

CONSTRUCTION PLANS - FOR BID, ISSUED NOVEMBER 17, 2023

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

SALEM-LECKRONE AIRPORT
SALEM, MARION COUNTY, ILLINOIS

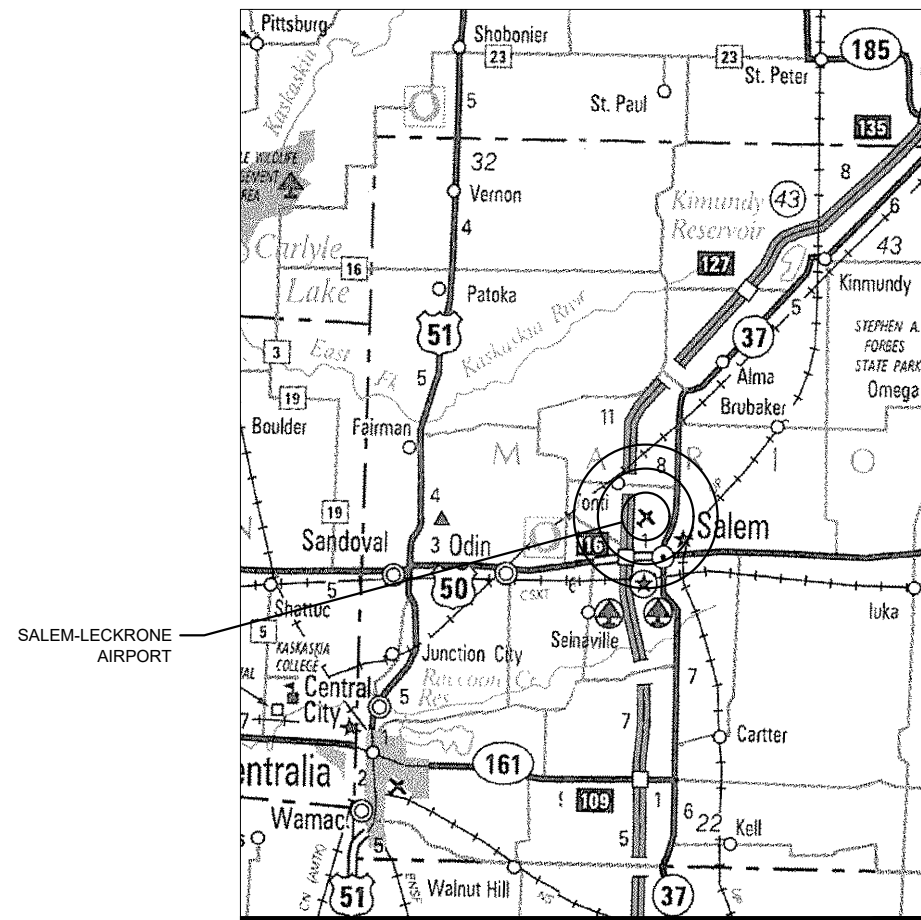
IDA PROJECT NO. SLO-5029

SCOPE OF WORK:

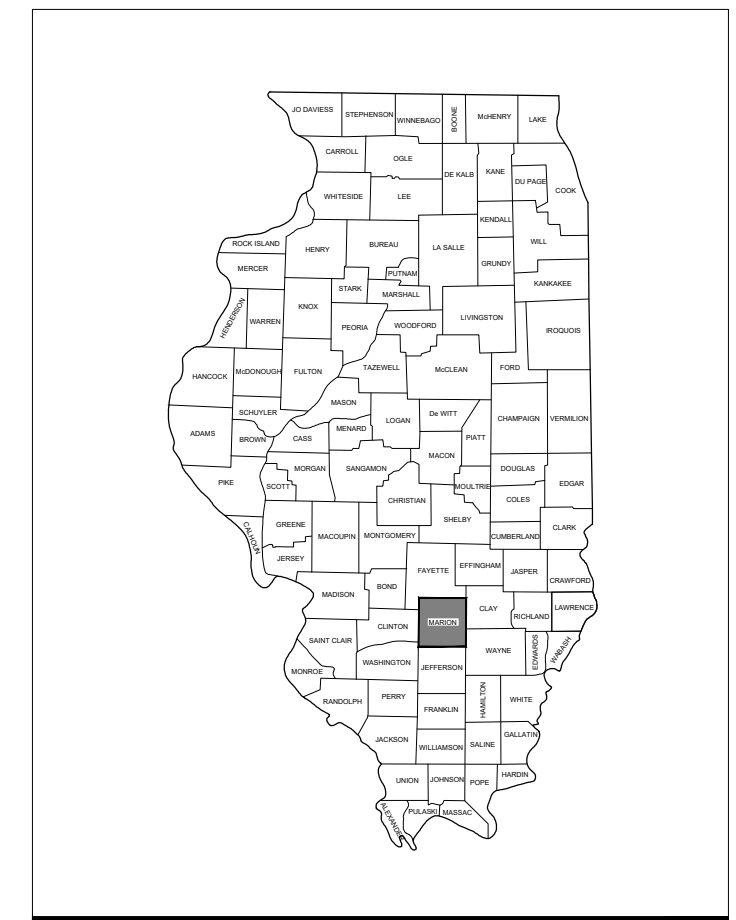
THIS PROJECT CONSISTS OF RECONSTRUCTION OF THE NORTH ACCESS ROAD AND INSTALLATION OF GATE. THIS PROJECT INCLUDES PAVEMENT REMOVAL, CONCRETE PAVING, PAVEMENT MARKING, REMOVAL OF EXISTING MANUAL GATE, INSTALLATION OF NEW ELECTRIC GATE, AND ASSOCIATED ITEMS.

NOTICE TO CONTRACTORS AND BIDDERS

THESE CONSTRUCTION PLANS RELY UPON THE SPECIAL PROVISIONS AND THE SPECIFICATIONS TO PROVIDE FOR A COMPLETE DESCRIPTION OF THE WORK AND CONSTRUCTION REQUIREMENTS. THE PLANS SHALL ONLY BE USED IN COMBINATION WITH ALL CONTRACT DOCUMENTS.



VICINITY MAP



LOCATION MAP

NOV 17 2023 1:56 PM STOLZ01547 I:\22\JOBS\22A078D\CAD\AIRPORT\1\SHEETC-01-CVR.DWG

No.	Issue/Description	Sheets Changed	Date	By

COVERING ELECTRICAL DESIGN

EXP. 11/30/2025

KEVIN N. LIGHTFOOT
062-047643

Kevin N. Lightfoot

Kevin N. Lightfoot, P.E.
Electrical Engineer

11/17/2023
Date

HANSON

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1525 S. Sixth St.
Springfield, Illinois 62703
Telephone: 217.788.2450
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EXP. 11/30/2025

BARRY S. STOLZ
062-057281

Barry S. Stolz

Barry Stolz, P.E.
Project Manager / Civil Engineer

11/17/2023
Date

Salem-Leckrone Airport

SALEM AIRPORT AUTHORITY
1100 Airport Rd.
Salem, IL 62881
Telephone: 618.548.2411

[Signature]

11/17/2023
Date



Engineering | Planning | Allied Services

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Offices Nationwide
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Illinois Licensed
Professional Service Corporation
#184-001084

Salem-Leckrone Airport

Salem Airport Authority
1100 Airport Rd.
Salem, IL 62881



DATE: 11/17/2023 LICENSE: 11/30/2025
SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

SUMMARY OF QUANTITIES - BASE BID				
ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	AS-BUILT QUANTITY
AR150520	MOBILIZATION	L SUM	1	
AR152411	UNCLASSIFIED EXCAVATION	L SUM	1	
AR152480	SHOULDER ADJUSTMENT	SQ YD	255	
AR156531	EROSION CONTROL BLANKET	SQ YD	85	
AR162214	CLASS E MANUAL SLIDE GATE-14'	EACH	1	
AR162905	REMOVE GATE	EACH	1	
AR209604	CRUSHED AGG. BASE COURSE - 4"	SQ YD	430	
AR501506	6" PCC PAVEMENT	SQ YD	401	
AR501530	PCC TEST BATCH	EACH	1	
AR701512	12" RCP, CLASS IV	FOOT	56	
AR701900	REMOVE PIPE	FOOT	32	
AR901515	SEEDING	SQ YD	85	

SUMMARY OF QUANTITIES - ADDITIVE ALTERNATE BID				
ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	AS-BUILT QUANTITY
AS162761	ELECTRIC GATE UPGRADE	EACH	1	

UNCLASSIFIED EXVACATION QUANTITY SUMMARY			
WORK AREA	CUT (CY)	FILL (CY)	NET (CY)
ACCESS ROAD	101	2	99 (EXCESS)

UNCLASSIFIED EXCAVATION NOTES:

- UNCLASSIFIED EXCAVATION QUANTITIES (CUT/FILL VOLUMES) SHOWN ABOVE WERE CALCULATED UTILIZING AUTODESK CIVIL3D SOFTWARE THROUGH AUTOCAD. THE CALCULATION METHOD WAS BY A COMPARISON OF SURFACE MODELS CREATED WITH EXISTING SURVEY DATA AND PROPOSED DESIGN GRADES. THE VOLUMES WERE CALCULATED IN TWO PARTS: THE CUT/FILL VOLUME REQUIRED TO CORE OUT AND FILL FOR THE PROPOSED PAVEMENT SECTION AS COMPARED TO THE EXISTING SUBGRADE DATUM, AND THE CUT/FILL VOLUMES REQUIRED FOR PROPOSED GRADING WORK OUTSIDE OF THE PROPOSED PAVEMENT LIMITS AS COMPARED TO THE EXISTING GROUND SURFACE. THE NUMBERS IN THE SUMMARY TABLES ABOVE REPRESENT A TOTAL OF THESE TWO PARTS ADDED TOGETHER FOR CLARITY.
- FOLLOWING THE PROJECT AWARD, THE ENGINEER CAN PROVIDE THE RELEVANT AUTOCAD AND CIVIL 3D SURFACE MODEL FILES TO THE AWARDED CONTRACTOR UPON REQUEST TO ASSIST WITH CONSTRUCTION LAYOUT.
- EXCESS MATERIAL TO BE PLACED ON AIRPORT PROPERTY AT A LOCATION TO BE DETERMINED BY THE AIRPORT MANAGER OR REMOVED OFFSITE.

INDEX TO SHEETS	
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2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS
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4	PROPOSED SAFETY PLAN
5	CONSTRUCTION SAFETY DETAILS AND NOTES
6	EXISTING CONDITIONS PLAN
7	TYPICAL SECTIONS
8	PROPOSED CONSTRUCTION PLAN
9	PROPOSED PLAN & PROFILE
10	PROPOSED JOINTING PLAN
11	PROPOSED JOINT DETAILS
12	ELECTRICAL LEGEND AND ABBREVIATIONS
13	PROPOSED SLIDE GATE DETAILS
14	GATE OPERATOR DETAILS
15	CONDUIT AND DUCT DETAILS
16	ELECTRICAL NOTES
17	GROUNDING DETAILS
18	GROUNDING NOTES AND DETAILS
19	PROPOSED ELECTRICAL ONE-LINE FOR AIRPORT GATE OPERATOR
20	SIGNAGE DETAILS
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GENERAL NOTES:

QUANTITIES
PAYMENT WILL BE MADE UNDER THE ITEM NUMBERS, DESCRIPTIONS AND UNITS NOTED IN THE ABOVE TABLE IN ACCORDANCE WITH THE BASIS OF PAYMENT FOR EACH RESPECTIVE WORK ITEM COMPLETED AND ACCEPTED BY THE ENGINEER.

CERTIFIED PAYROLLS
THE RESIDENT ENGINEER/TECHNICIAN CANNOT FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATIONS
MATERIALS TO BE INCORPORATED INTO THE PROJECT CANNOT BE USED WITHOUT PRIOR APPROVAL. ALL MATERIALS TO BE USED IN THE PROJECT MUST BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL. USE OF MATERIALS WITHOUT PRIOR APPROVAL AND ULTIMATELY DETERMINED TO BE UNACCEPTABLE BY THE ILLINOIS DIVISION OF AERONAUTICS ARE SUBJECT TO REMOVAL AND/OR NON-PAYMENT.

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
PROJECT NO: 22A0078D
CAD FILE: G-002-FLP.DWG
DESIGN BY: BSS 3/08/2023
DRAWN BY: CWS 3/08/2023
REVIEWED BY: BSS 10/20/2023

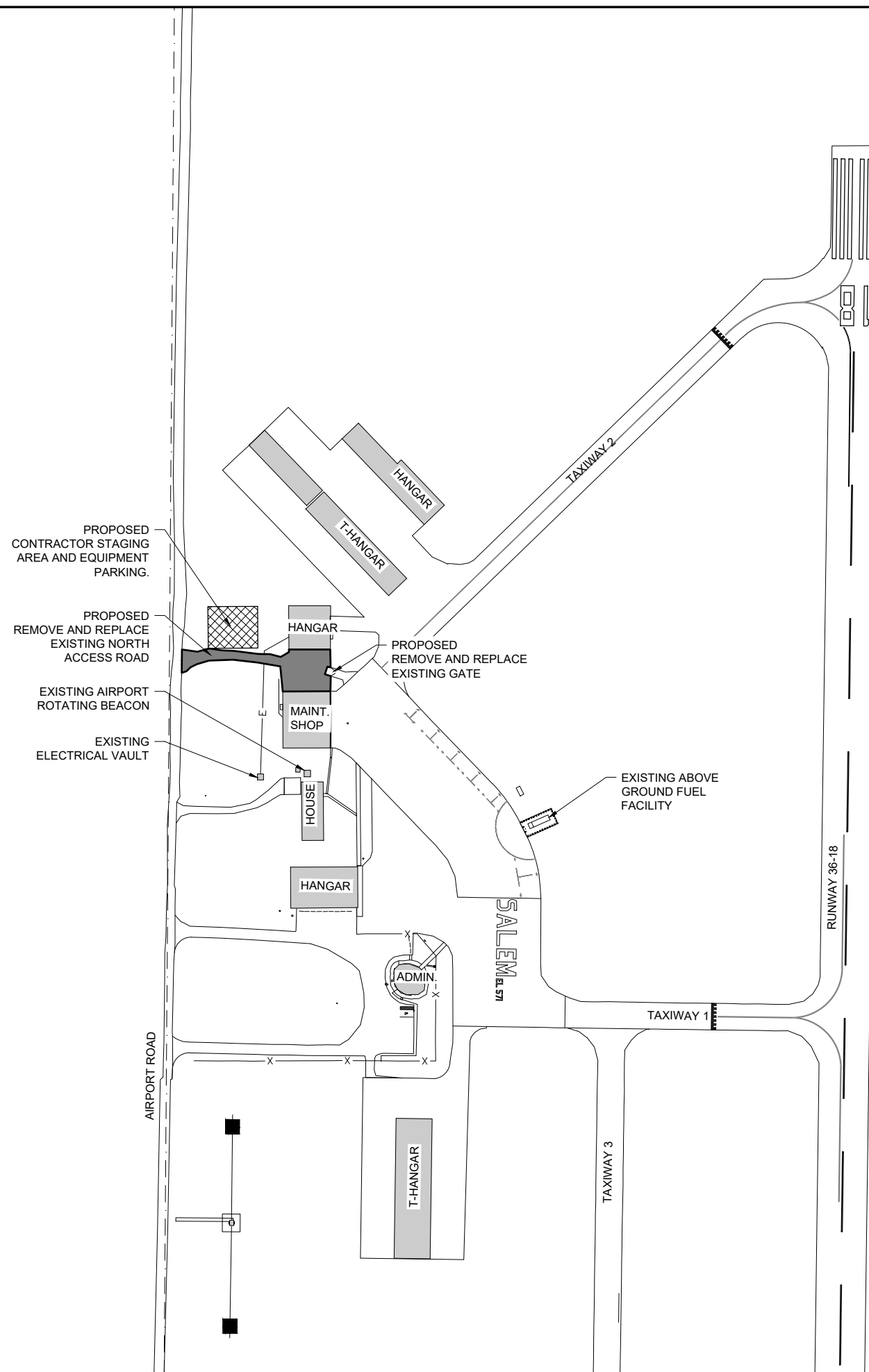
SHEET TITLE

SUMMARY OF QUANTITIES AND INDEX TO SHEETS

FOR BID

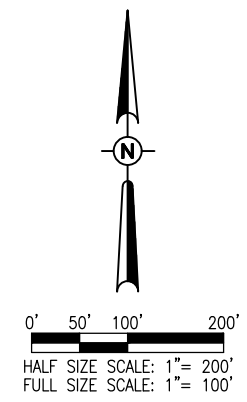
GENERAL NOTES

1. THE SCOPE OF WORK SHEET IS INTENDED ONLY AS A GENERAL DESCRIPTION OF WORK ITEMS AND THEIR APPROXIMATE LOCATIONS AND LIMITS, FOR THE PURPOSE OF UNDERSTANDING THE SCOPE OF THE PROJECT. THIS SHEET SHALL NOT BE USED AS A CONSTRUCTION PLAN. REFER TO THE FOLLOWING PLAN SHEETS FOR DETAILED CONSTRUCTION REQUIREMENTS, LOCATIONS, AND ITEMS OF WORK.
2. WORK FOR THIS PROJECT CONSIST OF RECONSTRUCTION OF THE AIRPORT NORTH ACCESS ROAD AND REMOVAL AND REPLACEMENT OF AIRPORT ACCESS GATE. THIS PROJECT INCLUDES PAVEMENT REMOVAL, EXISTING GATE REMOVAL, CONSTRUCTION OF NEW PCC PAVEMENT, PAVEMENT MARKING, NEW GATE INSTALLATION AND ASSOCIATED ITEMS.
3. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, AND TRANSPORTATION NECESSARY TO CONSTRUCT ALL ELEMENTS OF THE PROJECT AS DESCRIBED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS.
4. THE RULES, REGULATIONS, AND SPECIFICATIONS ENUMERATED HEREIN SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS. THEY SHALL NOT PROHIBIT THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIAL THAN ARE SPECIFIED HEREIN.
5. THE CONTRACTOR IS NOT PERMITTED TO USE THE AIRPORT ENTRANCE DRIVE AND AUTO PARKING LOT ADJACENT TO THE ADMINISTRATION BUILDING FOR MATERIAL AND EQUIPMENT HAULING OR STORAGE.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT, PRESERVE AND REPAIR THE EXISTING AIRFIELD AND ROADWAY PAVEMENTS AT ALL TIMES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING ELECTRICAL, DRAINAGE, AND PAVEMENT STRUCTURES AT NO ADDITIONAL COST TO THE CONTRACT.
7. NO EQUIPMENT SHALL BE PERMITTED TO CROSS OR USE ANY EXISTING AIRPORT PAVEMENT OUTSIDE THE CONSTRUCTION LIMITS, GENERAL PROJECT AREA OR HAUL ROUTE.
8. CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN RESTROOM FACILITIES.
9. UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS OUTSIDE OF THE PROPOSED CONSTRUCTION LIMITS SHALL BE GRADED, SEEDED AND/OR HYDROMULCH SEEDED IN ACCORDANCE WITH ITEM 901 AT NO ADDITIONAL COST TO THE CONTRACT.
10. ALL WASTE MATERIAL SHALL BE HAULED FROM THE AIRPORT AND PROPERLY DISPOSED OF UNLESS OTHERWISE SPECIFIED HEREIN.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS FOR HAULING ON PUBLIC ROADS, AS APPLICABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGES TO ANY PAVEMENTS (PUBLIC OR PRIVATE) CAUSED BY HIS/HER CONSTRUCTION EQUIPMENT OR PERSONNEL.
12. THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR ALL SALVAGEABLE MATERIAL REMOVED ON THE PROJECT.
13. THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER/TECHNICIAN SO THEY MAY DEVELOP ONE SET OF REDLINED AS-BUILT RECORD DRAWINGS AT THE COMPLETION OF THE PROJECT.
14. THE CONSTRUCTION LIMITS SHALL BE RESTRICTED TO AREAS THAT ARE ABSOLUTELY NECESSARY TO DISTURB TO COMPLETE THE REQUIRED WORK ITEMS. LIMITS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER/TECHNICIAN PRIOR TO BEGINNING ANY WORK.
15. CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION ALL GRASS, STONE, OR PAVEMENT DISTURBED BY CONTRACTOR'S CONSTRUCTION OPERATIONS, STAGING, AND CONSTRUCTION ACCESS ROUTES. DISTURBED AREAS TO BE REPAIRED, GRADED, AND MULCHED SEEDED IN ACCORDANCE WITH ITEMS 901 AND 908. UNLESS OTHERWISE NOTED. STAGING AREA AND SITE ACCESS RESTORATION SHALL BE INCLUDED IN THE COST OF THE HAUL ROUTE.
16. THE PROJECT PAY ITEMS ARE INTENDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT TO THE SATISFACTION OF THE RESIDENT ENGINEER/TECHNICIAN IS TO BE INCLUDED IN THE COSTS OF PERFORMING THESE ITEMS.
17. APPROXIMATE LOCATIONS OF UNDERGROUND UTILITIES ARE SHOWN THROUGHOUT THESE PLANS. THE CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AND PROTECT THESE UTILITIES DURING CONSTRUCTION. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE PROPER PERSONS FOR THE PURPOSE OF LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES.
18. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN PROPER DRAINAGE FOR ALL AREAS AFFECTED BY HIS WORK.
19. NO CONSTRUCTION EQUIPMENT GREATER THAN 25' TALL WILL BE PERMITTED ON THE PROJECT. HOWEVER OTHER EQUIPMENT TALLER THAN 25' MAY BE PERMITTED WITH THE APPROVAL OF THE AIRPORT MANAGER AND AIRSPACE APPROVAL BY THE FAA.



LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED IMPROVEMENTS
- PROPOSED CONTRACTOR STAGING AREA
- EXISTING FENCE
- AIRPORT PROPERTY LINE



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Offices Nationwide
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 Illinois Licensed
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 #184-001084

Salem-Leckrone Airport
 Salem Airport Authority
 1100 Airport Rd.
 Salem, IL 62881



DATE: 11/17/2023 LICENSE: 11/30/2025
 SIGNED: BARRY S. STOLZ
RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
 PROJECT NO: 22A0078D
 CAD FILE: G-003-SOW.DWG
 DESIGN BY: BSS 3/08/2023
 DRAWN BY: CWS 3/08/2023
 REVIEWED BY: BSS 10/20/2023

SHEET TITLE

SCOPE OF WORK

FOR BID

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UTILITY NOTE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

J.U.L.I.E. INFORMATION

COUNTY MARION
 CITY SALEM
 TOWNSHIP SALEM
 SECTION NO. T.2N. - R.2E.
 ADDRESS SALEM-LECKRONE AIRPORT
 1100 AIRPORT ROAD
 SALEM, IL 62881

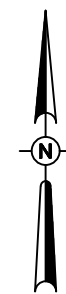
CRITICAL POINT DATA					
DESCRIPTION	LATITUDE	LONGITUDE	GROUND ELEV.	EQUIP. HEIGHT	EQUIP. ELEV.
CRITICAL POINT 1	N038°38'47.06"	W088°58'00.79"	569.0'	25'	594.0'
CRITICAL POINT 2	N038°38'46.92"	W088°57'59.99"	568.0'	25'	593.0'
CRITICAL POINT 3	N038°38'46.02"	W088°57'58.88"	569.0'	25'	594.0'
CRITICAL POINT 4	N038°38'45.16"	W088°58'00.01"	568.0'	25'	593.0'

SAFETY PLAN COMPLIANCE DOCUMENT

PRIOR TO THE ISSUANCE OF A CONSTRUCTION NOTICE-TO-PROCEED (NTP), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING A SAFETY PLAN COMPLIANCE DOCUMENT IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2G, PARAGRAPH 2.4.2, OR EQUIVALENT SECTION IN SUBSEQUENT/CURRENT ISSUE. THE AIRPORT MANAGER SHALL APPROVE THIS DOCUMENT AND SUBMIT TO THE DIVISION OF AERONAUTICS FOR APPROVAL PRIOR TO THE NTP ISSUANCE.

SAFETY PLAN NOTES

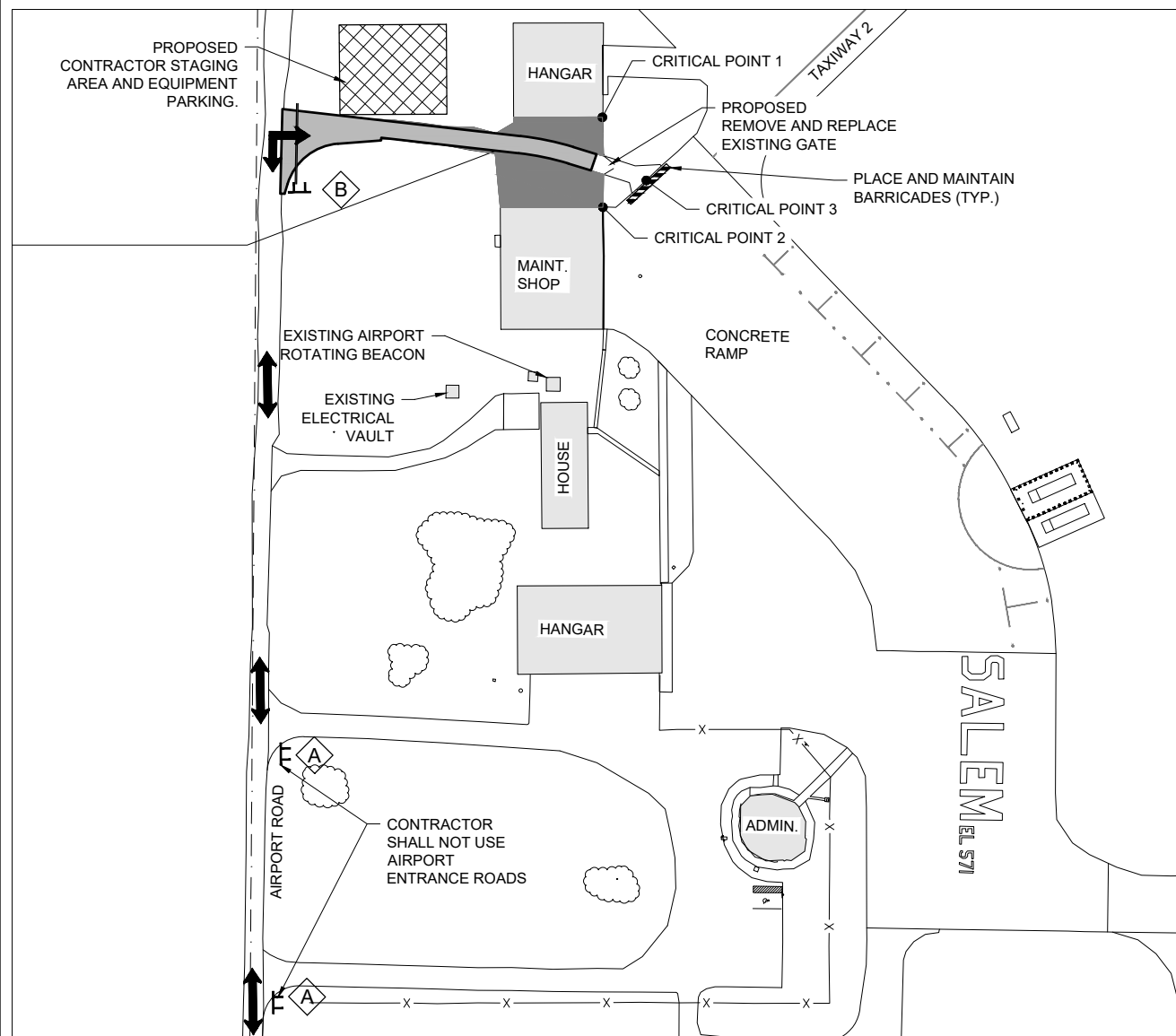
1. BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
2. FOLLOWING THE FINAL CONCRETE POUR, IF NO WORK ITEMS ARE IN PROGRESS DURING THE CONCRETE CURING PERIOD, THE CONTRACT TIME WILL BE TEMPORARILY STOPPED UNTIL THE CONCRETE REACHES SPECIFIED STRENGTH AND WORK RESUMES.
3. AT ALL TIMES, THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE DISRUPTION TO AIRCRAFT OPERATIONS.
4. PRIOR TO CONSTRUCTION, THE RESIDENT ENGINEER/TECHNICIAN AND CONTRACTOR SHALL ASSESS THE EXISTING CONDITIONS OF THE CONSTRUCTION EQUIPMENT PARKING AREA AND AIRPORT ROAD BY MEANS OF VISUAL INSPECTION AND DOCUMENT THE CONDITIONS WITH VIDEO/PHOTOGRAPHS. AT THE COMPLETION OF ALL WORK AREA CONSTRUCTION, THE HAUL ROUTE AND CONSTRUCTION EQUIPMENT PARKING AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS PER THE SPECIFICATIONS.
5. THE COSTS FOR PROVISION, PLACEMENT, MAINTENANCE AND REMOVAL OF BARRICADES ON THE AIRFIELD AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150520 MOBILIZATION.
6. THE COSTS FOR CONSTRUCTION/MAINTENANCE/RESTORATION OF HAUL ROUTE AND EQUIPMENT STAGING AREA, TEMPORARY SIGNAGE AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150540 HAUL ROUTE.



0' 30' 60' 120'
 HALF SIZE SCALE: 1" = 120'
 FULL SIZE SCALE: 1" = 60'

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED IMPROVEMENTS
- PROPOSED CONTRACTOR STAGING AREA
- EXISTING FENCE
- PROPOSED HAUL ROUTE
- PROPOSED BARRICADES
- CONSTRUCTION SIGN



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 Springfield, IL 62703
 phone: 217-788-2450
 fax: 217-788-2503

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 Salem, IL 62881



DATE LICENSE
 SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
 PROJECT NO: 22A0078D
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SHEET TITLE

PROPOSED SAFETY PLAN

FOR BID

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 I:\22\JOBS\22A0078D\CAD\AIRPORT\SHEET\C-004-SFY

Salem-Leckrone Airport

Salem Airport Authority
 1100 Airport Rd.
 Salem, IL 62881



DATE SIGNED: 11/17/2023 LICENSE EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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PROJECT NO: 22A0078D

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DESIGN BY: BSS 3/08/2023

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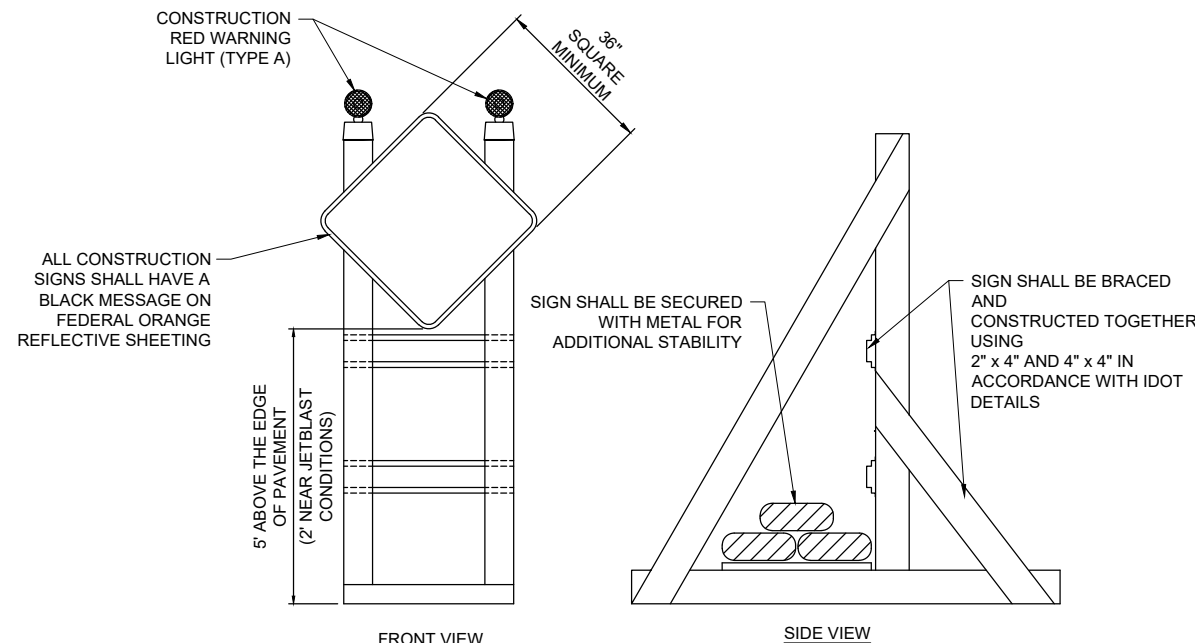
REVIEWED BY: BSS 10/20/2023

SHEET TITLE

CONSTRUCTION SAFETY DETAILS AND NOTES

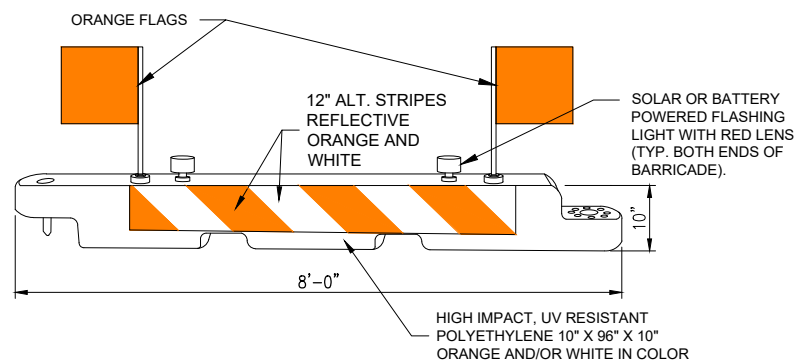
SAFETY NOTES

- FOLLOWING ARE THE CONSTRUCTION SAFETY PROCEDURES THAT THE CONTRACTOR SHALL FOLLOW THROUGHOUT THIS PROJECT. ADDITIONAL REQUIREMENTS ARE SHOWN ON THE SAFETY AND PHASING NOTES AND DETAILS SHEET.
- ALL PROVISIONS OF THE LATEST EDITION OF FAA ADVISORY CIRCULAR AC 150/5370-2 (CURRENT EDITION), "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", APPLY TO THIS CONTRACT, EXCEPT AS MODIFIED BY THIS SAFETY PLAN, OR AS MODIFIED BY THE OWNER THROUGH THE RESIDENT ENGINEER AT THE PRECONSTRUCTION CONFERENCE, OR DURING THE COURSE OF THE CONTRACT.
- THE CONTRACTORS SHALL MINIMIZE DISRUPTION OF STANDARD OPERATING PROCEDURES FOR AERONAUTICAL ACTIVITY BY REMAINING WITHIN THE PRESCRIBED STAGING, CONSTRUCTION, AND PHASING AREAS PRESENTED ON THE PROJECT SAFETY AND PHASING PLANS.
- NO UNAUTHORIZED PERSONNEL SHALL ENTER ANY AREA OF THE AIRPORT THAT COULD POTENTIALLY BE HAZARDOUS. THE AIRPORT MANAGER RESERVES THE RIGHT TO SUSPEND OPERATIONS IN ORDER TO MAINTAIN SAFETY AT THE AIRPORT.
- CONTRACTOR EQUIPMENT, VEHICLES, AND PROJECT MATERIALS SHALL BE STORED AT THE STAGING AREA SHOWN ON THE PLAN VIEW, EXCEPT AS OTHERWISE PROVIDED FOR AT THE PRECONSTRUCTION CONFERENCE.
- ALL CONSTRUCTION EQUIPMENT OPERATING IN THE PRESCRIBED CONSTRUCTION AREA IS REQUIRED TO DISPLAY A CHECKERBOARD FLAG PROPERLY LOCATED OR A ROTATING BEACON (STROBE) AS SPECIFIED IN AC 150/5210-5, "PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT" LATEST EDITION.
- NO CONSTRUCTION MATERIAL STOCKPILES SHALL BE LOCATED WITHIN 250' OF ANY ACTIVE RUNWAY, WITHIN 66' OF ANY OTHER ACTIVE AIRPORT OPERATIONS AREA, OR PENETRATE A PART 77 IMAGINARY SURFACE (PROVIDED BY THE RESIDENT ENGINEER) EXTENDING OUT AND UPWARDS FROM ALL SIDES OF AN ACTIVE RUNWAY.
- NO OPEN TRENCHES WITHIN 250' OF AN ACTIVE RUNWAY CENTERLINE OR WITHIN 66' OF ANY AIRPORT OPERATIONS AREA WILL BE PERMITTED UNLESS PROPERLY MARKED. OTHER TRENCHES SHALL BE MAINTAINED SAFE, I.E., BARRICADED OR COVERED WITH STEEL PLATES IN ALL OTHER AREAS.
- OPEN TRENCHES, EXCAVATIONS, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHOULD BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED WITH FLASHING YELLOW LIGHTS DURING HOURS OF RESTRICTED VISIBILITY AND/OR DARKNESS.
- THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FEET, WHICH IS EXPECTED TO BE A CONCRETE TRUCK, DUMP TRUCK, OR BACKHOE.
- NO OPEN FLAME WELDING OR TORCH CUTTING OPERATION IS PERMITTED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE AIRPORT MANAGER NO FLARE POTS ARE ALLOWED ON THE PROJECT.
- SOIL, DEBRIS, AND LOOSE MATERIAL DROPPED OR TRUCKED ONTO AIRPORT ROADS, TAXIWAYS, AND SOD SURFACES, OR WHICH CAN BE BLOWN ONTO SUCH SURFACES, SHALL BE IMMEDIATELY SWEEPED, PICKED UP AND REMOVED, OR PLACED INTO CLOSED CONTAINERS. ANY DAMAGE TO AIRPORT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAINTAINING AIRPORT LIGHTING AND NAVIGATIONAL ELECTRICAL SYSTEMS DURING CONSTRUCTION. A CONTACT PERSON AND TELEPHONE NUMBER FOR 24 HOUR EMERGENCY IMMEDIATE REPAIR SHALL BE SUBMITTED TO THE AIRPORT MANAGER AND RESIDENT ENGINEER. HAUL ROUTES CROSSING PAVEMENT, DRAINAGE, MISCELLANEOUS STRUCTURES AND/OR AIRFIELD CABLES SHALL BE PROTECTED FROM DAMAGE.
- ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO VEHICLES AND REMAIN CLEAR AT ALL TIMES.
- CONTRACTOR SHALL PLACE, SECURE, AND MAINTAIN LIGHTED BARRICADES AND CLOSURE CROSSES WHEN A RUNWAY/TAXIWAY/APRON IS CLOSED OR AS REQUIRED BY THE PLANS AND DESIGNATED BY THE RESIDENT ENGINEER/TECHNICIAN.
- CONTRACTOR SHALL MARK HAZARDOUS AREA WITH STEADY-BURNING OR FLASHING RED LIGHTS DURING PERIODS OF LOW VISIBILITY AS REQUIRED.
- THE CONTRACTOR SHALL PERIODICALLY PERFORM ONSITE INSPECTIONS THROUGHOUT THE DURATION OF THE PROJECT WITH THE IMMEDIATE REMEDY OF ANY DIFFERENCES, WHETHER CAUSED BY NEGLIGENCE, OVERSIGHT, OR PROJECT SCOPE CHANGE.
- CONTRACTOR SHALL MOVE MAINTENANCE OF TRAFFIC COMPONENTS AT THE WRITTEN DIRECTION OF THE RESIDENT ENGINEER/TECHNICIAN AT NO ADDITIONAL COST.
- CONTRACTOR SHALL NOT REMOVE THE BARRICADES WITHOUT THE APPROVAL BY THE RESIDENT ENGINEER/TECHNICIAN.
- CONTRACTOR SHALL MAINTAIN FLASHERS, SIGNS AND/OR BARRICADES AS REQUIRED BY THE PLANS, CITY OR COUNTY REGULATIONS OR CONTRACTOR ACTIVITIES. CONTRACTOR SHALL OBTAIN ANY AND ALL REQUIRED LOCAL PERMITS UNLESS SPECIFIED OTHERWISE.
- THE CONTRACTOR SHALL UTILIZE WATER AND/OR CHEMICALS APPROVED BY THE RESIDENT ENGINEER AS NECESSARY TO CONTROL DUST.
- NO CONSTRUCTION VEHICLES SHALL BE DRIVEN ACROSS ANY ACTIVE RUNWAY, INCLUDING TURF RUNWAYS. CONSTRUCTION EQUIPMENT OR CONSTRUCTION ACTIVITY WILL NOT BE PERMITTED WITHIN 250' OF ANY ACTIVE RUNWAY CENTERLINE OR WITHIN 66' OF ANY OTHER ACTIVE AIRPORT TAXIWAY OR APRON. HOWEVER, CONSTRUCTION MAY BE PERMITTED IN THESE AREAS IF THE CONTRACTOR HAS GAINED APPROVAL FROM THE AIRPORT MANAGER AT LEAST 7 DAYS IN ADVANCE OF THE SCHEDULED CONSTRUCTION PERIOD AND THE OPERATIONAL AREA IS CLOSED TO TRAFFIC AND PROPER NOTAMS ARE ISSUED BY THE AIRPORT MANAGER TO THE APPROPRIATE FLIGHT SERVICE STATION.
- UNLESS SPECIFIED OTHERWISE, COST FOR THE ABOVE IS TO BE CONSIDERED INCIDENTAL TO THE PROJECT. SEPARATE PAYMENT SHALL NOT BE MADE.



