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Note: SHAPES will be replacing the Highway Access Management System (HAMS). ★*All policies and guidance referencing SHAPES in this document will be active upon implementation, which is projected to be January 2027. Until then, staff should continue using HAMS as applicable.*★

1.0 General Policy

WisDOT provides official forms to document STH connections and related information. The Bureau of Highway Maintenance is responsible for form development and revisions with input from WisDOT staff. The Division of Business Management, Bureau of Business Services, Facility & Business Services Unit, approves revisions to all forms that are in SHAPES.[1] Customers may also download applicable forms from WisDOT's website and fill them out by hand. A person shall sign a form electronically or a paper copy in ink.

Only use approved and current form versions. Do not modify forms. Alteration of any form by an applicant is prohibited and may be grounds for permit denial. A STH connection permit that has been approved on a form altered by an applicant may be grounds for permit revocation.

Under Wis. Stat. § 137.11(8), any type of, *"symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record"* constitutes a valid e-signature. Under Wis. Stat. § 137.25(1), an e-signature may be used to submit electronic records to WisDOT. A person who types their name as a signature or uses an e-sign program/software (e.g., SHAPES) has validly signed an application.

2.0 Forms Description and Use

The use of WisDOT's forms depends on the circumstances for each connection and is described in this section along with its particular use.

2.1 DT1504 State Trunk Highway Connection Application

WisDOT's standard form, DT1504 *State Trunk Highway Connection Application*, documents the scope of work in conjunction with a STH connection. Customers may reference it as a driveway permit form. Use form DT1504 when a customer[2] needs a permit (permanent or temporary) to:

1. Construct a new:
   a. Connection whether or not the property has existing STH or local access
   b. Connection that includes removing an existing connection *with* (legal) or *without* (nonconforming or illegal) a valid WisDOT permit[3]
      i. This involves the issuance of *two permits*: (1) Removing the existing connection, and (2) Constructing the new one[4]
   c. Public road that connects to a STH
   d. Recreational trail that will run parallel with and/or cross a STH
   e. Connection for police, fire, or EMS (emergency)use only
2. Alter an existing WisDOT-permitted connection (e.g., widen, pave, increase culvert size, change the use[5])
3. Remove an existing legal, authorized, nonconforming, or illegal connection
4. Allow (permit) an existing unpermitted connection. An unpermitted–illegal connection may also be able to be permitted. 09-10-30, 5.4

For *each* STH connection, use *one* permit application form. The exception to this is for shared connections. When shared connections are approved, each property owner is issued a permit with its own number. In addition, use form DT1504 to document an authorized access point, which was approved by WisDOT under a previous Wis. Stat. § 84.25 project. This replaces form DT2234, which has been discontinued.

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1 SHAPES is the State Highway Access and Permitting Electronic System, which handles STH connection permits, unpermitted-nonconforming connections, and various access management actions. See note on page 2 for SHAPES implementation details.

2 Customer must own, have an interest in, or have a permanent easement across property abutting a STH.

3 In (b), the previous DT1504 form labeled this type of connection activity as "relocate existing."

4 Used to track connection locations and permits in SHAPES when implemented. Customer only needs to fill out one permit application form for "construct new." SHAPES will generate the other form with "remove existing."

5 "Change the use", means any modification that results in a change in the number or types of vehicles using a connection between private property and the roadway. This often results from a property use change when a single residence is replaced with multiple residential use or commercial use, property is subdivided to accommodate additional residences or businesses, or the type of business conducted on a property changes from a business that attracts a modest number of vehicles to one that attracts a large number of vehicles, e.g., a typical farm operation hosting tourist or wedding activities, or a small office being converted into a fast food restaurant with a drive-up.

2.2 DT1812 Work on Highway Right-of-Way Permit Application

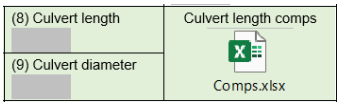
Use form DT1812 for trails built over or under a STH but not physically connecting to it. Interstate crossings may also require airspace rights agreements. **Do not use** form DT1812 for **any** STH *connection* activity including to pave, widen, replace a culvert, etc. Use form DT1504 instead. Upload previously issued DT1812 permits for new driveways and driveway improvements to SHAPES to provide a complete record for those connections.

2.3 DT2231 Record of Unpermitted-Nonconforming Connection (ROUNC) to State Trunk Highway

There are two situations in which form DT2231 is used: (1) A customer needs to do some work on their unpermitted-nonconforming connection and applies using form DT1504. If the connection will remain in its existing status, issue a DT1504 work permit but not a connection permit. Instead, issue a ROUNC as the final record. The customer does not have to fill out a separate DT2231 form. Most of its form fields will be autofilled from the DT1504 form in SHAPES. Fill-in any missing fields before electronically signing the form. (2) To provide a property owner with proof that WisDOT acknowledges a connection exists between the property and a STH if the owner needs such proof for an upcoming property sale, obtaining a mortgage, or the owner's files.

In both situations, form DT2231 does not give the owner any rights or rights of access, **nor is it a permit**. It provides the reasons why the connection is nonconforming, what activities the owner can and cannot do to the connection, and when WisDOT's approval is needed for the "can do" activities. The ROUNC also documents the connection in SHAPES. A guide for when to issue a ROUNC is in 09-10-30, (4.1) #11.

2.4 DT1247 STH Connection Design Checklist



Use form DT1247[6] to document design details for a typical STH connection especially when a field review is required for an application. This includes:

1. Connection width, return radii, and ROW width from the centerline
2. Culvert (if necessary) size, length, material, end treatment and distance from edge of traveled way or paved shoulder. The form contains a spreadsheet that will calculate the culvert length given certain parameters.
3. Intersection sight distance in each direction
4. Surface material/thickness, side-slope, etc.

Other items not captured on the form that may be documented include turn or bypass lane dimensions, grades, medians, signals, and locked gate designs.

2.5 DT1248 STH Connection Location Sketch

Form DT1248 may be used if SHAPES is not used to show an existing or proposed connection location in relation to other STH connections. If used, scan the form into SHAPES to maintain the original record.

3.0 DT1504 State Trunk Highway Connection Application Instruction

Direct customers to obtain a SHAPES account to apply for a STH Connection Permit or a Documented Authorized Access Point. A SHAPES account requires a customer to create a username and password then add their name, address, email address, and telephone number. It also requires a MyWisconsinID.

Using SHAPES, a customer fills out and submits the DT1504 application along with supporting documentation, which usually includes a copy of the property deed, title work, property surveys, etc. If a customer plans to alter, relocate, or remove a connection that has an existing WisDOT permit, they should submit a copy of the permit with their application. Use ***one*** DT1504 form for ***each*** connection activity Question 12 (3.5) to ensure proper records. See Table 1 for handling mailed applications. Instructions for filling out form DT1504 are available with form DT1504i. Guidance on how to handle specific DT1504 form questions follow this section.

Remind customers to contact their local government officials for ordinances and other permit requirements that may also apply.

