DETROIT METRO • WILLOW RUN

WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority

Safety Standards

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1.0 General Requirements

This document is specifically intended for the use of Construction Managers, Vendors, Contractors and Subcontractors who perform work on or at (Airport Authority) Detroit Metropolitan Airport (DTW) or Willow Run Airports (YIP) and facilities. It is made available to amplify your Safety Program. All or parts of the contents will apply to your contract depending upon the type of contract and the sequence in which the phases are conducted. ***BE ADVISED you will still be subjected to a Construction and Alteration Permit for work to be performed (if C/A permit project).***

The following information is provided as an example in which to determine what items to include in the safety program for work performed and does not constitute the requirements of a complete, comprehensive safety policy or Safety Program. It shall be the Contractors responsibility to provide a safe and healthful work environment for their workers on-site during the performance of the contract or work performed from a purchase order or work order. This shall include the Contractor and all its Subcontractors, all trades and supervision, suppliers, Airport Authority personnel, visitors and additional parties having access to the designated project work areas at the Airport Authority's facility. The safety goal of Airport Authority construction projects is to achieve zero fatalities, zero permanent disabilities, and zero lost time accidents.

The generalized overviews presented in this document are statements of expectations that the Contractor will be measured against. Failure to meet these requirements may be grounds for the removal of the individual employee from the worksite and also could lead to grounds for termination of the Contract by the Airport Authority.

The Contractor must not interfere with or make more difficult or expensive Airport Authority's compliance with any law, statue, code, ordinance or regulation. Airport Authority will notify the Contractor, orally or in writing, and the Contractor shall within forty-eight hours of receiving Airport Authority's notification make whatever changes are necessary to remedy the situation, including, without limitation, changes in the work schedule, installation of safety devices. Airport Authority's exercise of its rights under this guideline will not be grounds for an increase in the Contract Sum under the Contract.

The Airport Authority has the right to monitor (Contractor shall still be responsible for assuring safe work practices) the Contractors' operations for safety performance, workmanship, protection of operations, work progress, housekeeping, and compliance to design specifications. It is a general practice that the Airport Authority will work through the Contractor's supervision and not directly with the employee. The Airport Authority has the right to participate with and investigate any accident or incident.

Contractor shall develop and implement a system for assessing appropriate requirements applicable to its employees, including removal from Airport Authority property, for violation of safety laws statutes, codes, ordinances and regulations, safety requirements specified by Job Hazard Analysis; safety requirements specified by the Contract, including, without limitation, any other condition that presents a safety hazard to the employee or others. Contractor shall prepare and maintain a detailed written report of each instance where it has assessed discipline for a safety related infraction including identification of the employee, the nature of the infraction and their discipline assessed.

Prior to beginning any work, the Contractor shall conclusively demonstrate to the Airport Authority that the Contractor has in place and actively maintains a comprehensive random and post accident drug and alcohol testing program that meets or exceeds the standards for post accident and random testing in accordance with Department of Transportation (DOT) Drug and Alcohol Testing - 49 Code of Federal Regulations (CFR) Part 40 (hereinafter "Drug Testing"). Written proof of Drug Testing shall be submitted to the Airport Authority simultaneously with the required Payment and Performance Bonds

and Insurance. The Drug Testing requirement shall apply to all subcontractors of the Contractor and Insurance. The Drug Testing requirement shall apply to all subcontractors of the Contractor as well as the Contractor.

All persons entering the project area designated as the construction site shall strictly follow Michigan OSHA, MDEQ, FAA, DOT, and TSA regulations.

These established safety requirements shall govern Contractors and all persons within the designated construction site and are outlined to avoid infractions of common accepted safety practices. Safety Program – The Contractor shall submit its Safety Program to the Airport Authority and obtain approval prior to issuance of the Notice to Proceed. The Safety Program includes, but is not limited to the following:

- Contractor's Corporate Safety Policy and/or
- Contractor's Site Specific Safety Plan;
- Construction Safety and Phasing Plan (CSPP) – The Contractor shall abide by the CSPP, approved by the FAA and provided by the Airport Authority (for all Airfield, PFC, and AIP funded projects only).
- Safety Plan Compliance Document (SPCD) – The SPCD details how the contractor will comply with the CSPP. The Contractor shall prepare the SPCD and obtain approval by the Airport Authority prior to issuance of the Notice to Proceed (for all Airfield, PFC, and AIP funded projects only).

Regular progress meetings will be conducted during construction. Part of the meeting will be dedicated to safety. During these meetings, the Contractor shall submit to WCAA on a monthly basis the following safety information (Attachment #1):

- Estimated man-hours worked from the previous period;
- Number of near misses from the previous period;
- Number of accidents from the previous periods;
- Number of recordable injuries from the previous period; and
- Summarization of any accident that took place from the previous period.

The Contractor shall carry out its operations in a manner that will cause a minimum of interference with air traffic, and shall be required to cooperate with the Federal Aviation Administration (FAA), Wayne County Airport Authority (Airport Authority) the airlines, and other contractors working in the area. All work shall be completed in accordance with the Contract Documents including the Safety Program and FAA Advisory Circular 150/5370-2F, Operational Safety on Airports During Construction or current edition as of bid date.

If the Contractor uses resources from any union halls for staffing, those individuals shall have a current OSHA 10 hour certification as well as go thru safety orientation with the Contractor. Copies of any names of individuals who are used from the local halls shall be submitted with a copy of the certification to the Airport Authority or the Airport Authority's representative one week prior to allowing the individual onsite.

The Contractor shall supply, place, maintain, move and store the items listed herein, as appropriate, to facilitate construction and protect air traffic. The Contractor shall maintain an adequate extra supply of these items on site.

The following information is provided as an example in which to determine what items to include in the safety program for work performed and does not constitute the requirements of a complete, comprehensive

safety policy or Safety Program. It shall be the Contractors responsibility to provide a safe and healthful work environment for their workers on-site during the performance of the contract or work performed from a purchase order or work order. This shall include the Contractor and all its Subcontractors, all trades and supervision, suppliers, Airport Authority personnel, visitors and additional parties having access to the designated project work areas at the Airport Authority's facility. The safety goal of Airport Authority construction projects is to achieve zero fatalities, zero permanent disabilities, and zero lost time accidents.

These established safety requirements shall govern Contractors and all persons within the designated construction site and are outlined to avoid infractions of common accepted safety practices. These safety requirements shall not be construed as complete and any requirements of the guidelines in conflict with Michigan OSHA and FAA shall be superseded by Michigan OSHA or FAA regulations.

Tools, equipment or materials shall not be left or placed on beams, overhead walkways, or places where they may fall, causing injury.

To prevent possible explosive or incendiary devices from being hidden in areas close to Airport Facilities, equipment, aircraft, or vehicles, no containers (tool boxes, storage containers, materials trailers shall be left unsecured or unattended in public areas.

The Contractor shall not bring any tool through passenger screening. No tools shall be left unsecured in public areas. Any temporary doors that lead to construction areas that are accessible by the public shall be equipped with a push button cipher lock (installed at the contractor's expense). The access number to the door shall be provided to Airport Authority designees.

The Contractor is not permitted to carry liquids (except drinking water), gels, or aerosols into sterile areas except for those liquids, gels, or aerosol necessary for operational or medical needs, all of which shall be subject to inspection.
Eye protection shall be worn at all times.

While working on the airfield hearing protection is mandatory. It is up to each contractor and subcontractor to determine if a hearing conservation program is necessary. The Contractor will comply with industry standards for hearing protection of personnel and visitors as appropriate.

Upon request the Airport Authority will submit any historical noise surveys to the Contractor.

Contractor shall verify and assure that every employee who operates any mobile equipment on Airport Authority properties shall have a current valid driver's license.

The Contractor shall comply with the National Electric Code (NEC) requirements regarding ground fault circuit interrupters for construction field tools and equipment.

In matters concerning interpretation of the foregoing requirements, the decision of the Airport Authority will be final and binding.

Onsite vehicles are to have no more passengers than seats available on the vehicle. Personnel carts, golf carts or similar vehicles, where permitted, shall only have as many riders as seats available. Failure to follow this requirement will lead to removal of personnel from the project.

The Contractor shall maintain a Safety Program, for the purpose of safety, security, orientation, education, training, enforcement, and distribution.

If a fire line or any type of fire suppression service is going to be taken out of service, the Contractor must coordinate with the Airport Authority's Public Safety Fire Marshal or a designated representative from the Airport Authority's Fire Division at least three days in advance. In addition, the contractor shall complete an impairment notification to the insurance carrier. Impairment kits can be obtained by contacting the Airport Authority building operator, Airport Authority Maintenance Division, or Airport Authority Risk Management Unit.

If a security system (cameras, gates, lifts, doors, etc) is going to be taken out of service, the Contractor shall coordinate with the Airport Authority Security Division at least three days in advance. Pending certain security threat levels, permission may not be granted to take down a security system.

Potable water line installation will require coordination with the Airport Authority. In addition, a permit application may have to be completed and submitted to the Airport Authority.

The Contractor shall follow Detroit Water and Sewer Department guidelines for the installation and storage of potable water lines. Installation, storage, and testing results shall be coordinated with the Airport Authority.

Employees shall not operate any equipment or vehicles more than 16 hours consecutively.

Any individual failing to follow these safety requirements will be directed by the Contractor to immediately abate the unsafe act, behavior, or equipment.

All Contractor equipment brought onsite for use on or during the construction project shall be kept in a safe operating condition. Worn or damaged equipment shall be repaired, replaced or taken out of service (locked out) and removed from the job site.

Contractor shall keep its work area in a clean and safe condition.
The use of makeshift, defective or inadequate scaffolding, rigging, or staging is prohibited.

The Contractor shall provide barriers, railings or coverings for all areas including, but not limited to, elevated work platforms, holes, excavations, roof openings, along roof edges, manholes, and/or unfinished work causing floor obstructions. Outside excavations, barriers, and safety signs shall be adequately illuminated during darkness.

No Contractor is permitted to use any powered industrial moving equipment, trucks, tools, or ladders owned or rented by, the Airport Authority unless it is an emergency and the request form is executed.

The Contractor shall provide physical barriers along the perimeter of its work site and place signs identifying the area as a construction site. In some cases where the general public or open airfield is to be protected, additional and/or specialty barriers might be required and will need to be determined by Airport Authority.

All individuals in the designated construction areas are required to wear hardhats, safety glasses, protective footwear, and any other protective clothing or gear as required by safety codes and regulations or as deemed necessary by the Contractor.

Contractors shall not perform work overhead of any member of the general public. The Contractor shall use physical barriers to prevent access by non-construction personnel to areas with overhead construction work. If the Contractor cannot restrict access to the overhead work area, work will cease until a method of restricting access is developed and implemented.

Welding screens and/or curtains will be used in areas where cutting or welding operations are being performed where non-construction personnel may be exposed to weld flash or sparks. Refer to Airport Authority Hot Work permit requirements.

Non-Airport Operations Areas (Non-AOA) road closures shall be coordinated with Airport Authority Facilities, Design, and Construction Division. If road closures are required at YIP, then YIP Management shall be involved as well. Coordination shall take place at a minimum of five days prior to closure. Public roadways will be closed following the Michigan Uniform Traffic Code procedures.

Prior to mobilization the Contractor shall complete Contractor Employee Review, Contractor Safety Guidelines (Attachment 2). This document shall be kept on site and updated for every new employee who will work on the project.

Regular progress meetings will be conducted during construction. Part of the meeting will be dedicated to safety. During these meetings, the Contractor shall submit to WCAA the following safety information:

2.0 General Airfield Safety

This section is instead to be used to assist those Contractors who have access to the airfield. Warning lights shall meet the requirements of FAA Advisory Circular 150/5370-2G, or current edition as of bid date, Operational Safety on Airport during Construction. The Contractor's vehicles shall meet the requirements of FAA Advisory Circular 150/5210-5D or current edition as of bid date, Painting, Marking, and Lighting of Vehicles Used on an Airport.

Low profile barricades shall be in accordance with the details in the Contract Documents and meet the requirements of FAA Advisory Circular 150/5370-2G, or current edition as of bid date. The barricades shall be furnished, maintained and relocated during each phase by the Contractor. At the completion of the Contract (based on the contract language), the entire quantity of barricades shall be delivered to the Airport Authority complete and in good working order and shall become property of the Airport Authority. Barricades shall be as detailed and installed per the Drawings along the affected pavement edge or access to a closed runway, taxiway or apron.

Safety fence shall be furnished and installed at the locations as indicated on the Contract Documents and/or directed by the Designer.

The power vacuum sweepers shall be Tymco, Model HSP-600 or Elgin Model Crosswind or an approved equal. Depending on the size of the project and construction activity on aircraft operations area, a broom type sweeper may be allowed by the Designer. The Contractor shall provide a minimum of one sweeper per taxiway intersection at all times.

