

**Dallas to Houston High-Speed Rail
Draft Environmental Impact Statement**

**Appendix G:
Dallas to Houston High-Speed Rail
Passenger Service from Houston to Dallas
Final Draft Conceptual Engineering
Plans and Details
Set 18 of 21**

Transmittal

To	Megan Inman, AECOM	Date November 17, 2017
Copies	FRA: K. Wright AECOM: J. Smiley TCRR: A. Greer File: HOU TCR	TRA Number 00211
From	Christopher Taylor, Arup	
Subject	FINAL DRAFT CONCEPTUAL ENGINEERING DESIGN DOCUMENTATION – FDCE v7 Transmittal Final Version for Publication with Draft Environmental Impact Statement (DEIS) FDCE for Public Release	

We Are Sending You: ENTER DOCUMENT TYPE CODE(S) ONLY

Date of Document	DEIS Appendix	Set # of #	Title of Document or Drawing Title
11/17/17	-	-	234180-AFN-TRA-00211 FDCEv7.PDF (this transmittal)
REPORTS			
9/15/17	F	1 of 2	TCRR FDCE v7 REPORT.PDF (<i>Final Draft Conceptual Engineering Report v7 – Project Definition for publication with Draft EIS</i>)
9/15/17	F	2 of 2	TCRR CONSTRUCTABILITY v4 REPORT.PDF
TCRR FDCE v7 DWGS VOLUME 1 (General Sheets and Typical Sections)			
9/15/17	G	1 of 21	TCRR FDCE v7 DWGS VOLUME 1.PDF (<i>General Sheets and Typical Sections</i>)
TCRR FDCE v7 DWGS VOLUME 2 (Railway Alignment Plan and Profile Sheets)			
9/15/17	G	2 of 21	TCRR FDCE v7 DWGS VOLUME 2-1.PDF (<i>Houston Segment</i>)
9/15/17	G	3 of 21	TCRR FDCE v7 DWGS VOLUME 2-2.PDF (<i>West of Teague Segment</i>)
9/15/17	G	4 of 21	TCRR FDCE v7 DWGS VOLUME 2-3.PDF (<i>IH-45 Segment</i>)
9/15/17	G	5 of 21	TCRR FDCE v7 DWGS VOLUME 2-4.PDF (<i>Navarro West Segment</i>)
9/15/17	G	6 of 21	TCRR FDCE v7 DWGS VOLUME 2-5.PDF (<i>Navarro East Segment</i>)
9/15/17	G	7 of 21	TCRR FDCE v7 DWGS VOLUME 2-6.PDF (<i>Ellis West Segment</i>)
9/15/17	G	8 of 21	TCRR FDCE v7 DWGS VOLUME 2-7.PDF (<i>Ellis East Segment</i>)
9/15/17	G	9 of 21	TCRR FDCE v7 DWGS VOLUME 2-8.PDF (<i>Dallas Segment</i>)
TCRR FDCE v7 DWGS VOLUME 3 (Stations, Maintenance Facilities, and Railway Systems Sheets)			
9/15/17	G	10 of 21	TCRR FDCE v7 DWGS VOLUME 3-1.PDF (<i>Stations</i>)
9/15/17	G	11 of 21	TCRR FDCE v7 DWGS VOLUME 3-2.PDF (<i>Maintenance Facilities, Yards and Shops</i>)
9/15/17	G	12 of 21	TCRR FDCE v7 DWGS VOLUME 3-3.PDF (<i>Rail Systems</i>)
TCRR FDCE v7 DWGS VOLUME 4 (Roadway Plan Sheets)			
9/15/17	G	13 of 21	TCRR FDCE v7 DWGS VOLUME 4-1.PDF (<i>Houston Segment</i>)
9/15/17	G	14 of 21	TCRR FDCE v7 DWGS VOLUME 4-2.PDF (<i>West of Teague Segment</i>)
9/15/17	G	15 of 21	TCRR FDCE v7 DWGS VOLUME 4-3.PDF (<i>IH-45 Segment</i>)
9/15/17	G	16 of 21	TCRR FDCE v7 DWGS VOLUME 4-4.PDF (<i>Navarro West Segment</i>)
9/15/17	G	17 of 21	TCRR FDCE v7 DWGS VOLUME 4-5.PDF (<i>Navarro East Segment</i>)

