

	#	Description <b>Always consider Desirable Design Criteria and Values in RDM</b>	30% Schematic			60% Schematic			90% Schematic		
			Required	Consultant PM Verification	TxDOT PM Verification	Required	Consultant PM Verification	TxDOT PM Verification	Required	Consultant PM Verification	TxDOT PM Verification
Borders/Title Block	1	Schematic Roll/sheet size: Freeway: Width - 3 feet; Length < 10 feet Arterials: Width - 2 feet; Length < 10 feet	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	2	For schematic roll(s), show Title Block at both ends of each roll. Show following info in order inside the title block.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	3	TxDOT Registered Logo, and Term "Texas Department of Transportation"	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	4	Term "Fort Worth District"	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	5	Carl L. Johnson, P.E. District Engineer	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	6	Term "Design Schematic xx%" not "Preliminary Design Schematic"	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	7	TxDOTCONNECT Project Information in following order:	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	8	Project Name* (eg, IH 30/From Hwy to Hwy) - matching TxDOT CONNECT)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	9	Control-Section-Job (CSJ) Number* or Numbers for multiple CSJ's	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	10	County or Counties	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	11	Date (eg. May 2022)/Roll # of # (for rolls)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	12	Project Length (miles)*, Roadway Name (s), Design Speed, Functional Classification in Tabular form	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	13	In a Table - Existing Traffic (xxxx) and Proposed Traffic (xxxx)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	14	Project Location Map/(Key map) showing CSJ with respective Begin and End STAs & project reference markers	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	15	Station Equation, if have any, otherwise N/A at the bottom of location map	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	16	Engineer Firm Name and P.E. signature block	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	17	Bar Scale with following scale format: Freeway: H: 1" = 200' V: 1" = 20' Arterials: H: 1" = 100' V: 1" = 10'	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	18	Copyright (20## by Texas Department of Transportation; all rights reserved)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	19	Matchlines (STAs) where applicable.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	20	Legend for all items in the plan view (will be outside of title block)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	21	Date and source of Aerial imagery	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Typical Sections (Plan Portion)	22	Show existing and proposed typical sections for the project roadways and cross streets to be constructed (w/ STA increasing order, minimal detail - no pavement depth). Check scale.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	23	Show street names, cross slopes and station limits for each typical section.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	24	Show and label the dimensions of the project roadway cross section elements - lane, shoulder, median, border, sidewalk, shared-use path widths, shoulder/curb offsets (from shoulder/travel lane edge to nominal face of curb/traffic barriers/bridge rail), sidewalk/SUP offset from face of curb, sidewalk/SUP offset from ROW line, ROW, clear zone width etc. If an element's dimension varies, indicate the usual dimension and the range.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	25	Label all alignment control lines, including existing or proposed centerlines, baselines, and profile grade lines, etc.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	26	Show traffic flow directional arrows on all lanes including mainlanes, ramps, general purpose, or HOV. For public meetings/hearings replace arrows with public friendly cars or truck symbols.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	27	Provide curb type, traffic barriers, retaining walls, bridge rails, and guardrails if warranted next to steep embankment slopes.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	28	Show existing and proposed ROW; Label and dimension				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>

Typical Sections (Plan Portion)	29	Label pavement cross slopes & side slopes ratio for cut & fill				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	30	Ensure typical sections are consistent with plan view and existing roadway features are consistent with what is shown	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	31	FTW District Standard color coding to be used in Plan and corresponding any other views. <i>i.e if median and pavement are shaded yellow in plan also show on typical.</i>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	32	Show ped and bike accomadations for urban and suburban. For rural show bicycle accomadations.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	33	Show special ditch typical section maintaining acceptable ditch slopes and depths.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Traffic (Plan Portion)	34	Show Average Daily Traffic (ADT) line diagram with Opening year and projected 20 year traffic data (30 yr data not needed)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	35	Show Legend - ADT/DHV (Open year (eg #####)/Design year (eg #####))	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	36	Show - Source of data (for example: Texas Department of Transportation; Transportation Programming and Planning Division Memorandum, Month ##, 20##), % trucks (for both ADT & DHV), K and DD inside traffic diagram block	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	37	At 30% submission, provide existing traffic data and leave a space for projected traffic data.