



STANDARDS FOR ENGINEERING SITE PLANS

City of Des Plaines

Public Works and Engineering Department

Revised January 2023



Index

Composition and Order of Plans

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*Note: All requirements subject to change without notice. These requirements are not all inclusive.

The following Standards for Engineering Site Plans prepared by the City of Des Plaines Public Works and Engineering Department apply to all civil engineering site plans prepared for the purpose of a site Development Permit. This document is intended to supplement City Codes and Ordinances and not supersede same. Other development requirements include, but are not limited to, the Building Code and amendments, Title 14 of the City Code, the Subdivision Ordinance, the Metropolitan Water Reclamation District Watershed Management Ordinance, and other regulatory agency requirements.

Permits may be required from other agencies having jurisdiction within the City of Des Plaines including, but not limited to, the Metropolitan Water Reclamation District, Illinois Environmental Protection Agency, Illinois Department of Transportation, Illinois Department of Natural Resources and the Cook County Highway Department.

Please visit our website at desplaines.org.



Cover

- Project Address and P.I.N. Number
- Location Map
- Index of Sheets
- Design Engineer's Name, Address, and Telephone Number
- Property Owners' Name, Address, and Telephone Number
- City Benchmarks Used
- Revision Block
- Legend
- Professional Engineer's Seal, Signature, and Date
- Drainage Statement

Requirements for Site Development

- If the site is in a floodplain or floodway, the Title 14 of the City Code shall be followed. An elevation certificate will need to be submitted to the city before occupancy.
- Permit plans shall include a Grading Plan, Utility Plan, Standard Details, and Erosion Control Plan. Drawing sheet size is to be a standard of 24" x 36".
- All permit submissions (plan revisions, spot surveys, as-builts, other agencies permit applications, etc.) will be sent to permits@desplaines.org.
- A permit plan, foundation spot survey (after foundation is built and before walls are erected), and as-built survey will be required for all developments.
- A spot survey must be submitted before any framework can begin on the building. This spot survey should show the top of the foundation grade and offsets off the setback, easement, and building lines. After the spot survey approval, all storm sewer work must be completed prior to any stick work begins.
- MWRD WMO ordinance is followed for all sanitary and storm water installation, work in a combined sewer area, and all development in the flood plain.
- If the site is greater than 1 acre, a NPDES SWPPP will be required.
- IEPA Permit required for all public water main installation. A separate maintenance agreement will be required for any water main on private property.
- \$20,000 bond required for work in City Right of Way.
- Public sidewalk or escrow for public sidewalk will be determined by the Public Works and Engineering Department. ADA warning device where appropriate.
- The top of the lowest floor must be 2' foot above the 100-year flood elevation in a floodplain area or the top of the foundation must be 18" higher than the centerline of the highest adjacent roadway in a non-floodplain area.
- Plans received for permit approval by the City of Des Plaines Public Works and Engineering Department must be signed and sealed by a Licensed Illinois Professional Engineer.
- All top of window wells shall not be more than 4" below the top of the foundation or if there is a brick ledge, the window wells should extend to the bottom of it.
- Plans must use City of Des Plaines Standard Details and Site Plans Standards found on the City of Des Plaines website.
- Submit Photometrics for parking lot lighting.
- All applicable intergovernmental agency permits- (MWRD WMO, CCHD, IEPA, IDOT, IDNR, NPDES, etc.) must be submitted for review and approval to the Public Works and Engineering Department.

Requirements for Site Development, cont'd

- If you are constructing public improvements, inspections are required to be done by personnel from the City of Des Plaines Public Works and Engineering Department. It is the Developer's responsibility to contact the Public Works and Engineering Department at 847-391-5390, two (2) working days in advance of any construction of public improvements to arrange for required inspection(s).
- B-6-12 curb and gutter and at least one 48" Type A catch basin with storm sewer connected to City storm sewer is required for all parking lots.
- All sewers within 10' of a building foundation shall be televised and the video media will be submitted to the Public Works and Engineering Department for their review and approval.
- Electronic as-built drawings of the public improvements constructed, sealed by a licensed professional engineer, or registered land surveyor of the State of Illinois, will be required prior to acceptance of the public improvements. This should mirror the approved permit plans.
- Contractors are only authorized to construct improvements as shown on the plan as approved by the Director of Public Works and Engineering. Requests for design changes must be made by the Developer's Engineer to the Director of Public Works and Engineering and may require additional plans or calculations for approval. Any Public improvements constructed contrary to the Director of Public Works and Engineering's approved plans will be removed at the Developer's expense.
- Please be advised that a Final Waiver of Lien must be presented to the City of Des Plaines Public Works and Engineering Department before any release of surety for the public improvements for subdivisions (City Code Title 13-2-8F.).

