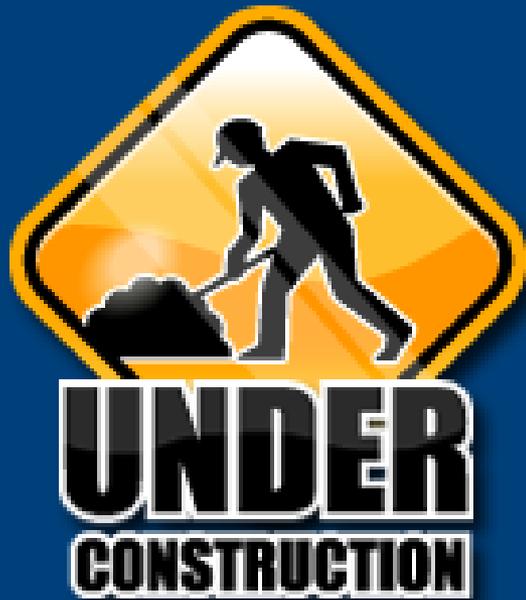


Local Project Administration Certification Course – April 2016

DESIGN & DELIVERY



Project Schedule

(Manual, pages 1-7 and 1-8)

❖ To deliver a project successfully:

- Set realistic schedule based on activities, durations & milestones, in coordination with MaineDOT.
 - **Critical Path Method (CPM) schedule preferred**
- Major milestones:
 - Kickoff
 - **Preliminary Design Report (PDR) ~ 50-60% complete**
 - Public Meeting / Formal Public Contact
 - National Environmental Policy Act (NEPA) Complete
 - Plan Impacts Complete (~ 75-80% complete)
 - Right of way Certified
 - **Plans, Specifications, & Estimate (PS&E)**

Preliminary Design Report

(Manual, Section 3)

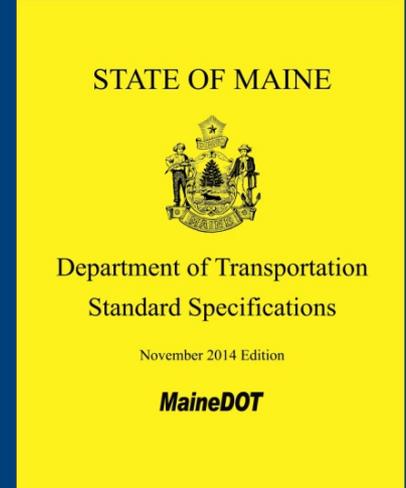
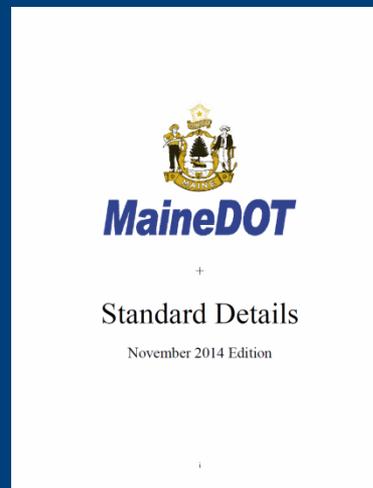
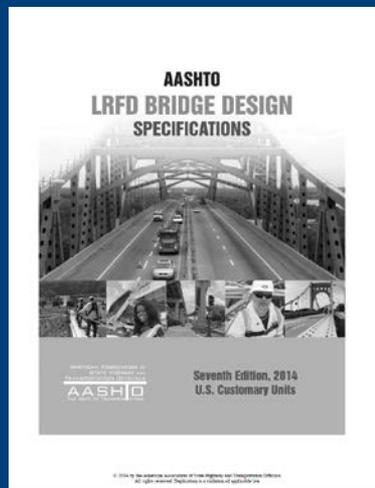
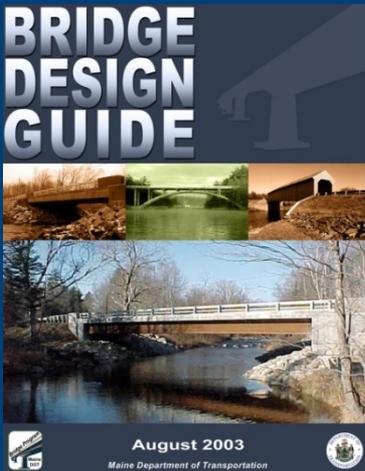
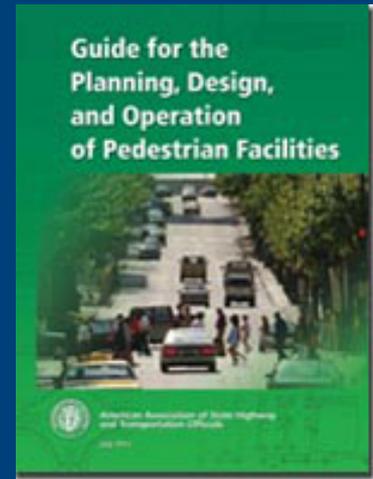
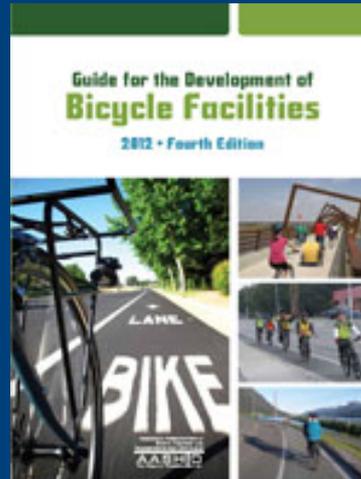
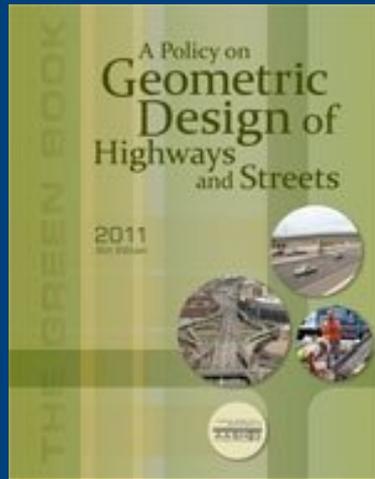
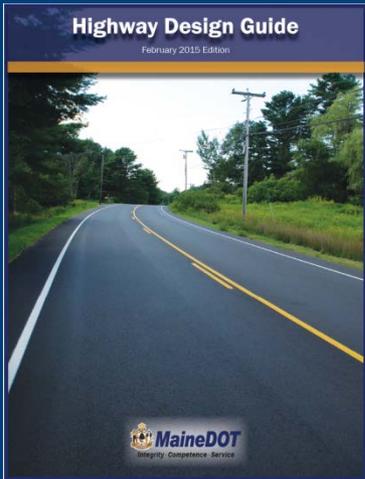
❖ Report Format:

- Input Data Used in Design
 - ✓ Guidance is in the manual (pages **3-2** & **3-21**)
- **Summary of preliminary engineering**
 - ✓ Narrative of chosen design
 - ✓ Clearly identify: PURPOSE AND NEED
 - ✓ Alternatives evaluated
 - ✓ Anticipated impacts discussed
 - ✓ In-depth discussion of exceptions, ADA decisions

Form is online: www.maine.gov/mdot/cpo/highway/

Design Standards

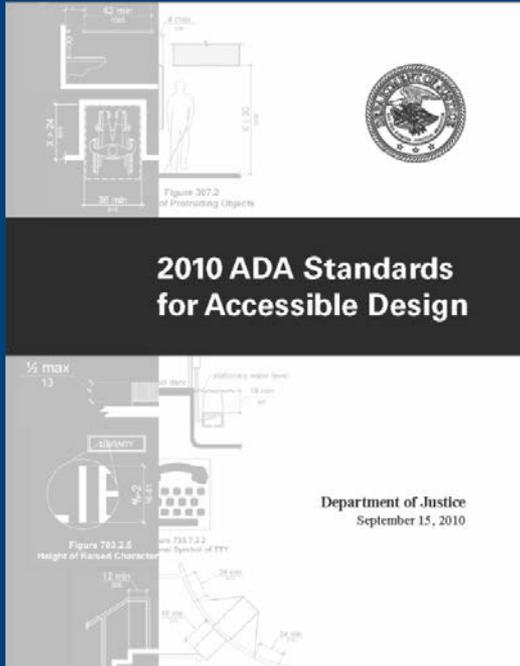
(Manual, Section 3)



MaineDOT Engineering Instructions (EI)

- Intended to provide prudent design flexibility
 - Complements the Highway Design Guide
- **Practical Design** (See E.I. C2)
 - **Appropriate** widths for travel lanes, shoulders
 - Clear zones based on posted speeds, traffic volumes, corridor consistency, level of risk to travelers
 - Determined by Highway Corridor Priority (1 to 6)
- **Crosswalk Design** (E.I. C6)
- **Entrance Design** (E.I. C7)
- **Website:** www.maine.gov/mdot/edi/

Americans with Disabilities Act (ADA)



- It's NOT an engineering standard
 - **IT'S THE LAW!**
- See MaineDOT ADA Compliance Policy
 - When a roadway is altered:
 - This has been defined by DOT & USDOT
 - Specific guidance in MaineDOT policy

