

**Northeast Wyoming Regional Airport  
Gillette, Wyoming  
AIP 45 – 2021  
WYDOT AGC003A  
General Aviation Terminal**

**Scope of Work**

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**General**

The general scope of work AIP 45 2021 is to provide the Northeast Wyoming Regional Airport the Assistance with the Preliminary and Final Design Engineering for the Airport Improvements to construct the General Aviation Terminal. The scope shall include a brief study of the project layout and possible alternative layouts, preparation of preliminary cost estimates for alternatives, meetings with the OWNER, WYDOT, and FAA to discuss alternatives, preparing and submitting the application for Federal and State assistance, obtaining survey data, studying alternative construction phasing to minimize impacts to airport users, pavement design, preparation of opinions of total project costs, and preparation of preliminary and final plans and specifications.

AIP 45 deliverables will consist of providing Northeast Wyoming Regional Airport a complete set of construction plans and project specifications for project bidding.

The Bidding Process, Construction Observation, and Construction Grant Management will be provided in the AIP 45 2021 Airport Improvement project.

The proposed work will consist of:

- Schedule 1 – Site grading, utility installation, paving, drainage improvements
- Schedule 2 – Construct terminal building
- Schedule 3 – Demolish existing GA terminal

Construction will consist of 240 calendar days and engineer's construction estimate is approximately \$2,500,000.

Phases II & III will follow the guidelines laid out in the Master Agreement for Professional Engineering Services dated December 18, 2013.

**A. Specific Project Data**

1. Provide Environmental CATEX,
2. Provide Draft Construction Safety and Phasing Plan to airport and tenants for review and comments, show phasing, haul routes, staging and stockpile areas,
3. Provide Design survey, ground topo, existing pavement ties, utilities locates,
4. A/E Programming/Schematic with Owner
5. A/E Design Development
6. Prepare Final Construction Safety and Phasing Plan and submit to FAA and WYDOT,
7. Prepare construction estimate,

8. Provide plans and specifications for the construction to FAA, WYDOT, and Sponsor for review and comments,
9. Prepare Final plans and specifications,
10. Provide assistance in the project bidding process,
11. Provide prebid conference,
12. Prepare bid tabulations,
13. Prepare bid recommendation,
14. Prepare bid award to successful bidder,
15. Prepare Construction Management Plan,
16. Provide construction observation,
17. Provide contract grant management,
18. Provide construction layout survey,
19. Provide AGIS as-built,
20. Provide ALP as-built,
21. Final project closeout,

**B. Phase II - Preliminary and Final Design Engineering, Plans and Specifications.**

1. Attend predesign conference with Airport, WYDOT, and FAA officials to discuss scheduling and scope of the project. Issues to be discussed include design schedule, construction project scope, projected bid opening dates, and construction period.

2. Perform services and identify and evaluate the alternate solutions available to the OWNER as listed in the Task Order. Information from the current edition of the *Airport Master Plan, AC 150/5360-9 (Planning and Design of Airport Terminal Facilities at non-Hub Locations)*, *AC 150/5300-13 (Airport Design)*, *AC 150/5325-6 (Airport Design Standards - Effects and Treatment of Jet Blast)*, and other applicable FAA Advisory Circulars (ACs) as of the date of the Task Order will be used as the basis for determining alternatives.

3. Prepare schematic development plans for the project.

4. Prepare ENGINEER's opinion of total project costs for alternative layouts.

5. Attend meetings with OWNER to discuss alternative layouts. The number of meetings anticipated will be stipulated in the Task Order.

6. Obtain field surveys of site topography and other field information, as required, to refine cost estimates and to use in the final design process. Utility mapping will be based on information obtained from utility owners or Airport records.

7. Obtain soils and geotechnical information required for pavement designs and the design of structures. Soils investigations for pavement design will use the edition of AC 150/5320-6D Airport Pavement Design which is in effect on the date of the Task Order as a basis for determining the scope of the investigation. For structures, appropriate building codes will be used as the basis of the geotechnical investigation.

8. Study alternatives for phasing of construction to minimize impacts to airport users.

9. Prepare schematic development plans for construction phasing.

10. Meet with OWNER and airport users to discuss construction phasing alternatives.

11. Prepare preliminary copies of plans and specifications and provide to OWNER, WYDOT, and the FAA for review. Three sets are anticipated unless otherwise stated in the Task Order.

