Master Development Plan for the TxDOT North Tarrant Express Project Segments 2-4

Chapter 9: Phasing and Sequencing Report

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9. Phasing and Sequencing Report

9.1 Phasing, Sequencing and Prioritization of Facilities

This Chapter discusses the phasing, sequencing and prioritization of Facilities in relation to potential Facility Development Work. The vision of the NTE Project is to improve the local transportation network as soon as possible to help relieve existing congestion and improve safety. During the development of the MDP, the main criterion for prioritizing Facility Development was to minimize the need for public funds while maximizing additional capacity that can be added in the short term, and the relative cost-benefit relationship to other Facilities.

Facility feasibility was primarily determined through traffic and revenue analysis that forecasted the time periods when congestion on the General Purpose Lanes would reach a level at which users would be more likely to consider managed lanes as an attractive option. Additional criteria in determining feasibility include local support, status of the environmental process, political support and ROW availability, among others.

Adding up all these factors, NTEMP24 has tried to optimize the revenue generation capacity of each Segment while ensuring that the users are provided with sufficient alternatives to avoid the inconvenience associated with long daily commutes on congested roads.

In our plan, the Managed Lanes are added in the first stage of the development of each Segment, generally providing two additional lanes (per direction) as an alternative for drivers willing to use tolled facilities for a faster and more reliable commute. By shifting traffic into the Managed Lanes, the flow on the General Purpose Lanes will be improved at no cost to users since the existing capacity of General Purpose Lanes will be maintained when the Managed Lanes are built. Additional benefits to the traveling public in the short term include improvements to some ramps and repaved, reconstructed General Purpose Lanes.

Design and construction of the interim configuration will take into consideration the future expansion that will accommodate the ultimate configuration envisioned by TxDOT and reflected in the schematics that are part of the environmental approval. Thus, the construction will occur at the time when the additional lanes are required, minimizing both the cost of those future expansions and the disturbance to traffic.

The triggers for expansion for either phased construction of an interim configuration or expansion to an ultimate configuration will be based on one the following principles:

- Date-Based Triggers: Similarly to the requirements on the CDA for Segments 1 and 2W, the concessionaire may be required to add capacity by a certain date, regardless of the actual demand.

- Revenue-Based Triggers: This option is also contemplated in the CDA for Segments 1 and 2W; the mechanism works according to the following principle: if the project is performing better than expected, when the amount of revenues in excess of the base case is enough to cover the cost of the widening plus the compensation to the concessionaire due to the decrease of traffic in the Managed Lanes as a result of the additional lane capacity, then new General Purpose Lanes, Frontage Roads and/or Managed Lanes will be constructed.
- TxDOT's Discretion: At all times, TxDOT will have the ability to request the concessionaire to build additional capacity, provided that the actual compensation is paid at the time.

Table 9-1 prioritizes the identified Facilities according to the findings of the analysis described above. Table 9-2 provides additional details on each Segment, including the length and number of lanes planned for the interim and ultimate configurations. Stick diagrams provided at the end of Chapter 1 show the configurations of each Segment visually. The schedule in Section 2 of this report provides more detail on the timing of the milestones and processes that go into the development and implementation of each Facility and the criteria for constructing ultimate configurations.

Table 9-1: Sequencing of Facilities

Segment / Facility		Limits	Key Dates (Preliminary Estimates)	Proposed Delivery Method for Interim Configuration	Est. Public Funds Required ($ M US)
Potential Facility 3A/3B	Seg. 3A	Meacham Blvd. to IH 30	Execution of Facility Agreement: December 2010 Substantial Completion / Service Commencement: June 2017	DBFOM with traffic risk on the private sector	Interim: $0.0 Ultimate: $872.0
	IH 35W / IH 820 Interchange	IH 35W / IH 820			
	Seg. 3B	Between Fossil Creek and Western Center Blvd. to North Tarrant Parkway			
Segment 2E		NTE Segment 2C (SH 183) at Industrial Blvd. (FM 157) to County Line Rd.	Execution of Facility Agreement: December 2014 Substantial Completion / Service Commencement: December 2020	DBFOM with traffic risk on the private sector	Interim: $276.2 Ultimate: $415.0
Segment 3C		NTE Segment 3B (US 287) to 0.16 mile south of Eagle Parkway	Execution of Facility Agreement: December 2014 Substantial Completion / Service Commencement: December 2020	DBFOM with availability payments or minimum revenue guarantee	Interim: $427.1 Ultimate: $744.5

Segment / Facility	Limits	Key Dates (Preliminary Estimates)	Proposed Delivery Method for Interim Configuration	Est. Public Funds Required ($ M US)
Segment 4	NTE Segment 2C (IH 820/SH 121/SH 183) to Randol Mill Road	Execution of Facility Agreement (Facility NTP3): December 2019 Substantial Completion / Service Commencement: December 2025	DBFOM with availability payments or minimum revenue guarantee	Interim: $548.0 Ultimate: $548.0

Table 9-2: Interim and Ultimate Build-Out Characteristics of NTE Segments

Segment ID	Length (miles)	Number, Type and Width of Lanes (by direction)	Interconnections	
			Major (Multi-Level Interchange)	Minor (Minor Interchange or Grade Separation)
2E Interim	4.5	3 – 12′ GP 2 – 12′ ML 2-12′ Frontage Roads	▪ SH 360 ▪ DFW International Parkway	▪ N. Industrial Blvd. (FM 157) ▪ Manchester Dr. ▪ N. Ector Dr. ▪ Byers St. ▪ N. Euless Main Street ▪ SH 10 ▪ American Blvd / Bear Creek Pkwy. ▪ Amon Carter Blvd.
2E Ultimate		4 – 12′ GP 3 – 12′ ML 2-12′ Frontage Roads		
3A Interim	5.4	2-3 – 12′ GP 2 – 12′ ML 2-12′ Frontage Roads	▪ Spur 280 ▪ SH 121 / US 377	▪ Meacham Blvd. ▪ SH 183 / 28th St. ▪ Fourth St. ▪ Pharr St.

Segment ID	Length (miles)	Number, Type and Width of Lanes (by direction)	Interconnections	
			Major (Multi-Level Interchange)	Minor (Minor Interchange or Grade Separation)
3A Ultimate		3-4 – 12′ GP 2 – 12′ ML 2-3 – 12′ Frontage Roads		▪ FW & Western RR/ Long St. ▪ BNSF RR/Dooling St. ▪ UPRR ▪ Yucca / E. Northside Dr. ▪ Sylvania Ave. @ SH 121 ▪ DART RR ▪ Luella St.
IH 35 / IH 820 Interchange Interim (Base Case and Alternative 1)	1.70 along IH 35W /	2-3 – 12′ GP plus auxiliary lanes 2 – 12′ ML on IH 35W 1-2 – 12′ ML on IH 820 2-12′ Frontage Roads One-lane non-tolled Direct Connectors	▪ IH35/IH820 ▪ Mark IV Parkway	▪ N/A
IH 35 / IH 820 Interchange Ultimate	1.87 along IH 820	3 – 12′ GP plus auxiliary lanes 2 – 12′ ML 2-12′ Frontage Roads Non-tolled Direct Connectors as shown on TxDOT schematics for environmental approval		
3B Interim	3.4	2-3 – 12′ GP 2 – 12′ ML 2-3 -12′ Frontage Roads	▪ US 81 / 287	▪ Basswood Blvd. ▪ Western Center Blvd.

