TECHNICAL DOCUMENTS

SH 130 SEGMENTS 5 AND 6 FACILITY

Between

Texas Department of Transportation

and

SH 130 Concession Company, LLC

Dated March 9, 2007

1.1 General Requirements

(a) Following is a list of Technical Documents that are incorporated into the FCA Documents. These Technical Documents are listed below with a designation of "As-is" or "Errata " "As-is" indicates that the Technical Document be included in FCA Documents in its entirety. "Errata" indicates that portions of the Technical Document are modified or excluded from the FCA Documents through errata sheets. The errata sheets are included as part of this Section.

(b) When a listed Technical Document refers to an activity that "must," "shall" or "should" be done or "is" done, Developer shall presume those activities are mandatory for Developer to perform.

(c) All references in a listed Technical Document to "should" shall mean "shall".

(d) All references in a listed Technical Document to the "Engineer", "District personnel", or "District" shall mean Developer All references in a listed Technical Document to "ROW Division personnel", "ROW Division Director", "TxDOT personnel", Director of the ROW Division, and other similar TxDOT employees or titles involved in ROW acquisition shall mean Developer and its authorized agents.

(e) No changes have been made to provisions in the Technical Documents that do not apply to CDAs, but that provide general information (e.g., descriptions of TxDOT procedures); however, in some cases it may not be clear whether rights or responsibilities are applicable to Developer. If it is unclear whether specific provisions in the Technical Document are applicable to Developer, Developer shall raise the issue with TxDOT and TxDOT shall make that determination in its sole discretion.

(f) For order of precedence in the case of conflicting provisions, refer to Section 1.2 of the Agreement.

(g) For the procedure by which Developer may apply for Deviations from Book 3, refer to Sections 7.1.2 and 8.1.2 of the Agreement.

(h) For the edition of the Technical Document that applies, refer to Sections 7.1.2, 8.1.2, 12.1.1.3 and 12.1.2.2 of the Agreement.

1.2 List of Technical Documents

Technical Documents "As-is"

Technical Document Title (by Subject)
General
National Electric Code
ADA/TAS Standards
Railroad
AREMA Manual for Railway Engineering
Union Pacific Railroad (UPPR) Guidelines for Design of Highway Separation Structures Over Railroad (Overhead Grade Separation)
UP/BNSF Common Standards
UPRR Engineering Track Standards
UPRR Guidelines for Design of Grade Separation Underpass Structures

Technical Documents "As-is" (Continued)
Roadway
AASHTO Guide for Design of Pavement Structures
TxDOT Standard Tex-1001-S Operating Inertial Profilers and Evaluating Pavement Profiles
TxDOT Pavement Management Information System Rater's Manual
ASTM E 274 Standard Test Method for Skid Resistance Testing of Paved Surfaces
ASTM E 524 Specification for Standard Smooth Tire for Pavement Skid Resistance Tests
Drainage
FHWA Bridge Deck Drainage Systems
Operations
TxDOT Herbicide Manual
TxDOT Roadside Vegetation Manual
Traffic
TxDOT Standard Sign Designs for Texas
TxDOT Sign Crew Field Book
TxDOT Interface Control Document - DRAFT
TxDOT Standards for Open Road Toll Collection Systems- DRAFT
Texas Manual on Uniform Traffic Control Devices (TMUTCD)
TRB Highway Capacity Manual
ASTM E 1710 Standard Test Method for Measurement of Retroreflective Pavement Marking Materials
Structural
National Bridge Inspection Standards (NBIS) of the CFR, 23 Highways – Part 650
TxDOT Guidelines for Analysis and Abatement of Highway Traffic Noise
TxDOT Bridge Railing Manual
ACI Building Code Requirements for Structural Concrete (318-99) and Commentary (318R-99)
International Building Code
AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals
ANSI/AASHTO/AWS-D1.5M/D1.5 202 Bridge Welding Code
Right-of-Way and Survey
TxDOT Right of Way Manual
TxDOT Survey Manual
TxDOT Appraisal and Review Manual
TxDOT Access Management Manual
TxDOT GPS Users Guide
Uniform Standards of Professional Appraisal Practices (USPAP)
FHWA Real Estate Project Development Guide
Environmental
ASTM E-1527 Standard Practice for Environmental Assessments, Phase 1 Environmental Assessment Practices
ASTM E-1528 Standard Practice for Environmental Assessments: Transaction Screen Process
US Army Corps of Engineers Wetlands Delineation Manual
Protocol for Historic Properties Identification, Evaluation, and Treatment for SH 130 Project
Protocol for Historic Properties Identification, Evaluation, and Treatment for SH 130 Project Amendment 1

