Planning & Engineering 360°

PennDOT Connects
Planning with our communities
Introduction
Overview of Module 2

P&E 360 Course Overview

Program Development for Module 2

Module 1: The Value of Planning
Module 2: Program Development (Pre-TIP)
Module 3: Project Delivery (Post-TIP)
CLICK for LEO BAGLEY VIDEO
Your table team will receive a puzzle. The pieces of the puzzle represent the various phases of pre-TIP transportation planning and the opportunities for collaboration that can be leveraged within each phase. Work together to put your team’s puzzle together.
In your table teams, discuss the challenges and opportunities that you foresee with collaborative transportation planning and write them on your team’s Challenges and Opportunities Form.

As we go through the session, as you think of new challenges and opportunities, please keep adding to your form. All forms will be collected at the end of the session.
The Importance of Collaboration in Program Development
Planning & Engineering Collaboration

Community Conditions

Community Development
Vision, Values and Aspirations
Quality of Life & Livability
Sense of Place & History
Community Vitality
Land Use

PennDOT Connects
Goals

• Build Partnerships that invest in sustainable transportation
• Leverage Resources to improve communities
• Lead & Innovate for a more livable Pennsylvania
• Deliver Projects that improve economic competitiveness, access to work, and overall quality of life

Project Development & Delivery
Transportation Choices
Safety & Operations
Asset Management
Mobility & Access

Transportation System Performance

Workbook p.11
Value Proposition

- Scope
- Relationships
- Expectations
- Schedule
- Management
- Education
- Community
- Budget
- Performance
Scalable Approach

Traditional Project
Scalable Approach

TA Set Aside Project
Scalable Approach

Complex Project

Rendering of Proposed CSVT Bridge over West Branch Susquehanna River
Early Investment...Long-Term Benefits

More Time Up Front

Better Projects
Better Communities

Workbook p.13
Example: Little Muncy Creek Bridge Project
Pre-TIP Collaboration Opportunities

Transportation Program Development and Project Delivery Process

**COLLABORATION**

- Problem Assessment
- Proposal Identification
- Proposal Evaluation
- Project addition to TIP/STIP
- PE/NEPA Decision
- Final Design and Construction

**Transportation Issues**
- Potential Sources:
  - LRTP, Asset Management, Public, MPO/RPO Districts, STC, State and Regional Priorities and Goals, County Comprehensive Plans, Statewide Plans, Transportation Planning, Financial Assistance

**Public Input Form**

**Proposal Screening Form**

**TIP/STIP Document**

**Scoping Form**

**Environmental Decision Document**

**ECMTS**

- **Review problems identified for consideration and determine **
  - Purpose and Need
  - Evaluate and refine problem
  - Determine priority level of problem - identify potential solutions and contextual issues

- **Evaluate contextual issues, as well as potential solutions and alternatives considering:**
  - Safety issues/concerns
  - Bicycle/pedestrian accommodations
  - Transit/multi-modal considerations
  - Stormwater management
  - Presence of impacts from current/future freight-generating land uses
  - Utility issues
  - Transportation operation considerations
  - Emergency service accommodations
  - Planned development
  - Long range transportation plans
  - Consistency with current and/or proposed zoning
  - Consistency with community comprehensive or other plans
  - Regional planning studies
  - Other proposed transportation improvements
  - Impacts on the natural, cultural, or social environment
  - Right-of-way considerations
  - Anticipated public opinion
  - Community or cultural events in the candidate project area
  - Presence of EJ community or LEP individuals
  - Maintenance agreement requirements
  - Other specific regional/local topics

- **Recommend formal study, place on LRTP or TIP as a study**

**Recommend project/study to the TIP or STIP Candidate List**

- At a minimum projects approved for the TIP will require collaboration with local governments to identify multimodal transportation infrastructure needs and related planning elements

- Conduct collaborative scoping field view including local governments with full consideration of community vision, needs, goals and objectives

- Use information collected in the collaborative planning process to inform the NEPA decision document, preliminary engineering, final design and construction. Monitor commitments made.

