PBPD – What, Why & When

Dave Slatzer, P. E.
Deputy Director
Division of Engineering
• What PBPD is NOT?
WHAT is PBPD?

A Planning & Design philosophy that will guide our decision making process to ensure that we are making the best possible investments in the transportation system AS A WHOLE.
PBPD at ODOT - Guiding Principals

- Safety not compromised;
- Minimum standard is the existing condition (design up);
- Design should be consistent with corridor context;
- Optimize mobility/operations/modes;
- Involve public in development of solutions (NEPA);
- Most bang for the buck (B/C);
- No single project is more important than the system;
  - Many “good” projects are better than just a few “perfect” projects
PBPD – What, Why & When

**WHAT is PBPD?**

- Begins in Planning Phase

- Make good decision given best available information
  - Design Traffic
  - Purpose and Need
  - HCS/HSM/Simulation Analysis Tools

- Emphasis on improvement as opposed to meeting “Standard”
**WHY NOW:**

- FHWA is unified in support of PBPD;
  - FAST Act
- Funding is vastly insufficient to meet our needs;

- New Tools – Until recently meeting standard was the proxy measure of a design’s safety. HSM can now quantify the expected safety implications of many situations.

- New Controlling Criteria flexibility (Design Exceptions)
To provide easy movement of people and goods from place to place, we will:

- Take care of what we have;
- Make our system work better;
- Improve safety;
- Enhance capacity

A long-term, reliable, professional and highly productive organization
We will serve, innovate, and communicate with purpose.

We will be productive, lean, efficient and effective.

We will utilize the public resources entrusted to us by satisfying the State's transportation needs.

We will be the standard of excellence for winter maintenance.

We will create a working environment based on trust and mutual respect.

We will value the diversity of all ODOT people.

We will work together — one team: the Ohio Department of Transportation.
Potential PBPD Opportunities

Geometrics

- Cross/Typical Section
- Controlling Criteria
- Ramp terminal spacing
- Upgrade of entrance ramp terminals including additional acceleration length if needed
- Upgrade of exit ramp terminals by providing the standard diverging curvature
- Providing the minimum ramp design speed
- Removal of inside merges and left exits or entrances
- Median width
- Left hand ramps
- Roadside grading schemes (safety, clear zone, common or barrier)
- Providing the standard designs for multi-lane entrances and exits (mainly the length of the auxiliary lanes)
- Cross slope corrections

Operational Performance

- LOS Criteria
- Design Year
- Design Volumes
- Design Speed (Context of Adjacent Corridor)
- 600’ of access control along the crossroad for diamond ramps

Alternatives

- Facility Type (expressway, freeway, super2, etc.)
- Grade Separation versus unconventional intersection
- Rehab versus replace
- Addressing secondary needs.
When will PBPD be “official”:

- ORE has drafted a PBPD chapter for L&D Volume 1;
- Districts Comments Received/Comments out to industry partners;
- PBPD will be published in January 2017 Standards Release;
- Principals can be applied now.
PBPD Examples - Alternative

- “Full” Alt is unfunded interchanges ($120M)
- Practical improvement is superstreets ($15M)
- Analysis: HCS, Simtraffic
- Result – significant improvement over existing. Not as good as interchanges but an improvement
PBPD Examples – 20 Year Design

- Interim Fix
- Analysis: HCS, Vissim
- “Traditional” fix = $30M
- PBPD = <$1M

Result: May not last 20 years but it will get rid of existing DAILY multi mile queue on the mainline.
Thank You

Questions?