Technical Documents with "Errata"

Technical Document Title (by Subject)	Refer to Page Number:
General	
TxDOT Project Development Process Manual	1
Roadway	
AASHTO A Policy on Geometric Design of Highways and Streets	2
AASHTO Roadside Design Guide	4
NCHRP Report 350 – Recommended Procedures for the Safety Performance Evaluation of Highway Features	5
TxDOT Plans, Specifications and Estimates Preparation Manual	6
TxDOT Roadway Design Manual	7
Railroad	
TxDOT Traffic Operations Manual - Railroad Operations Volume	13
Geotechnical	
TxDOT Geotechnical Manual	15
Drainage	
TxDOT Hydraulic Design Manual	16
Traffic	
TxDOT Highway Illumination Manual	18
TxDOT Traffic Signals Manual	21
Structural	
AASHTO Standard Specifications for Highway Bridges	23
TxDOT Bridge Design Manual	24
Operations & Maintenance	
Texas Reference Marker (TRM) System Users Manual	26
Utilities	
TxDOT Utility Manual	28
Environmental	
TxDOT Environmental Manual	31

ERRATA FOR THE
TxDOT Project Development Process Manual, August 2003

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Preface
Delete

Chapter 1
Delete

Chapter 2
Delete

Chapter 3
Delete

Chapter 4 – Right of Way Utilities

Section	Subheading	Modification
1		Retain
2		Retain
3		Retain
4		Delete

Chapter 5
Delete

Chapter 6
Delete

ERRATA FOR THE
AASHTO A Policy on Geometric Design of Highways and Streets, 5th edition

General
See Section 1.1 above.

Specific Modifications

Preface
Delete

Foreword
Delete

Chapter 1 – Highway Functions
Delete

Chapter 2 – Design Controls and Criteria
Delete entire chapter, except retain:

Section	Subheading	Modification
	Design Vehicles	Retain Exhibits 2-1 – 2-23

Chapter 3 – Elements of Design
Delete entire chapter, except retain:

Section	Subheading	Modification
	Widths for Turning Roadways	Retain Exhibit 3-50
	Sight Distance at Undercrossings	Retain

Chapter 4 – Cross Section Elements
Delete

Chapter 5 – Local Roads and Streets
Delete

Chapter 6 – Collector Roads and Streets
Delete

Chapter 7 – Rural and Urban Arterials
Delete

Chapter 8 – Freeways
Delete

Chapter 9 – Intersections

Delete entire chapter, except retain:

Section	Subheading	Modification
	Types of Turning Roadways	Delete text Retained Exhibits 9-19 through 9-28
	Island Size and Designation	Retain the first two paragraphs of this section Retain Exhibits 9-37 and 9-38.
	Intersection Sight Distance	Retain text and exhibits pp. 650-677

Chapter 10 – Grade Separations and Interchanges

Delete entire chapter, except retain:

Section	Subheading	Modification
Ramps		Retain figures A2, B1 and B2 in Exhibit 10-52, Exhibit 10-68, Exhibit 10-70, Exhibit 10-71, Exhibit 10-72, Exhibit 10-73, figure B in Exhibit 10-76

ERRATA FOR THE
AASHTO Roadside Design Guide, 3rd Edition

General
See Section 1 1 above.

Specific Modifications

Chapter 1 – Introduction
Delete

Chapter 2 – Roadside Safety and Economics
Delete

Chapter 3 – Roadside Topography and Drainage Features
Delete

Chapter 4 – Sign, Signal, and Luminaire Supports, Utility Poles, Trees, and Similar Roadside Features
Delete

Chapter 5 – Roadside Barriers
Delete

Chapter 6 – Median Barriers
Delete

Chapter 7 – Bridge Railings and Transitions
Delete

Chapter 8 – Barrier End Treatments and Crash Cushions

Section	Subheading	Modification
All		Replace all text with "All barrier end treatments and crash cushions must meet NCHRP Report 350 evaluation criteria."

Chapter 9 – Traffic Barriers, Traffic Control Devices, and Other Safety Features for Work Zones

Section	Subheading	Modification
All		Replace all text with "All traffic barriers, traffic control devices and other safety features for work zones must meet NCHRP Report 350 evaluation criteria." Table 9.1 shall be used for clear-zone widths for work zones.