Document Format	Date of Document	Number of Copies	Title of Document or Drawing Title
9/15/17	G	18 of 21	TCRR FDCE v7 DWGS VOLUME 4-6.PDF (<i>Ellis West Segment</i>)
9/15/17	G	19 of 21	TCRR FDCE v7 DWGS VOLUME 4-7.PDF (<i>Ellis East Segment</i>)
9/15/17	G	20 of 21	TCRR FDCE v7 DWGS VOLUME 4-8.PDF (<i>Dallas Segment</i>)
TCRR FDCE v7 DWGS VOLUME 5 (<i>Wildlife Crossing Sheets</i>)			
9/15/17	G	21 of 21	TCRR FDCE v7 DWGS VOLUME 5.PDF (<i>Wildlife Crossing Sheets</i>)

These are transmitted as checked below:

- Deliverable For Information As requested For your use
 For approval For Review and Comment Return Other: Publication with DEIS

REMARKS:

The files transmitted herewith represent a final submittal of the Final Draft Conceptual Engineering (FDCE) design report and drawings for the Dallas to Houston High-Speed Rail Project. This v7 submittal of the FDCE report is intended for distribution on the FRA website with the Draft EIS (DEIS) for public review.



Delivered VIA Outlook Email Hand Delivery Courier PMS Notification USPS

PREPARED BY: Christopher Taylor **Date:** November 17, 2017

IF ENCLOSURES ARE NOT AS NOTED, KINDLY NOTIFY US AT ONCE.



