

Perkins Specialized Transportation Contracting

Industry Perspective on Bridge
Ratings & Analysis



**Western Association of State Highway
and Transportation Officials**

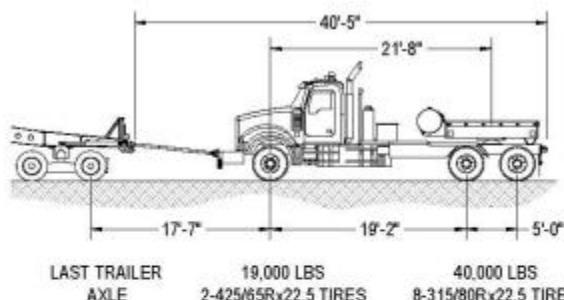
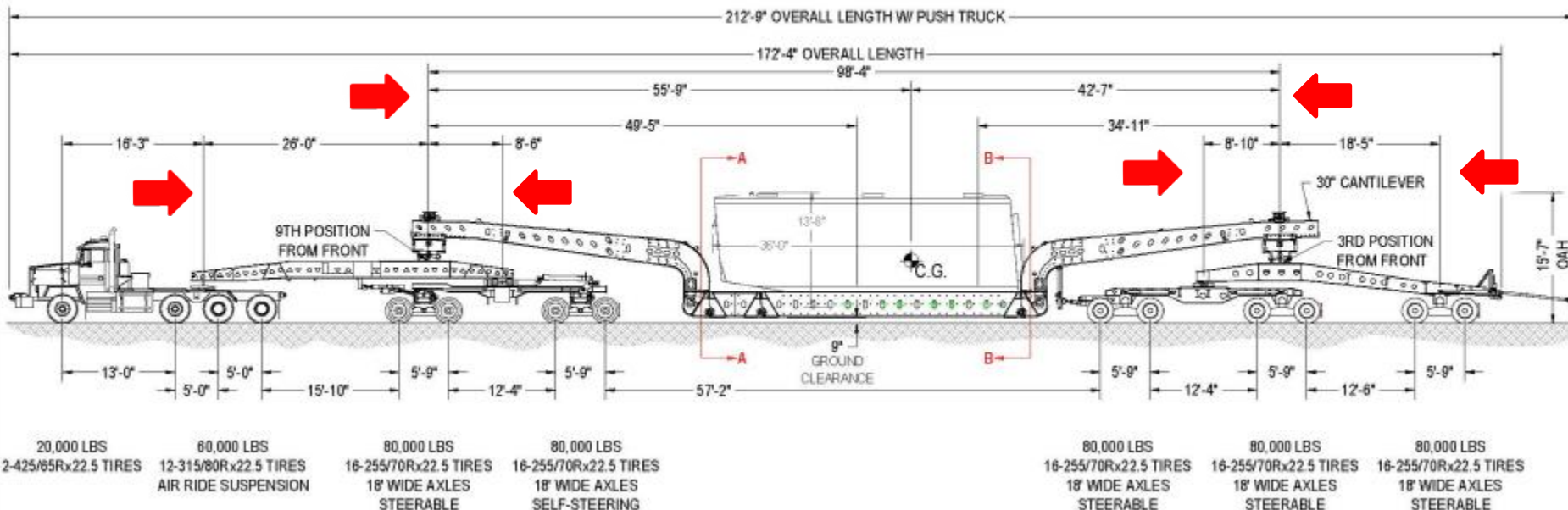
Agenda:

- Understanding the trailer,
- Research the cargo,
- Vehicle combination planning,
- Drawing preparation,
- What is the process?

The Vehicle, do you know?

- Axle spacing?
- Combination Geometry?
- Tare weight?
- In multi-unit combinations, each component's mass & centroid?
- Tire sizes, axle width & axle profile?