Chapter 10 – Roadside Safety in Urban or Restricted Environments
Delete

Chapter 11 – Erecting Mailboxes on Streets and Highways
Delete

Appendices A through E
Delete

ERRATA FOR THE
NCHRP Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features

General
See Section 1.1 above.

Foreword
Delete

Summary
Delete

Chapter 1 – Introduction
Delete

Chapter 2 – Test Parameters
Retain

Chapter 3 – Test Conditions

Section	Subheading	Modification
All		Retain with the following modifications: • Delete Section 3.1 – General • Revise footnote "a" in Table 3.1 to read "Test is optional."

Chapter 4 – Data Acquisition
Retain

Chapter 5 – Evaluation Criteria
Retain

Chapter 6 – Test Documentation
Retain

Chapter 7 – Implementation and In-Service Evaluation
Delete

Appendix A-J
Delete

ERRATA FOR THE
TXDOT PS&E Preparation Manual, April 2005

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1 – Preassembly Activities
Delete

Chapter 2 – Plan Set Development

Section	Subheading	Modification
1		Delete
2		Delete
3		Delete
4	Overview	Delete
4	Drafting Conventions	Retain
4	Annotation Conventions	Retain
4	Design Files	Retain
4	File Management	Delete
4	Plotting Guidelines	Delete
4	General Plotting Guidelines	Delete
4	Local Plotting on the Current Network in Use	Delete
5		Delete

Chapter 3 – Specifications
Delete

Chapter 4 – Plans Estimate
Delete

Chapter 5 – PS&E Submissions and Processing
Delete

Chapter 6 – Pre-Letting and Post-Letting
Delete

Chapter 7 – Local Public Agency Let Projects
Delete

ERRATA FOR THE
TxDOT Roadway Design Manual, October 2005

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1

Section	Subheading	Modification
1	Application of Design Guidelines	Delete
1	External Reference Documents	Delete
2	Design Exceptions	Delete
3	Schematic Layouts	Delete (Developer should identify in FIP)
4	Additional Access to the Interstate System	Delete
5	Preliminary Design Submissions	Delete
6	Maintenance Considerations in Design	Delete

Chapter 2

Section	Subheading	Modification
2	Traffic Volume	Delete
2	Traffic Speeds	Delete "Design Speed" article
3	Sight Distance	Delete entire section, except for Table 2-1 and Table 2-2
4	General Considerations for Horizontal Alignment	Delete
4	Curve Radius	Delete
4	Superelevation	Delete text, retain Figure 2-1, Figure 2-2 (US Customary), Table 2-5 (US Customary), Table 2-6 (US Customary), Table 2-8, and Figure 2-3 (US Customary)
4	Sight Distance on Horizontal Curves	Delete text, retain Figure 2-4 (US Customary)
5	Overview	Delete

5	Grades	Delete except for Figure 2-5. Also retain Figure 2-7 and Figure 2-9 for crossing roadways.
5	Vertical Curves	Delete
5	Grade Change Without Vertical Curves	Change to read "Designing a sag or crest vertical point of intersection without a vertical curve are acceptable where the grade difference (A) is: • 1 0 percent or less for design speeds equal to or less than 45 mph • 0 5 percent or less for design speeds greater than 45 mph."
5	Combination of Horizontal and Vertical Alignment	Delete
6	Cross Sectionals Elements	Replace section with the following: "Where guardrail is placed on side slopes, the area between the roadway and barrier should be sloped at 1V:10H or flatter. All crossing roadways shall have a minimum pavement cross-slope of 2%"
7	Overview	Delete
7	Introduction	Replace text with following: "In designing drainage systems, the primary objective is to properly accommodate surface run-off along and across highway right-of-way through the application of sound hydraulic principles. Consideration must also be given to incorporating safety into the design of drainage appurtenances. The best design would efficiently accommodate drainage and be traversable by an out-of-control vehicle without rollover or abrupt change in speed. To meet safety needs, the designer shall use one of the following treatments, listed in order of priority: • Design or treat drainage appurtenances so that they will be traversable by a vehicle without rollover or abrupt change in speed. • Locate appurtenances a sufficient distance, consistent with traffic volume, from the travel lanes so as to reduce the likelihood of accidental collision. • Protect the driver through installation of traffic barrier shielding appurtenances."
7	Design Treatment of Cross Drng. Culvert Ends	Delete
7	Parallel Drainage Culverts	Replace text with following: "The inlet and outlet points of culverts handling drainage parallel to the travel lanes, such as at driveways, side roads, and median crossovers, are concerns in providing a safe roadside environment. The following requirements apply to driveway, side road, and median crossover drainage facilities: • Within the horizontal clearance, there shall be no culvert headwalls or vertical ends. Outside the horizontal clearance, single pipe ends shall be sloped. • Where used, sloped pipe ends shall be at a rate of 1V:6H or flatter. The sloping end may be terminated and a vertical

