Compensatory Mitigation Plan

Madison and Stanton Counties, NE

USACE Permit Numbers:

NE 2009-02725 (Madison County)

NE 2011-00204 (Nucor Corporation)

NE 2011-00783 (Stanton County)

Northeast Industrial Highway

John P. Snowdon

Digitally signed by John P. Snowdon
DN: cn=John P. Snowdon, o=Nebraska Regulatory, ou=CENWO-OD-R-NE, email=john.p.snowdon@usace.army.mil, c=US
Date: 2011.08.23 14:30:02 -05'00'

The following details the plan Madison and Stanton Counties and Nucor Corporation will utilize to mitigate unavoidable wetland impacts from the construction of Northeast Industrial Highway Project, project numbers C-84(191) and C-59(534).

Note: for site designations in this plan, the letter "M" refers to a Madison County site, the letter "S" refers to a Stanton County site, and the letter "N" refers to a site on Nucor property. Numbers correspond to delineation sites in the application.

Mitigation Goals and Objectives:

Impact to Aquatic and Other Resources: The impacted wetlands occur at several sites along the proposed construction of Northeast Industrial Highway in areas adjacent to the Spring Branch (SB). SB meanders throughout the project from east to west, eventually joining the North Fork of the Elkhorn River. All impacted sites and the mitigation area are found within the same watershed (HUC-8 10220002).

Loss of basic wetland functions (habitat, filtration) will be temporary, and replaced at the mitigation site with a "quality" area performing the lost functions. The mitigated area will retain

a larger footprint and is designed to provide a significantly more diverse habitat than the impacted wetlands, which are considered marginal, at best. Benefit to the basin include; improved water quality, addition of plant diversity (seed mix), and quality wetland habitat. The mitigation consists of both in-kind and out-of-kind for the different aquatic resources.

Within Madison County, there are two confirmed wetland areas with proposed impacts. The first (Site #6, aka "Site M6") is approximately 0.232 acres of PEMA wetlands, located within an abandoned oxbow of the SB; west of Victory Road and approximately 1/2 mile south of East Nucor Road. The second (Site #5, aka "Site M5") is approximately 0.003 acres of PEMA wetland along a section of SB approximately 950' west of the first. The proposed construction calls for a sheet pile wall to be constructed along the south bank of SB to minimize channel impacts. The approximate 50 linear feet of south bank that will be permanently impacted by construction makes up "Site #M5".

Within Stanton County, there are two confirmed wetland areas with proposed impacts. The first area impacted is approximately 0.117 acres of PEMA wetland, located approximately 1/3 mile west of Eastwood Street and 1/2 mile south of East Nucor Road (Site #2, aka "Site S2"). Roadway embankment will bisect the wetland. Roadway culvert pipes are being installed to ensure connectivity between the wetland and its water source. The second site consists of approximately 0.014 acres of PEMA wetland, located along the channel, south of East Nucor Road (Site #1, aka "Site N1"). The wetlands will likely be impacted by channel shaping for the installation of a concrete box culvert. The majority of wetlands are expected to re-establish following project completion.

Upon completion of construction we expect a stable, diverse and functioning wetland to establish within the mitigated area.

Baseline Information:

Impacted Sites: Refer to the previously submitted wetland delineation reports for detailed information on the location and classification of impacted wetlands, aerial photographs and site photographs for each impacted site.

Location: The project is located approximately 1/2 mile south of East Nucor Road between Highway 81 and Highway 35, north of Norfolk in Madison and Stanton Counties, Nebraska.

Historic and Existing Hydrology: All sites contribute to either Spring Branch or Spring Branch tributaries. Precipitation and the Spring Branch are contributors to the Madison County sites. Precipitation and groundwater are water sources to the Stanton County site. Conditions encountered during site visits appear to be consistent.

Site #6 (M6) is an abandoned oxbow of the Spring Branch. The site's current function is a detention area for surface runoff until it can filter through the sandy soil into the Spring Branch. The site also can function as an overbank detention for Spring Branch. Should Spring Branch flood, water would fill the oxbow and filter through the soil back into the creek as levels recede. There is no continuity between site #M6 and Spring Branch, aside from ground water. The site does not exhibit flows at any point during the year.

Site #5 (M5) is a section of the Spring Branch's south bank. Spring Branch is a widely-networked tributary to the North Fork of the Elkhorn River, with many input sources. Spring Branch flows throughout the year.

Site #2 (S2) functions as a conduit for runoff from adjacent pastures and cultivated farmland to reach the Spring Branch. The site's primary input is short duration event oriented runoff. Ground water is an additional contributor to the site's water budget.

Site #1 (N1) is a perennial stream which flows east to west within a ditch, along the southern edge of Nucor Road. Main contributors to the flow are ground water and precipitation.

The proposed mitigation site is a perennial stream. Groundwater is the primary contributor to the stream, supplemented by precipitation/surface runoff.

Existing Vegetation: The impacted areas are mainly populated by invasive species such as: Phalaris arundinacea, Polygonum pensylvanicum, and Bromus inermis. The Floristic Quality Index (FQI) was calculated for each existing wetland site. Site #2 (S2) scored a 2.45 FQI. Site #1 (N1) scored a 0.00 FQI. Site #6 (M6) scored a 5.77 FQI. Site #5 (M5) scored a 5.00 FQI. The proposed mitigation site's existing FQI score is 0.00. See attached calculation sheet.