Taxiway ending marker shall be furnished and installed at the locations as indicated on the Contract Documents and/or directed by the Designer. Taxiway ending marker shall meet the requirements of FAA Advisory Circular 150/5345-44K, Type L-858C, or current edition as of bid date.

Airfield Rescue and Firefighter (ARFF) roads cannot be taken out of service unless approved by the WCAA.

Equipment that is used for material handling on the airfield shall have working headlights and brake lights. Any equipment that exits the AOA onto public roadways is subject to MDOT regulations.

Contractor to coordinate jet fuel line work with Airport Authority Operations prior to disturbance

The Contractor shall not pull any associated airfield lighting electrical cables through existing

If working on the AOA, the Contractor will be required to prepare an FAA Safety Plan Compliance Document (SPCD) that is a part of the Safety Program.

Airport Operations Area (AOA) zipper road closure shall be coordinated with the DTW or YIP Airfield Operation Units. Coordination shall take place at a minimum of five days prior to closure.

The Contractor shall submit an FAA Form 7460-1 at least 90 days prior to any crane erections. All construction involving cranes shall further be coordinated at least 72 hours in advance, excluding weekends, with the applicable DTW and YIP Airfield Operation Division or Airport Authority Facilities, Design, and Construction Division. This does not include the time required for airspacing. The following information and actions are required:

1. Location of the Crane.

2. Maximum extendable height.

3. Hours of operation.

4. The top of each crane boom shall be marked by a 3' x 3' orange and white checkered flag — each box being 1' square.

5. Each crane shall be lowered at night and during periods of poor visibility as directed by Airport Authority Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division. In the event the crane is approved to remain extended during the hours from sunset to sunrise, the highest point of the crane boom will be lit with a red obstruction light in accordance with AC 70/7460-1, and the Michigan Tall Structures Act.

3.0 Specific Airfield Safety

Taxiway ending marker shall be furnished and installed at the locations as indicated on the Contract Documents and/or directed by the Designer. Taxiway ending marker shall meet the requirements of FAA Advisory Circular 150/5345-44K, Type L-858C, or current edition as of bid date.

Runway Closure Marker (lighted X) shall meet the latest edition of FAA AC 150/5345-55A, or current edition as of bid date, Lighted Visual Aid to Indicated Temporary Runway Closure. Runway Closure Marker shall be approved in accordance with the details shown on the Contract Documents and as approved by the Designer. At the completion of the project the Runway Closure Markers and all associated equipment shall become the property of the Airport Authority. The following are requirements for the Runway Closure marker:

A. Be a portable, towable unit that can be quickly removed from the runway. Includes a two inch ball hitch on the trailer tongue and second hitch mounted on the rear of the trailer.

B. Consist of clear incandescent lamps or transmit a white color, arranged in the shape of a letter "X" with arms crossed at an appropriate angle to make the “X” discernible. The arms shall be painted aviation yellow on all sides so that the unit will be clearly visible when it is in position.

C. Be energized by a portable power supply, water-cooled diesel engine or by outlets on the airfield as available.

D. Be controlled so that the lighted signal will flash all lights simultaneously at an approximate rate of 2.5 seconds “on” (+/- 20%) and 2.5 seconds “off” (+/- 20%).

E. Provide the following daytime and nighttime visual reference during Visual Flight Rule (VFR) conditions when placed on centerline and within 250 feet of the runway end:

F. Visible to the pilot at a range of at least 5 nautical miles.

G. Recognizable as a letter "X" from a range of at least l-1/2 nautical miles.

H. Provide lamp dimming capability for nighttime operations.

I. Produce a signal that provides a horizontal coverage to at least 15 degrees on each side of the runway centerline, and a vertical coverage from 0 degrees to 10 degrees above horizontal, both day and night, at a range of 1-l/2 nautical miles.

J. Adjustable aiming and leveling to allow tilting to an optimum angle of three degrees from vertical.

K. Withstand a minimum wind speed of at least 40 mph without affecting aiming or operation.

L. Include an illuminated failure indicator that is visible from the back (runway side) of the unit.

M. Include an operations placard in a conspicuous location that instructs operators to visually check the operation of the device every two hours.

N. One person set up in less than 5 minutes.

O. Diesel portable power with adapter to run directly from electrical outlets.

P. Trailer hitch options including tandem towing for on-airport operations.

Q. Ability to provide up to 120 hours of continuous operation.

R. Fail safe protection to ensure that the unit stays on as continuous light if the flasher unit should fail.

S. Dimensioning and lights arrangement shall follow FAA recommendations of AC 150/5345-55A, or current edition as of bid date.

The power vacuum sweepers shall that meet requirements of dust control that will assure air emissions will comply with MIOSHA standards. Depending on the size of the project and construction activity on aircraft operations area, a broom type sweeper may be allowed by the Designer. If a broom type sweeper is used it must be used water or a vacuum system for dust control. The Contractor shall provide a minimum of one sweeper per taxiway intersection at all times.

In compliance with FAA AC 150/5370-2G, or current edition as of bid date, the Contractor shall prepare a Safety Plan Compliance Document (SPCD). This document shall include a general statement by the Contractor that he/she has read and will abide by the CSPP. Any details not identifiable for the CSPP should be included within the SPCD. The SPCD is similar to the CSPP but shall not contain duplicate information. The contractor must submit the SPCD to the Airport Authority for approval prior to the issuance of the NTP. The SPCD shall include but not be limited to the following Checklist as applicable to the scope of the project:

Coordination. Discuss details of proposed safety meetings with the Airport operator and with contractor employees and subcontractors.

Phasing. Discuss proposed construction schedule elements, including:

- Duration of each phase.
- Daily start and finish of construction, including "night only" construction.
- Duration of construction activities during:
    - Normal runway operations.
    - Closed runway operations.
    - Modified runway "Aircraft Reference Code" usage.

Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.

Protection of NAVAIDS. Discuss specific methods proposed to protect operating NAVAIDS.

Contractor access. Provide the following:

- Details on how the Contractor will maintain the integrity of the Airport security fence (contract security officers, daily log of construction personnel, and other).
- Listing of individual requiring driver training (for certificated airports and as requested).
- Radio communications.
    - Types of radios and backup capabilities.
    - Who will be monitoring radios.
    - Whom to contact if the Air Traffic Control Tower (ATCT) cannot reach the Contractor's designated person by radio.
    - Details on how the contractor will escort material delivery vehicles.

Wildlife management. Discuss the following:

- Methods and procedures to prevent wildlife attraction.
- Wildlife reporting procedures.

Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.

Hazardous material (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.

Notification of construction activities. Provide the following:

- Contractor points of contact.
- Contractor emergency contact.
- Listing of tall or other requested equipment proposed for use on the airport and the time frame for submitting 7460-1 forms not previously submitted by the Airport operator.
- Batch plant details, including 7460-1 submittal.

Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.

Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.

Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.

Special conditions. Discuss proposed actions for each special condition identified in the CSPP.

Runway and taxiway visual aids. Including marking, lighting, signs and visual NAVAIDs. Discuss proposed visual aids including the following:

- Equipment and methods for covering signage and airfield lights.
- Equipment and methods for temporary closure markings (paint, fabric, other).
- Types of temporary Visual Guidance Slope Indicators (VGSI).

Markings and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.

Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.

Protection of runway and taxiway safety areas. Including object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:

- Equipment and methods for maintaining Taxiway Safety Area standards.
- Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
- Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

The Safety Program, including the SPCD, shall be submitted to the Airport Authority for review.

Contractor shall be familiar with all existing and limiting conditions that will or may have a bearing on the performance of the Contract with regard to safety. Any limiting conditions shall be identified in writing.

Throughout the duration of the Contract, any practice or situation that the Designer determines to be unsafe or a hindrance to regular Airport operations shall be immediately rectified.

The following publications contain definitions/descriptions of critical Airport operating areas. The areas defined below pertain to airfield safety requirements and are referenced throughout the Contract Documents. Copies of these publications are available from the FAA at www.faa.gov. Advisory Circular 150/5370-2G, or current edition as of bid date, "Operational Safety on Airports During Construction": Sets forth guidelines to assist Airport operators in complying with FAR Part 139, "Certification and Operation/Land Airports Serving Certain Air Carriers" and with the requirements of federally funded construction projects.

FAR Part 77, "Objects Affecting Navigable Airspace," Current Edition: Establishes standards for determining obstructions to navigable airspace. Civil Airport imaginary surfaces are defined in the publication. It also sets forth requirements for notice of certain proposed construction or alteration. Notice of construction provides a basis for recommendations for identifying the construction or alteration in accordance with AC 70/7460-1, "Obstruction Marking and Lighting," or current edition as of bid date.
AC 150/5300-13, "Airport Design" or current edition as of bid date: Establishes design, operational and maintenance standards for Airports. Standard terms used in the Contract Documents are defined below:

Runway Safety Area (RSA) - The defined surface surrounding the runway over which aircraft should, in dry weather, be able to cross at normal operating speeds without incurring significant damage. A safety area is graded, drained and compacted. It is free of any holes, trenches, humps or other significant surface variations or objects, other than those which must be there because of their essential aeronautical function. The safety area requires the capability of supporting maintenance, firefighting, and rescue vehicles under normal (dry) conditions.

Object Free Area (OFA) – An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigations or aircraft ground maneuvering purposes.

Obstacle Free Zone (OFZ) – The OFZ is the airspace below 150 feet above the established Airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway, and for missed approaches. The OFZ is subdivided as follows:

Runway OFZ. The airspace above a surface centered on the runway centerline.
Inner-approach OFZ. The airspace above a surface centered on the extended runway centerline. It applies to runways with an approach lighting system.

Outer-approach OFZ. The airspace above the surfaces located on the outer edges of the runway OFZ and the inner-approach OFZ. It applies to runways with approach visibility minimums lower than ¾-statute mile.

Taxiway Safety Area (TSA) – A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

The work shall proceed in such a manner as to provide safe conditions for all workers and personnel. The sequence of operations shall be such that maximum protection is afforded to ensure that personnel and workers in the work area are not subject to any dangerous conditions.

Prior to commencement of construction activity, the Contractor shall notify in writing, at least 72 hours in advance, Airport Authority Operations and the Designer of its intentions to begin construction, stating the proposed time, date, and area of which construction is to occur in order for the appropriate Notice-to-Airmen (NOTAM) to be issued. During the performance of this Contract, the Airport facility shall remain in use to the maximum extent possible. The Contractor shall not allow employees, subcontractors, suppliers, or any other unauthorized persons to enter in any Airport area which may be open for aircraft use.

Should any of the following problems or hazards arise during construction, the Contractor shall immediately rectify/correct the problem or hazard to the satisfaction of the Designer and the Airport Authority: Trenches, holes, or excavations at or adjacent to any active runway or in safety areas. Unmarked/unlighted holes or excavation at any active apron, taxiway, taxilane, or related safety area. Mounds or piles of earth, construction materials, temporary structures, or other objects in the vicinity of any active taxiway, taxilane, or in a related safety, approach, or departure area.

Vehicles or equipment (whether operating or idle) on any active runway, taxiway, taxilane, or in any related safety, approach, or departure area. Vehicles, equipment, excavations, stockpiles, or other materials which could degrade or otherwise interfere with electronic signals from radios or navigational aids (NAVAIDS). Runway surfacing projects resulting in excessive lips greater than 1 inch for runways and exceeding 3 inches for edges between the old shoulder and new surfaces at runway edges and ends.

Unmarked utility, NAVAID, weather service, runway lighting, or other power or signal cables that could be damaged during construction. Objects (whether or not marked or flagged) or activities anywhere on or in the vicinity of the Airport which could be distracting, confusing, or alarming to pilots during aircraft operations.

Unflagged/unlighted low visibility items (such as tall cranes, drills, and the like) anywhere in the vicinity of active runways, or in any approach or departure area. Misleading or malfunctioning obstruction lights or unlighted/unmarked obstructions in an approach to any active runway.

Inadequate approach/departure surfaces needed to assure adequate landing/takeoff clearance over obstructions or work or storage areas. Inadequate, confusing or misleading (to user pilots) marking/lighting of runways, taxiways, or taxilanes, including displaced or relocated thresholds. Water, dirt, debris, or other transient accumulation which temporarily obscures pavement marking, pavement edges, or derogates visibility of runway/taxiway marking or lighting. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of Airport operations areas. Trash or other materials with foreign object damage (FOD) potential, whether on runways, taxiways, or aprons, or in related safety areas. Inadequate barricading or other marking which is placed to separate construction or maintenance areas from active aircraft operating areas.

Failure to control vehicle and human access to active aircraft operating areas. Construction/maintenance activities or materials which could hamper the response of aircraft rescue and firefighting (ARFF) equipment from reaching all aircraft or any part of the runway/taxiway system, runway approach and departure areas, and aircraft parking locations. Bird attractants on Airport, such as edibles (food scraps, etc.), miscellaneous trash, or ponded water.

