed by the ~~Village Engineer~~ Director of Engineering pursuant to IDOT standards, a barrier curb, as denoted as Type 3 on Exhibit No. STR-04, shall be provided on all major streets. All other streets shall be provided with curbs as denoted as on Exhibit No. STR-03. Depressed curbs shall be provided at all bike path and sidewalk crossings. Materials shall comply with those specified in Section 6-406.

10. Design of Pavement Thickness.

b. Flexible pavement materials can be used until November 1, weather permitting. Any work done after November 1, shall require written authorization from the ~~Village Engineer~~ Director of Engineering. Such authorization, if obtained, will not void the contractor's and the developer's guarantee on the work done.

c. Flexible pavements must set for a minimum of nine (9) months, including a winter and a spring. After this setting period has passed, one pavement core per nine hundred (900) lineal feet of measured pavement must be taken. A report must be submitted to the ~~Village Engineer~~ Director of Engineering that lists the thicknesses of base and binder courses and the type and condition of subgrade material as determined from the cores. If the results of the cores indicate pavement deficiencies, additional cores will be needed at intervals required by the ~~Village Engineer~~ Director of Engineering. All cores taken shall be numbered and delivered to the ~~Village Engineer~~ Director of Engineering.

d. Upon receipt of the report and cores, the ~~Village Engineer~~ Director of Engineering will review the report and will perform an inspection of the existing base and binder courses. All base and binder course failures will then be repaired to the ~~Village Engineer~~ Director of Engineering's satisfaction.

e. Upon completion of all construction within any development, the ~~Village Engineer~~ Director of Engineering will conduct a deflection test as specified in Subsection 4(c) above. All deficiencies outlined in the report shall be repaired as specified in the report and to the ~~Village Engineer~~ Director of Engineering's satisfaction prior to the installation of the final surface course.

G. Street Identification Signs.

1. The developer/property owner shall submit the list of street names approved by the ~~Village Engineer~~ Director of Engineering and a map for the installation of street identification signs immediately after the approval of engineering drawings.

SECTION 6-406 – SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

A. Sidewalks.

5. Construction. Sidewalk width shall be a minimum of five (5) feet in width, subject to ~~Village Engineer~~ Director of Engineering approval. Thickness shall be a minimum of five (5) inches reinforced with 6" x 6" wire mesh, or other reinforcement methods subject to approval of the ~~Village Engineer~~ Director of Engineering. All sidewalks at curb depressions shall include a detectable warning for the vision impaired consisting of truncated domes. The warning area shall begin six (6) inches from the back of the curb and continue two (2) feet in the direction of pedestrian travel for the entire width of the waking surface. The detectable warning shall also present a contrast in color from the adjacent sidewalk with integrally colored concrete or other means subject to ~~Village Engineer~~ Director of Engineering approval.

J. Placing and Finishing Concrete.

4. Control Joints.

a. Sidewalks. Control joints shall be constructed at right angles to the center line of the sidewalk and shall extend one-fourth (1/4) the depth of the sidewalk. They shall not be less than one-eighth (1/8) inch nor more than one-fourth (1/4) inch in width, and shall be edged with an edging tool having a one-fourth (1/4) inch radius. All slabs shall be five (5) feet long on any one side, unless otherwise ordered by the ~~Village Engineer~~ Director of Engineering.

O. Control of Materials. The developer shall, when requested by the Village and at his expense, have a commercial testing laboratory prepare and test samples of delivered concrete. One (1) set of tests shall be taken for the first twenty-five (25) cubic yards, or fraction thereof, and one (1) set of tests shall be taken for each additional fifty (50) cubic yards. A set of tests shall consist of four (4) standard cylinders (two (2) shall be broken at seven (7) days and two (2) shall be broken at twenty-eight (28) days), one (1) slump test and one (1) air content test. The laboratory shall perform tests in accordance with recognized ASTM standards and shall submit written reports of such tests to the ~~Village Engineer~~ Director of Engineering for review.