Segment ID	Length (miles)	Number, Type and Width of Lanes (by direction)	Interconnections	
			Major (Multi-Level Interchange)	Minor (Minor Interchange or Grade Separation)
3B Ultimate		3-4 – 12′ GP 2 – 12′ ML 2-3 -12′ Frontage Roads		▪ Basswood Blvd. ▪ Western Center Blvd. ▪ North Tarrant Parkway
3C Interim	7.2	2 – 12′ GP 2 – 12′ ML 2-12′ Frontage Roads	▪ SH 170	▪ North Tarrant Parkway ▪ Heritage Trace Parkway ▪ Golden Triangle Blvd. ▪ Keller-Hicks Rd. ▪ Westport Parkway ▪ Alliance Blvd. ▪ Texas Longhorn Way
3C Ultimate		3 – 12′ GP 2 – 12′ ML 2-12′ Frontage Roads		
4 Interim	3.7	4 – 12′ GP 1 – 14′ ML 2-3 – 12′ Frontage Roads	▪ IH 820/SH 121 ▪ IH 820/SH 121/ SH 183	▪ Randol Mill Rd. ▪ Trinity Blvd. ▪ Handley-Ederville Rd. ▪ SH 10 (Hurst Blvd.) ▪ Glenview Dr. / W. Pipeline Rd.
4 Ultimate		4 – 12′ GP 1 – 14′ ML 2-3 – 12′ Frontage Roads		

As this is a preliminary planning exercise, the proposed delivery methods in Table 9-1 and the recommendations that follow are based on an analysis performed to date using available data and market conditions from comparable projects. However, the nature of the CDA for Segments 2-4 will allow for future updates of the Master Development Plan if TxDOT or the Developer consider that conditions change significantly in the future that would have a material impact in the results presented above hence allowing for alternative delivery methods to be consider at the time. The MDP will need to be updated to reflect those new conditions according to the process that will be described in Milestone 7 of the Initial Scope of Work.

TxDOT has several options for methods of delivering the potential Facilities comprising NTE Segments 2-4. For Facilities with sufficient forecasted traffic and revenue to support a project with minimum public contribution, or that present an attractive ratio of public funds over the total project value, a concession procurement with traffic risk can be utilized. Under this scenario, the Developer would be responsible for the major risks, including construction, design, finance, traffic and revenue, operation, and maintenance. The Interim Configuration for Facility 3A-3B where both the Developer and TxDOT design and construct parts of the Facility, falls under this category.

The remaining Segments, as currently configured, will only be toll-viable with a significant contribution of public funds to design, construct, operate and maintain the interim configuration. For Segment 2E, a concession procurement in which the Developer undertakes the traffic risk is possible depending on TxDOT's ability to support the required public funds.
A concession delivery model with availability payments is another option that could be used to deliver NTE Facilities. This delivery model removes traffic and revenue from the Developer's risk profile and thereby decreases the amount of the public funds necessary during the construction phase. Portions of the public funds would be paid over the operating term of the concession. Depending on the project fundamentals, it may be advisable to use these delivery approaches to shorten concession term lengths and decrease risk for lenders and investors.

For Segment 3C, the amount of public funds needed is even greater than for Segment 2E, and an availability payments structure is recommended. Segment 4 requires the greatest amount of public funds, and the project would also need to be structured as a availability payment project.

In lieu of availability projects for Segment 3C and Segment 4, TxDOT could develop the projects where the Developer retains traffic risk, but has a minimum revenue guarantee. This approach would grant the Developer a minimum payment as long as revenues fall short of a contractually agreed upon threshold. If revenues exceed this threshold, TxDOT will not be responsible for making a payment to the Developer for that time period.

In addition to the methods outlined above, it may be possible to reduce or eliminate public subsidy on a potential Facility by phasing the construction of the interim configuration of a Facility so that certain scope items are deferred and tied to triggers for expansion. This optimization would occur during the Facility Implementation Plan stage and negotiations with TxDOT. Also, it may be feasible to combine Segments or portions of Segments into Facilities, potentially decreasing certain costs through economies of scale and sharing of resources across Segments.

9.2 Schedule of Facility Development

This chapter discusses the schedule of development for each Facility and provides phasing and sequencing as well as criteria for ultimate build-out. Graphical schedules are provided as Figures 9-1 through 9-4. These schedules show the timing of the various milestones and processes involved in the development and implementation of Facilities, including:

- Submission of Facility Implementation Plan request (notice that a Facility is Ready for Development)
- TxDOT agreement that Facility is Ready for Development
- Approval of Facility Implementation Plan (FIP)
- Execution of Facility Agreements
- Close of Finance
- Notice to Proceed for Design and Construction
- Design and Utility Coordination
- ROW Acquisition
- Construction
- Substantial Completion
- Commencement of Operations and Maintenance

9.2.1 Basis of Schedule

The timing of the milestones within each Facility is based on the following assumptions with regard to contractual obligations and time needed to carry out each type of activity.

Facility Development Work and Close of Finance

Timeframes for the submission of the FIP request, TxDOT Ready for Development letter, Facility Development Work, Facility Implementation Plan, Facility Agreement execution and Close of Finance are based on contractual requirements, as follows:

- Up to 210 days are allowed between the Developer's issuance of a FIP request (Ready for Development Letter) and TxDOT's approval of the resulting FIP. The process includes the following steps:
  - Once the Developer has issued a FIP request, TxDOT is allowed 30 days to respond and either issue Facility NTP1 authorizing preparation of a Facility Implementation Plan or reject that the Facility is Ready for Development.
  - Following issuance of NTP1, the Developer shall prepare and submit a FIP within 120 days.
  - Following submittal of a FIP, TxDOT is allowed up to 60 days to respond.
- A six-month schedule is indicated for Facility Development Work, which includes activities necessary to reach Close of Finance, including negotiation of a Facility Agreement, preliminary engineering and design, due diligence studies and cost estimation.
- Upon completion of Facility Development Work, the Developer or its Affiliate will request authorization to proceed with the Close of Finance for the Facility. TxDOT shall respond to this request within 30 days or such other period as may be agreed to by the parties. If TxDOT concurs that all conditions required for the Close of Finance have been satisfied, Facility NTP3 will be issued. Execution of the Facility Agreement is timed to coincide with Facility NTP3.
- Upon issuance of Facility NTP3, the Developer is allowed 45 days to reach Close of Finance. This time period may need to be adjusted to reflect more realistic conditions to achieve Close of Finance at the time.

Design and Construction

Design, utility coordination and right-of-way acquisition have been scheduled to begin simultaneously upon Close of Finance for each Facility. Design and construction will overlap to maximize coordination and efficiency. Following Substantial Completion, the Developer will be obligated to complete remaining Construction Work (for items with no material or adverse effect on the normal and safe use and operation of the Facility) as set out on TxDOT's Punch List before Final Acceptance will be issued.

9.2.2 Interim and Ultimate Build-Outs – Configurations and Phasing Parameters

The configurations of interim and ultimate build-outs for each Segment are provided in Table 9-2 on page 4.

Design and construction of the interim configuration will take into consideration the future expansion that will accommodate the ultimate configuration envisioned by TxDOT and reflected in the schematics that are part of the environmental approval. Thus, construction of the ultimate configuration will occur when and if additional lanes are

required, minimizing both the cost of those future expansions and the disturbance to traffic.

The triggers for future expansions will be based on one the following principles:

- **Revenue-Based Triggers:** This option is also contemplated in the CDA for Segments 1 and 2W. The mechanism works according to the following principle: if the project is performing better than expected, when the amount of revenues in excess of the base case is enough to cover the cost of the construction of the ultimate configuration, plus compensation to the Developer due to the decrease of traffic in the Managed Lanes as a result of the additional lane capacity, then additional General Purpose Lanes, Frontage Roads and/or Managed Lanes will be constructed.
- **TxDOT's Discretion:** At all times, TxDOT will have the ability to request that the Developer build additional capacity, provided that the actual compensation is paid at the time.

