Airport Construction - TOOLBOX TALKS

TOPIC: Runway Safety - Surface Incident Awareness



PURPOSE:

In October 2007 the FAA adopted the International definition of a runway incursion which is much more stringent, than the previous one. Prior to the new definition what was once considered a surface incident is now considered a runway incursion.

<u>Runway Incursion Definition:</u> Any unauthorized entry onto a runway or the runway safety area while a runway is open, regardless if an aircraft is arriving or departing on the runway.

Pass the message along to all your employees, this is a mandatory tool box talk and must be completed.

If you have any questions on the content of this tool box talk contact Miles Weaver at 269-966-3528.

RUNWAY SAFETY IS EVERYONE'S RESPONSIBILITY

Five (5) identifying items are placed at the point where a runway safety area intersects a crossing taxiway. You will find the first 2 at EVERY location, at every airport in the country, the remaining 3 are optional at the discretion of the airport, but they all serve one purpose; to identify to a vehicle operator where they MUST stop and not to proceed past that point without proper "official" authorization from the airport.

As a contractor on the airfield we are NEVER allowed to cross a mandatory hold bar on our own, without being under escort by the airport.

KNOW WHAT ALL THESE MARKINGS MEAN AND HOW THEY RELATE TO YOUR PROJECT, DON'T GUESS, IF YOU HAVE ANY QUESTIONS THROW YOUR HANDS IN THE AIR AND YELL FOR HELP! DON'T GAMBLE WITH YOUR LIFE OR THE LIVES OF HUNDREDS OF PASSENGERS ON AN AIRCRAFT.

It is our responsibility to know where we can and cannot drive on an airport, remember something pilots work under the assumption that we as vehicle operators know what we're doing and where we're supposed to be. A pilot is NOT looking out the window of his aircraft wondering if there is a vehicle on the runway he is about to land or take off on, they have many other duties to perform, and this is something they should not have to worry about.

It is up to us through training and education to know what we are doing on the airport. Know what signs and markings on the field mean to you and your crews. Don't cut corners, be aware of your surroundings, and know the limits of your construction project.

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What's a Runway Safety Area (RSA)

A runway safety area (RSA) is an imaginary rectangular box which surrounds all runways. The #1 purpose of the RSA is to provide a clear safe area for an aircraft to traverse in the event they have an excursion from a runway due to an emergency. Specific to Battle Creek Executive Airport the RWY 5L/23R RSA is 500' in width and extend 1,000' past the end of the runway. Understand that absolutely no construction activites can occur in the RSA while the runway is open. If you need to work in the RSA the runway must be closed by NOTAM by the Airport. **NEVER EVER EVER** drive into the runway safety area of an open runway between the hours of 7am and 11pm, unless you are being escorted or have contacted Air Traffic Control. If you do, Y<u>OU WILL CAUSE A RUNWAY</u> INCURSION! and the consequences are very severe.



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Mandatory Hold Bar

The mandatory hold bar is the primary marking to alert everyone you are approaching the runway safety area. It is painted on the ground; it has a large black painted background with solid yellow and dashed lines. Overall the mandatory hold bar is about 15' high and runs the entire width of the taxiway. **NEVER DRIVE PAST THE FIRST YELLOW LINE!**

Mandatory Hold Sign

The mandatory hold sign is the first "back-up" to the hold bar. It has a red background with white letters which identify the name of the runway in front of you. The hold sign is mounted in the grass adjacent to the painted hold bar and stands about 30" in height. Mandatory hold signs are usually placed on the left side of the taxiway as you approach the runway, however if the pavement is very wide or the hold bar has a "dogleg" in it you will find a hold sign on both sides. **NEVER DRIVE PAST THE HOLD SIGN!**

Runway Guard Lights

Runway Guard Lights are the "2nd back-up" to the hold sign and hold bar. These are flashing yellow lights that are mounted in front to the mandatory hold sign and are located on both sides of the taxiway even if there is only one hold sign. Some airports incorporate "In-Surface" guard lights which are in-pavement yellow flashing lights mounted in front to the first solid yellow line of the hold bar. **NEVER DRIVE PAST THE FLASHING YELLOW LIGHTS**

Runway Surface Painted Signs

Runway Surface Signs are the "3rd back-up" to the hold sign, hold bar and guard lights. This is a HUGE marking of the mandatory hold sign painted on the ground. <u>NEVER DRIVE PAST THE BIG</u> <u>PAINTED SIGN</u>

Enhanced Taxiway Centerline Markings

Enhanced Taxiway Centerline Markings are the last safety measure implemented by the FAA to bring awareness to the mandatory hold bar. Approximately 200' prior to the hold bar, instead of seeing just a solid yellow taxiway centerline marking you will see a dashed yellow line on either side of the centerline. The purpose of the enhanced taxiway centerline marking is to make things look a bit "busy" to draw your attention to the hold bar. <u>USE CAUTION IF YOU SEE ENHANCED</u> TAXIWAY MARKINGS, YOUR GETTING CLOSE TO A HOLD BAR, WHICH YOU SHOULD NEVER DRIVE PAST!











PHASE	CONSTRUCTION	AFFECTED ACTIVE OPERATION AREAS (AOA'S)	WORK HOURS	SAFETY AND SECURITY	CONTRACT TIME
1	RECONSTRUCTION OF TWY C FROM STATION 175+28.11 TO STATION 195+16.18, AND TWY E FROM STATION 428+38.46 TO STATION 432+20.54, INCLUDES ALL WORK TO BE COMPLETED PAVEMENT MARKING REMOVAL AND REMARKING OF RUNWAY 13-31 EXCEPT WITHIN RUNWAY 5L-23R RSA. EXCEPT FULL RATE PAVEMENT MARKING ON NEW PAVEMENT. REMARKING OF RUNWAY PAVEMENT SHALL TAKE PLACE AFTER COMPLETION OF HAULING OPERATIONS.	- RWY 13-31 CLOSED - TWY C CLOSED B/T TWY G & A - TWY E CLOSED B/T RWY 5L-23R & TWY A CLOSED - TWY A CLOSED - TWY A CLOSED SE OF RWY 5R-23L - TWY A LIMITED TO <100' WINGSPAN	ANY	CONTRACTOR SHALL INSTALL LOW-LEVEL BARRICADES AT LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL DISCONNECT APPROPRIATE EDGE LIGHTING CIRCUITS AND INSTALL JUMPERS AS NECESSARY. SIGNS AND LIGHTS LEADING TO CLOSED AREAS AND NOT DISABLED THROUGH THE USE OF JUMPERS SHALL BE COVERED. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND AIRPORT 30 DAYS PRIOR TO STARTING CONSTRUCTION. AIRPORT MANAGER SHALL ISSUE ALL NOTAMS. MAXIMUM EQUIPMENT HEIGHT SHALL BE 25'.	(44 DAYS)
	PAVEMENT MARKING REMOVAL AND REMARKING OF RUNWAY 13-31 WITHIN RUNWAY 5L-23R RSA AND RUNWAY 5R-23L RSA.	- AIRPORT CLOSED	10PM- 8AM	CONTRACTOR SHALL INSTALL LOW-LEVEL BARRICADES AT LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL DISCONNECT APPROPRIATE EDGE LIGHTING CIRCUITS AND INSTALL JUMPERS AS NECESSARY. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND AIRPORT 7 DAYS PRIOR TO STARTING CONSTRUCTION. AIRPORT MANAGER SHALL ISSUE ALL NOTAMS. MAXIMUM EQUIPMENT HEIGHT SHALL BE 25'.	(WITHIN PHASE 1)

TOTAL PHASE 1 DAYS : {44 DAYS}

SAFETY PHASING NOTE:

1. ALL COST ASSOCIATED WITH WORK SHOWN ON G-050-G-053 SHALL BE INCLUDED IN ITEM NO. 105001 MOBILIZATION OR NO. 105002 SAFETY AND SECURITY.

