

**Fiscal Year 2024-2025 National Railroad Partnership Program/Federal-State Partnership
for Intercity Passenger Rail (FSP-National) Grant Program
Crete, NE-BNSF Railway Corridor Highway/Rail Grade Crossing Safety Study Project**

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ARTICLE 4: STATEMENT OF WORK

4.1 General Project Description

The Crete, NE-BNSF Railway Corridor Highway/Rail Grade Crossing Safety Study Project will examine eight existing at-grade crossings in the vicinity of Crete, NE, to look for opportunities to improve safety, mobility, emergency access, and railroad operating efficiency in this busy BNSF rail corridor. There have been several highway-rail incidents in the City and adjacent portions of Saline County. The study will conduct an Alternatives Analysis for the corridor, located on BNSF's Hastings Subdivision, that consists of examining past crash history, performing traffic modeling and analyses to determine potential safety and mobility improvements for the Crete area for the future. These potential options include the following specific highway/rail at grade crossings;

- Conceptual engineering for a potential railroad/vehicle grade separation at Main Avenue (BNSF Milepost 79.64);
- Conceptual engineering for grade crossing upgrades/modifications and/or closures at:
 - Road 2000 (BNSF Milepost 82.24)
 - Blue River Road/Road 2100 (BNSF Milepost 81.23)
 - Arizona Avenue (BNSF Milepost 80.68)
 - W 13th Street (BNSF Milepost 80)
 - Hawthorne Avenue (BNSF Milepost 79.25)
 - Boswell Avenue (BNSF Milepost 79.03) and
 - SH 103 (BNSF 77.65)

The analysis will also look at the adjustments of crossing warning systems timing, railroad signal systems, and track alignment and superelevation to accommodate consistent railroad speed regimes through the City of Crete and its environs. This could potentially improve mobility through Crete by reducing the number of times vehicles wait at crossings for trains to pass and improve Amtrak and BNSF train schedule performance.

The study will also complete conceptual engineering for each discrete capital project, as well as conceptual cost estimates to pursue future construction funding opportunities. Its scope includes tasks appropriate to the Federal Railroad Administration's (FRA's) National Railroad Partnership Program/Federal-State Partnership Program (Project Planning and Development Lifecycle Stages). This would position the project to enter the next three FRA Lifecycle Stages, Preliminary and Final Design and Construction.

