

SECTION 13 12 00
GROUND CONCRETE HELISTOP

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes one design build ground concrete helistop. Package also includes lighting package, concrete stain for FAA markings, and FAA submittals.

1.2 RELATED SECTIONS

- A. Division 03 – Concrete: Provisions for and construction of concrete for the Helistop.
- B. Division 09 – Painting: Painting other than paint required by this section.
- C. Division 26 – Electrical: Provisions for and connection to supplied equipment including lighted wind cone, obstruction lights, and perimeter lights.

1.3 REFERENCES

- A. American Concrete Institute, ACI 301 – Specifications for Structural Concrete for Buildings or equivalent.

1.4 SYSTEM DESCRIPTION

- A. General Description: Concrete Helistop dimensions as required per drawings. Also included should be a lighting package and concrete stain for FAA markings.

1.5 SYSTEM PERFORMANCE REQUIREMENTS

- A. Provide Helistop to accommodate the following loading requirements of the design helicopter. Items 1, 2, and 3 apply to helipad landing surface only but do not act simultaneously. Gross weight and Impact loading consist of two-point loads 8'-0" apart.
 - 1. Gross weight of helicopter plus snow load plus dead load. Gross weight is defined as 1/2 of the helicopter maximum take-off weight at each point.
 - 2. Impact load of the helicopter plus dead load. Impact load is defined as ¾ of the helicopter maximum take-off weight at each point.
 - 3. 100 psf live load plus dead load.

1.6 SUBMITTALS

- A. General: Submit each item in this article according to the conditions of the Contract and Specification Sections.
- B. Helistop designer shall review shop drawings prior to fabrication and coordinate Helistop shop drawings accordingly.
- C. Product Data: Submit manufacturer's specifications to evidence compliance with these specifications.
- D. Helistop designer shall be responsible for FAA submittal process.
- E. Owner/General Contractor shall be financially responsible for obtaining any permits as they apply to the helistop

1.7 QUALITY ASSURANCE

- A. Designer Qualification:
 - 1. Helistop supplier shall have an approved and documented quality control system.
 - 2. The structural concrete for the helistop shall be designed by a registered structural engineer, in accordance with the local building codes, and said engineer must be employed by the helistop designer.

3. Upon request, submit statement certified by the registered engineer that the design of the structural concrete slab of the helistop is in compliance with the provisions of the Contract Documents and the Local Building Codes, and is in keeping with generally accepted engineering practice.
4. If requested, submit design calculations bearing the registered structural engineers stamp, to the Local Building Code Official.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturers unopened packaging until ready for installation.
- B. Store and dispose of solvent based materials and materials used with solvent based materials in accordance with requirements of local authorities having jurisdiction.

1.9 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturers absolute limits.

1.10 WARRANTY

- A. Warranty Period: Manufacturer warrants lighting equipment for 10 years on the housings and 3 years on the electrical components.
- B. Product Warranty: Manufacturer will repair or replace any parts that manufacturer determines are defective during the warranty period.
- C. Customer's Obligations: The customer shall notify manufacturer of any defects or problems with a part or system within 30 days of the date that the defects or problems were discovered or should have been discovered; failure to notify manufacturer within 30-day period shall nullify the warranty regarding the defect or problem.
- D. Maintenance: The customer is responsible for preventative and routine maintenance.
- E. Extension of Warranty: The warranty period shall not be extended.
- F. Discrete Warranty Claim: When the system returns to normal operation for a 30-day period following action by manufacturer and the customer under this warranty, the defect or problem shall be considered resolved.
- G. Other Warranty Provisions: Customer may not assign this warranty to any other person or business entity, including a successor in interest to the customer, without manufacturers written consent.

PART 2 – PRODUCTS AND SUPPLIERS

2.1 SUPPLIERS

- A. Acceptable suppliers of the helistop equipment:

FEC Heliports, 5228 River Road, Cincinnati, Ohio, 45233. Phone toll free (877) HELIPAD, email sales@fecheliports.com, www.fecheliports.com

Standard: Design is based on equipment manufactured by FEC Heliports, which is the standard for performance and quality.

2.2 EQUIPMENT

- A. Concrete Helistop Surface: Concrete work shall conform to all requirements of the current ACI 301, "Specifications for Structural Concrete for Buildings". With the following supplemental requirements:
 1. All concrete shall be normal weight with aggregates conforming to ASTM C33. Concrete shall develop the following 28-day compressive strength (F'c): 3,500 psi.

2. Chloride based admixtures are prohibited in all reinforced concrete. Other admixtures shall conform to ASTM C494.
 3. Reinforcing steel shall be deformed and conform to A615, A616, or A617, grade 60, with a minimum yield stress (Fy) of 60,000 psi.
 4. The minimum lap for splices shall be 3'-6".
 5. Concrete cover on reinforcing steel shall be 3" unless noted otherwise.
 6. Maximum slump shall be 4" +/- 1" as determined in accordance with ASTM C143.
 7. Concrete finish: Float/broom.
 8. Control joints shall be spaced as required per design drawings. Maximum aggregate size ¾."
- B. Lighting Fixtures:
1. Provide HP2070FC Green LED/IR Inset Perimeter Lights as shown on drawings.
 2. Provide HP3080P Red LED/IR Obstruction Lights as shown on drawings. Obstruction lights shall meet the requirements set forth in Engineering Brief 87.
 3. Provide HP0832 Radio Lighting Controller as shown on drawings.
 4. Provide HP2050 LED Three Color Locating Beacon as shown on drawings.
- C. Windcone: Provide (1) HP0908 LED Internally lighted windcone assembly. Mount in location as indicated on drawings.

PART 3 – EXECUTION

3.1 MARKINGS

- A. Complete markings following construction. Markings shall be in colors as indicated on plan and dictated by the FAA guidelines 150/5390-2D. Markings shall be applied using an approved concrete stain. Application shall be according to manufacturer's written directions.

3.4 WORK NOT IN CONTRACT

- A. Helistop equipment supplier shall not be responsible for taxes, bonding, permitting, hoisting, offloading, or electrical work as described in plans, wall penetrations, or any items not specifically listed in the final contract.

PART 4 – APPROVED SOURCES OF SUPPLY

"Approved Sources" must show evidence that their materials and products meet the requirements of the Contract Documents.

4.1 HELISTOP EQUIPMENT

FEC Heliports LLC
5228 River Rd.
Cincinnati, Ohio 45233
Phone: (513) 577-5150
E-mail: Sales@fecheliports.com

END OF SECTION