TOWN OF CROSS ROADS

ENGINEERING DOCUMENT PLANS REVIEW CHECKLIST

Please make sure the plans you are submitting are in accordance with this checklist. The following checklist will be used during the Plan Review.

PRELIMINARY PLAT CHECKLIST:

1.	Preliminary plats shall be placed on maximum 22" x 34" sheets and drawn to a scale of 1" = 100' or 1" = 50' unless approved in advance by the Town.	Yes ____ No ____ N/A ____
2.	Title or name of the subdivision preceded by the words: "Preliminary Plat"	Yes ____ No ____ N/A ____
3.	Name, address and telephone number of the owner, applicant, survey, and/or engineer.	Yes ____ No ____ N/A ____
4.	Volume and page, or deed record number of the ownership deed from Denton County Deed Records.	Yes ____ No ____ N/A ____
5.	Vicinity map and key map, if multiple sheets are needed.	Yes ____ No ____ N/A ____
6.	Date of preparation, written and graphic scale, and north arrow.	Yes ____ No ____ N/A ____
7.	Boundary line of the proposed subdivision drawn with a heavy line.	Yes ____ No ____ N/A ____
8.	Computed gross acreage of the subdivision	Yes ____ No ____ N/A ____
9.	Metes and bounds description of the proposed subdivision.	Yes ____ No ____ N/A ____
10.	Location of the subdivision with respect to a corner of the survey or tract or an original corner of the survey of which it is a part.	Yes ____ No ____ N/A ____
11.	Names of adjoining subdivisions with lots and blocks shown with dashed lines and/or property owners of record for all contiguous unplatted properties.	Yes ____ No ____ N/A ____
12.	Town limits (if within 200 feet of the subject tract)	Yes ____ No ____ N/A ____
13.	Location, dimension, and description and recording information for all existing rights-of-way, railroad rights-of-way, easements or other public ways on or adjacent to the property being developed.	Yes ____ No ____ N/A ____
14.	Show permanent structures or uses that will remain.	Yes ____ No ____ N/A ____

15. Sizes and flowlines of existing drainage structures — Yes ____ No ____ N/A ____

16. Existing drainage easements — Yes ____ No ____ N/A ____

17. 100-year floodplain and floodway as defined by FEMA. — Yes ____ No ____ N/A ____

18. Location, size and type of all existing utilities within or adjacent lot the site. — Yes ____ No ____ N/A ____

19. Existing two (2) foot interval contours referenced to NAD. — Yes ____ No ____ N/A ____

20. Proposed streets, alleys, drainageways, ponds, parks, open spaces, easements, other public areas and other rights-of-way within the subdivision. Dimensions of all easements and rights-of-way. — Yes ____ No ____ N/A ____

21. Number each proposed lot and block. Provide the proposed number of lots. — Yes ____ No ____ N/A ____

22. Dimensions for all lots. Gross acreage for all non-residential lots. Approximate acreage for areas in residential use. Approximate acreage of streets, parks, and other non-residential uses. — Yes ____ No ____ N/A ____

23. Front building setback lines and side building setback lines abutting streets. — Yes ____ No ____ N/A ____

24. Preliminary drainage study meeting the requirements of the Subdivision Regulations shall be submitted with the Preliminary Plat. — Yes ____ No ____ N/A ____

25. Tree removal/mitigation/preservation plan showing conformance with the Town's Tree Preservation and Protection requirements. — Yes ____ No ____ N/A ____

26. Preliminary Plat approval block as described by the Subdivision Regulations. — Yes ____ No ____ N/A ____

27. Where the Preliminary Plat is part of a larger area owned by the Applicant that will be subsequently subdivided, provide a layout of the larger area showing the tentative layout of streets, blocks, drainage, water, sewerage, and other improvements for the larger area. — Yes ____ No ____ N/A ____

FINAL PLAT CHECKLIST

1. Final plats shall be placed on maximum 24" x 36" sheets and drawn to a scale of 1” = 100’ or 1” = 50' unless approved in advance by the Town. Yes ____ No ____ N/A ____

2. Title or name of the subdivision preceded by the words "Final Plat" Yes ____ No ____ N/A ____

3. Name address and telephone number of the owner, applicant, survey, and/or engineer. Yes ____ No ____ N/A ____

4. Vicinity map and key map if multiple sheets are needed. Yes ____ No ____ N/A ____

5. Date, written and graphic scale, and north arrow. Yes ____ No ____ N/A ____

6. Boundary line of subdivision drawn with a heavy line and with bearings, dimensions and curve data. Yes ____ No ____ N/A ____