SIGNAGE NOTES

- ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE ILLINOIS SUPPLEMENT (LATEST EDITION) AND THE FAA ADVISORY CIRCULARS (LATEST EDITION) UNLESS NOTED OTHERWISE. THE FAA OR MORE STRINGENT SPECIFICATIONS SHALL GOVERN.
- UNLESS OTHERWISE SPECIFIED, CONSTRUCTION SIGNS SHALL BE MOUNTED ON PORTABLE OR NON-PORTABLE SUPPORTS. A PORTABLE SUPPORT IS DEFINED AS A TYPICAL SIGN STANDARD AS SHOWN ON THIS SHEET, OR A SMALL LIGHT WEIGHT TRAILER. A NON-PORTABLE SUPPORT IS DEFINED AS DRIVEN METAL OR WOOD POST. ALL SIGNS, REGARDLESS OF THE TYPE OF SUPPORTS USED, SHALL BE MOUNTED SUCH THAT THE MESSAGE ON THE SIGN IS LEVEL IN THE HORIZONTAL PLANE AFTER PLACEMENT. THE COST OF CONSTRUCTION WARNING LIGHTS SHALL BE INCLUDED IN THE COST OF THE CONSTRUCTION SIGNS.
- CONSTRUCTION RED WARNING LIGHT: THESE ARE PORTABLE, LENS DIRECTED, ENCLOSED LIGHTS. THE COLOR OF THE LIGHT EMITTED SHALL BE RED. THEY ARE TO BE USED IN A LOW INTENSITY FLASHING MODE (TYPE A).
- THE LIGHTING SHALL BE MAINTAINED IN OPERATION DURING THE HOURS OF DARKNESS BETWEEN 1/2 HOUR AFTER SUNSET AND 1/2 HOUR BEFORE SUNRISE AND WHEN CONDITIONS EXIST WHICH TEND TO OBSCURE VISION.
- COST FOR PROVIDING, PLACING, MAINTAINING, AND REMOVING SIGNS SHALL BE INCLUDED IN ITEM AR150540 HAUL ROUTE.

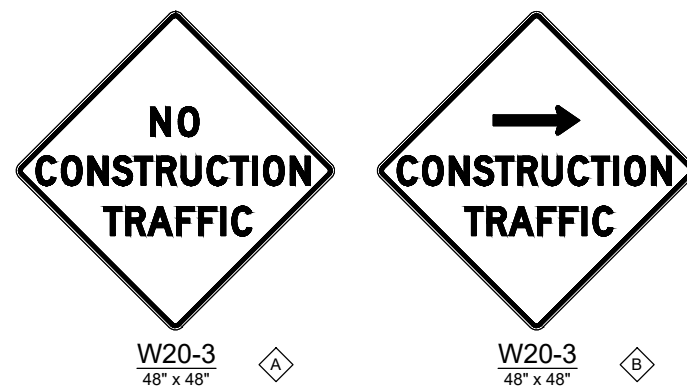


LOW-PROFILE BARRICADE DETAIL NOT TO SCALE

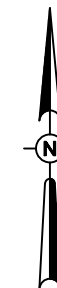
DETAIL ABOVE REPRESENTS ONE OPTION FOR LOW-PROFILE BARRICADES. OTHER OPTIONS MAY BE UTILIZED AS LONG AS THEY MEET THE REQUIREMENTS OF THE PROJECT, INCLUDING BARRICADE NOTE 1.

BARRICADE NOTES

- CLOSED AIRFIELD PHASING AREAS, OPEN TRENCHES, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH LIGHTED BARRICADES WITH STEADY BURNING OR FLASHING RED LIGHTS AS SPECIFIED IN 150/5370-2, "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION, LATEST EDITION. LIGHTED BARRICADES MUST BE NO TALLER THAN 18" (EXCLUSIVE OF SUPPLEMENTARY LIGHTS AND FLAGS) ON THE TAXIWAYS AND COMPLY WITH ADVISORY CIRCULAR 150/5370-2, LATEST EDITION. CONTRACTOR SHALL NIGHT CHECK BARRICADES DAILY FOR PROPER OPERATION.
- BARRICADES SHALL BE SPACED END TO END THE WIDTH OF THE PAVEMENT IN 4' INCREMENTS. BARRICADES ARE TO BE SET BACK 66' FROM THE ACTIVE TAXIWAY CENTERLINE OR AS SHOWN ON THE PLANS.
- CONSTRUCTION RED WARNING LIGHT: THESE ARE PORTABLE, LENS DIRECTED, ENCLOSED LIGHTS. THE COLOR OF THE LIGHT EMITTED SHALL BE RED. THEY MAY BE USED IN EITHER A STEADY BURN (TYPE C) OR LOW INTENSITY FLASHING MODE (TYPE A) UNLESS NOTED OTHERWISE.
- THE LIGHTING SHALL BE MAINTAINED IN OPERATION DURING THE HOURS OF DARKNESS BETWEEN 1/2 HOUR BEFORE SUNSET AND 1/2 HOUR AFTER SUNRISE AND WHEN CONDITIONS EXIST WHICH TEND TO OBSCURE VISION.
- BARRICADES SHALL BE SECURED TO THE GROUND BY APPROVED METHODS TO PREVENT MOVEMENT BY PROP WASH, JET BLAST OR OTHER WIND CURRENTS.
- THE ONLY COLOR COMBINATION ON BARRICADES IS ORANGE AND WHITE. THE ORANGE STRIPES SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING. THE WHITE STRIPES SHALL BE EITHER ENCAPSULATED OR ENCLOSED LENS REFLECTIVE SHEETING AND MUST BE IN ACCEPTABLE CONDITION.
- COST FOR PROVIDING, PLACING, MAINTAINING, AND REMOVING BARRICADES SHALL BE INCLUDED IN ITEM AR150520 MOBILIZATION.



CONSTRUCTION SIGNS NOT TO SCALE



0' 10' 20' 40'
 HALF SIZE SCALE: 1"= 40'
 FULL SIZE SCALE: 1"= 20'

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED PAVEMENT REMOVAL
- PROPOSED IMPROVEMENTS
- EXISTING FENCE
- PROPOSED SAWCUT

NOTES

1. DURING THE PCC PAVEMENT CONSTRUCTION, THE CONTRACTOR SHALL REMOVE TO A SUFFICIENT DEPTH IN ORDER TO ACCOMMODATE THE CONSTRUCTION OF THE PROPOSED PCC PAVEMENT TO PROPOSED GRADES. IF FOR ANY REASON THE CONTRACTOR REMOVES A GREATER DEPTH, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA MATERIAL.
2. THE CONTRACTOR SHALL PROTECT EXISTING PAVEMENT, HANGARS AND BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
3. EXISTING ROAD BED SECTION IS 12"-16" CRUSHED AGGREGATE.



DATE: 11/17/2023 LICENSE: 11/30/2025
 SIGNED: BARRY S. STOLZ

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

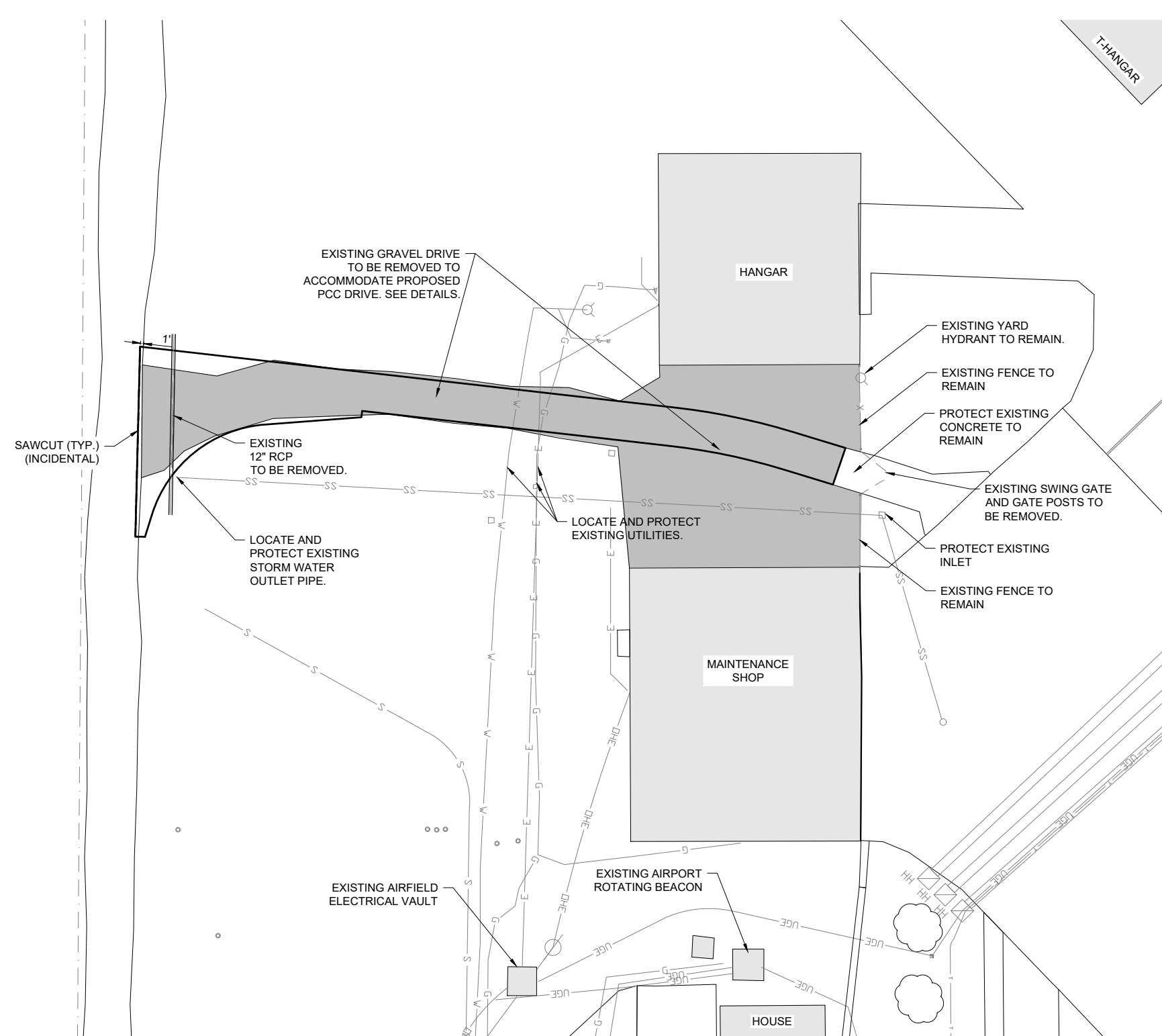
IDA NO: SLO-5029
 CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
 PROJECT NO: 22A0078D
 CAD FILE: C-131-EXST.DWG
 DESIGN BY: BSS 3/08/2023
 DRAWN BY: CWS 3/08/2023
 REVIEWED BY: BSS 10/20/2023

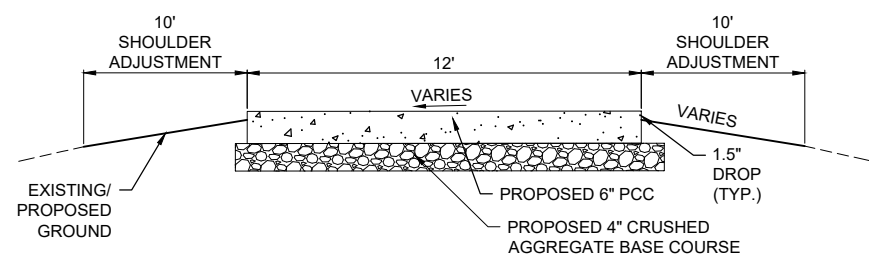
SHEET TITLE

EXISTING CONDITIONS PLAN



Salem-Leckrone Airport

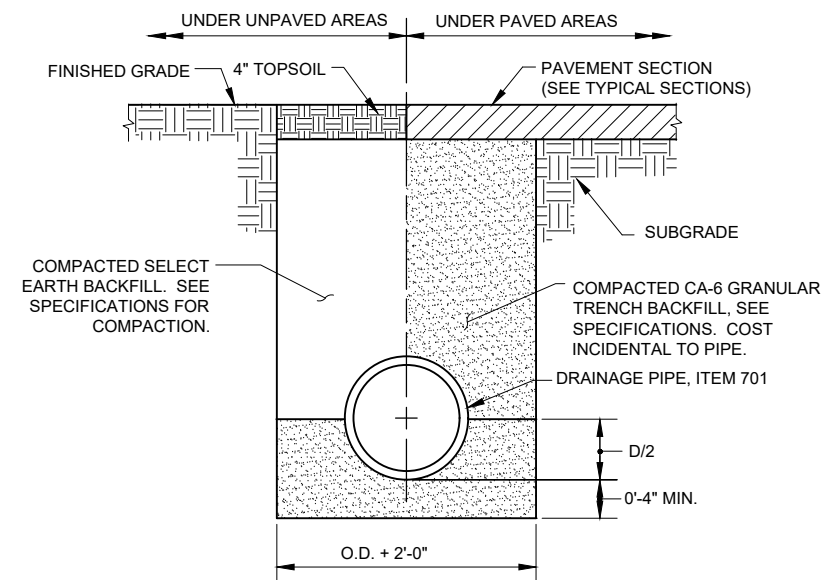
Salem Airport Authority
 1100 Airport Rd.
 Salem, IL 62881



PROPOSED PCC DRIVE
 NOT TO SCALE

NOTES

- TURF AREAS NOTED AS "SHOULDER ADJUSTMENT" SHALL ALSO RECEIVE EROSION CONTROL BLANKET INSTALLATION FOLLOWING SEEDING. GRAVEL AREAS NOTED AS "SHOULDER ADJUSTMENT" SHALL BE RESHAPED AS NEEDED TO MAINTAIN MAXIMUM 1.5" DROPOFF FROM NEW CONCRETE PAVEMENT. SEE PLAN AND PROFILE SHEET.



NOTES

- UNSUITABLE MATERIAL ENCOUNTERED DURING PLACEMENT OF BEDDING SHALL BE REMOVED AND REPLACED.
- WITHIN 3 FEET OF PAVED AREA, GRANULAR BACKFILL IS TO BE USED INSTEAD OF EARTH BACKFILL.
- AT CONTRACTOR'S OPTION IDOT CONTROLLED LOW STRENGTH MATERIAL WITH A HIGH EARLY STRENGTH, "FLASH FILL", MAY BE USED INSTEAD OF GRANULAR TRENCH BACKFILL UNDER PAVEMENTS.

