



**PUBLIC WORKS & WATER RESOURCES**  
**CITY OF NEWARK**

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**CITY OF NEWARK CONSTRUCTION IMPROVEMENT PLANS CHECKLIST**

**STANDARD SUBMISSION REQUIREMENTS**

1.  Completed checklist signed, sealed and certified by a Delaware P.E. /P.L.S.
2.  One copy of all relevant calculations signed, sealed and certified by a Delaware P.E. /P.L.S.
3.  Plans on 24" x 36" sheets. All plans shall be signed, dated, sealed and certified by a Delaware P.E. /P.L.S.
4.  All related review fees, payable to City of Newark. Separate checks are preferred.
5.  A minimum of seven (7) paper sets and a CD containing a PDF copy are enclosed.

**GENERAL PLAN REQUIREMENTS**

1.  Location map, maximum scale 1" = 800' (bearing a north arrow and street names)
2.  Legend for all symbols used.
3.  North arrow on all plan views.
4.  Title Block:
  - a.  Name and address of the subdivision or project including County and State.
  - b.  Names, mailing addresses, telephone and fax numbers of the owner/developer and the consulting engineer.
  - c.  Plan and profile scale (1" = 30' or larger scale, unless otherwise approved by PWWR Dept.).
  - d.  Date (include revision dates as applicable).
5.  Site Data:
  - a.  Tax parcel number.
  - b.  Acreage of lot, Zoning Classification.
  - c.  Wastewater flow generation summary showing existing and proposed average and peak wastewater flows using New Castle County Department of Special Services flow generation standards and peaking factor.
  - d.  Required and proposed parking requirements (including handicap parking and bicycle parking).
  - e.  Limit of land disturbance to the nearest hundredth of an acre.
  - f.  All existing and proposed utility owner information.

6.  General Notes (include the following notes as required/applicable):
- a.  'All Construction shall be per most current City of Newark Standards and Specifications, Building Code, and Fire Code.'
  - b.  'As-Built Plans and checklist shall be submitted to the City of Newark prior to issuance of Certificate of Occupancy.' There is a review process for As-Built submissions so it is recommended that the submission be well in advance of expected occupancy to avoid delays.
  - c.  'All handicapped parking stalls, logos, and access aisles shall be marked with blue paint and hatched accordingly.'
  - d.  'Any damage to the City storm sewer, water, or sanitary sewer infrastructure shall be repaired or replaced to the satisfaction of the Public Works and Water Resources Director or their designee.'
  - e.  'All on-site storm sewer and sanitary sewer is private. On-site manholes shall not have "Newark" anywhere on the lid.'
  - f.  'Unused water and sewer services shall be terminated at the utility main unless a more suitable location is determined by the Public Works and Water Resources Department during construction.'
  - g.  'Water meter shall be located as close as possible to where the domestic main enters the building. The meter room shall be readily accessible to the City of Newark. A ¼ turn locking ball valve shall be located immediately on both sides of the meter.'
  - h.  'Individual water meters will be provided for each dwelling and/or commercial unit. The developer will be responsible for the cost of the meters and the meter pits. The City will determine the size of the meters in coordination with the developer. Meter pits shall be Mueller Thermal-Coil meter pits in accordance with the latest City of Newark Water and Wastewater Standards and Specifications.'
  - i.  'Meter pits for water meters 1" and under shall be Mueller Thermal-Coil, 42" depth, with integral dual check valve, and 4" insulation pad. The lids for all meter pits shall be H-20 rated unless otherwise approved.'
  - j.  'The Developer shall pay fees associated with the new water meters prior to issuance of any building permit.'
  - k.  'The Developer will be responsible for the installation of additional transmission equipment should the proposed building negatively affect the performance of the City's wireless meter reading system.'
  - l.  'An "Approval to Construct" will be required from the Department of Public Health Office of Drinking Water. A copy of the approved permit shall be furnished to the City prior to CIP approval.'
  - m.  'An "Approval to Operate" from the Department of Public Health shall be provided to the City prior to the use of any domestic water or issuance of any certificate of occupancy.'
  - n.  'Developer shall provide a set of water system drawings in accordance with the State Department of Health Drinking Water Standards for their review and approval.'
  - o.  'All water valves shall be Mueller unless otherwise approved by the City of Newark Public Works and Water Resources Department.'
  - p.  'The Developer shall pay the Sewage Treatment Plant (STP) fee prior to receiving a building permit.' A credit for any existing structure will be given when determining the STP fee.