7. Names of adjoining subdivisions with lots and blocks shown with dashed lines and/or property owners of record for all contiguous unplatted properties. Yes ____ No ____ N/A ____

8. Town limits, if within 200 feet of the subject tract. Yes ____ No ____ N/A ____

9. Proposed streets, alleys, drainageways, parks, open spaces, easements, other public areas and other rights-of-way within the subdivision including dimensions, bearings and curve data. Yes ____ No ____ N/A ____

10. Right-of-way dedication for adjacent streets in accordance with Town’s Comprehensive Plan. Yes ____ No ____ N/A ____

11. All proposed streets, alleys, drainageways, parks, open spaces, storm drain facilities, detention ponds, easements, or other public areas and rights-of-way within the subdivision shall be privately maintained. Maintenance Agreement language shall be included on the plat. Yes ____ No ____ N/A ____

12. Location, dimension, description and recording information for all existing rights-of-way, railroad rights-of-way, easements or other public ways on or adjacent to the property being platted. Yes ____ No ____ N/A ____

13. Location and description of all permanent monuments and control points Yes ____ No ____ N/A ____

14. Floodways / Floodplains:

    a. Show the ultimate 100-year water surface elevation. Yes ____ No ____ N/A ____

    b. Show the ultimate 100-yr floodplain; specify the source Drainage study Yes ____ No ____ N/A ____

c. Show FEMA floodplain and floodway boundaries with panel number, zone and effective date — Yes ____ No ____ N/A ____

d. Floodplain easement limits (includes 10' buffer) — Yes ____ No ____ N/A ____

e. Minimum fill and floor elevations specified (Minimum floor elevation 2' above ultimate 100-yr water surface elevation) — Yes ____ No ____ N/A ____

15. Minimum building setback lines. — Yes ____ No ____ N/A ____

16. Lot and block numbers. — Yes ____ No ____ N/A ____

17. Approval block in the form prescribed by the SUBDIVISION REGULATIONS. — Yes ____ No ____ N/A ____

18. Abutting property owner names and recording information. — Yes ____ No ____ N/A ____

19. Gross acreage of the land being subdivided — Yes ____ No ____ N/A ____

20. Owner's certificate of deed or dedication in the form prescribed by the SUBDIVISION REGULATIONS with the following:

a. Metes and bounds description. — Yes ____ No ____ N/A ____

b. Representation that dedicators own the property. — Yes ____ No ____ N/A ____

c. Dedication statement. — Yes ____ No ____ N/A ____

d. Reference and identification or name of final plat. — Yes ____ No ____ N/A ____

f. Surveyor certification in the form prescribed by the SUBDIVISION REGULATIONS. — Yes ____ No ____ N/A ____

g. Closure report — Yes ____ No ____ N/A ____

21. Certificate showing all taxes have been paid. — Yes ____ No ____ N/A ____

22. A letter fully outlining and alterations from the approved Preliminary Plat. — Yes ____ No ____ N/A ____

23. Accepted final drainage study — Yes ____ No ____ N/A ____

SITE PLAN – Each site plan shall include:

1. Site plans shall be placed on maximum 22" x 34" sheets and drawn to a scale of 1" = 100' or 1" = 50' unless approved in advance by the Town. Yes ____ No ____ N/A ____

2. Title block in lower right hand corner including:

   a. Subdivision name with lot and block number. Yes ____ No ____ N/A ____

   b. Area in acres. Yes ____ No ____ N/A ____

   c. Metes and bounds description including survey name and abstract number. Yes ____ No ____ N/A ____