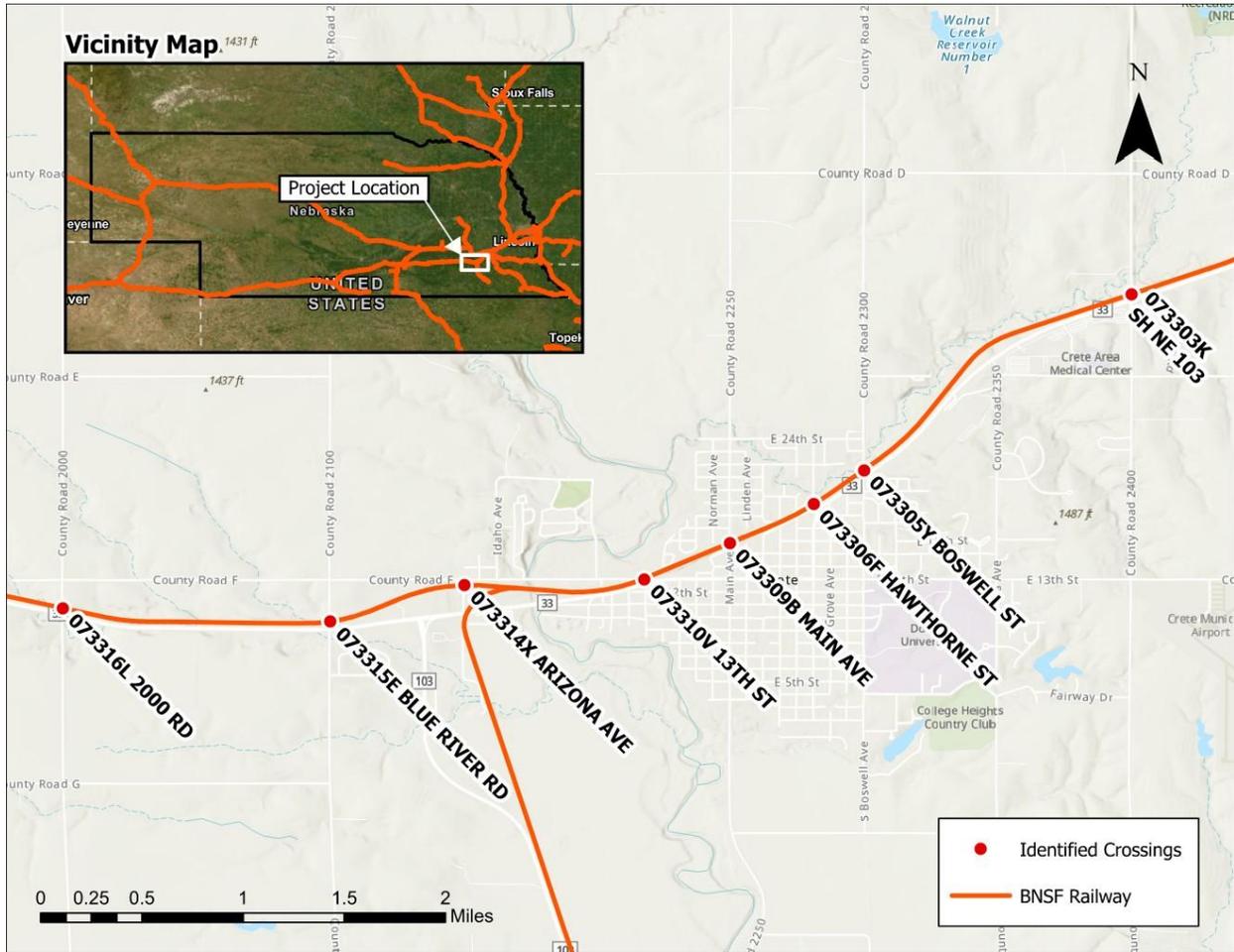
4.2 Project Location

The geospatial data for the Project is as follows:

Table 4-A: Geospatial Data

DOT Grade Crossing Inventory #	Street	Rail Operator(s)	Railroad Owner	Latitude Coordinates (at least five decimal places)	Longitude Coordinates (at least five decimal places)	BNSF Mileposts
073316L	2000 Road	BNSF Railway	BNSF Railway	40°37'23.5"N	97°00'32.8"W	MP 82.24
073315E	Blue River Road	BNSF Railway	BNSF Railway	40°37'20.0"N	96°59'24.4"W	MP 81.23
073314X	Arizona Avenue	BNSF Railway	BNSF Railway	40°37'29.3"N	96°58'49.7"W	MP 80.68
073310V	13 th Street	BNSF Railway	BNSF Railway	40°37'30.9"N	96°58'03.3"W	MP 80
073309B	Main Street	BNSF Railway	BNSF Railway	40°37'40.1"N	96°57'41.5"W	MP 79.64
073306F	Hawthorne Street	BNSF Railway	BNSF Railway	40°37'50.1"N	96°57'19.9"W	MP 79.25
073305Y	Boswell Street	BNSF Railway	BNSF Railway	40°37'58.9"N	96°57'07.1"W	MP 79.03
073303K	SH 103	BNSF Railway	BNSF Railway	40°38'44.1"N	96°55'58.1"W	MP 77.65

Figure 1: Vicinity Map



4.3 Project Scope

The Recipient will notify FRA in writing of any requested changes in Project Scope and will not proceed with the changed scope unless approved by FRA in writing. If approved, changes to Project Scope may require additional environmental review or an amendment to this Agreement.

Task 1: Project Administration and Management

Subtask 1.1: Project Administration

The Recipient will perform all tasks required for the Project through a coordinated process, which will involve affected railroad owners, operators, and funding partners, including:

- BNSF Railway
- Amtrak
- FRA

The Recipient will facilitate the coordination of all activities necessary for implementation of the Project. The Recipient will:

- participate in a Project kickoff meeting with FRA following award;
- complete necessary steps to hire a qualified consultant/contractor to perform required Project work, as necessary;
- hold regularly scheduled Project meetings with FRA;
- inspect and approve work as it is completed; and
- participate in other coordination, as needed.

The Recipient will demonstrate to FRA that it is carrying out the project benefits in the most cost-efficient manner.

Subtask 1.2: Project Management Plan

The Recipient will prepare a Project Management Plan (PMP), that describes how the Project will be implemented and monitored to ensure effective, efficient, and safe delivery of the Project on time and within budget. The PMP will describe, in detail, the activities and steps necessary to complete the tasks outlined in this Statement of Work.

