Railroad Safety Grants for the Safe Transportation of Energy Products by Rail

26th Street SW to Edgewood Road Track Improvement

Submitted by Iowa Department of Transportation

Appendix B

Statement of Work

STATEMENT OF WORK

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Track Improvement Project

I. BACKGROUND

The Cedar Rapids and Iowa City Railway (CRANDIC), a wholly owned subsidiary of Alliant Energy, has been in business since 1904. Today, CRANDIC operates around the clock service, 365 days a year in four counties, providing freight service to ten-Eastern Iowa communities. Via strategic agreements with other railroads, customers can connect with Class I rail connections across the North American continent. The award-wining short line serves some of the largest industries in east central Iowa including:

- ADM
- Alliant Energy
- Pen ford Products (Ingredion)
- International Paper
- Cargill
- Profol Plastics
- PMX Industries

II. OBJECTIVE

All loaded and empty ethanol rail cars traveling on the Cedar Rapids and Iowa City Railway (CRANDIC) system are bi-directionally routed across the project area, now a segment of single track located between 26th Street SW past Edgewood Road. As CRANDIC's critical artery for the movement of ethanol products, 26th Street SW to Edgewood Road is in need of upgrades to support the increased heavy volumes of rail traffic. CRANDIC estimates volumes in 2015 to reach almost 50,000 ethanol cars; this is more than 7,000 from 2014 levels.

This segment of track is a bottleneck for the CRANDIC as it has an S-Curve, a low lying roadbed section, poor drainage and visibility, and no access road for emergency response. As such, this span of 3,200 feet is in need of restructuring to continue to meet the current and future demands of ethanol traffic through the area. Specifically, CRANDIC aims to eliminate infrastructure and maintenance risks, which will create a safer and more efficient route. The objective of this project includes:

- Decrease CRANDIC bottleneck constraints by adding a new segment of mainline track
    - Remove bottleneck for key interchange partners
- Improve visibility approaching highway-railroad at-grade crossing
- Reduce risks of grade crossing accidents
- Mitigate risk of derailments and environmental impacts
    - Track sits within 75ft of Prairie Creek (3 miles downstream and feeds into the Cedar River, a large waterway in eastern Iowa) Derailment and spill of ethanol into this waterway would have severe environmental implications
- New access road constructed alongside rail for servicing and emergency response
- Improve drainage, lengthening lifecycle of ballast, ties and rail
- Improve fuel efficiencies and train handling
- Decreasing the risk of negative buff and draft forces
- Mitigate repair and maintenance costs
- Eliminate yard classification delays due to through trains
- Improve operational efficiencies with other ethanol connecting carriers