Figure 9-1: MDP Preliminary Sequencing Schedule, Facility 3A-3B

ID	Task Name	Start	Finish
1	Completion of Master Development Plan	12/15/10	12/15/10
2	**FACILITY 3A-3B DEVELOPMENT**	**05/19/10**	**07/04/17**
3	Submittal of Facility Implementation Plan Request	05/19/10	05/19/10
4	Facility NTP 1 - Agreement that Facility is Ready for Development	06/16/10	06/16/10
5	FIP Preparation	06/17/10	10/15/10
6	TxDOT Review of FIP	10/18/10	12/29/10
7	Facility NTP 2 - Approval of Facility Implementation Plan	12/30/10	12/30/10
8	Facility Development Work	06/16/10	11/30/11
9	Execute Facility Agreement	08/31/11	08/31/11
10	Close of Finance	12/30/11	12/30/11
11	NTP for Design and Construction	01/02/12	01/02/12
12	**Segment 3A**	**07/01/11**	**06/30/17**
13	Conform Design to Final NEPA Approval	07/01/11	01/01/12
14	Design and Utility Coordination	01/02/12	12/31/13
15	ROW Acquisition	01/02/12	12/31/13
16	Construction and Utility Relocation	01/01/13	06/30/17
17	**Segment 3B**	**07/01/11**	**06/30/17**
18	Development (TxDOT to Determine Specifics)	07/01/11	06/30/17
19	Developer Access to Seg. 3B for Toll Integration	06/01/16	06/01/16
20	**IH 35W / IH 820 Interchange**	**05/19/10**	**07/04/17**
21	ROW Acquisition (Concession CDA)	05/19/10	03/30/12
22	Design and Utility Coordination	01/02/12	12/31/13
23	Construction and Utility Relocation	01/01/13	06/30/17
24	Substantial Completion	07/03/17	07/03/17
25	Commencement of Operations and Maintenance	07/04/17	07/04/17

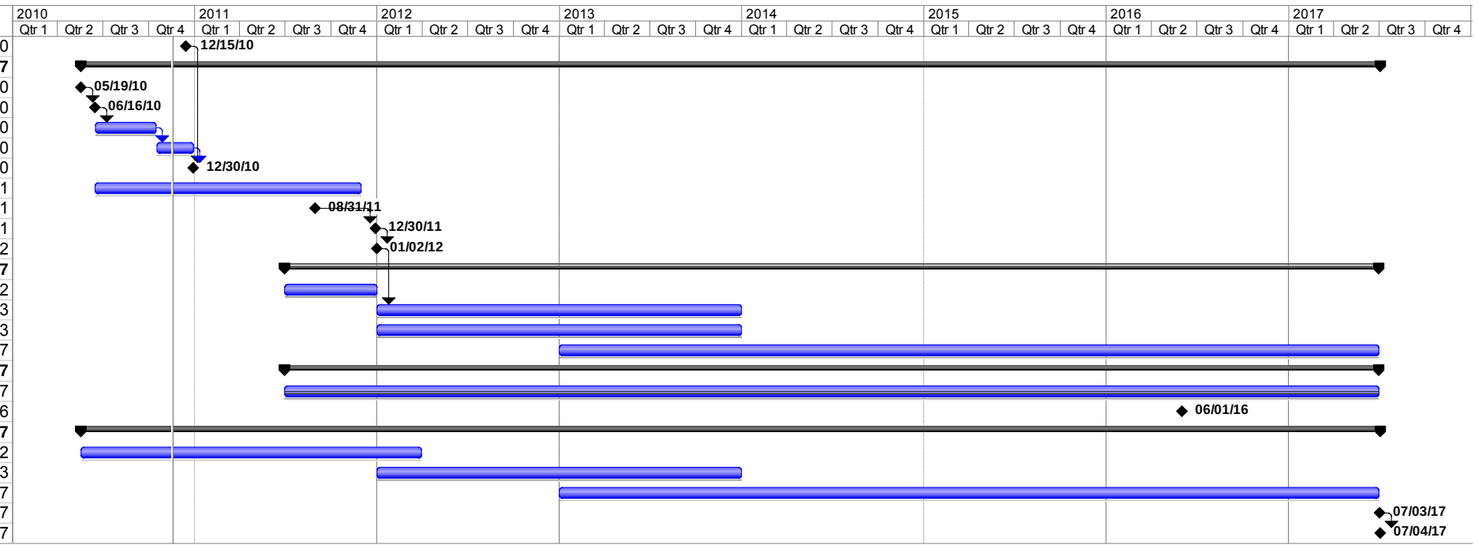

Figure 9-2: MDP Preliminary Sequencing Schedule, Segment 2E

ID	Task Name	Start	Finish
26	**SEGMENT 2E DEVELOPMENT**	**11/26/12**	**01/02/20**
27	Submittal of Facility Implementation Plan Request	11/26/12	11/26/12
28	Facility NTP 1 - Agreement that Facility is Ready for Development	12/24/12	12/24/12
29	FIP Preparation	12/25/12	04/25/13
30	TxDOT Review of FIP	04/26/13	06/27/13
31	Facility NTP 2 - Approval of Facility Implementation Plan	06/28/13	06/28/13
32	Facility Development Work	07/01/13	12/30/13
33	Execute Facility Agreement	01/01/14	01/01/14
34	Close of Finance	12/31/14	12/31/14
35	NTP for Design and Construction	01/01/15	01/01/15
36	Design and Utility Coordination	01/02/15	01/01/16
37	ROW Acquisition	07/01/15	12/31/17
38	Construction	10/01/15	12/31/19
39	Substantial Completion	01/01/20	01/01/20
40	Commencement of Operations and Maintenance	01/02/20	01/02/20

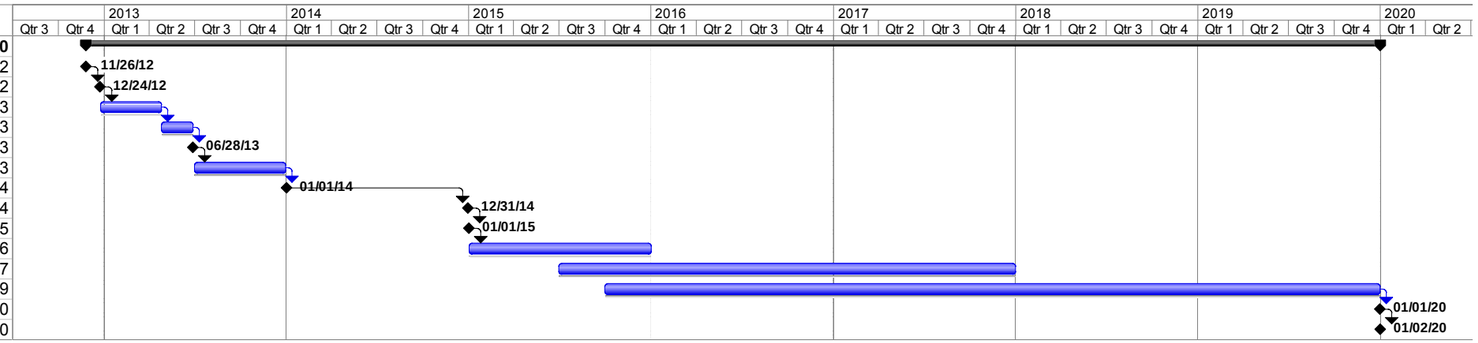

Figure 9-3: MDP Preliminary Sequencing Schedule, Segment 3C

ID	Task Name	Start	Finish
41	**SEGMENT 3C DEVELOPMENT**	**11/26/12**	**01/02/20**
42	Submittal of Facility Implementation Plan Request	11/26/12	11/26/12
43	Facility NTP 1 - Agreement that Facility is Ready for Development	12/24/12	12/24/12
44	FIP Preparation	12/25/12	04/25/13
45	TxDOT Review of FIP	04/26/13	06/27/13
46	Facility NTP 2 - Approval of Facility Implementation Plan	06/28/13	06/28/13
47	Facility Development Work	07/01/13	12/30/13
48	Execute Facility Agreement	01/01/14	01/01/14
49	Close of Finance	12/31/14	12/31/14
50	NTP for Design and Construction	01/01/15	01/01/15
51	Design and Utility Coordination	01/02/15	01/01/16
52	ROW Acquisition	07/01/15	12/31/17
53	Construction	10/01/15	12/31/19
54	Substantial Completion	01/01/20	01/01/20
55	Commencement of Operations and Maintenance	01/02/20	01/02/20

