



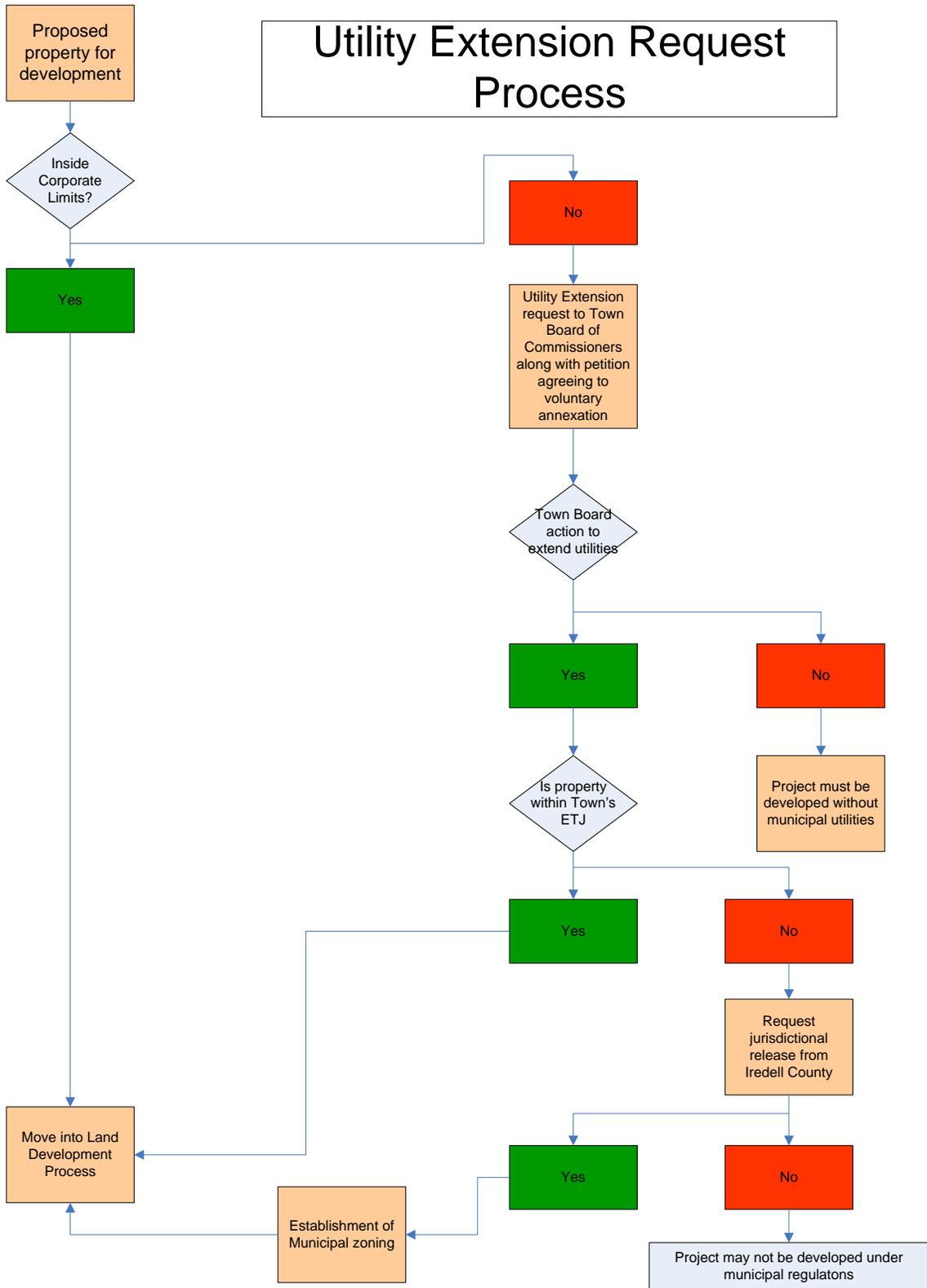
Town of Mooresville Land Development Process Manual

February 2019

Town of Mooresville Development Review Process

The Land Development process can begin in one of several ways. If the proposed site is outside of the corporate limits of the Town, a request for the extension of utilities must be made to the Town Board of Commissioners. This request must be accompanied by a signed petition agreeing to voluntary annexation into the Town. If the subject property lies outside of the planning jurisdiction of the Town, a request for release of jurisdiction must be made to the Iredell County Board of Commissioners. If a release is obtained from Iredell County, municipal zoning must be established on the property. These steps are outlined in the chart shown on the next page.

Utility Extension Request Process



Once a property has become part of the jurisdiction of the Town of Mooresville by one of the methods noted on the previous page, the Development Review Process is the method by which a concept becomes an actual project. A flow chart outlining this process can be found on the Town of Mooresville website at www.ci.mooresville.nc.us/departments . This process consists of Four basic steps. The steps are:

- 1. Sketch Plan Phase (This may be omitted per the Planning & Community Dev. Dept.)**
- 2. Concept Plan Phase**
- 3. Construction Drawings Phase**
- 4. Implementation Phase**

It is strongly suggested that a Development/sketch meeting be scheduled with the Staff before submitting the initial Sketch Plan for review.

The Sketch Plan Phase is the initial phase of the process. It is the basic presentation of what the developer wishes to do with the property. The Sketch Plan may be computer generated or hand drawn. It should include the information as noted in the Sketch Plan Phase section of this document. The Sketch Plan will determine if a rezoning of the site is required and will also determine if a Transportation Impact Analysis (TIA) is required. The Sketch Plan will be valid for 6 months after the approval date.

