

Memorandum

DATE February 11, 2020

TO Dillon Dittmer, Tyler Robertson, Brad Garbers, Mercy Manzanares

FROM Robert Carnazzo

THRU Julie Ramirez and Jason Dayton

SUBJECT Floodplain Certification — Dalton North, 385-3(120), CN 51470

Dalton North is a Mill and Overlay project located in Morrill County, Nebraska, along Highway US-385. The project begins at the Morrill / Cheyenne County Line (Mile Marker (MM) 54.48) and extends north to approximately Morrill County Road 78 (MM 62.57). This project will remove three (3) inches of existing pavement by milling followed by a five (5) inch asphalt overlay, for a two (2) inch increase in pavement elevation. Surface shoulders will also be milled and overlaid, with the adjacent earth shoulder being re-graded to the new pavement elevation. Granular drains will be constructed through the surface shoulders in the SE¼ Section 29 and SW¼ Section 28, T18N R49W. No culvert work will be completed.

Community of Morrill County

Morrill County has no FEMA Floodplain mapping and does not participate in the National Flood Insurance Program (NFIP). NDOT policy in unmapped communities is to classify drainages with greater than 640 acres of watershed upstream of the highway as potential Base Floodplains. State Minimum Standards require that all activity within potential Base Floodplains meet a "Less Than 1-foot Rise" criteria. A Permit is not required from the non-participating county, the certification provided for the locations below will be retained in its stead.

Please review the attached mapping showing where this project encroaches into potential flood zones. Enclosed you will find certifications for these encroachments:

Deep Hole Creek Tributary, Section 28 & 21 T18N R49W

The project encroaches the potential Base Floodplain for the Deep Hole Creek Tributary in Sections 28 and 21, T18N R49W. The tributary's ordinary high water flow is conveyed along the east side of the highway in the drainage's natural channel. At this location the project will remove three (3) inches of existing pavement by milling followed by a five (5) inch asphalt overlay, for a two (2) inch increase in pavement elevation. The surface shoulders will also be milled and overlaid, and the earth shoulders regraded to the new pavement edge elevation. No other work will be completed. No work will be completed in the drainage's natural channel. Since the project will not affect a change in the drainage's channel, the project will not affect the depth of flow in the tributary. The project will not cause a change in the base flood elevation of the tributary.

Deep Hole Creek Tributary, Section 21 T18N R49W

The project encroaches the potential Base Floodplain for the Deep Hole Creek Tributary in Sections 21, T18N R49W. The tributary's ordinary high water flow is conveyed through the highway by a box culvert with three five (5) foot wide by five (5) foot high openings (Triple 5x5 Box Culvert). At this location the project will remove three (3) inches of existing pavement by milling followed by a five (5) inch asphalt overlay, for a two (2) inch increase in pavement elevation. The surface shoulders will also be milled and overlaid, and the earth shoulders regraded to the new pavement edge elevation. No other work will be completed. Assuming the

February 11, 2020

base flood exceeds the capacity of the Triple 5x5 box culvert and overtops the highway, the two (2) inch increase in pavement elevation will cause a similar two (2) inch increase in the Base Flood Elevation (BFE) of the tributary. This increase will occur at and immediately upstream of the highway.

Deep Hole Creek, S385 06160, Section 08 T18N R49W

The project encroaches the potential Base Floodplain for the Deep Hole Creek in Sections 08, T18N R49W. The tributary's ordinary high water flow is conveyed through the highway by a box culvert with three 10-foot wide by eight (8) foot high openings (Triple 10x8 Box Culvert), structure S385 06160. At this location the project will remove three (3) inches of existing pavement by milling followed by a five (5) inch asphalt overlay, for a two (2) inch increase in pavement elevation. The surface shoulders will also be milled and overlaid, and the earth shoulders regraded to the new pavement edge elevation. No other work will be completed. Assuming the base flood exceeds the capacity of the Triple 10x8 Box Culvert and overtops the highway, the two (2) inch increase in pavement elevation will cause a similar two (2) inch increase in the Base Flood Elevation (BFE) of the Creek. This increase will occur at and immediately upstream of the highway.