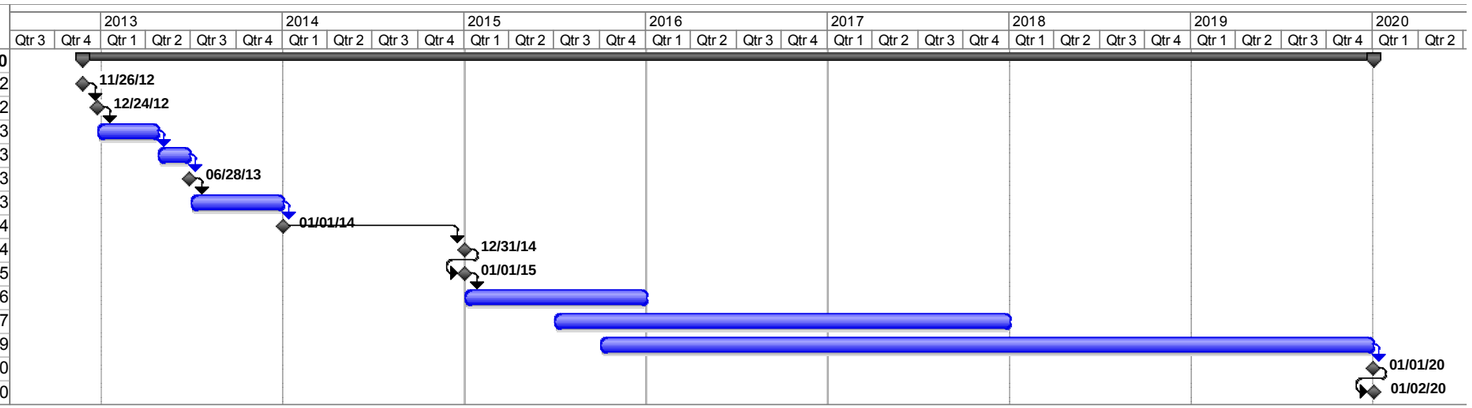

Figure 9-4: MDP Preliminary Sequencing Schedule, Segment 4

ID	Task Name	Start	Finish
56	**SEGMENT 4 DEVELOPMENT**	**11/26/18**	**01/02/25**
57	Submittal of Facility Implementation Plan Request	11/26/18	11/26/18
58	Facility NTP 1 - Agreement that Facility is Ready for Development	12/24/18	12/24/18
59	FIP Preparation	12/26/18	04/26/19
60	TxDOT Review of FIP	04/29/19	07/01/19
61	Facility NTP 2 - Approval of Facility Implementation Plan	07/01/19	07/01/19
62	Facility Development Work	07/02/19	01/01/20
63	Execute Facility Agreement	01/01/20	01/01/20
64	Close of Finance	12/30/19	12/30/19
65	NTP for Design and Construction	12/31/19	12/31/19
66	Design and Utility Coordination	01/01/20	12/31/20
67	ROW Acquisition	07/01/20	12/31/22
68	Construction	10/01/20	12/31/24
69	Substantial Completion	01/01/25	01/01/25
70	Commencement of Operations and Maintenance	01/02/25	01/02/25

9.3 Obtaining Outstanding Governmental Approvals

9.3.1 Introduction

NTEMP24 acknowledges that TxDOT is in the process of negotiating Environmental and Governmental Approvals in connection with the development of the Project, including the approval of the National Environmental Policy Act (NEPA) documents and Project Schematics. TxDOT-Provided Approvals will be based on the the NEPA approved Public Hearing schematics.

This report discusses the required Governmental Approvals for each Segment and actions needed to achieve these approvals. Compliance with the requirements set out in Governmental Approvals is discussed in Chapter 4, Compliance with Mitigation and Environmental Requirements of Governmental Approvals.

NTE Segments 1 and 2 were approved by the Federal Highway Administration (FHWA) on December 5, 2008 and October 26, 2009, respectively. TxDOT is currently preparing updated NEPA Environmental Assessments (EAs) and pursuing a finding of no significant impact (FONSI) with FHWA for Segment 3 South and Segment 3 North, which include Segments 3A and 3B/3C, respectively. Decision documents are expected no earlier than June 2011. The EA for Segment 4 was approved in April 2004 but did not include a managed lane facility, and therefore will need to undergo either a NEPA re-evaluation or a new EA, at TxDOT's discretion. Environmental clearance for Segment 4 is anticipated in 2012.

Because the environmental process is not yet complete for Segments 3A, 3B, 3C and 4, **the information contained herein relating to the environmental commitments for these Segments is subject to change**.

The Developer shall be responsible for obtaining all Governmental Approvals, including providing all materials supporting the permitting process and any delay risks in the processing of the request. The most common permits cited below are U.S. Army Corps of Engineers (USACE) Section 404 Nationwide Permits (NWP). The Developer shall work with TxDOT and the USACE to establish a mutually acceptable format and schedule of submittals to support the Section 404 Permit.

9.3.2 Facility-Specific Governmental Approvals

9.3.2.1 Segment 2E

The Environmental Assessment for SH 121/SH 183 (Airport Freeway) includes Segments 2W and 2E. This EA requires Governmental Approvals for three bodies of water within the Facility ROW of Segment 2E, as shown in Table 9-3. The stream

impacts for each water body (permanent and temporary) would each be covered under NWP 14. Pre-Construction Notifications (PCNs) under these NWPs will not be required since the crossings at each water body would result in the permanent loss of less than 0.1 acre of waters of the U.S., and no special aquatic sites (which include wetlands) would be impacted. The Developer shall be responsible for any exceedances of threshold limits during detailed design, including mitigation.

Table 9-3: Waters of the U.S. Within Proposed Segment 2E ROW and Easements

Name	Crossing Type	Type of Potential Impact	Acres Approx. Temporary Impacts	Acres Approx. Permanent Impacts	Proposed Permit
Unnamed Tributary to Trinity River	Multiple Box Culvert	Water	0.0[1]	0.009	NWP 14
Unnamed Tributary to Bear Creek	Multiple Box Culvert	Water	0.08	0.0[1]	NWP 14
Bear Creek	Bridge	Water	0.94	0.004	NWP 14
[1]Where impacts are listed as "0.0," it is either due to the channel being concrete-lined or because the proposed design would have no impact on the existing water body.					

Segment 2E has an area of impact greater than one acre, therefore a Texas Pollutant Discharge Elimination System (TPDES) General Permit for Construction Activity by TCEQ will be required. Segment 3A has an area of impact greater than five acres, therefore a SW3P Notice of Intent will be required.

DFW International Airport is immediately adjacent to Segment 2E and construction of this Segment will require acquisition of approximately 1.8 acres of airport property. A Federal Aviation Administration (FAA) Notice of Proposed Construction or Alteration form (Form AD-7460-1) must be completed during the design phase and submitted by TxDOT to the FAA for their approval prior to construction of this Segment. Any additional NEPA documentation that arises during detailed design or construction will be produced and submitted to TxDOT for processing with the FAA.

9.3.2.2 Segment 3A

The Environmental Assessment for IH 35W that includes Segment 3A requires Governmental Approvals for the four bodies of water within the Facility ROW. Table 9-4 identifies the following Governmental Approvals: NWP 14, NWP 14 with a PCN and NWP 25.

