

US Department of Energy

Transportation External Working Group (TEC)

Heavy Transport Presentation

Presented

By

EDWARDS

MOVING & RIGGING, INC.



What kind of projects do we do?

Heavy Transport



This 385,000 lb. transformer was moved 80 miles over 24 bridges on our dual lane transformer.

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A large yellow cylindrical object, likely a steam turbine generator (STG), is being lifted by a blue gantry crane. The crane is supported by four white vertical columns. The object is suspended by several thick cables. In the background, a red lattice crane is visible against a cloudy sky. The scene is a construction site with various structures and equipment.

Heavy Rigging

Using our 500 Ton gantry to place a 580,000 lb. STG
on an elevated 18 ft. foundation.

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Focus today is Heavy Transport





425,000 lb. Siemens turbine transported on 15 line of platform trailer.

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A large, white, rectangular GE turbine is being transported on a multi-axle trailer. The turbine is mounted on a red metal frame. The trailer has multiple sets of wheels and is being pulled on a paved road. In the background, there is a construction site with a concrete pump truck and other equipment. The sky is clear and blue.

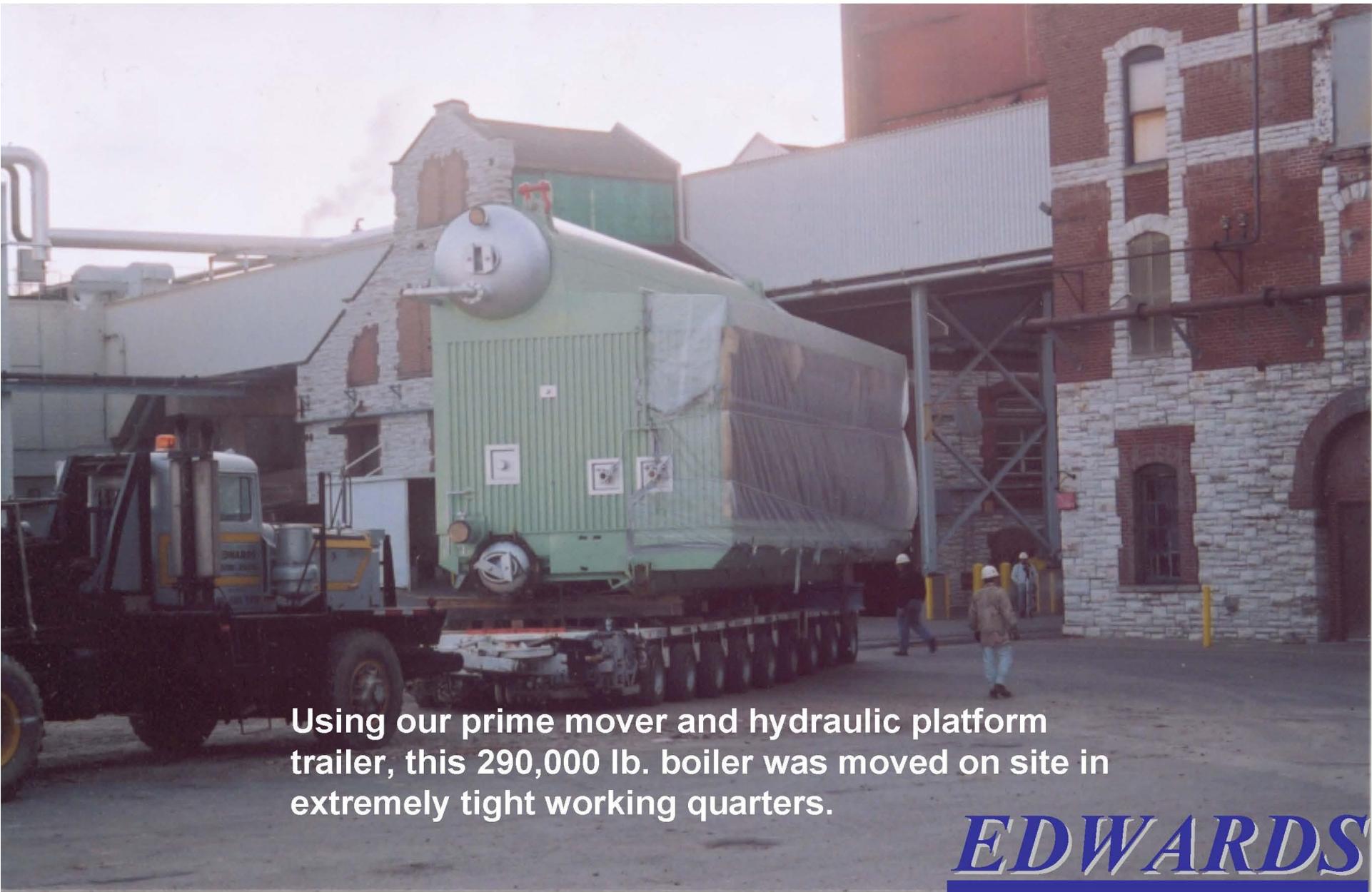
GE turbine 295,000 lb. (1 of 10 pieces) moved and set on foundation for a new plant.