PIPE TRENCH
 NOT TO SCALE



DATE SIGNED: 11/17/2023 LICENSE EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: C-302-TYP.DWG

DESIGN BY: BSS 3/08/2023

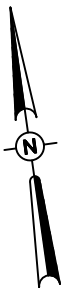
DRAWN BY: CWS 3/08/2023

REVIEWED BY: BSS 10/20/2023

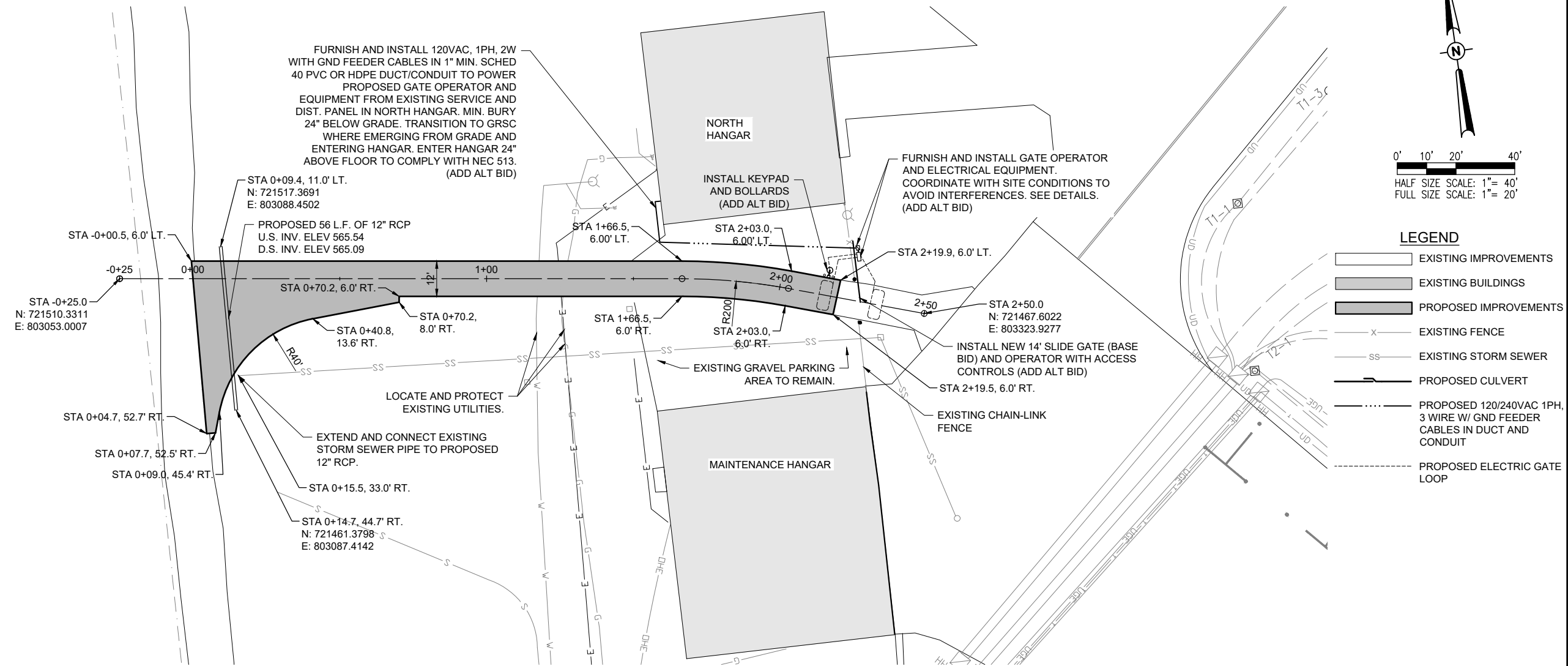
SHEET TITLE

TYPICAL SECTIONS

FOR BID



0' 10' 20' 40'
HALF SIZE SCALE: 1"= 40'
FULL SIZE SCALE: 1"= 20'



LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED IMPROVEMENTS
- EXISTING FENCE
- EXISTING STORM SEWER
- PROPOSED CULVERT
- PROPOSED 120/240VAC 1PH, 3 WIRE W/ GND FEEDER CABLES IN DUCT AND CONDUIT
- PROPOSED ELECTRIC GATE LOOP



DATE: 11/17/2023 LICENSE: 11/30/2025
SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

UTILITY NOTE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

NOTES

1. DURING THE PCC PAVEMENT RECONSTRUCTION, THE CONTRACTOR SHALL REMOVE TO A SUFFICIENT DEPTH IN ORDER TO ACCOMMODATE THE CONSTRUCTION OF THE PROPOSED PCC PAVEMENT TO PROPOSED GRADES. IF FOR ANY REASON THE CONTRACTOR REMOVES A GREATER DEPTH, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXTRA MATERIAL.
2. THE CONTRACTOR SHALL PROTECT EXISTING PAVEMENT, HANGARS AND BUILDINGS AT ALL TIMES DURING CONSTRUCTION.
3. TURF AREAS NOTED AS "SHOULDER ADJUSTMENT" SHALL ALSO RECEIVE EROSION CONTROL BLANKET INSTALLATION FOLLOWING SEEDING. GRAVEL AREAS NOTED AS "SHOULDER ADJUSTMENT" SHALL BE RESHAPED AS NEEDED TO MAINTAIN MAXIMUM 1.5" DROPOFF FROM NEW CONCRETE PAVEMENT. SEE PLAN AND PROFILE SHEET.

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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PROJECT NO: 22A0078D
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DESIGN BY: BSS 3/08/2023
DRAWN BY: CWS 3/08/2023
REVIEWED BY: BSS 10/20/2023

SHEET TITLE

PROPOSED CONSTRUCTION PLAN

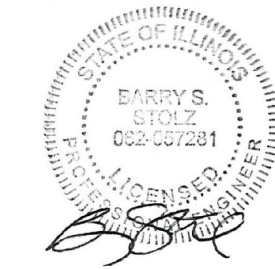
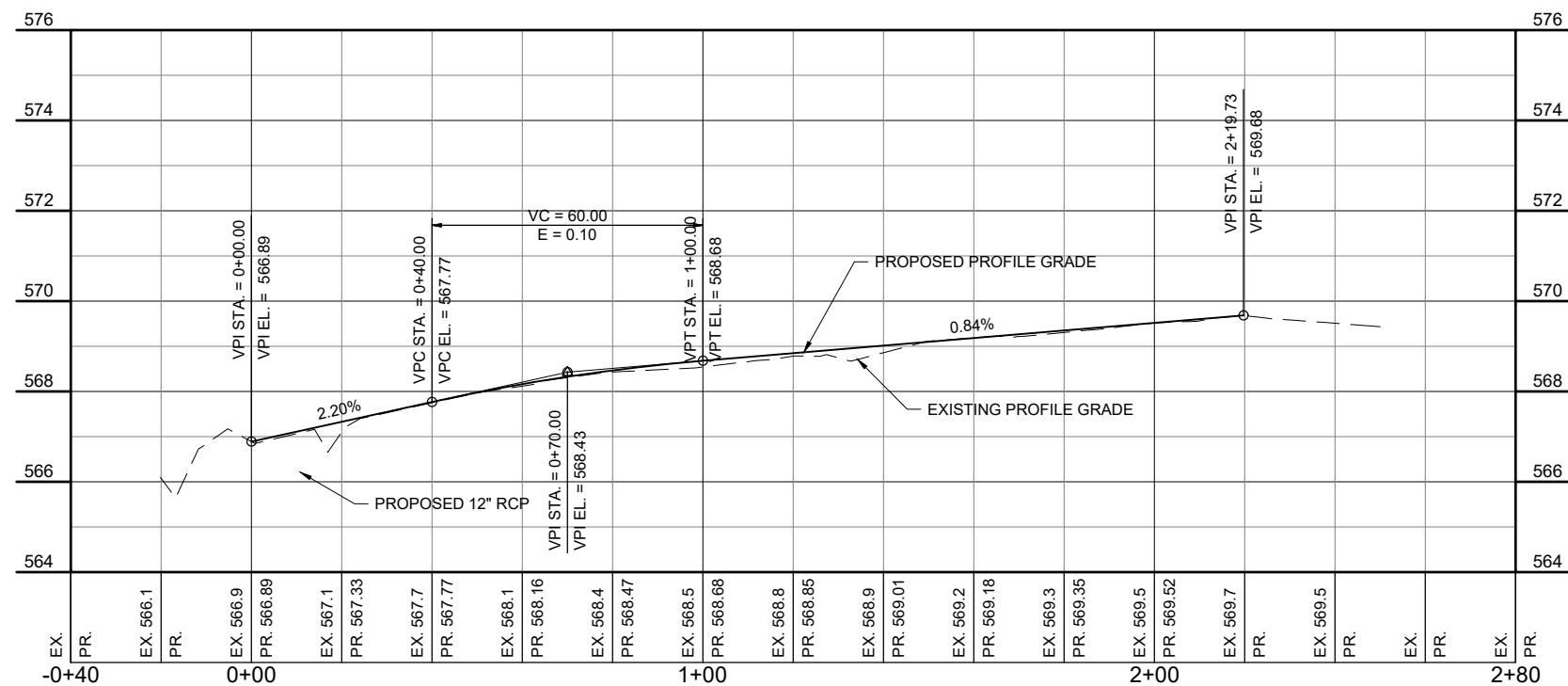
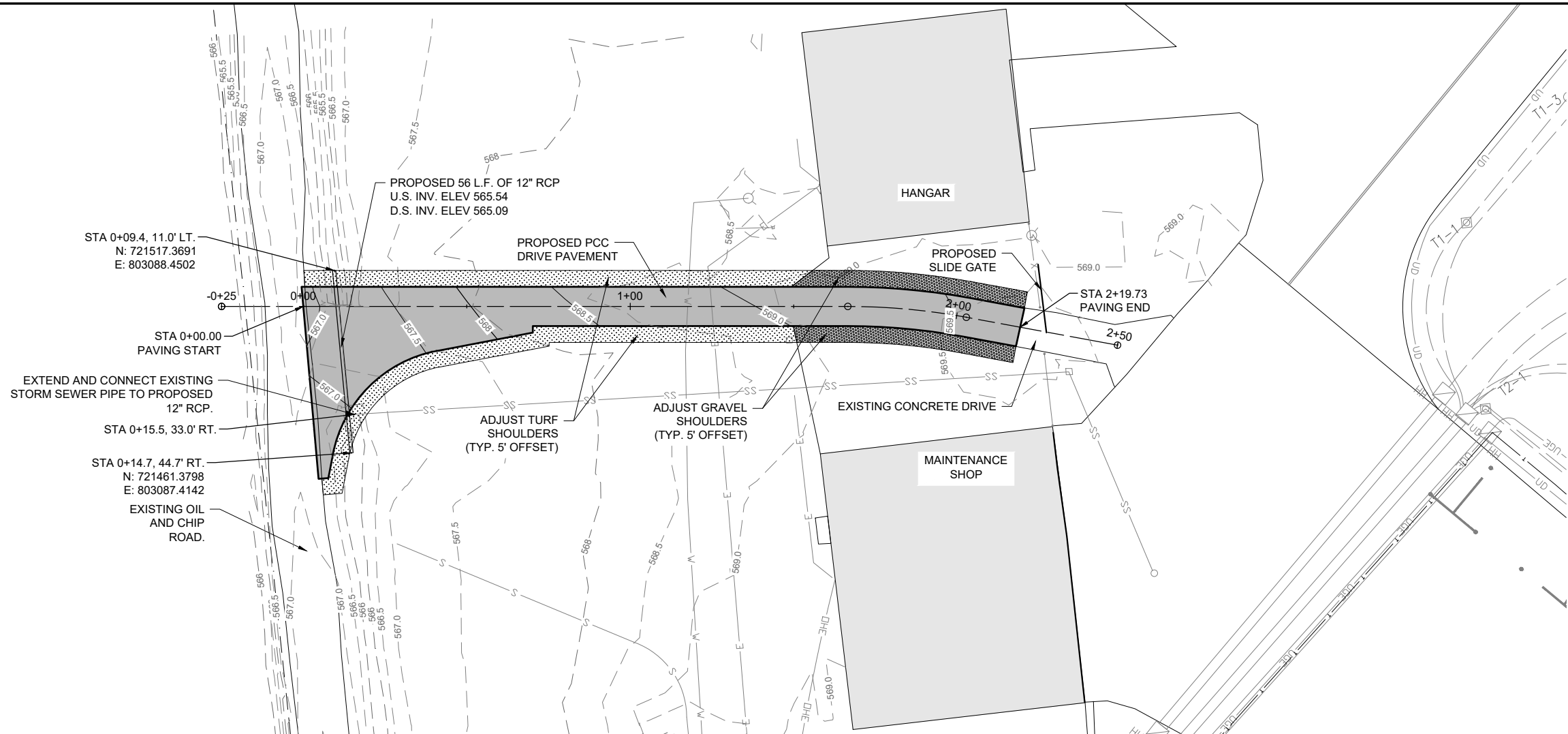
FOR BID



0' 10' 20' 40'
 HALF SIZE SCALE: 1" = 40'
 FULL SIZE SCALE: 1" = 20'

LEGEND

- EXISTING IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED IMPROVEMENTS
- EXISTING FENCE
- EXISTING STORM SEWER
- PROPOSED CULVERT
- PROPOSED GRAVEL SHOULDER ADJUSTMENT
- PROPOSED TURF SHOULDER ADJUSTMENT



DATE: 11/17/2023
 LICENSE: EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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 CAD FILE: C-701-PNP.DWG
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 REVIEWED BY: BSS 10/20/2023

SHEET TITLE

PROPOSED PLAN & PROFILE

FOR BID

Salem-Leckrone Airport

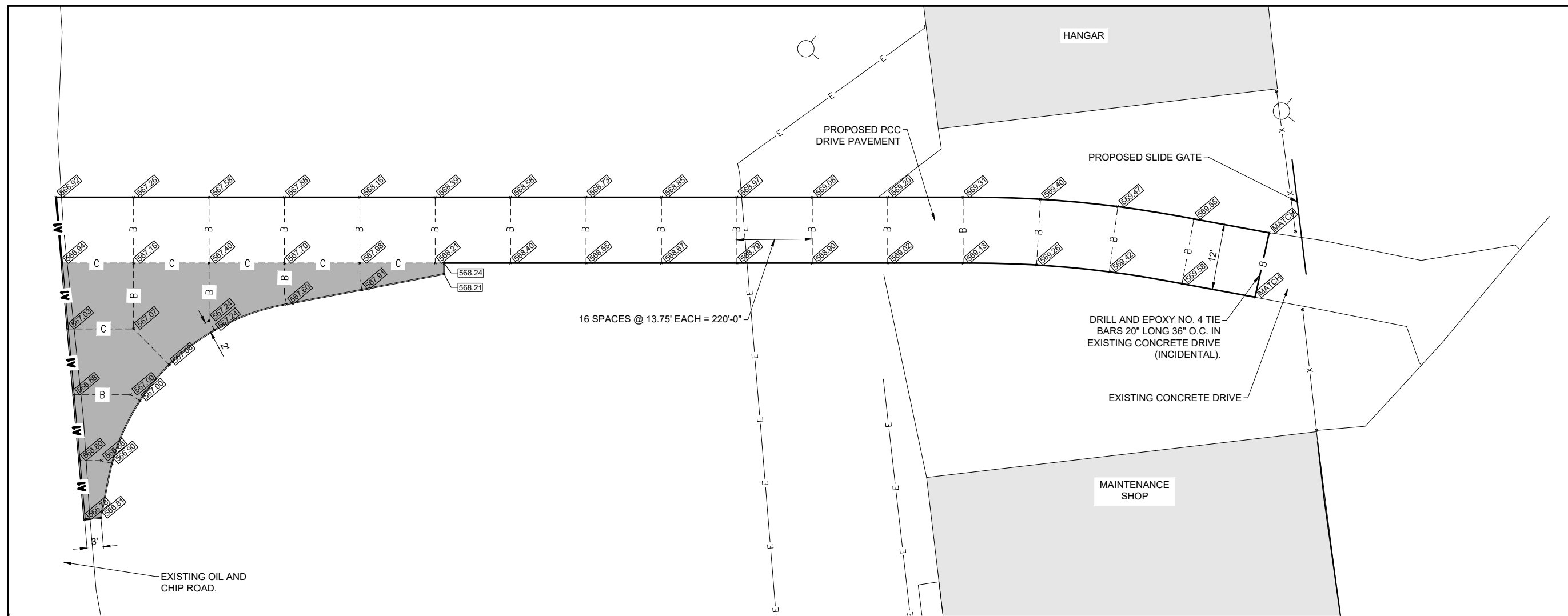
Salem Airport Authority
 1100 Airport Rd.
 Salem, IL 62881



DATE: 11/17/2023 LICENSE: 11/30/2025
 SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

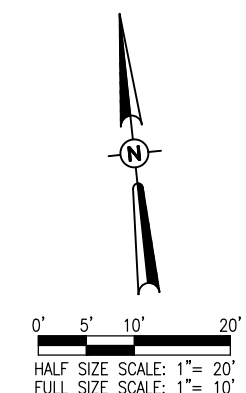


JOINTING NOTES

- ALL JOINT EDGES SHALL BE SAWCUT TO PRODUCE THE 1/4" CHAMFER.
- ALL LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS SHALL BE SAWED.
- ALL DOWEL BARS SHALL BE SECURELY HELD IN PLACE BY MEANS OF A DOWEL BAR ASSEMBLY WHICH WILL ENSURE THAT THEY WILL REMAIN PARALLEL TO THE SURFACE OF THE PAVEMENT AND TO THE CENTERLINES OF THE PAVEMENT LANES. THE DOWEL BAR ASSEMBLIES SHALL BE APPROVED BY THE RESIDENT ENGINEER/TECHNICIAN PRIOR TO INSTALLATION.
- DOWEL BARS FOR 6 IN. THICK PAVEMENT SHALL BE 3/4 IN. DIAMETER, 18 IN. LONG AT 12 IN. SPACING.
- ALL TIE BARS SHALL BE HELD IN PLACE BY SUPPORT PINS OR OTHER METHODS TO PREVENT SHIFTING DURING AND AFTER CONCRETE PLACEMENT. SUPPORT PINS SHALL BE OF SUFFICIENT LENGTH TO PENETRATE AT LEAST 6" INTO THE SUBGRADE.
- ALL TIE BARS FOR 6 IN. PCC PAVEMENT SHALL BE 20 IN. LONG NO. 4 BARS SPACED AT 36 IN. ON CENTER.
- DOWELS IN TRANSVERSE CONTRACTION AND LONGITUDINAL CONSTRUCTION JOINTS SHALL BE COATED WITH A RUSTPROOFING COMPOUND AND HALF THE LENGTH GREASED WITH A HEAVY GREASE.
- ALLOWABLE TOLERANCES FOR GROOVE DEPTH WILL BE ±1/8" FOR CONSTRUCTION JOINTS AND ±1/4" FOR CONTRACTION JOINTS.
- THE CONTRACTOR IS REQUIRED TO DRILL AND EPOXY THE PROPOSED DOWELS IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS. THE EPOXY MATERIAL MUST BE APPROVED BY THE DIVISION OF AERONAUTICS PRIOR TO USE.
- THE COST OF ALL DOWEL BARS, TIE-BARS, SAWING AND SEALING SHALL BE INCLUDED IN THE COST OF THE PCC PAVEMENT.
- WHEN CONSTRUCTING "FILL-IN" PAVEMENT LANES THE CONTRACTOR SHALL USE BELTING OR OTHER PROTECTIVE MATERIAL FOR THE PAVING MACHINE TO TRAVEL ON AND WILL PROTECT THE TRANSVERSE JOINTS.
- JOINT SEALANT SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS, ITEM 605.
- CURING COMPOUND SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS, ITEM 501, SECTION 501-2.9, AND SHALL BE APPROVED PRIOR TO THE PAVING OPERATION BY THE RESIDENT ENGINEER/TECHNICIAN.
- ALL NON-ALIGNED EDGES WILL BE SAWED FULL DEPTH.