Table 9-4: Waters of the U.S. Within Segment 3A ROW and Easements (Subject to Change)

Area Crossings	Type of Potential Impact	Name	Crossing Type	Acres within Proposed ROW	Acres Approx. Permanent Impacts	Proposed Permit
1	Water	Unnamed Tributary Fossil Creek	Single and complete	0.07	0.07	NWP 14 with a PCN
1	Wetland	Wetland	Associated with Water 1	0.29	0.29	NWP 14 with a PCN
2	Water	Unnamed Tributary West Fork Trinity River	Single and complete	0.0[1]	0.0[1]	None
3	Water	West Fork Trinity River	Single and complete	4.84	0.02	NWP 25
4	Water	West Fork Trinity River	Single and complete	5.50	0.02	NWP 25
5	Water	Unnamed Tributary West Fork Trinity River	Single and complete	0.51	0.01	NWP 14 NWP 25

[1] Tributary is currently in a culvert beneath IH 35W. There would be no impacts at this location.

Segment 3A has an area of impact greater than one acre, therefore a TPDES General Permit for Construction Activity by TCEQ will be required. Segment 3A has an area of impact greater than five acres, therefore a SW3P Notice of Intent will be required. Segment 3A is within the Trinity River Corridor Development Regulatory Zone; therefore, a Corridor Development Certificate (CDC) permit will be required.

Trinity River Crossing Number 3 on Segment 3A is within the 100-year floodplain, therefore coordination with the local floodplain administrator (FEMA, NFIP) will be required.

9.3.2.3 Segment 3B

The Environmental Assessment for IH 35W that includes Segment 3B requires Governmental Approvals for the three bodies of water within the Facility ROW. Table 9-5 identifies the following two Governmental Approvals: NWP 14 and NWP 14 with a PCN.

Table 9-5: Waters of the U.S. Within Segment 3B ROW and Easements (Subject to Change)

Area Crossings	Type of Potential Impact	Name	Crossing Type	Acres within Proposed ROW	Acres Approx. Permanent Impacts	Proposed Permit
12	Wetland	Unnamed Tributary Big Fossil Creek	Single and complete	0.7[1]	0.11	NWP 14 with a PCN
13	Open Water	Unnamed Tributary Big Fossil Creek	Single and Complete	0.38	0.31	NWP 14 with a PCN
14	Open Water	Big Fossil Creek	Single and Complete	0.74	0.01	NWP 14

[1] Wetlands within the OHWM.

Segment 3B has an area of impact greater than one acre, therefore a TPDES General Permit for Construction Activity by TCEQ will be required. Segment 3B has an area of impact greater than five acres, therefore a SW3P Notice of Intent will be required.

9.3.2.4 Segment 3C

The Environmental Assessment for IH 35W that includes Segment 3C requires Governmental Approvals for 11 bodies of water within the Facility ROW. Table 9-6 identifies the following Governmental Approvals: NWP 14, NWP 14 with a PCN, NWP 3(a) and NWP 25.

Segment 3C has an area of impact greater than one acre, therefore a TPDES General Permit for Construction Activity by TCEQ will be required. Segment 3C has an area of impact greater than five acres, therefore a SW3P Notice of Intent will be required.

Table 9-6: Waters of the U.S. Within Segment 3C ROW and Easements (Subject to Change)

Area Crossings	Type of Potential Impact	Name	Crossing Type	Acres within Proposed ROW	Acres Approx. Permanent Impacts	Proposed Permit
1	Open Water	Unnamed Tributary Henrietta Creek	Single and complete	0.0[2]	0.0	–
2	Open Water	Unnamed Tributary Henrietta Creek	Single and complete	0.0[2]	0.0	–
3	Open Water	Unnamed Tributary Henrietta Creek	Single and complete	0.0[2]	0.0[2]	–
4	Open Water	Henrietta Creek	Single and complete	0.69	0.01	NWP 14 with a PCN
	Wetland	Henrietta Creek	Associated with Water 4	0.46[4]	0.01[4]	
5	Open Water	Buffalo Creek	Single and Complete	0.30[5]	0.0[5]	NWP 14 with a PCN
	Wetland	Buffalo Creek	Associated with Water 5	0.02[4]	0.02[4]	
6	Open Water	Unnamed Tributary Buffalo Creek	Single and Complete	0.08	0.01[4]	NWP 14
7	Open Water	Unnamed Tributary Buffalo Creek	Single and Complete	0.04	0.04	NWP 14
8	Wetland	Unnamed Tributary Big Bear Creek	Single and Complete	0.01[4]	0.01[4]	NWP 14 with a PCN
9	Open Water	Big Bear Creek	Single and Complete	0.17	0.11	NWP 14 with a PCN
	Wetland	Big Bear Creek	Associated with Water 9	0.20[4]	0.10[4]	
10	Open Water	Unnamed Tributary Big Fossil Creek	Single and Complete	0.02	0.02	NWP 14 with a PCN
	Wetland	Unnamed Tributary Big Fossil Creek	Associated with Water 10	0.04[4]	0.04[4]	
11	Open Water	Unnamed Tributary Big Fossil Creek	Single and Complete	1.05	0.0[5]	NWP 14 with a PCN

Area Crossings	Type of Potential Impact	Name	Crossing Type	Acres within Proposed ROW	Acres Approx. Permanent Impacts	Proposed Permit
	Wetland	Unnamed Tributary Big Fossil Creek	Associated with Water 11	0.13[4]	0.13[4]	

[1] This column represents all the existing delineated waters of the U.S. within the proposed project's ROW and drainage easements. The column titled "Acres Approx. Permanent Impacts" indicates the amount that would be impacted by the proposed project within the ROW.
[2] This culvert receives upland drainage west of IH 35W. Waters of the U.S. begin east of the culvert.
[3] The culvert would not be extended at this location. There would be no impact at this location.
[4] Wetlands within the OHWM.
[5]Tributary is currently in a culvert beneath IH 35W. The culvert would remain in place and extended.

9.3.2.5 Segment 4

The EA/FONSI for IH 820 (Pipeline Road to Randol Mill Road), which includes Segment 4, was approved in April 2004, but did not include a managed lane option. This Segment will require a NEPA re-evaluation, subject to FHWA agreement. The relevant provisions of the previously approved EA are provided below, with the understanding that they are subject to change.

The previously approved EA requires Governmental Approvals for five bodies of water and four wetland areas within the Facility ROW. Unlike the other Segments, Segment 4 will likely require USACE and U.S. Coast Guard permits for the crossing of navigable waters (West Fork Trinity River). Table 9-7 lists the Governmental Approvals required by the 2004 EA.

Table 9-7: Waters of the U.S. Within Segment 4 ROW and Easements (Subject to Change)

Name	Crossing Type	Type of Potential Impact	Acres Approx. Impacts	Proposed Permit
Trinity River	Bridge	Water	Not provided	NWP 25 with PCN
Mosier Valley Lake	Bridge	Water	Not provided	NWP 25 with PCN
Calloway Branch	Bridge	Water	Not provided	NWP 25 with PCN
WF-9 (unnamed tributary of Trinity River)	Box Culvert	Water	0.2	NWP 14, possible PCN
West Fork Trinity River	Bridge	Navigable Water	Not provided	Section 10, USACE; Section 9, U.S. Coast Guard
Wetland #2	Not provided	Wetland	0.4	NWP 14 with PCN
Wetland #3	Not provided	Wetland	0.2	NWP 14 with PCN
Wetland #4	Not provided	Wetland	0.3	NWP 14 with PCN
Wetland #8	Not provided	Wetland	0.2	NWP 14 with PCN
Wetland #10	Not provided	Wetland	0.3	NWP 14 with PCN

9.4. Compliance with Mitigation and Environmental Requirements of Governmental Approvals

This chapter discusses the environmental and mitigation requirements for each Segment, as identified in the current NEPA studies. The discussion of these requirements is followed by the general management approach to be utilized to ensure compliance.

