

Bridge Inspection Report

Bedford 189/121

Date of Inspection: 03/05/2010
Date Report Sent: 6/1/2010
 Picture taken during inspection
Owner: Turnpike Bureau, NHDOT

US 3
Over
FEE TPK

Recommended Postings:

Weight: No Posting Required

Weight Sign OK

Width: Not Required

Width Sign OK

Primary Height Sign Recommendation: *None*
Optional Centerline Height Sign Rec: *None*

Clearances: Over:
(Feet) Under: 16.50
Route:

Height Signs OK

Condition: State Redlist

Deck: 4 Poor

Superstructure: 6 Satisfactory

Substructure: 4 Poor

Culvert: N N/A (NBI)

Structure Type and Materials:

Number of Spans Main Unit: 2

Number of Approach Spans: 0

Main Span Material and Design Type

Steel Multiple Beam

Sufficiency Rating: 10.6%

NBI Status: Structurally Deficient

Bridge Rail: Substandard
Rail Transition: Substandard
Bridge Approach Rail: Substandard
Approach Rail Ends: Substandard

NH Bridge Type: I Beams w/ Concrete Deck
Deck Type: Concrete, Cast in Place
Wearing Surface: Bituminous
Membrane: Other
Deck Protection: None
Pavement thickness: Not Applicable
Curb Reveal: 7.5 in
Plan Location: B-4

Bridge Dimensions:

Length Maximum Span: 72.0 ft
Left Curb/Sidewalk Width: 5.0 ft
Width Curb to Curb: 30.0 ft
Approach Roadway Width (W/ Shoulders): 38.0 ft

Total Bridge Length: 150.0 ft
Right Curb/Sidewalk Width: 5.0 ft
Total Bridge Width: 41.5 ft
Median: No median
Bridge Skew: 23.00 °

Bridge Service:

Type of Service on Bridge: Highway and Pedestrian
Type of Service under: Highway
Lanes on bridge: 2
Lanes Under: 4

Year Built: 1955
Year Rebuilt: Not Rebuilt
Detour Length: 7.0 mi

AADT: 17000 Percent Trucks: 5% Year of AADT: 2008
Future AADT: 25160 Year of Future AADT: 2028

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Federal or State Definition Bridge: Fed. Definition Bridge
 Roadway Functional Class: Urban Expressway
 New Hampshire Highway System and Class: Primary-DOT Maintained
 Eligibility for the National Register of Historic Places: Possibly eligible
 Traffic Direction: Two-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: Intolerable, Correctable
 Underclearances: Equal Desirable Criteria
 Approach Alignment: Equal Desirable Criteria
 Structural Evaluation: Intolerable, Replacement
 Channel/Channel Protection: Not Applicable (NBI)
 Waterway Adequacy: Not Applicable (NBI)
 Bridge Scour Critical Status: Not Over Waterway
 Riprap Condition: Not Applicable
 Debris Present: Not Applicable
 Date of Underwater Inspection: Not Applicable

AASHTO CoRe Element Condition State Data:

No.	Description	Env.	Material Notes and Condition Notes
14	Concrete Deck - Protected w/ Membrane and Pavement	Severe	ASPHALT- CRACKS AND PATCHED. NORTHWEST DECKEND REPAIRED BY BOBM. CURBS- CRACKED AND SPALLED.
107	Painted Steel Beam or Girder (Open Web)	Severe	SURFACE AND FRECKLED RUST OVERALL.
205	Reinforced Concrete Column or Pile Extension	Severe	CRACKS, SPALLS AND DELAMINATED AREAS.
215	Reinforced Concrete Abutment	Moderate	LIGHT CRACKS.
234	Reinforced Concrete Cap	Severe	LIGHT AND MEDIUM CRACKS, SPALLS WITH RUST STAINS, FEW DELAMINATIONS. REPAIRS TO SOUTH END BY BOBM 2005.
302	Compression Joint Seal	Severe	ARMOR RUSTED WITH SECTION LOSS UNDERSIDE AND STOP BARS LOOSE. HEAVY LEAKING. SIDEWALK PLATES LIFTING, HOLED AT NORTH AND SOUTH.
311	Moveable Bearing (roller, sliding, etc.)	Severe	RUST AND SCALE UNDER LEAKAGE. SIDE TABS BROKEN OFF ON SEVERAL.