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Horizontal Geometry (Plan Portion)	38	Rebuild from as-built plan and verify with survey for the existing horizontal geometry for frontage road, ramp, DC and mainlane. Label centerline existing facility and stationing (Stationing should increase in value from south to north, west to east).	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	39	Show and label proposed centerlines/baselines for mainline/ramp/DC/FR/x-stra in plan with stationing, PC, PT, and bearings. Show PCs, and PTs with a circle include tic marks at every 100 ft. Tie to existing stationing, if possible.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	40	If there is any in the project, show and label ramps, frontage roads, U-turns, cross streets, railroads and direct connectors centerlines/baselines stationing, PC, PT, and bearings. Show PCs, and PTs with a circle include tic marks at every 100 ft. Tie to existing stationing, if possible.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	41	Show all curve data for all proposed centerlines/baselines alignments in a tabular form in order: proposed centerline/baseline, Curve, PI STA, Coordinates (PI STA - North, PI STA - East), Delta, Radius, Degree, Tangent, Length, Chord Bearing, Chord Length, PC STA, PT STA, in the right side of the plan view.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	42	Provide a superelevation transition table with alignment name, transition begin and end STAs (superelevation transition lengths should be given in round numbers. Follow the FTW District Standard superelevation template).				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	43	Horizontal curve radii must meet required minimum for design speed. If not, a design exception will be required. For freeways use degree of curve to the nearest 15 minutes.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Mainlane (Plan portion)	44	Show North Arrow (with no scale)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	45	Add (light shaded) aerial imagery	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	46	Mark and label beginning and ending stations with: "Begin Project" or "End Project" ; CSJ #; Station; "Match Existing Pavement" or "Match CSJ # By Others"	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	47	Show and label match lines with CSJ # and station, in case of roll.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	48	Use gray scale applicable to reference files	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	49	Show existing driveways (to be reconstructed required at 30% submittal)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	50	Label any portions of roadway to be removed. Cross hatch or shade portions to be removed	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	51	Label streets, cemeteries, buildings, parks, railroads, airports, waterways and known utilities.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	52	Show median openings for highways at street intersections.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	53	Show lane and median widths for non-typical sections widths/configurations	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	54	For all line works, use line styles, font types and sizes matching legend. Existing ROW and DOA should be black. Show shoulders gray.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	55	Callouts at intersections of centerlines and all roadways, station equations				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	56	Provide adequate turn bay lengths (dimension storage, deceleration, and taper lengths) or prepare design waiver. Provide reasonable maximum length at 30% based on the engineering judgement - Be more conservative.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	57	Show cross slopes including superelevation (for super, if any, with begin/end STAs circle mark) with arrow for mainlan/Ramp/FR/x-stra. It can be shown on plan view or superelevation table.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	58	Show and label pavement transitions. Show pavement Striping including matching existng striping at begin/end STAs construction limits.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	59	Show retaining wall location at 30% plan. Show ret. wall begin/end STAs from 60% plan.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	60	Show preliminary noisewall location at 30% plan. Show noisewall begin/STAs from 60% plan after technical report is approved.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>

Mainlane (Plan portion)	61	Show number of lanes using a directional arrow for each lane including turn lanes.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	62	Show and label the beginning and end stations of pavement transitions and tapers				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	63	Provide adequate turning radii for large trucks & buses per design vehicle (eg. WB-67 for Interstate Highway) to locate rail, bridge columns near turnaround (where applicable). Provide separate truck turning templates				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	64	Label signalized intersections				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	65	Show ped and bike accomadations for urban and suburban. For rural, show bicycle accomadations.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	66	Provide ADA curb ramp and crosswalk				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	67	Show existing and proposed major guide signs and label station location. Verify horizontal and vertical clearances. Prepare a separate signing layout for large corridor projects				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
