

May 18, 2022

To: Plan Holders for Improvements to the
Houston Memorial Airport
Houston, Missouri
MoDOT Project No. 21-065A-1

Transmitted herewith is Addendum **No. 1** to the Issued for Bid Contract Documents, Specifications and Plans dated April 20, 2022 for Improvements to the Houston Memorial Airport

Schedule I: Runway Lighting Rehabilitation

Schedule II: REIL's and PAPI's Rehabilitation

Schedule III: Taxiway Lighting Rehabilitation



Sincerely,

Jviation, a Woolpert Company

Zach Ambariantz, P.E.
Project Manager

**ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS, SPECIFICATIONS AND PLANS
FOR IMPROVEMENTS TO THE
HOUSTON MEMORIAL AIRPORT
HOUSTON, MISSOURI
MODOT PROJECT NO. 21-065A-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, Specifications and Plans are modified as follows as of May 18, 2022:

1. CONTRACT DOCUMENTS/SPECIFICATIONS

Contract Documents – Proposal/Forms – Proposal Form

Section: Section B, Bid Proposal Summary and Schedules I, II and III

Revision: Replace bid proposal form in its entirety.

Justification: The proposal forms were updated to reflect quantity changes for line items L-115b Schedule I, L-108a Schedule II, and L-109a Schedule II, to reflect changes to the PAPI being on its own circuit. The quantities have been updated in the contract documents and plans to reflect the updated proposal sheets.

Specifications – L-109 AIRPORT TRANSFORMER VAULT AND VAULT EQUIPMENT

Section: 109-7.1

Revision: Revise Item L-109a to read,

“Item L-109a Install New L-829 Constant Current Regulator, Ferroresonant Type – per each”

Justification: New CCRs will be L-829 models.

Specifications – L-125 INSTALLATION OF AIRPORT LIGHTING SYSTEMS

Section: 125-2.10

Revision: The section shall be updated to read, “**125-2.10 PRECISION APPROACH PATH INDICATOR (PAPI)**. The light units for the PAPI shall meet the requirements of AC 150/5345-28, Type L-881, Style B, Class I, LED.

Justification: The PAPI equipment shall be a two box current driven LED model.

2. PLANS

E201 - (21 of 29) Update sheet to add PAPI circuit.

Justification: The PAPI systems will be powered by their own circuit.

E202 - (22 of 29) Update sheet to add PAPI circuit.

Justification: The PAPI systems will be powered by their own circuit.

E203 - (23 of 29) Update sheet to add PAPI circuit.

Justification: The PAPI systems will be powered by their own circuit.

E204 - (24 of 29) Update sheet to add PAPI circuit.

Justification: The PAPI systems will be powered by their own circuit.

E206 - (26 of 29) Update sheet to add PAPI circuit.

Justification: The PAPI systems will be powered by their own circuit.

E250 - (27 of 29) Remove Detail 2, 2" RGS CONDUIT COUPLING AND RETAINER from sheet.

Justification: This detail is not used during the project.

E251 - (28 of 29) Add Detail 4, PAPI LIGHT UNIT LAYOUT, and Detail 5 PAPI ELEVATION DETAIL, to the sheet.

Justification: This details provide additional information for the PAPI installation.

E252 - (29 of 29) Detail 2, REIL INSTALLATION SECTION DETAIL, revise "L-849V" to read "L-849I" in note pointing to REIL unit.

Justification: The REIL will be current driven.

E252 - (29 of 29) Add Detail 3, EXISTING TRANSCLOSURE DETAIL, to the sheet.

Justification: The detail provides additional information for the work to be done in the transclosure.

3. **QUESTIONS**

A. *Will the existing conduit for the PAPI's be utilized or removed?*

Answer: See the updated plan sheets E201-206. The PAPI circuit wire will be pulled through the new conduit for the runway edge lights. The existing conduit for the PAPI's will be abandoned in place.

B. *What is the survey tolerance from the runway centerline elevation to the PAPI's?*

Answer: The PAPI's shall be installed so that the light beam centers are +/- 1 foot of the adjacent runway centerline elevation. Please see the detail in the attached plan sheet E251.

C. *Is the wire and conduit that goes to the wind cone included in the quantities?*

Answer: Yes, the quantity to replace the existing wire with new wire, counterpoise and conduit to the wind cone is included in the quantities.

D. *Will the existing PAPI/REIL concrete pads be utilized or replaced?*

Answer: The existing concrete pads for the REIL's and PAPI's shall be removed and incidental per the items L-125g and L-125i respectively. New concrete pads shall be constructed per the plans and specifications and are considered incidental per the items L-125h and L-125j.

E. *There are three regulators in the vault now, will all three be replaced?*

Answer: The two oldest regulators shall be removed and disposed of per the direction of the RPR. The removal shall be incidental to item L-109a. The newest regulator shall be kept in the vault as a back up to the Airport. Two new regulators shall be installed per the plans.

F. *Is everything in the vault being replaced?*

Answer: The regulators, respective isolation transformers, aviation photocell, radio controller, and all associated wiring shall be replaced with new equipment in the vault. All items shall be considered incidental to the respective bid items. Please see plan sheet E252 for more information.

4. PRE-BID MEETING AGENDA AND SIGN-IN SHEET

The pre-bid meeting agenda, sign-in sheet and plan holder's list are attached to this addendum.

The final questions will be accepted until **3:00 p.m. (C.S.T.) Friday, May 20, 2022.**

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

HOUSTON MEMORIAL AIRPORT

MoDOT PROJECT NO. 21-065A-1

DATE: May 10, 2022

TIME: 10:00 A.M.

PRE-BID CONFERENCE MINUTES

1. RECORDING OF ATTENDEES

- A. Recording of attendees, firm represented, address, phone number and email **are attached in the sign-in sheet.**

2. INTRODUCTIONS & PROJECT DESCRIPTION

- A. City of Houston Representatives
- Scott Avery, City Administrator 417-967-3348 (o)
- B. Airport Engineering – Jviation, a Woolpert Company
- Laura Riegel – Phase Engineer 573-418-1767 (c)
 - Joe Pestka – Project Director 573-418-0983 (c)
- C. MoDOT Aviation
- Tom Power, Aviation Construction Inspector 573-526-7913 (o)
- D. Project Schedule (Total 35 Calendar Days)
- Schedule I – Runway 16/34 Lighting Rehabilitation
 - Schedule II – REIL's & PAIP's Rehabilitation
 - Schedule III – Taxiway Lighting Rehabilitation

E. Work Items – FAA Specifications

ITEM	DESCRIPTION	UNIT	SCHEDULE I	SCHEDULE II	SCHEDULE III
C-105a	Mobilization	LS	1	1	1
L-108a	Install #8AWG, L824C, 500V Wire	LF	8,610	0	4,250
L-108b	Install #6AWG, Bare Cooper Counterpoise Including Ground Rods and Terminations	LF	8,610	0	2,500
L-109a	Install New L-828 Constant Current Regulator, Ferroresonant Type	EA	1	0	0
L-109b	Install L-854 Radio Controller in Existing Vault	EA	1	0	0
L-110a	Install 1-2" SCH. 40 PVC Duct, Direct Earth Buried (DEB)	LF	8,610	0	2,000
L-115a	Install L-876B Junction Box, Complete	EA	6	0	6
L-115b	Install RL-867B Junction Box, Complete	EA	0	0	2
L-125a	Remove Stake Mounted Runway/Taxiway Light, Completed	EA	33	0	0
L-125b	Install L-861 Runway Edge Light, Base Mounted	EA	33	0	0
L-125c	Remove Stake Mounted Runway Threshold Light, Complete	EA	16	0	0
L-125d	Install L-861 E Runway Threshold Light, Base Mounted	EA	16	0	0
L-125e	Remove Stake Mounted Taxiway Edge Light, Completed	EA	25	0	29
L-125f	Install L-861T (L) Taxiway Edge Light, Base Mounted	EA	26	0	30
L-125g	Remove REIL System, Complete	EA	0	2	0
L-125h	Remove L-849I REIL	EA	0	2	0
L-125i	Remove PAPI System, Complete	EA	0	2	0
L-125j	Install L-881 PAPI System	EA	0	2	0

3. BID OPENING

A. Date: Tuesday, May 24th, 2022, at 10:00 A.M. (CST)

B. Location: City of Houston

City Council Chambers
601 s. Grand Ave.
Houston, MO 65483

- 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 through B-36.
All pages B-1 through B-22 will need to be submitted with bid.
- E. Award: Notice to Bidders, Section 1, Page 2 – lowest qualifying bidder no split awards.

4. DBE GOALS

The requirement of 49 CFR Part 26 apply to this contract. It is the policy of the City of Houston to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

Contract shall provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers that were used on the project through race neutral mean.

4.00% of Contract Amount Required.

5. QUALIFICATION OF BIDDERS

- A. Qualifications shall be furnished per Section 20-02. Each bidder shall furnish the Owner satisfactory evidence of his or her competency and financial responsibility to perform the proposed work. This includes resumes of key personnel, equipment list and a list detailing experience on similar construction projects.

6. ESTIMATED CRITICAL CONTRACT DATES

- A. Contract Award: Fall 2022 or Spring 2023 (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: Fall 2022 or Spring 2023, Refer to Section 3-37, Paragraph 80-02.
- C. Project Time: 35 Calendar Days total for Phase I, II, and III, from start date after Notice to Proceed. The project day count will be suspended in the event of a winter shutdown. Refer to Section 3-36, Paragraph 80-08 for more information.

7. BONDING

- A. Payment Bond: 100% of Bid Amount, Refer to Section 30-05
- B. Performance Bond: 100% of Bid Amount, Refer to Section 30-05

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. Federal or MoDOT State prevailing wage rates are required for this project, whichever is higher per job classification. Refer to Section 4-44, Part D Federal and State Wages.

