

PHASE II UNIFIED PERMITTING PROCESS PROJECT

Prepared by Annette M. Theroux, Pro-West & Associates, Inc.

Unified Permitting Process (UPP) is an effort that aims to streamline how haulers apply for oversize/overweight (OSOW) permits from multiple roadway authorities—townships, cities, counties, and the State of Minnesota—for a given trip.

With UPP, a hauler will submit only one permit application rather than several to haul a load across multiple roadway authority jurisdictions. UPP will increase efficiency for haulers and roadway authorities alike, saving time and money. UPP will also make enforcement easier, helping the state preserve its roads.



Project Team

Three key groups guided the Phase II Unified Permitting Process effort. The Policy Group and Technical Advisory Panel assisted with project strategy and aligning the project with stakeholder needs. The Working Group provided “real user” testing to the interface, hauler input, permit workflow and issuance.

Technical Advisory Panel

Clark Moe

MNDOT Operations Division Office of Maintenance

Rich Sanders

Polk County, MN

Rena Kuehl

SRF Consulting Group

Mike Marti

SRF Consulting Group

Annette Theroux

Pro-West & Associates

Lucas Scharenbroich

Pro-West & Associates

Policy Group

Clark Moe

MNDOT Operations Division Office of Maintenance

Rich Sanders

Polk County, MN

Mitch Rasmussen

MnDOT State Aid Division

Division Director

Working Group

Rich Sanders

Polk County, MN

The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.

Victor Lund

St. Louis County, MN

Cari Peterson

City of Duluth, MN

Taryn Erickson

City of Duluth, MN

Karin Grandia

Itasca County, MN

Ryan Sutherland

Itasca County, MN

Mark Gallagher

SRF Consulting Group

Annette Theroux

Pro-West & Associates

Lucas Scharenbroich

Pro-West & Associates

Royal Paddock

Pro-West & Associates

Introduction

The Right Load on the Right Road, the Right Way, Right Away

Designed to build on Phase 1 listening discovery, Phase II of the Unified Permitting Process (UPP) project defined policies and processes that enabled the development of a proof of concept reference platform (Appendix A: UPP Reference Platform) for unified permitting. UPP Phase II brings together the policies and processes uncovered during Phase I to present a proof of concept prototype Unified Permitting Reference Platform. As was the goal in Phase I, the goal for Phase II focused on effective and efficient movement of Minnesota freight that supports economy, safety and preservation.

Summary of Project Findings

Phase II answered the questions that have surfaced during almost 30 years of discussion and research by local and state government; What are the commonalities between levels of government for policy and process and how do we eliminate barriers to collaborative data sharing and use? How do we build a technology to leverage systems, and provide transparency for permit requests, permit issuance and permit enforcement?

Phase II gained support at all levels of government, including road authorities, the hauling industry, academic institutions, state agencies, and law enforcement (Appendix B: *Working Partners*). The wellspring of support and cooperation after almost three decades of dialog and problem-solving made it possible to build commonalities and test a prototype for permitting. The right people were in the right room.

Figure 1 Working Partners

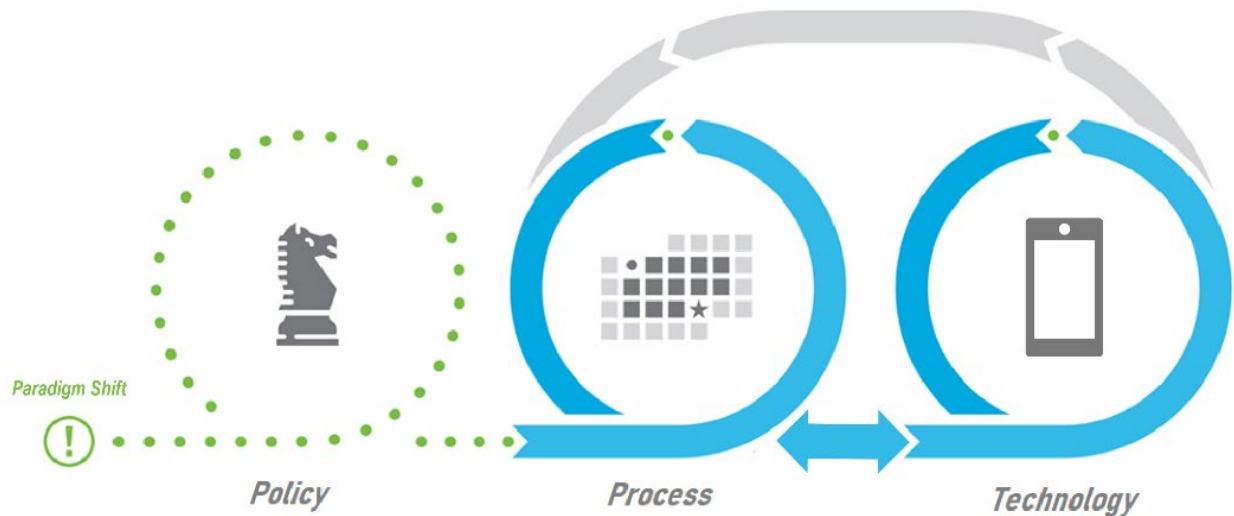


(See Appendix B: Working Partners)