The Concept Plan Phase The Approved Concept Plan shows the general layout of the site. This includes existing roadway connections, proximity to existing utilities, how they will be extended to the site and incorporated into the latest edition of the Town's Water /Sewer Master Plan. The Concept Plan must also show how the site is incorporated into the most current edition of the Comprehensive Transportation Plan. It answers all pertinent questions about the development from the ground up. It should include the information as noted in the Concept Plan section of this document. *The approved Concept Plan is the document that will be the basis of a rezoning or a Conditional Use Permit request if one is deemed necessary.* A determination of the necessity of a TIA (Transportation Impact Analysis) will be decided in the early stage of the Concept Plan Phase. If a rezoning request is not required, the approved Concept Plan is the trigger to initiate Design Drawings for the project. The Concept Plan will have a vesting of 2 years.

The Design Phase is the completion of the engineering and civil documents (Construction Drawings) that will be used during construction of the project. The Construction Drawings include above ground and below ground infrastructure including but not limited to streets, water, sewer, storm drainage, etc. These plans undergo a full plan review by the Town staff for compliance to all appropriate town standards and regulations. The standard plan review time is 45 days or less. Once the Construction Drawings are approved and all appropriate permits have been obtained, the applicant may receive the Authority to Proceed. Approved Construction Drawings are valid for 24 months.

The Implementation Phase is the actual construction of the Construction Drawings. The Implementation Phase cannot begin until approval by the Town and other applicable agencies has been obtained. Upon installation and acceptance for service of the required infrastructure, the applicant may obtain building permit(s) for construction of the vertical components of the project, or in the case of a residential subdivision, submit final plats for recording to facilitate the sale of lots and the construction of individual homes.

At any point in the Land Development Process an owner, developer, engineer etc. may request a meeting with the Land Development Staff to discuss any pertinent issues regarding a specific development proposal or the Land Development Process.

Definitions

Acceptance for Maintenance: Formal acceptance by the Town Board of streets and all infrastructure for long term maintenance and repair. This cannot occur until a subdivision is at least 90% build out.

Acceptance for Service: Acceptance by the Town's Land Development Staff of infrastructure for basic town services including utilities, garbage pick-up, and school transportation. It does not include any maintenance or repairs of infrastructure. Vertical construction can begin after the infrastructure has been accepted for services.

Authorization to Construct: Approval of the site plan by the Town's Land Development Staff. Clearing and site work may not begin until this is obtained, and a Zoning Permit has been issued.

Building Permit: Document issued by Iredell County that allows vertical construction to begin.

Certification: Statement made under the Design Engineer (Engineer of Record)'s seal and signature attesting to the proper construction of the approved infrastructure. Certifications are required by various permitting agencies which could include, but not limited to, NCDENR, NCDOT, Iredell County and the Town of Mooresville.

Concept Plan: The Concept Plan will define the development for everything above ground. It is the responsibility of the designer to ensure that the concept is designed to meet Town of Mooresville Standards. A Concept Plan should address the following: sanitation collection needs, accessibility for type of sanitation collection (public vs. private), Fire Dept. access and water supply needs, Fire hydrant spacing/location, utility needs (where do lines need to be looped, do any utility extensions need to be oversized?). If the site is not cleared, then an existing conditions page will need to be submitted as part of the concept plan. This will show any existing structures, impervious surfaces, as well as a tree survey.

Conditional-Use Rezoning: Rezoning for which conditions of approval are applied.

Construction Drawings: Drawings developed by a licensed Professional Engineer in accordance with the Town's Land Development Standards and approved by the Town and used by a licensed contractor to build infrastructure for a proposed commercial or residential development.

Design Engineer (Engineer of Record): The Professional Engineer licensed in North Carolina that prepares the construction drawings, prepares regulatory paperwork, and prepares record drawings.

Establishment of Zoning: Initial zoning given to a parcel(s) of land after being taken into the Town of Mooresville's zoning jurisdiction. This would happen after property is released from Iredell County's zoning jurisdiction (by the County Commissioners) or after the property has been annexed.

Directional Signs (On and Off site): A sign that shows route designations, destinations, directions, distances, services, points of interest, or other geographical, recreational, or cultural information. For example, Street Name signs, Route signs, Mile Marker signs, etc.

Infrastructure: Streets, water and sewer lines, and other facilities necessary to the functioning of a project.

NCDENR: Department of Environment and Natural Resources. The state agency that oversees water, soil, and air quality for North Carolina. For the purpose of this document, this includes the Division of Environmental Health (Public Water Supply Section), Division of Water Quality, and Division of Land Quality.

NCDOT: North Carolina Department of Transportation. The NCDOT governs and has jurisdiction over all State-owned roadways.

Owner Certification (Record Plat): A signed certification on the Record (Final) Plat verifying the actual owner of the property being platted and, where applicable, dedicating infrastructure for public use.

Preliminary Subdivision Plan: A drawing or series of drawings depicting a proposed subdivision of land. This drawing includes proposed lot layout, street infrastructure and any other pertinent features as well as all civil and construction drawings for the project.

Prerequisite: Something that is necessary to an end or to the carrying out of a function.

Public Infrastructure: All infrastructure that will be turned over to the Town of Mooresville (or Iredell County or North Carolina State) for ownership and maintenance. This includes all utilities including, but not limited to water and sewer lines, pump stations, fire hydrants, streets, storm drainage, regulatory and public safety signage etc.

Public vs. Private: Public infrastructure is turned over to the Town for maintenance and must be designed and built in accordance with the Town of Mooresville Land Development Standards. Private infrastructure is owned and maintained by the developer or Home Owners Association. Design of private infrastructure must be designed in accordance with the Land Development Standards and must also comply with all state and federal regulations in order to be utilized by Fire, Medical, and Police.

Projected Sewer Flows: The wastewater flows anticipated to be generated by the project. Projected sewer flows must be calculated based on published NCDENR Division of Water Quality requirements.

Projected Water Usage: The amount of potable water demand anticipated to be created by the project. Projected water usage must be calculated based on published NCDENR Public Water Supply Section.

