

INDOT Updates

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INDOT Standards and Policy
INDOT Highway Design Conference – January 23, 2020



Standards & Policy Housekeeping Reminders

- Design Consultant Listserv (link available from Design Manual webpage)
 - Communication
 - Design Memos - changes to design policies, procedures, and criteria
 - Training opportunities, surveys
- 2020 *Standard Drawings* – September 2020
 - Published every year
- 2020 *Standard Specifications* – September 2019 (Constr. Management)
 - Published on 2-year cycle
 - Get the news first from Standards Committee webpage
- Recurring Special Provisions Menu (Constr. Management)
 - Quarterly updates (noted on menu, schedule available on SC webpage)
 - Applicable menu is based on contract letting date, not RFC date. Available from the SC webpage



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- IDM https://www.in.gov/indot/design_manual/

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Welcome to the current [Indiana Design Manual \(Portfolio\)](#) (PDF 72.7 MB)

The on-line version of the *Design Manual* was last updated: 01/13/2020

Revisions to the *Design Manual* occurring after January 1, 2013 have been incorporated into this current *Indiana Design Manual*. Stay current on INDOT design standards and policy changes by subscribing to [Design Consultants Listserv](#).

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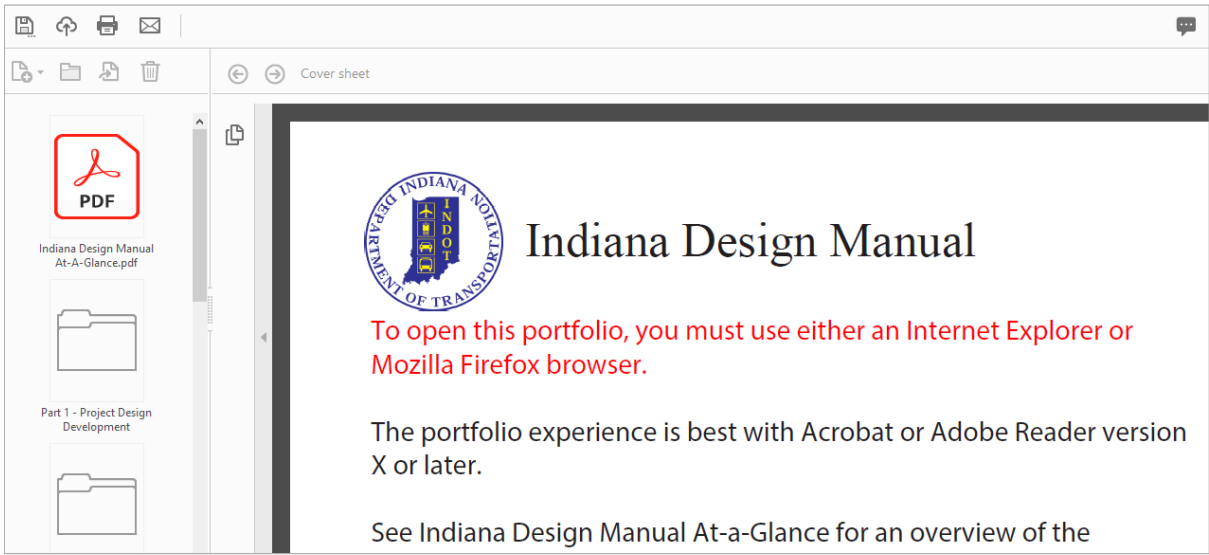
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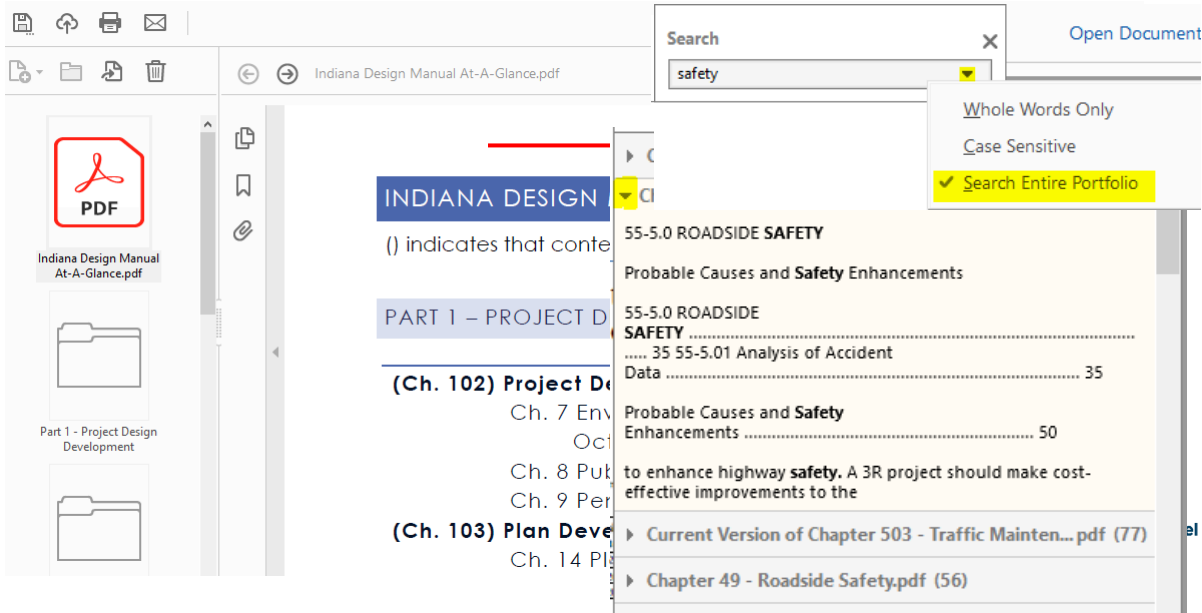
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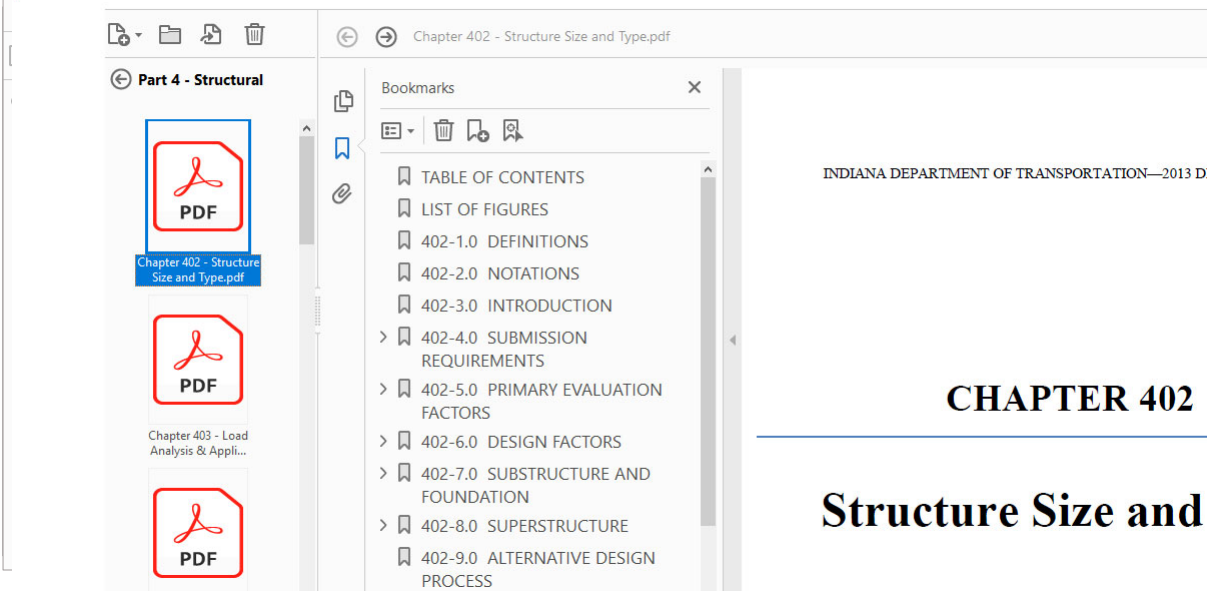
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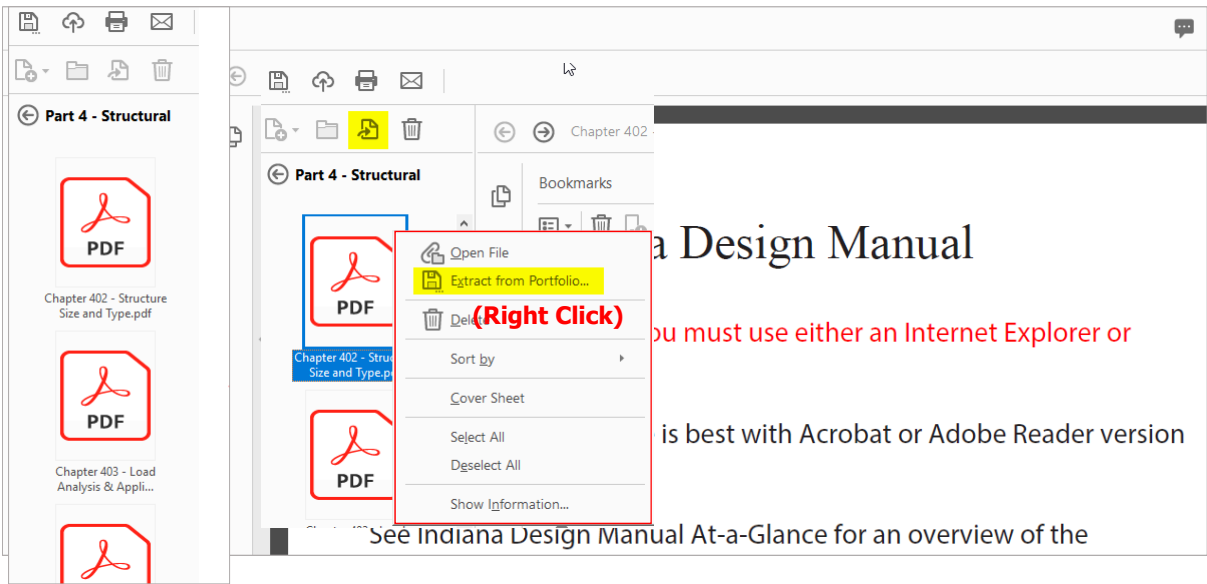
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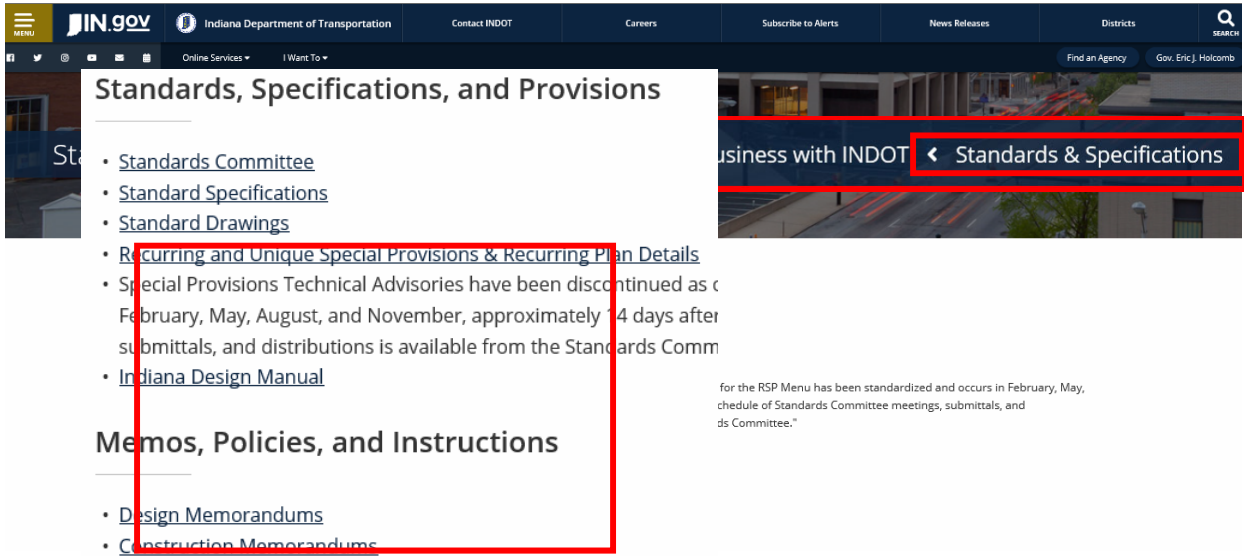
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Webpages to Bookmark – Standards & Specifications