10. ENGINEER'S FIELD OFFICE

Not required refer to Section 3-28, paragraph 60-05 for more information.

11. LIQUIDATED DAMAGES

- A. The Contractor shall be assessed a liquidated damage of **\$1,000/calendar day(s)** for each day that the work remains uncompleted beyond the contract period for **all Schedules**. Reference SECTION 80-08 FAILURE TO COMPLETE ON TIME.

SCHEDULE	LIQUIDATED DAMAGES COST	ALLOWED CONSTRUCTION TIME
Schedule I, II, III	\$1,000/Calendar Day(s)	35 Calendar Days

In addition, **up to \$1,730 per calendar day for the Construction manager, and up to \$1,390 per calendar day for each RPR, plus any incurred expenses** (additional testing, per diem, lodging, etc.) will be charged to the Contractor for that time which exceeds the number of calendar day(s) allowed. Reference the LOCAL PROVISIONS in Section 4, Part C for more information.

The maximum construction time for the overall project is **35** calendar days.

Please see the Phasing Sheets, G050 through G054, of the Construction Drawings for more information on the scheduling/sequencing of work.

- B. 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.

- C. The Engineer and City have attempted to estimate the amount of time needed for construction management services by the Engineer. **If unusually long working days or extended working days are required, reimbursement for unscheduled employment of the engineer may be required as shown in Section 4 of the Contract Documents, under “Liquidated Damages”.**

12. CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

- A. Intent is to minimize disruption to airport operations and provide safety to construction workers as well as aircraft operations at the airport. See Sheets G050 -G054 for detailed phasing requirements.
- B. The Contractor shall review the and adhere to the requirements of the CSPP – See Appendix B.
- C. Safety Plan Compliance Document.

The Contractor shall submit a Safety Plan Compliance Document (SPCD) to the Engineer and Airport Operator prior to Notice to Proceed, as required by FAA Advisory Circular (AC) 150/5370-2G “Operational Safety on Airports During Construction”.

The items to be included in the SPCD include but not limited to.

- 1. Specific hazard equipment and lighting to be used on the project.
- 2. Construction equipment heights.
- 3. Contractor’s contacts, and subcontractor’s contacts (including afterhours contact procedures).
- 4. List of construction personnel that will require security badging.
- 5. Statements on how the Contractor will adhere to the CSPP.
- 6. If the Contractor plans to deviate from the CSPP, these deviations shall be noted in SPCD and submittal for approval by the Engineer and Airport. (Examples will be made available to assist the Contractor with this requirement).

Refer to Section 2.4.2, page 2-4 of the AC 250/5370-2G for additional details. This AC is included in the Contract Documents in Appendix A.

13. BUY AMERICAN PRODUCTS

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

14. MISCELLANEOUS

- A. Survey Requirements – Refer to Section 50-06, Construction Layout and Stakes.
- B. The Contractor is responsible for acquiring any necessary permits.
- C. Contractor Access: The Contractor shall maintain gate guards at all times during operations while gates are open.
- D. An FAA form 7460-2 has been submitted for construction. Any equipment/machinery exceeding 30 feet above ground level will require an additional 7460. In the event the Contractor has equipment that exceeds 30 feet above ground level, Jviation will assist the Contractor with the submittal of the 7460.
- E. The Contractor shall be responsible for verifying existing locations and depths of utilities as required for construction activities.
- F. Haul Routes – Sheet G050 through G054 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. Airport radios shall be required and must be monitored at all times. Unicom number is 122.9.
- H. Award date will depend on receipt of federal funds. Bids can be held up to 120 calendar days. (120 days from May 24, is September 21). This project is FAA/MoDOT funded so timeline will be dependent on MoDOT Aviation funding availability and approval.
- I. The attached bid tab summary sheet and proposal sheets were discussed to review what is expected of the contractor to be submitted with each bid.

15. ADDENDUM UPDATE

- A. Addendum No. 1 shall include a plan sheet with the vault equipment layout and bid proposal & schedule sheets.
- B. Additional items for addenda.

16. QUESTIONS

- A. Questions will be taken via written format until **Friday, May 20, 2022 at 3:00 p.m. (CST)** by email to bid.info@woolpert.com (CC: laura.riegel@woolpert.com). Any last addendum items should be issued no later than 4:00 p.m. Monday, May 23, 2022.
- B. Questions discussed in pre-bid meeting are addressed in the addendum no. 1.

17. PROJECT SITE TOUR

MEMPHIS MEMORIAL AIRPORT

Houston, Missouri

MoDOT PROJECT NUMBER: 21-065A-1

BID OPENING

DATE: May 24, 2022

TIME: 10:00 A.M. (LOCAL TIME)

Schedule I: Runway Lighting Rehabilitation

Schedule II: REIL's and PAPI's Rehabilitation

Schedule III: Taxiway Lighting Rehabilitation

	Engineer's Estimate				
Contract Proposal (B-1 through B-22)	√				
Bid Proposal (signed)	√				
Bid Schedule Sheet	√				
Receipt of Bid Addendum No. 1 and X (Section B-4)	√				
Federal Tax Question (B-7)	√				
Buy America Certification	√				
Buy America Waiver Request	√				
Buy America Conformance Listing	√				
Worker Eligibility Verification/including e-Verify	√				
DBE Participation Form (4% Goal)	√				
Contractor Information/Qualifications (B-20)	√				
List of equipment, resume for personnel, list of completed projects within last 5 years, list of projects currently under construction, MoDOT evidence of "competency letter"	√				
Signature of Bidder	√				
Bid Bond	√				
Contractor in good standing with MO Secretary of State	√				
Debarment Check (System for Award Management http://www.sam.gov)	√				
Schedule I	\$ -	\$ -	\$ -	\$ -	\$ -
Total Cost	\$ -	\$ -	\$ -	\$ -	\$ -

- j. The BIDDER, by submission of a proposal, acknowledges that award of this contract is subject to the provisions of the David Bacon Act and the Missouri Prevailing Wage Law. The BIDDER accepts the requirement to pay prevailing wages for each classification and type of worker as established in the attached wage rate determinations as issued by the United States Department of Labor and the Missouri Division of Labor Standards. The BIDDER further acknowledges and accepts their requirement to incorporate the provision to pay the established prevailing wages in every subcontract agreement entered into by the Bidder under this project. The highest rate between the two (Federal and State) for each job classification shall be considered the prevailing wage.
- k. Compliance Reports (41 CFR Part 60-1.7): Within 30 days after award of this contract, the Contractor/Subcontractor shall file a compliance report (Standard Form 100) if s/he has not submitted a complete compliance report within 12 months preceding the date of award. This report is required if the Contractor/Subcontractor meets all of the following conditions:
- a. Contractors/Subcontractors are not exempt based on 41 CFR 60-1.5.
 - b. Has 50 or more employees.
 - c. Is a prime contractor or first tier subcontractor.
 - d. There is a contract, subcontract, or purchase order amounting to \$50,000 or more
- l. The undersigned acknowledges receipt of the following addenda:

Addendum No. _____, dated _____	Date Received _____
Addendum No. _____, dated _____	Date Received _____
Addendum No. _____, dated _____	Date Received _____
Addendum No. _____, dated _____	Date Received _____
Addendum No. _____, dated _____	Date Received _____

REPRESENTATIONS BY BIDDER

By submittal of a proposal (bid), the BIDDER represents the following:

- a. The BIDDER has read and thoroughly examined the bid documents including all authorized addenda.
- b. The BIDDER has a complete understanding of the terms and conditions required for the satisfactory performance of project work.
- c. The BIDDER has fully informed themselves of the project site, the project site conditions and the surrounding area.
- d. The BIDDER has familiarized themselves of the requirements of working on an operating airport and understands the conditions that may in any manner affect cost, progress or performance of the work
- e. The BIDDER has correlated their observations with that of the project documents.
- f. The BIDDER has found no errors, conflicts, ambiguities or omissions in the project documents, except as previously submitted in writing to the owner that would affect cost, progress or performance of the work.
- g. The BIDDER is familiar with all applicable Federal, State and local laws, rules and regulations pertaining to execution of the contract and the project work.
- h. The BIDDER has complied with all requirements of these instructions and the associated project documents.

CERTIFICATIONS BY BIDDER

- a. The undersigned hereby declares and certifies that the only parties interested in this proposal are named herein and that this proposal is made without collusion with any other person, firm or corporation.

1. The applicant represents that it is () is not () a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2. The applicant represents that it is () is not () is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

g. Certification Regarding Lobbying (31 U.S.C. § 1352, 2 CFR § 200 Appendix II(J), 49 CFR Part 20, Appendix A)

The Bidder or Offer certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

4. No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employer of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
5. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
6. The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for such failure.

h. Buy American Certification: (Title 49 U.S.C. § 50101)

The Contractor agrees to comply with 49 U.S.C. § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued List.

311

312 **Certificate of Buy American Compliance for Manufactured Products**

313

314 As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification
315 statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC §
316 50101 by selecting one on the following certification statements. These statements are mutually exclusive.
317 Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter “X”.

318 ☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

- 319 a) Only installing steel and manufactured products produced in the United States, or;
- 320 b) Installing manufactured products for which the Federal Aviation Administration (FAA) has
- 321 issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American
- 322 Waivers Issued listing, or;
- 323 c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition
- 324 Regulation Subpart 25.108.

325 By selecting this certification statement, the bidder or offeror agrees:

- 326 1. To provide to the Owner evidence that documents the source and origin of the steel and
- 327 manufactured product;
- 328 2. To faithfully comply with providing U.S. domestic product;
- 329 3. To furnish U.S. domestic product for any waiver request that the FAA rejects;
- 330 4. To refrain from seeking a waiver request after establishment of the contract, unless
- 331 extenuating circumstances emerge that the FAA determines justified.