4.0 Underground Work – Excavation, Shoring, Sheeting Trenching, Saw Cutting, and Drilling

The Contractor shall identify any known underground interferences or discrepancies on all available drawings that can be provided by contacting the Airport Authority Project Representative. The Contractor must coordinate a meeting a Utility Review meeting prior to any underground work to discuss the project approach as it relates to this section.

Prior to commencing any excavation (on or off AOA), drilling (on or off the AOA), driving fence posts (along the AOA), trenching (on or off the AOA), saw cutting (AOA only), the Contractor shall review drawings with Airport Authority personnel to insure that all underground obstructions and utilities are identified. In addition the contractor shall contact MISS DIG, other stakeholders, and coordinate with the Airport Authority Project Representative to assign the resources for marking the utilities. The Contractor will be completely responsible for all damage to underground utilities. The Contractor shall coordinate request of marking the utilities by completing the Utility Marking Request form (Attachment #3) at least 72 hours prior to any excavations. If the subject area of interest encompasses more than 5,000 linear feet or one acre, the request shall be made at least two weeks prior to the scheduled work. Airport Authority will notify the Contractor a minimum with 24 hours after receiving notice.

After the subjected area has been reviewed by MISS DIG, the Airport Authority, and other stakeholders the Contractor shall complete the Utility Field Acknowledgment form (Attachment #5). The Contractor shall **not** proceed until the Field Acknowledgment form has been executed by the Contractor. A Field Acknowledgment Form (ticket) is valid for 21 days from the start date of the excavation on the ticket, except that a ticket is valid for 180 days from the start date if the notice indicates that the proposed excavation will not be completed within 21 days of the start date. The Contractor shall catalog the marked utilities by means approved by the Airport Authority. The Contractor could be subjected to additional fees and penalties for mismanaging and not proper planning the coordination of this portion of the work

The Contractor shall assure and has a right to assure each utility shall be swept in the following manner. In addition for any reason the Contractor is the marking they must conform to this standard as well:

- Flags can be used but shall be color coordinated as suggested below. In addition the “acronym” for that utility shall be written on one side of the flag with a permanent marker.
- Stakes can be used. The top two inches of the stake shall be painted in color as suggested below. In addition the “acronym” for that utility shall be written on one side of the stake with a permanent marker.
- Painting is only authorized on asphalt, concrete, and metal surfaces. Markings shall be color coordinated as suggested below. The acronym for the utility shall be used for each utility. A line that shows the direction of the utility shall emanate from the acronym in each direction.
- All marking of utilities shall be every 50 feet. Use of stakes and flags on the AOA could be limited subjected to the work area:

	Acronym	**Color**
Electrical Loops (non AOA)	Use “Elec”	Red
Airfield Electrical	Use “Elec”	Red
Natural Gas	Use “Nat Gas”	Yellow
Sanitary	Use “Sanit”	Green
Storm	Use “Storm”	Green
Combined Sewers	Use “Combo”	Green
Water (potable and fire)	Use “Water”	Blue
Irrigation	Use “IRR”	Purple

FAA Fiber	Use “FAA Fib”	Orange
WCAA Fiber	Use “Fiber”	Orange
Telephone	Use “Tele”	Orange
Jet Fuel	Use “Jet Fuel”	Yellow
Glycol	Use “Glycol”	Blue
Oil	Use “Oil”	Yellow
Gasoline	Use “Gas”	Yellow
Diesel	Use “Diesel”	Yellow
Steam	Use “Steam”	Yellow
Condensate	Use “Conden”	Green
Temporary Mark	None	Pink
Proposed Excavation/Blasting	None	White

*if abandoned still shall stake, mark, or flag but write down “aband” before the abbreviated prefix indicated above.

The individual marking, staking, or flagging shall mark the utilities in a way that coincides with the drawings that are referenced on the Request for Sweep Form.

If a utility or any underground obstruction is found it shall be reported immediately to the Designer or the Airport Authority Project Supervisor.

Contractor employees in an excavation shall be protected from cave-ins by an adequate protective system unless the excavation is:

- Made entirely of stable rock, or
- Less than 5 feet deep and determination has been made that there is no potential for a cave-in.

Excavation shall be protected using proper barricading materials which shall be installed a minimum of 6 feet back from excavation (unless in conflict with airfield requirements). Barricade material can be wood, steel cables, or chain supported at intervals so that the barricade does not sag or drop below the required height. Caution tape is not an approved barricade material. Guardrail/jersey barriers may be required and shall provide a top rail, mid rail, and toe board at proper elevations and be able to withstand a minimum 200 pound of force without collapsing.

The Contractor is responsible for documenting utility information for use during construction and preparation of as-builts.

The Contractor, as needed, will conform to the Miss Dig Facility Damage & Safety Prevention Act.

5.0 Fall Protection Control

Fall Hazard Control requires that Contractors comply with fall prevention and protection procedures in accordance with Michigan Occupational Safety and health Administration (MIOSHA) Part 45.

Fall Protection will be required on specific mobile equipment and platforms.

Installation of fall protection systems on the ground:

- As much as practicable, fall protection such as nets, and lifelines, are installed on material and equipment on the ground.

Reducing fall hazards in the construction process:

- As much as practicable, permanent stairs, floors, decking, handrails, and walls are installed as the structures are being built. Also, material and equipment such as structural steel and tanks are erected in sections and painted on the ground to reduce fall exposures.

Safe access:

- Methods to provide safe access to work areas are included in the JHA. Safe access includes ladders, scaffold, stairways, and ramps. Climbing structural steel and equipment is not allowed.

Training:

- Before employees are allowed to use a particular fall protection method or system, they are properly trained on proper use and limitations of the system. The training is the responsibility of their supervisor.

When not protected by any other means of fall protection such as safety nets or scaffold with proper guardrails, employees shall use full body harnesses, shock absorbing lanyards with double locking snap hooks, and an adequate anchorage (fall arrest equipment). To achieve 100 percent fall protection, employees may need to use a double lanyard system and/or vertical or horizontal lifelines, retractable lifelines, or other such approved devices.
Employees shall rig fall arrest equipment so that they can neither free fall more than 6 feet nor contact any lower object. Anchorage points for fall arrest equipment shall be capable of supporting 5,000 pounds per employee and located above the employee's body harness attachment point where practicable. Anchorage points shall be independent of any anchorage being used to support or suspend scaffolds or other platforms.

When vertical lifelines are used, each employee shall be protected by a separate lifeline. The lifeline shall be properly weighted at the bottom and terminated to preclude a device such as a rope grab from falling off the line.
Horizontal lifelines should be limited to two persons at one time between supports. Horizontal lifelines shall be designed, installed, and used under the supervision of a qualified person. The horizontal lifeline shall be designed to maintain a safety factor of at least two.

Prior to each use, employees shall visually inspect all fall arrest equipment for cuts, cracks, tears or abrasions, undue stretching, overall deterioration, mildew, operational defects, heat damage, or acid or other corrosion. Equipment showing any defect shall be withdrawn from service.

All fall arrest equipment subjected to impacts caused by a free fall or by testing shall be removed from service.
Employees should store all fall arrest equipment in a cool dry place not subjected to direct sunlight.
Employees shall not use fall arrest equipment until they have been properly trained in its use.

Foremen shall ensure fall protection is available and used as required for all employees they are responsible for.
Fall arrest equipment shall not be used for any other purpose such as tow ropes or hoist lines.
Proper guardrails shall be installed on open sides of all walkways and runways where the fall distance exceeds 4 feet.

Proper guardrails shall be installed on all open sided floors where the fall distance exceeds 4 feet.

All floor openings or floor holes shall be protected by guardrails or hole covers. If hole covers are used, they shall be strong enough to support the maximum intended load, secured against displacement, and properly labeled. If the cover is subject to vehicular traffic, it shall be capable of supporting at least two times the axle load of the largest vehicle expected to cross over it. When operating a scissor lift work platform, the lift shall have guardrails on all open sides and the door access chains or rails in place.

Employees operating aerial lifts shall wear a body harness and lanyard attached to the aerial lift. Employees shall not attach the lanyard to an independent structure. Employees riding in a crane suspended work platform shall wear a body harness and lanyard attached to the grab rail of the platform.
Employees working on wall forms or rebar shall wear a body harness and lanyard in addition to a positioning device when exposed to a fall in excess of 6 feet. Position devices shall be rigged to prevent a free fall greater than 24 inches.

Stairs, ladders, or ramps shall be provided for all access ways where there is a change in elevation greater than 19 inches.
When guardrails are used for fall protection, they shall consist of a top rail, intermediate rail, and toeboard. The top rail shall have a vertical height of 42 inches, the midrail shall be at 21 inches, and the toeboard 4 inches. Guardrail systems shall be constructed so that there are no openings greater than 19 inches. When wood railings are used, the post shall be of at least 2 inch by 4 inch stock spaced not to exceed 8 feet, the top rail shall be of at least 2 inch by 4 inch stock, and the intermediate rail shall be of at least 1 inch by 6 inch stock. If pipe is used, it shall be at least 1-1/2 inch nominal diameter. If structural steel is used, it shall be of 2 inch by 2 inch by 3/8 inch angles or equivalent. If wire rope is used for railings, it shall have a diameter of at least 1/2 inch and be stretched taut to allow no more than a 3 inch deflection. Guardrail systems shall be capable of supporting a force of at least 200 pounds applied within 2 inches of the top edge.

Guardrail systems shall be constructed so that when a 200 pound force is applied in a downward direction, it will not deflect to a height less than 39 inches.

If wire rope is used for top rails, it shall be flagged at no more than 6 foot intervals with high visibility material.
Manila or synthetic rope shall not be used as guardrails. Employees shall not stand or sit on guardrails.

If an employee ever feels that any piece of his or her fall protection equipment is unacceptable or unsafe, he/she must contact his/her super-visor, who will immediately turn the equipment in for replacement. Harnesses, lanyards, hooks, etc., shall be visually inspected for the condition of rivets, buckles, stitching, D-rings, tabs, frayed or broken strands, cuts and abrasions, burns, rot, soundness of latching and locking mechanisms, and general appearance. Any piece of fall protection equipment that does not pass inspection will be immediately destroyed and replaced. Any piece that is subjected to loading will be immediately destroyed and replaced.

6.0 Fire Prevention

The Contractor shall provide appropriate fire extinguishers for its employees.

The Contractor shall not shut down or in any way interfere with the normal operation of the Airport Authority's sprinkler or fire control system. In all cases where the Contractor requires draining of a sprinkler system, a request shall be made with the Airport Authority Fire Division.

The Contractor shall not attach any tooling, equipment, rigging or any other device to a sprinkler pipe. Ladders shall not be placed against sprinkler pipes.

Contractor shall field verify location at sprinkler heads prior to performing cutting, burning, and/or welding operations. If in doubt, contact the Airport Authority Fire Marshall. Any damage to a sprinkler system shall be reported and repaired immediately.

Materials, trucks, ladders, racks and all other equipment shall be kept clear of aisles, exits, and firefighting equipment, sprinkler risers, fire alarm boxes, electrical lighting, power panels, and valves.

No burning, cutting , welding, or heat generating operation shall be allowed in any area on Airport Authority property without first obtaining a Wayne County Airport Authority - Hot Work permit from the Airport Authority Fire Division (Attachment #4).

Only the Airport Authority Fire Division will issue welding and burning permits. An inspection of the work area will be conducted prior to issuance of the permit. Issuance of the permit will allow heat generating operations to be performed in the areas stated on the permit only. Permits are good for the shift they are issued on. If work is going to continue on the next shift, a new permit is required unless approved by the Airport Authority Fire Division.

Oxygen and acetylene cylinders not in use, shall be properly stored and capped, and secured by a chain or rope. All flammable liquids shall be stored in approved safety containers. Airport Authority Fire Division shall give permission before any quantity in excess of 5 gallons is brought onto the Airport Authority's property. Oily rags and/or rags soaked with flammable liquids shall be stored in approved safety containers only. Paint and painter's equipment, drop sheets, cleaning materials, shall be stored in a clear area away from any heat generating operation.

Lids shall be replaced on all opened paint and/or solvent containers. All solvents are to be stored in approved safety containers.

7.0 Crane/Derricks/Lifting Equipment/Rigging

All crane operators shall be thoroughly knowledgeable in the operations of the crane, rigging equipment, and other MISOHA requirements relating to lifting.

NOTAMS may be required depending upon the location and height of the lift. Contractor shall contact Airport Authority Airfield Operations (734) 942-3685 prior to any crane activity. Lifting shall not be done over any employees. Tag lines shall be used for all lifts greater than 20 feet. No lifts shall be made when winds are sustained over 25 mph. Outrigger shall be shored so they do not damage property. Contractor will be responsible for any property damage to paved or concrete surfaces.