ROW/DOA	68	Show and label proposed and existing ROW				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	69	Show and label any easements (drainage/utility/lanscaping, etc)				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	70	Show and label City/County limit lines (where applicable).	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	71	DOA begin and end points should be labeled with no offsets but stations on schematic.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	72	Provide sufficient ROW at intersections for sidewalks/ADA ramps. Show corner clips if applicable.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	73	Label property owners w/id # in plan. Show property list in a table or indicate in the plan view.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	74	Show and label Access Denial (DOA) at proposed ROW line. <b>Existing ROW and DOA should be black.</b> The existing Access Denial line would be one color and the proposed Access Denial line would be a different color per legend.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Ramps	75	Begin and End Ramp Callout => <b>Ramp/ML/FR stations, offset and gore width</b>				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	76	Ramp elements & callouts - i.e. <b>EB exit ramp</b>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	77	On frontage road, provide recommended 1000' (abs. min. 700') weaving length from tip to tip of intersecting travel lanes between exit and entrance ramps with auxiliary lane. For reference see RDM (May, 2022) pg. 3-74, Research Report 1393-4F pg. 11, TxDOT, TTI 1996.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	78	On mainlane, provide greater than 2000' of weaving length from tip to tip of intersecting travel lanes between entrance and exit ramps on main lanes with auxiliary lane or 3000'-3500'+ without auxiliary lane. Dependent on HCS LOS analysis. For reference see RMD fig 3-36 and AASHTO fig 10-70 and 10-71. Design waiver is required if minimum weaving length values are not met.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	79	Provide adequate taper and deceleration/acceleration lengths for all ramps 700' acceleration, 300' taper width. Check RDM fig. 3-35 for speed change lane, design waiver is required if minimum values are not met.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	80	In frontage road, provide adequate separation distance from ramp/FR intersecting tip to x-street to provide an adequate weave distance. For reference see RDM (May, 2022) pg. 3-74, Research Report 1393-4F, TxDOT, TTI 1996 (Ch 3, Tbl 3-5, 3-6 & 3-7).	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	81	For exit ramps, provide lane add on frontage road (add auxiliary lane 2 lanes minimum on FR upstream ramp) Extend ramp lane to cross street.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	82	Provide superelevation on the table for ramp curve(s) between gores.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
Cross Streets/Arterials	83	Label begin and end construction stations along cross streets.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	84	Provide transition pavement or striping to match existing section.				✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	85	Use intersection curb radius of at least 50' at city streets varifying city design standard and truck turning template.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	86	Provide sidewalks or shared use paths for dedicated bikelane in coordination with local entity for suburban or urban sections. (separate item for bike lane) (Reference: Throughfare plan, TxDOT Memo, RDM bikeway guidance)	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	87	Provide adequate ROW for sight distances; especially if noise walls are being proposed.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>
	88	Show existing and proposed traffic signals.	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>	✓	<input type="checkbox"/>	<input type="checkbox"/>

Bridge Structures	89	Label existing and proposed bridges beginning and ending stations in Plan	✓	☐	☐	✓	☐	☐	✓	☐	☐
	90	Show existing and proposed ped and bike accommodations for urban and suburban. For rural, show existing and proposed bicycle accommodations. For SUP, show rail in typical section	✓	☐	☐	✓	☐	☐	✓	☐	☐
	91	Show Column locations in plan				✓	☐	☐	✓	☐	☐
	92	Provide space in median for columns	✓	☐	☐	✓	☐	☐	✓	☐	☐
	93	Delete hidden lines under the bridges. Dash intersecting roadways or any structure under bridge deck.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	94	Ensure shading on plan view and profile view is consistent with typical sections.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	95	Label vertical clearance in profile for bridge/structure (for RR passing under hwy, 23.5 feet for overpass, 18.5 feet for underpass for freight corridor; 16.5' for overpass/underpass for non-freight corridor). Verify and label vertical clearance for U-turns accordingly.	✓	☐	☐	✓	☐	☐	✓	☐	☐
Driveways	96	Show the length of driveways to construct with reasonable grade. Verify ADA ramp compliance. 12% for residential and 8% for others. See RDM Appendix C pg. C-10 to C-13. (Supplemental submittal, not part of main schematic)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	97	Shade driveways to remain in plan and in legend. Do not show any construction easements.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	98	Cross hatch driveways to be removed	✓	☐	☐	✓	☐	☐	✓	☐	☐
	99	Maintain a clear sight distance. Provide adequate ROW for sight distances. (Remove it, and make it guidance)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	100	Transition of existing pavement structures? Explain or remove. (Check it with side/x-street)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	101	Driveway radius works design vehicle. See RDM Appendix C, pg C-7, C-16, Fig. C-13. (Check it, but do not show it plan)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	102	Cross slope of driveway matches roadway grade at gutter line. (Check it)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	103	Show Bike and ped accommodation per RDM Appendix C section 6.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	104	Maintain cross slope at sidewalk 1.5%. Shared-Use Path cross slope max 1%. See RDM chapter 2 section 6 pg 2-47.	✓	☐	☐	✓	☐	☐	✓	☐	☐