The Developer acknowledges that TxDOT is in the process of negotiating Environmental and Governmental Approvals in connection with the development of the Segments 3A and 3B, including the approval of the NEPA documents and Project Schematics, and that TxDOT will pursue either an environmental re-evaluation or new EA for Segment 4. Information contained herein relating to the environmental commitments for these Segments is subject to change.

The Facility Implementation Plan (FIP) for each proposed Facility will provide additional details of environmental and other major Governmental Approvals to be obtained, as well as required environmental mitigation, and will be updated as the environmental documents are finalized.

For work performed under a Facility Implementation Plan or any Facility Agreement, the Developer will be responsible for complying with the environmental and mitigation requirements identified in the Record of Decision (ROD), Finding of No Significant Impact (FONSI) or other decision document, under the oversight of TxDOT, and as specified in the Facility Agreement.

9.4.1 Segment 2E

The major mitigation requirements for Segment 2E, as shown in the FONSI for Airport Freeway, are described below. Details of all mitigation requirements for Segment 2E will be provided at the FIP stage.

9.4.1.1 Right of Way Requirements, Relocations, and Displacements

Construction of Segment 2E will require the acquisition of approximately 26.2 acres of additional ROW, including 1.8 acres from DFW International Airport. The Right of Way Acquisition and Relocation Assistance Program shall be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

9.4.1.2 Airway / Highway Clearance

Due to the proximity of DFW International Airport to Segment 2E, a FAA Notice of Proposed Construction or Alteration form (Form AD-7460-1) will need to be completed

during the design phase and submitted to the FAA for approval prior to construction. Any additional NEPA documentation that arises during detailed design or construction will be produced the responsibility of the Developer.

9.4.1.3 Vegetation and Wildlife Habitat

On-site mitigation for the loss of 20.3 acres of riparian vegetation will be required at Bear Creek on a one-to-one ration of replacement. Clearing of vegetation within riparian areas and throughout the corridor shall be avoided or minimized where possible.

Swallow nests have been observed within several culvert structures under Airport Freeway. In the event that migratory birds are encountered onsite during construction, every effort shall be made to avoid take of protective birds, active nests, and/or young. Old migratory bird nests may be removed between September 1 and the end of February. Clearing of vegetation shall be avoided or minimized between March 1 and August 31.

9.4.1.4 Waters of the U.S.

Impacts to three jurisdictional waters of the U.S. associated with Segment 2E will be authorized under Nationwide Permit (NWP) 14 with a Preconstruction Notice (PCN) required. The affected waters are Bear Creek, an unnamed tributary to Bear Creek and an unnamed tributary to the Trinity River.

9.4.1.5 Water Quality

Because the project crosses a threatened or impaired water segment and is within five miles upstream of an impaired or threatened segment, coordination with the TCEQ is required for total maximum daily loads (TMDLs).

Because the project will include five or more earth disturbances, it must comply with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit. A Storm Water Pollution Prevention Plan (SW3P) will be implemented and a Notice of Intent (NOI) will be required.

The project will comply with the applicable Municipal Storm Sewer System (MS4) requirements. A Corridor Development Certificate (CDC) will not be required for Segment 2E.

9.4.1.6 Noise

The FONSI for Airport Freeway recommends 13 noise wall locations as reasonable and feasible. Four of these noise wall locations are located along Segment 2E. Noise wall workshops will determine which of the proposed noise walls are desired by the public.

9.4.2 Segment 3A

9.4.2.1 Right of Way Requirements, Relocations, and Displacements

Approximately 80.85 acres of additional ROW would be required to accommodate the proposed facility. A total of 126 parcels would be impacted by ROW acquisition and potentially 47 establishments, including 35 commercial structures and 12 residential establishments would be displaced. The Right of Way Acquisition and Relocation Assistance Program shall be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

There is a plant operated by Purina Mills Corp. at 1501 E. Fourth Street, just west of Segment 3A, south of the interchange with SH 121. The Purina plant is eligible for listing on the National Register of Historic Places (NRHP), and would thus be subject to an Individual or Programmatic Section 4(f) evaluation. The Developer's ROW personnel would need to obtain a lease agreement for the area beneath IH 35W for Purina to park vehicles. After NEPA approval, if the design is changed, the Developer will be responsible for any additional coordination, permitting and approvals.

9.4.2.2 Vegetation and Wildlife Habitat

Approximately 235.68 acres of maintained vegetation, 8.49 acres of woody vegetation and 1.74 acres of riparian vegetation would be impacted. In addition, 56 trees with a dbh equal to 20 inches or greater would be impacted. Mitigation for the loss of riparian habitat and other unique or special features (large trees) would be in accordance with Provision (4) (A) (ii) of the MOA between TxDOT and TPWD.

9.4.2.3 Floodplains

The proposed project crosses 15 water bodies and flood zones. According to NFIP, Zone A and Zone AE are located in a special flood hazard area inundated by the 100-year level.

9.4.2.4 Waters of the U.S.

Approximately 11.21 acres of waters of the U.S. were delineated within the proposed ROW. One (Area Crossing 2) of the five waters of the U.S. would not be impacted by the proposed improvement. One jurisdictional wetland (Area Crossing 1) was delineated totaling 0.29 acre. Because impacts at Area Crossing 1 exceed the 0.1-acre impact threshold for NWP 14 - Linear Transportation Projects, a PCN would be required for the proposed project corridor. Construction of the bridges over the West Fork Trinity River (Area Crossings 3 and 4) and the unnamed tributary to the West Fork Trinity River (Area Crossing 5) shall be authorized under NWP 25 – Structural Discharges.

NWP 14 would also be considered at Crossing 5. However, impacts would be less than 0.1 acre. If temporary fills are needed in jurisdictional waters then the affected areas would be returned to their pre-existing elevations. Channelization would not be required

to construct the proposed project. Compensatory mitigation for Section 404 impacts would be coordinated with the USACE and performed in accordance with the terms of the approved permit(s).

Acquisition of a Section 408/208 permit for construction and flood control on the navigable waters of the Trinity River is necessary before construction may begin on Segment 3A. This permit shall be coordinated with the USACE.

9.4.2.5 Water Quality

The proposed project is located within the boundaries of the Phase I Municipal Separate Storm Sewer Systems (MS4), and shall comply with the applicable MS4 requirements. The proposed project is within the Trinity River Corridor Development Regulatory Zone; therefore, a CDC will be required.

9.4.2.6 Noise

Segment 3A is expected to result in a traffic noise impact at eight representative receivers and the following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone, and the construction of noise barriers.

Four noise barrier locations (four subdivisions – total of 12 independent walls) are proposed for the project, as follows:

- Noise Barrier 1, North of SH 121 (R8), proposed for the Scenic Bluff neighborhood, is comprised of three segments.
- Noise Barrier 2, East of IH 35W (R9) is comprised of one segment.
- Noise Barrier A, West of IH 35W (R2-R6) at Greenway Place is comprised of five segments.
- Noise Barrier B, North of SH 121 (R7), proposed for the United Riverside neighborhood is comprised of three segments. There are a total of 29 benefited receivers for the four noise barrier locations.

9.4.3 Segment 3B

9.4.3.1 Right of Way Requirements, Relocations, and Displacements

Approximately 43.2 acres of additional ROW will be required to accommodate the proposed facility. The Right of Way Acquisition and Relocation Assistance Program shall be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

9.4.3.2 Vegetation and Wildlife Habitat

Segments 3B and 3C combined will impact approximately 406.5 acres of maintained vegetation and two trees with a diameter breast height (dbh) between six and 12 inches.

Segment 3B would impact approximately 31 acres of unmaintained grassland/pasture, five acres of fencerow vegetation and less than one acre of low-quality riparian vegetation. Compensatory mitigation for these impacts is not being offered because impacts would be minor (approximately 0.2 acre) and the riparian areas are poor quality with low species composition.