Table 1: Submitting Form 1504 by Mail

WisDOT must accept form DT1504 by USPS mail, mail services, or in-person. The basic steps include:

1. Upon request, mail a customer two copies of form DT1504 if they cannot obtain one from a library, county highway department, etc. Include copies of Wis. Stat. § 86.07(2)(a) and Ch. Trans 231.
2. Customer completes and signs/dates both copies, sends one to the region office, and keeps one for their records.
3. In SHAPES, add customer information via 'Public Hub' then 'External Users.' Add a new permit then manually enter the DT1504 form data into SHAPES. Scan the copy and upload it to 'Attachments.'
4. Mail an unsigned SHAPES-generated copy of the form to the customer to sign in ink and return it to the region office.
5. Scan the signed copy and upload it to 'Attachments' to verify the application data.

[6] WisDOT uses form DT1247 to supplement form DT1504.

3.1 Questions 1/2: Applicant Name and Mailing Address / Property Owner Name and Mailing Address

Typically, the applicant is the property owner. However, Trans 231 allows for a person other than a property owner to apply for a connection permit. When this occurs, the person must prove that s/he has a *bona fide interest* in the property.[7] Below are some acceptable items of proof but it is not an all-inclusive list:

1. An ***accepted*** offer to purchase as a potential buyer
2. An easement across property abutting a STH, which is owned by a person for obtaining access to his/her property that is separated from the STH by the abutting property
3. Proof of ownership of a property's development rights
4. A legal document granting power of attorney, trustee, estate executor, etc.
5. Court order resulting from a lawsuit or other type of legal action
6. Utility company hardship (e.g., no other access available). Utility must prove hardship and document that it has an easement or other property interest.

For a public road, the applicant must be a unit of government. Use the address to return the application/permit to the applicant/owner if submitted by mail or for mailing certified letters.

3.2 Question 3: Authorized Representative Name and Mailing Address / Explain relationship to applicant

A real estate agent, attorney, friend, etc. may represent an applicant or property owner. The representative must check a box in the SHAPES applicant information tab to certify that status. If a paper application is submitted by a representative, obtain an email or letter from the applicant or property owner to certify the relationship.

3.3 Question 7: Side of the Highway

Use the actual direction for the side of the STH where the connection is located if the STH is running true or mostly true north/south (N/S) or east/west (E/W). If a N/S or E/W STH is running SW/NE or NW/SE, then use the cardinal direction to determine the side of the STH the connection is located.

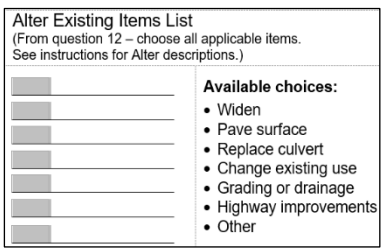
3.4 Question 10A: Name of Nearest Side Road from Location
Question 10B/C: Distance and Direction from the Side Road
Question 11: How far is the location from nearest non-side road connection on the same highway?

This information helps to pinpoint where a connection is located along a STH and determine if the connection is properly spaced from other existing connections or a permitted connection that has not been constructed yet. A side road must be a public road. Private roads are treated as driveways, which are non-side road connections. The applicant may use form DT1248 to depict location information.

3.5 Question 12: Proposed Activity

An activity is an action done in association with a connection. There are four activity types as describes below. **Only one box** shall be checked on the form.

- ***Construct New:*** to construct a new connection. This may include the removal of one or more connections. If removal is needed, or if relocating a connection, the applicant shall submit one form with ***Construct New*** checked. *SHAPES* will generate a corresponding form with ***Remove Existing*** checked for each connection that will be removed (**one** permit issued for **each** connection location).
- ***Remove Existing:*** to remove a legal, authorized, nonconforming, or illegal connection.
- ***Allow Existing:*** to obtain a valid WisDOT permit for an existing unpermitted connection whether altered or not, or to document an authorized access point previously approved under a Wis. Stat. § 84.25 project. May also be used when a new property owner desires a permit in his/her own name.
- ***Alter Existing:*** to physically modify, replace, or change the use of a permitted or authorized connection whose location will not change. This work includes surface paving, widening, replacing a culvert, grading or drainage, and making highway improvements (e.g., adding a turn lane). When this box is selected, applicants must also select at least one of the drop-down items on page two. Extra blanks are provided if more than one item will be done concurrently on the connection, e.g., widening, paving, and replacing its culvert. →



[7] Exception: local units of government applying for road, street, and trail connections

For an ***existing connection***, verify its ***status*** and the confirm the proper connection activity before issuing a permit. 09-10-30, 3.1 See Table 2 for details.

Table 2: Using Proper Form DT1504 Activity vs. Existing Connection Status

Form DT1504 Connection Activity	Existing Connection Status								
	Permitted			Unpermitted			Authorized ✯		
	C	NC	IL	C	NC	IL	C	NC	IL
Construct New						1*			1*
Remove Existing	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3
Allow Existing**	2	4		2	4,5	1*	2	4	1*
Alter Existing	2	4	1	6	6,7		2	4	

SYMBOL KEY

= Not applicable

C = Conforming: meets today's standards

NC = Nonconforming: does not meet today's standards

IL = Illegal

✯ = Access authorized under a Wis. Stats. § 84.25 project

Comments Key

1) Use **only** when the reason(s) for the illegal connection can be eliminated or resolved. 09-10-30, 5.4
   * Use *Construct New* with evidence of recent construction or *Allow Existing* when no such evidence exists.
2) Standard process.
3) When relocating a connection or constructing a new connection that includes removing multiple connections, issue one permit for each connection. Select *Construct New* for the new connection location and *Remove Existing* for each connection that will be removed. Cross-reference *Construct New* permits with *Remove Existing* permits and vice-versa.
4) Attempt conversion to conforming first but may retain nonconforming status (exception to standards or policy) if necessary. 09-10-30, 4.1
5) If an exception to standards or policy is not granted, issue the property owner a DT2231.
6) Use *Allow Existing* when the proposed alteration(s) can be permitted.
7) If the connection will remain nonconforming, only issue a work permit and a *Record of Unpermitted–Nonconforming Connection to STH* (form DT2231). 09-10-30, 4.0.

** May also be used when a new property owner desires a permit in his/her name. Applies to each status except illegal.

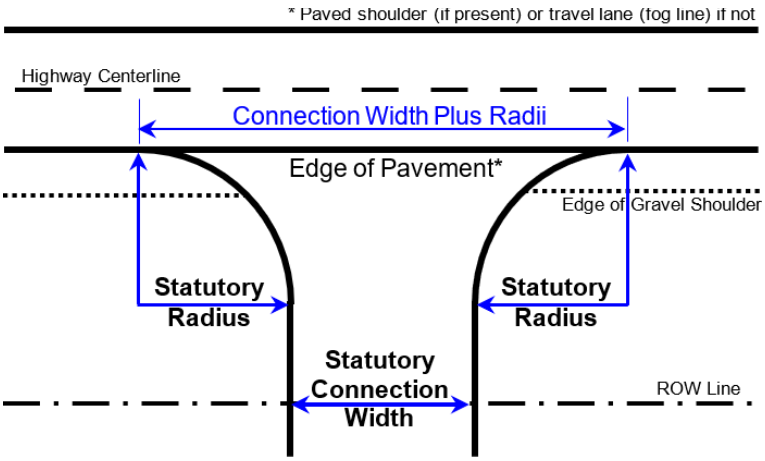
3.6 Question 13: Proposed Use

There are seven connection use types based upon Trans 231 and Wis. Stat. § 86.07(2)(a). 09-10-20, 2.0 It is critical to document the specific use for a connection since a change in use by a property owner may be grounds for permit revocation. Compare how this question is checked with the answers provided for questions 17 and 18 and resolve any discrepancies before issuing a permit. Only one box (that best defines the use) may be selected on form DT1504. Use definitions are:

- ***Commercial – rural (Trans 231.04):*** a retail, wholesale, industrial, ag-related, or non-profit business, or a residential facility with more than four units (apartments, hotels, etc.), next to a rural-type highway.
- ***Residential – rural (Trans 231.05):*** single and multiple family homes of 1-4 units (25 or fewer trips per day expected) next to a rural-type highway.
- ***Agricultural (Trans 231.05):*** a field for planting, maintaining, and/ or harvesting crops or tending livestock, or land for recreational and hunting us, next to a rural-type highway. This use may serve farm buildings but not residential buildings.
- ***Trail or trail crossing:*** a bicycle, pedestrian, equestrian, ATV, or snowmobile trail that runs parallel to and/or crosses a STH. If this box is selected, enter a trail description using the drop-down box that follows.
- ***Commercial – urban (Trans 231.06):*** a retail, wholesale, industrial, ag-related, or non-profit business, or residential facility with more than four units (apartments, hotels, etc.), next to an urban-type highway.
- ***Residential – urban (Trans 231.07):*** single and multiple family homes of 1-4 units (25 or fewer trips per day expected) next to an urban-type highway.
- ***Public road:*** a road, street, highway, etc. that connects to a STH for public travel and use and is maintained by a local unit of government.

Urban means an urban-type highway cross-section, which typically has curb and gutter. *Rural* means a rural-type highway cross-section, which typically has ditches. Details for verifying rural or urban are in 09-10-20, 2.1.

3.7 Question 14: Proposed Width



Connection Category	Statutory Width	Statutory Radius	Connection Width Plus Radii
Commercial – rural	35' max	40' max	115' max
Residential – rural	16' min – 24' max	30' max	76' min – 84' max
Agricultural	16' min – 24' max	30' max	76' min – 84' max
Commercial – urban	35' max	Determined by WisDOT*	
Residential – urban	24' max	10' max	44' max

* Based upon connection width, type of traffic, and any island areas

Widths for connection uses are specified in Trans 231 and as listed in the chart on the right. All widths are measured at the right-of-way (ROW) line. Widths exceeding maximum requirements shall only be allowed, "*...on specific approval of the Secretary"* under Trans 231.01(5). For urban-residential there is no minimum, but 12' is typical.

For a public road, there is no maximum width since that will vary with the amount and types of traffic designed for the connecting road. The minimum width of a public road should meet at least town road standards.

For a trail or trail crossing, ATV and snowmobile trail widths are usually 14' wide to allow machines to safely pass each other. There are no width requirements for bicycle, pedestrian, equestrian, multi-purpose, etc. trails, but it should be the smallest necessary to safely be accommodated either parallel and/or crossing a STH.

Depending on the traffic type and volume to use a commercial/industrial connection that is not a public road, sufficient width, bypass lanes and/or turn lanes may be warranted. Consider requiring a connection to use a type A1, A2, B1, B2, C, or D intersection or bypass lane configuration as found in WisDOT standard detail drawings 9A1 to maintain STH safety and capacity. Design criteria for these intersection types are in FDM 11-25-1.3, attachment 1.1. Additional design information for STH connections is in 09-10-10.

3.8 Question 15: Proposed Surface

This question only refers to the part of the connection within STH ROW. Applicants may choose from grass, gravel, asphalt, or concrete. For a connection that serves as an emergency access built with a grass paver system, grass should be selected as the surface and document the type of paver system used.

3.9 Question 16: Proposed Trips Per Day / Peak Hour Traffic Count

"Trips per day" is the vehicle count or annual average daily traffic (AADT) using the connection. One vehicle going in and out of a connection equals two trips. "Seasonal" means a connection that is only used a few times yearly, e.g., a driveway for hunting lands. Select the applicable category range, which may be determined using actual counts or estimated for new connections based upon the number of apartments, hotel rooms, customers, employees, etc. For any connection that will generate 100 or more trips in any hour, 50 or more trips exiting in one hour, or 750 trips in an average day, a peak hour traffic count is required. A traffic impact analysis should be used to obtain this data.

3.10 Question 17: Is the property zoned?

Whether a property is zoned or unzoned, the applicant must supply the proper documentation, which may be obtained from the local zoning administrator or clerk of the appropriate township, village, city, or county where the property is located. Typically, a statement from the authority on its letterhead is sufficient for documentation or use the WisDOT form in Figure 1 if needed. Compare this information with the answers for questions 13 and 18 and resolve any discrepancies, e.g., a person applies for a commercial/industrial connection for land that is zoned agricultural and is currently being used as agricultural/residential.

3.11 Question 18: Explain how the land is currently being used

This question is used to confirm that the existing land use if unzoned is similar to the connection use, or if the land is zoned, that the connection use matches the zoning. Compare this information with the answers for questions 13 and 17 and resolve any discrepancies, e.g., a person applies for a commercial/industrial connection for land that is unzoned but is currently being used as residential.

3.12 Question 19: Any plan to change the zoning or land use for the property?

This question alerts WisDOT about possible changes to a property, which may lead to a change in use for the connection. If the box is checked "yes," the applicant must provide a reasonable explanation such as, "construct new house" or "proposed development." Failure to provide this information may be grounds for permit revocation. Work with the applicant to determine the ultimate access needs for a property and develop the right connection type(s) that will balance the applicant's needs and STH operation and safety.

3.13 Question 20: Property...part of a land division or assemblage created on or after 2/1/99?

This question alerts WisDOT that a review may be needed under Trans 233,[8] which is the administrative code WisDOT uses to evaluate potential land division impacts on the STH system. If the question is marked "yes," then route the application to region office staff responsible for Trans 233 reviews to check for existing access restrictions on the property. Make sure to use the controlling document such as the subdivision plat, certified survey map (CSM), or deed.[9] Even if the question is marked "no," WisDOT should do a field review to confirm that the proposed STH connection is not for a potential subdivision. ***Do not issue any permit that would be contrary to the restrictions in place.***

3.14 Question 21: Own other property abutting the highway that is next to the property…?

This question also relates to a possible Trans 233 review but focuses more on the properties adjoining the property under application if they also abut a STH and are under the same ownership. In this situation, there is a possibility for development to occur with multiple STH connections due to lengthy frontage.

To safeguard STH safety and operability through the corridor, access restrictions may be needed on all properties via access covenants. 09-10-25, 3.0 In addition, WisDOT must consider access restrictions that may exist on the other properties, which may impact the property under application. This is covered in questions 24 and 25. ***Again, use the controlling document when reviewing access restrictions on adjoining properties.***

3.15 Question 22: Does the property abut other public roads?

This question is used to alert WisDOT that alternative access may be available on a side road rather than directly onto a STH. Applicants must provide the name of the abutting public road if applicable.

