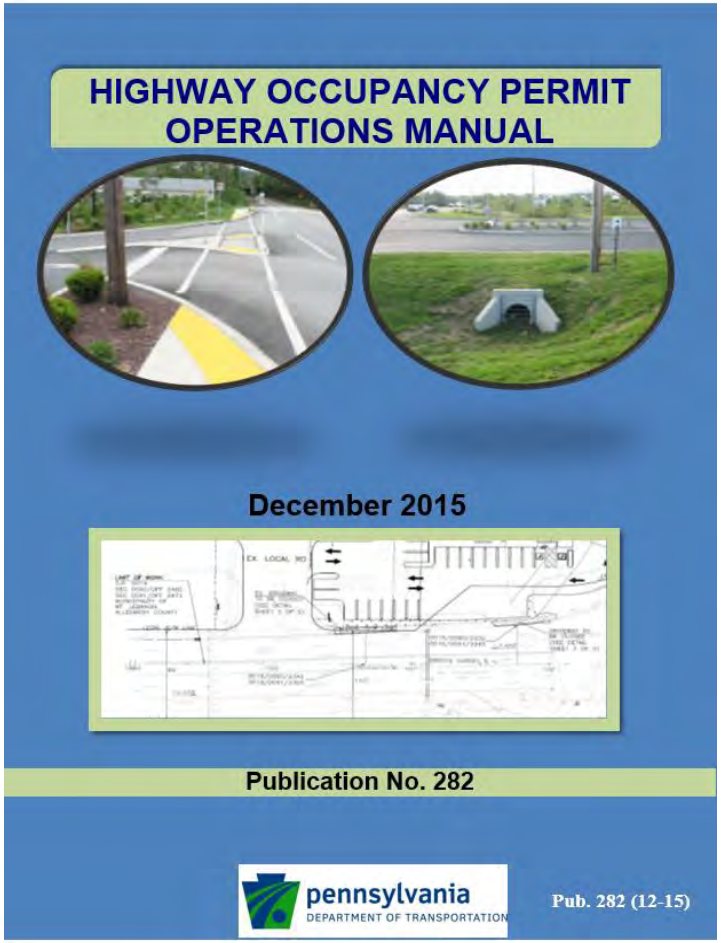
Highlights of the New Combined Publication 170/282 for HOPs

07/06/2016



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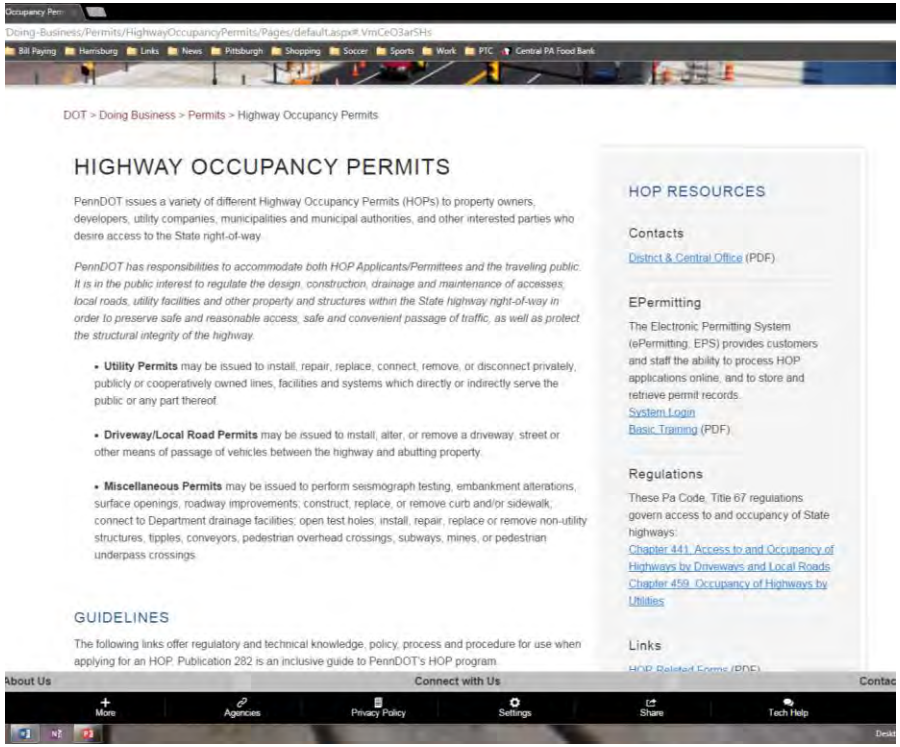
Schedule

- Document reviewed by FHWA in December
- June 29, 2016 - SOL 494-16-04 (Subsurface Utility Occupancy Testing and Inspection Requirements)
- Finalize by end of the week, submit to FHWA
- Final FHWA review
- PUBLISH!

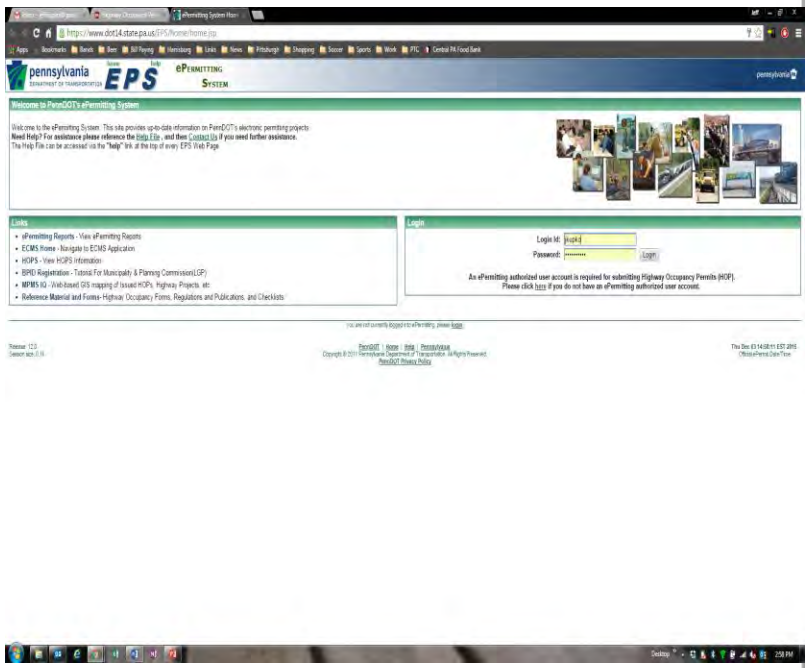
PennDOT HOP Website

- New website
- Contains links to publications, SOLs, restoration figures, ordinances, etc.
- Quick references to regulations and EPS