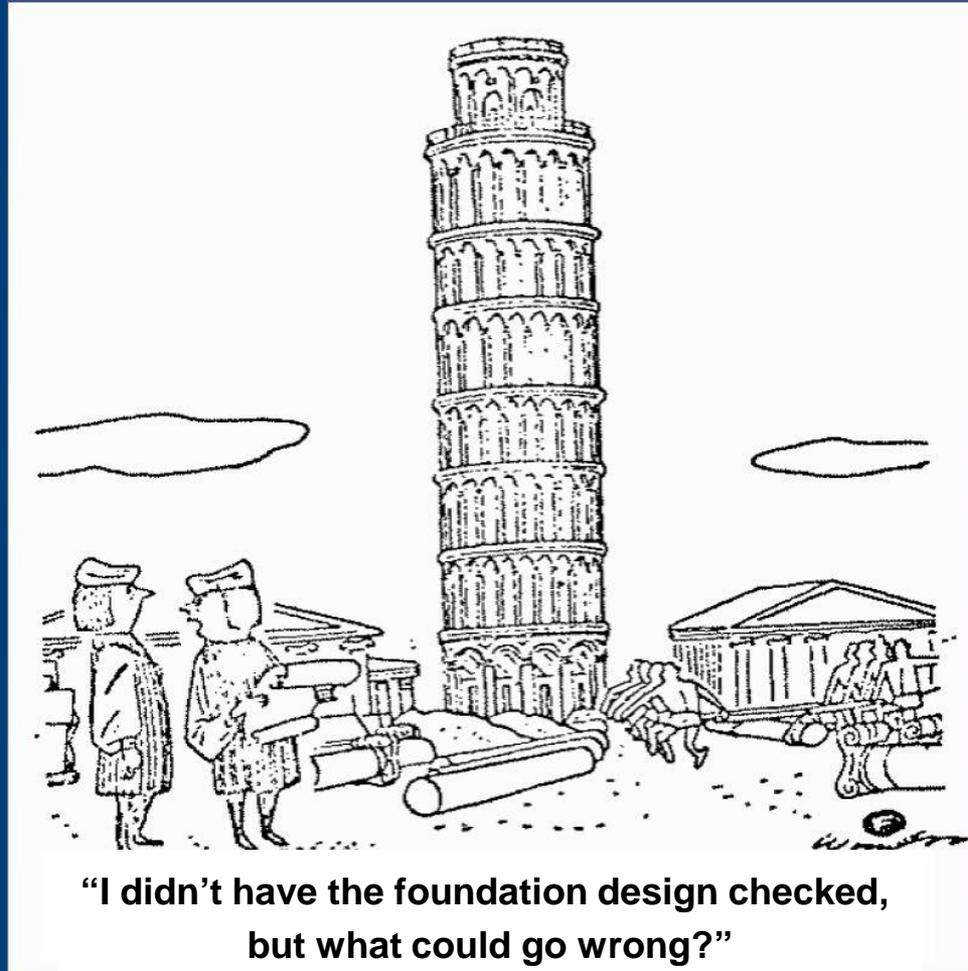
- ADA is part of Civil Rights presentation, later on

TAME

Traffic Analysis Management and Evaluation

- **For MaineDOT**
 - Projects on system: Traffic management during construction
- **Process establishes when and why to TAME**
 - Initial traffic management provisions drafted by Designer/PM
 - If project is going to have a PDR
 - Which means evaluation of design alternatives.
 - Submit request 4 weeks prior to final PDR
 - If no PDR: submit request 10 weeks prior to PS&E
 - Average Annual Daily Traffic: 15,000
 - > Traffic control provisions go to MaineDOT TAME Committee.
 - < CERT issued with or without additional conditions

Quality Control & Assurance



Quality Control & Assurance

(Manual, page 3-5)

- **Make QC/QA Part of Consultant Selection**
 - It's the **designer's** responsibility to provide QC
 - **Professional Engineering Responsibility**
 - Check for construction, maintenance issues
- **Quality Assurance**
 - **Municipality** (verify that design meets expectations)
 - **MaineDOT** (review design at 50% & 95% complete)
 - Make sure Federal & State standards met
 - Depth of review depends on project location & scope

Final Plans, Specifications, & Estimate

(Manual, Section 7)

- **Final Plans**
 - Stamped by Maine P.E. – if construction cost is over \$100,000
 - Reviewed, approved by MaineDOT
- **Engineer's Estimate**
 - Based on estimated quantities; must be in synch with plans
 - Use MaineDOT item numbers, unless unavailable
- **Certifications**
 - Environmental, Utilities, Right of Way, TAME Process (Traffic)
- **Final specifications**
 - Stamped by Maine P.E.
 - Reviewed, approved by MaineDOT

Final Plans, Specifications, & Estimate (Continued)

