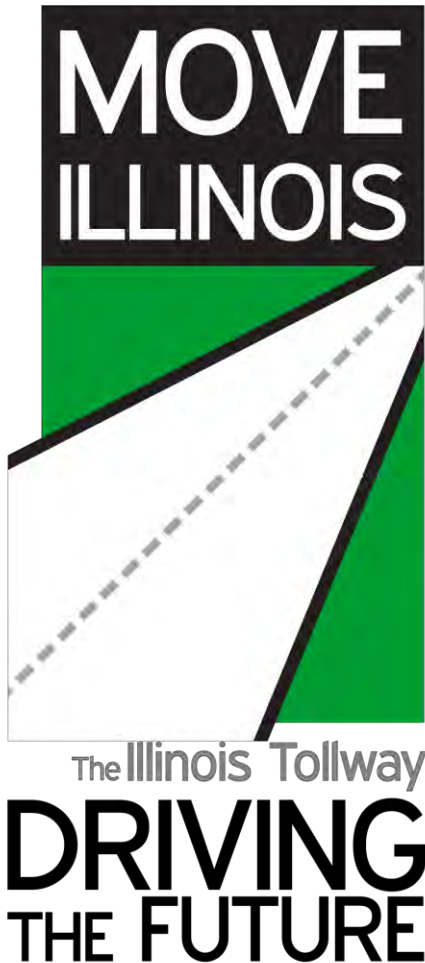




The Illinois Tollway

**DRIVING
THE FUTURE**

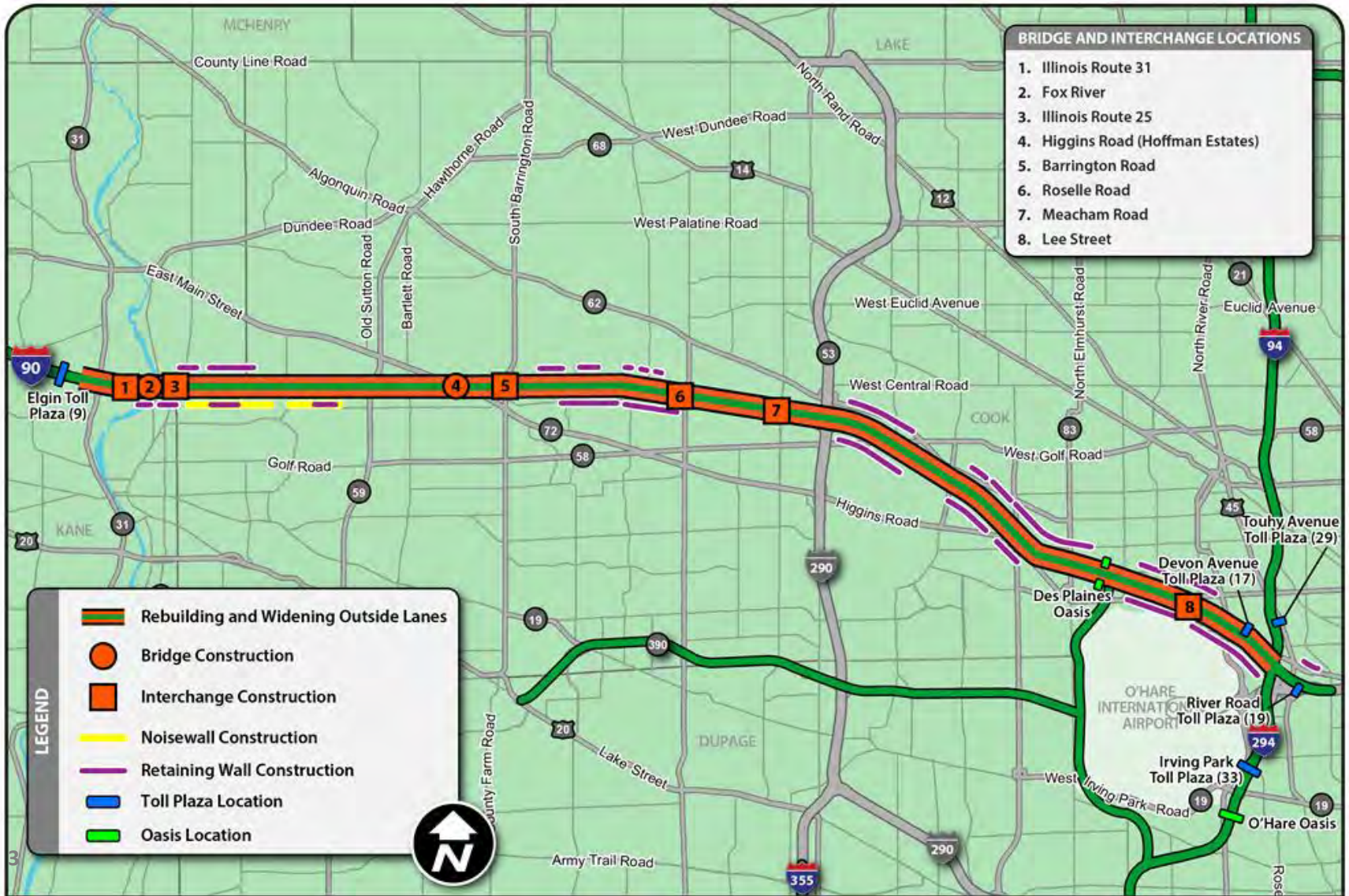
Corridor Presentations



I-90 Rebuilding and Widening Project: Eastern Segment

Jeff Druckman and Mike Hannemann,
Corridor Construction Managers

I-90 Eastern Segment



Project Overview

25 miles from Elgin Toll Plaza to Kennedy Expressway

- ▶ **Average daily traffic volume ranges from 140,000 - 162,000 per day**
- ▶ **Up to 11 percent truck traffic (18,000 trucks per day)**
- ▶ **\$1.7 billion in construction costs over 24 working months**
- ▶ **Average \$71 million per month in construction value**
- ▶ **Construction of 210 lane miles of mainline pavement and 10 interchanges**
- ▶ **Bridges**
 - ▶ 25 highway bridges
 - ▶ 6 bridges over rivers/creeks
 - ▶ 4 railroad bridges

CCM Priority No. 1

Public Safety, Construction Safety and Traffic Flow

- ▶ **I-90: major economic corridor transporting labor, goods and services**
- ▶ **No reductions in number of lanes during construction operations**
- ▶ **Minimize major construction tasks during peak traffic flow**
- ▶ **Provide continuous break-down shoulders or emergency pull-over areas**
- ▶ **Emergency communication / incident management plan**
- ▶ **Continuous protection of NSMJAWA water transmission facilities**
- ▶ **Continuous protection of NICOR natural gas transmission facilities**