Paradigm Shift: The Phase II proof of concept demonstrated the feasibility of realizing a new permitting paradigm. The authoritative data critical to the permitting process was accessed and consumed by data services maintained by the appropriate local or state authorities, rather than relying on a centralizing store of aggregated data. Redundant data and access to the permitting platform was enabled by a federated collection of systems, controlled by the permitting road authorities instead of a disconnected collection of siloed access points.

Technology evolution during the last three to five years significantly improved the ability in Phase II UPP to develop a unified permitting reference platform prototype that contained the essential elements of the system, ensuring third party software and processes maintain autonomous control over permitting issuance and information storage.

The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.



UPP Phase II Methodology

Policy

Policy requirements from various local and state agencies were uncovered during listening sessions during Phase I UPP. Policies were examined with the project TAP in Phase II to analyze commonalities for permit issuance (Appendix C: *Permit Application Database Summary – UPP*).

General Provisions were reviewed from state and local government agencies to develop **standardized provisions** as a basis for all permits and all agencies. TAP members reviewed and accepted MnDOT’s general provisions as the standard for unified permitting. Provisions are located at: <https://www.transportpermits.com/uploads/userfiles/files/documents/provision/MINNESOTA.PDF>

Standardized Permit Request Input compiled by TAP members from a Phase I draft list was compared to define core permit issuing criteria. The resulting criteria were agreed upon by local and state government, hauling industry and law enforcement TAP members. In the future, standardized permit input will streamline the process for haulers to apply for a multi-jurisdictional permit and allow road authorities to efficiently issue permits.

Business rules were developed from the standardized permit request input as part of the UPP workflow to evaluate permit input and ensure comprehensive and transparent information exchange between UPP reference platform and external third-party permitting software and data services.

Requirements for general provisions and standardized permit request input were translated into a unified permitting workflow for interaction between systems (Appendix D: *UPP Workflow*).

Education and Outreach to stakeholders was accomplished through presentations to Districts 1, 2, 4 and 6, the Minnesota County Engineers Association (MCEA), City Engineer’s Association of Minnesota (CEAM), and MnDOT District State Aid Engineers.

Process

UPP Workflow

Consultants met with the project TAP to outline business cases to support the UPP workflow. Business cases defined the general repeatable (same load, same road, multiple times each year) and OSOW (dimensions, weight or type of load fall outside the general hauling parameters) workflow for permits and any exceptions to the process. TAP members also provided information on any causes of failure or breakdown to existing permit workflows.

The UPP workflow was developed based on the business cases encountered by road authorities, haulers and law enforcement (Appendix D: *UPP Workflow*). The workflow process focused on crucial drivers for unified permitting detailed below: User Authentication, Permit Application Info, Permit Submission, Permit Approval or Denial, Permit Aggregation.

User Authentication: User authentication was designed to give haulers the ability to log into multiple systems simultaneously. User authentication streamlined hauler permit requests by providing an easily accessible web interface that allowed interaction with multiple road authority systems across a route. Haulers were seamlessly directed to the correct identity provider for login then redirected back to UPP for permit request input.

Permit Application Input: General provisions and standardized permit request input from the TAP were used to create drop-downs and automated field population from third party software. The UPP prototype Reference Platform leveraged external services for information requests related to truck, trailer, company and insurance. During the prototype development geospatial data and database information provided via mocked services or static data sources were used for automated field population and routing.



Figure 2 UPP Routing Example

UPP prototype was designed to use geospatial data and databases from authoritative sources, such as Minnesota Geographic Information Office (MnGEO), Department of Public Safety (DPS), Counties, and Minnesota Department of Transportation (MnDOT), when exposed as accessible data services.

The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.

Permit Submission: The proof of concept defined the process to pass information to road authority permitting systems once all the necessary permit application inputs are received and validated.

The UPP prototype extracted the required route information from the permit application and identified the road authorities involved in the approval process for the proposed permit. The road authorities were notified of the new permit and the permit was updated to include all the relevant authority metadata.

Permit Approval or Denial: The UPP workflow included the ability of the road authority permitting system to respond to a request for permit with approval, denial or requested changes. If the permit was under review and awaiting completion, the user would be notified of the status of the permit. Users were notified of the decision, including notes from the permitting agency.