PennDOT EPS

- Preferred method of navigating through the HOP process
- Most applicants required to register
  - Can use consultant to submit
  - Exceptions: one-time minimum-use, minor drainage or utility changes
- Contains all information a user would need to receive permit



Major Highlights

- Publication 170, previously internal only, absorbed by Publication 282
  - Transparency
  - One-stop shop
- Incorporates all previous SOL
- Redesign with graphics for visual ease
- Sidebars highlight important factoids
- Digital friendly as opposed to simply print layout

PennDOT PUB 282 HIGHWAY OCCUPANCY PERMIT OPERATIONS MANUAL Page 19
Chapter 2- Application Submission

Pre-Application Reviews

When planning on submitting a HOP application, the Applicant or Applicant's engineer should contact the District to set up a project scoping meeting. The scoping meeting is vital for outlining the expectations of the project and design in accordance with this chapter. The Transportation Impact Study Guidelines (Appendix A) provides a scoping meeting checklist of items to be covered and addressed during the meeting for a successful application.

District staffs will honor requests made by developers for pre-application reviews. These reviews have a positive impact and increase the likelihood that the formal HOP application package will be acceptable, and will reduce the number of issues that would otherwise need to be addressed by PennDOT during the 60-day statutory time limit for formal driveway application reviews.

Some of the items that may be appropriate to address in the pre-application review stage include methods to determine trip generation, pass-by trip percentages, background traffic growth rate, Transportation Impact Study area boundaries, and conceptual design issues (e.g., number and location of driveways).

Scoping meetings are also a good opportunity to facilitate early coordination with municipalities and planning commissions which may have recommendations or requirements impacting PennDOT's review of the project.

Comments for pre-application recommendations are not binding on PennDOT.

2.2 – REQUIRED APPLICATION INFORMATION FOR ALL TYPES OF PERMITS

The initial formal step in the issuance of the HOP is the submission of a properly completed application by the Applicant (e.g., an Applicant in Chapter 441 (Driveways/Local Roads) or Chapter 459 (Utilities)) via EPS or, at the discretion of PennDOT, a properly completed application (Form M-945 A or M-950 A) to the PennDOT County Permit Office in the county where the proposed work will be performed. Non-electronic paper applications are not routinely accepted; these applications will only be accepted as a last-resort at the discretion of the District.

A properly completed application is one that is in full compliance with the regulations, particularly 441.3 or 459.3, as applicable.

The application should be submitted at least 30 calendar days in advance of the anticipated start of routine utility work and work on Minimum Use driveways. For substantial utility projects or complex driveway/local road applications, the application will likely require multiple reviews and longer permit issuance timeframe. Upon receipt of an application, by the District or County Office, the date received shall be documented in either EPS or in writing.

When submitting via EPS, an *authorized agent* may submit the HOP application on behalf of a permit Applicant if a properly completed M-950 AA (Applicant's Authorization for Agent to Apply for HOP) form is provided and accepted as part of the application package submission. For guidance on the proper use of this form, please refer to Chapter 9 of this Manual.

When submitting applications, application information must be correctly completed by the Applicant before submitting. PennDOT staff will assist Applicants while also verifying each application complies with applicable laws, regulations and statewide policy. See Appendix C1 for an HOP Project Application checklist.

For additional information on completing an HOP application using EPS, Form M-945 A, or Form M-950 A, refer to Chapter 9. Also see *Publication 312 - Guide for Obtaining Minimum Use Driveway Permit*.

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Publication Organization

- Chapter 1 – Overview of PennDOT's HOP program, recommendations on public training and outreach, and outlines PA Right to Know Law
- Chapters 2-5 – Provide a detailed walkthrough of the typical Highway Occupancy permitting cycle
  - Chapter 2 – Application submission
  - Chapter 3 – Application review
  - Chapter 4 – Permit issuance
  - Chapter 5 – Construction, inspection, and closeout of permitted work
- Chapter 6 – Emergency repair of utility facilities
- Chapter 7 – Resolution of HOP-related disputes and complaints
- Chapter 8 – Repository of links to important HOP-related websites, publications, and regulations
- Chapter 9 – Guide on use of all HOP-related PennDOT forms
- Appendices – reference and other guidebooks

Who Can Be An Applicant?

- "Permit applications shall be submitted in the name of and executed by the owner of the property." - Section 441.3(b)
- "Permits will be issued only to the owners of the property. Permits will not be issued to contractors of the property owner nor to any person other than the owner of the property." - Section 441.5(b).
  - The term own is defined as: "To hold title to land or a building or a tenant in a lease that will not terminate within 15 years of the permit issuance date." - Section 441.1.
- In practice, PennDOT will accept an application from a person who holds fee title to land or a person who holds an estate or other legal interest in property, such as an easement, a lease, a license, subsurface rights, assignee, or an equitable interest under a sales agreement or option to purchase

Driveway Design Details & Illustrations

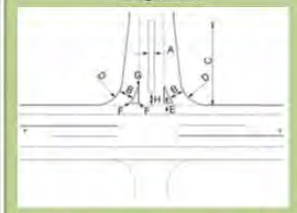
High Volume Driveways

A typical high volume driveway will provide access to multi-use commercial developments, urban activity centers, large office complexes, or large industrial sites with consistent traffic volumes during hours of operation. Most high volume driveways require the use of a traffic signal to control traffic movements between the state road and the driveway.

These driveways should be designed as a street intersection. Typically separate left- and right-turn lanes will be required depending on turn lane warrants. Radii and distances provided in the diagram below are recommended values and design vehicle turning movements should be used to verify their applicability. Americans with Disabilities Act (ADA) compliance is required.

The first internal access point should be located as far away from the driveway's intersection with the State road as possible.