Unique Challenges of the Corridor

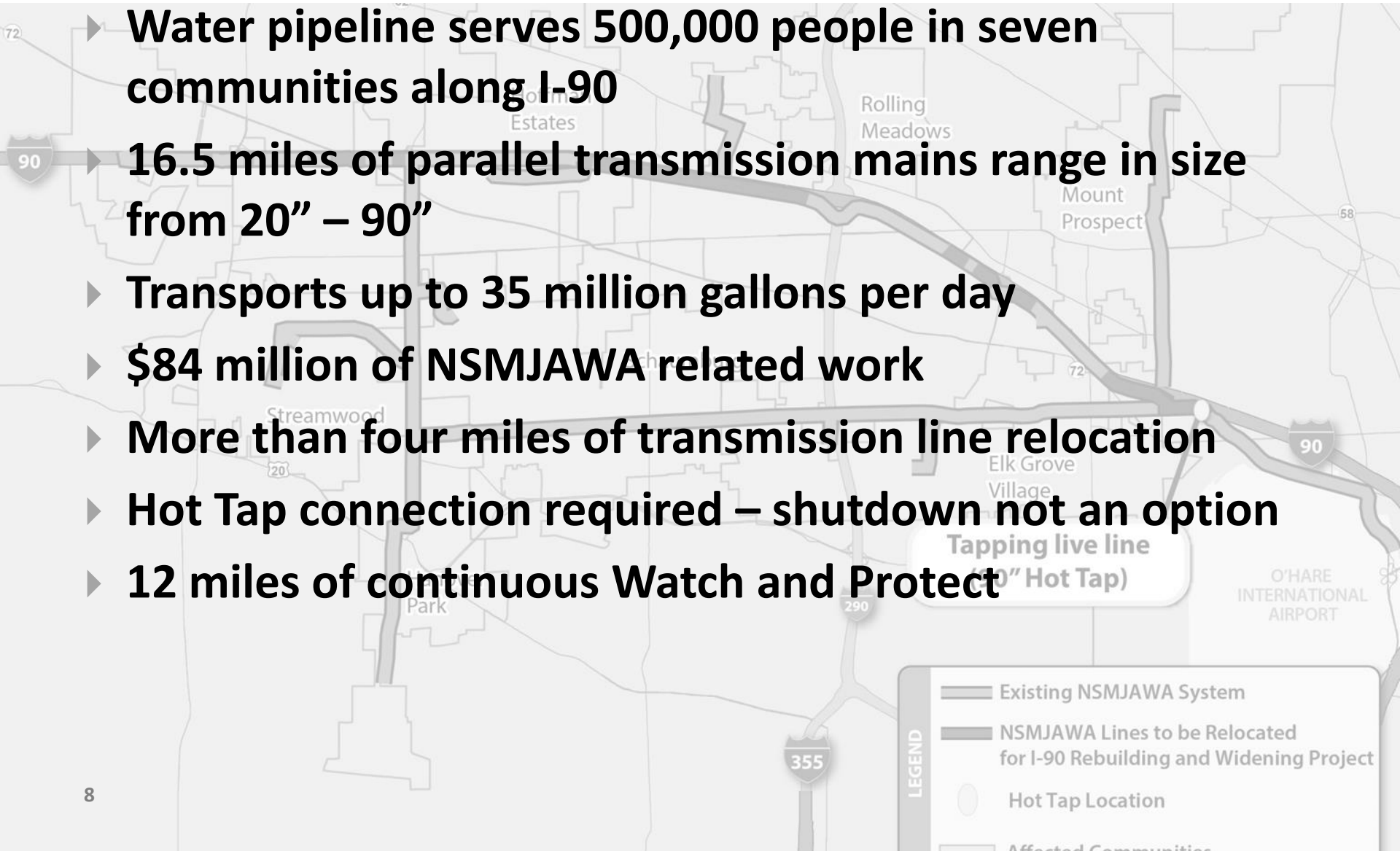
- ▶ **Hundreds of FAA and Chicago Department of Aviation permits required for proposed work within two Runway Protection Zones (RPZs)**
- ▶ **Right-of-way and easement acquisition process ongoing**
- ▶ **Hundreds of utility relocations including Nicor, NSMJAWA, ComEd, Shell Oil, AT&T, Comcast, XO Cable, MCI, Vinakom, WOW, West Shore-Badger Pipeline, TDS Metrocom and Windstream**
- ▶ **Dozens of municipal utility relocations including water mains, sanitary sewer and storm sewer facilities**
- ▶ **Unprecedented schedule and expenditure of construction materials and resources**

Coordination with Stakeholders

- ▶ **Illinois Tollway**
- ▶ **PMO Team**
- ▶ **19 Construction Managers**
- ▶ **7 Design Section Engineers**
- ▶ **14 General contractors and 44 construction contracts**
- ▶ **State and federal agencies: IDOT, Cook County, Kane County, Chicago Department of Aviation, FAA**
- ▶ **Local municipalities: Villages of Schaumburg, Hoffman Estates, Elgin, Rolling Meadows, Elk Grove Village, Mt. Prospect, Des Plaines, Rosemont, South Barrington**
- ▶ **Utility Companies (as previously mentioned)**
- ▶ **Four railroads**

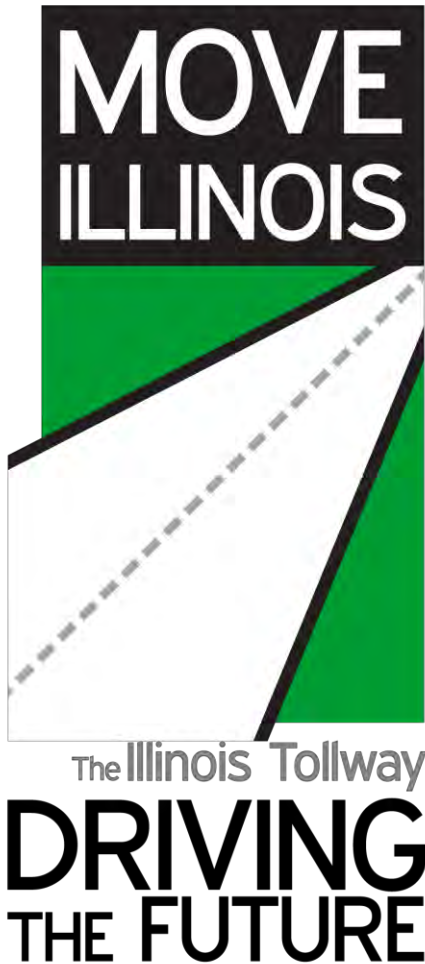
NSMJAWA

- ▶ Water pipeline serves 500,000 people in seven communities along I-90
- ▶ 16.5 miles of parallel transmission mains range in size from 20" – 90"
- ▶ Transports up to 35 million gallons per day
- ▶ \$84 million of NSMJAWA related work
- ▶ More than four miles of transmission line relocation
- ▶ Hot Tap connection required – shutdown not an option
- ▶ 12 miles of continuous Watch and Protect



Nicor

- ▶ Parallel high pressure natural gas transmission (Nicor) lines 36” and 22” being relocation in 12 locations due to Tollway construction
- ▶ \$35 million of Nicor related work
- ▶ Nicor owns a parallel right-of-way corridor abutting the south I-90 right-of-way and has exclusive rights to that property
- ▶ No construction activity allowed within 25 feet of either pipeline without prior approval from Nicor; Watch and Protect required
- ▶ Nicor right-of-entry permits needed in each location where contractor is expected to access, cross or work within Nicor right-of-way
- ▶ Nicor work plan permit needed in each location where contractor is required to work within Nicor right-of-way