When the permit process had been completed by all road authorities, a digital format permit was issued if the permit was approved, or a notification was sent to the hauler if the permit had been denied. If a permit could be issued if changes are made to the request, the road authority could communicate the required changes to the hauler.

Technology

Phase II focused on developing prototype reference platform functionality and piloted the use of the prototype for Working Group input and testing.

Reference Platform

Core Prototype Functional Capabilities: The UPP Reference Platform (*Appendix A: UPP Reference Platform*) core prototype functions were designed to demonstrate the basic functions expected for a unified permitting system on a statewide scale. Appendix D illustrates the core functions developed in the prototype.

The Reference Platform workflow was comprised of processes for user authentication, applying for a permit, submission and approval, and issuing approval, denial or a request to edit the submission. UPP accessed data sources that provide information for auto-populating fields and performing routing. Load specifications were analyzed against road attributes and state-provided bridge information to display an appropriate route and alternate routes. In the future, the platform could include road restrictions (seasonal, construction or weather related). All information in the workflow was sent to the permitting authority for editing, accepting or denying.

- From the haulers' point of view, the reference platform demonstrated the ability of the hauler to log into a system which recognized the hauler, auto-populated information that existed in other systems (such as vehicle, company and insurance), provided routing from the point of access to the exit point across road authority jurisdictions, and issued a permit that can be accessed on a mobile device.
- From the road authority's point of view, the reference platform demonstrated the ability to receive information about the company, truck and load entered by the hauler, view the route from point of access to exit point, provide an alternate route if needed, edit, accept or

deny the permit and view the decisions of road authorities from other jurisdictions affected by the permit request.

- From Law Enforcement's point of view, the reference platform demonstrated tracking all permits issued, information about the route, load, vehicle, company and insurance, expected dates of travel, need for an escort and special requirements.

Pilot Execution

A pilot area of the prototype was developed and tested with the input of a Working Group ([UPP Project Team: Working Group](#), pages 2 & 3). The Working Group was comprised of local government and MnDOT staff associated with the pilot area in Northern Minnesota (Appendix E: *UPP Pilot Area*). The working group met in two-week iterative cycles for six sprints over 12 weeks of development. Sprints included education about the reference platform infrastructure and functionality, defining permit input, refining permit workflow, and a prototype testing period between sessions.

The three goals of the Working Group for Pilot Execution included:

1. **Define data types** necessary to create a permit. The Working Group started with the Permit Request Input as compiled by the TAP to define the data types that were required to support the input in a web interface. Units for truck, loads, and routes were established, and pick lists for drop-downs were created.
2. **Define a permitting workflow, including the approval process.** The working group was tasked with testing the permitting workflow as defined by the TAP. (Appendix D: UPP Workflow)
Circular dependencies were identified during testing of UPP by the Working Group. One example of a circular dependency was regarding who approves what at which point in the process. A state road authority might request local permit information before approving a permit, and a local government road authority may require a state permit number before approving a permit.
3. **Develop a UPP Prototype** to test the unified permitting assumptions. This proof-of-concept effort was implemented as a web application to which the working group had consistent access during the project. The core technologies that were validated were:
 - Demonstrated ability to login for multiple users.
 - Demonstrated ability to access secured resources on third-party systems on behalf of the users. Secured bridge data hosted in ArcGIS Online was successfully integrated into the permit submission process. Also, vehicle and trailer information were accessible from a third-party system, RtVision.
 - RtVision was selected as a test external system for pilot execution since RtVision's permitting software is in use by a substantial number of Minnesota local government agencies and is used by agencies in the pilot area. The RtVision integrations demonstrated that the architecture, protocols and standards of UPP can be met by existing systems without undue burden.

The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.

- Demonstrated ability to share permit workflow updated among the relevant permit authorities. Stakeholders designated as permit authorities in the prototype system could see and manipulate proposed routes and update the core permit document. Other permitting authorities were able view the current state of the permit across all authorities. This was an especially important use case to validate since there is often coordination between local authorities and the state, or between neighboring counties and cities.