   d. Town and County. Yes ____ No ____ N/A ____

   e. Preparation Date. Yes ____ No ____ N/A ____

3. Name, address and telephone number of the owner, applicant, and surveyor/engineer. Yes ____ No ____ N/A ____

4. Vicinity map and key map, if multiple sheets are needed. Yes ____ No ____ N/A ____

5. Written scale, graphic scale and north arrow. Yes ____ No ____ N/A ____

6. Approximate distance to the nearest street. Yes ____ No ____ N/A ____

7. Site boundaries, dimensions, lot lines and lot areas. Yes ____ No ____ N/A ____

8. Legend for any symbols used Yes ____ No ____ N/A ____

9. Site data summary table including:

   a. Zoning. Yes ____ No ____ N/A ____

   b. Proposed use. Yes ____ No ____ N/A ____

   c. Building area (gross square footage). Yes ____ No ____ N/A ____

   d. Building height (feet and inches). Yes ____ No ____ N/A ____

   e. Area of impervious surface. Yes ____ No ____ N/A ____

   f. Total Parking: Required and provided. Yes ____ No ____ N/A ____

   g. Number of handicap parking spaces. Yes ____ No ____ N/A ____

   h. Number of dwelling units and number of bedrooms (multifamily). Yes ____ No ____ N/A ____

10. Existing improvements within 75' of the subject property. Yes ____ No ____ N/A ____

11. Land use, zoning, subdivision name, recording information and adjacent owners. Yes ____ No ____ N/A ____

12. Building locations, sizes, and dimensions. Yes ____ No ____ N/A ____

13. Distance between buildings on the same lot. Yes ____ No ____ N/A ____

14. Building lines and setbacks. Yes ____ No ____ N/A ____

15. Dimensions of all drive lanes and traffic flow arrows. Yes ____ No ____ N/A ____

16. FEMA floodplains with elevations (include the floodplain note shown on the final plat). Include FEMA panel number, zone and effective date. Yes ____ No ____ N/A ____

17. Ultimate 100-yr floodplain and minimum finished floor elevations. Yes ____ No ____ N/A ____

18. Public streets, private drives, and fire lanes with pavement widths and including rights-of-way, median openings, turn lanes, existing driveways, adjacent existing driveways with dimensions, radii, and surface. Yes ____ No ____ N/A ____

19. Distances between existing and proposed driveways. Yes ____ No ____ N/A ____

20. Loading and unloading areas. Yes ____ No ____ N/A ____

21. Ramps, crosswalks, sidewalks and barrier-free ramps with dimensions. Yes ____ No ____ N/A ____

22. Locations of dumpsters and trash compactors with height and material of screening. Yes ____ No ____ N/A ____

23. Size, location, dimensions and details of all signs and exterior lighting of signs, including type of standards, locations and radius of light and intensity of foot-candles. All signage installations are subject to approval by the Town. Yes ____ No ____ N/A ____

24. Location and sizes of existing and proposed water and sewer mains. Yes ____ No ____ N/A ____

25. Location of fire hydrants. Yes ____ No ____ N/A ____

26. Location and sizes of storm drains, culverts, inlets and other drainage features on or adjacent to the site. Yes ____ No ____ N/A ____

27. Locations, widths, and types of existing and proposed easements. Yes ____ No ____ N/A ____

28. Provide an elevation of all four sides of the building including materials, colors and dimensions at an architectural scale of 1”=20’. Yes ____ No ____ N/A ____

29. Landscape plan provided on separate sheet to show the following: Yes ____ No ____ N/A ____

    a. Natural features including tree masses and anticipated tree loss. Yes ____ No ____ N/A ____

b. Floodplains, drainageways and creeks. Yes ____ No ____ N/A ____

c. Screening walls and fences, retaining walls, headlight screens, and service area screens including height and type of construction. Yes ____ No ____ N/A ____

d. Existing and preserved trees including location, size, and species. Yes ____ No ____ N/A ____

e. Landscaping materials including location and size. Yes ____ No ____ N/A ____

f. Proposed plant materials. Yes ____ No ____ N/A ____

g. Note to indicate type and placement of irrigation system. Yes ____ No ____ N/A ____

30. 2" x 3" blank box in lower right corner for Town use. Yes ____ No ____ N/A ____

31. Additional information as requested to clarify the proposed development. Yes ____ No ____ N/A ____

GENERAL

1. North arrow clearly shown on each plan sheet. Yes ____ No ____ N/A ____
2. Benchmarks shown on each sheet; located on permanent structure outside of construction limits and conveniently spaced (500’ +). Yes ____ No ____ N/A ____
3. Title blocks, title, sheet number and scales shown. Yes ____ No ____ N/A ____
4. Each sheet must bear the seal of a Licensed Professional Engineer, signature, and date. Yes ____ No ____ N/A ____
5. Street names on each sheet. Yes ____ No ____ N/A ____
6. Property owners and property lines shown. Yes ____ No ____ N/A ____
7. Site boundary and adjacent property lines
8. Prepare plans on 22” x 34” sheets allowing for half size reduction to 11” x 17”. Yes ____ No ____ N/A ____
9. Text shall be legible on the half size 11” x17” plans. Yes ____ No ____ N/A ____
10. Place standard general notes on plans. Yes ____ No ____ N/A ____
11. Existing, proposed and future facilities must clearly be defined. Yes ____ No ____ N/A ____
12. Project name on right end of plan sheets. Yes ____ No ____ N/A ____
13. Label roads and ROWs