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No.	Description	Env.	Material Notes and Condition Notes
313	Fixed Bearing	Low	< none >
334	Coated Metal Bridge Railing	Moderate	** Steel Baluster ** AREAS OF HEAVY RUST AND SCALE, SECTION LOSS. REPAIRS TO CONNECTIONS 2005 BY BOBM.
359	Soffit of Conc Deck or Slab Condition Warning Flag	Severe	CRACKS, LEAKING, RUST STAINS AND MINOR SPALLS. PROTECTIVE NETTING INSTALLED 2007.
363	Section Loss Condition Warning Flag	Severe	MOVEABLE BEARINGS- RUST AND SCALE UNDER LEAKAGE.

No.	Description	Env.	Quantity	Units	State 1	State 2	State 3	State 4	State 5
14	Concrete Deck - Protected w/ Membran	Severe	6,222	(SF)	0 %	0 %	0 %	0 %	100 %
107	Painted Steel Beam or Girder (Open We	Severe	899	(LF)	0 %	0 %	100 %	0 %	0 %
205	Reinforced Concrete Column or Pile Ext	Severe	3	(EA)	33 %	67 %	0 %	0 %	
215	Reinforced Concrete Abutment	Moderate	148	(LF)	0 %	100 %	0 %	0 %	
234	Reinforced Concrete Cap	Severe	46	(LF)	0 %	0 %	100 %	0 %	
302	Compression Joint Seal	Severe	46	(LF)	0 %	49 %	51 %		
311	Moveable Bearing (roller, sliding, etc.)	Severe	12	(EA)	0 %	100 %	0 %		
313	Fixed Bearing	Low	12	(EA)	100 %	0 %	0 %		
334	Coated Metal Bridge Railing	Moderate	299	(LF)	0 %	0 %	90 %	10 %	0 %
359	Soffit of Conc Deck or Slab Condition W	Severe	1	(EA)	0 %	0 %	0 %	100 %	0 %
363	Section Loss Condition Warning Flag	Severe	1	(EA)	0 %	100 %	0 %	0 %	

Bridge Notes:

ADDED TO THE RED LIST 9/8/99. PROTECTIVE NETTING INSTALLED 2007. NORTHWEST DECKEND REPAIRED BY BOBM ON 12/2009.

Approach and Roadway Notes: ASPHALT- CRACKED, SETTLED, PATCHED AND POTHOLED AT EAST, WEST OK. APPROACH RAIL- SEVERAL POST AND RAIL ARE DECAYED AT SOUTHEAST AND NORTHWEST.

Inspection History:

Inspection Date: 03/05/2010

Inspector: KLM

Deck: 4 Poor

Notes:

Super: 6 Satisfactory

KLM- inspection comments -

Substr: 4 Poor

DECK: ASPHALT- CRACKS AND PATCHED. NORTHWEST DECKEND REPAIRED BY BOBM ON 12/2009. CURBS- CRACKED AND SPALLED.

Culvert: N N/A (NBI)

SUPERSTRUCTURE: BEAMS- SURFACE AND FRECKLED RUST OVERALL. MOVEABLE BEARINGS- RUST AND SCALE UNDER LEAKAGE. SIDE TABS BROKEN OFF ON SEVERAL. SUBSTRUCTURE: SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.

