

*Bauer*

**SUPERSEDED BY EI 94-038  
EFFECTIVE 1/12/95**

# ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

**SUBJECT:**  
REVISED ENGINEER'S OFFICE SPECIFICATION  
ITEM 637.0501 TO 637.0901, TYPES A TO E  
**Subject Code:** 7.30

**Distribution:**

PS&E		
SPECOR & STDS		CIRCULATE
MAIL ROOM	Main Office	
TEST EST		

32

Regions

34

Special

**Code:** EI-92-14

**Date:** 03/24/92

**APPROVED:**

Paul T. Wells, Deputy Chief Engineer, Construction Division

**Supersedes:**

EI 83-006 & EI 84-009

This Engineering Instruction announces the revised item specifications for Engineers' Offices, Item 637.0501 to 637.0901 (Types A to E). The Laboratory Building specification, Item 637.01, is unchanged. The new item specifications shall be used for all projects with lettings scheduled on or after 07/30/92 (PS&E; May 7, 1992).

Also established by this EI is that:

- 1) Type AA Engineer's Office , Item 15637.0401, is hereby discontinued. The new Type A Engineer's Office shall be the minimum office specified.
- 2) When the Microcomputer System, Item 15637.31, is included in a project proposal, the new Type B Engineer's Office shall be the minimum office specified.
- 3) The Telephone Answering Device, Item 15637.15 is hereby discontinued. The equipment is now a general requirement within the new specification for all Engineers' Offices, Types A to E.
- 4) The Regional Construction Groups are responsible for the final determination of office type (size) for all construction projects.

The purpose of the item specification changes are to supply construction field offices with equipment consistent with the Department's Field Office Automation Plan and current field staff responsibilities. The specification is also revised to provide standard office accessories which are not required under the existing item specification. These include bookcases, tack boards, and a telephone answering device, as well as sufficient numbers of other office furniture.

The Type A Engineer's Office is increased to 200 square feet with two separate rooms from the existing 160 square feet with one room. This provides the EIC with a private office.

Manual ENGINEERING INSTRUCTION	Code EI-92-14	Date 03/24/92	Page 2 of 2
Subject: REVISED ENGINEER'S OFFICE SPECIFICATION, ITEM 637.0501 TO 637.0901, TYPES A TO E			

Until historic bid price data becomes available for the new item, the following bid price cost increase has been estimated:

All Types, A to E: \$100 per month

Distribution of actual item specification, as an attachment to this EI, was as follows:

List 30: Recipients received 1 copy.

List 32: Copies have been sent to the Regional Design Engineer, Regional Estimating Engineer, and Regional Construction Engineer.

List 34: Recipients received 1 copy.

Copies of the item specification may be requested.

Any questions concerning this EI should be directed to Anthony Torre of the Construction Division at (518) 457-3225.

AJT:ENGROFC.EI

## SECTION 637 - ENGINEER'S OFFICE AND LABORATORY BUILDING

**637-1 DESCRIPTION.** This work shall consist of providing, furnishing and maintaining an Engineer's Office and a Field Laboratory Building for the exclusive use of and occupancy by the Department and Consultant field engineers. It shall be the responsibility of the contractor to install and maintain the Engineer's Office in compliance with all applicable building, safety, and health regulations and/or laws.

**637-1.01 Engineer's Office (Type A, B, C, D or E).** The Contractor shall supply for the Engineer's use a building or mobile trailer, (specified at Type A, B, C, D or E), which shall be erected at a location selected by the Engineer and shall be separate from any building used by the Contractor.

**637-1.02 Laboratory Building.** The Contractor shall supply mobile building or trailers for use as field laboratories for soils and materials testing. As work progresses on the contract, the laboratory shall be moved by the Contractor to follow the work, at such times and to the locations approved or designated by the Engineer.

**637-1.03 Furnishing Existing Facilities and Buildings.** The Contractor may furnish equivalent facilities in existing buildings provided such facilities and building are located to provide convenient service and provided that the building location and facilities are approved by the Regional Director in writing.

