**Common Issues on Local Program Plans**

**It is recommended that designers for Local Program projects download the Roadway Design Checklists as guidance to develop sheets and content. They can be found under the Reference Documents section located** [**here**](https://www.tn.gov/content/tn/tdot/roadway-design/design-standards/design-guidelines.html)**.**

**Also, for examples of TDOT Project plan sets, refer to the** [**Construction E-plans Room**](https://www.tn.gov/tdot/tdot-construction-division/bid-lettings/e-plans-room.html) **website.  Once here, check for a set of plans in the current letting and download the project PDF.  By following TDOT formatting, it helps to ensure quality plans and allows for quick plans review turnaround.**

**General**

* Plans contain typos or misspellings.
* Sheets are out of order or are misnumbered.
* Details and/or text is too small and unreadable.
* Sheet numbers referenced on details or in notes are incorrect.
* For projects not let by TDOT, cannot include TDOT above the sheet title blocks. City or design firm info can be used here instead.
* The current year is not shown in the block in the upper right corner of each sheet.
* Only the Federal project number should be listed on all remaining sheets after the title sheet.
* If you are unable to follow TDOT standards, then you must fill out a Design Waiver form per requirements of Chapter 2, Section 2-201.00 of the TDOT Roadway Design Guidelines. The form can be accessed on the Roadway Design webpage under Design Standards>Roadway Design Documents> Roadway Design Forms and Letters>Requests Submit it to Ali Hangul for approval.
* Proprietary items are shown in the plans that do not have signed approvals from the Traffic Operations Division or the approval has expired.
* If multiple manufacturers are listed for a proprietary product, 3 equal suppliers must be given. If 3 cannot be found, a minimum of 2 is required with the phrase “or equal”. If only 1 brand is preferred, approval must be obtained.
* **If there are any comments that cannot be addressed, written explanations must be provided.**

**Title Sheet**

* Project description on title sheet does not match what we have in our system.
* Project numbers are incorrect. The Federal number and State number should both be listed.
* The county name is missing from the top of the sheet.
* Traffic data and Design Speed are missing for projects that are along a roadway.
* Bike speed and facility capacity are not shown for shared-use paths.
* Traffic is not for current year (or most current year available).
* For projects not let by TDOT, Local officials should have their signature on the title sheet and not TDOT officials.
* Special Notes (Design Guidelines Chapter 1-204.02) are missing, or “Commissioner” is left in the first Special Note. It needs to be replaced with the city or a local official’s title.
* In the second Special Note, the date for the TDOT Standard Specifications is not updated to January 1, 2021.
* Locally Let and/or Locally Managed note is left off for projects that are not let by TDOT.
* Survey date is missing.
* If no ROW is being acquired on the project, add a note to the title sheet stating "No ROW Acquisition."
* For projects not let by TDOT, cannot include TDOT at the top of the title sheet.
* Begin/End Project flags are missing and/or do not include the station and North/East coordinates given to 4 decimal places.

**Index**

* Sheet titles in the index do not match the sheet titles of each sheet.
* Sheet numbers in the index do not match the actual sheet numbers.
* Sheets are shown in the index but are not included in the plans.
* Detail sheets should be near the front of the plans. See Design Guidelines Chapter 1-206.01 for sheet sequence guidance.

**Standard Drawings**

* A list of standard drawings used on the project is not provided. For current TDOT standard drawings, revision dates, and heading categories, please refer to the Standard Drawings Library on the TDOT website.
* Actual standard drawings are included in the plans instead of listing them as directed above.
* TDOT Standards are not used, especially curb ramps.
* Necessary drawings are omitted from the plans, especially Multimodal and EPSC.
* Revision dates or drawing titles are wrong. Review Instructional Bulletins for new/revised drawings and the effective date.
* Not including item numbers or additional standards that should be included as stated on standard drawings being used. EPSC drawing omissions are the most common.
* Standard Traffic Operations Drawings are being included under the Standard Roadway Drawings heading instead of being shown under a separate main heading.
* If any City standard drawings are used, add them below the TDOT standards. Make sure to reference the drawing number on any details in the plans.