PICTURES: D046-

33. NORTHWEST DECKEND REPAIRED BY BOBM ON 12/2009.

34. SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.

35. CRACKED, PACTHED, POTHOLED ON DECK ASPHALT.

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Inspection History:

Inspection Date: 11/10/2009	Inspector: KLM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>KLM- inspection comments -</i>		Substr: 4 Poor
<i>DECK: ASPHALT- CRACKS AND PATCHED. CURBS- CRACKED AND SPALLED.</i>		Culvert: N N/A (NBI)
<i>SUPERSTRUCTURE: BEAMS- SURFACE AND FRECKLED RUST OVERALL. MOVEABLE</i>		
<i>BEARINGS- RUST AND SCALE UNDER LEAKAGE. SIDE TABS BROKEN OFF ON SEVERAL</i>		
<i>SUBSTRUCTURE: SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.</i>		

Inspection Date: 03/05/2009	Inspector: RLM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>RLM inspection comments -</i>		Substr: 4 Poor
<i>DECK: PEELED AREAS OF ASPHALT PATCHED ON WEARING SURFACE.</i>		Culvert: N N/A (NBI)
<i>SUPER: ELEMENTS IN SATISFACTORY CONDITION.</i>		
<i>SUB: SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.</i>		
<i>NOTE: PROTECTIVE NETTING INSTALLED 2007.</i>		

*PICTURE: D027-
29. SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.*

Inspection Date: 11/13/2008	Inspector: KLM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>KLM inspection comments -</i>		Substr: 4 Poor
<i>DECK: PEELED AREAS OF ASPHALT PATCHED ON WEARING SURFACE. DELAMINATION</i>		Culvert: N N/A (NBI)
<i>OVER TRAFFIC SPAN TWO.</i>		
<i>SUPER: ELEMENTS IN SATISFACTORY CONDITION.</i>		
<i>SUB: SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.</i>		
<i>NOTE: PROTECTIVE NETTING INSTALLED 2007.</i>		

Inspection Date: 03/18/2008	Inspector: RLM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>RLM inspection comments -</i>		Substr: 4 Poor
<i>DECK: PEELED AREAS OF ASPHALT PATCHED ON WEARING SURFACE. DELAMINATION</i>		Culvert: N N/A (NBI)
<i>OVER TRAFFIC SPAN TWO.</i>		
<i>SUPER: ELEMENTS IN SATISFACTORY CONDITION.</i>		
<i>SUB: SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.</i>		
<i>NOTE: PROTECTIVE NETTING INSTALLED 2007.</i>		

*PICTURE: D005-
17. SPALLING AND DELAMINATIONS AT PIER AND COLUMNS.*

Inspection Date: 11/05/2007	Inspector: JEL	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>JEL inspection comments -</i>		Substr: 4 Poor
<i>PEELED AREAS OF ASPHALT PATCHED ON WEARING SURFACE. DELAMINATION OVER</i>		Culvert: N N/A (NBI)
<i>TRAFFIC SPAN TWO.</i>		
<i>NOTE: PROTECTIVE NETTING INSTALLED 2007</i>		

*PICTURE: B322-
22. PROTECTIVE NETTING INSTALLED 2007*

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Inspection History:

Inspection Date: 03/15/2007	Inspector: JEL	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>JEL inspection comments -</i>		Substr: 4 Poor
<i>PEELED AREAS OF ASPHALT PATCHED ON WEARING SURFACE. DELAMINATION OVER TRAFFIC SPAN TWO.</i>		Culvert: N N/A (NBI)
<i>NOTE: BLASTING ZONE SOUTHEAST OF BRIDGE FOR NEW COMMERCIAL DEVELOPMENT.</i>		

PICTURES: B303-
09. DELAMINATION OVER TRAFFIC SPAN TWO, BAY THREE.
10. SPALLS ALONG GRANITE CURB AT NORTH.

