Agricultural Products
Unit Train Facility Design Guidelines

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Table of Contents

BNSF Unit Train Economic Development Contacts

Unit Train Process and Agreements

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BNSF Unit Train Development Process

1.) **Identify the site:** If this is a new facility, BNSF can provide assistance with identifying a suitable location and track infrastructure. If repurposing or purchasing an existing facility, BNSF will evaluate the existing infrastructure to ensure it meets the unit train guidelines.

2.) **Develop a facility design:** BNSF will work with you to develop potential track designs and evaluate existing track designs to ensure that they meet the unit train and operational guidelines.

3.) **Get approved:** The concept and business plan will be submitted to BNSF Facility review process. The facility will get a preliminary approval from Operations, Service Design, and Engineering.

4.) **Build:** BNSF will hold an onsite meeting to discuss necessary agreements, rail operations, design, and other project related details.

   a. **Design**: Customer is responsible for hiring a qualified design/engineering firm to produce fully engineered plans. BNSF Engineering will review industry site plans for compliance with BNSF industry track guidelines

   b. **Agreements**: If located on BNSF, Economic Development will work with industry to establish land and track agreements prior to construction in the BNSF right of way.

5.) **Ship:** Once the facility is completed and all agreements are in place, BNSF will perform a final inspection of the track.

If there are any discrepancies between the BNSF Shuttle Train Facility Guidelines and Tariff 4022 the Tariff should be considered the governing authority.

BNSF Shuttle Train Facility Guidelines

Commodities: Corn, cracked corn, wheat, soybeans, peas, barley, flaxseed, lentils, other oilseeds, and milo

These guidelines are for informational purposes only. Specific requirements for a shuttle facility (BNSF direct or offline location) will be determined on a case-by-case basis to ensure that any such facility is designed, constructed, and operated in accordance with BNSF operating and design practices.

Operational Requirements:

- Track length at the customer facility must be sufficient to allow the BNSF or other railroad operator to drop-off and pick-up the entire train in one string.

- Loading/Unloading of the entire unit train must not exceed 15 hours.

Design Guidelines:

Track construction and technical design elements are outlined in the 'Guidelines for Industrial Track Projects'. This document can be found on the BNSF website at http://www.bnsf.com/ship-with-bnsf/ways-of-shipping/pdf/indytrkstds.pdf#page=10

1.) Minimum of 7,500 feet of clear track with recommendation of 8,000 feet; includes room for a shuttle of 110 hoppers (62' in length) or 120 hoppers (56' in length) and 4 BNSF locomotives (75' in length). Actual footage requirement may increase if more locomotives are needed based on site location.

2.) Locomotive storage – must have a dedicated track for private switch engine and BNSF locomotive storage for non-loop track designs. Multiple derails may be required per BNSF Industry Track Guidelines.

3.) Setout Track – Facility must have a dedicated track for bad orders or rejected equipment (minimum 300' of clear track) with derail protection to provide blue flag protection for mechanical inspectors.

4.) Unit and Manifest Volume – In the event manifest is being requested, the facility must have separate Unit Train and Single Car tracks that can be accessed by BNSF independently from one another.

5.) Mainline & Facility Turnouts – All main line and facility turnouts will be a minimum No. 11 turnout. Track design will allow access to BNSF mainline in both directions (2 switches; geography may increase switch type, size, and requirement for switch heater).

6.) Facility Lighting – Facility lighting may be required depending on location.

7.) Arrival/Departure – Due to revised FRA Airbrake and Train Handling Rules, outbound trains are required to have an airbrake inspection on both sides of the train. New shuttle projects will be required to have a minimum 13' inspection road on one side and a minimum 8.5' walkway on the other.

8.) Crew Van Turnaround - Crew drop off location needs to be near a mainline switch and provide ability for vehicle to make a continuous turn if land can be acquired to avoid three-point turns.

9.) Profile Grade & Curvature - Track profile grades shall be limited to a maximum of 0.5%. Other restrictions may be defined for individual projects. Maximum degree of curve shall not exceed 7°30' (764.49' radius). Additional details can be found in the Industrial track guidelines.

Additional Guidelines:

1.) All public or private crossings that the unit train will block during loading/unloading must be permanently closed. Temporary closures will be considered on a case-by-case basis and will require 250 ft additional track each side to allow for visible setback clearance in the event the crossing has to be cut. BNSF will require a copy of the closure agreement from the governing authority of the affected crossing(s) – state, county, township, city, etc.

