



MDOT NBI Rating Guidelines

BSIR #1 SURFACE (SI&A Item 58A)

This item is to evaluate and rate the condition of the deck surface only. The inspector must note in the comment field on the Bridge Safety Inspection Report (BSIR) if they are rating the structural deck surface or a protective wearing surface (i.e. thin epoxy, wood, bituminous or, latex overlay). Refer to SI&A Item 108 “Wearing Surface / Protective System” for type of wearing surface. If there is no protective wearing surface, rate the condition of the surface of the structure deck.

A concrete or bituminous wearing surface should be inspected for spalling, cracking, scaling, and delamination. Timber wearing surfaces should be inspected for deterioration, splitting, and crushing. Rate and code the condition in accordance with the following guidelines. Concrete patches or concrete repaired areas that are sound and functioning properly should not be counted as deteriorated or deficient area. Concrete patches that are loose, delaminated, or generally in poor condition shall be counted as deteriorated or deficient area. Refer to [Michigan Structure Inspection Manual \(MiSIM\)](#) Section 5.05 for inspection procedures related to common surface materials.

BSIR #2 JOINTS

The joints to be rated in this item include expansion joint devices such as strip seals, compression seals, assembly joint seals, polymer block out joints, steel armor joints, pourable seals, and compression seals. Rate and code the condition in accordance with the following guidelines. All joints which permit rotation and longitudinal translation of the superstructure, including those located off of the bridge shall be evaluated as expansion joints. Joints such as cold joints, construction joints, and other joints which are fixed for the purpose of rotation shall be coded in BSIR Item 3. Refer to [MiSIM](#) Section 5.06 for inspection procedures.

BSIR #3 OTHER JOINTS

This item includes all other joints NOT in BSIR Item 2. These are typically unsealed joints such as cold joints and construction joints. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.07 for inspection procedures.

BSIR #4 RAILING

This item is for the evaluation and rating of vehicular railing and pedestrian fencing on the supported spans of the bridge. Rate and code the condition in accordance with the following guidelines. Report the type of railing in the comment section and if the railing is constructed on only one side of the bridge, or if the bridge has a thrie beam retrofit. Use SI&A Items 36 A through D to report if the railing components meet the current standard. Report collision damage in the comment section and on the work recommendation list. Brush blocks are to be considered as part of the railing. Refer to [MiSIM](#) Section 5.08 for inspection procedures.



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BSIR #5 SIDEWALKS or CURBS

This item is for the evaluation and rating of the surface of sidewalks and curbs on the supported spans only. Rate and code the condition in accordance with the following guidelines. The areas below the sidewalk are to be rated with the deck. The inspector must note in the comment field if the sidewalk is on only one side of the bridge. Brush blocks are to be rated as part of BSIR Item 4. Refer to [MiSIM](#) Section 5.09 for inspection procedures.

BSIR #6 DECK BOTTOM SURFACE (SI&A item 58B)

This item is to evaluate and rate the condition of the deck bottom surface. The inspector must note in the comment field if the structural concrete of the deck bottom surface or stay-in-place forms are being rated. The bottom surface of a concrete deck should be inspected for cracking, scaling, spalling, leaching, delamination, and full or partial depth failures. If the deck has stay-in-place forms, rate the condition of the forms. Steel grid decks should be inspected for broken welds, broken grids section loss, and growth of filled grids from corrosion. Timber decks should be inspected for splitting, crushing, fastener failure, and deterioration from rot.

If the bottom surface of the deck cannot be observed because the superstructure obscures it, such as with side by side box beams or earth filled arch structures, code “N” and note in the comments why this item is not being rated. The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.10 for inspection procedures.

BSIR #7 DECK (SI&A item 58)

This item is to evaluate and rate the overall condition of the deck. Code “N” for culverts and other structures without decks such as filled arch bridges. Refer to SI&A Item 108 “Wearing Surface / Protective System” for type of wearing surface.

A concrete deck should be inspected for cracking, scaling, spalling, leaching, potholing, delamination, and full or partial depth failures. Steel grid decks should be inspected for broken welds, broken grids section loss, and growth of filled grids from corrosion. Timber decks should be inspected for splitting, crushing, fastener failure, and deterioration from rot.

The condition of the wearing surface / protective coating system, joints, expansion devices, curbs, sidewalks, parapets, fascias, bridge railing, and scuppers shall not be considered in the overall deck evaluation. However, their condition will be noted on the form in their respective items. If the structural deck is visible (i.e. there is no wearing surface / protective coating system) then the surface must be considered in the overall evaluation of the deck.



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If the underside of the deck cannot be observed due to an adjacent box beam superstructure or stay-in-place forms, the inspector is to evaluate and rate the deck from observations on the surface of the deck and note in the comment field any limitations this may cause.

When determining the overall percent deterioration of the deck and both structural surfaces are visible, the quantity of deteriorated top surface area should be added to the quantity of deck bottom surface area and the summation is divided by the combined top and bottom surface areas.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.11 for inspection procedures.

BSIR #8 DRAINAGE

This item is for noting poor drainage characteristics on the bridge deck. There is no rating scale. The inspector can note in the comments if there is ponding of water on the surface or debris build up on the deck or in the drains that is preventing water from getting to the drains. The deck drains and the area adjacent to the deck drains are to be considered in the evaluation of the deck, surface, and/or bottom surface.

BSIR #9 STRINGER (SI&A Item 59, Superstructure)

This item describes the physical condition of all structural members below the deck and above the pier cap, trusses (deck & through trusses), suspension cables, and suspenders. Evaluate and rate the condition in accordance with the general condition ratings. Code "N" for all culverts.

All structural members should be inspected for visible signs of distress which may include cracking, deterioration, section loss, and malfunction and misalignment of bearings or pin and hanger assemblies. The condition of BSIR Items 9, 10, and 11 may negatively influence the rating if they are in poor condition. However, they should not offset or improve the rating for stringers that are in poor condition. For example, if the stringers are in poor condition at a rating of 4 the rating would not be increased to 5 because the bearings are rated an 8.

On bridges where the deck is integral with the superstructure, the superstructure condition rating may be affected by the deck condition. The resultant superstructure condition rating may be lower than the deck condition rating in the situation where the girders have deteriorated or been damaged.