**Notes – General, Special, Environmental, ROW/Utility**

* Notes are not up to date. Templates for Local Programs notes are not being used. Navigate to the Roadway Design page>Design Standards>Roadway Design Documents>Local Programs.
* Blanks in the notes need to be filled in with the local government entity or another appropriate person, unless the project is being let by TDOT.
* Not following the blue instructional text in the Environmental Notes template regarding the usage and placement of the notes. Also, the underlined text in the notes needs to be filled in with the person responsible for obtaining the permits.
* Font is too small because all notes are placed on one sheet instead of using additional sheets.
* Not including Standard Drawings or item numbers that are listed in the notes.

**Estimated Quantities**

* Item numbers are not listed in numerical order.
* Item numbers shown in notes are not shown in the Estimated Quantities block.
* Wrong item number description or the description and/or unit has been modified. Descriptions and units must match what is on the TDOT website.
* Special details show item numbers, but those are omitted from the Estimated Quantities block.
* Item numbers are omitted when existing features are being removed.
* Pavement schedule item numbers are omitted from the Estimated Quantities block.

**Estimated Quantities cont’d.**

* Lump Sum erosion control is being used and is no longer valid. The standard drawings have item numbers for which erosion control devices shall be paid for.
* Item number 209-05 Sediment Removal is omitted when EPSC items are used.
* Required footnotes for all EPSC devices with 209 item numbers are missing. See Design Guidelines Chapter 7-209.00
* Pipe items are missing a footnote stating that bedding material is included in the cost of the pipe per Design Guidelines Chapter 7-204.01
* Required footnote for 801-03 Water (Seeding & Sodding) is omitted. See Design Guidelines Chapter 7-801.04
* Footnotes are not included to explain what is included in the item or where this item is being used.
* Footnote in Design Guidelines Chapter 6-208.00 is not included for all plastic Specialty Striping items.
* Item numbers can only be used once for a project and cannot be used in both the Roadway Quantities and other quantities. Footnote if there are multiple places the item number is used and clarification is needed.
* Invalid item numbers are being used. If an equivalent item number cannot be found, an item number with a description that can be edited must be used (920-10.01 through 920-20.92). Ensure the correct item number is chosen based on the desired unit of measurement.
* Topsoil is being omitted when seed or sod is used. See Standard Spec 203.06 for topsoil requirements.
* Item numbers with open descriptions are not being filled in. This is needed to provide descriptive information to the contractor.
* Footnotes should be added for all installation and removal Lump Sum item numbers to break down what is included.
* Truncated domes should be estimated based on actual full width of ramp.

**Tabulated Quantities**

* Item numbers and/or quantities shown on the Tabulated Quantities sheet do not match what is shown in the Estimated Quantities. This also applies to the EPSC and Traffic Control tabulated blocks shown on their respective sheets.
* Per Design Guidelines Chapter 2-708.00, earthwork quantities should be shown on this sheet and should no longer appear on the Profile sheet. See IB 22-04 for additional information.

**Typical Sections/Special Details**

* Typical sections are omitted from plans – especially sidewalks and shared-use paths. These are necessary to know what is being done on the project.
* Typical section will label a dimension as “varies”. It should state the range of dimensions instead.
* Show guardrail location on typical sections and label “As Required”.
* Sidewalk/shared-use path widths are missing.
* Sidewalk/shared-use path cross slope is missing or incorrect. TDOT standard is 1.5% to allow for construction tolerances (2% absolute maximum per PROWAG doesn’t allow for tolerances).
* For projects that are in the preliminary phase, the new RD11 series drawings are required.
* TDOT standard drawings must be referenced under each roadway typical section or special detail.
* Show lane widths on all typical sections. If the dimensions vary, include the min to max.
* If TDOT driveway standards are not used, provide a driveway detail and label with 1.5% maximum cross slope.
* Special details are too small and unreadable.

**Typical Sections/Special Details cont’d.**

* Show and label all proposed pavement layers on typical sections.
* Pavement schedule is missing the range of application rates for prime coat, as specified in Design Guidelines Chapter 7-402.01.
* Pavement schedule is missing the required note for tack coat per Design Guidelines Chapter 7-403.01. It is acceptable to also show the application rate range, but do not show a specific rate.
* Pavement schedule is missing the application rate range for Aggregate for Cover Material, as specified in Design Guidelines Chapter 7-402.01. The item number should also be footnoted on the Estimated Quantities as directed in the Design Guidelines.
* Pavement schedule is missing the spread rates for the pavement mixes (Design Guidelines Chapter

7-307.00 and 7-411.00) and/or for cold planing (Design Guidelines Chapter 7-415.00).

