

**BIDDING AND CONTRACT DOCUMENTS**  
**ADDENDUM NUMBER ONE**  
**STATE PROJECT NO. 18-045B-1**

DATE: MAY 10, 2019

CAMDENTON MEMORIAL-LAKE REGIONAL AIRPORT

CRAWFORD, MURPHY, TILLY, INC.  
ONE MEMORIAL DRIVE, SUITE 500  
SAINT LOUIS, MISSOURI 63102

TO: ALL PLANHOLDERS AND POTENTIAL BIDDERS

SUBJECT: ADDENDUM NUMBER ONE TO THE BIDDING DOCUMENTS FOR: 5/10/19  
RUNWAY 15-33 & PARALLEL TAXIWAY EXTENSION PRE-GRADING;  
EXTEND OPPORTUNITY ROAD



This addendum forms a part of the bidding and contract documents, and modifies the original bidding documents dated April 15, 2019. This addendum must be signed on the last page and included with the submitted Bid Package. An acknowledgement sheet is also attached. This must be signed and returned to Crawford, Murphy, & Tilly, Inc via fax or e-mail by May 20, 2019. FAILURE TO NOT RECOGNIZE THE ADDENDUM ON THE BID FORM MAY SUBJECT THE BIDDER TO DISQUALIFICATION.

The Contract Documents are revised as follows:

**CONTRACT PROPOSAL**

**Page 46**

ADD to the end of section 80-07.1 the following:

If the Contractor finds it impossible for reasons beyond their own control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this paragraph, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of their own request. Requests for extension of time, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

**Page 158-159**

REVISE section 152-2.1.a. Blasting. to read as follows:

**a. Blasting.** Blasting will be permitted as directed by the RPR and in accordance with the following:

Reporting for all blasting shall be made in accordance with [Sec 107.7](#) of the Missouri Standard Specifications for Highway Construction (MSSHC). Blasting requirements shall be in accordance with [Sec 203.4.4.1](#) of the MSSHC. Blasting and explosive storage shall be in accordance with Section 70, paragraph 70-09 and all federal, state, and local safety regulations.

**Page 160**

REVISE the first paragraph of 152-2.2.b. Undercutting. to read as follows:

**b. Undercutting.** ~~Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf~~ impacting the construction of roadway pavement typical sections shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth required to construct the pavement to the typical section specified by the RPR. This excavated material shall be utilized in the required embankments or wasted in the borrow areas as noted. The excavated material shall not be measured for payment but shall be considered incidental to the contract. Areas where the proposed finished grade is shown as turf will not require undercutting.

**Page 225**

ADD to the end of Section 701-2.2 the following:

Pipe called out on the plans as concrete pipe to be located under proposed or future roadway pavements may be substituted for polypropylene pipe, double wall  $\leq 30''$  diameter and triple wall for  $30'' - 60''$  diameter, Group A in accordance with MSSHC Sec 724 and ASTM F2764, except as otherwise specified herein. Dual wall polypropylene pipe (12-30'') shall have a smooth interior and annular exterior corrugations. Triple wall polypropylene pipe (30' - 60'') shall have a smooth interior and exterior with annular inner corrugations. Pipe shall have a minimum pipe stiffness of 46 pii when tested in accordance with ASTM D2412. Pipe shall be joined with an integral bell and spigot joint on all sizes. The joints shall be watertight in accordance with ASTM D3212. The spigot shall have two gaskets meeting the requirements of ASTM F477. The gaskets shall be installed by the pipe manufacturer and shall be covered with a removable, protective wrap to ensure the gaskets are free from debris. A joint lubricant shall be used on the gasket and pipe bell during assembly. Pipe shall have a reinforced bell with a polymer composite band installed by the manufacturer. Pipe located on airport property, shall be concrete pipe as specified above and as detailed on the plans. Regardless of pipe material, pipe shall be paid for under the reinforced concrete pipe pay item for the size of pipe specified.

**Page 251-252**

REPLACE pages 251-252 with 251A-252A. A payment schedule has been added.

**Page 295-298**

REPLACE pages 295-298 with 295A-298A. A payment schedule has been added to the lump sum items.

**Page 308**

ADD after page 308 pages 308A-308B. A traffic control specification and pay item has been added.

**Pages 330-340**

REPLACE pages 330-340 with 330A-340A. The revised proposal form can be inserted into the book with a staple or paper clip or added to the comb binding and included with the bid.

**PLANS****Sheet 2 of 196**

REPLACE Sheet 2 of 196 with REVISION 1.

**Sheet 4 of 196**

REPLACE Sheet 4 of 196 with REVISION 1.

**Sheet 9 of 196**

REPLACE Sheet 9 of 196 with REVISION 1.

**Sheet 13 of 196**

REPLACE Sheet 13 of 196 with REVISION 1.

**Sheet 14 of 196**

REPLACE Sheet 14 of 196 with REVISION 1.

**Sheet 15 of 196**

REPLACE Sheet 15 of 196 with REVISION 1.

**Sheet 60 of 196**

REPLACE Sheet 60 of 196 with REVISION 1.

**CLARIFICATION:**

Language on allowable justification for extension of contract time was inadvertently removed from standard language and is being added back in.

Blasting requirements have been changed from FAA to MSSHC.

Undercutting will only be required under roadway pavements and will not be measured for payment.

Concrete pipe under roadways may be substituted with polypropylene pipe as specified in this addendum.

The revised Proposal Form may be inserted into the comb binding in front of the existing form or stapled/paper clipped to the existing form.

**CRAWFORD, MURPHY & TILLY, INC.**

**This Addendum consists of 3 pages plus 7 revised plan sheets, a revised Proposal Form, revised specifications SP-1, SP-3 and SP-4, added specification SP-9 and a fax transmittal sheet.**

\_\_\_\_\_  
Signed  
(Contractor)

\_\_\_\_\_  
Date

Contractor to sign and date this Addendum #1 to acknowledge receipt. This signed Addendum must be included with the submitted Bid Package.

# FAX TRANSMITTAL

To: Crawford, Murphy & Tilly, Inc

Attention: **Brian Garkie**

Re: Addendum #1

Fax 314.436.0723

From:

(name)

---

(company)

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Date:

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To verify that all contractors are in receipt of this addendum, Contractors are asked to sign and date this acknowledgement sheet. The Contractor should fax or e-mail to Crawford, Murphy, & Tilly, Inc. at the number listed below by **May 20, 2019**.

Fax: (314) 436-0723

Phone: (314) 436-5500

E-mail : [bgarkie@cmtengr.com](mailto:bgarkie@cmtengr.com)

BY: CRAWFORD, MURPHY, & TILLY, INC.



## Special Provisions (SP) Specifications

### Item SP-1 Electrical Utility Adjustments

#### Description

**SP-1-1.1 General.** This item shall consist of contracting with Laclede Electric Cooperative to remove an overhead powerline and install new power poles along an existing overhead powerline and associated improvements. It shall include all labor, equipment and incidental material to complete this item. Contact information for Laclede Electric Cooperative is Dwayne Carpenter, (417) 532-3164, ext. 2294, [DCarpenter@lacledeelectric.com](mailto:DCarpenter@lacledeelectric.com). A preliminary estimate from Laclede Electric Cooperative which includes all work being performed by Laclede Electric Cooperative or their approved subcontractor is \$18,109.54 for the electrical utility work which includes all materials and labor. The contractor shall coordinate all work with Laclede Electric Cooperative. Any work proposed by the contractor to assist Laclede Electric Cooperative shall be coordinated directly with Laclede Electric Cooperative and the price charged by Laclede Electric Cooperative to the contractor adjusted accordingly. The contractor's bid price shall include all costs for Laclede Electric Cooperative and the contractor plus any subcontractors. Contact Dwayne Carpenter to coordinate the work.

#### Materials

**SP-1-2.1.** Materials shall conform to the requirements of Laclede Electric Cooperative. The contractor shall be responsible for any materials required to complete the relocation that are not supplied by Laclede Electric Cooperative.

#### Construction Requirements

**SP-1-3.1 Coordination.** All work shall conform to the requirements of Laclede Electric Cooperative. The work shall be coordinated with the Contractor's grading schedule. Care shall be taken to protect existing overhead powerlines and power poles.

#### Method of Measurement

**SP-1-4.1.** The electrical utility adjustments shall be measured for payment per lump sum. This shall include all work required by the serving utility, Laclede Electric Cooperative, and all fees and charges required to be paid to Laclede Electric Cooperative.

#### Basis of Payment

**SP-1-5.1.** Payment for electrical utility adjustments shall be made at the contract unit price per lump sum. This price shall be full compensation for all materials, for all fees and charges required to be paid to Laclede Electric Cooperative, and for all labor, equipment, tools, necessary maintenance and incidentals necessary to complete the work. The contractor shall include all fees and charges required to be paid to Laclede Electric Cooperative as part of the lump sum bid price. The contractor shall contract directly with Laclede Electric Cooperative and pay any and all fees and charges required by Laclede Electric Cooperative. No additional compensation will be paid to the contractor for failure to include any costs in the lump sum bid price.

Partial payments will be allowed on the next pay estimate as follows:

- A. Upon execution of a contract agreement with Laclede Electric Cooperative and providing a copy of said agreement to the RPR, 50 percent or \$10,000, whichever is less.
- B. Upon commencement of the field work, 20 percent.
- C. Upon completion of the removal of the overhead powerlines shown to be removed, 20 percent.
- D. Upon completion of the power pole relocations and all other remaining work, the remaining amount not already paid.