PERKINS SPECIALIZED TRANSPORTATION LAYOUT



DUAL LANE LOADING

GROSS VEHICLE WEIGHT = 539,000 LBS

ORIGIN INFORMATION	DESTINATION INFORMATION
SHIPPER: LAKE SUPERIOR WAREHOUSING CO, INC ADDRESS: 1210 PORT TERMINAL DR CITY/ST: DULUTH, MN ZIP: 55802 CONTACT: JONATHAN LAMB TEL NUM: 218-727-6646 FAX NUM: -	CONSIGNEE: IOWA WIND FARM ADDRESS: - CITY/ST: AMES, IA ZIP: - CONTACT: - TEL NUM: - CELL NUM: -

CUSTOMER	SHIPMENT DESCRIPTION	PERMIT INFORMATION
ACCIONA WINDPOWER NORTH AMERICA 155 FAWCETT DR WEST BRANCH, IA 52598 TYLER BURNS TEL: 319-843-9493 FAX: CELL: 319-333-8040 tburnst@acciona-na.com	LENGTH: 36'00" WIDTH: 13'08" HEIGHT: 13'08" WEIGHT: 245,000 LBS JOB NO: MOD NO: - MARK NO: - PREPARED BY: JCM REVIEWED BY: BJA APPROVED BY: -	LENGTH: 212'08" WIDTH: 18'00" HEIGHT: 15'07" REAR O.H.: 07'00" WEIGHT: SEE ABOVE DATE: 02/05/16 SCALE: NONE DATE: 02/05/16



THIS DRAWING CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION OF PERKINS SPECIALIZED TRANSPORTATION CONTRACTING. THE DRAWING IS THE PROPERTY OF PERKINS STC AND IS LOANED FOR ENGINEERING REVIEW ONLY. THE DRAWINGS MAY NOT BE COPIED OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PERKINS STC AND SHALL BE RETURNED ALONG WITH ALL COPIES UPON DEMAND. PERKINS SPECIALIZED TRANSPORTATION CONTRACTING.

ELEVATION VIEW	PERKINS SPECIALIZED TRANSPORTATION CONTRACTING	QUOTE #
ACCIONA 3.0MW NACELLE	NORTHFIELD, MN 1-877-PERKINS www.heavyhaul.com	109184
		PROJECT # 500
		WORK ORDER # 3212
		DRAWING # L00A4504-a