**Footnotes:**

1. Not required for all proposals.
2. PennDOT and the MPO/RPO may jointly decide to dismiss a proposal at any time if the proposal is determined to be a routine maintenance project or not feasible due to constructability issues.
3. Projects may also be deferred to the LRTP Candidate List or illustrative list.
4. Studies can also be funded through the Unified Planning Work Program (UPWP).
5. Multimodal includes highway, public transit, aviation, rail, freight, and bicycle and pedestrian facilities.
Problem Identification & Assessment

Transportation Issues
Potential Sources:
LRTP, Asset Management, Public, MPO/RPO, Districts, STC Comments, State and/or Regional Priorities and Goals, County/Municipal Comprehensive Plans, Corridor Studies, Planning Products, Discretionary, Financial Guidance

Public Input Form
Proposal Screening Form

Review problems identified for consideration and determine Purpose and Need

LRTP

Workbook p.15
Sources of Transportation Problems

**Transportation Issues**

**Potential Sources:**
- LRTP, Asset Management, Public, MPO/RPO, Districts, **STC Comments**, State and/or Regional Priorities and Goals, County/Municipal **Comprehensive Plans**, **Corridor Studies**, Planning Products, Discretionary, Financial Guidance

**Plus:**
- Economic Development/
  Housing Needs, etc.
- PennDOT Connects Collaboration
Sources of Transportation Problems

Potential Sources:
- LRTP, Asset Management, Public
- MPO/RPO, Districts, State
- and/or Regional Priorities, New Goals, County/Municipal

Plus:
- Economic Development/
- Housing Needs, Etc.
- DOT Connects Collaboration

STC Comments
Sources of Transportation Problems

Comprehensive Plans

Plus:
- Economic Development/
  Housing Needs, Etc.

PennDOT Connects Collaboration

MPO/RPO, and/or Regional Transportation Goals,
County/Municipal Comprehensive Plans,
Corridor Studies, Planning Products,
Discretionary, Financial Guidance
Elements of a Comprehensive Plan

Land Use (& Related)
- Existing development and conservation (open space lands)
- Future/planned development and conservation
- Natural resource protection
- Farmland preservation, historic resource preservation

Housing
- Condition of housing stock
- Affordable housing options
- Neighborhood character and amenities

Economy
- Jobs (inbound and outbound commuters)
- Workforce education
- Goods movement

Facilities & Utilities
- Police, fire protection and emergency medical service
- Educational and medical facilities
- Parks and recreation
- Public water, public sewer

Workbook p.16
Sources of Transportation Problems

Plus:
- Economic Development/
  Housing Needs, Etc.
- PennDOT Connects Collaboration

Corridor Studies

State
- Comprehensive Plans,
  Corridor Studies, Planning Products,
  Discretionary, Financial Guidance

County/ Municipalities
Sources of Transportation Problems

Transportation Issues

Economic Development/
Housing Needs, Etc.

Plus:
Economic Development/
Housing Needs, Etc.
PennDOT Connects
 Collaboration

Workbook p.16
Sources of Transportation Problems

Transportation Issues
Potential Sources:
LRTP, Asset Management, Public, MPO/RPO, Districts, **STC Comments**, State

PennDOT Connects Collaboration

Plus:
Economic Development/
Housing Needs, Etc.

DOT Connects Collaboration

Workbook p.16
Foundational Information

- Location
- Problem Description
- Supporting Data (if available)
- PennDOT Connects System
Purpose & Need

Need

• Key problems to be addressed
  • Tangible & fact-based
  • Focused on transportation problems, not solutions

Purpose

• A broad statement of the overall intended objective to be achieved by a proposed transportation improvement.
  • Can also include secondary goals
When and Why to Develop

Early – During Planning

• Reason for dedicating public funds
• Foundation for alternatives development
• Local government collaboration
• Documented on PennDOT Connects screening form

NEPA – Ensure Solid Purpose and Need

• Screening form → Scoping form
• May be refined
• Foundation of NEPA process
• Basis for alternatives development/screening
• Not too broad/not too narrow
• Safety
• Congestion/Capacity
• Facility Deficiencies/Structure Conditions
• System Linkage/Connectivity/Modal Interrelationships
• Economic Development
• Legislative Intent
Revisit Your Community

- College Town
- Rural Community
- (Former) Industrial Community
- City or Metropolis
- Small Town or Borough
- Retail or Logistics Hub
- Waterfront Town
- Bedroom Suburb
Your table team will be assigned a transportation problem based on your community type. You will find your community’s problem in Appendix 2D. Work together to write a draft Purpose & Need Statement based on the problem you have been assigned and what you know about your community.