Permanent soil erosion control features shall be constructed as soon as feasible during the early stages of construction through proper sodding and/or seeding techniques. Disturbed areas shall be restored and stabilized as soon as the construction schedule permits and temporary sodding shall be considered where large areas of disturbed ground would be left bare for a considerable length of time.

9.4.3.3 Floodplains

Segment 3B crosses three bodies of water and is located within the FEMA designated 100-year floodplain (Zones A and AE). Hydraulic design practices shall be in accordance with current TxDOT design policy and standards. The highway facility shall permit the conveyance of the 100-year flood levels, inundation of the roadway being acceptable, without causing significant damage to the roadway, stream, or other property. A portion of the proposed project is within the Regulated Floodway Zone. The constructed Facility shall not increase the base flood elevation to a level that would violate applicable floodplain regulations or ordinances; therefore, coordination with either the FEMA or the local floodplain administrator is not required. However, information coordination with the local floodplain administrator shall occur.

9.4.3.4 Waters of the U.S.

Impacts at all Area Crossings would be authorized under NWP 14 - Linear Transportation Crossings. Because impacts at Area Crossings 12 and 13 exceed the 0.1-acre impact threshold and/or a discharge in wetlands, PCN would be required. If temporary fills are needed in jurisdictional waters then the affected areas would be returned to their pre-existing elevations. Channelization will not be required to construct Segment 3B. Compensatory mitigation for Section 404 impacts would be coordinated with the USACE and performed in accordance with the terms of the approved permit(s).

9.4.3.5 Water Quality

The portion of Segment 3B within the boundaries of the Phase I (Fort Worth) MS4 (just north of US 81/287) would comply with the applicable MS4 requirements. The remaining portion of the proposed project is outside of MS4 jurisdiction. Segment 3B is not within

the Trinity River Corridor Development Regulatory Zone; therefore, a CDC will not be required.

9.4.3.6 Noise

Segment 3B is expected to result in a traffic noise impact at two representative receivers and the following noise abatement measures were considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone, and the construction of noise barriers. None of these noise abatement measures would be both feasible and reasonable; therefore, no abatement measures are proposed for this Segment.

9.4.4 Segment 3C

9.4.4.1 Right of Way Requirements, Relocations, and Displacements

Approximately 61.49 acres of additional ROW will be required to accommodate the proposed facility. The Right of Way Acquisition and Relocation Assistance Program shall be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

9.4.4.2 Vegetation and Wildlife Habitat

Segments 3B and 3C combined will impact approximately 420 acres of maintained vegetation and two trees with a diameter breast height (dbh) equal to 20 inches or greater.

Segment 3C will impact approximately 30.5 acres of unmaintained grassland/pasture, 1.7 acres of fencerow vegetation and less than one acre of low-quality riparian vegetation. Segment 3B will impact approximately 31 acres of unmaintained grassland/pasture, five acres of fencerow vegetation and less than one acre of low-quality riparian vegetation. Compensatory mitigation for these impacts is not being offered because impacts would be minor (approximately 0.2 acre) and the riparian areas are poor quality with low species composition.

Permanent soil erosion control features shall be constructed as soon as feasible during the early stages of construction through proper sodding and/or seeding techniques. Disturbed areas shall be restored and stabilized as soon as the construction schedule permits and temporary sodding shall be considered where large areas of disturbed ground would be left bare for a considerable length of time.

9.4.4.3 Floodplains

Segment 3C crosses 11 water bodies and is located within the FEMA designated 100-year floodplain (Zones A and AE). Hydraulic design practices shall be in accordance with current TxDOT design policy and standards. The highway facility shall permit the

conveyance of the 100-year flood levels, inundation of the roadway being acceptable, without causing significant damage to the roadway, stream, or other property. A portion of the proposed project is within the Regulated Floodway Zone. The constructed Facility shall not increase the base flood elevation to a level that would violate applicable floodplain regulations or ordinances; therefore, coordination with either the FEMA or the local floodplain administrator is not required. However, information coordination with the local floodplain administrator shall occur.

9.4.4.4 Waters of the U.S.

Impacts to three Area Crossings on Segment 3C (Area Crossings 6, 7 and 9) shall be authorized under NWP 14. Because impacts at Area Crossing 9 exceed the 0.1-acre impact threshold and/or a discharge in wetlands, a PCN would be required. Construction of the bridges over Henrietta Creek (Area Crossing 4) shall be authorized under NWP 25. The proposed culvert extensions (which require minor deviations in the structures' configuration or filled area to make the rehabilitation) at Area Crossings 5, 8, 10 and 11 would be authorized under NWP 3(a). If temporary fills are needed in jurisdictional waters then the affected areas shall be returned to their pre-existing elevations. Channelization would not be required to construct Segment 3C.

9.4.4.5 Water Quality

A small portion of Segment 3C may fall within the boundaries of the Phase I (Fort Worth) MS4 (just north of US 81/287). The exact location of the MS4 boundary will need to be investigated during Facility Development Work. Any portions of Segment 3C within the Fort Worth MS4 would comply with the applicable MS4 requirements. The remaining portion of Segment 3C is outside of MS4 jurisdiction. Segment 3C is not within the Trinity River Corridor Development Regulatory Zone; therefore, a CDC will not be required.

9.4.4.6 Noise

Segment 3C is not expected to result in a traffic noise impacts; therefore, no noise abatement measures are proposed for this Segment.

9.4.5 Segment 4

The major mitigation requirements for Segment 4, as shown in the EA/FONSI for IH 820 (Pipeline Road to Randol Mill Road), are described below. An environmental re-evaluation is currently underway for Segment 4, so certain mitigation requirements are likely to change when the revised NEPA document becomes available. Details of all mitigation requirements for Segment 4 will be provided at the FIP stage.

9.4.5.1 Right of Way Requirements, Relocations, and Displacements

The preferred alternative contemplated in the EA/FONSI would require the acquisition of approximately 49.6 acres of ROW and displacement of three businesses. In addition, a

small ROW take of driveway/parking areas for four additional businesses would occur. No residential displacements would occur. The Right of Way Acquisition and Relocation Assistance Program shall be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended.

9.4.5.2 Vegetation and Wildlife Habitat

Approximately 25 trees with a dbh greater than six inches would be impacted. Every effort shall be made to preserve trees in interchange areas, medians and other areas where they neither compromise safety nor interfere with construction. No major impacts are expected to fish and wildlife species; however, such impacts shall be minimized through avoidance of habitat, prevention and/or minimization of soil erosion and potentially compensatory mitigation for impacts to wetlands.

9.4.5.3 Waters of the U.S.

Replacement of the existing bridges over the Trinity River, Mosier Valley Lake and Calloway Branch would be authorized under NWP 25 with a PCN. Construction of a box culvert over WF-9, an unnamed tributary of the Trinity River, would be authorized under NWP 14. The permitting process will determine whether a PCN is required at this location.

Replacement of existing bridges over the West Fork of the Trinity River will require a Section 10, USACE permit and Section 9, U.S. Coast Guard permit, as this area of the river has been designated as navigable waters.

9.4.5.4 Wetlands

Approximately 1.4 acres of wetland impacts are anticipated. Where impacts are expected to be greater than 0.10 acre, all efforts shall be made to minimize impacts in the final design stage, or process PCNs as required. There are five locations where wetland impacts are estimated at greater than 0.10 acre.

9.4.5.5 Water Quality

No long-term water quality impacts are expected as a result of the preferred alternative.

Tier I Erosion Control, Post-Construction Total Suspended Solids (TSS) control and Sedimentation Control devices (at least one of each type of device) will be required for on-site water quality management to reduce and prevent impacts to jurisdictional waters.

Because the project will disturb more than one acre, it must comply with the TPDES Construction General Permit. A Storm Water Pollution Prevention Plan (SW3P) will be implemented and a Notice of Intent (NOI) will be required.

