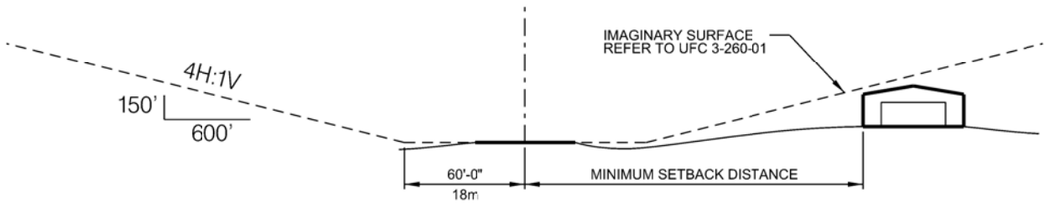
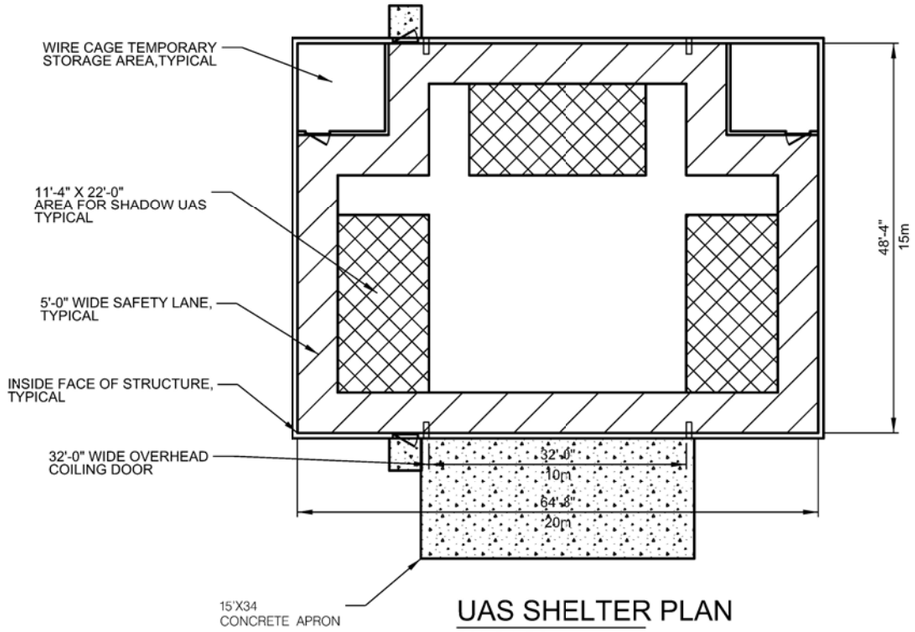


IMAGINARY SURFACE TRANSVERSE SECTION

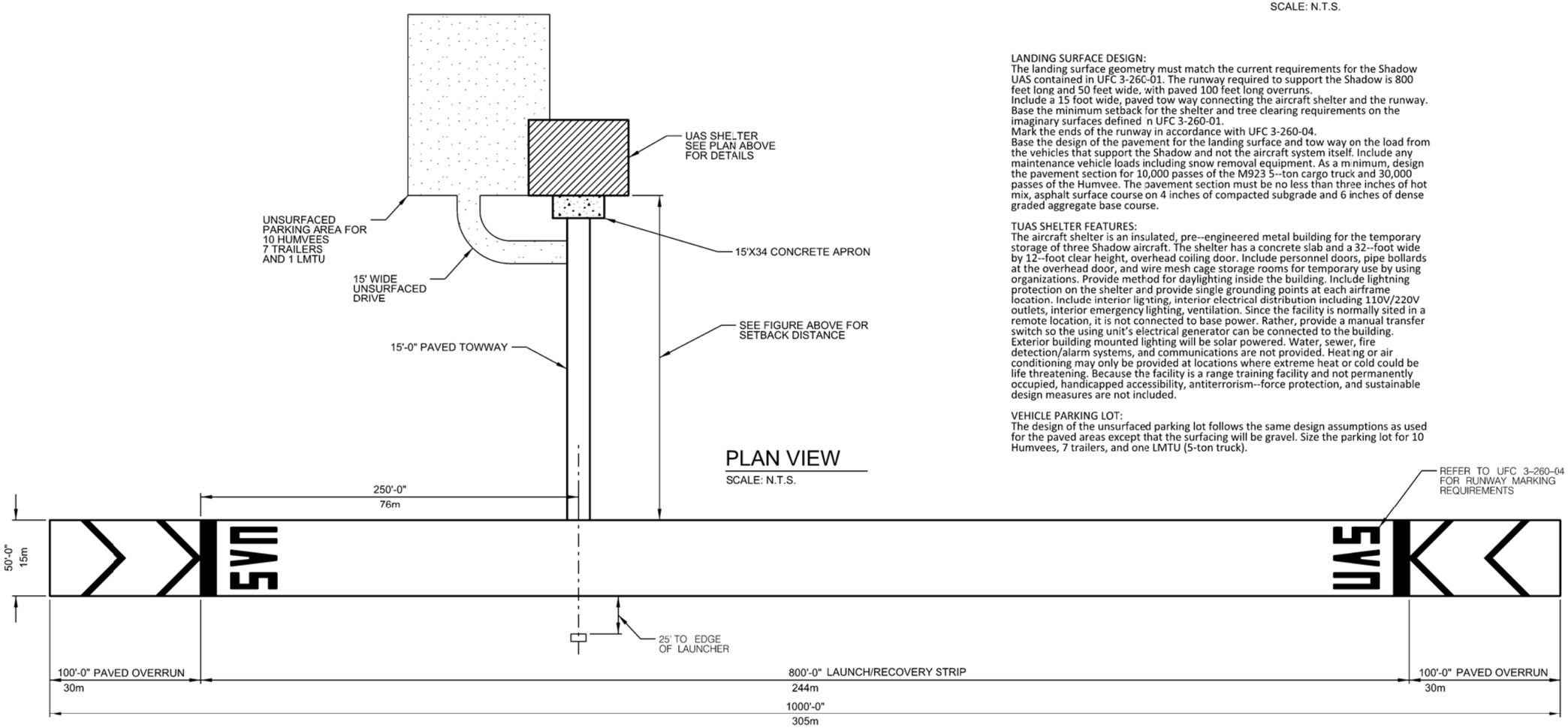
SCALE: N.T.S.