Payment will be made under:

Item SP-1-5.1                      Electrical Utility Adjustments - per lump sum

**END OF ITEM SP-1**



## Item SP-3 Gas Line Relocation

### Description

**SP3-1.1** This item shall consist of contracting with Summit Utilities, Inc. to relocate an underground gas line. It shall include all labor, equipment and incidental material to complete this item. Contact information for Summit Utilities is James E. Trujillo Jr., P.E., (720) 981-2123, ext. 1664, [JTrujillo@Summitutilitiesinc.com](mailto:JTrujillo@Summitutilitiesinc.com). A preliminary estimate from Summit Utilities which includes all work being performed by Summit Utilities or their approved subcontractor is \$92,198 for the gas line work which includes all materials, normal trench excavation and labor less trench rock excavation plus \$10/LF for trench rock excavation, if solid rock is encountered. The contractor shall coordinate all work with Summit Utilities. Any work proposed by the contractor to assist Summit Utilities shall be coordinated directly with Summit Utilities and the price charged by Summit Utilities to the contractor adjusted accordingly. The contractor's bid price shall include all costs for Summit Utilities and the contractor plus any subcontractors. Contact James E. Trujillo Jr. to coordinate the work.

### Materials

**SP3-2.1** Materials shall conform to the requirements of Summit Utilities. The contractor shall be responsible for any materials required to complete the relocation that are not supplied by Summit Utilities.

### Construction Requirements

**SP3-3.1 Excavation.** Trench excavation using typical equipment for excavating trenches shall be considered normal trenching. Trench excavation requiring the removal of solid rock that cannot be removed with typical equipment for excavating trenches shall be considered trench rock excavation. The RPR shall have sole authority on determining normal trenching and trench rock excavation. Trenching shall be to the limits and depths required by Summit Utilities. The trench shall be backfilled using materials and methods as required by Summit Utilities.

### Method of Measurement

**SP3-4.1** The gas line relocation work shall be measured for payment per lump sum. This shall include all work required by the serving utility, Summit Utilities, and all fees and charges required to be paid to Summit Utilities less any rock excavation. Trench rock excavation shall be measured for payment per liner foot of trench measured along the centerline of the trench.

### Basis of Payment

**SP3-5.1** Payment for gas line relocation shall be made at the contract unit price per lump sum. This price shall be full compensation for all materials, for all fees and charges required to be paid to Summit Utilities, and for all labor, equipment, tools, necessary maintenance and incidentals necessary to complete and maintain the item including normal trenching. The contractor shall include all fees and charges required to be paid to Summit Utilities as part of the lump sum bid price. The contractor shall contract directly with Summit Utilities and pay any and all fees and charges required by Summit Utilities. No additional compensation will be paid to the contractor for failure to include any costs in the lump sum bid price.

Partial payments will be allowed on the next pay estimate as follows:

- A. Upon execution of a contract agreement with Summit Utilities and providing a copy of said agreement to the RPR, 50 percent or \$50,000, whichever is less.
- B. Upon commencement of the field work, 25 percent.
- C. Upon completion of the work, the remaining amount not already paid.

**SP3-5.2** Payment for trench rock excavation shall be made at the contract unit price per linear foot. This price shall be full compensation for all materials, for all fees and charges required to be paid to Summit Utilities, and for all labor, equipment, tools and incidentals necessary to complete the item.

Payment will be made under:

- Item SP-3-5.1 Gas Line Relocation - per lump sum
- Item SP-3-5.2 Gas Line Trench Rock Excavation - per linear foot

**END OF ITEM SP-3**



## Item SP-4 Communications Line Relocation

### Description

**SP-4-1.1 GENERAL.** This item shall consist of contracting with (CWOT's in contractor's name) AT&T to relocate underground communications line. The work shall include all labor, equipment and incidental material to complete this item. Contact information for AT&T is Andy Erickson, AT&T OSP Design Engineer, (314) 450-3317, [ae4137@att.com](mailto:ae4137@att.com). A preliminary estimate from AT&T which includes all work being performed by AT&T or their approved subcontractor is \$80,000 for the communications line work which includes all materials and labor. The contractor shall coordinate all work with AT&T. Any work proposed by the contractor to assist AT&T shall be coordinated directly with AT&T and the price charged by AT&T to the contractor adjusted accordingly. The contractor's bid price shall include all costs for AT&T and the contractor plus any subcontractors. Contact Andy Erickson to coordinate the work.

### Materials

**SP-4-2.1.** Materials shall conform to the requirements of AT&T. The contractor shall be responsible for any materials required to complete the relocation that are not supplied by AT&T.

### Construction Requirements

**SP-4-3.1 Coordination.** All work shall conform to the requirements of AT&T. The work shall be coordinated with Andy Erickson.

### Method of Measurement

**SP-4-4.1.** The communications line relocation shall be measured for payment per lump sum. This shall include all work required by the serving utility, AT&T, and all fees and charges required to be paid to AT&T.

### Basis of Payment

**SP-4-5.1.** Payment for communications line relocation shall be made at the contract unit price per lump sum. This price shall be full compensation for all materials, for all fees and charges required to be paid to AT&T, and for all labor, equipment, tools, necessary maintenance and incidentals necessary to complete the work. The contractor shall include all fees and charges required to be paid to AT&T as part of the lump sum bid price. The contractor shall contract directly with AT&T and pay any and all fees and charges required by AT&T. No additional compensation will be paid to the contractor for failure to include any costs in the lump sum bid price.

Partial payments will be allowed on the next pay estimate as follows:

- A. Upon execution of a contract agreement (CWOT) with AT&T and providing a copy of said agreement to the RPR, 50 percent or \$45,000, whichever is less.
- B. Upon commencement of the field work, 25 percent.
- C. Upon completion of the work, the remaining amount not already paid.

Payment will be made under:

Item SP-4-5.1                      Communications Line Relocation - per lump sum

**END OF ITEM SP-4**





## **Item SP-9 Roadway and Airfield Traffic Control**

### **Description**

**SP-9-1** This item shall consist of furnishing, installing, maintenance, use of flaggers, use of light runway closure markers, and removal of barricades, traffic control signs, and other items as shown in the plans for roadway traffic control during construction of the entrance road. The barricades, warning signs, etc. for any airfield portions of the project is incidental to the contract and will not be measured for payment.

### **Material**

**SP-9-2** Lighted runway closure markers shall be as detailed on the plans and in accordance with FAA AC 150/5345-55A.

Low profile barricades shall be as detailed on the plans.

### **Construction Requirements**

**SP-9-3** The Contractor shall install the signs, barricades, and other essentials as shown in the plans. The Contractor shall follow the requirements of Section 616, Traffic Control Plan in the latest version of the Missouri Standard Specifications for Highway Construction and follow the requirements of Section 40-05 of the General Provisions.

The Contractor shall maintain the traffic control devices throughout the duration of the Hill N' Dale entrance road portion of the project and the haul route crossing of Forbes Road portion of the project. The Contractor shall remove the traffic control devices after completion of the Hill N' Dale entrance road portion of the project and after completion of Opportunity Road per the phasing requirements.

The Contractor shall provide and maintain the lighted runway closure markers when the runway is required to be closed and remove the lighted runway markers from the project site upon completion of the work requiring runway closures.

### **Method of Measurement**

**SP-9-4** The Roadway Traffic Control will be measured as a lump sum. This shall include all the furnishing, installing, maintenance, use of flaggers, and removal of barricades, traffic control signs, and other items as shown in the plans for roadway traffic control.

### **Basis of Payment**

**SP-9-5** Based on the contract lump sum price for "Roadway Traffic Control", partial payments will be allowed on the next pay estimate as follows:

- A.** When barricades, signs and other traffic control devices are installed on Forbes Road, 20 percent.
- B.** When barricades, signs and other traffic control devices are installed on S.R. 7 at the Hill N' Dale entrance, 20 percent.

- C. When low profile barricades and lighted runway closure markers are delivered to the project site and used for the first time, 30 percent.
- D. After removal of all barricades, signs and other traffic control devices from Forbes Road, 10 percent.
- E. After removal of all barricades, signs and other traffic control devices from S.R. 7 at the Hill N' Dale entrance, 10 percent.
- F. After removal of all low profile barricades and lighted runway closure markers from the project site, 10 percent.

Payment will be made under:

Item SP-9-5.1 Roadway and Airfield Traffic Control--per lump sum.

**End of Item SP-9**





Camdenton Memorial Lake Regional Airport  
 Pregrading; Extend Opportunity Road  
 State Project No. 18-045B-1

<b>BASE BID</b>						
BID ITEM	SPEC. NO.	ITEM DESCRIPTION	APPROX. QTY AND UNITS		UNIT PRICE	EXTENSION
X	XXXXX	Sample	109 Each	Words	<i>Twenty one and 55/100</i>	<i>Two thousand three hundred forty eight and 95/100</i>
				Numerals	<i>21.55</i>	<i>2,348.95</i>
1	C-100-14.1	Contractor Quality Control Program (CQCP)	1 Lump Sum	Words		
				Numerals		
2	C-102-5.1	Installation and Removal of Silt Fence	14,700 Linear Foot	Words		
				Numerals		
3	C-102-5.2	Installation and Removal of Silt Dike Ditch Check	300 Each	Words		
				Numerals		
4	C-102-5.3	Sedimentation Basin A	1 Lump Sum	Words		
				Numerals		
5	C-102-5.4	Sedimentation Basin B	1 Lump Sum	Words		
				Numerals		

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6	C-102-5.5	Sediment Removal (Basin)	2,000 Cubic Yard	Words		
				Numerals		
7	C-102-5.6	Erosion Control Blanket	94,500 Square Yard	Words		
				Numerals		
8	C-102-5.7	Rip Rap	400 Square Yard	Words		
				Numerals		
9	C-102-5.8	Inlet Protection	1 Each	Words		
				Numerals		
10	C-105-6.1	Mobilization (10% Limit)	1 Lump Sum	Words		
				Numerals		
11	C-105-6.2	Engineer's Field Office	1 Lump Sum	Words		
				Numerals		
12	P-101-5.1	Full Depth Asphalt Pavement Removal	5,725 Square Yard	Words		
				Numerals		