9.4.5.6 Noise

A traffic noise study was carried out for the preferred alternative and impacts were noted at four locations (receivers). Four abatement options were considered in the EA, but none was determined to be reasonable and feasible; therefore, no noise walls or other noise abatement measures are proposed. The contractor will be required to make every effort to minimize construction noise through measures such as work-hour controls and proper maintenance of muffler systems.

9.4.6 Compliance Approach

9.4.6.1 Roles and Responsibilities

Table 9-8 summarizes the types of permitting and mitigation measures to be undertaken for the Project and the roles and responsibilities of the Developer and TxDOT.

Table 9-8: Environmental Permitting and Mitigation Measures

Permit and/or Agency	Summary	Roles and Responsibilities
Section 404 Permit (NWP / PCN) U.S. Army Corps of Engineers (USACE)	TxDOT will apply to USACE for a Section 404 Permit to place fill material into navigable waters at specified disposal sites as required under Section 404 of the Clean Water Act. The permit requires avoidance and mitigation measures to be considered and implemented first, before consideration is given to permitting fill to be placed in existing waters.	Developer to liaise with TxDOT and USACE to establish a mutually acceptable format and schedule of submittals to support the Section 404 Permit.
Section 401, State Water Quality Certification TCEQ	TCEQ certifies that discharges will comply with State water quality standards under the authority of Section 401 of the federal Clean Water Act.	Developer to liaise with TxDOT and TCEQ to establish a mutually acceptable format and schedule of submittals to support TxDOT permit application.
Section 402, Texas Pollutant Discharge Elimination System (TPDES) Permits for temporary water pollution control measures	TCEQ issues a general permit specifically for construction activities. When construction activity disturbs one acre or greater of land, projects must	Developer to provide to TxDOT documentation to support TxDOT in developing NOI and Notice of Termination (NOT) to TCEQ.

Permit and/or Agency	Summary	Roles and Responsibilities
TCEQ	comply with TCEQ's general permit by implementing a Storm Water Pollution Prevention Plan (SW3P). When a construction activity disturbs five acres or greater TxDOT must notify TCEQ prior to commencement of construction using a Notice of Intent (NOI) form.	
Trinity River Corridor Development Certificate Zone	A CDC permit is required to develop land within a specific area of the Trinity floodplain called the Regulatory Zone, which is similar to the 100-year floodplain.	Developer to obtain
Endangered Species Act (ESA) and Fish and Wildlife Coordination Act (FWCA) USFWS, TPWD	TxDOT, as the FHWA agent for projects receiving federal funds or with a federal permit, must comply with the provisions of the ESA and FWCA. Where the Facility may affect a protected species, TxDOT, as an agent for FHWA, may consult directly with U.S. Fish and Wildlife Service (USFWS).	If required, TxDOT will coordinate with the USFWS on the NEPA-approved facility alignments. Post-NEPA, the Developer will conduct studies to determine if protected resources trigger additional consultation under the ESA or FWCA and provide appropriate documentation to TxDOT and FHWA.
Traffic Noise Mitigation TxDOT	TxDOT-Provided approvals and proposed permanent noise mitigation are based on the schematic design and Schematic ROW and mitigation may require amending by the Developer as the Work progresses.	The Developer shall be responsible for implementing all noise mitigation measures to minimize construction and long-term impacts of the Work as prescribed in TxDOT-Provided approvals and subsequent TxDOT-Provided approvals secured by the Developer.
Water Well Impacts TxDOT	Projects are subject to the provisions of Item 103, Disposal of Wells, from	The Developer is responsible for plugging and abandoning all wells in accordance with

Permit and/or Agency	Summary	Roles and Responsibilities
	TxDOT *Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges*	TxDOT requirements, as well as any required remediation efforts.
Section 106 of the National Historic Preservation Act (NHPA), permit to undertake cultural resource studies, Advisory Council on Historic Preservation (ACHP) Antiquities Permits Antiquities Code of Texas, Texas Historical Commission (THC)	Projects will be subject to the provisions of the Programmatic Agreement between the FHWA, THC, TxDOT and the ACHP. There is an existing MOU between TxDOT and THC. THC will need to issue an Antiquities Permit to enable the performance of archeological activities. TxDOT's statewide Emergency Discovery protocol has been developed for any TxDOT project.	Developer to provide a process and permit application to complete archeological surveys and, if needed, testing and data recovery. TxDOT will submit to THC.
Public Involvement ▪ 43 TAC §2.4, Project Coordination ▪ Section 106 of the NHPA ▪ Chapter 26 of the Texas Parks and Wildlife Code ▪ The Civil Rights Act of 1964 ▪ The Civil Rights Restoration Act of 1987	The Developer is responsible for conducting all public involvement requirements for the life of the project except where TxDOT has agreements with Governmental Entities to perform public involvement requirements	The Developer is responsible for conducting all public involvement requirements for the life of the project except where TxDOT has agreements with Governmental Entities to perform public involvement requirements

9.4.5.3 Comprehensive Environmental Protection Program

A Comprehensive Environmental Protection Program (CEPP) will be used to deliver the environmental commitments required by each Facility Agreement, Environmental Laws, Governmental Entities, Governmental Approvals and all applicable federal and state Laws and regulations. The CEPP will also help the Developer to protect the environment during design, construction, maintenance, operation, and rehabilitation activities and to document the measures taken to avoid and minimize impacts on the environment.

The CEPP will include the following elements:

- Environmental Compliance and Mitigation Plan (ECMP)
- Environmental Protection Training Plan (EPTP)
- Hazardous Materials Management Plan (HMMP)
- Construction Monitoring Plan (CMP)
- Recycling Plan (RP)
- Communication Plan (CP)
- Pollution Prevention Plan (P2)
- Environmental Management System (EMS)

The ECMP compiles all environmental and mitigation requirements for a given Facility into one comprehensive document and provides strategies, schedules and procedures to be used for environmental monitoring, reporting, corrective action and adaptive management. The ECMP will also include a Compliance Action Plan in the form of a detailed checklist that aggregates all environmental requirements and lists the actions to be carried out in order to achieve each requirement.

One important tool for implementing environmental and mitigation requirements is the Environmental, Permitting, Issues and Commitments (EPIC) form, which will be incorporated into construction plan sets and will serve as an essential reference for construction personnel. The Facility's Environmental Compliance Team will develop a database of site-specific environmental commitments, constraints, permitting requirements and related work instructions and use this data to populate the EPIC sheets for each site, with reference to baseline stationing where applicable.

The EPIC sheets will contain notes relating to the various environmental disciplines presenting constraints to Facility work, including wildlife habitat/vegetation, hazardous materials, water quality, air quality, traffic noise, jurisdictional waters of the U.S., wetlands, and residential areas. The EPIC sheet will also include a list of people to contact for issues relating to any of the above areas.

Another key strategy for ensuring that environmental and mitigation requirements are met is environmental protection training. This training will be conducted as part of the orientation process for all new non-administrative personnel, including subcontractor personnel. The EPTP will educate trainees to:

- recognize the overall importance of environmental issues in constructing, operating and maintaining a successful project;
- appreciate the environmental sensitivities of the Facility;
- introduce the elements of the CEPP and the personnel responsible for environmental compliance;
- utilize EPIC sheets correctly;

- implement SW3P and other permitting requirements effectively;
- recognize environmentally sensitive resources that may be encountered during the Work;
- avoid or take appropriate action to minimize environmental impacts from the Work; and
- know the required actions, practices, and procedures regarding regulated resources; and
- understand the Developer's commitment to environmental quality and zero tolerance for violations.

Training sessions will also be conducted when new environmental issues, regulations or approvals arise that have not previously been covered by the EPTP. Site-specific toolbox training will be conducted during construction and operation / maintenance activities, to point out isolated environmental constraints or special considerations that need to be taken during activities at a specific location.