		section introduced at the top and bottom of the partial pipe section as shown in Figure 2-16. • Median crossover, side road, and driveway embankment slope shall be 1V:6H maximum steepness, within the horizontal clearance dimensions. • Where large (greater than 30 inches in diameter) pipe ends are located within the horizontal clearance, safety pipe runners shall be provided with a maximum slope steepness of 1V:8H. Typical details for a driveway, side road, or median crossover grate are shown in Figure 2-17. Grates are not required on single, small (30 inches or less diameter) pipes regardless of end location with respect to horizontal clearance requirements; however, the ends of small pipes shall be sloped as described above and appropriate measures taken to control erosion and stabilize the pipe end. • The use of paved dips, instead of pipes, is encouraged particularly at infrequently used driveways such as those serving unimproved private property.
7	Side Ditches	Replace text with the following: "For side ditches, attention to cross section design can reduce the likelihood of serious injuries during vehicular encroachments. Ditches with the cross sectional characteristics defined in Table 2-14 shall be used when ditch location is within the horizontal clearance requirements. Where conditions dictate, such as insufficient existing right-of-way to accommodate the preferred ditch cross section or where ditches are located outside the horizontal clearance requirements, other ditch configurations may be used following consultation with TxDOT. Typically, guardrail is not necessary where the preferred ditch cross sections are provided. Ditches that include retards to control erosion shall be avoided inside the horizontal clearance requirements and shall be located as far from the travel lanes as practical. Nontraversable catch or stilling basins shall also be located outside the horizontal clearance requirements " In Table 2-14, eliminate the word "Preferred" in each occurrence.
8	Roadways Intersecting Department Projects	Replace text with the following: "Roadways that intersect or tie into a facility which Developer is constructing shall improve or retain the existing geometry of the intersecting roadway. Existing geometry will include all cross sectional elements. The definition of intersecting roadways excludes driveways."

Chapter 3

Section	Subheading	Modification
1	Overview	Delete
2	Urban Streets	Delete
3	Suburban Roadways	Delete

4	Two-Lane Rural Highways	Delete
5	Multi-Lane Rural Highways	Delete
6	Overview	Delete
6	Basic Design Criteria	Delete
6	Access Control	Delete
6	General	Delete
6	Mainlane Access	Delete
6	Driveways and Side Streets	Delete "Desirable" from Table 3-16. Replace text with the following: "When the 250 ft separation distance cannot be obtained, consideration should be given to channelization methods that would restrict access to driveways within this 250 ft distance. As with exit ramps, when the 100 ft entrance ramp separation distance cannot be obtained, consideration should be given to channelization methods that would restrict access to driveways within this 100 ft [30 m] distance. Refer to the Texas MUTCD for specific types of channelization."
6	Methods	Delete
6	Designation	Delete
6	Design	Delete
6	Mainlanes	Delete
6	Design Speed	Delete
6	Level of Service	Delete
6	Lane Width and Number	Delete
6	Shoulders	Delete
6	Medians	Delete
6	Outer Separation	Delete
6	Crossing Facilities	Delete
6	Vertical and Horizontal Clearance at Structures	Delete
6	Frontage Roads	Delete
6	Functions and Uses	Delete
6	Planning	Delete
6	Design Speed on Frontage Roads	Delete
6	Capacity and Level of Service	Delete

6	Frontage Road Design Criteria	Delete
6	Conversion of Frontage Roads from Two-Way to One-Way Operation	Delete
6	Interchanges	Delete
6	Three Leg Interchanges	Delete
6	Four leg Interchanges	Delete
6	Diamond Interchanges	Delete
6	Cloverleaf Interchanges	Delete
6	Directional Interchanges	Delete
6	Ramps and Direct Connections	Delete all text, figures and tables, except for Figure 3-37, Table 3-22, Figure 3-35 and Figure 3-36 and taper distances depicted in Figure 3-29.
6	General Information	Delete
6	Design Speed	Delete
6	Horizontal Geometrics	Delete
6	Distance Between Successive Ramps	Delete
6	Cross Section and Cross Slopes	Delete
6	Sight Distance	Delete
6	Grades and Profiles	Delete
6	Metered Ramps	Delete
6	Collector-Distributor Roads	Delete
6	Frontage Road Turnarounds and Intersection Approaches	Delete
7	Freeway Corridor Enhancements	Delete