LEGEND

	EXISTING IMPROVEMENTS
	PROPOSED IMPROVEMENTS
	EXISTING FENCE
	TYPE A, ISOLATION JOINT
	TYPE A1-MODIFIED, ISOLATION JOINT
	TYPE B, CONTRACTION JOINT
	TYPE C, CONTRACTION JOINT
	TYPE D, CONTRACTION JOINT
	TYPE E, CONSTRUCTION JOINT
	PROPOSED REINFORCED PANEL
	PROPOSED SPOT ELEVATION



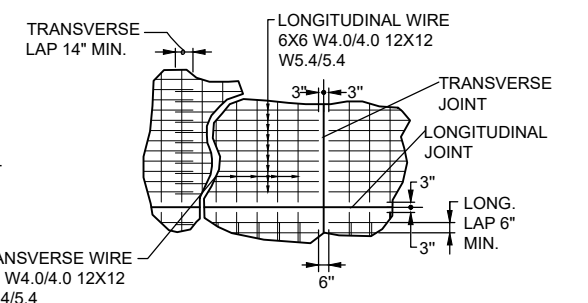
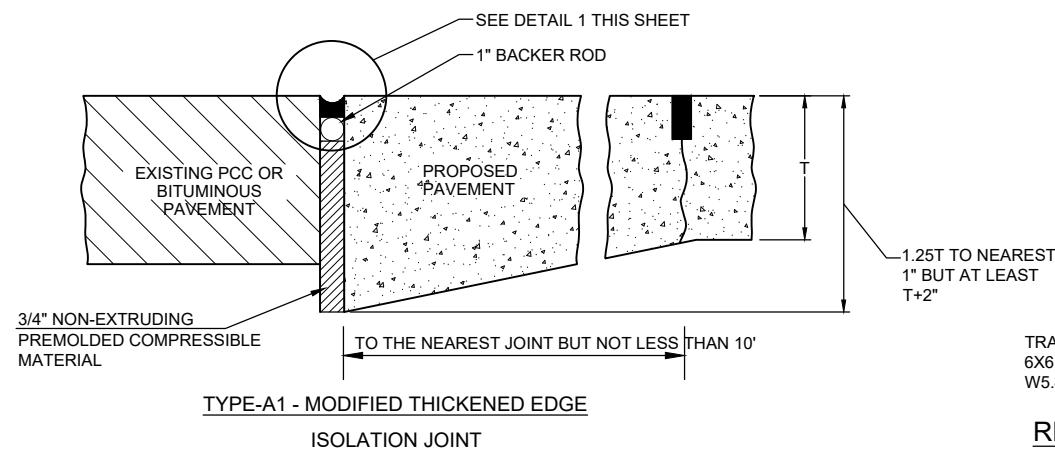
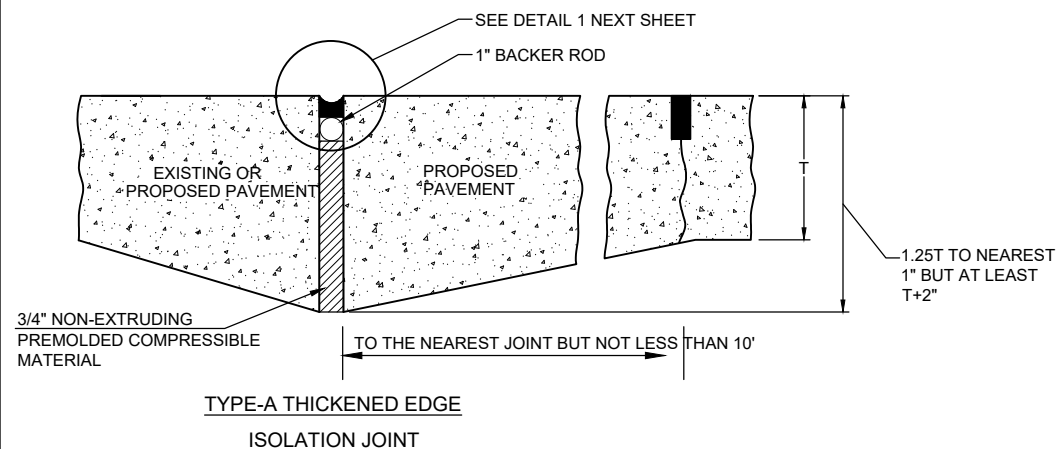
FOR BID

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
 PROJECT NO: 22A0078D
 CAD FILE: C-161-JNT.DWG
 DESIGN BY: BSS 3/08/2023
 DRAWN BY: CWS 3/08/2023
 REVIEWED BY: BSS 10/20/2023

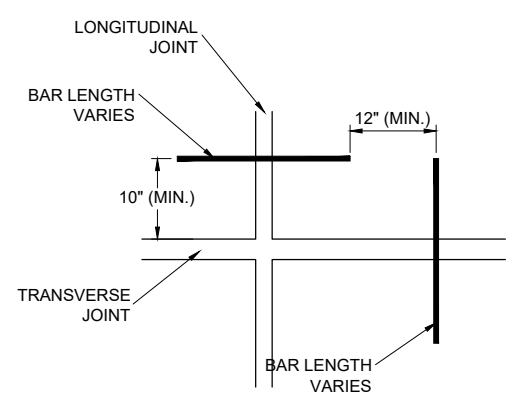
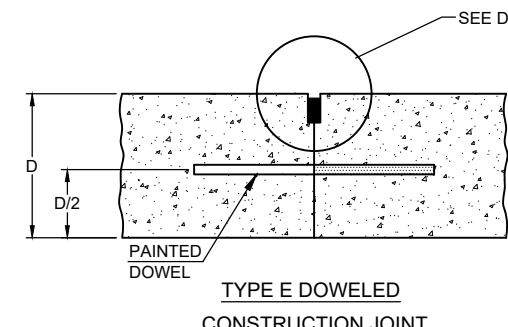
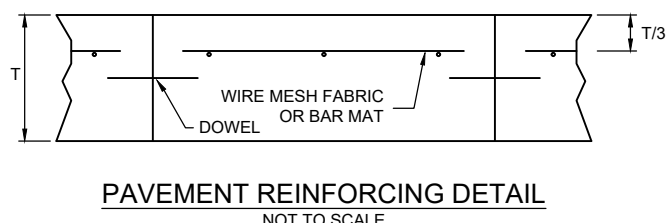
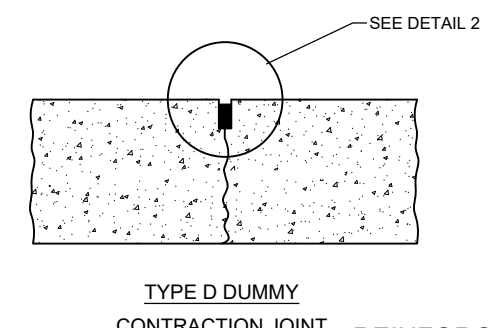
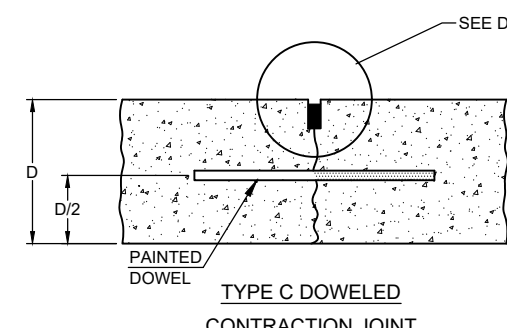
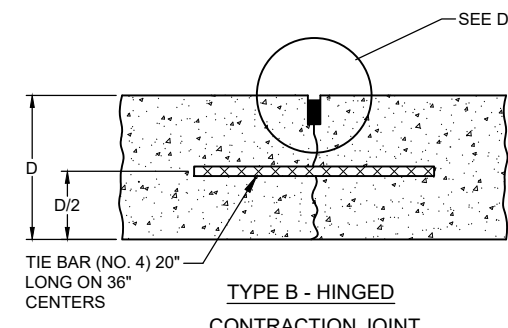
SHEET TITLE

PROPOSED JOINTING PLAN

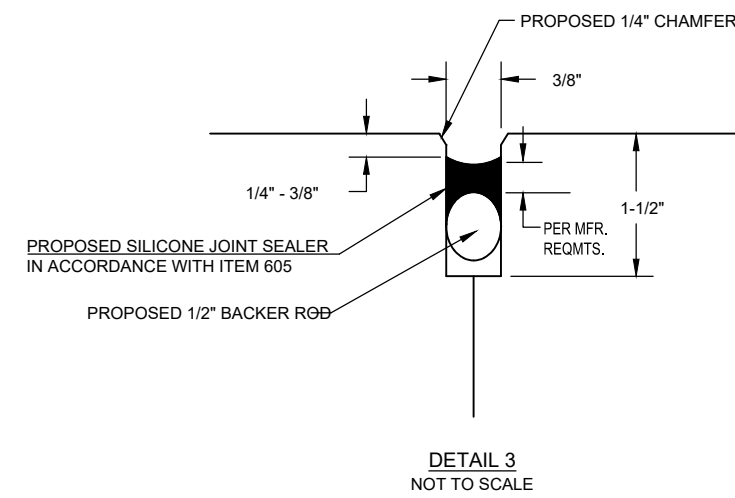
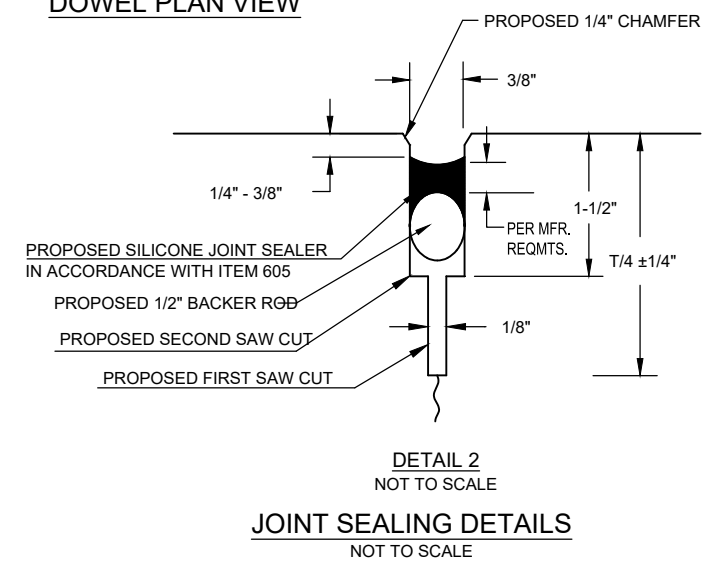
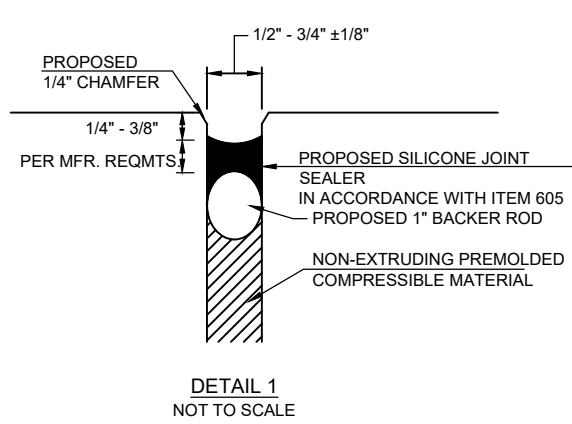


REINFORCEMENT SHEET WIRE FABRIC DETAIL
NOT TO SCALE

NOTE:
DIFFERENT WIRE MESH SIZES/CONFIGURATIONS OR SIZES ARE PERMITTED IF THE MINIMUM CROSS SECTIONAL AREA EQUALS 0.5 OR GREATER.



- REINFORCING NOTES:**
1. END LAPS SHALL BE A MINIMUM OF 12", BUT NOT LESS THAN 30 TIMES THE DIAMETER OF THE LONGITUDINAL WIRE OR BAR.
 2. SIDE LAPS SHALL BE A MINIMUM OF 6", BUT NOT LESS THAN 20 TIMES THE DIAMETER OF TRANSVERSE WIRE OR BAR.
 3. END AND SIDE CLEARANCES SHALL BE A MAXIMUM OF 6" AND A MINIMUM OF 2".
 4. LONGITUDINAL MEMBERS SHALL BE SPACED NOT LESS THAN 4" NOR MORE THAN 12" APART.
 5. TRANSVERSE MEMBERS SHALL BE SPACED NOT LESS THAN 4" NOR MORE THAN 24" APART.
 6. REINFORCING SHALL CONSIST OF WELDED STEEL WIRE FABRIC CONFORMING TO THE REQUIREMENTS OF ASTM A 185 OR BAR MATS CONFORMING TO THE REQUIREMENTS OF ASTM A 184 OR A 704.
 7. PAVEMENT REINFORCING SHALL BE INCIDENTAL TO ITEM 501 PCC PAVEMENT.



DATE: 11/17/2023 LICENSE: 11/30/2025
SIGNED: 11/17/2023 EXPIRES: 11/30/2025
RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
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DRAWN BY: CWS 3/08/2023
REVIEWED BY: BSS 10/20/2023

SHEET TITLE

PROPOSED JOINT DETAILS

FOR BID



Kevin N. Lightfoot
 DATE: 11/17/2023 LICENSE: 062-047643
 SIGNED: 11/17/2023 EXPIRES: 11/30/2025

**RECONSTRUCT NORTH
 AIRPORT ACCESS ROAD
 AND INSTALL GATE**

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-001-LGND.DWG

DESIGN BY: BSS 3/08/2023

DRAWN BY: CWS 3/08/2023

REVIEWED BY: KNL 9/6/2023

SHEET TITLE

**ELECTRICAL LEGEND
 AND ABBREVIATIONS**
FOR BID

ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR DUCT (CONCEALED OR BURIED)
	DUCT
	DUCT
	BURIED/UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	TOGGLE SWITCH
	PUSH BUTTON STATION
	WALL OR CEILING MTD. JUNCTION BOX. CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	MOTOR
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	CONTROL PANEL
	GROUND ROD
	POLE WITH CAMERA

NOTES:

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING/CONSTRUCTION FOR USE AS A REFERENCE.
- NEW WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
- INSULATED CONDUCTORS SHALL COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

120/240 VAC, 1 PHASE, 3 WIRE	
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES UL LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- ONLY QUALIFIED ELECTRICAL CONTRACTORS SHALL PERFORM ELECTRICAL WORK ON THIS PROJECT.
- RESPECTIVE POWER SOURCES FOR EACH PANEL, EQUIPMENT, LIGHT, GATE OPERATOR, OR OTHER DEVICE SHALL BE VERIFIED PRIOR TO WORKING ON, RELOCATING, REMOVING, DISCONNECTING, AND/OR INSTALLING THE RESPECTIVE DEVICES. SHUT OFF, LOCKOUT, AND TAGOUT FOR PROTECTION OF PERSONNEL.
- HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, RACEWAY, JUNCTION STRUCTURE OR HANDHOLE.
- PER NEC 513 THE ENTIRE AREA OF A HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLY CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR, PER NEC 513.3(C) "VICINITY OF AIRCRAFT". THE AREA WITHIN 5 FT. HORIZONTALLY FROM AIRCRAFT POWER PLANTS OR AIRCRAFT FUEL TANKS SHALL BE CLASSIFIED AS A CLASS I, DIVISION 2 LOCATION THAT SHALL EXTEND UPWARD FROM THE FLOOR TO A LEVEL 5FT. ABOVE THE UPPER SURFACE OF WINGS AND OF ENGINE ENCLOSURES. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS OTHER APPLICABLE CODES AND REQUIREMENTS.

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	HEAVY DUTY FUSIBLE SAFETY SWITCH 2 POLE 30A WITH 20A FUSES
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND - GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
	TRANSFER SWITCH
	ENGINE GENERATOR SET

ELECTRICAL ABBREVIATIONS (CONTINUED)	
PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS	
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSRL	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

ELECTRICAL ABBREVIATIONS	
A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EOB	ENGINEER OF RECORD
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK - ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KNL	KEVIN NEIL LIGHTFOOT
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD



Kevin N. Lightfoot
 DATE: 11/17/2023 LICENSE: 062-047643
 SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D
 CAD FILE: E-503.DWG
 DESIGN BY: BSS 3/08/2023
 DRAWN BY: CWS 3/08/2023
 REVIEWED BY: KNL 9/6/2023

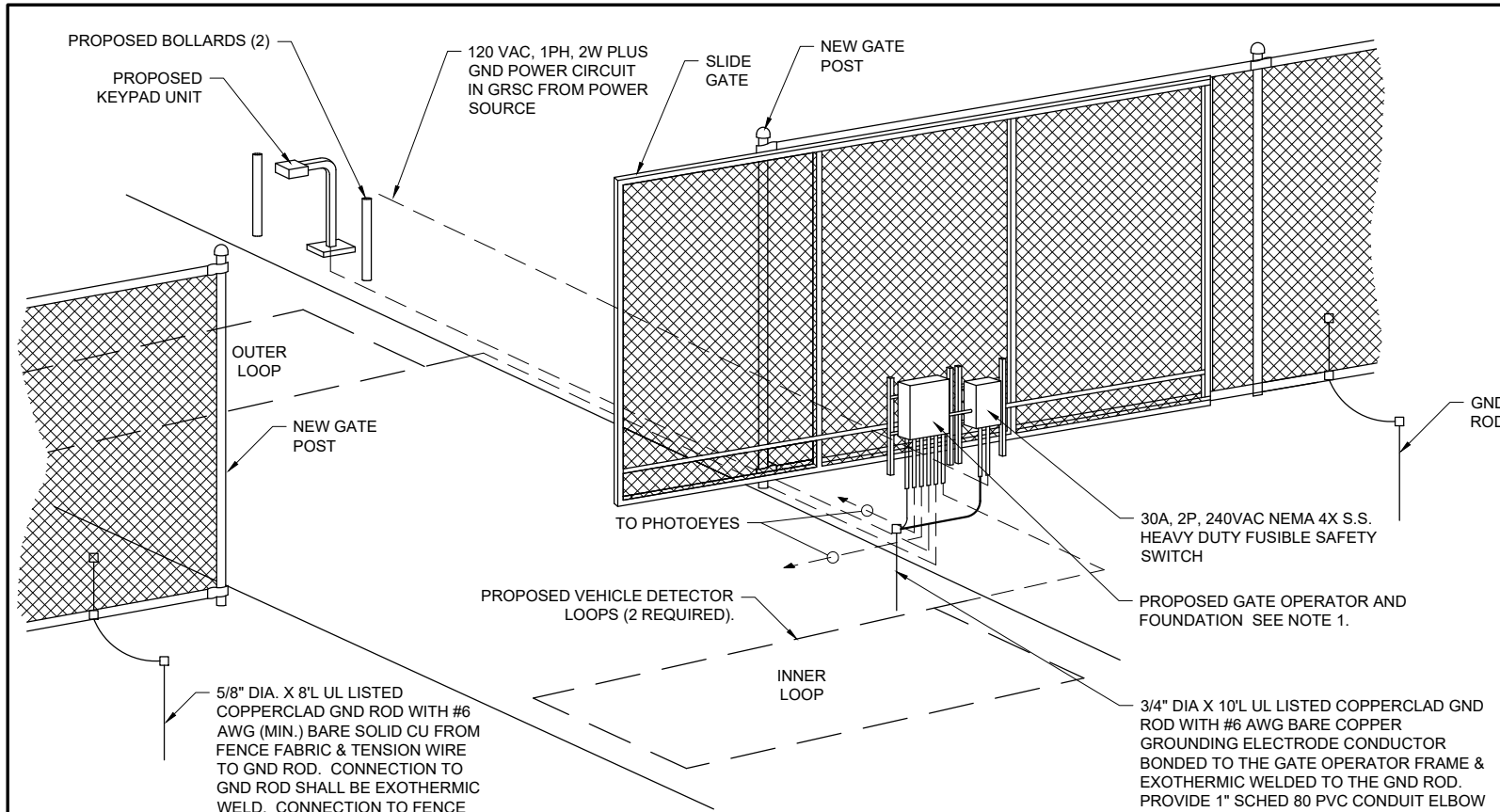
SHEET TITLE

PROPOSED SLIDE GATE DETAILS

NOTES:

- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON GATE & GATE OPERATOR SYSTEM.
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE SITE PLAN FOR GATE.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
- 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION AND THE KEYPAD ACCESS CONTROL UNIT, THE PHOTO-ELECTRIC EYES, AND THE DETECTOR LOOPS. THE MINIMUM BURYING DEPTH IS 24". ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE.
- INSTALL KEYPAD FOUNDATION, PEDESTAL AND BOLLARDS AT GATE. FOUNDATION SHALL BE 48" (MIN.) IN DEPTH AS DETAILED HEREIN. INTERFACE KEYPAD INSTALLATION TO NEW GATE OPERATOR.
- THE SLIDING GATE SHALL BE CANTILEVER TYPE OF THE SIZE CALLED FOR ON THE PLANS, SHALL HAVE AN ENCLOSED ROLLER ASSEMBLY WHICH IS PROTECTED FROM FREEZING RAIN AND SNOW.
- GATE SHALL INCLUDE PHOTO-ELECTRIC EYE SAFETY DEVICES. INCLUDE CORROSION RESISTANT SUPPORT POSTS AND HARDWARE WITH THE PHOTO-ELECTRIC EYE SAFETY DEVICES.
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER.
- INCLUDE AC SURGE PROTECTOR FOR THE GATE OPERATOR, UL 1449 LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120VAC, 1 PHASE, 2 WIRE SYSTEM; JOSLYN MODEL 1260-21, SQUARE D CAT. NO. TVS120XR50S, SQUARE D CAT. NO. SDS1175T, OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, ASSOCIATED EQUIPMENT, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE GATE OPERATOR NOTING THE VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
- PAYMENT FOR SLIDE GATE SHALL BE PER EACH AS A BASE BID ITEM. PAYMENT FOR GATE OPERATOR, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE PER EACH AS AN ADDITIVE ALTERNATE BID ITEM TO UPGRADE THE BASE BID GATE, AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, CABLE IN CONDUIT, DUCT, OR UNIT DUCT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO UPGRADE THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- THE GUARD/BOLLARD POSTS SHALL BE 4" DIA. STEEL (HEAVY WALL) PIPE, CONCRETE FILLED, AND SHALL EXTEND FROM THE TOP OF THE CARD CONTROL UNIT TO A DEPTH OF 48" BELOW THE GROUND LINE. THE CONCRETE FOOTER DIMENSION SHALL BE AS DETAILED HEREIN. GUARD/BOLLARD POSTS SHALL BE PAINTED WITH YELLOW COLORED ENAMEL FINISH.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.

VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	NO. OF TURNS
8' TO 12'	4' X 6'	3 TURNS
12' TO 16'	4' X 10'	2 TURNS
16' TO 20'	6' X 14'	2 TURNS
20' TO 24'	6' X 18'	2 TURNS
24' TO 30'	6' X 22'	2 TURNS
30' TO 34'	6' X 26'	2 TURNS

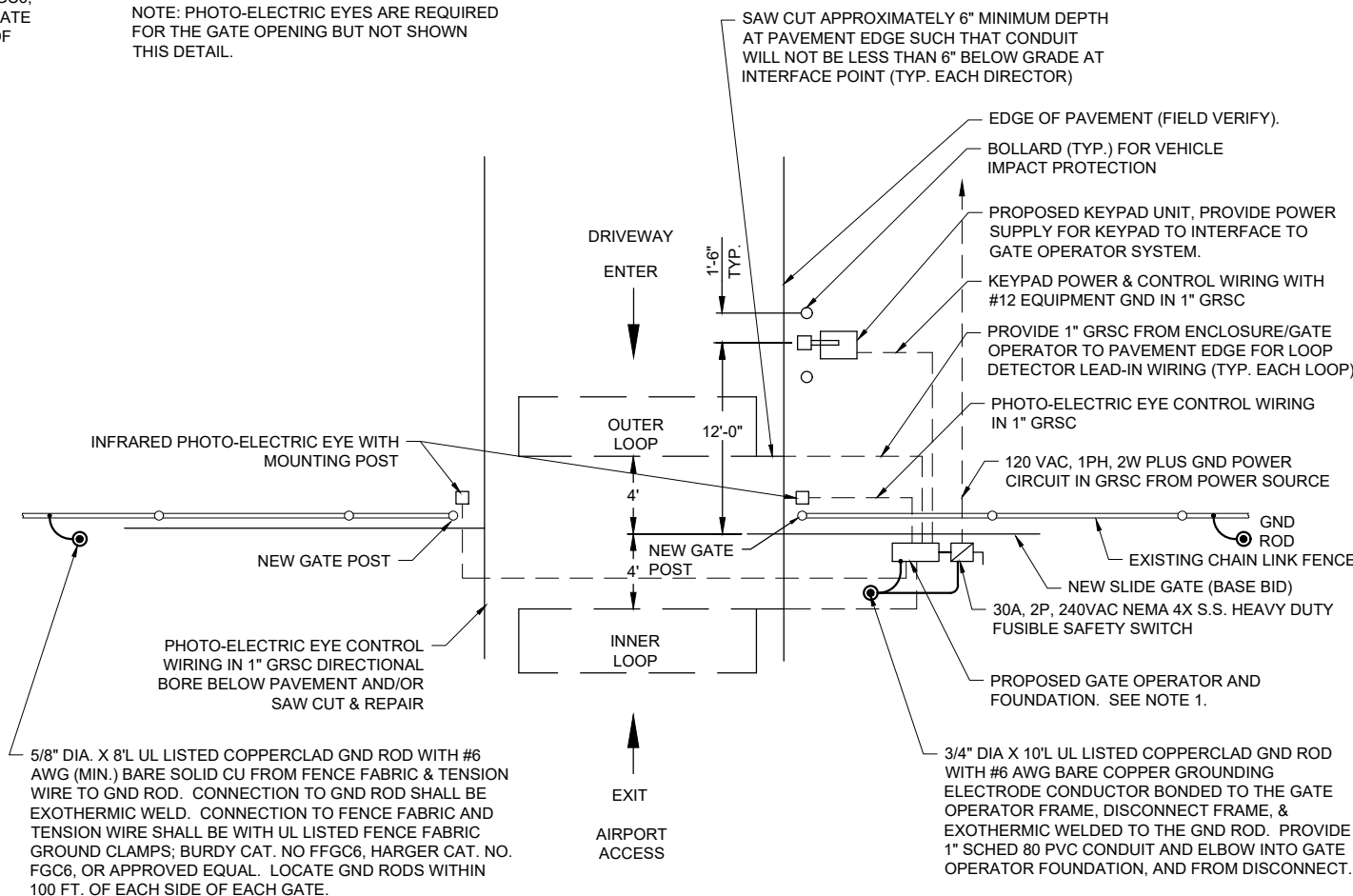


ELECTRIC GATE DETAIL (ISOMETRIC)
 "NOT TO SCALE"

5/8" DIA. X 8'L UL LISTED COPPERCLAD GND ROD WITH #6 AWG (MIN.) BARE SOLID CU FROM FENCE FABRIC & TENSION WIRE TO GND ROD. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO FENCE FABRIC AND TENSION WIRE SHALL BE WITH UL LISTED FENCE FABRIC GROUND CLAMPS; BURDY CAT. NO. FFGC6, HARGER CAT. NO. FFGC6, OR APPROVED EQUAL. LOCATE GND RODS WITHIN 100 FT. OF EACH SIDE OF EACH GATE.

NOTE: PHOTO-ELECTRIC EYES ARE REQUIRED FOR THE GATE OPENING BUT NOT SHOWN THIS DETAIL.

3/4" DIA X 10'L UL LISTED COPPERCLAD GND ROD WITH #6 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR BONDED TO THE GATE OPERATOR FRAME & EXOTHERMIC WELDED TO THE GND ROD. PROVIDE 1" SCHED 80 PVC CONDUIT ELBOW INTO GATE OPERATOR FOUNDATION.



ELECTRIC GATE PLAN
 "NOT TO SCALE"

5/8" DIA. X 8'L UL LISTED COPPERCLAD GND ROD WITH #6 AWG (MIN.) BARE SOLID CU FROM FENCE FABRIC & TENSION WIRE TO GND ROD. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO FENCE FABRIC AND TENSION WIRE SHALL BE WITH UL LISTED FENCE FABRIC GROUND CLAMPS; BURDY CAT. NO. FFGC6, HARGER CAT. NO. FFGC6, OR APPROVED EQUAL. LOCATE GND RODS WITHIN 100 FT. OF EACH SIDE OF EACH GATE.

3/4" DIA X 10'L UL LISTED COPPERCLAD GND ROD WITH #6 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR BONDED TO THE GATE OPERATOR FRAME, DISCONNECT FRAME, & EXOTHERMIC WELDED TO THE GND ROD. PROVIDE 1" SCHED 80 PVC CONDUIT AND ELBOW INTO GATE OPERATOR FOUNDATION, AND FROM DISCONNECT.



Kevin N. Lightfoot
 DATE: 11/17/2023 LICENSE: 11/30/2025
 SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH
 AIRPORT ACCESS ROAD
 AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-504.DWG

DESIGN BY: BSS 3/08/2023

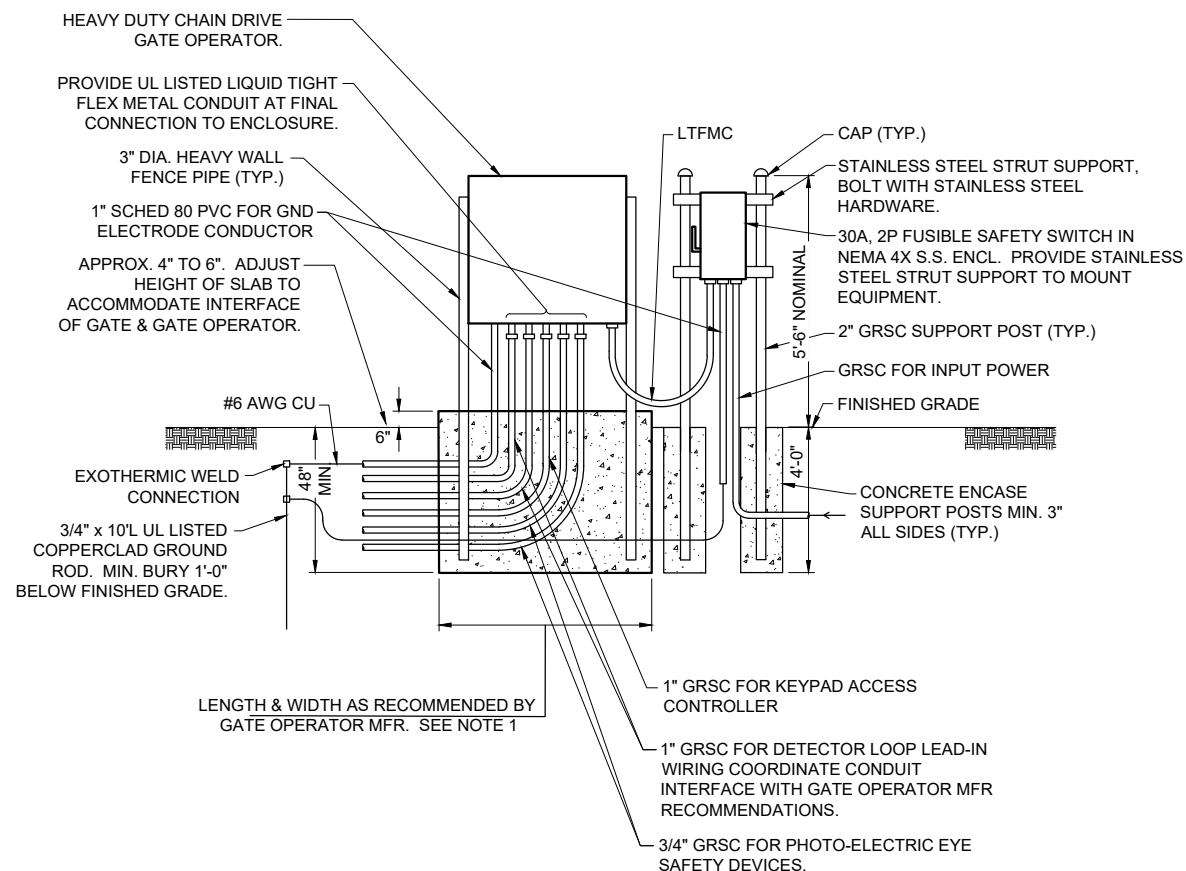
DRAWN BY: CWS 3/08/2023

REVIEWED BY: KNL 9/6/2023

SHEET TITLE

GATE OPERATOR
 DETAILS

FOR BID

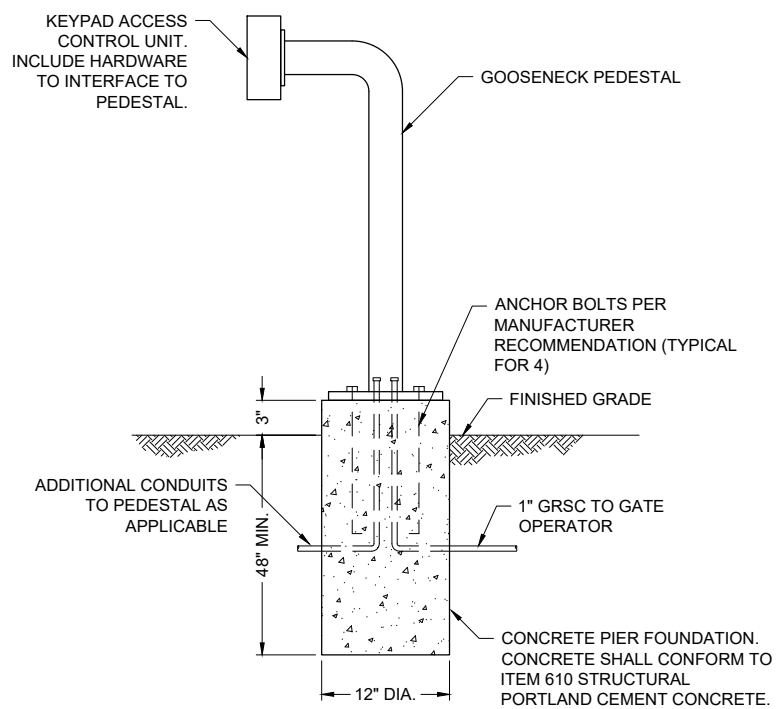


NOTES

- FOUNDATION FOR GATE OPERATOR SHALL BE 48" MIN. IN DEPTH AND OF THE LENGTH & WIDTH RECOMMENDED BY THE MANUFACTURER. CONFIRM MOUNTING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER
- COORDINATE CONDUITS INTO FOUNDATION.
- CONFIRM CONDUIT SIZES AND WIRING REQUIREMENTS WITH THE GATE OPERATOR MFR. ADJUST/INCREASE CONDUIT SIZES WHERE APPLICABLE. REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS.
- ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- GATE WILL REQUIRE PHOTOELECTRIC EYE SECONDARY SAFETY DEVICES. PROVIDE CONDUITS BETWEEN GATE OPERATOR AND SAFETY DEVICES.

GATE OPERATOR FOUNDATION DETAIL

NOT TO SCALE

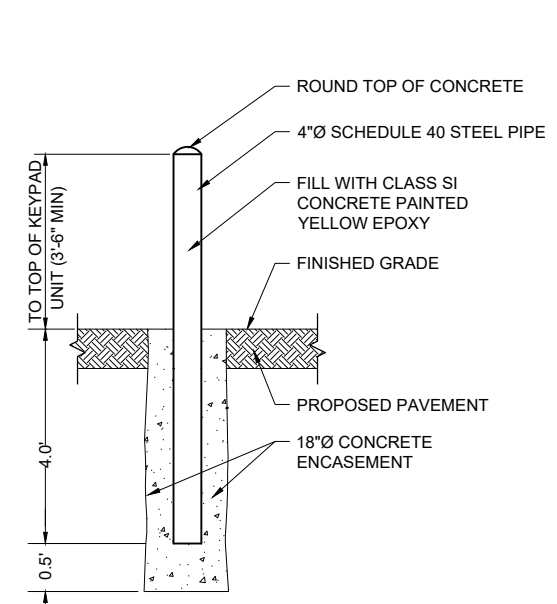


NOTES

- PROPOSED KEYPAD WITH PEDESTAL & FOUNDATION WILL REQUIRE INTERFACE TO THE NEW GATE OPERATOR.
- INCLUDE #12 AWG EQUIPMENT GND WIRE TO KEYPAD.
- FACE OF KEYPAD SHALL NOT EXTEND BEYOND BOLLARDS.

KEYPAD ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL

NOT TO SCALE

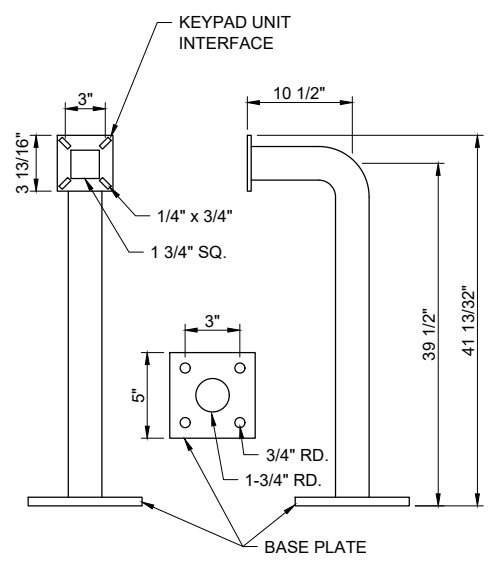


NOTES

- THE EXPOSED PORTION OF THE BOLLARD SHALL BE PAINTED YELLOW EPOXY.
- BOLLARD AND ASSOCIATED ITEMS ARE INCIDENTAL TO THE ELECTRIC SLIDING GATE UPGRADE.

BOLLARD DETAIL

NOT TO SCALE



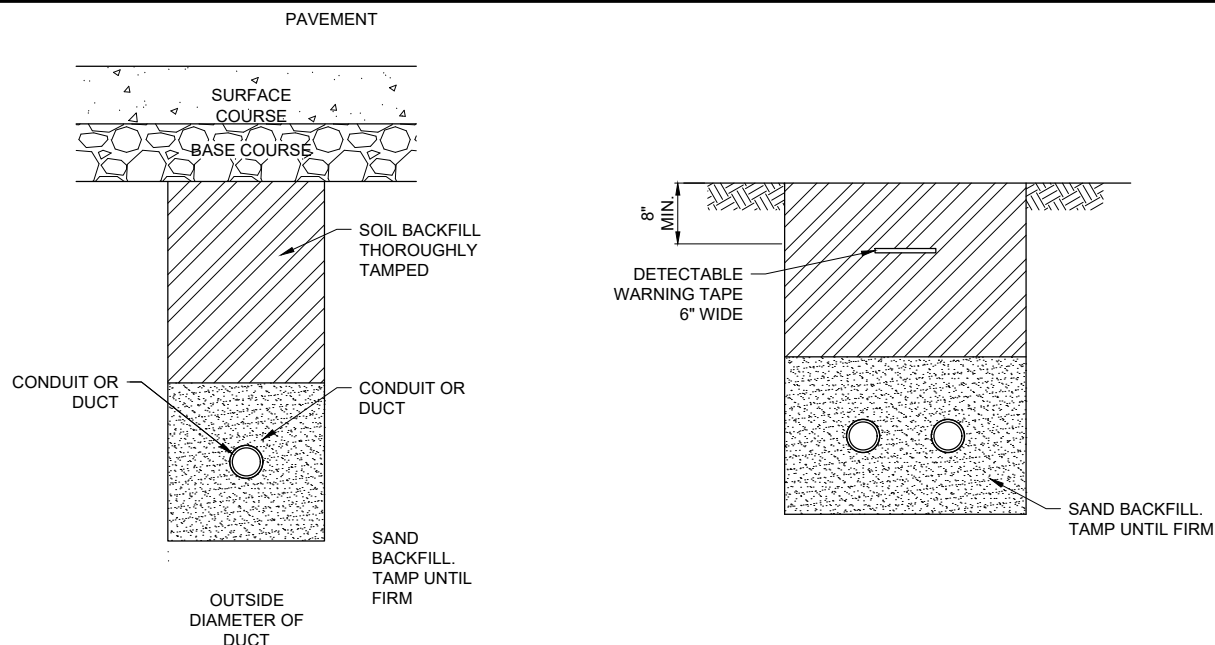
GOOSENECK PEDESTAL DETAIL

NOT TO SCALE

NOTE:
 GOOSENECK PEDESTAL SHALL BE AMERICAN ACCESS SYSTEMS, INC. (7079 SOUTH JORDAN RD., UNIT 6, ENGLEWOOD, CO 80112, PHONE: 800-541-5677, FAX 303-799-9756) MODEL 18-001 OR APPROVED EQUAL.

