

MINIMUM CRITERIA DETERMINATION CHECKLIST

TIP Project No. B-4979
W.B.S. Project No. 39899.1.1

Project Location: Bridge No. 59 over Jonesville Creek on US 21 Business (N. Main Street) in Jonesville in Yadkin County.

Project Description: The proposed project will replace Yadkin County Bridge No. 59 on US 21 Business (N. Main Street) over Jonesville Creek. Bridge No. 59 is 64 feet long. The replacement structure will be a bridge approximately 120 feet long providing a minimum 40-foot clear deck width. The bridge will include two 12-foot lanes and 8-foot offsets that include a bike lane/shoulder. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway grade of the new structure will be approximately the same as the existing structure.

The approach roadway will extend approximately 180 feet from the northwest end of the new bridge and 270 feet from the southeast end of the new bridge. The approaches will be widened to include a 24-foot pavement width providing two 12-foot lanes. A 4-foot full depth paved shoulder with a 4-foot grassed shoulder will be provided on each side (7-foot grass shoulders where guardrail is included). The roadway will be designed as a Minor Rural Arterial, using regional guidelines, with a 40-mile per hour design speed.

Traffic will be detoured off-site during construction (see Figure 1).

Purpose and Need: NCDOT Bridge Management Unit records indicate Bridge No. 59 has a sufficiency rating of 51.88 out of a possible 100 for a new structure.

The bridge is considered functionally obsolete due to a deck geometry appraisal of 3 out of 9 according to Federal Highway Administration (FHWA) standards. Since the bridge was built in 1922 and reconstructed in 1940, deck surface and joints are in critical condition in need of repairs.

Bridge No. 59 is expected to carry 4,000 vehicles per day (2020) with 4,600 vehicles per day projected for the future (2040). The substandard deck width is becoming increasingly unacceptable and replacement of the bridge will result in safer traffic operations.

Components of both the concrete superstructure and substructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. The bridge is not currently posted for weight limits. The bridge is approaching the end of its useful life.

Anticipated Permit or Consultation Requirements:

A Nationwide Permit (NWP) 3 (maintenance) will likely be required for impacts to “Waters of the United States” resulting from this project. Other permits that may apply include a NWP No. 33 for temporary construction activities such as stream dewatering, work bridges, or temporary causeways that are often used during bridge demolition.

In addition, a NCDWQ Section 401 Water Quality General may be required prior to the issuance of a Section 404 Permit. Other required 401 certifications may include a GC 3366 for temporary

construction access and dewatering. The United States Army Corps of Engineers (USACE) holds the final discretion as to what permit will be required to authorize project construction.

Special Project Information:

Environmental Commitments: Greensheet Commitments are located at the end of the checklist.

Estimated Costs:

The estimated costs, based on 2017 prices, are as follows:

R/W: \$ 120,000.00
Const: \$ 1,275,000.00
Total: \$ 1,395,000.00

Accidents: Traffic Engineering has evaluated a recent five year period (January 1, 2010 – December 31, 2014) and found four accidents occurring in the vicinity of the project. There were no fatal crashes; one non-fatal injury crash; and three property damage only crashes. None were associated with the geometry of the bridge or its approach roadways.

Design Exceptions: There are no anticipated design exceptions for this project.

Pedestrian and Bicycle Accommodations: This portion of US 21 Business (N. Main Street) is not a part of a designated bicycle route nor is a bicycle project along this portion of US 21 Business in the State Transportation Improvement Program. However, in accordance with the Jonesville Comprehensive Pedestrian Plan, the NCDOT Bicycle and Pedestrian Division has requested bicycle lanes on both sides of the bridge. As a result, 8-foot offsets, which include a 4-foot full depth paved shoulder and a minimum handrail height of 42 inches will be included in the project. No temporary bicycle or pedestrian accommodations are required for this project.

Bridge Demolition: Bridge No. 59 is constructed entirely of concrete and steel and should be possible to remove with no resulting debris in the water based on standard demolition practices.

Alternatives Discussion:

No Build – The no build alternative would result in eventually closing the road which is unacceptable given the volume of traffic served by US 21 Business (N. Main St.) and its connectivity.

Rehabilitation – The bridge was constructed in 1922 and reconstructed in 1940 and the bridge which would constitute effectively replacing the bridge.

Onsite Detour – An onsite detour was not evaluated due to the presence of an acceptable offsite detour.

Staged Construction – Staged construction was not considered because of the availability of an acceptable offsite detour.