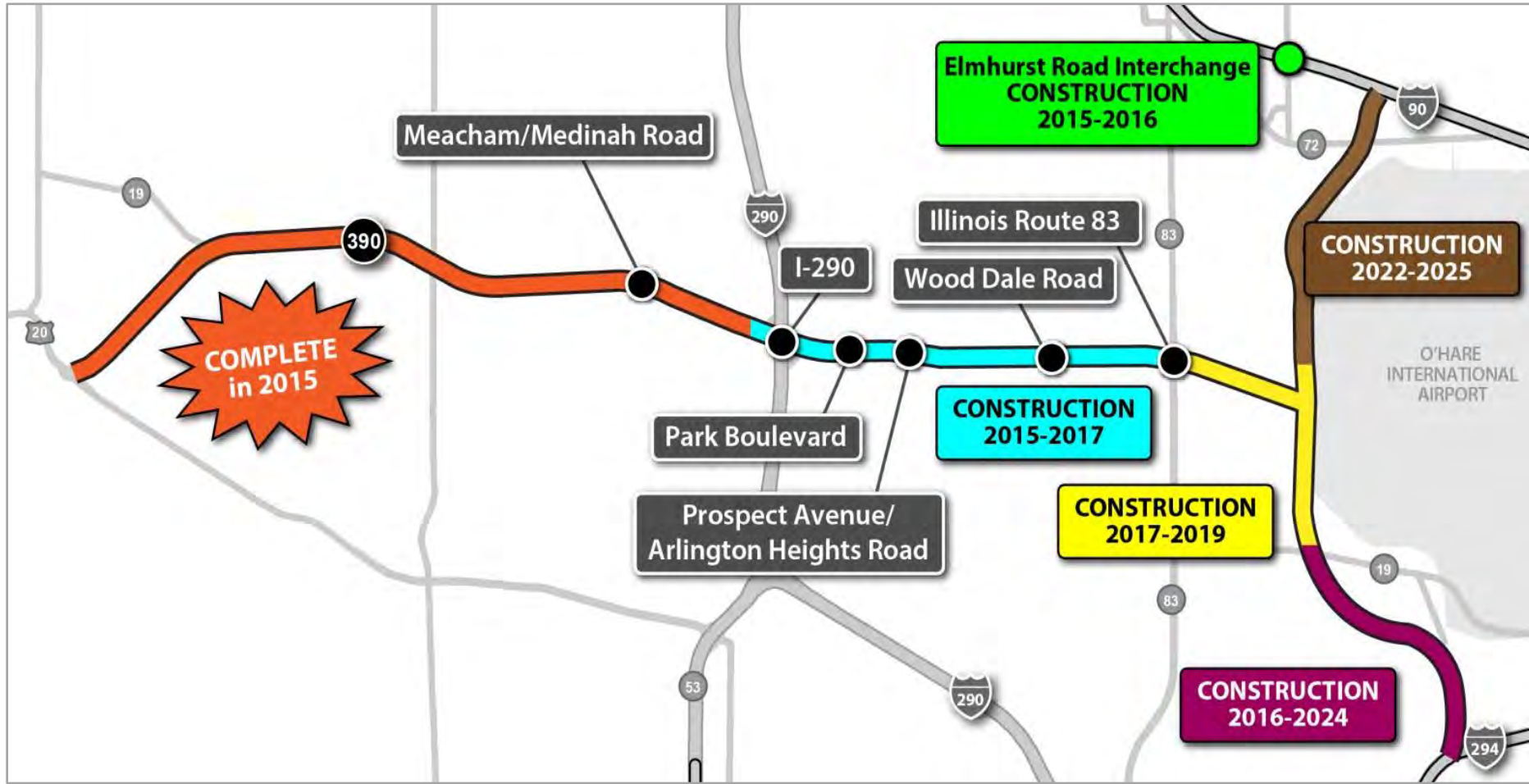
Elgin O'Hare Western Access Project

Pete Stukas, Corridor Construction Manager

EOWA Corridor Overview

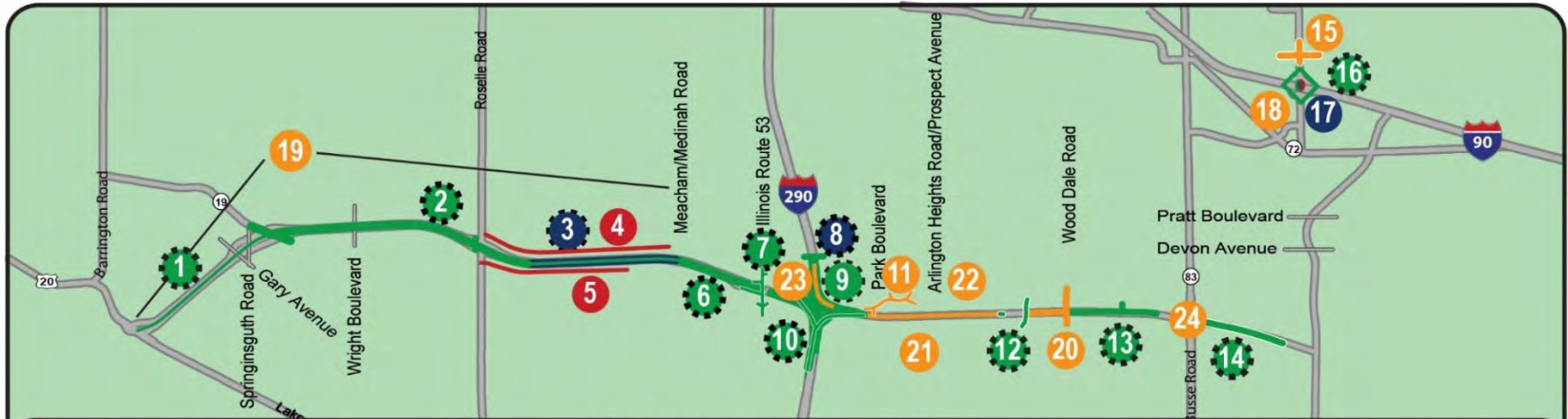


EOWA Implementation Timeline



EOWA 2015 Construction

Work anticipated this year



2013-2015 Construction Awards*

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 Toll plaza/ITS - U.S. Route 20 to I-290 2 Rehabilitation/widening - Illinois Route 19 to Roselle Road 3 Rehabilitation/widening - Roselle Road to Meacham Road 4 Noisewalls - westbound Roselle Road to Meacham Road 5 Noisewalls - eastbound Roselle Road to Meacham Road 6 Roadway reconstruction - Meacham/Medinah to Rohlwing Road 7 Rohlwing Road (Illinois Route 53) Bridge 8 Devon Avenue Bridge 9 I-290 Interchange 10 Westbound I-290 ramp to westbound Illinois Route 390 11 Hamilton Lakes access improvements 12 Salt Creek and Mittel Boulevard bridges | <ul style="list-style-type: none"> 13 Lively Boulevard Bridge and eastbound frontage road 14 Advance drainage work - Illinois Route 83 to Willow Creek 15 Elmhurst Road/Oakton Street intersection 16 Elmhurst Road at I-90 Interchange on I-90 17 Elmhurst Road southbound bridge over I-90 18 JAWA Watermain Relocation - Elmhurst Road Interchange 19 Rehabilitation from Lake Street (U.S. Route 20) to Meacham Road/Medinah Road 20 Wood Dale Road Bridge over Illinois Route 390 21 Illinois Route 390: Arlington Heights Road to Prospect Avenue 22 Illinois Route 390: Prospect Avenue to Lively Boulevard 23 Eastbound I-290 to eastbound Illinois Route 390 24 Lively Boulevard to Illinois Route 83 with Illinois Route 83 Bridge |
|---|--|