CABLE & DUCT MARKER NOTES:

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED AND 30" MIN BELOW FINISHED GRADE IN PAVED AREAS.
5. EMPLOY THE FOLLOWING METHODS WERE ADDITIONAL SPACE TO FIT LEGEND IS REQUIRED:
 - A. REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE.
 - B. INCREASE THE MARKER SIZE TO 30" X 30".
 - C. PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.

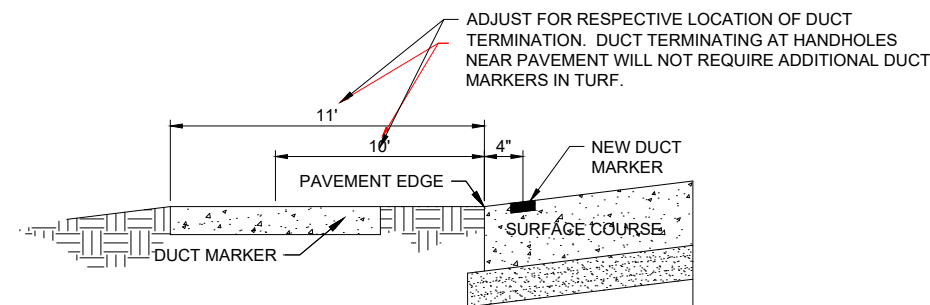


CONDUIT IN TRENCH - PAVED AREAS
"NOT TO SCALE"

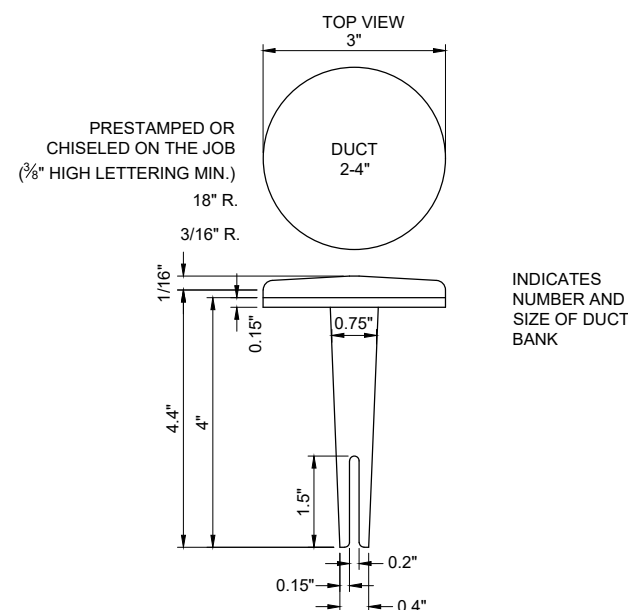
CONDUIT IN TRENCH - NON-PAVEMENT AREAS
"NOT TO SCALE"

DUCT BANK NOTES:

1. DIMENSIONS FOR COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM FOR SECURED AREAS AT AIRPORTS.
2. TRENCHES WITH MORE THAN TWO CONDUITS OR DUCTS SHALL BE INCREASED 3" IN WIDTH PLUS DIAMETER OF RESPECTIVE DUCT FOR EACH ADDITIONAL CONDUIT, OR DUCT; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS. MINIMUM COVER REQUIREMENTS FOR CABLES AND DUCTS AT AIRPORT RUNWAYS AND ADJACENT AREAS WHERE TRESPASSING IS PROHIBITED IS 18 INCHES PER NEC 300.5 AND 300.50. COVER IS DEFINED AS THE SHORTEST DISTANCE IN INCHES MEASURED BETWEEN A POINT ON THE TOP SURFACE OF ANY DIRECT-BURIED CONDUCTOR, CABLE, CONDUIT, OR OTHER RACEWAY AND THE TOP SURFACE OF FINISHED GRADE, CONCRETE OR SIMILAR COVER.
4. HIGH VOLTAGE AND LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
5. COMMUNICATION CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, OR HANDHOLE WITH POWER CIRCUITS.
6. DUCT AND CONDUIT INTERFACE TO HANDHOLES OR MANHOLES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCT WORK OR DUCT PAY ITEM
7. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.

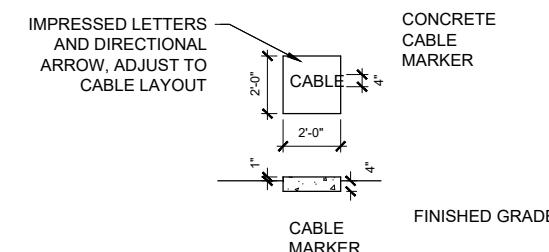


UNDERGROUND ELECTRICAL DUCT
"NOT TO SCALE"

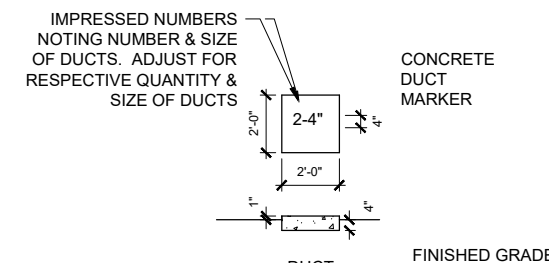


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

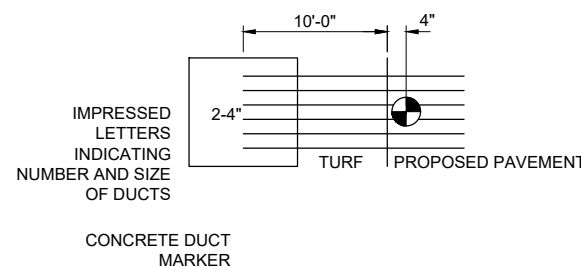
- NOTES:
1. TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.
 2. BRASS DUCT MARKERS ARE AVAILABLE FROM G&S FOUNDRY & MANUFACTURING CO., INC., 210 KASKASKIA DRIVE, RED BUD, IL 62278, PHONE: (618)-282-4114



TURF CABLE MARKERS
"NOT TO SCALE"



TURF DUCT MARKERS
"NOT TO SCALE"



DUCT MARKER DETAIL
"NOT TO SCALE"



DATE: 11/17/2023
LICENSE: EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
PROJECT NO: 22A0078D
CAD FILE: E-505.DWG
DESIGN BY: BSS 3/08/2023
DRAWN BY: CWS 3/08/2023
REVIEWED BY: KNL 9/6/2023

SHEET TITLE

CONDUIT AND DUCT DETAILS

FOR BID

GENERAL NOTES

- 1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
8. ANY AND ALL INSTRUCTIONS FROM THE RESIDENT ENGINEER/TECHNICIAN TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS. THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER/TECHNICIAN REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
C. INSTALLATION INSTRUCTION.
D. START-UP INSTRUCTIONS.
E. PREVENTATIVE MAINTENANCE REQUIREMENTS.
F. CHART FOR TROUBLE-SHOOTING.
G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT - "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

- 1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR PHASE CONDUCTORS ON 120/240VAC SINGLE-PHASE, THREE WIRE SYSTEMS. BLACK, RED, AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 208/120VAC THREE-PHASE, FOUR WIRE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).
3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS. CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

- 15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.
16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED. CONFIRM LIQUID-TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
21. WRAP ALL PRIMARY AND SECONDARY POWER CONNECTIONS WITH SUFFICIENT LAYERS OF HIGH VOLTAGE ELECTRICAL INSULATING TAPE (RUBBER SPLICING TAPE SUITABLE FOR PRIMARY ELECTRICAL INSULATION FOR SPLICING CABLE FROM 600 VOLTS TO 69,000 VOLTS) AND COVER WITH VINYL ELECTRICAL TAPE (ALL-WEATHER VINYL INSULATING TAPE SUITABLE FOR PROTECTIVE JACKETING FOR HIGH-VOLTAGE CABLE SPLICES AND REPAIRS) FOR FULL VALUE OF CABLE INSULATION VOLTAGE. PER ILLINOIS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS ITEM 108, ITEM 125 AND FAA AC 150/5370-10G ITEM L-108, HIGH VOLTAGE ELECTRICAL INSULATING TAPE SHALL BE 3M SCOTCH 23, 3M SCOTCH 130C OR APPROVED EQUIVALENT, AND VINYL ELECTRICAL TAPE SHALL BE 3M SCOTCH 88 OR APPROVED EQUIVALENT. TAPES MUST BE RATED SUITABLE FOR THE APPLICATION.
22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINIMUM.
23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.
B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
D. WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

NOV 17, 2023 3:49 PM STCOL201547 1:22:JOBS2022A0780/CAD/AIRPORT/SHEETE-002



Engineering | Planning | Allied Services
Hanson Professional Services Inc.
1525 S. 6th Street
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Offices Nationwide
www.hanson-inc.com

Illinois Licensed
Professional Service Corporation
#184-001084

Salem-Leckrone Airport

Salem Airport Authority
1100 Airport Rd.
Salem, IL 62881



Kevin N. Lightfoot
DATE: 11/17/2023 LICENSE: 11/30/2025
SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

Table with 3 columns: NO., DATE, DESCRIPTION. Includes sub-columns for DES, DWN, REV.

ISSUE: NOVEMBER 17, 2023
PROJECT NO: 22A0078D
CAD FILE: E-002.DWG
DESIGN BY: BSS 3/08/2023
DRAWN BY: CWS 3/08/2023
REVIEWED BY: KNL 9/6/2023

SHEET TITLE

ELECTRICAL NOTES

FOR BID



Kevin N. Lightfoot
DATE SIGNED: 11/17/2023 LICENSE EXPIRES: 11/30/2025

RECONSTRUCT NORTH
AIRPORT ACCESS ROAD
AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-506.DWG

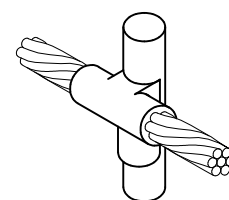
DESIGN BY: BSS 3/08/2023

DRAWN BY: CWS 3/08/2023

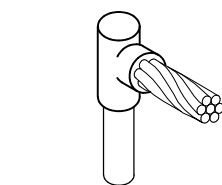
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SHEET TITLE

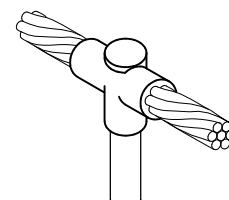
GROUNDING DETAILS



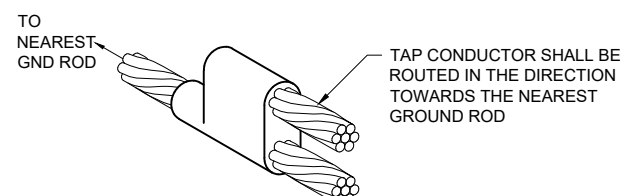
CABLE TO GROUND ROD



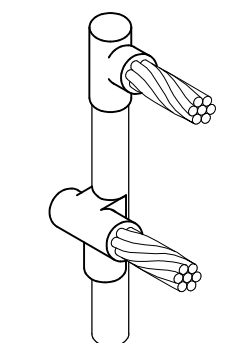
CABLE TO GROUND ROD



CABLE TO GROUND ROD



CABLE TO CABLE
HORIZONTAL PARALLEL TAP



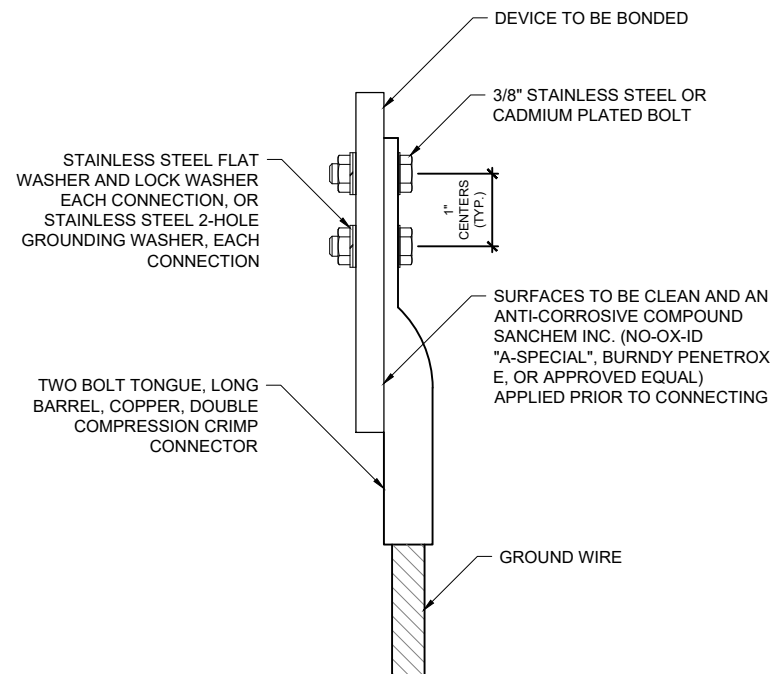
CABLES TO GROUND ROD

DETAIL NOTES

- ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY PENTAIR ERICO PRODUCTS, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, OR APPROVED EQUAL. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
- INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 80 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

EXOTHERMIC WELD DETAILS

NOT TO SCALE



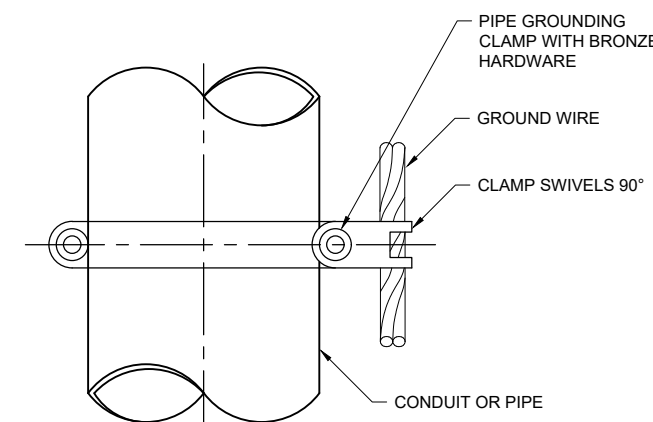
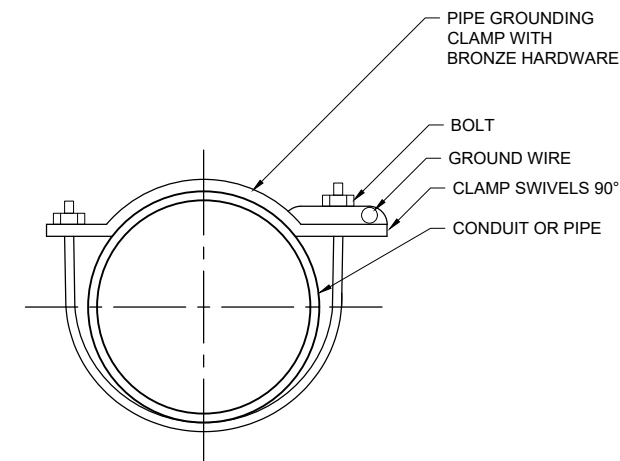
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157	BBLU-8D-2TC38
#6 AWG SOLID	YA8C-2TC38 OR YGA6C-2TC38E2G1	(VERIFY WITH MFR)	(VERIFY WITH MFR)
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	54816BE	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

NOTES

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIP MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR APPROVED EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL

NOT TO SCALE



BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PIPE SIZE
GAR3902-BU	3902BU	1/2" - 1"
GAR3903-BU	3903BU	1 1/4" - 2"
GAR3904-BU	3904BU	2 1/2" - 3 1/2"
GAR3905-BU	3905BU	4" - 5"
GAR3906-BU	3906BU	6"

NOTES

- PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL467 LISTED.
- PENN-UNION TYPE "GPL" SERIES PIPE GROUNDING CLAMPS PROPERLY SIZED FOR THE RESPECTIVE PIPE AND GROUND WIRE ARE ALSO ACCEPTABLE.
- HARGER CPC AND APC SERIES PIPE GROUNDING CLAMPS PROPERLY SIZED FOR THE RESPECTIVE PIPE AND GROUND WIRE ARE ALSO ACCEPTABLE.

PIPE/CONDUIT GROUNDING CLAMP DETAIL

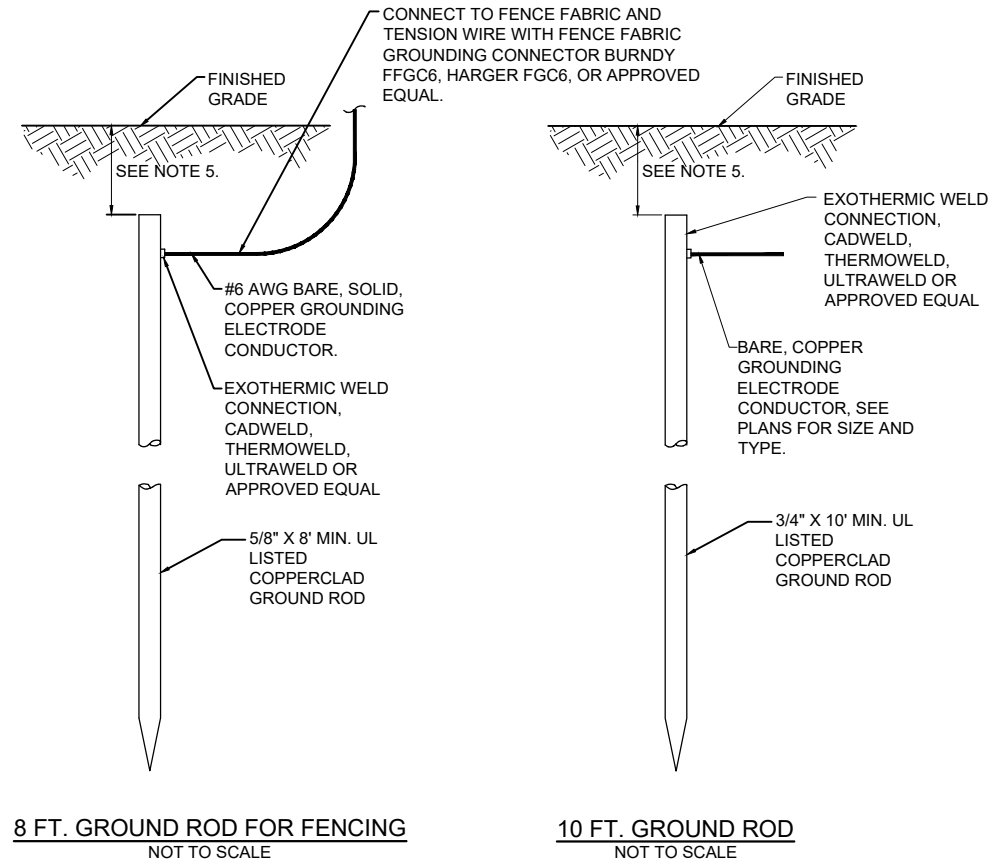
NOT TO SCALE

GROUNDING NOTES

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND AS DETAILED HEREIN. THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:

- FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS FOR ELECTRICAL INSTALLATIONS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS FOR FENCE GROUNDING SHALL BE MINIMUM 5/8-IN. DIAMETER BY 8-FT. LONG, UL LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS SHALL BE SPACED OR AS DETAILED ON THE RESPECTIVE PLANS, AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS, GROUND FIELDS, AND/OR THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS. CADWELD BY PENTAIR ERICO PRODUCTS, INC., THERMOWELD BY CONTINENTAL INDUSTRIES, ULTRAWELD BY HARGER, OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.
- CONTRACTOR SHALL TEST EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER OF RECORD FOR FURTHER DIRECTION. ALSO REFER TO EOR-047643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS, WHERE APPLICABLE. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/TECHNICIAN AND THE PROJECT ENGINEER OF RECORD.
- ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.
- ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, BURNDY PENETROX E, OR APPROVED EQUAL.
- METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2020 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT.
- ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, THOMAS AND BETTS, PENN-UNION OR EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
- PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.
- EACH NEW FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2020 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

- ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2020 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2020 NEC 250-102.
- IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.
- PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FROM WHITE GROUNDED NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.
- EACH AND ALL GROUNDED CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.
- ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL.
- BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.
- BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.
- INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLING DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.
- IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2020 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.
- NEVER REMOVE, ALTER, OR ATTEMPT TO REPAIR CONDUCTORS OR CONDUIT SYSTEMS PROVIDING GROUNDING OR ELECTRICAL BONDING FOR ANY ELECTRICAL EQUIPMENT UNTIL ALL POWER IS REMOVED FROM EQUIPMENT. WARN ALL PERSONNEL OF THE UNGROUNDED CONDITION OF THE EQUIPMENT. DISPLAY APPROPRIATE WARNING SIGNS, SUCH AS DANGER TAGS TO WARN PERSONNEL OF THE POSSIBLE HAZARDS.
- GROUNDING WORK AND MODIFICATIONS SHALL NOT BE PERFORMED DURING A THUNDERSTORM OR WHEN A THUNDERSTORM IS PREDICTED IN THE AREA.
- WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE PROJECT ENGINEER OF RECORD FOR FURTHER DIRECTIONS.
- GROUND RODS SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA FROM 100 PERCENT DOMESTIC STEEL TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS, AND/OR THE STEEL PRODUCTS PROCUREMENT ACT (30 ILS 565).