COVER SHEET * - The cover sheet shall include:

1. Project title and type of project. Yes ____ No ____ N/A ____
2. Location map. Yes ____ No ____ N/A ____
3. Disposal site for excess excavation. Yes ____ No ____ N/A ____
4. Index of Sheets (if not included on its own sheet). Yes ____ No ____ N/A ____
5. Professional Engineer's seal, signature and date. Yes ____ No ____ N/A ____
6. "Release for Construction" note. Yes ____ No ____ N/A ____

* NOTE: If the Cover Sheet is not furnished, information should appear on other sheets.

GRADING * – Each grading plan shall include:

1. Horizontal scale for grading plans shall be at 1" = 20' on full size drawings. Yes ____ No ____ N/A ____
2. Existing one-foot contours based on an on-the-ground survey or controlled aerial topographic map (dashed lines and labeled) to extend 20 feet from property line onto adjacent property. Yes ____ No ____ N/A ____
3. Proposed one-foot contours – solid lines and labeled. Yes ____ No ____ N/A ____
4. Directional flow arrows- interior of lots, streets, and all corners of intersections Yes ____ No ____ N/A ____
5. Proposed finished pad elevations Yes ____ No ____ N/A ____
6. Show top of curb elevation every 50 feet on streets, alleys, existing and proposed parking lots. Yes ____ No ____ N/A ____
7. Provide spot elevations along front, back, side and corner of lots. Yes ____ No ____ N/A ____
8. Slope:
    a. Back of street curb to property line: ¼" per foot. Yes ____ No ____ N/A ____
    b. Parking lot top of curb to property line: Maximum 4 (horizontal) to 1 (vertical). Yes ____ No ____ N/A ____
    c. Any unpaved area to property line: Maximum slope of 4:1. Yes ____ No ____ N/A ____
    d. Show driveways with ¼" per foot + 6" from street gutter up to property line. Yes ____ No ____ N/A ____
9. Letter of approval if grading is proposed on adjacent property. Yes ____ No ____ N/A ____
10. Utility easement from abutting property owners. Yes ____ No ____ N/A ____

11. Proposed inlets, label and size. Yes ____ No ____ N/A ____

12. Proposed pipes, label and size. Yes ____ No ____ N/A ____

13. Existing inlets and pipes. Yes ____ No ____ N/A ____

14. Plan shall be consistent with proposed drainage boundary delineations Yes ____ No ____ N/A ____

15. FEMA floodplain and floodway Yes ____ No ____ N/A ____

16. Fully developed 100-yr floodplain and floodplain easement Yes ____ No ____ N/A ____

17. Add minimum finished floor elevations for lots affected by or adjacent to floodplain, open channels, or ponds, overflow structures or flumes. Yes ____ No ____ N/A ____

18. Show temporary or interim runoff controls needed for phasing. Yes ____ No ____ N/A ____

* NOTE: Add statement that grading only is being submitted with these plans.

DRAINAGE – Design of Drainage Systems shall include:

1. Rational Method calculation for area less than 200 acres. Yes ____ No ____ N/A ____

2. Unit Hydrograph Method (SCS) for any size areas (required for areas greater than 200 acres). Yes ____ No ____ N/A ____

3. Modified Rational Method includes volume adjustment factors. Yes ____ No ____ N/A ____

4. Statement that drainage from the abutting property will not be impaired by the proposed grading. Yes ____ No ____ N/A ____

5. No diversion of drainage. Yes ____ No ____ N/A ____

6. Offsite drainage or discharge to downstream property will require a letter of permission and/or easements. Yes ____ No ____ N/A ____