SECTION 6-407 – STREET LIGHTING

A. Street Lighting Standards

7. After completion of the street lighting system, all developments shall submit to the ~~Village Engineer~~ Director of Engineering or designee, a set of "As Built" drawings showing the routing of electric cable, mounting height, size length, luminaire size wattage and actual locations of each light standard, disconnect pedestal, and point of connection to Commonwealth Edison electric lines. The ~~Village Engineer~~ Director of Engineering or designee shall inspect the system for conformance to the standards set out in this document. The ~~Village Engineer~~ Director of Engineering or designee may accept the system after all the deficiencies are corrected.

E. Foundation

1. Pole Foundation.

c. In areas where conventional concrete foundations cannot be utilized because of soil conditions or utility conflicts, the use of metal helical screw-in type foundations may be utilized with written approval from the ~~Village Engineer~~ Director of Engineering or designee. The Standard Details identify the minimums required.

F. Electric Cable 600 Volt, Plastic Insulated Materials.

6. Taped Splices. Taped Splices are only allowed with prior approval from the ~~Village Engineer~~ Director of Engineering, or his designee. A taped splice shall mean a splice of pigtail construction

made with a spring connector, rubber tape, and plastic/vinyl tape according to the following descriptions and construction methods:

H. Granular Trench Backfill. At locations indicated by the ~~Village Engineer~~ Director of Engineering or designee, a trench shall be constructed to accommodate the cable duct or unit. The trench shall be backfilled with granular material in accordance with Section 810 of the IDOT Standard Specification for Road and Bridge Construction, latest edition. The contractor or developer shall furnish the trench backfill material and shall appropriately dispose of all surplus backfill material.

I. Construction Methods.

a. The cable duct shall be placed in the bottom of the trench only after all existing loose granular material has been removed, and the trench area has been bedded with granular backfill material, as directed by the ~~Village Engineer~~ Director of Engineering or designee.

b. Any material excavated from the trench may be used as backfill provided it does not conflict with the above, and the material is approved by the ~~Village Engineer~~ Director of Engineering or designee. However, if the material in question has been excavated from the roadway area, replacement material must be granular trench backfill regardless of what material has been excavated from the trench.

J. Acceptance of Street Lighting System.

1. Once the street lighting system has been initially installed according to the specifications set forth in this Section, the ~~Village Engineer~~ Director of Engineering or designee shall, upon the request of the developer, inspect the system and prepare a list of items for repair (punch list) (commonly referred to as a "punch list"). The punch list shall be provided to the developer or their designee. When the appropriate repairs have been made, the Village shall accept the lighting system for luminaire maintenance only. The developer remains responsible for the lighting system and shall therefore be responsible for any damage due to construction, including cable hits and pole knock-downs. The Village shall accept the lighting system when the development is formally accepted in letter form, as written by the Director of Development Services or designee.

SECTION 6-408 – SANITARY SEWER SYSTEM

D. Basic Design Standards.

1. Design Flows.

a. Design flows for single and multiple residential development shall be based upon full development of the service area with the population served, estimated as follows:

Type of Dwelling Unit	Number of Persons
Studio	1
1 Bedroom	2
2 Bedroom	3
3 Bedroom	4
4 Bedroom	5

The maximum daily per capita design flow shall be calculated using the formula:

The maximum daily per capita design flow shall be calculated using the formula:

$Q = 500(P)^{1/5}$

Where Q* = maximum design flow, in gallons per capita per day ("gpcpd")
P = population served, in thousands
*Not to exceed 400 gpcpd or be less than 250 gpcpd

For undeveloped residential areas where the details of future developments are not known, design population (P) per acre may be estimated by the ~~Village Engineer~~ Director of Engineering.

b. Design flows for non-residential developments shall be based on full development of service area with the maximum daily per capita design flow calculated as follows:

Type of Establishment	Unit	Average Flow in Gals/day/unit
Shopping Center (without food service or laundries)	Employee	0.10 gal/sq. ft.
Store	Employee (1 shift)	25
Office	Person (1 shift)	25
Industrial		
- with showers	Person	35
- without showers	Person	25
Restaurant	Meal Served	7
Theater	Per Seat	5
Hotel	Per Guest	100

* Quantities are exclusive of process water requirements which must be estimated and added.