Contract Awarded * Schedule subject to refinement

Text Colors: Complete / Substantially Complete / Ongoing / 2015 Look Ahead

EOWA 2015 Construction

▶ Major milestones

- ▶ Complete Rohlwing Road Bridge
- ▶ Complete westbound I-290 to westbound Illinois Route 390 flyover bridge
- ▶ Complete new eastbound I-290 to westbound Illinois Route 390 ramp
- ▶ Complete all roadway and plaza work west of Rohlwing Road
- ▶ Award all remaining mainline contracts thru Illinois Route 83



Unique Challenges

- ▶ **New Tollway**
- ▶ **Existing roadways not under Tollway jurisdiction**
- ▶ **Complex maintenance of traffic**
- ▶ **Utility relocation/utility corridor**
- ▶ **WBBM Tower**

Unique Challenges

- ▶ I-290 Interchange construction

Before



After



Problem Solving

- ▶ **Early and regular communication is key**
- ▶ **Cooperative approach**
- ▶ **Creativity and flexibility**
- ▶ **Understand the processes of others (utilities)**

EOWA Construction

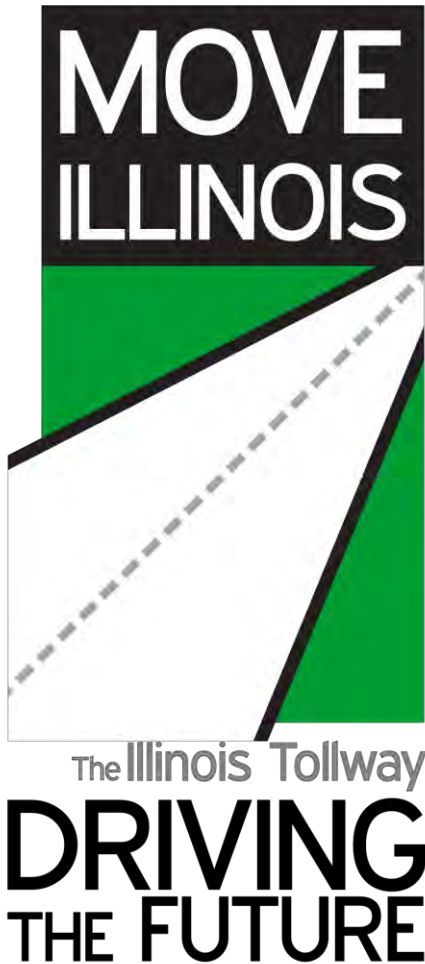


EOWA Construction



EOWA Construction





General Engineering Consultant

Bridget Malinowski, Deputy Project Manager

Upcoming Training

- ▶ Tollway Publication Updates
 - ▶ Standard and Manuals
- ▶ **DSE**
 - ▶ Standard Drawings
 - ▶ Manuals
- ▶ **CM**
 - ▶ Lane Closures,
 - ▶ Maintenance,
 - ▶ Walk Thru's
 - ▶ Current Construction Bulletins

Thursday, March 12, 2015
8:00 am to 12:00 pm



Sheraton Lisle Hotel



Thursday, March 19, 2015
8:00 am to 12:00 pm

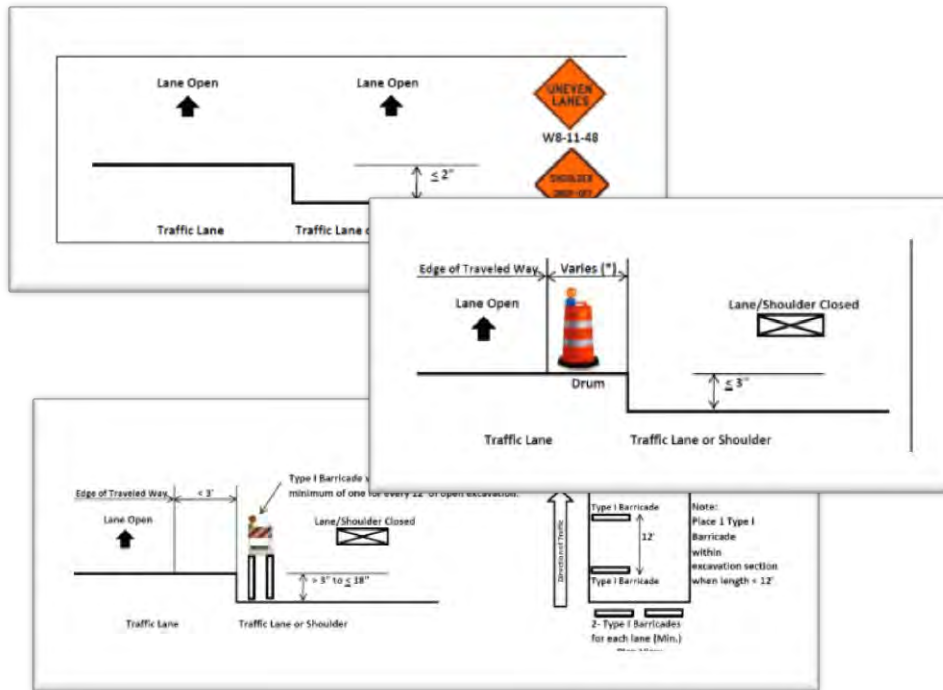


Hyatt, Lisle



Drop-Off Policy and Temp. Concrete Barrier

DROP-OFF POLICY



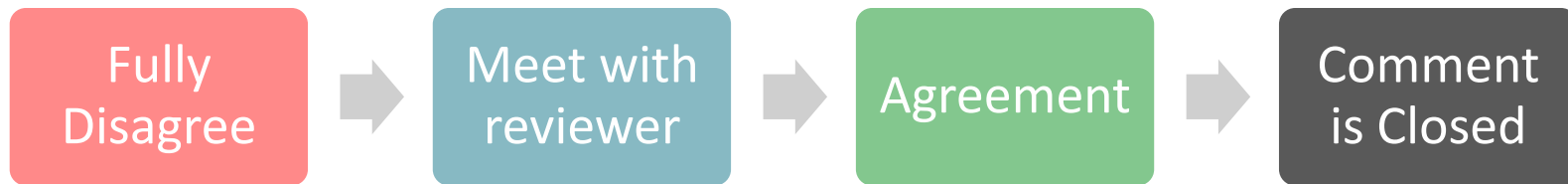
TEMPORARY CONCRETE BARRIER



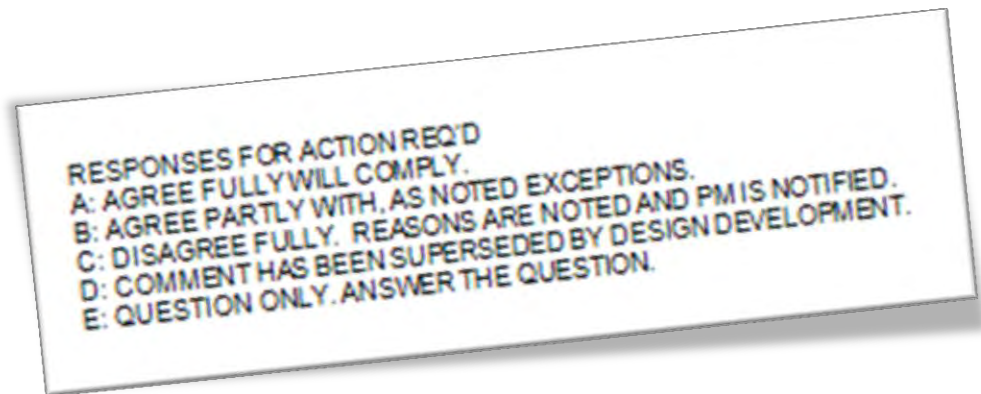
Tollway is analyzing recent IDOT proposal
Continue using existing policies