Chapter 4
Delete

Chapter 5
Delete

Chapter 6
Delete

Chapter 7

Section	Subheading	Modification
1		Delete
2		Delete
3		Delete
4		Delete
5	Roadway Applications of Shoulder Texturing	Replace text with the following: "For rural freeways and rural four-lane or more divided highways, the following guidelines are required: • Asphaltic Concrete Shoulders: Rumble strips shall be installed as part of new construction, reconstruction, and overlay projects on rural four-lane or more controlled and partially controlled access highways with asphaltic concrete shoulders. • Portland Cement Shoulders: Rumble strips should be installed as part of new construction and reconstruction projects. If the concrete shoulder will be used in the near future as a permanent travel lane or a travel lane in a work zone, shoulder texturing should not be considered. • Rumble strips shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways. Depressed rumble strips (i.e., milled-in or rolled-in) shall not be placed across bridge decks."
6		Delete
7		Delete

Appendix A

Section	Subheading	Modification
1		Delete
2		Delete text, retain Figure A-1 and Table A-1
3		Delete text, retain Figure A-2, and Figure A-3
4		Delete text, retain Figure A-5
6	Overview	Delete
6	Variables	Delete text, retain Figure A-7
7		Delete

Appendix B
Delete

Appendix C
Retain

ERRATA FOR THE
TxDOT Traffic Operations Manual – Railroad Operations Volume, February 2000

General
See Section 1.1 above.

Manual Notices
Delete

Chapter 1 - Introduction

Section	Subheading	Modification
3	Operations Involving Railroads	Replace text with "The Developer and TxDOT will jointly enter into agreements with railroad companies. The Developer shall be responsible for all costs related to force account work for construction or maintenance requirements during the term of project. Where the Manual refers to actions the state normally takes, Developer shall perform those actions."

Chapter 2 – Railroad Agreements – General

Section	Subheading	Modification
1	Overview	Replace text with "Developer shall be responsible for all costs normally assigned to TxDOT."
2	Railroad Force Account Work	Replace text with "Developer and TxDOT will jointly enter into agreements with railroad companies. The Developer shall be responsible for all costs related to force account work for construction or maintenance requirements during the term of project. Where the Manual refers to actions the state normally takes, Developer shall perform those actions."
3	District Responsibilities	For reference only
3	District Responsibilities	In all subsequent subheadings, where the text includes work to be performed by the District or TRF, Developer shall perform.
4	TRF Responsibilities	Replace all text with the following: "The Developer shall provide all documents, estimates, and other information required by the TxDOT Traffic Operations Division (TRF) to prepare railroad agreements for the project.

Chapter 3 – Highway-Rail Grade Crossing Surfaces (Construction and Reconstruction)

Section	Subheading	Modification
1	Overview	Delete
2	Plan Layout	Replace "District" and "TxDOT" with "Developer". Under **Instruction**, delete "to be performed by TxDOT, TXDOT's contractor".
3	Agreement and Negotiating	Replace references to "Traffic Operations Division", "TRF", and "TxDOT" with the word "Developer". Delete **Construction and Maintenance** except for the 1st sentence. Under **Insurance Claims** delete all except the

		1st sentence Replace the word "contractor" with the word "Developer". Delete "Payment Clause", "Solicitations of Bids" clause and "Conditions" Delete "Negotiating" and "After Execution".
4	Project Execution	Replace the words "District", "TxDOT's Contractor" and "TxDOT" with the word "Developer". Delete the section **Completion Letter.**

Chapter 4 – Grade Crossing Replanking Program
Delete

Chapter 5 – Spur Tracks
Delete

Chapter 6 – Warning Signals and Devices
Delete

Chapter 7 – Traffic Signal Preemption
Delete

Chapter 8 – Grade Separation
Delete

Chapter 9 – Drainage Structures and Common Ditches
Delete this Chapter, except for Page 9-2; Overview Policy and Practice.