Existing Soil Conditions: In Madison County the impacted soil is classified as Inavale loamy fine sand with slopes from 0-5%. The impacted soil in Stanton County is Lawet silty clay loam with slopes from 0-3%. The mitigation site is located within Obert silty Clay loam, frequently ponded. The soil is listed as a hydric soil of the United States. We expect a hydric soil condition to establish over the long term.

Current land use of the area is agricultural (row-crop and pastoral). Historic land use appears to have been agricultural (row-crop and pastoral). The mitigation area is located adjacent to the main stream which is pastoral.

Classification: The affected wetlands are: 0.117 Acres of PEMA (NE subclass – Riverine Floodplain) at Site #2 (S2), 0.014 Acres of PEMA (NE subclass – Riverine Channel) at Site #1 (N1), 0.232 Acres of PEMA (NE subclass - Floodplain Depression) at Site #6 (M6), and 0.003 Acres of PEMA (NE subclass – Riverine channel) at Site # 5 (M5).

Existing wildlife usage: Typical wildlife species found in Nebraska, are assumed to utilize the areas of impact. Below is a list of endangered/protected species with the potential to be found in Madison and Stanton Counties, Nebraska.

- Haliaeetus leucocephalus (Bald Eagle)
    - During site visits no potential nesting sites were found within the proposed project limits. During construction the procedures dictated by the Bald and Golden Eagle Protection Act will be followed.
- Scaphirhyncus albus (Pallid Sturgeon)
    - The proposed project does not directly impact the Elkhorn River system where this species is primarily located.
- Platanthera praeclara (Western Prairie Fringed Orchid)
    - This species was not found to exist during site visits conducted within its flowering period.
- Sternulla antillarum (Least Tern)
    - To the extent practicable, bridge construction activities will be scheduled outside the designated nesting period of April 15 through September 1.
    - No depletions to in-stream flows are anticipated; therefore the Least Tern and their critical habitat will not be negatively impacted.

- Charadrius melodus (Piping Plover)
    - To the extent practicable, bridge construction activities will be scheduled outside the designated nesting period of April 15 through September 1.
    - No depletions to in-stream flows are anticipated; therefore the Piping Plover and their critical habitat will not be negatively impacted.
- Notropis Topeka (Topeka Shiner)
    - A qualified ichthyologist was employed to perform a survey to ascertain the presence/absence of the species; No Topeka shiners were found.

Current Owners: Site #6 (M6) is located on a tract of land owned by MVKV, LLC. Site #5 (M5) is located on a tract of land owned by Neva Winter. Site #2 (S2) is located between tracts of land, one owned by NUCOR Corporation and the other owned by Elaine and Curtis Wilken. Site #1 (N1) is located on existing Stanton County road right-of-way. The mitigation site is located on a tract of land owned by NUCOR Corporation. All right-of-way acquired, either in fee simple or permanent easement, for the construction of the proposed project will be held by the county in which the property is located.

Mitigation:

Mitigation Site Selection and Justification:

Multiple sites within the watershed were reviewed as the potential mitigation site. Consideration was given to the water-budget and potential changes of land use when searching for a mitigation location. It was attempted to develop mitigation by expanding existing wetlands

at Sites M6 and S2 however, lack of reliable water sources raised the possibility of failure to unacceptable levels. Conversations with landowners and limits of the current proposed roadway construction (for which the mitigation is required) eliminated many options. The proposed site was reviewed and determined to have the highest probability of success due to a continual source of water and very little chance of development in the area. NUCOR Corporation owns the tract of land on which the site is located and they have informed us that there are no plans for development at this location. Nucor's interest and support made acquisition of the site economical. Its proximity to concurrent roadway construction makes this location an economical choice. Choosing a location adjacent to an established thoroughfare allows for convenient access to monitor the site's progress. Preliminary water-budget analysis indicates the current location has a high probability of success. Proximity to ground water and the perennial stream will provide the water necessary to establish and maintain a mitigation of the size required.

The mitigation to be performed is for replacement of impacted wetlands as follows: Sites #2 (S2) and #6 (M6) are Nebraska subclasses "Riverine Floodplain" and "Floodplain Depression" respectively; totaling 0.349 acres. These two sites will be replaced with on-site, in-kind mitigation at a ratio of 2:1. Sites #1 (N1) and #5 (M5) are Nebraska subclass "Riverine Channel" totaling 0.017 acres. These two sites will be replaced with on-site, out of kind mitigation at a ratio of 4:1. The decision to use out of kind mitigation was chosen due to the minor amount of Riverine Channel wetlands impacted. In kind mitigation would require 0.034 acres of new wetlands. Such a small amount would be difficult to create without possible detrimental impacts to the floodplain subclasses mitigation and would be difficult to monitor. The total proposed mitigation for the project is 0.349 x 2 + 0.017 x 4 for a total of **0.766 acres.**