## 637-2 MATERIALS

**637-2.01 General Construction.** Each Engineer's Office or Field Laboratory shall be an approved and weatherproof building or mobile trailer of the type specified in the contract documents. The structure shall have a minimum ceiling height of 7 feet and shall be provided with weatherproof windows and weatherproof doors each equipped with adequate locking devices. Each window shall have a minimum area of eight square feet, shall be screened and of a type that will open and close to provide adequate ventilation.

**637-2.02 General Requirements for all Engineer's Offices.**

- A. LIGHTING.** Electric light, non-glare type luminaires to provide a minimum illumination level of 100 ft.-candles at desk height level.
- B. HEATING AND COOLING.** Adequate equipment to maintain an ambient air temperature of  $70\text{ F} \pm 5$ .
- C. TYPEWRITER STAND.** Standard type with casters.
- D. TYPEWRITER.** A standard electric office size with pica type.
- E. TELEPHONE.** A separate phone for the exclusive use of Department and Consultant personnel. The phone shall have modular jacks at the wall and phone and be adaptable to electronic communications. An extension telephone, of a type and location as required by the Engineer,

with a 25-foot cord shall also be provided. The number of telephones, each with an extension, to be provided is specified for each type of office.

- F. **POTABLE WATER.** From a local municipal waterline and/or bottled water with refrigerator unit - hot/cold water.
- G. **ADDING MACHINE.** Tape type registering to at least ten digits, four function. The number of adding machines to be provided is specified for each type of office.
- H. **FIRST AID KIT.** The Contractor shall keep the kit properly stocked with appropriate first aid supplies at all times.
- I. **TOILET.** A separately enclosed room, properly ventilated and complying with applicable sanitary codes. The Contractor shall provide all lavatory amenities, necessary paper and soap products, hot and cold running water and a flush-type toilet. Any other toilet will not be acceptable unless as ordered by the Engineer (A.O.B.E.).
- J. **LOCKER.** A metal or wood locker with lock of sufficient size for storage of surveying instruments and testing equipment.
- K. **MAINTENANCE.** The Contractor shall maintain all facilities and furnished equipment in good working condition. The office shall be cleaned weekly, or as required by the Engineer.
- L. **FIRE EXTINGUISHER.** Non-toxic dry chemical, fire extinguisher meeting Underwriters Laboratories, Inc., approval for Class A, Class B and Class C fires with a minimum rating of 2A: 10B: 10C. 1 per room.
- M. **FIRE RESISTANT CABINET.** Fire resistant, 4 drawer, legal size file cabinet with lock and 2 keys, meeting the requirements for "Insulating Filing Devices, Class 350-1 Hour (D)" of ANSI/UL 72 or the Class D rating of the original Underwriters Laboratories specification for insulated filing devices. The number of cabinets to be provided is specified for each type of office.
- N. **THERMOMETER.** A minimum -- maximum thermometer.
- O. **PENCIL SHARPENER.** Manual, standard pencil sharpener. 1 per room.
- P. **PHOTOCOPYING MACHINE.** Desk top, heavy duty, electric, dry process photocopying machine. The machine shall be capable of copying 8.5" x 11", 8.5" X 14", and 11" x 17" sheets. An adequate supply of 20 lb. copy paper in the three (3) sizes shall be provided. The supply of copy paper shall be replenished by the Contractor as required by the Engineer.
- Q. **SIGNS/BULLETIN BOARD.** The Contractor shall furnish and install necessary signs to locate and identify the Project Engineers Office.

The Contractor shall also furnish and install a 4' x 8' weatherproof Bulletin Board in front of or adjacent to the Project Engineers Office.

This Board may also be attached to the Office on an outside wall which is easily accessible and clearly visible.

- R. **STOVE.** The Contractor shall furnish an electric, propane or bottle gas stove adequate for rapid drying of soil samples, including all necessary fuel or electrical supply and all maintenance necessary for continued operation. Size of the stove shall be approved by the Engineer.

Requirement R. will be necessary when Excavation and Embankment, and/or Culverts and Storm Drains are included in a project and a Laboratory Building is not included.