Record Drawings (As-Builts): Construction drawings updated to reflect post-construction conditions of infrastructure and certified as accurate based on field verification and measurements by the Design Engineer.

Record Plat (Final Plat): A plat containing the actual lot layout for a subdivision of land. This plat is recorded with the Iredell County Register of Deeds.

Regulatory Signs: A sign that gives notice to road users of traffic laws or regulations. For example: Stop signs, No Parking signs, Speed Limit signs, etc.

Release of Jurisdiction: When one governing body (Iredell County) releases its zoning jurisdiction over a property to be accepted by another jurisdiction (Town of Mooresville).

Review Officer: Employee of a governmental entity appointed by the Iredell County Board of Commissioners with the authority to sign off on plats, and other documentation prior to recordation with the Iredell County Register of Deeds.

Subdivision Administrator: Development Services Department staff responsible for approval sign-off of preliminary and final subdivision plats.

TIA (Transportation Impact Analysis): is an analytical and informational document professionally prepared by a licensed professional traffic engineer or civil engineer in connection with a specific proposed land use application that forecasts, describes, and suggests ways of offsetting the effects on the transportation system of the proposed new activities within a geographic area.

Town Engineer: Member of the Development Services Staff charged with the Town Engineering duties.

Utility Extension: The extension of Town utilities (water & sewer lines) to an area not previously served. This is a request that the Town Board of Commissioners must approve.

Warning Signs: A sign that gives notice to road users of a situation that might not be readily apparent. For example, Speed Hump Ahead signs, Construction Ahead signs, No Outlet signs, etc.

Zoning Approval / Permit: Issuance of a document by the Town of Mooresville indicating that the proposed building, structure, or use of land meets all the standards, criteria, procedures, and requirements of the Town of Mooresville. This is a prerequisite to obtaining building permits (or submitting plans for review) to Iredell County.

Zoning Change (Rezoning): Process by which the zoning designation of a parcel(s) of land is changed through a procedure described in the Town of Mooresville Zoning Ordinance with proper notification taken as prescribed by NC state statutes.

It is strongly suggested that a Development/Concept meeting be scheduled with the Staff before submitting the initial Concept Plan for review.

I. Sketch Plan Phase

A sketch plan is general project layout, existing roadway infrastructure, and existing utility infrastructure as it relates to the site. Sketch Plans should address:

- Proximity to existing utilities
- How the site is incorporated into the current water/sewer masterplan. This involves how the property will extend water/sewer service to the site. Will any major facilities need to be extended?
- How the site is incorporated into the current Comprehensive Transportation Plan.

Prerequisites:

- Utility extension request, if applicable
- Release of jurisdiction, if applicable
- Voluntary annexation petition, if applicable

A Sketch Plan is general project layout, existing roadway infrastructure, and existing utility infrastructure as it relates to the site. **Three (3) sets** of a sketch plan shall be submitted on a **24" x 36"** format to the **PLANNING and COMMUNITY DEVELOPMENT DEPARTMENT** along with a PDF emailed to the Staff and shall include:

1. Title block containing name, address, phone number, and email address of developer and designer (REQUIRED for REVIEW)
2. Approval box (Planning and Engineering only), located in the lower right-hand corner (REQUIRED for REVIEW). See page 9.
3. General site layout including locations of all buildings and parking areas
4. General roadway network
5. Proposed connections to existing roadways and developments
6. Proposed connections to adjacent properties (multi-modal)
7. Determination of water courses on the site and watershed district
8. North arrow, vicinity map, and scale
9. Proposed number of units, etc.
10. The proposed Trip generation
11. Developer's Compliance Statement: All graphic representations on the approved Sketch Plan shall reflect compliance to all Town of Mooresville Land Development Standards, signed by the Designer. See page 9.
12. Show the number of floors per building and the square footage per building and per floor.
13. Show the proposed use for each building. For hotels/motels show the number of rooms and square footage of any meeting space. For restaurants show the number of seats.
14. Show existing utilities.

Developer's Statement

All graphic representations on the approved Sketch Plan shall reflect compliance with all Town of Mooresville Land Development Standards.

Developer's Signature

Date

Town of Mooresville, North Carolina Sketch Plan Approval	
_____ Planner	_____ Date
_____ Engineer	_____ Date
_____ Fire Department	_____ Date

II. Concept Plan Phase

The Concept Plan is a refinement of the Sketch Plan that will define the development for everything above ground. It is the responsibility of the designer to ensure that concept is designed to meet Town of Mooresville Standards.

Concept Plans should address the following:

1. Sanitation collection needs, accessibility for type of sanitation collection (public vs. private collection)
2. Fire Department access and water supply needs
3. Fire hydrant spacing/location. This is solely the purview of the Town of Mooresville Fire Department per the regulations of the State Fire Code.
4. Utility needs – where do lines need to be looped?
Do any utility extensions need to be oversized?
7. Landscape, lighting, open space plan, and tree canopy retention.
8. Classification of street type and function.
9. Building elevations (all four sides -labeled with directional arrows) with materials list.

Three (3) sets of a Concept Plan shall be submitted on a **24” x 36” format** to the **PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT** and shall include the following:

1. Town transmittal sheet (information completed). (REQUIRED FOR REVIEW).
2. Title block containing name, address, phone number, and email address of developer and designer (REQUIRED for REVIEW).
3. Approval block (Planning, Engineering, Fire), located in the lower right-hand corner (REQUIRED for REVIEW) See page 11.
4. North arrow, vicinity map, and scale
5. Site layout including locations and orientations of all buildings, parking areas, & sidewalks. (Label drive aisle widths, parking space dimensions). Label building uses.
6. Street network and classification of roadways with proposed cross-sections
7. Transportation impacts and mitigations per the approved TIA (if applicable)
8. Public streets vs. private streets or alleys with proposed rights of way
9. Show proposed utility connections to the distribution / collection system
10. Stormwater needs – setbacks from streams, pervious vs. impervious calculations
11. Call out the Watershed district name and max. % impervious allowed.
12. Connectivity – vehicular and pedestrian. Show sidewalks along street frontages and from street to the building(s). Show a vehicular connection to adjacent sites (even if they are currently undeveloped).
13. Show existing fire hydrants and proposed location of fire hydrants
14. Concept building elevations (with materials) showing compliance to architectural requirements
15. Developer’s Compliance Statement: All graphic representations on the approved Concept Plan shall reflect compliance to all Town of Mooresville Land Development Standards, signed and dated by the Developer (on paper copies & PDF). See page 11.
16. A statement noting the type of sanitation collection (roll out container, dumpster, compactor, etc.) and whether that collection is to be municipal or private.
17. Show the number of floors and square footage per floor and total per building.