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13	P-101-5.2	Partial Depth Asphalt Pavement Removal	563 Square Yard	Words		
				Numerals		
14	P-101-5.3	Full Depth PCC Pavement Removal	293 Square Yard	Words		
				Numerals		
15	P-151-4.1	Clearing and grubbing	43.0 Acre	Words		
				Numerals		
16	P-151-4.2	Tree removal	48 Each	Words		
				Numerals		
17	P-151-4.3	Tree trimming	87 Each	Words		
				Numerals		
18	P-152-4.1	Embankment in place	474,044 Cubic Yard	Words		
				Numerals		
19	P-152-4.2	Unsuitable Substrate	5,000 Cubic Yard	Words		
				Numerals		

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20	P-152-4.3	Settlement Monitoring Device	2 Each	Words		
				Numerals		
21	Section 304-5.1	4" Type 5 Aggregate Base Course	15,322 Square Yard	Words		
				Numerals		
22	Section 304-5.2	8" Type 5 Aggregate Base Course	875 Square Yard	Words		
				Numerals		
23	Section 304-5.3	6" of 4" Minus Aggregate Base Course	14,893 Square Yard	Words		
				Numerals		
24	Section 401-8.1	Bituminous Surface Course	1,760 Ton	Words		
				Numerals		
25	Section 401-8.2	Bituminous Base Course	2,400 Ton	Words		
				Numerals		
26	Section 407-6.1	Tack Coat	930 Gallon	Words		
				Numerals		

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27	Section 408-6.1	Prime Coat	4,750 Gallon	Words		
				Numerals		
28	Section 501-17.1	9" Portland Cement Concrete Pavement	386 Square Yard	Words		
				Numerals		
29	Section 620-5.1	Permanent Pavement Marking with Glass Beads	3,455 Square Foot	Words		
				Numerals		
30	Section 620-5.2	Durable Intersection Marking-Stop Bar	2 Each	Words		
				Numerals		
31	F-161-5.1	4' Woven Wire Fence	3,099 Linear Foot	Words		
				Numerals		
32	F-161-5.2	Remove 4' Woven Wire Fence	2,635 Linear Foot	Words		
				Numerals		
33	F-161-5.3	24' Wide Woven Wire Fence Double Swing Gate With Barbed Wire	2 Each	Words		
				Numerals		

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34	F-162-5.1	8' Chain-Link Fence with 3-Strand Barbed Wire	5,539 Linear Foot	Words		
				Numerals		
35	F-162-5.2	8' Chain-Link Fence Removal	1,747 Linear Foot	Words		
				Numerals		
36	F-162-5.3	14' Wide Chain-Link Fence Swing Gate with Barbed Wire	2 Each	Words		
				Numerals		
37	D-701-5.1	18" Reinforced Concrete Pipe (Class IV)	94 Linear Foot	Words		
				Numerals		
38	D-701-5.2	24" Reinforced Concrete Pipe (Class IV)	474 Linear Foot	Words		
				Numerals		
39	D-701-5.3	30" Reinforced Concrete Pipe (Class IV)	262 Linear Foot	Words		
				Numerals		
40	D-701-5.4	36" Reinforced Concrete Pipe (Class IV)	485 Linear Foot	Words		
				Numerals		

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41	D-751-5.5	CMP Removal	111 Linear Foot	Words		
				Numerals		
42	D-751-5.6	FES Removal	5 Each	Words		
				Numerals		
43	D-751-5.8	18" RCP Flared End Section (Class IV)	1 Each	Words		
				Numerals		
44	D-751-5.9	24" RCP Flared End Section (Class IV)	3 Each	Words		
				Numerals		
45	D-751-5.10	30" RCP Flared End Section (Class IV)	4 Each	Words		
				Numerals		
46	D-751-5.11	36" RCP Flared End Section (Class IV)	2 Each	Words		
				Numerals		
47	D-751-5.1	Precast Drop Inlet (S-1 Top) 5'x3'	1 Each	Words		
				Numerals		

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48	T-901-5.1	Airport Seeding	77.5 Acre	Words		
				Numerals		
49	T-905-5.1	Topsoil	1 Lump Sum	Words		
				Numerals		
50	T-908-5.1	Hydraulically Applied Mulching	58.0 Acre	Words		
				Numerals		
51	SP-1-5.1	Electrical Utility Adjustments	1 Lump Sum	Words		
				Numerals		
52	SP-2-5.1	8" C900 PVC Watermain	3,011 Linear Foot	Words		
				Numerals		
53	SP-2-5.2	10" C900 PVC Watermain	3,736 Linear Foot	Words		
				Numerals		
54	SP-2-5.3	Fire Hydrant Assembly	2 Each	Words		
				Numerals		



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55	SP-2-5.4	Existing Hydrant Removal	2 Each	Words		
				Numerals		
56	SP-2-5.5	8" Gate Valve with Valve Box	3 Each	Words		
				Numerals		
57	SP-2-5.6	¾" Chlorination Tap	3 Each	Words		
				Numerals		
58	SP-2-5.7	¾" Water Service Relocation	1 Each	Words		
				Numerals		
59	SP-2-5.8	Concrete Plugs for Main Abandonment	2 Each	Words		
				Numerals		
60	SP-2-5.9	Air Release Valve Assembly	1 Each	Words		
				Numerals		
61	SP-3-5.1	Gas Line Relocation	1 Lump Sum	Words		
				Numerals		

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62	SP-3-5.2	Gas Line Trench Rock Excavation	500 Linear Foot	Words		
				Numerals		
63	SP-4-5.1	Communications Line Relocation	1 Lump Sum	Words		
				Numerals		
64	SP-5-5.1	Sign Post with Signage	7 Each	Words		
				Numerals		
65	SP-5-5.2	Remove Roadway Sign	3 Each	Words		
				Numerals		
66	SP-6-5.1	Building Demolition	1 Lump Sum	Words		
				Numerals		
67	SP-6-5.2	Plugging and Closure of Water Wells	3 Each	Words		
				Numerals		
68	SP-7-5.1	Curb and Gutter	415 Linear Foot	Words		
				Numerals		

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69	SP-8-5.1	Mailbox and Shelter Relocation	1 Lump Sum	Words		
				Numerals		
70	SP-9-5.1	Roadway and Airfield Traffic Control	1 Lump Sum	Words		
				Numerals		
<b>TOTAL BASE BID</b>				Words		
				Numerals		

# SUMMARY OF QUANTITIES

BID NUMBER	ITEM	DESCRIPTION	UNIT	QUANTITY
1	C-100-14.1	CONTRACTOR QUALITY CONTROL PROGRAM	LS	1
2	C-102-5.1	INSTALLATION AND REMOVAL OF SILT FENCE	LF	14,700
3	C-102-5.2	INSTALLATION AND REMOVAL OF SILT DIKE DITCH CHECK	EA	300
4	C-102-5.3	SEDIMENTATION BASIN A	LS	1
5	C-102-5.4	SEDIMENTATION BASIN B	LS	1
6	C-102-5.5	SEDIMENT REMOVAL (BASIN)	CY	2,000
7	C-102-5.6	EROSION CONTROL BLANKET	SY	94,500
8	C-102-5.7	RIP RAP	SY	400
9	C-102-5.8	INLET PROTECTION	EA	1
10	C-105-6.1	MOBILIZATION (10% LIMIT)	LS	1
11	C-105-6.2	ENGINEER'S FIELD OFFICE	LS	1
12	P-101-5.1	FULL DEPTH ASPHALT PAVEMENT REMOVAL	SY	5,725
13	P-101-5.2	PARTIAL DEPTH ASPHALT PAVEMENT REMOVAL	SY	563
14	P-101-5.3	FULL DEPTH PCC PAVEMENT REMOVAL	SY	293
15	P-151-4.1	CLEARING AND GRUBBING	AC	43.0
16	P-151-4.2	TREE REMOVAL	EA	48
17	P-151-4.3	TREE TRIMMING	EA	87
18	P-152-4.1	EMBANKMENT IN PLACE	CY	474,044
19	P-152-4.2	UNSUITABLE SUBSTRATE	CY	5,000
20	P-152-4.3	SETTLEMENT MONITORING DEVICE	EA	2
21	304-5.1	4" TYPE 5 AGGREGATE BASE COURSE	SY	15,322
22	304-5.2	8" TYPE 5 AGGREGATE BASE COURSE	SY	875
23	304-5.3	6" OF 4" MINUS AGGREGATE BASE COURSE	SY	14,893
24	401-8.1	BITUMINOUS SURFACE COURSE	TON	1,760
25	401-8.2	BITUMINOUS BASE COURSE	TON	2,400
26	407-6.1	TACK COAT	GAL	930
27	408-6.1	PRIME COAT	GAL	4,750
28	501-17.1	9" PORTLAND CEMENT CONCRETE PAVEMENT	SY	386
29	620-5.1	PERMANENT PAVEMENT MARKING WITH GLASS BEADS	SF	3,455
30	620-5.2	DURABLE INTERSECTION MARKING - STOP BAR	EA	2
31	F-161-5.1	4' WOVEN WIRE FENCE	LF	3,099
32	F-161-5.2	REMOVE 4' WOVEN WIRE FENCE	LF	2,635
33	F-161-5.3	24' WIDE WOVEN WIRE FENCE DOUBLE SWING GATE WITH BARBED WIRE	EA	2
34	F-162-5.1	8' CHAIN-LINK FENCE WITH 3-STRAND BARBED WIRE	LF	5,539
35	F-162-5.2	8' CHAIN-LINK FENCE REMOVAL	LF	1,747
36	F-162-5.3	14' WIDE CHAIN-LINK FENCE SWING GATE WITH BARBED WIRE	EA	2
37	D-701-5.1	18" REINFORCED CONCRETE PIPE (CLASS IV)	LF	94
38	D-701-5.2	24" REINFORCED CONCRETE PIPE (CLASS IV)	LF	474
39	D-701-5.3	30" REINFORCED CONCRETE PIPE (CLASS IV)	LF	262
40	D-701-5.4	36" REINFORCED CONCRETE PIPE (CLASS IV)	LF	485
41	D-701-5.5	CMP REMOVAL	LF	111
42	D-701-5.6	FES REMOVAL	EA	5
43	D-701-5.7	18" RCP FLARED END SECTION (CLASS IV)	EA	1
44	D-701-5.8	24" RCP FLARED END SECTION (CLASS IV)	EA	3
45	D-701-5.9	30" RCP FLARED END SECTION (CLASS IV)	EA	4
46	D-701-5.10	36" RCP FLARED END SECTION (CLASS IV)	EA	2
47	D-751-5.1	PRECAST DROP INLET (S-1 TOP) 5'X3'	EA	1
48	T-901-5.1	AIRPORT SEEDING	AC	77.5
49	T-905-5.1	TOPSOIL	LS	1
50	T-908-5.1	HYDRAULICALLY APPLIED MULCHING	AC	58.0
51	SP-1-5.1	ELECTRICAL UTILITY ADJUSTMENTS	LS	1
52	SP-2-5.1	8" C900 PVC WATERMAIN	LF	3,011
53	SP-2-5.2	10" C900 PVC WATERMAIN	LF	3,736
54	SP-2-5.3	FIRE HYDRANT ASSEMBLY	EA	2
55	SP-2-5.4	EXISTING HYDRANT REMOVAL	EA	2
56	SP-2-5.5	8" GATE VALVE WITH VALVE BOX	EA	3
57	SP-2-5.6	3/4" CHLORINATION TAP	EA	3
58	SP-2-5.7	3/4" WATER SERVICE RELOCATION	LS	1
59	SP-2-5.8	CONCRETE PLUGS FOR MAIN ABANDONMENT	EA	2
60	SP-2-5.9	AIR RELEASE VALVE ASSEMBLY	EA	1
61	SP-3-5.1	GAS LINE RELOCATION	LS	1
62	SP-3-5.2	GAS LINE TRENCH ROCK EXCAVATION	LF	500
63	SP-4-5.1	COMMUNICATIONS LINE RELOCATION	LS	1
64	SP-5-5.1	SIGN POST WITH SIGNAGE	EA	7
65	SP-5-5.2	REMOVE ROADWAY SIGN	EA	3
66	SP-6-5.1	BUILDING DEMOLITION	LS	1
67	SP-6-5.2	PLUGGING AND CLOSURE OF WATER WELLS	EA	3
68	SP-7-5.1	CURB AND GUTTER	LF	415
69	SP-8-5.1	MAILBOX AND SHELTER RELOCATION	LS	1
70	SP-9-5.1	ROADWAY AND AIRFIELD TRAFFIC CONTROL	LS	1

