

General Notes

- All construction shall comply with the applicable ordinances and requirements of the City of Elgin, unless noted otherwise, and shall conform to the specifications of the "Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction" and the "Illinois Society of Professional Engineers (ISPE) Standard Specifications for Water and Sewer Main Construction in Illinois", both of which shall be the latest edition. All construction shall also conform to the Fox River Water Reclamation District (FRWRD) ordinances (or the Metropolitan Water Reclamation District of Greater Chicago (MWRD) as applicable) and the Illinois Recommended Standards for Sewage works, latest edition published by the Illinois Environmental Protection Agency (IEPA) except for conflicts with the Fox River Water Reclamation District sewer permit and manual of procedures ordinances. These specifications shall be considered a part of Elgin's Standard Specifications. In the event of a conflict between the State Specifications and the Elgin Standard Specifications, the most restrictive provisions shall take precedence. Any variations or alternatives to the Elgin Standard Specifications must be submitted to and approved by the City Engineer or his designee(s) (herein after City Engineer) in writing.
- As applicable, all projects must comply with section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899 and the rules and regulations enforced by the US Army Corps of Engineers, Chicago District.
- All paving and excavation work shall comply with the applicable ordinances of the City of Elgin and the Illinois Department of Transportation "Specifications for Road and Bridge Construction" latest edition. In case of a conflict, the most restrictive provisions shall govern.
- It shall be the responsibility of the developer (owner) and the contractor to abide by, adhere to and perform all work in accordance with the requirements, specifications, standards, practices, policies and codes of the City of Elgin which includes but is not limited to labor, materials, procedures and safety.
- Any changes, revisions or substitutions to the plans, specifications, materials, requirements or work shall be submitted to the City Engineer, in writing, with written approval by the City Engineer received prior to beginning of said work. All such materials and construction whether implicitly or explicitly stated or covered within the requirements, codes or specifications shall be approved by the City Engineer, prior to commencing the installation and construction. The changed, revised and substituted items must be accounted for in the record drawings.
- The contractor shall field check and verify all existing utility locations, dimensions and elevations in the field prior to the commencement of construction of the improvements or proposed work. All existing utility locations shown on the plans are based on best available information. Contractor will notify the City Engineer immediately if discrepancies are found.
- All vertical control records (elevations) shall be referenced upon USGS NAVD 88 datum. For horizontal control, Illinois Coordinate System, East Zone (NAD 83) shall be used.
- A minimum of one (1) 2nd order class II permanent benchmark shall be required to be established in all developments, location specified by the City Engineer. The benchmark shall reference at least two (2) existing City benchmarks, be tied to the NAVD 88 datum, and be recorded to the nearest 0.01 feet.
- The contractor shall refer to landscape plans for complete information regarding planting locations, wetlands, walkways, walls, streams and pond shorelines, if applicable.
- The contractor shall notify the City of Elgin Engineering Department (847) 931-5955, the Fox River Water Reclamation District (847) 742-2068 and J.U.L.L.E. (800) 892-0123 at least 48 hours prior to starting construction. All other agencies shall also be notified as required.
- It shall be the responsibility of the contractor to call the assigned City Engineering Inspector at least 48 hours in advance and set up the necessary and proper inspection(s) for all work performed.
- The contractor shall restore all disturbed off-site areas to a condition equal to or better than what existed prior to construction.
- All existing field drainage tiles encountered or damaged during construction are to be restored to their original condition, properly rerouted and/or connected to the storm sewer system. Connections shall be made at structures; preferably catch basins only. No blind taps are allowed. As-built drawings shall be provided to the City's Engineering Department.
- All independent testing, if required by the City Engineer or his designee, is to be paid for by the owner/developer. Testing is to be at the discretion of the City Engineer. Results shall be verified to the City Engineer within 48 hours of testing.
- The developer shall provide that all public improvements are constructed within public right-of-way or granted public easements.
- One set of approved plans as well as approved permit(s) shall be on site at all times during construction of the project.
- The contractor shall provide a record of pre-development conditions at the site utilizing video tape or still pictures as required by the City Engineer.
- Storm and sanitary sewer lines shall be cleared of all construction debris and silt prior to requesting inspection.
- Contractor shall maintain public right-of-way free and clear of any obstruction(s) including but not limited to rocks, boulders, debris, mud, equipment or material.