Fracture critical components should receive careful attention because failure could lead to collapse of a span or the bridge. Fatigue prone details should receive close observation because they could lead to failure of a given element.



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Structurally engineered temporary supports may allow unrestricted loading of the bridge, however a load rating analysis must be completed without the addition of the supports and the coding of SI&A Item 103 changed to a “T”. Contact the Bridge Management Unit when this is necessary.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.13 for inspection procedures.

BSIR #10 PAINT (SI&A Item 59A)

This item is to evaluate and rate the condition of the paint only. The inspector must note in the comment field of the BSIR the type of paint or coating system (such as weathering steel or galvanized beams) and the year that the paint was applied. The condition of the coating system may also have influence on the rating of BSIR Item 8. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.14 for inspection procedures.

BSIR #11 SECTION LOSS UNDER JOINTS

This item is used for steel and concrete superstructures and is intended to identify and track those structures with a tendency for deterioration under the joints. Evaluate and rate the area 5 ft. on each side of the joint. This item is separate from BSIR Item 8, but all deterioration identified in this location must be also taken into account when rating item 8. Rate and code the condition in accordance with the following guidelines. Refer to [MiSIM](#) Section 5.15 for inspection procedures.

BSIR #12 BEARINGS

This item describes the physical condition of bearings. Rate and code the condition in accordance with the following guidelines. Code “N” for culverts, delta frame designs and bridges designed with the superstructure integral with the substructure.

This item is separate from BSIR Item 8, but all deterioration identified in this location may also be taken into account when rating Item 8. The inspector must note in the comment field on the BSIR the type of bearings on the bridge and the factors and quantities that influenced the judgment for the rating. Refer to [MiSIM](#) Section 5.16 for inspection procedures.



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BSIR #13 ABUTMENTS (SI&A Item 60, Substructure)

This item describes the physical condition of the abutments, piles, fenders, footings or other substructure components in proximity of the abutments and below the bearings. The final rating for SI&A Item 60 will be the lesser of the values assigned to BSIR Items 13 and 14. Rate and code the condition in accordance with the following guidelines. The substructure rating is independent of the deck and superstructure. Code “N” for all culverts.

All structural members should be inspected for visible signs of distress which may include cracking, deterioration, section loss, settlement, misalignment, scour, collision damage and corrosion. The rating given by SI&A Item 113 - Scour Critical Bridges, may have a significant affect on this item if scour has substantially affected the overall condition of the substructure. The location, size and, depth of any scour must be noted in the comments. For structures where the substructure and superstructure are integral, the substructure shall be considered as the portion below the superstructure.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Refer to [MiSIM](#) Section 5.17 for inspection procedures.

BSIR #14 PIERS (SI&A item 60, Substructure)

This item describes the physical condition of the piers, pier caps, crash walls, footings or other substructure components in proximity of the piers and below the bearings. The final rating for SI&A Item 60 will be the lesser of the values assigned to BSIR Items 13 and 14. Rate and code the condition in accordance with the following guidelines. The substructure rating is independent of the deck and superstructure. Code “N” for all culverts.

All structural members should be inspected for visible signs of distress which may include cracking, deterioration, section loss, settlement, misalignment, scour, collision damage and corrosion. The rating given by SI&A Item 113 - Scour Critical Bridges, may have a significant affect on this item if scour has substantially affected the overall condition of the substructure. For structures where the substructure and superstructure are integral, the substructure shall be considered as the portion below the superstructure.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. The location, size and, depth of any scour must be noted in the comments. Refer to [MiSIM](#) Section 5.18 for inspection procedures.



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BSIR #15 SLOPE PROTECTION

This item describes the physical condition of the slope protection ahead of and on the sides of the abutments for bridges that do not cross water. This rating could have impact on the evaluation and the rating assigned to BSIR Item 13. Rate and code the condition in accordance with the following guidelines. The substructure rating is independent of the deck and superstructure. Code “N” for all culverts. Slope protection should be inspected for visible signs of distress which may include cracking, deterioration, settlement and misalignment.

The inspector must note in the comment field on the Bridge Safety Inspection Report (BIR) the factors and quantities that influenced the judgment for the rating. Refer to [MiSIM](#) Section 5.19 for inspection procedures.

BSIR #16 APPROACH

This item is to evaluate and rate the overall condition of the approach pavement. It includes the roadway area from the bridge seat at the abutments to 40 feet away from the bridge or to the first joint. Rate and code the condition in accordance with the following guidelines. Code “N” for culverts and other structures without decks, such as a filled arch bridge where the pavement is carried across the structure on grade.

The concrete or asphalt pavement should be inspected and evaluated for settlement, cracking, scaling, spalling, potholing, and delamination. The approach should allow for a smooth transition to the bridge deck.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Refer to [MiSIM](#) Section 5.20 for inspection procedures.

BSIR #17 APPROACH SHOULDERS AND SIDEWALKS

This item is to evaluate and rate the overall condition of the approach shoulders, sidewalks, and curbs and gutter. It includes those shoulders that are carried across the structure on grade. Rate and code the condition in accordance with the following guidelines. The concrete or asphalt pavement should be inspected and evaluated for settlement, cracking, scaling, spalling, potholing, and delamination. Gravel shoulders should have adequate slope and drainage.

The inspector must note in the comment field on the BSIR the factors and quantities that influenced the judgment for the rating. Refer to [MiSIM](#) Section 5.21 for inspection procedures.



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BSIR #18 APPROACH SLOPES

This item is for noting poor characteristics or situations associated with the road approach slopes. There is no rating scale. The inspector can note in the comments if there are washouts, erosion that can affect the guardrail supports or the road shoulders. Evidence of erosion of the slopes that affect the stability of the abutments should be reported in the condition rating of BSIR Item 12.

BSIR #19 UTILITIES

This item is for noting poor characteristics of utilities attached to and affecting the bridge. There is no rating scale. The inspector can note in the comment field the situations observed.

BSIR #20 CHANNEL (SI&A Item 61 - Channel and Channel Protection)

This item describes the physical conditions associated with the flow of water through a bridge such as stream stability and the condition of the channel, riprap, slope protection or stream control devices including spur dikes. The inspector should be particularly concerned with visible signs of excessive water velocity which may affect undermining of slope protection, erosion of banks, and realignment of the stream which may result in immediate or potential problems. Scour, accumulation of drift and debris may cause damage severe enough to affect the condition of the superstructure and substructure components. Refer to [MiSIM](#) Section 5.24 for inspection procedures.