For non-residential developments where the details of the development are not established, domestic design flows may be estimated by the ~~Village Engineer~~ Director of Engineering. Such flow estimate shall not relieve the owner or developer of the responsibility to provide adequate sanitary sewer capacity in order to meet any and all future requirements within the development.

4. Alignment. Sewers shall be laid straight in both horizontal and vertical planes between manholes, unless otherwise approved by the ~~Village Engineer~~ Director of Engineering.

6. Sanitary Sewer Manholes.

b. Where possible, sanitary sewer facilities shall be designed to avoid the use of a drop manhole. A drop manhole shall be provided for manholes with any pipe having a difference in invert elevation more than seventy-two (72) inches above the invert of the sewers leaving such manholes. Small drops may be used in the event of utility conflicts, where approved by the ~~Village Engineer~~ Director of Engineering. The invert of the outlet pipe from a drop pipe must match the springline elevation of the precast manhole bench. All drop manholes must be precast with monolithic drop pipe assemblies.

7. Sewer Depth. Sanitary sewers shall be constructed at a minimum depth of eight (8) feet and shall provide an outfall for all sanitary sewage within the existing and future ultimate service area, unless approved by the ~~Village Engineer~~ Director of Engineering. The eight-foot depth is intended

to eliminate the service line separation deficiencies which commonly occur between sanitary sewer placed at six feet deep and water mains at five feet deep.

8. Lift Stations.

b. Lift station and force main designs shall be submitted for review and approval to the ~~Village Engineer~~ Director of Engineering, the Illinois Environmental Protection Agency, and the Metropolitan Water Reclamation District of Greater Chicago.

d. A stand-by internal combustion power source shall be provided for lift stations. The power source shall be natural gas-fueled for output rating less than 100 kW and shall be diesel-fueled for 100 kW and above.

As an alternate, the ~~Village Engineer~~ Director of Engineering may allow a dual connection to the power system as a method of providing stand-by power in cases where such an alternate would provide an equal degree of reliability, and also would provide an economy to the Village over the service life of the alternate stand-by power system.

10. Sewer Pipe Bedding.

b. Sewer pipe concrete cradle, arch, or full encasement shall be constructed whenever dictated by trench or embankment conditions as directed by the ~~Village Engineer~~ Director of Engineering.

E. Material Specifications. All sanitary sewer system elements shall conform to the following specifications:

1. Casing Pipes (Exhibit PC-01). Bituminous coated steel pipe - ASTM A120, 0.375" minimum thickness. All casing pipes shall utilize appropriate stainless steel spacers, per manufacturer's specifications, to support the sewer pipe as directed by the ~~Village Engineer~~ Director of Engineering.

6. Castings.

c. Water Tightness. Where necessary to prevent entry of overland flow, a water tight frame and self-sealing lid shall be used, 7" East Jordan Iron Works, Inc. #1022Z1 PT4 (4 bolt lock down) frame and 1020A HD GS lid embossed with "SANITARY SEWER" and "VILLAGE OF ORLAND PARK," Sanitary Manhole Frame and Cover - Standard Detail No. SS-04 or as required by the ~~Village Engineer~~ Director of Engineering.

F. Design Flows.

3. Design Slopes. Minimum and maximum slopes are tabulated below. The slopes are those that produce minimum and maximum velocities of 2.0 ft/sec. and 15.0 ft/sec. respectively, based on Kutter's formula, with n = 0.013 and the pipe flowing full, unless approved by the ~~Village Engineer~~ Director of Engineering.