12. Following review of the above by the OWNER, WYDOT, and the FAA, and based on their acceptance, modification and direction, prepare final plans and specifications indicating the scope, extent and character of the Work to be performed and furnished by the ENGINEER(s).

13. Prepare a final design report, identify items of proposed work, levels of federal funding requested and project impacts. Identify items of work which will be bid as alternative bid items. The design report will be completed in accordance with the versions of the appropriate ADO Notices which are in effect as of the date of the Task Order.

14. Prepare final copies of plans and specification and provide to OWNER, WYDOT, and the FAA for review. Three sets are anticipated unless otherwise stated in the Task Order.

15. Include in the specification's Special Provisions a CONSTRUCTION OPERATIONS PLAN to address specific impacts of construction activities on airport operations. The version of AC 150/5370-10A Operational Safety on Airports during Construction which is in effect as of the date of the Task Order will be used as a guide in preparing the Construction Operations Plan. Coordinate with the FAA Airport District Office, FAA Air Traffic Control Tower and FAA Facilities, as well as airport management and airport users as required to complete the plan. Generally, the FAA ADO will coordinate with and obtain approval from FAA Flight Standards for any special airport operational issues during construction.

16. Update the ENGINEER's opinion of total project costs.

17. Attend Airport Board meetings and meetings with the FAA, as required, to update Project progress. The maximum of meetings with the Airport Board and with the FAA shall be as specified in the Task Order.

**C. Phase III - Provide Assistance in the Bidding Process, Construction Observation, and Contract Grant Management.**

Following the advertisement for construction, Phase III of this Agreement shall commence and the ENGINEER shall:

1. Provide plans and specifications for the construction of the improvements set forth in the Task Order. For bidding, provide the OWNER, plan exchanges, and review agencies with the number of sets of plans and specifications stipulated in the Task Order and furnish five (5) sets for the Contractor during construction. Plans and specifications will be offered to bidding Contractors for a non-refundable fee to cover reproduction and postage costs

2. Distribute plans and specifications to contractors, suppliers and manufacturers for the purpose of bidding.

3. Conduct a prebid conference to discuss airport operational safety during construction, airport security requirements, project construction schedule, and FAA construction specifications with prospective contractors.

4. Prepare a final opinion of probable cost based on the final plans and specifications for use as a guide in considering bids at the bid opening.
5. Attend bid opening, tabulate bids and make recommendations to the OWNER in awarding the contract.
6. Prepare a notice of award and assist the OWNER in preparation of the construction Contract documents.
7. Prepare the Application for Federal Assistance and submit it to the FAA and WYDOT Aeronautics Division.
8. Conduct a preconstruction conference.
9. Prepare and submit FAA Requests for Reimbursement and Summaries of Project Cost.
10. Prepare weekly construction observation reports for review by the OWNER, FAA, and WYDOT Aeronautics Division.
11. Should paving costs as bid exceed \$500,000, the ENGINEER shall prepare a **CONSTRUCTION MANAGEMENT PLAN**. The plan will include the identification of the OWNER's representative, the testing laboratory, the procedures for testing laboratories, qualifications of testing personnel, and testing requirements, as required by the versions of the ADO Notices which are in effect as of the date of this Agreement.
12. Provide the services of a Resident Project Representative (RPR) at the site to assist the ENGINEER and to provide observation of Contractor's work. The RPR will be onsite full time during construction activities. Duties, responsibilities, and authority of the RPR are as set forth in Exhibit B. The furnishing of such RPR's services will not extend ENGINEER's responsibilities or authority beyond the specified limits set forth elsewhere in this Agreement.
13. Visits to site and construction observation. In connection with observations of Contractor's work in progress while it is in progress:
  - a. Make visits to the site at intervals appropriate to the various stages of construction, as ENGINEER deems necessary, in order to observe the progress and quality of the Work. Such visits and observations by ENGINEER and RPR are not intended to be exhaustive or to extend to every aspect of Contractor's work in progress or to involve detailed inspection of Contractor's work in progress, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work. Based on information obtained during such visits and such observations, ENGINEER will determine in general if Contractor's work is proceeding in accordance with the construction Contract documents, and ENGINEER shall keep OWNER informed of the progress of the work.
  - b. The purpose of ENGINEER's visits to, and observation by the Resident Project Representative will be to enable ENGINEER to better carry out the duties and responsibilities assigned to and undertaken by ENGINEER during the construction phase, and, in addition, to provide for OWNER a greater degree of confidence that the completed Work will conform in general to the Contract Documents. ENGINEER shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over Contractor's work, nor shall ENGINEER have authority

over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected by Contractor, for safety precautions and programs incident to Contractor's work, or for any failure by Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work. Accordingly, ENGINEER neither guarantees the performance of any Contractor nor assumes responsibility for any Contractor's failure to furnish and perform its work in accordance with the construction Contract documents.