Then, determine which sources would have helped to identify your community’s problem.
Examples of Needs

• Safety
• Congestion/Capacity
• Facility Deficiencies/Structure Conditions
• System Linkage/Connectivity/Modal Interrelationships
• Economic Development
• Legislative Intent
## Deficiencies

### Original

"The existing bridge needs to be replaced."
- **Why?**
- **What is wrong with the existing bridge?**

### Facts could have to support:
- Is it structurally deficient/functionally obsolete? (List specific deficiencies.)
- Is it a single lane? Does it include shoulders?
- Are there sight distance/approach issues?
- What is the traffic mix/volume?
- Is it weight restricted? EMS/bus issues?
- Where is the next crossing?

### Improved

"The one-lane bridge is SD and weight restricted, causing 10-mi detours for buses & EMS providers"

### Facts/Evidence:
- Fire trucks/buses cannot cross weight-restricted bridge
- Detour is 10 miles (explain hardship for EMS/buses)
- Substantial traffic crosses this bridge (give #s)
### Original

“A new roadway/interchange should be constructed to encourage economic development in <community>”

- Why?
- How was this conclusion reached?

**Facts could have to support:**

- What do the comprehensive plans say?
- Has development occurred/more planned?
- Is other infrastructure (sewer/water) in place?
- Does zoning support development?

### Improved

“Transportation infrastructure improvements are needed to support economic development in <community>”

**Facts:**

- Zoning maps
- Plans/quotes from comprehensive plans
- Maps showing existing/in progress/planned development
- Information about supporting infrastructure
In your table teams, use the information you just learned to refine your Purpose & Need Statement.
Proposal Identification

- Evaluate and refine problem
- Determine priority level of problem - identify potential solutions and contextual issues

LRTP ²,³
Problem Evaluation and Refinement

- Conducted based on known information, purpose and need
- Gather additional information that may be useful
- Timing may depend on the specific problem and its context
- Consider whether the problem is a long-term or short-term priority
What additional information would be necessary or helpful?

As a large group, discuss what additional information may be necessary or helpful in order to identify potential conceptual solutions.
PennDOT Connects provides an opportunity to be innovative when thinking about solutions.
Land Use

Bucks County Future Land Use Plan

Bakery Square, Pittsburgh Mixed Use Development
HOV Hard Shoulder

Freight Management
Travel Demand Management (TDM)

Van Pool

Commuter Services
Multimodal/Intermodal

- Oakland Bicycle/Pedestrian Accommodations
- Elizabethtown Amtrak Station
- Lehigh Line
- Bethlehem Norfolk Southern Freight Rail
In your table teams, brainstorm potential solutions/alternatives based on your Purpose & Need Statement.
Proposal Evaluation

Proposal Screening Form

Evaluate contextual issues, as well as potential solutions and alternatives considering:
- Safety issues/concerns
- Bicycle/pedestrian accommodations
- Transit/multi-modal considerations
- Stormwater management
- Presence of impacts from (current/future) freight-generating land uses
- Utility issues
- Transportation operation considerations
- Emergency services accommodations
- Planned development
- Long range transportation plans
- Consistency with current and/or proposed zoning
- Consistency with community comprehensive or other plans
- Regional planning studies
- Other proposed transportation improvements
- Impacts on the natural, cultural, or social environment
- Right-of-way considerations
- Anticipated public opinion
- Community or cultural events in the candidate project area
- Presence of EJ community or LEP individuals
- Maintenance agreement requirements
- Other specific regional/local topics