# EARTHWORK SUMMARY

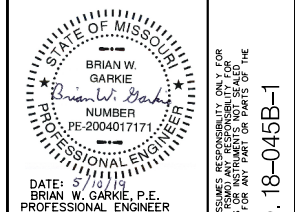
BASELINE	CUT (CY)	FILL (CY)
RUNWAY	58,646	233,160
PARALLEL TAXIWAY	19,735	219,998
OPPORTUNITY RD	443,314	19,603
BEAR COMMERCIAL	687	17
GC WATER NORTH	328	96
GC WATER SOUTH	149	0
HILL N' DALE	49	1,083
FORBES CUL-DE-SAC	706	87
TOTAL	523,614	474,044

REVISIONS		
NUMBER	BY	DATE
1	KSW	5/10/19

0 1 2  
THIS BAR IS EQUAL TO 2'  
AT FULL SCALE (34X22).  
PLOT 1

**CAMDENTON MEMORIAL-LAKE  
REGIONAL AIRPORT**  
CAMDENTON, MISSOURI

**RUNWAY 15-33 & PARALLEL TAXIWAY  
EXTENSION PRE-GRADING;  
EXTEND OPPORTUNITY ROAD**



ONE MEMORIAL DRIVE, SUITE 500  
314 455-5000

**CMT**  
PROFESSIONAL ENGINEERING - 000031

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FILE: 02\_Sum\_of\_Quant.dgn

DESIGN BY: BDB

DRAWN BY: BDB

CHECKED BY: TCS

APPROVED BY: BWG

DATE: APRIL 15, 2019

JOB No: 18048001

SUMMARY OF QUANTITIES

SHEET 2 OF 196 SHEETS

4/15/2019 K:\ComdentonMOAp\18048001\_Grading\Draw\Sheets\04\_CSPP\_Notes\_Sheet\_1\_of\_2.dgn

GENERAL

- 1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW THE REQUIREMENTS OF THE AIRPORT'S APPROVED CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)...

1. COORDINATION

- 1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE AIRPORT, ENGINEER, AND THE MODOT AVIATION SECTION...

2. PHASING

- 1. PHASING SHALL BE AS NOTED BELOW AND AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN (CAP) SHEETS.

PHASE 1 NOTES

- 1. PHASE 1 SHALL CONSIST OF THE GRADING AND CONSTRUCTION OF OPPORTUNITY ROAD FROM THE DEAD END OF CAMDENTON INDUSTRIAL DRIVE TO THE NORTH SIDE OF THE BEAR COMMERCIAL RENTAL LLC ENTRANCE DRIVE.

PHASE 1A NOTES

- 1. PHASE 1A SHALL CONSIST OF REMOVING AND REPLACING THE NORTH HALF OF BEAR COMMERCIAL RENTAL LLC ENTRANCE DRIVE, CONNECTING TO THE NEWLY CONSTRUCTED OPPORTUNITY ROAD.

PHASE 1B NOTES

- 1. PHASE 1B SHALL CONSIST OF REMOVING AND REPLACING THE SOUTH HALF OF BEAR COMMERCIAL RENTAL LLC ENTRANCE DRIVE, CONNECTING TO THE NEWLY CONSTRUCTED OPPORTUNITY ROAD.

PHASE 2 NOTES

- 1. PHASE 2 SHALL CONSIST OF COMPLETELY REMOVING OPPORTUNITY ROAD BETWEEN GLOBAL CUSTOMIZED WATER AND FORBES ROAD. THIS PHASE ALSO INCLUDES THE REMOVAL AND REPLACEMENT OF THE SOUTH ENTRANCE TO GLOBAL CUSTOMIZED WATER.

PHASE 3 NOTES

- 1. PHASE 3 SHALL CONSIST OF GRADING WITHIN RUNWAY 15-33 SAFETY AREAS AND APPROACH AND DEPARTURE SURFACES.

PHASE 4 NOTES

- 1. PHASE 4 SHALL CONSIST OF THE RELOCATION OF HILL N'DALE MOBILE HOME ENTRANCE ROAD, TREE TRIMMING AND REMOVAL NORTH OF HIGHWAY 7 AND BUILDING DEMOLITION.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

- 1. WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

- 1. THE CONTRACTOR SHALL REMAIN CLEAR OF THE PAPI SYSTEMS, WIND CONE, BEACON, AWOS AND OTHER NAVAIDS FACILITIES AT ALL TIMES.

5. CONTRACTOR ACCESS

- 1. CONTRACTOR ACCESS SHALL BE AS NOTED BELOW AND AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN SHEETS.

8. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CONSTRUCTION AREAS AND HAIL ROUTES WHICH WILL BE OPENED TO AIR TRAFFIC TO THE SATISFACTION OF THE ENGINEER...

- 9. ALL PAVEMENTS, ROADS, DRIVES OR ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAIL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED TO THE SAME CONDITION OR BETTER THAN THEY WERE PRIOR TO BEGINNING CONSTRUCTION.

6. WILDLIFE MANAGEMENT

- 1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR AIRPORT MANAGER IF ANY WILDLIFE IS SEEN ENTERING THE AIRPORT.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

- 1. THE CONTRACTOR SHALL PICK UP ANY FOREIGN OBJECT DEBRIS (FOD) SEEN ON THE AIRFIELD PAVEMENTS.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

THE CONTRACTOR SHALL DEVELOP A HAZMAT MANAGEMENT PLAN AND KEEP COPIES ON THE JOB SITE OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS HANDLED ON THE JOB SITE.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

- 1. THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT PERSON AND PHONE NUMBER.

CONTACTS

- OWNER: CITY OF CAMDENTON JEFF HANCOCK - CITY ADMINISTRATOR (573) 346-3600

10. INSPECTION REQUIREMENTS

- 1. THE CONTRACTOR SHALL INSPECT THE JOB SITE DAILY TO ENSURE COMPLIANCE WITH THE CSPP. THE CHECKLIST FOUND IN APPENDIX D OF FAA AC 150/5370-2G MAY BE USED TO AID IN THE INSPECTIONS.

11. UNDERGROUND UTILITIES

- 1. IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES AT CRITICAL POINTS.

12. PENALTIES

- 1. NONCOMPLIANCE BY THE CONTRACTOR WITH AIRPORT RULES AND REGULATIONS OR FAILURE TO COMPLY WITH THE AIRPORT'S APPROVED CSPP AND THE CONTRACTOR'S APPROVED SPCD MAY RESULT IN FINES AS ALLOWED BY LAW.

13. SPECIAL CONDITIONS

- 1. NONE

14. RUNWAY AND TAXIWAY VISUAL AIDS

- 1. AIRPORT PAVEMENT SHALL BE CLOSED DURING THIS PROJECT. THE CONTRACTOR SHALL USE MARKING, LIGHTING AND SIGNS THAT FOLLOW THE REQUIREMENTS OF FAA AC 150/5370-2G

15. MARKING AND SIGNS FOR ACCESS ROUTES

- 1. BARRICADES AND SIGNS SHALL BE USED ALONG THE CONTRACTOR'S ACCESS ROUTE AS DETAILED ON THIS SHEET, THE CONSTRUCTION ACTIVITY PLAN SHEETS AND THE TEMPORARY TRAFFIC CONTROL DETAIL SHEET.