BSIR #21 DRAINAGE CULVERTS

This item is for noting damage or poor drainage characteristics in the approach drains. There is no rating scale. The inspector can note in the comments if there is ponding of water at the casting due to build up of debris or erosion of approach fill into the manhole.

BSIR #1 SURFACE (SI&A Item 58A)

| Code | Condition | Material | Description |
|------|------------------|------------|--|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect the condition of the surface. |
| 8 | GOOD | Concrete | Cracking less than 1/32" wide with no spalling, scaling, or delamination. |
| | | Thin Ovlly | Surface wear with no other observed defects. |
| | | HMA | No cracking, but minor deformations may be visible without spalling, segregation, or longitudinal joint failure. |
| | | Timber | Minor surface abrasion with fasteners functioning as constructed. |
| 7 | GOOD | Concrete | Open cracks less than 1/16" wide or sealed cracks spaced at 10' or more. Light shallow scaling may be present. |
| | | Thin Ovlly | Minor surface wear and aggregate loss within 2' of expansion joints. |
| | | HMA | Cracks spaced at 50' or more. Minor deformations with no spalling, segregation, or longitudinal joint failure. |
| | | Timber | Minor surface abrasion with the majority of fasteners functioning as constructed. |
| 6 | FAIR | Concrete | Open cracks greater than 1/16" wide spaced at less than 10'. Spalling, delamination, and sound patches affecting 2% or less of the area. Surface scaling may be 1/4" to 1/2" deep. |
| | | Thin Ovlly | Hairline cracking spaced at 50' or more. Surface area exhibits 2% or less ineffectiveness. |
| | | HMA | Cracks spaced at 50' or more. Limited rutting, shoving, or raveling with no affect on ride quality. |
| | | Timber | Surface abrasion or decay that affects less than 5% of the thickness. Limited damage to the surface. |
| 5 | FAIR | Concrete | Delamination or spalling affecting between 2% and 10% of the area. Excessive cracking or heavy scaling up to 1" deep. |
| | | Thin Ovlly | Loss of aggregate or ineffectiveness affecting between 2% and 5% of the area. |
| | | HMA | Spalling affecting 2% and 10% of the area. Moderate block cracking, raveling, and longitudinal joint failure. |
| | | Timber | Abrasion or decay that affects 5% to 10% of the thickness. Fasteners may be loose but the surface functions adequately. Moderate damage to the surface. |
| 4 | POOR | Concrete | Delamination or spalling affecting between 10% and 25% of the area. |
| | | Thin Ovlly | Loss of aggregate or ineffectiveness affecting between 5% and 10% of the area. |
| | | HMA | Spalling affecting 10% and 25% of the area. Block cracking, raveling, and longitudinal joint failure throughout. |
| | | Timber | Abrasion or decay that affects 10% to 25% of the thickness. Substantial damage to the surface. |
| 3 | SERIOUS | Concrete | Spalling affecting more than 25% of the surface area. |
| | | Thin Ovlly | Loss of aggregate or ineffectiveness affecting more than 10% of the surface area. Condition of aggregate may affect skid resistance. |
| | | HMA | Spalling affecting more than 25% of the surface area. Ride quality may be impacted. |
| | | Timber | Abrasion or decay that affects more than 25% of the thickness. Fasteners or planks are missing. |
| 2 | CRITICAL | All | Emergency surface repairs are required for the bridge to remain open. |
| 1 | IMMINENT FAILURE | All | Bridge is closed to traffic due to the surface condition, but corrective action may allow the bridge to reopen. |
| 0 | FAILED | All | Bridge is closed to traffic due to the surface condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #2 JOINTS

| Code | Condition | Description |
|------|------------------|---|
| 9 | NEW | No noticeable or noteworthy deficiencies that would affect the operation, movement, or water tightness of the joint. |
| 8 | GOOD | No noticeable or noteworthy deficiencies that would affect the operation, movement, or water tightness of the joint. Minor accumulation of debris and non-compressible particles in the expansion joint opening. |
| 7 | GOOD | Minor deterioration with shallow hairline cracks less than 1/32" and shallow spalls within 2' of the joint. No noticeable water leakage on the surfaces below. |
| 6 | FAIR | Minor deterioration with shallow hairline cracks greater than 1/32" and shallow spalls within 2' of the joint. Device components may be uneven or misaligned. No noticeable water leakage on the surfaces below. |
| 5 | FAIR | Moderate deterioration of surrounding concrete including cracking and shallow spalling. Minor leakage along less than 5% of the joint length on redundant members due to loss of seal adhesion and/or failure of the device. Expansion may be limited due to inadequate opening at the bridge railing or fascia. |
| 4 | POOR | Major deterioration of surrounding concrete including cracking and spalling to steel. Minor leakage on non-redundant members, or along 5% or more of the joint length on redundant ones due to loss of seal adhesion and/or failure of the device. Expansion is obstructed due to bridge railing or fascia contact. |
| 3 | SERIOUS | Surrounding concrete is spalled below reinforcement on the top or bottom deck surface with possible full-depth failures. Majority of the device is leaking, loose, or not properly functioning. Settlement of the sleeper slab or joint condition is impacting ride quality. |
| 2 | CRITICAL | Device and surrounding concrete is seriously deteriorated. Emergency repairs may be required for all lanes to remain open. Temporary joint support from underneath may be necessary. |
| 1 | IMMINENT FAILURE | Lane closed to traffic due to joint condition, but corrective action may remove the restriction. |
| 0 | FAILED | Bridge is closed to traffic due to joint failure. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #3 OTHER JOINTS