- 16. Show proposed use for each building. For hotels/motels, show the number of rooms and square footage of any meeting space. For restaurants, show the number of seats (indoor & outdoor).
- 17. Show a lighting and landscaping plan (with pertinent calculations, species and number of plants/trees called out). Chapter 7, Landscaping; Chapter 9, Section 9.4 Site Lighting.
- 18. Provide the parking calculations (what is required/what is provided).

Items 1, 2, & 3 MUST be addressed on concept plans for plans to be reviewed. Concept plans eligible for review will be logged in with a tracking system number that stays with the project as it moves through the development process. Concept Plan submittal comments will be returned to the designer and developer within 2 weeks.

An approved concept plan has a statutory vesting of 2 years. Statutory vesting is site specific and covers only land use and zoning. Statutory vesting does not grandfather the project from construction standards or material standards that may be changed or updated during the vesting period.

Please locate these in the lower right-hand corner of your plans on each page.

Developer’s Statement

All graphic representations on the approved
Concept Plan shall reflect compliance with all
Town of Mooresville Land Development Standards.

Developer’s Signature

Date

Town of Mooresville, North Carolina Concept Plan Approval	
_____ Planner	_____ Date
_____ Engineer	_____ Date
_____ Fire Department	_____ Date

*****PLEASE SUBMIT THREE COPIES OF YOUR CONCEPT PLAN IN A 24” X 36” FORMAT TO THE PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT USING THE LAND DEVELOPMENT PROCESS TRANSMITTAL SHEET. See page 23.**
A PDF is required to be submitted for each concept review. The paper copies and PDF must be received before the plan can be scheduled for review.

A comment response letter is required to be submitted with each subsequent submittal showing how and where each comment was addressed.

**A base \$500 Plan Review Fee is due UPON SUBMITTAL of your Concept Plan. There is an additional fee based on building square footage and number of lots. See approved Town Fee Schedule.

III. Design Phase

During the Design Phase, complete Construction Drawings are prepared by the Design Engineer. Construction drawings are the documents which once approved will allow the applicant to begin construction. The documents shall include the preliminary plat and civil design drawings for residential uses or the site plan and civil drawings for commercial uses. The construction drawings must conform to the current Town of Mooresville Land Development Standards.

Prerequisites:

- Approved Concept Plan
- Must be in the Town's jurisdiction

These Plans shall include all the information shown on the Plans Minimum Requirements Checklist. There are minimum requirements that are required on ALL submittals. Additionally, there are checklist requirements that are specific to the type of submittal. These additional requirements are noted after the minimum requirements.

Submit 1 full set of plans on your first CD submittal. Construction Drawings are logged in using a tracking number that was generated during the sketch/concept phase. The drawings will be reviewed, and comments will be returned to both the owner and Design Engineer in no more than 45 days. Comments will be accompanied by an invoice to the Design Engineer for the review fees incurred. **For the CD approval, Submit 4 full sets.**

*****PLEASE SUBMIT FOUR COPIES OF YOUR CONSTRUCTION DRAWINGS IN A 24" X 36" FORMAT to the PLANNING & COMMUNITY DEVELOPMENT DEPARTMENT USING THE LAND DEVELOPMENT PROCESS TRANSMITTAL SHEET (see page 23). PLANS WILL NOT BE ACCEPTED UNLESS THEY ARE ACCOMPANIED BY OUR TRANSMITTAL SHEET. See page 23.**

*****ALL PRIOR REVIEW FEES MUST BE PAID IN FULL BEFORE SUBSEQUENT PLAN SUBMITTALS WILL BE ACCEPTED.**

The Town assumes that the Design Engineer will perform a Quality Assurance/Quality Control level of review prior to each submittal. The first drawing submittal is typically reviewed for completeness and general compliance with the Plans Minimum Requirements Checklist and general engineering practices. Items that are missing or incomplete will be generally noted in the response letter (ex., "Label all bends in waterline."). A detailed review to identify each location that does not comply will **NOT** be performed during the first review, unless the plans are at a level of quality that they could reasonably be approved on the 2nd submittal. If comments are not fully addressed in subsequent reviews, the Town will perform a more detailed review identifying each location that does not comply (ex., "Label 45 deg bend on Sheet U-2, Sta 10+43. Label 90 degree bend on Sheet U-3, Sta 60+03. ..."). A comment response letters is required to be submitted with each subsequent submittal showing how and where each comment was addressed.

If after every 2 sets of review comments are returned and the plans are not yet ready for approval, the Design Engineer and the Developer/Owner shall schedule a meeting with the Town prior to any subsequent submittals. Design review meetings are scheduled on Mondays.

For commercial sites only (no subdivisions or mixed-use projects), the Owner will be issued a conditional zoning approval to allow for **Plan Review Only** at Iredell County Building Inspections after the second review is completed. Sites with multiple buildings must have a conditional zoning approval for each building that is to be submitted to the County. All buildings must have an address issued by Iredell County before a conditional zoning approval can be issued. The Owner must sign the zoning approval. Agents of the Owner may not sign in lieu of the Owner. Concurrent review is at the risk of the Owner. If changes to the site plan require additional County review, then the Owner accepts responsibility for the additional expense. No building permits will be issued until the site plan receives full approval and all required infrastructure has been installed and approved by the Town.