Chapter 10 – Other Railroad Agreements
Delete this Chapter except for Page 10-2, Letter Agreements, Policy and Practices

Chapter 11 – Crossing Closure, Relocation, and Consolidation
Delete

Appendix A – Forms
Delete

ERRATA FOR THE
TxDOT Geotechnical Manual, October 2000

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1
Delete

Chapter 2
Delete

Chapter 3
Delete

Chapter 4
Delete

Chapter 5
Delete

Chapter 6

Section	Subheading	Modification
5	Railroad Surcharge	Retain
All other sections		Delete

Chapter 7
Delete

Chapter 8

Section	Subheading	Modification
4	Structural Design	"The design of structural members [shall] conform to the requirements of the *AASHTO Standard Specification for Highway Bridges*." Delete rest of section.

Chapter 9
Delete

ERRATA FOR THE
TxDOT Hydraulic Design Manual, March 2004

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1 – Manual Introduction
Delete

Chapter 2 – Policy and Guidelines

Section	Subheading	Modification
1		Delete
2		Delete
3		Delete
4		Delete
5		Retain table "FEMA Requirements for Applicable Conditions", delete remainder of section

Chapter 3 – Types of Documentation
Delete

Chapter 4 – Data Collection, Evaluation, and Documentation
Delete

Chapter 5 - Hydrology

Section	Subheading	Modification
1		Delete
2		Delete
3	Concept of Frequency	Delete
3	Frequency Determination	Delete
3	Design by Frequency Selection	Delete
3	Design by Cost Estimation or Risk Assessment	Delete
3	Check Flood Frequencies	Retain
3	Frequencies of Coincidental Occurences	Retain
3	Rainfall versus Flood Frequency	Delete

4		Retain Figure 5-3 "Hydrologic Method Selection Chart", delete remaining text
5		Replace all text with "The Developer shall use a minimum time of concentration (t_c) of 10 minutes."
6		Retain tables for Runoff Coefficients for Rural and Urban Watersheds and Equation 5-5, delete remainder of section
7		Retain Figure 5-10, delete remainder of section
8		Delete
9		Delete
10		Retain Figure 5-16, delete remainder of section
11		Retain "*Hydrologic Regions for Statewide Rural Regression Equations*" and "*Regression Coefficients and Limits for Hydrologic Regions 1-11 (English)*", delete remainder of section

Chapter 6 – Hydraulic Principles
Delete

Chapter 7 – Channels
Delete

Chapter 8 – Culverts
Delete

Chapter 9 – Bridges
Delete

Chapter 10 – Storm Drains
Delete

Chapter 11 – Pump Stations
Delete

Chapter 12 – Reservoirs
Delete

Chapter 13 – Storm Water Management
Delete

Chapter 14 – Conduit Strength and Durability
Delete

ERRATA FOR THE
TxDOT Highway Illumination Manual, November 2003

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1 – Introduction
Delete

Chapter 2 – Lighting Systems, Highway Eligibility, and Warrants

Section	Subheading	Modification
1	Sources of Requests	Delete
2	Continuous Lighting	Delete
3	Safety Lighting	Replace text that starts with "Safety lighting may..." with "Safety lighting shall... ."
4	Bikeway and Pedestrian Way Lighting	Delete
5	Systems Financed, Installed and Operated by Other Agencies	Delete

Chapter 3 – Master Lighting Plans
Delete

Chapter 4 – Lighting Agreements
Delete

Chapter 5 – Lighting Equipment

Section	Subheading	Modification
1	Overview	Retain
2	Light Sources	Delete
3 - 5		Retain

Chapter 6 – Lighting Design and Layout

Section	Subheading	Modification
1	Overview – Project Design Procedures	Delete
1	Overview – Project Lead Time	Delete
2	Illumination	Retain

	Levels	
3	Plan Standards	Retain
4	Conventional vs. High Mast Lighting	Delete
5	Glare and Sky Glow Issues	Delete section and replace with the following: "Cutoff luminaries shall be used for new roadway lighting. When emitting light above the horizontal is absolutely necessary and in accordance with Texas Health and Safety Code, Chapter 425, "Regulation of Certain Outdoor Lighting," Developer shall strive to keep the above-horizontal light as low as practical to accomplish the intended effect. This can be achieved by using lower wattage luminaries, by shielding, or by luminaire design.
6	Spacing of Light Poles	Retain
7	Pole Placement Guidelines – Breakaway Poles Preferred	Replace subheading title text "Preferred" with "Required" Replace text "preferred" with "required"

Chapter 7 – Electrical Systems

Section	Subheading	Modification
1	Overview	Retain
2	Electrical Service	Delete subheadings "Separate Electrical Service for Signs" and "Where Service Does Not Exist"
3	Circuit Design	Retain
4	Calculating Voltage Drop	Retain