New Alignment – Given that the alignment for US 21 Business (N. Main St.) is acceptable, a new alignment was not considered as an alternative.

Offsite Detour – Bridge No. 59 will be replaced on the existing alignment. Traffic will be detoured offsite (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the offsite detour. The off-site detour for this project utilizes existing roads which include SR 1386 (Swan Creek Bypass W., SR 1311(Shaffner Road), and SR 1312 (Haynes Road). The detour for the average user will result in 5 minutes of additional travel time (approximately 3 miles of additional travel). The duration of the construction is expected to be 12 months. The majority of traffic on the road is through traffic.

Based on the Guidelines, the criteria above indicate that on the basis of delay alone, the detour is acceptable. Yadkin County Emergency Services along with Yadkin County Schools Transportation have also indicated that the detour is acceptable but will result in 1 to 2 minute delay in response time. NCDOT Division 11 has indicated the condition of all roads, bridges and intersections on the offsite detour are acceptable, without improvement, and concurs with the use of the detour. US 21 Business (N. Main Street) is used as detour route when portions of I-77 are closed. The proposed project detour would accommodate any necessary detours for I-77.

Floodplains

The portion of Jonesville Creek crossed by Bridge No. 59 has a regulated floodway. The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of the project with regard to applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Other Agency Comments:

A start of study letter was sent to all agencies on January 23, 2016. The **Town of Jonesville, the Jonesville Police Department, Yadkin County, the U.S. Coast Guard, the N.C. Division of Water Quality, the USACE, the FHWA, Eastern Band of Cherokee, USEPA and N.C. Division of Water Resources** had no special concerns for this project.

Public Involvement:

A landowner notification letter was sent to all property owners affected directly by this project on November 11, 2014. Property owners were invited to comment. No comments have been received to date.

PART A: MINIMUM CRITERIA

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 1. Will the proposed project involve land disturbing activity of more than ten acres that will result in substantial, permanent changes in the natural cover or topography of those lands? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Will the proposed project require the expenditure of more than ten million dollars in public funds? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Is the proposed project listed as a type and class of activity which would qualify as a Non-Major Action under the Minimum Criteria rules? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
- If “yes”, under which category? Category # 9
(Note: If either Category #8 or #15 is used, complete Part D of this checklist.)

If “yes” is selected for either Question 1 or 2 and “no” is selected for Question 3, then the project does not qualify as a Non-Major Action. A state environmental impact statement (SEIS) or state environmental assessment (SEA) will be required.

PART B: MINIMUM CRITERIA EXCEPTIONS

- | | YES | NO |
|--|--------------------------|-------------------------------------|
| 4. Does the proposed activity have a significant adverse effect on wetlands; surface waters such as rivers, streams, and estuaries; parklands; prime or unique agricultural lands; or areas of recognized scenic, recreational, archaeological, or historical value? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Will the proposed activity endanger the existence of a species on the Department of Interior’s threatened and endangered species list? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse air quality impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Would the proposed activity cause significant changes in land use concentrations that would be expected to create adverse water quality or groundwater impacts? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. Is the proposed activity expected to have a significant adverse effect on long-term recreational benefits? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Is the proposed activity expected to have a significant adverse effect on shellfish, finfish, wildlife, or their natural habitats? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10. Will the proposed activity have secondary impacts or cumulative impacts that may result in a significant adverse impact to human health or the environment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11. Is the proposed activity of such an unusual nature or does the proposed activity have such widespread implications, that an uncommon concern for its environmental effects has been expressed to the NCDOT? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Note: If any of Questions 4 through 11 in part B are answered “YES”, the proposed project does not qualify as a Non-Major Action. A SEIS or SEA will be required.

PART C: COMPLIANCE WITH STATE AND FEDERAL REGULATIONS

	YES	NO
<u>Ecological Impacts</u>		
12. Is a federally protected threatened or endangered species, or its habitat, likely to be impacted by the proposed action?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Does the action require the placement of fill in waters of the United States?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Does the project require the placement of a significant amount of fill in high quality or relatively rare wetland ecosystems, such as mountain bogs or pine savannahs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Does the project require stream relocation or channel changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the proposed action located in an Area of Environmental Concern, as defined in the Coastal Area Management Act?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Cultural Resources

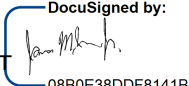
17. Will the project have an “effect” on a property or site listed on the National Register of Historic Places?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18. Will the proposed action require acquisition of additional right of way from publicly owned parkland or recreational areas?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

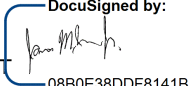
Question 12: While there is potential habitat present for the northern long-eared bat (NLEB), this species is exempt due to consistency with the 4(d) rule. Prior to construction, NCDOT will coordinate with the US Fish and Wildlife Service or the US Army Corps of Engineers to satisfy Section 7 of the Endangered Species Act for the NLEB.