| Code | Condition | Description |
|------|------------------|--|
| 9 | NEW | No noticeable wear or leakage. |
| 8 | GOOD | No noticeable or noteworthy deficiencies except for possible minor accumulation of incompressible particles and debris in the joint opening. |
| 7 | GOOD | Minor deterioration with shallow hairline cracks less than 1/32" and shallow spalls within 2' of the joint. No noticeable water leakage on the surfaces below. |
| 6 | FAIR | Minor deterioration with shallow hairline cracks greater than 1/32" and shallow spalls within 2' of the joint. No noticeable water leakage on the surfaces below. |
| 5 | FAIR | Moderate deterioration of surrounding concrete including cracking and shallow spalling. Minor leakage along less than 5% of the joint length on redundant members. |
| 4 | POOR | Major deterioration of surrounding concrete including cracking and spalling to steel. Minor leakage on non-redundant members, or along 5% or more of the joint length on redundant ones. |
| 3 | SERIOUS | Surrounding concrete is spalled below reinforcement on the top or bottom deck surface with possible full-depth failures. Majority of the device is leaking. Ridge quality may be impacted. |
| 2 | CRITICAL | Joint and surrounding concrete is seriously deteriorated. Emergency repairs may be required for all lanes to remain open. Temporary joint support from underneath may be necessary. |
| 1 | IMMINENT FAILURE | Lane closed to traffic due to joint condition, but corrective action may remove the restriction. |
| 0 | FAILED | Bridge is closed to traffic due to the joint condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #4 RAILINGS

| Code | Condition | Material | Description |
|------|------------------|----------|--|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect railing performance. |
| 8 | GOOD | All | Small superficial wear, deterioration, or collision damage. |
| 7 | GOOD | Concrete | Shallow hairline cracks less than 1/32" or shallow scaling. |
| | | Steel | Protective coating failures in very small and scattered locations. |
| | | Timber | Paint or other coating failures in very small and scattered locations. Minor weathering present. |
| | | All | Minor deterioration or collision damage. |
| 6 | FAIR | Concrete | Minor deterioration with shallow cracking present greater than 1/32", shallow spalls, or scaling limited to less than 2% of the surface area. |
| | | Steel | Protective coating failures is limited to less than 2% of the surface area with no loss of section. |
| | | Timber | Minor checks, splitting, or decay that affects less than 5% of the member thickness. |
| | | All | Minor collision damage with all connections are securely attached. |
| 5 | FAIR | Concrete | Moderate deterioration with cracks and spalls or scaling limited to less than 5% of the surface area. |
| | | Steel | Protective coating failure is limited to less than 5% of the surface area with minor loss of section. |
| | | Timber | Moderate checks, splitting, or decay that affects less than 10% of the member thickness. |
| | | All | Minor collision damage with the majority of connections securely attached. |
| 4 | POOR | Concrete | Major deterioration with cracks and spalls or scaling greater affecting between 5% and 10% of the surface area. |
| | | Steel | Protective coating failure affecting between 5% and 10% of the surface area with some loss of section. |
| | | Timber | Major checks, splitting, or decay that affects more than 10% of the member thickness. |
| | | All | Moderate collision damage or loose connections without substantial impact on railing performance. |
| 3 | SERIOUS | Concrete | Major deterioration with cracks and spalls or scaling greater affecting more than 10% of the surface area. |
| | | Steel | Protective coating failure affecting more than 10% of the surface area with measurable loss of section. |
| | | Timber | Decay that affects more than 15% of the member thickness. |
| | | All | Collision damage or loose connections should be repaired prior to the next scheduled inspection. |
| 2 | CRITICAL | All | Most of the railing components exhibit deterioration and/or loss of section. Collision damage and deterioration has progressed to the point where the railing may fail if impacted. Immediate repairs are required for the structure to remain open. |
| 1 | IMMINENT FAILURE | All | Lane or shoulder closed to traffic and temporary concrete barricades or thrie beam guardrail in place to keep the bridge open. Corrective action may remove the restriction. |
| 0 | FAILED | All | Bridge is closed due to the condition of the railing. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Bridges that carry railway freight, culverts that do not have railing fastened to the structure because the amount of cover is sufficient for driven posts, or other culverts without railing that extend beyond the clear zone from the route shoulder. |

BSIR #5 SIDEWALKS OR CURBS

| Code | Condition | Material | Description |
|------|------------------|----------|--|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect the condition of the surface. |
| 8 | GOOD | Concrete | Cracking less than 1/32" wide with no spalling, scaling, or delamination. |
| | | Steel | Small areas of superficial wear on the surface. |
| | | Timber | Minor surface abrasion with no measurable section loss. |
| 7 | GOOD | Concrete | Open cracks less than 1/16" wide or sealed cracks spaced at 10' or more. Light shallow scaling may be present. |
| | | Steel | Protective coating failure in very small and scattered locations. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| 6 | FAIR | Concrete | Open cracks greater than 1/16" wide spaced at less than 10'. Spalling, delaminations, and unsound repairs affecting 2% or less of the area. Surface scaling may be 1/4" to 1/2" deep. |
| | | Steel | Protective coating failures is limited to less than 2% of the surface area with no loss of section. |
| | | Timber | Decay or section loss that affects less than 5% of the member section. Checks or shakes not in the tension zone that penetrate between 5% and 25% of the member thickness. Splits arrested and concerns mitigated. |
| 5 | FAIR | Concrete | Excessive surface cracking present. Spalling, delaminations, and unsound repairs affecting between 2% and 10% of the area. Surface scaling may be 1/2" to 1" deep. |
| | | Steel | Protective coating failure is limited to less than 5% of the surface area with minor loss of section. Loose fasteners or broken welds present but the connection is in place and functioning as intended. |
| | | Timber | Decay or section loss that affects between 5% and 10% of the member section. Checks or shakes not in the tension zone that penetrate between 25% and 50% of the member thickness. Split length less than the member depth. |
| 4 | POOR | Concrete | Delamination or spalling affecting between 10% and 25% of the area. Excessive cracking or scaling that does not present a hazard to pedestrians |
| | | Steel | Protective coating failure affecting between 5% and 10% of the surface area with measurable loss of section. Cracks that have not been arrested. Structural review not required. |
| | | Timber | Decay or section loss that affects more than 10% of the member section but does not warrant a structural review. Check or shakes that penetrate more than 50% of the member thickness. |
| 3 | SERIOUS | Concrete | Spalling affecting more than 25% of the surface area and does not present a trip hazard to pedestrians. |
| | | Steel | Protective coating failure affecting more than 10% of the surface area with measurable loss of section. Missing fasteners or adjacent broken welds present that do not warrant a structural review. |
| | | Timber | Checks or shakes that penetrate more than 5% of the member thickness in the tension zone. Cracking that has not been arrested and does not require structural review. Split length greater than the member depth. |
| 2 | CRITICAL | All | Emergency repairs required for the sidewalk to remain open. |
| 1 | IMMINENT FAILURE | All | Sidewalk is closed to pedestrians, but corrective action may put it back in service. |
| 0 | FAILED | All | Sidewalk is closed to pedestrians. |
| N | N/A | All | Bridges without sidewalks or curbs. |