- q.  'Any sanitary sewer laterals proposed to be reused shall be visually inspected (televised) by the Developer and approved for re-use by the Public Works and Water Resources Department.' Contact Shawn Gealy, Water and Wastewater Inspector, at (302) 229-1396 a minimum of 48 hours in advance of the CCTV work and provide a digital copy to the Public Works and Water Resources Department.
  - r.  'A DNREC "Construction of Wastewater Collection and Conveyance Systems" permit will be required and shall be furnished to the City prior to CIP approval.' Required for projects that generate more than 2000 gallons per day average sewer flow.
  - s.  'A signed and sealed copy of the DNREC approved sanitary sewer as-built plans shall be furnished to the City within 30 days of DNREC approval.'
  - t.  'The required fire protection flow rate for the building is \_\_\_\_\_.' The required sprinkler flow rate for each building is to be determined by the engineer and/or sprinkler system designer.
  - u.  'The Developer shall paint all existing and proposed fire hydrants associated with this project to reflect the flow capacity and apply 2-inch reflective tape in accordance with the State Fire Code.'
  - v.  'Sprinklers are required in all units and all fire protection systems shall be submitted to the City of Newark Fire Marshal's office for review and permitting prior to issuance of building permit.'
  - w.  'A Blue Card holder will be on site at all times during construction to ensure all sediment and stormwater regulations are adhered to.'
  - x.  'A concrete washout area shall be installed and approved by the Public Works and Water Resources department.'
7.  Professional Engineer/Land Surveyor certification block: (signed, dated, and sealed):  
 'I [Name] certify that I am a registered Professional [Engineer/Land Surveyor] in the State of Delaware with a background in civil engineering. To the best of my knowledge and belief, I certify that the information on this plan is true and correct to the accuracy required by accepted surveying standards and practices, the proposed construction as shown on this plan complies with applicable laws and regulations, and this plan includes all information required by the latest revision of the 'City of Newark Lines and Grades Checklist.'
8.  Owner's/Applicant's certification: (signed and dated):  
 'I [Name] certify that I am the owner of the property which is subject of this plan and that the land use action proposed by this plan is made at my direction.'
9.  Location for Signature of public works director, city secretary, and city manager.
10.  If a Standard Plan is applicable, add all conditions, including runoff reduction practices, to the Lines and Grades Plan and provide a complete Standard Plan Approval application. Otherwise a detailed plan is required. If a Best Management Practice (BMP), Conveyance Mitigation Area or Runoff Reduction Practice, collectively referred to as a BMP, include all design and construction details and provide the following note on the plan:  
 'A P.E./P.L.S. must certify that the Best Management Practice is installed and functioning as designed and identify any discrepancies from the regulations and/or approved plans and any design changes from the original design prior to issuance of a Certificate of Occupancy.'
11.  Existing and proposed contours at one (1) foot intervals, with labeling of at least every fifth contour. Two (2) foot intervals may be acceptable for areas of 15% or steeper slopes. Areas with slopes between 15 and 25 percent and greater than 25% shall be identified.
12.  Identification and boundaries of soils classifications as indicated by the New Castle County Soils Survey.

13.  Approximate total area of land of all land to be used for roads, open space, and building lots expressed in percentage of total land areas.
14.  Existing and proposed spot elevations at all high and low points and elsewhere as necessary with associated flow arrows to illustrate drainage patterns in compliance with the City of Newark Drainage Code. (max. and min. slopes for pervious and impervious areas).
15.  Slopes no steeper than 3:1.
16.  Delineate the limits of any protected resource(s) on the plan, including the special flood hazard area (SFHA), if applicable. Include documentation of the source used to determine and/or delineate any protected resource(s) and the method by which the delineation is depicted on the plan. Floodplains are protected resources that apply to existing parcels and all building permit applications.
17.  A ten-foot buffer between the limits of grading, as well as all sediment control practices, and the designated resources to be protected. (i.e. WRPA, wetlands and floodplains).
18.  Courses and distances of all property lines, easements, dedicated public spaces, including landscape buffers metes and bounds for all subject parcel(s).
19.  Include all streets with names, pavement widths, and limits of R.O.W. Dimension building setback lines (front, side and rear) within 100 feet.
20.  Label all existing structures and their uses.
21.  Label the names, addresses and zoning of all adjacent property owners within 200 feet.
22.  Label all existing and proposed structures and their present/intended uses.
  - a.  Dimension locating the proposed structures to the property lines.
  - b.  Provide top of foundation wall and/or top of slab elevation(s) for proposed structures.
  - c.  Provide amount of land to be used for buildings expressed as a percentage of total land, if applicable.
23.  Location of all proposed sidewalks.
24.  Provide all necessary details (driveways, retaining walls, etc.) - 14% max. slope for driveways. If a retaining wall is proposed over 4'0" in stem height, include the structural design and computations signed, dated, and sealed by a Delaware P.E.
25.  Type, size, length and invert elevations at inlets and outlets of all pipes and culverts.
26.  Show all roof drains and cleanouts.
27.  Location and size of existing and proposed water lines.
28.  Location and size of existing and proposed sanitary sewers.
29.  Show the sanitary sewer lateral and clean out(s), with invert elevation at main sewer line and at clean out(s) (All laterals shall be 6" PVC with clean out(s) located just outside the right-of-way).
30.  The lowest floor elevation with sewer is at least 5-feet higher than the corresponding sewer lateral invert elevation.
31.  Full construction details and design calculations for any grinder pump and/or force-main, if applicable.