Chapter 8 – Temporary Lighting

Section	Subheading	Modification
1	Design and Layout – Special Considerations	Replace all text in subheading with "Lighting shall be installed in such a way as to limit glare and avoid the placing of hazardous obstacles near the travel ways."
2	Financing	Delete

Chapter 9 – Construction and Maintenance Guidelines

Section	Subheading	Modification
1	Overview	Delete
2	Review and Approval of Shop Drawings	Delete
3	Breakaway Light Poles – Frangibility and Structural Requirements	Replace all text with – "The Developer shall use the AASHTO specification contained in the *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals*."
3	Breakaway	Delete

	Light Poles – Replacement Guidelines	
3	Breakaway Light Poles	Retain subheading Striking Height
3	Breakaway Light Poles	Delete the subheadings • Guidelines Apply to Cities • Review of Shop Drawings
4	Group Relamping	Delete
5	High Mast Lighting Inspection and Servicing	Delete
6	Other Maintenance Considerations	Delete

ERRATA FOR THE
TxDOT Traffic Signals Manual, December 1999

General
See Section 1.1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1 - Introduction

Section	Subheading	Modification
1	Overview	Replace entire section with – "Traffic signals shall only be installed when the location or locations meets one or more of the warrants for highway traffic signals contained in the current *Texas Manual on Uniform Traffic control Devices for Streets and Highways (TMUTCD)*
2	Traffic Operations Division Support	Replace entire section with – "The Developer will perform all functional and environmental tests for traffic signal equipment."
3	Equipment Acquisition	Delete

Chapter 2 – Requests for Traffic Signals

Section	Subheading	Modification
1	Sources of Requests	Delete
2	Action on Requests	Delete

Chapter 3 – Traffic Studies

Section	Subheading	Modification
1	Overview Introduction	Retain
1	Overview Responsibility	Delete
1	Overview Costs	Delete
1	Overview Required Information	Delete text "Some of the data is difficult and time consuming to collect" Replace text "The district traffic section supervisor..." with "The Developer"
1	Warrant Analysis Data	Retain
2	Information Sources	Delete text under sub-heading "Aerial Photographs"
2	Additional Necessary Information	Retain

3	Location Map and Photographs	Retain
4	Accident (Crash) Information	Replace all section text with – "The Developer shall request traffic accident information from the Texas Department of Public Safety "
5	Vehicle and Pedestrian Traffic Counts	Retain except delete the first paragraph under the sub-heading "Estimates and Projected Counts"
6	Approach Speeds	Retain
7	Traffic Survey Count Analysis	Delete last sentence in sub-heading Count Data Processing, Automated Methods, beginning with "Districts may ..."
7	Traffic Survey Count Analysis	Delete all of sub-heading "Intersection Traffic and Pedestrian Count Analysis Program"
8	Intersection Delay Study	Delete the first sentence of the subheading Equipment beginning with the text "Unless the District..."

Chapter 4 – Operational Considerations

Section	Subheading	Modification
1	Overview	Delete all of subheading Equipment Repair
2	Coordinated Operation	Delete all of subheading Coordinating Operations with Other Jurisdictions
3	Preemption	Retain
4	Flashing Operation	Retain

Chapter 5 – Traffic Signal Projects

Section	Subheading	Modification
1	**Overview**	Delete
2	Projects installed by the State	Delete
3	Plan Requirements for PS & E	Delete subheading Estimate and Quantity Sheet

ERRATA FOR THE
AASHTO Standard Specifications for Highway Bridges, 17th Edition

General
See Section 1.1 above.

Specific Modifications

Division 1 – Design
Retain

Division 1A - Seismic Design
Retain

Division 2 – Construction
Delete

ERRATA FOR THE
TxDOT Bridge Design Manual, December 2001

General
See Section 1 1 above.

Specific Modifications

Manual Notices
Delete

Chapter 1
Delete

Chapter 2

Section	Subheading	Modification
1	Coordinating with TxDOT Divisions and Sections	Delete
2	Primary Responsibilities of the Bridge Design Section	The section titled Preliminary Bridge Layouts should remain. The text should be replaced with: "The Developer shall prepare preliminary bridge layouts. These layouts are usually complete with geometric controls, type, size, length of spans, hydraulic data, required clearances, soil test boring data, classification of highway, and projected traffic. At this time, type of foundation should be proposed and conveyance of water through stream crossings and scour analysis should be addressed and coordinated with the Hydraulics Section. The layouts are sent to TxDOT who will forward them to the FHWA and/or other agencies that may exercise review authority on federal oversight projects."
3 - 4		Delete

Chapter 3

Section	Subheading	Modification
1	Mandatory Specifications	Retain
2 – 3		Delete

Chapter 4
Delete

Chapter 5
Delete

Chapter 6
Delete

Chapter 7
Delete

Chapter 8
Delete

Chapter 9
Delete

Chapter 10
Delete

Appendix A
Delete

Appendix B
Delete

Appendix C
Delete

ERRATA FOR THE
Texas Reference Marker (TRM) System User's Manual, January 2005

General
See Section 1.1 above.

