

# Purpose and Need Statement

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## What Is It?

The Purpose and Need (P&N) statement explains why MnDOT is undertaking the proposed action and what its objectives are. The “Need” identifies transportation deficiencies or problems (e.g., congestion, safety, deteriorating physical condition of the transportation facility, etc.) that need to be addressed. The “Purpose” is a broad statement of the primary intended transportation result (e.g., improve mobility, improve bridge condition) and other related objectives to be achieved by a proposed transportation improvement.

The P&N statement provides the basis for developing criteria for comparative evaluation of alternatives, developing a range of alternatives, and selecting the preferred alternative. It limits the range of alternatives which may be considered reasonable, prudent and practicable (feasible), consistent with environmental process requirements (e.g., NEPA, Section 4(f), Section 106, and wetland permitting).

Some projects also identify [goals](#) beyond solving the identified transportation problems (needs). Such goals are NOT part of the P&N statement, but would be presented in the environmental document as part of the alternatives development process and used as secondary screening for alternatives that do meet the P&N.

Note that the P&N statement may evolve as new information is obtained during the project development process, including input from project stakeholders. The P&N statement should be re-examined and updated, as appropriate, throughout the project development process.

## How Is It Developed?

MnDOT continually assesses the condition and performance (mobility/safety) of the assets for

which it is responsible (e.g., highways, bridges, pedestrian/bicycle facilities, and other related infrastructure). This assessment involves technical evaluations and stakeholder engagement. Projects are developed to address problems (existing and/or forecast) that these studies identify. The P&N statement compiles and organizes the study/assessment findings into a clear and substantiated explanation of the problem(s) that the proposed action is intended to address.

MnDOT's project scoping process includes identification of needs; these are documented in the scoping report. (See <http://www.dot.state.mn.us/pm/processes.html> for information on MnDOT project scoping.) The scoping process might distinguish between primary and secondary needs with the information in hand at the time. To complete the P&N statement for the NEPA document, the content from the scoping report P&N description may need revisions for readability, organizing primary vs. secondary needs, and/or additional technical analysis to address dated information, changed project setting, or gaps in the previous analysis. See ["Crafting a Purpose and Need Statement"](#).

## Writing Guidance

Here are the features of a good Purpose and Need (P&N) statement:

- The P&N statement does not confuse Need (identified problems) with Purpose (desired outcomes). (See more detail about the Need section and the Purpose section below.)
- The P&N statement is not so narrow as to limit reasonable solution alternatives or so vague as to provide no framework for decision-making.
- The P&N statement is clear, written in a straightforward, to-the-point and well-organized manner (visuals are very helpful).
  - It is able to be understood by a reader who is unfamiliar with the project area or its problems.
  - It is audience-appropriate. Explain technical content in lay terms if the document is for public review [EA or EIS] vs. a CE which typically is not.
- The P&N statement sets the stage for developing and evaluating alternatives.
  - During project development, alternatives are developed and evaluated first on the basis of how they well they address the Need and achieve the Purpose stated in the P&N statement.
  - In the NEPA document itself, the P&N statement clearly connects to the subsequent Build

alternative(s) description, such that it is easy for the reader to see that the proposed improvements will meet the Need (address the identified problems) and the Purpose (achieve the desired outcomes).

- If a proposed need cannot transition into an objective measure (evaluation criterion) to characterize how well a given alternative meets a need, it is probably not viable as a need.
- The P&N statement is concise.
  - Consider including detailed analysis in an appendix. This approach is sometimes referred to as a “two-part Purpose and Need statement” and is particularly appropriate for complex projects with a high level of public interest. One part of the two-part P&N statement is a concise, reader-friendly summary for the main body of the environmental document. The second detailed part is typically accomplished in a tech memo format.
  - On projects where a two-part P&N statement is appropriate, both parts are submitted to OES and FHWA for review as a single package. Any other designated lead agency for the project would likewise receive the detailed analysis.
- The **Need** section states problem(s), not solution(s), “lacking” features, or design standards to be met. Examples:

<b>YES</b> (problem statement)	<b>NO</b> (solution or “lacking” feature statement)
<i>The roadway will not reasonably accommodate the 20-year traffic forecast under the No Build condition.</i>	<i>The roadway needs to be expanded to a four-lane freeway.</i>
<i>The bridge has substantial condition issues.</i>	<i>The bridge needs to be replaced.</i>
<i>The existing intersection operates at level of service F for 10 hours a day.</i>	<i>An interchange needs to be constructed at this location.</i>
<i>There is a high rate of crashes at conflict points (driveways and field accesses) along the roadway.</i>	<i>The roadway lacks access control.</i>

- The **Need** section presents persuasive data-based information that substantiates each of the stated problem(s). (Figures, photos and other visuals are helpful.)
- The **Need** section focuses on important information; does not include “the kitchen sink” in an attempt to substantiate need.
- The **Need** section differentiates between Primary Need(s) and Secondary Need(s).
  - Primary Need(s) are the problems that are the real reason(s) the project is being

proposed.