Deep Hole Creek Tributary, Section 08 T18N R49W

The project encroaches the potential Base Floodplain for the Deep Hole Creek Tributary in Sections 08, T18N R49W. The tributary's ordinary high water flow is conveyed through the highway by a 36-inch pipe culvert. At this location the project will remove three (3) inches of existing pavement by milling followed by a five (5) inch asphalt overlay, for a two (2) inch increase in pavement elevation. The surface shoulders will also be milled and overlaid, and the earth shoulders regraded to the new pavement edge elevation. No other work will be completed. Assuming the base flood exceeds the capacity of the pipe culvert and overtops the highway, the two (2) inch increase in pavement elevation will cause a similar two (2) inch increase in the Base Flood Elevation (BFE) of the tributary. This increase will occur at and immediately upstream of the highway.

Enclosures: Certificates (4)
 FIRMettes covering project (9)
 Location Map

February 11, 2020

Permit Information:

Community of Morrill County

Deep Hole Creek Tributary, Section 28 & 21 T18N R49W

Is the work substantial improvement?	No
Is the work in an identified floodplain?	Yes
Elevation of the base flood (100-year event)?	No Change
Elevation/floodproofing requirement (if applicable)?	NA
Is the work in a designated floodway?	No

Deep Hole Creek Tributary, Section 21 T18N R49W

Is the work substantial improvement?	No
Is the work in an identified floodplain?	Yes
Elevation of the base flood (100-year event)?	2-inch Increase
Elevation/floodproofing requirement (if applicable)?	NA
Is the work in a designated floodway?	No

Deep Hole Creek, S385 06160, Section 08 T18N R49W

Is the work substantial improvement?	No
Is the work in an identified floodplain?	Yes
Elevation of the base flood (100-year event)?	2-inch Increase
Elevation/floodproofing requirement (if applicable)?	NA
Is the work in a designated floodway?	No

Deep Hole Creek Tributary, Section 08 T18N R49W

Is the work substantial improvement?	No
Is the work in an identified floodplain?	Yes
Elevation of the base flood (100-year event)?	2-inch Increase
Elevation/floodproofing requirement (if applicable)?	NA
Is the work in a designated floodway?	No

*Certification of Compliance
Floodplain and Floodway Regulations*

FLOODPLAIN/ FLOODWAY LOCATION

Project Name Dalton North Stream Deep Hole Creek Tributary
Project No. 385-3(120) County Morrill
Control No. 51470 Section(s) 28 & 21 T 18 N R 49 W

FEMA LOCATION

County/Community Morrill County
Panel No. State Minimum Standards
Effective Date NA

TYPE OF STRUCTURE

☐ Bridge ☐ Culvert ☒ Roadway
Structure No. ☒ Drainage's Natural Channel

TYPE OF IMPROVEMENT

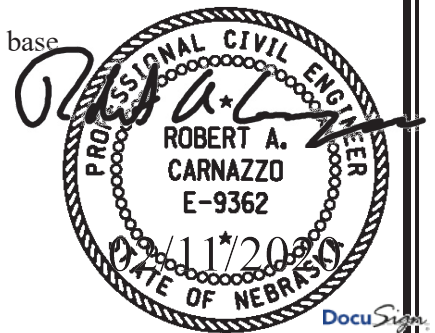
☐ Modify Existing ☐ Replace Existing ☒ Other
Details Highway - Remove 3-inches of asphalt by milling, place 5-inch overlay. No work in
drainage channel.

Highway Profile Change: ☒ Yes ☐ No

THE FOLLOWING IS HEREBY CERTIFIED

- ☒ Floodplain in Un-mapped Community (State Minimum Standards Apply)
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Floodplain (without Designated Floodway) or Flood Fringe
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Designated Floodway
Proposed construction will result in no rise along the base
(100 year) floodway water surface profile.

