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CSC 554 Project Management (Spring 2018)

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PennDOT Route 222 Traffic Reduction Contract

Statement of Work

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1.0 draft 1

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1.0 Statement of Purpose

The purpose of this document is to provide a detailed description of the work that is to be outsourced, such that potential sellers can determine whether they can provide the product/service or not, as well as estimate the price they will charge for supplying the product/service. This document includes (a) some background information on the PennDOT Route 222 Traffic Reduction Contract (b) a description of the product/service that will be acquired, (c) a list of the different tasks that need to be completed in the production of the product/service, (d) a list of the specific deliverables, (e) when the procurement process will start and end, (f) an indication of how much Top Tier Contractors is going to spend on acquiring the product/service, (g) a description of how the seller's performance will be monitored, (h) the criteria that will be used to determine whether the product/service is deemed acceptable, (i) specific information on when each deliverable is due, and (j) any special requirements and considerations.

2.0 Introduction and Overview

2.1 Background

The PennDOT Route 222 Traffic Reduction Contract is a plan by PennDOT to reduce traffic delays on Route 222 between Fleetwood and Temple, Pennsylvania. The project is to be implemented by Top Tier Contractors. Only intersections where traffic lights are present are being worked on in hopes to improve the flow of traffic.

2.2 Project Deliverables

- 1.) Intersection one of Route 222 optimized for the reduction of traffic.
- 2.) Intersection two of Route 222 optimized for the reduction of traffic.
- 3.) Intersection three of Route 222 optimized for the reduction of traffic.
- 4.) Intersection four of Route 222 optimized for the reduction of traffic.
- 5.) Intersection five of Route 222 optimized for the reduction of traffic.

2.3 Project Objectives

The project objectives are the following:

- 1.) Remove any traffic accessories pointed out by the PennDOT plan
- 2.) Remove any section of road pointed out by the PennDOT plan
- 3.) Place any new road additions pointed out by the PennDOT plan
- 4.) Place any new traffic accessories pointed out by the PennDOT plan
- 5.) Clean up or dispose of any leftover materials or accessories

The project requirements are the following:

- 1.) The new addition must properly reduce traffic delays
 - 2.) The roadwork crew must keep hinderances to the flow of traffic to a minimum during project duration
 - 3.) The new addition must be implemented in a way such that it can be easily maintained at any point after the project
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3.0 Description of Product/Service to be Acquired

- 1.) Traffic accessories to be put in place provided by PennDOT
 - 2.) Asphalt, concrete or macadam to build with provided by PennDOT
 - 3.) Contract plans, blueprints and specifications from PennDOT
 - 4.) Insurance for employees from the company's insurance policy company
 - 5.) Insurance for equipment from the company's insurance policy company
 - 6.) Power in the form of gasoline/diesel from a fossil fuel-based company (Exxon)
 - 7.) Power in the form of electricity from the local area's power company (Met-Ed)
 - 8.) Renting/Leasing unowned heavy machinery or tools from an equipment leaser
 - 9.) Manual tools for employees (Home Depot, Lowe's or ACE Hardware)
 - 10.) Safety equipment for employees and motorists
 - 11.) Personal safety equipment for employees (Home Depot, Lowe's or ACE Hardware)
 - 12.) A repair company to fix any malfunctioning/broken tools or machinery
 - 13.) Renewing and maintaining all required permits (through the state)
 - 14.) Disposal of any material (through Waste Management, scrap yards or landfills)
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4.0 Scope of Work

All tasks of the contract are the following:

- 1.) Remove all necessary traffic accessories from the intersections 1-5
 - 2.) Remove all necessary road area from the intersections 1-5
 - 3.) Place any new road additions to the intersections 1-5
 - 4.) Place any new road accessories to the intersections 1-5
 - 5.) Dispose of any waste from intersections 1-5
 - 6.) Clean up, remove and collect all left-over company materials
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5.0 Deliverables

- 1.) Intersection one of Route 222 optimized for the reduction of traffic. This is the intersection of Route 222 and Route 662 at Moselem Springs, Pennsylvania. This includes the removal of any road accessories deemed obsolete by PennDOT and the

addition of new road accessories deemed necessary by PennDOT. This also may include the addition of new roadway/lanes and/or the removal of old roadway/lanes.

2.) Performance/Progress report for PennDOT assessment of intersection one

3.) Intersection two of Route 222 optimized for the reduction of traffic. This is the intersection of Route 222 and Farmers Dr. at Moselem Springs, Pennsylvania. This includes the removal of any road accessories deemed obsolete by PennDOT and the addition of new road accessories deemed necessary by PennDOT. This also may include the addition of new roadway/lanes and/or the removal of old roadway/lanes.