- S. **TACK BOARD.** Cork Tack Boards (2' x 4') mounted on a wall of each room.
- T. **BOOKCASE.** A self-standing 3 shelf metal bookcase. 1 per room. (Approximate size 48" high, 48" wide, 12" deep.)
- U. **WASTE PAPER BASKETS.** Constructed of metal. 1 per room.
- V. **PARKING AREA.** The Contractor shall provide/furnish a paved or hard surfaced (gravel or bankrun material) parking area adjacent to the building where the Engineers Office is located. The number of spaces to be provided is specified for each type of office. Each space shall measure 9 feet by 18 feet.
- . **MAILBOX.** Standard mailbox (with post if necessary) or post office box shall be provided.
- X. **COAT RACK.** A metal or wooden coat rack capable of holding at least 4 coats. 1 per room.
- Y. **TELEPHONE ANSWERING DEVICE.** A FCC approved automatic answering device capable of recording outgoing messages of 60 seconds long and receiving a minimum of 40 incoming messages of 60 seconds duration. The unit shall include a message mark so you can hear new messages without erasing old messages. The unit shall include remote programming of playback, backspace, and out-going message re-record. The unit shall include computer generated voice marking of time and day of each message received. The unit shall allow for the retrieval of messages without a remote beeper unit or shall include a number of remote control units as ordered by the Engineer (A.O.B.E.).

637.2.03 General Requirements for some Engineer's Offices,

Type B, C, D and E only (Not Type A)

- 1-- Freestanding Microcomputer System Workstation with a 60" long by 30" wide work surface and height of 27". The workstation shall include an adjustable shelf approximately 12" wide and no less than 30" long. This workstation shall be fully assembled.
- 1-- Ergonomic Microcomputer Workstation Chair w/arms, five (5) legs w/casters and adjustable from approximately 17" to 23" height by pneumatic gas cylinder. This chair shall be fully assembled.
- 1-- Antistatic Tabletop Mat for the Microcomputer System Workstation with an approximate size of 30" long by 24" wide.
- 1-- Ergonomic and height adjustable "wrist rest" keyboarding support.
- 1-- Calculator. The device shall be capable of executing normal engineering/surveying calculations and have sufficient memory to accept and execute programs of at least 200 lines or steps. The device shall also be capable of printing the results of calculations and programs, storing programs resident in the device on a magnetic medium for later use, and accepting preprogrammed software. The Contractor shall supply the preprogrammed software capable of performing normal surveying computations and the printing paper. The supply of printing paper shall be replenished by the Contractor as required by the Engineer. Instruction manuals for the calculator and software shall also be provided.

Type D and E Only (Not Type A, B, and C)

- 1-- Telephone FAX Machine, meeting the following requirements:

DOCUMENT SIZE	- 8 1/2" X 11" both transmit and receive with transmit speed less than 20 seconds per page
COMPATIBILITY	- Group G3
RESOLUTION	- Standard, with 16-Shade Gray Scale
RECEIVING	- Automatic
DOC. FEEDER	- Automatic, 5 Sheets
AUTO DIALER	- 10 Phone Number Memory with automatic redial and on-hook dialing
TRANSMIT TERMINAL IDENTIFICATION	- Page Number, Sender's Phone Number, and Name
OUTPUT DOCUMENT SEPARATOR	- Automatic Cutter

An adequate supply of fax paper shall be provided. The supply of fax paper shall be replenished by the Contractor as required by the Engineer.

37-2.04 Specific Requirements for all Engineer's Offices  
(Type A, B, C, D, and E).

- A. **Engineer's Office Type A.** In addition to the general requirements, Type A shall provide a minimum of 200 square feet of floor space with one outside door and four windows. The office shall be partitioned to provide two rooms with an adjoining door. The smaller room shall not be less than 64 square feet in floor area and shall contain at least one of the four windows. The furnishings shall be as indicated in Table 1 of this Section.
- B. **Engineer's Office Type B.** In addition to the general requirements, Type B office shall provide a minimum 330 square feet of floor space with two outside doors and six windows. The office shall be partitioned to provide two rooms with an adjoining door. The smaller room shall be not less than 96 square feet in floor area and shall contain two of the six windows. The furnishings shall be as indicated in Table 1 of this Section.
- C. **Engineer's Office Type C.** In addition to the general requirements, Type C office shall provide a minimum 460 square feet of floor space with with two outside doors and six windows. The office shall be partitioned to provide three rooms with adjoining doors. The smaller rooms shall be not less than 96 square feet in floor area and shall contain two of the six windows. The furnishings shall be as indicated in Table 1 of this Section.
- D. **Engineer's Office Type D.** In addition to the general requirements, Type D office shall provide a minimum of 720 square feet of floor space and shall be partitioned to provide four rooms: three small rooms and one large room with adjoining doors. The smaller rooms shall be not less than 96 square feet in area, and shall each contain two windows. Two outside doors and at least eight windows will be the total required. The furnishings shall be as indicated in Table 1 of this Section.