7. Discharge does not adversely affect downstream property. Yes ____ No ____ N/A ____

8. Drainage study in support of construction plans must be accepted prior to plan acceptance. Yes ____ No ____ N/A ____

9. Delineate and label fully developed 100-yr floodplain and floodplain easement. Yes ____ No ____ N/A ____

10. Drainage Area Map:

    a. 1” = 200’ or less with match lines between any two or more maps. Pre- and post-project maps must be the same scale. Yes ____ No ____ N/A ____

    b. Show and label existing and proposed stormwater infrastructure including storm drains and inlets, culverts, channels, ponds, etc.. Yes ____ No ____ N/A ____

    c. Calculate sub areas for each inlet and point of analysis. Yes ____ No ____ N/A ____

    d. Provide existing and proposed two-foot contours on map for on and offsite and include offsite and onsite flow arrows Yes ____ No ____ N/A ____

    e. Indicate zoning on drainage area. Yes ____ No ____ N/A ____

    f. Composite C value calculations if needed. Yes ____ No ____ N/A ____

    g. Show calculations for non-standard time of concentrations. Yes ____ No ____ N/A ____

    h. Runoff calculation table for the 10-yr, 50-yr and 100-yr flood events including area, time of concentration, runoff coefficient, intensities, flows, and receiving system (ie inlet number). Yes ____ No ____ N/A ____

    i. If detention pond required, flood events include 2, 5, 10, 25, 50, and 100-yr Yes ____ No ____ N/A ____

    j. Calculate discharge at all inlets, dead-end streets and alleys or to adjacent additions or acreage. Yes ____ No ____ N/A ____

    k. If phased, include interim and ultimate drainage area maps. Yes ____ No ____ N/A ____

11. Hydraulic Calculations:

    a. Calculations of:

        1) Spread of water. Yes ____ No ____ N/A ____

        2) Inlets. Yes ____ No ____ N/A ____

        3) Street capacity. Yes ____ No ____ N/A ____

        4) ROW capacity. Yes ____ No ____ N/A ____

        5) Hydraulic grade line for conduits. Yes ____ No ____ N/A ____

    b. For cumulative runoff, show calculations. Yes ____ No ____ N/A ____

    c. Define all crests, sags and streets and alley intersections with flow arrows. Yes ____ No ____ N/A ____

12. Curbs for alleys where capacity is exceeded. Yes ____ No ____ N/A ____

13. Storm water from streets does not flow into alleys or drives. Yes ____ No ____ N/A ____

14. Emergency overflow for 100-year storm at low points or design for 100-year storm. Yes ____ No ____ N/A ____

PAVING PLAN – Each Paving Plan shall include:

1. Horizontal scale for paving plans shall be at 1" = 20' on full size drawings. Yes ____ No ____ N/A ____

2. Right-of-way, street, alley, drives and sidewalks dimensioned. Yes ____ No ____ N/A ____

3. Centerline stations shown. Yes ____ No ____ N/A ____

4. Limits of work defined. Yes ____ No ____ N/A ____

5. Barrier free ramps at all intersections. Yes ____ No ____ N/A ____

6. Pavement transitions. Yes ____ No ____ N/A ____

7. Traffic control items; striping, traffic buttons, sign. Yes ____ No ____ N/A ____

8. Street lighting. Yes ____ No ____ N/A ____

9. Concrete/asphalt pavement thickness with supporting Geotech recommendations. Yes ____ No ____ N/A ____

10. 4,000 psi in 28 days concrete compressive strength or asphalt equivalence for streets, alleys, and driveways. Yes ____ No ____ N/A ____

11. 6" curbs where required. Yes ____ No ____ N/A ____

12. Reinforcement with No. 4 bars 24" o.c. both ways. Yes ____ No ____ N/A ____

13. Sidewalks to be 4" thick, 3,600 psi in 28 days, reinforced with No. 3 bars 14" O.C.E.W. Yes ____ No ____ N/A ____

14. Expansion joints at intersection and at minimum 600-foot intervals for concrete pavements. Yes ____ No ____ N/A ____

15. Saw cut at 15-, 17.5- and 20-foot intervals for 6-inch, 7-inch and 8-inch pavements respectively. Yes ____ No ____ N/A ____