14. Require such special inspections or tests of Contractor's work as deemed reasonably necessary, and receive and review all certificates of inspection, tests, and approvals. ENGINEER's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the construction Contract documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the construction Contract documents. ENGINEER shall be entitled to rely on the results of such tests.

15. Monitor contractor and subconsultant operations during construction for general adherence to the Construction Operations Plan. In the event construction activities are not in conformance with the provisions of the Construction Operations Plan, the Contractor and OWNER will be notified verbally and in writing. Failure of the Contractor to take corrective action will result in a stop work order issued to the Contractor until such time as the Contractor takes corrective action. The stop work order will be issued at the direction of the OWNER, through the ENGINEER.

16. Based on the on-site observations of the RPR and review of Contractor(s)' applications for payment and the supplemental data and schedules, the ENGINEER shall approve, in writing, the amounts owed to the Contractor(s), and in accordance with the provisions of the General Conditions of the construction Contract documents shall approve payments to the Contractor(s) in such amounts.

Approvals of payment shall constitute a representation to the OWNER, based on such observations and review, that the work has progressed to the point indicated and that, to the best of ENGINEER's knowledge, information and belief, the quality of the work is in accordance with the construction Contract documents subject to an evaluation of the work upon substantial completion and subject to the results of subsequent tests, and to any other qualifications stated in the ENGINEER's approval.

By approving applications for payment, the ENGINEER shall not be deemed to have represented that it has made any examination to determine how or for what purpose any Contractor has used the moneys paid on account of the contract price, or that title to any of the Contractor(s)' work, materials or equipment has passed to the OWNER free and clear of any lien, claims, security interests or encumbrances.

17. Make recommendations to the OWNER on all claims relating to the execution and progress of the construction work.

18. Notify the OWNER of permanent work that does not conform to the result required in the construction Contract documents, prepare a written report describing any apparent non-conforming permanent work, make recommendations to the OWNER for its correction, and, at the request of the OWNER, have these recommendations implemented by the Contractor.

19. Review shop drawings, samples, certifications and other submittals of the Contractor only for general conformance to the design concept of the Project and for general compliance with the construction Contract documents. Such reviews and approvals will not extend to the means, methods,

techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto.

20. Prepare incidental Change Orders for the OWNER's approval. Incidental in this reference would require no additional design or construction management. (Change Orders involving additional design and construction management services shall be considered Additional Services and subject to Section 2.02 of this Agreement).

21. Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with OWNER, the FAA, WYDOT Aeronautics Division, and Contractor, conduct an inspection to determine if the Work is substantially complete. If, after considering any objections of OWNER, and the FAA, and WYDOT Aeronautics Division the ENGINEER considers the Work substantially complete; ENGINEER shall then deliver a certificate of substantial completion to OWNER and Contractor.

22. *Final Notice of Acceptability of the Work.* Conduct a final inspection with the OWNER, FAA, and WYDOT Aeronautics Division to determine if the completed Work of Contractor is acceptable so that ENGINEER may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, ENGINEER shall also provide a notice in the form attached hereto as Exhibit C (the "Notice of Acceptability of Work") that the Work is acceptable to the best of the ENGINEER's knowledge, information, and belief and based on the extent of the services provided by ENGINEER under this Agreement.

23. *Contractor's Completion Documents.*

- a. Receive and review maintenance and operating instructions, schedules, and guarantees.
- b. Receive bonds product, certificates, certificates of inspection, tests, and approvals, shop drawings, samples and other data required by the construction Contract documents and the annotated record documents which are to be assembled by Contractor in accordance with the construction Contract documents to obtain final payment.
- c. The ENGINEER in the construction Contract documents shall require the Contractor to prepare as constructed record documents in accordance with FAA requirements which shall show any changes that were made in the plans and specifications during construction. A copy of the as-constructed plans shall be furnished to the ENGINEER. Final payment to Contractor will be made contingent on receipt of the as-constructed plans.
- d. ENGINEER shall transmit all of the Contractor's completion documents to OWNER.

