Standard	Page	Item	Description/How Changed
1.9.2 B	1-18	Street Construction Policy	Added language describing required minimum easement requirements (Fort Collins only).
1.14 (new)	1-29	Complete Streets in Fort Collins	New section describing implementation of complete streets in Fort Collins
4.1.1	04-01	General	Added language connecting these standards to the City Adequate Public Facilities ordinance
4.1.3	04-01	Capacity and Safety Issues	Minor text update, changed "competing" to "various". Deleted "balanced"
4.1.3 B	04-02	Pedestrian Traffic Considerations	Minor text update, changed "walkway tunnels" to "underpasses". Added clarification when to consider underpasses.
4.1.4 A 3, 4	04-02	Define TIS	Updated cross reference to Sections
4.1.4 C1a1,2,3	04-03	Existing Traffic	Updated cross reference to Sections
4.1.4 C1b1,2	04-03	Background Traffic	Updated cross reference to Sections
4.1.4 C1c1,2,3	04-03	Projected Generated Traffic	Updated cross reference to Sections
4.1.4 C1c4	04-03	Projected Generated Traffic	Deleted redundant language referring to trip distribution and assignment, is stated in 3)
4.1.4 D1a	04-03	Text cleanup references to Loveland and Fort Collins	Added City of Loveland reference reworded reference to Fort Collins
4.1.4 D1b2	04-04	Text cleanup	Deleted unnecessary reference to Loveland and Fort Collins
4.1.4 D1c	04-04	Text cleanup	Updated cross reference to Sections
4.1.4 G1	04-04	Present the Completed TIS	Added language indicating need for copies to be "stamped and signed"

Standard	Page	Item	Description/How Changed
4.1.5 A, B, C, D, E, F, G, H	04-05	Listing of Attached TIS Worksheet	Bolded references
4.2	04-05	Heading update	Changed from "Criteria" to "Study Types"
4.2.1 A	04-06	Text clarification	Added text about the type and level of study determination under Purpose of the Scoping Meeting
4.2.1 B 3	04-06	Meeting Setup and Content	Text clarification
4.2.1 C	04-07	Results of Meeting	Added language for type of study
4.2.1 C 8	04-07	Results of Meeting	Added bullet for details on information to be provided for signalized intersections for analysis.
4.2.2 A	04-07	Clarifies type of TIS	Adds specific type of updates "Full, Intermediate or Memorandum"
4.2.2 B	04-07	Related to type of study	Deleted section B. as the added language in section A is more specific and detailed.
4.2.3	04-07	Related to type of study	Deletes section 4.2.3 which becomes subsection to 4.2.2 simplifying the language about type of study
4.2.2 B	04-07	Updated formatting and bullets	Becomes section B under 4.2.2
4.2.2 B 1,2,3	04-07, 08	Updated formatting and bullets, text changes	Clarifies requirements for Full TIS, drops requirements for Pedestrian Traffic and Bicycle Traffic
4.2.2 C 1,2,3,4,5	04-08	Updated formatting and bullets, text changes	Clarifies requirements for Intermediate TIS
4.2.2 D 1,2,3,4,5	04-08, 09	Updated formatting and bullets, text changes	Clarifies requirements for Transportation Memorandum
4.2.2 E 1,2,3,4,5,6,7,8,9 ,10	04-09, 10	Updated formatting and bullets, text changes	Clarifies requirements for No TIS Required.