Engineers, developers or their representatives shall not directly contact the Town's review consultant for meeting requests, project updates, or any other inquiries. These information requests must be submitted to the Town. The Town's review consultant may contact the Engineer directly for clarifications during the review process.

Various regulatory permits are required before construction activities can begin. During the design review, the Town will notify the Owner/Engineer through the review comments letter when it is the appropriate time to submit permit applications requiring the Town's signature. Signed water and sewer applications will be returned to the Design Engineer for submission to the appropriate agencies. Sewer and water applications will be processed in accordance with the Town of Mooresville Services Policy Manual. Agencies that may require permits prior to construction include but are not limited to:

- NCDOT-Utility Encroachment Agreement
- NCDOT - Driveway Permit
- Town of Mooresville Driveway Permit
- US Army Corps of Engineers-404/401 Permit
- NCDENR-Division of Water Quality- Sewer Permit (list Town as applicant)
- NCDENR-Public Water Supply- Water Permit (list Town as applicant)
- NCDENR-Land Quality Section-Sedimentation and Erosion Control Permit
- Other utility encroachment agreement(s)
- Railroad Encroachment Agreement(s)
- Iredell County

The Developer is required to obtain any and all rights-of-way or easements for all infrastructure (including but not limited to streets, water lines, sewer lines, sidewalks, and grading easements). Public easements must be acquired in the Town of Mooresville's name and then recorded at the Iredell County Register of Deeds Office before construction may begin. Temporary grading easements shall be obtained in the developer's name and then recorded at the Iredell County Register of Deeds Office if necessary.

For commercial sites only (no subdivisions or mixed-use projects), the Owner may request conditional-approval to begin early grading on the site prior to receiving a signed set of plans. This conditional –approval may only be given at a point in time in which the remaining review will not compromise the integrity of the plan. The owner assumes all risk associated with grading that begins prior to full site plan approval.

The final approval package shall satisfactorily address all review comments and include all necessary easements and encroachments. One signed original set of plans will be returned to the Design Engineer along with a final invoice for review fees. **It is the Design Engineer's responsibility to forward copies of the approved plans to the contractor(s) and the owner(s). The signed approved plans shall serve as the Authorization to Construct. This does not supersede any other authorizations required by NCDENR, Iredell County or other regulatory agencies.**

An invoice for outstanding fees will be sent to the Design Engineer based on the final signed set of plans unless otherwise instructed in writing by the Developer/Owner. Outstanding fees will include final review fees, reproduction fees and inspection fees. The Town employs inspectors to observe the construction of all infrastructure. Town inspectors do not replace the developer/engineer of record inspectors for certification purposes.

*****PLEASE SUBMIT FOUR COPIES OF YOUR CONSTRUCTION DRAWINGS IN A 24" X 36" FORMAT Labeled for ENGINEERING DEPARTMENT *delivered* to PLANNING & COMMUNITY DEVELOPMENT DEPT. USING THE LAND DEVELOPMENT PROCESS TRANSMITTAL SHEET (see page 23). PLANS WILL NOT BE ACCEPTED UNLESS THEY ARE ACCOMPANIED BY OUR TRANSMITTAL SHEET. See page 23.**

*****ALL PRIOR REVIEW FEES MUST BE PAID IN FULL BEFORE SUBSEQUENT PLAN SUBMITTALS WILL BE ACCEPTED.**

Plans Minimum Requirements Checklist

The following is a Plan Review Checklist used by the Department during the review process and represents the minimum requirements for plan review. Plans submitted for review that do not meet these guidelines may be rejected and therefore increase total review time. There shall be no shifting of lot lines, building layouts, driveway location, etc. after construction plan approval.

1. Sheets shall be 24" x 36" plan and profile paper. Any plans larger than 24" x 36" will not be accepted.
2. All plans shall have a cover sheet with the name, telephone number, address, and email address of owner, developer or responsible person, and engineer, name of the project, a vicinity map, a legend (for symbols), and an index of pages. Show tax identification number(s) for the property.
3. Scale on plan view shall be a maximum of 1" = 40'; scale on profile view shall be a maximum of 1" = 40' horizontally and 1" = 4' vertically using a grid showing 1' intervals.
4. All elevations shall be given in relation to mean sea level; elevations in profile view shall be labeled in 10' intervals on the heavy lines (e.g., 780, 790). No assumed elevations allowed.
5. Benchmark elevations and locations shall be shown on plan view.
6. Plan view shall have a north arrow on each drawing.
7. Each drawing shall have the following information in the title block: Street or project title, limits, horizontal and vertical scales, original date, revisions date, drawing number, "checked by" and "drawn by", name, address and phone number of Designer and Owner.
8. The Engineer's seal (registered in the State of North Carolina) shall be stamped in the general area of the title block on each plan sheet and dated in accordance with the requirements of the State of North Carolina Board of Engineers and Land Surveyors.
9. Approval signature block and title block shall be located in lower right-hand corner of all sheets.
10. The typical Sections and General Notes shall be on the first sheet of plan and profiles.
11. Plan view shall show all property lines and lot frontages. Existing property lines shall be labeled "E.I.P." Right-of-way lines shall be dimensioned and labeled "R/W."
12. Existing centerline profile shall be shown for a minimum of 500 feet from the end of any street that shall be extended in the future, even if off-site.
13. All tax block numbers, lot numbers, driveways and parking lots shall be shown on plan view.
14. Houses, building numbers and property owners shall be shown on existing property.
15. Existing and proposed buildings shall be shown.
16. Plan view shall show all existing street names. State road numbers shall be shown if applicable. Plan view should also indicate the existing street surface (i.e. asphalt, concrete, gravel or dirt).
17. Proposed street widths shall be dimensioned lip-to-lip and labeled in plan view.
18. Plan view shall show proposed and existing curb and gutter, storm sewers, drainage structures, driveway pipes, water mains, sanitary sewer mains, etc. All available elevations shall be shown on the profile view. Direction of flow shall be shown on plan view for all sanitary and storm sewers.
19. Construction drawings shall include all off-site improvements.