2.) For work within 25 feet of the BNSF Mainline Track (clearance from the centerline of mainline), the industry will be responsible for cost of BNSF Flagging services. The customer/contractor should discuss Flagging Service requirements with the BNSF Roadmaster, estimating how many hours/days construction will be within the 25-foot clearance limits.

3.) Use of BNSF locomotives for loading/unloading is subject to BNSF approval and a signed use agreement.

4.) All Unit Train and Shuttle projects on Shortlines are subject to these requirements and a separate case-by-case approval process.

Loading and Unloading Incentives

Additional incentives are available for processing the train in. Details can be found in the 4022 tariff at www.bnsf.com :

A.) Origin Efficiency Payments: Item 13500
B.) Destination Efficiency Payments: Item 13501
C.) Reload incentive: Item 13502

BNSF Unit Train Facility Guidelines

Commodities: Ethanol

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Operational Requirements:

- Track length at the customer facility must be sufficient to allow the BNSF or other railroad operator to drop-off and pick-up the entire train in one string.

- Loading/Unloading of the entire unit train must not exceed 24 hours.

Design Guidelines:

Track construction and technical design elements are outlined in the 'Guidelines for Industrial Track Projects'. This document can be found on the BNSF website at http://www.bnsf.com/ship-with-bnsf/ways-of-shipping/pdf/indytrkstds.pdf#page=10

1.) Minimum of 6,900 feet of clear track with recommendation of 7,500 feet; includes room for 96 ethanol tanks, 2 buffer cars (62' in length) and 4 BNSF locomotives (75' in length). Actual footage requirement may increase if more locomotives are needed based on site location, if track is also utilized for corn shuttles or DDG unit trains, or if empties are to be stored on site.

2.) Locomotive storage – must have a dedicated track for private switch engine and BNSF locomotive storage for non-loop track designs. Multiple derails may be required per BNSF Industry Track Guidelines.

3.) Setout Track – Facility must have a dedicated track for bad orders or rejected equipment (minimum 300' of clear track) with derail protection to provide blue flag protection for mechanical inspectors.

4.) Unit and Manifest Volume – In the event manifest is being requested, the facility must have separate Unit Train and Single Car tracks that can be accessed by BNSF independently from one another.

5.) Mainline & Facility Turnouts – All main line and facility turnouts will be a minimum No. 11 turnout. Track design will allow access to BNSF mainline in both directions (2

switches; geography may increase switch type, size, and requirement for switch heater).

6.) Facility Lighting – Facility lighting may be required depending on location.

7.) Arrival/Departure – Due to revised FRA Airbrake and Train Handling Rules, outbound trains are required to have an airbrake inspection on both sides of the train. New shuttle projects will be required to have a minimum 13' inspection road on one side and a minimum 8.5' walkway on the other.

8.) Crew Van Turnaround - Crew drop off location needs to be near a mainline switch and provide ability for vehicle to make a continuous turn if land can be acquired to avoid three-point turns.

9.) Profile Grade & Curvature - Track profile grades shall be limited to a maximum of 0.5%. Other restrictions may be defined for individual projects. Maximum degree of curve shall not exceed 7°30' (764.49' radius). Additional details can be found in the Industrial track guidelines.

Additional Guidelines:

1.) Ethanol storage tracks must be 50’ from main track and loading/unloading must be 100’ from main track.

2.) All public or private crossings that the unit train will block during loading/unloading must be permanently closed. Temporary closures will be considered on a case-by-case basis and will require 250 ft additional track each side to allow for visible setback clearance in the event the crossing has to be cut. BNSF will require a copy of the closure agreement from the governing authority of the affected crossing(s) – state, county, township, city, etc.

3.) For work within 25 feet of the BNSF Mainline Track (clearance from the center-line of mainline), the industry will be responsible for cost of BNSF Flagging services. The customer/contractor should discuss Flagging Service requirements with the BNSF Roadmaster, estimating how many hours/days construction will be within the 25-foot clearance limits.

4.) All Unit Train and Shuttle projects on Shortlines are subject to these requirements and a separate case-by-case approval process.

BNSF Unit Train Facility Guidelines

Commodities: DDG, Oilseed Meals, and Cottonseed

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Operational Requirements:

- Track length at the customer facility must be sufficient to allow the BNSF or other railroad operator to drop-off and pick-up the entire train in one string.

