

June 17, 2015

To: Plan Holders for Improvements to the
Northwest Missouri Regional Airport
Maryville, Missouri
Project No. 14-002A-1
Reconstruct Runway 14/32 (Schedule I), Reconstruct Connecting Taxiway (Schedule II), and Partial Apron (Schedule III)

Transmitted herewith is Addendum **No. 1** to the Contract Documents, Plans and Specifications dated May 26, 2015 for Improvements to the Northwest Missouri Regional Airport, Maryville, Missouri, Project No. 14-002A-1.

SCHEDULE I:

Reconstruct Runway 14/32

SCHEDULE II:

Reconstruct Connecting Taxiway

SCHEDULE III:

Reconstruct Partial Apron



Sincerely,

Jviation, Inc.

Ryan B. Lorton, P.E.
Project Manager

**ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS, PLANS AND SPECIFICATIONS
FOR IMPROVEMENTS TO THE
NORTHWEST MISSOURI REGIONAL AIRPORT
MARYVILLE, MISSOURI
PROJECT NO. 14-002A-1**

To All Bidders: You are requested to make all changes and/or additions contained in this addendum to the Bidding Documents. Failure to acknowledge this Addendum in Proposal shall result in rejection of bid. Bidders are informed that the above referenced Contract Documents, Plans and Specifications are modified as follows as of June 17, 2015:

1. CONTRACT DOCUMENTS

Section: Request for Bids/Invitation for Bids

Revision: After the second sentence of the third paragraph of the second page of the Request For Bids add the following: "The DBE goal applies to all three Schedules. Regardless of the combination of Schedules awarded, the DBE goal shall be met."
See attached revised Request for Bids/Invitation for Bids page 2.

Section: 1-1 and 1-2 Notice to Bidders, Contract Work Items, Summary of Approximate Quantities

Revision: Replace table in its entirety. This change allows for the alternate bid of using all MO-209 material or the use of P-219 material supplemented with MO-209 material. In addition, Lime Stabilization has been replaced with Fly Ash Stabilization.
See attached revised sheets Section 1-1 and 1-2.

Section: 1-3 Notice to Bidders, Contract Time

Revision: At the end of the first sentence under the Contract Time section add:
"A Notice to Proceed will be issued for either the summer of 2015 or the spring of 2016, based on the Contractor's preference. If the Notice to Proceed is issued in the spring of 2016, the work is tentatively scheduled to start May 2, 2016."
See attached revised sheet Section 1-3

Section: 1-4 Notice to Bidders, DBE Requirement
Revision: At the end of the first paragraph under the DBE Requirement section
add: "This DBE goal only applies to Schedule I."
See attached revised sheets Section 1-4 through 1-6.

Section: Bid Proposal Schedule I / Schedule II / Schedule III sheets (total 5
pages).
Revision: Replace Bid Proposal Schedule I / II / III sheets with the revised
Schedule I / II / III Addendum No. 1 sheets. These changes allow for
the alternate bid of using all MO-209 material or the use of P-219
material supplemented with MO-209 material. In addition, Lime
Stabilization has been replaced with Fly Ash Stabilization.
See attached revised sheets Addendum No. 1 Schedule I / II / III
(Total 5 sheets).

2. TECHNICAL SPECIFICATIONS

P-155: LIME TREATED SUBGRADE
Pages: All
Revision: Delete technical specification in its entirety.

MO-155: FLY ASH TREATED SUBGRADE
Pages: All
Revision: Insert technical specification.
See attached Specification MO-155 Fly Ash Treated Subgrade

MO-209: CRUSHED AGGREGATE BASE COURSE
Page: MO-209-1
Revision: Paragraph 2 has been revised and paragraph 3 added to read:
"RECYCLED CONCRETE AGGREGATE BASE - ALTERNATE BID - The MO-
209 Crushed Aggregate Base Course shall be used when there is a shortage of
recycled concrete as specified under the P-219 Recycled Concrete Aggregate Base
specification. The contractor shall use all available recycled concrete prior to
using new base rock as specified under this MO-209 specification.

CRUSHED AGGREGATE BASE - ALTERNATE BID - This alternate is for the
use of MO-209 Crushed Aggregate Base Course as the base material as specified
under this MO-209 specification. "

Page: MO-209-4
Revision: Method of Measurement 209-4.1 has been revised to read:
"209-4.1 The quantity of crushed aggregate base course to be paid for will be
determined by measurement of the number of square yards of material actually

constructed and accepted by the Engineer as complying with the plans and specifications."

Page: MO-209-4

Revision: Basis of Payment 209-5.1 has been revised and 209-5.2 added to read:
"209-5.1 RECYCLED CONCRETE AGGREGATE BASE - ALTERNATE BID -
Payment shall be made at the contract unit price per square yard for recycled concrete aggregate base course under P219a. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

209-5.2 CRUSHED AGGREGATE BASE - ALTERNATE BID - Payment shall be made at the contract unit price per square yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item. It shall also include the disposal of the removed concrete pavement by hauling and disposal off-site.

Payment will be made under:

Item MO-209a 6" Crushed Aggregate Base Course - per square yard"

See attached Revised Specification MO-209 Crushed Aggregate Base Course.

P-219: RECYCLED CONCRETE AGGREGATE BASE COURSE

Page: P-219-6

Revision: Basis of Payment, at the end of Paragraph 1 the following has been added to clarify the payment of supplemental MO-209 material when the Recycled Concrete Aggregate Base - Alternate Bid - is chosen: "If MO-209 material is required to supplement the recycled concrete material, it shall be paid for as 6" recycled concrete aggregate base course."
See attached page P-219-6.

3. PLAN SET

Sheet: G002

Title: Index of Drawings, Legends, Abbreviations and Earthwork Pay Items

Revision: The Unclassified Excavation Volume Calculation detail has been revised to reflect the two Bid Alternates for use of Recycled Concrete Aggregate Base or New Crushed Aggregate Base. In addition, Lime Stabilization has been replaced with Fly Ash Stabilization.
See attached sheet G002.

Sheet: G003
Title: Summary of Approximate Quantities
Revision: The Summary of Approximate Quantities has been revised to reflect the two Bid Alternates for use of Recycled Concrete Aggregate Base or New Crushed Aggregate Base. In addition, Lime Stabilization has been replaced with Fly Ash Stabilization.
See attached sheet G003.

Sheet: G010
Title: Construction Safety Drawing Overall Phasing Plan
Revision: All references to the Estimated Start Date have been revised to read: "ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016)".
See attached sheet G010.

Sheet: G011
Title: Construction Safety Drawing Phasing Plan Phase 1
Revision: All references to the Estimated Start Date have been revised to read: "ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016)".
See attached sheet G011.

Sheet: G012
Title: Construction Safety Drawing Phasing Plan Phase 2
Revision: All references to the Estimated Start Date have been revised to read: "ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016)".
See attached sheet G012.

Sheet: C205
Title: Geometric Plan Sta. 33+50 to Sta. 40+00 Runway 14/32
Revision: This sheet has been revised to clarify the limits of Schedule I and Schedule II.
See attached sheet C205.

Sheet: C551
Title: Proposed Typical Sections
Revision: The proposed typical sections have been revised to reflect the two Bid Alternates for use of Recycled Concrete Aggregate Base or New Crushed Aggregate Base. In addition, Lime Stabilization has been replaced with Fly Ash Stabilization.
See attached sheet C551.

Sheet: C650
Title: Jointing Details
Revision: The call-off for the type of joint sealant material has been revised to read "Hot Pour Joint Sealant" for Details 1, 2 and 3.
See attached sheet C650.

4. QUESTIONS:

1. Does the 8% DBE goal apply to all three Schedules, or only Schedule I?

Answer: The DBE goal applies to all three Schedules. Regardless of the combination of Schedules awarded, the DBE goal shall be met. This has been clarified in the Addendum Revisions.

5. ATTACHMENTS:

- Pre-Bid Agenda and Sign-in Sheet

The last time for questions is Wednesday, June 17, 2015, at 5:00pm central time.

**** END OF ADDENDUM NO. 1 ****

Addendum No. 1
June 17, 2015
To: Contract Documents, Plans
and Specifications
Project No. 14-002A-1
Dated: May 26, 2015

ADDENDUM NO. 1
ATTACHMENT 1

Pre-Bid Agenda and Sign-In Sheet

NORTHWEST MISSOURI REGIONAL AIRPORT

MoDOT PROJECT NO. 14-002A-1

DATE: June 10, 2015

TIME: 11:00 A.M.

PRE-BID CONFERENCE

1. RECORDING OF ATTENDEES

- A. Recording of attendees, firm represented, address, phone number and email.

2. INTRODUCTIONS & PROJECT DESCRIPTION

A. Airport Representatives

- Greg McDanel – City Manager
- Ryan Heiland – Assistant City Manager
- Kevin Rankin – Airport Manager

B. Airport Engineering – Jviation, Inc.

- Ryan Lorton – Project Manager

C. MoDOT Aviation

- Tamara Pitts – Project Manager

D. Project Schedules

- Schedule I – Reconstruct Runway 14/32
- Schedule II – Reconstruct Connecting Taxiway
- Schedule III – Reconstruct Partial Apron

E. Work Items

Schedule I – Reconstruct Runway 14/32

- Mobilization 1 LS
- Unclassified Excavation 3,365 CY
- 12” Lime Treated Subgrade..... 35,984 SY
- Lime 1,000 TON
- Silt Fence 6,990 LF
- Ditch Check 14 EA
- Recycled Concrete Aggregate Base Course (6-inches)..... 35,984 SY

• Stabilization Fabric.....	35,984 SY
• 6" Portland Cement Concrete Pavement.....	35,390 SY
• Full Depth Concrete Removal	35,416 SY
• Temporary Airport Runway Pavement Marking (White)	25,245 SF
• Temporary Airport Taxiway Pavement Marking (Yellow)	616 SF
• Permanent Airport Runway Pavement Marking (White).....	25,245 SF
• Permanent Airport Taxiway Pavement Marking (Yellow)	616 SF
• Permanent Airport Pavement Marking (Black).....	6,512 SF
• Pavement Marking Removal	8,570 SF
• Install 6-Inch Perforated Polyethylene Pipe.....	8,114 LF
• Install 6-Inch Non-Perforated Polyethylene Pipe	392 LF
• Install 6-Inch Underdrain Cleanout.....	22 EA
• Install 6-Inch Underdrain Inspection Pit	9 EA
• Install 6-Inch Underdrain Outfall	9 EA
• Seeding.....	10 AC
• Mulching.....	10 AC
• Airport L-807 Wind Cone, Internally Lighted, 12-feet.....	1 EA
• #8 AWG, L-824C, 5000 Volt Wire	12,060 LF
• #6 AWG Bare Copper Counterpoise, including ground.....	11,110 LF
• Install 2" PVC Conduit (CE)	190 LF
• Install Base Mounted L-861 Runway Edge Light	6 EA
• Install Stake Mounted L-861 Runway Edge Light	40 EA
• Install Base Mounted L-861E Runway End Light.....	4 EA
• Install Stake Mounted L-861E Runway End Light.....	12 EA
• Install Stake Mounted L-861T Taxiway Edge Light.....	4 EA
• Remove Existing Runway Lighting System.....	1 EA
• Install L-853 Retroreflective Marker	15 EA

Schedule II – Reconstruct Connecting Taxiway

• Mobilization	1 LS
• Unclassified Excavation	850 CY
• 12" Lime Treated Subgrade.....	3,122 SY
• Lime.....	100 TON
• Silt Fence	500 LF
• Ditch Check	5 EA
• Recycled Concrete Aggregate Base Course (6-inches).....	3,122 SY
• Stabilization Fabric.....	3,122 SY
• 6" Portland Cement Concrete Pavement.....	2,992 SY
• Full Depth Concrete Removal	2,290 SY
• Type 3 Rock Lining	3 CY

- Temporary Airport Taxiway Pavement Marking (Yellow)419 SF
- Permanent Airport Taxiway Pavement Marking (Yellow)419 SF
- Permanent Airport Pavement Marking (Black).....793 SF
- 18” RCP Storm Pipe – Class IV 110 LF
- 18” RCP FES – Class IV.....2 EA
- Existing Storm Pipe Removal.....271 LF
- Existing Inlet Removal1 EA
- Install 6-Inch Perforated Polyethylene Pipe.....518 LF
- Install 6-Inch Non-Perforated Polyethylene Pipe 58 LF
- Install 6-Inch Underdrain Cleanout.....2 EA
- Install 6-Inch Underdrain Inspection Pit.....2 EA
- Install 6-Inch Underdrain Outfall2 EA
- Seeding.....1 AC
- Mulching.....1 AC
- Encase Existing DEB Cables in 3” PVC Split Duct and Concrete Encase7 LF
- Install Stake Mounted L-861T Taxiway Edge Light.....4 EA
- Install L-853 Retroreflective Marker 20 EA

Schedule III – Reconstruct Partial Apron

- Mobilization 1 LS
- Recycled Concrete Aggregate Base Course (6-inches).....501 SY
- Stabilization Fabric.....501 SY
- 6” Portland Cement Concrete Pavement.....501 SY
- Full Depth Concrete Removal489 SY

3. BID OPENING

- A. Date: Tuesday, June 23, 2015 at 2:00 P.M. (CST)
- B. Location: City of Maryville
City Hall
415 N. Market Street
Maryville, MO 64468
- C. Bid Bond: 5% of bid amount – Section 2, Instructions to Bidders, Paragraph 4 and Section 20-10 Bid Guaranty.
- D. Contract Proposal: Proposal Form starts on page B-1. Submit pages B-1 through B-20 with bid.
- E. Award: Notice to Bidders, Section 1, Page 2 and Section 30 Award and Execution of Contract.