CUSTOMER APPROVAL / SIGN-OFF

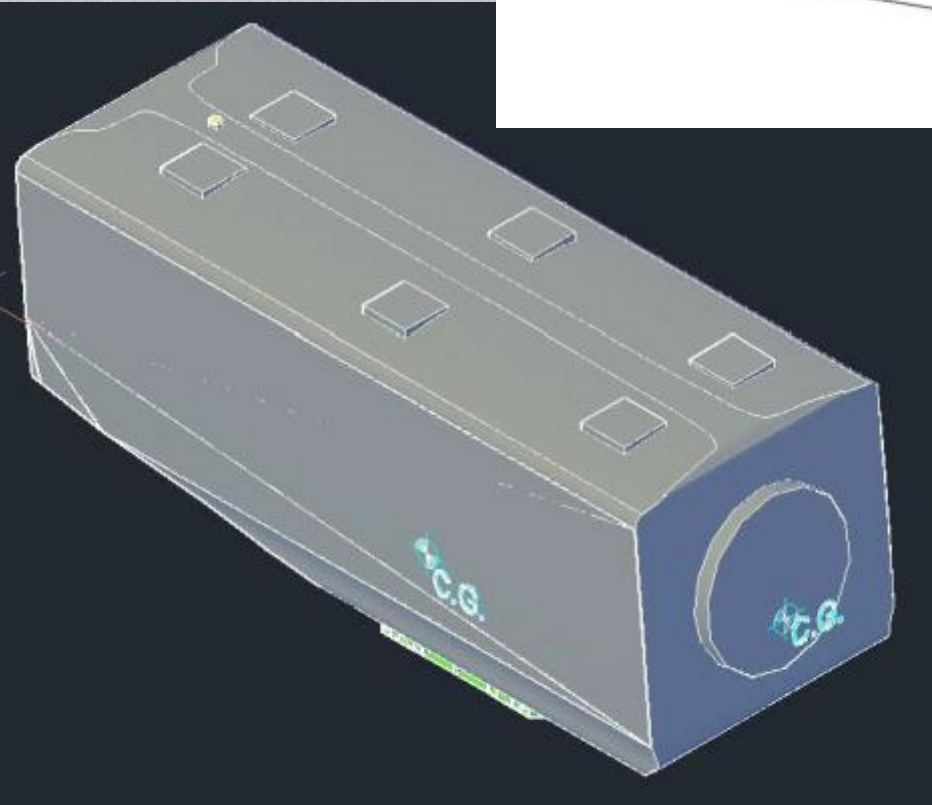
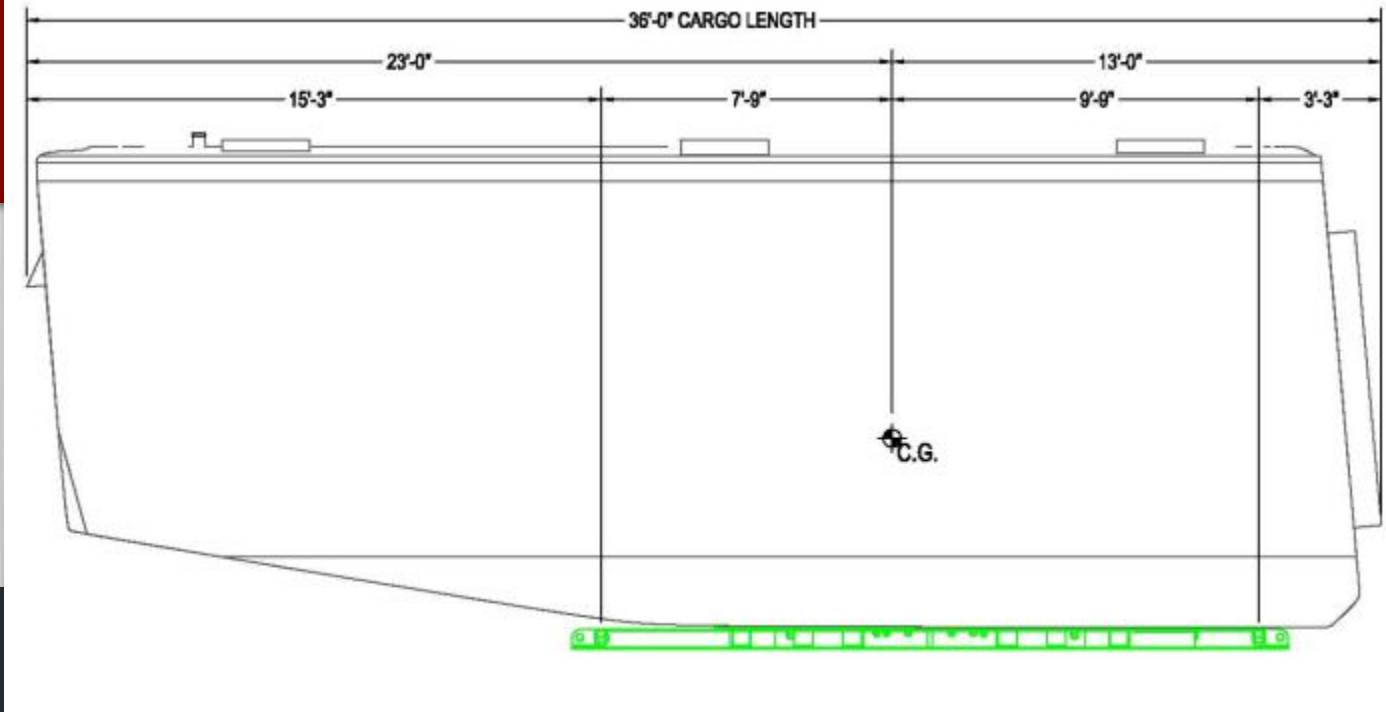
DATE	INITIALS
APPROVE SHIPMENT DIMENSIONS	
APPROVE SHIPMENT WEIGHT	
APPROVE SHIPMENT CENTER OF GRAVITY	
APPROVE METHOD OF TRANSPORT & SHIPMENT SUPPORT AS SHOWN	

NOTES:

REV 1	JCM	DATE: 02/24/16	ADDED # BEAM TO DECK
REV 2	JCM	DATE: 04/28/16	CHANGED TO DOLLY GROUP "B", UPDATED OAL
REV 3	DLD	DATE: 06/16/16	MODIFY SECUREMENT PLATE LOCATIONS

The Cargo, do you know?