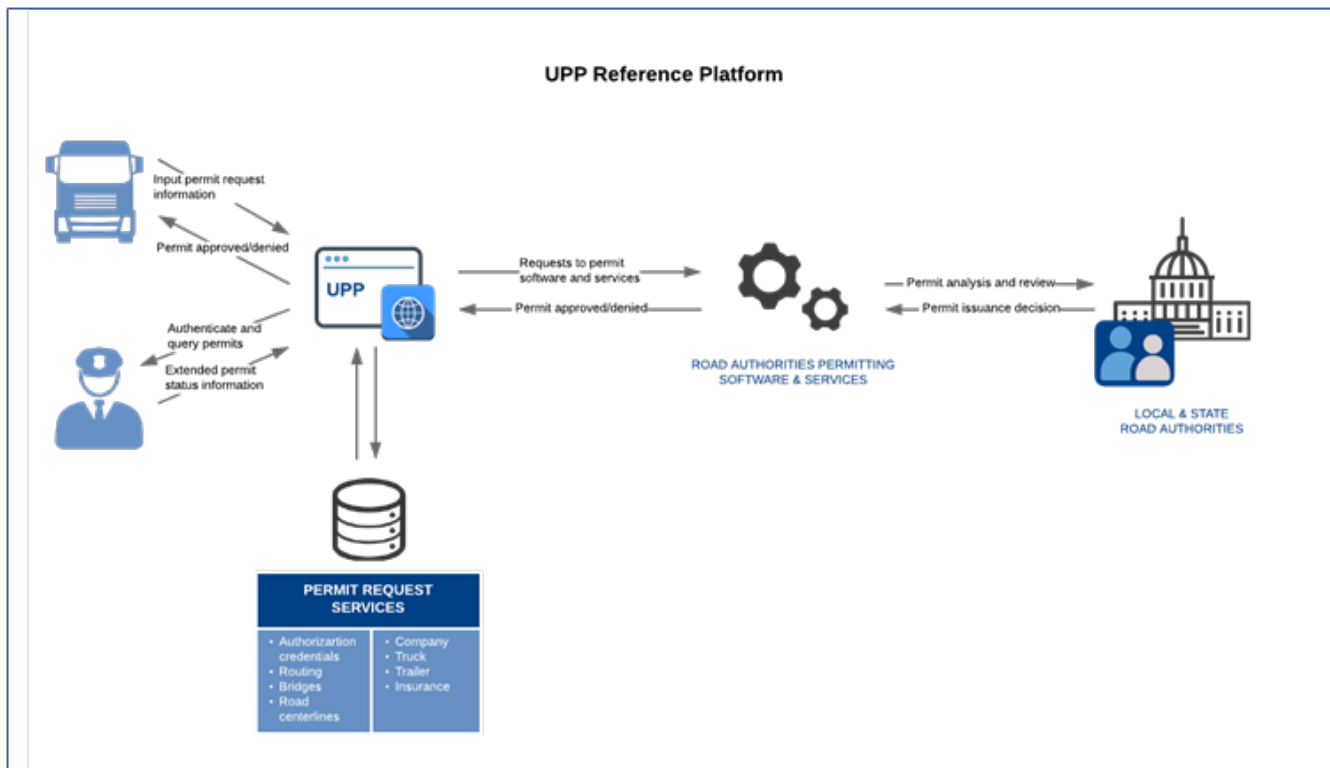
As a hands-on exercise, the Working Group was required to set up a login and was trained in the key concepts and mechanisms for communication with other permitting systems, accessing data sources and other supporting services.

Each Working Group sprint was designed to build on information and testing from the previous session. Working Group members provided testing feedback such as checking units as input to interface fields, testing the routing function and reviewing information in auto-populated fields for accurate results, attaching documents, and providing comments about user-friendliness, efficiency and effectiveness of the platform.

- From the road authority's point of view, the reference platform demonstrated the ability to exchange information between UPP and the road authority's permitting software, view the status of a requested permit, use information from external third- party data services for truck, trailer, load, route, bridges and restrictions to approve or deny a permit, and attach files.

Appendices

Appendix A: UPP Reference Platform



Appendix B: Working Partners

Working Partners	Agencies, Institutions and Companies
Federal Government	FHWA – Federal Highway Administration
State Government	MnDOT – Minnesota Department of Transportation MnGeo – Minnesota Geospatial Information Office MnDPS – Minnesota Department of Public Safety MnDVS – Minnesota Department of Vehicle Services Highway Patrol
Local Government	MCEA – Minnesota County Engineers Association MAT – Minnesota Association of Townships LRRB – Local Road Research Board OSOW – Oversize Overweight Committee of the LRRB Polk County Itasca County St. Louis County City of Duluth Carlton County Sheriff’s Law Enforcement
Private	Pro-West & Associates, Inc.

The purpose of this TRS is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.