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A 420,000 lb. Alstom transformer is unloaded from a barge on the Ohio River using 15-lines of Goldhofer.

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Using our prime mover and hydraulic platform trailer, this 290,000 lb. boiler was moved on site in extremely tight working quarters.

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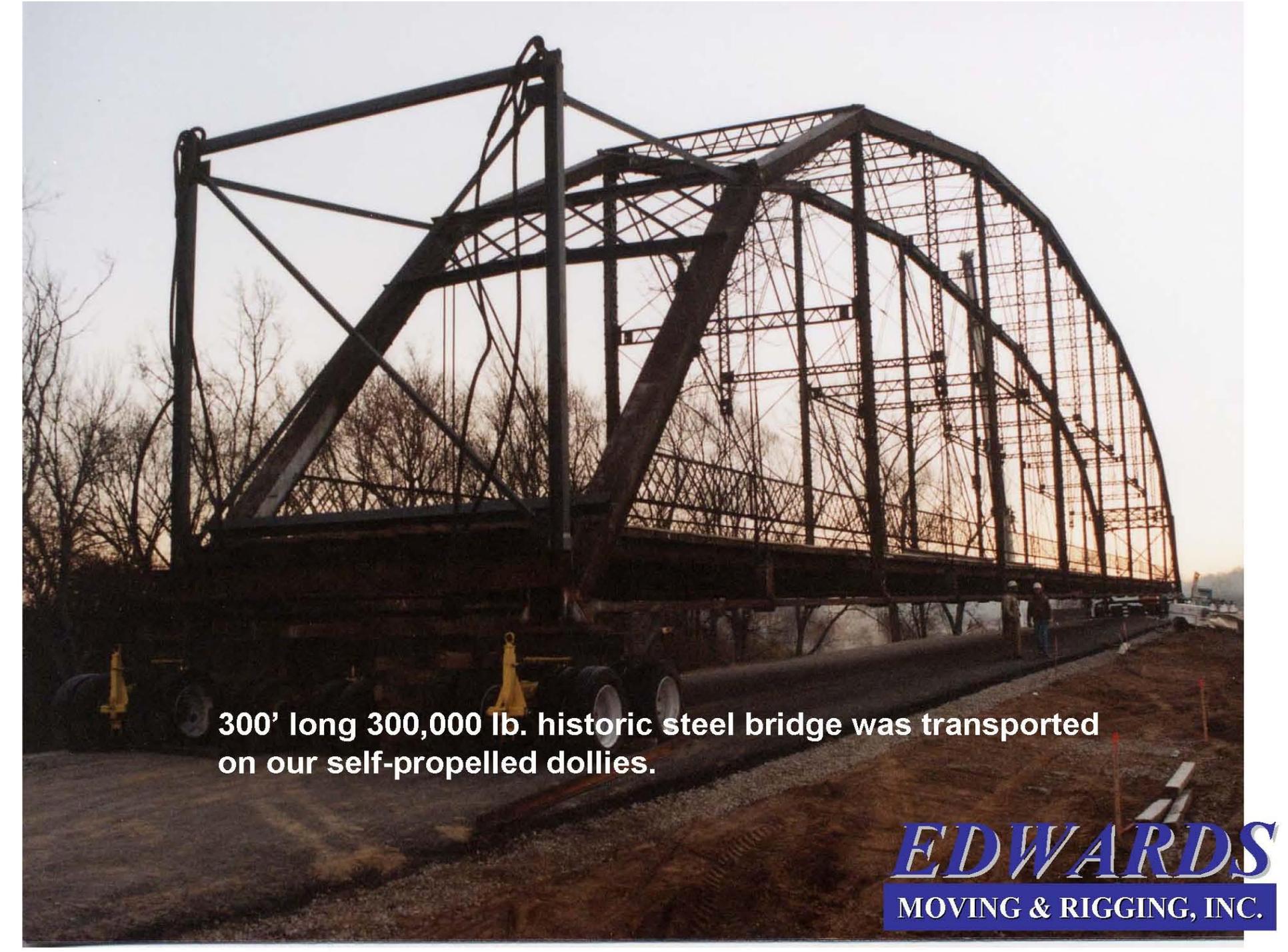