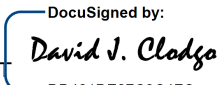
Question 13: No wetlands were identified within the project area. No impacts are expected to Jonesville Creek and 92 feet are expected to Stream SA.

PART D: N/A

Reviewed by:

9/29/2017 | 9:22 AM EDT 
Date FOR Angela Sanderson
Project Planning Engineer
NCDOT

9/29/2017 | 9:22 AM EDT 
Date James McInnis, Jr, PE
Project Manager
NCDOT

9/29/2017 | 9:11 AM EDT 
Date David J. Clodgo, PE
Consultant Project Manager

PROJECT COMMITMENTS

**Yadkin County
Bridge No. 59 on US 21 (N. Main Street) in Jonesville
Over Jonesville Creek
W.B.S. No. 39899.1.1
T.I.P. No. B-4979**

Division Eleven Construction, Resident Engineer's Office – Offsite Detour

In order to have time to adequately reroute school busses Yadkin County will be contacted at 336-679-2051 at least one month prior to road closure.

Yadkin County Emergency Services will be contacted at (336) 679-4232 for medical services and (336) 679-4231 for the fire marshal, at least one month prior to road closure to make the necessary temporary reassignments to primary response units.

Structure Unit – Pedestrian and Bicycle Accommodations

Eight-foot offsets, which include a 4-foot full depth paved shoulder and a minimum handrail height of 42 inches will be included in the project design.

Hydraulics Unit – FEMA Coordination

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of the project with regard to applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Division Construction-FEMA

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

Contracts Unit - Length of Construction

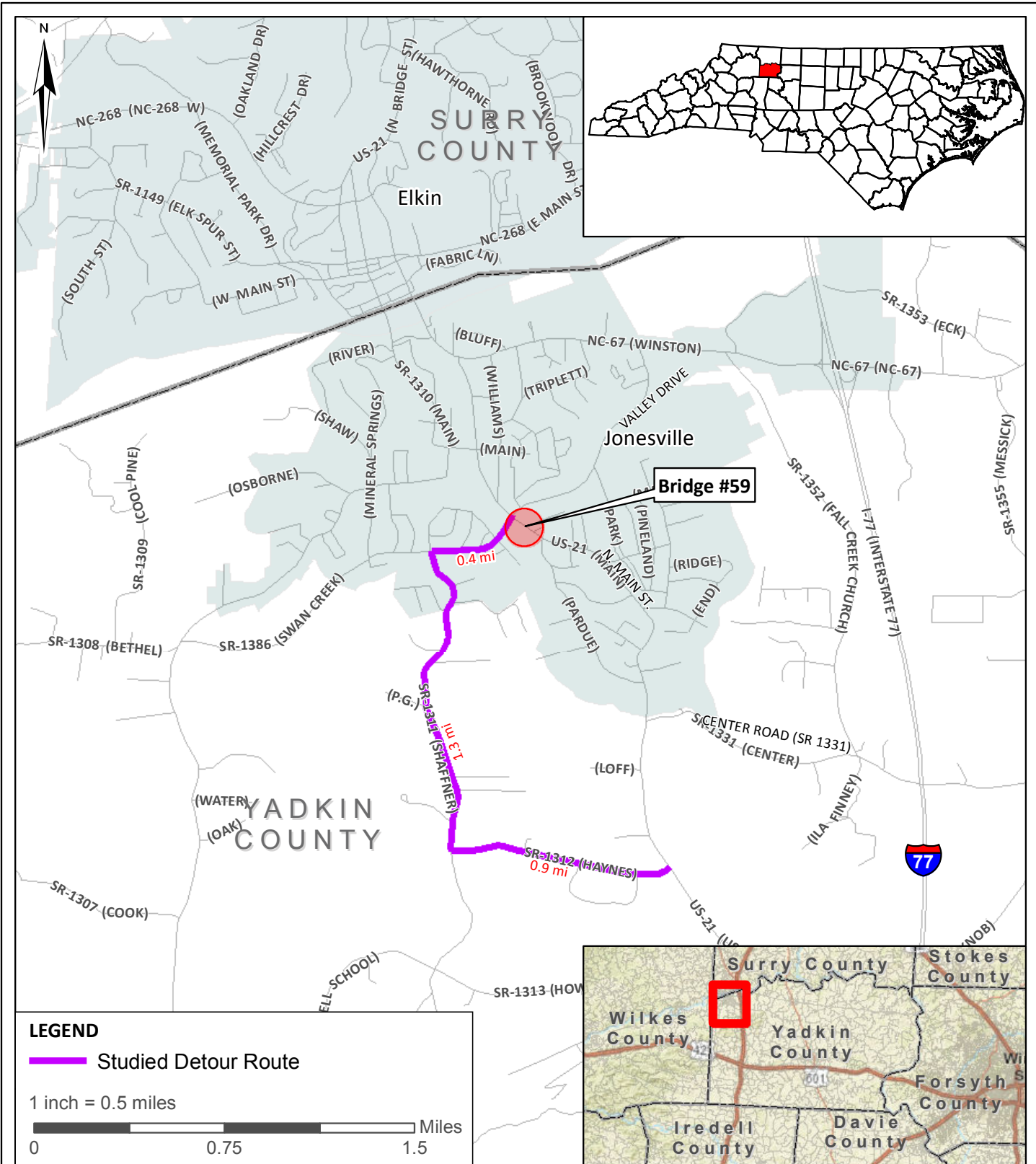
In order to address specific requests from the School Transportation Director for Yadkin County, NCDOT will set the **minimum** reasonable contract time to reduce the period of road closure.