16. Radius for fire lanes shall be minimum 30-foot inside and 50-foot outside Yes ____ No ____ N/A ____

17. Gutter flow arrows. Yes ____ No ____ N/A ____

18. Roadways comply with thoroughfare plan. Yes ____ No ____ N/A ____

19. Geometrics meet design speed criteria as defined in AASHTO criteria, latest edition. Yes ____ No ____ N/A ____

20. Retaining Walls:

    a. Type, beginning and ending locations and wall elevations. Yes ____ No ____ N/A ____

    b. Provide design if non-standard or modified. Yes ____ No ____ N/A ____

    c. Drainage behind walls shown. Yes ____ No ____ N/A ____

21. Driveway grades shown. Yes ____ No ____ N/A ____

22. Prepare plans and necessary forms for TDLR plans review and field inspection. Yes ____ No ____ N/A ____

23. Developer to pay for all review and inspection fees. Yes ____ No ____ N/A ____

PAVING PROFILES AND GRADES – Plans shall include:

1. Vertical scale for paving profiles shall be at 1" = 4' on full size drawings. Yes ____ No ____ N/A ____

2. Profiles plotted showing ground at proposed property line. Yes ____ No ____ N/A ____

3. Top of curb profiles must meet minimum and maximum grade requirements. Use PGL notations where no curbs. Yes ____ No ____ N/A ____

4. Roadside ditch profile if no curbs Yes ____ No ____ N/A ____

5. Driveway profile grades. Yes ____ No ____ N/A ____

6. Vertical curves must be designed in accordance with AASHTO design requirements. Yes ____ No ____ N/A ____

7. Contour grading plans for major intersections. Yes ____ No ____ N/A ____

8. Spot top of curb or pavement elevations in plan view on proposed left turn lanes. Yes ____ No ____ N/A ____

9. Check carefully for any place water might pond. Are inlets located at sag points or vertical curves? Yes ____ No ____ N/A ____

10. Are grades, crossfall, slopes, etc., consistent with information shown on typical section? Yes ____ No ____ N/A ____

11. Check ends of project for drainage. If gutters drain to ditches or field type inlets, are grades and profiles shown? Yes ____ No ____ N/A ____

12. Minimum grades maintained to assure complete drainage. Minimum grades shall be 0.60%. Yes ____ No ____ N/A ____

CLOSED CONDUIT STORM DRAINS – All storm drain plans shall include:

1. Horizontal scale for storm drain profiles shall be at 1” = 20’ on full size drawings. Yes ____ No ____ N/A ____
2. Vertical scale for storm drain profiles shall be at 1” = 4’ on full size drawings. Yes ____ No ____ N/A ____
3. Plan and profile of all proposed storm drains. Yes ____ No ____ N/A ____
4. Station of laterals on trunk profile. Yes ____ No ____ N/A ____
5. Plan view of each area showing
    a. Size of inlet. Yes ____ No ____ N/A ____
    b. Lateral size. Yes ____ No ____ N/A ____
    c. Flow line. Yes ____ No ____ N/A ____
    d. Paving station. Yes ____ No ____ N/A ____
    e. Top of Inlet elevation. Yes ____ No ____ N/A ____
6. Details of all non-standard items. Yes ____ No ____ N/A ____
7. Curve data for storm drains. Yes ____ No ____ N/A ____
8. Property lines and easements with dimensions. Yes ____ No ____ N/A ____
9. Class III RCP required for all storm drain in public rights of way or easements. Yes ____ No ____ N/A ____
10. Plot hydraulic grade line (HGL). Yes ____ No ____ N/A ____
11. Storm drain discharge at flow line of creek or channel and use rip-rap. Show coincident water surface elevation at outfall. Show existing and proposed contours at outfalls. Yes ____ No ____ N/A ____
12. Headwalls and erosion control at outfall of storm drains. Yes ____ No ____ N/A ____
13. Laterals connected at 45 or 60 degree angle. Yes ____ No ____ N/A ____
14. Matching pipe centerline at connection. Yes ____ No ____ N/A ____
15. 3600 psi in 28 days for structural concrete strength. Yes ____ No ____ N/A ____
16. Existing and proposed utilities in plan and profile. Yes ____ No ____ N/A ____
17. On profile indicate:
    a. Grade. Yes ____ No ____ N/A ____
    b. Flow line elevations every station and at lateral connections, pipe size changes and fittings. Yes ____ No ____ N/A ____

c. Existing and proposed ground line. Yes ____ No ____ N/A ____

d. Hydraulic grade line and data. Yes ____ No ____ N/A ____

e. 100-yr flow, 100-yr velocity, slope, pipe capacity Yes ____ No ____ N/A ____

f. Existing and proposed grade, tie-ins and coincidental water surface elevation at outfalls. Yes ____ No ____ N/A ____

g. Flow, velocity, frictional slope and full pipe capacity for each pipe segment. Yes ____ No ____ N/A ____