Design Details



Letter	Measurement
A	10' Recommended, 4' Min
B	23'
C	150' Min
D	50' Radius
E	4' Min
F	3' Radius
G	2' Radius
H	19' Min

*Can be raised concrete median or striped left-turn lanes

Typical Installations

State Road with Dedicated Left Turn Lane

State Road with Concrete Mountable Median

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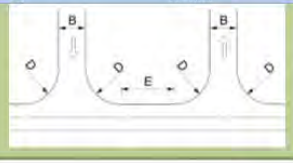
Medium Volume Driveways

A typical medium volume driveway will provide access to commercial developments of moderate size similar to community shopping centers, medium-sized office complexes, public schools, assemblies of worship, and parking lots for employees or transit. Most medium volume driveways require turning lanes on the state road to help remove the traffic from interfering with the through movements.

These driveways should use curb radius design, and allow for ingress and egress at one location or provide ingress at one location and egress at another location. Should the latter be the case, proper signage is required. Radii and distances provided in the diagram below are recommended values and design vehicle turning movements should be used to verify their applicability. Americans with Disabilities Act (ADA) compliance is required.

Design Details

Letter	Measurement
A	10' Recommended, 4' Min
B	14' Min, 28' Max
C	120' Desirable
D	Cars/Single Unit Trucks: 15' Min Buses/Combination Trucks: 45' Min (<45 MPH) 50' Min (≥45 MPH)
E	10' Min



Typical Installations

Single Point of Access

Multiple Points of Access

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- Tables and figures illustrate and supplement the minimum design requirements described in Chapter 441
- Added restricted access and special situations

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Sight Distance

- Policy revised to be consistent with AASHTO & DM-2.
- Clarifies use of intersection vs. stopping sight distance along a property frontage
- What is used as design speed in sight distance calculations
  - Use posted unless it is suspected it is exceeded by 10 MPH or more
    - 85th percentile
    - Safe-Running Speed
- How sight distance is measured in the field

Sight Distance

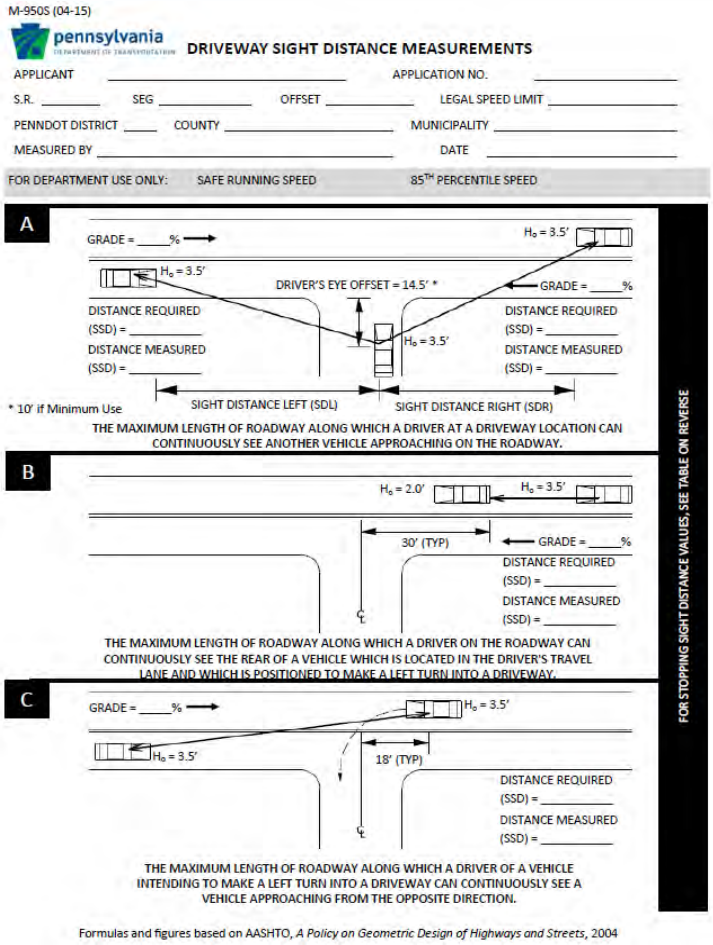
For each direction along the highway, the following lengths must be the measured sight distances for that direction, as discussed in the previous section:

(A) The maximum length of roadway along which a driver at a driveway location can continuously see another vehicle approaching on the roadway.

(B) The maximum length of roadway along which a driver on the roadway can continuously see the rear of a vehicle which is located in the driver's travel lane and which is positioned to make a left turn into a driveway.

(C) The maximum length of roadway along which a driver of a vehicle intending to make a left turn into a driveway can continuously see a vehicle approaching from the opposite direction. This sight distance length is measured from the location of the approaching vehicle to a point on the roadway where the left-turning vehicle crosses the path of the approaching vehicle.

Sight Distance



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DRIVEWAY SIGHT DISTANCE MEASUREMENTS

APPLICANT _____ APPLICATION NO. _____

S.R. _____ SEG _____ OFFSET _____ LEGAL SPEED LIMIT _____

PENNDOT DISTRICT ____ COUNTY _____ MUNICIPALITY _____

MEASURED BY _____ DATE _____

FOR DEPARTMENT USE ONLY: SAFE RUNNING SPEED 85TH PERCENTILE SPEED

A

GRADE = ____% → H_o = 3.5′

H_o = 3.5′ DRIVER'S EYE OFFSET = 14.5′ * ← GRADE = ____%

DISTANCE REQUIRED (SSD) = _____ DISTANCE MEASURED (SSD) = _____

H_o = 3.5′ DISTANCE REQUIRED (SSD) = _____ DISTANCE MEASURED (SSD) = _____

* 10′ if Minimum Use

SIGHT DISTANCE LEFT (SDL) SIGHT DISTANCE RIGHT (SDR)

THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER AT A DRIVEWAY LOCATION CAN CONTINUOUSLY SEE ANOTHER VEHICLE APPROACHING ON THE ROADWAY.

B

H_o = 2.0′ H_o = 3.5′

30′ (TYP) ← GRADE = ____%

DISTANCE REQUIRED (SSD) = _____ DISTANCE MEASURED (SSD) = _____

THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER ON THE ROADWAY CAN CONTINUOUSLY SEE THE REAR OF A VEHICLE WHICH IS LOCATED IN THE DRIVER'S TRAVEL LANE AND WHICH IS POSITIONED TO MAKE A LEFT TURN INTO A DRIVEWAY.