I. Handling of Pipe. Sanitary sewer pipe shall be handled in a manner that will prevent damage prior to installation. Damaged or defective material on the job site shall be rejected and replaced to the satisfaction of the ~~Village Engineer~~ Director of Engineering. Methods of construction conducive to the damage of sewer pipe shall be corrected when called to the attention of the contractor. All pipe and fittings shall be examined by the contractor above grade before placement in the trench.

J. Laying of Pipe.

1. Sanitary Sewer Pipe. Sanitary sewer pipe shall be laid true to line and grade as set forth in the Standard Specifications for Water and Sewer Main Construction in Illinois, Sixth Edition (July 2009), and/or latest revision. Dirt or other foreign material shall be prevented from entering the pipe or pipe joint during handling or laying operations and any pipe or fitting that has been installed with dirt or foreign material in it shall be removed, cleaned, and relaid. At times when

pipe laying is not in progress, the open end of the installed pipe shall be closed with a water tight plug or by other means approved by the ~~Village Engineer~~ Director of Engineering to ensure absolute cleanliness and avoidance of extraneous flows inside the pipe.

2. Laying of Pipe on Curves. The curvature of sanitary sewers is not allowed unless, in the opinion of the ~~Village Engineer~~ Director of Engineering, special circumstances dictate otherwise. Pipe required to be laid on curved alignment shall be joined in straight alignment and then deflected, joint by joint. Special care shall be taken in blocking the pipe, and in no case shall the degree of deflection exceed the manufacturer's recommendations for the respective pipe size, material and barrel length.

4. Depth of Pipe Cover. All pipe shall be laid to a minimum depth of eight (8) feet measured from the proposed ground surface to the top of the pipe barrel unless specifically allowed otherwise under special circumstances by the ~~Village Engineer~~ Director of Engineering.

K. Installation Requirements.

2. Sewer system design and construction shall in all respects be in accordance with the regulations of the MWRDGC and the Illinois Environmental Protection Agency. No construction shall commence until evidence of the approved permits from these agencies is filed with the ~~Village Engineer~~ Director of Engineering.

6. The contractor shall keep a record of the location of all sewer services by measurement to the nearest downstream manhole. Such records shall be delivered to the ~~Village Engineer~~ Director of Engineering at the completion of the work.

L. Inspection and Test.

3. T.V. Inspections.

a. Upon completion of construction and prior to initiation of the maintenance guarantee period, a T.V. inspection shall be performed. Video and a written report of all television inspections shall be provided to the Village prior to the initial acceptance provided for by this Section. The form of the report and video format shall be approved by the ~~Village Engineer~~ Director of Engineering.

4. Infiltration Testing.

c. Immediately after backfilling, the entire length of the sewer trench, including stubs, shall be inundated to normal ground water level or eighteen (18) inches above the top of sewer pipe, whichever is higher. At that time, infiltration tests shall be made to determine compliance with the allowable infiltration criteria. To measure the amount of infiltration, the contractor shall furnish, install, and maintain a V-notch shape crested weir in a metal frame tightly secured at the lower end of each sewer test section as directed by the ~~Village Engineer~~ Director of Engineering. The ~~Village Engineer~~ Director of Engineering shall check the infiltration by measuring the flow over such weirs. When infiltration is demonstrated to be within the allowable limits, the contractors shall remove such weirs.

5. Exfiltration Testing. If during the construction of the sewer system, the ~~Village Engineer~~ Director of Engineering determines that it is impractical to obtain a proper infiltration test, then a test for water tightness shall be made by bulk heading the manhole at the lower end of the section under test and filling the sewer with water to eighteen (18) inches above the top of the sewer in the manhole at the upper end of the section. Leakage will then be calculated as the measured amount of water added to maintain the above described level at a maximum allowable exfiltration rate of one hundred (100) gallons per inch of diameter of sewer per mile per twenty-four (24) hour day at any time for any section of the system.