- Standards & Specifications <https://www.in.gov/dot/div/contracts/standards/>



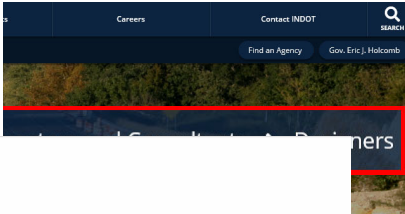
Webpages to Bookmark - Designers

- Designers <https://www.in.gov/indot/2731.htm>

General Design

Design Submittal

- Plan Production
 - Road Design
 - Highway
 - Work Zone Safety
 - Work Zone Safety Homepage
 - Hot T
 - INDOT Interstate Highways Congestion Policy
 - INDOT Work Zone Safety & Mobility Policy (New in 2015)
 - Inter:ul> - Additional Work Zone Safety Resources
 - National Work Zone Safety Information Clearinghouse
 - Unit
 - Guidelines on the Use of Positive Protection in Temporary Traffic Control Zones
 - Publi
 - Portable Positive Protection: A Guide for Short Duration and Short Term Work Zones
 - Share
 - Guidance: Use of Work Zone Clear Zones, Buffer Spaces, and Positive Protection Deflection Distances
 - Work Zone Positive Protection Toolbox



19-01: Rumble Strips and Rumble Stripes

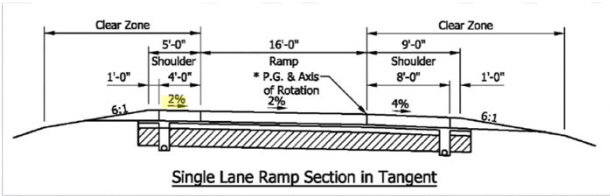
- INDOT adopted a sinusoidal pattern for pavement corrugations – rumble strips and rumble stripes
 - INDOT *Standard Drawings* series 606-SHCG
- Sinusoidal pattern can only be used with HMA pavement
- “Convent rural free applicatic
- IDM Ch. 5
 - Terminology, Usage
 - Pay items
- Transverse Rumble Strips (raised markings) also added to Ch. 502

Coordinate with your district Traffic Engineer



Ramps

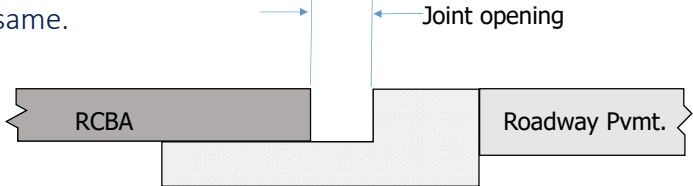
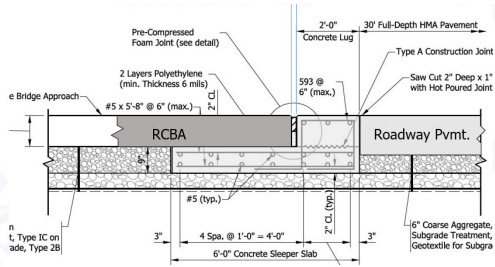
- 19-02 Shoulder Cross Slope on Single Lane Ramps.
 - Corrected IDM Figure 48-5B to correctly show the left shoulder cross slope
- 20-02 Ramp Maximum Grade
 - 4% max. grade for high-speed, **system** interchange ramps
 - Grades steeper require coordination with INDOT Corridor Development Office



NextLevel
INDIANA

19-10: Terminal Joints

- New details 503-R-692d (2020 Std. Dwg. 503-BATJ)
- Pre-compressed foam joint replaces HMA material
- Use with PCCP approach pavement and HMA based on **expansion** length
 - Separate details for HMA and PCCP
- Anticipated movements were based on integral end bent research by Dr. Frosch, but the thermal movement principles remain the same.



NextLevel
INDIANA

19-05 Spare Parts Packages

- Department no longer requires spare part packages for guardrail end treatments and impact attenuators.



19-06 Practice Pointers



- PCCP quantity of 7200 yd² (one lot) or greater, the pay item should be “QC/QA-PCCP, ____ in.” *[these are 501 pay items]*
- PCCP quantity less than 7200 yd², the pay item should be “PCCP, ____ in.” *[these are 502 pay items].*
- Cost Estimates in CES by Stage *(at the latest!)*
- Subgrade Treatment Type IB (14 in. Chemical Soil Modification)
 - Use USP in addition to pay item supplemental description
- Grading at End Treatments needs to be accounted for in design

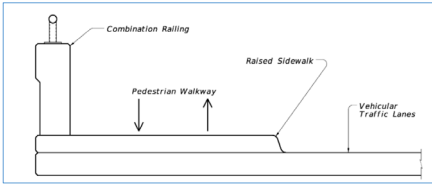


19-07 Pedestrian Fence

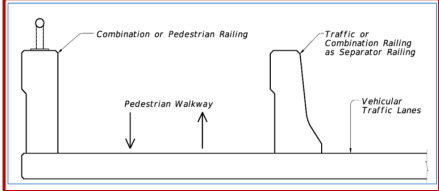
- Use subject to review under the Bridge Aesthetics Policy
- Added guidance on the use of pedestrian fence (protective screening*) to IDM Ch. 404
 - History of objects being thrown from the bridge and other measures have not effectively alleviated the problem
 - Location expected to be frequently used by children not accompanied by adults
 - Urban areas not easily kept under surveillance by law enforcement
 - Private property is subject to damage located beneath the structure
- Placement and Traffic