The PMP will include a Project Schedule and Project Budget for the work to be performed under this Agreement. The Project Schedule will be consistent with the Estimated Project Schedule in Section 5.2 of this Attachment 2, but provide a greater level of detail. Similarly, the Project Budget should be consistent with the Approved Project Budget in Section 6.5 of this Attachment 2, but provide a greater level of detail.

The Recipient will submit the PMP to FRA for review and approval. The Recipient will implement the Project as described in the approved PMP. The Recipient will not begin work on subsequent tasks until FRA has provided written approval of the PMP, unless FRA has provided pre-award authority for such work under Section 6.6 of this Attachment 2. FRA will not reimburse the Recipient for costs incurred in contravention of this requirement.

FRA may require the Recipient to update the PMP. The Recipient will submit any such updates to FRA for review and approval, and FRA will determine if updates to the PMP require an amendment to this Agreement. The Project Budget and Project Schedule may be revised consistent with Article 5 of Attachment 1 of this Agreement without amending this Agreement.

Subtask 1.3: Project Closeout

The Recipient will submit a Final Performance Report as required by Section 7.2 of Attachment 1 of this Agreement, which should describe the cumulative activities of the Project, including a complete description of the Recipient’s achievements with respect to the Project objectives and milestones.

Task 1 Deliverables:

Deliverable ID	Subtask	Deliverable Name
1.1	1.2	Project Management Plan

1.2	1.3	Final Performance Report
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Task 2: Stakeholder/Public/Community Outreach

The community engagement consultant will prepare a draft and a final Stakeholder and Community Engagement Plan and will work with the Project Leadership Team (PLT) and the project’s engineering/planning consultant to prepare a preliminary Project Purpose and Need to initiate the engagement process. The Stakeholder and Community Engagement Plan will identify a comprehensive set of strategies designed to elicit feedback from all stakeholders and preferences for interaction (in person or virtual) to ensure that a wide range of viewpoints are captured.

Subtask 2.1 Create Stakeholder and Community Outreach Plan

Subtask 2.2 Community Outreach Planning and Coordination

- Prepare plans for each public open house or meeting, 1 total event
- Prepare and conduct public notifications for the event
- Event attendance by consultant (1 total, 3-hour meetings with 2 staff members)
- Prepare post-event summary including public feedback received

Subtask 2.3 Conduct one Design Charette Events in the community

Subtask 2.4 On-line public open house for public involvement

- Preparing and hosting one open house
- Prepare post-meeting summaries including public feedback received

Subtask 2.5 Social Media engagement Activities supporting outreach efforts.

Subtask 2.6 Graphics Preparation

- Prepare concept and/or preliminary level plan and/or alternative graphics for additional grant applications and public/community outreach events.

Subtask 2.7 Stakeholder and Community Engagement

- In accordance with the final Stakeholder and Community Engagement Plan, the stakeholder and community engagement consultant will work with the grantee and the PLT to implement the plan and will ensure that all voices are heard. A Draft and Final Community Engagement Report shall be prepared.

Task 2 Deliverables:

Deliverable ID	Subtask	Deliverable Name
2.1	2.1	Stakeholder and Community Engagement Plan
2.2	2.2	Post-Open House Summary
2.3	2.4	Post-Online Meeting Summary
2.4	2.6	Preliminary Level Plan and/or Alternative Graphics
2.5	2.7	Final Community Engagement Report

Task 3: Transportation and Traffic Study

This task will consist of conducting a traffic analysis of up to 15 intersections. The analysis will include the following scenarios: existing, future no-build, and future build #1 and future build #2. The existing traffic patterns will be utilized to understand volumetric travel pattern shifts that would occur due to either closures or grade separations. The two future build scenarios have not yet been identified and therefore are not described in detail in this task. The study will include a safety analysis of existing crash history and provide recommendations focused on reducing the number of and severity of the crashes.

Subtask 3.1 Data Collection

- Traffic counts will be collected at up to 15 intersection in the yellow pin locations shown (AM and PM Peak period counts) on the map on the following page. The AM and PM peak 2-hour periods are assumed to occur from 7:00 to 9:00 AM and from 4:00 to 6:00 PM.