Mitigation on-site provides an opportunity to replace lost wetland functions within the same watershed as the impacts. Mitigating on-site is calculated to be the most economical method of mitigation in this instance. The site chosen for mitigation is approximately 1,800' south of East Nucor Road and approximately 150' west of Eastwood Street, along an existing channel. Wetlands which can contribute to the mitigation total shall exist no further east than 75' west of the existing centerline of Eastwood Street to allow for future development of the roadway. Any wetlands created by mitigation activities within the previously defined 75' will not be counted toward the mitigation total. The mitigation plan includes establishing an earth dike at least 5' wide along the southern bank of the existing channel. It has been determined through a routine on-site wetland determination; the existing wetlands stop at approximately 1'-6" above the Ordinary High Water (OHW) level of the channel. Building the dike at this elevation will ensure neither the existing wetlands or channel will be permanently impacted by creating the mitigated wetlands. The purpose of the dike is to control the entry of water into the mitigation site from the existing channel. Since the mitigation site is in a depression; water will not be able to re-enter the channel because of the higher ground encompassing it. Water will pool until the level matches that of the channel at which time the flow of the channel will bypass the mitigation site, when the water level within the mitigation site drops, water from the channel will flow in to replenish it. The flowline of the mitigation site has been designed at 6" below the established OHW level to ensure continuity between the mitigation site and channel's flow throughout the year.

There will be two main features to the mitigation area which will allow us to perform in-kind mitigation for two different subclasses of wetland within the same site. The first is an

undulating, “ponding” area, which is meant to mimic a floodplain depression. The second is a sloped “berm” along the southern edge of the “ponding” area which will imitate a floodplain.

As shown on the attached plans; the “ponding” area will be shaped with an undulating bottom. The undulation apex should be slightly below OHW to ensure saturation throughout the growing season. To ensure transmittal of water to all portions of the mitigation, a 4’ wide “alley” will be left along the center of the mitigation “ponding” area. The alley will essentially be a portion of the “ponding” area without undulation. Construction of an inlet to the mitigation area will be shaped to 6” below OHW, near the existing Eastwood Street bridge. The “ponding” area flowline will slope from the inlet area to the west. Sloping the “ponding” area’s flowline will create a depression which increases in depth, not to exceed 10” below OHW, as you move west through the mitigation.

The “berm” bordering the southern edge of the “ponding” area will imitate a floodplain. Shaping the “berm” to slope from mitigation site flowline to the top of dike elevation, as you move south, will create a range of soil moisture favorable to establishing a more diverse plant community.

A general, desktop assessment of the site’s water budget was performed during the site selection process. We have determined: the local surface run-off, drainage area, and precipitation will remain constant. Additional water will be provided via ground water. The NRCS soil survey shows “depth to water table” is zero centimeters. This indicates the stream flows year-round. Historical aerial images and interviews with surrounding landowners confirm that the stream does flow year-round. Since excavation of the mitigation area will place the bottom elevation below the channel’s water level, it is reasonable to assume the mitigation area will intersect the water table, allowing the site to maintain a sufficient hydro-period.

Adjacent, non-impacted wetlands will help naturally seed the mitigated areas. As required by USACE Public Notice dated December 9, 2005, a 50' vegetated buffer strip will be maintained from the limits of mitigation shaping. The constructed buffers will reduce overland sediment transmission to the mitigated wetlands and improve water quality. Tilling of the buffer zone shall occur, prior to seeding with appropriate perennial and native grasses, following grading operations. Establishment of some seeded grasses is expected initially with development of perennial hardy species occurring in successive growing seasons. Adjacent land use is presently agricultural and is expected to change little in the future. The existing fence, south of the mitigation site shall be relocated to the new permanent easement line to surround the mitigation site. One sign shall be placed at the west right-of-way line of Eastwood Street.

Mitigation Work Plan: Typical roadway construction equipment is expected to complete the required earthwork. The contractor will be required to avoid unnecessary impacts to adjacent wetlands and over-compaction of wetland soils.

Construction of the mitigation site is anticipated to begin in the fall of 2011 and completed in fall of 2011/spring of 2012. The first monitoring will take place during the 2013 growing season.

To aid wetland establishment within the mitigation site, the buffer strip, disturbed areas, and south side-slope shall be seeded with appropriate perennial and native grasses. Native wetland species will provide seed to the site via natural methods of dispersion. A wetland seed mix will provide additional wetland species diversity. Topsoil from permanently impacted wetlands will not be used in mitigation site construction since majority of species in those sites are invasive (Phalaris arundacea).

Side slopes of disturbed areas will be seeded upon completion of final grading activities. Silt fence will be installed to protect the wetlands from sediment deposition during/following construction. Silt fence will be maintained until 75% vegetation cover is established on all side-slopes adjacent to the wetlands.

SWPPP documents will be kept up-to-date and will be available on-site for review.

Timing of Mitigation: Construction activities on Phase I of the project are scheduled to begin in the fall of 2011 and completed in May of 2012. Construction on Phases II and III is expected to proceed shortly thereafter with the entire project being completed in 2013. Mitigation will be completed during Phase I of construction concurrent with impacts and roadway construction. The first mitigation monitoring will be performed during the growing season of 2013.

Performance Standards: The on-site wetland mitigation will be monitored for a minimum period of five (5) years. The anticipated post-construction changes in hydrology and vegetation are the basis for evaluating the performance/success of the mitigation. Areas with temporary impacts described in USACE permit numbers; NE 2009-02725, NE 2011-00204, and NE 2011-00783 will be monitored for a period of three years, as required by the special conditions of said permits.