Drainage	105	Provide Preliminary Drainage/Hydraulic analysis report.				✓	☐	☐	✓	☐	☐
	106	Show and label size with intersection STAs of proposed and existing culverts, river or creeks, and also show upstream and downstream water flow direction arrows in plan.				✓	☐	☐	✓	☐	☐
	107	Label intersecting STA, size, and flow line elev of proposed and existing culverts, river or creeks, and respective design yr freq. elev and 100yr freq. elev in profile.							✓	☐	☐
	108	Ensure adequate drainage to outflow creek or storm sewer system can be obtained. Provide in hydraulic analysis report.				✓	☐	☐	✓	☐	☐
	109	Show off-site drainage system (detention/retention/drop inlet/etc) if required. Verify with District Hydraulic Engineer. Show in hydraulic analysis report.				✓	☐	☐	✓	☐	☐
	110	Maintain acceptable ditch slopes and depths. Use special ditch grades that differ from profile grades if necessary (supplemental info). Show in typical section.				✓	☐	☐	✓	☐	☐
	111	Show and dimension existing and proposed drainage easements.				✓	☐	☐	✓	☐	☐
	112	Provide at least 2' cover over existing and proposed drainage structures.				✓	☐	☐	✓	☐	☐
	113	Provide adequate ROW to grade ditches to the flow line of the safety end treatment and provide access to maintain culverts and bridges.				✓	☐	☐	✓	☐	☐
	114	Maintain existing stream/creek/drainage structure(s) onto or from state ROW to ensure water is not being diverted to or from private property. Show exist. drainage structures at 30%. Show complete prop & exist drainage structures at 60% plan.	✓	☐	☐	✓	☐	☐	✓	☐	☐
Profile Portion (Vertical)	115	In the profile grid, label Station (major) @ 500 ft interval on the bottom of grid, and label Elev (major) at left side of grid.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	116	Show proposed elevations (x.xx') and existing elevations (x.x') on reference line at the bottom of grid. Proposed elevations (high wt.) are on the left and existing elevations (low wt.) are on the right.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	117	Follow color code or separate multiple roadway profiles, i.e. in plan color for ML, ramp, gore area, FR, x-str per district preference shown in legend.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	118	All vertical elements for mainlanes centerline to be shown at 30%. Show mainlane centerline profile under the plan view in same roll/sheet. Other roadway profile(s) to be shown on separate profile sheet.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	119	Like in plan, mark and label beginning and ending stations with the following: "Begin Project" or "End Project"; CSJ # with Stations and elevations; "Match Existing Pavement" or "Match CSJ # By Others"	✓	☐	☐	✓	☐	☐	✓	☐	☐
	120	Show and label proposed profile and existing ground profile. Proposed profile line will be high line wt.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	121	Show and label existing ground line at centerline/pgl. For frontage road and other streets, show existing ground line at ROW. Set PGL at FOC and one foot below existing ground at ROW. Create another line for rural section	✓	☐	☐	✓	☐	☐	✓	☐	☐

<b>Profile Portion (Vertical)</b>	122	Show and label VPI with station and elevation. Place VPI's with quarter station increments (even number).	✓	☐	☐	✓	☐	☐	✓	☐	☐
	123	Show proposed grade (high wt) on tangent. Show tying line grade if any. (Prefer no grades less than 0.5% for schematic designs)	✓	☐	☐	✓	☐	☐	✓	☐	☐
	124	Controlling grades on ramps and direct connectors should preferably be 4% or less. 25 to 30 mph - 7% max. 35 to 40 mph - 6% max. 45 mph or greater is 5% max. Table 3-21.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	125	Show and label existing drainage structures.	✓	☐	☐	✓	☐	☐	✓	☐	☐
	126	Show and label proposed bridge with begin/end bridge STAs (matching in plan), show each span length, and bridge depth (sum of bridge deck/slab depth and beam depth).				✓	☐	☐	✓	☐	☐
	127	For bridge, show and label concrete riprap slopes & limits.				✓	☐	☐	✓	☐	☐
	128	Show clearance on proposed structures				✓	☐	☐	✓	☐	☐
	129	Show vertical curve w/ open circles for elements labeled (VPC, VPT) station and elevation. For curve data, show VPI STA, elevation, external distance, K, and length in order. For sag vertical curve, if you have any low point, label LOW POINT, station and elevation.				✓	☐	☐	✓	☐	☐
	130	For ramp/DC/U-turn tying to mainlanes/frontage roads at theoretical gores (painted nose), show begin/end ramp/DC/U-turn STAs, elevations, offsets and gore width at physical gores (gore nose). Show and label spline grade between theoretical and physical gores.				✓	☐	☐	✓	☐	☐
	131	For in any profiles crossing cross street, railroad, frontage road, ramp, direct connector, and U-turn, show intersecting STAs with elevations, if applicable.				✓	☐	☐	✓	☐	☐
	132	For in any profiles crossing, show and label centerlines, and baselines; and show cross sections of cross streets, railroads, frontage roads, ramp, direct connectors, major utilities and culverts/drainage structures. Show intersecting STAs and elevations.				✓	☐	☐	✓	☐	☐
	133	In cases where existing vertical profile is maintained or matched, provide vertical profile data and superelevation data in table format to verify adequate design speed.				✓	☐	☐	✓	☐	☐
	134	Verify ramps tying to main lanes/frontage roads do not create a low point to cause ponding of water or hydroplaning at neutral area between painted nose and physical nose.				✓	☐	☐	✓	☐	☐
	135	Show and label centerlines, baselines and cross sections of cross streets, railroads, frontage roads, ramp, direct connectors, major utilities and culverts to existing ground for items that cross over or under bridges. Show intersecting STAs.				✓	☐	☐	✓	☐	☐
136	No grade break at proposed profile. Verify grade breaks for matching begin/end project are appropriate for design speed. RDM (pg. 2-43 under Grade Change without Vertical Curves). It's desirable to use vertical curves along mainlanes.				✓	☐	☐	✓	☐	☐	
137	Provide cross-sections (for review only)				✓	☐	☐	✓	☐	☐	