Subtask 3.2 Field Observations

- Up to two (2) staff will be on-site during the traffic data collection periods to observe traffic operations, queuing, and driving behaviors within the project area.

Subtask 3.3 Safety Analysis

- Consultant will obtain the most recent five years of crash data from the FRA and NDOT and perform a safety analysis for the study area. The existing crashes will be summarized in table and figure form. For the analysis we will utilize the Extended Highway Safety Manual (HSM) Spreadsheet Tool to summarize the predicted

performance of future safety in terms of crashes by severity (fatal, injury A, injury B, injury C, and property damage only) and expected average crash frequency. The build conditions will be compared to the no-build condition.

Subtask 3.4 Traffic Volume Development

- The existing traffic counts will be adjusted to the peak month. An annual growth rate will be calculated and utilized to predict future year vehicular demands at the study area intersections and rail crossing locations.

Subtask 3.5 Operations Analysis

- The Synchro operations analysis software will be used to analyze traffic operations for the AM and PM peak hours for the following scenarios: existing, future no-build, future build #1, and future build #2. If study area intersections are predicted to fail to meet the applicable operational standards in the future year build conditions, mitigations will be summarized that would allow the intersections to meet standards.

Subtask 3.6 Report

- The analysis will be summarized and documented in a draft Traffic Safety and Operations Report. Client will review the draft report and provide one set of consolidated non-conflicting comments. The comments will be reviewed and incorporated into a final report.

Task 3 Deliverables:

Deliverable ID	Subtask	Deliverable Name
3.1	3.6	Traffic Safety and Operations Report

Task 4 – Alternatives Analysis

The Consultant, in collaboration with BNSF Railway, will assess the condition of current railroad operations and roadway infrastructure and other relevant conditions within the project area to prepare the Alternatives Analysis Summary document. This assessment will include information on the roadway crossing characteristics, train operations and safety, road network performance and traffic analysis, maintenance activities, and engineering/capacity constraints of the existing highway facilities and/or railway infrastructure. This task will identify any planned or programmed infrastructure improvements contained in state and local planning documents and check to determine whether rail operators have planned infrastructure enhancements within the project study area [to be defined]. The Alternatives Analysis Summary document will also include conceptual design alternatives for roadway alignments/cross-sections and conceptual cost estimates.

Subtask 4.1 Conceptual design and alternatives analysis for grade separation at Main Avenue crossing

Subtask 4.2 Conceptual design and alternatives analysis for grade crossing upgrades/modifications and/or closures at:

- Road 2000 (BNSF Milepost 82.24)
- Blue River Road/Road 2100 (BNSF Milepost 81.23)
- Arizona Avenue (BNSF Milepost 80.68)
- W 13th Street (BNSF Milepost 80)
- Hawthorne Avenue (BNSF Milepost 79.25)
- Boswell Avenue (BNSF Milepost 79.03) and
- SH 103 (BNSF 77.65)

Subtask 4.3 Conceptual design for railway infrastructure improvements necessary to achieve identified speeds (wayside signal, track, etc.)

- A concept level roll plot will be developed to be used as the basis of design for preliminary design services. This will identify basic alignment, roadway configurations, and ROW impacts. This will be the basis of initial discussions with project stakeholders prior to moving to a 30% preliminary design level.

Subtask 4.4 Draft Alternatives Analysis Summary document

Subtask 4.5 Final Alternatives Analysis Summary document

Task 4 Deliverables:

Deliverable ID	Subtask	Deliverable Name
4.1	4.4	Draft Alternatives Analysis Summary
4.2	4.5	Final Alternatives Analysis Summary

Task 5 – Utilities

Subtask 5.1 Initial Coordination with Utility Agencies

- Identifying impacted utility agencies/Initial Utility Contacts

Subtask 5.2 Utility Coordination and Meetings

- Ongoing coordination meetings with utility agencies to identify conflicts with proposed design

- Utility Coordination Meetings
 - 3 Total with three (3) consultant staff each

Deliverable ID	Subtask	Deliverable Name
5.1	5.2	Utility Coordination Meeting

Task 6 – Surveying

Development of topographic and cadastral survey base mapping for the project area. Survey activities will be a combination of topographic, cadastral, and aerial mapping. Refer to the exhibit below for the boundaries.