**TEXAS
CENTRAL**



DALLAS TO HOUSTON HIGH-SPEED RAIL
PASSENGER SERVICE FROM HOUSTON TO DALLAS

FINAL DRAFT
CONCEPTUAL ENGINEERING PLANS AND DETAILS
VOLUME 4 - RAILWAY PLAN SHEETS

SEPTEMBER 15, 2017



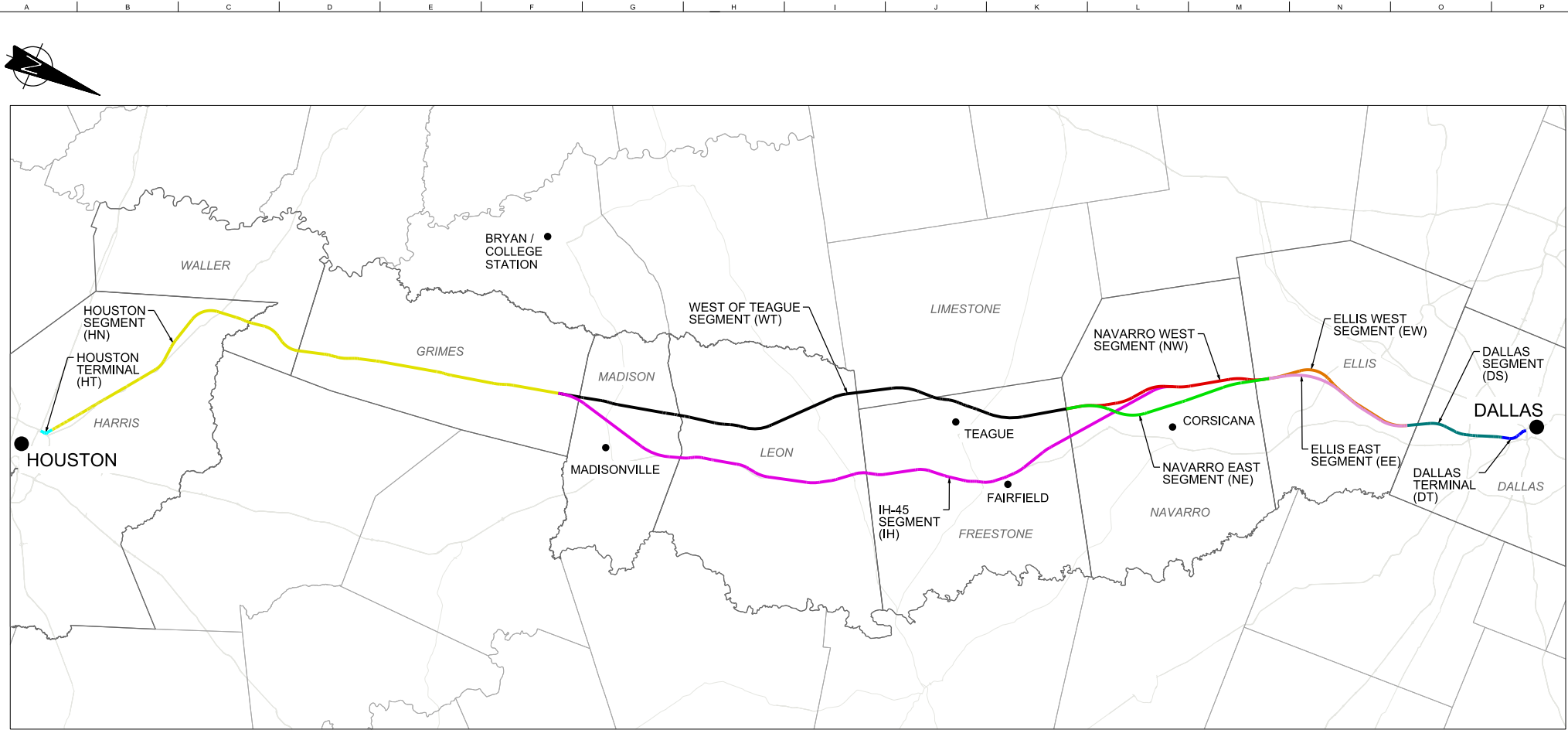
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**FRESE
NICHOLS**

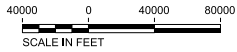
2711 North Haskell Ave., Suite 3300
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Texas Registered Engineering Firm: F-2144

COVER SHEET



ALIGNMENT ALTERNATIVE	OE SEGMENT ID	SEGMENT NAMES	SEGMENT ABBREVIATION
A	5.4A, 3A, 2A, 1	DALLAS SEGMENT, ELLIS WEST SEGMENT, NAVARRO WEST SEGMENT, WEST OF TEAGUE SEGMENT, HOUSTON SEGMENT	DS, EW, NW, WT, HN
B	5.4A, 3B, 2A, 1	DALLAS SEGMENT, ELLIS WEST SEGMENT, NAVARRO EAST SEGMENT, WEST OF TEAGUE SEGMENT, HOUSTON SEGMENT	DS, EW, NE, WT, HN
C	5.4A, 2B, 1	DALLAS SEGMENT, ELLIS WEST SEGMENT, IH-45 SEGMENT, HOUSTON SEGMENT	DS, EW, IH, HN
D	5.4B, 3A, 2A, 1	DALLAS SEGMENT, ELLIS EAST SEGMENT, NAVARRO WEST SEGMENT, WEST OF TEAGUE SEGMENT, HOUSTON SEGMENT	DS, EE, NW, WT, HN
E	5.4B, 3A, 2A, 1	DALLAS SEGMENT, ELLIS EAST SEGMENT, NAVARRO EAST SEGMENT, WEST OF TEAGUE SEGMENT, HOUSTON SEGMENT	DS, EE, NE, WT, HN
F	5.4B, 2B, 1	DALLAS SEGMENT, ELLIS EAST SEGMENT, IH-45 SEGMENT, HOUSTON SEGMENT	DS, EE, IH, HN

