WILSON COUNTY

BRIDGE MAINTENANCE RECOMMENDATIONS

COUNTY: WILSON
LOCATION: 95-01368-02.38-
CO. SEQ.: 1 SPEC. CASE: 0

Tennessee Department of Transportation

CROSSING: BECKWITH RD./I40
FED. BRIDGE NO.: 95I00400007
MAINT. DIST.: 95

REPAIR LIST NO.: N
DATE ADDED:
REVISED: 02/19/2010

FACILITY CARRIED:	NFA 1368			NUMBER OF MAIN SPANS:	2
HIGHWAY SYSTEM:	11-OTHER COUNTY ROADS			NUMBER OF APPROACH SPANS:	0
BRIDGE WIDTH (CURB TO CURB):	100 FT	0 IN		BRIDGE LENGTH (FT):	314
BRIDGE WIDTH (OUT TO OUT):	104 FT	0 IN		MAXIMUM SPAN LENGTH (FT):	166
APPROACH ROADWAY (W/SHOULDERS):	96 FT	9 IN		SKEW ANGLE (DEGREES):	80

MAINTAINED BY:	STATE HIGHWAY AGENCY
MAIN SPAN MATERIAL:	STEEL CONTINUOUS
MAIN SPAN DESIGN TYPE:	STRINGER/MULTI-BEAM OR GIRDER
APPROACH SPAN MATERIAL:	OTHER OR NOT APPLICABLE
APPROACH SPAN DESIGN TYPE:	OTHER OR NOT APPLICABLE

INSPECTION DATE:	02/19/2010	GENERAL CONDITION:	GOOD
EVALUATION DATE:	02/26/2008	STRUCTURALLY DEFICIENT:	NO
PPRM PIN NUMBER:			
H TRUCK RATING @ INV.:	20 TONS	SUFFICIENCY RATING:	99.3

GENERAL COMMENTS:

BACKFILL GRAVEL AROUND GUARDRAIL POSTS AT BRIDGE APPROACHES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 02/22/2010

County:	95
Route:	01368
Special Case:	0
County Sequence:	1
Log Mile:	2.38

Bridge Number: (Includes Item 5A)	95I004000071
Feature Intersected:	BECKWITH RD./I40
Evaluation Status:	OTHER ITEM(S) HAVE BEEN CHANGED

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	LAST INSPECTION DATE	02/19/2010
	EARLIEST DATE OF NEXT REGULAR INSPECTION	12/21/2011
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.
		FT. IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.
		FT. IN.
36	TRAFFIC SAFETY FEATURES	
	Br. Rail 1	
	Trans. 1	
	Appr. Rail 1	
	Terminal 1	
	SPEED LIMIT 40	
41	STRC OPEN/CLOSED/POSTED A K P	A
58	DECK	9
59	SUPERSTRUCTURE	9
60	SUBSTRUCTURE	9
61	CHANL/CHANL PROTECTION	N
62	CULVERT AND RETAIN WALL	N
71	WATERWAY ADEQUACY	N
72	APPROACH RDWY ALIGNMENT	8
521	OVERALL CONDITION	GOOD

16 LATITUDE N 36° 10.6700′

17 LONGITUDE W 86° 27.3990′

Gilbert W Hunter

Digitally signed by Gilbert W Hunter
DN: cn=Gilbert W Hunter, c=US, o=TDOT, ou=Bridge Inspection
Date: 2010.02.22 10:18:10 -06'00'

TEAM LEADER SIGNATURE

REVIEW DATE

CONDITION CODING GUIDELINES

(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOUSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT IT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 02/22/2010

County: 95

Route: I0040

Special Case: 0

County Sequence: 1

Log Mile: 6.28

Bridge Number: (Includes Item 5A) 95I004000072

Feature Intersected: BECKWITH RD./I40

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	LAST INSPECTION DATE	02/19/2010
	EARLIEST DATE OF NEXT REGULAR INSPECTION	12/21/2011
		/ /
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	17 FT. 2 IN.
		FT. IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	17 FT. 2 IN.
		FT. IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	91 FT. 7 IN.
		FT. IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: H R	FT. IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: H R	FT. IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	FT. IN.
521	OVERALL CONDITION	GOOD

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
CONCRETE BARRIER OR RAIL

Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL 1

(C) ADEQUACY OF TRANSITIONS 1

(D) ADEQUACY OF TERMINALS 1

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
FT. IN.
FT. IN.

16 LATITUDE N 36° 10.6700′

17 LONGITUDE W 86° 27.3990′

HEIGHT POSTED AT BOTH APPROACHES? YES [ ] NO [ ] N/A [ ]

555 COMMENTS

TEAM LEADER SIGNATURE

/ / REVIEW DATE

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

BRIDGE NO.