The following table summarizes the assessment goals and monitoring schedule for the mitigation site.

Permit/Preconstruction Activities:	a) Mitigation Plan: Determine individual Floristic Quality Index (FQI) for Impact sites. b) Wetland and Buffer seed mix sources. c) Identify # and locations of monitoring transects.
Mitigation Site(s) Construction:	a) Grading and wetland mitigation seeding completed (introduction of desirables). b) Upland buffer seeding completed (native species). c) Create baseline final grading cross-sections (as-built) and cross section at monitoring transects.
Year 1 Monitoring – minimum 1 full growing season after mitigation seeding completed. + Determine if invasive species require maintenance or proactive intervention measures. **Performance Goal: Natives show that they are establishing.**	a) Baseline transects for vegetation and hydrology using USACE delineation manual form. b) Invasive species baseline: Calculate % Invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Annual summary of hydrology.
Year 2 Monitoring (required) + Determine if invasive species require maintenance or proactive intervention measures. **Performance Goal: Invasive species decreasing. Natives showing increase.**	a) Transects for vegetation and hydrology (Hydric soils as appropriate). b) Calculate % Invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Annual summary of hydrology. e) Provide maintenance and intervention plan for next growing season.
Year 3 Monitoring (required) Adaptive Management: Any corrective measures or site modifications required to meet success criteria. **Performance Goal: Minimum 50% natives. Diverse 3-5 dominant native species.**	a) Transects for vegetation, hydrology, and hydric soils. b) Calculate % invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Determine if invasive species require maintenance or intervention measures. e) Annual summary of hydrology. f) Provide maintenance and intervention actions underway for past growing season. g) Provide any changes in maintenance and intervention action plan for review.
Year 4 Monitoring (required)	a) Transects for vegetation, hydrology, and hydric soils.

Continued Adaptive Management: **Performance Goal: Greater than 50% natives. Diverse 3-5 dominant native species.**	b) Calculate % invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Determine if invasive species require maintenance or intervention measures. e) Annual summary of hydrology. f) Provide maintenance and intervention actions underway for past growing season. g) Provide any changes in maintenance and intervention action plan for review.
Year 5 Monitoring (required) Continued Adaptive Management: **Performance Goal: Minimum 75% natives. Diverse 3-5 dominant native species.** ***Decision point: Goals met? Additional monitoring required?***	a) Transects for vegetation, hydrology, and hydric soils. b) Calculate % invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Determine if invasive species require maintenance or intervention measures. e) Annual summary of hydrology. f) Provide maintenance and intervention actions underway for past growing season. g) Provide any changes in maintenance and intervention action plan for review.
Year 6 and Beyond Monitoring (as required) Continued Adaptive Management: **Performance Goal: Minimum 75% natives. Diverse 3-5 dominant native species.** ***Decision point: Goals met? Additional monitoring required?***	a) Transects for vegetation, hydrology, and hydric soils. b) Calculate % invasive wetland species % Native wetland species. c) Determine FQI at each transect. d) Determine if invasive species require maintenance or intervention measures. e) Annual summary of hydrology. f) Provide maintenance and intervention actions underway for past growing season. g) Provide any changes in maintenance and intervention action plan for review.

Performance Standards: Ecologically based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives.

Wetland Characteristics: Development of new wetlands similar to those existing is intended. The "ponding" area will create a site favorable to rooted-emergent hydrophytes and other wetland obligate species. This portion of the mitigation site is meant to mimic a depression wetland, where water is allowed to pool during the growing season.

The "berm" will exhibit a wider range of soil moisture content; this is favorable to establishing a widely-diverse plant community. This portion of the mitigation site is meant to mimic a floodplain, where saturation levels decrease as you move away from the water source. A wide range of plants can be found in these areas since the moisture requirements both hydrophytes and mesophytes can be fulfilled within the floodplain.

Wetland Vegetation: The mitigation area vegetation development will be documented annually. Species migration within the watershed is anticipated.

Additionally, a "Waters Edge" seed mixture will be broadcast at a rate of 1 lb/1000 sq ft following final grading. Seeding is expected to provide additional plant diversity. The calculated Floristic Quality Index for the seed mix proposed is 18.97; the actual FQI will vary by year and depending on what species are able to flourish in the post-construction condition. A minimum FQI of 5.77 will be required for the mitigation to be successful. This minimum is equal to the highest FQI score for the existing, impacted wetlands. We expect the mitigation FQI to exceed this minimum FQI by the end of the monitoring period. Succession of species is difficult to predict, annual monitoring will document actual species establishment.

Optimal mitigation development during the monitoring period is outlined below. It is understood that the invasive species are not favorable for mitigated wetlands. Our expectations

are realistic in-that invasive, quick growing species will dominate until the introduced species can emerge and establish.

Wetland Soils: Soils will be examined during monitoring, but success of the mitigation site will not depend upon the development of distinct hydric soil characteristics during the monitoring period.

Wetland characteristics are dependent on adequate hydrology. Site conditions may vary over the long term; as water elevations are expected to fluctuate with variations in precipitation and runoff.