A prelift review shall be performed by the Contractor for every critical lift. A Critical lift shall be defined as a lift with a hoisted load that is within 15% of the maximum load limits (normal) of the equipment that is being used. Before a critical lift is performed the Contractor shall submit a Critical Lift Plan that is prepared and approved by a Professional Engineer that is registered with the State of Michigan. The Critical lift Plan will include the following:

- Description of the lift
- Crane Position
- Lift Height
- Load Radius
- Boom and angle
- Size and weight of load
- Percent of cranes capacity
- Personnel involved
- Rigging plan
- Communications methods
- Ground Conditions
- Inspection Procedures
- Procedures for hosting (if applicable)
- The critical lift plan will also document the source (i.e. weight, crane and rigging capacities, inspections, and wind speeds).

8.0 Hazardous Energy Control

Examples of energy sources that are required to be locked out and tagged regardless of who has custody are:
Any time repairs or modifications are made to electrical systems, either temporary or permanent, they shall be locked out. Locks shall be applied to the main disconnect switch whenever possible. A tag shall accompany all locks.

Electrical systems that provide electrical power to equipment, such as pumps and electrical motors, shall be locked out by the Contractor until such time that system is released. Depending upon the location of the work, the disconnects may have to be coordinated with the Airport Authority Electrical Unit or an Airport Authority Building Operator.

Electrical systems that provide electrical power to the airfield signage and lighting.
Lines, valves and similar systems that are being tested pneumatically or with Inert gases, such as oxygen, shall be tagged and locked out to prevent an accidental discharge of the pressure within the line. In addition, areas affected by the pneumatic test shall be barricaded against entry and inspected by the Contractor prior to commencement of the test.

Any steam, natural gas, refrigeration, chemical feed, glycol, water, fuel oil, diesel, and jet fuel lines that could be inadvertently activated or discharged causing a hazardous condition, shall be locked out, blanked or otherwise neutralized to prevent accidental activation and or a hazardous condition. In some cases double block and bleed maybe required.

Access to all electrical systems will be coordinated by the Airport Authority Electrical Unit. This includes access to all panels, breakers, switches, relays, substations, and all relevant switch gear. All initial desegregation and reenergizing will be coordinated through the Airport Authority Electrical Unit.

Access to all utilities and equipment not including electrical systems can be coordinated with the Airport Authority Maintenance and the Facilities and Infrastructure Divisions.

In some cases a "system" may be turned over to a Contractor or Vendor for repairs and testing. If a system is turned over to a Contractor or Vendor for testing and repairs, the lock-out rules below in this Part still apply.
To get a system energized or de-energized, the Contractor will get approval from the Airport Authority Project Representative. This will require coordination with various Airport Authority departments. If a system is de-energized, back-up utility service may be necessary (i.e. electrical generator) pending the details of the work and proposed outage.

Shutting down systems will be conducted in a manner that will minimize interruption. The Contractor shall complete the Utility Interruption Form (Attachment #6) and submit it to the Airport Authority Project Representative at least five business days in advance prior the shut down. The Airport Authority Project Representative will coordinate with those tenants/lease holders who will be affected by the shut down. All outages will be conducted on midnights unless authorized by the Airport Authority Project Representative.
To take overall control and custody of a system for a period of time, the contractor shall complete and execute the Airport Authority Utility System Custody Form (Attachment #7) five business days in advance prior to work with all the proper notifications

Systems that are 480 volts or more will not be turned over to Contractors, unless authorized by the Airport Authority Electrical Department.

If more than one employee is required to lockout and tag a circuit or piece of equipment, a multiple padlock device (hasp) shall be used.

Depending upon the location of the work, some disconnects may have to be coordinated with the Airport Authority Building Operator/Tennant.

This procedure establishes a lockout practice for securing machinery and equipment during periods of construction and maintenance. It is essential that all Contractors are consistent with their lockout procedure to ensure the safety of all employees. A lockout procedure is to render inoperative electrical systems, air lines, hydraulic lines, mechanical devices, pumps, conveyors, fuel, glycol, water, gasoline, jet fuel, pipelines, valves and all other such energy and stored energy systems that may accidentally be energized or discharged while employees are working on them before they are ready and released for service.

Contractors shall administer their own lockout program where not identified by this document. The Contractor shall issue all locks and applicable tags to their foreman, general foreman, superintendents and employees as necessary. The Contractor shall maintain a lock and tag log. Tags are required to have the Contractor's name, phone number, employee name, and supervisor name easily identified on each tag. Contractors shall use lock boxes in all areas except:

- Airport Lighting Vaults at Willow Run and Detroit Metro
- North Terminal Substation #1
- North Terminal Substation #2
- North Terminal Substation #3
- North Terminal Substation #4
- Wayne County Airport Authority Boiler Plant/Powerhouse (Building 611).
- Metro Energy Center
- McNamara Terminal Substation #1
- McNamara Terminal Substation #2
- McNamara Terminal Substation #3
- McNamara Terminal Substation #4
- McNamara Terminal Substation #5
- McNamara Terminal Substation #6
- McNamara Terminal Substation #7
- McNamara Terminal Substation #8
- Building Substations – Willow Run
-

Areas above (1-15) are locations that have pre-designed lock out tag out boards, podiums, and/or Airport Authority provided lock boxes that will be utilized. After equipment has been locally de-energized (i.e. regulator or switch gear) by Airport Authority Electricians, Airport Authority Electricians will lock out the device with an Airport Authority administrative lock and HASP. The Contractor will be required to place their HASP on the Airport Authority HASP at the local disconnect. Afterwards the contractor will be required to hang their personal locks and tags at the local disconnect on their HASP. The Airport Authority will lock all the administrative keys inside the podium or the Airport Authority provided lock box. During work activities the equipment will be locked out and under control of the Airport Authority Electrical Unit. If a Contractor needs to access the electrical room or vault to remove locks and tags they shall coordinate with the Airport Authority Electrical Unit.

All other areas where lock out tag outs are to be completed and not specified above in item K will be considered as remote locations. At remote locations the Contractor and the Airport Authority will follow the same procedures as listed above, but will keep the administrative keys in a lock box at a designated location.

When Airport Authority employees are to work on equipment that contractors are also working on, WCAA employees will place their personal locks and tags on the Airport Authority HASP.

All energy sources shall be locked out and a "DANGER" tag affixed to the equipment or System indicating who installed the lock, Contractor's name, phone number (24-hour contact), and the reason the system was locked out. Each employee shall be responsible for hanging his or her own lock and tag on the proper piece of equipment before starting work. No employee or other Contractor may work on a lock and tag belonging to another employee. Contractor supervision shall be responsible for assisting employees in locating the proper piece of equipment to be locked out and tagged. Each employee involved with "lockout" shall have a lock with an individual key. No locks with duplicate or master keys shall be used. Contractors are required to identify locks by either tags, paint or die markings. Unidentified locks are subject to removal by using the "lock removal procedure."

After locking out and tagging a circuit, an attempt to energize the equipment shall be made by depressing or turning "on" all starting stations before work begins. In no case shall work begin before circuits and equipment are tested to ensure that they are, in fact, de-energized.

Any employee who removes a tag or lock belonging to another employee or person, or overrides a tag or lock in any way, may be removed from the Airport property. Written authorization has to be obtained from the foreman, general foreman, superintendent and Project Manager of the responsible Contractor when a lock has been left on a piece of equipment and the originator is not available for removal.

When locks and tags are required, Contractors employees working on that system shall notify their appropriate supervisor. The supervisor, or his designee, shall see that appropriate locks and tags are provided. When work is completed, the appropriate supervisor is also to be notified when locks and tags are removed.

After equipment or systems are turned over to the Airport Authority, no work or Airport Authority modifications will be performed without compliance to Airport Authority's Lockout/Tagout Program.

There may be some equipment that cannot be physically locked out using any type of device. If a situation exists where equipment cannot be locked out the contractor shall notify the Airport Authority and a Job Hazard Analysis is to be prepared.

9.0 Confined Space Entries

The Airport Authority has several "confined spaces" which will require a written permit prior to entry in accordance with the MIOSHA standard for permit required confined spaces Part 90 and Part 490.

Airport Authority's confined space procedures can be obtained by contacting the Airport Authority Risk Management department. After reviewing the Airport Authority Confined Space Procedures, the contractor shall evaluate and follow their confined space entry guideline. It is up to each contractor to perform a pre-entry inspection and to classify the confined space. If a classification cannot be achieved the contractor is to work with the Airport Authority Environmental and Risk Management Units.

Airport Authority Fire Division will not act as "Standby" for confined space services.
Any Contractor involved in a confined space entry shall meet all State, Federal, and Airport Authority standards, relative to confined spaces, including:

- MIOSHA requirements.
- Demonstration of proof that their employees who enter, act as standby attendants, issue permits, or perform rescue team functions have been properly trained.
- Issuance and posting of their confined space entry permits by qualified permit issuers.
- Providing appropriate confined space instrumentation to measure oxygen levels, explosive atmospheres, or the presence of toxic gases.
- Providing rescue equipment.

Airport Authority personnel will not perform the above confined space entry procedures for Contractors or provide any instrumentation or equipment. However, the Airport Authority will provide the necessary equipment where Airport Authority personnel will also be entering the confined space.

When Airport Authority employees are also entering the same confined space as the Contractors, Airport Authority employees will control the confined space entry.

10.0 Hazardous Materials/Environmental

Work on Airport Authority projects may involve hazardous materials. If working in buildings with suspect materials please contact the Airport Authority Environmental unit for clarification on those suspected material.

Hazardous materials can be easily identified using the U.S. Department of Transportation (DOT) labeling and identification system. All hazardous materials arriving on site shall be properly labeled, stored, and managed as required by the Material Safety Data Sheet (MSDS) for that material, or as directed by Airport Authority Fire, Airport Authority Environmental and Airport Authority Risk Management. If shipments are being shipped to Willow Run, then Willow Run Maintenance (734-485-6672) shall be notified separately as well as Airport Authority Environmental, Airport Authority Fire, and Airport Authority Risk Management.

All wastes shall be properly stored, labeled, managed, and disposed of in accordance with the Airport Authority project specifications and Michigan Department of Environmental Quality (MDEQ) regulations, or as otherwise directed by the Airport Authority Environmental personnel.

Contractors and Subcontractors are required to have copies of all MSDS's for all materials brought on site.
If suspect unknown hazardous materials are identified, then the job should stop until further direction by the Airport Authority Environmental and Risk Management Departments.

If potentially hazardous waste/materials have been indicated in the bid documents and could be foreseen in a project, proposal, or work order, then the contractor is expected to have onsite the proper personal protective equipment and instruments for detection and safety.

Contractor shall provide mitigation plans for projects that include abatement or remediation.

Contractor to immediately report spills to Airport Authority Operations and MDEQ. Reports are to conform to MDEQ requirements.

Transports and handlers of hazardous materials will be pre-approved by the Airport Authority or their representative.

Waste sites for recycling and disposing of materials will be pre-approved by the Airport authority or their representative.

All bill of ladings and manifests will be submitted to the Airport Authority.

11.0 Roofing Operations

Access to the rooftops shall be coordinated with the Airport Authority Project Representative.

Bitumen kettles will not be permitted on the Airport Authority's property until the Airport Authority Fire Division has inspected them. Once approved, the Airport Authority Fire Division will designate the location of the kettle. The Contractor or Subcontractor shall provide fire extinguishing equipment suitable for the operation. Propane tank shall be properly protected.

Smoking, cutting, burning, or welding will not be permitted on any roof where roofing operations are being performed.

Where large quantities of bitumen are required for roofing operations, the material will be mechanically pumped to the roof.

Reduce the possibility of fires by keeping work areas clean. This shall be done on daily basis.

Fall protection requirements shall be adhered to including perimeter protection, harnesses with lifelines, warning line system within 6 feet of roof edge.

Access to the roof and ladders shall be cleared by Airport Authority Security and the Building operator.

12.0 Removal of Existing Equipment

This section does not pertain to large-scale demolition work. Removal of abandoned or existing equipment, hangers, piping, conduit, etc. is a major safety concern at the construction site throughout the duration of the contract. When reviewing the scope of work, a site hazard assessment will be completed by the Contractor, with all safety and environmental concerns addressed, including methods of removal. Mechanical means of removal will be used versus oxy-gas cutting, whenever possible.

Special consideration should be given for the use of mechanical shearing where removing of building structure will be involved and the structure is contaminated with lead paint. Hydraulic lines can be cut easily. Residual hydraulic oil in lines can cause dangerous flashback if cut with a torch. Even though the lines are drained, not all of the hydraulic fluid can be removed. Galvanized conduit and raceways filled with wires can be cut with the shear. This eliminates potentially hazardous vapors, gases, and fumes coming from the galvanizing and wiring.

Selection of the mechanical equipment will be the responsibility of the Contractor, but shall meet the approval of the Airport Authority. To avoid nuisance odors and possible disruptions to adjacent populated work areas and the general public, work may have to be performed during low peak periods. All rented equipment will be equipped with suitable audio and/or visual back up alarms and shall meet applicable government requirements.