Quality Control

- ▶ Disposition of Comments
- ▶ Required for all submittals
- ▶ “Return with next submittal”
- ▶ Disagreement process (C)



- ▶ Question Only (E)
 - ▶ Is it really just a question?



Design and Construction Bulletins

► Since last Quarterly Meeting

Date Issued	Description	
	Design	Construction
09/10/14	Moment slab	
10/09/14	INVEST manual	
10/14/14	Monotube Overhead Signs	
10/15/14	Embedded culverts	
10/15/14	Environmental Manual	
10/23/14	T1 and T1-A Terminals	
02/03/15		Sign Panel Connections

Design and Construction Bulletins – (14-15/04)

Implementation of INVEST



- ▶ The Illinois Tollway has integrated INVEST throughout its processes

- ▶ Uses all three Modules
- ▶ System Planning
- ▶ Operations & Maintenance
- ▶ Project Development



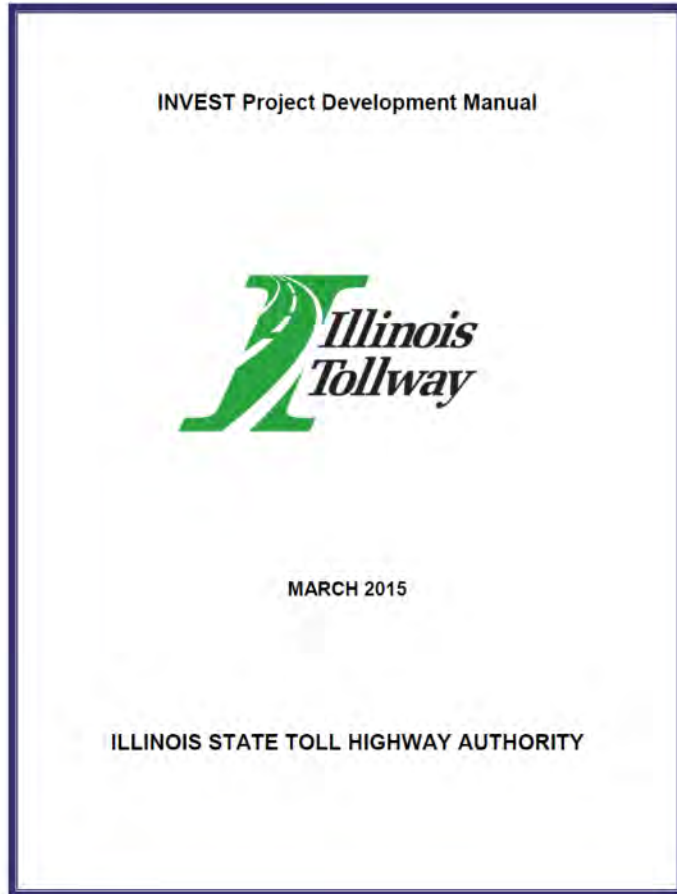
- ▶ INVEST will help the Tollway manage and track sustainability

- ▶ Incorporate into the program
- ▶ Measure progress
- ▶ Identify barriers
- ▶ Report consistently to stakeholders



Design and Construction Bulletins – (14-15/04)

INVEST Project Development Module



Scoring Criteria

29

29 - FHWA

9

Tollway supplement
to FHWA

8

8 - Tollway-specific

Design and Construction Bulletins – (14-15/04)

Project Development

The Tollway's INVEST Program

▶ **10** Steps

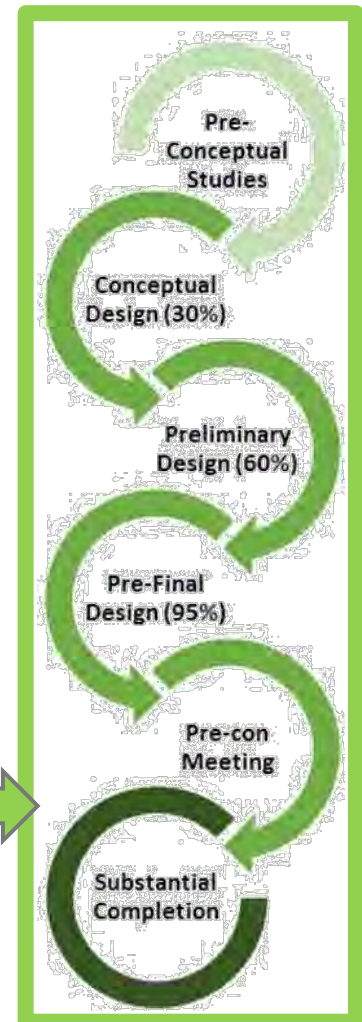
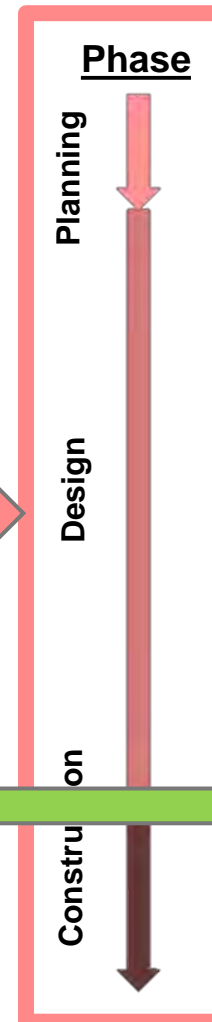
▶ **2** Stages:

▶ **Planning**

▶ **Construction**

▶ **6** Submittals

▶ Ensures process is followed



Design and Construction Bulletins – (14-15/04)

INVEST Sustainability Forms

Tracking Form

- Excel Spreadsheet
- Used to Document Sustainable Practices
- Submittals



Project No.: 9998
 Description: I-123 - Intersection A to Intersection E
 Submittal: Construction Substantial Completion (CSC)

Abbreviations:
 BY = Person Completing Information
 CO = Is the Practice Included in a Change Order?
 ST = Is the Practice Included in a Technical Study or was the Process Completed?
 PL = Is the Practice Included in the Contract Plans?
 SP = Is the Practice Included in the Contract Specifications (Including Special Provisions)?
 EV = Is the Practice Included in the INVEST Evaluation performed at the Submittal?
 ** Also see Tollway's Supplement