8 FT. GROUND ROD FOR FENCING
NOT TO SCALE

10 FT. GROUND ROD
NOT TO SCALE

NOTES

- TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
- THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
- GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
- TOP OF GROUND RODS FOR ELECTRICAL INSTALLATIONS SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN. TOP OF GROUND RODS FOR FENCING APPLICATIONS (NON-ELECTRICAL INSTALLATIONS) SHALL BE 6" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN.
- GROUND RODS FOR FENCING SHALL BE A MINIMUM 5/8-INCH DIAMETER BY 8-FT LONG UL LISTED COPPER CLAD.
- GROUND RODS FOR GATE OPERATORS AND OTHER ELECTRICAL EQUIPMENT SHALL BE A MINIMUM 3/4-INCH DIAMETER BY 10-FT LONG UL LISTED COPPER CLAD.
- CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT IN URBAN AREAS AND 1,000 FT IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 FT TO 50 FT AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED FENCE FABRIC GROUND CLAMPS; BURNDY CAT. NO. FFGC6, HARGER CAT. NO. FGC6, OR APPROVED EQUAL. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED CONNECTORS SUITABLE FOR DIRECT BURY IN EARTH OR EXOTHERMIC WELD TYPE CONNECTORS. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.

GROUND RODS
NOT TO SCALE

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Salem-Leckrone Airport

Salem Airport Authority
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Salem, IL 62881



Kevin N. Lightfoot
DATE: 11/17/2023 LICENSE
SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH AIRPORT ACCESS ROAD AND INSTALL GATE

IDA NO: SLO-5029
CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023
PROJECT NO: 22A0078D
CAD FILE: E-003-GND.DWG
DESIGN BY: BSS 3/08/2023
DRAWN BY: CWS 3/08/2023
REVIEWED BY: KNL 9/6/2023

SHEET TITLE

GROUNDING NOTES AND DETAILS

FOR BID



Kevin N. Lightfoot
DATE: 11/17/2023 LICENSE: 062-047643 EXPIRES: 11/30/2025

RECONSTRUCT NORTH
AIRPORT ACCESS ROAD
AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-601.DWG

DESIGN BY: KNL 9/6/2023

DRAWN BY: CWS 9/7/2023

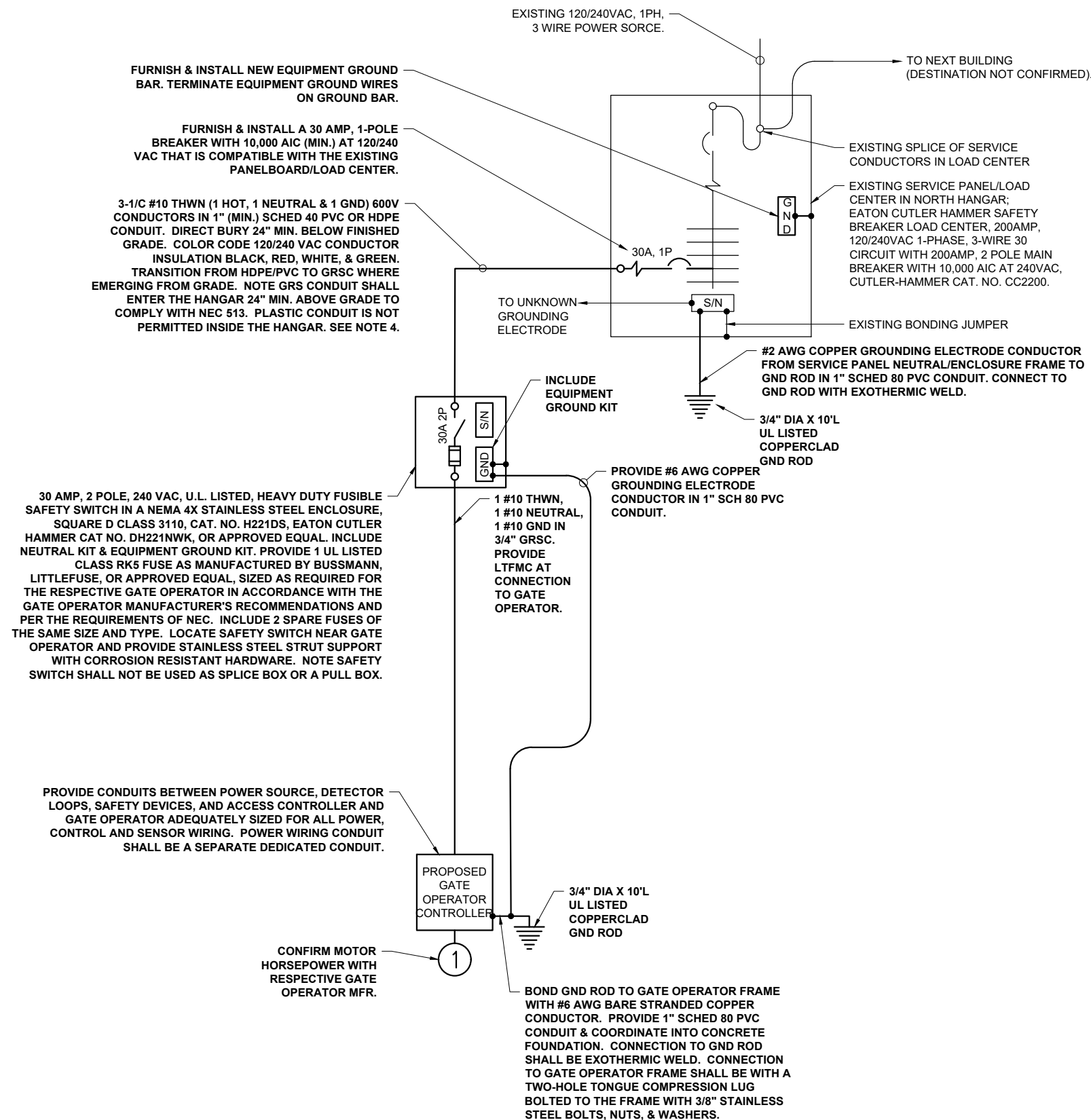
REVIEWED BY: KNL 9/6/2023

SHEET TITLE

PROPOSED
ELECTRICAL
ONE-LINE FOR
AIRPORT GATE
OPERATOR

ELECTRICAL NOTES

- NOTE THE EXISTING NORTH HANGAR ELECTRIC SERVICE AND DISTRIBUTION SYSTEM HAS APPARENT NATIONAL ELECTRICAL CODE VIOLATIONS AND/OR OTHER APPARENT NFPA OR FAA SAFETY VIOLATIONS WHICH MIGHT CAUSE UNSAFE WORKING CONDITIONS. APPARENT NFPA/NEC VIOLATIONS INCLUDE, BUT ARE NOT LIMITED TO, SERVICE DISCONNECT AND DISTRIBUTION PANEL NOT PROPERLY IDENTIFIED AND LABELED, AVAILABLE FAULT CURRENT NOT IDENTIFIED ON SERVICE DISCONNECT, SERVICE CONDUCTORS SUPPLYING ANOTHER BUILDING ARE SPLICED AND PASS THROUGH SERVICE PANEL/LOAD CENTER FOR NORTH HANGAR, MISSING ARC FLASH RISK LABELS, AND MISSING SAFETY LABELS FOR SOME EQUIPMENT THAT IS REQUIRED BY NEC. CONTRACTOR WILL NEED TO EXERCISE CAUTION WHEN WORKING AT THIS FACILITY. CORRECTIVE LABELING SHALL BE INCLUDED WITH THIS PROJECT.
- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PER NEC 513 THE ENTIRE AREA OF THE HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLE CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR. AREAS IN THE VICINITY OF AIRCRAFT ARE ALSO CLASSIFIED AS HAZARDOUS AS DEFINED BY NEC 513. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS ANY OTHER APPLICABLE CODES AND REQUIREMENTS.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E-STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX/DUPLEX RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.
- FIELD VERIFY CONDUIT & CABLE ROUTING.



PROPOSED ELECTRICAL ONE-LINE FOR AIRPORT GATE OPERATOR
NOT TO SCALE

FOR BID



Kevin N. Lightfoot
DATE: 11/17/2023 LICENSE: 11/30/2025
SIGNED: 11/17/2023 EXPIRES: 11/30/2025

RECONSTRUCT NORTH
AIRPORT ACCESS ROAD
AND INSTALL GATE

IDA NO: SLO-5029

CONTRACT NO. SA037

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-507.DWG

DESIGN BY: KNL 9/6/2023

DRAWN BY: CWS 9/7/2023

REVIEWED BY: KNL 9/7/2023

SHEET TITLE

SIGNAGE DETAILS

FOR BID



FENCING SIGN DETAIL

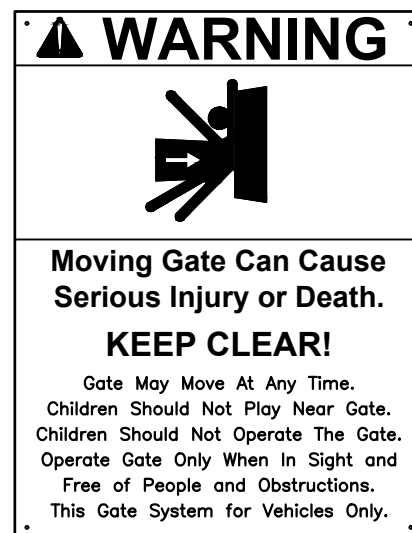
NOT TO SCALE

SIZED TO ACCOMMODATE TEXT, CONSTRUCTED OF DURABLE MATERIALS, CONTRASTING COLORS, AND REFLECTIVE MATERIAL SIGN BLANK 0.080" ALUMINUM

COLORS:
LEGEND FOR "NO TRESPASSING" - RED TEXT
BACKGROUND - WHITE (RETROREFLECTIVE)

LEGEND FOR REMAINING - BLACK TEXT
BACKGROUND - WHITE (RETROREFLECTIVE)

TEXT:
MUTCD/FHWA (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES/FEDERAL HIGHWAY ADMINISTRATION)
"SERIES C 2000" OR EQUIVALENT



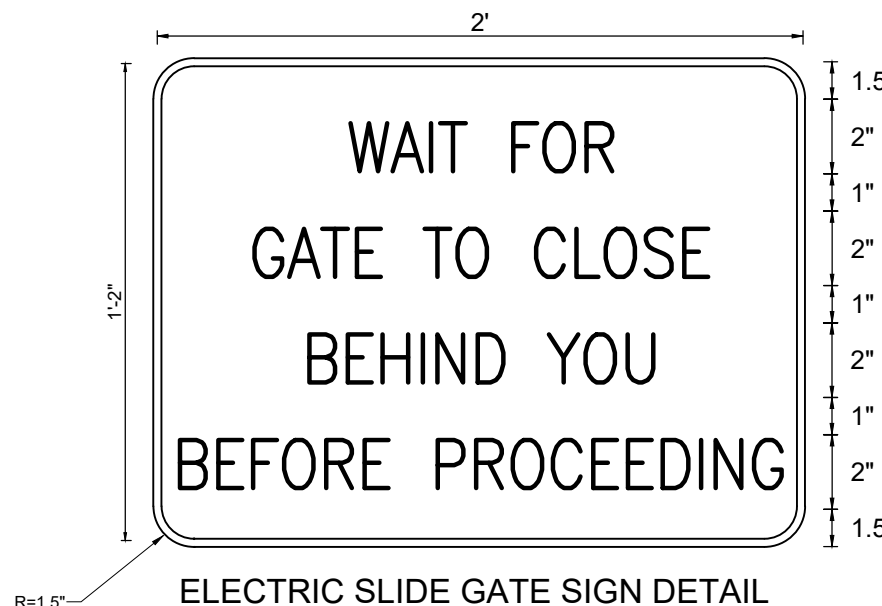
NOTES

- WARNING SIGNS/PLACARDS AS DETAILED ABOVE OR SIMILAR, SHALL BE INSTALLED WHERE CLEARLY VISIBLE ON BOTH SIDES OF EACH ELECTRIC SLIDE GATE. WARNING SIGNS SHALL BE WEATHERPROOF, CORROSION RESISTANT METAL, AS DETAILED ABOVE (OR SIMILAR), AND IN ACCORDANCE WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS. PROVIDE SIGNS FOR EACH ELECTRIC SLIDE GATE (EXISTING AND NEW), ON EACH SIDE OF EACH GATE.

WARNING SIGN DETAIL

SIGN NOTES

- INSTALL SIGNS AT EACH ACCESS GATE AND ALONG FENCE AT SPACING NOT TO EXCEED 100 FEET. SIGNS ALONG FENCE LINE SHALL BE LOCATED SUCH THAT WHEN STANDING AT ONE SIGN, THE OBSERVER IS ABLE TO SEE THE NEXT SIGN IN BOTH DIRECTIONS.
- TOP OF SIGN SHALL BE INSTALLED APPROXIMATELY ONE FOOT BELOW THE TOP RAIL OF THE FENCE. CONFIRM MOUNTING HEIGHT WITH OWNER REPRESENTATIVE.
- MOUNT SIGNS TO THE FENCE WITH COMPATIBLE MOUNTING HARDWARE, SUCH AS BRACKETS, BOLTS WASHERS, AND NUTS. THERE IS NO SEPARATE PAY ITEM FOR FURNISHING AND INSTALLING THE SIGNS TO THE FENCE. MOUNTING IS INCLUDED IN THE PAY ITEMS FOR FENCE AND GATES.



ELECTRIC SLIDE GATE SIGN DETAIL

NOT TO SCALE

24" X 14" (MINIMUM)
SIGN BLANK
0.080" ALUMINUM

COLORS:
LEGEND - RED
BACKGROUND - WHITE (RETROREFLECTIVE)

TEXT: MUTCD/FHWA "SERIES C 2000"

INSTALL SIGNS ON EACH SIDE OF ELECTRIC SLIDE GATE



"DANGER - HIGH VOLTAGE UNAUTHORIZED PERSONNEL KEEP OUT" SIGN

PROVIDE WEATHERPROOF WARNING SIGN ON AIRPORT ELECTRICAL VAULT BUILDING EXTERIOR DOORS LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C). SIGN SHALL BE APPROXIMATELY 10"H X 14"W.

Salem-Leckrone Airport

Salem Airport Authority
 1100 Airport Rd.
 Salem, IL 62881



Kevin N. Lightfoot
 DATE: 11/17/2023 LICENSE
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RECONSTRUCT NORTH
 AIRPORT ACCESS ROAD
 AND INSTALL GATE

IDA NO: SLO-5029
 CONTRACT NO. SA037

ARC FLASH RISK LABELS	
EQUIPMENT	LABEL
VAULT SERVICE METER	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
VAULT SERVICE & DISTRIBUTION PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
EACH VAULT LIGHTING CONTACTOR PANEL (3 LABELS)	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
VAULT AIRFIELD LIGHTING/NAVAID CONTROL PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
NORTH HANGAR SERVICE & DISTRIBUTION PANEL	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
GATE OPERATOR SAFETY SWITCH	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1
GATE OPERATOR	WARNING ARC FLASH HAZARD APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED NOMINAL VOLTAGE: 120/240 VAC, 1 PHASE, 3-WIRE ARC FLASH BOUNDARY: 19 INCHES ARC-FLASH PPE CATEGORY; 1

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
NORTH HANGAR SERVICE PANEL	NORTH HANGAR SERVICE & DIST. PANEL 120/240 VAC, 1 PH, 3-WIRE SERVED FROM ELECTRIC UTILITY TRANSFORMER
NORTH HANGAR SERVICE PANEL	MAX. AVAILABLE FAULT CURRENT AT UTILITY POLE MOUNT XFMR BANK SECONDARY CALCULATED BY AMEREN TO BE 18,050 AMPS ON 9/19/2023
GATE OPERATOR DISCONNECT	GATE OPERATOR 120 VAC FED FROM NORTH HANGAR SERVICE PANEL
VAULT SERVICE & DISTRIBUTION PANEL	VAULT SERVICE & DIST. PANEL 120/240VAC 1PH, 3-WIRE SERVED FROM ELECTRIC UTILITY TRANSFORMER
VAULT SERVICE & DISTRIBUTION PANEL	MAX. AVAILABLE FAULT CURRENT AT UTILITY POLE MOUNT XFMR BANK SECONDARY CALCULATED BY AMEREN TO BE 18,050 AMPS ON 9/19/2023

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

NOTES:

- LABELS ARE BASED ON FAULT CURRENT FROM UTILITY TRANSFORMER THAT IS LESS THAN 25,000 AMPS AT 120/240 VAC. WHERE FAULT CURRENT EXCEEDS 25,000 AMPS THE ARC FLASH LABELS WILL NEED TO BE CHANGED FOR THE RESPECTIVE CONDITIONS. CONTACT ENGINEER OF RECORD FOR FURTHER DIRECTIONS.
- FAULT CURRENT INFORMATION TO BE PROVIDED BY SERVING ELECTRIC UTILITY COMPANY OR FROM DATA OBTAINED FROM UTILITY TRANSFORMER NAMEPLATE. CONTACT PROJECT ENGINEER OF RECORD TO CONFIRM FAULT CURRENT CALCULATIONS.
- CONTRACTOR SHALL PROVIDE APPROPRIATE LABELS ON ELECTRICAL EQUIPMENT, IN ACCORDANCE WITH NFPA 70E ARTICLE 130 WORK INVOLVING ELECTRICAL HAZARDS, PART 130.5 ARC FLASH RISK ASSESSMENT, (H) EQUIPMENT LABELING. WHERE MAXIMUM CALCULATED FAULT CURRENT EXCEEDS 25,000 AMPS CONTACT PROJECT ENGINEER.
- ALL LABELING AND SIGNS WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE ELECTRIC SLIDE GATE WORK PAY ITEM

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: NOVEMBER 17, 2023

PROJECT NO: 22A0078D

CAD FILE: E-507.DWG

DESIGN BY: BSS 3/08/2023

DRAWN BY: CWS 3/08/2023

REVIEWED BY: KNL 9/7/2023

SHEET TITLE

LEGEND PLATE
 SCHEDULES

FOR BID