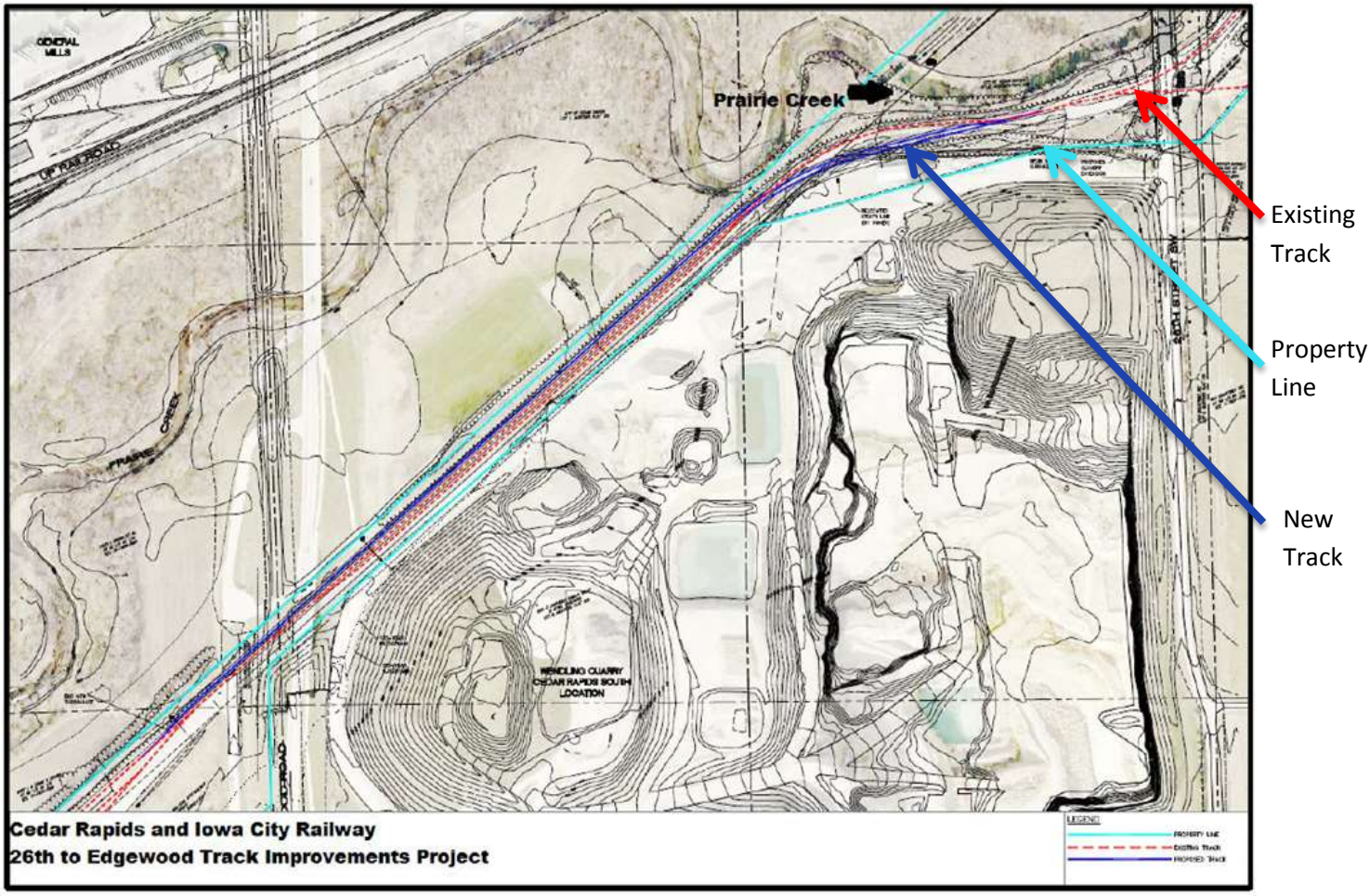
Figure 1 -8 and 8.5 degree S-Curve

III. PROJECT LOCATION

The project is located between 26th Street SW to Edgewood Road SW in Cedar Rapids, Iowa. The track was formally part of the Milwaukee Railroad's mainline, which the CRANDIC acquired in the early 1980s. This is a primary route used by the CRANDIC and is used to interchange all ethanol cars with CRANDIC's largest interchange carrier, the IAIS.

Figure 2 - Aerial showing project location

A full size engineering plan is included in Appendix C.



IV. DESCRIPTION OF WORK

- Track renewal:
  - Connectivity to two sticks of CWR as part of this project
  - Replace balance of current 39 ft. non-control cooled 112 lb. rail with 80 ft. control cooled 115 lb. rail
  - Remove a low grade segment and raise the roadbed and rail for consistent grades
  - Remove one 8.5 degree curve
  - Reduce remaining curve from 8 degrees to 5.9 degrees
  - Remove any undulating grades
- Ballast renewal
  - Replace current with all new 2" ballast
- Turnout installation
  - A #11 turnout – positioned for gradual movement through curve
- Drainage rehabilitation
  - Earthwork and grading to improve draining and add space for an access road and additional track
  - Add 6" drain tiles running parallel on both sides of the tracks

Task 1 – Pre-construction

1.1 Prepare cooperative agreements with FRA and sub grantee

1.2 Prepare a detailed Project Work Plan, Budget and Schedule

Task 1 Deliverables

- Project agreement with FRA and sub-grantee
- Detailed Project Work Plan, Budget and Schedule

Task 2 – Construction

2.1 Initial Construction Design and Construction - Design and specification, purchase of materials, contractor removing trees, grading, removal of excess dirt, constructing roadbed, trackbed, and install to finish grade sub base

2.2 New Curve Construction Including Turnout Design and Construction - Design and specification, purchase of materials, new curve construction, construct new turnout.

2.3 Connect New Curve and Old Curve Removal Design and Construction - Design and specification, purchase of materials, new curve installation, old curve removal.

2.4 New Track Construction Design and Construction - Design and specification, purchase of materials, construct new track from 26th St SW to 900 Yard

2.5 Connect to 900 Main Design and Construction - Design and specification, purchase of materials, spike out 901/Main switch and complete rail construction.

2.6 Removal East 900 Switch Design and Construction - Design and specification, purchase of materials, remove 901/Main switch, reconstruct turnout, and surface area

2.7 Track Completion Design & Construction - Design and specification, purchase of materials, surface and dump ballast along newly constructed track and removal of equipment

Task 2 Deliverables

- Complete construction activities detailed in task 2.1 through 2.7
- Project reporting

Task 3 – Project Completion

3.1 Final Inspection

3.2 Project Closeout

Task 3 Deliverables

- Certificate of Completion
- Final Performance Report

V. PROJECT CHEDULE AND DELIVERABLES

The period of performance for all work will be approximately 8 months, from June 2016 to February 2017 (assuming grant awards will be announced in January 2016.) The deliverables associated with this Grant/Cooperative Agreement are listed below. The Grantee must complete these deliverables to FRA's satisfaction in order to be authorized for funding reimbursement and for the Project to be considered complete.