Access to the TPP Database shall be coordinated through TxDOT. All input and supplemental data entry shall be the responsibility of Developer.

Specific Modifications

Manual Notices
Delete

Chapter 1

Section	Subheading	Modification
1	Introduction to TRM	Retain
2	Key Points to Know	Delete except for subsection "Official TRM Location Key"
3	Data Maintenance Responsibility	Replace with "Developer shall provide with TPP all information necessary to enter and maintain facility in TRM."
4	Establishing a Route	Replace with "Developer shall coordinate with TPP to establish a reference marker system on the facility "

Chapter 2
Retain

Chapter 3
Retain

Chapter 4
Retain

Chapter 5
Retain

Chapter 6
Retain

Chapter 7
Retain

Chapter 8
Retain

Chapter 9
Retain

Chapter 10
Retain

Chapter 11
Retain

Chapter 12
Retain

Chapter 13
Retain

Chapter 14
Retain

Chapter 15
Retain

Appendix A
Retain

ERRATA FOR THE
TxDOT Utility Manual, July 2005

General

1. All references to the "Project Design Engineer", "Project Construction Engineer", "ROW Representative" or "Personnel" shall mean Developer. All references to "Responsible Party" shall mean Developer. "TxDOT Utility Liaison" shall mean Developer and its authorized agent.
2. All references to the "ROW Division" shall mean the TxDOT ROW Division.

Specific Modifications

Manual Notices
Delete

Chapter 1

Section	Subheading	Modification
1		Retain
2		Retain
3		Retain
4		Delete
5		Delete

Chapter 2

Section	Subheading	Modification
1		Retain
2		Retain
3		Delete

Chapter 3
Retain

Chapter 4

Section	Subheading	Modification
1	General	Delete
1	Annual Transportation Improvement Program Meeting	Delete
1	Annual Meeting	Delete
1	Utility Coordination Council Meetings	Delete
1	Initial Project Notification Meeting	Retain
1	Preliminary Design Meeting	Retain
2		Retain
3		Delete

4		Retain
5		Delete

Chapter 5

Section	Subheading	Modification
1		Retain
2	Objective	Last sentence, change "would" to "will"
3		"TxDOT's PS&E" shall mean Developer's Final Design Documents
4		Retain
5		Delete
6		Retain
7		Delete
8		Retain
9		Retain
10		Delete

Chapter 6

Section	Subheading	Modification
1	Use of Consulting Engineers	Delete
1	Replacement of Utility Right of Way	Retain
2		Retain
3		Delete

Chapter 7
Retain

Chapter 8
Delete

Chapter 9

Section	Subheading	Modification
1		Delete
2		Delete
3		Retain
4		Delete
5		Delete
6		Retain

Chapter 10
Delete

Chapter 11
Delete

Chapter 12

Section	Subheading	Modification
1		Retain
2		Retain
3		Retain
4		Delete
5		Delete
6		Delete
7		Delete
8		Delete
9		Delete
10		Delete
11		Delete
12		Retain
13		Delete
14	Exclusive Development Agreements	References to "Exclusive Development Agreements" shall include Comprehensive Development Agreements and Facility Concession Agreements

Appendix A
Delete

ERRATA FOR THE
TxDOT Environmental Manual, October 2004

General
See Section 1.1 above

Special Modifications
Manual Notices
Delete

Chapter 1

Section	Subheading	Modification
1	Overview	Retain
2	Authorities	Retain
3	The Environmental Process	Retain
4	Roles and Responsibilities	Change "District's role" to "Developer's role" except for interagency coordination issues. All interagency coordination efforts shall be coordinated through TxDOT.
5	Planning and the Environment	Retain

Chapter 2
Retain

Chapter 3
Retain

Chapter 4
Retain

Chapter 5

Section	Subheading	Modification
1 - 11	Interagency Coordination	Replace with "Developer shall coordinate all interagency coordination through TxDOT "

Chapter 6
Retain

Chapter 7
Retain