Wetland Acreage: Listed below are the sites, their permanent impacts to wetlands, and their respective mitigation requirement:

- Site #6 (M6) – Approximately 0.232 acres impacted (0.232 at 2:1 ratio = 0.464 acres of depression wetlands)
- Site #5 (M5) – Approximately 0.003 acres impacted (0.003 at 4:1 ratio = 0.012 acres of depression wetlands)
- Site #2 (S2) – Approximately 0.117 acres impacted (0.117 at 2:1 ratio = 0.234 acres of floodplain wetlands)
- Site #1 (N1) – Approximately 0.014 acres impacted (0.014 at 4:1 ratio = 0.06 acres of depression wetlands)

It is anticipated that the actual wetland area created will be in excess of the required 0.234 acres of floodplain wetlands and 0.536 acres of depression wetlands, however the mitigation will be considered complete when the above mitigation requirement have been met. Wetland

boundaries will be determined using the Corps of Engineers 1987 Wetland Delineation Manual and the appropriate regional supplement.

Project Success: Success of the mitigated area will be measured by the performance criteria specified above. The County will be responsible for compliance with the mitigation plan and with any required remediation, repair, maintenance or management work in the mitigation area. The mitigation will be considered a success when the performance goals indicated in this document have been met and the site can sustain itself into the future.

Site Protection: The County will protect the mitigated area and adjacent buffer strips by acquiring permanent easement from the owners of the land in a form approved by the US Army Corp of Engineers. The permanent easement will be filed in the Office of the Register of Deeds of Stanton County. A certified copy of the documentation will be provided to the Corps of Engineers 60 days after the completion of all wetland mitigation outlined in this document. Land use restrictions and protection measures outlined in the special condition(s) section of USACE Permit Numbers: NE 2009-02725, NE 2011-00204, NE 2011-00783 will be implemented.

Adaptive Management Plan: The mitigation site is expected to develop within 5 years and temporarily impacted areas are expected to re-establish within 3 years assuming normal precipitation and runoff. In the event of un-anticipated site conditions, or events beyond the control of the County, the following adaptive management plan will be completed by the County. The plan will modify the described performance standard in the following manner.

During the initial assessment the County will document the presence or absence of adequate hydrology. During the mitigation areas development, routine monitoring will address remedial measures that are necessary to correct un-expected depth of water or other hydrologic problems.

If, following the second assessment, the site displays inefficient water to support wetland development, the County will:

- Re-assess precipitation and other inputs
- Determine actions, if any, which could supply additional water to the site.

Prior to conducting remedial actions, the County will assess whether a change in precipitation during the following years growing season would correct the problem and contact the Corps of Engineers.

Frequent inundation from flooding is expected and is a planned water source. Following a rainfall event and the return of normal flows in the channel, the mitigation areas water depths will be restored to the pre-event level. The design allows ponding to depths of 4”-8” for obligate species development; excess water will return to the natural channel, draining to the west.

Channel degradation was not observed during the site assessment and is not anticipated.

NUCOR Steel was consulted to determine the most appropriate place to mitigate on property which they currently own. The proposed location was chosen because there is minimal potential for future development.

The mitigation area will be inspected regularly for the presence of noxious weeds. Weeds including, but not limited to; musk thistle, leafy spurge, and purple loosestrife will be controlled by appropriate measures.

The County will not be responsible for the requirements of this Compensatory Mitigation Plan, if precluded from performing monitoring, maintenance, or management activities by force majeure including but not limited to; acts of war, acts of god, rebellion, strikes, or natural catastrophes that the Corps reasonably determines are beyond the control of said County to prevent. If the county believes that it is prevented from fulfilling some or all of the requirements of this plan due to force majeure, it will contact the USACE project manager to determine which requirements of the plan may be excused or determine possible substitute requirements which would achieve the plan goals to the extent practicable.

Monitoring and Reporting: Madison County, Stanton County, and NUCOR Corporation are the responsible parties for the mitigation site along with the maintenance and monitoring of said mitigation site. Madison County will be the lead agency for these activities on behalf of Stanton County and NUCOR Corporation.

It is anticipated that annual monitoring of the mitigation area will be conducted by the County for a minimum period of 5 years. Monitoring will be completed as described in the USACE Regulatory Guidance Letter No. 08-03. If, two consecutive monitoring reports demonstrate that the performance standards as required by the Corps of Engineers have been met, the County may request that the remaining monitoring requirements be waived.

Monitoring will continue beyond the five year period, if necessary, until 2 consecutive monitoring reports demonstrate the required success. The County will be responsible for annual reports monitoring the performance of the mitigated site and maintenance and management activities within buffers and wetland mitigation areas.

The annual reports shall include at a minimum all information described in *Part c. "Monitoring Report Narrative"* in USACE Regulatory Guidance Letter No. 08-03. The report will be submitted by December 1st of each year. It is anticipated that, in addition to the information required in *Part c* the reports will include the following information:

- A summary of a vegetation assessment conducted within the growing period, including:
    - FQI for each transect
    - Determination of whether invasive species require maintenance or proactive intervention measures
- A summary of activities conducted at the mitigation site during the preceding year, including, but not limited to construction, seeding or planting, weed control, and/or hydrological modifications.
- A summary of wetland hydrology indicators observed during the growing season.
- Miscellaneous observations including fauna that are utilizing the mitigation site.
- Summary of any problems and the proposed activities required to correct them.
- Color photographs of the mitigation area.