	SRF Consulting, Inc. RtVision, Inc. Tiller Corporation MidState Trucking Add trucking companies or reps
Academic	North Dakota State University – Upper Great Plains Transportation Institute UGPTI Alexandria Technical College

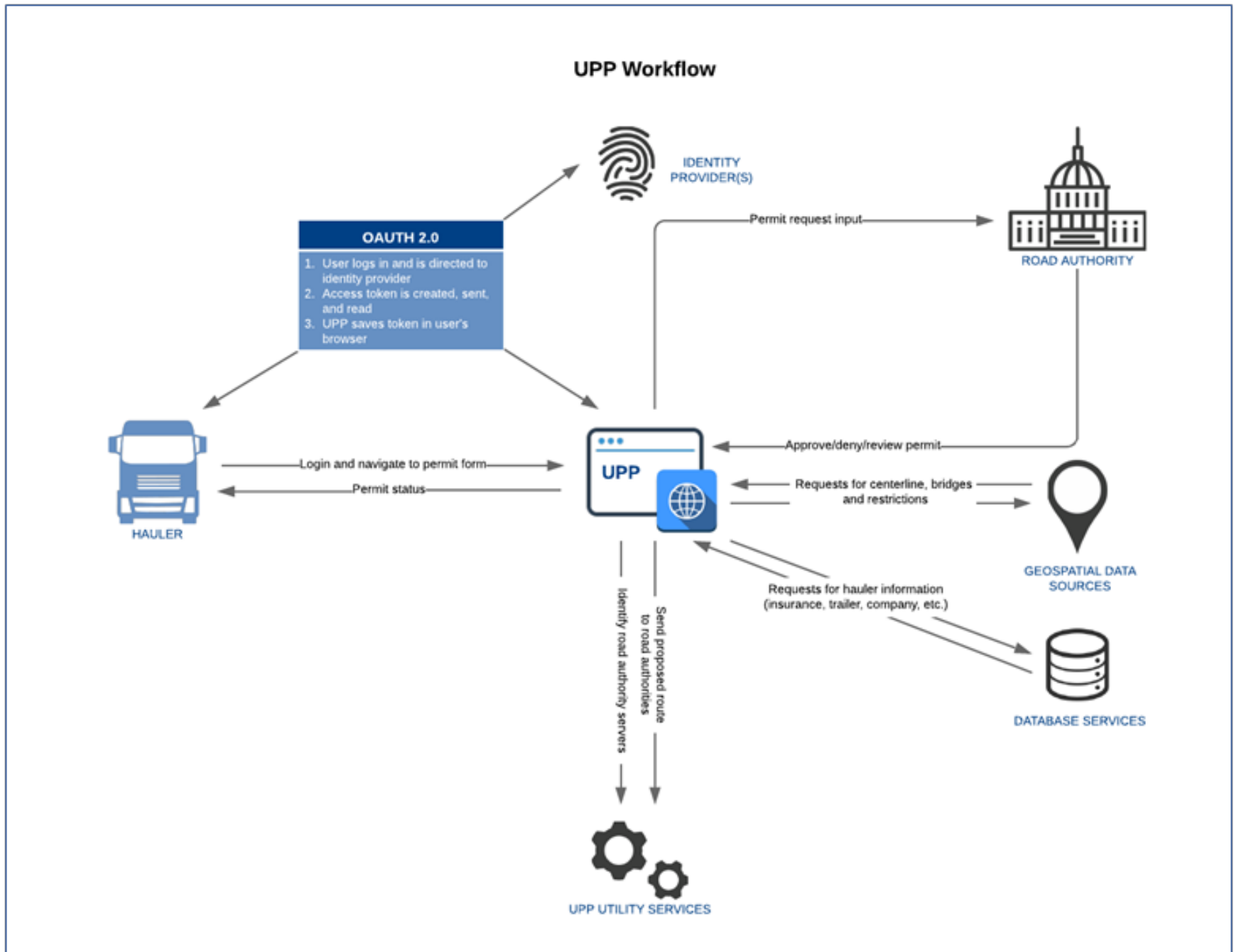
		Prototype Recommendations	Input Recommendations	MNDOT	Initial County Inputs							Meeting Comments		
		Meetings 12/19/17 and 1/3/18			Dakota County	Polk	Carlton	Hennepin	Freeborn	Jackson	St. Louis	Kanabec	Dec 19, 2017 Meeting Notes	Jan 3, 2018 Meeting Notes
		Legend Y= yes (keep) N=no (remove) ONCE=input once; auto populates with login AUTO = Calculated by tool (not an input)	Patrol/ Enforcement Needs		Blue- truck over 220,000 lbs only									
Hauler Info	Requires Login/Password	ONCE		Y	ONCE			X			X		Hauler, company, insurance all put in once.	
	Applicant Name	ONCE	Y	Y	ONCE	X	X	X	X	X	X	X	saved into system	
	Application Date	Y	Y	Y	AUTO				X	X				
	Applicant Email	ONCE		Y - Dropdown- FAX or Email or Mail	ONCE			X			X		saved into system	
	Applicant Phone	ONCE		Y	ONCE			X			X		saved into system	
						ONCE							MnDOT needs this as an option because they do provide permits via fax if carriers don't have access. Marti- how often does this happen? (Clarke-MnDOT can be different). Permit faxed to truck stop as opposed to an email so it may be important to stay. Butch- permits are faxed, but with the online system, we prefer email. The online systems are not necessarily perfect systems. Sometimes fax is the only option when the computer system malfunctions. Rich- as an industry hauler. We need to remove. Need to ask who will benefit, why do we have this.	
	Applicant Fax	Y		Y - Dropdown- FAX or Email or Mail				X			X		saved into system	
	Company Name	ONCE	Y	ONCE	ONCE	X	X	X	X	X	X	X	saved into system	
	Company Address	ONCE	Y	N	ONCE	X	X	X	X	X	X	X	saved into system	
	Company contact	ONCE	Y	ONCE	ONCE	X	X		X			X	saved into system	
Phone Number	ONCE	Y	ONCE	ONCE	X	X	X	X	X	X	X			
Fax Number	Y		ONCE	N	X	X	X	X	X	X				
Cell Number	N		N			X						If we need to contact them. Mike- can we complete an annual profile, so you don't have to continue to update.		
Bill Permit to	N			Auto - Account #	AUTO			X				haulers uncommon usually the same as the company address		
Billing Address	N			N	AUTO			X				haulers uncommon usually the same as the company address		
Insurance Provider	ONCE			N	Y	X	X	X	X	X		saved into system		
Insurance Agency Address	ONCE			N	N				X	X		haulers uncommon, most common requires motor security yearly so may be this can be pre-populated. We have to send to Metro cities and state each year. Butch- I hardly get this sent to me. It would be entered once and saved. Annette- No attaching documents at this time.		
Insurance Policy Number	ONCE			N	Y	X	X							