332 ☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American

333 Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49

334 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the

335 apparent low bid agrees:

- 336 1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver
- 337 request and required documentation that supports the type of waiver being requested.
- 338 2. That failure to submit the required documentation within the specified timeframe is cause
- 339 for a non-responsive determination may result in rejection of the proposal.
- 340 3. To faithfully comply with providing U.S. domestic products at or above the approved U.S.
- 341 domestic content percentage as approved by the FAA.
- 342 4. To refrain from seeking a waiver request after establishment of the contract, unless
- 343 extenuating circumstances emerge that the FAA determines justified.

344 **Required Documentation**

345 **Type 3 Waiver** - The cost of the item components and subcomponents produced in the United

346 States is more that 60 percent of the cost of all components and subcomponents of the “item”. The

347 required documentation for a type 3 waiver is:

- 348 a) Listing of all product components and subcomponents that are not comprised of 100 percent
- 349 U.S. domestic content (Excludes products listed on the FAA Nationwide Buy American
- 350 Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart
- 351 25.108; products of unknown origin must be considered as non-domestic products in their
- 352 entirety)
- 353 b) Cost of non-domestic components and subcomponents, excluding labor costs associated with
- 354 final assembly at place of manufacture.
- 355 c) Percentage of non-domestic component and subcomponent cost as compared to total “item”
- 356 component and subcomponent costs, excluding labor costs associated with final assembly at
- 357 place of manufacture.

Type 4 Waiver – Total cost of project using U.S. domestic source product exceeds the total project cost using non-domestic product by 25 percent. The required documentation for a Type 4 of waiver is:

- a) Detailed cost information for total project using U.S. domestic product
- b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date

Signature

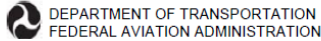
Company Name

Title

BUY AMERICA WAIVER REQUEST

Title 49 U.S.C Section 50101 (b)(3)

For Airfield Development Projects funded under the Airport Improvement Program



OMB CONTROL NUMBER: ####-####
EXPIRATION DATE: MM/DD/YYYY

Buy American Content Percentage Calculation Worksheet

Company Name: _____ Date: _____
Address: _____ Point of Contact: _____
Telephone: _____ Fax: _____ Email: _____
Product Structure: Multi-Level Bill of Materials (through level 2 only)
Item Description: _____ Total Material Cost: _____
Address of Final Assembly Location: _____ US Content (%): _____
FAA Item Number (if applicable): _____ Other (%): _____

The undersigned certifies that this information is true and accurate to the best of their knowledge.¹

Signature: _____

Name: _____

Level (0, 1, 2)	Part Number	Description	Quantity Per Unit	Unit of Measure	Price/Unit of Measure	US Origin Price/Unit of Measure ²	US Origin* Cost/Each	Other Price/Unit of Measure	Other Cost/Each

¹ A false certification represents a violation of 18 U.S.C § 1001 and 49 U.S.C § 47126. Signatory has the burden of proof to establish compliance.

² Items listed in Federal Acquisition Regulation Part 25.104 may be counted as US Origin, however should include note stating that item is exempt in 25.104.

FAA Form 5100-136 (1/16)

Certification Signature

Bidder hereby requests a waiver to Buy America preferences based upon Section 50101(b)(3) for the equipment identified above. The bidder certifies that _____% of the cost of components and subcomponents comprising the equipment are produced in the United States and that final assembly occurs within the United States.

I hereby certify the above information is accurate and complete.

Bidder's Firm Name

Date



OMB CONTROL NUMBER: 2120-0569
EXPIRATION DATE: 8/31/2019

Buy American Preferences – Final Assembly Questionnaire

To assist the Federal Aviation Administration (FAA) in making the determination of whether final assembly of the product occurs in the United States, please complete and submit this questionnaire when requesting a Buy American Waiver under 49 USC § 50101(b)(3)(A).

1. Please provide a description of the assembly process occurring at the specified final location in the United States.
2. Please describe the final assembly process and its various operations.
3. How long does the final assembly process take to complete?
4. Please provide a description of the resources used to conduct the assembly of the product at the specified location in the United States.
5. How many employees are involved in the final assembly process and what is the general skill level of those employees?
6. What type of equipment is used during the final assembly process?
7. What is a rough estimate of the associated cost to conduct final assembly of the product at the specified location in the United States?

The undersigned certifies that this information is true and accurate to the best of their knowledge. A false certification represents a violation of 18 U.S.C § 1001 and 49 U.S.C § 47126. Signatory has the burden of proof to establish compliance.

Signature: _____

Name: _____

FAA Form 5100-137 (4/19) SUPERSEDES PREVIOUS EDITION

BUY AMERICA CONFORMANCE LISTING

Title 49 U.S.C Section 50101 (b)

For Airfield Development Projects funded under the Airport Improvement Program

- Preparation of a Component Cost Calculation Table is not necessary for equipment listed on the FAA national listing: http://www.faa.gov/airports/aip/buy_american/
- Bidder shall submit a listing of equipment it proposes to install on the project that is included on the current National Buy American conformance list.

Equipment Type	Name of Manufacturer	Product Number

Certification Signature:

Bidder hereby certifies that the above listed equipment, which we propose for installation on the subject project, is on the current National Buy America Conformance list as established at:

http://www.faa.gov/airports/aip/buy_american/

I hereby certify the above information is accurate and complete.

Bidder's Firm Name

Date

Signature

**WORKER ELIGIBILITY VERIFICATION AFFIDAVIT FOR ALL
CONTRACT AGREEMENTS IN EXCESS OF \$50,000
(Local match in excess of \$5,000)**

(for joint ventures, a separate affidavit is required for each business entity)

STATE OF _)

) ss

COUNTY OF _)

On this _ day of _, 20_, before me appeared _, personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, deposed as follows:

My name is _, and I am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the state or any of its political subdivisions to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities:

I am the _ of _, and I am duly authorized, directed, and/or empowered to act officially and properly on behalf of this
(title name) (business name)
business entity.

I hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify information (employment eligibility) of newly hired employees working in connection to work under the within contract agreement. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.

In addition, I hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection to work under the within contract agreement, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).

I am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 through 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.

I acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

(Affiant Signature)

Subscribed and sworn to before me this _ day of _, 20____.

(Notary Public)

My commission expires:

[Documentation of enrollment/participation in a federal work authorization program is attached. Acceptable enrollment and participation documentation consists of the following two pages of the E- Verify Memorandum of Understanding: (1) A valid, completed copy of the first page identifying the business entity; and (2) A valid copy of the signature page completed and signed by the business entity, the Social Security Administration, and the Department of Homeland Security – Verification Division.]

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

The information shown in this section must be completed when a DBE contract goal has been established. The percentage must equal or exceed the DBE contract goal. If the percentage is below the contract goal, then the bidder must submit complete written documentation of good faith efforts taken to meet the DBE contract goal.

Only those firms currently certified as DBEs by the Missouri Department of Transportation (MoDOT), City of St. Louis, Metro, City of Kansas City, and Kansas City Area Transportation Authority are eligible to participate as DBEs on this contract. A list of these firms is available on MoDOT's Office of External Civil Rights webpage at the following address:

<http://www.modot.org/dbe-program>

- a. The undersigned submits the following list of DBEs to be used in accomplishing the work of this contract. The work, supplies or services, applicable value and percent of total federal contract each DBE is to perform or furnish is as follows:
- b. Joint venture with a DBE. The undersigned submits the following list of bid items the DBE prime is responsible for and any items that will be subcontracted out are noted with an asterisk or a similar notation. The work, applicable value and percentage of total federal contract the DBE prime is responsible for are as follows:

(A) DBE Name and Address	(B) Bid Item Number(s) Or Work Performed	(C) Dollar Value of DBE Work **	(D) Percent Applicable to DBE Goal (100%, 60%)	(E) Dollar Amount Applicable to DBE Goal (C x D)	(F) Percent of Total Contract (C / Total Contract Amount)
TOTAL DBE PARTICIPATION				\$	%

**Cannot exceed contract amount for given item of work.

Truck services credited at 100% if the DBE owns the trucks or is leasing from a DBE firm.

Merchant wholesalers (supply) are credited at 60%.

Brokered services will only receive credit for fees.

(Please reproduce the above sheet if additional space is needed.)

CONTRACTOR'S STATEMENT OF QUALIFICATIONS

Qualifications shall be furnished with the bid proposal as described in Section 20 of the General Provisions, including resumes of all key personnel detailing experience on similar airfield construction projects as stated in paragraph 2 of Section 2, Instructions to Bidders.

Name of firm, address with zip code

Project Contact Name.....

Area Code/Telephone Number

Area Code/Fax Number

Federal I.D. Number

The Contractor is **required** to perform an amount equal to or at least **15 percent** of the total contract cost.

% of work by Contractor

No. of permanent employees

No. of years in business

Have you done business under different name? If so, please give name and location.

- Provide list of equipment available for the work.
- Provide resumes of all key personnel that would be available.
- Provide list of projects completed within last five years that are similar in scope to the one being bid, including cost of each, and owner contact information.
- Provide list of projects currently under construction, including costs of each, and owner contact information.
- Provide “evidence of competency” and “evidence of financial responsibility” in accordance with Section 20-02 of the General Provisions. If the Bidder is presently pre-qualified with the Missouri Department of Transportation (MoDOT), evidence of this pre-qualification may serve as evidence of financial responsibility in lieu of the certified financial statements and reports.

**THIS EXECUTED PROPOSAL FORM MUST BE SUBMITTED
WITH SECTIONS B-1 THROUGH B-22 FILLED OUT COMPLETELY**

SIGNATURE OF BIDDER

The undersigned states that the correct LEGAL NAME AND ADDRESS of (1) the individual bidder, (2) each partner or joint venturer (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the state in which it is incorporated) are shown below; that (if not signing with the intention to bind themselves to become responsible and sole bidder) they are the agent of, and they are signing and executing this (as indicated in the proper spaces below) as the bid of a

() sole individual () partnership () joint venture
() corporation, incorporated under the laws of state of _____.