Subtask 6.1 Field Reviews

Subtask 6.2 Data collection

- Existing roadway, ROW, and utility information

Subtask 6.3 Horizontal and Vertical Control Networks

Subtask 6.4 Establishing Road Centerline Alignments and Rights-of-Way base mapping

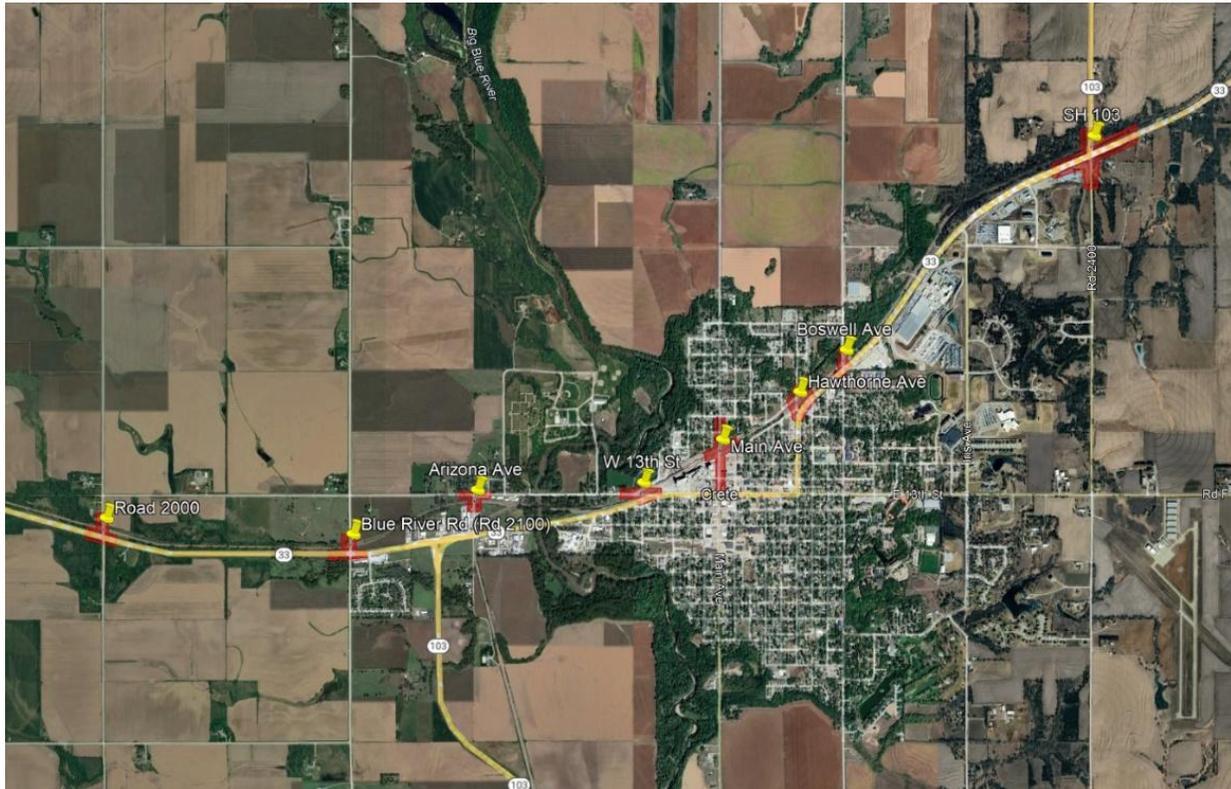
Subtask 6.5 Supplemental Topographic and Cadastral Survey

- With boundaries shown in red below.

Subtask 6.6 Alignment, ROW, and Survey Control Plans

Deliverable ID	Subtask	Deliverable Name
6.1	6.5	Supplemental Topographic and Cadastral Survey
6.2	6.6	Alignment, ROW, and Survey Control Plans

Figure 2: Topographic and Cadastral Survey Map



Task 7 – Conceptual Engineering & Plans Preparation

The Consultant will complete conceptual engineering for FRA review. Conceptual engineering will include all design development and documentation to demonstrate the effectiveness, feasibility, and readiness of the Project. The Consultant will prepare the conceptual engineering plans for the construction of each discrete capital project.

Subtask 7.1 Data Collection

- Roadway, utility, and rail as-built collection and review
- Existing Site Conditions
- 3 site/field visits with two (2) consultant staff per visit

Subtask 7.2 Type, Size, and Location (TS&L) Analysis for grade separation of Main Avenue

- This preliminary design report will detail different bridge/structures needs for the grade separated crossing.