Task #	Deliverable Name	Related Task	Due Date
1.1	Prepare cooperative agreements with FRA and sub grantee		June 2016
1.2	Prepare a detail Project Work Plan, Budget and Schedule		July 2016
2.1	Initial Construction Design and Construction		August 2016
2.2	New Curve Construction Including Turnout Design and Construction		August 2016
2.3	Connect New Curve and Old Curve Removal Design and Construction		September 2016
2.4	New Track Construction Design and Construction		September 2016
2.5	Connect to 900 Main Design and Construction		September 2016
2.6	Removal East 900 Switch Design and Construction		September 2016
2.7	Track Completion Design & Construction		October 2016
3.1	Certificate of Completion		December 2016
3.2	Final Performance Report		February 2017

VI. PROJECT ESTIMATE/BUDGET

The total estimated cost of the Project is $ 1,775,000, for which the FRA grant will contribute up to 60% of the total cost, not to exceed $ 1,065,000. Any additional expense required beyond that provided in this grant to complete the Project shall be borne by the sub-grantee.

Task #	Project Phase	Comments	Total Cost
1	Preconstruction Activities		$0
2.1	Initial Construction Design and Construction	Includes contractor removing trees, grading, removal of excess dirt, constructing roadbed, trackbed, and install to finish grade sub base	$ 852,500.00
2.2	New Curve Construction	Includes MOW employee and machine hours and material to prebuild the new curve track and turnout	$ 156,750.00
2.3	Connect New Curve and Remove Old Curve	Includes MOW employee and machine hours and material to place prebuilt track and turnout onto the Main Line. Also includes removal old curve taken out of service and completion of initial construction	$ 28,050.00
2.4	New Track Construction	Includes MOW employee and machine hours to construct new track from 26th St SW to 900 Yard	$ 596,750.00
2.5	Connect 900 Main	Includes MOW employee and machine hours to spike out 901/Main switch and complete rail construction.	$ 19,250.00
2.6	Removal East 900 Switch	Includes MOW employee and machine hours to remove 901/Main switch, reconstruct turnout, and surface area	$ 19,250.00
2.7	Track Construction Completion	Includes MOW employee and machine hours to surface and dump ballast along newly constructed track and removal of equipment	$ 29,700.00
3.	Project completion	Includes all work hours for project closeout and contingency costs	$ 72,750.00
	Total Budgeted Costs		**$ 1,775,000.00**

Project Estimate Contributions

Funding Source	Project Contribution Amount	Percentage of Total Project Cost
FRA Grant	$ 1,065,000	60%
CRANDIC Railroad (sub-grantee)	$ 710,000	40%
Total Project Cost	**$ 1,775,000**	**100%**

VII. PROJECT COORDINATION

CRANDIC shall perform all tasks required for the project through a coordinated process, which will involve affected railroad owners, operators, and funding partners, including:

- CRANDIC
- FRA

VIII. PROJECT MANAGEMENT

CRANDIC is responsible for facilitating the coordination of all activities necessary for implementation of the project. Upon award of the project, the Grantee will monitor and evaluate the project's progress through regular meetings scheduled throughout the period of performance. The Applicant/Grantee will:

- Participate in a project kickoff meeting with the FRA and CRANDIC the sub-grantee
- Grantee and FRA will develop a cooperative grant agreement
- Grantee will develop a sub-grantee agreement with IAIS
- In coordination with the grantee and the FRA the sub-grantee will complete necessary steps to hire a qualified consultant/contractor to perform required project work and procure materials
- Hold regularly scheduled project meetings with FRA and CRANDIC
- Grantee in coordination with CRANDIC will inspect and approve work as it is completed

- Grantee will review and approve invoices as appropriate and submitted by sub-grantee for completed work
- Grantee in cooperation with CRANDIC will perform project close-out audit to ensure contractual compliance and issue close-out report
- Grantee in cooperation with CRANDIC will submit to FRA all required project deliverables and documentation on-time and according to schedule, including periodic receipts and invoices
- Grantee in cooperation with CRANDIC will comply with all FRA project reporting requirements, including, but not limited to:
    - Status of project by task breakdown and percent complete
    - Changes and reason for change in project's scope, schedule and/or budget
    - Description of unanticipated problems and any resolution since the immediately preceding progress report
    - Summary of work scheduled for the next progress period
    - Updated project schedule