LOW SPEED (≤ 45 mph):
raised sidewalk or
separated by traffic railing

HIGH SPEED (≥ 50 mph):
separated by traffic railing



LOW SPEED ONLY



LOW SPEED OR HIGH SPEED

- Pedestrians prohibited → don't use pedestrian fence



*AASHTO Roadside Design Guide

19-08: Bridge Railing

If ...	And...	Minimum (MASH) test level is	INDOT Standard Bridge Railing	Notes
Bridge carries interstate mainline or system interchange ramp traffic		TL-5	Type FT Type TF-2	Once the minimum test level is determined, use the evaluation criteria listed below to assess if a higher test level is appropriate. A higher test level railing may be used to satisfy lower test level requirements.
The design speed is ≥ 50 mph		TL-3	Type FC Type PF-1 Type PS-1	
The design speed is ≤ 45 mph	The route is on the NHS	TL-3	Type FC Type PF-1 Type PS-1	
The design speed is ≤ 45 mph	The route is not on the NHS	TL-2	Type TX*	

*successfully MASH tested

19-09: Preprint Changes

- Preprint changes will not be accepted within 7 days of advertisement.
- [gentle reminder] the time period after Final Tracings should not be used as an extension of the design phase.



19-11 Proprietary Materials

- 23 CFR 635.411 (a)-(e) revised such that Federal funds participation no longer restricted when State DOTs specify a trade name for approval in Federal-aid contracts.
- INDOT’s process is unchanged
 - Highway Design Division will continue to coordinate all requests during design.
 - Highway Design Director approves requests during design
 - Applicable to LPA projects

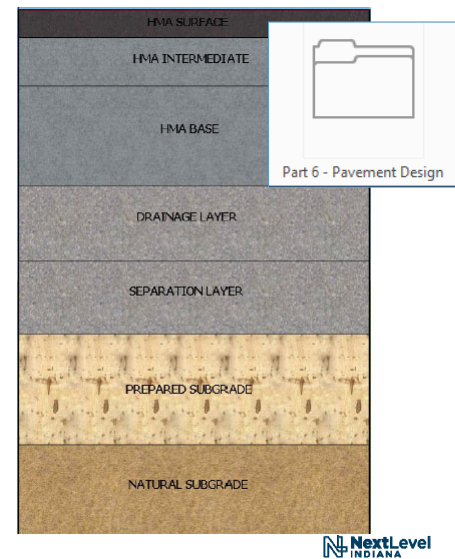
➔ **EXCEPT**

- Traffic Division will approve traffic items (Highway Design still coordinates)
- FHWA signatures no longer required



20-01 Pavement Design

- Reorganized Chapter 304 into a standalone Part 6 and updated to current practice
- Flowcharts for INDOT, LPA pavement design process, selecting pavement recycling treatments.
- Catalog design process for small structure replacement projects. (605-1.09)
 - Based on district, ESALs and design speed
- Full and partial depth patching*
- standard vs. minor/abbreviated pavement design for bridge deck overlay and bridge rehabilitation/ replacement projects. (605-1.10 and 605-1.11)



MOT

- INDOT Interstate Highways Congestion Policy (IHCP) not always checked
 - Required exception request not submitted
- Construction zone design speed missing from plan sheets
- Construction Memo 14-06 for Two Step Speed reduction (>15mph) not followed
- Buffer/roll ahead distance for Truck Mounted Attenuator is not called out correctly
 - See the roll ahead distance per INDOT Work Zone Traffic Control Guidelines, 2013, page 72
- When sidewalk is closed either not providing the required signage or alternate path
- Per IDM 503-7.04(02) Concurrence from the District Traffic Engineer is required prior to including the portable signal pay item into a contract. Temporary Traffic Signal Type Determination form should be submitted.

Cost Estimates

- Contingency in Final Plans estimate
 - IDM 20-1.03(03) says all quantities should be finalized at this stage
- Quantities not matching between plans, quantity calcs & estimate
- Partial depth patching
 - Pay Item and/or USP missing on non overlay projects
 - Pay Item should not be included when Hydrodemolition used
- Polychloroprene joint membranes used for semi-integral end bents
 - Included in the cost of Concrete, A, Substructure per 702.28 of Std Specs
 - USP needed if no pay item for Concrete, A, Substructure
- Missing bridge numbers in supplemental description for LSUM items
- Pay Item for temporary signal per IDM 503-7.04
 - Supplemental description noting the location for one lane, two-way operations, must be included with the use of the fixed temporary signal or portable signal pay item.



QUESTIONS

Standards and Policy



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