Recommend formal study; place on LRTP or TIP as a study

LRTP
Contextual Issue Evaluation

- Safety Issues/Concerns
- Stormwater Management
- Transportation Operation Considerations
- Consistency with LRTP
- Regional Planning studies
- Right-of-Way Considerations
- Presence of Environmental Justice (EJ) or Limited English Proficiency (LEP) Individuals
- Bicycle/Pedestrian Accommodations
- Presence of Impacts from (Current/Future) Freight-Generating Land Uses
- Emergency Services Accommodation
- Consistency with Community Comprehensive or Other Plans
- Other Proposed Transportation/Infrastructure Improvements
- Anticipated Public Opinion
- Maintenance Agreement Requirements
- Transit/Multi-modal Considerations
- Utility Issues
- Planned Development
- Consistency with Current or Proposed Zoning
- Impacts on the Natural, Cultural or Social Environment
- Community or Cultural Events in the Candidate Project Area
- Other Specific Regional/Local Topics
Stormwater Management

Lancaster Mulberry Street
Rain Garden Bump-out

Lemoyne Rain Garden
Planned Development

Blairsville

Master Plan
Blairsville Riverfront Village
Borough of Blairsville - Indiana County - Pennsylvania

- single family detached units
- duplex units
- condominium units
- units total

Blairsville Community Development Authority
130 West Market Street
Blairsville, Pennsylvania 15717
724.459.4888

Workbook p.31
Appendix 2D
Planned Development

North Philadelphia Station

- Renovation of 180,000-square foot industrial building
- 21-story tower with 128 apartments and offices
- Six-story, 105-unit apartment building
- Possible area of future development

Workbook p.31
Appendix 2D
Community Comprehensive or Other Plans

Montco 2040: A Shared Vision
The Comprehensive Plan for Montgomery County

Connecting Our Community
A Plan for Connecting Allegheny’s Parks and People through a Network of Bicycle and Pedestrian Trails

Port Authority of Allegheny County
Transit-Oriented Development Guidelines

Workbook p.31
Appendix 2D
Regional Planning Studies

Building on Our Strengths
Evaluating Transit-Oriented Development (TOD) Opportunities in Greater Philadelphia

Northwest Rural Planning Organization County and Municipal Redundant Bridge Inventory Final Report

Prepared for:
Northwest Pennsylvania Regional Planning & Development Commission
395 Seneca Street
Oil City, PA 16301

Prepared by:
Quality Engineering Solutions, Inc.
405 Water Street
PO Box 3004
Conneaut Lake, PA 16316

February 15, 2016

Quality Engineering Solutions
Engineering • Inspection

Workbook p.31
Appendix 2D
Impacts on Natural, Cultural or Social Environment

- Wetlands
- Agricultural Resources
- Historic Resources

Workbook p.31
Appendix 2D
Each table team will receive some new, relevant information that your team has uncovered through the PennDOT Connects discussions with local government officials. As a team, consider this new information, and answer the following questions...

Who would you engage to discuss this new information?

Does this new information impact your Purpose & Need Statement?

___YES  ___NO

• If no, why not?

• If yes, how would the Purpose & Need Statement have to be revised to address the new information?

Does this new information impact your solutions/alternatives?

___YES  ___NO

• If no, why not?

• If yes, how would the solutions/alternatives have to be revised to address the new information?
Project Addition to the TIP

Recommend project/study to the TIP or to TIP Candidate List

At a minimum projects approved for the TIP will require collaboration with local governments to identify multimodal, stormwater, green infrastructure needs and related planning elements.
## Proposal Prioritization

<table>
<thead>
<tr>
<th></th>
<th>LRTP</th>
<th>TIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration</strong></td>
<td>Minimum 20 years</td>
<td>4 year transportation program</td>
</tr>
<tr>
<td><strong>Updates</strong></td>
<td>Every 4-5 years</td>
<td>Every 2 years</td>
</tr>
<tr>
<td><strong>Fiscal Constraint</strong></td>
<td>Fiscally constrained, but can have an illustrative list of additional proposals</td>
<td>Fiscally constrained</td>
</tr>
</tbody>
</table>
| **Process Notes**       | • If deferred to the LRTP, the proposal can reenter the collaborative planning process later without the need to start from the beginning.  
                          | • Good documentation of collaboration and decisions made will allow the proposal to reenter the process with a lesser need to repeat work.  
                          | • Should be process focused.                        | • If assigned to a TIP, it is being identified as a “priority” project that should be funded in the next 4 years.  
                          |                                                                 | • This may require that a project already identified for the TIP be deferred based on funding.  
                          |                                                                 | • The MPO/RPO and PennDOT should work together to make this determination. |
Requirements for Addition to TIP