4. DBE GOALS

- A. 8% of Contract Amount.

5. ESTIMATED CRITICAL CONTRACT DATES

- A. Contract Award: Summer 2015 (ESTIMATED) –The signature of the bidder on the proposal form indicates that within thirty (30) calendar days from acceptance of its bid offer it will execute a contract with the Owner and, if indicated in this solicitation, furnish a project specific Certificate of Insurance naming the Owner as Additional Insured, furnish Performance and Payment Bonds and any other documents required by the Contract Documents.

- B. Notice to Proceed: Summer 2015 (ESTIMATED), Refer to Section 80-2.

Project Time: 90 Calendar Days for Schedule I and III and an additional 15 Calendar Days for Schedule II for a total of 105 Calendar Days if all Schedules are awarded. Notice to Proceed, Refer to Section 80-08 for more information.

6. BONDING

- A. Payment Bond: 100% of Bid Amount, Refer to Section 30-6
- B. Performance Bond: 100% of Bid Amount, Refer to Section 30-6

7. BUY AMERICAN REQUIREMENTS

- A. See Section 4 – Supplementary Provisions, Part A Federal and State Provisions for Buy American Requirements. Buy American Certification required to be submitted as part of the Bid Proposal Form.

8. INSURANCE REQUIREMENTS

Refer to Section 4, Part C Local Provisions, Paragraph 11 for Contractor's Liability Insurance.

- A. The Contractor shall pay for and maintain during the life of this contract adequate Workmen's Compensation, Public Liability and Property Damage Insurance. The Contractor is charged with the responsibility for adequate and proper coverage for all his subcontract operations. Contractor shall furnish to the Sponsor satisfactory proof of carriage of the insurance required.

9. FEDERAL AND STATE WAGE RATES (DAVIS BACON ACT)

- A. The higher of the Federal wage and State wage rates are required for this project for work completed under Schedule I. Refer to Section 4, Part D Federal and State Wage Rates.

10. ENGINEER'S FIELD OFFICE

- A. See Section 60-05.

11. LIQUIDATED DAMAGES

- A. As compensation for non-use, the Contractor shall be assessed a liquidated damage of **\$750/calendar day(s)** for each day that the work remains uncompleted beyond the contract period.

SECTION 80-08 FAILURE TO COMPLETE ON TIME.

SCHEDULE	LIQUIDATED DAMAGES COST	ALLOWED CONSTRUCTION TIME
Schedule I	\$750/Calendar Day(s)	90 Calendar Days
Schedule II	\$750/Calendar Day(s)	105 Calendar Days
Schedule III	Concurrent with the 90 Calendar Days provided in Schedule I	

The maximum construction time for the overall project is 105 calendar days.

Please see the Phasing Sheets, G010 through G012, of the Construction Drawings for more information on the scheduling/sequencing of work.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

12. PROJECT PHASING

- A. Phase 1: The work in this phase includes all Schedule I work and is inside the Runway 14/32 Safety Area. Phase 1 work area includes Schedules I and III.
- B. Phase 2: The work in this phase includes all work that is outside of the Runway 14/32 Safety Area. Phase 2 work area includes Schedule II.

13. MISCELLANEOUS

- A. Construction Materials: Sales Tax Exemption. Refer to Section 4, Part C Local Provisions, Paragraph 13 Sales and Use Taxes.
- B. Survey Requirements – Refer to Section 50-06, Construction Layout and Stakes.
- C. Contractor Access: Off Hawk Road as shown on the Phasing sheets.
- D. Acceptance Testing: Responsibility of Engineer.
- E. Waste Area- Contractor shall dispose of all waste materials offsite. See “Material Supply and Disposal” notes on Sheet G004.
- F. Haul Route- Sheet G004, “Site Access and Staging” notes. The Contractor shall be responsible for any damage to existing facilities or roads. Repairs shall be made at no additional cost to the Sponsor.
- G. Questions will be taken via written format only to Jviation, Inc. until **Wednesday, June 17, 2015 at 5:00 p.m. (CST)**.

14. QUESTIONS

15. PROJECT SITE TOUR

- In accordance with the Davis-Bacon Act, and the Missouri Prevailing Wage Law (Annual Wage Order No. 22), the Contractor will be required to comply with the wage and labor requirements and to pay minimum wages in accordance with the schedule of wage rates established by the United States Department of Labor and the Missouri Division of Labor Standards, respectively. The highest rate between the two (Federal and State) for each job classification shall be considered the prevailing wage.

The City of Maryville, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

This project is subject to the requirements of 49 CFR Part 26 Disadvantaged Business Enterprise Participation. The owner has established a contract goal of 8 percent participation for small business concerns owned and controlled by qualified disadvantaged business enterprises (DBE). The DBE goal applies to all three Schedules. Regardless of the combination of Schedules awarded, the DBE goal shall be met. The bidder shall make and document good faith efforts, as defined in Appendix A of 49 CFR Part 26, to meet the established goal.

A certification of Nonsegregated Facilities, in accordance with 41 CFR Part 60, must be submitted prior to the award of a federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

Contractors receiving federally assisted construction contract awards exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Aware of contract is also subject to the following Federal provisions:

- 49 USC § 59191 – Buy American Preference
- 49 CFR Part 30 – Trade Restriction
- 2 CFR § 200 Appendix II(D)) – Davis-Bacon Requirements
- Executive Order 11246 and 41 CFR Part 60-1.4 – Affirmative Action to Ensure Equal Employment Opportunity
- 2 CFR Part 180 (Subpart C), 2 CFR Part 1200 – Governmentwide Debarment and Suspension (non-procurement)
- 41 USC 702 through 706 – Drug-Free Workplace Act of 1988
- Section 285,530 RSMo - Federal Work Authorization Program including E-Verify
- All contracts and subcontracts must meet comply with the Occupational Safety and Health Act of 1970

SECTION 1

NOTICE TO BIDDERS

Northwest Missouri Regional Airport
Maryville, Missouri
Project No. 14-002A-1

Sealed bids subject to the conditions and provisions presented herein will be received until 2:00 p.m., Tuesday, June 23, 2015, and then publicly opened and read by the City of Maryville at City Hall, 415 N Market St, Maryville, MO 64468, for furnishing all labor, materials, equipment and performing all work necessary to construct the following:

Schedule I: Reconstruct Runway 14/32

Schedule II: Reconstruct Connecting Taxiway

Schedule III: Reconstruct Partial Apron

Contract Documents. The complete set of Specifications and Contract Documents can be downloaded from Jviation, Inc.'s bid site (<http://bid.jviation.com>), beginning on May 27, 2015. In order to submit a responsive bid as a Prime Contractor and to receive all necessary addendum(s) for this project, you must be on the Planholder's List. To view all planholder documents (contract documents, plans and addendums) you must fill out the online form located at (<http://www.jviation.com/bidrequest>). By filling out and submitting this form, you agree to be publicly listed on the bid site with your contact information as a planholder for all projects requested. **It is the planholder's responsibility to review the site for addendums and changes before submitting their proposal.** For additional information, please contact us via email at bidinfo@jviation.com.

*Note that contractors will NOT be automatically added to new projects. You will need to re-submit the online form for access to new projects. Once granted access, additional projects will use your same login credentials. **Note:** Plan ahead when submitting the online request form and allow up to 2 business days for approval and access to projects.

Contract Work Items. This project will involve the following work items and estimated quantities. Prospective bidders are hereby advised that the quantities indicated herein are approximate and are subject to change.

SUMMARY OF APPROXIMATE QUANTITIES					
ITEM NO.	ITEM DESCRIPTION	UNITS	SCHEDULE I	SCHEDULE II	SCHEDULE III
			ESTIMATE	ESTIMATE	ESTIMATE
MO-100a	Mobilization	LS	1	1	1
MO-152a	Unclassified Excavation	CY	3,365	850	-
MO-155a	9 Inch Fly Ash Treated Subgrade	SY	35,984	3,122	-
MO-155b	Class C Fly Ash	TON	2,200	190	-
MO-156a	Silt Fence	LF	6,990	500	-
MO-156b	Ditch Check	EA	14	5	-
P-312a	Stabilization Fabric	SY	35,984	3,122	501
P-501a	6" Portland Cement Concrete Pavement	SY	35,390	2,992	488

MO-601a	Full Depth Concrete Removal	SY	35,416	2,290	489
MoDOT-609a	Type 3 Rock Lining	CY	-	3	-
MO-620a	Temporary Airport Runway Pavement Marking (White)	SF	25,245	-	-
MO-620b	Temporary Airport Taxiway Pavement Marking (Yellow)	SF	616	419	-
MO-620c	Permanent Airport Runway Pavement Marking (White)	SF	25,245	-	-
MO-620d	Permanent Airport Taxiway Pavement Marking (Yellow)	SF	616	419	-
MO-620e	Permanent Airport Pavement Marking (Black)	SF	6,512	793	-
MO-620f	Pavement Marking Removal	SF	8,570	-	-
MO-701a	18" RCP Storm Pipe - Class IV	LF	-	110	-
MO-701b	18" RCP FES - Class IV	EA	-	2	-
MO-701c	Existing Storm Pipe Removal	LF	-	271	-
MO-701d	Existing Inlet Removal	EA	-	1	-
D-705a	Install 6-inch Perforated Polyethylene Pipe	LF	8,114	518	-
D-705b	Install 6-inch Non-Perforated Polyethylene Pipe	LF	392	58	-
D-751a	Install 6-inch Underdrain Cleanout	EA	22	2	-
D-751b	Install 6-inch Underdrain Inspection Pit	EA	9	2	-
D-751c	Install 6-inch Underdrain Outfall	EA	9	2	-
MO-901a	Seeding	AC	10	1	-
MO-908a	Mulching	AC	10	1	-
MO-107a	Airport L-807 Wind Cone, Internally Lighted, 12-feet	EA	1	-	-
MO-108a	#8 AWG, L-824C, 5000 Volt Wire	LF	12,060	-	-
MO-108b	#6 AWG Bare Copper Counterpoise, including Ground Rods	LF	11,110	-	-
MO-110a	Install 2" PVC Conduit (CE)	LF	190	-	-
MO-110b	Encase Existing DEB Cables in 3" PVC Split Duct and Concrete Encase	LF	-	7	-
MO-125a	Install Base Mounted L-861 Runway Edge Light	EA	6	-	-
MO-125b	Install Stake Mounted L-861 Runway Edge Light	EA	40	-	-
MO-125c	Install Base Mounted L-861E Runway End Light	EA	4	-	-
MO-125d	Install Stake Mounted L-861E Runway End Light	EA	12	-	-
MO-125e	Install Stake Mounted L-861T Taxiway Edge Light	EA	4	4	-
MO-125f	Remove Existing Runway Lighting System	LS	1	-	-
L-126a	Install L-853 Retroreflective Marker	EA	15	20	-
RECYCLED CONCRETE AGGRAGE BASE COURSE – ALTERNATE BID					
P-219a	Recycled Concrete Aggregate Base Course (6-inches)	SY	35,984	3,122	501

CRUSHED AGGRAGE BASE COURSE – ALTERNATE BID					
MO-209a	6" Crushed Aggregate Base Course	SY	35,984	3,122	501

Contract Time. The owner has established a contract performance time of 105 calendar day(s) from the date of the Notice-to-Proceed. A Notice to Proceed will be issued for either the summer of 2015 or the spring of 2016, based on the Contractor's preference. If the Notice to Proceed is issued in the spring of 2016, the work is tentatively scheduled to start May 2, 2016. All project work shall be substantially completed within the stated timeframe. This project is subject to liquidated damages as prescribed in the project manual.