General Underground Utilities

- Trench backfill shall be provided for any trench excavated under and within 2' of all existing and proposed roadway. Backfill material shall be approved and inspected by the City of Elgin. For restoring cuts in existing roadways, Controlled Low Strength Material (CLSM) - Flowable Fill, shall be used per IDOT specifications and procedure in lieu of trench backfill.
- All publicly owned and maintained sanitary manholes and similar structures shall be a minimum of 48" diameter. Valve vaults must be a minimum of 48" diameter for watermain up to 8" diameter; minimum 60" diameter for watermain greater than 8" diameter but less than 16" diameter and minimum 72" diameter for watermain 16" diameter or greater.
- No shear or mechanical joint gasket couplings shall be used in the connection of sewer pipe of dissimilar materials. No dissimilar materials shall be allowed between structures in new developments except as noted for drop manhole connections.
- The contractor shall mark the location of the end of sanitary, water and storm services with buried 2" x 4" wood posts extending a minimum of 3' out of the ground and painted red, blue and green respectively. Curb shall be marked at appropriate locations where service lines cross with an "S" for sanitary and a "W" for water.
- All storm, sanitary and watermain services are to end at the right-of-way line with proper termination.
- Sewer connections to an existing manhole shall be machine cored.
- Eccentric cone sections shall be used on all manholes and catch basins unless approved otherwise by the City Engineer. Valve vaults shall have their openings centered over the valve.
- All sewer construction requires bedding with select granular backfill (IDOT equivalent CA-6, CA-7, FA-6) with a minimum thickness equal to ¼ the outside diameter of the sewer pipe, but not less than 4 inches, or greater than 8 inches.
- All sewer construction shall conform to the approved permit and plans unless revisions have been approved by the City, as well as any and all other regulating agencies.
- Maximum height attained by adjusting rings for a sanitary structure shall be 8 inches. Maximum height attained by adjusting rings for a water or storm structure shall be less than 12 inches. For 12 inches or greater, a barrel riser shall be used. No more than two rings shall be used for adjustment.

Earthwork / Erosion Control

- All erosion control work shall comply with Kane County Stormwater Management

Ordinance and Technical Manual as amended by the City of Elgin and per the latest addition of the Illinois Urban Manual.

- Stripping of vegetation, grading or other soil disturbance, especially in designated wetland areas shall be done in a manner which will minimize soil erosion, and shall be in accordance with the approved drawings, mitigation and permit requirements.
- The extent of the exposed area and duration of exposure shall be kept within practical limits as directed by the City Engineer.
- All temporary stockpiles of earth shall be stabilized per the conditions of the Elgin Municipal Code, Title 21 "Stormwater Management."
- Sediment shall be retained on site. Erosion control devices shall be installed along the perimeter of all regraded areas or as required to prevent sediment from entering and/or leaving the site.
- Management areas shall be inspected per approved schedule and a weekly maintenance report shall be submitted to the City Engineer upon request.
- Dust produced from the site shall be kept to a minimum.
- All mud shall be removed from all vehicles before leaving the site and the roads shall be kept clean and clear of mud and debris at all times.
- Culverts and drainage ditches shall be kept clean and clear of obstructions.
- The contractor shall maintain existing positive drainage from off-site at all times.
- Water courses and drainage swales adjacent to construction activities shall be monitored weekly for evidence of silt intrusion and other adverse environmental impacts. Any problems or deficiencies shall be corrected immediately upon their discovery.
- Any wetland mitigation shall begin prior to any grading work and shall be in accordance with the approved mitigation permit plan and requirements.
- The contractor shall install temporary orange fence around all trees to remain and wetland areas to be preserved.
- In order to ensure protection against flooding, the lowest point of opening of foundations for proposed structures shall be set at a minimum of 2 feet above the following:
 - HWL of adjacent stormwater management facilities such as retention/detention ponds.
 - HGL of overland flow route(s).
 - BFE of any adjacent water body including waters of U.S., except adjacent to the Fox River where the minimum shall be 3 feet above the BFE.
- Within the limits of proposed grading the soil shall be compacted to not less than the following percentages of Modified Proctor Dry Density in accordance with ASTM D 1557-78:
 - Under structures and pavements: Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 95% modified proctor dry density.
 - Under parkway or unpaved areas: Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 85% modified proctor dry density.
 - Under public sidewalks: Compact 6 inch maximum lifts of dry subgrade, backfill or fill material at 95% modified proctor dry density.