C

GRADE = ____% → H_o = 3.5′

H_o = 3.5′ 18′ (TYP)

DISTANCE REQUIRED (SSD) = _____ DISTANCE MEASURED (SSD) = _____

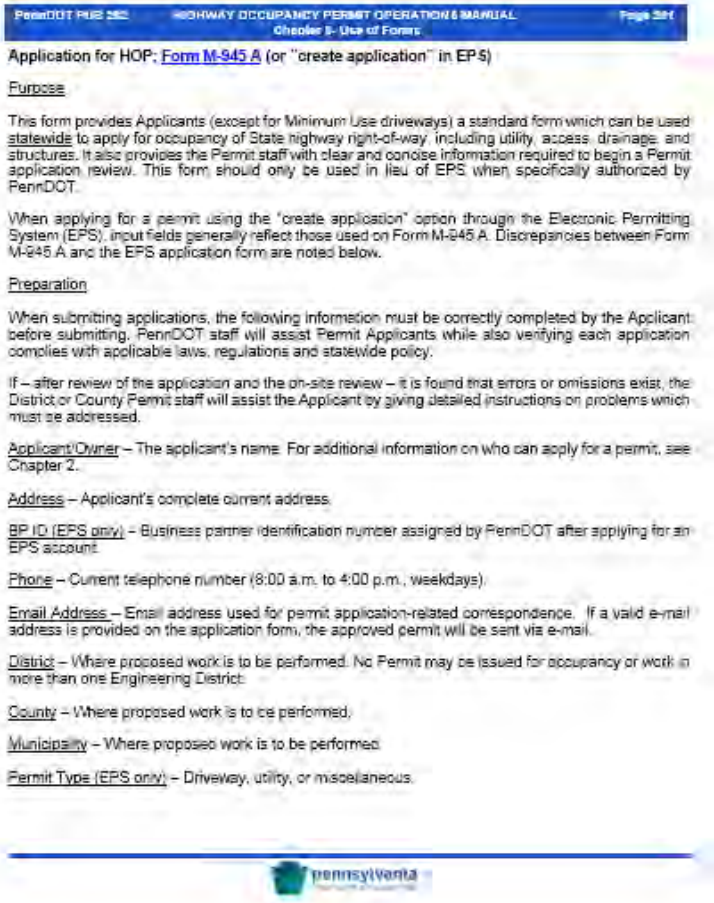
THE MAXIMUM LENGTH OF ROADWAY ALONG WHICH A DRIVER OF A VEHICLE INTENDING TO MAKE A LEFT TURN INTO A DRIVEWAY CAN CONTINUOUSLY SEE A VEHICLE APPROACHING FROM THE OPPOSITE DIRECTION.

FOR STOPPING SIGHT DISTANCE VALUES, SEE TABLE ON REVERSE

Formulas and figures based on AASHTO, *A Policy on Geometric Design of Highways and Streets*, 2004

- Measurements A & C – Both objects 3.5’ off roadway
- Measurement B – Rear of stopped car height is 2.0’ off roadway and 30’ from centerline of driveway
- Measurement A – Driver’s eye is 14.5’ off edge of roadway unless minimum use. Prefer to meet ISD, but must meet SSD

Form Guidance



PennDOT Pub 282 — HIGHWAY OCCUPANCY PERMIT OPERATION & MANUAL — Page 3H1
Chapter 3- Use of Forms

Application for HOP: Form M-945 A (or "create application" in EPS)

Purpose

This form provides Applicants (except for Minimum Use driveways) a standard form which can be used statewide to apply for occupancy of State highway right-of-way, including utility, access, drainage, and structures. It also provides the Permit staff with clear and concise information required to begin a Permit application review. This form should only be used in lieu of EPS when specifically authorized by PennDOT.

When applying for a permit using the "create application" option through the Electronic Permitting System (EPS), input fields generally reflect those used on Form M-945 A. Discrepancies between Form M-945 A and the EPS application form are noted below.

Preparation

When submitting applications, the following information must be correctly completed by the Applicant before submitting. PennDOT staff will assist Permit Applicants while also verifying each application complies with applicable laws, regulations and statewide policy.

If – after review of the application and the on-site review – it is found that errors or omissions exist, the District or County Permit staff will assist the Applicant by giving detailed instructions on problems which must be addressed.

Applicant/Owner – The applicant's name. For additional information on who can apply for a permit, see Chapter 2.

Address – Applicant's complete current address.

BP ID (EPS only) – Business partner identification number assigned by PennDOT after applying for an EPS account.

Phone – Current telephone number (8:00 a.m. to 4:00 p.m., weekdays).

Email Address – Email address used for permit application-related correspondence. If a valid e-mail address is provided on the application form, the approved permit will be sent via e-mail.

District – Where proposed work is to be performed. No Permit may be issued for occupancy or work in more than one Engineering District.

County – Where proposed work is to be performed.

Municipality – Where proposed work is to be performed.

Permit Type (EPS only) – Driveway, utility, or miscellaneous.