Bid Security. No bid will be considered unless accompanied by a bid bond secured by an approved surety or sureties, payable to the Maryville, for not less than five (5) percent of the total amount of the bid.

Bonding Requirements. The successful bidder will be required to furnish separate performance and payment bonds each in an amount equal to 100% of the contract price at the time of contract execution.

Award of Contract. The Owner intends to award a contract resulting from this solicitation to the lowest, responsive, responsible bidder, whose offer, conforming to the solicitation, will be most advantageous to, and in the best interest of, the Owner, cost or price and other factors considered.

- a. In addition to other factors, bid offers will be evaluated on the basis of advantages and disadvantages to the Owner that might result from offers received.
- b. The Owner reserves the right to reject any or all proposals and to waive informalities and/or irregularities in the bid offer. Bids may be held by the owner for a period not to exceed 90 calendar days from the date of the bid opening for the purpose of conducting the bid evaluation.
- c. Total bid will be evaluated and awarded as follows: It is the Owner's intent to award this bid based on the **TOTAL BASE BID FOR ALL ITEMS, split awards will not be made.**
- d. The Owner will determine which Schedules and/or Bid Alternates will be awarded based on the received bid prices and available funding. The project award will be based on the low bid sum of the Schedules and Bid Alternates awarded by the Owner. Not all Schedules and/or Bid Alternates may be awarded. A combination of Schedules and Bid Alternates may be awarded, including only a single Schedule. The numbering of the Schedules or Bid Alternates does not necessarily indicate the order of award. The project award is contingent on the availability of funding.

Federal Provision. This project is subject to the following Federal provisions, statutes and regulations;

Airport and Airway Improvement Act of 1982. In accordance with the Davis-Bacon Act, as amended, and the Missouri Prevailing Wage Law, the Contractor will be required to comply with the wage and labor requirements and to pay minimum wages in accordance with the schedule of wage rates established by the United States Department of Labor and the Missouri Division of Labor

Standards, respectively. The highest rate between the two (Federal and State) for each job classification shall be considered the prevailing wage.

Equal Employment Opportunity and Affirmative Action Requirement. The proposed contract is under and subject to 41 CFR Part 60-4 and Executive Order 11246 of September 24, 1965, as amended, and to the equal opportunity clause and the Standard Federal Equal Employment Opportunity Construction Contract specifications including the goals and timetables for minority and female participation.

Goals for Minority and Female Participation – Executive Order 11246 and 41 CFR Part 60:

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth within the supplementary provisions.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables

Goals for minority participation for each trade: 10.0%

Goals for female participation in each trade: 6.9%.

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the geographical area where the work is actually performed, the contractor also is subject to the goals for both its federally involved and non-federally involved construction in this secondary area.

Certification of Nonsegregated Facilities – 41 CFR Part 60: A certification of Nonsegregated Facilities must be submitted prior to the award of a federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

Contractors receiving federally assisted construction contract awards exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Title VI Solicitation Notice. The Maryville, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

DBE Requirement. The bidder shall make good faith efforts, as defined in Appendix A of 49 CFR Part 26, Regulations of the Office of the Secretary of Transportation, to subcontract 8 percent of the dollar value of the prime contract to small business concerns owned and controlled by socially and economically disadvantaged individuals (DBE). This DBE goal only applies to Schedule I.

It is the policy of MoDOT and the city to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. In the event that the bidder for this solicitation qualifies as a DBE, the contract goal shall be deemed to have been met. Individuals who are rebuttably presumed to be socially and economically disadvantaged include, women, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, and Asian-Indian Americans. The bidder and any subcontractor, who qualifies as a DBE who subcontracts work to another non-DBE firm, must subtract the amount of the non-DBE contract from the total DBE work counted toward the goal, as defined 49 CFR Part 25.55.

The apparent successful competitor will be required to submit information concerning the DBE's that will participate in this contract. The information will include the name and address of each DBE, a description of the work to be performed by each named firm, and the dollar value of the contract. If the bidder fails to achieve the contract goal stated herein, it will be required to provide documentation demonstrating that it made good faith efforts in attempting to do so. A bid that fails to meet these requirements will be considered non-responsive. Those firms currently certified as DBE's by the Missouri Department of Transportation (MoDOT) are eligible to participate as DBE's on this contract. A list of these firms are available on MoDOT's Office of External Civil Rights webpage at:

http://www.modot.mo.gov/business/contractor_resources/External_Civil_Rights/mrcc.htm.

Davis-Bacon Act, as amended – 29 CFR Part 5: The Contractor is required to comply with wage and labor provisions and to pay minimum wages in accordance with the current schedule of wage rates established by the United States Department of Labor included in the supplementary provisions.

In addition, the contractor will also be required to comply with the wage and labor requirements and pay minimum wages in accordance with the schedule of wage rates established by the Missouri Division of Labor Standards included in the Supplementary Provisions.

The highest rate between the two (Federal and State) for each job classification shall be considered the prevailing wage.

Debarment, Suspension, Ineligibility and Voluntary Exclusion –Title 2 CFR Part 180 (Subpart C) Title 2, CFR Part 1200: The bidder certifies, by submission of a proposal or acceptance of a contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Foreign Trade Restriction – 49 CFR Part 30: The Bidder and Bidder's subcontractors, by submission of an offer and/or execution of a contract, is required to certify that it:

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;

- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Buy American Certificate – Aviation Safety and Capacity Act of 1990: This contract is subject to the “Buy American Preferences” of the Aviation Safety and Capacity Act of 1990. Prospective Bidders are required to certify that steel and manufactured products have been produced in the United States and to clearly identify those items produced or manufactured outside of the United States.

Additional Provisions: Modification to the project documents may only be made by written addendum by the Owner or Owner’s authorized Representative.

The proposal must be made on the forms provided within the bound project manual. Bidders must supply all required information prior to the time of bid opening.

SCHEDULE I

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
MO-100a	Mobilization	at the unit price of:_____dollars and_____cents.	LS	1	\$	\$
MO-152a	Unclassified Excavation	at the unit price of:_____dollars and_____cents.	CY	3,365	\$	\$
MO-155a	9 Inch Fly Ash Treated Subgrade	at the unit price of:_____dollars and_____cents.	SY	35,984	\$	\$
MO-155b	Class C Fly Ash	at the unit price of:_____dollars and_____cents.	TON	2,200	\$	\$
MO-156a	Silt Fence	at the unit price of:_____dollars and_____cents.	LF	6,990	\$	\$
MO-156b	Ditch Check	at the unit price of:_____dollars and_____cents.	EA	14	\$	\$
P-312a	Stabilization Fabric	at the unit price of:_____dollars and_____cents.	SY	35,984	\$	\$
P-501a	6" Portland Cement Concrete Pavement	at the unit price of:_____dollars and_____cents.	SY	35,390	\$	\$
MO-601a	Full Depth Concrete Removal	at the unit price of:_____dollars and_____cents.	SY	35,416	\$	\$
MO-620a	Temporary Airport Runway Pavement Marking (White)	at the unit price of:_____dollars and_____cents.	SF	25,245	\$	\$
MO-620b	Temporary Airport Taxiway Pavement Marking (Yellow)	at the unit price of:_____dollars and_____cents.	SF	616	\$	\$
MO-620c	Permanent Airport Runway Pavement Marking (White)	at the unit price of:_____dollars and_____cents.	SF	25,245	\$	\$
MO-620d	Permanent Airport Taxiway Pavement Marking (Yellow)	at the unit price of:_____dollars and_____cents.	SF	616	\$	\$
MO-620e	Permanent Airport Pavement Marking (Black)	at the unit price of:_____dollars and_____cents.	SF	6,512	\$	\$
MO-620f	Pavement Marking Removal	at the unit price of:_____dollars and_____cents.	SF	8,570	\$	\$
D-705a	Install 6-inch Perforated Polyethylene Pipe	at the unit price of:_____dollars and_____cents.	LF	8,114	\$	\$
D-705b	Install 6-inch Non-Perforated Polyethylene Pipe	at the unit price of:_____dollars and_____cents.	LF	392	\$	\$
D-751a	Install 6-inch Underdrain Cleanout	at the unit price of:_____dollars and_____cents.	EA	22	\$	\$
D-751b	Install 6-inch Underdrain Inspection Pit	at the unit price of:_____dollars and_____cents.	EA	9	\$	\$
D-751c	Install 6-inch Underdrain Outfall	at the unit price of:_____dollars and_____cents.	EA	9	\$	\$

SCHEDULE I

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
MO-901a	Seeding	at the unit price of:_____dollars and_____cents.	AC	10.2	\$	\$
MO-908a	Mulching	at the unit price of:_____dollars and_____cents.	AC	10.2	\$	\$
MO-107a	Airport L-807 Wind Cone, Internally Lighted, 12-feet	at the unit price of:_____dollars and_____cents.	EA	1	\$	\$
MO-108a	#8 AWG, L-824C, 5000 Volt Wire	at the unit price of:_____dollars and_____cents.	LF	12,060	\$	\$
MO-108b	#6 AWG Bare Copper Counterpoise, including Ground Rods	at the unit price of:_____dollars and_____cents.	LF	11,110	\$	\$
MO-110a	Install 2" PVC Conduit (CE)	at the unit price of:_____dollars and_____cents.	LF	190	\$	\$
MO-125a	Install Base Mounted L-861 Runway Edge Light	at the unit price of:_____dollars and_____cents.	EA	6	\$	\$
MO-125b	Install Stake Mounted L-861 Runway Edge Light	at the unit price of:_____dollars and_____cents.	EA	40	\$	\$
MO-125c	Install Base Mounted L-861E Runway End Light	at the unit price of:_____dollars and_____cents.	EA	4	\$	\$
MO-125d	Install Stake Mounted L-861E Runway End Light	at the unit price of:_____dollars and_____cents.	EA	12	\$	\$
MO-125e	Install Stake Mounted L-861T Taxiway Edge Light	at the unit price of:_____dollars and_____cents.	EA	4	\$	\$
MO-125f	Remove Existing Runway Lighting System	at the unit price of:_____dollars and_____cents.	LS	1	\$	\$
L-126a	Install L-853 Retroreflective Marker	at the unit price of:_____dollars and_____cents.	EA	15	\$	\$

SCHEDULE I BASE BID - SUBTOTAL \$ _____

RECYCLED CONCRETE AGGREGATE BASE COURSE - ALTERNATE BID

P-219a	6" Recycled Concrete Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	35,984	\$	\$
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SCHEDULE I RECYCLED CONCRETE AGGREGATE BID - SUBTOTAL \$ _____

CRUSHED AGGREGATE BASE COURSE - ALTERNATE BID

MO-209a	6" Crushed Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	35,984	\$	\$
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SCHEDULE I CRUSHED AGGREGATE BID - SUBTOTAL \$ _____

SCHEDULE I TOTAL (BASE BID PLUS EITHER RECYCLED CONCRETE AGGREGATE OR CRUSHED AGGREGATE BID) \$ _____

SCHEDULE II

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
MO-100a	Mobilization	at the unit price of: _____dollars and _____cents.	LS	1	\$	\$
MO-152a	Unclassified Excavation	at the unit price of: _____dollars and _____cents.	CY	850	\$	\$
MO-155a	9 Inch Fly Ash Treated Subgrade	at the unit price of: _____dollars and _____cents.	SY	3,122	\$	\$
MO-155b	Class C Fly Ash	at the unit price of: _____dollars and _____cents.	TON	190	\$	\$
MO-156a	Silt Fence	at the unit price of: _____dollars and _____cents.	LF	500	\$	\$
MO-156b	Ditch Check	at the unit price of: _____dollars and _____cents.	EA	5	\$	\$
P-312a	Stabilization Fabric	at the unit price of: _____dollars and _____cents.	SY	3,122	\$	\$
P-501a	6" Portland Cement Concrete Pavement	at the unit price of: _____dollars and _____cents.	SY	2,992	\$	\$
MO-601a	Full Depth Concrete Removal	at the unit price of: _____dollars and _____cents.	SY	2,290	\$	\$
MoDOT-609a	Type 3 Rock Lining	at the unit price of: _____dollars and _____cents.	CY	3	\$	\$
MO-620b	Temporary Airport Taxiway Pavement Marking (Yellow)	at the unit price of: _____dollars and _____cents.	SF	419	\$	\$
MO-620d	Permanent Airport Taxiway Pavement Marking (Yellow)	at the unit price of: _____dollars and _____cents.	SF	419	\$	\$
MO-620e	Permanent Airport Pavement Marking (Black)	at the unit price of: _____dollars and _____cents.	SF	793	\$	\$
MO-701a	18" RCP Storm Pipe - Class IV	at the unit price of: _____dollars and _____cents.	LF	110	\$	\$
MO-701b	18" RCP FES - Class IV	at the unit price of: _____dollars and _____cents.	EA	2	\$	\$
MO-701c	Existing Storm Pipe Removal	at the unit price of: _____dollars and _____cents.	LF	271	\$	\$
MO-701d	Existing Inlet Removal	at the unit price of: _____dollars and _____cents.	EA	1	\$	\$
D-705a	Install 6-inch Perforated Polyethylene Pipe	at the unit price of: _____dollars and _____cents.	LF	518	\$	\$