Environmental Analysis Unit-Northern Long-Eared Bat

Construction activities for this project will not take place until Endangered Species Act compliance is satisfied for the northern long-eared bat.

Geotechnical Unit-Geoenvironmental – Phase II Study

Due to two sites that have potential contamination, a Phase II Geoenvironmental study would need to be done prior to Construction.



LEGEND

Studied Detour Route

1 inch = 0.5 miles



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS UNIT

VICINITY MAP

B-4979
Replace Bridge #59
on N. Main St. (US 21 Business)
Over Jonesville Creek in Jonesville

County: YADKIN	
Div: 11	B-4979
WBS: 39899.1.1	
MAY 2017	
Figure 1	

8/17/99

B-4979, BRIDGE NO. 59 YADKIN COUNTY REPLACE IN PLACE OFFSITE DETOUR

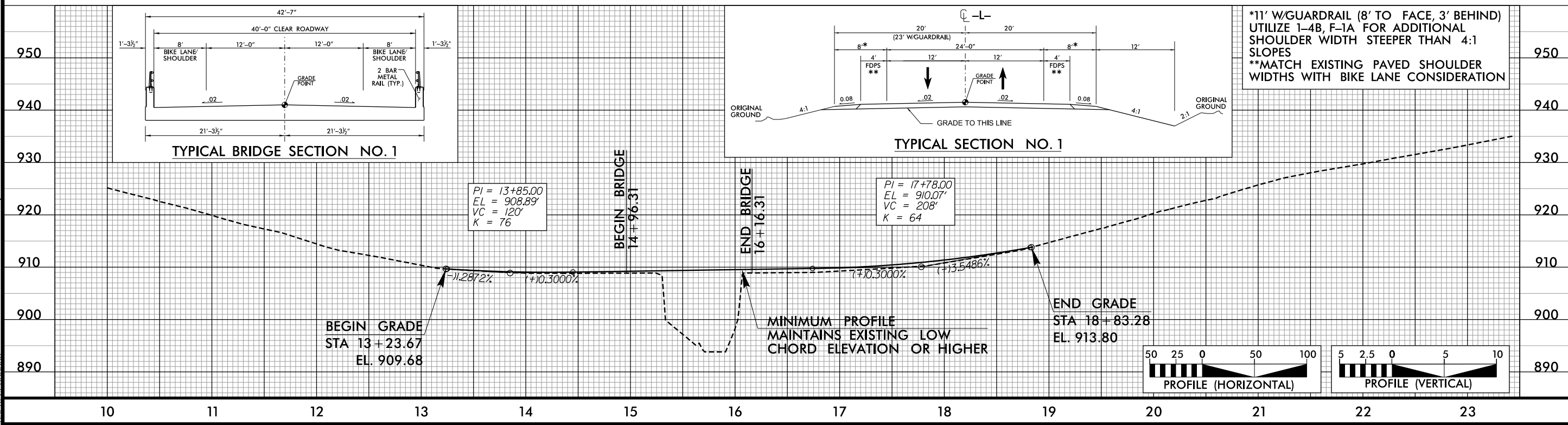
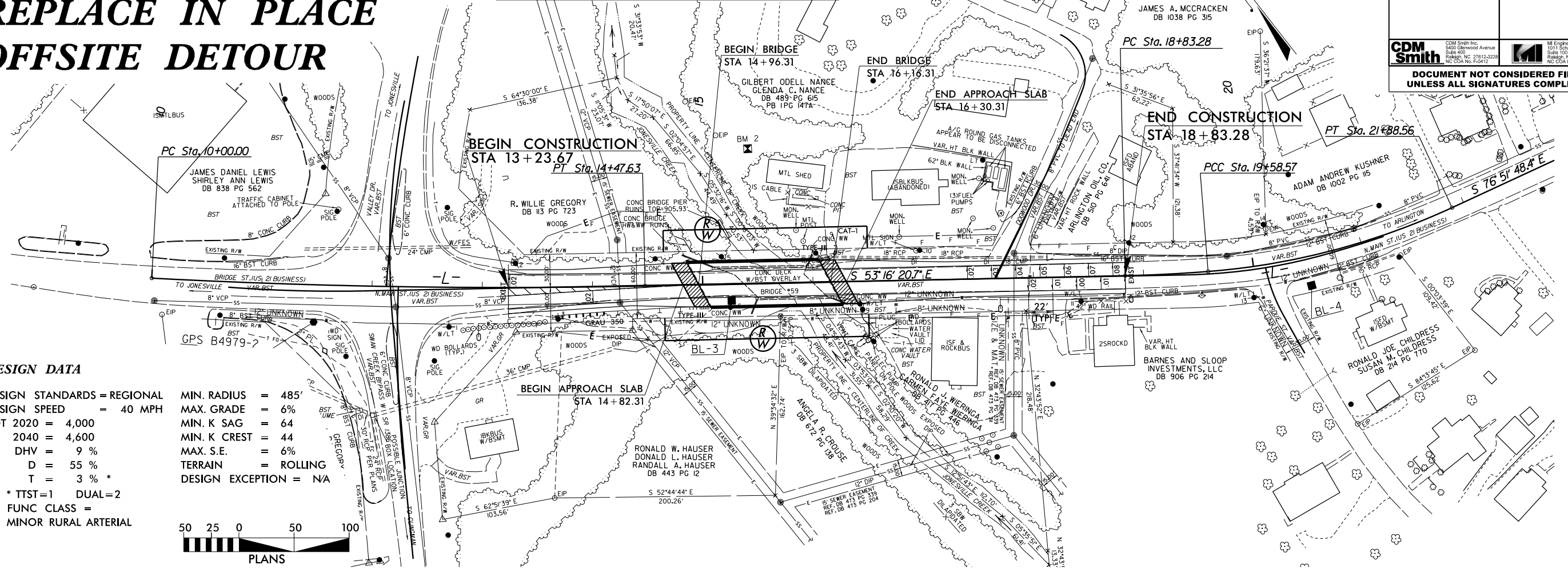
-L-		