Executed by bidder this _____ day of _____, 20____.

Name of individual,
all partners
or joint venturers:

Address of each:

doing business under the name of:

Address of principal place of business in Missouri:

(If using a fictitious name, show this
name above in addition to legal names)

(If a corporation, show its name above)

ATTEST: (SEAL)

(Signature) Secretary

(Signature) (Title)

Please print name

Please print name

NOTE: If bidder is doing business under a fictitious name, the bid shall be executed in the legal name of the individual partners, joint ventures, or corporation, with the legal address shown, and registration of fictitious name filed with the secretary of state, as required by sections 417.200 to 417.230 RSMo. If the bidder is a corporation not organized under the laws of Missouri, it shall procure a certificate of authority to do business in Missouri, as required by section 351.572 et seq RSMo.



931 Wildwood Drive, Suite 101
Jefferson City, MO 65109
Phone: 573.636.3200
Fax: 573.636.3201

Houston Memorial Airport

Pre-Bid Meeting Sign In

Meeting Date / Location:

May 10, 2022
City of Houston
City Council Chambers/City Hall
601 South Grand Avenue, Houston, MO, 65483
10:00 a.m.

Project Name:

Schedule I: Runway 16/34 Lighting Rehabilitation
Schedule II - REILs & PAPIs Rehabilitation
Schedule III - Taxiway Lighting Rehabilitation

Time:

MoDOT Project #:

21-065A-1

Name

Company

Telephone No. _____

E-mail

Laura Riegel, Project Manager

Jvation, a Woolpert Company

573-418-1767

laura.riegel@woolpert.com

Kevin Stille
Scott Hall
Bruce Sorkman
Tom Powers
Scott Avery
Hereth Sponler

Meyer Electric
Meyer Electric
Jones/Sortman Inc
MODOT
Houston
Hurst

417-217-5298
873 694 1219
417 293 5311
573 395-6278
417-260-1733
967 334 ✓

ocall2meyerclerk@net
JONESORTMAN INC@centurytel.net
thomas.powers@nodat.mo.gov
city administrator @ houston mo.org
city clerk ehoustonmo.org

**Houston Memorial Airport
MoDOT 21-065A-1 Runway Taxiway Lighting Rehabilitation
Plan Holder's List**

	ROLE	Company Name	CONTACT	STREET ADDRESS	CITY	STATE	ZIP	TELEPHONE NO.	EMAIL ADDRESS	FAX NUMBER
1	Jviation	Jviation, A Woolpert	Zach Ambariantz	720 S. Colorado Blvd, Ste. 1200-S	Denver	CO	80246	720-544-6534	zach.ambariantz@woolpert.com	
2	Jviation	Jviation, A Woolpert	Laura Riegel	931 Wildwood Drive, Ste. 101	Jefferson City	MO	65109	573-658-9477	laura.riegel@woolpert.com	
3	Airport	Houston Memorial Airport	Scott Avery							
4	DOT	MoDOT	Tom Powers							
5	Prime	Meyer Electric Co., Inc.	Leon Keller	3513 North Ten Mile Drive	Jefferson City	MO	65109	(573) 893-2335	leon@meyerelectric.net	
6	Prime	ePlan	Taylor H	1400 Forum Blvd Suite 7B	Columbia	MO	65203	573-447-7130	epplan@eplanbidding.com	573-355-5404
7	Prime	KT Power Systems	Jim McElreath	433 County Road 638	Cape Girardeau	MO	63701	(573) 388-4524	jmac@ktpowersystems.com	
8	Plan Room	Southern Illinois Builders Association	Elizabeth Klein	1468 Green Mount Road	O'Fallon	IL	62269	(618) 624-9055	projects@siba-agg.org	(618) 624-9065
9	Sub	Shaffer & Hines, Inc.	Shane Machin	729 W Mt Vernon	Nixa	MO	65714	417-725-4663	shane@shafferhines.com	417-725-5230
10	Sub	Lumacurve Airfield Signs	Liz Humpage	9115 Freeway Drive	Macedonia	OH	44056	330-467-2030	liz@lumacurve.com	330-467-2076
11	Sub	Reinhold Electric	Scott Byrne	2511 Lemay Ferry Rd	Saint Louis	MO	63125	(314) 939-6573	sbyrne@reinholdelectric.com	
12	Prime	Royal Electric	Lynette Sanchez	8481 Carbide Court	Sacramento	CA	95828	(916) 226-2100	estimating@royalelect.com	(916) 226-2150
13	Prime	Koch Electric Incorporated	Shawn Koch	26688 U.S. Highway 61	Scott City	MO	63780	573-313-2444	shawn@koelectricinc.net	573-313-2445
14	Plan Room	Multi Electric Manufacturing	Frank Kazienko	4223 W. Lake Street	Chicago	IL	60624	773-722-1900	fkazienko@multielectric.com	779-722-5694
15	Plan Room	Construct Connect	Natashia Pardo	3825 Edwards Road	Cincinnati	OH	45209	(513) 458-8604	Natashia.Pardo@constructconnect.com	
16	Sub	Eaton's Crouse-Hinds Airport Lighting Products	Susan Flanagan	1200 Kennedy Road	Windsor Locks	AL	06095	(860) 683-4361	susanmflanagan@eaton.com	
17	Plan Room	Dodge Data & Analytics	Dodge	300 American Metro Blvd #185	Hamilton	NJ	08619	(877) 784-9556	dodge.bidding@construction.com	(877) 784-9556
18	Plan Room	ADB Safegate Americas, LLC	Jason Watson	977 Gahanna Parkway	Columbus	OH	43230	(614) 506-9750	jason.watson@adbsafegate.com	
19										
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BID PROPOSAL SUMMARY

Bidder Name:

SCHEDULE I TOTAL \$ _____

SCHEDULE II TOTAL \$ _____

SCHEDULE III TOTAL \$ _____

TOTAL ALL SCHEDULES \$ _____

Bidder has examined the proposed site and is familiar with all site conditions.

Signature

SCHEDULE I						
Item No.	Description		Units	Estimated Quantity	Unit Price	Total
C-105a	Mobilization	at the unit price of: _____ dollars and _____ cents.	LS	1	\$	\$
L-108a	Install #8 AWG, L-824C, 5000V, Wire	at the unit price of: _____ dollars and _____ cents.	LF	8,610	\$	\$
L-108b	Install #6 AWG, Bare Copper Counterpoise Including Ground Rods and Terminations	at the unit price of: _____ dollars and _____ cents.	LF	8,610	\$	\$
L-109a	Install New L-829 Constant Current Regulator, Ferroresonant Type	at the unit price of: _____ dollars and _____ cents.	EA	1	\$	\$
L-109b	Install L-854 Radio Controller in Existing Vault	at the unit price of: _____ dollars and _____ cents.	EA	1	\$	\$
L-110a	Install 1-2" SCH. 40 PVC Conduit, Direct Earth Buried (DEB)	at the unit price of: _____ dollars and _____ cents.	LF	8,610	\$	\$
L-115a	Remove L-867 Junction Box, Complete	at the unit price of: _____ dollars and _____ cents.	EA	6	\$	\$
L-115b	Install L-867B Junction Box, Complete	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$
L-125a	Remove Stake Mounted Runway Edge Light, Complete	at the unit price of: _____ dollars and _____ cents.	EA	33	\$	\$
L-125b	Install L-861 Runway Edge Light, Base Mounted	at the unit price of: _____ dollars and _____ cents.	EA	33	\$	\$
L-125c	Remove Stake Mounted Runway Threshold Light, Complete	at the unit price of: _____ dollars and _____ cents.	EA	16	\$	\$
L-125d	Install L-861E Runway Threshold Light, Base Mounted	at the unit price of: _____ dollars and _____ cents.	EA	16	\$	\$
L-125e	Remove Stake Mounted Taxiway Edge Light, Complete	at the unit price of: _____ dollars and _____ cents.	EA	25	\$	\$
L-125f	Install L-861T(L) Taxiway Edge Light, Base Mounted	at the unit price of: _____ dollars and _____ cents.	EA	26	\$	\$

SCHEDULE I TOTAL \$ _____

SCHEDULE II						
Item No.	Description		Units	Estimated Quantity	Unit Price	Total
C-105a	Mobilization	at the unit price of: _____ dollars and _____ cents.	LS	1	\$	\$
L-108a	Install #8 AWG, L-824C, 5000V, Wire	at the unit price of: _____ dollars and _____ cents.	LF	6,250	\$	\$
L-109a	Install New L-829 Constant Current Regulator, Ferroresonant Type	at the unit price of: _____ dollars and _____ cents.	EA	1	\$	\$
L-125g	Remove REIL System, Complete	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$
L-125h	Install L-849I REIL	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$
L-125i	Remove PAPI System, Complete	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$
L-125j	Install L-881 PAPI System	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$

SCHEDULE II TOTAL \$ _____

SCHEDULE III						
Item No.	Description		Units	Estimated Quantity	Unit Price	Total
C-105a	Mobilization	at the unit price of: _____ dollars and _____ cents.	LS	1	\$	\$
L-108a	Install #8 AWG, L-824C, 5000V, Wire	at the unit price of: _____ dollars and _____ cents.	LF	4,250	\$	\$
L-108b	Install #6 AWG, Bare Copper Counterpoise Including Ground Rods and Terminations	at the unit price of: _____ dollars and _____ cents.	LF	2,000	\$	\$
L-110a	Install 1-2" SCH. 40 PVC Conduit, Direct Earth Buried (DEB)	at the unit price of: _____ dollars and _____ cents.	LF	2,000	\$	\$
L-115a	Remove L-867 Junction Box, Complete	at the unit price of: _____ dollars and _____ cents.	EA	6	\$	\$
L-115b	Install L-867B Junction Box, Complete	at the unit price of: _____ dollars and _____ cents.	EA	2	\$	\$
L-125e	Remove Stake Mounted Taxiway Edge Light, Complete	at the unit price of: _____ dollars and _____ cents.	EA	29	\$	\$
L-125f	Install L-861T(L) Taxiway Edge Light, Base Mounted	at the unit price of: _____ dollars and _____ cents.	EA	30	\$	\$

SCHEDULE III TOTAL \$ _____

Plotted May 16, 2022 @ 7:50 AM by: Ambariantz, Zach
\\nas2-1\Lighting Rehabilitation\CAD\PLANS\2021-M48-21-065A-1-E201-ELEC-GMTT.dwg

MATCHLINE - SEE SHEET E200

MATCHLINE - SEE SHEET E202

INSTALL L-861 RUNWAY EDGE LIGHT (TYP.)