SCHEDULE II

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
D-705b	Install 6-inch Non-Perforated Polyethylene Pipe	at the unit price of: _____dollars and _____cents.	LF	58	\$	\$
D-751a	Install 6-inch Underdrain Cleanout	at the unit price of: _____dollars and _____cents.	EA	2	\$	\$
D-751b	Install 6-inch Underdrain Inspection Pit	at the unit price of: _____dollars and _____cents.	EA	2	\$	\$
D-751c	Install 6-inch Underdrain Outfall	at the unit price of: _____dollars and _____cents.	EA	2	\$	\$
MO-901a	Seeding	at the unit price of: _____dollars and _____cents.	AC	1.3	\$	\$
MO-908a	Mulching	at the unit price of: _____dollars and _____cents.	AC	1.3	\$	\$
MO-110b	Encase Existing DEB Cables in 3" PVC Split Duct and Concrete Encase	at the unit price of: _____dollars and _____cents.	LF	7	\$	\$
MO-125c	Install Stake Mounted L-861T Taxiway Edge Light	at the unit price of: _____dollars and _____cents.	EA	4	\$	\$
L-126a	Install L-853 Retroreflective Marker	at the unit price of: _____dollars and _____cents.	EA	20	\$	\$

SCHEDULE II BASE BID - SUBTOTAL \$ _____

RECYCLED CONCRETE AGGREGATE BASE COURSE - ALTERNATE BID

P-219a	6" Recycled Concrete Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	3,122	\$	\$
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SCHEDULE II RECYCLED CONCRETE AGGREGATE BID - SUBTOTAL \$ _____

CRUSHED AGGREGATE BASE COURSE - ALTERNATE BID

MO-209a	6" Crushed Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	3,122	\$	\$
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SCHEDULE II CRUSHED AGGREGATE BID - SUBTOTAL \$ _____

SCHEDULE II TOTAL (BASE BID PLUS EITHER RECYCLED CONCRETE AGGREGATE OR CRUSHED AGGREGATE BID) \$ _____

SCHEDULE III

Item No.	Description		Units	Estimated Quantity	Unit Price	Total
MO-100a	Mobilization	at the unit price of: _____dollars and _____cents.	LS	1	\$	\$
P-312a	Stabilization Fabric	at the unit price of: _____dollars and _____cents.	SY	501	\$	\$
P-501a	6" Portland Cement Concrete Pavement	at the unit price of: _____dollars and _____cents.	SY	488	\$	\$
MO-601a	Full Depth Concrete Removal	at the unit price of: _____dollars and _____cents.	SY	489	\$	\$

SCHEDULE III BASE BID - SUBTOTAL \$ _____

RECYCLED CONCRETE AGGREGATE BASE COURSE - ALTERNATE BID

P-219a	6" Recycled Concrete Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	501	\$	\$
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SCHEDULE III RECYCLED CONCRETE AGGREGATE BID - SUBTOTAL \$ _____

CRUSHED AGGREGATE BASE COURSE - ALTERNATE BID

MO-209a	6" Crushed Aggregate Base Course	at the unit price of: _____dollars and _____cents.	SY	501	\$	\$
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SCHEDULE III CRUSHED AGGREGATE BID - SUBTOTAL \$ _____

SCHEDULE III TOTAL (BASE BID PLUS EITHER RECYCLED CONCRETE AGGREGATE OR CRUSHED AGGREGATE BID) \$ _____

ITEM MO-155 FLY ASH TREATED SUBGRADE**DESCRIPTION**

155-1.1 This work shall consist of the addition of self-cementing fly ash, mixing and compacting the material to the required density to develop a stabilized subgrade section. This item applies to natural ground or fill and shall be constructed as specified herein and in conformity with the typical sections, lines and grades as shown on the plans or as established by the Engineer.

MATERIALS

155-2.1 FLY ASH. Fly ash shall comply with the physical requirements of ASTM D-5239 6.4 maintaining a minimum compressive strength of 500 psi at 7 days and the chemical requirements of ASTM Specifications C-618, Section 3.3 when sampled and tested in accordance with Sections 5, 6 and 8, unless otherwise shown on the plans. Fly ash shall be of the Class "C" designation containing a minimum of 25 percent CaO. The source of the ash shall be selected by the Contractor and approved by the Engineer in advance of stabilization operations in order that the required laboratory tests can be completed prior to construction without delaying the work. The fly ash shall conform to Department of Natural Resources fly ash regulations.

155-2.2 WATER. The water used in the stabilized mixture shall be clean, clear, free of sewage, vegetable matter, oil, acid and alkali. Water known to be potable may be used without testing. All other sources shall be tested in accordance with AASHTO T26 and approved by the Engineer.

155-2.3 SOIL. The soil for this work shall consist of materials on the site or selected materials from other sources and shall be uniform in quality and gradation, and shall be approved by the Engineer. The soil shall be free of roots, sod, weeds, and stones larger than 2-1/2 inches.

COMPOSITION

155-3.1 FLY ASH. Fly Ash shall be applied at the rate of **15%**.

155-3.2 TOLERANCES. At final compaction, the fly ash and water content for each course of subgrade treatment shall conform to the following tolerances:

<u>Material</u>	<u>Tolerance</u>
Fly Ash	+ 0.5%
Water	0% to +2%

EQUIPMENT

155-4.1 EQUIPMENT. The machinery, tools, and equipment necessary for proper execution of the work shall be on the project and approved by the Engineer prior to beginning construction operations. Blending of the soil-fly ash mixture shall be accomplished by a direct hydraulic drive pulvamer. Compaction shall be achieved using sheepsfoot or padfoot rollers. Rubber-tired rollers will not be permitted except for finish rolling of the stabilized section.

All machinery, tools and equipment used shall be maintained in a satisfactory and workmanlike manner.

Fly ash shall be stored and handled in closed weatherproof containers until immediately before distribution. Fly ash exposed to moisture prior to mixing with soils shall be discarded. If fly ash is furnished in trucks, each truck shall have the weight of fly ash certified on public scales or the Contractor shall place a set of standard platform truck scales or hopper scales at a location approved by the Engineer.

CONSTRUCTION METHODS

155-5.1 GENERAL. It is the primary purpose of this specification to secure a completed section of treated material which contains a uniform fly ash/soil mixture with no loose or segregated areas; has a uniform density and moisture content; is well bound for its full depth. It shall be the responsibility of the Contractor to regulate the sequence of his/her work; to process a sufficient quantity of material to provide a completed section as shown on plans; to use the proper amounts of fly ash; to achieve final compaction within the specified time; to maintain the work; and to rework the lifts as necessary to meet the above requirements.

155-5.2 WEATHER LIMITATION. The soil-fly ash mixture shall not be mixed while the atmospheric temperature is below 40°F or when conditions indicate that temperatures may fall below 40°F within 24 hours, when it is foggy or rainy, or when soil or subgrade is frozen.

155-5.3 PREPARATION OF SUBGRADE. Before other construction operations are begun, the area where the fly ash stabilized material will be placed shall be cut and shaped in conformance with the lines and grades shown on the plans.

All areas shall be firm and able to support, without displacement, the construction equipment and the compaction hereinafter specified. Soft or yielding subgrade shall be corrected and made stable by scarifying, adding fly ash, and compacting until it is of uniform stability.

Where the stabilized section is to extend below the cut surface, the fly ash shall be distributed uniformly across the surface in a quantity sufficient to provide the specified ash content. The fly ash shall be incorporated with a pulvamer with water being added to achieve the specified moisture content.

91 **155-5.4 MOISTURE CONTROL.** Moisture control shall be achieved through use of a
92 pulvamixer equipped with a spray bar in the mixing drum capable of applying sufficient quantities of
93 water to achieve the required moisture content for the soil-fly ash mixture. The system shall be
94 capable of being regulated to the degree necessary as to maintain moisture contents within the
95 recommended range.

96
97 Required moisture contents will be established by the Engineer based on laboratory tests with the site
98 soils and specific fly ash to be used for the treatment. Final moisture content of the mix, immediately
99 prior to compaction shall not exceed the specified range of moisture content. If moisture contents
100 exceed the specified limits, additional fly ash may be added to lower moisture contents to the
101 required limits. Lowering moisture contents by aeration following addition of fly ash will not be
102 allowed.

103
104 **155-5.5 APPLICATION OF FLY ASH.** Immediately prior to application of fly ash, the area shall
105 be bladed to allow uniform distribution of fly ash. The fly ash shall be spread only on that area where
106 the complete placement operation can be completed within 2 hours. The application and mixing of
107 the fly ash with the soil shall be accomplished by the methods hereinafter described.

108
109 The fly ash shall be spread uniformly over the top of the subgrade by an approved screw-type auger
110 spreader box or other approved spreading equipment. The amount of fly ash spread shall be the
111 amount required for mixing to the specified depth which will result in the percentage determined in
112 the job mix formula.

113
114 The fly ash shall be distributed at a uniform rate and in such manner as to reduce the scattering of fly
115 ash by wind to a minimum. Fly ash shall not be applied when wind conditions, in the opinion of the
116 Engineer, are detrimental to a proper application or becomes objectionable to adjacent property
117 owners. A motor grader shall not be used to spread the fly ash.

118
119 **155-5.6 MIXING.** The mixing procedure utilized shall be for Dry Placing as hereinafter described.

120
121 The full depth of the treated subgrade shall be mixed with a rotary pulvamixer which utilizes a direct
122 hydraulic drive. Fly ash shall not be left exposed for more than 30 minutes after distribution. The
123 mixing machine shall make two coverage's. Water shall be added through use of a pulvamixer
124 equipped with a spray bar in the mixing drum capable of applying sufficient quantities of water to
125 achieve the required moisture content of the soil-fly ash mixture. The system shall be capable of
126 being regulated to the degree as to maintain moisture contents within the recommended range.

127
128 Required moisture contents shall be established based on laboratory tests with the site soils and
129 specific fly ash to be used for the treatment. Final moisture content of the mix, immediately prior to
130 compaction, shall be determined in accordance with ASTM D 698 and shall not be below nor more
131 than 2% above the optimum moisture content for maximum density of the mix. If moisture contents
132 exceed the specified limits, additional fly ash may be added to lower the moisture content to the
133 required limits. Lowering moisture contents by aeration following addition of the fly ash will not be
134 permitted.

135
136 If the soil-fly ash mixture contains clods greater than 1-1/2" in size, they shall be reduced in size by

additional pulverization.

155-5.7 COMPACTION. Compaction of the soil-fly ash mixture shall begin immediately after mixing of the fly ash and be completed within two hours following incorporation of fly ash. Compaction of the mixture shall begin at the bottom and shall continue until the entire depth of mixture is uniformly compacted to the specified density using sheepsfoot or padfoot rollers. A test for both density and moisture content of the soil-fly ash mixture shall be taken for each 750 square yards of material placed.

The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples taken from material in place. The specimens shall be compacted and tested in accordance with ASTM D 698. The in-place field density shall be determined in accordance with ASTM D 1556, ASTM D 2167 or ASTM D 6938.

In lieu of the core method of field density determination, acceptance testing may be accomplished using a nuclear gage in accordance with ASTM D 6938 using the Direct Transmission Method. Calibration and operation of the gage shall be in accordance with the requirements of the manufacturer. The operator of the nuclear gage must show evidence of training and experience in the use of the instrument. The gage shall be standardized daily in accordance with ASTM D 6938.

All irregularities, depressions, or weak spots which develop shall be corrected immediately by scarifying the areas affected, adding or removing material as required and remixing and re-compacting. The surface of the course shall be maintained in a smooth condition, free from undulations and ruts, until other work is placed thereon or the work is accepted.

