Freight Mobility Strategic Investment Program
2018 Application Form

Project Summary

Project Title:	

Applicant Organization

Lead Agency:	
Contact Person & Title:	
Email:	
Phone:	
Address:	

Project Location

City:		**Legislative**	
County:		**District(s):**	
GPS Coordinates:			

STRATEGIC FREIGHT CORRIDOR on which this project is located.
(Attach a detailed map of the proposed project and all affected adjacent routes - see Q1)

PROJECT ADDRESSED IN REGIONAL and/or STATE TRANSPORTATION PLANS (see Q9)

Regional Plan:		
	name of plan(s)	date
State Plan:		
	name of plan(s)	date

List of Supplemental Documents:	**Project Financial Summary:**		
Vicinity Map (required - see Q1B)			
Traffic Data (required - see Q1C)	Total Public Sector Match:		#DIV/0!
	Total Private Sector Match:		#DIV/0!
	Total Match:	$ -	#DIV/0!
	FMSIB Request:		#DIV/0!
Supplemental Application Form used Y/N	**Total Project Cost:**		#DIV/0!
If yes, # of pages			

Funding Detail

Partnerships:	Anticipated	Committed	Total
Public Sector Match			
Lead Agency Funds			$ -
			$ -
			$ -
			$ -
			$ -
Private Sector Match			
			$ -
			$ -
			$ -
			$ -
			$ -
Partnership Total	$ -	$ -	$ -

Funding Allocation:	PE	RW	CN	Total
FMSIB Request				$ -
Committed Public Sector				
Lead Agency Funds				$ -
				$ -
				$ -
				$ -
				$ -
Committed Private Sector				
				$ -
				$ -
				$ -
				$ -
				$ -
Anticipated / Need				$ -
Total	$ -	$ -	$ -	$ -

Tentative Dates	PE Completed	RW Completed	CN Ad	
			Start	
			Completed	

Cash Flow Needs ($1,000's):

	pre-2017	2017-2019	2019-2021	2021-2023	2023-2025	Total
Total PE Phase						$ -
Total RW Phase						$ -
Total Const. Phase						$ -
FMSIB Request						$ -

Project Total	$ -	#DIV/0!
Partnership Total	$ -	#DIV/0!
FMSIB Total	$ -	#DIV/0!

Detailed Project Information

In addition to the Project Summary and Funding Detail submitted on page 1 and 2, the following information is required in order for this funding application to be considered complete.
     Refer to the Freight Mobility Strategic Investment Program 2018 Guidelines and 2018 Criteria
     documents for further details and additional guidance.

Project Narrative and Required Supplemental Data:

Q1: Description and scope of project and supplemental data:
     Q1A: Truck/Rail industry contact names
     Q1B: Vicinity and benefitted area map(s)
     Q1C: Traffic Data

Freight Mobility for the Project Area:

Q2: Truck travel times, with and without the project, and other freight travel time benefits
Q3: Other project benefits
Q4: Calculate truck volume to capacity ratio
Q5: Rail capacity improvements

Freight Mobility for the Region, State, & Nation:

Q6: Significance of the project to regional economy
Q7: Significance of the project to state economy
Q8: Relation of project to port or international boundary access
Q9: Relation of project to a regional, state, or national freight corridor

General Mobility:

Q10: Non-truck travel times, with and without the project
Q11: If project includes at-grade railroad crossing improvements, reduction in travel delays
Q12: If project includes at-grade railroad crossing improvements, travel time to an unobstructed crossing
Q13: Is project improving an urban principal arterial

Safety:

Q14: Accident history
Q15: Emergency vehicle access
Q16: Extent of railroad crossing closure

Freight and Economic Value:

Q17: Benefit to mainline rail operations
Q18: Key employment areas
Q19: Improved train speed

Environment:

Q20: Non-attainment area
Q21: Sensitive receptor sites
Q22: Sustainability policies and plans
Q23: Air quality

Partnerships / Costs / Special Issues:

Q24: Critical timing of partnership investments
Q25: Project quantitative benefits
Q26: Least-cost alternatives
Q27: Special or unique circumstances

Signature and Certification

Detailed Project Application

Note: If inadequate space is provided for individual responses, please utilize the Supplemental Application Form (if utilized, note its use on the cover sheet)