INSTALL L-881 2-UNIT PAPI SYSTEM

RUNWAY 16/34

NOTES

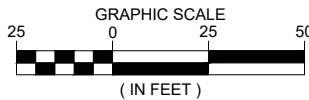
- SEE SHEETS E250 THRU E252 FOR ELECTRICAL DETAILS.
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- ALL ELECTRICAL CONDUITS ARE 1-2" SCH. 40 PVC CONDUIT UNLESS IDENTIFIED OTHERWISE.
- ALL L-867 JUNCTION BOXES ARE SIZE B. 12" DIA X 24" DEEP WITH 3/8" BLANK COVER.

CIRCUIT LEGEND

- | | |
|---|--------------|
| 1 | RUNWAY 16-34 |
| 2 | WINDCONE |
| 3 | BEACON |
| 4 | PAPIS |

R/W LIGHT KEY

C - WHITE
Y - YELLOW
G - GREEN
R - RED



ISSUED FOR BID

THESE DRAWINGS ARE FOR BIDDING PURPOSES ONLY. THEY WERE PREPARED BY OR UNDER THE SUPERVISION OF:

ZACHARY C. AMBARIANTZ PE-2021009380 04/20/2022
NAME REG. NO. DATE
FOR AND ON BEHALF OF JVIATION , INC.

JVIATION[®]
A WOOLPERT COMPANY

HOUSTON MEMORIAL AIRPORT
HOUSTON, MISSOURI

DES: Z.C.A.

DR: E.H.M.

CH: C.L.G.

APP: Z.C.A.

ISSUE RECORD

NO.	BY	DATE	DESCRIPTION
1	Z.C.A.	04/20/2022	ISSUED FOR BID
2	Z.C.A.	05/18/2022	ADDENDUM NO.1

RUNWAY 16/34
LIGHTING REHABILITATION

ELECTRICAL GEOMETRY PLAN

MoDOT PROJ. NO.
21-065A-1

JVIATION PROJ. NO.
2021.M48.01

SHEET NAME

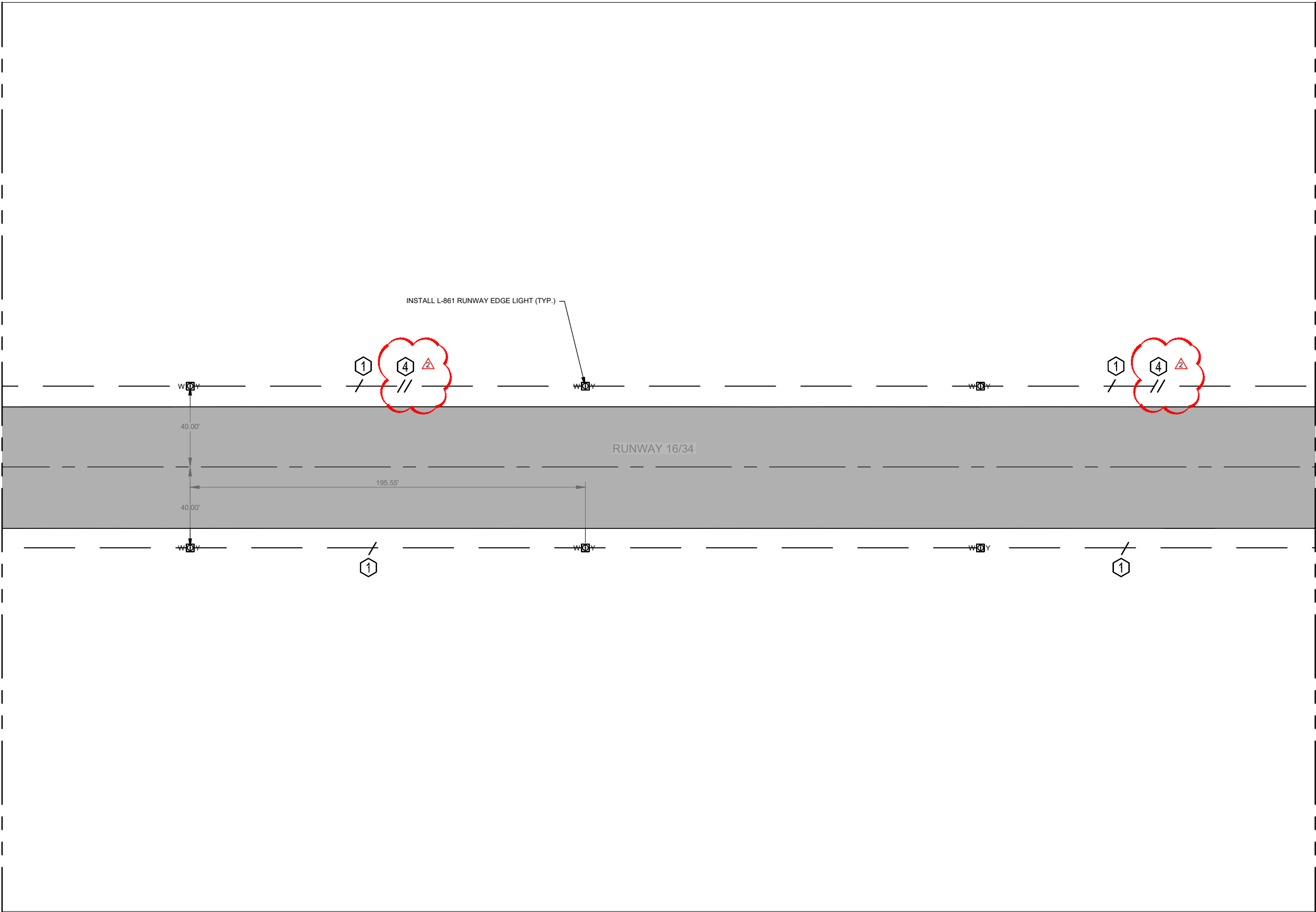
E201

SHEET NO.

21 of 29

Plotted May 16, 2022 @ 7:50 AM by: Ambariantz, Zach
\\nas2-1\Lighting Rehabilitation\CD\PLANS\102-M48-21-065A-1 E202-ELEC-GMTT.dwg

MATCHLINE - SEE SHEET E201



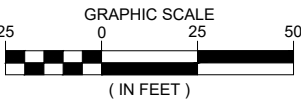
NOTES

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CIRCUIT LEGEND	
1	RUNWAY 16-34
2	WINDCONE
3	BEACON
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DR: E.H.M.	1	Z.C.A.	04/20/2022	ISSUED FOR BID
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APP: Z.C.A.				

RUNWAY 16/34
LIGHTING REHABILITATION

ELECTRICAL GEOMETRY PLAN

MoDOT PROJ. NO.
21-065A-1

JVIATION PROJ. NO.
2021.M48.01

SHEET NAME
E202

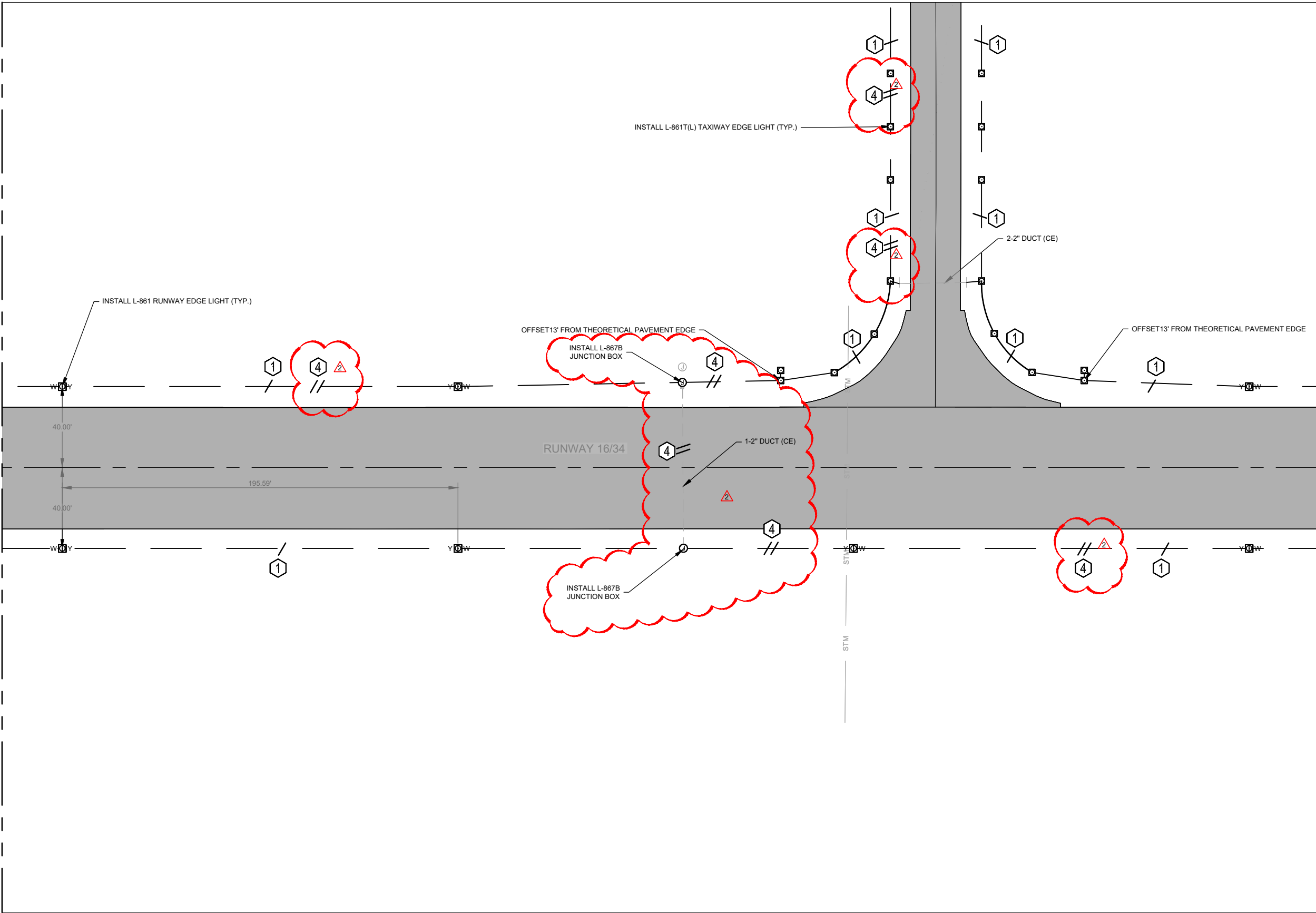
SHEET NO.

