

# Rail to Pad- Transportation and Rigging Considerations

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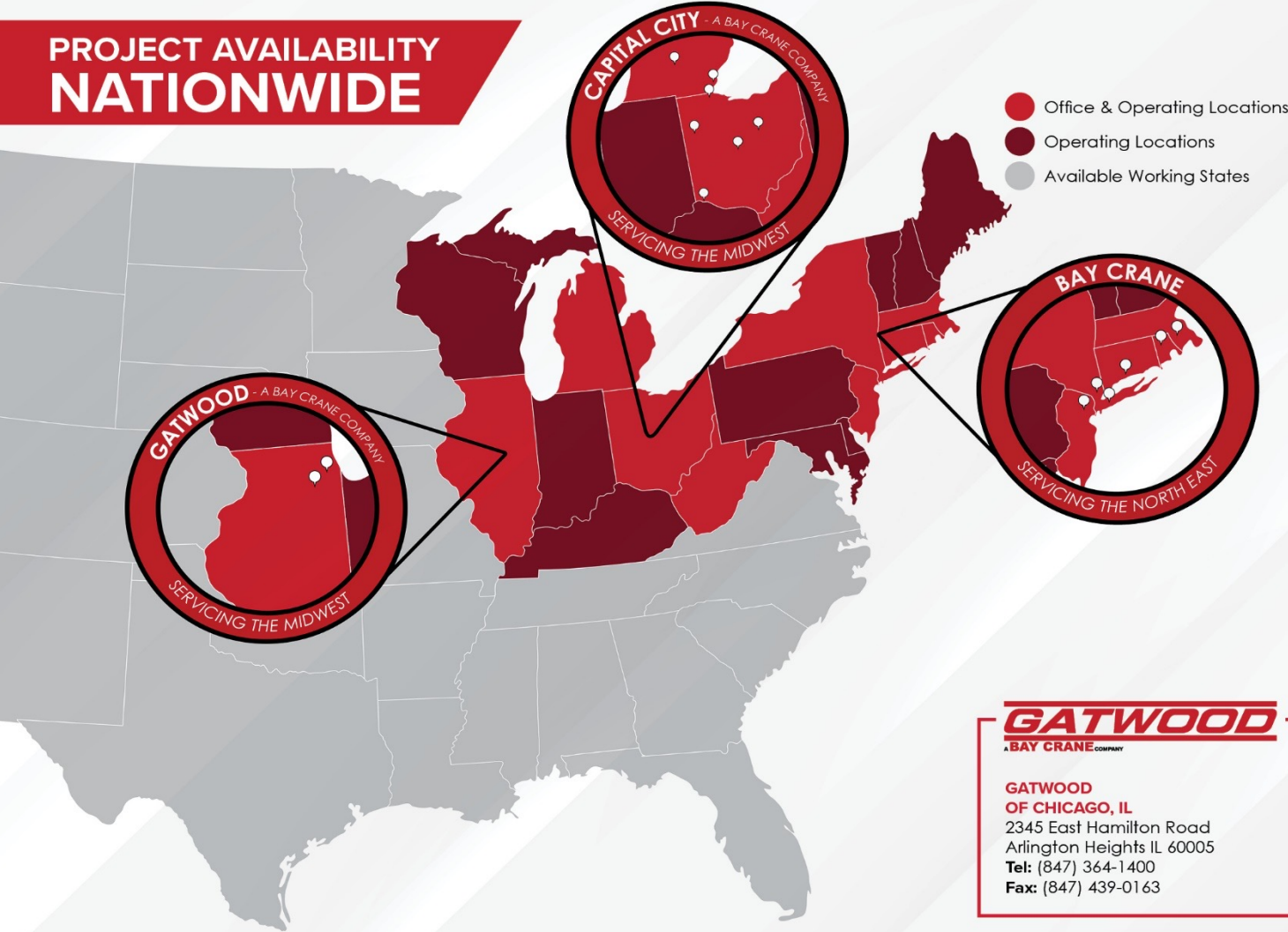
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**CAPITAL CITY**  
BAY CRANE COMPANY