In addition to the requirements specified for density, the full depth of the material shown on the plans shall be compacted to the extent necessary to remain firm and stable under construction equipment. After each section is completed, tests will be made by the Engineer. If the material fails to meet the density requirements, it shall be reworked to meet these requirements. Throughout this entire operation, the shape of the course shall be maintained by blading, and the surface upon completion shall be smooth and shall conform with the typical section shown on the plans and to established lines and grades. Should the material, due to any reason or cause, lose the required stability, density and finish before the work is accepted, it shall be reprocessed, recompact and refinished at the sole expense of the Contractor. Reprocessing shall follow the same pattern as the initial stabilization including the addition of fly ash.

155-5.8 FINISHING AND CURING. After the final layer or course of the fly ash treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. The finished surface shall not vary more than 3/8 inch when tested with a 16-foot straightedge applied parallel with and at right angles to the pavement centerline. Any variations in excess of this tolerance shall be corrected by the Contractor, at his/her own expense, in a manner satisfactory to the Engineer.

After the fly ash treated course has been finished as specified herein, the surface shall be protected against rapid drying by either of the following methods for a period of not less than three days or until the pavement section is placed.

1) Maintain in a thorough and continuously moist condition by sprinkling.

2) Apply a 2-inch layer of earth on the completed course and maintain in a moist condition.

155-5.9 THICKNESS. The thickness of the fly ash treated subgrade shall be determined by depth tests or cores taken at intervals so that each test shall represent no more than 300 square yards. Where the thickness is deficient by more than 1/2 inch, the Contractor shall correct such areas in a manner satisfactory to the Engineer. The Contractor shall replace, at his/her expense, the soil/fly ash material where borings are taken for test purposes.

155-5.10 MAINTENANCE. The contractor shall maintain, at his/her own expense, the entire fly ash-treated subgrade in good condition from the start of work until all the work has been completed, cured, and accepted by the Engineer.

METHOD OF MEASUREMENT

155-6.1 The yardage of fly ash-treated subgrade to be paid for shall be the number of square yards completed and accepted.

155-6.2 The amount of fly ash to be paid for shall be the number of tons of fly ash, dry weight, used as authorized.

BASIS OF PAYMENT

155-7.1 Payment shall be made at the contract unit price per square yard for the fly ash-treated subgrade of the thickness specified. The price shall be full compensation for furnishing all material, except the fly ash, and for all preparation, delivering, placing, mixing these materials, shaping and maintaining, for all curing including water, and all labor, equipment, tools and incidentals necessary to complete this item.

155-7.2 Payment shall be made at the contract unit price per ton (2,000 pounds) of fly ash. This price shall be full compensation for furnishing this material; for all delivery, placing, and incorporation of this material; and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item MO-155a	9 Inch Fly Ash Treated Subgrade- - per square yard
Item MO-155b	Class C Fly Ash – per square yard

TESTING REQUIREMENTS

228	ASTM D 698	Moisture-Density Relations of Soils and Soil-Aggregate Mixtures
229		Using 5.5 lb. (2.49 kg) Rammer and 12-in. (305mm) Drop
230		
231	ASTM D 1556	Density of Soil in Place by the Sand-Cone Method
232		
233	ASTM D 2167	Density of Soil in Place by the Rubber-Balloon Method
234		
235	ASTM D 6938	Standard Test Method for In-Place Density and Water Content of
236		Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
237		
238	AASHTO T26	Quality of Water to be Used in Concrete
239		
240		

MATERIAL REQUIREMENTS

242		
243	ASTM C 618	Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a
244		Mineral Admixture in Portland Cement Concrete
245		
246		

****END OF ITEM MO-155****

ITEM MO-209 CRUSHED AGGREGATE BASE COURSE

DESCRIPTION

209.1.1 This work shall consist of furnishing and placing one or more courses of crushed aggregate base on a prepared subgrade in accordance with these specifications and in conformity with the lines, grades, thicknesses and typical cross sections shown on the plans. Aggregate base shall meet the requirements of the 2004 Missouri Standard Specification for Highway Construction (MSSHC), Section 304 - Aggregate Base Course. **All construction methods, testing, and acceptance criteria shall be in accordance with the standards included within this Item MO-209.**

RECYCLED CONCRETE AGGREGATE BASE – ALTERNATE BID - The MO-209 Crushed Aggregate Base Course shall be used when there is a shortage of recycled concrete as specified under the P-219 Recycled Concrete Aggregate Base specification. The contractor shall use all available recycled concrete prior to using new base rock as specified under this MO-209 specification.

CRUSHED AGGREGATE BASE – ALTERNATE BID – This alternate is for the use of MO-209 Crushed Aggregate Base Course as the base material as specified under this MO-209 specification.

MATERIALS

209-2.1 AGGREGATE. All materials for aggregate base shall conform to the requirements of the 2004 (MSSHC), Section 304, for **Type 5 Aggregate.**

The ledge stone from which the aggregate base will be produced has to have source approval from the Missouri Department of Transportation (MoDOT). Prior to use of materials, the contractor shall submit the current MoDOT source approval letter to the Engineer for the materials proposed for use during construction. Source approval granted for “all types of highway construction” (Product Code 1005CACP) constitutes approval for all uses. Source approval granted for “all types except PCCP” (Product Code 1005CACM) comprises approval for all uses except Portland cement concrete pavement. Source approval obtained for “all types except PCCP & PCCM” (Product Code 1002CAAC) is considered to be approval for all uses except Portland cement concrete.

The contractor shall submit certified test reports to the Engineer for the gradation of the aggregate base. The certification shall show the appropriate AASHTO test for the material, the test results, and a statement that the material passed or failed. The aggregate shall be sampled and tested for gradation using the following procedures:

a. Sampling Aggregates. Sampling shall be in accordance with AASHTO T 2.

b. Sieve Analysis of Fine and Coarse Aggregate. The aggregate shall be tested in accordance with AASHTO T 27 and shall meet the gradation requirements of the MSSHC, Section 1007.

c. Material Passing No. 200 Sieve. The aggregate shall be tested in accordance with AASHTO T 11 and meet the requirements of the MSSHC, Section 1007.

In lieu of the above gradation testing requirements, the contractor may provide documentation from

MoDOT (District Materials Office) indicating that the material meets specification requirements.

The Engineer may request samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

CONSTRUCTION METHODS

209-3.1 PREPARING UNDERLYING COURSE. The underlying course shall be checked and accepted by the Engineer before placing and spreading operations are started. Any ruts or soft yielding places caused by improper drainage conditions, hauling, or any other cause shall be corrected at the Contractor's expense before the base course is placed thereon. Material shall not be placed on frozen subgrade.

209-3.2 MIXING. The aggregate shall be uniformly blended during crushing operations or mixed in a plant. The plant shall blend and mix the materials to meet the specifications and to secure the proper moisture content for compaction.

209-3.3 PLACING. The crushed aggregate base material shall be placed on the moistened subgrade in layers of uniform thickness with a mechanical spreader. The maximum depth of a compacted layer shall be 6 inches. If the total depth of the compacted material is more than 6 inches, it shall be constructed in two or more layers. In multi-layer construction, the base course shall be placed in approximately equal-depth layers.

The previously constructed layer should be cleaned of loose and foreign material prior to placing the next layer. The surface of the compacted material shall be kept moist until covered with the next layer.

209-3.4 COMPACTION. Immediately upon completion of the spreading operations, the crushed aggregate shall be thoroughly compacted. The number, type, and weight of rollers shall be sufficient to compact the material to the required density.

The moisture content of the material during placing operations shall not be below, nor more than 2 percentage points above, the optimum moisture content as determined by ASTM D 698.

209-3.5 ACCEPTANCE SAMPLING AND TESTING FOR DENSITY. Aggregate base course shall be accepted for density on a lot basis. A lot will consist of one day's production where it is not expected to exceed 2400 square yards. A lot will consist of one-half day's production where a day's production is expected to consist of between 2400 and 4800 square yards.

Each lot shall be divided into two equal sublots. One test shall be made for each subplot. Sampling locations will be determined by the Engineer on a random basis in accordance with statistical procedures contained in ASTM D 3665.

Each lot will be accepted for density when the field density is at least 100 percent of the maximum density of laboratory specimens prepared from samples of the base course material delivered to the job site. The specimens shall be compacted and tested in accordance with ASTM D 698. The in-

place field density shall be determined in accordance with ASTM D 1556, D 2167 or ASTM D 6938. If the specified density is not attained, the entire lot shall be reworked and/or recompact and two additional random tests made. This procedure shall be followed until the specified density is reached.

In lieu of the core method of field density determination, acceptance testing may be accomplished using a nuclear gage in accordance with ASTM D 6938 using the Direct Transmission Method. Calibration and operation of the gage shall be in accordance with the requirements of the manufacturer. The operator of the nuclear gage must show evidence of training and experience in the use of the instrument. The gage shall be standardized daily in accordance with ASTM D 6938.

If a nuclear gage is used for density determination, two random readings shall be made for each subplot.

209-3.6 FINISHING. The surface of the aggregate base course shall be finished by blading or with automated equipment especially designed for this purpose.

In no case will the addition of thin layers of material be added to the top layer of base course to meet grade. If the elevation of the top layer is 1/2 inch or more below grade, the top layer of base shall be scarified to a depth of at least 3 inches, new material added, and the layer shall be blended and recompact to bring it to grade. If the finished surface is above plan grade, it shall be cut back to grade and rerolled.

Type 5 aggregate base is intended to provide some drainage and shall not be segregated. Trimmed Type 5 aggregate base may not be reused until it is verified as meeting the required specifications. Base material contaminated to such an extent that it no longer complies with the specifications shall be removed and replaced with satisfactory material at the expense of the contractor.

209-3.7 SURFACE TOLERANCES. The finished surface shall not vary more than 3/8 inch when tested with a 16-foot straightedge applied parallel with or at right angles to the centerline. Any deviation in excess of this amount shall be corrected by the Contractor at the Contractor's expense.

The Contractor shall provide a 16-foot straight edge for the Engineer at all times, to verify smoothness.

209-3.8 THICKNESS CONTROL. The completed thickness of the base course shall be within 1/2 inch of the design thickness. Four determinations of thickness shall be made for each lot of material placed. The lot size shall be consistent with that specified in paragraph 3.5. Each lot shall be divided into four equal sublots. One test shall be made for each subplot. Sampling locations will be determined by the Engineer on a random basis in accordance with procedures contained in ASTM D 3665. Where the thickness is deficient by more than 1/2 inch, the Contractor shall correct such areas at no additional cost by excavating to the required depth and replacing with new material. Additional test holes may be required to identify the limits of deficient areas.

Lift thickness testing may also be performed via survey at no cost to the Sponsor.

209-3.9 MAINTENANCE. The base course shall be maintained in a condition that will meet all specification requirements until the work is accepted. Equipment used in the construction of an

adjoining section may be routed over completed portions of the base course, provided no damage results and provided that the equipment is routed over the full width of the base course to avoid rutting or uneven compaction.

If a prime coat is specified in the contract, the contractor will be required to apply the prime coat on any completed portion of the aggregate base as soon as practicable, or as otherwise specified. However, the contractor will not be permitted to apply prime if the moisture in the top 2 inches of the aggregate base exceeds the higher of either (1) the average of the optimum moisture as determined by the standard compaction test and the absorption of the plus No. 4 fraction, or (2) two-thirds of the optimum moisture as determined by the standard compaction test.

At the discretion of the engineer, proof rolling may be required by a loaded tandem axle truck on top of the aggregate base course to determine the level of stability. If the condition of the aggregate base course is not satisfactory, it should be given more time to cure or be reworked to put it into the proper condition for overlay.

METHOD OF MEASUREMENT

209-4.1 The quantity of crushed aggregate base course to be paid for will be determined by measurement of the number of square yards of material actually constructed and accepted by the Engineer as complying with the plans and specifications.

BASIS OF PAYMENT

209-5.1 RECYCLED CONCRETE AGGREGATE BASE - ALTERNATE BID – Payment shall be made at the contract unit price per square yard for recycled concrete aggregate base course under P219a. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

209-5.2 CRUSHED AGGREGATE BASE – ALTERNATE BID - Payment shall be made at the contract unit price per square yard for crushed aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item. It shall also include the disposal of the removed concrete pavement by hauling and disposal off-site.

Payment will be made under:

Item MO-209a 6" Crushed Aggregate Base Course – per square yard

****END OF ITEM MO-209****

over the full width of the base course to avoid rutting or uneven compaction.

219-4.12 Maintenance. The base course shall be maintained until the base course is completed and accepted. Maintenance will include immediate repairs to any defects and shall be repeated as often as necessary to keep the completed work intact. The Contractor, at his or her expense, will rework any area of the recycled concrete aggregate base course that is damaged.