13.0 Vehicle Operation on the AOA

All vehicles accessing the AOA shall be placarded with a company name and logo or some other form of identification. All vehicles shall be limited to the Airport zipper road, paved leasehold areas and/or construction areas unless specifically authorized by the DTW or YIP Airfield Operations Unit.

All construction vehicles/mechanized equipment authorized within the Movement Area or related safety areas shall be marked with a flag on a staff attached to the uppermost portion of the vehicle/motorized equipment so that the flag will be readily visible. The flag shall be at least a 3' x 3' square having a checkered pattern of international orange and white squares at least 1’ on each side in accordance with FAA Advisory Circular 150/5210-5D, or current edition as of bid date.

During nighttime hours, all equipment operating on the Airport exceeding 15 feet in height shall be lit with a red obstruction light in accordance with FAA Advisory Circular 70/7460-1, or current edition as of bid date. This light is to be located on the uppermost portion of the equipment.

All construction equipment that exceeds 20 feet in height are required to be “airspaced” as determined by the FAA Form 7460-1. This will require the contractor to notify the DTW or YIP Operations Units so that may have to issues a NOTAM.

Contractor utilized bicycles, motorcycles and two-wheeled scooters are prohibited on the AOA. Vehicle(s)/equipment shall be operated in a manner that does not interfere with aircraft operations. All vehicle(s)/equipment shall yield right of way to all aircraft and emergency vehicles. Vehicles/mechanized equipment operators shall obey all traffic signs and markings.

Vehicles/equipment shall not stop or be parked so as to block a driveway, AOA access gate, fire lane or aircraft Vehicles/equipment shall not stop or be parked in areas other than those prearranged and approved by the DTW or YIP Airfield Operation Units.

No equipment or vehicles may be parked within six feet of an AOA fence. The established speed limit on the Ramp and AOA is 15 mph. Vehicle(s)/equipment shall not be operated by individuals under the influence of any substance which impairs the ability to do so in a safe manner

If an incident occurs on the AOA the incident shall be reported immediately to the DTW or YIP Airfield Operation Units by contacting (734) 942-3685. Airport Authority DTW and YIP Airfield Operations and Airport Authority Public Safety have the right to investigative all incidents and issue citations. The Contractor is still obligated to produce their own incident report to be submitted to the Airport Authority upon request. The Contractor is required to submit an incident report no later than 24 hours after the incident.

Vehicle/mechanized equipment operators are not permitted to move about the Airport, outside the designated construction area, at night unless the vehicle has operating head lights, tail lights and brake lights, or is under the escort of a properly lighted vehicle. Head lights shall not be set on high beam when moving about the Airport at night.

Vehicles/mechanized equipment authorized on the Movement Area (runways, taxiways, and ramps) and/or associated safety areas shall be equipped with an electrically powered, amber color, 360-degree omni-direction light, mounted on the vehicle such that it is conspicuous from any direction.

At no time shall a vehicle enter the Movement Area and/or associated safety areas unless it is authorized by the DTW or YIP Airfield Operation Units and is in continuous radio communication with the Control Tower. If a vehicle is not radio equipped to communicate with the Control Tower, an escort vehicle equipped with such a radio

shall lead or direct the movement of this vehicle while operating on the Movement Area unless the construction area is completely closed to Airport movement and cordoned off. Coordination of escorts shall be prearranged with the DTW or YIP Airfield Operation Units. Any individual authorized unescorted access to the Movement Area or associated safety areas shall have completed the driver training program administered by the DTW or YIP Airfield Operations Department.

Seat belts shall be utilized on equipment/vehicles that are designed for usage.

The Airport Authority may remove and impound, at the owner's expense, any vehicle/equipment which is disabled, abandoned, improperly parked, or represents an operational hazard

All vehicles/equipment shall be appropriately secured such that neither aircraft blast nor wind will result in their movement.

14.0 AOA Contractor Escorts

As required the Contractor shall provide an adequate number of escorts/flaggers for material deliveries along haul routes and the movements of the Contractor's vehicles/mechanized equipment and personnel within the Movement Area and Non-Movement Areas as authorized by the DTW or YIP Airfield Operation Units. To arrange for employees to become an escort the contractor shall complete the following:

> For DTW Projects: those selected Non-Movement Area escort employees are required to be badged by Airport Security, go through Security Identification Display Area (SIDA) training program, and pass the computerized test. Office hours for Credentials are Monday thru Friday from 8:30 am until 4:00 pm (closed 11:30-12:30 for lunch). Be advised that in some cases training will take at least two hours. Training shall not be requested after 2:00 p.m. The office can be contacted at (734) 932-3606 or visit the Airport Authority's website at www.metroairport.com and click on the "Badging" link on the top tool bar for additional information on Badge processing. Upon successfully completing the security requirements, those employees who have been selected as escorts shall contact the Airport Authority Airfield Operations Access and Permits office to coordinate finalization of the permit and to coordinate training on the AOA with an DTW or YIP Airfield Operations agent. Training is performed at 10:00 am and 1:00 pm each day Monday thru Friday. The DTW Operations and Permits office can be reached at 734-942-3823.

Movement Area escort/flagging employees are required to complete and pass an additional eight hour class on Ground Vehicle Operations. For scheduling contact Airfield Operations Training Unit at (734) 942-3595. For YIP Projects: All employees are encouraged, but only Supervisory personnel (Foreman, Site Superintendents, Project Managers, etc.) are required to be trained and badged. These badged individuals will be responsible for escorting their employees and Subcontractors in closed and cordoned construction sites. The YIP Operations Unit, or designee, will perform any escorts in open AOA Movement Areas. Badge applicants are to complete the required badge paperwork. Employees attend a 1.5 hour Airport Security/AOA Driver's Safety Training Class at the Operations/Security Office (734) 485-6675. Training is provided at 10:00 am and 1:30 pm Tuesdays and Thursdays, by appointment only. A $20 non-refundable badge processing fee, payable in cash or money order only, will be charged for each badge. Escort processions will be limited to a maximum of three (3) trucks or less. Those performing the escorts will be trained by WCAA Airside Operations. If requested, variance to the procession procedure can be modified only upon written approval by the Airport Authority.

During any absence of the approved escort(s)/flagger(s) or for periods that they are unable to perform their specified duties, all work within the Movement Area and associated safety areas for projects shall stop. Additionally, all personnel and equipment shall be escorted to approved locations outside the Movement Area and related safety areas. NO contract time extension will be granted for time lost due to the absence of escort(s). Work shall resume only with the return of the approved escort(s).

The escort/flagger shall ensure that all equipment maintains proper clearances from moving aircraft.

For flaggers/escorts contracted through the Airport Authority, the Contractor shall be responsible for the cost of each required flagger/escort at the hourly rate identified on the Wayne County Airport Authority Flagging/Escorting Service Request Authorization Form (See WCAA Airside Operations). The Contractor shall also be responsible for completing and submitting this form.

Contractor provided flagging services must be approved by the Airport Authority. Flaggers will be trained by Airport Authority staff and be equipped with approved hazard communication devices (red/green flags, radios etc.). The area where the flaggers are staged must be approved and will be properly illuminated.

15.0 Special Construction Rules on the AOA

When airfield construction is being performed on the AOA the following rules will apply unless modified in writing by the DTW or YIP Airfield Operation Units. All construction activities on the AOA shall include a specific Construction Safety Phasing Plan (CSPP) and a Safety Plan Compliance Document (SPCD)as required by the FAA. The SPCD will address compliance to and details required by the CSPP and include any other topics of discussion that might be mentioned during the safety phase planning meeting.

The safety phase planning meeting shall be held prior to mobilization to the AOA. Any Airport construction and/or alteration requires the Contractor to complete and submit FAA Form 7460-1 Notice of Proposed Construction or Alteration (available from the FAA Air Traffic Division Regional Office), and www.FAA.gov at least 60 days prior to the start of the project.

The Contractor shall complete and submit FAA Form 7460-1 for all equipment and/or temporary structures, utilized during any Airport construction and/or alteration that exceeds a height of 20 feet above ground level. This includes

- Cranes;
- Derricks;
- Stockpiles of materials or equipment; and
- Earthmoving equipment.

A copy of all completed FAA Form 7460-1's and the FAA's determination(s) shall be on file with the Department of Aviation prior to commencing the erection or construction of the item(s) proposed by the Contractor. The Contractor will provide the DTW or Yip Airfield Operation Units with the FAA determination number, for internet review, or paper copy of the full determination. The Contractor shall erect and maintain fencing, barricades, signs and warning devices used to delineate the perimeter of all construction areas, as approved by the Airport Authority Airfield Operation Units.

All escorts performed within the Movement Area and/or associated safety areas, shall be provided by an authorized Escort. The Airport Authority Airfield Operation Units and the Airport Authority Security Division shall designate all access points into the AOA. All points of entry into the AOA, which are under the Contractor's control, shall be secured and/or guarded and should be coordinated with the Airport Authority Security Division or YIP Airfield Operations/Security Division. Deliveries are to be strictly controlled (by the Contractor) using personnel specifically acquainted with these rules. The Contractor shall provide properly manned escort vehicles as required to guide and escort all deliveries to the work area(s).
All work outside an approved construction area shall be submitted, in writing, 72 hours in advance, excluding weekends

Unless otherwise specified by the DTW or YIP Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division, all work outside an approved construction area shall be marked in accordance with Barricade Details Checklist included at the end of this document. All barricades, lighting and warning devices used to delineate any construction or hazardous area(s) are to be provided by the Contractor.

At no time shall personnel, vehicles or equipment be located or enter any of the following areas unless authorized by DTW or YIP Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division.

- Within 250 feet parallel to an active runway centerline (to be indicated on the CSPP and/or SPCD).
- Within 400 feet parallel to an active runway centerline without equipment and stockpile removal.

- Within 1,000 feet of the end of active runways (each end to be indicated in the CSPP and/or SPCD).
- Within 160 feet parallel to an active taxiway centerline operating with Group V aircraft without proper approval.
- Active NAVAID Critical Areas.
-

On the Movement Area and/or associated safety areas during times of inclement weather or unusual events as determined by the DTW or YIP Airfield Operation Units. During such times all work is to be suspended. All equipment shall be removed to approved staging areas

Trenches and/or Excavations Trenches and/or excavations shall not be allowed in the following areas without closure or restriction of the adjacent Movement Area:

- Within 250 feet parallel to a runway centerline.
- Within 400 feet parallel to a runway centerline, without proper trench and excavation cover.
- Within 160 feet parallel to a taxiway centerline operating with Group V aircraft without proper approval.
- Within 1,000 feet of the end of a runway.
- Active NAVAID Critical Areas.

Barricading/plating of trenches and/or excavations shall be in accordance with the requirements contained in Barricade Details Checklist. No trenching is allowed under AOA fence without prior approval and coordination by the Airport Authority Security Division. All stockpiled material(s)/supplies shall be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions. Material(s)/supplies shall not be stored within 500 feet of aircraft turning areas or movement areas. Stockpiled material(s)/supplies shall not exceed 15 feet in height unless the Contractor has complied with all requirements for airspacing and secured approval from the DTW or YIP Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division. All material(s)/supplies shall be positioned so it will not obstruct the line of sight from the Control Tower to the Movement Area. Marking and lighting shall be in accordance with the requirements contained in Barricade Details Checklist.

Stockpile material may not be within 6 feet of an AOA fence. Nighttime work, not covered by the Contract Documents, requires 72 hours advanced approval, excluding weekends, by the DTW or YIP Airfield Operation Units. Lighting for nighttime work shall be shielded and positioned downward so as not to hinder the vision of the air traffic controllers in the control Tower or the pilots of moving aircraft.

Debris, waste, and loose materials shall not be allowed on the Movement Area. If debris and/or loose materials are observed to be on active portions of the Movement Area, the Contractor will be responsible for correcting the discrepancy immediately. At the direction of the DTW or YIP Airfield Operation Units, debris problems occurring during construction, NOT corrected by the Contractor in a timely manner, will be corrected by the Airport at the Contractor's expense. The Contractor is responsible for controlling dust problems resulting from construction and clean-up processes, as defined by the DTW or YIP Airfield Operation Units or WCAA Facilities, Design, and Construction Division, resulting from construction and clean up processes. The Contractor may be working in an air operations area in which a high degree of care is necessary to control debris and dust. Spilled material on active roadways, runways, taxiways and aprons will be swept up immediately. The Contractor will be aware that the construction area may be subject to jet blast and significant wind velocities. Dust control measures will be required to prevent loose material from blowing within or outside the air operations area.

If the Contractor uses or if a haul road crosses any area used by aircraft, service or emergency vehicles, a vacuum power broom and/or hand sweeping will be used to keep this area clean of debris which could damage aircraft engines or propellers. The Contractor will be liable for any damages that occur. Power brooms and sweepers shall be vacuum capable. Prior to opening any Runway, Taxiway, Ramp, Apron or Associated Safety Area, that has been

closed for construction; the Contractor shall arrange for an inspection by the DTW or YIP Airfield operations director or his/her designee.