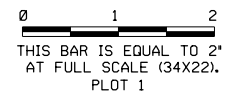
16. HAZARD MARKING AND LIGHTING

- 1. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING OF OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCKPILES, AND HIS/HER CONSTRUCTION EQUIPMENT.

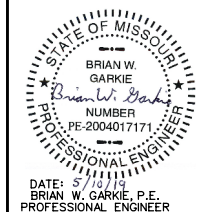
17. PROTECTION

- 1. WORK PERFORMED INSIDE OF THE OBSTACLE FREE ZONE (OFZ) WHILE THE RUNWAY IS OPEN SHALL BE COORDINATED WITH THE AIRPORT. THE OFZ EXTENDS 200' FROM THE RUNWAY CENTERLINE.

Table with 3 columns: NUMBER, BY, DATE. Row 1: 1, BWG, 5/10/19



CAMDENTON MEMORIAL-LAKE REGIONAL AIRPORT CAMDENTON, MISSOURI RUNWAY 15-33 & PARALLEL TAXIWAY EXTENSION PRE-GRADING; EXTEND OPPORTUNITY ROAD



DATE: 5/10/19 BRIAN W. GARKIE, P.E. PROFESSIONAL ENGINEER

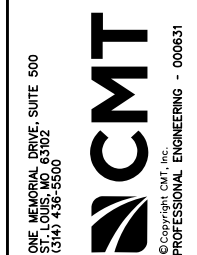
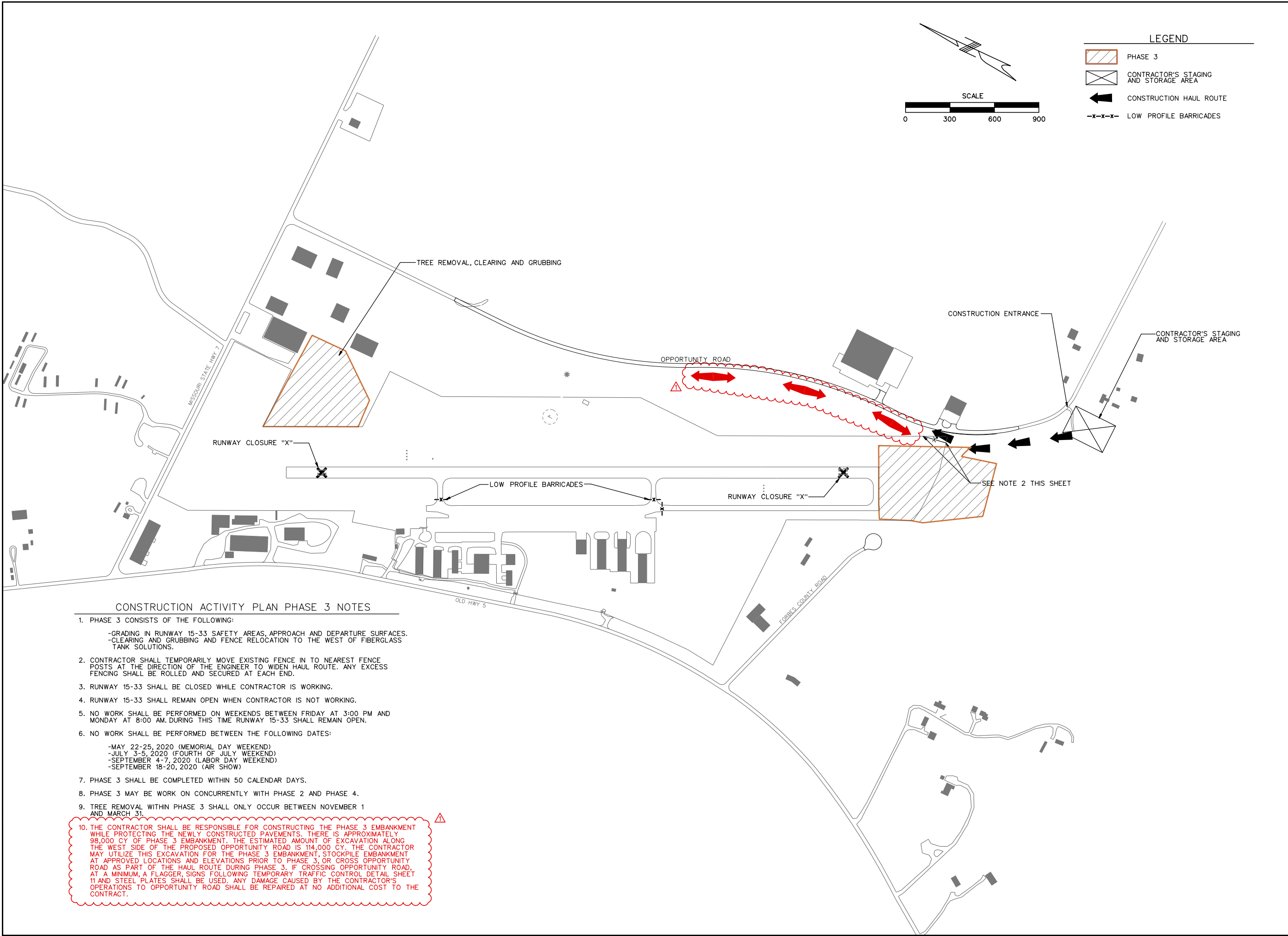


Table with project details: FILE: 04\_CSPP\_Notes\_Sheet\_1\_of\_2.dgn, DESIGN BY: BDB, DRAWN BY: BDB, CHECKED BY: TCS, APPROVED BY: BWG, DATE: APRIL 15, 2019, JOB No: 18048001, CSPP NOTES SHEET 1 OF 2, SHEET 4 OF 196 SHEETS

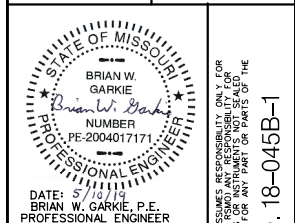


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REVISIONS		
NUMBER	BY	DATE
1	BWG	5/10/19

**CAMDENTON MEMORIAL-LAKE REGIONAL AIRPORT**  
 CAMDENTON, MISSOURI  
**RUNWAY 15-33 & PARALLEL TAXIWAY EXTENSION PRE-GRADING; EXTEND OPPORTUNITY ROAD**



**CMT**  
 PROFESSIONAL ENGINEERING - 000831  
 ONE MEMORIAL DRIVE, SUITE 500  
 CAMDENTON, MO 64830  
 (314) 455-5000

FILE: 09_Construction_Activity_Plan_Sheet_3
DESIGN BY: LEW
DRAWN BY: LEW
CHECKED BY: TCS
APPROVED BY: BWG
DATE: APRIL 15, 2019
JOB No: 18048001
<b>CAP PHASE 3</b>
SHEET 9 OF 196 SHEETS

**CONSTRUCTION ACTIVITY PLAN PHASE 3 NOTES**

- PHASE 3 CONSISTS OF THE FOLLOWING:
  - GRADING IN RUNWAY 15-33 SAFETY AREAS, APPROACH AND DEPARTURE SURFACES.
  - CLEARING AND GRUBBING AND FENCE RELOCATION TO THE WEST OF FIBERGLASS TANK SOLUTIONS.
- CONTRACTOR SHALL TEMPORARILY MOVE EXISTING FENCE IN TO NEAREST FENCE POSTS AT THE DIRECTION OF THE ENGINEER TO WIDEN HAUL ROUTE. ANY EXCESS FENCING SHALL BE ROLLED AND SECURED AT EACH END.
- RUNWAY 15-33 SHALL BE CLOSED WHILE CONTRACTOR IS WORKING.
- RUNWAY 15-33 SHALL REMAIN OPEN WHEN CONTRACTOR IS NOT WORKING.
- NO WORK SHALL BE PERFORMED ON WEEKENDS BETWEEN FRIDAY AT 3:00 PM AND MONDAY AT 8:00 AM. DURING THIS TIME RUNWAY 15-33 SHALL REMAIN OPEN.
- NO WORK SHALL BE PERFORMED BETWEEN THE FOLLOWING DATES:
  - MAY 22-25, 2020 (MEMORIAL DAY WEEKEND)
  - JULY 3-5, 2020 (FOURTH OF JULY WEEKEND)
  - SEPTEMBER 4-7, 2020 (LABOR DAY WEEKEND)
  - SEPTEMBER 18-20, 2020 (AIR SHOW)
- PHASE 3 SHALL BE COMPLETED WITHIN 50 CALENDAR DAYS.
- PHASE 3 MAY BE WORK ON CONCURRENTLY WITH PHASE 2 AND PHASE 4.
- TREE REMOVAL WITHIN PHASE 3 SHALL ONLY OCCUR BETWEEN NOVEMBER 1 AND MARCH 31.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE PHASE 3 EMBANKMENT WHILE PROTECTING THE NEWLY CONSTRUCTED PAVEMENTS. THERE IS APPROXIMATELY 98,000 CY OF PHASE 3 EMBANKMENT. THE ESTIMATED AMOUNT OF EXCAVATION ALONG THE WEST SIDE OF THE PROPOSED OPPORTUNITY ROAD IS 114,000 CY. THE CONTRACTOR MAY UTILIZE THIS EXCAVATION FOR THE PHASE 3 EMBANKMENT, STOCKPILE EMBANKMENT AT APPROVED LOCATIONS AND ELEVATIONS PRIOR TO PHASE 3, OR CROSS OPPORTUNITY ROAD AS PART OF THE HAUL ROUTE DURING PHASE 3. IF CROSSING OPPORTUNITY ROAD, AT A MINIMUM, A FLAGGER, SIGNS FOLLOWING TEMPORARY TRAFFIC CONTROL DETAIL SHEET 11 AND STEEL PLATES SHALL BE USED. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS TO OPPORTUNITY ROAD SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE CONTRACT.