Storm Sewer

- All storm sewer pipes shall be reinforced concrete pipe conforming to ASTM C-76 class IV with confined O-ring gasketed joints in compliance with ASTM C-361.
- All sump pump and drain tile discharges shall be routed to a structure on the storm sewer system. Sump pump drain service connections shall be 4" PVC at a minimum slope of 2% and buried. The discharge pipe shall be SDR 26, and shall conform to ASTM D2751 or ASTM D3034 specifications.
- Privately owned or maintained sump pump connection or junction structures shall be minimum 2-foot diameter concrete structures.
- Minimum size of main line storm sewer shall be 12" diameter for concrete pipe.
- Rim elevations for curb inlet box type storm sewer structures shall be taken at the flow line and recorded on the "As-Built" drawing.
- All open grate storm sewer structure shall have "Dump No Waste, Drains to River" and appropriate symbol (fish symbol) cast in the grate or curb box.
- All flared end sections shall have grates which follow the intent of the IDOT standard.
- All downspouts, footing drains and outside drains shall discharge to the storm sewer or over ground as approved by the City Engineer.
- All storm sewer mains shall be inspected with a video camera prior to acceptance after all utilities are installed (i.e. electric, phone, gas) and at least one year after construction per the direction of the City Engineer. The sewer shall be cleared of all construction debris and silt prior to televising. The report accompanying video shall accurately state structure #, type, pipe size & length, and location of all services. All defects in pipes and construction shall be called out. Provide a copy of the video to the City Engineer in a non-rewritable DVD format that can be played on any standard DVD player. Any discrepancy found in the system shall be corrected and re-televised prior to final acceptance.