Preliminary transect locations for monitoring are shown on the attached plan view.

Final monitoring will be completed utilizing the Routine On-Site Determination method from the Corps of Engineers 1987 Wetland Delineation Manual and appropriate regional supplement.

Long Term Management: It is anticipated that the mitigation area will require minimum maintenance once established. Long term mitigation success and any required maintenance will be the responsibility of the County.

Financial Assurances: Madison and Stanton Counties and Nucor, along with others, have entered into agreements to implement construction of this project. Madison County is the lead agency for the project and will be responsible for construction and monitoring of the wetland mitigation site. Madison County will provide the USACE with a letter naming the parties financially responsible for all costs incurred to construct and maintain the mitigation site. It is anticipated that since a governmental entity is providing the assurance, additional assurance such as performance bonds, trusts, escrow accounts, insurance, letters of credit, etc. will not be required.

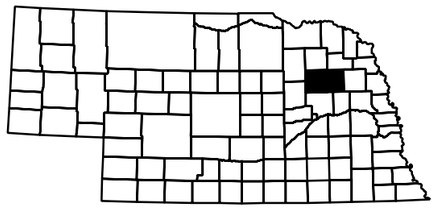
PROJECT NUMBER	SHEET NO.
MITIGATION SITE	1

INDEX OF SHEETS

SHEET NO.	
1	TITLE PAGE
2-T	TYPICAL CROSS SECTION OF IMPROVEMENT
3	GRADING PLAN
4	SITE DETAILS
X-1	TRANSECT CROSS SECTIONS

STANDARD PLANS

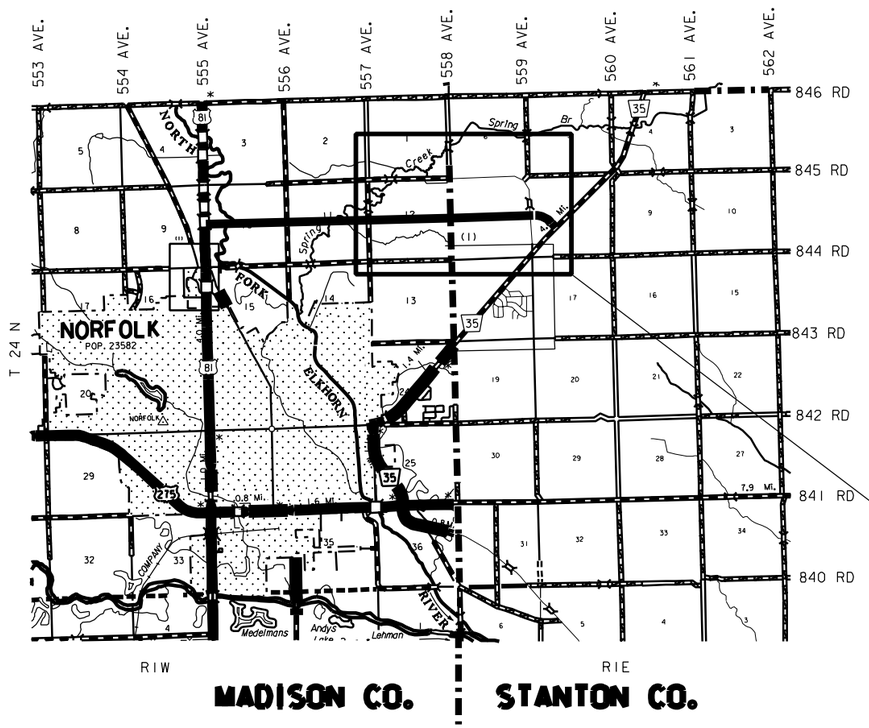
STANDARD PLAN NO.	DESCRIPTION
501-R5	(3 SHEETS) EROSION CONTROL
502	(1 SHEET) SILT FENCE
920-R5	(2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE
921-R5	(2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE
923	(1 SHEET) TRAFFIC CONTROL, ROAD CLOSURE