3.16 Question 23: Are there any existing connections to any road serving the property?

If the question is marked "yes," the applicant must provide the total number of connections currently serving the property. Even if the connection is no longer in use or has a valid permit but has not been constructed yet, it still must be included in the total count.

If a property already has existing access, WisDOT has the right to deny additional connections under Trans 231.03(2), which states, *"The number of [connections] permitted serving a single property frontage along a state trunk highway shall be the minimum deemed necessary by [WisDOT] for reasonable service to the property without undue impairment of safety, convenience, and utility of the highway."*

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[8] Trans 233 has always given the WisDOT the authority access restrictions on properties that are subdivided. Between 2/1/99 and 1/28/04, that authority extended to lands divided by CSMs, deeds or condo plats. A 2004 court ruling determined that WisDOT did not have the statutory authority to place access restrictions on land divisions other than subdivisions. However, WisDOT recognizes that property owners have been duly informed of the access restrictions imposed by WisDOT, and this notice is sufficient to continue to enforce those restrictions. However, owners may now appeal WisDOT's decision through the permit process.

[9] If a deed or CSM occurred on or after 2/1/99, start with the Region's Trans 233 files. SHAPES will eventually contain this information, but until it is fully populated it is important to check Region files.

3.17 Question 24: Any restrictions limiting the number, use or location of connections...? Question 25: (A) Are there any access easements across the property...? (B): Are there any easements or arrangements that allow the property to access a public road by crossing another property?

If a property has any existing access restrictions, WisDOT may not be able to approve a proposed connection or may only approve a certain type of connection. An access easement usually consists of a vehicular access right across a property. Access restrictions and/or access easements may be documented on a:

- Subdivision Plat
- Certified Survey Map
- Agreement
- Deed
- Plat
- Map
- Access covenant (recorded or unrecorded)
- Existing permit (WisDOT or non-WisDOT issued)

If these questions are marked "yes", thoroughly review all information submitted. If vehicles from adjoining properties may be able to use the proposed connection, properly analyze its design and STH operation/safety at the proposed location.

By contrast, an access easement may allow vehicles from the property under application to use an adjoining property for access, which may allow WisDOT to deny a permit if reasonable access is already available. If the adjacent property is fully restricted from STH access, a shared connection straddling the property line or forcing cross access to that property is *not* possible. Restrictions on the number, use, or location of a connection must be adhered to unless there are *compelling reasons*[10] for change.

3.18 Question 26: Provide all property tax identification numbers that will be using the connection

This information may be found on the property tax bill or a county (or city) land records web site.

3.19 Question 27: List the proposed work start and finish dates for construction of the connection

The work finish date is when the applicant has completed all connection construction and ROW restoration, which means that any disturbed ground has been seeded or sodded, mulched, and erosion control devices (if needed) remain operational until sustained growth has been achieved. Do not issue a connection permit or documentation of authorized access point until restoration has been completed to WisDOT's satisfaction.

The applicant provides both the work start and finish dates on the application form or checks the "Not Applicable" box if no work will be done. A work permit cannot be issued prior to the work start date. Check the work finish date to ensure that it is reasonable. The date should not be more than **one year** from the permit issuance date unless special circumstances are present, e.g., construction of a connection is being done in conjunction with a major commercial development that will take more than a year to finish.

3.20 Questions 28-32: Contractor Information

Have the applicant provide the contractor's contact information If they have hired one to do the permitted work.

3.21 Additional Form DT1504 Instructions

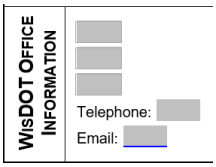
The following sections provide details for other items on form DT1504. They are not referenced with a question number since they do not have one on the form.

3.21.1 Tracking

In the upper right-hand corner of the form's first page, there is a blank for the *SHAPES* tracking number.[11] This is a unique number that *SHAPES* automatically generates and populates when an application is submitted. When an application is dismissed or a permit is denied, no *Identification Number* is issued. Instead, the tracking number serves in this capacity.

3.21.2 WisDOT Office Information

In the upper right-hand corner of the form's first page, there is a space labeled *WisDOT Office Information*. Insert the region office address along with the access coordinator's telephone number and email address.



[10] Example: Local government approves a change in zoning, an existing land-use plan, or redevelopment plan.

[11] Prior to SHAPES implementation, this was the HAMS ID number.

3.21.3 Latitude and Longitude (Completed by WisDOT)

This information is automatically populated in SHAPES when a pindot is placed on the electronic map either by the applicant or WisDOT.

3.21.4 Applicant Signature Block

Every permit application form submitted to WisDOT by a customer must have a signature. There are three ways for signatures to be valid:

1. In ink if on a paper form
2. Using a brush-script font if the form was downloaded and submitted as a Word version
3. Electronically, if the applicant created an account in SHAPES. Submitting the application will print a brush-script signature on the form when approved.

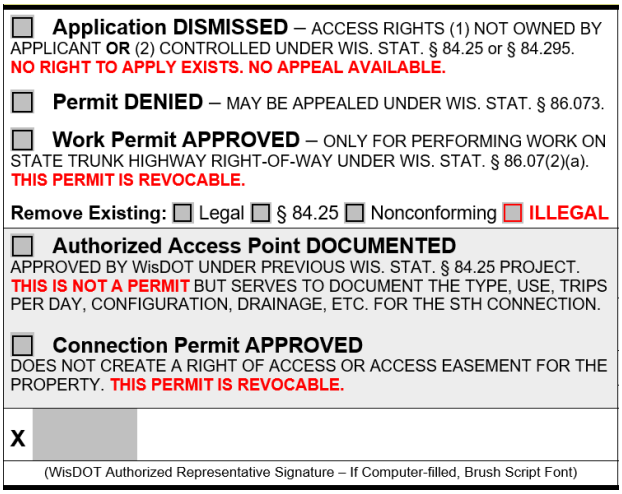
When accepting a paper form or electronic copy with a brush-script font signature, enter all DT1504 information into SHAPES. Once complete, send a SHAPES-generated copy to the applicant for review and a new signature. Upon receiving the new signed copy, scan it into SHAPES to maintain accurate records.

Next to the applicant's signature line, there are blanks for their telephone number and email address. One of the two should be filled out for WisDOT to contact a customer about his/her application. If a person does not want to give out an unlisted telephone number, it is acceptable to leave the space blank. The applicant must also include the date s/he signs the form.

3.21.5 Bottom of DT1504 – Page 1

The area under this banner provides WisDOT staff with a number of checkboxes and blanks to document the decision making process. Information for each half of the form is detailed in the next three sections.

3.21.5.1 DT1504 Decisions and WisDOT Signature Block



Select **Application DISMISSED** and return the entire permit application for a proposed STH Connection to the customer if a property has legal restrictions prohibiting STH access. In this situation, there is no right to appeal.

Select **Permit DENIED** if the proposed activity does not meet current law, policy, or standards, or if an exception to policy or standards cannot be approved. In this case, the applicant has a right to appeal WisDOT's decision under Wis. Stat. § 86.073 – even if a property's legal restrictions prohibit STH access.