Completed By: ROBERT A. CARNAZZO, P.E., CFM
NDOT Roadway Design Hydraulics



*Certification of Compliance
Floodplain and Floodway Regulations*

FLOODPLAIN/ FLOODWAY LOCATION

Project Name Dalton North Stream Deep Hole Creek Tributary
Project No. 385-3(120) County Morrill
Control No. 51470 Section(s) 21 T 18 N R 49 W

FEMA LOCATION

County/Community Morrill County
Panel No. State Minimum Standards
Effective Date NA

TYPE OF STRUCTURE

☐ Bridge ☒ Culvert Triple 5x5 Box Culvert ☐ Roadway
Structure No. _____ ☐ _____

TYPE OF IMPROVEMENT

☐ Modify Existing ☐ Replace Existing ☒ Other

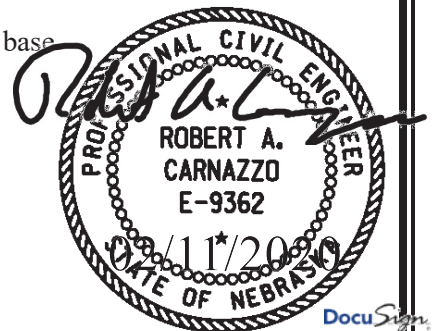
Details Highway - Remove 3-inches of asphalt by milling, place 5-inch overlay. No culvert work.

Highway Profile Change: ☒ Yes ☐ No

THE FOLLOWING IS HEREBY CERTIFIED

- ☒ Floodplain in Un-mapped Community (State Minimum Standards Apply)
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Floodplain (without Designated Floodway) or Flood Fringe
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Designated Floodway
Proposed construction will result in no rise along the base
(100 year) floodway water surface profile.

Completed By: ROBERT A. CARNAZZO, P.E., CFM
NDOT Roadway Design Hydraulics



*Certification of Compliance
Floodplain and Floodway Regulations*

FLOODPLAIN/ FLOODWAY LOCATION

Project Name Dalton North Stream Deep Hole Creek
Project No. 385-3(120) County Morrill
Control No. 51470 Section(s) 08 T 18 N R 49 W

FEMA LOCATION

County/Community Morrill County
Panel No. State Minimum Standards
Effective Date NA

TYPE OF STRUCTURE

☐ Bridge ☒ Culvert Triple 10x8 Box Culvert ☐ Roadway
Structure No. S385 06160 ☐

TYPE OF IMPROVEMENT

☐ Modify Existing ☐ Replace Existing ☒ Other

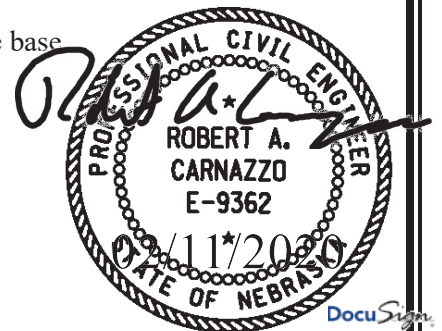
Details Highway - Remove 3-inches of asphalt by milling, place 5-inch overlay. No culvert work.

Highway Profile Change: ☒ Yes ☐ No

THE FOLLOWING IS HEREBY CERTIFIED

- ☒ Floodplain in Un-mapped Community (State Minimum Standards Apply)
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Floodplain (without Designated Floodway) or Flood Fringe
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Designated Floodway
Proposed construction will result in no rise along the base
(100 year) floodway water surface profile.