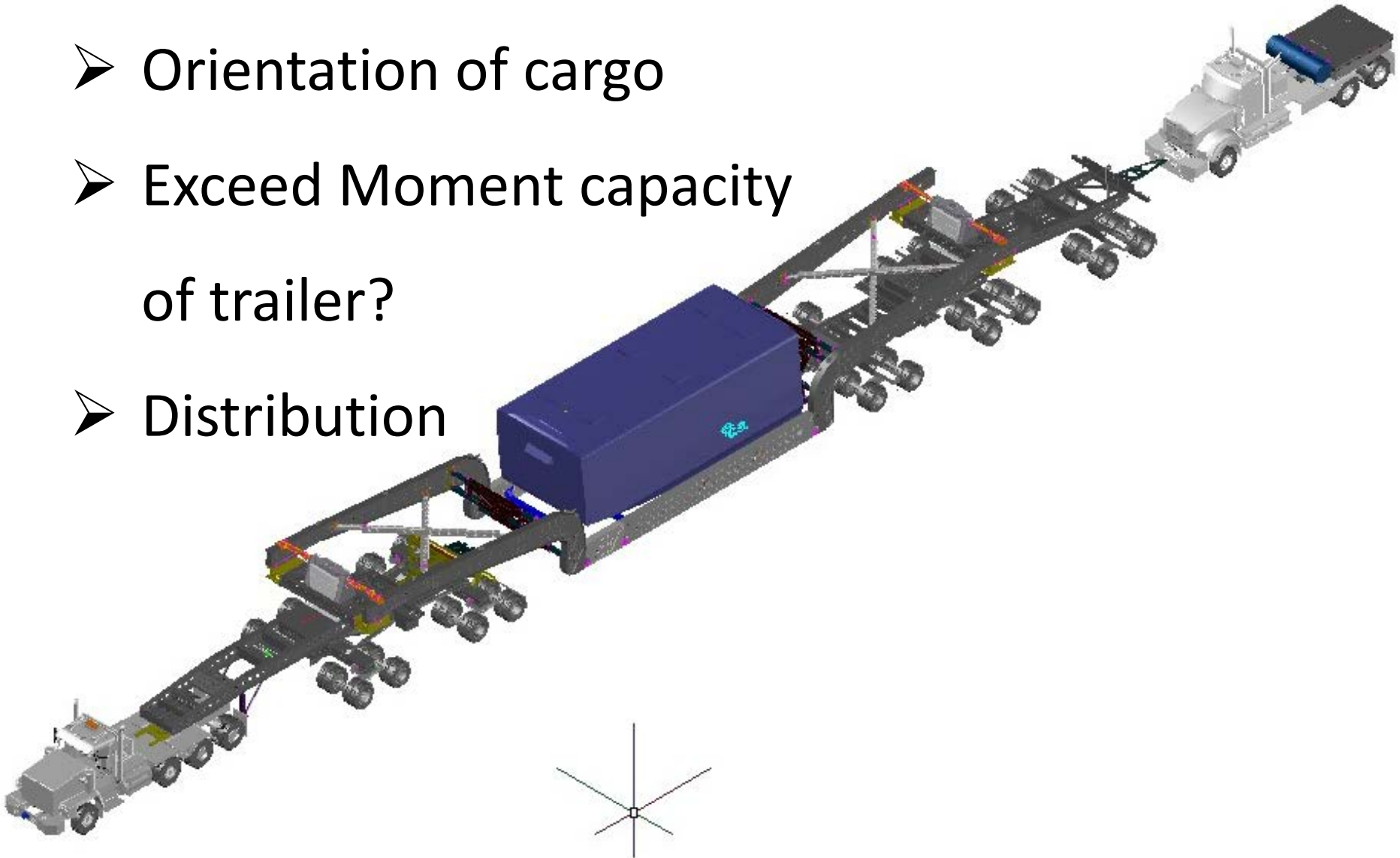
- Overall dimensions?
- Center of gravity?
 - Longitudinal COG?
 - Lateral COG?
- Support points?
- Securement attachment points?



- Securement points
- Eccentric COG
- LL Moment Capacity?

Vehicle Combination

- Orientation of cargo
- Exceed Moment capacity of trailer?
- Distribution



Corridor Planning

- What states are in the route?
- Does every state accept the trailer?
- Does the state have an established process?
- Does each state have defined weight allowances?
- Plan for the most restrictive state in the route?
- Does a dimension or GVW trigger a different permit category?

Drawing Preparation

- Does the state have a specific form?
- Does the state require specific drawing details?
 - Axle track?
 - Axle & Tire profile?
 - Tare weight & LL by axle? By Group?
 - View arrangement?
 - Imperial and / or metric units?