Select **WORK Permit APPROVED** if the proposed activity meets current law, policy, and standards, or an exception to policy or standards is allowed, or to begin work on an authorized connection that has not been built yet. When **Remove Existing** is selected in question 12, determine if the connection is Legal, authorized (§ 84.25), Nonconforming, or **ILLEGAL** and select the appropriate box.

Select **Authorized Access Point Documented** for those connections previously authorized under Wis. Stat. § 84.25 and were also approved with a WORK permit. Issue **only** after pictures of the finished work have been submitted **and** all ROW restoration has been completed to WisDOT's satisfaction.

Select **Connection Permit APPROVED** after a WORK permit has been approved **and** all ROW restoration has been completed to WisDOT's satisfaction. Pictures of the finished work should also be submitted.

Any WisDOT authorized staff member may sign form DT1504. All signatures are done within SHAPES. WisDOT staff may scan a copy of their signature for use when printing a SHAPES-generated copy.

3.21.5.2 Provisions and Additional Requirements/Information

General conditions 1-43 apply to all STH Connection permits. Check the appropriate boxes when supplemental or special provisions are required. See 3.21.6 for additional discussion on permit provisions.

GENERAL CONDITIONS OF ISSUANCE #1-43 APPLY
Permit Provisions Also Apply: ☐ **Supplemental** ☐ **Special**
☐ Lane Closure System notification required
☐ Insurance required and/or ☐ Irrevocable letter of credit required
☐ Permit voids/replaces permit #
☐ Transportation project plat ID #
☐ **Temporary access.** Permit expiration date below. See #35.

Select **Lane Closure System** when the proposed work meets the notification criteria.

Select **Insurance or irrevocable letter of credit** when the proposed work requires one or both items to protect STH interests. (09-10-25, 4.0)

If the **permit voids or replaces a previously issued WisDOT permit**, check the box and insert that number. If more than one permit number has been voided or replaced, use the **comments** area to include all numbers.

Insert the **transportation project plat ID #** if one applies to the STH Connection.

For a **temporary access**, check the box and insert the expiration date (3.20.5.3). Select a reasonable date for both the customer and WisDOT, e.g., the date may coincide with the end of a special event, construction stage, harvest, etc. When there is no specific item, the maximum timeframe should be **six** months.

If the permit is part of a **shared connection** with another property owner, check the box and include the name of the owner and related permit number. If more than two property owners share a connection, use the **comments** area to include all owners and related permit numbers. When shared connections are approved, each property owner is issued a permit with its own number.

Use the **comments** area to document additional or miscellaneous details for the final record if needed.

3.21.5.3 Dates and Identification Number

The following blanks are available on each form DT1504, but may not all be used:

Application Submitted	Approved Work Start	Approved Work Finish	Approved Work Extension	
Application Completed	Identification Number	Issued	Permit Expires	Permit Amended

- **Application Submitted:** SHAPES automatically generates this date when an application is submitted.
- **Approved Work Start:** Insert this date upon final application approval.
- **Approved Work Finish:** Insert this date upon final application approval. Typically, the date should be in the same calendar year for permits issued early in the year. For permits issued late in the year, include sufficient time for ROW restoration in the following calendar year. For developments and other major projects, the date may span more than one year.
- **Approved Work Extension:** Insert this date when a time extension is needed to complete construction and/or ROW restoration.
- **Application Completed:** Insert this date **only** when form DT1504 has been fully and accurately completed and all supporting documentation has been submitted.
- **Identification number:** Upon WisDOT approval, *SHAPES* generates an identification (ID) number with the format **CC-NNNN-YY** where **CC** = county number (01-72), **NNNN** = sequential number starting at 0001 (this number goes back to 0001 at the beginning of each year), and **YY** = last two digits of the calendar year. **NOTE:** When a work permit is issued followed by an Authorized Access Point Documented, Approved Connection Permit, or Record of Unpermitted Nonconforming Connection, two ID numbers will be generated. One for the work permit, and one for the other document (i.e., two records for the connection).
- **Issued:** Upon selecting any of the five WisDOT decisions (3.21.5.1), SHAPES generates this date.
- **Permit Expires:** For temporary permits, insert a date.
- **Permit Amended:** When a permit is amended, e.g., a work finish date needs to be extended, SHAPES generates this date upon WisDOT approval.

3.21.6 Supplemental and Special Permit Provisions

Use of supplemental and special permit provisions is critical when placing reasonable conditions on a connection and/or the construction of the connection and is WisDOT's right under Wis. Stat. § 86.07(2)(a). A provision may be written to cover any conceivable aspect of a permit – even for something that may occur in the future. See HMM 09-15-25 for additional information on developing provisions.

Select a supplemental provision box #44-67 on form DT1504 if it needs to be included with the permit. If special permit provisions are needed, number the first one starting with #68 and subsequent ones in numerical order. Consult the ROW Permits Unit in the Bureau of Highway Maintenance or the Access Unit in the Bureau of Technical Services for assistance with developing special provisions if needed.

3.21.7 Time Extensions and Subsequent Permits

If the work has not been started by the Approved Work Finish Date, the permit is ***null and void*** [12] and no work may be done until a subsequent permit has been issued. SHAPES will automatically send a notification to the customer and WisDOT one month prior to this date if a completion notification has not been received.

If the work has been started but is not completed by the Approved Work Finish Date, no additional work shall be done unless authorized through an approved Work Extension Date or a subsequent permit from WisDOT. The customer shall provide WisDOT with a reasonable explanation for needing the extension. Do not guarantee a time extension approval or subsequent permit since the conditions WisDOT based its original permit approval upon may have changed between the permit approval date and time extension request date. A field review may be necessary to determine if said conditions have changed. If conditions have changed significantly, issue a new permit to document the changes instead of extending the old permit.

3.21.8 Requirements for Public and Private Road Connections

For all public and private road connections, the proposed road must conform to local road standards as found in Wisconsin Statutes and WisDOT's Facilities Development Manual. The applicant must provide:

- A copy of the:
  - General location map. The county GIS site may be used for this.
  - Plat, if applicable
  - Traffic Impact Analysis, if required by WisDOT or local unit of government
  - Pictures of the proposed intersection from all four directions
- Highway plans for the STH and connecting road showing the:
  - Designated ROW widths (Town Road Standards are in Wis. Stat. § 82.50)
  - Land ties and/or reference points
  - Proposed geometrics including surface type(s), lane width(s), approach grades (in all directions), turn lanes, bypass lanes, return radii, etc.
  - Drainage patterns and drainage structures including culvert size, endwalls, and extensions, if needed
  - Closest connections (other roads, driveways, trail crossings) in both directions along the STH from the proposed road, and along the proposed road from the STH
  - Cross-sections of all road improvements every 50' showing the original ground, proposed finished pavement elevations, ditches, and ROW line. Cross-sections along the local road should be provided at least 100' from the STH ROW line.
  - Pavement marking plan including new or restored markings, if needed
  - Erosion control and restoration plans
  - Traffic control plans during construction

[12] General Condition of Issuance #11

For all public road connections, the applicant must be the appropriate unit of government (UOG). With its permit application, it must also provide a copy of the:

- Resolution from the appropriate UOG board or council documenting approval of the proposed road.
- Executed deed showing the transfer of property from the landowner to the appropriate UOG.