METHOD OF MEASUREMENT

219-5.1 The quantity of recycled concrete aggregate base course will be determined by measurement of the number of square yards (square meters) of material actually constructed and accepted as complying with the plans and specifications.

BASIS OF PAYMENT

219-6.1 Payment shall be made at the contract unit price per square yard of recycled concrete aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item. If MO-209 material is required to supplement the recycled concrete material, it shall be paid for as 6" recycled concrete aggregate base course.

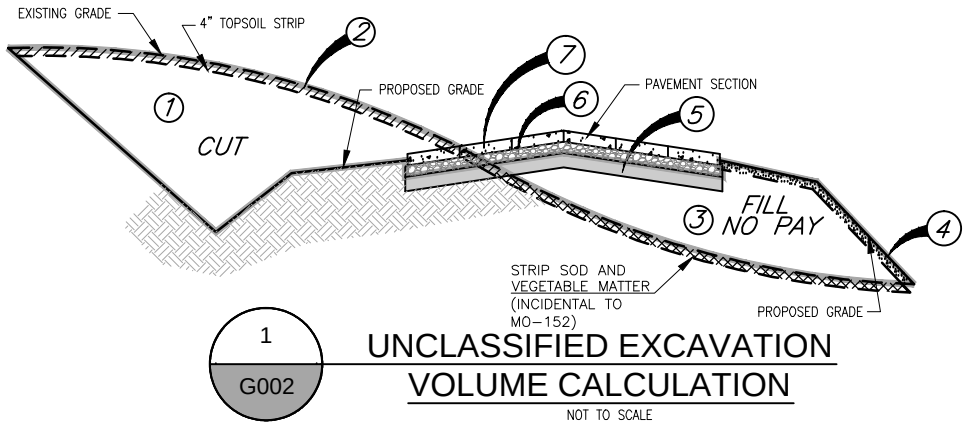
Payment will be made under:

Item P-219	6" Recycled Concrete Aggregate Base Course – per square yard
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TESTING REQUIREMENTS

ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM D75	Standard Practice for Sampling Aggregates
ASTM C117	Standard Test Method for Materials Finer than 75 μ m (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil

INDEX OF DRAWINGS		
SHEET NO.	SHEET ID	TITLE
1	G001	COVER SHEET
2	G002	INDEX OF DRAWINGS, LEGEND, ABBREVIATIONS AND EARTHWORK PAY ITEMS
3	G003	SUMMARY OF APPROXIMATE QUANTITIES
4	G004	GENERAL NOTES
5	G005	SURVEY CONTROL PLAN
6	G006	BORING MAP AND BORING LOGS RUNWAY 14/32
7	G007	BORING LOGS RUNWAY 14/32
8	G008	BORING MAP AND BORING LOGS CONNECTING TAXIWAY AND RUNWAY TURN-AROUND
9	G009	CONSTRUCTION LAYOUT AND SAFETY PLAN
10	G010	CONSTRUCTION SAFETY DRAWING - OVERALL PHASING PLAN
11	G011	CONSTRUCTION SAFETY DRAWING - PHASING PLAN PHASE 1
12	G012	CONSTRUCTION SAFETY DRAWING - PHASING PLAN PHASE 2
13	C100	DEMOLITION PLAN STA. -4+00 TO STA. 4+30 RUNWAY 14/32
14	C101	DEMOLITION PLAN STA. 4+30 TO STA. 12+10 RUNWAY 14/32
15	C102	DEMOLITION PLAN STA. 12+10 TO STA. 19+90 RUNWAY 14/32
16	C103	DEMOLITION PLAN STA. 19+90 TO STA. 27+70 RUNWAY 14/32
17	C104	DEMOLITION PLAN STA. 27+70 TO STA. 35+50 RUNWAY 14/32
18	C105	DEMOLITION PLAN STA. 35+50 TO STA. 40+00 RUNWAY 14/32
19	C106	DEMOLITION PLAN CONNECTING TAXIWAY AND APRON
20	C200	GEOMETRIC PLAN STA. -4+00 TO STA. 4+30 RUNWAY 14/32
21	C201	GEOMETRIC PLAN STA. 4+30 TO STA. 12+10 RUNWAY 14/32
22	C202	GEOMETRIC PLAN STA. 12+10 TO STA. 19+90 RUNWAY 14/32
23	C203	GEOMETRIC PLAN STA. 19+90 TO STA. 27+70 RUNWAY 14/32
24	C204	GEOMETRIC PLAN STA. 27+70 TO STA. 35+50 RUNWAY 14/32
25	C205	GEOMETRIC PLAN STA. 35+50 TO STA. 40+00 RUNWAY 14/32
26	C206	GEOMETRIC PLAN CONNECTING TAXIWAY AND APRON
27	C300	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. -4+00 TO STA. 4+30 RW 14/32
28	C301	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. 4+30 TO STA. 12+10 RW 14/32
29	C302	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. 12+10 TO STA. 19+90 RW 14/32
30	C303	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. 19+90 TO STA. 27+70 RW 14/32
31	C304	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. 27+70 TO STA. 35+50 RW 14/32
32	C305	GRADING, DRAINAGE AND EROSION CONTROL PLAN STA. 35+50 TO STA. 40+00 RW 14/32
33	C306	GRADING, DRAINAGE AND EROSION CONTROL PLAN CONNECTING TAXIWAY AND APRON
34	C310	EROSION CONTROL DETAILS
35	C350	SPOT ELEVATION PLAN STA. -4+00 TO STA. 4+30 RUNWAY 14/32
36	C351	SPOT ELEVATION PLAN STA. 4+30 TO STA. 12+10 RUNWAY 14/32
37	C352	SPOT ELEVATION PLAN STA. 12+10 TO STA. 19+90 RUNWAY 14/32
38	C353	SPOT ELEVATION PLAN STA. 19+90 TO STA. 27+70 RUNWAY 14/32
39	C354	SPOT ELEVATION PLAN STA. 27+70 TO STA. 35+50 RUNWAY 14/32
40	C355	SPOT ELEVATION PLAN STA. 35+50 TO STA. 40+00 RUNWAY 14/32
41	C356	SPOT ELEVATION PLAN CONNECTING TAXIWAY AND APRON
42	C400	PLAN AND PROFILE - STORM LINE A
43	C450	STORM DRAINAGE AND UNDERDRAIN DETAILS
44	C500	RUNWAY 14/32 PLAN AND PROFILE STA. -3+00 TO STA. 9+00
45	C501	RUNWAY 14/32 PLAN AND PROFILE STA. 9+00 TO STA. 21+50
46	C502	RUNWAY 14/32 PLAN AND PROFILE STA. 21+50 TO STA. 34+00
47	C503	RUNWAY 14/32 PLAN AND PROFILE STA. 34+00 TO STA. 46+00
48	C504	CONNECTING TAXIWAY PLAN AND PROFILE
49	C550	EXISTING TYPICAL SECTIONS
50	C551	PROPOSED TYPICAL SECTIONS
51	C600	JOINT LAYOUT PLAN STA. 0+00 TO STA. 25+00 RUNWAY 14/32
52	C601	JOINT LAYOUT PLAN STA. 25+00 TO STA. 40+00 RW 14/32, CONNECTING TAXIWAY AND APRON
53	C650	JOINT DETAILS
54	C700	PAVEMENT MARKING PLAN STA. 0+00 TO STA. 25+00 RUNWAY 14/32
55	C701	PAVEMENT MARKING PLAN STA. 25+00 TO STA. 46+00 RW 14/32 AND CONNECTING TAXIWAY
56	C750	PAVEMENT MARKING DETAILS
57	C900	RUNWAY 14/32 CROSS SECTIONS STA. -3+00 TO STA. -1+00
58	C901	RUNWAY 14/32 CROSS SECTIONS STA. -0+50 TO STA. 2+00
59	C902	RUNWAY 14/32 CROSS SECTIONS STA. 2+50 TO STA. 4+50
60	C903	RUNWAY 14/32 CROSS SECTIONS STA. 5+00 TO STA. 7+50
61	C904	RUNWAY 14/32 CROSS SECTIONS STA. 8+00 TO STA. 10+50
62	C905	RUNWAY 14/32 CROSS SECTIONS STA. 11+00 TO STA. 13+50
63	C906	RUNWAY 14/32 CROSS SECTIONS STA. 14+00 TO STA. 16+50
64	C907	RUNWAY 14/32 CROSS SECTIONS STA. 17+00 TO STA. 19+50
65	C908	RUNWAY 14/32 CROSS SECTIONS STA. 20+00 TO STA. 22+50
66	C909	RUNWAY 14/32 CROSS SECTIONS STA. 23+00 TO STA. 25+50
67	C910	RUNWAY 14/32 CROSS SECTIONS STA. 26+00 TO STA. 28+50
68	C911	RUNWAY 14/32 CROSS SECTIONS STA. 29+00 TO STA. 31+50
69	C912	RUNWAY 14/32 CROSS SECTIONS STA. 32+00 TO STA. 34+50
70	C913	RUNWAY 14/32 CROSS SECTIONS STA. 35+00 TO STA. 37+00
71	C914	RUNWAY 14/32 CROSS SECTIONS STA. 37+50 TO STA. 40+00
72	E100	ELECTRICAL LAYOUT PLAN STA. 0+00 TO STA. 12+50 RUNWAY 14/32
73	E101	ELECTRICAL LAYOUT PLAN STA. 12+50 TO STA. 37+50 RUNWAY 14/32
74	E102	ELECTRICAL LAYOUT PLAN STA. 37+50 TO STA. 46+00 RUNWAY 14/32
75	E200	ELECTRICAL DETAILS
76	E201	ELECTRICAL DETAILS



TOTAL CUT (PAY)

- 1 UNCLASSIFIED VOLUME
- 2 + VOLUME TOPSOIL AT CUT (STRIPPED)
(PAID AS 4" DEEP, PLAN AREA OF CUT)
- 1 + 2 = TOTAL VOLUME CUT (PAID AS P-152a)

TOTAL FILL (NO PAY)

- 3 EMBANKMENT VOLUME (NOT PAID)
- 4 + TOPSOIL REPLACEMENT ABOVE FILL
AND UNDER CUT (NOT PAID)
(INCIDENTAL TO MO-152)
- 3 + 4 = TOTAL VOLUME FILL

PAVEMENT SECTION (PAY)

- 5 9" FLY ASH TREATED SUBGRADE (PAID AS MO-155a)
- 6 6" RECYCLED CONCRETE AGGREGATE BASE COURSE (PAID AS P-219a) OR
6" CRUSHED AGGREGATE BASE COURSE (PAID AS P-219a)
- 7 6" PCC PAVEMENT (PAID AS P-501a)

MO-152 EARTHWORK VOLUME SUMMARY				
SCHEDULES I & II	AREA DESCRIPTION	APPROX. CUT (CY)	APPROX. FILL (CY)	NET (CY)
		MO-152	MO-152	MO-152
SCHEDULE I	RECONSTRUCT RUNWAY 14-32 & CONNECTING TAXIWAY	3,365	3,670	270 (FILL)
SCHEDULE II	RECONSTRUCT CONNECTING TAXIWAY	850	460	355 (CUT)
TOTAL		4,215	4,130	85 (CUT)

* NOTES:

- THESE QUANTITIES ARE RAW AND UNADJUSTED.
- SEE DETAIL (THIS SHEET) FOR VOLUME CALCULATION.