22 of 29

Plotted May 16, 2022 @ 7:50 AM by Ambariantz, Zach
\\nas02-101\Lighting Rehabilitation\CAD\PLANS\2021-M48-21-065A-1 E203-ELEC-GMTT.dwg

MATCHLINE - SEE SHEET E202

MATCHLINE - SEE SHEET E204



NOTES

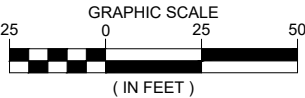
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CIRCUIT LEGEND

- 1 RUNWAY 16-34
- 2 WINDCONE
- 3 BEACON
- 4 PAPIIS

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DR: E.H.M.	1	Z.C.A.	04/20/2022	ISSUED FOR BID
CH: C.L.G.	2	Z.C.A.	05/18/2022	ADDENDUM NO.1
APP: Z.C.A.				

RUNWAY 16/34
LIGHTING REHABILITATION

ELECTRICAL GEOMETRY PLAN

MoDOT PROJ. NO.
21-065A-1

JVIATION PROJ. NO.
2021.M48.01

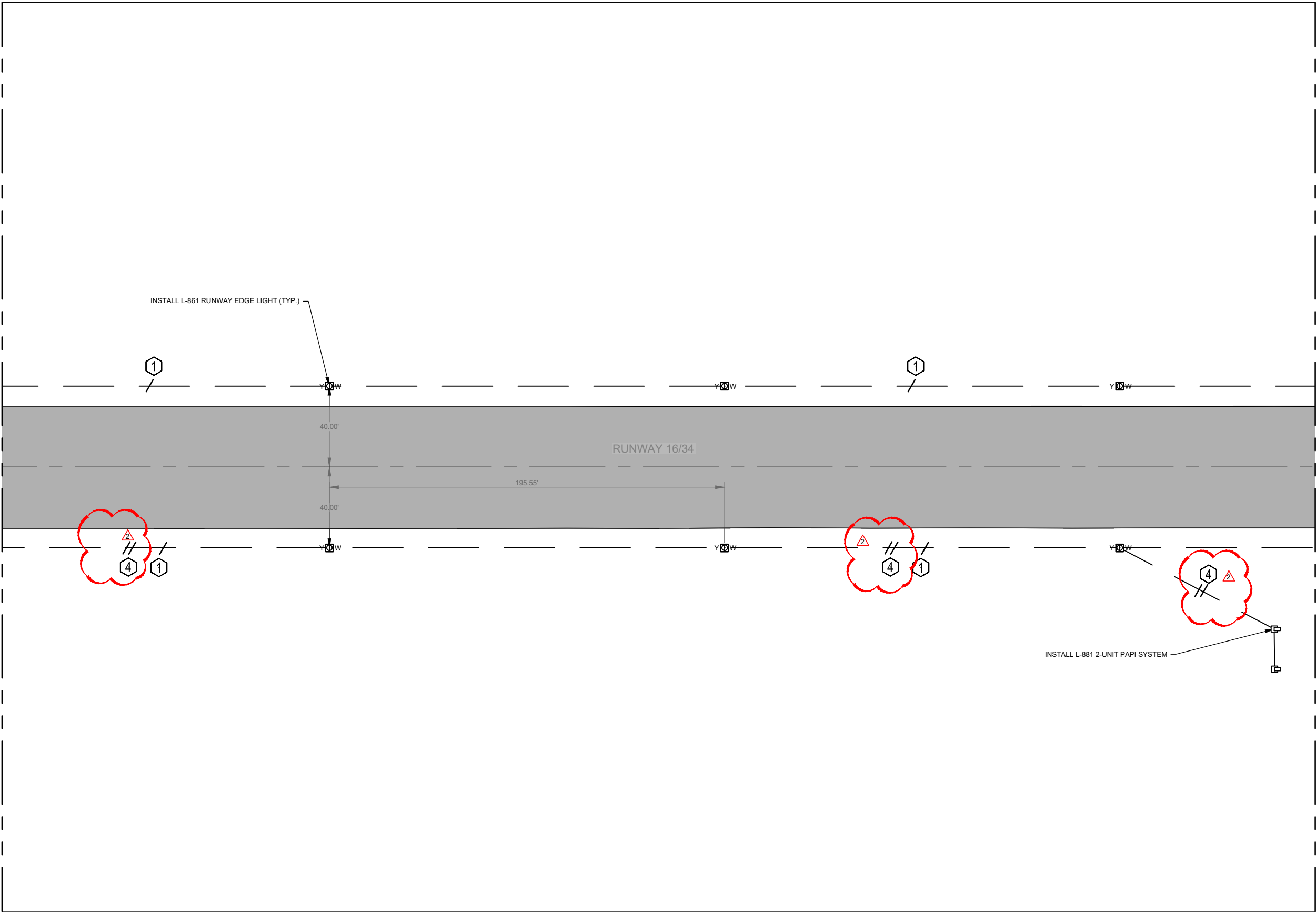
SHEET NAME
E203

SHEET NO.
23 of 29

Plotted May 16, 2022 @ 7:50 AM by: Ambariantz, Zach
\\wms2-1\Lighting Rehabilitation\CAD\PLANS\120-M48-01-065A-1-E204-ELEC-GMT.dwg

MATCHLINE - SEE SHEET E203

MATCHLINE - SEE SHEET E205



NOTES

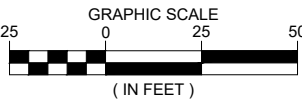
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CIRCUIT LEGEND

- 1 RUNWAY 16-34
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RUNWAY 16/34
LIGHTING REHABILITATION