## TERRITORY

### PROJECT AVAILABILITY NATIONWIDE



### BAY CRANE

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### GATWOOD A BAY CRANE COMPANY

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# RAILROAD TRANSPORT CHALLENGES

Finding Nearest Rail Siding (NRS) and coordinating transfer and offloading

- Clearances and limited/maintaining Infrastructure
  - Height/Width pending region
  - Increase Clearance
  - Scrutiny- Weight
  - Larger Rail Cars Required: 8, 12, 16, 20, and 36 axle railcars
- Reduction of Rail Crews and Power
  - More unforeseen delays in ETA
  - Longer Car Trains, limited space for OD Loads
  - Special trains



# RAILROAD TRANSPORT CHALLENGES

- Limited and reduction of rail sidings/
  - Rail sidings eliminated due to cost of maintaining
  - Rail Yards and Industry are more restrictive due to liability and usage
  - Leasing Costs have sky-rocketed due to awareness of shortage



# BARGE TRANSPORT CHALLENGES

- Limited Access-Offloading Egress
- Lock Delays and Traffic
- Flooding / Water Level
- Securing and Ballasting Critical



# OVER THE ROAD (OTR) CHALLENGES



- Aging Infrastructure
  - Larger Transports required
  - Multiple Government Permits-
  - Tighter Restrictions Pavement / Bridges / Culverts
1. Overhead Issues: Height is Critical for Wires and Structures-Cost Impacts
- Restricted routes
  - Weekend or Night Moves mandates.

# OVER THE ROAD (OTR) CHALLENGES AND COST IMPACTS



## Permits:

- Government Limited DOT Resources
- Engineering: Backlog and Third-Party Resource
- Police Escort availability
- Time Required for approval
- Limited Communications



# CRANE AND RIGGING CONCERNS & ISSUES

- Movement of oiled filled and fully Dressed transformers
- Containment Pits and Tight spacing
- MFC Oversights and inaccuracies
  - Drawing Specs vs Real “ Weight and Dims”
  - Residual Oil left in tank (5%-10%)
- Overhead Clearance-Minimum Approach Distance (MAD)
- Infrastructure awareness- underground
- Ground Stability (New-“Greenfield Project”)





# OTHER RELATED ISSUES THAT IMPACT SAFETY, COST AND DELAYS

- Multi-State moves require more time coordinating permits-No Uniformity from State to State (Escorts, Frost laws, Axle weight limits, etc...)
- Shipping Drawing vs. Actual Dims: Impacts permits/route, lift plans, Rail clearance, etc...
- Actual weight of the transformer vs. shipping weight as the residual oil after drainage: Impacts Lift & Rigging plans- 2000 lbs matters sometimes.
- Transformers moved/transport/lifted with oil (Typical smaller units up to 40 tons) Adds complexity:
  - Lifting a dynamic load
  - Potential Environmental Hazard especially on older fully dressed units where leakage does occur especially around gaskets

# OTHER RELATED ISSUES THAT IMPACT SAFETY, COST AND DELAYS

- Inspection of Transformer upon arrival, confirming ownership of liability for accepting and final placement on foundation
- Feasibility of the jacking pads and lifting lugs after a transformer is fully assembled
- Due to Multiple Carriers from Factory to Pad there is a necessity of multiple (2-3) digital impact recorders to be mounted at origin.
- Air/Nitrogen bottles monitoring.
  - Inspection at the time of pickup
  - Remediation action/steps required if there is no pressure

# OTHER RELATED ISSUES THAT IMPACT SAFETY, COST AND DELAYS

- Touchup paint sent with the accessories is considered Haz-Mat and require a driver with such endorsement. The great majority of the drivers to not have the Haz-Mat endorsement.
- Handling of the accessory's crates at site:
  - Some Utility companies will not allow the off-loading of the crates via crane (PSEG)
  - Poorly crafted box crates could collapse when picked.
  - Preplanned designated area assigned for Accessories important for accessibility to dress and also protection.



# QUESTIONS?



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