Subtask 7.3 Concept Plans Preparation

- A conceptual level set of plans will be developed to be used as the basis of design for preliminary design services but also for use in obtaining future grant funding for the entire project or partial elements of the project.
- The conceptual design objectives will be to include the:
 - Conceptual engineering design for a railroad/vehicle grade separation at Main Avenue & BNSF Railway.
 - Conceptual engineering design for grade crossing upgrades/modifications and/or closures at:
 - Road 2000 (BNSF Milepost 82.24)
 - Blue River Road/Road 2100 (BNSF Milepost 81.23)
 - Arizona Avenue (BNSF Milepost 80.68)
 - W 13th Street (BNSF Milepost 80)
 - Hawthorne Avenue (BNSF Milepost 79.25)
 - Boswell Avenue (BNSF Milepost 79.03) and
 - SH 103 (BNSF 77.65)
- Conceptual plans to be developed include the following disciplines:
 - Cover Sheet
 - Survey Control Plans (covered in survey scope)
 - Typical Sections
 - Roadway Plans
 - Structural/Wall Plan

Subtask 7.4 Estimating

- Preparation of construction Cost Estimates (CEs) for the project at the conceptual level submittal. Where practical, the bid items shall be NDOT standard bid items described in NDOT standard specifications and listed in NDOT standard bid item list. The Consultant shall modify unit costs on the basis of their experience and judgment to reflect specific construction requirements of this contract and the general bidding environment.

Subtask 7.5 QC Review of Conceptual Design Deliverables

- Consultant will conduct an internal QC process on the conceptual design deliverables. This process will follow the Consultant QC standard process and stored electronically as verification the process has been completed.

Subtask 7.6 NDOT Coordination

- NDOT Coordination Meetings

- Consultant will attend up to 5 meetings with NDOT to collaborate on required design elements, discuss alternatives, structure types, and overall design discussions.
- Consultant will set up initial kickoff meeting with NDOT to identify necessary documentation.
- NDOT Documentation Support
 - Develop an outline of required documentation needed for project work on NDOT facilities.

Deliverable ID	Subtask	Deliverable Name
7.1	7.3	Conceptual Design Plans
7.2	7.4	Construction Cost Estimates
7.3	7.6	NDOT Documentation Support

4.4 Implement Required Environmental Commitments

The Recipient will implement the Project consistent with the documents and environmental commitments identified below.

Due to the project starting in Track 1: Project Planning, there has not been any completion of environmental analysis or commitments to date. A separate, high level environmental analysis will be performed during the project and will be included in the Corridor Safety Plan.

Table 4-A: Environmental Commitments

Document Type	Commitment Reference	Document Date
TBD	TBD	TBD

ARTICLE 5: AWARD DATES AND ESTIMATED PROJECT SCHEDULE

5.1 Award Dates

Budget Period End Date: February 5, 2028

5.2 Estimated Project Schedule

Milestones associated with this Agreement are identified in Table 5-A: Estimated Project Schedule. The Recipient will complete these milestones to FRA’s satisfaction by the Schedule Date, subject to Article 5 of Attachment 1 of this Agreement. The Recipient will notify FRA in writing when it believes it has achieved the milestone.

Table 5-A: Estimated Project Schedule

Milestone	Schedule Date
Obligation of Funding	February 6, 2027
Project Management Plan Completion	April 30, 2027
Community Engagement	February 5, 2028
Task 3 (Transportation and Traffic Study) Completion	August 30, 2027
Alternatives Analysis	December 31, 2027
Utility Coordination	December 31, 2027
Survey Completion	October 1, 2027
Conceptual Engineering Plans and Cost Estimates	February 5, 2028

Table 5-B: Calendar Project Schedule

Project Milestone Schedule - Tasks and Key Subtasks	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
NRPP Grant Obligation												
Task 1: Project Management												
Project Kickoff Meeting												
Project Management Plan												
Project Closeout Final Report												
Task 2: Stakeholder/Public/Community Outreach												
Stakeholder and Community Outreach Plan												
Public Open House												
Design Charettes												
Public Meetings												
Task 3: Transportation and Traffic Study												
Task 4: Alternatives Analysis												
Task 5: Utilities												
Task 6: Surveying												
Task 7: Conceptual Engineering & Plans Preparation												
Conceptual Design Plans												
Construction Cost Estimates												
NDOT Documentation Support												

ARTICLE 6: AWARD AND PROJECT FINANCIAL INFORMATION

6.1 Award Amount

Agreement Federal Funds: \$1,145,629

6.2 Federal Obligation Information

Federal Obligation Type: Single

6.3 Federal Authorization and Funding Source.

Authorizing Statute: 49 U.S.C. 24911 § 22106/22307.