Insured Amount	N			N	N	X	X	X	X	X		Why do we need this and insured amount, if something ever happens what does the county do with it? If we send this information at the beginning, why do we need to do it again? All vehicles need DOTs after 10,001lbs. Butch- 1 ton trucks hauling oversized boats without a DOT registration. Rare exceptions with DOT numbers are not required because of planes (overwidth, overlength). May be is there a toggle that says do you have a DOT number, if yes then you wouldn't have to get this information and move in. MCS- policy endorsement to make sure you have insurance for a policy time period, attached to the DOT number.		
Vehicle Year	N	Y	N	N	N	X		X			X		Hennepin County- nothing special, just apart of the original. We can remove. Not necessarily need. Rich- no, it was just there, but not necessary now. Only question if we have two truck side by side, how do you know. (Response: license #).	
Vehicle Make	Y	Y	Y	Y	Y		X	X			X	X	remove	make, model, type all the same as mndot
Vehicle Model	N	Y	N	N	N	X	X					X	remove, as long as we have the VIN and license plate. Shelly MnDOT- says important. State Aid- company profile in the database with the company, can't we do this with vehicles, too? Shelly- guest users would have to type in year, make, model.-- Shelly, if it's not part of the MnDOT then the county applicant will fail unless it matches perfectly to MnDOT. Annette- how does this impact the prototype? no- may be we can connect to other locations mnLAR being one, we don't directly interface with MnLAR. It will depend on the stability of the other systems that we will be interfacing. So, it would show up as we complete the prototype.	
Vehicle Type	Y		Y	Y	N	X		X			X	X	at a minimum, let's move forward with what MnDOT requires? One comment- let's leave them in. But we are removing year.	
Vehicle License Number	Y	Y	Y	Y	Y	X	X	X			X	X		
Vehicle State	Y	Y		AUTO - MN default - dropdown	N	X	X				X			
Vehicle (Truck) Serial Number	Y	Y		Y - Annual & Job Permits	N						X			
USDOT Number	Y	Y		Not Required/Open Field	N	X					X			
Vehicle Empty Weight	Y			AUTO - Default 20,000 but changeable	N						X		MnDOT requires vehicle empty weight.	
Vehicle Registered Weight	N			N	N						X	X	Rich-registered weight wouldn't be on IFTA because the aggregate weights of equipment aren't required to be registered. So be careful if we include this. Registered weight should be higher than the vehicle weight. Sounds like we can remove it. You can't force someone to register for the correct amount of weight or make the permit contingent on this. Can't enforce. So how do you know if they are over registered? It's linked to license plate.	
Total Gross Weight	Y	Y		AUTO	Y	X	X	X			X	X		
Empty Weight Amount	N			AUTO	N	X		X				X	delete and include it only in vehicle.	
Registered Weight	N			N	N								delete	
Regulation Weight Amount	N			N	N	X		X					delete	
Dimension Summary	AUTO	Y		N	N	X							delete	
Overall Dimension Description	AUTO	Y		N	N			X			X		delete	
Height	Y	Y	Y	Y	Y	X	X	X	X	X	X	X		
Width	Y	Y	Y	Y	Y	X	X	X	X	X	X	X		
Length	Y	Y	Y	Y	Y	X	X	X	X	X	X	X		
Front Overhang	Y	Y		Not Required/Open Field	N	X	X				X	X		
Rear Overhang	Y	Y		Not Required/Open Field	N	X	X				X	X		
Left Overhang	Y	Y		AUTO - Adjustable	N	X	X	X			X			
Right Overhang	Y	Y		AUTO - Adjustable	N	X	X	X			X			
Truck Diagram	AUTO	Y		N	Y	X	X						pivot points/ax	remove - auto populated