SINK HOLE L.S. GUARDRAIL POST NEXT TO WING

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

VIEW ACROSS DECK

CRACKS @ RIGHT SIDE A-APPROACH SLAB TYPICAL

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

A-APPROACH

B-APPROACH

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

ABUTMENT-2-TYPICAL

BENT

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

BOTTOM DECK VIEW SPAN-2-TYPICAL

RIGHT SIDE ELEVATION

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

B-APPROACH WEST BOUND LANE

B-APPROACH EAST BOUND LANE

Photographs

Bridge ID#: 95-1368-2.38 **Date: 02/19/2010**

A-APPROACH WEST BOUND LANE

A-APPROACH EAST BOUND LANE

BRIDGE INSPECTION REPORT

Page No.___

Form BIR 3.0
(Rev. 9-22-98)
DT-0069

Field Report No. 02 Date 2/19/2010
Previous Report No. 01 Date 2/21/2008
Plans: YES

Bridge No. 95I00400007 (Eleven Digit No.)
Bridge Location No. 95 - 01368 - 2.38 (Co. Route Log Mile)

BECKWITH ROAD (Road Name) over I-40 (Crossing) NA (Structure Name (If Named))

Year Constructed 2006 County Wilson Maintenance District 32
Year Widened _____ Year Rehabilitated _____

FEATURES

Wearing Surface CONCRETE Depth _____ (in.)
Flared Width _____ Median Width NONE
Navigational Control _____ Bridge Skew 80 ° RT
Structure Type (Main Span) WPG
Structure Type (Appr.Spans) _____
No. Main Spans 2 No. Approach Spans _____
Maximum Span Length 166.0 (**.* ft.)
Total Length 314.0 (**.* ft.)

INSPECTORS

1. HUNTER
2. WALLER
3. DANIEL
4. HALLIBURTON
5. WHEELEY
6. _____
7. _____
8. _____

WIDTHS (*.* ft.)

Deck Out-to-Out 104.0
Roadway Curb/Curb _____
Roadway Rail/Rail 100
Sidewalk Rt. _____ Lt. _____
*Approach Roadway 74
*(Does Not Include Shoulders)
Approach Shoulder Rt. 11.5
Lt. 11.5

CLEARANCES

Min. Vertical Clearance over Deck _____ (ft.-in.)
Min. Vertical Under Clearance 17'2" (ft.-in.)
Min. Lateral Under Clearance Rt. 28' (*.* ft.)
Min. Lateral Under Clearance Lt. 27'6" (*.* ft.)

FRACTURE CRITICAL: NO
(If Yes, Include BIR 3.9)

NBIS Bridge Length (<25 ft.) >25 (ft.-in.)

UNDERWATER INSPECTION

To Be Performed By: NONE REQUIRED Date _____

Change in Structural Condition: NO Major Repairs Made: NO BRIDGE is: OPEN

COMMENTS:

Supervising Bridge Inspector: WAYNE HUNTER BRIDGE RATING: **GOOD**

Form BIR 3.1
(Rev. 9-22-98)
DT-0080

Page No.___

Bridge Location No. 95 - 01368 - 2.38 (Co. - Route - Log Mile)

Date 2/19/2010

PERFORMANCE EVALUATION

Time of Day Inspected 10:35 A.M. Weather Conditions SUNNY 42

Vehicles Observed ALL TYPES

LIVE LOAD BEHAVIOR

	Yes/No	Comments
Substructure		
Horiz./ Vert. Defl.	NO	
Vibration	NO	
Superstructure		
Horiz./ Vert. Defl.	NO	
Vibration	NO	

APPROACH

	Rating	Comments
Alignment	GOOD	
Slab	GOOD	
Joints	GOOD	
Pavement	GOOD	
Embankment	GOOD	
Drains	GOOD	

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard	Comments
Bridgerailing	GOOD	STANDARD	
Transitions	GOOD	STANDARD	
Guardrail	GOOD	STANDARD	
Guardrail Terminal	GOOD	STANDARD	

SIGNING

	Yes/ No/ Needed
Paddleboards	DECALS/TERMINAL
Vertical Clearance (<14'-6")	NA
Narrow Bridge Signs	NA
One Lane Bridge Signs	NA

Weight Limit Posted NO

Gross..... _____ Tons

2 Axle..... _____ Tons

3 or more Axles.. _____ Tons

Other Signs or Plaques:

Comments Regarding any Problems with Signing:

Form BIR 3.2
(Rev. 9-22-98)
DT-0081

Page No.___

Bridge Location No. 95 - 01368 - 2.38 (Co. - Route - Log Mile)