DEMOLITION LEGEND	ELECTRICAL LEGEND	GRADING LEGEND	CONCRETE JOINT LEGEND
6" PCC ON 2" BITUMINOUS ON 9" AGGREGATE BASE - FULL DEPTH REMOVAL LIMITS	EXISTING DIRECT BURIED CABLE(S)	- 1110 - EXISTING INDEX CONTOUR	REINFORCED CONCRETE PANEL
6" PCC ON 6" AGGREGATE BASE - FULL DEPTH REMOVAL LIMITS	EXISTING CONDUIT	- 1111 - EXISTING INTERMEDIATE CONTOUR	TYPE "A" ISOLATION (THICKENED EDGE)
6" PCC ON 15" AGGREGATE BASE - FULL DEPTH REMOVAL LIMITS	PROPOSED 2" SCH. 40 PVC CONDUIT (CONCRETE ENCASED)	1110 PROPOSED INDEX CONTOUR	TYPE "B" HINGED CONTRACTION
6" PCC ON 8" AGGREGATE BASE - FULL DEPTH REMOVAL LIMITS	PROPOSED DIRECT BURIED #8 AWG, L-824C, 5000V WIRE	1111 PROPOSED INTERMEDIATE CONTOUR	TYPE "C" DOWELED CONTRACTION
REMOVAL ITEM	EXISTING PAPI LIGHT UNIT	PROPOSED STORM PIPE	TYPE "D" DUMMY CONTRACTION
EXISTING CABLE TO REMAIN	EXISTING REIL UNIT	GRADING LIMITS	TYPE "E" DOWELED CONSTRUCTION
EXISTING CABLE TO BE ABANDONED	PROPOSED RUNWAY END LIGHT (L-861E)	TYPE 3 ROCK LINING	PAVEMENT MARKING LEGEND EXISTING PAINT PROPOSED YELLOW PAINT PROPOSED WHITE PAINT RUNWAY SAFETY AREA RUNWAY OBJECT FREE AREA TAXIWAY SAFETY AREA TAXIWAY OBJECT FREE AREA TAXILANE OBJECT FREE AREA
EXISTING RUNWAY LIGHT TO BE REMOVED	PROPOSED RUNWAY EDGE LIGHT (L-861)	PROPOSED EXISTING SPOT ELEVATION	
EXISTING TAXIWAY LIGHT TO BE REMOVED	PROPOSED TAXIWAY EDGE LIGHT (L-861T)	SURFACE ROUGHENING SEED AREA WITH HYDRO MULCH	
EXISTING TAXIWAY REFLECTIVE MARKER TO BE REMOVED	PROPOSED JUNCTION BOX	SILT FENCE	
	PROPOSED LIGHTED WINDCONE	DITCH CHECK	
	GEOMETRIC LEGEND	SILT FENCE	
	PROPOSED 6" PORTLAND CONCRETE FULL DEPTH (P-501)		

ISSUE FOR BID
NOT FOR CONSTRUCTION

THESE DRAWINGS ARE FOR BIDDING
AND CONSTRUCTION USE AND ARE NOT
A RECORD SET AS DEFINED BY LAW.
THE RECORD SETS ARE SIGNED AND
SEALED BY:

RYAN B. LORTON PE-2004017211 05/26/15
NAME REG. NO. DATE
FOR AND ON BEHALF OF JVIATION, INC.

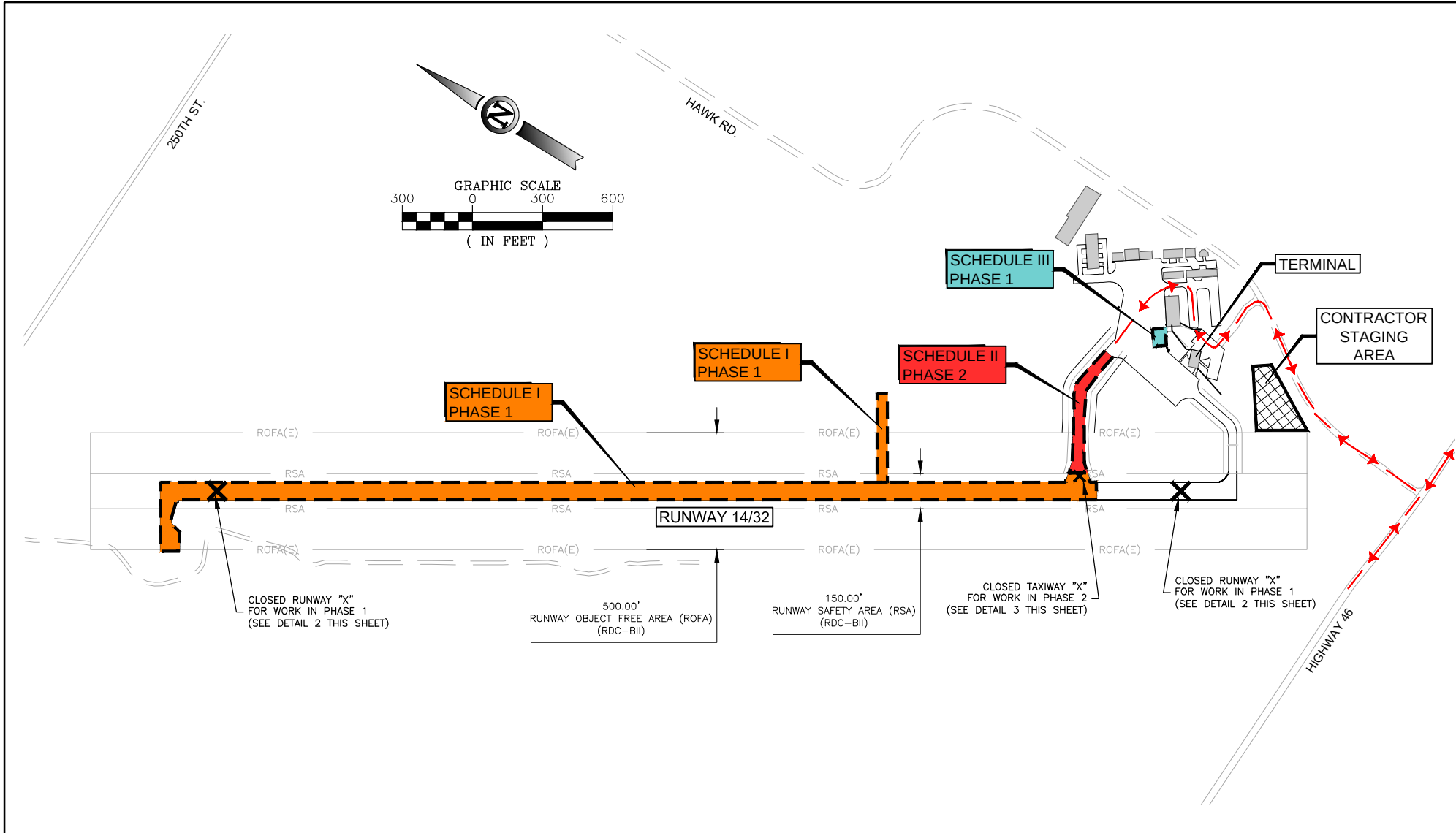
DES: D.W.C.	ISSUE RECORD			
	NO.	BY	DATE	DESCRIPTION
DR: D.W.C.	1	R.B.L.	05/26/15	ISSUED FOR BID
	2	R.B.L.	06/17/15	ADDENDUM NO. 1
CH: C.L.G.				
APP: R.B.L.				

RECONSTRUCT RUNWAY 14/32,
CONNECTING TAXIWAY AND
PARTIAL APRON

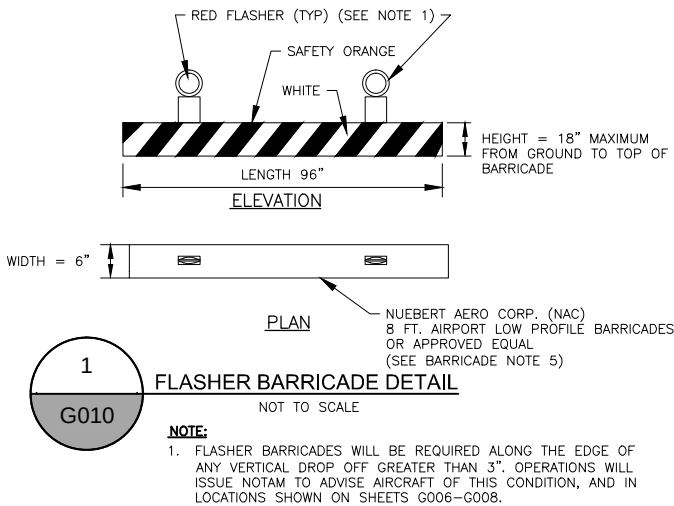
INDEX OF DRAWINGS,
LEGENDS, ABBREVIATIONS AND
EARTHWORK PAY ITEMS

MODOT PROJ. NO. 14-002A-1
JVIATION PROJ. NO. EVU-LOC-13-01
DATE: 05/26/15

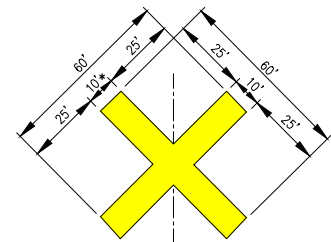
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G002
SHEET NO.
2 of 76



SCHEDULE I, II, & III - CONSTRUCTION PHASING NOTES - TOTAL ALL PHASES (105 CALENDAR DAYS)		
SCHEDULE I, II & III	MAJOR WORK TO BE COMPLETED	CONSTRUCTION PHASING LEGEND
SCHEDULE I – PHASE 1: ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016) 90 CALENDAR DAYS CONCURRENT WITH SCHEDULES II & III PHASES 1 & 2 SCHEDULE II – PHASE 2: ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016) AN ADDITIONAL 15 CALENDAR DAYS FOR A TOTAL OF 105 CALENDAR DAYS FOR WORK INSIDE THE SCHEDULE II – PHASE 2 WORK AREA. CONCURRENT WITH SCHEDULE I & III PHASE 1. SCHEDULE III – PHASE 1: ESTIMATED START DATE: SUMMER 2015 OR SPRING 2016 (TENTATIVELY SCHEDULED FOR MAY 2, 2016) NO ADDITIONAL CALENDAR DAYS. THE WORK INSIDE THE SCHEDULE III – PHASE 1 WORK AREA SHALL BE COMPLETED WITHIN THE 90 CALENDAR DAYS PROVIDED FOR SCHEDULE I – PHASE 1 WORK CONCURRENT WITH SCHEDULE I & II PHASES 1 & 2.	SCHEDULE I: 1. PAVEMENT DEMOLITION 2. UNCLASSIFIED EXCAVATION 3. LIME STABILIZED SUBGRADE 4. RECYCLED CONCRETE AGGREGATE BASE COURSE 5. PORTLAND CEMENT CONCRETE PAVEMENT 6. UNDERDRAIN INSTALLATION 7. RUNWAY PAVEMENT MARKINGS 8. NEW WIND CONE INSTALLATION 9. NEW EDGE LIGHTS AND CABLE 10. NEW RETRO-REFLECTIVE MARKERS SCHEDULE II: 1. PAVEMENT DEMOLITION 2. UNCLASSIFIED EXCAVATION 3. LIME STABILIZED SUBGRADE 4. RECYCLED CONCRETE AGGREGATE BASE COURSE 5. PORTLAND CEMENT CONCRETE PAVEMENT 6. REMOVAL OF EXISTING STORM SEWER 7. STORM SEWER AND UNDERDRAIN INSTALLATION 8. TAXIWAY PAVEMENT MARKINGS 9. NEW RETRO-REFLECTIVE MARKERS SCHEDULE III: 1. PAVEMENT DEMOLITION 2. RECYCLED CONCRETE AGGREGATE BASE COURSE 3. PORTLAND CEMENT CONCRETE PAVEMENT	SCHEDULE I PHASE 1 (90 CALENDAR DAYS) SCHEDULE II PHASE 2 (105 CALENDAR DAYS) SCHEDULE III PHASE 1 (90 CALENDAR DAYS) CONTRACTOR STAGING AREA FLASHER BARRICADES SEE DETAIL 1 ON THIS SHEET TRUCK/HAUL ROUTE X CLOSED RUNWAY "X" SEE DETAIL 2 ON THIS SHEET X CLOSED TAXIWAY "X" SEE DETAIL 3 ON THIS SHEET
AIRPORT OPERATIONAL NOTES		OTHER NOTES
1. CONSTRUCTION BARRICADES SHALL BE INSTALLED AS DIRECTED BY ENGINEER FOR AREAS THAT ARE TEMPORARILY CLOSED TO TRAFFIC DURING PAVEMENT MARKING APPLICATION AND DRY TIME. 2. ALL OF THE CONTRACTOR'S EQUIPMENT AND ANY FOREIGN OBJECT DEBRIS (FOD) MUST BE REMOVED FROM RUNWAY SAFETY AREAS PRIOR TO OPENING. 3. THE CONTRACTOR SHALL HAVE FLAGGERS AVAILABLE WHEN NEEDED TO DIRECT TRAFFIC.		1. A MINIMUM OF 72 HOUR NOTICE SHOULD BE GIVEN TO THE AIRPORT FOR CONSTRUCTION ACCESS TO THE WORK AREAS IN ORDER FOR THE AIRPORT TO ISSUE A NOTAM. IF CLOSURES ARE NOT SCHEDULED PROPERLY AND IN WRITING, THE CONTRACTOR MAY NOT HAVE ACCESS TO THE DESIRED WORK AREA AND IN NO WAY IS THIS A VALIDATION FOR ADDITIONAL CALENDAR DAYS. 2. UNICOM 122.8 MHZ. 3. A SWEEPER OR OTHER APPROVED EQUIPMENT SHALL BE AVAILABLE AT ALL TIMES TO CLEAN DEBRIS FROM HAUL ROUTE OR AREAS ADJACENT TO CONSTRUCTION. 4. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING AIRFIELD PAVEMENT, LIGHTS OR AREAS ALONG THE HAUL ROUTE. 5. THE CONTRACTOR SHALL ONLY PARK EQUIPMENT IN THE DESIGNATED STAGING AREA. 6. THE CONTRACTOR SHALL SUBMIT A DETAILED SCHEDULE. 7. CONTRACTOR SHALL PROVIDE TEMPORARY SIGNAGE TO DIRECT AIRPORT TRAFFIC TO THE TEMPORARY AIRPORT ACCESS ROUTE.