ELECTRICAL GEOMETRY PLAN

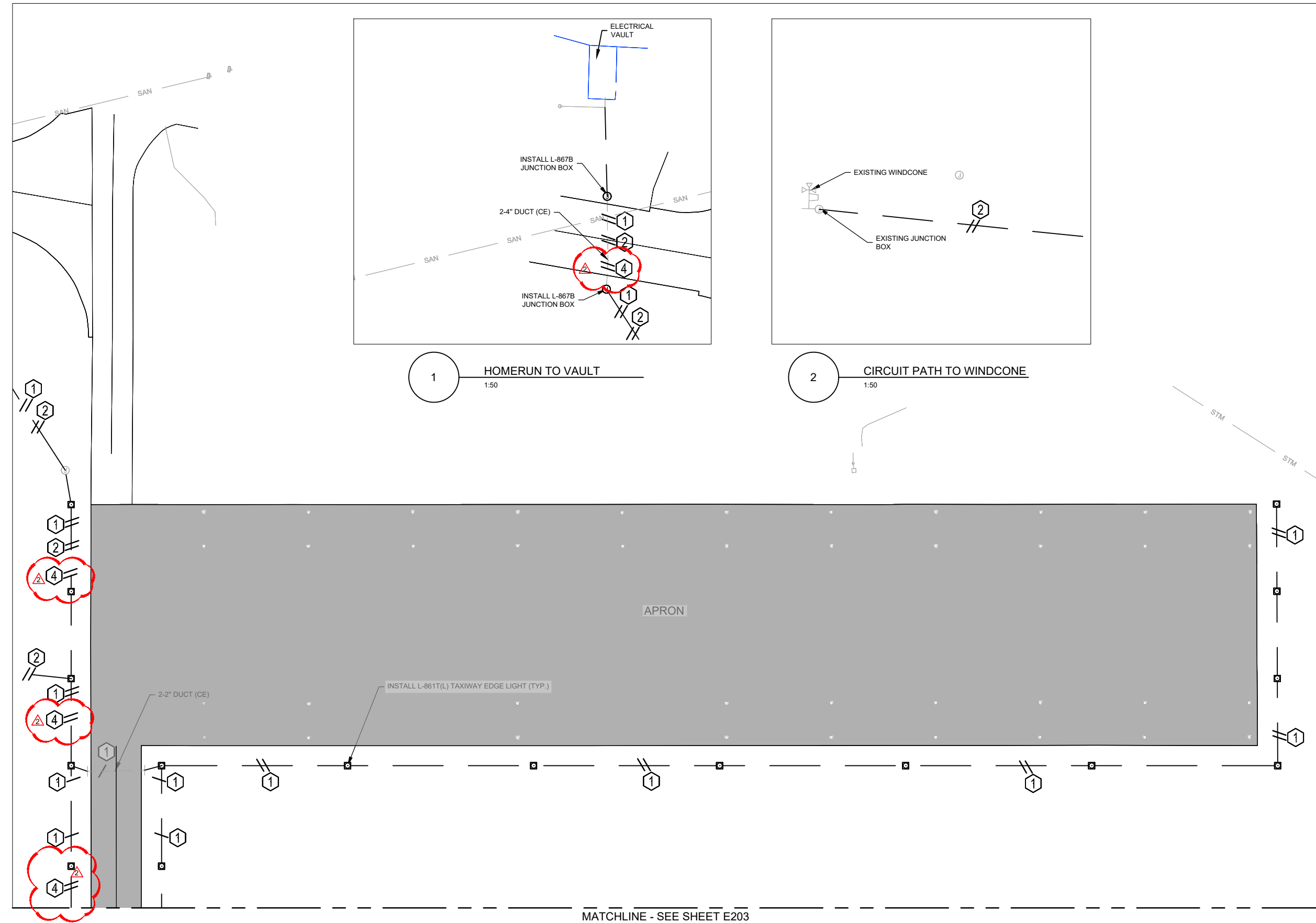
MoDOT PROJ. NO.
21-065A-1

JVIATION PROJ. NO.
2021.M48.01

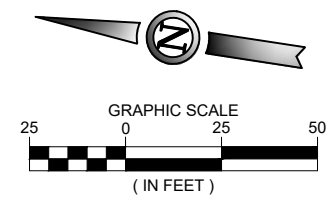
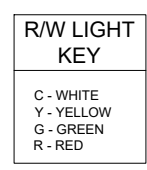
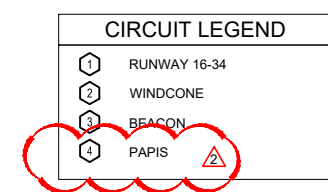
SHEET NAME
E204

SHEET NO.
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Printed May 16, 2022 @ 7:50 AM by Ambriant, Zach
\\w4821-1\Lighting Rehabilitation\CD\PLANS\20-M48-01-065A-1 E206-ELEC-GMT.dwg



- NOTES**
- SEE SHEETS E250 THRU E252 FOR ELECTRICAL DETAILS.
 - SEE SHEETS G050 THRU G054 FOR CONSTRUCTION PHASING.
 - CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES.
 - ALL ELECTRICAL CONDUITS ARE 1-2" SCH. 40 PVC CONDUIT UNLESS IDENTIFIED OTHERWISE.
 - ALL L-867 JUNCTION BOXES ARE SIZE B. 12" DIA X 24" DEEP WITH 3/8" BLANK COVER.



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ZACHARY C. AMBRIANTZ PE-2021009380 04/20/2022
NAME REG. NO. DATE
FOR AND ON BEHALF OF JVIATION, INC.



HOUSTON MEMORIAL AIRPORT
HOUSTON, MISSOURI

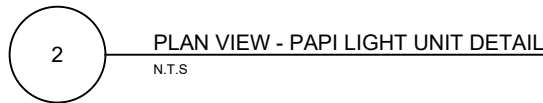
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	NO.	BY	DATE	DESCRIPTION	
DR: E.H.M.	1	Z.C.A.	04/20/2022	ISSUED FOR BID	
CH: C.L.G.	2	Z.C.A.	05/18/2022	ADDENDUM NO.1	
APP: Z.C.A.					

RUNWAY 16/34
LIGHTING REHABILITATION

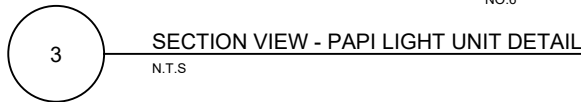
ELECTRICAL GEOMETRY PLAN

MoDOT PROJ. NO. 21-065A-1 JVIATION PROJ. NO. 2021.M48.01

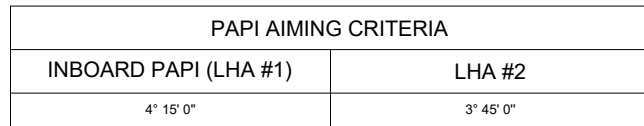
SHEET NAME
E206
SHEET NO.
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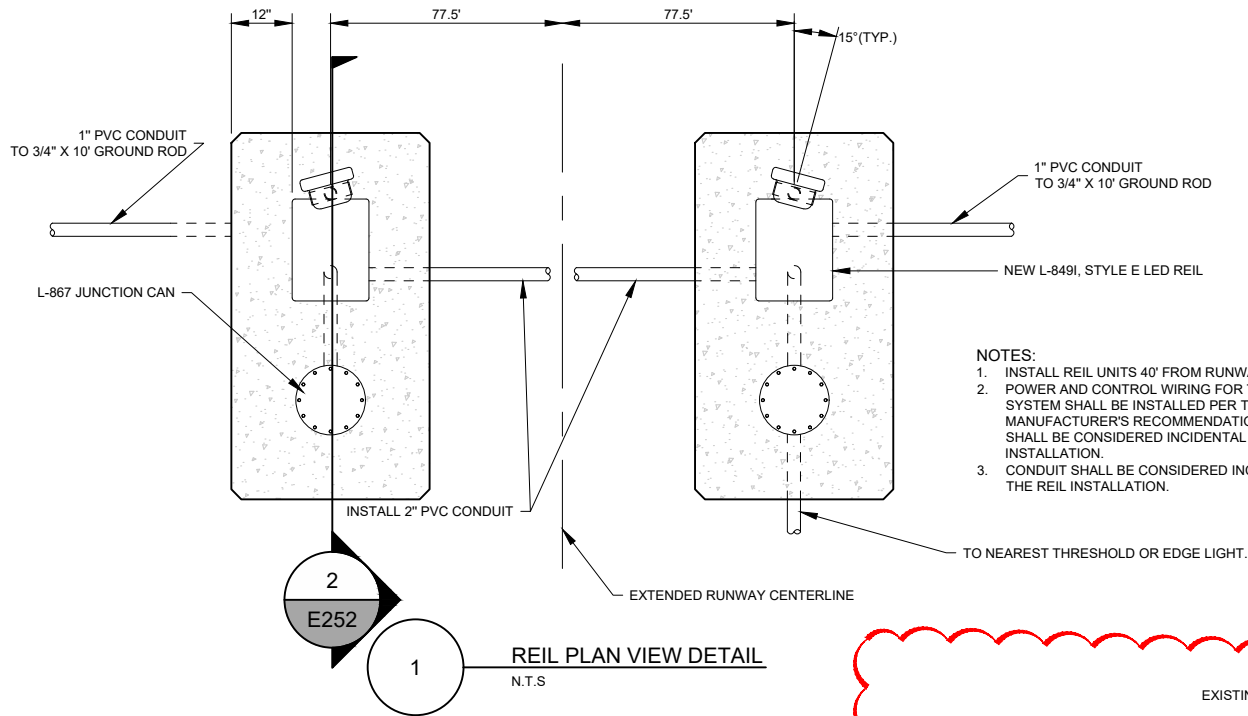
1. PROVIDE FRANGIBLE MOUNTS FOR ALL LEGS OF LIGHT UNITS AND POWER ADAPTERS.
2. NUMBER AND CONFIGURATION OF LEGS PER MANUFACTURER.
3. INSTALL 90P/90R CONNECTORS FOR CABLES ENTERING/LEAVING THE POWER AND CONTROL UNIT AND THE LIGHT UNITS.
4. GROUND EACH LAMP HOUSING AND POWER ADAPTER PER MANUFACTURER.
5. CONTRACTOR MAY MAKE THE CONCRETE FOOTING ROUND OR SQUARE.
6. APPLY "NEVER SEEZ" OR APPROVED EQUAL TO ALL THREAD BOLTS AND FRANGIBLE CONNECTIONS.
7. SEE ITEM L-125 OF THE SPECIFICATIONS FOR INSTALLATION TOLERANCES.



1. CONTRACTOR SHALL INSTALL A COMPLETE PAIPI SYSTEM, ALONG WITH THE PAIPI UNITS AND FOUNDATIONS THE CONTRACTOR IS RESPONSIBLE FOR ALL WIRING, CONDUIT, CONCRETE, CURRENT SENSING TRANSFORMER, ETC. WHICH SHALL BE CONSIDERED PART OF THE PAIPI BID ITEM.
2. LED PAIPI UNITS SHALL BE FURNISHED WITH BAFFLES THAT ARE PRE-INSTALLED AT THE FACTORY.
3. PAIPI UNITS SHALL BE RADIO CONTROLLED BY L-854 RADIO CONTROLLER LOCATED IN TRANSCLOSURE.