2. ACCESS SHALL BE THROUGH THE ACCESS GATE SHOWN ABOVE ONLY, UNLESS GIVEN WRITTEN PERMISSION FROM THE AIRPORT OR ENGINEER. ANY WORK NECESSARY TO IMPROVE THE STAGING AREA SITE FOR THE CONTRACTOR OPERATIONS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

3. ALL VEHICLES ENTERING OR EXITING THE SITE AND TRAVELING BEYOND THE CONTRACTOR PARKING AREA SHALL BE DRIVEN BY EMPLOYEES THAT HAVE OBTAINED AIRFIELD DRIVING PRIVILEGES THOUGH THE AIRPORTS BADGING PROCESS OR SHALL BE ESCORTED TO THE CONSTRUCTION SITE BY A VEHICLE DRIVEN BY AN EMPLOYEE THAT HAS OBTAINED AIRFIELD DRIVING PRIVILEGES THROUGH THE AIRPORTS BADGING PROCESS. AT NO POINT SHALL THE CONTRACTOR RELY ON THE AIRPORT OR ENGINEER TO PROVIDE ESCORTING SERVICES. ALL PERSONNEL WORKING ON THE PROJECT SHALL EITHER OBTAIN A VALID BADGE FROM THE AIRPORT OR BE UNDER DIRECT SUPERVISION OF A BADGED EMPLOYEE AT ALL TIMES, DIRECT SUPERVISION REQUIRES LINE OF SIGHT AT A DISTANCE NO GREATER THAN CAN BE REASONABLY EXPECTED TO HEAR VOCAL COMMANDS FROM THE BADGED EMPLOYEE.

4. AIRFIELD LIGHTS AND SIGNS IN CLOSED AREAS OR LEADING TO CLOSED AREAS SHALL BE DISABLED. THE CONTRACTOR SHALL INSTALL TEMPORARY JUMPERS AS NECESSARY TO PROVIDE POWER TO CIRCUITS AND PORTIONS OF CIRCUITS THAT ARE NOT UNDER CONSTRUCTION, SEE SHEET G-154 FOR TEMPORARY JUMPER PLAN.

CONTRACTOR STAGING AREA COORDINATES (MAX EQUIPMENT HEIGHT 25') GROUND LATITUDE | LONGITUDE | ELEVATION CORNER N42° 18' 35.92" [W85° 14' 41.74" N42° 18' 34.17" [W85° 14' 38.52" N42° 18' 32.98" [W85° 14' 39.69" 917 921' 920' 8 N42° 18' 34.73" W85° 14' 42.92" 919'

ACTIVE OPERATION	SAFETY	OBJECT FREE
AREA	AREA WIDTH	AREA WIDTH
RUNWAY 5L-23R	500'	800'
RUNWAY 13-31	150'	500'
RUNWAY 5R-23L	150'	500'



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A PARTICLE CREEK EXECUTIVE BATTLE CREEK EXECUTIVE AIRPORT AT KELLOGG FIELD AIRPORT AT KELLOGG FIELD RECONSTRUCT TWY C PAVEMENT & LIGHTING PHASE III & LIGHTING PHASE III BATTLE CREEK, MI
AIP NO: 26 - 0008 - 4720 MARINO: 0228800-191874.01 DATE: MAY 15, 2020 DESIGNED BY: ALP DRAWN BY: ALP DRAWN BY: ALP CHECKED BY JET DO NOT SCALE DRAWINGS SHEET CONTENTS CONSTRUCTION SAFETY PHASING PLAN - PHASE 1 SHEET NO: 3 of 45 CONSTOL



PHASE	CONSTRUCTION	AFFECTED ACTIVE OPERATION AREAS (AOA'S)	WORK HOURS	SAFETY AND SECURITY	CONTRACT TIME
2	RECONSTRUCTION OF TWY E FROM STATION 432+22 TO EDGE OF RWY 5L-23R. INCLUDES ALL WORK TO BE COMPLETED. PAVEMENT MARKING REMOVAL AND REMARKING OF RUNWAY 5L-23R EXCEPT WITHIN RUNWAY 13-31 RSA. EXCEPT FULL RATE PAVEMENT MARKING ON NEW PAVEMENT. REMARKING OF RUNWAY PAVEMENT SHALL TAKE PLACE AFTER COMPLETION OF HAULING OPERATIONS.	- RWY 5L-23R CLOSED - TWY E CLOSED B/T TWY F & C - TWY A CLOSED B/T TWY A 2 & RWY 5L-23R - TWY A1 CLOSED - TWY F CLOSED	ANY	CONTRACTOR SHALL INSTALL LOW-LEVEL BARRICADES AT LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL DISCONNECT APPROPRIATE EDGE LIGHTING CIRCUITS AND INSTALL JUMPERS AS NECESSARY. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND AIRPORT 7 DAYS PRIOR TO STARTING CONSTRUCTION. AIRPORT MANAGER SHALL ISSUE ALL NOTAMS. MAXIMUM EQUIPMENT HEIGHT SHALL BE 25'.	10 DAYS
(2A)	PAVEMENT MARKING REMOVAL AND REMARKING OF RUNWAY 5L-23R WITHIN RUNWAY 13-31 RSA.	- RWY 5L-23R CLOSED - RWY 13-31 CLOSED	10PM - 8AM	CONTRACTOR SHALL INSTALL LOW-LEVEL BARRICADES AT LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL DISCONNECT APPROPRIATE EDGE LIGHTING CIRCUITS AND INSTALL JUMPERS AS NECESSARY. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND AIRPORT 7 DAYS PRIOR TO STARTING CONSTRUCTION. AIRPORT MANAGER SHALL ISSUE ALL NOTAMS. MAXIMUM EQUIPMENT HEIGHT SHALL BE 25'.	2 NIGHT (WITHIN PHASE 2)
3	FULL RATE PAVEMENT MARKING ON NEW PAVEMENT	VARIOUS SHORT TERM CLOSURES	10PM - 8AM	CONTRACTOR SHALL COMPLETE PHASE 3 30 DAYS AFTER COMPLETION OF PHASE 2, BUT NOT MORE THAN 60 DAYS AFTER COMPLETION OF PHASE 2 IF WEATHER PERMITS.	1 DAYS
				TOTAL PHASE 2 DAYS	· (10 DAYS)

TOTAL PHASE 2 DAYS : (10 DAYS TOTAL PHASE 3 DAYS : 10AYS TOTAL PROJECT DAYS : 55 DAYS

1. ALL COST ASSOCIATED WITH WORK SHOWN ON G-050-G-053 SHALL BE INCLUDED IN ITEM NO. 105001 MOBILIZATION OR NO. 105002 SAFETY AND SECURITY.

2. ACCESS SHALL BE THROUGH THE ACCESS GATE SHOWN ABOVE ONLY, UNLESS GIVEN WRITTEN PERMISSION FROM THE AIRPORT OR ENGINEER. ANY WORK NECESSARY TO IMPROVE THE STAGING AREA SITE FOR THE CONTRACTOR OPERATIONS SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

3. ALL VEHICLES ENTERING OR EXITING THE SITE AND TRAVELING BEYOND THE CONTRACTOR PARKING AREA SHALL BE DRIVEN BY EMPLOYEES THAT HAVE OBTAINED AIRFIELD DRIVING PRIVILEGES THOUGH THE AIRPORTS BADGING PROCESS OR SHALL BE ESCORTED TO THE CONSTRUCTION SITE BY A VEHICLE DRIVEN BY AN EMPLOYEE THAT HAS OBTAINED AIRFIELD DRIVING PRIVILEGES THROUGH THE AIRPORTS BADGING PROCESS. AT NO POINT SHALL THE CONTRACTOR RELY ON THE AIRPORT OR ENGINEER TO PROVIDE ESCORTING SERVICES. ALL PERSONNEL WORKING ON THE PROJECT SHALL EITHER OBTAIN A VALID BADGE FROM THE AIRPORT OR BE UNDER DIRECT SUPERVISION OF A BADGED EMPLOYEE AT ALL TIMES. DIRECT SUPERVISION REQUIRES LINE OF SIGHT AT A DISTANCE NO GREATER THAN CAN BE REASONABLY EXPECTED TO HEAR VOCAL COMMANDS FROM THE BADGED EMPLOYEE.
 CONTRACTOR STAGING AREA COORDINATES (MAX EQUIPMENT HEIGHT 25')