**Plan, Profile, and Cross Section Sheets**

* Begin/End flags are missing from layout sheets.
* Project flags do not show the station and North/East Coordinates given to 4 decimal places.
* Road Names along the centerline for the mainline and all side roads are not labeled on all sheets.
* Station and corresponding sheet number are omitted for matchlines or do not match between sheets.
* All property owners’ names and tract numbers must be shown on the property map/present layout/ROW detail sheets.
* ROW Acquisition Table & total disturbed area table are omitted. See Design Guidelines Chapter

4-401.00, 4-404.00, and Figure 4-6.

* If a tract is not affected by ROW acquisition or easements, line out the entire line in the ROW Acquisition Table and line out the owner’s name and tract number on the property map/present layout/ROW detail sheets.
* Survey control points are not labeled or shown in a table with coordinates to 4 decimal places and elevations.
* Existing ROW is not shown and/or labeled.
* Existing ROW bearings and lengths are omitted from the present layout sheets (or ROW detail sheets) in areas where there is proposed ROW.
* Proposed ROW bearings, distances, stations, and offsets are omitted from the present layout sheets (or ROW detail sheets).
* Width of construction easement is not labeled. If the width is consistent throughout the project, add a note.
* Drainage easements (or other permanent easements) are not labeled with stations, offsets, bearings, and distances.
* The datum adjustment factor note (see Design Guidelines Chapter 1-202.05) is missing or not filled in. The note should appear on all sheets where coordinates are shown. The factor should be supplied with the survey.
* Begin and End stations are not labeled for proposed bridges.
* Begin and End stations and anchor types are not labeled for proposed guardrail. If tying into existing guardrail, tie-in stations and offsets also need to be labeled.
* Begin and End stations and offsets are not labeled for proposed retaining walls.
* Begin and End stations for proposed pedestrian safety rail are not labeled.
* Proposed sidewalk/shared-use path widths are not labeled.
* Proposed driveways are not labeled with the applicable standard drawing. RP-D-15 is preferred when a grass strip is used.
* Proposed crosswalk width and/or T-M-4 reference is omitted.
* Distance between the stop line and the crosswalk is not labeled (4’ minimum).

**Plan, Profile, and Cross Section Sheets**

* Special Ditches are not shown on proposed sheets. They should be labeled with the shape, width (if trapezoidal), type of lining, and stations/offsets for Begin/End and breakpoints. They should also be shown on the profile sheets and labeled with begin and end stations, grade, shape, width, and breakpoint stations and elevations
* Driveway station, width, side drain length and size, and limit of construction station are recommended to be shown on the proposed layout sheets and the private drive profiles.
* Profiles are omitted for a shared use path that is not along the roadway. Recommended maximum grade is 4.99% to allow for construction tolerances (5% absolute maximum per PROWAG doesn’t allow for tolerances).
* Existing and proposed grades are not labeled on profile sheets.
* On profile sheets, proposed pipes, culverts, and storm sewer features are not labeled with length, type, size, and grade. Structures are not labeled with structure code, type, and grate/inlet/outlet elevations.
* Proposed bridge linework with Begin/End stations and hydraulic data are not shown on profile sheets.
* Existing overhead/underground utilities, and superelevation rate diagrams are missing on profile sheets.
* Cut/Fill values, existing/proposed ROW, offsets/finished grade elevations are missing for each cross-section.
* Special ditches and guardrail are not shown on applicable cross-sections.

**EPSC Plans**

* EPSC Plans are not included.
* EPSC measures are shown outside ROW or easement areas.
* Erosion Control legend is missing or shows devices that are not shown on the plans. Standard drawings should also be listed for each device.
* Erosion Control tabulation block is missing. Item numbers and quantities must match what is shown in the Estimated Quantities block. Also recommend including footnotes.