Standard	Page	Item	Description/How Changed
4.2.5	04-11	Updated section number, text edit	Changes to Section 4.2.3, clarifies when revisions and updates are required, with specific percentages and trip requirements
4.3.2 B	04-11	Updates to Short Range Horizon definition	Deletes specific language to City of Loveland and City of Fort Collins, deletes the analysis horizon of 5 year (for Fort Collins) simplifies language to be one year
4.3.2 C	04-12	Long Range Horizon	Changes "errors" to "discrepancies"
4.3.3.	04-12	Text update	Changes requirement of establish study are to apply to all updates not just Full TIS.
4.3.3. A 1	04-12	Master TIS	Added reference to include intersections
4.3.3. A 2,3	04-13	Master TIS	Added new bullet for Fort Collins only referring to offsite arterial and collector roadways. Updates numbering due to new bullet.
4.3.3. B 6,7	04-13	Full TIS	Added new bullet for Fort Collins only referring to offsite arterial and collector roadways. Updates numbering due to new bullet.
4.3.3. C 4,5	04-13	Intermediate TIS	Added new bullet for Fort Collins only referring to offsite arterial and collector roadways. Updates numbering due to new bullet.
4.3.4 A	04-14	Text updates	Changes reference of "zoning" to "development", clarified language to be consistent with type of Study
4.3.4 A 1,2,3,4,5,6,7,8,9	04-14	Formatting and bullets	
4.3.4 B	04-15	Full TIS	Changed reference from "project impact assessment" to "Full TIS" to avoid confusion
4.3.4 B 2,3	04-16	Full TIS	Added bullet to require adherence to adopted planning documents, updated numbering due to new bullet.
4.3.4 B7	04-18	Full TIS	Added "driveway" as part of consideration for sight distance evaluations
4.3.4 B 13	04-18	Full TIS	Updated bullet to not just apply to Loveland and added clarifying language

Standard	Page	Item	Description/How Changed
4.3.4 C 1,2,3,4,5,6,7,8,9 ,10,11,12,13,14, 15	04-16	Text edit, formatting and bullets	Moved reference of no requirement for Long Range Horizon analysis from bullet 1, renumbered the rest of the items under section C
4.3.4 C 2	04-18	Intermediate TIS	Added bullet to require adherence to adopted planning documents, updated numbering due to new bullet.
4.3.4 C 7	04-20	Intermediate TIS	Added "driveway" as part of consideration for sight distance evaluations
4.3.4 C 8	04-20	Intermediate TIS	Added bullet to include multi-modal and TDM opportunities, updated numbering due to new bullet.
4.3.4 C 13	04-20	Intermediate TIS	Updated bullet to not just apply to Loveland and added clarifying language
4.3.4 D 1,2,3,4,5,6,7,8,9	04-16, 17	Text edit, formatting and bullets	Moved reference of no requirement for Long Range Horizon analysis from bullet 1, renumbered the rest of the items under section C
4.3.4 D1	04-20	Traffic Memorandum	Bolded table references
4.3.4 D 2	04-20	Traffic Memorandum	Added clarification to include intersection level of service requirement
4.3.4 D 5	04-21	Traffic Memorandum	Added driveway to be included for sight distance evaluations
4.3.4 D7	04-21	Traffic Memorandum	Updated text, clarified requirements
4.3.4 D 8	04-21	Traffic Memorandum	Clarified items to be requested by Scoping Meeting
4.4	04-21	Heading change	Changed heading from Traffic Volumes to Traffic Analysis
4.4.2	04-21	Updated section numbering	Updated section number from 4.4.1 to 4.4.2

Standard	Page	Item	Description/How Changed
4.4.2 A	04-21	Roadway Traffic Volumes	Added text clarifying volumes should be no more than one year old "unless otherwise approved by Local Entity"
4.4.2 B 1,2	04-19	Intersection level of service	Clarified requirements for conducting intersection level of service
4.4.3	04-22	Updated section numbering	Updated section number from 4.4.2 to 4.4.3
4.4.3 A	04-22	Short range volume projections	Text update, deleted "Full" to clarify type of TIS
4.4.3 A	04-23	Short range volume projections	Minor text edit deleting reference to 5 year horizon for short range year
4.4.4	04-21	Updated section numbering	Updated section number from 4.4.3 to 4.4.4
4.4.4 A	04-21	Trip generation rate	Added clarification to use data based on local data as approved by Local Entity Engineer
4.4.4 E	04-25	Adjustments to Trip Generation	Added text for adjustments to be agreed on at Scoping Meeting
4.4.4 E 1	04-25	Adjustments to Trip Generation	Changed "will" to "may"
4.4.4 E 3	04-26	Adjustments to Trip Generation	Added new bullet to detail mode split requirements
4.4.5	04-23	Updated section numbering	Updated section number from 4.4.4 to 4.4.5, for Fort Collins only deleted text that references traffic volume thresholds for street classifications
4.5.2 A 1,2,3	04-25	Criteria for vehicular impacts from proposed project	Cleaned up text for determination for signalized intersections, with reference to Table4-3
4.5.2 B 1,2,3	04-25	Criteria for vehicular impacts from proposed project	Cleaned up text for determination for unsignalized intersections, with reference to Table4-3
4.5.3.A.2	04-23	Updated LOS for State Highways	For Loveland only Updated LOS for State Highways in Table 4-1 as adopted in the 2035 Transportation Plan (2035 Transportation Plan page 31)