All barricades used by the Contractor to designate an unusable or hazardous area on the AOA, shall be secured in place against movement or jet blast. The Contractor shall ensure that all barricades and hazard lighting are operational prior to departing the construction area at the end of each workday.
In accordance with FAR Part 139, The DTW or YIP Airfield Operation Units shall, prior to the release of work crews, inspect all areas to ensure that:

- Paved areas are free of surface variations in accordance with FAR Part 139.
- All unpaved safety areas are cleared and graded and have no potentially hazardous ruts, humps, depressions or other surface variations.
- All trenches or excavations within active Runway and/or Taxiway safety areas are backfilled to support the weight of an aircraft or Aircraft Rescue and Fire Fighting (ARFF) equipment.
- If the trenches, excavations or hazardous areas have been authorized to remain in place, they are to be adequately plated and marked and lighted in accordance with Barricades Detail Checklist.

Location of haul routes on the Airport site shall be approved by the DTW or YIP Airfield Operation Units or Airport Authority Facilities, Design and Construction Division. All haul routes on the Airport shall be marked, when necessary, and maintained by the Contractor. These routes shall be restored to their original condition upon completion of the construction project. Markings, if required, shall be provided by the Contractor, in accordance with specifications established by the DTW or YIP Airfield Operation Units or Airport Authority Facilties, Design, and Construction Division, and Airport Authority Security. Construction equipment shall not be permitted to operate upon paved areas unless the equipment has pneumatic tires or special means, approved by the Airport Authority Facilities, Design, and Construction Division, provided to protect the pavement.

Construction equipment shall not exceed a height of 20 feet above the Airport surface without approval by the Airport Authority Airfield Operation Units. All construction involving cranes shall be coordinated at least 72 hours in advance, excluding weekends, with the Airport Authority Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division. This does not include the time required for airspacing. The following information is required:

- Location of the Crane.
- Maximum extendable height.
- Hours of operation.
- The top of each crane boom shall be marked by a 3' x 3' orange and white checkered flag — each box being 1' square.
- Each crane shall be lowered at night and during periods of poor visibility as directed by Airport Authority Airfield Operation Units or Airport Authority Facilities, Design, and Construction Division. In the event the crane is approved to remain extended during the hours from sunset to sunrise, the highest point of the crane boom will be lit with a red obstruction light in accordance with AC 70/7460-1

16.0 Special Construction Rules on the AOA

Construction is a dynamic process; it is ever changing in physical and environmental forms until the construction process is completed. At the Airport Authority all contractors who are required to perform construction work shall use the job hazards analysis process. Its purpose is to develop a preliminary hazard analysis on proposed work operations as to their potential for injury, property damage, or both. Once potential hazards have been identified, identify procedures to eliminate or mitigate their potential for occurrence.

Direct benefits of the hazard analysis are as follows:

- Potential for injury or property damaged is eliminated;
- Indentifies hazards;
- Improves safety;
- Defines job procedures;
- Provides training;
- Increases awareness;
- Provides improvement in job methods;

During the planning stages of the project work, activities are flagged that require job hazard analysis. Further work operations requiring job hazards analysis may be identified by weekly workarounds, responses to accidents or audits, safety meetings, or committee meetings, or if work activities change that have not been addressed.

17.0 Housekeeping

Leads, hoses, and extension cords shall be hung up with a nonconductive material, off all floors, stairways, and walkways. Trash such as drinking cups, cans, and scraps from lunch are not to be thrown down, but disposed of properly in marked containers.

Available material, equipment, concrete forms, pipe, etc., are to be orderly, stacked out of walkways, and from in front of doors, stairways, and ladders.

Oil, grease, and other such liquid spills shall be cleaned up at the time of spill and are not to be left unattended. Each craft is responsible for housekeeping in its respective work areas.

Where such items as protruding rebar and anchor bolts create an impalement hazard or tripping hazard they shall be properly protected and conspicuously marked.

Trash barrels and 55 gallon drums shall not be hoisted by holes cut in the sides; adequate means of support shall be used.

Site/FOD walks will be required on a weekly basis

18.0 Site Sanitation

Potable water:

- An adequate supply of potable water shall be provided on all projects.
- Portable containers used to dispense drinking water shall be capable of being tightly closed, and equipped with a tap. Water shall not be dipped from containers.
- Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not be used for any other purpose.
- The common drinking cup is prohibited.
- Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

Nonpotable water:

- Outlets for nonpotable water, such as for industrial or firefighting purposes only, shall be identified by signs to clearly indicate that the water is unsafe and is not to be used for drinking or washing purposes.
- There shall be no cross-connection, open or potential, between a system furnishing potable water and a system furnishing non-potable water. Toilets at construction sites:

Washing facilities:

Employees can use public restroom expects when projects engaged in activities where employees are exposed to sludge, chemicals, or other harmful contaminates must provide adequate washing facilities onsite. This can be accomplished by receiving permission to use the WCAA non-public facilities or constructing a temporary wash station. This would require a potable water holding tank, soap, towels, and weather protection. Such facilities should be mobile and maintained in close proximity to work locations and along the route of travel to the parking area.

Food consumption:

−In an attempt to prevent the possibility of contracting a hand-to-mouth disease, all employees must wash their hands before breaks, lunch, and going home. All consumables such as food, candy, dip tobacco, cigarettes, coffee, sodas, etc., should be not stored or consumed in the work area. These items should not leave the personal car parking lot unless sanitary lunch areas are designated for that purpose.

19.0 Compressed Gasses

Care shall be exercised in handling all compressed gas cylinders. They shall not be dropped, jarred, or exposed to temperature extremes. Cylinders shall have the valve cap or valve protection device in place at all times, except when in actual use or connected to a welding set. Cylinders shall not be rolled and shall not be lifted by the valve or valve cap; a suitable cradle or other device shall be used. Cylinders shall have their contents properly identified.

Cylinders not having fixed hand wheels shall have keys, handles, or non-adjustable wrenches on the valve stems while the cylinders are in service. Compressed gas cylinders, whether full or empty, shall be stored and transported in an upright position and chained or otherwise secured so they cannot fall or be upset. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials (especially oil or grease) a minimum distance of 20 feet or by a 5 foot high noncombustible barrier. Cylinders shall not be placed where they might become part of an electric circuit or within 5 feet of an electrical outlet. Employees shall never force connections which do not fit nor shall they tamper with the safety relief devices of cylinder valves.

Before the regulator is removed from a cylinder, the valve shall be closed and all pressure released from the regulator. A leaking cylinder shall not be used. Such cylinders shall be taken outdoors away from sources of ignition. The supervisor shall be notified. A flame shall never be used to detect gas leaks. The recessed top of cylinders shall not be used as a place for tools.

Oxygen--Oil, grease, or similar materials shall not be allowed to come in contact with any valve, fitting, regulator, or gauge of oxygen cylinders:

- Oxygen shall never be used as a substitute for compressed air.
- When an oxygen cylinder is in use, the valve should be opened fully in order to prevent leakage around the valve stem.

Acetylene--Acetylene cylinders shall be properly secured and always used, transported, or stored in a vertical position. Cylinders shall be protected from sparks, flames, and contact with energized electrical equipment:

- An acetylene cylinder valve shall not be opened more than one and one-half turns of the spindle and preferably no more than three-fourths of a turn.
- Employees shall not use acetylene in a free state at pressures higher than 15 psi.

20.0 Safe Supports and Scaffolds

Each project shall designate at least one competent person to oversee scaffold operations. Operations shall include scaffold erection, moving, dismantling, altering, repairing, etc. The competent person shall ensure the proper type of scaffolding is selected for each task, and that only experienced and properly trained employees erect, move, dismantle, alter, or repair scaffolds. The competent person shall ensure each scaffold is erected in accordance with Contractors requirements, manufacturer's specifications, and applicable OSHA standards.

The competent person shall inspect each scaffold prior to employees accessing the scaffold, before each shift, and after any occurrence that could affect the scaffold's structural integrity and shall tag or ensure the scaffold is tagged according to the scaffold tagging procedure.

Scaffold Tagging Procedure

Prior to assigning an employee or crew to work off of a scaffold, the foreman responsible for the employee or crew shall interface with a scaffold competent person to ensure the scaffold is complete and properly tagged. The foreman shall then visually inspect the scaffold to verify it is complete and properly tagged according to the following:

- Green Tag--This scaffold was built to meet OSHA regulations; it is safe to use.
- Yellow Tag--This scaffold does not meet OSHA regulations; personal fall arrest systems are required. This tag is used in situations where guardrails cannot be constructed on all open sides of a scaffold platform because of an interference or obstruction.
- Red Tag--This scaffold is not complete; DO NOT USE.

Employees shall not use a scaffold unless it is properly tagged according to the scaffold tagging procedure.
Scaffold Requirements No employee, or any material or equipment, shall be supported or permitted to be supported on any portion of a pole structure, scaffold, ladder, walkway, or other elevated structure, crane or derrick, etc., without it first being determined that such support is adequately strong and properly secured in place.

Employees shall check all scaffolding prior to use to ensure it is of sufficient strength and rigidity to safely support the weight of persons and material to which it will be subjected. Employees shall not use a scaffold from 4 to 6 feet in height, having a minimum horizontal dimension of less than 45 inches, unless there is present a standard guardrail, with midrail and toe board, to provide adequate employee protection. Employees shall not use a scaffold over 6 feet in height unless there is present a standard guardrail, with midrail and toeboard to provide adequate employee protection.

Scaffold planks shall be secured in place and extend over their end supports by not less than 6 inches (unless cleated) nor more than 12 inches. Scaffolds shall not be moved without first removing all loose tools, materials, and equipment resting on the scaffold deck.

The footing or anchorage points for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks. Scaffolds shall be erected level and plum and rigidly braced to prevent swaying and displacement. Scaffolds shall not be altered or moved horizontally while being used or occupied except when specifically designed for such use. Movable scaffolds shall have the casters or wheels locked to prevent movement.

The width of all scaffolds, ramps, and platforms shall be sufficient to prevent congestion of persons, materials, or equipment, and in no case shall they be less than 18 inches wide. They shall extend to the entire platform depth.

Synthetic or natural fiber rope shall not be used as guardrails. Employees working on suspended scaffolds shall be protected by an independent lifeline, body harness, and lanyard. Safe access shall be provided for all scaffolds. Structural members should not be used as a means of access.

Employees shall not use a scaffold unless it is properly tagged according to the project scaffold tagging procedure. Only competent persons may erect, dismantle, or alter a scaffold. Only scaffold grade planks (appropriately marked) shall be used for work platforms. Scaffold planks shall not be painted with non-transparent materials which could obscure defects. Scaffold foundations shall utilize the manufacturer's footer plates.

Mobile Scaffolds:

Platforms shall be tightly planked for the full width of the scaffold except for necessary entrance opening. Platforms shall be secured in place. All tools and equipment shall be removed from the scaffold before it is moved or repositioned. The rollers shall be secured to the scaffold frame by using a manufactured pin or by No. 9 wire to prevent displacement. Standard guardrail systems shall be used on all open sides of the scaffold.

Swinging Scaffolds:

On suspension scaffolds designed for working load of 500 pounds, no more than two workers shall be permitted to work at one time. On suspension scaffolds with a working load of 750 pounds, no more than three workers shall be permitted to work at one time. Each employee shall be protected by an approved full body harness attached to an independent lifeline.

The lifeline shall be securely attached to substantial members of the structure (not scaffold), or to securely rigged lines, which will safely suspend the employee in case of a fall.

21.0 Ladders

Wooden ladders shall not be painted so as to obscure a defect in the wood; only a clear, nonconductive finish shall be used. All ladders shall be inspected frequently and regularly. Ladders with weakened, broken, or missing steps; broken side rails; or other defects shall be tagged and removed from service.

Ladders and scaffolds shall be sufficiently strong for their intended use. Portable metal ladders shall not be used in the vicinity of energized electrical circuits. (Exception: Such ladders may be used in specialized work, such as high voltage substations, where nonconductive ladders might present a greater hazard. These ladders shall be properly marked.)

Ladders shall not be placed in front of a door that opens toward the ladder, unless the door is open, locked, or guarded. When ascending or descending ladders, employees shall have both hands free and shall face the ladder. Only one employee shall work from a ladder at one time (except for hook type ladders). If two employees are required, a second ladder shall be used. Ladders shall not be used as scaffold platforms. Boxes, chairs, etc., shall not be used as ladders. Employees shall not use a ladder until they have been properly trained in its use.

Each quarter, a formal ladder inspection must be performed by a competent person designated by the Project Manager. If the ladder passes the inspection, it shall be tagged with a colored tie-wrap for the respective quarter. If it fails, it shall be tagged with a "DO NOT OPERATE" tag until repairs are made. When the ladders are being inspected, the Quarterly Ladder Inspection form must be filled out by the competent person.