416,400 lb. boiler drum moved on 18 lines of platform trailer to protect concrete floor. Our platform trailer's extensive steering capabilities were utilized to navigate the limited work area.



380,000 lb. press crown, 1 of 3 units unloaded off barge using 9 lines of our hydraulic platform trailer, prime mover and barge ramps, for Saturn Automotive Plant.

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300' long 300,000 lb. historic steel bridge was transported on our self-propelled dollies.

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SANSVILLE KY. LOUISVILLE KY.

800-404-6064



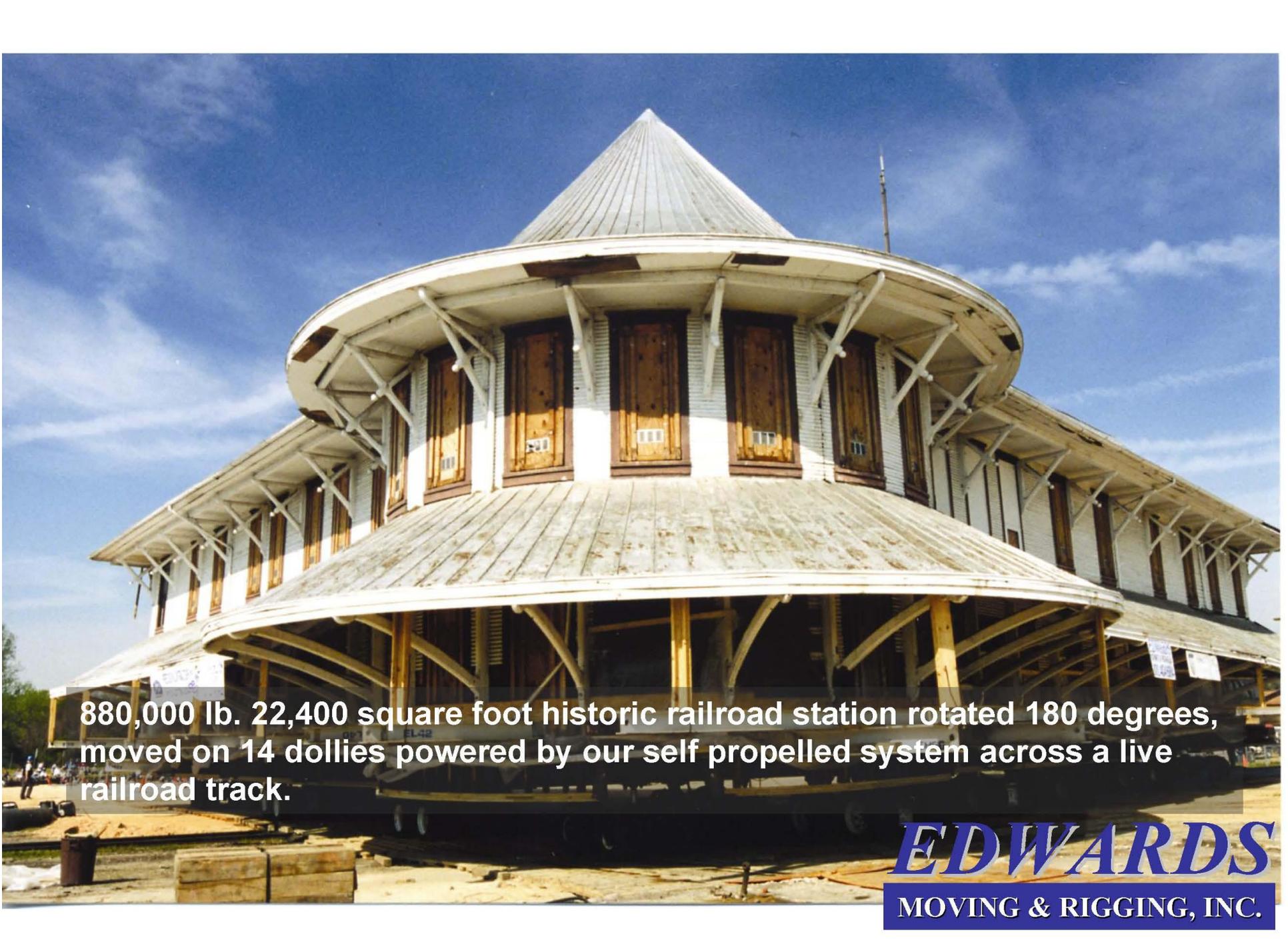
540,000 lb. historic locomotive moved on self-propelled dollies 1 ½ miles through inner city streets.