18. Show sizes in plan and profile. Yes ____ No ____ N/A ____

19. Show hydraulic computations for existing system when connecting to existing storm drain. Extend computations to an outfall with known or calculated starting HGL. Show existing line and size, length, slope, 100-yr calculated discharge, pipe capacity, 100-yr calculated velocity and hydraulic grade line for the existing line. Yes ____ No ____ N/A ____

20. Velocities and hydraulic gradients conform to Denton County Subdivision Rules and Regulations criteria. Yes ____ No ____ N/A ____

21. Inlets and conduits properly sized. Provide detailed HGL and inlet computations on all inlets and conduits. Yes ____ No ____ N/A ____

22. Storm drain inlet and outlet velocity calculations. Yes ____ No ____ N/A ____

23. Proposed culvert profiles shall include: culvert size, length, grade, flowline elevations, tailwater elevations, headwater elevation, flow, velocity, type of headwalls. Yes ____ No ____ N/A ____

24. Include standard drainage details. Yes ____ No ____ N/A ____

25. Show/label and dimension drainage easements. Yes ____ No ____ N/A ____

CREEKS AND CHANNELS – Plans of creeks and channels shall include:

1. Horizontal scale for plan views shall be at 1” = 20’ on full size drawings. Yes ____ No ____ N/A ____

2. Vertical scale for profile views shall be at 1” = 4’ on full size drawings. Yes ____ No ____ N/A ____

3. Stationing in plan and profile. Yes ____ No ____ N/A ____

4. Existing and proposed contours Yes ____ No ____ N/A ____

5. Show/label and dimension drainage / floodplain easements Yes ____ No ____ N/A ____

6. Profiles indicating:

    a. Existing and proposed ground elevations at centerline. Label proposed flowlines at stations . Yes ____ No ____ N/A ____

    b. High banks. Left and right top of banks Yes ____ No ____ N/A ____

    c. Channel grade. Yes ____ No ____ N/A ____

    d. Hydraulic profile and data for design storm (fully developed 100-yr) Yes ____ No ____ N/A ____

    e. Rock line. Yes ____ No ____ N/A ____

7. Hydraulic Computations.

    a. 100-year discharge Yes ____ No ____ N/A ____

    b. Velocity Yes ____ No ____ N/A ____

    c. Critical depth Yes ____ No ____ N/A ____

    d. Manning's "n" Yes ____ No ____ N/A ____

    e. Design grade for improved channels Yes ____ No ____ N/A ____

8. Cross sections as relative to property line. Yes ____ No ____ N/A ____

9. Cross sections include dimensions, elevations, hydraulic parameters, 100-yr water surface elevation and property/ROW or drainage easement lines. Show 1' freeboard. Yes ____ No ____ N/A ____

10. Erosion control. Yes ____ No ____ N/A ____

11. Compacted fill where fill required. Yes ____ No ____ N/A ____

12. Design velocities not greater than original stream velocities or greater than stated in Design Manual. Yes ____ No ____ N/A ____

13. Maximum side slope on earthen channels not greater than 4:1. Use trapezoidal. Yes ____ No ____ N/A ___

14. Provide structural details of all outfalls, drop structures, energy dissipater. Yes ____ No ____ N/A ____

BRIDGES – Plans of bridges shall include:

1. Lowest member of bridge 2 feet above design water surface elevation. Yes ____ No ____ N/A ____
2. Soil Borings on plans. Yes ____ No ____ N/A ____
3. Soils report. Yes ____ No ____ N/A ____
4. Channel sections upstream and downstream. Yes ____ No ____ N/A ____
5. Structural details and calculations with dead load deflection diagram. Yes ____ No ____ N/A ____
6. Vertical and horizontal alignment. Yes ____ No ____ N/A ____
7. Bridge cross section. Yes ____ No ____ N/A ____
8. Hydraulic calculations on all sections. Yes ____ No ____ N/A ____

UTILITIES – All water and wastewater plans must be submitted to Mustang by the applicant for review and approval. In addition to Mustang requirements, all plans shall show the following:

1. Existing and proposed facilities shown in plan and profiles views. Yes ____ No ____ N/A ____
2. Underground facilities close to or in conflict with proposed construction located by actual ties and elevations. Yes ____ No ____ N/A ____
3. Caution notes shown when construction operations come close to existing utilities. Telephone number of utility contact shall be shown. Yes ____ No ____ N/A ____