Standard	Page	Item	Description/How Changed
4.5.3.A3	04-24	Updated LOS for State Highways	For Loveland only Updated LOS for State Highways in Table 4-2 as adopted in the 2035 Transportation Plan (2035 Transportation Plan page 31)
Table 4-3	04-28	Updates to table	Updates to table simplifying criteria and thresholds to be used
4.5.3 A 4	04-30	Access spacing	Added text about how to handle multiple adjacent roadways, for driveway access.
4.5.3 A 4 g	04-29	Access spacing	Added item referencing access spacing for Fort Collins to be found in Table 7-3
4.5.3 A 5 a	04-32	Traffic signals	Minor text update "effected" to "affected"
4.6.6	04-34	Geometric Improvements	Clarified design standards to be found in Chapter 8
4.6.7	04-34	Variances	New section referring to variance process in Section 1.9.4
Attachment C	04-45	Under proposed use on worksheet	Deleted reference to 2020 transportation plan, instead added reference to "current" transportation plan
7.1.1	07-01	Conforming to Standards and Master Plan	Added clarification as to what type of plan documents must be conformed to
7.2.2 A	07-02	Conforming to Standards and Master Plan	Deleted reference to 2020 transportation plan, instead added reference to "current" transportation plan
7.2.2 C	07-02	Master Planned Arterial and Major Collector Streets	Fixed bullet C. New Streets, which was not properly bulleted
7.4.1 A 2	07-04	Horizontal alignment, tangent length	Clean up references to minimum tangent length in regards to intersections.
CH 7 Table 7-1	07-06	Fort Collins Street Standards	Remove Continuity item in table.
CH 7, Table 7-1	07-06	Fort Collins Street Standards	Added column for "Modified 4-lane Arterial", Updated Bike Facility parameters to included buffered and protected bike lane, added notes for clarification of each

Standard	Page	Item	Description/How Changed
CH 7, Table 7-1	07-06	Fort Collins Street Standards	Deleted "Traffic Volume Capacity" row to be consistent with updated cross-section figures
7.4.1 B 1	07-13	Vertical alignment, max and min grades	Added sentence to refer to ADA requirements
7.4.1 B 3	07-13	Vertical alignment, grade breaks	Added sentence detailing 25 foot minimum spacing requirement between breaks
7.4.1 B 4	07-13	Vertical alignment, vertical curves	Added sentence about grade changes and beginning or end of vertical curves.
7.4.1 B 4 c	07-14	Vertical alignment, vertical curves, sump sag curves	Added sentence detailing requirements for grade into and out of an inlet.
7.4.1 B 8	07-15	Vertical alignment, vertical curves, off-site continuance	Added text detailing that the centerline and flowline shall continue.
7.4.1 D (new)	7-17	Interim Pavement Edge	Added new subsection detailing requirements for interim pavement edge where curb and gutter are not yet installed or where the full street widening is not being constructed.
7.9.3	07-26	Bus Stops	Added reference to Bus Stop Design Guidelines (to be new Appendix)
7.9.3 A	07-26	Bus Stops Approach Leg	Updated paragraph aligning criteria with new Bus Stop Design Guidelines
7.9.3	07-26	Bus Stops Departure Leg	Updated paragraph aligning criteria with new Bus Stop Design Guidelines
CH 7, Fig 7-1F	07-24	6-Lane Arterial cross-section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer, changed notes to reflect change.
CH 7, Fig 7-2F	07-26	4-Lane Arterial cross-section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer, changed notes to reflect change.
CH 7, Fig 7-3F	07-28	2-Lane Arterial cross-section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer, changed notes to reflect change.
CH 7, Fig 7-4F	07-30	Major Collector cross- section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer, changed notes to reflect change.