Straight Ladders:

Portable straight ladders shall not be used without nonskid bases. The ladder shall be placed so that the distance between the bottom of the ladder and the supporting point is approximately one fourth of the ladder length between supports. Straight ladders shall not be climbed beyond the third step from the top.

When working from a portable ladder, the ladder must be securely placed, held, tied, or otherwise made secure to prevent slipping or falling. When dismounting from a ladder at an elevated position (as at a roof), the employee shall ensure that the ladder side rails extend at least 3 feet above the dismount position, or that grab bars are present.

Two Step Ladders:

Employees shall wear a body harness and lanyard, and tie off to a secure anchor whenever both hands must be used for the job or are exposed to a fall in excess of 6 feet. Ladders shall not be spliced together to form a longer ladder. A ladder shall not be placed against an unsafe support. Employees climbing a ladder with a fall exposure greater than 24 feet shall be protected by an approved cage, ladder climbing device, or by the use of a body harness, lanyard, lifeline step Ladders. The top two steps shall not be used. Step ladder legs shall be fully spread and the spreading bars locked in place. Step ladders shall not be used as straight ladders. When an employee is working on a step ladder over 6 feet high, the employee shall use a body harness and lanyard attached to a substantial anchor.

22.0 Material Handling/Ergonomics

An employee shall obtain assistance in lifting heavy objects or power equipment shall be used.
When two or more persons carry a heavy object that is to be lowered or dropped, there shall be a prearranged signal for releasing the load.

When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried (The right way to lift is easiest and safest. Crouch or squat with the feet close to the object to be lifted, secure good footing, take a firm grip, bend the knees, keep the back vertical, and lift by bending at the knees and using the leg and thigh muscles. Employees shall not attempt to lift beyond their capacity. Caution shall be taken when lifting or pulling in an awkward position.)

Employees should avoid twisting or excessive bending when lifting or setting down loads. When moving a load horizontally, employees should push the load rather than pull it. When performing a task that requires repetitive lifting, the load should be positioned to limit bending and twisting. The use of lift tables, pallets, and mechanical devices shall be used in these instances. When using such tools as screwdrivers and wrenches, employees should avoid using their wrists in a bent (flexed), extended, or twisted position for long periods of time. Employees should maintain their wrists in a neutral (straight) position.

When gripping, grasping, or lifting an object such as a pipe or board, the whole hand and all the fingers should be used. Gripping, grasping, and lifting with just the thumb and index finger should be avoided.

23.0 Hand Tools

All tools, regardless of ownership, shall be of an approved type and maintained in good condition. (Tools are subject to inspection at any time. A foreman has the authority and responsibility to condemn unserviceable tools, regardless of ownership.) Defective tools shall be tagged to prevent their use and shall be returned to the tool room for repairs.

Employees shall always use the proper tool for the job performed. Hammers with metal handles, screwdrivers, knives with metal continuing through the handle, and metallic measuring tapes shall not be used on or near energized electrical circuits or equipment. Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.

Tools shall never be placed unsecured on elevated places. As impact tools such as chisels, punches, drift pins, etc., become mush-roomed or cracked, they shall be dressed, repaired, or replaced before further use.
Chisels, drills, punches, ground rods, and pipes shall be held with suitable holders or tongs (not with the hands) while being struck by another employee. Shims shall not be used to make a wrench fit. Wrenches with sprung or damaged jaws shall not be used.

Pipe shall not be used to extend a wrench handle for added leverage unless the wrench was designed for such use.
Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets. Wooden handles that are loose, cracked, or splintered shall be replaced. The handle shall not be taped or lashed with wire. All cutting tools such as saws, wood chisels, drawknives, or axes shall be kept in suitable guards or in special compartments.

Tools shall not be left lying around where they may cause a person to trip or stumble. When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where others are present or the danger area shall be barricaded or guarded. The insulation on hand tools shall not be depended upon to protect users from shock.

The noncurrent carrying metal parts of portable electric tools such as drills, saws, and grinders shall be effectively grounded when connected to a power source unless:

- The tool is an approved double-insulated type.
- The tool is connected to the power supply by means of an isolating transformer or other isolated power supply, such as a 24 volt dc system.

All powered tools shall be examined prior to use to ensure general service-ability and the presence of all applicable safety devices. The electric cord and electric components shall be given an especially thorough examination and documented on the Electrical Inspection Log. Powered tools shall be used only within their capability and shall be operated in accordance with the instructions of the manufacturer.

All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.
Electrical tools shall not be used where there is a hazard of flammable vapors, gases, or dusts.
All power tools and cord sets shall be protected by ground fault circuit interrupters.

25.0 Heaters

UL approved salamanders, radiant heaters, and space heaters are the only approved heaters on the jobsite. Heaters shall be kept at least 20 feet from buildings and other combustible items or as approved by the WCAA Fire Marshal. Job-made heaters, solid fuel salamanders, and open fires are prohibited on the jobsite.

26.0 Barrier Tape Identification System

In order to uniformly identify particular hazards, a barrier tape identification system has been developed for use by all employees working on the construction site. It has been developed so that any employee working on the jobsite, regardless of craft, can recognize and avoid a hazard when properly marked.
The following barrier tape identification system shall be used:

- General Purpose--Yellow tape (may have black in it). Used for low hazard areas where access should be monitored and controlled. "Use caution when crossing."
- General--Red tape (may have black in it). "Do not cross."
- Logistics--Multicolor triangular flagging. Used to identify lay-down areas, walkways, etc. "Use caution when crossing."
- Radiation--Yellow with magenta (purple) tape. Possible radiation hazard, X-ray, etc. "Do not cross."

The supervisor erecting the barrier tape shall hang a tag on the tape that indicates the hazard, name of employer, name of person erecting the tape, and date erected. The barriers shall be erected far enough back from the hazard to allow for adequate warning and protection from the hazard. The barrier shall be constructed so that it will stand against adverse weather conditions and construction traffic. If the hazard is of a magnitude which requires additional protection (hard barricades, lights, etc.), the supervisor responsible for erecting the barricade shall see that additional protection is provided. It is the erector's responsibility to maintain the barrier as long as the hazard is present. It is also his or her responsibility to take down and dispose of the barrier when its use is not needed.

27.0 General Electric Rules

All electrical work shall be in compliance with the latest edition of the National Electrical Code, unless otherwise provided by MIOSHA regulations. Electrical installations and maintenance shall be performed only by qualified electricians.

Extension cords used with portable electric tools shall be the 3 wire type, shall be protected from damage, and shall not be fastened with staples, hung from nails, or suspended from wires. Splices shall have soldered wire connections with insulation equal to the cable. Worn or frayed cables shall not be used.

Except where bulbs are deeply recessed in the reflector, bulbs on temporary lights shall be equipped with guards. Temporary lights shall not be suspended by their electric cords unless designed for suspension.

Receptacles for attachment plugs shall be of approved, concealed contact type. Where different voltages, frequencies, or types of current are supplied, receptacles shall be of such designs that attachment plugs are not interchangeable.

Cable passing through work areas shall be covered or elevated at least 7 feet off the ground. Unprotected cables, extension cords, etc., shall NEVER be run over by vehicles, heavy equipment, JLGs, scissor lifts, etc.
Boxes for disconnecting means shall be securely and rigidly fastened to the surface upon which they are mounted and fitted with covers.

Employees shall not be permitted to work in such proximity to any part of an electric power circuit that he or she may contact the same in the course of his or her work unless the employee is protected against electric shock by de-energizing the circuit and grounding it or by guarding it by effective insulation or other means. In work areas where the exact location of underground electric power lines is not known, workers using jackhammers, bars, or other hand tools which may contact an energized line shall be provided with insulated protective gloves.
For 15 and 20 ampere receptacle outlets on single-phase, 120 volt circuits for construction sites which are not a part of the permanent wiring of the building or structure, ground fault circuit interrupters (GFCIs) shall be used for employee protection.

Employees shall test GFCIs before they are used on a daily basis and, if there is a malfunction, shall report the problem to his or her supervisor. Each month, the Project Manager shall designate a competent person in electrical safety to test the GFCIs and report the results on the GFCI Monthly Test form. All outlets, "bang-boxes," etc., shall be tagged with a monthly inspection tag. When the competent person checks the GFCIs, the month and day they were tested shall be marked.

All electrical circuits, equipment, and conductor enclosures shall have a grounding system, which is permanent and continuous, of such capacity to conduct safely any fault current likely to be imposed on it, and has sufficiently low resistance to limit the voltage to ground and facilitate the operation of the circuit breaker in the circuit. The continuity and resistance of grounding systems shall be tested immediately after installation, after any repair or modification, and annually thereafter.

All electrical powered equipment and machinery shall be de-energized and locked out before any maintenance or repair work is performed. Where overhead power lines are encountered on a jobsite and equipment has the potential to contact the lines, the safe minimum clearances shall be followed. The lines shall be either relocated in cooperation with the utility or Owner, or safe clearance barriers shall be erected. Example: install poles and wire rope that has reflective tape or other acceptable attention getting markings at safe minimum clearance locations away from the power lines. Ground level signs shall also be constructed to make operators aware of the hazard above. The safe minimum clearances are as follows.

All employees who face the risk of electric shock from working on, near, or with electrical circuits, which is not reduced to a safe level by electrical installation, shall be trained in the recognition, avoidance, and control of specific electrical hazards.

28.0 Disposal Chutes

Whenever materials are dropped more than 20 feet to any exterior point of a building, an enclosed chute shall be used. When debris is dropped through holes in the floor without the use of chutes, that area where the material is dropped shall be enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edges of the opening above. Warning signs of the hazards of falling material shall be posted at each level.

29.0 Non-AOA Motor Vehicles and Mechanized Equipment

All vehicles in use shall be checked at the beginning of each shift to assure that all parts, equipment, and accessories that affect safe operation are in proper operating condition and free from defects. All defects shall be corrected before the vehicle is placed in service.

No person shall use any motor vehicle, earth moving, or compacting equipment having an obstructed view to the rear unless:

- The vehicle has a reverse signal alarm distinguishable from the surrounding noise level, or
- The vehicle is backed up only when an observer signals that it is safe to do so.

Heavy machinery, equipment, or parts thereof which are suspended or held aloft shall be substantially blocked to prevent falling or shifting before employees are permitted to work under or between them.

30.0 Silica Exposure Plan

The contractor must have a written silica exposure plan for the work to be performed. The plan shall can be a spate document or part of the Site Specific or Corporate plans.

Attachment #1 – Loss Management Monthly Review

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority
Loss Management Monthly Summary

Contact Name: _____ Month/Year: _____

Contract # _____ Number of Contractors: _____

Statistics:

	Current Period	Calendar YTD	Project to Date
Total Work Hours:			
Contractors			
Total			
First Aid Cases:			
Contractors			
Total			
Near Miss Incidents:			
Contractors			
Total			

All Skilled Medical Treatment Cases:

	#	Rate	#	Rate	#	Rate
Contractors						
Total						

All Skilled Medical Treatment Cases Which Require Days Off from Work:

	#	Rate	#	Rate	#	Rate
Contractors						
Total						

Total Number of Days Away from Work:

	#	#	#
Contractors			
Total			

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority
Loss Management Monthly Summary

Description of Skilled Medical Treatment Injuries/Illnesses:
(Specify Contractor name. List body part and one-line description of incident.)

(Insert text here)

Near Miss Incidents (Specify Contractor name.)

(Insert text here)

Property Damage Incidents (Specify Contractor name.)

(Insert text here)

First Aid Only Cases.

(Insert text here)

Attachment #2 – Contractor Employee Review

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Attachment 2 – Contractor Employee Review
Contractor Safety Guidelines

THIS DOCUMENT MUST BE KEPT ONSITE AND UP TO DATE

Date:_____

Project Number:_____

From: _____

Prime Contractor

_____ _____

Sub-Contractor #1 Sub-Contractor #2

_____ _____

Sub-Contractor #3 Sub-Contractor #4

After reviewing general safety, emergency response, and specific area safety requirements with all of your on-site assigned employees and sub-contractors, please have them sign and indicate their badge ID number or the last five numbers of their social security number on this sheet. If the employee or sub-contractor refuses to sign, the superintendent shall print the employee's name and write "employee has been read the requirements but refuses to sign."

"My Superintendent/Foreman/Supervisor has been explained to me the Wayne County Airport Authority Contractor Safety Guidelines. I understand the requirements. I understand that my deviation from these requirements could be cause for my dismissal from this project."