Project Narrative and Required Supplemental Data:

Q1	**Please describe the scope of the freight mobility project and how the project will:**
	    (a) reduce barriers to or increase capacity for improved freight movement; and/or
	    (b) mitigate the impacts on local communities of increasing freight movement, including rail and road conflicts.
	Reducing barriers or increasing capacity includes: truck climbing lanes, realignment and rerouting project to avoid excessive truck climbing grades or general congestion; alternate truck routes; dedicated truck lanes; access into and/or out of ports, intermodal freight facilities and freight terminals; truck turning lanes; changes in roadway or intersection geometry to better accommodate trucks; increasing weight limits; and the use of Intelligent Transportation Systems (ITS).
	Mitigation includes grade separations, mitigating impacts of increasing truck and/or railroad traffic to a community and can be the use of ITS.

Answer:

Q1A	**Provide the names, contact information, and comments of the truck and/or rail representatives consulted on this project.**

Answer:

Q1B **Provide a map identifying the extent of the proposed project and identify all transportation facilities directly affected by the proposal.** (Provide this information as a separate document submitted with the hardcopy transmittal of the completed application.)

Q1C **Provide traffic data within the project boundaries describing four scenarios:**
- **(1) current traffic values with no project**
- **(2) current traffic values with project completed, if different than (1)**
- **(3) predicted traffic values 10-years in the future with no project**
- **(4) predicted traffic values 10-years in the future with project completed, if different than (3)**

Required "Traffic Values" for each of 1-4 above:
- **(1) Percentage of various vehicle types**
- **(2) Average weekday/average weekend**
- **(3) AM and PM peak period volumes, or 24-hour continuous fluctuation, for both travel directions for vehicles**
- **(4) Provide separate peak period data, or 24-hour continuous fluctuation, pertaining to trucks if freight movement has different timing/peak flow characteristics than other traffic**

(Provide this information as a separate document submitted with the hardcopy transmittal of the completed application.)

Freight Mobility for the Project Area:

Q2 **Provide travel time for truck traffic between logical termini that reflect the benefits of the proposal:**
- **• during free-flow with and without the project**
- **• during current truck peak hours with and without the project**
- **• during truck peak hours 10-years in the future with and without the project**

Include with the response a description of the logical termini utilized.
(Provide this information below or submit this information as a separate document attached to the hardcopy transmittal of the completed application.)

Answer:

Q2 continued

Describe other freight mobility benefits from reduced truck travel time as a result of the project.

Answer:

Q3 **What are some of the benefits that this project will have to improve safety, eliminate noise, reduce emissions, eliminate grade crossings, reduce vehicular delays, or result in other environmental benefits?**

Answer:

Q4 | **What is the improvement in the volume to capacity ratio (v/c) for truck peak-hour movements?**
(Perform the following calculation. If you believe this question does not apply or cannot be performed as outlined, explain why within the space provided for assumptions. If multiple intersections and/or dissimilar roadway segments are involved, the applicant should provide this information as a separate document attached to the hardcopy transmittal of the completed application.)

Describe any assumptions utilized in gathering and/or applying the data:

Answer:

Note: HCM = 2000 ITE Highway Capacity Manual

For determination of truck volume to capacity ratio for intersection improvements, go directly to Step 4, skipping Steps 1 and 3.

Step 1: Calculate the current peak hour truck volume

Current peak volume	(A)	vehicles / hour
Current truck percentage	(B)	%
Current peak hour truck volume (C = A x B / 100)	(C) 0	trucks/peak hour

Step 2: Convert peak hour truck volume to passenger car equivalents

Factor for converting trucks to passenger car equivalents (PCE) Use a factor of 1.5 except for the following conditions:	(D)	PCE
For <u>upgrades</u> use the value from Exh 21-9 of the HCM using the specific site conditions		
For <u>downgrades</u> use the value from Exh 21-11 of the HCM using the specific site conditions		
Passenger car equivalents (E = C x D)	(E) 0	PCE's / peak hour

Step 3: Determine the current facility capacity (without the project)

Highway capacity value from the HCM	(F)	PCPHPL
For multilane highways, use the value from Exh 21-2 for the posted speed and LOS D		
For basic freeway sections on four-lane or more freeways, use Exh 23-2 for the posted speed and LOS D		
Number of current lanes in the direction of peak hour flow	(G)	lanes
Current capacity (H = F x G)	(H) 0	PCPH