**Traffic Control**

* Temporary Traffic Control (TTC) plans are not included. TTC plans must be developed as part of the design process.  Depending on the scope of the project, the traffic control plan may only require references to TDOT standard drawings, MUTCD, notes, etc.
* Transportation Management Plans (TMP’s) are required for all Federally funded projects. Refer to TDOT's Work Zone Safety and Mobility Manual for example TMP's and a Local Programs template. Contact Jason Quicksall with the Roadway Design Division if any questions.
* Traffic Control should be phased. Make sure all sidewalks are not closed at the same time so pedestrians can use one side or the other or can be directed into road if properly barricaded. Make sure to check MUTCD.
* If a sidewalk will be closed, ensure that a work zone pedestrian control plan is developed.  It does not have to be a separate sheet but must include TDOT standard drawing T-WZ-55, any additional standard drawings that might be required due to a lane closure, the appropriate item numbers, and notes.
* Pavement Edge Drop Off notes are omitted or not updated.
* Traffic Control tabulation block and Construction Signs tabulation block are missing. Item numbers and quantities must match what is shown in the Estimated Quantities block. Also recommend including footnotes.
* Item 712-01 is strictly for the management of traffic control. See TDOT Specification Book section 712.10. Provide item numbers for products associated with traffic control, such as drums, warning lights, etc. Include all construction signs in 712-06.

**Traffic Control cont’d.**

* Certain work such as sidewalk projects and concrete turn islands do not have TTC that shows the project’s impact.
	+ Sidewalk projects many times don’t include closures of the adjacent lane of traffic, even though that is typical for that type of work, even when the work is 5-10ft off the edge of road.
	+ Turn lanes should have specific TTC laid out to show how traffic is to be routed during work. Usually this involves closing an area larger than the proposed island as well as the turning lane. Plans should take into account changes in the ability of trucks to navigate the intersection without the turn lane.

**Non-Motorized Concerns**

* Each curb ramp is not labeled with the applicable standard drawing on the proposed layout sheets.
* Curb ramps must be aligned within the crosswalk.
* All references to Handicap Ramps/ADA Ramp should be labeled as Curb Ramp.
* Curve warning signs are missing for curves less than 60’ minimum radius. Bicycle Facilities must be in conformance with AASHTO’s “Guide for the Development of Bicycle Facilities”, 2012 Fourth Edition.
* Clear zone is not provided. A 2’ wide clear zone with maximum 6:1 fill slope on each side of the paved surface shall be provided (see Figure 5-1, AASHTO’s “Guide for the Development of Bicycle Facilities”, 2012 Fourth Edition). Sections on a structure may reduce the lateral offset to 1’ (see Standard Drawing MM-TS-3).
* Truncated dome color must be yellow.
* Truncated domes may be needed at all commercial driveways with stop or yield control or that function as a road. Evaluate all and add as needed.
* Truncated domes should extend the entire width of the ramp.
* For shared use-path crossings or blended transitions, truncated dome and lowered area for curb ramp should extend the entire width of crosswalk.
* Ensure the 4x4 maneuvering area is located at the toe of ramp and is entirely within crosswalk.
* If tying into existing sidewalk in the middle of the project, existing sidewalk needs to be labeled as "Existing Compliant Sidewalk". If not ADA compliant, then it must be updated.
* If you touch the intersection, you are responsible for all corners. If some of the corners are compliant, then the existing curb ramps must be shown on the plans and it must be stated they are fully compliant. Otherwise, they will need to be replaced.
* TDOT does not allow the use of brick pavers (or truncated dome pavers) due to the increased rolling resistance they produce for wheelchairs and walkers, as well as their tendency to sink or shift over time. PROWAG Advisory R302.7.1 states that pedestrian access routes must be generally planar, smooth, and provide easy rollability.
* TDOT does not allow the entire sidewalk or crosswalk to be stamped. It creates an uncomfortable path for people in wheelchairs. The edges can be stamped, but a 5-foot smooth surface must be provided in the middle. For crosswalks, the white boundary lines must remain. See T-M-4.
* If pedestrian facilities exist at opposite sides of any intersection, including “T” intersections that have uncontrolled crossings, they require ADA curb ramps. All intersections are legal crosswalks where pedestrian facilities exist, even if they are unmarked or uncontrolled, and require access.
* Ramps should be installed for each direction of travel at each corner. Most intersections with sidewalks at each corner should have 8 total ramps. Corners with single ramps intended to serve two crossings need to be justified.