20. Existing utilities shall be shown and labeled on plan view by either gray or dashed lines. Proposed utilities shall be shown by solid bold lines.
21. Label all proposed and existing utilities on plan view AND profile view with size and material of pipe, and slope.
22. Stations shall begin at 10+00 or greater (no negative stations are allowed) and shall be labeled every 100' on plan view and profile view. Stations shall be labeled on plan view along survey baseline.
23. Match lines between sheets shall be shown (e.g., See Sheet 3 of 10).
24. Existing water meter boxes and sewer cleanouts shall be shown on the plan view and labeled as "Exist. W. Conn." and "Exist. S. Conn." Connection address should be given for existing water connections.
25. A 100-year floodplain elevation shall be shown on all plans and profiles where applicable.
26. Riprap size, thickness, and locations shall be shown on plan view.
27. Smooth steel encasement pipe shall be shown on the plan view and profile view, including size and wall thickness.
28. Complete street curve data shall be shown on plans. This information shall include, but is not limited to: intersection radii, vertical curve length, PVI, PVC and PVT station and elevation, low point/high point station and elevation, horizontal curve length, tangent, centerline radius, K value, and delta.
29. Water/sewer connections shall be shown on construction plans for all lots.
30. Detail drawing(s) shall be shown on plans for Permanent and Temporary T-Turnarounds and/or Cul-de-sac, where applicable.
31. Detail drawing(s) / Typical Section(s) of Pavement design shall be shown on plans. Curb and Gutter detail (Standard and/or Residential Curb and Gutter) shall be shown on plans.
32. Return marked up (red-lined plans) from any previous submittals to the Town (if applicable).
33. Each set of plans must include a master signage inventory table or sheet with total quantities by type of street signs identified. In addition, this list should include the names of all streets to be constructed or extended.
34. Each set of plans must include estimated water demand and wastewater flow generated by the project.
35. Each set of plans must include a public infrastructure inventory table or sheet with total quantities by type of infrastructural component. This includes sewer pipe, sewer manholes, water pipe, water valves, fire hydrants, drainage pipe, drainage structures, roadways, curb and gutter, and sidewalk.
36. Street names, lot numbers, frontages, right-of-way and street widths, etc. shall be labeled in plan view. At breaklines, along with sheet number, note the name of the next intersecting street. (e.g., Sheet 4 of 5, to Vernon Drive)
37. If lots appear on more than one sheet, show the connection and station for water and/or sewer on all sheets.
38. Approved proposed street names must be shown on plans.
39. Profile shall include street grades, storm drain grades, and utility grades.
40. Roadway cross sections shall be shown on plans.
41. Existing water courses, railroads, bridges, culverts, storm drains, both on the land to be subdivided, and, where necessary, on land immediately adjoining.
42. Show stream buffers on the plan view.
43. Grading plans must be included in the plan set.
44. If applicable, BMP location(s) and engineering calculations including the total drainage area for the BMP(s).

45. Erosion control measures must be included in plan set.
46. Engineering documentation and details for stormwater containment including maintenance and operation plan, if applicable.
47. Water & sewer authorization stamps (attached) if applicable.

NUMBERS 47 – 57 APPLY TO PRELIMINARY SUBDIVISION PLANS:

48. The exact boundary lines of the property to be subdivided, fully dimensioned by lengths and bearings, and the location of the existing boundary lines of the adjoining lands
49. The names of any adjoining subdivisions of record or proposed and under review
50. Minimum building setback lines
51. The zoning classification of the tract to be subdivided and the adjoining properties (preliminary)
52. Proposed lot lines, lot and block numbers and appropriate dimensions (preliminary)
53. Septic tank suitability data furnished by the Iredell County Health Department, if applicable
54. Buffer strips
55. Parks and recreation areas
56. School sites (both existing and proposed)
57. Areas to be used for purposes other than residential with the purpose of each stated
58. Site calculations including acreage in total tract to be divided, total number of parcels to be created, linear feet of streets, and a copy of the soil erosion control plan submitted if needed
59. Water & sewer authorization stamps (attached) if applicable.

NUMBERS 58 – 71 APPLY TO COMMERCIAL SITE PLANS:

60. The zoning of the site and the tax pin number
61. The zoning of all adjacent parcels
62. Minimum building setback lines
63. Total acreage of the parcel(s)
64. Square footage of all buildings on the site
65. Proposed use of the building(s) and breakdown of office, retail, warehouse, or other commercial uses
66. Proposed number of employees
67. Complete parking layout and calculations based on use(s)
68. Location and travel patterns for loading dock(s)
69. Existing tree survey
70. Complete site landscaping plan including tree save plan
71. Dumpster location(s) if applicable
72. Driveway location(s) and widths. And the locations of existing driveways across the street from the subject property
73. (If applicable) complete watershed information; including classification and complete impervious calculations

IV. Implementation Phase

The implementation phase is construction of the entire project based on the infrastructure plans approved by the Town and building plans approved by Iredell County. According to the Town's ordinances, building permits can not be issued and record (final) plats can not be recorded until

the infrastructure has been installed and accepted for services by the Town. Please note that infrastructure does not include paving of private driveways or parking lots.