PI Sta 12+23.92 Δ = 4'16" 28.3" (LT) D = 0'57" 17.7" L = 447.63' T = 223.92' R = 6,000.00'	PI Sta 19+20.94 Δ = 3'19" 06.2" (LT) D = 4'24" 26.5" L = 75.29' T = 37.66' R = 1,300.00'	PI Sta 20+74.78 Δ = 20'16" 21.5" (LT) D = 8'48" 53.0" L = 229.99' T = 116.21' R = 650.00'

PROJECT REFERENCE NO. B-4979	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR E/W ACQUISITION	
CDM Smith CDM Smith Inc. 6400 Glenwood Avenue Suite 400 Raleigh, NC 27612-3228 NC CDA No. F-2412	ME Engineering, PLLC 1011 S. E. 10th Street Suite 100 Raleigh, NC 27606 NC CDA No.
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

DESIGN DATA

DESIGN STANDARDS = REGIONAL
 DESIGN SPEED = 40 MPH
 ADT 2020 = 4,000
 2040 = 4,600
 DHV = 9 %
 D = 55 %
 T = 3 % *
 * TTST=1 DUAL=2
 FUNC CLASS =
 MINOR RURAL ARTERIAL

MIN. RADIUS = 485'
 MAX. GRADE = 6%
 MIN. K SAG = 64
 MIN. K CREST = 44
 MAX. S.E. = 6%
 TERRAIN = ROLLING
 DESIGN EXCEPTION = N/A



REVISIONS

Invalid expression in Roadway Pro: B4979_1_Rdy_psh.dgn