- Secondary Needs are other opportunities for improvement that may be able to be addressed as part of the project. Not all projects have secondary need(s).
- Note: If a project only has one need, it is not necessary to designate that need as primary vs secondary.
- The **Need** section differentiates between Need(s) and Additional Considerations.
  - Needs are problems to be fixed.
  - Additional Considerations are other important factors influencing project decisions. Not all projects have additional considerations worth calling out in the P&N statement.
- The **Purpose** section is normally brief.
- The **Purpose** section states the desired outcome of the project.
- The **Purpose** section is logical in relation to the Need section.

## Sample Structure of a P&N Statement

### Background

A short discussion of the context for the project, including location, background on the existing facility and its role in the transportation system.

### Need

A persuasive description of the problems or unsatisfactory conditions that currently exist or are reasonably expected with the existing facility or project area. (Most common need types are listed further below.) Focus first on the primary need(s), then secondary need(s), if any, and finally, important additional considerations, if any.

#### Primary Needs

The primary needs section discusses the primary transportation problem(s) to be solved, i.e., the real/main problem(s) that led to initiation of the project. In other words, what is the main reason we have an undertaking? Most projects will have one primary need (e.g., bridge condition, vehicle mobility).

## Secondary Needs

The discussion of secondary needs describes other transportation problems or opportunities for improvements within the project study area that may be able to be addressed, if feasible, at the same time that the primary needs are addressed. Examples of such improvements include improved geometrics, and ADA upgrades. **Not all projects have secondary needs. The Need statement does not need to have more than a primary need if that is all there is.**

## Substantiating Data

Each need (primary or secondary) should be persuasively substantiated through specific quantitative investigation/data. See below for types of data that support typical needs. Use visuals in lieu of or to complement text. (To be concise, include supporting data may be included in an appendix.) Contact OES for advice as to how to best substantiate the problem in situations where it appears that the problem needs to be described qualitatively.

## Additional Considerations

Describe other desirable project elements or effects that are not central to the purpose and need, but are nonetheless important considerations to the selection of the preferred alternative (e.g., environmental protection, scenic improvements, economic considerations, etc.). These considerations should be discussed separately from the project Needs.

This section should not be a laundry list of all potential social, economic and environmental (SEE) impacts. Situations with a rare natural feature (e.g., calcareous fen) or high occurrence of Section 4(f) resources (e.g., known high quality intact historic district, National Historic Landmark) that will likely be the “big players” in alternative development and analysis may be listed. **Not every project will have an Additional Considerations section.**

## Purpose

A very clear, concise description of the primary goals the project is expected to attain (usually no more than one or two sentences); a “big picture” of the desired results (e.g., the purpose is to improve safety along a highway segment that has a high crash rate). The Purpose should be based on (and, therefore, written after) the Needs have been defined.

## Most Common Need Types and Their Use

Most projects on the federal-aid system will have needs that fit under one of eight “need type” headers. To promote consistency among NEPA documents, these headers are to be used unless, after consultation, MnDOT OES and/or FHWA, as appropriate, agree with an additional header(s). While this is not an exhaustive list, additional headers are anticipated to be outliers in the federal-aid highway program.