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This 55' X 50' drum weighing 200,000 lbs. was moved using our self-propelled dollies.

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880,000 lb. 22,400 square foot historic railroad station rotated 180 degrees, moved on 14 dollies powered by our self propelled system across a live railroad track.

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This 88' x 100' solid masonry restaurant, with tile roof, weighing 620 tons was banded and lifted off a slab floor and moved on 18 dollies across an asphalt parking lot, then rotated 180 degrees to set on a new foundation.

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“These guys
can move
anything”



Movement of Hazardous Cargo

Major Plant Components & Casks





10.21.2005 14:52

Shipment by Road





10.21.2005 10:31

Shipments by Barge





Logistical Study



- Route Surveys
- Permit Requirements
- Bridges and Overpass Study
- Police and Escort Requirements
- Traffic Patterns and Controls
- Load Securement

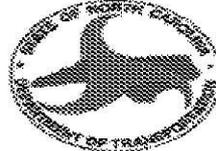


Route Survey

Permit Requirements

FAXSR: NCDOT PERMIT UNIT Page 1

DOT Division of Highways Permit #707100W0071



Valid From: 7/12/2007 to 7/21/2007

Issued to:
EDWARDS MOVING AND RIGGING INC
2695 AIKEN RD
SHELBYVILLE, KY 40065

Phone: **502.772.5530** State Fee: \$ **1,020.00**
Sent by: Fax - **502.722.8093**

Load Description: **OTHER - TRANSFORMER**

Power Unit: **TRUCK-TRACTOR**

License: **9NS016(KY)**

Registered weight: **80,000** VIN: **05614** Escorts: **3**
Axles: **15**

Vehicle 2: **SEMI-TRAILER**

License: **NO TAG(N/A)**

Dimensions - Length: **145'6"** Width: **11'10"** Height: **17'11"** Trailer: Overhang - Front: **NONE** Rear: **NONE**

VEHICLE(S) MUST BE PROPERLY LICENSED FOR MAXIMUM WEIGHT ALLOWED BY LAW

Gross Weight: **456,336**

Axle: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Weight: **18000 21000 21000 33028 33028 33028 33028 33028 33028 33028 33028 33028 33028 33028 33028**

Spacing: **15'8" 5'5" 26'1" 4'11" 4'11" 4'11" 4'11" 4'11" 37'2" 4'11" 4'11" 4'11" 4'11" 4'11"**

From: **DURHAM**

To: **DURHAM COUNTY**

Permit does not authorize travel on routes beyond "From", point of origin or "To", destination specified.