- 32.  Location of existing/proposed well and septic system in accordance with all approved DNREC permits. (show 100-ft radius between well and septic) if applicable.
- 33.  Location and size of all existing storm sewers, water courses, and natural drainage flows which may influence design, including stormwater management areas.
- 34.  Provide on-lot erosion and sediment control measures:
  - a.  Silt fence, stabilized construction entrance per the Del. E&S Handbook specifications.
  - b.  Other measures as required per the Delaware E&S Handbook specifications.
- 35.  On a plan with contours at intervals of two feet show all landscaping and the tree plantings, mature trees and community assets as specified in chapter 32, zoning, article XXV, landscape screening and treatment, and community assets, appendix IX, chapter 27, subdivisions.

### **CONSTRUCTION IMPROVEMENT PLAN REQUIREMENTS**

#### **Streets**

- 1.  Horizontal Plan
  - a.  Center line with bearings, distances, and curve data and stations corresponding to the profile.
  - b.  Right-of-way and curb lines with radii at intersections.
  - c.  Beginning and end of proposed construction.
  - d.  Tie-ins by courses and distances to intersections of all public roads with their names and widths
  - e.  Location of all monuments with reference to permanent structures.
  - f.  Proposed and existing property lines and ownership of abutting properties.
  - g.  Contour lines at intervals not to exceed five feet.
  - h.  Location, size, and elevations of all drainage structures and public utilities.
  - i.  The scale shall be at least one-inch equals 50 feet.
- 2.  Profiles
  - a.  Profile of existing ground surface along center line and also along both right-of-way lines if required by the director of public works.
  - b.  Proposed center line grade with percent of grade on tangents and elevations at 50-foot intervals, grade intersections, and both ends of curb radii.
  - c.  Vertical curve data including length, tangent elevations, and corrections with elevations at 25-foot intervals for sharp vertical curves.
  - d.  The scale shall be at least one-inch equals five feet vertical and one-inch equals 50 feet horizontal. Preferably at the same horizontal scale as the corresponding plan view.
- 3.  Cross Section
  - a.  Right-of-way width and location and width of paving.
  - b.  Type, thickness, and crown of paving.

- c.  Type and size of curb.
- d.  Grading of sidewalk area.
- e.  Typical location of sewers and utilities with sizes.
- f.  The scale shall be one-inch equals one foot vertical and one-inch equals ten feet horizontal.

### **Sanitary Sewers and Storm Water Systems**

1.  Horizontal Plan
  - a.  Location and size of line with stations corresponding to the profile.
  - b.  Location and types of manholes or inlets with grades between and elevation of flow line and top of each manhole or inlet.
  - c.  Property lines and ownership, with details of easements where required.
  - d.  Beginning and end of proposed construction.
  - e.  Location of laterals, Y's, etc.
  - f.  Location of all other drainage facilities, location and design of storm water management structures, and public utilities.
  - g.  The scale shall be at least one-inch equals 50 feet.
2.  Profile (sanitary sewers and storm drains)
  - a.  Profile of existing ground surface with elevations at top of manholes or inlets and at flow line.
  - b.  Profile of storm drain or sewer showing size of pipe, grade, cradle (if any), manhole, or inlet locations.
  - c.  The scale shall be at least one-inch equals 50 feet horizontal and one-inch equals five feet vertical.
  - d.  Location of these and all other utilities at points of intersection.

### **Water Mains**

1.  Horizontal plan
  - a.  Location and size of line with stations corresponding to profiles.
  - b.  Locations of valves, fittings, fire hydrants, and other appurtenances.
  - c.  Property lines and ownership with details of easements where required.
  - d.  Beginning and end of proposed construction.
  - e.  Location of service lines, etc.
  - f.  Location of all other drainage facilities and public utilities.
  - g.  Scale shall be at least one-inch equals 50 feet.
2.  Profile
  - a.  Profile of existing ground surface with elevations at valves.
  - b.  Profile of water main showing size of pipe, cover, etc.

- c.  The scale shall be at least one-inch equals five feet vertical and one-inch equals 50 feet horizontal.
- d.  Location of these and all other utilities at points of intersection.

**NOTE REQUIREMENTS:**

- 1.  'This plan accurately reflects site conditions and the proposed development is in compliance with the latest Delaware Sediment and Stormwater Regulations and the City of Newark Drainage Code.'
- 2.  'This plan was prepared in compliance with the Subdivision Plan dated XX/XX/XXXX and approved on XX/XX/XXXX.'
- 3.  'The total land disturbance proposed by this plan is \_\_\_\_\_square feet / \_\_\_\_\_ Acres.'

**CERTIFICATION OF ENGINEER / LAND SURVEYOR**

**I, the undersigned, hereby certify that I am a Professional Engineer / Land Surveyor registered in the State of Delaware and it is my opinion that, to the best of my knowledge, each element of this checklist was considered and addressed in accordance with all applicable regulations, codes, standards, guidelines and policies.**

\_\_\_\_\_  
**Signature and Seal of Professional**

\_\_\_\_\_  
**Date**

Use of this checklist does not relieve the Applicant from the responsibility to comply with all applicable regulations, codes, standards, guidelines and policies. The City of Newark Public Works Department reserves the right to revise this checklist at any time.