Grading Plan

- All City Benchmarks are USGS NAVD 88. Show City Benchmark used; all elevations to be USGS NAVD 88.
- Drainage statement must be signed by the Owner and Professional Engineer responsible for the design.
- Entire site to be shown on one sheet at largest scale possible.
- Use engineering scale of 1" = 20', 30', 40', or 50' only.
- Indicate North Arrow and Scale.
- Show lot lines, lot numbers, City furnished addresses, right-of-way lines (row), easements, streets, and street names.
- Show existing tops of foundation adjacent to project and existing contours at 1' vertical contours and spot elevations within the project.
- Show proposed top of foundation elevation, the elevation at each lot corner and side yard, direction of proposed swale (located in 5.0' sideyard setback) to City ROW if existing ground pitch is 1% or steeper, or to project storm sewer (built and constructed by developer). Project must accept all-natural tributary drainage.
- Swale longitudinal slopes to be 1% minimum; transverse slopes to be 4:1 maximum; Emergency Overflow swales to carry 100-year Flow.
- Show 100-year Base Flood Evaluation where floodplain is involved. Show Floodway Boundary where applicable.
- Maximum design depth of ponding allowed at a drainage structure is 18" for grass swales, 12" for paved areas; design depth of ponding on a public street shall not exceed the proposed street centerline crown elevation.
- Indicate Emergency Overflow and Direction. Overflow must go to detention basin either thru 100-year design storm pipe (show inlet capacity calculations) or overland.
- New driveways that are built on the side of an existing house are to drain away from the house at a 2% slope (2" in 8'). The opposite side of the drive will have a rolled edge or if the existing grade allows an inverted crown. The driveway will then drain to the street or a part of it in the backyard of the property that is constructing the driveway.
- All driveway aprons to be Portland Cement Concrete (PCC) with minimum 2% slope and maximum 5% slope and depressed curb at the street.
- Show all radii and dimension parking lot stalls, aisles, and widths.
- Show pavement cross section.

Utility Plan

General

- All trench backfill in public Right of Way will be flowable fill.
- Show all existing storm and sanitary sewers, manholes, water mains, and valve vaults, including sizes, rims, and inverts.
- All public utilities to follow the “Standard Specifications for Water and Sewer Main Construction in Illinois.”
- All traffic control standards will follow the Standard Specifications for Road and Bridge Construction-IDOT.

Storm Sewer

- Minimum size 10” Reinforced Concrete Pipe or approved equivalent (8” PVC for rear yard catch basin)
- Reinforced Concrete Pipe with C-361 joints only.
- Drainage Structure to be 48” Type A CB (24” Type C CB permitted at terminal end of sewer in grassy area) per 10,000 SF of pavement.
- All sump pump discharges shall be connected to storm sewer.

Sanitary Sewer

- 8” minimum ductile iron pipe (DIP) CL 52 (or approved equivalent) with AWWA – C-104 cement mortar lining and C-111 Joints; or SDR 26 PVC pipe.
- 48” diameter manhole minimum, refer to City Standard Design.
- 150 feet maximum distance spacing between manholes.
- Any public sewer construction shall not commence until the approved MWRD permit is on file in the Public Works and Engineering Department.
- 6” PVC SDR 26 pipe @ 1% slope w/cleanout for residential services.
- Existing residential sanitary services shall be removed to the City sanitary sewer main.

Water Main

- 8” minimum ductile iron pipe (DIP) CL 52 with cement mortar lining with polyethylene encasement (or approved equivalent)
- Hydrant spacing = 150’ radius must cover 2/3 of proposed lot.
- All water service/water main extensions to be pressure tested and chlorinated per IEPA permit and City Standards.

Utility Plan, cont'd

Water Main, cont'd

- Show single family residential water services, 1½" minimum diameter, and Type K copper (or approved equivalent).
- Water shut off (buffalo-box) for residential water service to be in parkway only.
- Any public water main shall be polybagged and its construction shall not commence until the approved IEPA permit is on file in the Public Works and Engineering Department.
- Remove existing water services at the city water main and replace the corresponding section of public water main.

Drainage Statement

The following statement, signed by a Professional Engineer properly registered in Illinois shall be included on the Grading Plan.

“To the best of our knowledge and belief, the drainage of the surface waters will not be changed by the construction of this project or any part thereof, or, that if drainage will be changed, reasonable provision has been made for collection and diversion of such surface waters into public areas, or drains approved for use by the Director of Public Works and Engineering, and that such surface waters are planned for in accordance with generally accepted engineering practices so as to reduce the likelihood of damage to adjoining properties because of the construction of this project.”

SEAL

Registered Professional Engineer

Owner

Address

Digital Plan Requirements

The City of Des Plaines Public Works and Engineering Department has the following requirements for digital plan sets. All submissions will be sent to permits@desplaines.org.

All digital drawings must be submitted in PDF and AutoCAD DWG format or Microstation DGN format using NAD83 state plane coordinates and NAVD 88 Datum.

Below is a list of all submissions that need to be in this format:

- All New Single Family Residences
- All New Commercial Buildings
- All Commercial Additions
- All Residential Additions in the floodplain
- All Residential Additions that expand the footprint by 50% or more.
- All Residential Garages in the floodplain