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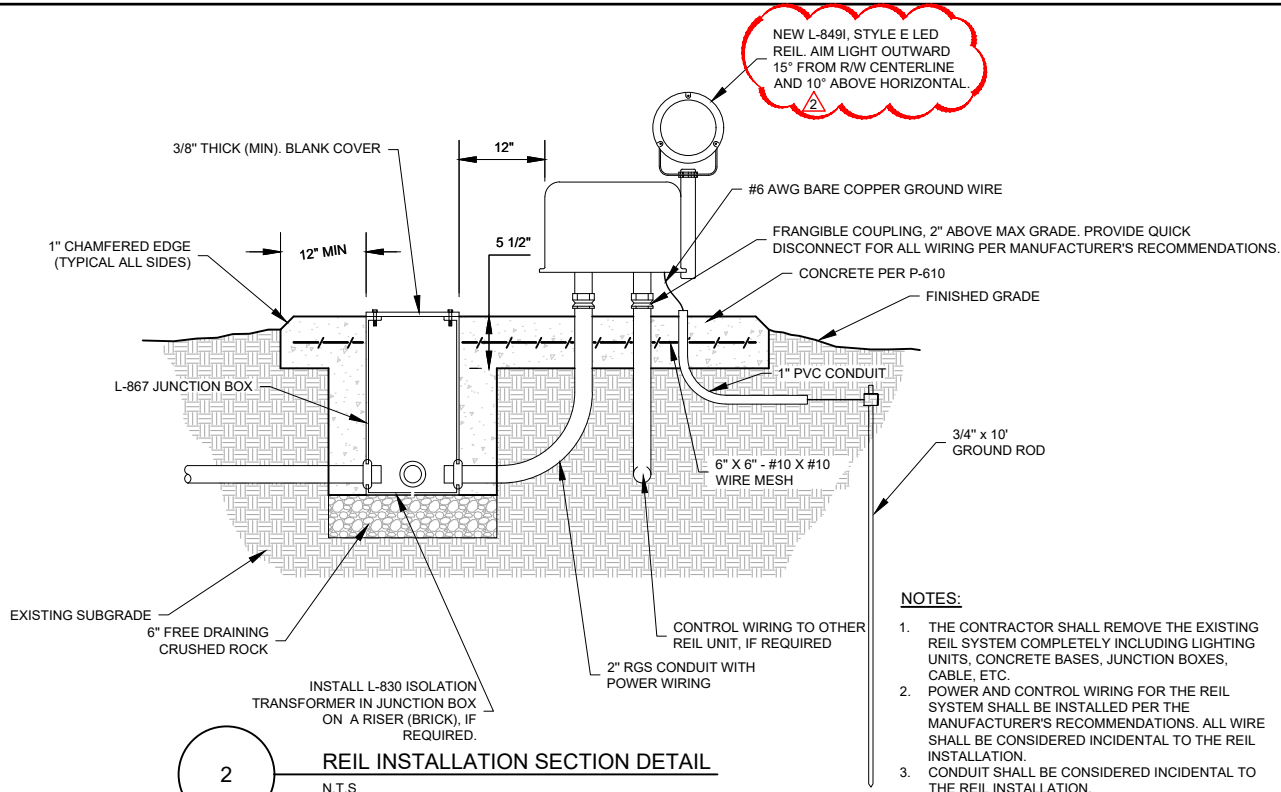


REIL PLAN VIEW DETAIL
N.T.S.

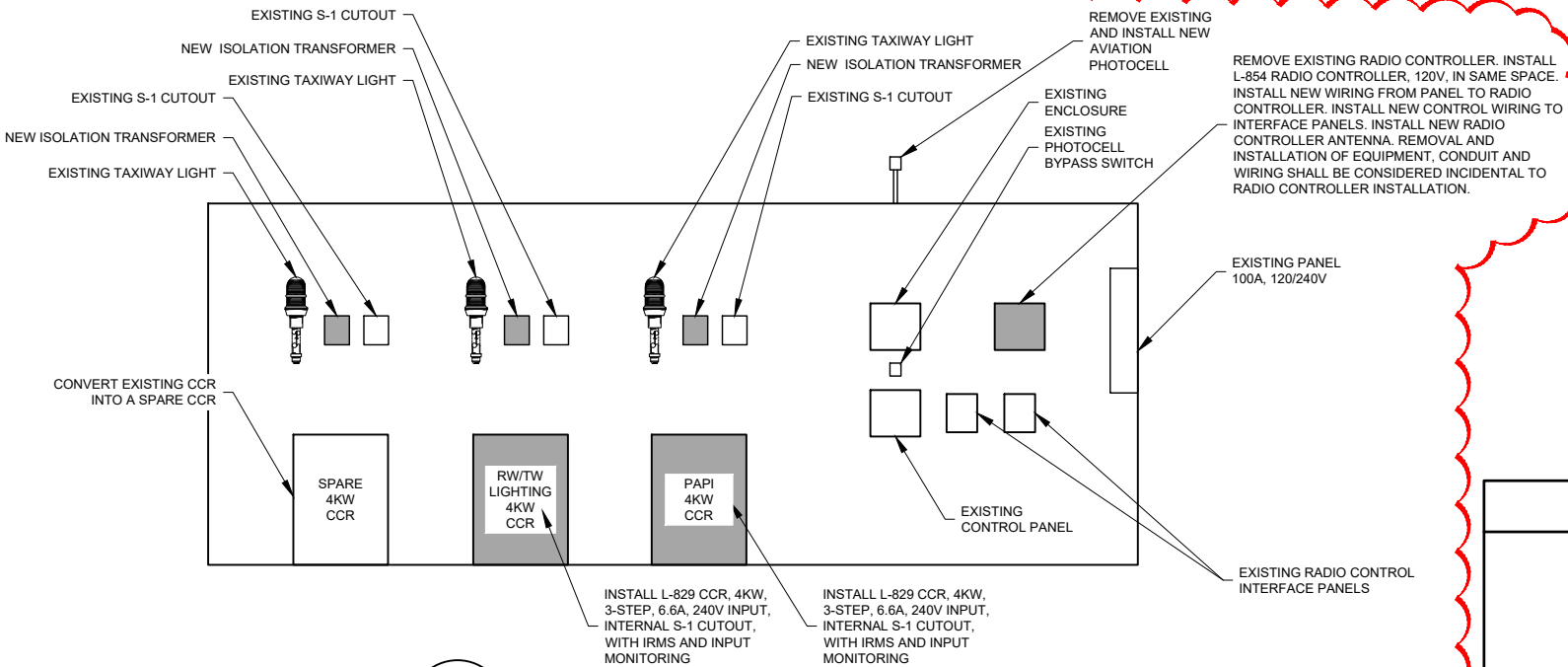
CIRCUIT LOAD TABLE			
DESCRIPTION	UNIT LOAD	1	
		QUANTITY	TOTAL LOAD
L-861T T/W EDGE LIGHT	15	56	840
L-861 R/W EDGE LIGHT	21.5	33	709.5
L-861E R/W THRESHOLD LIGHT	17.9	16	286.4
L-849i, STYLE E, LED REIL	322	2	644
CIRCUIT TOTAL VA			2479.9

CIRCUIT LOAD TABLE			
DESCRIPTION	UNIT LOAD	4	
		QUANTITY	TOTAL LOAD
L-881B, CLASS 1, PAPI	980	2	1960
CIRCUIT TOTAL VA			1960

CIRCUIT LOADING TABLE
N.T.S.



REIL INSTALLATION SECTION DETAIL
N.T.S.



EXISTING TRANSCLOSURE
Scale: N.T.S.

- NOTES:
- REMOVE EXISTING CCRS AND DISPOSE OF EQUIPMENT OF THE AIRPORT SITE. REMOVAL SHALL BE CONSIDERED INCIDENTAL TO THE CCR INSTALLATION ITEMS.
 - CONTRACTOR SHALL CLEAN AND VACUUM TRANSCLOSURE PRIOR TO THE INSTALLATION OF THE NEW CCRS, INCIDENTAL TO THE CCR INSTALLATION.
 - CONTRACTOR SHALL INSTALL NEW CIRCUIT BREAKERS IN EXISTING PANEL FOR EACH NEW CCR, INSTALL NEW INPUT WIRING TO EACH CCR, AND INSTALL NEW CONTROL WIRING FOR EACH CCR TO INTERFACE PANELS. SIZE CIRCUIT BREAKERS AND WIRING PER MANUFACTURER'S RECOMMENDATIONS. WORK ITEMS ARE CONSIDERED INCIDENTAL TO THE CCR BID ITEMS.
 - CONTRACTOR SHALL INSTALL CONTROL WIRING TO THE EXISTING CONTROL PANEL FOR R/W AND PAPI CCRS. PROVIDE NEW LABELS ON CONTROL PANEL ENCLOSURE FOR R/W AND PAPI 3-STEP CONTROLS. CONTROL WIRING AND LABELS SHALL BE CONSIDERED INCIDENTAL TO THE CCR INSTALLATION ITEMS.
 - FOR EACH TEST SETUP (3 TOTAL) IN THE TRANSCLOSURE, THE CONTRACTOR SHALL INSTALL NEW 30/45W ISOLATION TRANSFORMERS AND INSTALL NEW AIRFIELD LIGHTING CABLE FOR EACH TEST SETUP. EXISTING S-1 CUTOUT AND LIGHT SHALL REMAIN. WORK IS INCIDENTAL TO THE CCR INSTALLATION ITEMS.
 - CONTRACTOR SHALL INSTALL NEW AVIATION PHOTOCELL AND WIRE TO SAME LOCATION. REMOVAL OF EXISTING AND INSTALLATION OF NEW PHOTOCELL SHALL BE INCIDENTAL TO THE RADIO CONTROLLER ITEM.
 - AIRFIELD LIGHTING CONTROL SCHEME - RUNWAY/TAXIWAY LIGHTS AND REILS ON SAME CIRCUIT AND RADIO CONTROLLED AT ALL TIMES WHEN PHOTOCELL IS BYPASSED. PAPI CIRCUIT IS RADIO CONTROLLED AT ALL TIMES WHEN PHOTOCELL IS BYPASSED. EXISTING WINDCONE AND BEACON ARE PHOTOCELL CONTROLLED.

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JVIATION
A WOOLPERT COMPANY

HOUSTON MEMORIAL AIRPORT
HOUSTON, MISSOURI

DES: Z.C.A.	ISSUE RECORD			
	NO.	BY	DATE	DESCRIPTION
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RUNWAY 16/34
LIGHTING REHABILITATION

ELECTRICAL DETAILS

MoDOT PROJ. NO. 21-065A-1
JVIATION PROJ. NO. 2021.M48.01

SHEET NAME

E252

SHEET NO.

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