6. Air Testing. All Polyvinyl Chloride (PVC) and Polyvinyl Chloride Molecularly Oriented Pressure Pipe (PVCO) will require low pressure air testing meeting ASTM F1417. The ~~Village Engineer~~ Director of Engineering may require air testing for other pipe materials in accordance with ASTM C828.

SECTION 6-410 – WATER SUPPLY

B. Basic Design Standards.

1. System Extension.

e. Developer shall be required to extend water distribution system as determined by ~~Village Engineer~~ Director of Engineering.

2. Maximum Day Consumption. For purposes of water main design, maximum day consumption for water main design shall be based on the following table:

Type of Establishment	Unit	Maximum Day Consumption Gal/day/unit*
Retail	(> 100,000 sq. ft.)	105
Retail	(< 100,000 sq. ft.)	65
Office	Person (1 shift)	50
Industrial	Person (1 shift)	75
Restaurant	Meal Served	15
Theater	per Seat	10
Hotel	per Guest	210

* Quantities are exclusive of process water requirements which must be estimated and added.
For other than residential developments, when the details of the development are not known, maximum day consumption and fire flow may be estimated by the ~~Village Engineer~~ Director of Engineering. Such estimate shall not relieve the owner or developer of the responsibility of providing adequate main capacity for any and all future needs within the development.

5. Required Fire Flow and Pressure. A separate fire flow report shall be prepared that indicates that at selected locations, and at any other locations that may be selected by the ~~Village Engineer~~ Director of Engineering, the fire flows required, in excess of maximum daily consumptive demands, will be supplied using a "C" factor of 100, ignoring fittings, and with a minimum residual hydrant pressure of twenty (20) psi. Required fire flow shall be computed as detailed in the "Guide for Determination of Required Fire Flow," latest edition, published by the Insurance Service Office. Watermains shall be sized and set at grades to provide ISO fire protection flow rates. The developer shall bear the cost of the flow studies. Flow tests are to be performed to verify compliance w/ the guide.

Single-Family Residential	1500	GPM @ 25 PSI
Multi-Family Residential	2500	GPM @ 25 PSI
Commercial - Industrial	3500	GPM @ 25 PSI

C. Material Specifications and Details.

12. Valve Vaults. (Exhibit Nos. WM-01 and WM-02).

b. Size: For -, 8", - and smaller diameter valves, valve vaults shall have a 60"" inside diameter; for pressure connections and valves -10" and larger in diameter, valve vaults

shall have a minimum 72"" inside diameter or as required by the ~~Village Engineer~~ Director of Engineering.

E. Water Service Line.

1. Installation and Location. A water service line is a water pipe connected at the water main by a brass corporation stop or a ductile iron fitting. Such pipe is extended horizontally at right angles with the water main to the front line of a lot or single building which It is to serve. The service pipe shall be provided with a brass curb stop or gate valve at the mid-point between the curb and the sidewalk unless otherwise specified by the ~~Village Engineer~~ Director of Engineering. A cast iron curb box shall be installed over curb stops. A valve vault shall be provided for gate valves - three (3) inches and larger. All water service lines shall be located at the approximate center of each lot at a minimum depth of five (5) feet. A water service curb box that falls within a hard service area shall be relocated.

H. Construction Requirements.

3. Laying Water Main.

a. The contractor shall keep the trench free from water while the water main is being placed and until the pipe joint has been sealed to the satisfaction of the ~~Village Engineer~~ Director of Engineering.

c. In making joints, all portions of the joining materials and the socket and spigot ends of the joining pipe shall be wiped clean of all foreign materials. The actual assembly of the jointing shall be in accordance with the manufacturer's installation instructions and/or as directed by the ~~Village Engineer~~ Director of Engineering. During construction, until jointing operations are complete, the open ends of all pipes shall be at all times protected and sealed with temporary watertight plugs.