BSIR #6 DECK BOTTOM SURFACE

| Code | Condition | Material | Description |
|------|------------------|----------|---|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect the condition of the bottom surface. |
| 8 | GOOD | Concrete | Cracking less than 1/32" wide with no spalling, scaling, or delamination. No rust on stay-in-place forms. |
| | | Steel | Very limited partial protective coating failures that do not expose bare steel. |
| | | Timber | Paint or other coating failures in very limited locations. |
| 7 | GOOD | Concrete | Open cracks less than 1/16" wide spaced at 10' or more. Light shallow scaling present. No rust on stay-in-place forms. |
| | | Steel | Protective coating failures in very small and scattered locations. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| 6 | FAIR | Concrete | Open cracks greater than 1/16" wide spaced at less than 5'. Spalling, delaminations, map cracking, or freckled rust on stay-in-place forms affecting 2% or less of the area. Surface scaling may be 1/4" to 1/2" deep. |
| | | Steel | Protective coating failures is limited to less than 2% of the surface area with no loss of section. |
| | | Timber | Decay or section loss that affects less than 5% of the member section. Checks or shakes not in the tension zone that penetrate between 5% and 25% of the member thickness. Splits arrested and concerns mitigated. |
| 5 | FAIR | Concrete | Delamination, spalling, heavily map cracked areas, or freckled rust on stay-in-place forms affecting between 2% and 10% of the area. Excessive cracking or heavy scaling up to 1" deep. |
| | | Steel | Protective coating failure is limited to less than 5% of the surface area with minor loss of section. Cracks that have self-arrested or have been arrested may be present. Loose fasteners present but the connection is functioning as intended. |
| | | Timber | Decay or section loss that affects between 5% and 10% of the member section. Checks or shakes not in the tension zone that penetrate between 25% and 50% of the member thickness. Split length less than the member depth. |
| 4 | POOR | Concrete | Delamination, spalling, heavily map cracked areas, or light to moderate corrosion on stay-in-place forms affecting between 10% and 25% of the total surface area. Efflorescence with heavy rust staining. |
| | | Steel | Protective coating failure affecting between 5% and 10% of the surface area with measurable loss of section. Cracks that have not been arrested or missing fasteners. Structural review not required. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Check or shakes that penetrate more than 50% of the member thickness. |
| 3 | SERIOUS | Concrete | Delamination, spalling, heavily map cracked areas, or moderate to severe corrosion on stay-in-place forms affecting more than 25% of the total surface area. Local failures may be possible. |
| | | Steel | Protective coating failure affecting more than 10% of the surface area with measurable loss of section. Cracks or missing fasteners that do warrant a structural review. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Check or shakes that penetrate more than 50% of the member thickness. Split length greater than the member depth. |
| 2 | CRITICAL | All | The deck will not support design loads and is posted. Emergency repairs may be required. |
| 1 | IMMINENT FAILURE | All | Bridge is closed to traffic due to the potential for deck failure, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed due to deck condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #7 DECK (SI&A Item 58)

| Code | Condition | Material | Description |
|------|------------------|----------|---|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect the condition of the bottom surface. |
| 8 | GOOD | Concrete | Cracking less than 1/32" wide with no spalling, scaling, or delamination. |
| | | Steel | Very limited partial protective coating failures that do not expose bare steel. |
| | | Timber | Minor surface abrasion with fasteners functioning as constructed. |
| | | All | Small superficial wear or surface abrasion. |
| 7 | GOOD | Concrete | Open cracks less than 1/16" wide or sealed cracks spaced at 10' or more. Light shallow scaling present. |
| | | Steel | Protective coating failures in very small and scattered locations. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| | | All | Minor deterioration in intermittent locations that has no effect on structural capacity. |
| 6 | FAIR | Concrete | Delamination, spalling, and cracking greater than 1/16" wide spaced at less than 5'. Scaling may be 1/4" to 1/2" deep. |
| | | Steel | Protective coating failures present with no loss of section. |
| | | Timber | Decay or section loss affecting less than 5% of the member section. Checks or shakes not in the tension zone that penetrate between 5% and 25% of the member thickness. Splits arrested and concerns mitigated. |
| | | All | Deterioration of the combined area of both deck surfaces is 2% or less of the total area. |
| 5 | FAIR | Concrete | Excessive cracking or heavy scaling up to 1" deep. |
| | | Steel | Protective coating failures with minor loss of section. Cracks are arrested. All connections functioning as intended. |
| | | Timber | Decay or section loss affecting 5% to 10% of the member section. Checks, shakes, and splits have no effect on capacity. |
| | | All | Deterioration of the combined area of both deck surfaces is between 2% and 10% of the total area. |
| 4 | POOR | Concrete | Delamination, spalling, heavily map cracked areas, or efflorescence with heavy rust staining. |
| | | Steel | Protective coating failure with measurable section loss. Cracks have not been arrested or missing fasteners are present. |
| | | Timber | Decay, section loss, checks, shakes, or splits that do not warrant structural review. |
| | | All | Deterioration of the combined area of both deck surfaces is between 10% and 25% of the total area. Structural review and/or load analysis is not required. |
| 3 | SERIOUS | Concrete | Excessive delamination, spalling, or cracking that may affect capacity. |
| | | Steel | Protective coating failure with measurable loss of section. Cracks or missing fasteners may affect design capacity. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Checks, shakes, splits may warrant structural review. |
| | | All | Deterioration of the combined area of both deck surfaces is more than 25% of the total area. Structural review and/or load analysis may be necessary to determine if the structure can continue to function without restricted loading. |
| 2 | CRITICAL | All | The deck will not support design loads and is posted, emergency repairs or temporary shoring is required. |
| 1 | IMMINENT FAILURE | All | The bridge is closed to traffic due to the potential for deck failure, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed due to deck condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #9 SUPERSTRUCTURE (SI&A Item 59)