Watermain

- All watermains shall be pressure tested per requirements of the City of Elgin. Test method shall be a leakage test of 150 pounds per square inch (psi) held for 2 hours. The total leakage shall not exceed the allowable leakage requirements of AWWA C600.
- Water lines 4" and larger must be pressure tested and chlorinated from the point of connection at the existing watermain to a permanently installed valve located inside the building. The contractor shall contact the City of Elgin Water Department at (847) 931-6026 at least 48 hours prior to making a tap.
- Pressure testing of water piping shall be witnessed by the Engineering Inspector, Water Distribution Inspector, or the plumbing inspector, as appropriate.
- All watermains shall be chlorinated per the requirements of the City of Elgin. Bacterial tests will be performed by the City of Elgin Water Department Laboratory.
- All watermains to be ductile iron pipe per ANSI A21.51 (AWWA C151), (class 52) with "push on" or mechanical joints as required by the Water Department. All bends shall be mechanical joints. All mechanical joints are to be mega-lug restrained with coated stainless steel bolts. All push on joints shall incorporate 2 brass wedges per joint and 4 brass wedges per joint on main larger than 12" diameter. Pipe to be cement lined per ANSI A21.4 (AWWA C104).
- The exterior of all ductile iron pipe shall be coated with a factory-applied layer of arc-sprayed zinc per ISO 8179. The mass of the zinc applied shall be 200 g/m2 of pipe surface area. A finishing layer topcoat shall be applied to the zinc. The mean dry film thickness of the finishing layer shall not be less than 3 mils with a local minimum not less than 2 mils. The coating system shall conform in every respect to ISO 8179-1 "Ductile iron pipes - External zinc-based coating - Part 1: Metallic zinc with finishing layer, Second edition 2004-06-01". Any damage to the zinc coating shall be repaired per the manufacturer's specification. All ductile iron pipe shall have appropriate manufacturer labeling on each pipe, indicating that zinc coating has been applied. Any ductile iron pipe delivered to the site without the required zinc coating or labeling will be rejected and shall be immediately removed from the project site. In addition, polyethylene encasement for use with ductile iron pipe systems shall consist of three layers of co-extruded linear low density polyethylene (LLDPE) fused into a single thickness of not less than eight mils. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of anti-microbial biocide to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.
- The minimum cover for watermain shall be 5.5 feet from finished grade to top of main. Top of pipe elevations shall be provided every 50' and recorded on "As-Built" drawings. The maximum depth of the operating run of a valve shall be 7.0 feet from

finished grade unless approved otherwise by the Water Director.

- All water services to be minimum 1", type "K" copper. 1" taps shall be direct tap, 1 1/4" through 2" taps shall be saddle tapped. Saddle clamp shall be stainless steel epoxy coated. All flare connections, no compression allowed. Corporation stop coupling is to be at a 45 degree angle upwards off the main. Sleeves are prohibited.
- All water services from main up to the B-box are to be installed by the Water Department personnel, unless approved in writing by the Water Department.
- The City of Elgin Plumbing Inspector shall be notified (847) 931-5920 for requesting all private water service line and fire suppression line inspections. The Engineering Inspector shall be notified at (847) 931-5955 for requesting public and quasi-public watermain inspections. Inspections shall be scheduled a minimum of 48 hours in advance of starting work.
- Only City of Elgin Water Department personnel shall operate all water main, hydrant and auxiliary valves.
- Any deviation from these specifications must receive written approval from the City of Elgin Water Department or its representatives. Requests for deviations must be submitted a minimum of 4 weeks prior to proposed installation. Any requests received after this deadline will be rejected.
- Hydrants shall fully comply with the National Fire Protection Association, Fire Protection Handbook, latest Edition.
- All valves shall be American Flow Control Series 2500-1 Ductile Iron Resilient Wedge Gate Valves or Clow Series C151 rated for 250 psi cold water working pressure with stainless steel hardware. All valves shall have an operating nut made of ductile iron that has four flats at stem connection to assure even torque input on the stem during opening and exercising. The valves shall have factory installed 304 stainless steel exterior bolting. All bolts to be no smaller than 5/8" diameter. Metric size and socket head cap screw are NOT allowed. Valves 18" and larger shall have an enclosed gear case. Design shall be of the bevel or spur type dependent upon the installation conditions of the valve. All tapping sleeves shall be stainless steel.
- PVC cleevings for copper water services are not allowed. Any sleeve necessary for protection of the service shall be stainless steel.
- 3" Ductile iron pipe, fittings and valves are not allowed.
- Water service lines up to and including 2" services shall be pressure tested against a permanently installed valve, located inside of the building.
- Service connections 4" and larger shall have valves located in vaults, unless otherwise approved by the Water Department.
- All at locations where watermains and sewers cross material and jointing shall be in accordance with the Illinois Environmental Protection Agency Public Water Supplies Technical Policy Statements.