- NOTES:
 1. REFER TO FDCE v5 FOR SEGMENT NAMES AND ALIGNMENT ALTERNATIVES.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
D. THOMPSON

DRAWN BY
D. THOMPSON

CHECKED BY
R. BURNS

IN CHARGE
C. TAYLOR

DATE
09/15/2017

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Client

1409 South Lamar Street, Suite 1022, Dallas, Texas 75215

Drawing Title
GENERAL LOCATION PLAN

Scale: AS SHOWN

Drawing Status: **FINAL DRAFT**

Job No: 234180 Drawing No: GEN-00-00002 Rev: 01

VOLUME 1 - GENERAL SHEETS & TYPICAL SECTIONS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Includes sections for 1-1 GENERAL, 1-2 RAILWAY TYPICAL SECTIONS, 1-3 ROADWAY AND GRADE SEPARATION TYPICAL SECTIONS, 1-4 CIVIL STRUCTURES TYPICAL DETAILS, 1-5 CIVIL UTILITIES TYPICAL DETAILS, and 1-6 GENERAL - ALIGNMENT CURVE DATA TABLES.

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists various HOUSTON SEGMENT drawings including CIVIL - PLAN AND PROFILE for various stationing ranges.

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists various HOUSTON SEGMENT drawings including CIVIL - PLAN AND PROFILE for various stationing ranges, and WEST OF TEAGUE SEGMENT drawings including CIVIL - KEY MAP and CIVIL - PLAN AND PROFILE.

VOLUME 2 - RAILWAY ALIGNMENT PLAN AND PROFILE SHEETS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists drawings for 2-1 HOUSTON SEGMENT, including CIVIL - KEY MAP and CIVIL - PLAN AND PROFILE for various stationing ranges.

Table with columns: REV, DATE, BY, CHK, APP, DESCRIPTION. Revision table for the drawing.

DESIGNED BY: D. THOMPSON
DRAWN BY: D. THOMPSON
CHECKED BY: R. BURNS
IN CHARGE: C. TAYLOR
DATE: 09/15/2017



Client:
Drawing Title: GENERAL INDEX SHEET 1 OF 5
Scale: NO SCALE
Drawing Status: FINAL DRAFT
Job No: 234180
Drawing No: GEN-00-00003
Rev: 01

VOLUME 2 - RAILWAY ALIGNMENT PLAN AND PROFILE SHEETS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Includes sections for 2-2 WEST OF TEAGUE SEGMENT and 2-3 IH-45 SEGMENT.

Table with columns: Drawing No., Description. Lists various segments (IH-45, NAVARRO WEST, NAVARRO EAST, ELLIS WEST) with stationing and drawing numbers.

Table with columns: Drawing No., Description. Lists various segments (NAVARRO WEST, NAVARRO EAST, ELLIS WEST) with stationing and drawing numbers.

Table with columns: REV, DATE, BY, CHK, APP, DESCRIPTION. Revision table for the drawing.

DESIGNED BY: D. THOMPSON
DRAWN BY: D. THOMPSON
CHECKED BY: R. BURNS
IN CHARGE: C. TAYLOR
DATE: 09/15/2017

ARUP and FREENICHOLS logos and contact information for both firms.



Client: TEXAS CENTRAL
Drawing Title: GENERAL INDEX SHEET 2 OF 5
Scale: NO SCALE
Drawing Status: FINAL DRAFT
Job No: 234180
Drawing No: GEN-00-00004
Rev: 01

HOUSTON SEGMENT - CIVIL - KEY MAP - Sheet 2 of 4 - HN1 1024+00 TO HN1 2082+00

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists drawings for 2-6 ELLIS WEST SEGMENT, 2-7 ELLIS EAST SEGMENT, and 2-8 DALLAS SEGMENT.

VOLUME 3 - STATIONS, MAINTENANCE FACILITIES AND RAILWAY SYSTEMS SHEETS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists drawings for 3-1 STATIONS, 3-2 MAINTENANCE FACILITIES, YARDS AND SHOPS, and 3-3 MAINTENANCE FACILITIES, TYPICAL MOW FACILITY.