Step 4: Determine the current truck volume to capacity ratio (v/c)

For Intersections --- The capacity value (I) is typically computed using computer software developed for this purpose, or can be hand calculated using the procedure established in the HCM (Chapter 16 for signalized intersections, or Chapter 17 for un-signalized intersections)

(I)		capacity

Intersection truck v/c (J = E / I)

(J)	#DIV/0!	int. truck v/c

OR

For Highways

Highway truck v/c (J = E / H)

(J)	#DIV/0!	hwy. truck v/c

Step 5: Determine the projected truck volume to capacity ratio using the methods presented in the above Steps 1 through 4 <u>with the proposed improvements in place</u>

Step 1:

Current peak volume	(a)		vehicles / hour
Current truck percentage	(b)		%
Current peak hour truck volume (c = a x b / 100)	(c)	0	trucks/peak hour

Step 2:

1.5 or HCM Exh 21-9 or HCM Exh 21-11	(d)		PCE
Passenger car equivalents (e = c x d)	(e)	0	PCE's / peak hour

Step 3: With project improvements in place

HCM Exh 21-2 or HCM Exh 23-2	(f)		PCPHPL
number of lanes	(g)		lanes
Capacity (h = f x g)	(h)	0	PCPH

Step 4:

Intersection capacity with improvements in place	(i)		capacity
Intersection truck v/c (K = e / i)	(K)	#DIV/0!	int. truck v/c

OR

Highway truck v/c (K = e / h)	(K)	#DIV/0!	hwy. truck v/c

Step 6: V/C Improvement

Enter "J" from the intersection <u>or</u> highway calculation above	(J)		v/c w/o project
Enter "K" from the intersection <u>or</u> highway calculation above	(K)		v/c w/ project

V/C Improvement (L = J - K)
  (Note: a value of zero will be utilized for evaluation purposes
  if the calculation result is less than zero)
	(L)	0.000	

Q5 **If this project results in improved railroad operating efficiencies, please describe the increases to train velocity, the reduction in train delays, and/or increases in capacity.**

Answer:

Freight Mobility for the Region, State, & Nation:

Q6 | **What is the significance of this project to the <u>regional</u> economy? Describe the project's impact on the regional freight transportation system and the regional economy** (i.e., nature of the improvement and principal freight moved; improved intraregional and interregional freight movement in terms of products, industries and direct employment; improved freight movement and access to domestic and international markets in terms of freight, industries and direct employment; benefits to other regional industries; and access and links to intermodal connections and facilities.)

Answer:

Q7 | **What is the significance of this project to the <u>state</u> economy? Describe the project's impact on the state (outside the region) freight transportation system and the state (outside the region) economy.** (i.e., improved intrastate freight movement in terms of products, industries and direct employment; improved freight movement to domestic and international markets in terms of freight, industries and direct employment; and benefits to other state industries.)

Answer:

Q8 | **Does the project improve the freight movement for <u>direct</u> port access or across an international border?**

Yes ☐   No ☐

If yes, explain the proximity and the relationship of the project to the port or border and how it improves freight flow.

Answer:

Q9   **Is this project part of a regional corridor solution or major system improvement?**

Yes		No	

If yes, is your regional planning council supportive of the project? Describe.

Answer:

If yes, list the state and regional plans which include the proposed project. List the stakeholders involved and describe the process by which the proposed project was selected and prioritized.

Answer:

General Mobility:

Q10   **Provide travel time for non-truck traffic, between logical termini that reflect the benefits of the proposal:**
- **free-flow with and without the project**
- **during current AM and PM peak hours with and without the project**

Note if this is the same logical termini as used in Q2. If it is a different one, include with the response a description of the logical termini utilized.

(Provide this information below or submit this information as a separate document attached to the hardcopy transmittal of the completed application.)

Answer:

Describe other non-truck traffic benefits from reduced travel time as a result of the project.