[illegible]

PERKINS
STC ...WHEN EXECUTION
MATTERS MOST

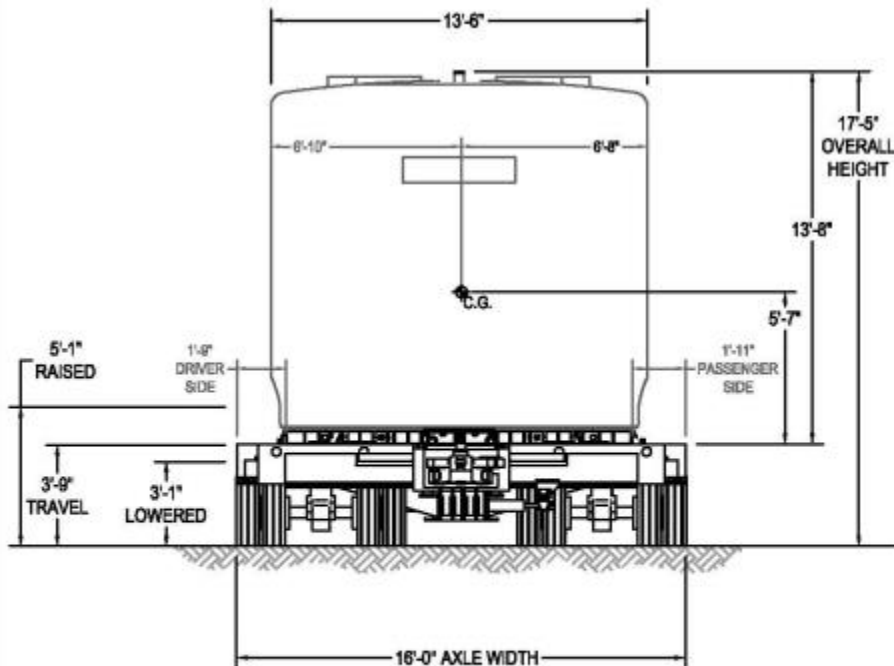
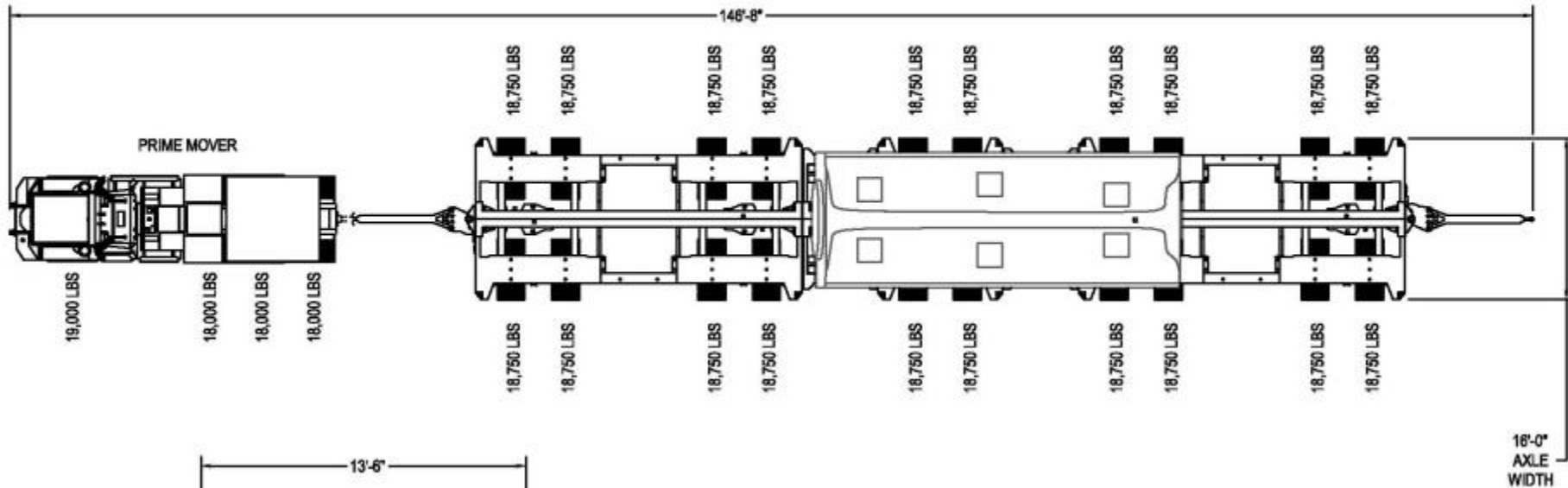
<u>CUSTOMER</u>	<u>SHIPMENT DESCRIPTION</u>	<u>PERMIT INFORMATION</u>
ACCIONE WINDPOWER	LENGTH 36' 0"	LENGTH 146' 0"
NORTH AMERICA	WIDTH 13' 0"	WIDTH 16' 0"
601 FAWCETT DR	HEIGHT 13' 0"	HEIGHT 17' 0"
WEST BRANCH, IA	WEIGHT 244,945 LBS	REAR O.H. 00' 00"
52358	JOB NO. -	WEIGHT SEE ABOVE
BJ DYKSTRA	MOD NO. -	
TEL. 319-643-8463	MARK NO. -	
FAX:	PREPARED BY: JME	DATE: 03-28-16
CELL: 391-541-7556	REVIEWED BY: JCM	DATE: 03-29-16
bdykstra@accione-na.com	APPROVED BY: -	DATE: -
		SCALE NONE