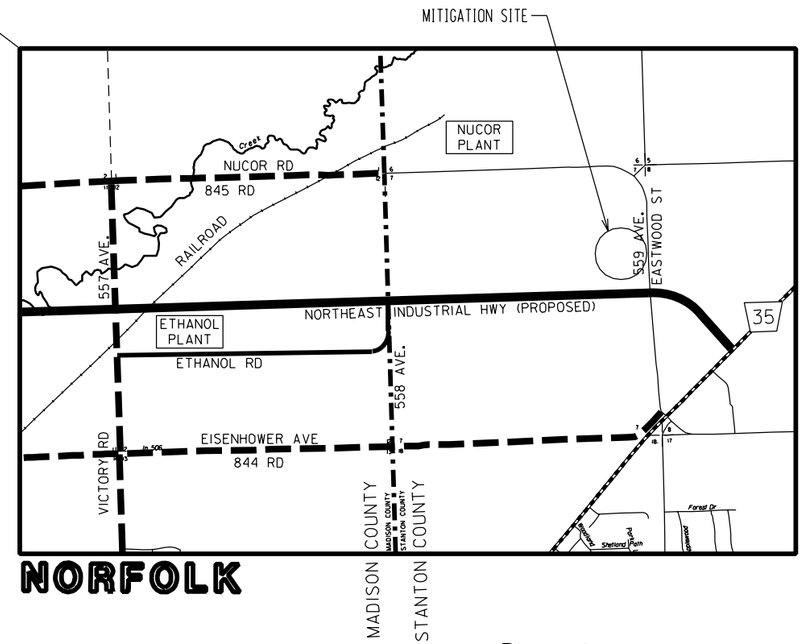


PLANS FOR CONSTRUCTION

NORTHEAST INDUSTRIAL HIGHWAY

MITIGATION SITE - STANTON COUNTY





THE 2007 EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

HALF SIZE PLANS

CONVENTIONAL SIGNS

- FENCE R.O.W. OR WIRE
- GUARDRAIL
- TRAVELED WAY
- DIKE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- MAILBOX
- RAILROAD TRACKS
- MARSH
- TREE - CONIFEROUS
- TREE - DECIDUOUS

R.O.W. LEGEND

- NEW CONTROLLED ACCESS
- PREVIOUS CONTROLLED ACCESS
- LIMITS OF CONSTRUCTION
- PREVIOUS R.O.W.
- NEW R.O.W.
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- EXCESS TAKING
- PERMANENT EASEMENT
- EXISTING RAILROAD EASEMENT
- NEW RAILROAD PERMANENT EASEMENT
- NEW RAILROAD TEMPORARY EASEMENT

REFERENCE POST NO. N/A TO REFERENCE POST NO. N/A

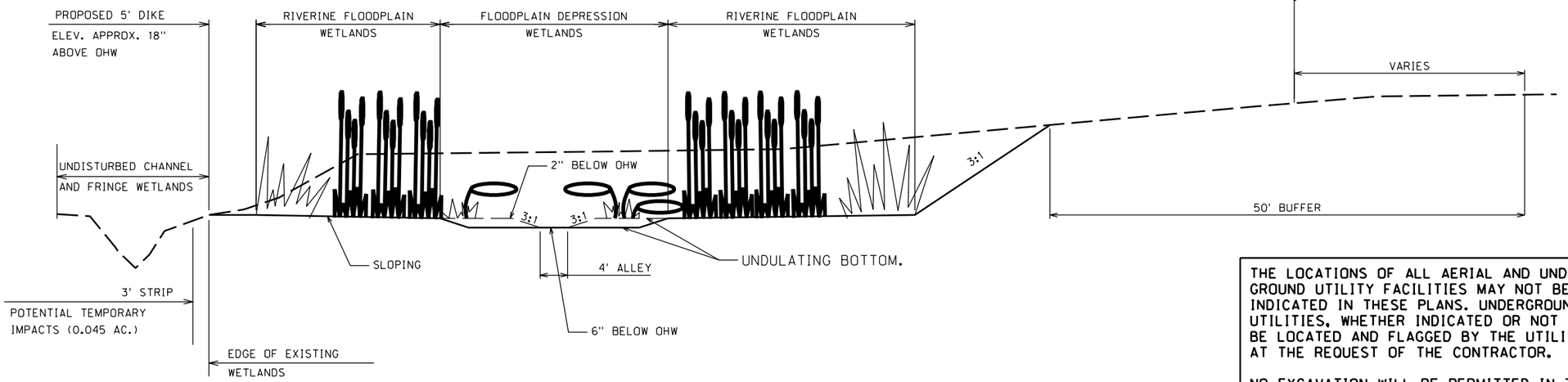
EXCEPTIONS: FROM STA. N/A TO STA. N/A

TOTAL NET LENGTH OF PROJECT: N/A MILES

Plans by:

Mainelli Wagner & Associates, Inc.

TYPICAL CROSS SECTION OF IMPROVEMENT



EARTHWORK QUANTITIES		
STATION TO STATION	DESCRIPTION	EXC. AVAILABLE (cu. yds.)
210+00.00 217+55.52	MITIGATION SITE	4,990
	TOTALS	4,990

SUMMARY OF QUANTITIES

ITEM	QUANTITY	UNIT
MOBILIZATION	1.000	LUMP SUM
EXCAVATION, ESTABLISHED QUANTITY	4,990.000	CU. YDS.
SEEDING, WETLAND MIX	1.000	ACRE
SEEDING, TYPE "A"	1.000	ACRE
MULCH	3.000	TONS
REMOVE FENCE	602.000	LIN. FT.
BARBED WIRE FENCE	634.000	LIN. FT.
SKID LOADER, FULLY OPERATED	10.000	HOURS
BULL DOZER, FULLY OPERATED	10.000	HOURS
LOADER, FULLY OPERATED	10.000	HOURS
DUMP TRUCK, FULLY OPERATED	10.000	HOURS

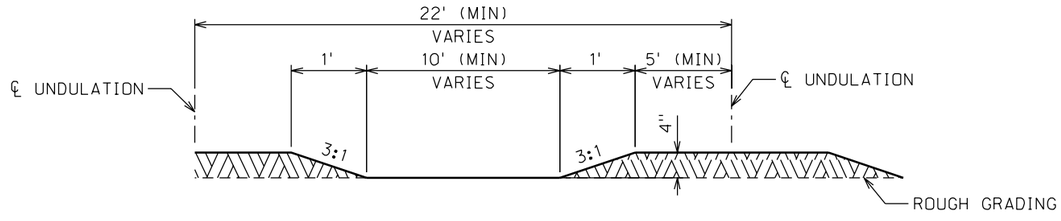
THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR.