K. Disinfection.

6. All water mains shall be disinfected and tested according to the requirements of the "Standards for Disinfecting Water Mains," AWWA C601, and as required by this Section. All disinfection, as required by this Section, shall be performed by an independent firm exhibiting experience in the methods and techniques of this operation, and shall be approved by the ~~Village Engineer~~ Director of Engineering.

L. Final Flushing and Testing.

1. Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipeline at its extremities until the replacement water, throughout its length shall, upon test, be approved as safe water by the ~~Village Engineer~~ Director of Engineering. This quality of water delivered by the new main should continue for a period of at least two (2) full days as demonstrated by laboratory examination of samples taken from a tap located and installed in such a way as to prevent outside contamination. Samples should never be taken from an unsterilized hose or from a fire hydrant because such samples seldom meet current bacteriological standards.

2. After disinfecting and flushing, a minimum of two (2) water samples shall be collected by the contractor on two successive days, with notice given, so that the collection may be witnessed by the ~~Village Engineer~~ Director of Engineering. Bacteriological sampling and analysis of the samples shall be performed by a laboratory approved by the Illinois Department of Public Health and the ~~Village Engineer~~ Director of Engineering. Should the initial treatment result in an unsatisfactory bacterial test, the procedure shall be repeated until satisfactory results are obtained. The contractor or developer shall pay for the sampling and analysis. Results of the analysis shall be transmitted by the laboratory directly to the ~~Village Engineer~~ Director of Engineering. Test results shall indicate the date the sample was collected, the date the analysis was made, the exact locations at which samples were taken, the firm submitting the sample, and

the project at which the samples were collected. Sufficient samples shall be collected in order to insure that the system is bacteriologically safe.

SECTION 6-411 – SOIL EROSION AND SEDIMENTATION CONTROL

C. Soil Erosion Control Plan and Permit Requirements.

5. Application for Permit.

g. The proposed phasing of development of the site, including stripping and clearing, rough grading and construction, and final grading and landscaping. Phasing should identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary sediment control measures, installation of storm drainage, paving streets and parking areas, and establishment of permanent vegetative cover.

The ~~Village Engineer~~ Director of Engineering may waive specific requirements for the content of submission upon written finding that the information submitted is sufficient to show that the work will comply with the objectives and principles of this Section and the standards contained in the Handbook incorporated by Subsection (E)(1).

E. Operation Standards and Requirements.

4. Special Precautions.

a. If at any stage of the grading of any development site the ~~Village Engineer~~ Director of Engineering determines by inspection that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, watercourse or drainage structure, the ~~Village Engineer~~ Director of Engineering may require, as a condition of allowing the work to be done, that such reasonable special precautions be taken as is considered advisable to avoid the likelihood of such peril. "Special precautions" may include, but shall not be limited to, a more level exposed slope, construction of additional drainage facilities, berms, terracing, compaction, cribbing, or installation of plant materials for erosion control. Said special precautions shall, as much as possible, reflect the standards contained in the Handbook.

b. On large operations or where unusual site conditions prevail, the ~~Village Engineer~~ Director of Engineering or his designee may specify the timing of grading or may require that the operations be conducted in specific stages so as to insure completion of protective measures or devices prior to the advent of seasonal rains. Said specifications or requirements shall, as much as possible, reflect the standards contained in the Handbook.

SECTION 6-412 – LOCAL STREAM AND WATERBODY PROTECTION

H. Site Grading and Excavation.

2. Unless otherwise provided in this Section the following restrictions, requirements and standards shall apply to all construction:

b. no grading, filling, cleaning, clearing, terracing or excavation of any kind shall be initiated until final engineering plans are approved and the application is approved by the ~~Village Engineer~~ Director of Engineering; and

J. Watercourse Relocation and Minor Modifications.

3. Modification of watercourses as a convenience for site design purposes shall not be permitted. Stream modification, when permitted, shall be subject to the following conditions and restrictions:

c. prior to diverting water into a new channel, a qualified professional approved by the ~~Village Engineer~~ Director of Engineering inspects the stream modification and issues a

written report to the ~~Village Engineer~~ Director of Engineering that the modified stream complies with the requirements of this Section.