ELEVATION VIEW: ACCIONA (SAN ROMAN WIND) - NACELLE	
PERKINS SPECIALIZED TRANSPORTATION CONTRACTING NORTHFIELD, MN 1-877-PERKINS www.heavynaul.com	QUOTE # 109158 PROJECT # 503-000 WORK ORDER # 3215 DRAWING # L00A4434

DUAL LANE LOADING
GROSS VEHICLE WEIGHT = 448,000 LBS

V 1	-	DATE:-	-
V 2	-	DATE:-	-
V 3	-	DATE:-	-

PERKINS SPECIALIZED TRANSPORTATION LAYOUT



DUAL LANE LOADING

TOTAL RIGHT FILE	187,500 LBS
TOTAL CENTER FILE	73,000 LBS
TOTAL LEFT FILE	187,500 LBS
TOTAL GVW	448,000 LBS
PUSH TRACTOR	N/A
TOTAL GVW WITH PUSH TRACTOR	448,000 LBS



WHEN EXECUTION
MATTERS MOST

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ORIGIN INFORMATION		DESTINATION INFORMATION	
SHIPPER:		CONSIGNEE:	
ADDRESS:		ADDRESS:	
CITY/ST: BROWNSVILLE, TX		CITY/ST: RIO HONDO, TX	
ZIP:		ZIP:	
CONTACT:		CONTACT:	
TEL NUM:		TEL NUM:	
FAX NUM:		CELL NUM:	
CUSTOMER		SHIPMENT DESCRIPTION	PERMIT INFORMATION
ACCIONA WINDPOWER		LENGTH 38' 00"	LENGTH 146' 08"
NORTH AMERICA		WIDTH 13' 06"	WIDTH 16' 00"
801 FAIRCETT DR		HEIGHT 13' 06"	HEIGHT 17' 06"
WEST BRANCH, IA		WEIGHT 244,945 LBS	REAR O.H. 10' 00"
52356		JOB NO. -	WEIGHT SEE ABOVE
BJ DYKSTRA		MOD NO. -	
TEL: 319-843-8483		MARK NO. -	
FAX:		PREPARED BY: JME	DATE: 03-26-16
CELL: 381-541-7586		REVIEWED BY: JCM	DATE: 03-26-16
APPROVED BY: -		DATE: -	
PLAN & END VIEWS: ACCIONA (SAN ROMAN WIND) - NACELLE			
PERKINS SPECIALIZED TRANSPORTATION CONTRACTING		QUOTE #	109158
NORTHFIELD, MN		PROJECT #	863-000
1-877-PERKINS		WORK ORDER #	3215
www.heavyhaul.com		DRAWING #	L00A4434-b

REV 1	-	DATE: -	-
REV 2	-	DATE: -	-
REV 3	-	DATE: -	-

Challenges

- States that don't have defined process?
- Limited staff to analyze route?
- Cities & Counties may not have staff to properly vet local routing
- Does every state allow corridor movement?
- Does the state have a process for analyzing out of gauge combinations?

Challenges (Cont'd)

- Bridge or route geometrics come first?
- Route development in timely manner to coordinate utilities?
- Inaccurate cargo data?
- Permit release in timely manner to coordinate patrol?
- Construction re-routes?

Extra-Legal Shipments...



PERKINS
STC

Extra-Legal Shipments...





Extra-Legal Shipments...



Extra-Legal Shipments...





Extra-Legal Shipments...



Recommendations

- Measure and weigh your trailer,
- Understand trailer variables (sliding locations)
- Research cargo prior to submitting permits
- Contact each state & understand process
- Create generic drawings (or tables) that are easily duplicated
- Develop database with state processes & documentation



Contact Information

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www.perkinsstc.com

...when execution matters most