(Manual, Section 7)

- **Bid Documents**
 - Notice to Contractors
 - Contract Agreement, Offer and Award Form
 - Bonding Requirements
 - Davis-Bacon wage rates (Federal)
 - Electronic payroll requirements (Federal)
 - Signed Title VI Assurances
- **Certifications to PM** (Not In Bid Book)
 - Public Process (Communication 10)
 - Environmental (Communication 12)
 - Utilities (Communication 13)
 - Right-of-way (Communication 14)
 - TAME (MaineDOT State Traffic Engineer)

**THIS IS NOT
EVERYTHING!!**

**AFTER REVIEW AND APPROVAL
MAINEDOT WILL PROVIDE CONSTRUCTION AUTHORIZATION**

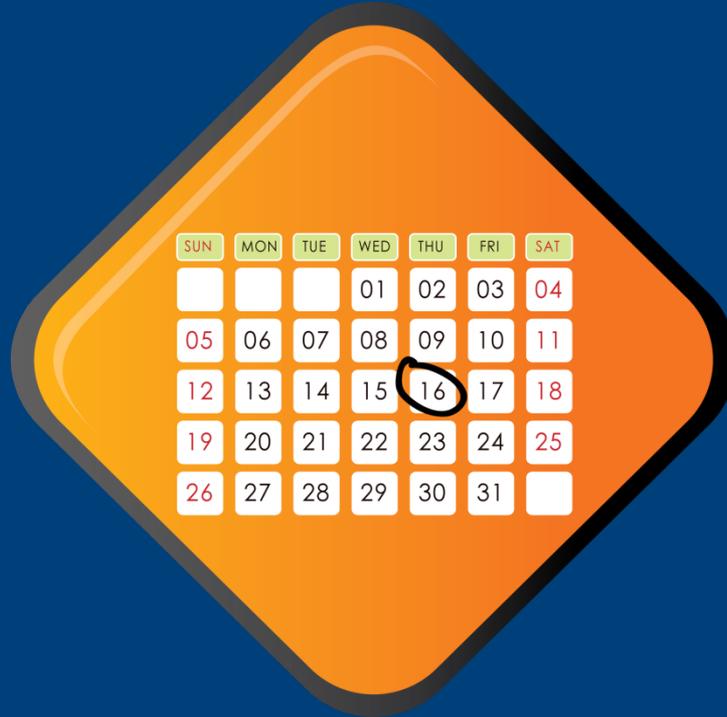
Advertise & Award

(Manual, Section 9)

- **Advertise**
 - Public Advertise; **3 week** minimum
- **Bidding Process**
 - Answer questions in absolutes
 - Same answer to all bidders
- **Open bids publicly, review bids**
 - Check for defects: “curable” and “non-curable”
 - Award to lowest responsive, responsible bidder
- **MaineDOT**
 - Review bids & approve before award



Delivery Expectations



Setting the Schedule

(Manual, pages 1-7 and 1-8)

- **Schedule should be realistic**
 - Allow reasonable time for design work, environmental reviews, right of way, MaineDOT review & approval
 - Critical Path Method Is **HIGHLY** Recommended.
- **Should be set in consultation with MaineDOT**
 - MaineDOT project manager must ensure that set schedule is met
- **Should be reviewed, updated periodically**
 - Project Kickoff
 - Preliminary Design Report
 - Plan Impacts Complete
- **Communicate ... Communicate ... Communicate**

Set a Realistic Schedule

“TYPICAL” Critical path items:

- ROW activities on MaineDOT Jurisdiction Roadways
 - Plan Impacts Complete Must Be Achieved before:
 - **Title Work & Final ROW Mapping**
 - Title Work and Final ROW Mapping Must Be Completed before:
 - **Valuation**
 - **NEPA** & Valuation Must Be Completed Before:
 - **ROW Negotiations**
 - ROW Negotiations Must Be Completed Before:
 - **Acquisition**

ROW = 6 months from Plan Impacts Complete

Performance Measures

- MaineDOT's goal is **80% On-Time Delivery** (within 30 days of Construction Advertise Plan date)
 - Project managers review and update projects before the **15th** of every month. Dates and money are considered “good” until the 15th of the next month.
 - PS&E, advertise and construction dates must be accurate to the **week**, for projects in 30-day window.
 - PS&E, advertise and construction dates must be accurate to the **month**, for projects in 12-month window.

MaineDOT On-Time Delivery Rates

- 2012 = 89%
- 2013 = 94%
- 2014 = 95%
- 2015 = 87%
- 2016 = 84% (current)

LAP On-Time Delivery Rates

- 2012 = 42%
- 2013 = 39%
- 2014 = 33%
- 2015 = 52%
- 2016 = 84% (current)

QUESTIONS?