The Town will return one original of the approved construction plans to the Design Engineer along with a cover letter listing the Town-assigned inspectors and their contact information. Attached to the letter will be a packet of information further describing the implementation phase. This packet will include paperwork to be filled out by the Design Engineer, Developer/Owner and Contractor in order to obtain an Acceptance for Service. The Design Engineer is responsible for forwarding a copy of the signed plans along with inspector contact information and relevant portions of the information packet to the Contractor prior to the start of construction. The Contractor must always work from approved plans and keep a set of approved plans on site. The Contractor shall advise the Town inspectors of his construction schedule and shall provide contact information for key personnel.

There shall be no construction activity on the site (including but not limited to mobilization, clearing, grubbing or construction entrances) until the project has received an Authorization to Construct. The Authorization to Construct IS the approved set of plans, signed by the Town.

The Town's inspectors will periodically observe construction. The Contractor shall coordinate with the inspectors such that the inspector is present for various infrastructure testing (such as proof rolls, pressure testing, etc.). Tests required to be observed by Town inspectors are outlined in the information packet provided with the approved plans. Any tests to be observed by the Town must be scheduled with the appropriate inspector at least 2 working days in advance of the test date.

Acceptance of Infrastructure for Services

Once the infrastructure has been constructed the Owner/Developer or his agent must make a formal request for Acceptance for Services. The following steps must then be completed before the Town can accept infrastructure for services:

- 1) The developer submits a request for acceptance for services of infrastructure including the PE Certification from the Engineer of Record.
- 2) The Town schedules and performs a formal inspection with the developer.
- 3) The Town sends the resulting punch list to the developer.
- 4) The developer **completes** the punch list.
- 5) The developer submits a second request for acceptance for services of infrastructure.
- 6) The Town verifies the completion of the punch list.
- 7) Upon satisfactory completion of the punch list, the Town issues an Acceptance for Services letter to the developer.

In addition to deficiencies found in the constructed work, the punch list will also include at a minimum the following items as applicable:

- Record Drawings (see Record Drawings Minimum Requirements Checklist).
- Proof of acceptance from NCDOT of the required road widening, driveway permits, and/or signal installation on NCDOT roadways.
- Approved Signage Plan and payment for the signs. (Note: All signs must be installed by the Town. Developer must allow at least 4 weeks from approval of signage plan to installation of signs.)

- Final Approval of the water lines and sewer lines from Public Water Supply and the Division of Water Quality.
- Eligible infrastructure must have a bond in place. Eligible infrastructure refers to the final lift of asphalt, landscaping, and sidewalks. The construction estimate for bonded items must be approved by the Engineering Department.

Once the above conditions are met the infrastructure will be accepted for services by the Town, and the Planning & Community Development Department will be notified. The Town Engineer will issue the developer a formal letter stating that the infrastructure has been accepted for services. At this time Final Plat(s) containing the information below may be signed by the Planning and Community Development Department and building permit(s) issued. Due to field conditions, certain punchlist items may not be completed before the building is erected. In these instances, the Certificate of Occupancy will be contingent on those items being completed. These items are determined by the Town, formally documented, and must be included in the bond.

Record Plat (Final Plat)

Information required on Final Plat(s) is as follows:

1. Title block containing subdivision name, name, address, and phone number of subdivider. The owner must be clearly labeled in the title block. The name, address, phone number, and email address of the plat preparer.
2. Date of plat preparation
3. A scale in feet per inch listed in words or figures and north arrow
4. A sketch vicinity map with north arrow showing the relationship of the proposed subdivision and the surrounding area
5. The names of any adjoining subdivisions of record or proposed and under review
6. Current zoning district and minimum building setback lines
7. Existing water courses, railroads, bridges, culverts, storm drains, both on the land to be subdivided, and, where necessary, on land immediately adjoining
8. Actual lot lines, lot and block numbers and lot dimensions
9. Marshes, swamps, rock outcrops, ponds, lakes, streams, or streambeds and any other features affecting the site
10. Right of way locations and dimensions and site triangles.
11. Road names
12. Where roads are dedicated to the public but are not accepted onto the Municipal or State system for maintenance before lots are sold; a statement explaining the status of the street in accordance with the Town of Mooresville Zoning Ordinance must be included on the plat. The statement must address whether the streets will be a privately maintained or will be petitioned for acceptance onto a Municipal or State system for maintenance at build out.
13. Actual As-Built locations (not design location) for water, sewer, and storm water structures.
14. Utility and other easements
15. Buffer strips
16. Parks and recreation areas (if applicable)
17. Areas to be used for purposes other than residential with the purpose of each stated

18. The future ownership (dedication or reservation for public use to governmental body; for owners to duly constituted homeowners association; for tenants remaining in subdividers ownership) of recreation and open space
19. Site calculation including total number of parcels to be created, linear feet of streets
20. The accurate locations and descriptions of all monuments, markers, and control
21. Note the deed book and page for recordation of the CCRs and O & M agreement for stormwater structures (if applicable).
22. Note that all common open space and stormwater structures are owned and maintained by the HOA or POA. Retaining walls within common open space are owned and maintained by the HOA or POA.
23. Provide a setback chart that calls out the side setbacks for each lot (right and left sides) with a note if there is a discrepancy between the chart and the map portion, the chart carries.
24. Note that all driveways must be outside of the site triangles.
25. Show water, sewer, and storm drainage structures within a right-of-way in the as-built locations (not design locations). Show and label type and width of all easements. Use different hatching for each to provide clarity.
26. Note that all accessory structures must be outside of easements. If fences are within easements, it will be the property owner's responsibility to repair/replace if a fence is removed for repairs/maintenance within any easement.

Record Drawings (As-Built) Minimum Requirements Checklist

Final acceptance of the constructed facilities by the Town is contingent upon the submittal of Record Drawings, also known as As-Built. Record drawings shall include Water, Sanitary Sewer, Storm Sewer, Water Quality features and Street construction.