EROSION CONTROL – All plans shall show the following:

1. The scale for Erosion Control Plans may vary however shall be prepared on sheets no smaller than 1” = 100’ on full size drawings. Yes ____ No ____ N/A ____
2. Existing and Proposed Grading. Contour interval shall be 1’ or 2’. Yes ____ No ____ N/A ____

3. Onsite and offsite directional flow arrows

3. Existing and Proposed Drainage Features. Yes ____ No ____ N/A ____
4. Erosion features including temporary construction entrance, silt fence, inlet protection, rock berms, seeding, etc. Yes ____ No ____ N/A ____
5. Include in legend all applicable erosion and sediment control measures. Yes ____ No ____ N/A ____

6. Erosion control standard details. Yes ____ No ____ N/A ____

7. Show and label FEMA floodplain include panel number, zone and effective date. Yes ____ No ____ N/A ____

DRY DETENTION POND - Pond sheet (s) shall show the following:

1. Modified Rational Method calculations for the 2, 5, 10, 25, 50, and 100-yr storm events. Include volume adjustment factor Yes ____ No ____ N/A ____

2. Hydrologic Model if using Unit Hydrograph Method (SCS) Yes ____ No ____ N/A ____

3. Plan view with existing and proposed contours and pond outfall details Yes ____ No ____ N/A ____

4. Cross sections showing all dimensions, slopes, elevations, resulting water surface elevations, top of pond elevation, easement lines, embankments (10' crown width Yes ____ No ____ N/A ____

5. Longitudinal cross section showing outfall; including all dimensions, elevations, slopes, water surface elevations, tailwater elevation Yes ____ No ____ N/A ____

6. Maximum 4H:1V side slopes and minimum 0.50% longitudinal slope. Yes ____ No ____ N/A ____

7. Outflow calculations; include all hydraulic parameters and account for backwater Yes ____ No ____ N/A ____

8. Results table including inflow, outflow, storage, and water surface elevation for the 2, 5, 10, 25, 50, and 100-yr flood events Yes ____ No ____ N/A ____

9. Outfall details suitable for construction Yes ____ No ____ N/A ____

10. Elevation vs Area/Storage rating table Yes ____ No ____ N/A ____

11. Elevation vs outflow rating tables Yes ____ No ____ N/A ____

12. Emergency spillway with calculations Yes ____ No ____ N/A ____

13. Maintenance access provided Yes ____ No ____ N/A ____

PAVEMENT MARKINGS AND SIGNAGE

1. The scale for Pavement Marking Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings. Yes ____ No ____ N/A ____
2. Pavement Markings and Signage Plan in accordance with MUTCD. Yes ____ No ____ N/A ____
3. Pavement Markings Standard Details. Yes ____ No ____ N/A ____

TRAFFIC CONTROL PLAN

1. The scale for Traffic Control Plans may vary however shall be prepared on sheets no smaller than 1" = 200' on full size drawings. Yes ____ No ____ N/A ____
2. Traffic Control Plan in accordance with MUTCD. Yes ____ No ____ N/A ____
3. Traffic Control Standard Details. Yes ____ No ____ N/A ____
4. Traffic Control Phasing as necessary. Yes ____ No ____ N/A ____

LANDSCAPE AND IRRIGATION PLANS

1. The scale for Landscape and Irrigation Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings. Yes ____ No ____ N/A ____
2. Landscape Plan showing rights-of-way and proposed back of curbs, sidewalk, existing; and proposed utilities and other features pertinent to the plan. Yes ____ No ____ N/A ____
3. Planting details. Yes ____ No ____ N/A ____
4. Tree Preservation plan in accordance with Article 3 Yes ____ No ____ N/A ____
5. Irrigation Plans including metering, back flow prevention, and provision for electrical service and controllers. Yes ____ No ____ N/A ____
6. Irrigation details. Yes ____ No ____ N/A ____

STREET LIGHTING

1. The scale for Street Lighting Plans may vary however shall be prepared on sheets no smaller than 1" = 100' on full size drawings. Yes ____ No ____ N/A ____
1. Lighting and Conduit Layout Plan. Yes ____ No ____ N/A ____
2. Lighting Standard Details. Yes ____ No ____ N/A ____