Standard	Page	Item	Description/How Changed
CH 7, Fig 7-5F	07-32	Minor Collector cross- section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer, changed notes to reflect change.
CH 7, Fig 7-6F	07-34	Commercial Local cross- section and notes	Updated cross-section to incorporate recommendations from the 2014 Bike Plan. Overall ROW width and roadway width remained the same, reduced lane widths and added bike lane buffer from on-street parking, changed notes to reflect change.
CH 7, Fig 7-7F	07-36	Industrial Local notes	Updated text in "Where used" note
CH 7, Fig 7-8F	07-38	Connector Local notes	Updated text in "Where used" note
CH 7, Fig 7-9F	07-40	Residential Local notes	Updated text in "Where used" note
CH 7, Fig 7-24	07-62	Widening detail	Change W = 24' to 34" to W= 30' to 36"
CH 7, NEW Fig (Fort Collins only)	07-XX	4-Lane Modified Arterial	New figure representing a 4-lane modified arterial cross-section utilized in areas with constrained right-of-way situations and after review and approval of the City Engineer.
8.2.2	08-01	Lane alignment	Clarified language about general alignment and when a 2-foot shift is allowed.
8.2.3	08-01	Angle of intersection	Added "New" to the start of the first sentence
Table 8-2	08-05	Curb return radii	Added "Minimum" to "Curb Return Radii"
9.1.1 A	09-01	Placement of Accesses, direct access restricted	For Fort Collins only removed reference to Collectors.
9.1.2 B	09-01	Review and approval, new developments	Heading change from "Approval for New Developments" to "Approval"
9.1.2 C	09-02	Review and approval, existing developments	Change to relate to City of Loveland only
9.2.3 C	09-03	Arterials, public direct access requirements	Change minimum spacing from 660 to 460

Standard	Page	Item	Description/How Changed
9.3.2 A 1	09-06	Layout criteria, high volume access	Updated section to clarify requirements
9.3.2 B	09-06	Layout criteria, low volume access	Updated section to clarify requirements
9.3.7	09-08	Residential approaches	Changed references to construction drawings
9.3.7 H	09-09	Residential approaches, garage door locations	Added reference about public streets and alleys.
9.4.11 B	09-11	Drainage, sheet flow	Added reference to the maximum area allowed to flow over sidewalk.
Chapter 14, Table of Contents	14-ii	Chapter 14 – Table of Contents, List of Figures	Revised Table of Contents for Chapter 14 to indicate that this chapter does not contain figures.
14.2.1.1	14-1	Traffic Signal Design Requirements	Clarified traffic signal design requirements for CDOT highways and city streets not on the state highway system
14.2.1.1.A	14-1	Special Requirements for Loveland	Clarified special requirements and hardware to be consistent with current practices
14.3.1.E.5	14-5	Breakaway Post System	Changed from CDOT specification to the Local Entity's Specifications
14.3.1.F	14-5	Sign Reflectivity	Clarified reflective materials to be diamond grade
14.3.2.A	14-5	Street Name Signs	Changed sign sizes and text
14.3.2.B.2	14-7	Stop Signs	Changed "shall" to "should"
14.3.3.A	14-7	Design and Size	Added the word "warning" and changed sign size from 36-inches to 36" x 36"
14.3.3.C	14-7	Regulatory Signs	Updated text to be consistent with current practices