Via Routes: **FROM A POINT AT THE JCT OF DURHAM CO SR1838/JUNCTION RD & NC98/HOLLOWAY ST TO NC98 EAST SR1900 TO A POINT ON SR1900/COLEY RD**

MOVER USING A TRACTOR AND TRUNION. WEIGHT FOR THE TRUNION IS PER LINE (2 AXLES PER LINE) RATHER THAN PER AXLE. TOTAL NUMBER OF AXLES IS 27.

Permits issued by the Department of Transportation do not authorize travel on city streets, such authority must be obtained from the city/municipality prior to movement of permitted load.

Issuance of a permit by the NCDOT does not imply nor guarantee the clearance of width or height along permitted route of travel. It is the responsibility of permit holder to check route prior to travel thereon.

Permittee to follow all detours authorized by DOT or law enforcement. Use extreme safety precautions and obey posted speed limits while traveling into or through all DOT authorized construction workzones.

Permit not valid when: visibility is less than 500 feet; highway covered with ice or snow; wind gusts exceed 25 MPH or travel conditions are considered unsafe by the Division of Highways or law enforcement having jurisdiction.

The commodity being transported is to be so loaded or reduced to the least possible dimension and/or weight prior to application for an overdimension and/or overweight permit.

Dimensions and/or weights different from those stated on the permit shall not eliminate the escort requirement indicated on this document. Escort vehicle(s) shall be equipped with: flashing amber lights, rotating sealed beam or strobe, minimum 5 inch diameter base and a minimum 4 inch lens height to be mounted on top of escort vehicle, display a banner, yellow or orange in color, mounted on bumper or roof bearing the legend "WIDE LOAD" or "OVERSIZED LOAD" in black (10 inch X 1 1/2 inch) brush stroke lettering visible from front or rear as required by location of escort.

Effective July 1, 2003, all escort vehicle operators are required to obtain an approved certification prior to performing the duties of an oversize/overweight load escort vehicle operator in North Carolina.

Power unit and escort Vehicle must maintain radio contact and burn headlamps during movement.

Escort vehicle/transporters shall monitor trailing traffic build up and pull to the roadside periodically as the opportunity arises to allow line of traffic to clear.

Escort must be a truck (single vehicle) of not less than 1/4 ton rated load capacity but not more than 17,000 lbs GVWR or a single vehicle passenger vehicle of not less than 2,000 lbs gross weight.

Escort vehicle shall display on both sides of vehicle placards/identification sign measuring 8 inch by 12 inch providing escort company's or individual's name, address, and telephone number.