Sanitary Sewer

- All sanitary sewer main and fittings shall meet the following specifications or as approved by the City Engineer.
- | MATERIAL (8" MIN.) | PIPE SPEC. | JOINT SPEC. |
|--------------------------|--------------|-----------------|
| DIP - Class 52 (wrapped) | ANSI A-21.51 | AWE C111 & C600 |
| P.V.C. - | ASTM D-3034 | ASTM D-3212 |
- SDR 26 for 3.5' - 15' cover
SDR 21 for over 15' - 20' cover
SDR 18 for over 20' cover
- P.V.C. pipe shall utilize elastomeric gaskets complying with F-477

- All sanitary sewer mains shall be tested as required by the City of Elgin and the Fox River Water Reclamation District (FRWRD) or the Metropolitan Water Reclamation District of Greater Chicago (MWRD), as applicable, prior to acceptance.
- All sanitary sewer mains shall be inspected with a video camera prior to acceptance after all utilities are installed (i.e. electric, phone, gas) and at least one year after construction per the direction of the City Engineer. The sewer shall be cleared of all construction debris and silt prior to televising. The sewer shall have water flowing through it during television. The report accompanying video shall accurately state structure #, type, pipe size & length, and location of all services. All defects in pipes and construction shall be called out. Provide a copy of the television to the City Engineer in a non-rewritable DVD format that can be played on any standard DVD player. Any discrepancy found in the system shall be corrected and re-televised prior to final acceptance.
- Sanitary sewer service lines within the public right-of-way shall be 6" diameter with a minimum slope of 1% and shall match material specifications for public main. A clean-out shall be located on every service line per City of Elgin Building Department direction.
- Sanitary sewer services shall be connected to the main by use of approved fitting. For connections to new sewer main, a manufactured wye or wye-tee shall be used. For existing sewer main, approved saddle connection shall be used. Any sanitary sewer connection to an existing sanitary sewer greater than 15 feet deep shall be made with a cut in ductile iron tee with mechanical joint gaskets and ductile iron sleeve.
- Manholes shall utilize a reinforced precast monolithic bottom section with integral fillet or a poured concrete bench and trough and shall have a smooth finish. The bench shall be a minimum height of one-half of the diameter of the connecting pipe and extend to the inside walls of the manholes. Changes in direction should be made with the use of rounded turns. The radius of the channel centerline shall be at least 1/2 the inner diameter of the manhole, min. 2 feet. Sharp angles will not be permitted in the redirection of sewer flow.
- When connecting to an existing sewer main by means other than an existing wye, tee or an existing manhole, one of the following methods shall be used:
 - Circular saw-cut of the sanitary sewer main by proper tools ("sewer tap" machine or similar) and proper installation of hub-wye saddle or hub-tee saddle. The cored section shall be provided to the Engineering Department.
 - With a pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting to be held firmly in place using "band-seal" or similar type couplings with prior approval from the City Engineer. If existing bedding is disturbed, connection shall be supported with proper bedding.
- A flexible rubber boot shall be used at all connections and penetrations into precast sanitary sewer manholes. Connections into existing brick manholes shall utilize brick and hydro-cement.

Paving

- Sub-base course shall be minimum 4" thick, compacted CA-6, aggregate type B, conforming to IDOT requirements.
- Base course shall be 5" thick Bituminous Aggregate Mixture (BAM) with composition as follows:
 - IL-19.0 Bituminous Base Course, Superpave, N30, 2% air voids, maximum RAP allowed shall be 50%, PG 58-22. The BAM shall be allowed to cool for 24 hours prior to placement of the bituminous binder course. If BAM is not available, N50 binder shall be substituted.
- Bituminous Binder Course shall be 2.5" thick with composition as follows:
 - IL-19.0, Bituminous Concrete Binder Course, Superpave, N50, 4% air voids, maximum RAP allowed 25%, PG 64-22. The binder shall be allowed to cool for 24 hours prior to placement of the bituminous surface course.
- Bituminous Surface Course shall be 1.5" thick with composition as follows:
 - IL-12.5, Bituminous Concrete Surface Course, Superpave, N50 Mix D, 4% air voids, maximum RAP allowed 15%, PG 64-22.
- A cross slope of 2% shall be maintained from the pavement centerline to the curb and gutter.
- Curb and gutter and barrier curb shall be continuously reinforced with two #4 bars. Curing compound shall be applied after finishing. Winter protection per IDOT specifications shall be provided. If cured after October 1, the curing compound shall contain 25% sealer. Backfilling of curb or paving adjacent to curb, shall not