ted

Information Request	Meetings 12/19/17 and 1/3/18		Patrol/ Enforcement Needs	Dakota County Blue-truck over 220,000 lbs only	Polk	Carlton	Hennepin	Freeborn	Jackson	St. Louis	Kanabec	Dec 19, 2017 Meeting Notes	Jan 3, 2018 Meeting Notes	
	Legend Y= yes (keep) N=no (remove) ONCE=input once; auto populates with login AUTO = Calculated by tool (not an input)													
Axle Information	Axle Description	N	N	N			x			x		Hennepin uses this information for the bridges MnDOT provides in a trailer description, what's collected in axles field needs to be defined as what the data will provide. Because this is in the trailer description. We wouldn't want it to input axle into the trailer. Need to make sure that the proper data gets populated in MnDOT's online permitting system. Brent- they use the diagram not the actual. 381 LB 5365 is a nomenclature. It is from RT Vision. ----- delete	N	
	Weight per Axle	Y	Y	Y - Based on Configuration Type or GVW	Y	x	x	x		x			Y	
	Axle Description Summary	N	N	N	Y	x	x					may be this something we come down to phase 3. but it is important to the carriers. It should be noted that we want this ability. If we need to put out an RFQ for the future. Haulers like the ability to save the truck configuration. We need to redesign, better cataloging methods. It can be a 20 minute process to find a configuration that you used years ago in RT Vision.	N-RT Vision does this automatically and gives you a figure	
	Axle Count	Y	Y	AUTO	Y	x	x	x			x		Auto -Side comment: This is all that is needed. (axle width to know if it's wider than a lane, weight per axle, spacing, number of axles, number of tires per axle)	
	Group Count	N	N	N	Y	x	x				x		the group count is if you have a tandem, tri-axle is a different, just counting the different types of the group. Not sure if it's calculated or entered by the applicant..... what is autopopulated? This may be autopopulated	N- MnDOT allows you to specify the configuration, which autopopulates the rest. Let's keep with MnDOT plus axle width
	Approximate Axle Length (Total)	N	N	N	Y						x		Hennepin- keep, distance from the first axle to the last. Bridge staff. Any information we have on the load and it calculates to make sure the bridge can handle the load.	N
	Axle Length (axle spacing)	Y		AUTO	N	x	x	x			x	x		Auto
	Max Axle Width	Y		Y - Single Trip + Job type permits	N	x	x							Y
	Max Axle Weight	Auto		AUTO	Y	x	x	x			x			Auto
	Axle Total Weight	Auto	Y	AUTO	Y	x	x	x			x			Auto
	Axle Group Summary	N		N	N	x	x						RT Vision does this automatically.	N
	Number of axles per group	N		N	N				x	x			They probably require this because they are not in RT vision and need to calculate more manually. Based on what we already entered, this information can be calculated from the information that we already required. Delete because they aren't part of the pilot.	N
	Axle Group Tire Type	Y (number of tires per axle)		Y	N	x	x				x		Rick- remove. Width--- why do we have this? State permit will typically max out at 600 per tire. As far bridge analysis does not look at tire width. Tire type asks tire width. MnDOT asks for this so they can calculate the tire width. MnDOT requires it so include because of the current system. Rick's comment noted for further. Pavement- need axle weight and spacing. Jinyeene- axle tire type only asks- single, double.... they don't ask for dimensions.	Y
	Axle Group Width	N		N	N	x	x							N
	Axle Operating Weights	N		N	N							x		N
Trailer Information	Axle Group Weight	N	N	N	x	x		x	x			who governs axle group weight. If they violate the permit then statute governs. Like Dakota, max axle weight is 16,000 pounds and we give a permit, and then you're out in the field it's actually 22,000 pounds... they would be ticketed? Yes. They would need a new permit or become legal weight. As a carrier a load restriction becomes apparent then you are required to complete a single haul every time because of this.	N	
	Axle Group Max Width	N	N	N	x	x							N	
	Axle Group Total Weight	N	N	N	N	x	x						N	
	Axle Group Distance	N	N	N	Y								N	
	Trailer Description	N	N	N	N	x	x				x			
	Trailer Make	Y	N	Y	N	x	x				x	x		
	Trailer Model	N	N	N	N	x	x					x		
	Trailer Type	Once	ONCE	ONCE	N	x	x				x	x		
	Trailer Serial Number	N	N	N	N	x	x				x			
	Trailer License Number	Y	Y	Y	N	x					x	x		
	Trailer State	Y	AUTO - MN default - dropdown	AUTO - MN default - dropdown	N	x					x			
	Trailer Empty Weight	Y	AUTO - Default 20,000 but changeable	AUTO - Default 20,000 but changeable	N	x					x	x		
	Trailer Registered Weight	N	N	N	N							x		
	Trailer Regulation Weight	N	N	N	N	x					x		typical trucking company doesn't have trailer weights, put it on the truck. However, excavation companies may put it on truck	
	Load Info	Owner of Load	N	N	N							x		
Is the load over size? (yes/no)		N	N	N				x	x					
Is the load over weight? (yes/no)		N	N	N				x	x					
Load Description		Y	Y - Dropdown included	Y	Y	x		x	x		x			
Load Size/Model		N	Not Required/Open Field	Not Required/Open Field	N							x		
Load Weight	N	Not Required/Open Field	Not Required/Open Field	N							x			
Movement Information	Hauling Dates (Start/End)	Y	Y	AUTO - End date - Valid 7 Days on ST - 365 Annual	AUTO	x	x		x	x	x	x		
	Hauling Start	N	Y	AUTO - Defaults to today's date	N			x				Hennepin says start because it's when the permit is valid		
	Hauling Hours	provisions required by MnDOT for specific load base	Y	AUTO	N						x			
	Movement (To/From)	Y	Y	Y	N			x	x	x	x			
	Origin and Destination Description	N	Y	Y	N						x			
	Route: Road	N	Y	Y	N			x						
	Planned Route	N	Y	AUTO	Y						x			
	Route Description	Auto	Auto	Auto	N	x	x					will have one option for the prototype, will work towards dragging and creating your own path		
	Route Description Detail	N	Auto	Auto	N	x	x							
	Route County Numbers	Auto	MnDOT Requests Carriers to ID exit point	MnDOT Requests Carriers to ID exit point	N				x	x	x			
	Route Miles of County Road	Auto	N	N	N			x						
	Route Length	Auto	Auto	Auto	N	x				x	x			
	State Highway/Permit Number	Y	Auto	Auto	N	x	x					if hauling across state, attach and write state permit		
	State Highway/Permit Number issued:	Y	Auto	Auto	N						x			
	Final Location/Permit Number	N	Auto	Auto	N	x	x							