NOTE: REFER TO UFC 3-260-01 FOR ADDITIONAL IMAGINARY SURFACE INFORMATION



UAS SHELTER PLAN

SCALE: N.T.S.



PLAN VIEW

SCALE: N.T.S.

LANDING SURFACE DESIGN:
The landing surface geometry must match the current requirements for the Shadow UAS contained in UFC 3-260-01. The runway required to support the Shadow is 800 feet long and 50 feet wide, with paved 100 feet long overruns.
Include a 15 foot wide, paved tow way connecting the aircraft shelter and the runway.
Base the minimum setback for the shelter and tree clearing requirements on the imaginary surfaces defined in UFC 3-260-01.
Mark the ends of the runway in accordance with UFC 3-260-04.
Base the design of the pavement for the landing surface and tow way on the load from the vehicles that support the Shadow and not the aircraft system itself. Include any maintenance vehicle loads including snow removal equipment. As a minimum, design the pavement section for 10,000 passes of the M923 5--ton cargo truck and 30,000 passes of the Humvee. The pavement section must be no less than three inches of hot mix, asphalt surface course on 4 inches of compacted subgrade and 6 inches of dense graded aggregate base course.

TUAS SHELTER FEATURES:
The aircraft shelter is an insulated, pre--engineered metal building for the temporary storage of three Shadow aircraft. The shelter has a concrete slab and a 32--foot wide by 12--foot clear height, overhead coiling door. Include personnel doors, pipe bollards at the overhead door, and wire mesh cage storage rooms for temporary use by using organizations. Provide method for daylighting inside the building. Include lightning protection on the shelter and provide single grounding points at each airframe location. Include interior lighting, interior electrical distribution including 110V/220V outlets, interior emergency lighting, ventilation. Since the facility is normally sited in a remote location, it is not connected to base power. Rather, provide a manual transfer switch so the using unit's electrical generator can be connected to the building. Exterior building mounted lighting will be solar powered. Water, sewer, fire detection/alarm systems, and communications are not provided. Heating or air conditioning may only be provided at locations where extreme heat or cold could be life threatening. Because the facility is a range training facility and not permanently occupied, handicapped accessibility, antiterrorism--force protection, and sustainable design measures are not included.

VEHICLE PARKING LOT:
The design of the unsurfaced parking lot follows the same design assumptions as used for the paved areas except that the surfacing will be gravel. Size the parking lot for 10 Humvees, 7 trailers, and one LMTU (5-ton truck).

US Army Corps of Engineers

Rev #	Description	Date	Approved

Designed by: | Dwn by: | Ckd by: | Reviewed by: | Submitted by: | Date: | Rev. | Design file no. | Drawing code: | File name: | Plot date: | Plot scale:

U. S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
HUNTSVILLE, ALABAMA

JUNE 2020

RANGE AND TRAINING LAND PROGRAM
STANDARD DESIGN MANUAL

SHADOW TUAS TRAINING FACILITY

Sheet reference number:
TUAS