 CORNER
 LATITUDE
 GROUND LONGITUDE
 GROUND ELEVATION

 13
 N42° 18' 41.41"
 W85° 14' 44.97"
 919'

 14
 N42° 18' 41.41"
 W85° 14' 42.28"
 919'

 15
 N42° 18' 42.59"
 W85° 14' 43.00"
 919'

 16
 N42° 18' 40.40"
 W85° 14' 43.50"
 916'

 N42°
 18'
 42.70"
 W85°
 14'
 18.68"

 N42°
 18'
 21.15"
 W85°
 14'
 45.08"

920'

4. AIRFIELD LIGHTS AND SIGNS IN CLOSED AREAS OR LEADING TO CLOSED AREAS SHALL BE DISABLED. THE CONTRACTOR SHALL INSTALL TEMPORARY JUMPERS AS NECESSARY TO PROVIDE POWER TO CIRCUITS AND PORTIONS OF CIRCUITS THAT ARE NOT UNDER CONSTRUCTION. SEE SHEET G-154 FOR TEMPORARY JUMPER PLAN.

SAFETY PHASING NOTE:

			GROUND
WAY	LATITUDE	LONGITUDE	ELEVATION
δL	N42° 17' 44.6330"	W85° 15' 57.5229"	951.8'
3R	N42° 18' 57.3726"	W85° 14' 27.4058"	928.4'
3	N42° 18' 51.0068"	W85° 15' 16.5345"	919.8'
31	N42° 18' 22.8575"	W85° 14' 24.5162"	929.4'
R	N42° 17' 57.9332"	W85° 15' 00.7071"	925.0'
3L	N42° 18' 27.7449"	W85° 14' 23.7712"	930.0'
02	1112 10 2111 110	1100 11 201112	000.0

SAFETY AREA

ACTIVE OPERATION	SAFETY	OBJECT FREE
AREA	AREA WIDTH	AREA WIDTH
RUNWAY 5L-23R	500'	800'
RUNWAY 13-31	150'	500'
RUNWAY 5R-23L	150'	500'

	(MAX EQUIPN	IENT HEIGHT 25	2
CORNER			
9	N42° 18' 59.07"	W85° 14' 19.61"	923'
10	N42° 18' 59.11"	W85° 14' 15.61"	925'
11	N42° 18' 57.63"	W85° 14' 15.59"	925'
12	N42° 18' 57.59"	W85° 14' 19.58"	923'

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BATTLE CREEK EXECUTIVE AIRPORT AT KELLOGG FIELD AIRPORT AT KELLOGG FIELD RECONSTRUCT TWY C PAVEMENT & LIGHTING PHASE II BATTLE CREEK, MI
AIP NO: 26 - 0008 - 4720 MAH NO: 0228800-191874.01 DATE: MAY 15, 2020 DESIGNED BY: ALP DENAMN BY: ALP DEN NOT SCALE DRAWINGS SMEET CONTENTS CONSTRUCTION SAFETY PHASING PLAN - PHASE 2
G-051

SAFETY PLAN COMPLIANCE DOCUMENT: THE CONTRACTOR SHALL PREPARE A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) DESCRIBING HOW THE REQUIREMENTS OF THE CONSTRUCTION SAFETY PHASING PLAN (CSPP) WILL BE MET. THE SPCD SHALL INCLUDE A CERTIFICATION STATEMENT BY THE CONTRACTOR THAT: 1) INDICATES FULL UNDERSTANDING OF THE OPERATIONAL SAFETY REQUIREMENTS OF THE CONSTRUCTION SAFETY PHASING PLAN AND 2) ASSETS NO DEVIATIONS SHALL BE MADE FROM THE APPROVED CONSTRUCTION SAFETY PHASING PLAN AND SPCD UNLESS WRITTEN APPROVAL IS GRANTED BY THE AIRPORT OPERATOR. THE SPCD SHALL FOLLOW THE FORMAT OF FAA AC 150/5370-2F, SECTION 204(b) AND SHALL ADDRESS ITEMS (1) - (18) PER THE REQUIREMENTS OF THE AC.

THE CONTRACTOR SHALL SUBMIT THE SPCD TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL BY THE AIRPORT SPONSOR FOURTEEN (14) DAYS PRIOR TO THE ANTICIPATED ISSUE OF THE NOTICE TO PROCEED. COPIES OF THE APPROVED CONSTRUCTION SAFETY PHASING PLAN AND SAFETY PLAN COMPLIANCE DOCUMENT SHALL BE MAINTAINED AT THE PROJECT SITE.

GENERAL CONSIDERATIONS: AIRPORT OPERATORS, OR TENANTS CONDUCTING CONSTRUCTION ON LEASED PROPERTIES, SHOULD USE THE PRE-DESIGN, PRE-BID, AND PRE-CONSTRUCTION MEETINGS TO INTRODUCE AIRPORT OPERATIONAL SAFETY DURING CONSTRUCTION. COORDINATE THE FOLLOWING AS REQUIRED:

A. OPERATIONAL SAFETY SHOULD BE A STANDING AGENDA ITEM DURING EVERY PROGRESS MEETING.

B. CHANGES IN THE SCOPE OR DURATION OF THE PROJECT MAY REQUIRE REVISIONS TO THE SAFETY PHASING PLAN (AND REVIEW AND APPROVAL BY THE AIRPORT OPERATOR AND FAA). REVISIONS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER

C. EARLY COORDINATION WITH FAA ATO IS REQUIRED TO SCHEDULE AIRWAY FACILITY SHUTDOWNS AND RESTARTS. RELOCATION OR ADJUSTMENTS TO NAVAIDS OR THEIR CRITICAL AREAS MAY REQUIRE AN FAA FLIGHT INSPECTION PRIOR TO RESTARTING THE FACILITY. FLIGHT INSPECTIONS MUST BE COORDINATED WELL IN ADVANCE AND MAY REQUIRE A REIMBURSABLE AGREEMENT BETWEEN THE AIRPORT AND FAA ATO. REIMBURSABLE AGREEMENTS SHOULD BE COORDINATED A MINIMUM OF 12 MONTHS PRIOR TO THE START OF CONSTRUCTION

AREAS AND OPERATIONS AFFECTED BY CONSTRUCTION ACTIVITY: SEE THE CSPP FOR A DEPICTION OF ALL AREAS AFFECTED BY CONSTRUCTION, CLOSED OR PARTIALLY CLOSED RUNWAYS, TAXIWAYS, AND APRONS

A. IF AFFECTED, ACCESS ROUTES AND DETOURS WILL BE SHOWN FOR AIRCRAFT RESCUE AND FIREFIGHTING (ARFF) OR AIRPORT AND

B. IF AFFECTED, INTERRUPTIONS OF UNDERGROUND UTILITIES, INCLUDING WATER SUPPLY FOR FIREFIGHTING WILL BE SHOWN.

C. RUNWAY APPROACH/DEPARTURE AREAS AND CLEARWAYS WILL BE PROTECTED PER CSPP.

D. CONSTRUCTION AREAS, STORAGE AREAS AND ACCESS ROUTES WILL BE SHOWN

E. THE CSPP ADDRESSES TEMPORARY CHANGES TO RUNWAY AND/OR TAXIWAY OPERATIONS, MAINTENANCE OF ESSENTIAL UTILITIES, AND TEMPORARY CHANGES TO AIR TRAFFIC CONTROL PROCEDURES TO BE COORDINATED WITH THE ATO

NAVAIDS: A. BEFORE COMMENCING CONSTRUCTION ACTIVITY, PARKING VEHICLES, OR STORING CONSTRUCTION EQUIPMENT AND MATERIALS NEAR A NAVAID, COORDINATE WITH THE APPROPRIATE FAA ATO/TECH OPS OFFICE TO EVALUATE THE EFFECT OF CONSTRUCTION ACTIVITY AND THE REQUIRED DISTANCE AND DIRECTION FROM THE NAVAID. SEE THE CSPP FOR APPLICABLE NAVAID CRITICAL AREAS ALL COORDINATION WITH THE FAA A TO/TECH OPS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER.