These common need types and supporting data:

- tell the reader the context of the transportation problem(s)
- facilitate the development of objective performance-based criteria for alternatives evaluation
- support application of performance-based practical design principles to alternative development and evaluation by substantiating the needs in terms of performance as much as practicable

Shown below are examples of when these common need type headers would be used and typical support data. **The same header can be used under both Primary and Secondary Needs if the situation warrants (e.g., a project area may have some *primary* vehicle mobility needs and some *secondary* vehicle mobility needs).**

### 1. Bridge Condition

- **Best examples of use:** Any superstructure or substructure condition issues including, but not limited to: deck condition, scour issues, paint quality, pier/abutment rotation, concrete spalling, low NBI rating
- **Typical support data:**
  - **NEW!** [Bridge Condition Needs Template](#)
  - National Bridge Inventory (NBI) rating
  - Key findings of structural report (bridge inspection reports)
  - Load restrictions
  - Historic bridge management plans
  - Abutment/pier stability (e.g., rotating: active vs stable)

### 2. Pavement Condition

- **Best examples of use:** Joint condition, end of service life
- **Typical support data:**
  - Pavement surface rating (PSR)
  - International roughness index (IRI)

- remaining service life
- pavement condition reports

### 3. **Infrastructure Condition (*Item, e.g. Rest Area, Noise Barriers, Culverts, Signs*)**

- **Best examples of use:** Infrastructure, other than bridges, pavement or pedestrian/bicycle facilities that have condition issues. If the structure has a bridge number, use the bridge condition header.
- **Typical support data:**
  - Rest area facility condition index (FCI) and factors supporting the FCI
  - Noise barrier health index and/or condition rating
  - Culvert inventory rating and condition/performance issues from latest inspection reports
  - Sign retroreflectivity lost/diminished
  - Other asset management data

### 4. **Vehicle Safety**

- **Best examples of use:**
  - Facilities experiencing documented, substantial, ongoing crash issues
  - Note:
    - Avoid using for unsubstantiated situations, perceived “safety” issues, operational characteristics that are indicators of a potential safety issue in the future, or a condition that is simply not to current geometric standards. There are other headers more suited to these situations: e.g., vehicle mobility, geometric deficiencies or systemic risk location. Contact OES for assistance in these cases.
- **Typical support data:**
  - Number and location of crashes
  - Types and severity of crashes
  - Critical crash rates higher than statewide critical crash rates for similar facilities. **Per MnDOT Traffic Engineering Manual (TEM) Chapter 11 and FHWA MN Division policies, critical crash rates (rather than simple crash rates) should be used to assess the relative safety of a location.**
  - An identified Sustained High-Crash Location (SHCL) in a MnDOT District Safety Plan or LPA safety plan that uses same methodology and thresholds.<sup>1</sup> .

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<sup>1</sup> If project setting has changed (e.g. intersection or geometric changes) since last Safety Plan update, analysis to demonstrate that previous SHCL still exists or that a SHCL does now exist. Address in tech memo with purpose and need statement as a summary.

- Visual displays of crashes are very helpful

## 5. Vehicle Mobility

- **Best examples of use:** Facilities where, under Existing or future No-Building conditions, vehicles (including transit and freight, as appropriate) experience:
  - Congestion (delay)
  - Capacity deficiencies
  - Poor operations
  - Poor travel time reliability
  - Poor access
  - Poor connectivity
  - Problems with maintenance of traffic (MOT) during construction
  - Notes:
    - Avoid citing “economic development” as the need – rather translate the issue into a transportation need, e.g., there is inadequate roadway capacity and/or capabilities of the existing access configuration to accommodate planned economic development.
    - Break out freight and/or transit as sub-headers where appropriate on a project-by-project basis.
- **Typical support data:**
  - Level of service
  - Volume/capacity ratio
  - Queue lengths
  - Hours of delay
  - Travel time, average speed
  - Travel time index
  - Truck Travel Time Reliability (TTTR) Ratio
  - Deficiencies in relation to established performance targets
  - Freight movement issues causing back-ups
  - Description/depiction of connectivity and/or access gaps and resulting problems; relate to planned functional classification network and/or land use/community development
  - Description/depiction of property access problems

## 6. Walkability/Bikeability

- **Best examples of use:** Locations where:
  - There is a documented, ongoing crash problem with bicyclists or pedestrians
  - Bicyclists or pedestrians have difficulty crossing roadways
  - Bicyclists or pedestrians experience low multi-modal level of service (MMLOS; see Highway Capacity Manual)
  - Bicyclists or pedestrians do not have reasonable connections between destinations, facilities or modes
  - A systemic risk location has not been identified but a walkability/bikeability hazard or other problem has been identified
- **Typical support data:**
  - Description of the problem
  - Description of pedestrian/bicycle generators, activity
  - Crash information, if applicable
  - Calculated current or projected MMLOS
  - Description of
    - pedestrian/bicycle destinations
    - level of pedestrian/bicycle activity, demand
    - gaps in the pedestrian/bicycle network (focus on problems the gaps cause, not the gap itself)
  - Visuals very helpful