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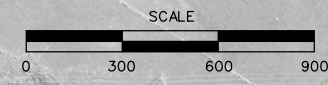


**NOTES:**

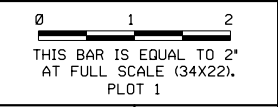
1. CLEARING AND GRUBBING OF ANY AREAS NOT SHOWN AS CLEARING AND GRUBBING BUT REQUIRED FOR GRADING OPERATIONS SHALL BE CONSIDERED INCIDENTAL TO THE GRADING OPERATIONS.
2. THE AREA SHOWN FOR CLEARING AND GRUBBING IS TAKEN FROM AN AERIAL PHOTO. THERE SHALL BE NO ADJUSTMENT TO THE PLAN QUANTITY FOR CLEARING AND GRUBBING OF THE AREAS SHOWN WITHOUT AN AUTHORIZED CHANGE TO THE INTENDED AREAS BY THE ENGINEER.
3. VEGETATION AND TREE RUBBISH SHALL BE BURNED AT AN APPROVED LOCATION OR DISPOSED OF OFF AIRPORT PROPERTY IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS. THE CONTRACTOR SHALL OBTAIN AN OPEN BURNING PERMIT FROM THE MISSOURI DEPARTMENT OF NATURAL RESOURCES AND THE MID-COUNTY FIRE PROTECTION DISTRICT PRIOR TO BURNING. THE CONTRACTOR SHALL USE AN AIR CURTAIN DESTRUCTOR IF REQUIRED BY MO DNR.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE VICINITY OF THE CLEARING AND GRUBBING PRIOR TO THE START OF THIS WORK. THE CONTRACTOR SHALL NOT IMPACT EXISTING UTILITIES THROUGH THE CLEARING AND GRUBBING OPERATION.
5. TREES TO BE TRIMMED ARE NOT ON AIRPORT PROPERTY. AVIGATION EASEMENTS EXIST AT THE TRIMMING ELEVATION SPECIFIED. NO TRIMMING SHALL BE ALLOWED BELOW THE EASEMENT ELEVATION UNLESS OTHERWISE SHOWN ON THE PLANS OR WITH THE WRITTEN CONSENT OF THE PROPERTY OWNER.
6. THE CONTRACTOR SHALL NOTIFY THE CITY OF CAMDENTON A MINIMUM OF 72 HOURS PRIOR TO WORKING OUTSIDE AIRPORT PROPERTY SO THAT THE CITY MAY NOTIFY THE PROPERTY OWNER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE TRIMMING ELEVATION IN THE FIELD. THE PLANS INDICATE THE AMOUNT OF FEET TO BE TRIMMED FROM EACH TREE LOCATION. THIS AMOUNT HAS BEEN DETERMINED FROM AN AERIAL SURVEY. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR MARKING THE TRIM LINE ON EACH TREE.
8. VEGETATION AND TREE RUBBISH FROM TRIMMING AND CLEARING OPERATIONS SHALL BE EITHER HAULED OFF AIRPORT PROPERTY AND NEIGHBORING PROPERTY AND HAULED TO AN APPROVED LOCATION OR HAULED TO THE APPROVED BURNING SITE AND BURNED IN ACCORDANCE WITH THE BURNING REQUIREMENTS FOR CLEARING AND GRUBBING.

**LEGEND**

- CLEARING AND GRUBBING
- GRADING FOR RUNWAY AND TAXIWAY EXTENSION
- EXISTING AIRPORT PROPERTY LINE
- EXISTING CITY OF CAMDENTON PROPERTY LINE

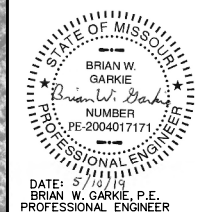


REVISIONS		
NUMBER	BY	DATE
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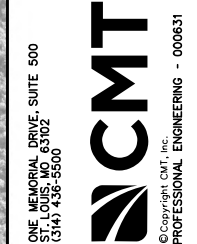


**CAMDENTON MEMORIAL-LAKE  
REGIONAL AIRPORT**  
CAMDENTON, MISSOURI

**RUNWAY 15-33 & PARALLEL TAXIWAY  
EXTENSION PRE-GRADING;  
EXTEND OPPORTUNITY ROAD**



DATE: 5/10/19  
BRIAN W. GARKIE, P.E.  
PROFESSIONAL ENGINEER



ONE MEMORIAL DRIVE, SUITE 500  
ST. LOUIS, MO 63102  
314.455.5000

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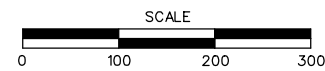
STATE PROJECT NO. 18-045B-1

FILE: 13\_Clearing\_and\_Grubbing\_Plan.dgn

DESIGN BY: BWG
DRAWN BY: KSW
CHECKED BY: TCS
APPROVED BY: BWG
DATE: APRIL 15, 2019
JOB No: 18048001
<b>CLEARING AND GRUBBING PLAN</b>
SHEET 13 OF 196 SHEETS



4/15/2019 K:\CamdentonMOAp\18048001\_Grading\Draw\Sheets\14\_TreeRemovals\_Runway\_15.dgn



LEGEND

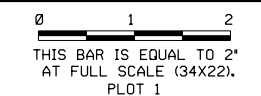
- TREE TO BE TRIMMED
- AIRPORT PROPERTY LINE
- - - AVIGATION EASEMENT

NOTES

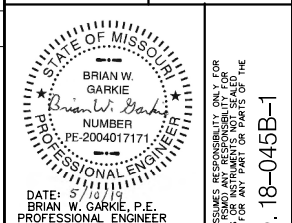
1. SEE TREE TRIMMING SCHEDULE SHEET FOR MORE INFORMATION.



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**CAMDENTON MEMORIAL-LAKE REGIONAL AIRPORT**  
 CAMDENTON, MISSOURI  
 RUNWAY 15-33 & PARALLEL TAXIWAY  
 EXTENSION PRE-GRADING;  
 EXTEND OPPORTUNITY ROAD



ONE MEMORIAL DRIVE, SUITE 500  
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 (314) 455-5500

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FILE: 14_TreeRemovals_Runway_15.dgn
DESIGN BY: BWG
DRAWN BY: BWG
CHECKED BY: TCS
APPROVED BY: BWG
DATE: APRIL 15, 2019
JOB No: 18048001
TREE TRIMMING PLAN RUNWAY 15 END
SHEET 14 OF 196 SHEETS



## TREE TRIMMING SCHEDULE - RWY 15 END

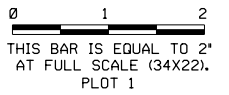
OBSTACLE NUMBER	APPROXIMATE OBSTACLE ELEVATION	EASTING	NORTHING	TRIM TO ELEVATION	APPROXIMATE PORTION OF TREE TO BE CUT (FT)
2	1076.20	1584372.24	782383.06	1068.82	7.4
3	1087.04	1584134.89	782587.17	1077.22	9.8
4	1086.21	1584233.62	782590.62	1076.08	10.1
5	1080.13	1584544.48	782099.48	1059.13	21.0
7	1075.50	1584559.25	782098.32	1058.90	16.6
8	1065.20	1584524.93	782103.50	1059.50	5.7
9	1091.19	1584573.41	782027.06	1056.80	34.4
10	1077.62	1584505.29	782135.31	1060.61	17.0
11	1091.25	1584557.81	782035.96	1057.25	34.0
12	1090.21	1584574.29	782044.19	1057.25	33.0
13	1078.66	1584576.52	782098.75	1058.68	20.0
15	1079.00	1584294.00	782394.85	1070.11	8.9
16	1084.72	1584287.41	782401.41	1070.37	14.4
17	1090.83	1584564.59	782068.23	1058.02	32.8
18	1084.07	1584216.41	782630.75	1077.36	6.7
19	1088.64	1584130.97	782443.29	1073.44	15.2
20	1086.06	1584154.81	782437.46	1072.98	13.1
21	1078.44	1584198.06	782460.28	1073.05	5.4
22	1091.76	1584223.50	782424.92	1071.78	20.0
23	1082.64	1584281.11	782419.06	1070.91	11.7
25	1084.30	1584248.74	782491.73	1073.25	11.1
27	1078.28	1584408.52	782497.47	1071.43	6.9
28	1079.74	1584391.91	782421.00	1069.59	10.1
29	1089.48	1584184.54	782405.40	1071.74	17.7
30	1079.21	1584572.66	781993.28	1055.90	23.3
32	1083.24	1584523.48	782350.31	1066.08	17.2
35	1076.42	1584567.67	782163.75	1060.55	15.9
37	1066.65	1584487.45	782199.45	1062.53	4.1
38	1086.51	1584559.20	782224.75	1062.30	24.2
39	1072.63	1584560.88	782248.11	1062.90	9.7
42	1090.59	1584134.66	782935.64	1086.51	4.1
43	1088.88	1584077.04	782793.20	1083.44	5.4
44	1085.47	1584116.37	782760.33	1082.07	3.4
45	1087.82	1584066.82	782487.89	1075.43	12.4
46	1111.34	1583211.94	782296.62	1080.941	30.4
47	1103.25	1583244.97	782227.54	1078.688	24.6
48	1101.44	1583352.06	782385.77	1081.569	19.9
49	1102.79	1583269.53	782554.92	1087.117	15.7
50	1106.32	1583393.42	782544.53	1085.298	21.0
51	1097.11	1583217.41	782640.42	1090.052	7.1
52	1108.30	1583335.35	782491.95	1084.615	23.7
53	1096.79	1583604.67	782741.54	1087.94	8.8
54	1111.41	1583628.59	782747.72	1087.808	23.6
55	1104.78	1583568.66	782783.74	1089.516	15.3
56	1098.07	1583631.10	782780.38	1088.65	9.4
57	1082.84	1583968.74	782564.25	1078.697	4.1
58	1106.61	1583627.53	782729.14	1087.324	19.3
60	1082.67	1583654.53	782324.51	1076.169	6.5
64	1086.98	1583595.14	782310.58	1076.535	10.4
65	1091.29	1583631.01	782297.05	1075.728	15.6
66	1085.68	1583668.53	782301.45	1075.378	10.3
69	1104.28	1583667.38	782934.22	1092.313	12.0
70	1097.82	1583570.66	782889.47	1092.319	5.5
71	1104.73	1583596.39	782817.28	1090.069	14.7
72	1087.37	1583970.88	782410.81	1074.578	12.8
73	1082.22	1583788.73	782489.54	1078.914	3.3
76	1099.55	1583666.45	782003.92	1067.422	32.1
77	1091.08	1583841.71	782491.99	1078.329	12.7
78	1080.92	1583929.69	782473.89	1076.766	4.1
79	1083.21	1583922.17	782477.21	1076.947	6.3
80	1081.62	1583907.28	782473.78	1077.038	4.6