B JE THIS PROJECT AFFECTS BUNWAY NAVAIDS, COORDINATION WITH LOCAL TECHNICAL OPERATIONS WILL BEGIN AT THE A TER-CONSTRUCTION METING, A UST OF RESPONSIBLE PARTY REPRESENTATIVES, INCLUDING PROCEDURES FOR CONTACT AFTER-HOURS, SHOULD BE OBTAINED PRIOR TO CONSTRUCTION. A 45-DAY MINIMUM NOTICE SHOULD BE PROVIDED TO FAA ATO/TECH OPS REGARDING SHUT-DOWN OF A NAVAID MORE THAN 24 HOURS OR MORE THAN 4 HOURS ON CONSECUTIVE DAYS. ALL COORDINATION WITH THE FAA ATO/TECH OPS WILL BE THE RESPONSIBILITY OF THE AIRPORT OR ENGINEER

INTERFERENCE FROM CONSTRUCTION EQUIPMENT AND ACTIVITIES MAY REQUIRE NAVAID SHUTDOWN OR ADJUSTMENT OF INSTRUMENT APPROACH MINIMUMS FOR LOW VISIBILITY OPERATIONS. THIS REQUIRES THAT A NOTAM BE FILED.

CONTRACTOR ACCESS: A. SEE THE CSPP FOR AREAS ACCESSIBLE TO THE CONTRACTOR AND ACCESS ROUTES.

B. STOCKPILED MATERIALS AND EQUIPMENT STORAGE ARE NOT PERMITTED WITHIN THE SAFETY AREA OR OBJECT FREE AREA OF AN DEPENDIONAL RUNNAY OR TAXIMAY (OFA STOCKPILES REQUIRE FAA APPROVAL). IF THE CONTRACTOR WISHES TO STOCKPILE MATERIALS OR EQUIPMENT ADJACENT TO AN OFA, HE MUST FIRST COORDINATE WITH THE ENGINEER AND AIRPORT OPERATOR TO ENSURE THAT 1) APPROPRIATE LIGHTING AND BARRICADES ARE IN PLACE, AND 2) THE STOCKPILED MATERIALS DO NOT CREATE A WILDLIFE ATTRACTANT OR FOREIGN OBJECT DEBRIS (FOD) HAZARD. EXCAVATION AND RESULTANT STOCKPILES ADJACENT TO OTHER PAVED SURFACES MUST BE APPROPRIATELY MARKED WITH BARRICADES. AS DIRECTED BY THE ENGINEER.

C. THE CONTRACTORS' EQUIPMENT IS STRICTLY LIMITED TO THE CONSTRUCTION AREAS DURING CONSTRUCTION AND TO THE CONTRACTOR STORAGE AREA DURING NON-CONSTRUCTION PERIODS, EXCEPT AS PROVIDED ON THE PLANS, IN THE CONTRACT SPECIAL PROVISIONS OR AS AUTHORIZED BY THE ENGINEER IN WRITING. CONTRACTOR PARKING SHALL BE LIMITED TO THE STAGING AREA EXCEPT AS ALLOWED BY THE AIRPORT

D. HAUL ROUTES AND ACCESS TO THE CONSTRUCTION SITE(S) WILL BE AS SHOWN ON THE CONSTRUCTION SAFETY PHASING PLAN AND DISCUSSED AT THE PRE-BID MEETING. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL HAUL ROADS, PLANT SITES, STAGING AND STORAGE AREAS TO ORIGINAL CONDITION OR TO THE SATISFACTION OF THE ENGINEER/AIRPORT. THIS WILL INCLUDE BUT NOT BE AND STORAGE AREAS TO ORIGINAL CONTINUE OF THE SATISFACTION OF THE INDIVERSITY AND A STORAGE AREAS TO CANDINAL CONTRACTOR. ANY PAVEMENT AREAS USED BY THE CONTRACTOR AND SEEDING AND MULCHING ALL TURE REPAYED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR AS A HAUL ROUTE WHICH ARE DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT ALL HAUL ROUTES PRIOR TO START OF DAMAGED WILL BE REPAVED AS APPROVED BY THE PROJECT ENGINEER AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL INSPECT AND A REVERTING THE PROVED AS APPROVED BY THE PROVED AS APPROVED BY THE PROVED AS APPROVED AS APPROVED BY THE PROVED AS APPROVED AS APPROVED AS APPROVED AS APPROVED BY THE PROVED AS APPROVED AS APPR CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY DOCUMENTATION OF EXISTING HAUL ROUTES, EITHER WITH PICTURES OR VIDEO, ANTICIPATED COSTS ASSOCIATED WITH DOCUMENTING EXISTING HAUL ROUTE CONDITIONS. OR UCTING OR RESTORING HAUL ROUTES AND STORAGE AREAS, WILL BE INCLUDED IN THE PROJECT ITEM

E. ALL CONSTRUCTION EQUIPMENT MUST BE MARKED WITH A 3' X 3' ORANGE AND WHITE CHECKERED FLAG AND/OR AMBER BEACON. FOR NIGHT CONSTRUCTION, ALL EQUIPMENT MUST BE EQUIPPED WITH AN AMBER BEACON. ALL CONSTRUCTION VEHICLES MUST BE CLEARLY MARKED WITH THE COMPANY NAME/LOGO AT ALL TIMES. MARKING AND LIGHTING SHALL OTHERWISE BE IN ACCORDANCE WITH

AIRPORT RADIOS. FLAG PERSON AND DRIVER TRAINING: THE CONTRACTOR SHALL MAINTAIN AND MONITOR AN AIRPORT RADIO ON-SITE. THE TOWER/CTAF FREQUENCY FOR THE AIRPORT IS 112.6.825 MHz, GROUND CONTINUE AIRPORT IS 121.7 MHz. RADIOS ARE NOT AVAILABLE FROM THE AIRPORT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN ADEQUATE NUMBER OF RADIOS FOR THEIR OPERATIONS. TRAINING OF CONTRACTORS ON PROPER COMMUNICATION PROCEDURES IS ESSENTIAL FOR MAINTAINING OF DEPENDENCI ON FROM THE AIRPORT. THE STREET ON THE AIRPORT IS 121.7 MHZ. RADIOS AIRPORT OPERATIONAL SAFETY. IF THE AIRPORT PROVIDES RADIO COMMUNICATION TRAINING, CONTRACTOR ATTENDANCE WILL BE REQUIRED PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO HAVE A TRAINED FLAG PERSON EQUIPPED TH AN AIRPORT RADIO OPERATING ON 126 825 MHZ AND GROUND CONTROL FOR THE AIRPORT 121 7 MHZ TO ESCORT ANY CONTRACTOR VEHICLES WHEN CROSSING ACTIVE AGA'S. COST OF MAINTAINING THE FLAG PERSON SHALL BE INCLUDED IN THE PROJECT ITEMS. KEY CONTRACTOR PERSONNEL MAY BE EXPECTED TO TRAVEL ON OR NEAR ACTIVE AGA'S. THESE INDIVIDUALS MUST COMPLY WITH THE AIRPORT OPERATOR'S RULES AND REGULATIONS BY PARTICIPATING IN ANY APPLICABLE AIRFIELD DRIVER'S TRAINING PROCEDURES PROVIDED BY THE AIRPORT