Answer:

Q11 **If the project involves an at-grade road/railroad crossing, what is the reduced queuing and backup as a result of this project?** (perform the following calculation or ignore if not applicable)

Using the Watson Equation: Q = V x R

Q = Average queues length (in number of vehicles per lane)

V = Volume expressed in ADT divided by number of lanes in one direction

R = Percentage of time per day either the crossing is closed or vehicles are stopped at a crossing

Step 1: Calculate the current queuing (without the project)

Current Average Daily Traffic (ADT)	(A)	vehicles / day
Number of lanes in one direction	(B)	lanes
Volume per lane (C = A / B)	(C) #DIV/0!	vehicles / lane
Current closure or stoppage time either measure or calculated	(D)	%
Average queue length (E = C x D / 100)	(E) #DIV/0!	vehicles / lane

Step 2: Calculate the projected queuing with the proposed improvement

Projected Average Daily Traffic (ADT) (current +10-years)	(F)	vehicles / day
Number of lanes in one direction with proposed improvements	(G)	lanes
Volume per lane (H = F / G)	(H) #DIV/0!	vehicles / lane
Estimate or calculated closure or stoppage time	(I)	%
Average queue length (J = H x I / 100)	(J) #DIV/0!	vehicles / lane

Step 3: Reduction in queuing (K = E - J)

(Note: a value of zero will be utilized for evaluation purposes if the calculation result is less than zero)

(K) #DIV/0! vehicles / lane

Supplemental Notes:

Q12 **If the project involves an at-grade road/railroad crossing, what is the shortest travel time to an unobstructed crossing in minutes?**

Answer:

If present queuing can result in emergency vehicle delay, describe the most logical alternate emergency vehicle route and include the added distance and travel time.

Answer:

Q13 | **Is the project on a designated urban principal arterial?**

Yes		No	

Safety:

Q14 | **Have there been any accidents at the project location that this freight project will help reduce?**

Yes		No	

If yes, summarize the 5-year accident history and explain how the project will reduce each type of accident. (Separate railroad crossing accidents from non-railroad crossing accidents. Provide this information below or submit this information as a separate document attached to the transmittal of the completed application.)

Answer:

Q15 | **Is the project located on an essential emergency vehicle access route?**

Yes		No	

If yes, describe (i.e., fire, police, ambulance, school bus route and include closest alternative emergency access)

Answer:

Q16 | **Does this project result in additional road/rail closures?**

Yes		No	

If yes, how many and where?

Answer:

Freight and Economic Value:

Q17 | **Does the project result in operational efficiencies to the railroad network/system and benefit economic development and the overall capacity and movement of freight within the State/Region?**

Answer:

Q18 | **Does the project improve access to key employment areas?**

Yes ☐ No ☐

If yes, describe and include the number of temporary jobs created during construction and the number of permanent jobs preserved and/or created. Include the names of businesses and/or the types of permanent jobs affected.

Answer:

Q19 | **If, as a result of this improvement, train speed limits can be increased, will the applicant be supportive?**

Yes ☐ No ☐ N/A ☐

If yes, describe level of support. If no, why?

Answer:

Environment:

Q20 | **Is the project located in a non-attainment area for air pollution?**

Yes ☐ No ☐

Q21 **How many sensitive receptor sites are affected by the reduction in train whistle noise in the vicinity of the grade separation?** (Vicinity is identified as a quarter of a mile up and down the track and 600 feet each side of centerline. Sensitive receptor sites include residences, schools, churches, hospitals, hotels and motels, each counted as individual facilities.)

Answer:

Q22 **What sustainability** (i.e., greenhouse gas reduction (GHG)) **policies and plans has the applicant adopted?** (These could be in project design, construction, maintenance and/or operations.) **Will these plans or policies be used in developing the project and to reduce the use of fossil fuels (GHG) emissions?**

Answer:

Q23 **Freight projects have the potential to not only improve the movement of commerce, but also improve local air quality. Explain how this project provides an overall health and environmental benefit.** (e.g. reduction of particulate emissions, contribution to attainment standards in non-attainment area, etc.) **How was the information and evaluation arrived at to support the benefit statement?** (e.g. traffic model, air emissions model, etc.)