Design Guidelines:

Track construction and technical design elements are outlined in the 'Guidelines for Industrial Track Projects'. This document can be found on the BNSF website at http://www.bnsf.com/ship-with-bnsf/ways-of-shipping/pdf/indytrkstds.pdf#page=10

1.) Minimum of 8,000 feet of clear track; includes room for 100 cars (70' in length) and 4 BNSF locomotives (75' in length). Actual footage requirement may increase if more locomotives are needed based on site location.

2.) Locomotive storage – must have a dedicated track for private switch engine and BNSF locomotive storage for non-loop track designs. Multiple derails may be required per BNSF Industry Track Guidelines.

3.) Setout Track – Facility must have a dedicated track for bad orders or rejected equipment (minimum 300' of clear track) with derail protection to provide blue flag protection for mechanical inspectors.

4.) Unit and Manifest Volume – In the event manifest is being requested, the facility must have separate Unit Train and Single Car tracks that can be accessed by BNSF independently from one another.

5.) Mainline & Facility Turnouts – All main line and facility turnouts will be a minimum No. 11 turnout. Track design will allow access to BNSF mainline in both directions (2 switches; geography may increase switch type, size, and requirement for switch heater).

6.) Facility Lighting – Facility lighting may be required depending on location.

7.) Arrival/Departure – Due to revised FRA Airbrake and Train Handling Rules, outbound trains are required to have an airbrake inspection on both sides of the train. New

shuttle projects will be required to have a minimum 13' inspection road on one side and a minimum 8.5' walkway on the other.

8.) Crew Van Turnaround - Crew drop off location needs to be near a mainline switch and provide ability for vehicle to make a continuous turn if land can be acquired to avoid three-point turns.

9.) Profile Grade & Curvature - Track profile grades shall be limited to a maximum of 0.5%. Other restrictions may be defined for individual projects. Maximum degree of curve shall not exceed 7°30' (764.49' radius). Additional details can be found in the Industrial track guidelines.

Additional Guidelines:

1.) All public or private crossings that the unit train will block during loading/unloading must be permanently closed. Temporary closures will be considered on a case-by-case basis and will require 250 ft additional track each side to allow for visible setback clearance in the event the crossing has to be cut. BNSF will require a copy of the closure agreement from the governing authority of the affected crossing(s) – state, county, township, city, etc.

2.) For work within 25 feet of the BNSF Mainline Track (clearance from the center-line of mainline), the industry will be responsible for cost of BNSF Flagging services. The customer/contractor should discuss Flagging Service requirements with the BNSF Roadmaster, estimating how many hours/days construction will be within the 25-foot clearance limits.

3.) Use of BNSF locomotives for loading/unloading is subject to BNSF approval and a signed use agreement.

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BNSF Unit Train Facility Guidelines

Commodities: Fertilizer

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Operational Requirements:

- Track length at the customer facility must be sufficient to allow the BNSF or other railroad operator to drop-off and pick-up the entire train in one string.

- Loading/Unloading of the entire unit train must not exceed 24 hours.

Design Guidelines:

Track construction and technical design elements are outlined in the 'Guidelines for Industrial Track Projects'. This document can be found on the BNSF website at http://www.bnsf.com/ship-with-bnsf/ways-of-shipping/pdf/indytrkstds.pdf#page=10

1.) Minimum of 6,900 feet of clear track; includes room for up to 100 hoppers or tanks (62' in length) and 4 BNSF locomotives. Actual footage requirement may increase if more locomotives are needed based on site location.

2.) Locomotive storage – must have a dedicated track for private switch engine and BNSF locomotive storage for non-loop track designs. Multiple derails may be required per BNSF Industry Track Guidelines.

3.) Setout Track – Facility must have a dedicated track for bad orders or rejected equipment (minimum 300' of clear track) with derail protection to provide blue flag protection for mechanical inspectors.

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Additional Guidelines:

1.) All public or private crossings that the unit train will block during loading/unloading must be permanently closed. Temporary closures will be considered on a case-by-case basis and will require 250 ft additional track each side to allow for visible setback clearance in the event the crossing has to be cut. BNSF will require a copy of the closure agreement from the governing authority of the affected crossing(s) – state, county, township, city, etc.

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