No.	Most Relevant INVEST Criterion	Practice Title (2-3 Words)	Practice Description	Location(s) to be Implemented	Assignments		30% Submittal (30)				50% Submittal (50)				90% Submittal (90)				Pre-Construction	
					Discipline	Responsible	BY	ST	PL	EV	BY	ST	PL	EV	BY	ST	PL	SP	EV	BY
1	PD-01 - Economic Analyses	Benefit-Cost	B/C for corridor	Project-wide	Management	Lisa	LMR	Yes	N/A	Yes	LMR	Yes	N/A	LMR	Yes	N/A	N/A	Yes	LMR	No
2	PD-02 - Lifecycle Cost Analyses	LCCA - Pavmt	LCCA for pavements (in corridor paving design)	Project-wide	Pavement Design	John	JRW	Yes	N/A	Yes	JRW	Yes	N/A	JRW	Yes	N/A	N/A	Yes	JRW	No
3	PD-02 - Lifecycle Cost Analyses	LCCA - Bridge	LCCA for Bridge A	Bridge A	Structural	Taylor	TKD	Yes	N/A	Yes	TKD	Yes	N/A	TKD	Yes	N/A	N/A	Yes	TKD	No
4	PD-02 - Lifecycle Cost Analyses	LCCA - Bridge	LCCA for Bridge B	Bridge B	Structural	Taylor	TKD	Yes	N/A	Yes	TKD	Yes	N/A	TKD	Yes	N/A	N/A	Yes	TKD	No
5	PD-02 - Lifecycle Cost Analyses	LCCA - Bridge	LCCA for Bridge C	Bridge C	Structural	Taylor	TKD	Yes	N/A	Yes	TKD	Yes	N/A	TKD	Yes	N/A	N/A	Yes	TKD	No
6	PD-03 - Context Sensitive Project Development	CS - Incorporate Public Input	Continued focus on incorporating public input into design	Project-wide	Management	Lisa	LMR	Yes	N/A	Yes	LMR	Yes	N/A	LMR	Yes	N/A	N/A	Yes	LMR	No
7	PD-05 - Educational Outreach	Public Outreach	Future ASCE Sustainability Pres (Signage of lines restricted)	Project-wide	Management	Lisa	LMR	Yes	N/A	Yes	LMR	Yes	N/A	LMR	Yes	N/A	N/A	Yes	LMR	No
8	PD-06 - Tracking Environmental Commitments	Tracking Commitments	Commitment Tracking Spreadsheet and Review Sign-off	Project-wide	Management	Lisa	LMR	Yes	N/A	Yes	LMR	Yes	N/A	LMR	Yes	N/A	N/A	Yes	LMR	No
9	PD-08 - Stormwater	Infiltration - Detention Pond	Detention Pond A	Pond A	Drainage	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	No	
10	PD-08 - Stormwater	Infiltration - Detention Pond	Detention Pond B	Pond B	Drainage	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	No	
11	PD-08 - Stormwater	Infiltration - Bioswales	Bioswales outside of pond	Project-wide	Drainage	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	No	
12	PD-08 - Stormwater	Infiltration - Tree Trunks	Infiltration treatment tree trunks	Project-wide	Drainage	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	Yes	Yes	Yes	JDL	No	
13	PD-10 - Pedestrian Access**	Bikeways	Bikeways at Intersection A	Intersection A	Roadway	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
14	PD-10 - Pedestrian Access**	Bikeways	Bikeways at Intersection B	Intersection B	Roadway	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
15	PD-10 - Pedestrian Access**	Bikeways	Bikeways at Intersection C	Intersection C	Roadway	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
16	PD-14 - ITS for System Operations	Truck Collection	Truck Collection	Mass Blvd A and B	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
17	PD-14 - ITS for System Operations	Emergency Pre-emptive	Emergency Vehicle Signal Pre-emption (at cross streets)	Signals at Cross Streets	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
18	PD-14 - ITS for System Operations	Dynamic Message Sign	DMS	DMS Blvd B and C	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
19	PD-14 - ITS for System Operations	Data Archiving	Data Archiving	Project-wide	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
20	PD-14 - ITS for System Operations	ITS Backbone	ITS Infrastructure backbone	Project-wide	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
21	PD-14 - ITS for System Operations	Road Weather Maintenance data collection	RWM data collection	Project-wide	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	Yes	
22	PD-14 - ITS for System Operations	Video Surveillance	Streaming video	Project-wide	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
23	PD-14 - ITS for System Operations	Adaptive Signal Control	Adaptive signal control	Signals at Cross Streets	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
24	PD-14 - ITS for System Operations	Call boxes	Call boxes	Project-wide	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	
25	PD-14 - ITS for System Operations	S11	S11	Project-wide	ITS	Alissa	AMR	Yes	No	Yes	AMR	Yes	No	AMR	Yes	No	No	AMR	No	
26	PD-14 - ITS for System Operations	CMS warning System	CMS warning system	DMS Blvd B and C	ITS	Alissa	AMR	Yes	Yes	Yes	AMR	Yes	Yes	AMR	Yes	Yes	Yes	AMR	No	

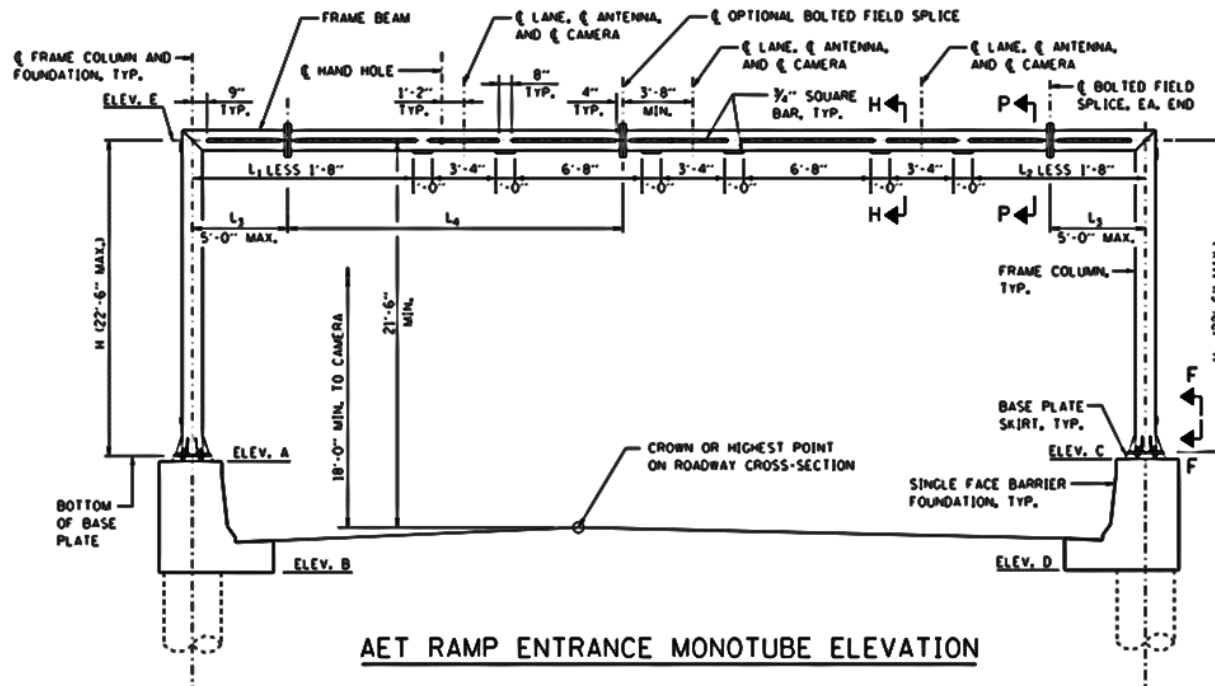
Excel template available!