Police Escort Requirements







Traffic Patterns and Control



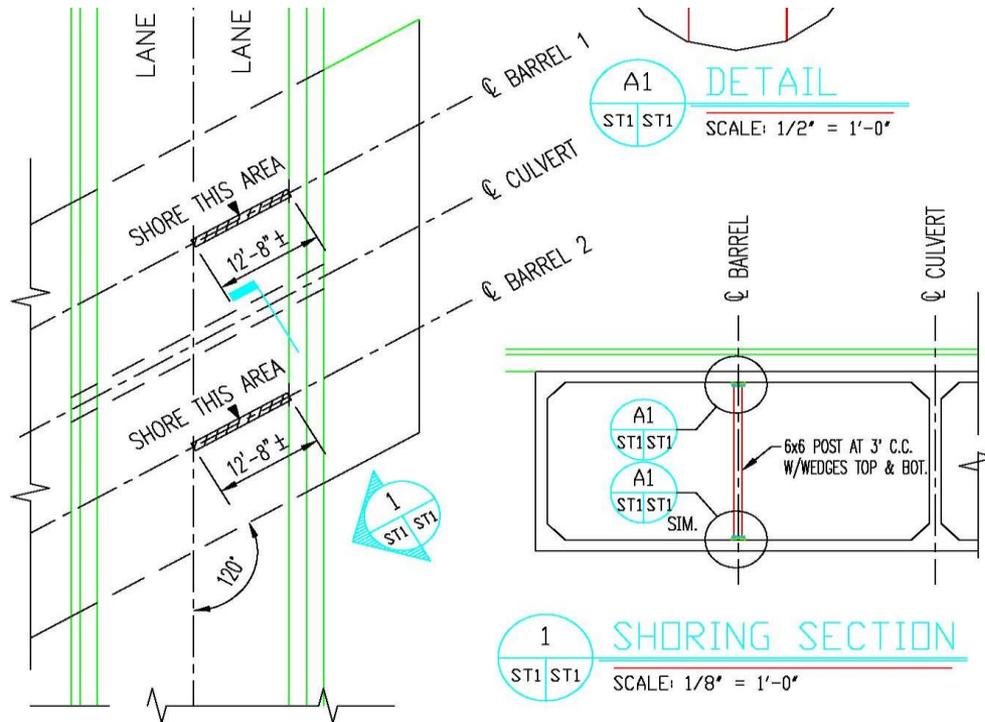


Jumping a 15 Ton Weight Limited Bridge



Permit Requirements

This load required shoring of multiple culverts



CULVERT AT 120° SKEW, PLAN VIEW

SCALE: 1/16" = 1'-0"

NOTES:

1. (2) BARREL CULVERT SHOWN.
(3) BARREL CULVERT IS SIMILAR.
2. 120° SKEW ANGLE SHOWN.
OTHER SKEW ANGLES ARE SIMILAR.

JOB NUMBER XXX
SCALE AS NOTED
DRAWN BY ERP
DATE 06/28/2007
SUPERVISOR W. Knapp

EDWARDS MOVING & RIGGING, INC.
2695 AIKEN ROAD, SHELBYVILLE KY 40065
TEL. 800.404.6064 FAX. 502.722.8093

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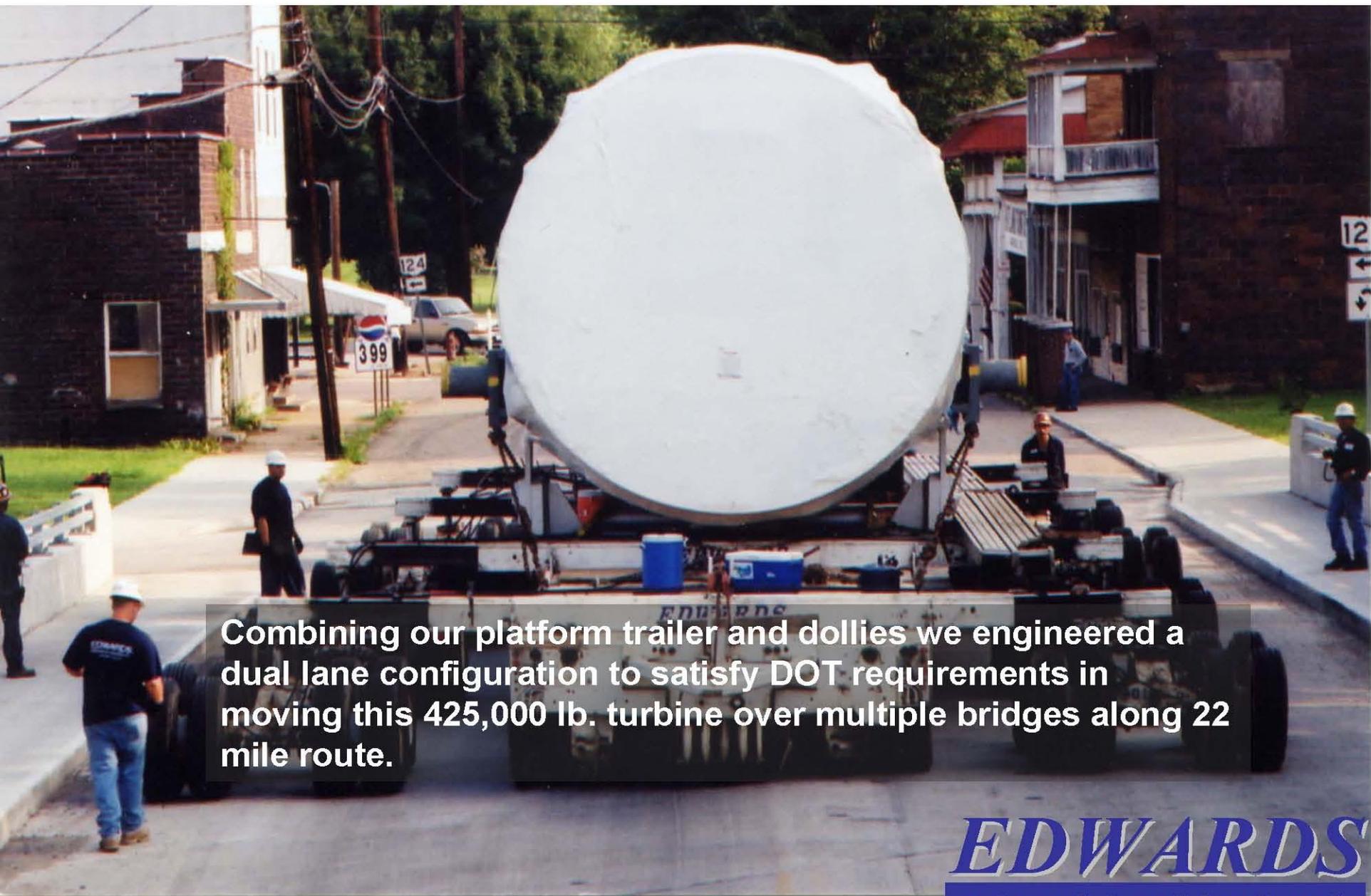
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CULVERT SUPPORT