Collaboration with Local Governments

Central Office Executive Collaboration Meeting

Project Initiation Form

Workbook p.36
Requirements for Addition to TIP

Transportation Program Development and Project Delivery Process

**Public Input Form**

1. Evaluate and refine problem
2. Determine priority level of problem - identify potential solutions and contextual issues
3. Evaluate contextual issues, as well as potential solutions and alternatives considering:
   - Safety issues/concerns
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   - Right-of-way considerations
   - Community or cultural events in the candidate project area
   - Presence of EJ community or LEP individuals
   - Maintenance agreement requirements
   - Other specific or regional/local topics

4. Recommend formal study, place on LRTP or TIP as a study

**TIP/STIP Document**

- Recommend project(s) study to the TIP or to TIP Candidate List
- At a minimum projects approved for the TIP will require collaboration with local governments to identify multimodal, stormwater, green infrastructure needs and related planning elements

**Scoping Form**

- Conduct collaborative scoping field view including local governments with full consideration of community vision, needs, goals and objectives

**Environmental Decision Document**

- Use information collected in the collaborative planning process to inform the NEPA decision document, preliminary engineering, final design and construction. Monitor commitments made.

Footnotes:

1. Not required for all proposals
2. PennDOT and the MPO/RPO may jointly decide to dismiss a proposal at any time if the proposal is determined to be a routine maintenance project or not feasible due to constructability issues.
3. Projects may also be deferred to the LRTP Candidate List or illustrative list.
4. Studies can also be funded through the Unified Planning Work Program (UPWP).
5. Multimodal includes highway, public transit, aviation, rail, freight, and bicycle and pedestrian facilities.

March 22, 2017
As a large group, discuss early experiences and lessons learned from 2017/2019 TIP update collaboration.
Wrap-up & Next Steps
Moving a Project Forward

Transportation Program Development and Project Delivery Process

1. Public Input Form
2. Proposal Identification
3. Proposal Evaluation
4. Project Addition to TIP/STIP
5. NEPA
6. Final Design and Construction

- **C O L L A B O R A T I O N**
- **TIPS TIP Document**
- **Scoping Form**
- **Environmental Decision Document**
- **ECMTS**

**Evaluate contextual issues, as well as potential solutions and alternatives considering:**
- Safety issues/concerns
- Bicycle/pedestrian accommodations
- Translink/multi-modal considerations
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**Recommend formal study; place on LRTP or TIP as a study**

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March 22, 2017

Workbook p.39
PennDOT Connects System

Categorical Exclusion Expert System

Moving a Project Forward

Scoping General Project Information

Scoping Package Number: 25336
Associated Screening LPNs: 6076

An LPN log-in is required to view screening data.

Attachments in LPN Screening

Scoping authors should evaluate LPN files for inclusion in the Project File.

None.
Moving a Project Forward

**Project Details**

**Project Name:** US 30 over Branch of Racoon Creek

**Project Description**

Include narrative to describe the general project scope of work. Attach Location Map(s) and Design Plan (only overview and sheets showing limits of work).

Bridge replacement/restoration on SR 30, Lincoln Highway over Branch of Racoon Creek in Independence Township, Beaver County.

**Project Setting and Distinct Project Features**

Provide narrative to adequately describe the project setting (terrain, locale, land use, presence of bicycle/pedestrian or other unique facilities, etc.). Any additional information not otherwise covered by this form that is necessary to clearly understand project circumstances should also be included in this section. Narrative should be appropriate for the complexity of the project and project circumstances with the length and content varying accordingly.

**Why is the project needed (project needs)?**

Provide project needs that are tangible and fact-based, framed in terms of problems and deficiencies, not solutions. Bridge is structurally deficient and does not meet current design standards.

**What is the project purpose?**

Provide a safe and reliable crossing on SR 30 (Lincoln Highway) over Branch of Racoon Creek in Independence Township.
In your table teams, consider the Challenges/Opportunities Form that you have been filling in during the session. As a team, identify 2-3 strategies (i.e., things that you are going to do) based on this list.
Planning & Engineering 360°

Module 2: Program Development