Do not issue a STH connection permit for a proposed public road to a developer, landowner, etc. (private entity). While a UOG is responsible for all permitted work, a private entity may be doing the actual work.

At times, a UOG may wait to "accept" the road from the private entity until construction is finished and subsequently inspected to ensure that it meets the UOG's requirements. If a UOG does not "accept" the road, then the permit may be revoked and the connection removed.

The permit may also be suspended until all interested parties can meet and agree on corrective actions. A public road connection cannot become eligible for local transportation aids until WisDOT is satisfied that the connection was constructed according to its permit.

For all private road connections, the applicant must provide a copy of:

- Proof of insurance, if requested by WisDOT
- A road maintenance agreement, if such an agreement has been developed and implemented by a group of property owners, businesses, association, etc.

3.21.9 Requirements for Trail Connections

If the connection is a longitudinal trail in STH ROW and/or a trail crossing the STH:

- The applicant should be a unit of government (UOG) or property owner. Consider allowing a recreational group (e.g., a snowmobile club) to be the applicant, but the UOG is preferred.
- For a trail crossing, one permit may be issued. If the applicant is not a property owner, written permission from the property owners on each side of the highway must be provided with the application to prove that the trail can be located there. Separate permits may be issued if each property owner requests one. If only one permit is issued, ensure each property owner receives a copy if s/he is not the applicant.
- The applicant must provide a copy of an ordinance designating the trail or trail crossing
- As determined by WisDOT, the applicant must provide a copy of the resolution or agreement that details trail maintenance, or enter into a Memorandum of Agreement with WisDOT that details trail responsibilities such as maintenance, signing, costs, etc.

3.21.10 Permittee Responsibilities after Construction is Completed

See General Conditions of Issuance 1-13, 26, and 29-43 on form DT1504.

Figure 1 Documentation of Zoning Form

DOCUMENTATION OF ZONING

for a

State Trunk Highway (STH) Connection Application

Property Owner Name(s):	**Highway(s):**
City / Village / Town:	**County:**
Legal Description of Property:	
Zoning Classification:	**Date Zoned:**

Please attach a copy of the zoning ordinance in effect in your jurisdiction. Before a STH connection permit may be issued, a review is required of the primary permitted uses in the zoning classification listed above to ensure agreement between the zoning and the connection's type of use.

Is a STH connection permit required prior to receiving a local building permit? ☐ **No** ☐ **Yes**

Being the duly authorized zoning administrator or their agent, I do hereby verify the zoning information indicated.

(Signature) (Date)

(Printed Name of Person Signing) (Telephone Number)

(Title: County Zoning Administrator/Town Clerk/etc.) (Email Address)

Revised: 12/1/2024

4.0 DT2231 Record of Unpermitted-Nonconforming Connection (ROUNC) to State Trunk Hwy Instructions

Direct customers to establish a SHAPES account to obtain a ROUNC. A SHAPES account requires a customer to create a username and password then add their name, address, email address, and telephone number. It also requires a MyWisconsinID.

Using SHAPES, the customer submits form DT2231 along with supporting documentation, which may include a copy of the property deed, title work, property surveys, etc. Use only one form for each connection to ensure proper records.

Guidance on how to handle specific form DT2231 questions follow this section. Not all questions are listed since some are self-explanatory.

Remind customers to contact their local government officials for ordinances and other permit requirements that may also apply.

Table 3: Submitting Form 2231 by Mail

WisDOT must accept form DT2231 by USPS mail, mail services, or in-person. The basic steps include:

1. Upon request, mail a customer two copies of form DT2231 if they cannot obtain one from a library, county highway department, etc.
2. Customer completes both copies, sends one to the region office, and keeps one for their records.
3. In SHAPES, add customer information via 'Public Hub' then 'External Users.' Add a new ROUNC then manually enter the DT2231 form data into SHAPES.
4. Verify the original DT2231 data before processing the ROUNC. If correct, scan the copy and upload it to 'Attachments.'
5. If any data need to be revised, send a SHAPES-generated copy back to the customer with the revisions marked on the original.

4.1 Question 1: Property Owner(s) Name and Mailing Address

Issue a ROUNC only to the property owner.

4.2 Question 1B: Authorized Representative Name and Mailing Address

A real estate agent, attorney, friend, etc. may represent the property owner. The representative must check a box in the SHAPES applicant information tab to certify that status. If a paper DT2231 is submitted by a representative, obtain an email or letter from the property owner to certify the relationship.

4.3 Question 7: Side of the Highway

Use the actual direction for the side of the STH where the connection is located if the STH is running true or mostly true north/south (N/S) or east/west (E/W). If a N/S or E/W STH is running SW/NE or NW/SE, then use the cardinal direction to determine the side of the STH the connection is located.

4.4 Question 10A: Name of Nearest Side Road from Location
Question 10B/C: Distance and Direction from the Side Road
Question 11: How far is the location from nearest non-side road connection on the same highway?

This information helps to pinpoint where a connection is located along a STH and determine if the connection is properly spaced from other existing connections or a permitted connection that has not been constructed yet. A side road must be a public road. Private roads are treated as driveways, which are non-side road connections. The applicant may use form DT1248 to depict location information.

4.5 Question 12: Provide the property tax identification number

This information may be found on the property tax bill or a county (or city) land records web site.

4.6 Question 13: Current zoning

Whether a property is zoned or unzoned, the property owner must supply the proper documentation, which may be obtained from the local zoning administrator or clerk of the appropriate township, village, city, or county where the property is located. Typically, a statement from the authority on its letterhead is sufficient for documentation or use the WisDOT form in Figure 1 if needed. Compare this information with the Current Use (4.7.1).

4.7 Questions 14-20: Connection Type Information

The following questions are required to obtain specific use and design details on existing connections.

4.7.1 Question 14: Current Use

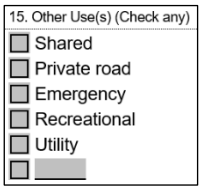
Only one box (that best defines the existing use) may be selected on form DT2231. Use definitions are:

- ***Commercial – rural (Trans 231.04):*** a retail, wholesale, industrial, ag-related, or non-profit business, or a residential facility with more than four units (apartments, hotels, etc.), next to a rural-type highway.
- ***Residential – rural (Trans 231.05):*** single and multiple family homes of 1-4 units (25 or fewer trips per day expected) next to a rural-type highway.
- ***Agricultural (Trans 231.05):*** a field for planting, maintaining, and/ or harvesting crops or tending livestock, or land for recreational and hunting us, next to a rural-type highway. This use may serve farm buildings but not residential buildings.
- ***Trail or trail crossing:*** a bicycle, pedestrian, equestrian, ATV, or snowmobile trail that runs parallel to and/or crosses a STH. If this box is selected, enter a trail description using the drop-down box that follows.
- ***Commercial – urban (Trans 231.06):*** a retail, wholesale, industrial, ag-related, or non-profit business, or residential facility with more than four units (apartments, hotels, etc.), next to an urban-type highway.
- ***Residential – urban (Trans 231.07):*** single and multiple family homes of 1-4 units (25 or fewer trips per day expected) next to an urban-type highway.
- ***Public road:*** a road, street, highway, etc. that connects to a STH for public travel and use and is maintained by a local unit of government.