ST1

EMR Engineered Bridge Supports for 350T Loads





Combining our platform trailer and dollies we engineered a dual lane configuration to satisfy DOT requirements in moving this 425,000 lb. turbine over multiple bridges along 22 mile route.

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For maximum weight distribution Edwards configured a combination 15-line Goldhofer 8 dollie trailer system, to safely move this 560,000 lb. Siemens-Westinghouse generator across one of twenty bridges along a 23.5 mile route. Total permitted weight of 729,150 lb.

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DOCUMENT CONTROL AND TRACKING

- Shipping Manifests Compliant with regulations
- Packaging Requirements
- Clearly Stated Volume
- Number and Types of Packages
- Packing Group
- Placard Requirements





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Qualified Workers

- Specialty training in the area of expertise
- Safety Training
- Drug Testing
- Background checks
- Security Risk Training



Safety Culture

- Knowledge of the work scope
- Knowledge of the materials being handled
- Pre-job briefing
- Peer Checking
- ALARA
- Hazard assessment
- Training programs



Some of the things we are doing to enhance the safety culture

- Pre-employment background screening
- Criminal Background Checks
- Motor Vehicle Records Checks
- Ongoing safety audits conducted in the field
- Random Drug Screening
- Worksite safety analysis
- System that allows employees to notify management of potential hazards
- Full Time Safety and Risk Manager
- Ongoing staff development and training

RELIABLE WORK STANDARDS

- Inspection, testing, and preventive maintenance
- Quality Assurance/Control strategies and plans the ensure ongoing equipment integrity
- Strategic Plans for developing operating procedures and training for personnel





This 370,000 lb boiler was offloaded from barge and placed on pad.