4.) Performance/Progress report for PennDOT assessment of intersection two

5.) Intersection three of Route 222 optimized for the reduction of traffic. This is the intersection of Route 222 and Tamarack Blvd. at Blandon, Pennsylvania. This includes the removal of any road accessories deemed obsolete by PennDOT and the addition of new road accessories deemed necessary by PennDOT. This also may include the addition of new roadway/lanes and/or the removal of old roadway/lanes.

6.) Performance/Progress report for PennDOT assessment of intersection three

7.) Intersection four of Route 222 optimized for the reduction of traffic. This is the intersection of Route 222 and Route 73 at Blandon, Pennsylvania. This includes the removal of any road accessories deemed obsolete by PennDOT and the addition of new road accessories deemed necessary by PennDOT. This also may include the addition of new roadway/lanes and/or the removal of old roadway/lanes.

8.) Performance/Progress report for PennDOT assessment of intersection four

9.) Intersection five of Route 222 optimized for the reduction of traffic. This is the intersection under the exit/merging highway ramps for northbound and southbound traffic of Route 222. It is located by Blandon, Berkley and Temple Pennsylvania. This includes the removal of any road accessories deemed obsolete by PennDOT and the addition of new road accessories deemed necessary by PennDOT. This also may include the addition of new roadway/lanes and/or the removal of old roadway/lanes.

10.) Performance/Progress report for PennDOT assessment of intersection five

11.) Summation of all project progress from initiation to completion

6.0 Schedule Constraints

The contract must be completed in four months. The procurement of all unobtained or collected resources must be completed before Sunday, May 13th, 2018. There is a total of five intersections and each intersection must be completed in 25 days. The contract will need to be completed no later than Sunday, September 16th, 2018. There will be no off days for the company but individual employees will have two non-consecutive days off per week to recuperate. Overtime may be required if there are setbacks or scope changes. Normal contract hours will be from 6AM to 3PM (with

lunch included) to utilize daylight. Evening hours may be scheduled if there are setbacks or scope changes. There will be a total of six milestones:

- 1.) Contract initiation with all resources in place
 - 2.) Finishing of intersection one, moving to intersection two
 - 3.) Finishing of intersection two, moving to intersection three
 - 4.) Finishing of intersection three, moving to intersection four
 - 5.) Finishing of intersection four, moving to intersection five
 - 6.) Finishing of intersection five (contract completion)
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7.0 Payment

Top Tier Contractors is going to spend \$332,100 on acquiring the product/service. Most of that will go to the employee payroll and the rest going to the gathering of resources and insurance for employees and equipment.

- 1.) Payroll: \$28,800 per employee (\$288,000 total)
 - 2.) Employee Insurance: \$2,000 per employee (\$20,000 total)
 - 3.) Power for Machinery i.e. Gasoline/Electricity: (\$4,569.60 total)
 - 4.) Equipment Insurance: Rate is \$1,500/month (\$5,000 total)
 - 5.) Equipment Leasing: Rate is \$2,315/month (\$9,260 total)
 - 6.) Equipment and Tools for Employees: \$150 per employee, (\$1,500 total)
 - 7.) Deductible for Equipment Repair Insurance: (\$500 total)
 - 8.) Required Pennsylvania Permits: \$96 monthly (\$384 total)
 - 9.) Removal and Disposal of Old Roadway & Accessories: (2,880 total)
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8.0 Performance Assessments

The contractors will meet with PennDOT executives a total of five times to discuss the contractors' performance and status. Performance reports will be given after the successful completion of an intersection pointed out in the PennDOT plan. Performance reports include whether the project is still on schedule or not, whether the project is under budget or not and whether there were any problems or setbacks during the portion of project that is being analyzed. A summation of the project will be given at the moment of contract closing (project completion).

9.0 Acceptance Criteria

PennDOT will have time to inspect and evaluate the work of the contract company after each intersection is completed. This can be done either at the performance assessment or if they wish to send their own employees to evaluate the finished intersection on a set of predetermined criteria. If all is deemed satisfactory, the company will move on to the next intersection and so on. If all is not deemed satisfactory, the company will return to the intersection in question and make any necessary alterations, repairs or additions.

10.0 Delivery

- 1.) Intersection one of Route 222 completed by Friday, June 8th, 2018
 - 2.) Intersection two of Route 222 completed by Tuesday, July 3rd, 2018
 - 3.) Intersection three of Route 222 completed by Saturday, June 28th, 2018
 - 4.) Intersection four of Route 222 completed by Wednesday, August 22nd, 2018
 - 5.) Intersection five of Route 222 completed by Sunday, September 16th, 2018
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11.0 Special Requirements and Considerations

- 1.) The road crew must not block more than one lane of a road at a time
 - 2.) The road crew may be required at times to relinquish one to two employees to direct the flow of traffic safely around the construction area
 - 3.) The road crew must understand the protocols and laws of a construction zone
 - 4.) The road crew must be prepared and adjust accordingly for all weather conditions
 - 5.) Contact with lawyers should be present in the case of any accidents
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