		Meetings 12/19/17 and 1/3/18			Dakota County Blue- truck over 220,000 lbs only	Polk	Carlton	Hennepin	Freeborn	Jackson	St. Louis	Kanabec	Dec 19, 2017 Meeting Notes	Jan 3, 2018 Meeting Notes	
Permit Invoice		Use of Pilot Car Required	Auto to MndOT provisions	Y	AUTO				x	x				this isn't something a hauler should input, they should receive guidance if required, but needs to be on the permit	
		Destination within limits of a city	Auto- GIS data		Y	N			x	x					
		Destination located within County applying	Auto- GIS data		N	N				x	x				
		MnDOT state road permits	N		N	N				x					
	General Permit Info	Permit Number	Auto			AUTO	x	x					x		
		Permit Expiration Date	Auto			AUTO	x	x							
		Status	Auto			AUTO	N	x	x						
		Valid Dates	Auto			AUTO	N	x	x						
	Formal Approval Info	Quantity	Y- move to load when asking about a job permit?			N	N	x							
		Applicant Name				Y	AUTO					x			
		#1 Permit Administrator				N	N				x				
		Approving Signature				N	N				x	x		x	
	Payment Info	Approve Date				N	AUTO	x	x	x	x	x	x		
		Approving Digital Signature				N	AUTO	x	x						
		Single Trip Permit Cost				AUTO	AUTO					x			
		Total Payment Due				AUTO	AUTO	x	x					x	
		Permit Fees				AUTO	N							x	
		Standard Fees				AUTO	N							x	
		Overage Fees				AUTO	N							x	
		Payment Amount Received				N	AUTO								
	Misc.	Payment Reference Number				AUTO	AUTO								
		Individual Receiving Payment				N	N								
		Map Graphic				N	N		x						

Appendix D: UPP Workflow



Appendix E: UPP Pilot Area