NO EXCAVATION WILL BE PERMITTED IN THE AREA OF THE UNDERGROUND UTILITY FACILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES. THE EXCAVATION MUST BE ACCOMPLISHED WITH EXTREME CARE IN ORDER TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY.

THE SITE SHALL BE FINE GRADED AS DIRECTED BY THE ENGINEER TO ACHIEVE FINAL CONTOURS. PAYMENT FOR FINAL GRADING SHALL BE PAID WITH EQUIPMENT RENTAL HOURS.

EXCESS MATERIAL WILL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

UPON COMPLETION OF THE GRADING OPERATIONS PERMANENT SEEDING AND EROSION CONTROL OF THE DISTURBED AREAS CREATED BY THE GRADING OPERATIONS WILL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.



TYPICAL CROSS SECTION OF UNDULATIONS

PROJECT NUMBER	SHEET NO.
MITIGATION SITE	3

210

SEC. 7-T24N-R1E

215

EASTWOOD STREET

EXISTING STRUCTURE

℄ EXISTING STREAM

℄ EXISTING ROADWAY

STA. 210+94, 174.7' LT. TO
STA. 211+95, 123.2' LT.
BUILD 113 LIN. FT.
BARBED WIRE FENCE

STA. 210+94, 174.7' LT. TO
STA. 216+96, 159.8' LT.
REMOVE 602 LIN. FT.
EXISTING FENCE.

EXISTING FENCE

TRANSECT 1

PROPOSED FENCE

STA. 211+95, 123.2' LT. TO
STA. 216+97, 141.2' LT.
BUILD 502 LIN. FT.
BARBED WIRE FENCE

TRANSECT 2

STA. 216+97, 141.2' LT. TO
STA. 216+96, 159.8' LT.
BUILD 19 LIN. FT.
BARBED WIRE FENCE

STA. 210+00.00
CONTROL POINT
N=826232.57
E=2359927.81

STA. 217+55.52
CONTROL POINT
N=826236.98
E=2360683.32

EARTHWORK:
EXCAVATION, ESTABLISHED QUANTITY = 4,990 CU. YDS.

GRADING PLAN

SCALE 1"=25'

SEC. 7-T24N-R1E

PROJECT NUMBER	SHEET NO.
MITIGATION SITE	4

210

SEC. 7-T24N-R1E

215

PROFESSIONAL CIVIL ENGINEER — MARK D. BARELLI (E-6195) — STATE OF NEBRASKA

PROFESSIONAL CIVIL ENGINEER — JEFFREY J. WICKER (E-7053) — STATE OF NEBRASKA

STA. 211+82.36
440.79' ℄

STA. 211+46.73
439.73' ℄

℄ 4' ALLEY
N=826577.41
E=2360046.97

PERM. EASE.

STA. 212+48.98
417.20' ℄

STA. 210+36.53
388.37' ℄

STA. 210+20.57
387.80' ℄

STA. 210+88.50
369.20' ℄

UNDULATIONS
(TYPICAL)

SEEDING, WETLAND MIX
AREA = 0.56 ACRES

STA. 212+44.50
335.12' ℄

℄ 4' ALLEY
N=826503.09
E=2360144.82

PROPOSED EARTH DIKE

STA. 212+97.28
296.53' ℄

℄ 4' ALLEY
N=826474.46
E=2360324.53

℄ 4' ALLEY
N=826472.90
E=2360386.69

STA. 214+03.66
273.78' ℄

STA. 214+51.96
275.26' ℄

STA. 214+84.80
271.79' ℄

℄ 4' ALLEY
N=826458.93
E=2360547.64

℄ 4' ALLEY
N=826465.88
E=2360510.10

STA. 215+24.72
281.69' ℄

STA. 215+66.49
276.35' ℄

℄ 4' ALLEY
N=826463.86
E=2360577.31

STA. 216+51.29
243.24' ℄

STA. 217+03.78
291.94' ℄

STA. 217+06.57
215.96' ℄

40'-10"

35'-1"

EASTWOOD STREET

℄ EXISTING ROADWAY

SEEDING, TYPE "A"
50' BUFFER ZONE
AREA = 0.86 ACRES

SEEDING, 50/50 MIX OF TYPE "A"
AND WETLAND MIX
AREA = 0.36 ACRES

75'

STA. 210+30.28
117.26' ℄

PERM. EASE.

EXISTING FENCE

STA. 217+09.84
141.66' ℄

EXISTING ROW

EXISTING ROW

STA. 210+55.52
CONTROL POINT
N=826232.89
E=2359983.33

TRANSECT 1

TRANSECT 2

STA. 217+55.52
CONTROL POINT
N=826236.98
E=2360683.32

SECTION LINE

NOTE: CONTRACTOR SHALL RELOCATE EXISTING FENCE TO
NEW, SOUTH PERMANENT EASEMENT LINE.

RIGHT-OF-WAY

SCALE 1"=30'

SEC. 7-T24N-R1E

PROJECT NUMBER	SHEET NO.
MITIGATION SITE	X-1

HORIZONTAL SCALE: 1"= 10'
VERTICAL SCALE: 1"= 5'