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Multiple Modes of Transportation





OVERSIZE LOAD

EDWARDS

BY 8135



Transfer between Modes of Transport





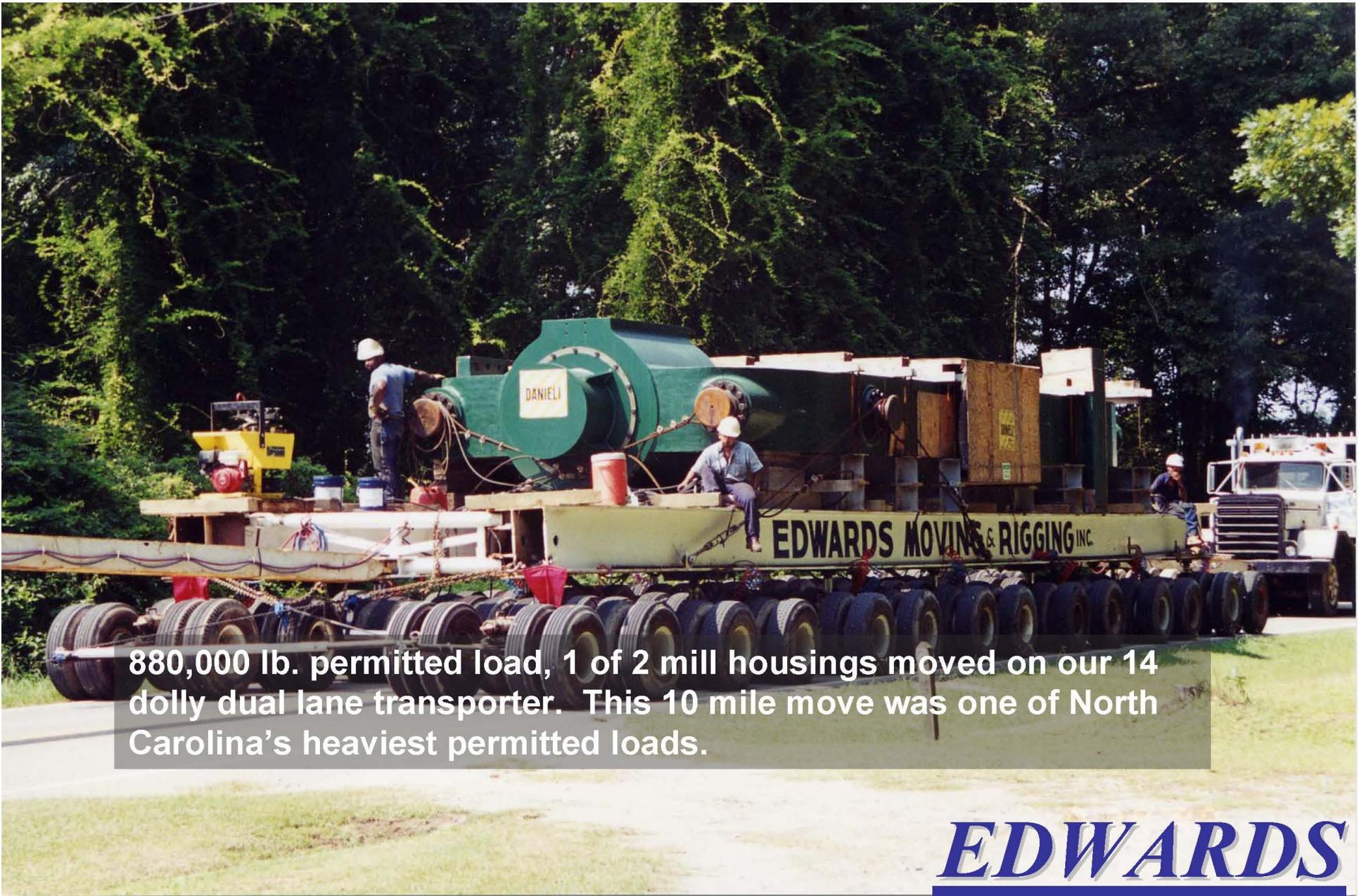
DAWES

EPVC
41-Series

OVERSIZE LOAD

GE Energy Products - Europe





880,000 lb. permitted load, 1 of 2 mill housings moved on our 14 dolly dual lane transporter. This 10 mile move was one of North Carolina's heaviest permitted loads.

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126' long, 24' wide 468,000 lb. bridge was one of three bridges moved 2 miles on 12 of our hydraulic dollies.

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Our 12 dolly transporter, with a gross permitted load of 692,315 lbs. crossing a major interstate overpass.

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