Two paper copies of record drawings shall be submitted for review to the Engineering Department. Upon review and approval, two final signed paper copies and two (2) electronic copies (one AutoDesk© (i.e., .dwg) and one Adobe© (i.e., .pdf) format) shall be submitted for Town files. AutoDesk© (i.e., .dwg) shall be geo-referenced with USGS State Plane 1983 coordinates. Record drawings shall include but not be limited to the following:

1. Use the approved plans for as-built documents (do not redraw the plans).
2. All installed pipe sizes, pipe materials and pipe locations shall be indicated.
3. Cross out proposed rim & inverts and write in the as-built elevation.
4. If a utility line was moved, show by crossing out and drawing its new location.
5. Give as-built lengths and slopes on all sewer lines.
6. Show location of all water services and cleanouts.
7. Stormwater management facility
 - a. Submit certified calculations of as-built pond volume and verify that it equals or exceeds the required volume. Show as-built volume on plans.
 - b. Give as-built side slopes.
 - c. Verify high water elevation, overflow construction and normal water levels.
 - d. Certify installation and size of restrictors or outlet system.
 - e. Verify one foot of freeboard around pond.
8. Grading
 - a. Verify overland flood routing

- b. Show as-built grading of all stormwater management facilities including but not limited to wet detention ponds, dry detention ponds, grassed swales, vegetated buffer (if disturbed during construction)
- 9. Details do not require resubmission unless a detail was revised anywhere in the constructed work.
- 10. Show as-built grades, inverts and locations of all storm drainage structures (storm lines, catch basins, drop inlets, etc.).
- 11. Any horizontal or vertical changes in the street alignment or profile (outside of reasonable construction tolerances) shall be shown.
- 12. Seal and date the As-Built Certification.

<p><i>Town of Mooresville, North Carolina</i> <i>As-Built Certification</i></p>	
<p><i>I certify that these plans (including roadway, water, sewer, and drainage) have been as-built through field verification and measurements and the information contained on these plans is accurate to the best of my knowledge.</i></p>	
<p><i>Seal</i></p>	
<p>_____</p> <p><i>Professional Engineer or Professional Land Surveyor</i></p>	<p>_____</p> <p><i>Date</i></p>

<p>Town of Mooresville, North Carolina Plan Approval for Roadway, Drainage, Water & Sewer</p> <hr/>	
<p>Planning Department</p>	<p>Date</p>
<p>Engineering Department</p>	<p>Date</p>
<p>Fire Department</p>	<p>Date</p>

Town Acceptance of Infrastructure for Maintenance

Acceptance for maintenance is a formal action made by the Town Board of Commissioners. When a residential or commercial subdivision is at or beyond 90% build out, the Developer may submit a formal request to the Engineering Department. The form can be found on the Town’s website. A subdivision that still has significant construction traffic does not qualify for acceptance for maintenance.

Upon receipt of the form, the Town inspector will schedule a Maintenance Inspection and generate a punch list of deficiencies that require correction. Once the Developer has completed the punch list, he may resubmit the formal request for acceptance to the Town inspector. The Town inspector will verify the punch list items were addressed satisfactorily.

Once all punch list items have been corrected, the Engineering Department will recommend to the Town Board of Commissioners that the roadways and infrastructure be added onto the Town’s system for maintenance. Once the Town Board has formally accepted the infrastructure for maintenance, the bonds/letters of credit will be released, and the one-year warranty period will go into effect for non-routine maintenance.

A 6th month and 11th month inspection shall be performed during the warranty period. The Developer will be responsible for correcting any deficiencies noted.

Individual commercial sites, since they do not include public roadways, are accepted for maintenance whenever the certificate of occupancy is issued. A one-year warranty still applies.

***SEE ATTACHED LAND DEVELOPMENT SUBMITTAL SHEET

***SEE ATTACHED WATER & SEWER AUTHORIZATION STAMPS

Authorization Stamps

Water and Sewer Authorization Stamps are to be included on the cover page of Civil Plans that require a Water and/or Sewer Permit Application.

AUTHORIZATION TO CONSTRUCT SEWER SYSTEM EXTENSION	
This stamp shall be considered the Authorization to Construct the project referenced below. Construction of this project may proceed in accordance with the Town of Mooresville's Land Development Design Standards, approved plans and approved specifications. Any deviation from the approved plans or approved specifications shall be subject to the Town of Mooresville review and approval. This Authorization to Construct is valid for 24 months from the date below.	
Project Name: _____	
Permit Number: _____	Date Approved: _____
Approved By: _____	

**AUTHORIZATION TO CONSTRUCT
WATER SYSTEM EXTENSION**

This stamp shall be considered the Authorization to Construct the project referenced below. Construction of this project may proceed in accordance with the Town of Mooresville's Land Development Design Standards and the Approved Plans. Any deviation from the Approved Plans shall be subject to the Town of Mooresville review and approval. This Authorization to Construct is valid for 24 months from the date below.

Project
Name: _____

Permit Number: _____ Date Approved: _____

Approved By: _____



Land Development Submittal Sheet

To be used for all Plan submittals to the Town. Must be filled out completely.

ProjectName _____

Location/ Vicinity _____

Developed by: _____

Address _____

Email: _____

Phone: _____

Designer/Engineer/Architect/Surveyor: _____

Address: _____

Email: _____

Phone: _____

Contact Name/ Company: _____

Email: _____

Phone: _____

Office Use Only:

Project # _____

Received: _____

TRC date: _____

Reason for Submittal	Quantity	Submittal# (1 st , 2 nd , 3 rd , etc.)	Attached Fees
Sketch Plan			
Concept Plan			
Calculations (Storm Drainage, etc.)			
Civil Construction Drawings			
Final As-Builts			
File Copies- Recorded Plats			
Subdivision -Final Plat			
Recombination Plat			
Signage Plans			
Water Permit			
Sewer Permit			
Driveway Permits			
Encroachment Agreements		NCDOT	
Encroachment Agreements		Other	
Other			

Submitted by _____

Notes: _____
