Planning for the Future but Developing Solutions for Today: Performance Based Project Development in NEPA

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What is the Problem?

○ The **problem** - we have more needs (a lot more) than funding.

○ **Solution** - Make the funds we have stretch farther…
STRETCHING WHAT WE HAVE...

One method of stretching our funding…

Performance Based Project Development (PBPD)
Several “good” projects are better for the system as a whole that a few “perfect” projects.

Making an affordable improvement now is better than doing nothing while waiting indefinitely for funding for the “perfect” project…
PERFORMANCE BASED PROJECT DEVELOPMENT

Principles:

- Improve the existing condition (design up)
- Design solutions focus on **Purpose & Need**
- Designs strive to maximize benefit/minimize cost
- Do enough work up front to avoid designing solutions that can’t be funded
TRADITIONAL PROJECT PLANNING

- Establish Purpose & Need
  - Identify all existing transportation problems
  - Compare existing to future conditions
  - Identify desired conditions based on design standards
Develop Alternatives

- Meet all identified needs
- Preferred Alternatives addresses all deficiencies
In a world of limited resources and endless needs...

- Are all identified deficiencies truly a problem?
- Is funding available for the ultimate fix?
- Is building the ultimate fix a good use of funds?
- Or are there better ways to improve existing network?
Establish Purpose & Need

- Improve existing conditions to the extent practical—don’t focus on specific metrics
- Primary and Secondary needs identified
- Secondary needs:
  - “Needs” that aren’t causing undue problems
  - Project will address if the cost and impacts aren’t excessive.
Effective PBPD should begin *early* in the process

- Planning Phase of the PDP

Identifying primary and secondary needs early (in P&N) reduces need to spend time and funds designing the ultimate fix
**Alternatives with PBPD**

Develop Alternatives:

- Address **Primary** Needs to the extent practical
  - Address **Secondary** Needs if cost-effective and not too impactful
  - Consider a “good” fundable alternative that improves on the existing in lieu of a “perfect” alternative that we can’t afford
GRE-US 35 Project Area

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PROJECT HISTORY

- Statewide Plan (Access Ohio 2040):
  - US 35 has statewide significance for Ohio’s economic vitality.

- Purpose and Need: Purpose is to improve safety and travel efficiency (congestion)
  - Five at-grade intersections in the project area
  - Capacity inadequate to serve existing transportation demands
PROJECT HISTORY

○ Congestion:
   ○ Level of Service at or close to failing

○ Safety:
   ○ High crash area
Traditional Solution

- Eliminate five at-grade crossings and replace with two interchanges

Meets Project Purpose and Need

- Improves Congestion & Safety
GRE-35 Grade Separation

- Traditional Solution
  - Cost: $120.1 Million
  - Provides solution in accordance with local communities’ and ODOT’s plans for this corridor
Gre-35 Superstreets

- PBPD Solution:
  - Build Superstreet at Factory and Orchard intersections rather than interchanges
  - Meets Project Purpose and Need
    - Improves Congestion & Safety
WHAT IS A SUPERSTREET?

- Non-traditional signalized intersection
- Provides more capacity than a traditional signal
- Side-street traffic cannot turn left or go straight through the main intersection—turn right and do a U-Turn at nearby signal
What is a Superstreet?

Factory Rd.
GRE-35 SUPERSTREETS

- **PBPD Solution** at Factory and Orchard
  - **Fundable**
    - Approximately $10 Million
  - Provides Solution Commensurate with Cost
    - 1/10th of traditional approach and will perform better than the existing signals for many years.
RESULTS...

PBPD allowed for primary needs to be addressed: Congestion and Safety will be improved. And...

- Project cost is **substantially** less than the original plan
- Solution will last years
Great example but…

- Would have saved a lot of time and money if project has started out with a PBPD mindset
- Currently PBPD is being incorporated into numerous projects in various phases of development.
MOVING FORWARD

- What is ODOT-OES doing?
  - Purpose and Need guidance revision—focus on primary and secondary need elements
  - Address concepts in FS and AER Guidance
  - Address concepts in PDP
  - Training
QUESTIONS?

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