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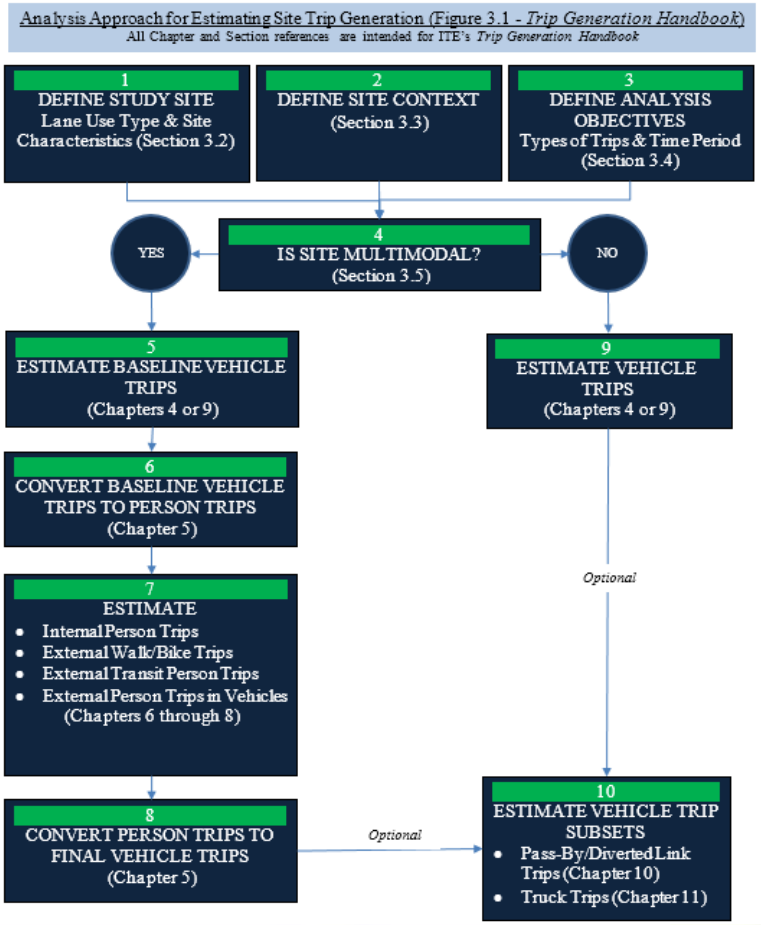
- Provides direct hyperlink where applicable
- Updated descriptions and how to use the forms, including what is needed in each field
- Identifies when form is available in EPS or if an original copy is required

TIS Guidelines

APPENDIX A

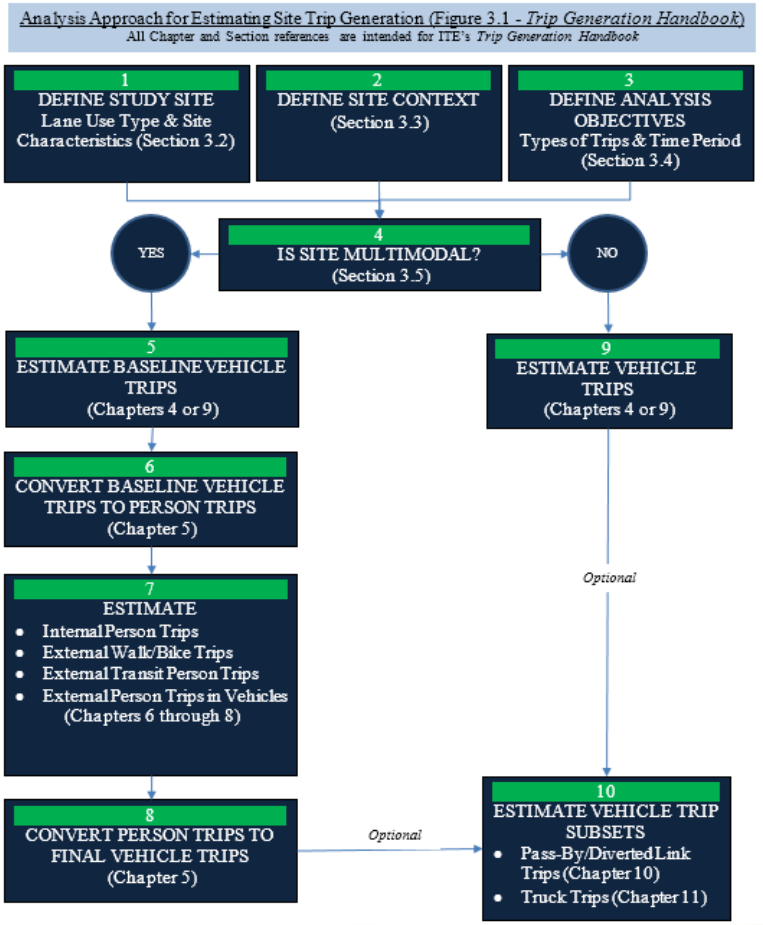
TIS Guidelines – Trip Generation

- Follows New ITE *Trip Generation Handbook, Third Edition*
- Converts baseline trips to person trips
- Takes person-trip reductions
- Converts reduced person trips back to vehicular trips



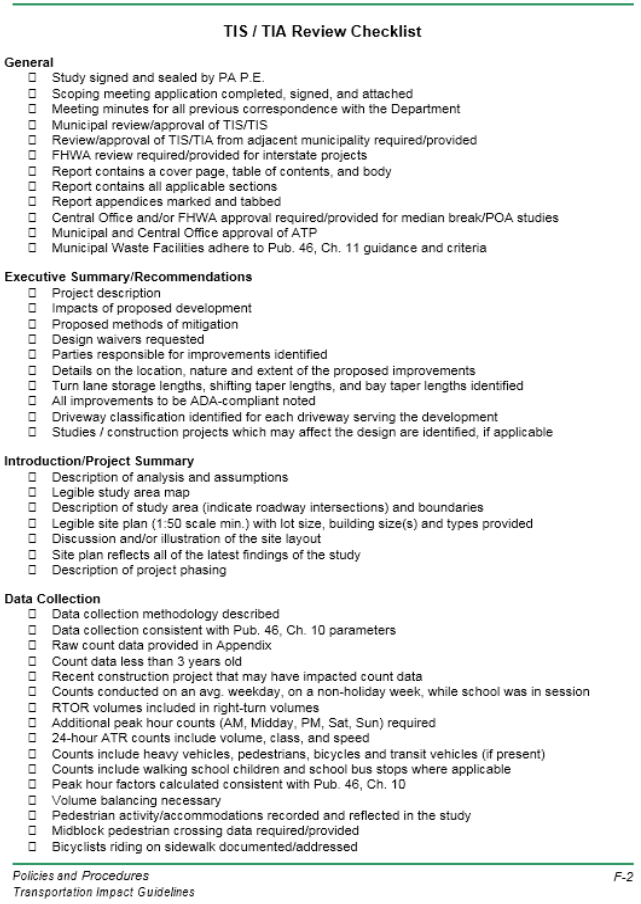
TIS Guidelines – Roundabouts

- Incorporates previous SOL
- If the impact analysis indicates a need for reconstructing existing intersections, or for constructing new intersections, **roundabouts shall be evaluated by the applicant** along with other unsignalized or signalized traffic controls.
- Special consideration should be given to driveways which will be constructed in the area of a roundabout. **Driveways should not interfere with the operation of the roundabout**, although in general, driveways may be closer to a roundabout (relative to conventional intersections) because of shorter queuing.