Date 2/19/2010

DECK

	Rating	Comments
Wearing Surface	GOOD	
Deck - Structural Condition	GOOD	
Curbs	NA	
Median	NA	
Sidewalks	NA	
Parapet	NA	
Railing	GOOD	
Paint	NA	
Drains	NA	
Lighting Standards	NA	
Utilities	NA	
Joint Leakage	NA	
Expansion Joints	NA	

SUPERSTRUCTURE

Bearing Devices	GOOD	*NEOPREAME PAD STICK OUT UP TO 5" AT ABUTMENT-1*
Girders or Beams	GOOD	
Floor Beams	NA	
Stringers	NA	
Diaphragms	GOOD	
Bracing	NA	
Trusses - General	NA	
Portals	NA	
Bracing	NA	
Paint	NA	
Alignment of Members	GOOD	

TEXTURE COAT

Condition Rating	GOOD	Needs Spot Painting	NO
Overall Appearance	GOOD	Needs Repainting	NO
Staining Rating	GOOD	Comments	
Fading Rating	GOOD		
Scaling Rating	GOOD		

Form BIR 3.3
(Rev. 9-22-98)
DT-0082

Page No.___

Bridge Location No. 95 - 01368 - 2.38 (Co. Route Log Mile)

Date 2/19/2010

SUBSTRUCTURE

ABUTMENTS

	Rating	Comments
Caps	GOOD	
Breastwall	NA	
Wings	GOOD	
Backwall	GOOD	
Plumb	GOOD	
Footing	NV	
Piles	NV	
Embankment	GOOD	
Bearing Surface	GOOD	
Slope Paving	NA	
Rip Rap	GOOD	

PIERS

Caps		
Columns		
Plumb		
Footings		
Piles		
Bearing Surface		

BENTS

Caps	GOOD	
Columns	GOOD	
Plumb	GOOD	
Footings	NV	
Piles	NV	
Bearing Surface	GOOD	

Piles Need Replacement: NO

Piles To Be Replaced:

INSPECTION REPORT FOR UNDERPASS ROUTE

Page No.___

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 02 Date 2/19/2010
Previous Report No. 01 Date 2/21/2008

Bridge No. 95I00400007 (Eleven Digit No.)

Underpass Location No. 95 - I40 - 6.28 (Co. Route Log Mile)

Railroad/Walkway _____ or 95 - 1368 - 0238 (Co. Route Log Mile) over 95 - I40 - 6.28 (Co. Route Log Mile)

County Wilson

Structure Name (If Named) NA

Year Constructed 2006

Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(.* ft. unless otherwise noted)*

Divided Highway RT RDWY E.B.L.

Type of Wearing Surface ASPHALT

Width of Approach Traveled Roadway _____ ft. (Does Not Include Shoulders)

Width of Median if Divided Highway 42 ft.

Approach Shoulder Width 12 ft. Right 9 ft. Left

*Horizontal Clearance Under Bridge 91.6 ft.

*Distance Between Pier Protection Guardrail and Substructure _____ ft. Right 18.6 ft. Left

*Width of Sidewalk Under Bridge _____ ft. Right _____ ft. Left

*Minimum Vertical Clearance: 17 ft. 3 in. (ft.-in.)

*Show on Sketch

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard Non Exist
Pier Protection Railing or Parapet	GOOD	STANDARD
Approach Guardrail Terminals	GOOD	STANDARD
Approach Guardrail	GOOD	STANDARD
Approach Guardrail Terminal	GOOD	STANDARD

INSPECTORS

1. HUNTER
2. WALLER
3. DANIEL
4. HALLIBURTON
5. WHEELEY
6. _____

SIGNING

	Yes/ No/ Needed
Paddleboards	DECALS/TERMINAL
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO
Other Underpass Signs Needed	

Page No.___

Form BIR 3.0A (Continued)
(Rev. 9-22-98)
DT-1443

Date 2/19/2010

Underpass Location No. 95 - I40 - 6.28
Co. Route Log Mile

Other Signs or Plaques:

Comments Regarding any
Problems with Signing:

BRIDGE FEATURES *(*.* ft.)*

Bridge Skew 80 ° RT

Number of Lanes/Tracks on Bridge 6

Structure Type (Main Span) WPG

No. Main Spans 2

Structure Type (Appr.Spans)

No. Appr. Spans

Maximum Span Length 166.0 (ft.)

Total Length 314.0 (ft.)

Width of Bridge Out-to-Out 104.0 (ft.)

Right Angle to Centerline of Bridge)

Width of Bridge Along Skew NA (ft.)

