



# MARINE SPECIALTY CONTRACTORS GENERAL TRADE KNOWLEDGE EXAMINATION CONTENT INFORMATION FOR COMPUTER BASED TESTING

Revised September 14

The General Trade Knowledge examination is administered daily in Computer Based Testing (CBT) format. It will consist of 80 equally weighted questions.

You should be prepared to respond to examination questions on any of the content areas listed. Questions asked and content areas tested on previous examinations should not be assumed to be the only possible questions to be asked or content areas to be tested on this examination.

The percentage of questions shown for each content area may vary by as much as plus or minus three (3) percent. Please refer to the Candidate Information Booklet and the Reference List for additional information.

## **Content Area A** 7% **Determining Existing Soil Conditions**

### **1. Review Soil Report**

knowledge of local geology  
knowledge of soil type  
knowledge of testing terminology

### **2. Analyze Soil Conditions**

knowledge of soil profiling  
knowledge of groundwater conditions  
knowledge of local geology

### **3. Design Foundation System**

knowledge of material types  
knowledge of foundation systems  
knowledge of installation methods  
knowledge of soil bearing capacity

## **Content Area B** 10% **Determining Project Parameters**

### **1. Determine Area Jurisdiction**

knowledge of local, state, and federal personnel  
knowledge of local, state, and federal regulations  
knowledge of property ownership  
knowledge of proprietary jurisdiction  
knowledge of environmental concerns  
knowledge of best management practices

### **2. Prepare Construction Documents**

knowledge of framing spans  
knowledge of dead and live loads  
knowledge of wind loads  
knowledge of site conditions  
knowledge of structural systems  
knowledge of local, state, and federal codes and regulations  
knowledge of foundation capacities  
knowledge of trade terminology  
knowledge of trade specialists  
knowledge of trade products

### **3. Secure Project Permits**

knowledge of local, state, and federal codes and regulations  
knowledge of permitting procedures  
knowledge of local committee meetings or hearings

### **4. Determine Project Timeline**

knowledge of scheduling types  
knowledge of local conditions  
knowledge of crew capabilities  
knowledge of equipment capabilities  
knowledge of trade products  
knowledge of local, state, and federal permitting response times

## 5. Implement Safety Program

Knowledge of job safety hazards  
Knowledge of safety rules & regulations  
knowledge of MSDS (material safety data sheet)

### Content Area C 16% Administering Project

#### 1. Investigate Site Conditions

knowledge of sunshine one locates  
knowledge of equipment dimensions  
knowledge of soil conditions  
knowledge of neighboring property issues  
knowledge of local committees  
knowledge of Home Owners Association  
regulations  
knowledge of local security

#### 2. Order Project Materials

knowledge of construction methods  
knowledge of freight characteristics  
knowledge of marine materials  
knowledge of MSDS (material safety data sheet)  
knowledge of site conditions and access

#### 3. Order Project Equipment

knowledge of equipment capabilities and limitations  
knowledge of site access  
knowledge of equipment availability  
knowledge of emergency response plan

#### 4. Mobilize Equipment

knowledge of equipment capabilities and limitations  
knowledge of project materials  
knowledge of local conditions and access  
knowledge of environmental conditions  
knowledge of insurance requirements  
knowledge of coast guard regulations

#### 5. Assign Project Personnel

knowledge of personnel capabilities  
knowledge of subcontractor timelines  
knowledge of personnel responsibilities  
knowledge of US Longshoreman & Harbor Workers  
(USL&H) Insurance  
knowledge of Jones Act Insurance  
knowledge of company policies  
knowledge of Safety procedures

## 6. Conduct Pre-Construction Meeting

knowledge of site conditions  
knowledge of project scope  
knowledge of project scheduling

### Content Area D 9% Constructing Foundation Systems

#### 1. Demolish Existing Structure

knowledge of heavy equipment  
knowledge of disposal sites  
knowledge of HazMat requirements  
knowledge of soil conditions  
knowledge of existing structure  
knowledge of diving  
knowledge of environmental regulations

#### 2. Layout Structure Location

knowledge of property survey  
knowledge of riparian law  
knowledge survey methods  
knowledge of survey equipment  
knowledge of project parameters  
knowledge of environmental regulations  
knowledge of local, state, and federal codes and  
regulations

#### 3. Install Concrete Footers

knowledge of concrete mixtures  
knowledge of reinforcement requirements  
knowledge of concrete finishing  
knowledge of concrete conveying systems  
knowledge of volume estimations  
knowledge of formwork carpentry

#### 4. Install Structure Piling

knowledge of hammer capacities  
knowledge of jet pumps  
knowledge of soil conditions  
knowledge of piling capacities  
knowledge of rigging  
knowledge of construction layout  
knowledge of equipment operations

**Content Area E** 13%  
**Constructing Shoreline Stabilization**

**1. Install Soil Stabilization Systems**

knowledge of survey and layout  
knowledge of hydrology  
knowledge of tidal conditions  
knowledge of erosion control  
knowledge of product installation

**2. Install Cast-In-Place Concrete Wall**

knowledge of concrete finishing  
knowledge of concrete mixed design  
knowledge of formwork carpentry  
knowledge of reinforcement requirements  
knowledge of concrete conveying systems  
knowledge of volume estimations  
knowledge of concrete placement

**3. Install Pre-Cast Concrete Wall**

knowledge of concrete finishing  
knowledge of concrete mix  
knowledge of formwork carpentry  
knowledge of reinforcing requirements  
knowledge of concrete conveying systems  
knowledge of volume estimations  
knowledge of concrete placement