Answer:

Partnerships / Costs / Special Issues:

Q24	**What is the timing for the implementation of the proposed project** (i.e., matching with other state/federal funds, phasing with other projects, meeting a concurrency requirement)**? Are there critical timing issues associated with this project?** (e.g. available funding that may expire, project impact, deteriorating infrastructure or other critical timing issues.)
	Answer:

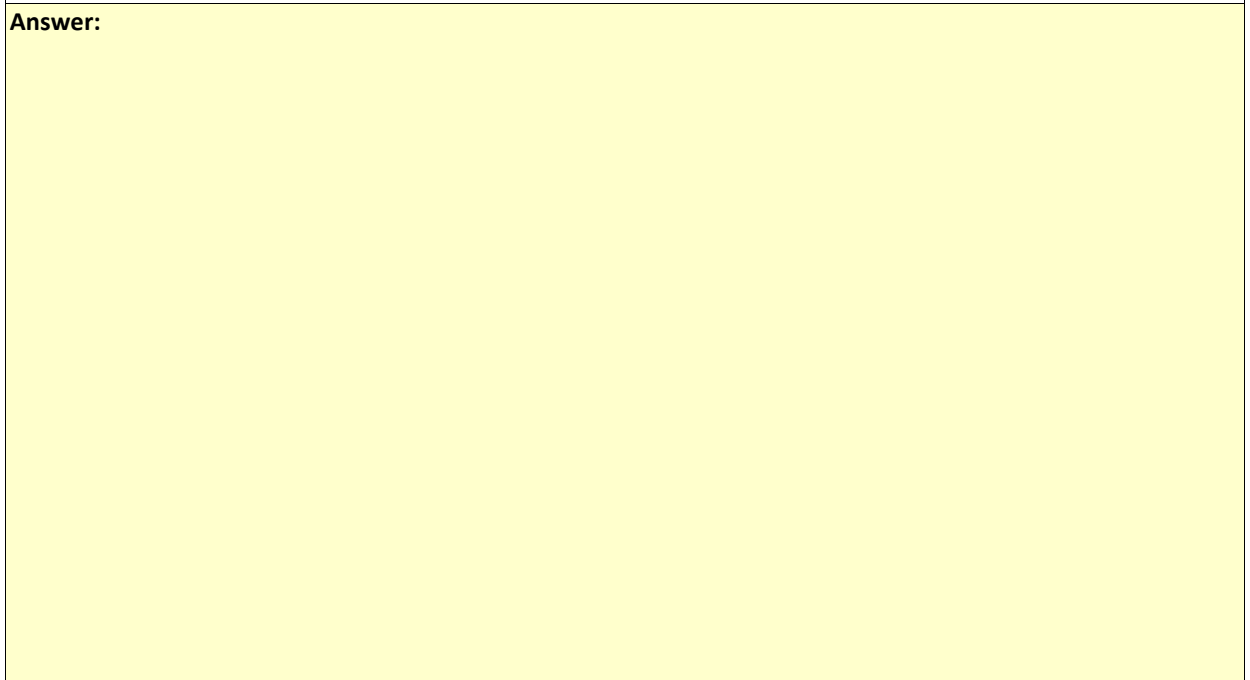| Q25	**What are the greatest quantitative benefits of this project?** (i.e. reduced truck/train delay, lowered v/c ratio, improved travel for trucks, job creation/retention, etc. --- this information will be used by FMSIB to develop a cost effectiveness measure.)
	Answer:

Q26	**Describe the degree to which least-cost alternatives were analyzed and considered for this project.**
	Answer:

Q27	**Describe the uniqueness of this project based on factors not addressed by previously asked questions.**
	Answer:

Signature and Certification

Freight Mobility Strategic Investment Program
Application Form

Certification
(To be signed by a Duly Authorized Official of the Applicant Organization)

I certify that [   ] *supports the proposed*
(Applicant Organization)
project, has the legal authority to pledge matching funds, and has the legal authority to apply
for Freight Mobility Strategic Investment Board funds. I further certify that matching funds
are available or will be available for the proposed project. I understand that this is a request
for reimbursement from the state and that all state rules for contracting, auditing, and
payment will apply to this project.

Signature		Date	
Printed Name and Title			
Project Title			

Submission Requirements:

1. Respond to all applicable questions and prepare/provide all requested information.
2. Transmit electronically the above completed application in Excel format to FMSIB at *saelidg@fmsib.wa.gov* , including a completed cover sheet noting the supplemental documents (PDF format) that will be attached to the submission.