OBSTACLE NUMBER	APPROXIMATE OBSTACLE ELEVATION	EASTING	NORTHING	TRIM TO ELEVATION	APPROXIMATE PORTION OF TREE TO BE CUT (FT)
84	1094.52	1583814.24	782968.99	1091.417	3.1
85	1111.51	1583578.46	782845.06	1091.035	20.5
87	1113.36	1583423.71	782809.81	1092.016	21.3
88	1095.07	1583503.94	782760.04	1089.687	5.4
89	1101.39	1583487.71	782776.40	1090.327	11.1
90	1098.37	1583528.64	782716.49	1088.216	10.2
91	1096.29	1583521.97	782728.31	1088.615	7.7
92	1097.31	1583483.37	782794.24	1090.858	6.4
93	1092.05	1583545.84	782687.51	1087.227	4.8
95	1098.77	1583770.44	783006.98	1092.977	5.8
96	1113.28	1583695.96	782963.91	1092.752	20.5
97	1098.39	1583750.08	782949.23	1091.686	6.7
98	1084.30	1583638.28	782279.21	1075.16	9.1
99	1096.10	1583556.72	782243.38	1075.218	20.9
100	1083.44	1583669.51	782214.37	1073.04	10.4
101	1079.56	1583570.05	782271.97	1075.816	3.7
103	1082.45	1583611.71	782224.48	1074.028	8.4
104	1081.40	1583676.94	782169.23	1071.742	9.7
105	1083.57	1583659.85	782283.88	1075.017	8.6
106	1081.46	1583673.87	782285.71	1074.891	6.6
107	1079.55	1583649.98	782264.61	1074.625	4.9
109	1109.12	1583649.54	782674.23	1085.582	23.5
110	1099.99	1583542.94	782506.62	1082.425	17.6
111	1103.86	1583497.56	782548.06	1084.098	19.8
112	1102.02	1583499.99	782422.36	1080.707	21.3
113	1103.41	1583677.13	782632.00	1084.109	19.3
114	1094.44	1583777.92	782634.89	1082.933	11.5
115	1107.91	1583270.61	782729.77	1091.78	16.1
116	1099.11	1583200.52	782689.24	1091.567	7.5
117	1093.73	1583684.57	782012.83	1067.433	26.3
118	1086.35	1583696.70	782009.57	1067.192	19.2
119	1084.18	1583365.17	782045.80	1072.343	11.8
120	1092.60	1583633.14	782119.56	1070.953	21.6
121	1092.37	1583552.52	782098.72	1071.41	21.0
122	1095.00	1583657.22	782106.65	1070.302	24.7
123	1105.72	1583593.34	782024.62	1068.901	36.8
124	1086.66	1583727.92	782301.65	1074.647	12.0
125	1080.76	1583775.69	782399.89	1076.683	4.1
126	1083.46	1583730.28	782365.84	1076.331	7.1
127	1110.02	1583531.20	782888.30	1092.779	17.2
128	1113.08	1583490.06	782863.74	1092.633	20.5
129	1106.94	1583530.51	782835.90	1091.386	15.5
130	1086.69	1583599.82	782256.47	1075.031	11.7
131	1111.92	1583455.41	782259.55	1076.911	35.0
133	1087.36	1583720.73	782285.41	1074.302	13.1
134	1092.68	1583725.07	782192.21	1071.759	20.9
135	1079.27	1584063.06	782460.11	1074.761	4.5
136	1082.36	1583945.18	782528.97	1078.045	4.3
139	1088.59	1584061.93	782487.40	1075.503	13.1
140	1096.58	1583531.47	782013.15	1069.373	27.2
141	1102.77	1583148.65	782583.60	1089.387	31.4
142	1092.12	1583054.21	782512.19	1088.656	3.5
143	1081.33	1583505.73	782239.40	1075.746	5.6

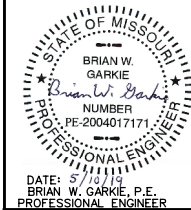
**SURVEYING NOTE:**

CONTRACTOR SHALL USE A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI TO LOCATE THE TREES TO BE TRIMMED AND VERIFY THE APPROXIMATE AMOUNT TO BE TRIMMED FROM THE HIGHEST POINT OF EACH TREE TO THE TRIM TO ELEVATION. THE SURVEYOR SHALL IDENTIFY EACH TREE AND LABEL THE AMOUNT TO BE TRIMMED ON A STAKE WITH RIBBON AT LEAST 7 CALENDAR DAYS PRIOR TO COMMENCEMENT OF TRIMMING. THE SURVEYOR SHALL BE ON SITE AT ALL TIMES DURING THE TRIMMING TO VERIFY THAT THE TRIM TO ELEVATION HAS BEEN MET. COPIES OF THE SURVEYOR'S FIELD BOOK SHALL BE PROVIDED TO THE RPR AND SHALL INCLUDE THE BEFORE AND AFTER TOP OF TREE ELEVATIONS. THE COST OF THE SURVEYING SHALL BE INCIDENTAL TO THE TREE TRIMMING WORK.

REVISIONS		
NUMBER	BY	DATE
△	KSW	5/10/19



**CAMDENTON MEMORIAL-LAKE  
REGIONAL AIRPORT**  
 CAMDENTON, MISSOURI  
**RUNWAY 15-33 & PARALLEL TAXIWAY  
EXTENSION PRE-GRADING;  
EXTEND OPPORTUNITY ROAD**



DATE: 5/10/19  
BRIAN W. GARKIE, P.E.  
PROFESSIONAL ENGINEER

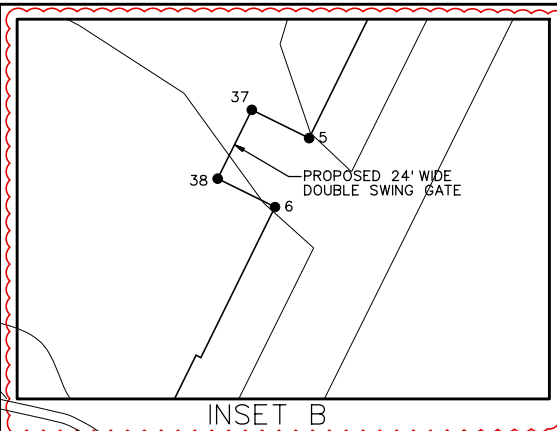
THE PROFESSIONAL SEAL, SIGNATURE, AND PERSONAL SEAL OF A PROFESSIONAL ENGINEER ASSUMES RESPONSIBILITY ONLY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR INSTRUMENTS NOT SEALED OR REFERENCED TO THIS PROJECT TO WHICH THIS PAGE REFERS.  
 STATE PROJECT NO. 18-045B-1

ONE MEMORIAL DRIVE, SUITE 500  
ST. LOUIS, MO 63102  
314.455.5000



FILE: 15_Tree_Trimming_Schedule_Rwy15.dgn
DESIGN BY: BWG
DRAWN BY: BWG
CHECKED BY: TCS
APPROVED BY: BWG
DATE: APRIL 15, 2019
JOB No: 18048001
TREE TRIMMING SCHEDULE RUNWAY 15 END
SHEET 15 OF 196 SHEETS

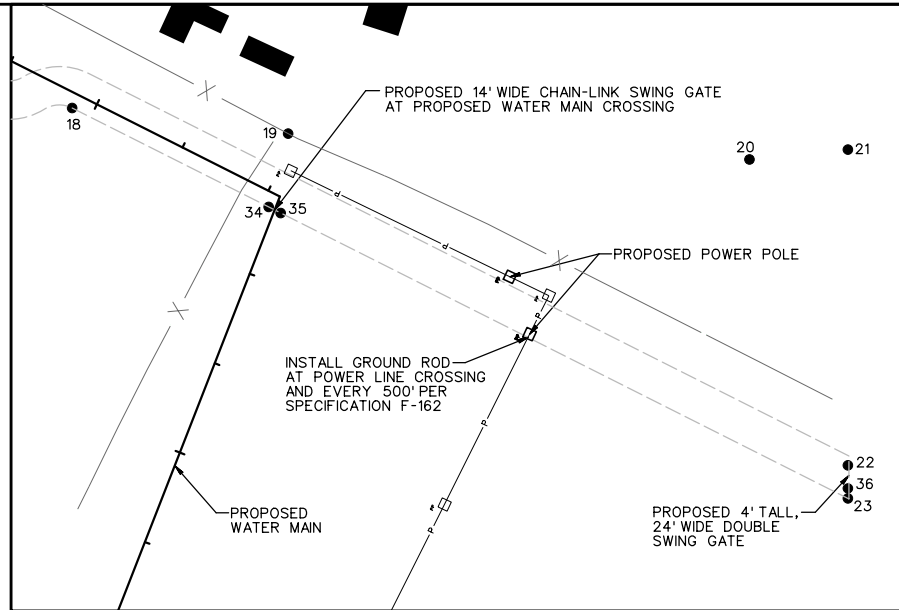
4/15/2019 K:\CamdentonMO\Ap\18048001\_Grading\Draw\Sheets\60\_Fence\_Plan.dgn