TIS Guidelines – Checklist

- Was released through SOL
- Used by reviewers to ensure compliance, but aids preparers to make sure submission is complete
- Highlights some common comments made
  - Identify responsible parties
  - ADA compliance



TIS / TIA Review Checklist

General
- ☐ Study signed and sealed by PA P.E.
- ☐ Scoping meeting application completed, signed, and attached
- ☐ Meeting minutes for all previous correspondence with the Department
- ☐ Municipal review/approval of TIS/TIS
- ☐ Review/approval of TIS/TIA from adjacent municipality required/provided
- ☐ FHWA review required/provided for interstate projects
- ☐ Report contains a cover page, table of contents, and body
- ☐ Report contains all applicable sections
- ☐ Report appendices marked and tabbed
- ☐ Central Office and/or FHWA approval required/provided for median break/POA studies
- ☐ Municipal and Central Office approval of ATP
- ☐ Municipal Waste Facilities adhere to Pub. 46, Ch. 11 guidance and criteria

Executive Summary/Recommendations
- ☐ Project description
- ☐ Impacts of proposed development
- ☐ Proposed methods of mitigation
- ☐ Design waivers requested
- ☐ Parties responsible for improvements identified
- ☐ Details on the location, nature and extent of the proposed improvements
- ☐ Turn lane storage lengths, shifting taper lengths, and bay taper lengths identified
- ☐ All improvements to be ADA-compliant noted
- ☐ Driveway classification identified for each driveway serving the development
- ☐ Studies / construction projects which may affect the design are identified, if applicable

Introduction/Project Summary
- ☐ Description of analysis and assumptions
- ☐ Legible study area map
- ☐ Description of study area (indicate roadway intersections) and boundaries
- ☐ Legible site plan (1:50 scale min.) with lot size, building size(s) and types provided
- ☐ Discussion and/or illustration of the site layout
- ☐ Site plan reflects all of the latest findings of the study
- ☐ Description of project phasing

Data Collection
- ☐ Data collection methodology described
- ☐ Data collection consistent with Pub. 46, Ch. 10 parameters
- ☐ Raw count data provided in Appendix
- ☐ Count data less than 3 years old
- ☐ Recent construction project that may have impacted count data
- ☐ Counts conducted on an avg. weekday, on a non-holiday week, while school was in session
- ☐ RTOR volumes included in right-turn volumes
- ☐ Additional peak hour counts (AM, Midday, PM, Sat, Sun) required
- ☐ 24-hour ATR counts include volume, class, and speed
- ☐ Counts include heavy vehicles, pedestrians, bicycles and transit vehicles (if present)
- ☐ Counts include walking school children and school bus stops where applicable
- ☐ Peak hour factors calculated consistent with Pub. 46, Ch. 10
- ☐ Volume balancing necessary
- ☐ Pedestrian activity/accommodations recorded and reflected in the study
- ☐ Midblock pedestrian crossing data required/provided
- ☐ Bicyclists riding on sidewalk documented/addressed

Policies and Procedures *F-2*
Transportation Impact Guidelines

TIS Guidelines – ATPs

- Not always feasible or desirable to modify intersections to mitigate LOS drops
- Alternative Transportation Plan should be used
- Identify other areas in transportation network that could benefit
- Cost should be similar
- Follow steps and guidance in TIS Guidelines

TIS Guidelines – Convenience Stores

- Trip Generation
  - Weekday: Gasoline/Service Station w/ Convenience Market (LU 945) – fueling positions
  - Weekday/Saturday peak: Convenience Market w/ Gasoline Pumps (LU 853) – user greater of 1,000 sq. ft. and fueling positions
- Pass-by Trips
  - Weekday: Use average LU 853
  - Saturday: Use 10% less than LU 853
- Driveway Design
  - Identify classification (low, medium, high)
  - Justify any criterion not met such as throat length
- Access Management
  - Evaluate restricting movements
  - Minimize number of access points

Drainage Guides

APPENDIX B

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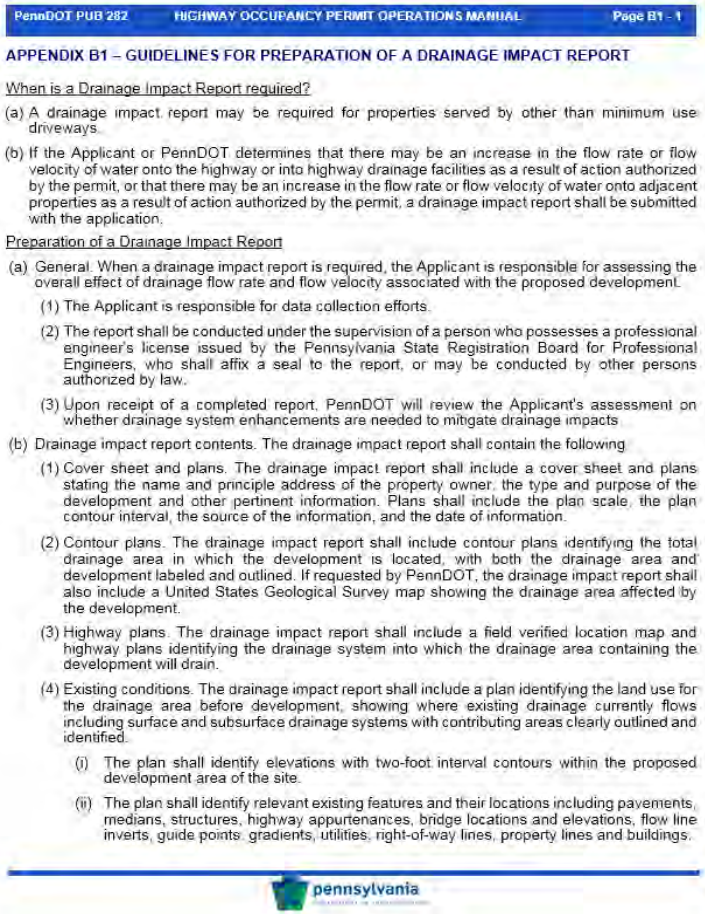
Appendix B1 – Drainage Impact Report



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APPENDIX B1 – GUIDELINES FOR PREPARATION OF A DRAINAGE IMPACT REPORT

When is a Drainage Impact Report required?