G. AIRPORTS SUBJECT TO 49 CFR PART 1542, AIRPORT SECURITY, SHALL BE REQUIRED TO MEET ALL APPLICABLE STANDARDS. THE CONTRACTOR SHALL PROVIDE A GATE GUARD AT ALL POINTS OF ENTRY USED BY THE CONTRACTOR. GATES MUST BE LOCKED WHEN NOT IN USE OR NOT GUARDED BY THE CONTRACTOR, AIRPORT OPERATORS AND CONTRACTORS MUST TAKE CARE TO MAINTAIN A HIGH INOT IN USE OR NOT GUARDED BY THE CONTRACTOR. MAPORI OPERATORS AND CONTRACTORS MUST TARE CARE TO MAINTAIN A MINIMA MUST AND EXCENT YERCING TO PERMIT THE PASSAGE OF CONSTRUCTION VEHICLES OR PERSONNEL TEMPORARY GATES SHALL BE EQUIPPED SO THEY CAN BE SECURELY CLOSED AND LOCKED TO PREVENT ACCESS BY ANIMALS AND PEOPLE. PROCEDURES SHALL BE IN PLACE TO ENSURE THAT ONLY AUTHORIZED PERSONS AND VEHICLES HAVE ACCESS TO THE AOA AND TO PROHIBIT PIGGYBACKING BEHIND ANOTHER VEHICLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER OPERATION AND PRESERVATION OF ALL AIRFIELD PERIMETER GATES, FITHER MANUAL OR AUTOMATED. FOR THE PURPOSES OF THIS CONTRACT, ALL FENCING/GATES SHALL BE CONSIDERED PART OF CONTRACTOR HAUL ROUTES. AS SUCH, ANY DAMAGE TO FENCING/GATES AS A RESULT OF CONSTRUCTION TRAFFIC SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

II DI IFE MANAGEMEN

THE CSPP AND SPCD MUST BE IN COMPLIANCE WITH THE AIRPORTS WILDLIFE MANAGEMENT PLAN, IF APPLICABLE. CONTRACTORS MUST CAREFULLY CONTROL AND CONTINUOUSLY REMOVE WASTE OR LOOSE MATERIALS THAT CAN CREATE WILDLIFE HAZARDS OR ATTRACTANTS, THESE INCLUDE TRASH, STANDING WATER, TALL GRASS, SCATTERED SEEDS, POORLY MAINTAINED FENCING, AND DISRUPTION OF EXISTING HABITAT

FOREIGN OBJECT DEBRIS MANAGEMENT: A. DEBRIS SHALL NOT BE DEPOSITED ON ANY PORTION OF AN OPERATIONAL RUNWAY, TAXIWAY OR APRON. SHOULD ANY DEBRIS BE

ACCIDENTALLY DEPOSITED ON ACTIVE OPERATIONAL AREAS. IT SHALL BE REMOVED IMMEDIATELY, THE CONTRACTOR SHALL HAVE SWEEPING AND/OR VACILIMING CAPABILITIES ON-SITE IN ORDER TO CONTINUOUSLY REMOVE DEBRIS FROM ACTIVE OPERATIONAL SWEEPING AND/OR VACUOMING CAPABILIES ON-STE IN ORDER TO CONTINUOUSLY REMOVE DEBRIS FROM ACTIVE OPERATIONAL AREAS DURING THE CONSTRUCTION PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE STE, INCLUDING ADJACENT PAVEMENTS AND HAUL ROUTES, IS CLEAR OF ANY FOREIGN OBJECT DEBRIS (FOD) AND IS ACCEPTABLE TO THE AIRPORT. THE CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS OF THE WORK AND ADJACENT AREAS FOR SAFETY AND CLEANLINESS. THE AIRPORT MAY ALSO PERFORM DAILY INSPECTIONS, UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE, INCLUDING ADJACENT PAVEMENTS HAUL ROUTES, IS RETURNED TO ORIGINAL CONDITION.

B. CONTRACTOR SHALL USE ALL MEANS NECESSARY TO MINIMIZE DUST DURING CONSTRUCTION OPERATIONS. IF THE AIRPORT OR ENGINEER REQUESTS DUST CONTROL IT SHALL BE APPLIED IMMEDIATELY.

HAZARDOUS MATERIALS MANAGEMENT: ANY TYPE OF FUELING SUPPORT FACILITY OR DEVICE USED TO REFUEL CONSTRUCTION EQUIPMENT IS SUBJECT TO LOCAL FIRE INSPECTION LOCAL FIRE CODES AND SAFETY STANDARDS SHALL BE MET PRIOR TO COMMENCEMENT OF WORK CONTRACTORS UP SPILLS RESULTING FROM FUEL OR HYDRAULIC FLUID LEAKS. TRANSPORT AND HANDLING OF OTHER HAZARDOUS MATERIALS ALSO REQUIRE SPECIAL PROCEDURES (SEE AC 150/5320-15, MANAGEMENT OF AIRPORT INDUSTRIAL WASTE).

NOTIFICATION OF CONSTRUCTION ACTIVITIES: A. THE CONTRACTOR SHALL INCLUDE IN THE SPCD A PROCEDURE FOR IMMEDIATE NOTIFICATION OF THE AIRPORT AND LOCAL FAA OF ANY ADVERSE CONDITIONS AFFECTING SAFETY ON THE AIRPORT

B. THE CONTRACTOR SHALL OBTAIN CONTACT INFORMATION FOR ALL INVOLVED PARTIES AND PROCEDURES FOR CONTACTING THEM 24 HOURS A DAY, 7 DAYS A WEEK. THIS INCLUDES, IF APPLICABLE, A LIST OF LOCAL FAA ATO PERSONNEL, ATCT MANAGERS ON DUTY AUTHORIZED REPRESENTATIVES TO THE FAA OPERATIONS CONTROL CENTER (OCC).

C. THE AIRPORT SHALL ISSUE ALL NOTAMS RELEVANT TO THE CONSTRUCTION PROGRESS. THE AIRPORT OPERATOR MAY NEED TO PROVIDE INFORMATION ON CLOSED OR HAZARDOUS CONDITIONS TO THE OCC.

D. THE CONTRACTOR SHALL PREPARE AND SUBMIT CONTACT INFORMATION FOR LOCAL MEDICAL, FIREFIGHTING, AND POLICE RESPONSE IN CASE OF EMERGENCIES DURING CONSTRUCTION.

THE CONTRACTOR MAY BE REQUIRED TO COORDINATE WITH AIRPORT AREF PERSONNEL EVEN FOR NON-EMERGENCIES, SUCH AS DEACTIVATION OF WATERLINES, REPOUTING OF EMERGENCY ACCESS ROUTES, OR USE OF HAZARDOUS MATERIALS.

F. PER 14 CFR PART 77. THIS CSPP HAS BEEN SUBMITTED TO THE FAA BY THE TIME OF CONSTRUCTION. 14 CFR PART 157 IS NOT APPLICABLE TO THIS PROJECT

G. TO REPORT EMERGENCY IMPACTS TO NAVAIDS, CALL (866) 432-2622.

INSPECTION REQUIREMENTS: A AIRPORT SAFETY SELF-INSPECTIONS SHOULD BE CONDUCTED BY THE CONTRACTOR AT LEAST DAILY, BUT MORE FREQUENTLY IF NECESSARY TO CONFORM WITH THE CSPP. A SAMPLE DAILY INSPECTION CHECKLIST IS AVAILABLE IN APPENDIX D OF AC 150/5370-20.