**4. Install Sheet Piling**

knowledge of hydrostatic pressure  
knowledge of concrete formwork  
knowledge of concrete mixed design  
knowledge of survey controls  
knowledge of sheet piling  
knowledge of vibratory hammers  
knowledge of cranes  
knowledge of impact hammers  
knowledge of water pumps  
knowledge of installation methods  
knowledge of rigging  
knowledge of soil conditions

**5. Install Timber Bulkhead**

knowledge of timber construction  
knowledge of environmental regulations  
knowledge of timber preservation treatment  
knowledge of rough carpentry  
knowledge of anchoring systems

knowledge of backfill material and methods

**Content Area F** 10%  
**Constructing Anchoring Systems**

**1. Install Concrete Deadmen**

knowledge of soil conditions  
knowledge of concrete mix  
knowledge of reinforcing bars  
knowledge of tie-back system capabilities  
knowledge of heavy equipment

**2. Install Timber Pilings**

knowledge of soil conditions  
knowledge of pile drivers  
knowledge of pile capabilities  
knowledge of tie-back system capabilities  
knowledge of heavy equipment

**3. Install Helical Anchors**

knowledge of soil conditions  
knowledge of product applications  
knowledge of equipment operations

**4. Install Wedge Anchors**

knowledge of soil conditions  
knowledge of anchor operations  
knowledge of equipment operations

**Content Area G** 6%  
**Performing Dredge and Fill Operations**

**1. Obtain Dredge and Fill Permit**

knowledge of volumetric calculations  
knowledge of surveying  
knowledge of local, state, and federal codes and regulations  
knowledge of environmental concerns

**2. Excavate Spoil**

knowledge of types of dredging  
knowledge of dewatering procedures  
knowledge of equipment operations  
knowledge of turbidity testing  
knowledge of environmental regulations  
knowledge of surveying  
knowledge of equipment maintenance

### **3. Relocate Spoil**

knowledge of types of dredging  
knowledge of transportation equipment  
knowledge of heavy equipment  
knowledge of Florida Department of Transportation regulations  
knowledge of environmental regulations  
knowledge of equipment maintenance

#### **Content Area H**

**9%**

### **Building Floating Marine Structures**

#### **1. Installation of Flotation Systems**

knowledge of flotation products and systems  
knowledge of wave attenuators

#### **2. Construct Frame Structure**

knowledge of marine accessory types  
knowledge of fire suppression systems  
knowledge of marine utilities  
knowledge of mooring systems  
knowledge of metallurgical reactions

#### **3. Install Anchoring Systems**

knowledge of concrete piles  
knowledge of wood piles  
knowledge of helical anchors  
knowledge of counter-weight anchors  
knowledge of cable systems  
knowledge of wedge anchors  
knowledge of pile guides  
knowledge of soil conditions  
knowledge of rigging  
knowledge of pile driving  
knowledge of heavy equipment  
knowledge of water elevations

#### **4. Install Access Gangway**

knowledge of aluminum gangways  
knowledge of ADA requirements  
knowledge of fastening systems  
knowledge of water elevation fluctuations  
knowledge of geometry

### **5. Install Specialty Equipment**

knowledge of mooring of vessels  
knowledge of local, state, and federal codes and regulations  
knowledge of vessels  
knowledge of mooring products and installation  
knowledge of recreational accessory products installation

#### **Content Area I**

**14%**

### **Building Fixed Marine Structures**

#### **1. Install Framing Structure**

knowledge of carpentry  
knowledge of surveying  
knowledge of fastening hardware  
knowledge of wood properties  
knowledge of metallurgical properties  
knowledge of welding  
knowledge of aluminum frame structures  
knowledge of wood frame structures  
knowledge of steel frame structures  
knowledge of plastic frame structures  
knowledge of concrete frame structures

#### **2. Construct Deck**

knowledge of wood decking  
knowledge of aluminum decking  
knowledge of composite decking  
knowledge of vinyl decking  
knowledge of concrete decking  
knowledge of steel decking  
knowledge of fiberglass decking  
knowledge of fasteners  
knowledge of carpentry  
knowledge of environmental regulations  
knowledge of metallurgical reactions

#### **3. Install Roof System**

knowledge of wood shingles  
knowledge of wood shakes  
knowledge of asphalt shingles  
knowledge of fiberglass shingles  
knowledge of carpentry  
knowledge of fastening systems

#### **4. Install Boat Lifts**

knowledge of Friction Mean Effective Pressure (FMEP)  
knowledge of mooring of vessels  
knowledge of local, state, and federal codes and regulations  
knowledge of boat lift product specifications  
knowledge of vessels  
knowledge of pile bearing capacity  
knowledge of boat lift accessories  
knowledge of bunking systems  
knowledge of davits  
knowledge of piling installation  
knowledge of metallurgical properties

#### **5. Construct Boat Ramps**

knowledge of local, state, and federal codes and regulations  
knowledge of soil conditions  
knowledge of concrete  
knowledge of heavy equipment  
knowledge of cofferdams  
knowledge of water elevations  
knowledge of sump pumps  
knowledge of reinforcing steel  
knowledge of surveying  
knowledge of environmental protection measures  
knowledge of boat ramp usage  
knowledge of navigational aids

### **Content Area J**

**6%**

#### **Executing Close-Out Procedures**

##### **1. Clean-Up Job Site**

knowledge of disposal methods  
knowledge of scope of work  
knowledge of heavy equipment  
knowledge of navigational aids  
knowledge of water elevations  
knowledge of vessel operations  
knowledge of vehicle operations  
knowledge of rigging

#### **2. Perform Final Inspections**

knowledge of surveying  
knowledge of scope of work  
knowledge of permitting specifications  
knowledge of contract management practices  
knowledge of close-out documentation