If two mobile trailer units are provided, they shall be joined in parallel fashion and shall have two weatherproof doorways or archways between units A.O.B.E. A minimum of two (2) outside doors shall still be required, and arranged so as to facilitate emergency access.

- E. **Engineer's Office Type E.** In addition to the general requirements, Type E office shall provide a minimum of 920 square feet of floor space and shall be partitioned to provide four rooms: two small rooms and two large rooms each with adjoining doors. The smaller rooms shall be not less than 120 square feet in area and shall each contain two windows. Two outside doors and at least twelve windows will be required. The furnishings shall be as indicated in Table 1 of this Section.

If two mobile trailer units are provided, they shall be joined in parallel fashion and shall have two weatherproof doorways or archways between units A.O.B.E. A minimum of two (2) outside doors shall still be required, and arranged so as to facilitate emergency access.

SECTION 637-2.04  
TABLE 1

Specific Requirements for Offices Item Description	Office Type				
	A #	B #	C #	D #	E #
Office Desks with Drawers & Locks not less than 2.5' X 5.0' each	1	3	4	7	8
Office Chairs	4	6	8	16	18
Fire Resistant Cabinet, 4-Drawer as specified in 637-2.02M	1	2	3	4	6
Drafting-type Tables each three feet by six feet & supported by wall brackets & legs	1	2	2	3	4
Draftsman's Stools	2	4	4	6	8
Vertical filing plan rack for 6 sets of plans each	1	0	0	0	0
Vertical filing plan rack for 12 sets of plans each	0	1	1	2	3
Roll File Unit each with twelve 6" x 6" compartments for twelve cross-section rolls each 22 inches long	0	1	1	1	2
Office table, not less than 3.0' x 6.0' each	1	1	2	3	4
Metal storage cabinet with four adjustable shelves, tumbler lock and two keys (approx. size 72" high, 36" wide, 18" deep)	0	1	1	1	2
Adding Machine as specified in 637-2.02G	1	1	2	2	3
Telephone lines with extensions as specified in 637-2.02E	1	1	2	2	2
Parking lot spaces as specified specified in 637-2.02V	5	5	6	8	10

637-2.05 Minimum requirements for Field Laboratories.

- A. Area. Floor space of one hundred square feet.
- B. Windows. Three windows.
- C. Doors. One door with lock and two sets of keys.
- D. Floor Covering. Linoleum, tile or other serviceable finish.
- E. Sink. A sink at least three feet long by two feet wide by 18 inches deep, equipped with water faucet and drain line.
- F. Counter. A work counter next to sink at least two feet long by two feet wide.
- G. Table. A heavy duty work table not less than eight feet long by thirty inches wide by three feet high.
- H. Cabinet. A storage cabinet or locker at least two feet square by six feet high, equipped with at least four shelves, lock and two keys.
- I. Fire Resistant Cabinet. Two drawer as specified in 637-2.02M.
- J. Desk. A desk or writing table with chair.
- K. Pedestal. A heavy wooden block for soil compaction tests, nominally ten inches square by twelve inches high. (Soils Lab. only.)
- L. Stove. As specified in 637-2.02R.
- M. Lighting. Electric lighting and not less than three convenient outlets. Electric service shall be for not less than 20 amperes, 155 VAC. Where an electric hotplate or stove is provided under (L) above, service shall be increased over 20 amperes by an amount equal to the rating of the device listed on the nameplate.
- N. Potable Water. Potable water supplied from an existing system or from an external 55 gallon (minimum) gravity-feed storage tank connected to the sink faucet.
- O. Heater. A space heater with the necessary fuel and and outside vent, if required.
- P. Fire Extinguisher. As specified in 637-2.02L.