commence within 72 hours of curb placement. Locations of water and sewer service lines shall be clearly marked on all new curbs. Testing of concrete shall be per IDOT standard. Results shall be provided to the City Engineer within 48 hours of testing.

- 1/2" fiber expansion joint shall be installed when the curb abuts a sidewalk or existing curb. Fiber expansion joints shall be excluded at handicap ramps abutting curb.
- Curb and gutter and barrier curb shall have sawed contraction joints at maximum intervals of ten (10) feet. A 1/2" fiber expansion joint shall be installed at a maximum interval of sixty (60) feet. A 1/2" fiber expansion joint shall be used at 5 feet on both side of a curb line structure. Two 18" long, 1" diameter smooth steel dowel bars with greased caps shall be used at expansion joints.
- All curbs shall be stamped with a "W" or "S" to identify water or sanitary lines, respectively.
- Pavement subgrade shall be finished to ± 0.1 foot of design subgrade elevations.
- The base course shall be cleaned and primed at the rate of 0.25 to 0.50 gallons per square yard with liquid asphalt conforming to IDOT standards and shall be appropriate for prevailing weather conditions.
- Prior to placement of any public pavement including curbs, the subgrade and subbase shall be proof rolled with a fully loaded tandem axle dump truck (minimum 20 tons). Proof rolling shall be witnessed by the materials consultant and the engineering inspector. The density of the subbase material and bituminous materials shall be tested by the materials consultant. Provide a copy of the test results to the City Engineer within 48 hours of testing.
- Structures within pavement areas shall be plated during paving operations (BAM & Binder)
- All existing structures (manholes, catch basins, valve boxes, etc.) shall be adjusted to meet the final pavement or ground surface elevation as required.
- Removal of all pavement, sidewalk and/or curb shall be accomplished by saw cutting in accordance with IDOT Standard Specifications.
- Saw cutting of existing curb head to provide depressed curb at entrances is prohibited. The contractor shall saw cut existing curb at limits of work and replace with depressed curb at all entrances. Drill and dowel all new curb including depressed curb to existing curb as required.

Tree Planting

- All City owned trees and shrubs shall be planted at the approval and direction of the City and in accordance with ANSI A300 (Part 6) latest edition. Contact Engineering & Forestry prior to selecting, planting, or trimming trees by calling (847) 931-6069.
- All trees shall have a minimum diameter of 2.5" measured 6" off of the ground. Trees shall be placed no more than 40' apart on both sides of the street.
- The following guidelines shall be followed when placing trees. No tree shall be planted closer than:
 - 5 feet from driveways
 - 10 feet from hydrants, b-boxes & underground utility structures
 - 15 feet from street lights
 - 50 feet of any right-of-way intersection
 - 100 feet from any traffic control device (traffic light)
- Trees subject to disease or with fast growing brittle wood are prohibited. These include: American Elm, Chinese Elm, all species of ash, cottonwood, box elders, silver maples, female ginkgo, Bradford pear, poplars all varieties, Pin Oak, willows all varieties and evergreens. This list includes examples; additional species may be added as deemed necessary by the City of Elgin.
- Acceptable trees include: All hard wood maples, most oaks, honey locusts, sycamore, plane trees, hackberry, linden, ginkgo (male only), Kentucky coffee tree, hybrid elms including Homestead, Pioneer, and Danaoda, yellowwood, hornbeam, Autumn Blaze or Chanticleer pear, and Japanese or Peking lilac. This list includes examples; contact City of Elgin Forestry for the most current list. The City reserves the right to remove any tree or individual variety from the list.
- Trees selected for planting shall be locally grown within a 100 mile radius of the City of Elgin. They shall be true to species and variety specified by the City of Elgin planting list and shall be tagged with the scientific and common names. The contractor installing the trees shall supply the City with a letter stating where the trees were grown. They shall be healthy, free of insects and disease and shall conform to the American Association of Nurseryman's Standard for Nursery Stock ANSI Z 60.1 - 2004 standard. The City reserves the right to tag trees in the ground.
- In an effort to have greater diversity of planting, the following is the minimum requirement:

When planting:	1 to 3 trees	1 tree variety;
	4 to 5 trees	2 different species from 2 different genera;
	6 to 9 trees	3 different species from 2 different genera;
	10 to 24 trees	4 different species from 3 different genera;
	25 to 49 trees	6 different tree species from 4 different genera and 3 different families;
	50 or more trees	Max. of 25% from 1 family, 16% from 1 genus and 8% from 1 species.
- Trees planted under utility wires shall be smaller stature when mature. Contact City of Elgin Forestry at (847) 931-6069 for a list of acceptable trees.
- Trees determined to be unsatisfactory by the City of Elgin shall be required to be removed and replaced by the Contractor with the same or larger size tree and species originally planted, within thirty (30) days of written notification by the City of Elgin.

Requirements for As-Built Record Drawings

- The contractor shall maintain and keep at job site, an up to date set of "As-Built" drawings showing changes from original plans. These drawings shall include all public improvements and information for stormwater management areas.
- "As-Built" drawings shall be submitted to the City Engineer on 24" x 36" plan sheets at the conclusion of the project, prior to any final inspections for his review. The engineer may submit a paper copy of the "As-Built" for review and comment prior to submitting mylars and digital copies. After approval of "As-Built" drawings, the developer/owner's engineer will transfer the information on original plans and furnish the City a paper copy of complete set of "Record Drawings", one (1) set of reproducible Mylar copy, and a digital (electronic) media copy. Electronic media shall be recorded on a CD-ROM and files shall be generated in AutoCAD using Illinois Coordinate System, East Zone (NAD83). Coordinate layer information with City of Elgin GIS Manager. A PDF or other unalterable electronic format shall be provided.
- Record drawings shall be submitted in plan form. Digital copies shall include a Title sheet, all Plan and Profile sheets, all overall plan sheets and all detail and note sheets. Mylar copies should include a Title sheet, Plan and Profile sheets and any other sheets deemed necessary. All sheets must be labeled "Record Drawing" with the date and engineers initials. The title sheet must have the engineer's seal and signature.
- Record Drawings shall clearly show the following:
 - Rim elevations and numbering of valve vaults; breakaway flange elevation of fire hydrants; top of pipe elevations of watermain at valve boxes, vaults and every 50' between.
 - Linear distance along watermain from appurtenance (i.e. valve vault to tee, tee to bend, bend to valve, etc.); also verification of pipe sizes installed.
 - Horizontal ties to all valve vaults, boxes, hydrants and sampling stations (1 foot tolerances).
 - Location of service connection along main, including horizontal ties on B-Box.
 - Public irrigation systems including all valve vaults, location of sprinkler heads, RPZ, meters and piping.

Watermain

- Rim elevations and numbering of valve vaults; breakaway flange elevation of fire hydrants; top of pipe elevations of watermain at valve boxes, vaults and every 50' between.
- Linear distance along watermain from appurtenance (i.e. valve vault to tee, tee to bend, bend to valve, etc.); also verification of pipe sizes installed.
- Horizontal ties to all valve vaults, boxes, hydrants and sampling stations (1 foot tolerances).
- Location of service connection along main, including horizontal ties on B-Box.
- Public irrigation systems including all valve vaults, location of sprinkler heads, RPZ, meters and piping.

f) Casing locations tied to valve vaults.