(If Unable to Measure at Right
Angle to Centerline of Bridge)

BRIDGE CONDITION: **GOOD**

Does Potential Exist for Elements from Bridge Falling on Roadway Beneath? NO

Does Potential Exist Because of Deteriorated Condition or Failure of Major Members? NO

Comment on any Conditions of Bridge that would Effect Roadway Beneath:

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

INSPECTION REPORT FOR UNDERPASS ROUTE

Page No.___

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 02 Date 2/19/2010
Previous Report No. 01 Date 2/21/2008

Bridge No. 95I00400007 (Eleven Digit No.)

Underpass Location No. 95 - I40 - 6.28 (Co. Route Log Mile)

Railroad/Walkway or 95 - 1368 - 0238 (Co. Route Log Mile) over 95 - I40 - 6.28 (Co. Route Log Mile)

County Wilson

Structure Name (If Named) NA

Year Constructed 2006

Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(.* ft. unless otherwise noted)*

Divided Highway LT RDWY W.B.L.

Type of Wearing Surface ASPHALT

Width of Approach Traveled Roadway _____ ft. (Does Not Include Shoulders)

Width of Median if Divided Highway 42 ft.

Approach Shoulder Width 12 ft. Right 8.4 ft. Left

*Horizontal Clearance Under Bridge 100.4 ft.

*Distance Between Pier Protection Guardrail and Substructure _____ ft. Right 20 ft. Left

*Width of Sidewalk Under Bridge _____ ft. Right _____ ft. Left

*Minimum Vertical Clearance: 17 ft. 2 in. (ft.-in.)

*Show on Sketch

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard Non Exist
Pier Protection Railing or Parapet	GOOD	STANDATD
Approach Guardrail Terminals	GOOD	STANDARD
Approach Guardrail	GOOD	STANDARD
Approach Guardrail Terminal	GOOD	STANDARD

INSPECTORS

1. HUNTER
2. WALLER
3. DANIEL
4. HALLIBURTON
5. WHEELEY
6. _____

SIGNING

	Yes/ No/ Needed
Paddleboards	DECALS/TERMINAL
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO
Other Underpass Signs Needed	

Page No.___

Form BIR 3.0A (Continued)
(Rev. 9-22-98)
DT-1443

Date 2/19/2010

Underpass Location No. 95 - I40 - 6.28
Co. Route Log Mile

Other Signs or Plaques:

Comments Regarding any
Problems with Signing:

BRIDGE FEATURES *(*.* ft.)*

Bridge Skew 80° RT

Number of Lanes/Tracks on Bridge 6

Structure Type (Main Span) WPG

No. Main Spans 2

Structure Type (Appr.Spans)

No. Appr. Spans

Maximum Span Length 166.0 (ft.)

Total Length 314.0 (ft.)

Width of Bridge Out-to-Out 104.0 (ft.)

Right Angle to Centerline of Bridge)

Width of Bridge Along Skew NA (ft.)

(If Unable to Measure at Right
Angle to Centerline of Bridge)

BRIDGE CONDITION: **GOOD**

Does Potential Exist for Elements from Bridge Falling on Roadway Beneath? NO

Does Potential Exist Because of Deteriorated Condition or Failure of Major Members? NO

Comment on any Conditions of Bridge that would Effect Roadway Beneath:

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

SUMMARY
95-1368-2.38
2/19/2010

Beckwith Rd./I40
2Span/W.P.G.

This bridge was inspected and found to be in **good** condition. The approach alignment is good. The approach pavement is asphalt overlay which is in good condition. The approach embankment is good. The concrete bridge railing is in good condition. The neoprene bearing pads are oversized on abutment #1 but are good; they stick out up to 5".

Wayne Hunter

CLEARANCE SKETCH

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

*TAKEN FROM BEAM "A"

Top of Deck Span No. 1

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

DECK	GOOD	
RAILS	GOOD	

Top of Deck Span No. 2

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

DECK	GOOD	
RAILS	GOOD	

Bottom of Slab Span No. 1

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

DECK	NV	
DIAPHRAGMS	GOOD	
BEAMS	GOOD	WEATHERING STEEL

Bottom of Slab Span No. 2

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

DECK	NV	
DIAPHRAGMS	GOOD	
BEAMS	GOOD	WEATHERING STEEL

Abutment No. 1

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

BACKWALL	GOOD	
CAP	GOOD	
WINGS	GOOD	FEW HAIR CRACKS WITH LEACHING
BEARINGS	NV	

BENT # 1

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

FRONT

BACK

CAP		
COLUMN		
FOOTING		
BEARINGS		

Abutment No. 2

Date 2/19/2010

Bridge Location No. 95 (County) 1368 (Route) 2.38 (Log Mile)

BACKWALL	GOOD	
CAP	GOOD	
WINGS	GOOD	FEW HAIR CRACKS WITH LEACHING
BEARINGS	NV	