(a) A drainage impact report may be required for properties served by other than minimum use driveways.

(b) If the Applicant or PennDOT determines that there may be an increase in the flow rate or flow velocity of water onto the highway or into highway drainage facilities as a result of action authorized by the permit, or that there may be an increase in the flow rate or flow velocity of water onto adjacent properties as a result of action authorized by the permit, a drainage impact report shall be submitted with the application.

Preparation of a Drainage Impact Report

(a) General. When a drainage impact report is required, the Applicant is responsible for assessing the overall effect of drainage flow rate and flow velocity associated with the proposed development.

(1) The Applicant is responsible for data collection efforts.

(2) The report shall be conducted under the supervision of a person who possesses a professional engineer's license issued by the Pennsylvania State Registration Board for Professional Engineers, who shall affix a seal to the report, or may be conducted by other persons authorized by law.

(3) Upon receipt of a completed report, PennDOT will review the Applicant's assessment on whether drainage system enhancements are needed to mitigate drainage impacts.

(b) Drainage impact report contents. The drainage impact report shall contain the following.

(1) Cover sheet and plans. The drainage impact report shall include a cover sheet and plans stating the name and principle address of the property owner, the type and purpose of the development and other pertinent information. Plans shall include the plan scale, the plan contour interval, the source of the information, and the date of information.

(2) Contour plans. The drainage impact report shall include contour plans identifying the total drainage area in which the development is located, with both the drainage area and development labeled and outlined. If requested by PennDOT, the drainage impact report shall also include a United States Geological Survey map showing the drainage area affected by the development.

(3) Highway plans. The drainage impact report shall include a field verified location map and highway plans identifying the drainage system into which the drainage area containing the development will drain.

(4) Existing conditions. The drainage impact report shall include a plan identifying the land use for the drainage area before development, showing where existing drainage currently flows including surface and subsurface drainage systems with contributing areas clearly outlined and identified.

(i) The plan shall identify elevations with two-foot interval contours within the proposed development area of the site.

(ii) The plan shall identify relevant existing features and their locations including pavements, medians, structures, highway appurtenances, bridge locations and elevations, flow line inverts, guide points, gradients, utilities, right-of-way lines, property lines and buildings.

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- When is a Drainage Impact Report required?
- How to prepare the report
  - Identify impacts and mitigations
  - Recommended remedies
  - Storm Water Management Act
    - Adhere to storm water management plan in area

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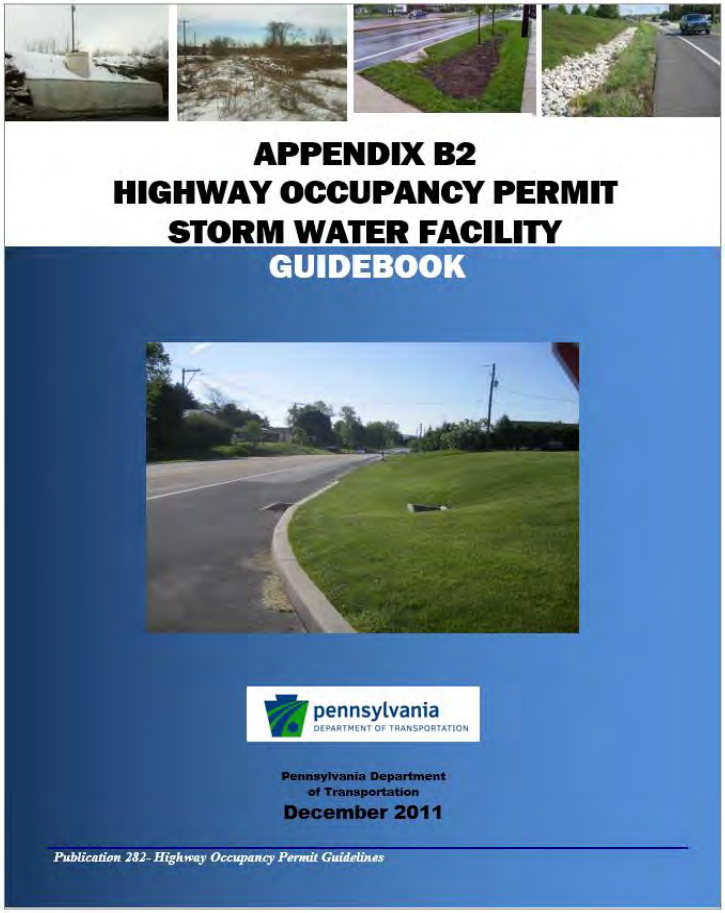
Appendix B2 – Storm Water Facility Guidebook



- In previous SOL
- Identifies storm water facility categories and gives examples
- Identifies alternative storm water designs to avoid HOP
- Co-applicant agreements

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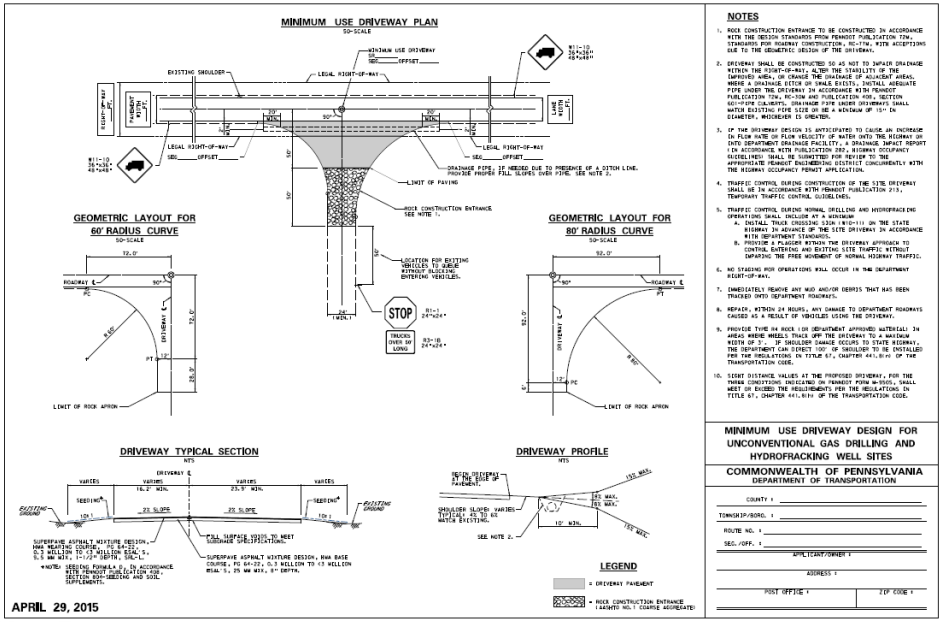
Other HOP Reference Materials