24. Upon completion of construction, the ENGINEER shall prepare a "Final Project Report" in accordance with appropriate ADO Notices and WYDOT requirements in affect at the time of the project. The ENGINEER shall furnish the OWNER with two (2) blue line sets of record drawings, specifications and shop drawings based on information furnished to the ENGINEER by the Contractor. The ENGINEER shall furnish one (1) copy of the Final Project Report to the OWNER, FAA, and WYDOT Aeronautics Division.

## **6.00 CONSTRUCTION SURVEYS BY ENGINEER**

## 6.01 Layout Surveys

The construction staking requirements stated in Section 50-06 shall be provided by the Engineer, Morrison-Maierle, Inc.

A. **CONTROL POINTS.** The construction plans show base lines, control points, and benchmarks established by the Owner for project control. From these control points, the Engineer shall lay out the work by establishing all lines and necessary grades for site work.

B. **ENGINEER PROVIDED SURVEY.** The Engineer will establish the following horizontal and vertical grade controls:

1. **Paved Surfaces**

Preliminary grade stakes and slope stakes at 50-foot intervals.

Finished (blue top) grade stakes or steel pins and spikes on edges and centerlines at intervals not to exceed 50 foot longitudinally and 50 foot transversely, as required for construction control and checking finished subgrade.

Grade, alignment, and location stakes for manholes, hydrants, water lines, slotted drains, lights, electrical ducts, pull boxes, and signs.

Grade stakes at maximum 50-foot intervals on centerline, breaks, and slope catch points of drainage grading.

On runway or taxiway, and ramp intermediate asphalt layer grade checks on the top two lifts of asphalt not to exceed 25 foot longitudinally and 25 foot transversely.

Layout for pavement markings will be at 50 foot intervals on tangents, 25 foot intervals on curves, and layout of the radius points of curves.

The Engineer will provide the Contractor with a copy of the staking notes in a timely manner.

C. **REPLACEMENT OF DISTURBED CONTROLS.** If permanent controls established by the Owner are disturbed during construction, the Engineer will replace such controls at no additional cost to the Owner. The contractor shall pay for the cost of replacement by Engineer of such disturbed controls at the rates listed:

Office Calculations	\$65/hr
2-Person Survey Crew	\$110/hr
3-Person Survey Crew	\$140/hr

D. **STAKING REQUESTS AND RESTAKING.** The Contractor must give 48-hour advance request of the staking needs, in writing, by completing and submitting the “Request for Staking” form that is included in the Forms section of this Project Manual.

No “second time” or “restaking” work will be done by the Engineer unless separate compensation for the Engineer's costs are paid directly to the Engineer by the contractor. Work will proceed upon completion of the “Scope of Work Change Notice” that is located in the FORMS section of this Project Manual. Survey rates will be as listed in Special Provisions Section 6.01.C.

- E. **CONTRACTOR SURVEY REQUIREMENTS.** The Contractor shall provide all other project surveying needs not identified above. This may include but is not limited to the following:

Protecting and using the construction control stakes that have been set by the Engineer.

The Contractor shall make all other surveys necessary for construction that are not identified above.

Contractor shall remove all grade stakes from the base course prior to paving.

## 6.02 Quantity Surveys

- A. Volume quantities shall be surveyed and computed by the Engineer. The Contractor may use Engineer's surveys to calculate earthwork quantities or may perform independent surveys. To determine quantities, the Engineer shall survey the following:
1. Original ground cross-sections. The original ground has been previously cross-sectioned for project design. These cross-sections shall be sufficient for the Engineer's use. However, the Contractor may re-survey cross-sections, at his discretion, of the topsoil borrow area.
  2. Cross-sections at the bottom of unclassified excavations, where measurement is specified per cubic yard.
  3. Aggregate base course quantities. Quantities shall be computed to the lines shown on the plans.
  4. Cross-sections and excavated boundary limits of topsoil borrow areas and waste areas prior to use and upon completion of final grading.
  5. Cross-section of topsoil stockpile.

## 6.03 Basis for Vertical Control for All Schedules

Vertical controls for the project are based on USGS elevations and coordinates. For primary control by the Engineer, the Owner has established a system of coordinate points throughout the construction area, including northerly and easterly USGS coordinates and elevations. (See Vertical and Horizontal Control Data Plan Sheet).