Sanitary

- Rim elevations and numbering of manholes; invert elevation for all pipes in manholes; top of pipe elevations of sanitary forcemain at every structure, bend and at 50' intervals.
- Linear distance along sewer from structure to structure; also verification of pipe sizes and material installed.
- Recalculated pipe slopes based on invert to invert elevations along the linear distance between manholes.
- Service connections on the main line with distance to downstream manhole. Stub location at property line tied to property corner.

Storm

- Rim elevations and numbering of all structures including manholes, catch basins, inlets, end sections, and top and bottom of slope boxes, headwalls and other special structures; invert elevation for all pipes in all structures listed above including culverts.
- Linear distance along sewer or subdrain from structure to structure; also verification of pipe sizes and material installed.
- Recalculated pipe slopes based on invert to invert elevations along the linear distance between structures.
- All publicly and privately owned utility mains must be clearly labeled as such on the record drawing together with a note that states the agencies that will be responsible to own and maintain the utility mains.

Stormwater Management

A topographical survey prepared by an Illinois Licensed Professional Engineer or Illinois Professional Land Surveyor of the following:

- Detention basins.
- Retention basins.
- Constructed or regraded streams and channels.
- Overflow routes (including street areas that act as overflow routes) and verify all cross sections called out in the plans.
- Street depressions which are planned detention areas.
- Permanent and/or temporary diversion berms, swales and control structures.
- Parking lots which are planned detention areas.

The survey shall contain sufficient spot elevations and grading contour lines to show that the stormwater management facilities have been constructed in compliance with the approved engineering plans. Record information for all public improvements within the stormwater management area must be depicted on the record drawings. Additionally, a Professional Engineer shall prepare the as-built stormwater management storage volume together with the approved final engineering planned volume depicted in tabular form. Also, the as-built release rates as compared with the design release rates shall be depicted in tabular form.

Miscellaneous

- Street light poles and cable locations. Please note power connection location also.
- Parkway tree locations with common name and trunk diameter measured 6" off the ground.
- Pavement centerline and top of curb elevations at intervals as necessary to easily identify location of the pavement and overflow locations.
- Any unusual conditions which may affect the public or private improvements such as field tiles.
- The engineer shall provide documentation regarding deviations from the plans. This may be done in letter form.
- Engineer's Statement to be included on record drawing: ENGINEER'S STATEMENT OF PUBLIC IMPROVEMENTS - RECORD DRAWINGS CONSTRUCTED PER PLANS

Pursuant to Elgin Municipal Code 18.20.050, I, _____, a licensed Professional Engineer in the State of Illinois, hereby declare that these record drawings pertaining to water main, sanitary sewer, storm sewer, detention basin grades have been prepared for a certain project known as _____ and contain information as obtained by the surveyor _____. It is my professional opinion that the completed items were constructed in accordance with the approved plans and specifications for this project.

Date _____
Signed _____
Illinois License Number: _____
My license expires on _____

Note:
The City of Elgin may be reached during regular business hours by dialing 311 within the city limits or 847-931-6001 outside of Elgin.

General questions or requests may also be e-mailed to elgin311@cityofelgin.org

DATE	DESCRIPTION	BY
08/25/2010	PREPARED FOR REVIEW	MLH
08/25/2010	FOR CHANGE ENGINEERING	MLH
08/25/2010	FOR WATER DEPT. REVIEW AND COMMENT	MLH
08/25/2010	FOR WATER DEPT. REVIEW	MLH

GENERAL NOTES

CITY OF ELGIN

ENGINEERING DEPARTMENT

ELGIN
THE CITY IN THE SUBURBS

PROJ. NO.:	_____
PROJ. ENG.:	_____
DRAWN BY:	MLH
CHECKED BY:	_____
DATE:	01-13-04
SCALE:	N.T.S.

SHEET

1 OF 1

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