APPENDIX C

HOP Reference Materials



- HOP Application checklist
- General Permit Notes
- Outline of Right-of-Way Acquisition Procedures
- Minimum Use Driveway Design for Unconventional Gas Drilling and Hydrofracking Well Sites
- Sample ACORD Form
- Signature Authority Guide (Right-Of-Way Manual, Appendix F)

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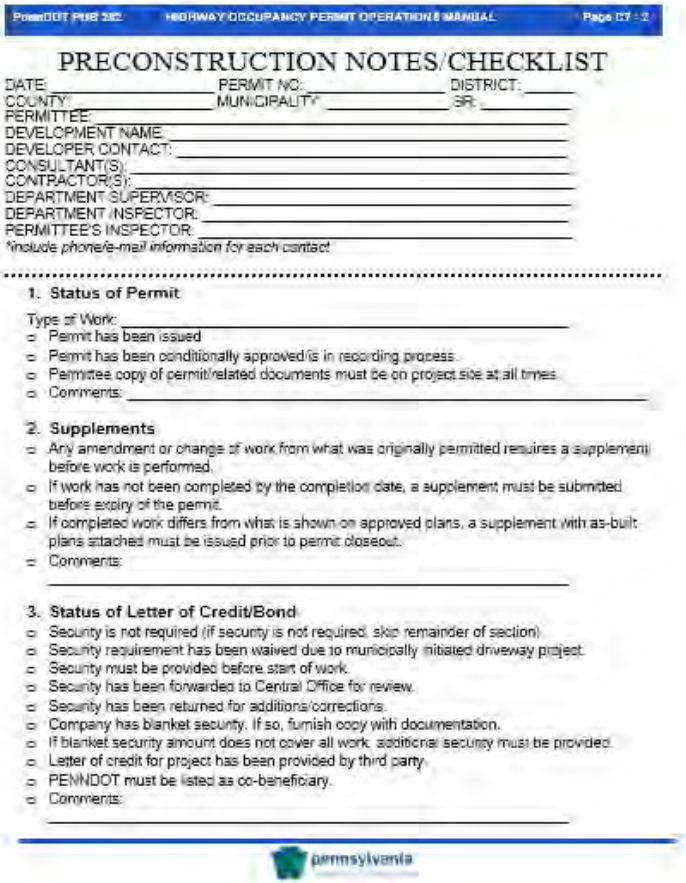
HOP Reference Materials



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PRECONSTRUCTION NOTES/CHECKLIST

DATE: _____ PERMIT NO: _____ DISTRICT: _____
COUNTY: _____ MUNICIPALITY: _____ SR: _____
PERMITTEE: _____
DEVELOPMENT NAME: _____
DEVELOPER CONTACT: _____
CONSULTANT(S): _____
CONTRACTOR(S): _____
DEPARTMENT SUPERVISOR: _____
DEPARTMENT INSPECTOR: _____
PERMITTEE'S INSPECTOR: _____
Include phone/e-mail information for each contact

1. Status of Permit

Type of Work: _____
- ☐ Permit has been issued
- ☐ Permit has been conditionally approved/is in recording process
- ☐ Permittee copy of permit/related documents must be on project site at all times
- ☐ Comments: _____

2. Supplements
- ☐ Any amendment or change of work from what was originally permitted requires a supplement before work is performed.
- ☐ If work has not been completed by the completion date, a supplement must be submitted before expiry of the permit.
- ☐ If completed work differs from what is shown on approved plans, a supplement with as-built plans attached must be issued prior to permit closeout.
- ☐ Comments: _____

3. Status of Letter of Credit/Bond
- ☐ Security is not required (if security is not required, skip remainder of section)
- ☐ Security requirement has been waived due to municipally initiated driveway project.
- ☐ Security must be provided before start of work.
- ☐ Security has been forwarded to Central Office for review.
- ☐ Security has been returned for additions/corrections.
- ☐ Company has blanket security. If so, furnish copy with documentation.
- ☐ If blanket security amount does not cover all work, additional security must be provided.
- ☐ Letter of credit for project has been provided by third party.
- ☐ PENNDOT must be listed as co-beneficiary.
- ☐ Comments: _____

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- Outlines all steps to go through before construction can begin
- Ensures materials are properly required and to spec
- OSHA requirements are met
- Minimizes omissions and any reconstruction required on closeout

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Internal PennDOT Policies, Procedures & Documents (Pub 170)

APPENDIX D

Internal Guidance

- Records retention policy
- Sanction guidelines for violators of a permit of law
- Checklist for limited access right-of-way
- Condition statements
- Administrative law and procedure
- HOP related court cases and precedent setting rulings

Interagency Guidance

APPENDIX E

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Interagency Guidance

- Identifies agreements between state agencies
- Are used to develop the policies that PennDOT follows related to HOPs
- Current documents:
  - Joint agency guidance for projects performed by entities other than PennDOT on property under PennDOT's jurisdiction
  - MOU between PHMC and PennDOT – Consultation on state-funded transportation projects in Pennsylvania

Acronyms and Abbreviations

APPENDIX F

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Approved Provisional Technologies

APPENDIX G

Approved Provisional Technologies

- Meant to be a clearinghouse for new methods and products
- Uses an appendix so entre manual does not need to be updated
- Current approved products in the appendix:
  - Flowable Backfill
  - Fiber Wrap
  - Core Bore/Vacuum/Flowable Backfill Process

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QUESTIONS?