Signature	Date	Badge ID or Last 5 SSN:	Company Name:

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WAYNE COUNTY AIRPORT AUTHORITY

Signature	Date	Last 5 SSN:	Company Name:

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Signature	Date	Last 5 SSN:	Company Name:

Attachment #3 – Request for Marking

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Request For Marking Utilities

Company Name or WCAA
Requesting the Marking:_____
Company/WCAA Division Name Project/Permit/Contract Number

Date and Time Submitted:_____
Print Date Print Time

Name/Contact of the Individual Requesting Marks:_____
Print Name Phone Number

Name of the WCAA Representative/Engineer Submitted to:_____
Print Name Phone Number

Drawing Numbers Reviewed:_____

Utilities will not be marked unless a drawing showing the limits of the marking are attached. Markings will only be valid for Twenty-one days. Underground work shall not be carried out beyond the 21 days of this request unless the Contractor documents the locations of the marking via survey at their own expense. The locations of the markings must be submitted back to the WCAA Representative.

	Responsible Party (b)	Contact Numbers
☐ Electrical	WCAA and/or DTE	Call WCAA Project Rep. / 811 (a)
☐ Natural Gas	WCAA and/or Michcon	Call WCAA Project Rep. / 811 (a)
☐ Water	WCAA	Call WCAA Project Rep. / 811 (a)
☐ Sanitary/Storm	WCAA	Call WCAA Project Rep. / 811 (a)
☐ FAA Electrical/Fiber	FAA	(734) 955-5100
☐ Telephone	ATT	(734) 778-1215 or (734) 731-3270
☐ Jet Fuel Systems	Swissport	(734) 732-5748 or (734) 941-5510
☐ Glycol	WCAA and or Miss Dig	Call WCAA Project Rep. / 811 (a)
☐ All Other (list below)	Varies – See Drawings	Call WCAA Project Rep. / 811

_____
_____
_____

Notes:

(a) WCAA Project representative may vary from project to project. The Project Representative might also be a company that represents the WCAA.
(b) It is the Contractors responsibly to mark and locate other utilities not listed on this form.

How will you document the locations?_____
_____

I understand that I am asking WCAA and outside agencies to conduct onsite markings if they have the resources to do so and if not I will be contacted by WCAA and must coordinate to perform the markings as outlined in the WCAA Safety Standards. I understand that I must also attach a sketch to indicate the limits of the area I am requesting to be swept. If I require additional markings outside the limits or require other utilities to be marked I understand a new form must be completed. The Contractor is not to proceed without an executed Field Acknowledgments form.

_____ _____
Signature of the Individual Requesting the Markings Date

Attachment #4 – Hot Work Permit

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority – Hot Work Permit

Site Survey For: Cutting, Welding, Burning, AND/OR
Tar Kettle Work at ALL DTW/YIP Locations.

IN CASE OF EMERGENCY CALL 911

Survey Requested By: (Company Name, Tenant, Airline, or Department):	**Contact Person:**	**Contact Number:**

AFTER INSPECTION THIS WILL
PERMIT_____
Name of Company Doing The Work

TO_____
Identify the Ignition Source and the Job to Be Done

FROM_____:_____ **AM/PM** **TO**_____:_____ **AM/PM** _____/_____/_____ (day/month/year)

Extend TO:_____:_____ **AM/PM** **TO**_____:_____ **AM/PM** **BY** _____/_____/_____ (day/month/year)

Extend TO:_____:_____ **AM/PM** **TO**_____:_____ **AM/PM** **BY** _____/_____/_____ (day/month/year)

The operator shall take the necessary precaution to eliminate all possible fire hazards and to prevent damage to any construction work, building materials, equipment and all other property, both public and personal involved in connection with their work to be done. The provisions of the following shall apply at all times. If a portable **WELDING CART** is being utilized, then at least **ONE PORATBLE EXTINGUSIHER MUST** be attached to the cart with a **MINIUM RATING of 2A-10BC**. **THESE ARE THE MINIMUM REQUIREMENTS**. If it is determined that the hazard warrants additional extinguishers and/or other life safety precautions, then the permit holder will be REQUIRED to meet all the conditions before beginning their operations.

BY ORDER OF THE FIRE MARSHALL
THE FOLLOWING CONDITIONS SHALL BE INSPECTED PRIOR TO APPROVAL

C	N/C	Working On Walls or Ceilings	C	N/C	Within 35 feet of Work
		Combustible Coverings shall NOT be used			Fixed site combustibles and flammable liquids shall be protected with covers, guards, or metal shields
		Combustibles shall be moved away, from the opposite side of the wall being worked on			Combustible floors shall be wet down, covered with damp sand, metal or other shields
		Covers suspended beneath work to collect sparks shall be non-combustible			Movable combustible materials and flammable liquids shall be relocated outside the work area.
C	**N/C**	**Work on Enclosed Equipment**			The floors shall be swept clean of combustibles
		The Equipment will be cleaned of All combustibles			All Wall and floor openings shall be covered
		The container will be purged of all vapors and verified with a gas detection meter			
		Equipment has been safely taken out of service and properly locked and tagged out.	**C**	**N/C**	**Tar Kettle Operations**
C	**N/C**	**Work in Enclosed Equipment (Confined Spaces)**			A minimum of two (2) portable extinguishers with a minimum rating of 2A-20BC shall be maintained in a proper working order not closer than ten (10) feet nor more than fifty (50) feet from the TAR KETLE operations area.
		Contractor shall properly ventilate the space and have a gas meter onsite full time to monitor the space. Contractor must have their own recue equipment onsite and be Confined Space Entry Trained			Propane fuel tanks shall be secured and maintained at all times. Also, all supply hoses and regulators shall be maintained in the appropriate manner (i.e. free of leaks, tears, cuts
C	**N/C**	**Fire Watch**	**C**	**N/C**	**Miscellaneous**
		No ignition source within 100 feet of aircraft			If working in a fuel farm or fueling station a verify that the contractor has a written Safety Plan
		Operator shall supply extinguishers of appropriate size and type. They shall be located not more than fifty (50) feet from the operations			While working in ANY terminal contractor must use a ventilator or smoke eater to remove the welding hot work fumes
		Operator shall be trained in use of extinguishing equipment and in sounding of fire alarm and notifications. It is the responsibility of the Company/Tenant to ensure that operating personnel have received such training.			
		Provided during operations, with FINAL inspections thirty (30) minutes after operations cease			

AT THE TIME OF THE SURVEY THE ABOVE CONDTIONS WERE FOUND. ANY NON-COMPLAINT ITEMS SHALL BE CORRECTED BEFORE OPERATIONS BEGIN

ISSUED BY:_____ **DATE**:_____ **TIME**:_____ **INC.#**_____

REMARKS:_____

Attachment #5 – Utility Field Acknowledgment

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

FIELD ACKNOWLEDGEMENT FORM

	Utility	Date Req.	Date Completed
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Project/Contract #:_____

Name of Contractor :_____

Limits of Work Included:

☐ Yes or ☐ No

PLEASE ATTACH SUBSEQUENT FORMS THAT HAVE BEEN COMPLETED FOR PROPER VERIFICATION

Contractor will list out those utilities that were marked, cleared, or could not be located below:

Marked	Cleared	Not in Scoped Area or could not locate

Notes

(a) WORK SHALL NOT COMMENCE IF THE UTILITY NOT LOCATED. CONTRACTOR SHALL REQUEST A MEETING WITH THE WCAA TO CLAIRIFY PRIOR TO PROCEEDING.

Marking documentation attached? ☐ Yes or ☐ No

The above data has been checked with the Contract Drawings. When close clearances are indicated, hand excavation must be used to determine the exact location, existing lines, and interferences in the vicinity of work must be marked indicating locations and depth prior to excavation.

_____ _____ _____

Printed Name Date Contractor Signature

Attachment #6 – Utility Interruption

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Attachment 6 - Utility Interruption Form

Permit # or Contract #_____ Circle Airport: DTW or YIP

Utility System – List System(s) to be taken out of Service (Gas, Water, Electrical) and General Location	Buildings/Systems/Equipment to be effected	Maximo Work Order #	Shut Down Date and Time	Start Up Date and Time	Contractor Rep Initials	WCAA Rep Initials
1.						
2.						
3,						
4.						
5						
6						
7						

_____ _____

Contractor Representative Signature and Date WCAA Representative Signature and Date

This document is to be forwarded to the WCAA Project Representative and the WCAA Facilities & Infrastructure Divisions at least five (5) business days prior to work. The shutdowns will not be authorized unless this form signed and received in advance as specified. Please use additional forms as needed. WCAA Project Representative will be required to notify those affected by the shut down. In some cases a back-up utility source may be necessary – PLEASE SEE PROJECT REPRESENATIVE TO DETERMINE IF BACK-UP UTILITY SOURCES ARE REQUIRED. Upon authorization of the document a copy will must forwarded to the Maintenance Call Center located at Building 703. The Call Center Representative will assure it gets forwarded to the correct departments.

Attachment #7 – Utility Custody

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Attachment 7 - Utility System Custody Form

This form serves as authorization for the Contractor to take full custody of a Utility System during their Project Work. All WCAA Safety Rules and Regulations still apply while the system is under the custody by the undersigned (Contractor). Contractors will be in full control of the entire system while under their custody. The Contractor will be required to coordinate with WCAA for this request. If custody times need to be extended than a new form must be completed and approved.

Permit # or Contract #_____ Circle Airport: DTW or YIP

Requested System	Maximo Work Order #	Area of Isolation (i.e. list panel#, breaker # , transformer #, regulator # of where custody begins and ends)	Requested Day and Time to be turned over	Time and Day System to be turned back to WCAA
1.				
2.				
3,				
4.				
5				

_____ _____

Contractor Representative Signature and Date WCAA Representative Signature and Date

This document is to be forwarded to the all the WCAA Department affected listed below five (5) business days prior to work. Upon authorization of the document a copy will must forwarded to the Maintenance Call Center located at Building 703. The Call Center Representative will assure it gets forwarded to the correct departments that are effected. Call Center Fax:

Attachment #8 – Barricades Detail

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority
Barricades Detail Checklist

This Barricades Detail Checklist shall be used as a guidance document for biding purposes. Actual barricades to utilized shall be submitted with the bid. Alternates shall be proposed prior to the award of a contact.

Class A Barricades
Twelve inch (12") by twelve inch (12") timber or equivalent (minimum 8 feet long) with lights. Maximum height of eighteen inches high as follows:

- 12" High Board
- Shall not weigh less than 300 lbs
- Some applications may require steady burn red-lenses as directed by WCAA Airfield Operations
- Maximum spacing between warning lights on adjacent barricades shall be seven feet (7') unless other specified.
- Four inch dome light shall meet the following requirements:
    - 12v – 300 MZ
    - 65 Flashed per minute
    - 150 Candelas

Class B Barricades
Eight inch (8") by eight inch (8") timber or equivalent (minimum 8 feet long) with lights. Maximum eighteen inches high as follows:

- Eight inch (8") High Board
- Shall not weigh less than two-hundred (200 lbs)
- Some applications may require steady burn red-lenses as directed by WCAA Airfield Operations
- Maximum spacing between warning lights on adjacent barricades shall be six feet (6') unless other specified.

Class C Barricades
Four inch (4") by four inch (4") timber or equivalent (minimum 8 feet long) with lights. Maximum seventeen inches high as follows:

- Eight inch (8") High Board
- Shall not weigh less than ninety (90 lbs)
- Some applications may require steady burn red-lenses as directed by WCAA Airfield Operations
- Maximum spacing between warning lights on adjacent barricades shall be six feet (6') unless other specified.

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Wayne County Airport Authority
Barricades Detail Checklist

Plates

The use of plates on an airport construction project requires WCAA Airside Operations approval. If plates are allowed, the following criteria will apply:

1. Plates shall be provided by the Contractor.

2. Plates shall be 3/4 to 1 inch in thickness, as required by traffic, of 60 KSI yield strength steel.

3. Plates shall have 45 degree beveled edges.

4. Plates shall be sized such that not more than 1/3 of the plate area covers a trench or excavation.

5. Plates shall not cover trenches or excavations that exceed 24 inches in width.

6. No more than 3 plates will be used on any one trench or excavation.

7. No more than 6 plates will be used on the project at any one time.

8. All plates shall be secured in such manner that movement does not occur during use by aircraft or vehicular traffic.

Attachment #9 – Daily Construction Checklist - AOA

DETROIT METRO • WILLOW RUN
WAYNE COUNTY AIRPORT AUTHORITY

Daily Construction Checklist – AOA Construction

	Item	Compliant (Y/N)	Action Required
1	Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
2	Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking		
3	Runway resurfacing projects resulting in lips exceeding 3 in (7.6 cm) from pavement edges and ends.		
4	Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
5	Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
6	Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and approach zones.		
7	Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
8	Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
9	Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
10	Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
11	Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
12	Obliterated or faded temporary markings on active operational areas.		
13	Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		
14	Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		
15	Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
16	Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
17	Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
18	Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
19	Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
20	Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
21	Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		
22	Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
23	Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
24	Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
25	Site burning, which can cause possible obscuration.		
26	Construction work taking place outside of designated work areas and out of phase.		

Project:_____ Name of Contractor:_____

Date of Inspection:_____ Signature of Inspector:_____