L. Stream Channel and Waterbody Development Permit.

1. Except as otherwise provided in this Section, to ensure that proposed development can be carried out which is compatible and harmonious with the natural amenities of the stream channel area and with surrounding land uses, no person shall commence development within the minimum setback area without first having obtained a Stream Channel and Waterbody Development Permit. A request for a permit shall be submitted to and approved by the ~~Village Engineer~~ Director of Engineering.

2. No permit shall be issued unless the applicant submits engineering data, surveys, site plans and other information as the Village may reasonably require in order to determine the effects of such development on the affected land and water areas. The permit shall not be approved by the ~~Village Engineer~~ Director of Engineering unless:

M. Permit Exceptions. The permit provisions of this Section shall not apply to:

1. emergency work necessary to preserve life or property. When emergency work is performed under this Section, the person performing it shall report the pertinent facts relating to the work to the Village within ten (10) days after commencement of the work and shall thereafter obtain a special use permit and shall perform such work as may be determined by the ~~Village Engineer~~ Director of Engineering to be reasonably necessary to correct any impairment such emergency work may have caused to the water conveyance capacity of the watercourse; and

C. Applicability.

2. The actual boundaries of non-tidal wetlands shall ordinarily be determined by the applicant through the performance of a field survey applying the nontidal wetland definition. The Wetlands Map is to be used as a guide to the general location of nontidal wetlands. The applicant is required under Section 6-413-D.1 of this ordinance to show a Wetland District boundary on a scaled drawing submitted as part of the permit application. Evidence documenting the results of the boundary survey may be required by the ~~Village Engineer~~ Director of Engineering.

SECTION 6-413 – WETLANDS PROTECTION

D. Permit Requirements.

1. No regulated activity in or within 50 feet of a nontidal wetland may be conducted without a permit from the ~~Village Engineer~~ Director of Engineering and full compliance with the terms of this ordinance and other applicable regulations. All activities that are not permitted as of right or as special permit uses shall be prohibited.

2. Notwithstanding the provisions of this ordinance or any other law to the contrary, the ~~Village Engineer~~ Director of Engineering may issue a temporary nontidal wetlands permit through oral or written authorization, provided a written permit application is received within five days, if he or she deems that an unacceptable threat to life or severe loss of property will occur if an emergency permit is not granted. The emergency permit may be terminated at any time without process upon a determination by the ~~Village Engineer~~ Director of Engineering that the action was not or is no longer necessary to protect human health or the environment.

3. To guide restoration and creation actions should a violation occur; the ~~Village Engineer~~ Director of Engineering shall have the power to order the violator to develop a plan as described in Section 6-413 G.2. of this ordinance for the approval of the ~~Village Engineer~~ Director of Engineering. Field verification of absence or existence of wetland areas, in the form of a wetland report checklist, shall be provided for approval of the ~~Village Engineer~~ Director of Engineering.

SECTION 7-101 – CONSTRUCTION PROCEDURES

E. Maintenance During Construction. The subdivider shall clean and maintain all public ways, sewers, ponds and drains free from snow, mud, debris, trash or other extraneous material prior to acceptance of the street by the Village at all times during construction and as the ~~Village Engineer~~ Director of Engineering may otherwise deem necessary. The Police Department shall have the authority to issue tickets to the developer or his or her agents in the event of any such violation. The Village shall withhold any subsequent development approvals for the development until the tickets have been paid and the violation corrected.

F. Construction Noise. The subdivider shall take every precaution to assure that undue noise from construction operations is kept at a minimum. To assure that contractors are aware of this requirement, the following construction noise standard shall be made a part of all contracts entered into for construction of proposed improvements:

6. Requests to modify or deviate from these requirements shall be submitted in writing by the Contractor and must be approved in writing by the ~~Village Engineer~~ Director of Engineering.