Page	Item	Description/How Changed
14-8	Warning Signs	Updated text to be consistent with current practices
14-9	Roundabouts	Deleted all previous text and instead added "See Roundabout Design Guidelines Appendix I"
14-10	Pavement Markings	Updated pavement marking text to add clarification and to be consistent with current practices
14-11	Striping	Updated text to add clarifications. Also added text pertaining Retro-reflectivity
19-4	Striping	Clarified that all parking lines in center islands shall be 125 mils Thermoplastic painted white.
19-5	Striping	Clarified that in Cul-de-Sac 4" Thermoplastic can be used in lieu of curbs.
19-6	Striping	Clarified that all parking lines in center islands shall be 125 mils Thermoplastic painted white.
22-48	Traffic Control Signs	Clarified Diamond grade sheeting.
22-48	Crosswalk Signs	Clarified placement of W16-7P sign
22-49	General	Removal of existing markings required prior to new installations on chip seals
22-49	Striping	Latex waterborne paint on concrete pavement instead of epoxy
22-50	Pre-striping	Formatting
22-50	Layout and Tab Installation	Changed from 50 foot tab spacing to 25 foot tab spacing
22-50	Materials	Changed from 150 mil to 125 mil. Also clarified a 2 part primer
	14-8 14-9 14-10 14-11 19-4 19-5 19-6 22-48 22-49 22-49 22-50 22-50	14-8Warning Signs14-9Roundabouts14-10Pavement Markings14-11Striping19-4Striping19-5Striping19-6Striping22-48Traffic Control Signs22-49General22-49Striping22-50Pre-striping22-50Layout and Tab Installation

Standard	Page	Item	Description/How Changed
22.6.2.E.3.d	22-50	Crosswalks	Added text indicating the concrete surface cure shall be removed. Also clarified using a 2 part primer
22.6.2.E.3.f	22-51	Bike Lanes	Bike symbols to be placed 10 feet downstream from intersection instead of 50 feet
16.11.4 B	16-06	Pad Requirements (bus)	Added reference for pad sizes in Bus Stop Design Guidelines (to be new Appendix J)
Appx A, Drawing 801		Raised Median Geometry	Clarified that blockout for sign post shall go to subgrade. Added dimension for location of blockout for sign post.
Appx A, Drawing 802		Splitter Island	Clarified that blockout for Safe Hit delineator shall go to subgrade
Appx A, Drawing 1401		Sign Post	Clarified sign post sleeve depth (4 to 6" below grade), size (5"), cutoff at surface and the use of sand as fill material.
Appx A, Drawing 1404a &1404b		Turn Lane Pavement Markings	Clarified location of Bike Lane markings and added T intersection details.
Appx A, Drawing 1410		Bike Lane approaching Right Turn Lane	Clarified Bike Lane width and removed metric conversion.
Appx A, Drawing 1411		Street Name Sign	Clarified sign thickness and material. Clarified text styles and dimensions.
Appx A, Drawing 1412		Roundabout Sign Details	Deleted Drawing since roundabout sign details Appendix I Roundabout Design Manual supersede.
Appx A, Drawing 1413		Temporary Dead End Barricades	Clarified 4' maximum spacing of posts. Clarified posts shall be 2" Telespar square tubing sleeved or core drilled into pavement surface.
Appx A, Drawing 1415		Safe Hit	Clarified to extend closed end post to be 1" above surface
Appx A, Drawing 1416L		Speed Tables	Clarified signing and striping for speed tables in Loveland.
Appx A, Drawing 1417L		Raised Crossings	Clarified signing and striping for raised crossings in Loveland