Appropriation: Appropriation: \$5,070,784,989, Fiscal Years 2022-2025

6.4 Funding Availability

Program funding that is obligated under this Agreement remains available until expended.

6.5 Approved Project Budget

The estimated total Project cost under this Agreement is \$1,432,036.

FRA – Fiscal Year 2024-2025 National Railroad Partnership/FSP Program

FRA will contribute a maximum of 80% percent of the total Project cost, not to exceed the Agreement Federal Funds in Section 6.1 of this Attachment 2. FRA will fund the Project at the lesser amount of the Agreement Federal Funds or the FRA maximum contribution percentage of total Project costs.

The Recipient will contribute \$286,408 in Agreement Non-Federal Funds. Recipient’s Agreement Non-Federal Funds are comprised of cash.

The Recipient will complete the Project to FRA’s satisfaction within the Approved Project Budget, subject to Article 5 of Attachment 1 of this Agreement.

Table 6-A: Approved Project Budget by Task

Task #	Task Title	Agreement Federal Funds	Agreement Non-Federal Funds	Total
1	Project Administration and Management	\$75,611	\$18,903	\$94,514
2	Stakeholder/Public/Community Outreach	\$49,262	\$12,316	\$61,578
3	Transportation and Traffic Study	\$150,078	\$37,519	\$187,597
4	Alternatives Analysis	\$321,922	\$80,480	\$402,402
5	Utilities	\$40,097	10,024	\$50,121
6	Surveying	\$139,766	\$34,942	\$174,708
7	Conceptual Engineering & Plans Preparation	\$368,893	\$92,223	\$461,116
Total		\$1,145,629	\$286,407	Total Project Cost: \$1,432,036

Table 6-B: Approved Project Budget by Source

Funding Source	Total Amount	Percentage of Total Project Cost
Federal Share	\$1,145,629	80%
Agreement Federal Funds	\$1,145,629	80%
NRP-FSP	\$1,145,629	80%
Agreement Non-Federal Funds	\$286,408	20%
City of Crete, NE	\$143,204	10%
BNSF Railway	\$143,204	10%

6.6 Pre-Award Costs

None. Consistent with 2 C.F.R. part 200, costs incurred before the date of this Agreement are not allowable costs under this award. FRA will neither reimburse those costs under this award nor consider them as a non-Federal cost-sharing contribution to this award.

6.7 Phased Funding Agreement

Not applicable.

ARTICLE 7: PERFORMANCE MEASUREMENT INFORMATION

Table 7-A: Performance Measurement Table identifies the performance measures that this Project is expected to achieve. These performance measures will enable FRA to assess the Recipient’s progress in achieving grant program goals and objectives. The Recipient will report on these performance measures in accordance with the frequency and duration specified in Table 7-A.

Upon Project completion, the Recipient will submit reports comparing the actual Project performance of the new and or improved asset(s) against the pre-Project (baseline) performance and expected post-Project performance as described in Table 7-A. The Recipient will submit the performance measures report to the Project Manager in accordance with Table 7-A.

Table 7-A: Performance Measurement Table

Goal	Objective	Performance Measure	Description of Measure	Measurement	Reporting
Goal 1	Satisfactory completion of Purpose and need Statement and Stakeholder and Community Engagement Plan	Completion of Purpose & Need and Stakeholder Engagement Plan acceptable to FRA	All Task 2 Deliverables are successfully completed and accepted and/or approved by FRA	Pre-Project (Baseline) Performance as of: NA	Frequency: Once
				Expected Post-Project Performance: Completed	Duration: Following period of performance

FRA – Fiscal Year 2024-2025 National Railroad Partnership/FSP Program

Goal 2	Satisfactory completion of Alternatives Analysis	Completion of Alternatives Analysis acceptable to FRA	All Task 3 Deliverables Task 3 are successfully completed and accepted and/or approved by FRA.	Pre-Project (Baseline) Performance as of: NA	Frequency: Once
				Expected Post-Project Performance: Completed	Duration: Following period of performance