B. A FINAL INSPECTION MEETING WILL ALSO BE HELD FOR THIS PROJECT THAT MUST BE ATTENDED BY THE CONTRACTOR.

UNDERGROUND UTLITIES: A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING AIRPORT UTILITIES, AND ELECTRICAL CIRCUITS, WHETHER OWNED BY THE AIRPORT OR OTHER AGENCIES OPERATING AT THE AIRPORT (SEE GENERAL PROVISION 70-15). ANY LOCATIONS OF EXISTING CABLE SHOWN IN THE PLANS ARE BASED ON AVAILABLE AS-BUILT DATA AND ARE APPROXIMATE ONLY. THE CONTRACTOR EAISTING CABLE SHOWN IN THE FLANS AND BASED SON AVAILABLE AS-BUILT DATA AND ARE AFFRAAMMED ONLET. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ANY CROSSING OF UNDERGROUND ELECTRICAL CIRCUITS WITH THE AIRPORT AND FAA FACILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE TONING EQUIPMENT CAPABLE OF DETECTING A 60 Hz SIGNAL FOR LOCATING CABLES IN THE CONSTRUCTION AREA. WORKING IN CONJUNCTION WITH THE ENGINEER, THE CONTRACTOR SHALL LOCATE EXISTING CABLES PRIOR TO START OF CONSTRUCTION. COST OF LOCATING THE CABLES AND PROVIDING THE TONING EQUIPMENT SHALL BE INCLUDED IN THE PROJECT ITEMS ANY ELECTRICAL CIRCUITS TO BE CROSSED SHALL THEN BE TESTED FOR RESISTANCE TO GROUND BY THE CONTRACTOR UNDER SUPERVISION OF THE ENGINEER AND THE READINGS RECORDED. FOLLOWING CONSTRUCTION, THE CONTRACTOR, UNDER THE SUPERVISION OF THE ENGINEER, SHALL CHECK ALL CIRCUITS CROSSED DURING THE PROJECT. ANY CIRCUITS SHOWING A DECREASE IN RESISTANCE TO GROUND SHALL BE CORRECTED BY THE CONTRACTOR SO AS TO PROVIDE AT LEAST 50 MEGOHMS RESISTANCE IN THAT CIRCUIT. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY CORRECTIVE ELECTRICAL WORK DUE TO CONTRACTOR'S OPERATIONS.

B. A 7-DAY ADVANCE NOTICE SHALL BE GIVEN TO THE SSC MANAGER BEFORE LOCATION OF FAA CABLES IS REQUIRED. FAA SHALL LOCATE CABLES ONLY ONCE DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR RECORDING FAA CABLE LOCATIONS IN THE EVENT THAT MARKS ARE LOST DURING CONSTRUCTION. THE CONTRACTOR SHALL HYDRO-EXCAVATE ONLY WHEN DIGGING WITHIN 5 FEET OF ANY MARKED FAA BURIED CABLE LOCATION. ANY FAA CABLE(S) DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE COMPLETELY REPLACED (NOT SPLICED OR REPAIRED), AT THE CONTRACTOR'S EXPENSE.

PENALTIES: THIS PROJECT INVOLVES WORK NEAR ACTIVE AIRCRAFT OPERATIONAL AREAS. ANY RUNWAY OR TAXIWAY INCURSIONS OCCURRING DURING THE PROJECT, AS DETERMINED BY THE JUDGEMENT OF THE ENGINEER AND/OR AIRPORT, MAY BE SUBJECT TO FAA FINES IN EXCESS OF \$10,000. FAA DEFINES A RUNWAY INCURSION AS "ANY OCCURRENCE AT AN AERODROME INVOLVING THE INCORRECT PRESENCE OF AN AIRCRAFT, VEHICLE OR PERSON ON THE PROTECTED AREA OF A SURFACE DESIGNATED FOR THE LANDING AND

RUNWAY & TAXIWAY VISUAL AIDS-MARKING, LIGHTING, SIGNS, AND VISUAL NAVAIDS: A. AIRPORT MARKINGS, LIGHTING, SIGNS, AND VISUAL NAVAIDS MUST BE CLEARLY VISIBLE TO PILOTS, NOT MISLEADING, CONFUSING OR DECEPTIVE ALL MUST BE SECURED IN PLACE TO PREVENT MOVEMENT BY PROP WASH. JET BLAST, WING VORTICES OR OTHER WIND CURRENTS, BUT FRANGIBLE AND CONSTRUCTED OF MATERIALS THAT WOULD MINIMIZE DAMAGE TO AN AIRCRAFT IN THE EVENT OF INADVERTENT CONTACT.

B. THE FOLLOWING ARE APPLICABLE STANDARDS FOR ANY TEMPORARY OR PERMANENT INSTALLATIONS OF THESE RESPECTIVE ITEMS: AIRPORT MARKINGS: AC 150/534 LIGHTING: AC 150/5340-30, 150/5345-50, 150/5345-5

SIGNAGE: AC 150/5345-44, 150/5340-18, 150/5345-53, ENGINEERING BRIEF 93

C. SHOULD A RUNWAY BE TEMPORARILY CLOSED: THE CONTRACTOR SHALL MARK THE AFFECTED RUNWAY WITH A CLOSURE CROSS IN ORDANCE WITH THE RUNWAYLCLOSURE CROSS SPECIFICATIONS FOUND IN THE PLANS. CLOSURE CROSSES SHALL REMAIN IN PLACE UNTIL NORMAL RUNWAY OPERATIONS RESUME.

D. SHOULD A TAXIWAY BE TEMPORARILY CLOSED WITH AN OPEN RUNWAY. THE CONTRACTOR SHALL MARK THE AFFECTED TAXIWAY WITH A CLOSURE CROSS IN ACCORDANCE WITH THE TAXIWAY CLOSURE CROSS SPECIFICATIONS FOUND IN THE PLANS. CLOSURE CROSSES SHALL REMAIN IN PLACE UNTIL NORMAL TAXIWAY OPERATIONS RESUME.

E, WHEN NECESSARY TO CLOSE OR CHANGE THE STANDARD OPERATIONS OF A RUNWAY OR TAXIWAY, THE CONTRACTOR SHALL. THROUGH THE ENGINEER, NOTIFY THE AIRPORT 72 BUSINESS HOURS IN ADVANCE OF THE PROPOSED CHANGE IN OPERATIONS

F. IF REQUIRED, CONSTRUCTION SIGNS SHALL COMPRISE A MESSAGE IN BLACK ON AN ORANGE BACKGROUND AT LOCATIONS SHOWN

ON THE CSPF

MARKING AND SIGNS FOR ACCESS ROUTES: PAVEMENT MARKINGS AND SIGNS INTENDED FOR CONSTRUCTION PERSONNEL SHOULD CONFORM TO AC 150/5340-18, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND/OR STATE HIGHWAY SPECIFICATIONS AS PRACTICAL.

HAZARD MARKING AND LIGHTING: A. IF ANY AIRCRAFT MOVEMENT AREAS MUST BE CLOSED, THE CONTRACTOR SHALL FURNISH AND PLACE PORTABLE BARRICADES ACROSS RUNNAYS OR TAXIMAYS TO KEEP VEHICLES FROM ENTERING ACTIVE OPERATION AREAS AND TO KEEP AIRCRAFT FROM TAXIING INTO CONSTRUCTION AREAS, BARRICADES SHALL BE HIGHLY-REFLECTIVE, MARKED WITH DIAGONAL, ALTERNATING ORANGE AND WHITE STRIPES AND SUPPLEMENTED WITH EITHER FLASHING OR STEADY-BURNING LIGHTS DURING HOURS OF RESTRICTED AND WHITE STRIPES AND SUPPLEMENTED WITH EITHER FLASHING OK STEADT-BORNING LIGHTS DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS. LIGHTS SHALL BE BARICADE TYPE TYPICAL FOR CONSTRUCTION ZONES AND RED IN COLOR, MEETING ALL STATE HIGHWAY REQUIREMENTS. BARRICADES LOCATED <u>WITHIN</u> AIRCRAFT MOVEMENT AREAS (RUNWAYS, TAXIWAYS, APRONS) SHALL BE LOW LEVEL AVIATION BARRICADES (NO HIGHER THAN 18") SPECIFICALLY MANUFACTURED AND DESIGNED FOR SUCH PURPOSE. THEY SHALL BE ALTERNATING ORANGE AND WHITE IN COLOR 10" HIGH AND 96" LONG. MADE OF UV-RESISTANT POLYETHYLENE AS MANUFACTURED BY MULTI-BARRIER (MODEL AR 10x96 HDPG), OR APPROVED EQUAL ENOUGH BARRICADES MUST BE PROVIDED TO SAFELY DELINEATE ALL CONSTRUCTION BOUNDARIES. BARRICADES SHALL BE PLACED CLOSELY ENOUGH TO PREVENT TRAFFIC FROM ENTERING THE CONSTRUCTION AREA, GENERALLY NO MORE THAN 4 FEET APART. BARRICADES SHALL BE FILLED WITH WATER TO PREVENT MOVEMENT BY JET BLAST. BARRICADES LOCATED OUTSIDE OF AIRCRAFT MOVEMENT AREAS MAY BE MADE FROM VARIOUS MATERIALS, INCLUDING RAILROAD TIES, SAWHORSES, JERSEY BARRICADES, BARRELS, OR OTHER STANDARD HIGHWAY BARRICADES, IF BARRICADES ARE SUBJECT TO PROP WASH, JET BLAST, WIND VORTEX OR ANY OTHER SURFACE WIND CURRENTS, THE BARRICADES WILL BE WEIGHTED OR FASTENED TO THE GROUND TO PREVENT DISPLACEMENT.