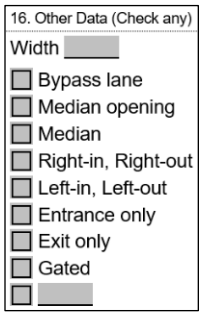
Urban means an urban-type highway cross-section, which typically has curb and gutter. *Rural* means a rural-type highway cross-section, which typically has ditches. Details for verifying rural or urban are in 09-10-20, 2.1

4.7.2 Question 15: Other Use(s)

Select all applicable "other use(s)" boxes from the list or insert one if needed. See below for their description.



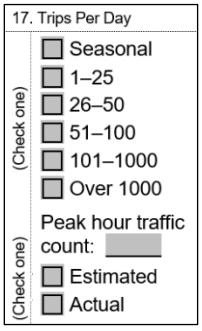
- **Shared:** The connection providing access to more than one parcel. If so, provide the applicable parcel numbers in SHAPES. If using a paper form, list them in Question 20 or on a separate document.
- **Private road:** The connection is classified as a road that is being maintained by more than one property owner. Provide a road maintenance agreement amongst all affected property owners.
- **Emergency:** The connection is providing special access only for police, fire, EMS, etc.
- **Recreational:** The connection is providing access to hunting lands, parklands, etc.
- **Utility:** The connection is providing access to a utility facility such as a cell tower, etc.



4.7.3 Question 16: Other Data

Select all applicable "other data" boxes from the list or insert one if needed. Insert the connection width in the top blank.

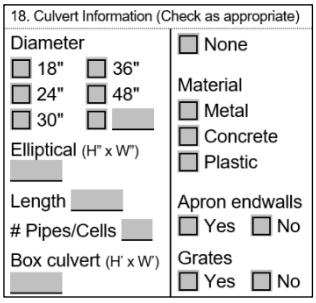
4.7.4 Question 17: Trips Per Day



"Trips per day" is the vehicle count or annual average daily traffic (AADT) using the connection. One vehicle going in and out of a connection equals two trips. "Seasonal" means a connection that is only used a few times yearly, e.g., a driveway for hunting lands.

Select the applicable category range, which may be determined using actual counts or estimated based upon the number of apartments, hotel rooms, customers, employees, etc. For any connection that generates 100 or more trips in any hour, 50 or more trips exiting in one hour, or 750 trips in an average day, a peak hour traffic count is required. A traffic impact analysis or a traffic counter should be used to obtain this data.

4.7.5 Question 18: Culvert Information



Select the applicable boxes or insert data as needed. Select "None" if the connection does not have a culvert. Insert the box culvert size if present. Insert the applicable number if a connection has more than one pipe or a box culvert has more than one cell. If the connection has a slab-span or other small bridge instead of a culvert, use Question 20 to fully describe it.

4.7.6 Question 19: Surface

This question only refers to the part of the connection within STH ROW. Select grass, gravel, asphalt, or concrete. If more than one surface is present, place a comment in Question 20.

4.7.7 Question 20: Additional Description or Explanation

Use this section to provide details about the connection that may not fit within the other categories.

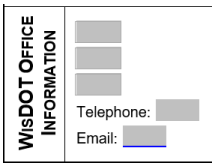
4.8 Non-Question Fields

The following data fields do not have a question number associated with them.

4.8.1 Tracking # / Identification

In the upper right-hand corner of the form's first page, there is a blank for the SHAPES tracking number. This is a unique number that SHAPES automatically generates and populates when form DT2231 is submitted. Upon WisDOT approval, SHAPES generates an identification number with the format **CC-NNNN-YY** where **CC** = county number (01-72), **NNNN** = sequential number starting at 0001 (this number goes back to 0001 at the beginning of each year), and **YY** = last two digits of the calendar year.

4.8.2 WisDOT Office Information



In the upper right-hand corner of the form's first page, there is a space labeled *WisDOT Office Information*. Insert the region office address along with the access coordinator's telephone number and email address.

4.8.3 Latitude and Longitude (Completed by WisDOT)

This information is automatically populated in *SHAPES* when a pindot is placed on the electronic map either by the applicant or WisDOT.

4.8.4 Reasons for Nonconforming Status

Use this field at the bottom of the form to provide the reason(s) for the nonconforming status, e.g., "Connection does not meet spacing requirements," or "Connection does not meet sight distance requirements."

4.8.5 WisDOT Project ID, Description, and Stationing (if applicable)

There may be times when unpermitted-nonconforming connections are discovered in advance of a WisDOT highway improvement project. For those connections that will remain in their current status and a ROUNC is issued, insert the corresponding project ID, project description, and stationing of the connection.

4.8.6 Comments

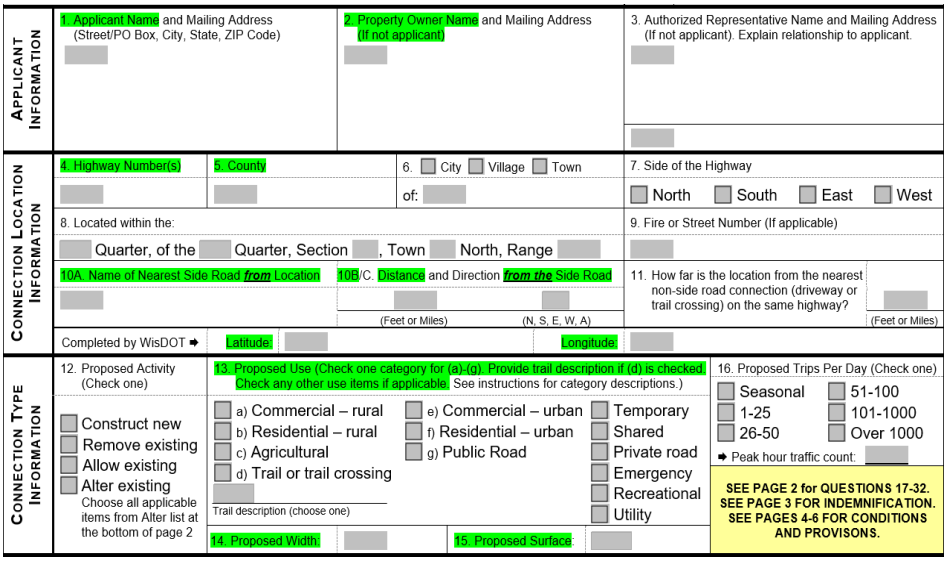
This space is reserved for WisDOT to add any other information regarding the connection, e.g., if previous discussions with a customer leading up to WisDOT approval need to be documented.