## 7. Geometric Deficiencies

**Project needs should be based on specific performance measures identified by the agency and past performance of the roads within the project area. Per MnDOT and FHWA MN Division policy, noncompliance with geometric design criteria is not, by itself, a performance issue on an existing road. Noncompliance with geometric design criteria is a need only if it has resulted in (or is forecast to result in) poor performance that is correctable by a geometric design improvement.**

The best way to objectively demonstrate the safety benefit of improving a geometric element is through the Highway Safety Manual's (HSM) predictive models. These models should be used to understand the magnitude of safety benefit from changing the geometric design.

Note that if there is existing substantial documented ongoing crash problem (under Items 4 or 6), geometric design may be a contributing factor and should be investigated as part

of the analysis to address the safety need of the project.

For more information, refer to [Technical Memorandum 18-02-TS-01](#), Performance-Based Practical Design Guidelines, particularly the Section on “Project Purpose, Need, and Problems” on pages 7-8 for MnDOT TH projects. Aspects of design [flexibilities in State-Aid Road Design Standards](#) for non-TH projects going through MnDOT SALT are covered by the latest version of Minnesota State-Aid for Local Transportation Operations [Chapter 8820](#).

Note: In the age of performance-based practical design, a geometric deficiency is viewed as an opportunity; typically a secondary need.

- **Best examples of use:**
  - Locations with non-standard design elements but not a crash problem that would trigger a safety need under Items 4 or 6. And where Highway Safety Manual analysis indicates that improving the geometric design would result in substantial safety improvement.
  - Locations where non-standard design elements result in a unique on-going operational problem that does not fit well under any of the other common need categories (e.g. unable to inspect bridge with snoop truck).
- **Typical support data:**
  - Identify the gap(s) (e.g., shoulder width, sight distance) between the design of existing facility and the current design standard and indicate that HSM analysis shows potential for measurable benefit
  - Show where the deficiencies are located and explain the nature of the unique on-going operational problem caused by the deficiency

## 8. Systemic Safety Risk Location

A systemic safety risk location is a system opportunity (not an existing problem) that is based upon analyzing a confluence of geometric and operational characteristics. This analysis translates into a risk rating. MnDOT Districts and some counties have completed safety plans that identify and prioritize systemic risk locations.

Systemic risk is different from geometric deficiencies. A geometric deficiency is simply something that does not meet current design standards. A systemic risk location, regardless of whether current design standards are met, is based upon a standardized risk analysis as used in MnDOT district safety plans.

- **Only examples of use:**
  - Systemic risk locations identified in a MnDOT District Safety Plan or a County safety plan that uses the MnDOT safety plan methodology
  - A site identified as a systemic risk location using the same methodology utilized in MnDOT District Safety Plans
- **Typical support data:**
  - If from a Safety Plan, a brief summary of the systemic risk analysis that led to the location's identification in the safety plan<sup>2</sup>
  - If not from a Safety Plan, brief summary of a tech memo that presents a systemic risk analysis of the site using the MnDOT District Safety Plan methodology
  - For locations with rail crossing considerations:
    - If a priority from a roadway system analysis (using the [MnDOT Rail Grade Crossing Safety Report](#) methodology), brief summary of the system risk analysis that led to the crossing being prioritized
    - If no roadway system analysis has been done, brief summary of a tech memo that presents a system risk analysis of the crossing using the MnDOT Rail Grade Crossing Safety Report methodology

## Example Need Text and Visuals

### Need Text

- [Bridge Condition](#)
- [Pavement Condition](#)
- [Infrastructure Condition](#)
- [Vehicle Safety](#)
- [Vehicle Mobility](#)
- [Walkability/Bikeability](#)
- Geometric Deficiencies [To Be Added]
- [Systemic Risk Location](#)

### Additional Examples of Visuals

- [MnCMAT Crash Data with Stacks](#)
- [Change in Traffic Demand](#)
- [Freeway LOS](#)

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<sup>2</sup> If project setting has materially changed (e.g. changed geometrics or intersection configuration) since last Safety Plan update, analysis to demonstrate that previous systemic safety risk location still exists. Address in tech memo with purpose and need statement as a summary.

- [Intersection LOS](#)
- [Peak Hour Traffic Queue Lengths](#)
- [Flood Risk](#)