B. HAZARDS SUCH AS OPEN MANHOLES, AREAS UNDER REPAIR, STOCKPILE AND WASTE AREAS SHOULD ALSO BE MARKED.

LIGHTING AND BARRICADING INTERSECTIONS WITH BARRICADES EVEN FOR SHORT (TEMPORARY) CLOSURES

E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MOVEMENT OF BARRICADES BETWEEN PHASES, OR AS OTHERWISE CRITICAL TO AIRPORT OPERATIONS. ALL BARRICADE LIGHTS MUST BE CHECKED NIGHTLY AND REPLACED BY THE CONTRACTOR IF NOT FUNCTIONING. CONTRACTOR SHALL BE COMPENSATED FOR COST OF ALL BARRICADES, THEIR MAINTENANCE AND MOVEMENT UNDER THE PROJECT ITEMS.

WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION: LIGHTING EQUIPMENT MUST ADEQUATELY ILLUMINATE THE WORK AREA IF THE CONSTRUCTION IS TO BE PERFORMED DURING NIGHTIME HOURS. LIGHT TOWERS SHOULD BE POSITIONED AND ADJUSTED TO AIM AWAY FROM ATCT CAB AND ACTIVE RUNWAYS TO PREVENT BLINDING EFFECTS. TOWERS MUST BE REMOVED PRIOR TO REOPENING TO AIRCRAFT OPERATIONS.

PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS: A. NO CONSTRUCTION MAY OCCUR WITHIN THE EXISTING RUNWAY SAFETY AREA (RSA) WHILE THE RUNWAY IS OPEN TO AIRCRAFT OPERATIONS. RSA DIMENSIONS MAY BE TEMPORARILY ADJUSTED, IF THE RUNWAY IS RESTRICTED TO AIRCRAFT OPERATIONS REQUIRING AN RSA EQUAL TO THE WIDTH AND LENGTH THAT ARE AVAILABLE. THIS ADJUSTMENT MUST BE COORDINATED WITH THE FAA REGIONAL OR DISTRICT OFFICE AND LOCAL AIR TRAFFIC MANAGER BY THE AIRPORT OPERATOR AND APPROPRIATE NOTAMS ISSUED DPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN THE RSA WHILE OPEN. OPEN TRENCHES AND EXCAVATIONS WITHIN THE CONSTRUCTION AREA(S) MUST BE PROMINENTLY MARKED WITH RED OR ORANGE FLAGS, AND LIGHTED DURING HOURS OF LOW VISIBILITY/DARKNESS. IF THE RUNWAY MUST BE OPENED BEFORE EXCAVATIONS ARE BACKFILLED, THE EXCAVATIONS MUST BE COVERED IN SUCH A WAY AS TO ALLOW THE HEAVIEST AIRCRAFT OPERATING ON THE RUNWAY TO CROSS THE COVERING WITHOUT DAMAGE SOIL EROSION MUST BE CONTROLLED TO MAINTAIN RSA STANDARDS (NO POTENTIALLY HAZARDOUS BUTS HUMPS NS, OR OTHER SUFFACE VARIATIONS, AND CAPABLE UNDER DRY CONDITIONS OF SUPPORTING SNOW REMOVAL EQUIPMENT (SRE), ARFF, AND THE OCCASIONAL PASSAGE OF AIRCRAFT WITHOUT STRUCTURAL DAMAGE.

B CONSTRUCTION INCLUDING EXCAVATIONS MAY BE PERMITTED IN THE RUNWAY OR IECT FREE AREA (ROFA). FOURMENT MUST BE b) CONSTRUCTION, INCLUDING EXCAVATIONS, INAT BE PERMITTED IN THE NOTWAY DOBECT FREE AREA (ROFA). EUCIFICIENT INUST BE REMOVED FROM THE ROFA WHEN NOT IN USE, AND MATERIAL SHOULD NOT BE STOCKPILED IN IT IF NOT NECESSARY. STOCKPILING WITHIN THE ROFA REQUIRES SUBMITTAL OF A 7460-1 FORM AND FAA APPROVAL.

C. NO CONSTRUCTION MAY OCCUR WITHIN THE EXISTING TAXIWAY SAFETY AREA (TSA) WHILE THE TAXIWAY IS OPEN TO AIRCRAFT C. NO CONSTRUCTION WAY OCCUR WITHIN THE EXISTING TAXWAY SAFETY AREA (SA) WHILE THE TAXIWAY IS OPEN TO ARCRAFT OPERATIONS. TSA DIMENSIONS MAY BE TEMPORARILY ADJUSTED, IF THE TAXIWAY IS RESTRICTED TO AIRCRAFT OPERATIONS REQUIRING A TSA EQUAL TO THE WIDTH THAT IS AVAILABLE. THIS ADJUSTMENT MUST BE COORDINATED WITH THE FAA REGIONAL OR DISTRICT OFFICE AND LOCAL AIR TRAFFIC MANAGER BY THE AIRPORT OPERATOR, AND APPROPRIATE NOTAMS ISSUED. OPEN TRENCHES OR EXCAVATIONS ARE NOT PERMITTED WITHIN THE TSA WHILE OPEN. OPEN TRENCHES AND EXCAVATIONS WITHIN THE CONSTRUCTION AREA(S) MUST BE PROMINENTLY MARKED WITH RED OR ORANGE FLAGS AND LIGHTED DURING HOURS OF LOW USIBILITY/DARKNESS. IF THE TAXIWAY MUST BE OPENED BEFORE EXCAVATIONS ARE BACKFILLED, THE EXCAVATIONS MUST BE COVERED IN SUCH A WAY AS TO ALLOW THE HEAVIEST AIRCRAFT OPERATING ON THE RUNWAY TO CROSS THE COVERING WITHOUT DAMAGE, SOIL FROSION MUST BE CONTROLLED TO MAINTAIN TSA STANDARDS (NO POTENTIALLY HAZARDOUS RUTS, HUMPS, DEPRESSIONS, OR OTHER SURFACE VARIATIONS, AND CAPABLE UNDER DRY CONDITIONS OF SUPPORTING SRE, ARFF, AND THE OCCASIONAL PASSAGE OF AIRCRAFT WITHOUT STRUCTURAL DAMAGE.

IN RARE CIRCUMSTANCES WHERE THE SECTION OF TAXIWAY IS INDISPENSABLE FOR AIRCRAFT MOVEMENT, OPEN TRENCHES OR EXCAVATIONS MAY BE PERMITTED WHILE OPEN IF SUBJECT TO THE FOLLOWING: TAXIING IS LIMITED TO 10 MPH; APPROPRIATE NOTAMS ARE ISSUED; APPROPRIATE LIGHTING AND MARKING ARE IMPLEMENTED; LOW MASS, LOW PROFILE LIGHTED BARRICADES ARE INSTALLED; APPROPRIATE TEMPORARY ORANGE CONSTRUCTION SIGNS ARE INSTALLED.

D. UNLIKE THE ROFA. NO CONSTRUCTION MAY OCCUR WITHIN THE TAXIWAY OBJECT FREE AREA (TOFA) WHILE OPEN TO AIRCRAFT OPERATIONS, UNLESS 1) THE TOFA DIMENSION IS TEMPORARILY ADJUSTED FOR USE BY SMALLER AIRCRAFT ONLY; 2) TEMPORARY OFFSET TAXIWAY MARKINGS ARE USED.