Completed By: ROBERT A. CARNAZZO, P.E., CFM
NDOT Roadway Design Hydraulics



*Certification of Compliance
Floodplain and Floodway Regulations*

FLOODPLAIN/ FLOODWAY LOCATION

Project Name Dalton North Stream Deep Hole Creek Tributary
Project No. 385-3(120) County Morrill
Control No. 51470 Section(s) 08 T 18 N R 49 W

FEMA LOCATION

County/Community Morrill County
Panel No. State Minimum Standards
Effective Date NA

TYPE OF STRUCTURE

☐ Bridge ☒ Culvert 36-inch Pipe Culvert ☐ Roadway
Structure No. _____ ☐ _____

TYPE OF IMPROVEMENT

☐ Modify Existing ☐ Replace Existing ☒ Other

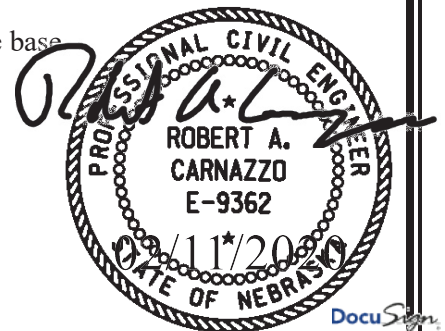
Details Highway - Remove 3-inches of asphalt by milling, place 5-inch overlay. No culvert work.

Highway Profile Change: ☒ Yes ☐ No

THE FOLLOWING IS HEREBY CERTIFIED

- ☒ Floodplain in Un-mapped Community (State Minimum Standards Apply)
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Floodplain (without Designated Floodway) or Flood Fringe
Proposed construction will not increase the base
(100 year) flood heights more than one foot at any location.
- ☐ Designated Floodway
Proposed construction will result in no rise along the base
(100 year) floodway water surface profile.

Completed By: ROBERT A. CARNAZZO, P.E., CFM
NDOT Roadway Design Hydraulics





Drainage Area
< 640 acres



385 - 55

Hwy US-385

Morrill

17-17-49W

16-17-49W

Middle North Platte-Scotts Bluff

Begin Project
MM 54.48

Cheyenne

20-17-49W

21-17-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet



Drainage Area
< 640 acres

385 - 56

08-17-49W

09-17-49W

Morrill

Middle North Platte Scotts Bluff

Hwy US-385



ROAD 64

17-17-49W

16-17-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet



385 - 57

05-17-49W

04-17-49W

Hwy US-385

Morrill

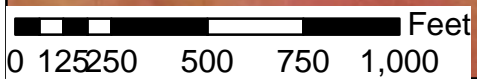
Middle North Platte-Scotts Bluff

08-17-49W

09-17-49W

Drainage Area
< 640 acres

State Minimum Standards Mapping





385 - 58

32-18-49W

33-18-49W

Morrill

Middle North Platte-Scotts Bluff

Hwy US-385



05-17-49W

04-17-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet



Drainage Area
< 640 acres

385 - 59

29-18-49W

28-18-49W

Morrill

Middle North Plateau - Scotts Bluff

Hwy US-385

32-18-49W

33-18-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet



ROAD 72

385 - 60

20-18-49W

21-18-49W

Deep Hole Creek Tributary
Sec 21 T18N R49W

Morrill

Middle North Platte

Scotts Bluff

Deep Hole Creek Tributary
Sec 28 & 21 T18N R49W

Highway 385

29-18-49W

28-18-49W

Drainage Area
> 640 acres

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet



17-18-49W

16-18-49W

Morrill

Middle North Platte

Hwy US-385



20-18-49W

21-18-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet

385 - 60



Deep Hole Creek Tributary
Sec 08 T18N R49W

Drainage Area
> 640 acres

08-18-49W

09-18-49W

Drainage Area
> 640 acres

Deep Hole Creek
S385 06160

Morrill

Middle North Platte-Scotts Bluff

Hwy US-385

17-18-49W

16-18-49W

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet

385 - 61



05-18-49W

04-18-49W

385

End Project
MM 62.57

ROAD 78

Morrill

Middle North Platte-Scotts Bluff

08-18-49W

Hwy US-385

09-18-49W

385 - 62

State Minimum Standards Mapping

0 125 250 500 750 1,000 Feet

C.N. 51470 BOOK 5925
MORRILL COUNTY

R.P. 54+48 HWY. US-385
STA. 408+79
BEGIN PROJECT