Standard	Page	Item	Description/How Changed
Appx A, Drawing 1418		Fire Access Road Signs	Removed "By Order of the Fire Marshal" text and added arrows to Fire Lane sign
Appx A, Drawing 1420		Enlongated Arrows	Clarified enlongated arrow materials and added reference to new Appendix K - Loveland Thermoplastic Standards for Loveland.
Appx A, Drawing 1421	New	Rectangular Rapid Flashing Beacon	Added new drawing for Rectangular Rapid Flashing Beacons.
Appx A, Drawing 1609L		Raised Speed Table	Moved Raised Pedestrian Crossing detail to ne Drawing 1609aL. Removed tread plate and widened asphalt milling to 4' for Raised Speed Table in Loveland.
Appx A, Drawing 1609aL		Raised Pedestrian Crossing	Added new drawing for Raised Pedestrian Crossing in Loveland.
Аррх I	10	Marking	Clarified language about inlaid pavement markings. Also included crosswalks to the pavement markings language
Appx I, Figure 1	12	Figure 1 – Roundabout Terminology	Removed "ONLY" pavement markings on roundabout approaches to clarify lane utilization
Appx I, Figure 5	16	Figure 5 – Construction Details	Changed mountable truck curb height from 4" to 3 ½". Changed truck apron concrete to 8" min. at 4,000 psi. Changed truck apron slope to 1% - 2% instead of 4% - 6%.
Appx I, Figure 8	19	Figure 8 – Standard Signing	Changed R3-8 sign size to 30"x30" from 36"x36". Changed W16-7P sign size to 24"x12" from 24" x 18". Changed R3-16a sign size to 18"x24" from 24"x30".
Appx I, Figure 9	20	Figure 9 – Standard Signing (continued)	Changed General Note 6 to 18" min. clearance from 2.0' min. clearance. Clarified R3-8 and R3-8a signs are for multiple lane approaches. Discuss eliminating W3-2A Yield Ahead sign w/ supplemental "YIELD AT ROUNDABOUT" plaque.
Appx I, Figure 10	21	Figure 10 – 4 Lane by 4 Lane Arterial	Removed "ONLY" pavement markings on roundabout approaches to clarify lane utilization. Clarification added on application of inlayed thermoplastic linear lines. Striping Legend Note 3 changed to 3' w/ 3' gap. Note 5 changed to 6' w/ 6' gap. General Striping Note 5 changed grinding depth to 125 mils from 120 mils.
Appx I, Figure 12	23	Figure 12 – 2 Lane by 4 Lane Arterial with Bypass Lane	Clarification added on application of inlayed thermoplastic linear lines. Striping Legend Note 3 changed to 3' w/ 3' gap. Note 5 changed to 6' w/ 6' gap. General Striping Note 5 changed grinding depth to 125 mils from 120 mils.
Appx I, Figure 13	24	Figure 13 – 2 Lane by 2 Lane Arterial	Clarification added on application of inlayed thermoplastic linear lines. Striping Legend Note 3 changed to 3' w/ 3' gap. Note 5 changed to 6' w/ 6' gap. General Striping Note 5 changed grinding depth to 125 mils from 120 mils.
Appx I, Figure 14	25	Figure 14 – Collector	Clarification added on application of inlayed thermoplastic linear lines. Striping Legend Note 3 changed to 3' w/ 3' gap. Note 5 changed to 6' w/ 6' gap. General Striping Note 5 changed grinding depth to 125 mils from 120 mils.

Standard	Page	Item	Description/How Changed
Appx I, Figure 15	26	Figure 15 – Mini	Clarification added on application of inlayed thermoplastic linear lines. General Striping Note 5 changed grinding depth to 125 mils from 120 mils. Fixed cropping issue with figure.
Appx I, Figure 15	27	Figure 16 – Residential Compact	Clarification added on application of inlayed thermoplastic linear lines. General Striping Note 5 changed grinding depth to 125 mils from 120 mils. Fixed cropping issue with figure.
Appx J, Drawing 711		Bus Bay and Stop Standard General	
Appx J, Drawing 711A	New	Bus Bay and Stop Standard Type I Standard	
Appx J, Drawing 711B	New	Bus Bay and Stop Standard Type II Standard	
Appx J, Drawing 711C	New	Bus Bay and Stop Standard Type III Standard	
Appx J, Drawing 711D	New	Bus Bay and Stop Standard Type III Constrained	
Аррх К	New	Loveland Pavement Markings Layout Standards	This appendix incorporates Loveland Pavement Markings Layout Standards into the LCUASS. These standards provide detailed guidance for pavement marking layout in Loveland.
Appx L	New	Loveland Thermoplastic Standards	This appendix incorporates Loveland Thermoplastic Standards into the LCUASS. These standards provide detailed guidance for the dimensions of Thermoplastic in Loveland.