CONSTRUCTION, INCLUDING OPEN EXCAVATIONS, MAY BE ACCOMPLISHED WITHOUT ADJUSTING THE TOFA SUBJECT TO THE FOLLOWING RESTRICTIONS: TAXIING IS LIMITED TO 10 MPH: APPROPRIATE NOTICES TO AIRMEN (NOTAM'S) HAVE BEEN ISSUED BY THE AIRPORT MARKING AND LIGHTING PROVISIONS HAVE BEEN INFLEMENTED BY THE CONTRACTOR, APPROPRIATE ORANGE CONSTRUCTION SIGNS ARE INSTALLED (IF DESIRED); FIVE-FOOT CLEARANCE BETWEEN EQUIPMENT AND ANY PART OF AN AIRCRAFT IS MAINTAINED (MOVING PERSONNEL AND EQUIPMENT FOR PASSAGE OF AN AIRCRAFT MAY BE NECESSARY); AND CONTRACTOR'S FLAGGERS ARE UTILIZED TO DIRECT AND CONTROL EQUIPMENT AND PERSONNEL TO A PRE-ESTABLISHED SETBACK DISTANCE. (AIRLINES SHOULD PROVIDE FLAGGERS TO DIRECT THE ACTUAL TAXIING AIRCRAFT.)

E. PERSONNEL, MATERIAL, AND/OR EQUIPMENT MAY NOT PENETRATE THE RUNWAY OBSTACLE FREE ZONE (OFZ) WHILE THE RUNWAY IS OPEN. IF WORK IN THE OFZ IS NECESSARY, IT MAY BE POSSIBLE TO CONTINUE AIRCRAFT OPERATIONS THROUGH OPERATIONAL RESTRICTIONS (COORDINATE WITH THE FAA).

F. ALL PERSONNEL, MATERIAL, AND/OR EQUIPMENT MUST REMAIN CLEAR OF APPLICABLE THRESHOLD SITING SURFACES. OBJECTS THAT DO NOT PENETRATE MAY STILL BE OBSTRUCTIONS TO AIR NAVIGATION AND MAY AFFECT STANDARD INSTRUMENT APPROACH PROCEDURES (COORDINATE WITH THE FAA).

G. ADEQUATE DISTANCE FROM BLASTING OPERATIONS: N/A

OTHER LIMITATIONS ON CONSTRUCTION: THE FOLLOWING ARE PROHIBITED FROM USE ON THE AIRFIELD: TALL EQUIPMENT BEYOND THE MAXIMUM EQUIPMENT HEIGHT SHOWN ON THE SAFETY/PHASING PLAN, OPEN-LAME WELDING/TORCH CUTTING (UNLESS PROPER PRECAUTIONS ARE TAKEN, AND AIRPORT APPROVAL IS OBTAINED), ELECTRICAL BLASTING CAPS (WITHIN 1000 FEET OF AIRPORT PROPERTY).

OTHER CONSTRUCTION NOTES: A. CRITICAL AIRCRAFT DURING CONSTRUCTION OPERATIONS CONSIST OF DESIGN GROUP III AIRCRAFT.

B. CONSTRUCTION SHALL BEGIN BETWEEN AUGUST 17, 2020 AND SEPTEMBER 8, 2020. THERE SHALL BE 55 CALENDAR DAYS FOR THE PROJECT

C. LIQUIDATED DAMAGES IN THE AMOUNT OF \$2,500 SHALL BE ASSESSED FOR EACH CALENDAR DAY CONSTRUCTION EXCEEDS THE ALLOTTED CONTRACT DAYS FOR PHASE 1 AND 3. \$7,500 FOR EACH CALENDAR DAY WORK ON PHASE 2 THAT EXCEEDS THE CONTRACT TIME ALL OTTED

D. ALL SAFETY AND SECURITY ITEMS REQUIRED ON THE CONSTRUCTION SAFETY PHASING PLAN OR IN SAFETY AND CONSTRUCTION NOTES WILL BE INCLUDED IN THE COST FOR THE PROJECT ITEMS

CONSTRUCTION STAKE AND LATH REQUIREMENTS: THE PROJECT ENGINEER SHALL FURNISH ENOUGH WOOD STAKES AND LATH TO ESTABLISH ALL LINES, GRADES AND MEASUREMENTS CONSIDERED BY THE PROJECT ENGINEER AS NECESSARY TO THE PROPER PROSECUTION AND CONTROL OF THE WORK CONTRACTED FOR UNDER THESE SPECIFICATIONS. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PROTECT THE LINES AND GRADES ESTABLISHED BY THE ENGINEER. The CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING ALL LINES. GRADES AND MEASUREMENTS OUTLINE IN ITEM 800 COLD MILLING AND PAVING GRADE CONTROL.

THE CONTRACTOR SHALL EXECUTE THE QUALITY CONTROL TESTS REQUIRED TO DETERMINE THAT THE CONTRACTOR'S WORK AND/OR MATERIALS CONFORM TO THE APPLICABLE SPECIFICATIONS. THESE TESTS WILL BE PERFORMED AT A FREQUENCY, AS DETERMINED BY THE CONTRACTOR, TO VERIFY THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE CONTRACTOR WILL SUPPLY QUALITY CONTROL TEST REPORTS TO THE ENGINEER PRIOR TO THE START OF QUALITY ASSURANCE TESTING, COSTS ASSOCIATED WITH QUALITY CONTROL TESTING WILL BE INCLUDED IN ITEM NO. 100001 - MOBILIZATION AND GENERA

AFTER THE CONTRACTOR HAS PERFORMED SUFFICIENT QUALITY CONTROL TESTING TO DETERMINE THAT WORK HAS BEEN PERFORMED ACCORDING TO PROJECT SPECIFICATIONS, THE PROJECT ENGINEER WILL PERFORM QUALITY ASSURANCE TESTING QUALITY ASSURANCE TESTING WILL BE PERFORMED AT THE FREQUENCY SPECIFIED IN THE CONSTRUCTION MANAGEMENT REPORT OR THE PROJECT SPECIFICATIONS. COST OF QUALITY ASSURANCE TESTING IS NOT PART OF THE CONTRACTOR'S COSTS FOR THIS CONTRACT, WITH THE FOLLOWING EXCEPTION

EXCESSIVE TESTING OF THE SAME WORK ELEMENT IS REQUIRED TO VERIFY QUALITY ASSURANCE, THE CONTRACTOR SHALL BE ESPONSIBLE FOR ADDITIONAL QUALITY ASSURANCE TESTING COSTS. EXCESSIVE TESTING IS DEFINED AS MORE THAN TWO (2) TESTS (1 TEST, 1 RETEST) AT THE SAME LOCATION OR WORK ELEMENT

ONE COPY OF EACH QUALITY ASSURANCE TEST WILL BE FURNISHED TO THE CONTRACTOR UPON REQUEST. THE CONTRACTOR SHALL PROVIDE SUCH FACILITIES AS THE PROJECT ENGINEER OR HIS REPRESENTATIVE MAY REQUIRE FOR CONDUCTING QUALITY ASSURANCE FIELD TESTS AND FOR COLLECTING AND FORWARDING SAMPLES. ALL OTHER PORTIONS OF SECTION 60-02 SHALL REMAIN IN EFFECT



C. THE CONTRACTOR MUST ALSO PROVIDE AN EMERGENCY CONTACT AVAILABLE 24 HOURS FOR MAINTENANCE OF CONSTRUCTION

LIGHTING AND BARNICAUNO. D. USE HIGHLY REFLECTIVE BARRICADES WITH LIGHTS TO CLOSE TAXIWAYS LEADING TO CLOSED RUNWAYS. CLOSE RUNWAY/TAXIWAY



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BATTLE CREEK EXECUTIVE AIRPORT AT KELLOGG FIELD RECONSTRUCT TWY C PAVEMENT & LIGHTING PHASE III BATTLE CREEK, MI
05/15/2020 ISSUED FOR BID 06/09/2020 ADDENDUM #1
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SHEET CONTENTS CONSTRUCTION SAFETY PHASING NOTES
SHEET NO