Inspection Date: 11/06/2006	Inspector: FNM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>FNM inspection comments -</i>		Substr: 4 Poor
<i>PICTURE:B295-6. DELAMINATION OVER NB TRAFFIC AT NORTH EDGE.</i>		Culvert: N N/A (NBI)

Inspection Date: 03/07/2006	Inspector: FNM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>FNM inspection comments -</i>		Substr: 4 Poor
<i>PICTURES:B274-7. SIDEWALK PLATE AT JOINT LIFTING, HOLED AT NORTH.</i>		Culvert: N N/A (NBI)
<i>8. DELAMINATIONS OVER NB TRAFFIC AT NORTH EDGE.</i>		

Inspection Date: 11/07/2005	Inspector: FNM	Deck: 4 Poor
Notes:		Super: 6 Satisfactory
<i>Sufficiency Rating Calculation Accepted by DEP at 02/22/2006 15:25:50</i>		Substr: 4 Poor
<i>FNM inspection comments -</i>		Culvert: N N/A (NBI)
<i>DECK: DELAMINATIONS OVER TRAFFIC IN NB LANES.</i>		
<i>BRIDGE RAIL - AREAS OF HEAVY RUST AND SCALE, SECTION LOSS. REPAIRS TO CONNECTIONS 2005 BY BOBM.</i>		
<i>SUB: PIER CAP-LIGHT AND MEDIUM CRACKS WITH RUST STAINS, FEW DELAMINATIONS. REPAIRS TO SOUTH END BY BOBM 2005.</i>		
<i>PICTURES: B267-</i>		
<i>12. DELAMINATION OVER NB TRAFFIC AT NORTH EDGE.</i>		
<i>13. STOP BAR LOOSE AND HANGING DOWN AT PIER JOINT AT NORTH EXTERIOR (TYPICAL OF TWO OTHERS).</i>		

Inspection Date: 03/30/2005	Inspector: FNM	Deck: 4 Poor
Notes:		Super: 7 Good
<i>FNM inspection comments -</i>		Substr: 4 Poor
<i>RAIL IN POOR CONDITION</i>		Culvert: N N/A (NBI)
<i>DECK: ASPHALT-CRACKED, SOME SEALED, AREAS PEELING, LOOSE ASPHALT ON SIDEWALKS.</i>		
<i>SOFFIT - AREAS OF MODERATE LEAKING WITH RUST STAINING. DELAMINATIONS, FEW OVER TRAFFIC AT NORTH EDGE OF NB.</i>		
<i>SUB: PIER - HEAVILY CRACKED, SPALLED AND DELAMINATED. LARGE CRACK IN TOP AT SOUTH BEARING #1.</i>		

PICTURES: B237-15, 16, 17, 18

Inspection Date: 11/02/2004	Inspector: JEL	Deck: 4 Poor
Notes:		Super: 7 Good
<i>JEL inspection comments-</i>		Substr: 4 Poor
<i>RAIL- AREAS OF PAINT PEELING, RUST, CONNECTION WITH SECTION LOSS, AND SEVERAL CONNECTIONS HOLED. ONE SECTION AT SOUTH WITH CONNECTIONS HOLED TOP AND BOTTOM AT SAME POST.</i>		Culvert: N N/A (NBI)
<i>CONTINUED DETERIORATION AND LEAKING OF CONCRETE DECK AND ASPHALT WEARING SURFACE. CONTINUED DETERIORATION OF CONCRETE CAP AND COLUMNS.</i>		

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Inspection History:

Inspection Date: 03/01/2004	Inspector: FNM	Deck: 4 Poor
Notes: Sufficiency Rating Calculation Accepted by DEP at 7/1/2004 11:49:39 FNM inspection comments -		Super: 7 Good
PICTURES: B199- 06. PIER CAP SPALLED AND DETERIORATING WITH LOOSE CONCRETE AT TOP. 07. SMALL DELAMINATIONS OVER NB TRAFFIC AT NORTH EDGE.		Substr: 4 Poor
		Culvert: N N/A (NBI)
Inspection Date: 11/06/2003	Inspector: JEL	Deck: 4 Poor
Notes: Sufficiency Rating Calculation Accepted by DEP at 6/2/2004 14:03:45 JEL inspection comments - SPAN ONE; AREA OF ASPHALT PEELED AND POTHOLED WITH DECK DETERIORATION EVIDENT. LARGE PATCHED AREA AT NORTHWEST DECK END, PAVEMENT PEELED AWAY.		Super: 7 Good
		Substr: 4 Poor
		Culvert: N N/A (NBI)
Inspection Date: 03/05/2003	Inspector: JEL	Deck: 4 Poor
Notes: Sufficiency Rating Calculation Accepted by DEP at 11/03/2003 09:39:48 JEL inspection comments - AREA IN SPAN ONE, PEELED AND POTHOLED WITH DECK DETERIORATION EVIDENT. LARGE PATCHED AREA AT NORTHWEST DECK END, PAVEMENT PEELED AWAY.		Super: 7 Good
PICTURES: B165- 14. VIEW OF CONCRETE CAP AND COLUMNS WITH CRACKS AND SPALLS 15. AREAS IN SPAN ONE PEELED, POTHOLED AND DEPRESSED.		Substr: 4 Poor
		Culvert: N N/A (NBI)
Inspection Date: 11/12/2002	Inspector: JEL	Deck: 4 Poor
Notes: JEL inspection comments - PIPE AND PALING RAIL CONNECTIONS WITH HEAVY SECTION LOSS AND SOME HOLED. ONE SECTION OVER PIER AT SOUTH WITH TOP AND BOTTOM CONNECTIONS HEAVILY HOLED. AREA IN SPAN ONE POTHOLED WITH DECK DETERIORATION EVIDENT.		Super: 7 Good
PICTURES: B160- 15. AREA IN SPAN ONE POTHOLED, DEPRESSED, DECK DETERIORATION EVIDENT. 16. PIPE RAIL CONNECTION HOLED.		Substr: 4 Poor
		Culvert: N N/A (NBI)
Inspection Date: 03/06/2002	Inspector: JEL	Deck: 4 Poor
Notes: Sufficiency Rating Calculation Accepted by DEP at 07/23/2002 12:59:55 JEL inspection comments - PIPE AND PALING RAIL CONNECTIONS WITH HEAVY SECTION LOSS AND SOME HOLED. ONE SECTION OVER PIER AT SOUTH WITH TOP AND BOTTOM CONNECTIONS HEAVILY HOLED, NOTE PICTURES B143-11 AND 12. ASPHALT- PATCHED AREAS AT DECK ENDS, AND AT JOINT. CRACKS SOME SEALED. AREA IN SPAN ONE POTHOLED WITH DECK DETERIORATION EVIDENT.		Super: 7 Good
PICTURES B143- 11. PIPE RAIL CONNECTION HOLED. 12. PIPE RAIL CONNECTION HOLED. 13. AREA IN SPAN ONE POTHOLED, DECK DETERIORATION EVIDENT.		Substr: 4 Poor
		Culvert: N N/A (NBI)
Inspection Date: 10/22/2001	Inspector: JEL	Deck: 4 Poor
Notes: JEL inspection comments - WEARING SURFACE- ASPHALT- CRACKED, SETTLED, STRIPPING OFF AT NW. DETERIORATION WITH SMALL POTHOLES AT DECK ENDS.		Super: 7 Good
		Substr: 4 Poor
		Culvert: N N/A (NBI)

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Inspection History:

Inspection Date: 03/12/2001	Inspector: FNM	Deck: 4 Poor Super: 7 Good Substr: 4 Poor Culvert: N N/A (NBI)
Notes: <i>FNM inspection comments - PICTURES: B124-11. PIER CAP CRACKED AND SPALLED AT SOUTH UNDER S2, S1</i>		
Inspection Date: 11/07/2000	Inspector: FNM	Deck: 4 Poor Super: 7 Good Substr: 4 Poor Culvert: N N/A (NBI)
Notes: <i>FNM inspection comments- RAIL- PIPE AND PAILING, PAINT PEELING AND SURFACE RUST, CONNECTION WITH SECTION LOSS DECK- CONCRETE, POOR CONDITION, CRACKS WITH LEAKING AND RUST STAINS, SMALL DELAMINATIONS OVER TRAFFIC AT NORTH EDGE, WEARING SURFACE WITH MANY CRACKS SETTLED AREAS AND PATCHED AREAS, ARMOR PROTECTION AT MIDSPAN BROKEN UP AND ANCHORAGE LOOSE AT NORTH EDGE SUPER- I-BEAMS, MANY AREAS OF SURFACE AND FRECKELED RUST SUB. -BREASTWALLS, FINE AND LIGHT CRACKS, PIER CAP POOR CONDITION, MANY AREAS OF DETERIORATION, WITH SPALLS AND REBAR EXPOSED.</i>		
Inspection Date: 03/08/2000	Inspector: JEL	Deck: 4 Poor Super: 7 Good Substr: 4 Poor Culvert: N N/A (NBI)
Notes: <i>Sufficiency Rating Calculation Accepted by DEP at 10-11-2000 08:15:28 JEL inspection comments - RAIL- PIPE AND PAILING, PAINT PEELING AND SURFACE RUST, CONNECTION WITH SECTION LOSS DECK- CONCRETE, POOR CONDITION, CRACKS WITH LEAKING AND RUST STAINS, SMALL DELAMINATIONS OVER TRAFFIC AT NORTH EDGE, WEARING SURFACE WITH MANY CRACKS SETTLED AREAS AND PATCHED AREAS, ARMOR PROTECTION AT MIDSPAN BROKEN UP AND ANCHORAGE LOOSE AT NORTH EDGE SUPER- I-BEAMS, MANY AREAS OF SURFACE AND FRECKELED RUST SUB. -BREASTWALLS, FINE AND LIGHT CRACKS, PIER CAP POOR CONDITION, MANY AREAS OF DETERIORATION, WITH SPALLS AND REBAR EXPOSED.</i> <i>PIC: B083-10. DELAMINATIONS OVER TRAFFIC AT NORTH EDGE OF UNDERSURFACE</i>		
Inspection Date: 09/08/1999	Inspector: JEL	Deck: 4 Poor Super: 7 Good Substr: 4 Poor Culvert: N N/A (NBI)
Notes: <i>Sufficiency Rating Calculation Accepted by DEP at 12-10-1999 16:31:38 JEL inspection comments - RAIL- PIPE AND PAILING, PAINT PEELING AND SURFACE RUST, CONNECTION WITH SECTION LOSS DECK- CONCRETE, POOR CONDITION, CRACKS WITH LEAKING AND RUST STAINS, SMALL DELAMINATIONS OVER TRAFFIC AT NORTH EDGE, WEARING SURFACE WITH MANY CRACKS SETTLED AREAS AND PATCHED AREAS, ARMOR PROTECTION AT MIDSPAN BROKEN UP AND ANCHORAGE LOOSE AT NORTH EDGE SUPER- I-BEAMS, MANY AREAS OF SURFACE AND FRECKELED RUST SUB. -BREASTWALLS, FINE AND LIGHT CRACKS, PIER CAP POOR CONDITION, MANY AREAS OF DETERIORATION, WITH SPALLS AND REBAR EXPOSED.</i> <i>PICS: B054-27 to 32</i>		
Inspection Date: 05/01/1997	Inspector: Not Available	Deck: 5 Fair Super: 8 Very Good Substr: 5 Fair Culvert: N N/A (NBI)
Notes: <i>Sufficiency Rating Calculation Accepted by DEP at 12-23-98 07:54:59</i>		

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Inspection History:

Inspection Date: 04/01/1995
Notes:

Inspector: Not Available

Deck: 5 Fair
Super: 8 Very Good
Substr: 6 Satisfactory
Culvert: N N/A (NBI)

Inspection Date: 07/01/1993
Notes:

Inspector: Not Available

Deck: 5 Fair
Super: 8 Very Good
Substr: 6 Satisfactory
Culvert: N N/A (NBI)

Copy Distribution:

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- Bureau of Turnpikes

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- Bureau of Rail and Transit
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- Dept. of Res. and Econ. Dev.
- Dept. of Environmental Services
- USDA Forest Service
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