

DALLAS DISTRICT
ADVANCE PROJECT DEVELOPMENT
DESIGN SCHEMATIC CHECKLIST

SCHEMATIC TITLES

- 1) For schematic rolls: Place title block @ both ends of each roll.
- 2) For 22"x34" sheets: Provide title sheet (First Sheet).
- 3) Place in title block or title sheet.
 - Term "Texas Department of Transportation."
 - Term "Design Schematic" not "Preliminary Design Schematic"
 - DCIS project information for each CSJ/project (*Information in DCIS and information on schematic must match for each CSJ.*)
 - Project name (*project name in DCIS and on Schematic must match*)
 - Control-section-job (CSJ) numbers
 - Functional classification (DCIS functional classification numbers are provided)
 - (1) Interstate (main lanes, frontage road, loop, direct connector, or ramp)
 - (2) Other urban freeway or expressway
 - (3) Rural principal arterial, urban principal arterial
 - (4) Minor arterial
 - (5) Rural major collector, or urban collector street
 - (6) Rural minor collector
 - (7) Local
 - Project limits (*Limits in DCIS and on Schematic must match word for word*)
 - (1) If project limits do not match word for word, change limits in DCIS or on Schematic.
 - (2) City or County Lines cannot be used for project limits.
 - (3) Project limits should be from west to east and from south to north.
 - Design speed (mph) (*Do not give minimum or desirable speed*)
 - Project length (miles)
 - Location map of projects
 - Date (Month and Year)
 - Counties
 - Scale
 - Roll # of # (for rolls)
 - Sheet # of # (for 22"x34" sheets)
 - Copyright (*© 200X by Texas Department of Transportation; all rights reserved*)
 - P.E. signature block
 - William Hale, P.E. District Engineer
 - Provide table of contents for sheets

SCHEMATIC 22"x34" SHEETS

- 1) Place a title block on each 22"x 34" sheet after title page.
 - Show sheet number, state, district name, county, CSJ, and highway number (roadway name).
 - Show term "Texas Department of Transportation."
 - Show functional name (NB IH35E frontage road, ramp, loop, mainlanes etc.) of the profile shown.
 - Show copyright (*Texas Department of Transportation © 200X*)

PLAN PORTION

- 1) Label streets, buildings, parks, railroads, airports, waterways, and known utilities.
- 2) Show typical roadway sections and label following things:
 - Station or station limits,
 - Dimensions,
 - Centerlines and Baselines,
 - Directional arrows for each lane,
 - Pavement width (If width varies, show for example *varies from 2' to 4'*),
 - Median widths (If width varies, show for example *varies from 2' to 4'*),
 - Border separation,
 - Profile elevation,
 - Curb offsets,
 - Type of curb (mountable or barrier),
 - Existing and proposed R.O.W., and
 - Side slopes.
- 3) Mark and label beginning and ending stations with the following:
 - "Begin Project" or "End Project, and
 - CSJ.
- 4) Show and label (and dimension at certain locations) proposed and existing R.O.W., and *any easements* (drainage / utility / landscaping, etc.).
- 5) Identify specific properties to be displaced.
- 6) Label existing and proposed bridges (beginning and ending stations for existing structures).
- 7) Show and label existing centerline and proposed centerline with stationing. (Stationing should increase in value from south to north, west to east.)
- 8) Show all curve data; proposed centerline, stationing, PC points, PT points, bearing, PI points, and PI curve data.
- 9) Show and label retaining walls and noise walls.
- 10) Show number of lanes using a directional arrow for each lane.
- 11) Show pavement transition areas and tapers.
- 12) Show and label ADT traffic volumes on traffic diagram at each major roadway.
 - Existing
 - Projected 20 year
 - Source of data (for example: Texas Department of Transportation; Transportation, Programming and Planning Division Memorandum, January 1, 200X.)
- 13) Show and label city limits and county limits.
- 14) Show north arrow.

- 15) Show control of access (if applicable).
- 16) Show and label project and cross street stationing at intersecting points.
- 17) Label signalized intersections.
- 18) Show and label ramp stationing, frontage road stationing, and direct connection stationing. (*Station only from physical gore to physical gore. Make sure ramp grades match frontage road / mainlane grades and elevation matches frontage road / mainlane elevation +/- cross slope.*)
- 19) Show median openings for highways at street intersections. Include note that other median opening locations to be determined in PS&E in coordination with city.
- 20) Check intersection turn bay lengths
- 21) Show sidewalks (use 5' width). Show locations for sidewalk ADA ramps at intersections. (*1.5% slope is recommended on sidewalk ADA ramps even though the maximum is 2% because of construction tolerances*)
- 22) Show superelevation by table format or beginning and ending superelevation stations on horizontal profile.
- 23) Show matchlines when two or more sheets or rolls.
 - Label matchline with CSJs and stationing.
- 22) For controlled access facilities show major guide signs.

PROFILE PORTION

- 1) Mark and label beginning and ending stations with the following:
 - "Begin Project" or "End Project,"
 - CSJs, and
 - Elevations.
- 2) Show and label existing and proposed centerline profile.
- 3) Show annotation listed below of proposed vertical profile.
 - PC's and PT's
 - VPI's
 - VPI curve data
 - Curve length
 - Grades (*prefer no grades less than 0.5%*)
 - K values
- 4) Color-code or separate different profiles when multiple roadways are involved.
- 5) Show proposed elevations (0.00) and existing (0.0) elevations on reference line. Design elevations are on the left and existing elevations are on the right.
- 6) Label elevations on vertical scale and label stations on horizontal scale.
- 7) Show and label existing drainage structures.
- 8) Show and label proposed bridges. (*Check and label bridge clearances*)
- 9) Show and label beginning and ending stations for existing structures.
- 10) Show clearance on proposed structures.
- 11) Show cross street, railroad, frontage road, ramp and direct connections, if applicable.
- 12) In cases where existing profile is maintained or matched, show vertical profile data and superelevation data in table format to verify adequate design speed.
- 13) Provide cross-sections (for review only).
- 14) Provide Level of Service at intersections and ramp weaving (for review only).

Page 3 of 3, 1002 Form

- 1) Check information in DCIS, on schematic, and on page 3 of 3, 1002 Form. The information must be exactly the same.

Schematic Submittal Memorandum

- 1) Enclose 3 copies of the design schematic (1 copy for Design Division (DES), 1 copy for FHWA, and 1 copy for Transportation Operations Division). If your project has no Federal Oversight, then just submit 2 copies.
- 2) Enclose one copy of page 3 of Form 1002. After DES approves project, page 3 of Form 1002 must be sent to PS&E so that the same form can be used throughout the whole project life span.
- 3) It is encouraged to submit a design summary report to DES for their approval.