| Code | Condition | Material | Description |
|------|------------------|----------|---|
| 9 | NEW | All | No deficiencies in any of the structural components that will affect long term performance. |
| 8 | GOOD | All | All protective coatings are sound and functioning but with minor weathering of the coating. |
| 7 | GOOD | Concrete | Hairline cracks in C.I.P. concrete or sealed cracks spaced at more than 3' with no other defects present. |
| | | Steel | Very limited partial protective coating failures that do not expose bare steel. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| | | All | Members retain full section properties and function as designed with limited deterioration. |
| 6 | FAIR | Concrete | Cracks in C.I.P. concrete 1/16" wide or less or hairline cracks in P.S. concrete spaced at more than 3'. Minor delamination and spalling with exposed mild steel reinforcement without section loss or rust staining. |
| | | Steel | Protective coating failures present with no loss of section. |
| | | Timber | Decay or section loss affecting less than 5% of the member section. Splits arrested and concerns mitigated. |
| | | All | Members retain full section properties and function as designed with minor deterioration. Superficial impact damage. |
| 5 | FAIR | Concrete | Cracks in C.I.P. concrete 1/16" wide or less or hairline cracks in P.S. concrete spaced at 1' to 3'. Moderate delamination, spalling, or exposed prestressing reinforcement without section loss. Minor efflorescence present. |
| | | Steel | Protective coating failures with minor loss of section. Cracks are arrested. All connections functioning as intended. |
| | | Timber | Decay or section loss affecting 5% to 10% of the member section. Checks, shakes, and splits have no effect on capacity. |
| | | All | Members continue to function as designed with moderate deterioration affecting structural members and minor section loss in low or no stress areas. Moderate impact damage that does not require mitigation. |
| 4 | POOR | Concrete | Cracks in C.I.P. 1/16" wide or greater or hairline cracks in P.S. concrete spaced at less than 1'. Moderate delam and spalling or exposed prestressing reinforcement without section loss. |
| | | Steel | Significant protective coating failure and limited loss of section. Cracks not arrested or missing fasteners are present. |
| | | Timber | Decay, section loss, checks, shakes, or splits that do not warrant structural review. |
| | | All | All members continue to function as designed with considerable deterioration affecting structural members and up to 10% section loss in scattered and isolated areas. Substantial impact damage may be present. |
| 3 | SERIOUS | Concrete | Structural cracking or reinforcement section loss that may affect load capacity. |
| | | Steel | Protective coating failed with measurable loss of section. Cracks or missing fasteners may affect design capacity. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Checks, shakes, splits may warrant action. |
| | | All | Considerable deterioration affecting structural members with section loss up to 25% in scattered and isolated areas. Structural evaluation or load analysis may be necessary to determine if the structure can continue to function without restricted loading. |
| 2 | CRITICAL | All | The superstructure will not support design loads. Posting, emergency repairs installed, or temporary shoring is required. |
| 1 | IMMINENT FAILURE | All | The bridge is closed to traffic due to the potential for superstructure failure, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed due to condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts. |

BSIR #10 PAINT

| Code | Condition | Description |
|------|-----------|--|
| 9 | NEW | No deficiencies in the coating which will affect its long term performance. |
| 8 | GOOD | Minor weathering of the coating and/or dirt contamination. |
| 7 | GOOD | Minor pinpoint rusting in scattered locations or on sharp edges. |
| 6 | FAIR | Minor corrosion or degradation of the coating in scattered locations with a total area of less than 1%. |
| 5 | FAIR | Moderate corrosion or degradation of the coating limited to 1% and 5% of the total surface area. If areas of paint failure are concentrated under open joints, consideration may be given to zone painting. |
| 4 | POOR | Large areas of corrosion or degradation of the coating occurring to 5% and 15% of the total surface area. If areas of paint failure are concentrated under open joints, consideration may be given to zone painting. Otherwise, schedule for complete repainting when coating failure has progressed beyond 15%. |
| 3 | SERIOUS | Significant areas of corrosion or degradation of the coating comprising between 15% and 50% of the total surface area. Structure should be scheduled for complete recoating. |
| 2 | CRITICAL | More than 50% of the coating has failed. Structure should be scheduled for complete recoating. |
| 1 | IMMINENT | Very limited effectiveness of the entire coating system remaining throughout. |
| 0 | FAILED | The entire coating system has failed or is no longer effective. |
| N | N/A | Concrete superstructures, unpainted A-588 weathering steel, and galvanized beams. |

BSIR #11 SECTION LOSS UNDER JOINTS

| Code | Condition | Material | Description |
|------|-----------|----------|---|
| 3 | GOOD | Steel | No loss of paint protection, corrosion, or evidence of section loss due to corrosion. |
| | | Concrete | Superficial surface scaling without reinforcement exposure or reduced bearing. |
| 2 | FAIR | Steel | Rusty beam ends or section loss less than 10%. |
| | | Concrete | Distress limited to non-structural cracking or spalling without exposed reinforcement. |
| 1 | POOR | Steel | 10% or greater section loss that does not require repair or action due to load capacity analysis or structural review. |
| | | Concrete | Cracking, exposed reinforcement, or bearing surface reduction that does not require action due to load analysis or structural review. |
| 0 | FAILED | All: | Excessive deterioration requiring engineered repairs or temporary supports. |
| N | N/A | All: | Timber superstructures, slabs, culverts, etc. |

BSIR #12 BEARINGS

| Code | Condition | Description |
|------|------------------|--|
| 9 | NEW | No deficiencies in any bearing components that will affect long term performance. |
| 8 | GOOD | All protective coatings are sound and functioning but with minor weathering of the coating and/or dirt contamination on bearing components. |
| 7 | GOOD | Minor coating failures in scattered locations on steel bearing components. All bearing components function as designed. |
| 6 | FAIR | Minor deterioration affecting non-structural components. Some protective coating failures. Minor misalignment or loss of bearing support. All bearing components function as designed. |
| 5 | FAIR | Moderate deterioration affecting bearing components. Minor misalignment, section loss, or loss of bearing in low or no stress areas. |
| 4 | POOR | Considerable deterioration affecting bearing components with section loss up to 10% in scattered and isolated areas, misalignment, and/or loss of bearing. All members continue to function as designed. |
| 3 | SERIOUS | Considerable deterioration affecting bearing components with section loss up to 25% in scattered and isolated areas. Structural and/or load analysis may be necessary to determine if the structure can continue to function without restricted loading. |
| 2 | CRITICAL | Deterioration has progressed to the point where the structure will not support design loads and must be posted for reduced loads. |
| 1 | IMMINENT FAILURE | Bridge is closed to traffic due to condition of the bearings, but corrective action may put the bridge back in service. |
| 0 | FAILED | Bridge is closed due to bearing condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | Slab designs without bearings and culverts. |