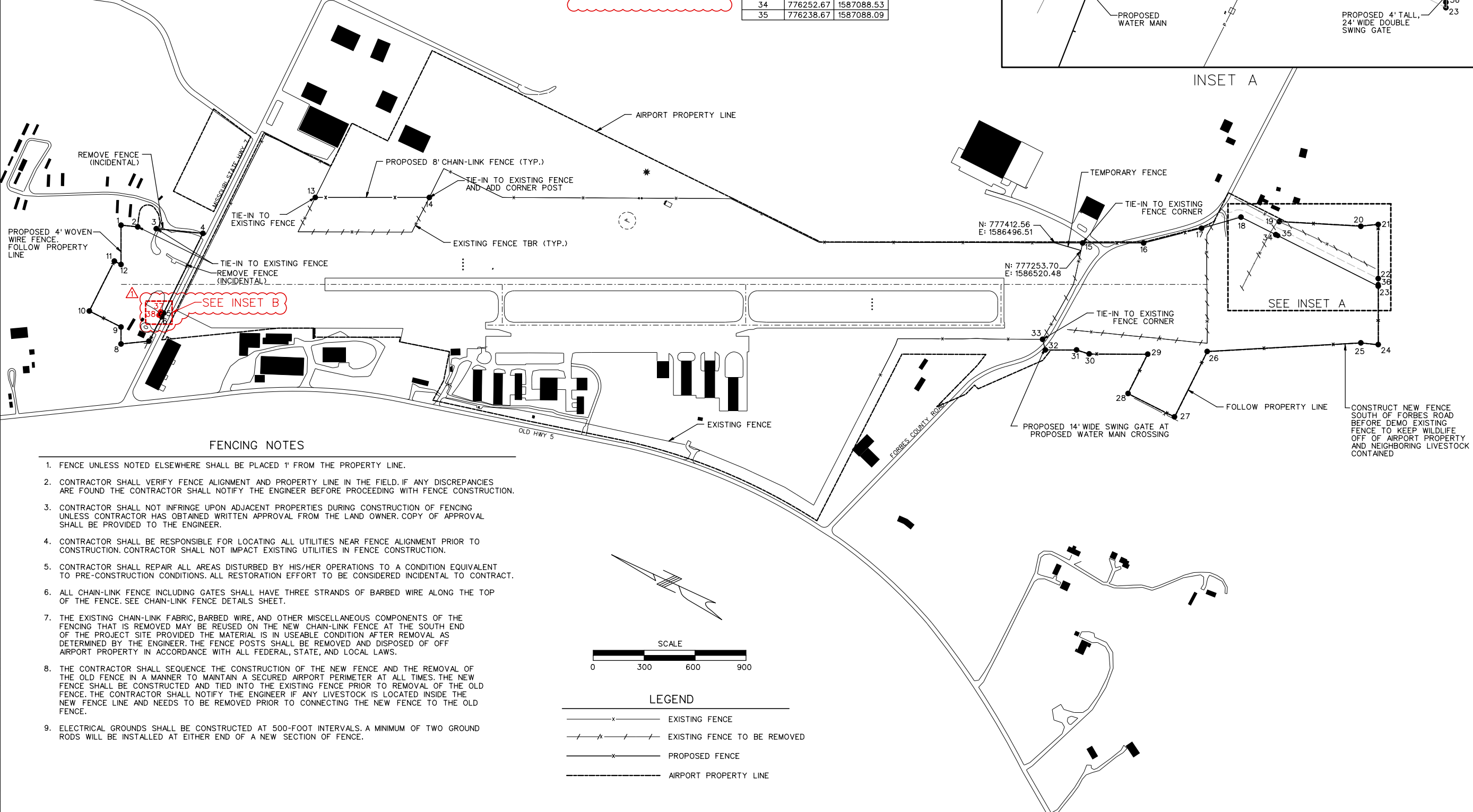
INSET B

WOVEN WIRE FENCE		
LOCATION	NORTHING	EASTING
1	782446.52	1584275.51
2	782353.14	1584308.00
3	782249.41	1584344.09
4	781988.27	1584434.96
5	782000.88	1583910.73
6	782001.45	1583886.74
7	782009.68	1583724.65
8	782151.84	1583640.55
9	782193.78	1583730.93
10	782403.05	1583738.06
11	782393.14	1584066.70
12	782349.07	1584065.52
19	776266.30	1587166.30
20	775819.00	1587344.27
21	775730.25	1587396.77
22	775596.14	1587107.80
36	775581.66	1587076.60
37	782020.87	1583911.22
38	782021.45	1583887.22

CHAIN-LINK FENCE		
LOCATION	NORTHING	EASTING
13	781477.35	1584905.00
14	780867.66	1585187.96
15	777263.47	1586564.89
16	776937.71	1586716.07
17	776665.01	1586938.32
18	776481.74	1587095.78
34	776252.67	1587088.53
35	776238.67	1587088.09
23	775577.29	1587067.18
24	775432.29	1586754.76
25	775529.69	1586720.87
26	776328.95	1586294.21
27	776341.57	1585863.36
28	776647.34	1585872.79
29	776639.77	1586132.21
30	776953.77	1585987.88
31	777031.18	1585978.30
32	777198.24	1585900.78
33	777238.95	1585950.74
34	776252.67	1587088.53
35	776238.67	1587088.09

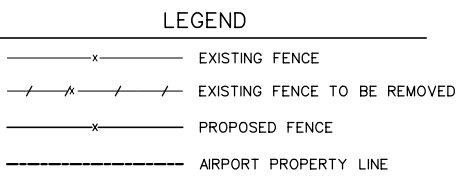


INSET A

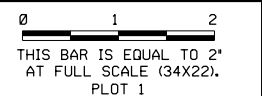


FENCING NOTES

1. FENCE UNLESS NOTED ELSEWHERE SHALL BE PLACED 1' FROM THE PROPERTY LINE.
2. CONTRACTOR SHALL VERIFY FENCE ALIGNMENT AND PROPERTY LINE IN THE FIELD. IF ANY DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH FENCE CONSTRUCTION.
3. CONTRACTOR SHALL NOT INFRINGE UPON ADJACENT PROPERTIES DURING CONSTRUCTION OF FENCING UNLESS CONTRACTOR HAS OBTAINED WRITTEN APPROVAL FROM THE LAND OWNER. COPY OF APPROVAL SHALL BE PROVIDED TO THE ENGINEER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES NEAR FENCE ALIGNMENT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOT IMPACT EXISTING UTILITIES IN FENCE CONSTRUCTION.
5. CONTRACTOR SHALL REPAIR ALL AREAS DISTURBED BY HIS/HER OPERATIONS TO A CONDITION EQUIVALENT TO PRE-CONSTRUCTION CONDITIONS. ALL RESTORATION EFFORT TO BE CONSIDERED INCIDENTAL TO CONTRACT.
6. ALL CHAIN-LINK FENCE INCLUDING GATES SHALL HAVE THREE STRANDS OF BARBED WIRE ALONG THE TOP OF THE FENCE. SEE CHAIN-LINK FENCE DETAILS SHEET.
7. THE EXISTING CHAIN-LINK FABRIC, BARBED WIRE, AND OTHER MISCELLANEOUS COMPONENTS OF THE FENCING THAT IS REMOVED MAY BE REUSED ON THE NEW CHAIN-LINK FENCE AT THE SOUTH END OF THE PROJECT SITE PROVIDED THE MATERIAL IS IN USEABLE CONDITION AFTER REMOVAL AS DETERMINED BY THE ENGINEER. THE FENCE POSTS SHALL BE REMOVED AND DISPOSED OF OFF AIRPORT PROPERTY IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS.
8. THE CONTRACTOR SHALL SEQUENCE THE CONSTRUCTION OF THE NEW FENCE AND THE REMOVAL OF THE OLD FENCE IN A MANNER TO MAINTAIN A SECURED AIRPORT PERIMETER AT ALL TIMES. THE NEW FENCE SHALL BE CONSTRUCTED AND TIED INTO THE EXISTING FENCE PRIOR TO REMOVAL OF THE OLD FENCE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY LIVESTOCK IS LOCATED INSIDE THE NEW FENCE LINE AND NEEDS TO BE REMOVED PRIOR TO CONNECTING THE NEW FENCE TO THE OLD FENCE.
9. ELECTRICAL GROUNDS SHALL BE CONSTRUCTED AT 500-FOOT INTERVALS. A MINIMUM OF TWO GROUND RODS WILL BE INSTALLED AT EITHER END OF A NEW SECTION OF FENCE.

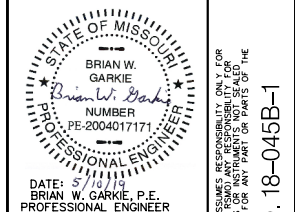


REVISIONS		
NUMBER	BY	DATE
1	KSW	5/8/19



**CAMDENTON MEMORIAL-LAKE REGIONAL AIRPORT**  
CAMDENTON, MISSOURI

**RUNWAY 15-33 & PARALLEL TAXIWAY**  
**EXTENSION PRE-GRADING;**  
**EXTEND OPPORTUNITY ROAD**



FILE: 60_Fence_Plan.dgn
DESIGN BY: BWG
DRAWN BY: KSW
CHECKED BY: TCS
APPROVED BY: BWG
DATE: APRIL 15, 2019
JOB No: 18048001
<b>FENCE PLAN</b>
SHEET 60 OF 196 SHEETS