Design Bulletin – (14-13)

Ramp Monotube Overhead Sign Structures

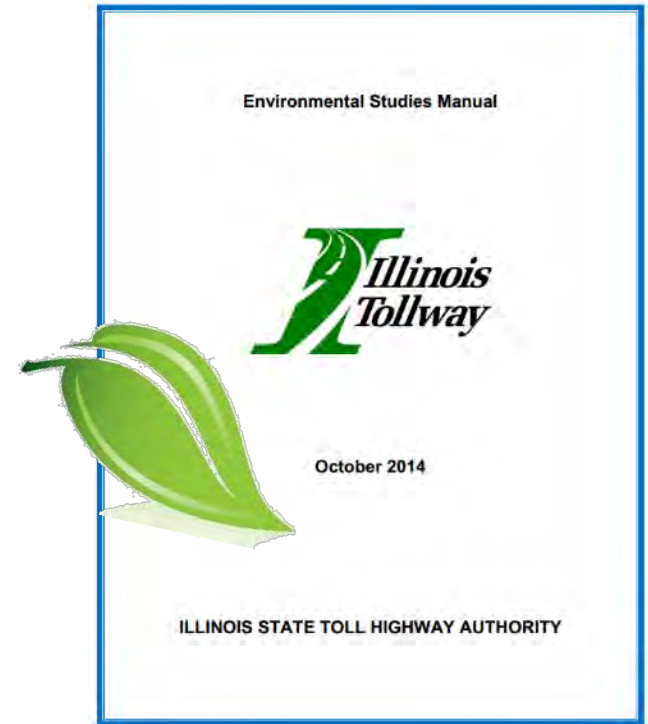
► Two new standards



- F-15 at **AET Plaza**
- F-16 at **Cash-IPO Plaza**
- Updated Specifications 733 and 734

Environmental Studies Manual

- ▶ Major update to 2006 manual
 - ▶ Army Corp. of Engineers definition of jurisdictional waters
 - ▶ New noise policy
 - ▶ New ESIS procedures
 - ▶ Modified NPDES program
 - ▶ CCDD Requirements
 - ▶ Historic preservation coordination



Design and Construction Bulletins – (14-17/06)

T-1 and T1-A Terminal

- ▶ Removed Trinity as allowable manufacturer



Construction Bulletin – (15-01)

Aluminum Sign Panel Connections

- ▶ Connections now require 2 aluminum flat washers



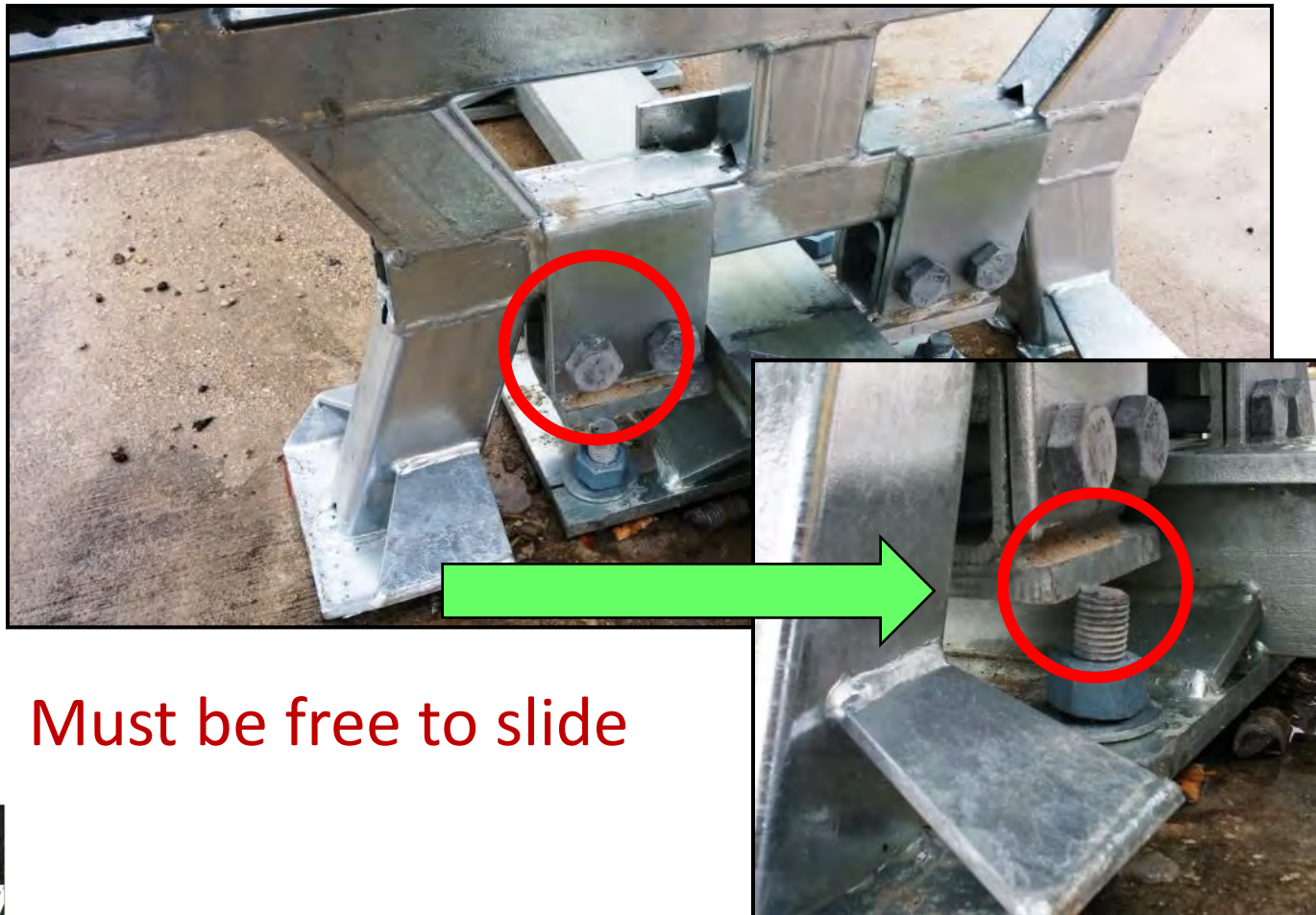
- ▶ Under the stitch bolt head and nuts (2)
- ▶ Under each nut of the post clip bolt (1)
- ▶ **Drawing F10**
- ▶ **Sign Installation (Tollway Recurring Spec.)**
- ▶ **Existing single washers may remain**