BSIR #13 ABUTMENTS (SI&A Item 60)

| Code | Condition | Material | Description |
|------|-----------|----------|--|
| 9 | NEW | All | No deficiencies in any of the structural components that will affect long term performance. |
| 8 | GOOD | All | All structural components are sound and functioning as designed. There may be superficial cracking or weathering of protective components and/or dirt contamination of structural components. |
| 7 | GOOD | Concrete | Insignificant cracks or moderate cracks that are sealed. |
| | | MSE | Structural cracking or staining of panels is minor and limited to a few locations. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| | | All | All components retain full section properties and function as designed. |
| 6 | FAIR | Concrete | Unsealed moderate-width or map cracks. Minor delamination, spalling, or efflorescence without build-up or rust staining. |
| | | MSE | Minor uniform tilting of walls that does not require structural review. Structural cracking limited to 5% or less of the area. |
| | | Timber | Decay or section loss affecting less than 5% of the member section. Splits arrested and concerns mitigated. |
| | | All | Minor deterioration affecting structural components. Scour effects have been arrested with countermeasures. |
| 5 | FAIR | Concrete | Moderate delamination, spalling, or efflorescence. Reinforcement exposure without section loss. |
| | | MSE | Connections visible at isolated locations where panels are bowing. Joint width between panels is substantially uniform. |
| | | Timber | Decay or section loss affecting 5% to 10% of the member section. Checks, shakes, and splits have no effect on capacity. |
| | | All | Moderate deterioration affecting structural components including minor settlement, shallow scour, or impact damage. All members continue to function as designed. |
| 4 | POOR | Concrete | Considerable cracking, spalling, and efflorescence with heavy build-up or rust staining. |
| | | MSE | Moderate uniform tilting of walls that does not require structural review. Structural cracking limited to between 10% and 25% of the area. Erosion has exposed the wall base without undermining. |
| | | Timber | Extensive decay, section loss, checks, shakes, or splits that do not warrant structural review. |
| | | All | Considerable deterioration affecting structural members including partial settlement or scour. All members continue to function as designed. |
| 3 | SERIOUS | Concrete | Considerable areas of spalling, exposed reinforcement with section loss, or heavy rust staining. |
| | | MSE | Structural cracking occurring on greater than 25% of area. Exposed geotextile fabric or loss of backfill. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Checks, shakes, splits may warrant action. |
| | | All | Considerable deterioration or damage affecting structural members. Structural evaluation, hydraulic, and/or load analysis may be necessary to determine if the structure can continue to function without restricted loading or immediate repairs. |
| 2 | CRITICAL | All | Deterioration has progressed to the point where the structure will not support design loads and posting, emergency repairs, or shoring with structurally engineered temporary supports is required. |
| 1 | IMMINENT | All | Bridge is closed to traffic due to abutment failure, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed due to abutment condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts |

BSIR #14 PIERS (SI&A Item 60)

| Code | Condition | Material | Description |
|------|------------------|----------|--|
| 9 | NEW | All | No deficiencies in any of the structural components that will affect long term performance. |
| 8 | GOOD | All | All structural components are sound and functioning as designed. There may be superficial cracking or weathering of protective components and/or dirt contamination of structural components. |
| 7 | GOOD | Concrete | Insignificant cracks or moderate cracks that are sealed. |
| | | Steel | Protective coating failure in very small and scattered locations. |
| | | Timber | Checks or shakes penetrate less than 5% of the member thickness. |
| | | All | All members retain full section properties and function as designed. |
| 6 | FAIR | Concrete | Unsealed moderate-width or map cracks. Minor delamination, spalling, or efflorescence without build-up or rust staining. |
| | | Steel | Protective coating failures is limited to less than 2% of the surface area with no loss of section. |
| | | Timber | Decay or section loss affecting less than 5% of the member section. Splits arrested and concerns mitigated. |
| | | All | Minor deterioration affecting structural components. Scour effects have been arrested with countermeasures. |
| 5 | FAIR | Concrete | Moderate delamination, spalling, or efflorescence. Reinforcement exposure without section loss. |
| | | Steel | Protective coating failure is limited to less than 5% of the surface area with minor loss of section. Loose fasteners or broken welds present but the connection is in place and functioning as intended. |
| | | Timber | Decay or section loss affecting 5% to 10% of the member section. Checks, shakes, and splits have no effect on capacity. |
| | | All | Moderate deterioration affecting structural components including minor settlement, shallow scour, or impact damage. |
| 4 | POOR | Concrete | Considerable cracking, spalling, and efflorescence with heavy build-up or rust staining. |
| | | Steel | Protective coating failure affecting between 5% and 10% of the surface area with some loss of section. Cracks that have not been arrested but do not require structural review. |
| | | Timber | Extensive decay, section loss, checks, shakes, or splits that do not warrant structural review. |
| | | All | Considerable deterioration affecting structural members including partial settlement or scour. All members continue to function as designed. |
| 3 | SERIOUS | Concrete | Considerable areas of spalling, exposed reinforcement with section loss, or heavy rust staining. |
| | | Steel | Protective coating failure affecting more than 10% of the surface area with measurable loss of section. Missing fasteners or adjacent broken welds present that do not warrant a structural review. |
| | | Timber | Decay or section loss that affects more than 10% of the member section. Checks, shakes, splits may warrant action. |
| | | All | Considerable deterioration or damage affecting structural members. Structural evaluation, hydraulic, and/or load analysis may be necessary to determine if the structure can continue to function without restricted loading or immediate repairs. |
| 2 | CRITICAL | All | Deterioration has progressed to the point where the structure will not support design loads and posting, emergency repairs, or shoring with structurally engineered temporary supports is required. |
| 1 | IMMINENT FAILURE | All | Bridge is closed to traffic due to pier failure, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed due to condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts |

BSIR #15 SLOPE PROTECTION

| Code | Condition | Description |
|------|------------------|--|
| 9 | NEW | No deficiencies in any of the primary components that will affect the long term performance. |
| 8 | GOOD | Superficial cracking and/or dirt contamination on primary components. |
| 7 | GOOD | Minor deterioration and/or cracking of the materials. Slope protection will function as designed. |
| 6 | FAIR | Minor cracking, shallow settlement, scaling, and small scattered spalls. |
| 5 | FAIR | Moderate cracking, scaling, scattered spalls, or minor settlement. Slope protection will function as designed. |
| 4 | POOR | Considerable cracking, scaling, scattered spalls, and partial settlement. Slope protection will continue to function as designed. |
| 3 | SERIOUS | Considerable deterioration affecting the primary materials. Slope protection repairs or other corrective action should be scheduled. |
| 2 | CRITICAL | Limited effectiveness due to undermining or deterioration of the materials. |
| 1 | IMMINENT FAILURE | Slope protection no longer functions as designed. |
| 0 | FAILED | Slope protection has failed. |
| N | N/A | All structures over water and culverts. |

BSIR #16 APPROACH

| Code | Condition | Material | Description |
|------|------------------|----------|---|
| 9 | NEW | All | No noticeable or noteworthy deficiencies which affect the condition of the surface. |
| 8 | GOOD | Concrete | Cracking less than 1/32" wide with no spalling, scaling, or delamination. |
| | | HMA | No cracking, but minor deformations may be visible without spalling, segregation, or longitudinal joint failure. |
| | | All | No spalling, scaling, or delamination of the surface. |
| 7 | GOOD | Concrete | Open cracks less than 1/16" or sealed cracks spaced at 10' or more. |
| | | HMA | Cracks at spacing of 50' or more. Minor deformations with no spalling, segregation, or longitudinal joint failure. |
| | | All | Light shallow scaling or raveling allowed on the surface. Approach pavement will function as designed. |
| 6 | FAIR | Concrete | Open cracks greater than 1/16" wide spaced at less than 10'. Spalling, delamination, or unsound repairs affecting 2% or less of the area. Surface scaling may be 1/4" to 1/2" deep. |
| | | HMA | Cracks spaced at of 50' or more. Rutting, shoving, or raveling in limited locations with no affect on ride quality. |
| | | All | Minor settlement of the slab or pavement. |
| 5 | FAIR | Concrete | Excessive cracking or heavy scaling up to 1" deep. Spalling, delamination, or unsound repairs affecting between 2% and 10% of the area. |
| | | HMA | Block cracking, raveling, and other deterioration present throughout affecting between 2% and 10% of the area. |
| | | All | Settlement of the slab or pavement is less than 3/4" at the bridge seat or sleeper slab. |
| 4 | POOR | Concrete | Spalling, delamination, or unsound repairs affecting between 10% and 25% of the area. |
| | | HMA | Block cracking, raveling, other deterioration present throughout affecting between 10% and 25% of the area. |
| | | All | Settlement of the slab or pavement is more than 3/4" at the bridge seat or sleeper slab. |
| 3 | SERIOUS | Concrete | Spalling affecting more than 25% of the surface area. |
| | | HMA | Spalling affecting more than 25% of the surface area. Ride quality may be impacted. |
| | | All | Settlement of the slab or pavement impacts ride quality. Emergency repairs may be required. |
| 2 | CRITICAL | All | Emergency approach repairs required for the bridge to remain open. |
| 1 | IMMINENT FAILURE | All | The bridge is closed due to the approach condition, but corrective action may put it back in service. |
| 0 | FAILED | All | Bridge is closed to traffic due to the approach condition. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | All | Culverts, filled arch bridges, and other bridges without decks. |

BSIR #17 APPROACH SHOULDERS and SIDEWALKS

| Code | Condition | Description |
|------|-----------|--|
| 9 | NEW | No noticeable or noteworthy deficiencies which affect the condition of the approach shoulders or sidewalks. |
| 8 | GOOD | Small and superficial deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. |
| 7 | GOOD | Minor deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. All components will function as designed. |
| 6 | FAIR | Some deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. Settlement is minor. All components will function as designed. |
| 5 | FAIR | Moderate deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. Settlement is less than 3/4 inches at the bridge seat. All components will function as designed. |
| 4 | POOR | Considerable deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. Settlement is more than 3/4 inches at the bridge seat. All components will function as designed. |
| 3 | SERIOUS | Serious deterioration or wear on the approach shoulders, sidewalks, and curb and gutter. Urgent surface repairs may be required by the crews. |
| 2 | CRITICAL | Deterioration has progressed to the point where the approach shoulders, sidewalks, and curb and gutter will not function as designed. Emergency repairs may be required by the crews. |
| 1 | IMMINENT | Shoulder or sidewalks are closed to traffic, but corrective action may put the bridge back in service. |
| 0 | FAILED | Approach shoulders or sidewalks closed. |
| N | N/A | No approach shoulders, sidewalks, and curb and gutter. |

BSIR #20 CHANNEL and CHANNEL PROTECTION

| Code | Condition | Description |
|------|------------------|--|
| 9 | NEW | No noticeable or noteworthy deficiencies affect the condition of the channel. |
| 8 | GOOD | Banks are protected or well vegetated. River control devices such as spur dikes and embankment protection are not required or are in stable condition. |
| 7 | GOOD | Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel, have minor amounts of drift. |
| 6 | FAIR | Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. Minor stream bed movement is evident. Debris is restricting the channel slightly. |
| 5 | FAIR | Bank protection is being eroded. River control devices and/or embankment have major damage. Trees and brush restrict the channel. |
| 4 | POOR | Bank and embankment protection is severely undermined. River control devices have severe damage. Large deposits of debris are in the channel. |
| 3 | SERIOUS | Bank protection has failed. River control devices have been destroyed. Streambed, aggradation, degradation or lateral movement has changed to threaten the bridge and/or approach roadway now. |
| 2 | CRITICAL | The channel has changed to the extent the bridge is near a state of collapse. |
| 1 | IMMINENT FAILURE | The bridge is closed because of channel failure, but corrective action may put it back in service. |
| 0 | FAILED | Bridge closed because of channel failure. Coordinate with SI&A Item 41 and notify Bridge Field Services. |
| N | N/A | Bridges that are not over a waterway (channel). |