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Lists drawings for HOUSTON SEGMENT - STATIONS - HOUSTON TRANSIT STATION OPTION - STATION SECTIONS, HOUSTON SEGMENT - STATIONS - HOUSTON TRANSIT STATION OPTION - CIVIL SITE PLAN, HOUSTON SEGMENT - STATIONS - HOUSTON NORTHWEST MALL STATION OPTION - STATION AREA PLAN, HOUSTON SEGMENT - STATIONS - HOUSTON NORTHWEST MALL STATION OPTION - STATION FLOOR PLAN SHEET 1 OF 2, HOUSTON SEGMENT - STATIONS - HOUSTON NORTHWEST MALL STATION OPTION - STATION FLOOR PLAN SHEET 2 OF 2, HOUSTON SEGMENT - STATIONS - HOUSTON NORTHWEST MALL STATION OPTION - STATION SECTIONS, HOUSTON SEGMENT - STATIONS - HOUSTON INDUSTRIAL STATION OPTION - STATION AREA PLAN, HOUSTON SEGMENT - STATIONS - HOUSTON INDUSTRIAL STATION OPTION - STATION FLOOR PLAN SHEET 1 OF 2, HOUSTON SEGMENT - STATIONS - HOUSTON INDUSTRIAL STATION OPTION - STATION FLOOR PLAN SHEET 2 OF 2, HOUSTON SEGMENT - STATIONS - HOUSTON INDUSTRIAL STATION OPTION - STATION SECTIONS, HOUSTON SEGMENT - STATIONS - HOUSTON INDUSTRIAL STATION OPTION - CIVIL SITE PLAN, HOUSTON SEGMENT - STATIONS - BRAZOS VALLEY STATION - STATION AREA PLAN, HOUSTON SEGMENT - STATIONS - BRAZOS VALLEY STATION - STATION FLOOR PLAN SHEET, HOUSTON SEGMENT - STATIONS - BRAZOS VALLEY STATION - STATION SECTIONS, HOUSTON SEGMENT - STATIONS - BRAZOS VALLEY STATION - CIVIL SITE PLAN, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION AREA PLAN, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION FLOOR PLAN SHEET 1 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION FLOOR PLAN SHEET 2 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION FLOOR PLAN SHEET 3 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION SECTIONS SHEET 1 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION SECTIONS SHEET 2 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - STATION SECTIONS - FUTURE EXPANSION SHEET 3 OF 3, DALLAS SEGMENT - STATIONS - DALLAS STATION - TYPICAL PEDESTRIAN STREETScape, DALLAS SEGMENT - STATIONS - DALLAS STATION - CIVIL SITE PLAN, DALLAS SEGMENT - STATIONS - DALLAS STATION - HOTEL STREET REALIGNMENT - SHEET 1 OF 2, DALLAS SEGMENT - STATIONS - DALLAS STATION - HOTEL STREET REALIGNMENT - SHEET 2 OF 2, DALLAS SEGMENT - STATIONS - DALLAS STATION - BELLEVIEW STREET REALIGNMENT, DALLAS SEGMENT - STATIONS - DALLAS STATION - PROPOSED STREET 1 REALIGNMENT, DALLAS SEGMENT - STATIONS - DALLAS STATION - PROPOSED STREET 2 REALIGNMENT, 3-2 MAINTENANCE FACILITIES, YARDS AND SHOPS, GENERAL - MAINTENANCE FACILITIES - TYPICAL MOW FACILITY, GENERAL - MAINTENANCE FACILITIES - TYPICAL SIDING OFF, GENERAL - MAINTENANCE AND TMF FACILITIES - KEY MAP, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - SHEET 1 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - SHEET 2 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - SHEET 3 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - TRACK REALIGNMENT - SHEET 1 OF 5, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - TRACK REALIGNMENT - SHEET 2 OF 5, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - TRACK REALIGNMENT - SHEET 3 OF 5, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - TRACK REALIGNMENT - SHEET 4 OF 5, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON SOUTH TMF - TRACK REALIGNMENT - SHEET 5 OF 5, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON NORTH TMF - SHEET 1 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON NORTH TMF - SHEET 2 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON NORTH TMF - SHEET 3 OF 3, HOUSTON SEGMENT - MAINTENANCE FACILITIES - HOUSTON NORTH TMF - SHEET 3 OF 3, HOUSTON SEGMENT - MOW FACILITY HN-2 - LAYOUT, HOUSTON SEGMENT - MOW FACILITY HN-4 - LAYOUT - SHEET 1 OF 2, HOUSTON SEGMENT - MOW FACILITY HN-4 - LAYOUT - SHEET 2 OF 2, HOUSTON SEGMENT - MOW FACILITY HN-5 - LAYOUT - SHEET 1 OF 2, HOUSTON SEGMENT - MOW FACILITY HN-5 - LAYOUT - SHEET 2 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY WT-1 - LAYOUT - SHEET 1 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY WT-1 - LAYOUT - SHEET 2 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 1 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 2 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY WT-2 - LAYOUT - SHEET 1 OF 2, WEST OF TEAGUE SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY WT-2 - LAYOUT - SHEET 2 OF 2, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-1 - LAYOUT - SHEET 1 OF 3, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-1 - LAYOUT - SHEET 2 OF 3, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-1 - LAYOUT - SHEET 3 OF 3, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 1 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 2 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 3 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 4 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 5 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 6 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 7 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - TRACK CONNECTION - LAYOUT - SHEET 8 OF 8, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-2 - LAYOUT - SHEET 1 OF 3, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-2 - LAYOUT - SHEET 2 OF 3, IH-45 SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY IH-2 - LAYOUT - SHEET 3 OF 3, ELLIS WEST SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY EW-1 - LAYOUT - SHEET 1 OF 2, ELLIS WEST SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY EW-1 - LAYOUT - SHEET 2 OF 2, ELLIS EAST SEGMENT - MAINTENANCE FACILITIES - MOW FACILITY EE-1 - LAYOUT, DALLAS SEGMENT - MAINTENANCE FACILITIES - DALLAS SOUTH TMF - SHEET 1 OF 3