QuadGuard HS-Energy Attenuator



Field Issues

Incorrect anchor stud embedment and height



Must be free to slide



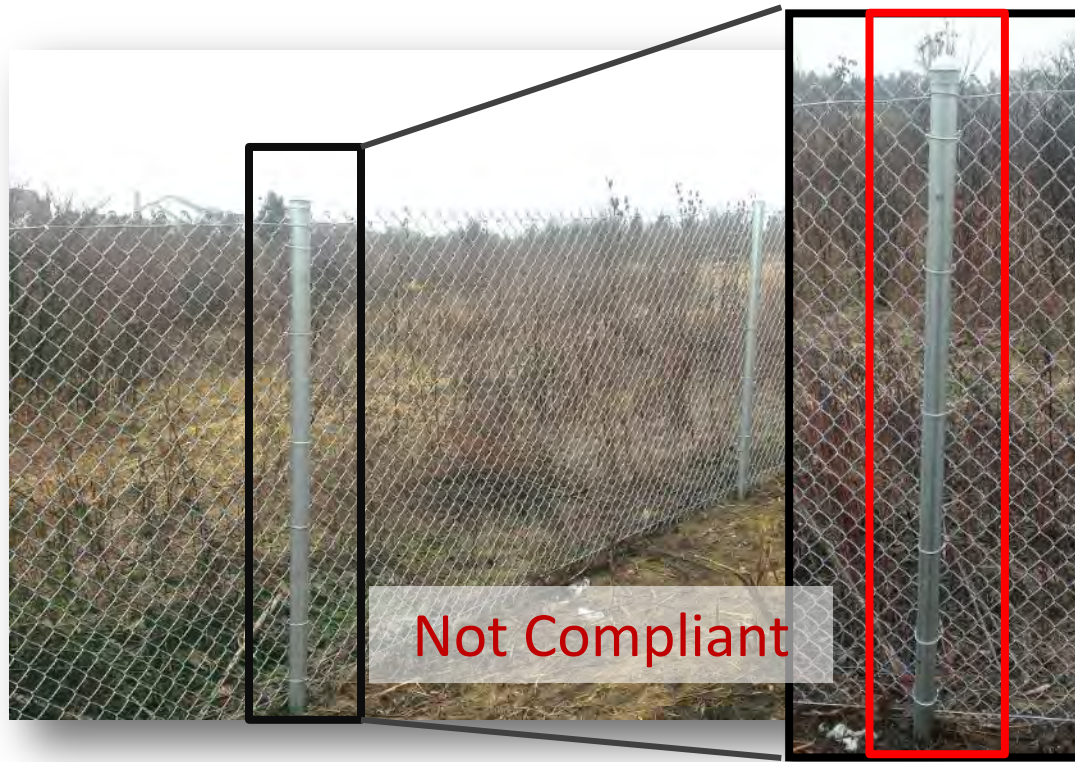
Head-On Impact



Walkthru Inspection

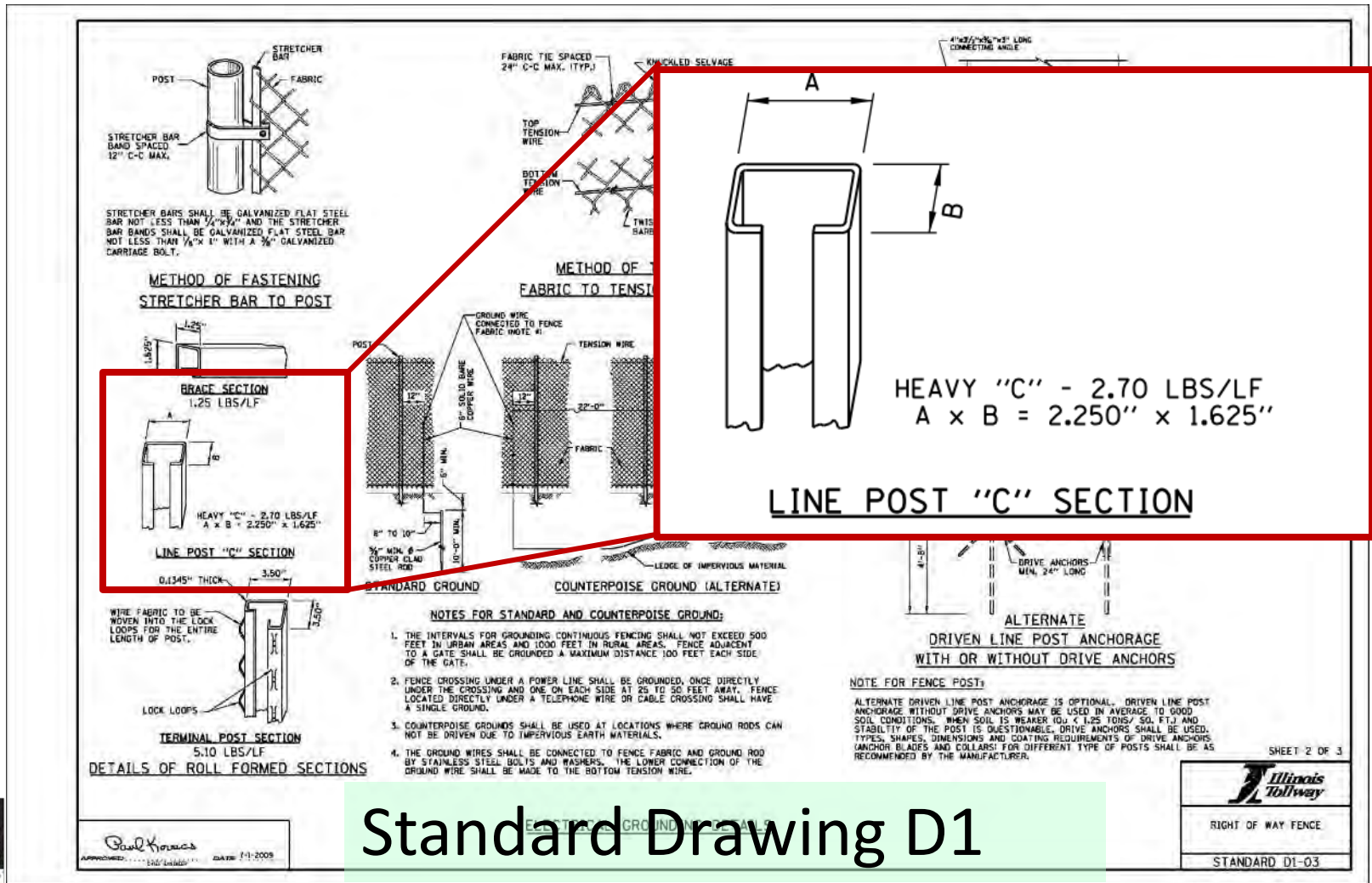
Right-of-Way Fence (Type 1) (J1664305)

- ▶ Newly constructed ROW Fence
 - ▶ Inconsistent with the Tollway Recurring Special Provisions.



Line posts shown do not follow the C-Section shape

Walkthru Inspection Right-of-Way Fence (Type 1) (J1664305)





The Illinois Tollway

**DRIVING
THE FUTURE**

Questions?



The Illinois Tollway
**DRIVING
THE FUTURE**

Thank You