5.0 DT1247 STH Connection Site Design Checklist Instructions

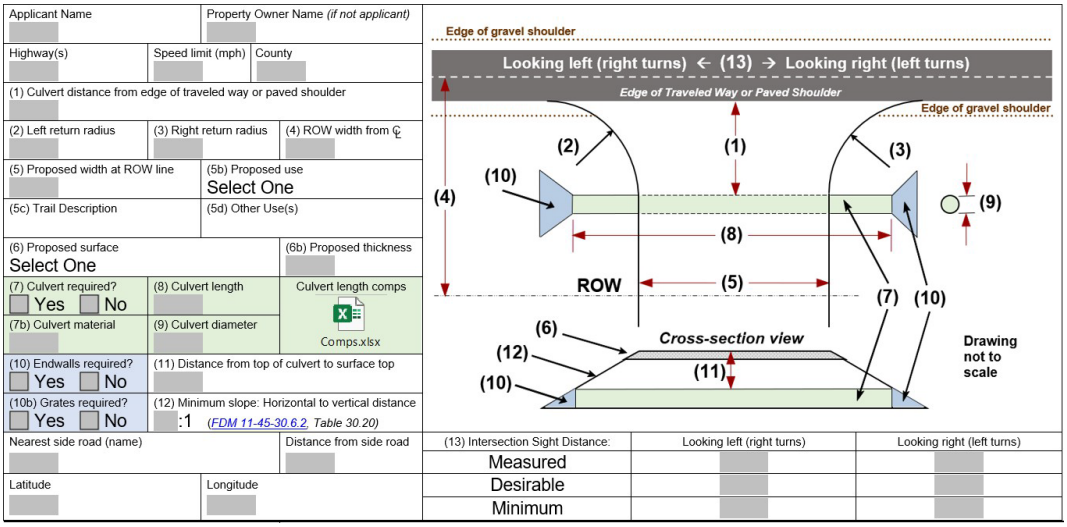
Use form DT1247 to document all relevant design details regarding a proposed or existing connection when doing a site review. The form's data fields will be replicated in SHAPES and the final form printed as a PDF if needed.

The form may be filled-out by hand and its data manually uploaded to SHAPES. It may also be accessed via SHAPES using a laptop, tablet, etc. and filled-out on site. By doing this, the data is automatically saved in SHAPES. Another benefit is that the form will be partially filled-in prior to site review since SHAPES autofills from form DT1504 as shown at the right.

Correct questions 10A/10B data if needed on site. If a proposed connection is moved, make sure that the latitude and longitude are adjusted in SHAPES



The site reviewer will complete the following items on form DT1247.[13]



(1) **Culvert distance from edge of pavement or paved shoulder.** Measure the distance to the nearest edge of the culvert. The center of the culvert should align with the center of the ditch bottom.

(2) & (3) **Left and right return radius.** Use Trans 231 maximum dimensions unless otherwise noted.[14]

(4) **ROW width from CL.** Determine from current ROW plat. Confirm with a field measurement if a ROW marker is nearby.

(5) **Proposed width at ROW line.** Use Trans 231 maximum dimensions unless otherwise noted.[14]

(5b) **Proposed use.** If not already populated, select the applicable item from the drop-down menu.

(5c) **Trail Description.** If trail or trail connection is selected in (5b), select the applicable item from the drop-down menu.

(5d) **Other Use(s).** Select the applicable items from the drop-down menu if needed to describe multiple connection uses.

[13] Includes measurements, calculations, and data input as needed.

[14] "Unless otherwise noted" means the plans submitted with the application have different values.

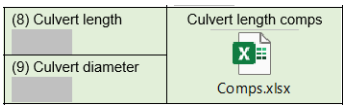
(6) **Connection surface.** If not already populated, select the applicable item from the drop-down menu.

(6b) **Surface thickness.** Use WisDOT SDDs 9A-11, 9A-12, 9A-14, or 9A-15 or unless otherwise noted.[14]

(7) **Culvert required?** Select "yes" unless the connection is at or near the crest of a vertical curve, or drainage is handled by a storm sewer system.

(7b) **Culvert material.** Enter metal, concrete, or plastic, or leave blank if none.

(8) **Culvert Length.** To calculate this distance, use the *Comps* program, which is an embedded Excel spreadsheet within form DT1247. The *Comps* program is included with SHAPES but not embedded within the form. It also calculates distance offsets from the centerline of the connection to its edge.



(9) **Culvert diameter.** Measure the diameter of the culvert upstream and downstream from the location. If they are both the same, use the same diameter. If the downstream one is larger, determine if the runoff amount between the upstream culvert and the proposed culvert requires matching the downstream culvert. If the area is prone to frequent flooding, use the downstream culvert diameter. If either the upstream or downstream culvert is elliptical, calculate the hydraulic openings to determine the size.

(10) & (10b) **Endwalls required? Grates required?** Determine if a blunt culvert end may be a potential hazard for an errant vehicle. If yes, then require endwalls and determine if traversable grates are also needed (FDM 11-45-30.6.1.1). If erosion may be a concern, then require a culvert end section. Grates may cause flooding if not maintained properly since they can trap vegetation and other debris.

(11) **Distance from top of culvert to surface top.** This can be calculated by using the embedded spreadsheet.

(12) **Minimum slope: Horizontal to vertical distance.** Determine the proper slope that allows an errant vehicle to safely traverse the connection without causing it to vault into the air or flip over. See FDM 11-45-30.6.2. Minimum slopes are listed in FDM Table 30.20.

(13) **Intersection sight distance.** Fill in the six boxes on the form. Measured distances may be determined by timing oncoming vehicles in the field then converting time to distance. For desirable and minimum values, use Table 5.2 in FDM 11-10-5.

WisDOT reviewer / Site review date. The reviewer must insert his or her name and the date of the review.

Comments. The large gray box on the form allows WisDOT staff to place any comments that would be beneficial for the final record, e.g., "Trees and other vegetation must be removed within the ROW to establish sight and vision triangles."

6.0 DT1248 STH Connection Location Sketch Instructions

When a customer cannot submit form DT1504 using SHAPES, form DT1248 may be used to depict a new or existing connection location. The customer starts by filling out the five sections at the top of the form. Then, the customer measures and records the distances along the highway centerline (CL) between the locations of the:

1. Proposed STH connection,
2. CL of other connections (driveways, public and private roads, and trail crossings), and
3. Owner's property lines.

Distances may be in feet or miles as shown on the example at the bottom of the form. The north arrow also needs to be circled for reference. In lieu of this form, a customer may provide a separate drawing or sketch.

Scan the submitted form DT1248 and upload to SHAPES. If any corrections need to be made, show them in red and include a note somewhere on the form indicating that it was revised by WisDOT and who (initials) made the revisions. Scan the revised copy and upload to SHAPES, then send it to the customer.

End notes:

[1] The advantages for each property owner being issued their own permit for shared connections are:

(1) Allows better data management by being able to sort on all owner's names, addresses, etc., rather than just one permittee.

(2) Allows one permit to be revoked and the other to still be valid, e.g., if it was a joint residential driveway and one owner tries to use it as a commercial driveway, the appropriate action could be taken against that owner. It would be cumbersome to revoke a permit that has both owners on it and then have to issue a new permit for the owner whose driveway is still legal.

(3) Allows the issuance of permits with different uses. For example, one driveway could be for a small business (welding shop, taxidermy, etc.) and the other could be residential.

(4) Reduces the amount of work needed for ownership changes. Instead of issuing new permits to both owners, issue a new permit for the new owner, and send a brief note to the other indicating the new owner's name and associated permit number.