DESIGNED BY D. THOMPSON, DRAWN BY D. THOMPSON, CHECKED BY R. BURNS, IN CHARGE C. TAYLOR, DATE 09/15/2017



Scale: NO SCALE, Drawing Status: FINAL DRAFT, Job No: 234180, Drawing No: GEN-00-00005, Rev: 01

VOLUME 3 - STATIONS, MAINTENANCE FACILITIES AND RAILWAY SYSTEMS SHEETS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Includes sections 3-2 MAINTENANCE FACILITIES, YARDS AND SHOPS and 3-3 RAILWAY SYSTEMS.

VOLUME 4 - ROADWAY PLAN SHEETS

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Section 4-1 HOUSTON SEGMENT listing various roadway plan sheets.

Table with columns: DRAWING NO., DRAWING DESCRIPTIONS. Sections 4-2 WEST OF TEAGUE SEGMENT and 4-3 IH-45 SEGMENT listing various roadway plan sheets.

Table with columns: REV, DATE, BY, CHK, APP, DESCRIPTION. Revision table for the drawing.

DESIGNED BY: D. THOMPSON
DRAWN BY: D. THOMPSON
CHECKED BY: R. BURNS
IN CHARGE: C. CHAYLOR
DATE: 09/15/2017



Client: 1409 South Lamar Street, Suite 1022, Dallas, Texas 75215
Drawing Title: GENERAL INDEX SHEET 4 OF 5

Scale: NO SCALE
Drawing Status: FINAL DRAFT
Job No: 234180
Drawing No: GEN-00-00006
Rev: 01