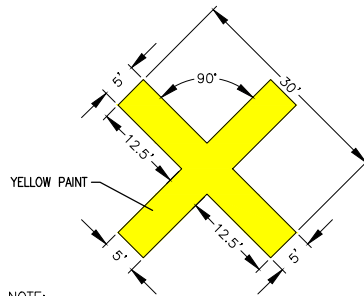
- BARRICADE NOTES:**
- LENS TO BE RED AND BE ABLE TO ROTATE 90°. NEUBERT AERO CORP. (NAC) - 360 DEGREE RED-TYPE D HAZARD SOLAR POWERED DUAL FUNCTION AND/OR APPROVED EQUAL BY ENGINEER.
 - FACING OF LOW-PROFILE BARRICADE TO BE COVERED WITH REFLECTIVE MATERIAL.
 - LOW-PROFILE BARRICADES TO BE PLACED CONTINUALLY ALONG OPERATIONAL PAVEMENT, ADJACENT TO CONSTRUCTION, AS DIRECTED BY THE ENGINEER. THE GAPS BETWEEN BARRICADES SHALL NOT EXCEED 4' END TO END.
 - FLASHERS SHALL BE SECURED TO THE BARRICADES, AS APPROVED BY AIRPORT OPERATIONS. ALTERNATE FLASHER LENSES SO THAT EVERY OTHER LENS IS ROTATED 90°.
 - LOW-PROFILE BARRICADES SHALL BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF ITS COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR LOW AS POSSIBLE, BUT NOT TO EXCEED 3 INCHES ABOVE THE GROUND. THE CONTRACTOR IS TO REPAIR ANY SURFACE DAMAGE IF BARRICADE IS AFFIXED TO THE SURFACE. NEUBERT AERO CORP. (NAC) 8 FT AIRPORT LOW PROFILE BARRICADES AND/OR APPROVED EQUAL BY ENGINEER.
 - THE CONTRACTOR SHALL MAINTAIN ALL BARRICADES DURING DAYLIGHT HOURS. CONTRACTORS SHALL ALSO PROVIDE THE AIRPORT SPARE LIGHTING UNITS FOR MAINTENANCE DURING NIGHTTIME HOURS.
 - BARRICADES TO BE PLACED IN LOCATIONS AS SHOWN ON PLANS AND AS DIRECTED BY THE FIELD ENGINEER THROUGHOUT THE PROJECT.
 - THE BARRICADES SHALL BE INCIDENTAL TO BID ITEM P-100 MOBILIZATION. CONTRACTOR SHALL PLACE ALL BARRICADES IN STORAGE AT A LOCATION DETERMINED BY THE AIRPORT.



NOTE:
THE CONTRACTOR WILL BE REQUIRED TO PLACE CROSSES AT EACH END OF A RUNWAY WHEN HE CLOSSES THE RUNWAY FOR CONSTRUCTION. THE MATERIAL USED FOR THE CROSS SHALL BE ANY SUITABLE WOOD, PLYWOOD OR FABRIC ACCEPTABLE TO THE ENGINEER. THE MATERIAL SHALL BE PAINTED YELLOW. THE CROSS SHALL BE PLACED OVER RUNWAY NUMBER UNLESS OTHERWISE SHOWN IN PLANS. CONTRACTOR TO SECURE TO SURFACE TO PREVENT MOVEMENT FROM WIND AND JET BLAST.

* 8' DIMENSION IS ALLOWABLE FOR TEMPORARY RUNWAY CLOSURES

2
G010
CLOSED RUNWAY "X"
N.T.S.

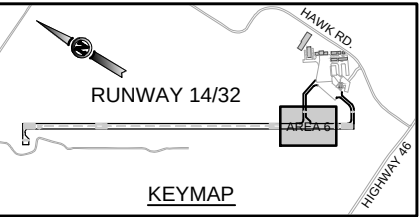
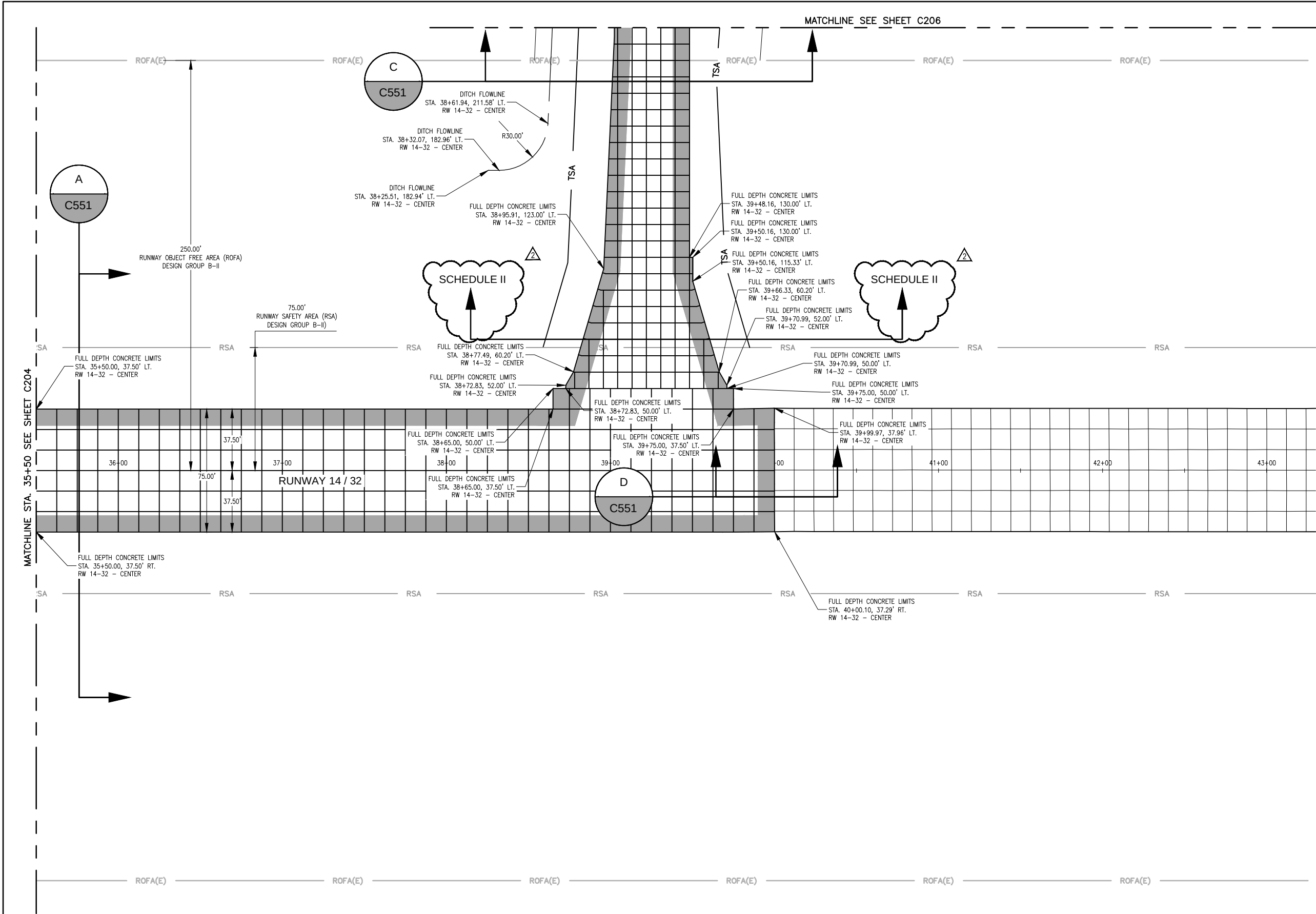


NOTE:
THE MATERIAL USED FOR THE CROSS SHALL BE ANY SUITABLE WOOD, PLYWOOD OR FABRIC ACCEPTABLE TO THE ENGINEER. THE MATERIAL SHALL BE PAINTED YELLOW. CONTRACTOR TO SECURE TO SURFACE TO PREVENT MOVEMENT FROM WIND AND JET BLAST.

3
G010
CLOSED TAXIWAY "X"
N.T.S.

ISSUE FOR BID NOT FOR CONSTRUCTION		
THESE DRAWINGS ARE FOR BIDDING AND CONSTRUCTION USE AND ARE NOT A RECORD SET AS DEFINED BY LAW. THE RECORD SETS ARE SIGNED AND SEALED BY:		
RYAN B. LORTON	PE-2004017211	05/26/15
NAME	REG. NO.	DATE
FOR AND ON BEHALF OF JVIATION, INC.		

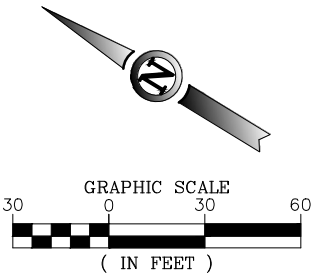
 © 2004 JVIATION, Inc. All Rights Reserved. JVIATION, the JVIATION logo, and JVIATION are trademarks of JVIATION, Inc. All other marks are the property of their respective owners.	NORTHWEST MISSOURI REGIONAL AIRPORT MARYVILLE, MISSOURI	DES: D.W.C.	ISSUE RECORD				RECONSTRUCT RUNWAY 14/32, CONNECTING TAXIWAY AND PARTIAL APRON	CONSTRUCTION SAFETY DRAWING OVERALL PHASING PLAN			SHEET NAME
		DR: D.W.C.	NO.	BY	DATE	DESCRIPTION					G010
			1	R.B.L.	05/26/15	ISSUED FOR BID					
		CH: C.L.G.	2	R.B.L.	06/17/15	ADDENDUM NO. 1		SHEET NO.			
		APP: R.B.L.							10 of 76		



GEOMETRIC LEGEND

PROPOSED 6" PORTLAND CONCRETE
FULL DEPTH (P-501)

- NOTES**
- ANY PAVEMENT DAMAGED DURING REMOVAL OUTSIDE THE PROPOSED REMOVAL LIMITS SHALL BE SQUARED OFF TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH THE ADDITIONAL REMOVAL AND RECONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES AND ELECTRICAL SYSTEMS DURING CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES. CONTRACTOR SHALL COORDINATE ALL UTILITY LOCATES.
 - ANY PAINT DAMAGED OUTSIDE OF REMOVAL LIMITS TO BE RESTORED TO ORIGINAL CONDITIONS AT THE EXPENSE OF THE CONTRACTOR.
 - IF EXISTING PAVEMENT IS DAMAGED BY HAUL OPERATIONS, THE CONTRACTOR SHALL REPAIR PAVEMENT AT NO ADDITIONAL COST TO THE SPONSOR.



**ISSUE FOR BID
NOT FOR CONSTRUCTION**

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RYAN B. LORTON	PE-2004017211	05/26/15
NAME	REG. NO.	DATE
FOR AND ON BEHALF OF JVIATION, INC.		

	NORTHWEST MISSOURI REGIONAL AIRPORT MARYVILLE, MISSOURI	DES: D.W.C.	ISSUE RECORD				RECONSTRUCT RUNWAY 14/32, CONNECTING TAXIWAY AND PARTIAL APRON	GEOMETRIC PLAN STA. 35+50 TO STA. 40+00 RUNWAY 14/32	MODOT PROJ. NO. 14-002A-1	JVIATION PROJ. NO. EVU-LOC-13-01	DATE: 05/26/15	SHEET NAME
		DR: D.W.C.	NO.	BY	DATE	DESCRIPTION						C205
		CH: C.L.G.	1	R.B.L.	05/26/15	ISSUED FOR BID						SHEET NO.
		APP: R.B.L.	2	R.B.L.	06/17/15	ADDENDUM NO. 1						25 of 76