### 637-3 CONSTRUCTION DETAILS

**637-3.01 General Requirements.** The buildings shall be fully equipped and made available for use and occupancy by the Department personnel as well as comparable personnel employed by a Consultant prior to the start of any contract work. Such use and occupancy shall be made available after the work has been accepted by the Department as directed in writing by the Regional Director.

All buildings shall be maintained in good condition and appearance by the Contractor for the designated period after which all portable buildings or trailers, fencing, surfacing and utilities shall be removed from the location, the areas cleaned, loamed and seeded if required and left in a neat and acceptable condition.

The contractor shall be responsible, until use and occupancy of the Engineer's office and Laboratory building is relinquished by the State, for any and all damage, direct or indirect, of whatever nature, occurring to the property of the State of New York, property of the Department's personnel, property of the Department's Consultant representative, including other employees of the Consultant assigned to this office, which is kept in the Engineer's Office and Laboratory Building. Non-State owned or employee property shall only be those items used by appropriate personnel in the performance of project-related work activities. Such property shall be replaced within 30 days of the reported damages and would include any loss caused by, but not limited to, fire, theft, vandalism or malicious mischief.

The Engineer shall provide the Contractor a detailed list of items, with corresponding dollar values, belonging to the State of New York, the Department's personnel, the Department's Consultant representative, and the Consultant's employees at least once a month but not more than once a week. The Contractor shall not be responsible for items kept in the Engineer's office that are not on this list.

### 637-4 METHOD OF MEASUREMENT

**637-4.01 Engineer's Office (Type A, B, C, or D or E).** Payment will be made for each month (to the nearest 1/4 month increment), of availability for occupancy by the field engineers during the period of the contract. Payment will begin the first month that the office is fully equipped, serviced as specified, and made available for occupancy. Monthly payments will continue until the date of acceptance of the contract. When directed in writing by the Regional Director, payment for each month's occupancy after the date of acceptance will be made as part of the final estimate. Failure of the Contractor to supply all documents required to complete the final estimate may result in a non-payment during this delaying period. This non-payment will be in the form of a charge to the Contractor as further stated in Section 637-5 of this Specification. Monthly payments may be terminated on a specified date prior to acceptance of the contract by written notification by the Regional Director that such office will no longer be required on the contract.

No payment will be made for occupancy and services during the periods of contract extension of time where Engineering Charges are assessed, except that,

in such cases, payment for each month's occupancy after the date of acceptance will be made as part of the final estimate when directed in writing by the Regional Director.

637-4.02 Laboratory. Payment will be made for each building or trailer furnished under this work as follows: Seventy-five (75%) of the amount bid will be paid when the building or trailer equipped as specified has been placed on the work site and fully operative. The remaining twenty-five percent (25%) will be paid when the Engineer estimates the contract to be ninety percent (90%) complete, on a dollar basis.

#### 637-5 BASIS OF PAYMENT

637-5.01 Engineer's Office (Type A, B, C, D, and E). The unit price bid per month shall include the cost of all labor, material, equipment, ground rental and utility charges necessary to complete the work.

No payment will be made under engineers field office for each calendar day during which there are deficiencies in compliance with the requirements of any sub-section of this specification. The first calendar day shall commence 24 hours after notice to the contractor of such a deficiency. This non-payment shall be deducted from the contractors next estimate as a charge to contractor on the item. The amount of such calendar day non-payment will be determined by dividing the unit price bid per month by 30.

In addition, if the cited deficiencies exceeds 72 hours or is permitted to recur, liquidated damages will be assessed at 1/5 the rate (20%) shown in Table 108-1 of Section 108-03 for each subsequent calendar day or part thereof that a cited deficiency resulting in non-payment, as prescribed herein, is not corrected.

637-5.02 Laboratory. The price bid for each building or trailer shall include the cost of furnishing all labor, materials and equipment necessary to erect, relocate and remove the building or trailer as directed by the Engineer, together with all fuel, water, ground rental, or other expenses incidental thereto.

Payment will be made under:

Item No.	Item	Pay Unit
637.01	Laboratory Building	Each
637.0501	Engineer's Office--Type A	Month
637.0601	Engineer's Office--Type B	Month
637.0701	Engineer's Office--Type C	Month
637.0801	Engineer's Office--Type D	Month
637.0901	Engineer's Office--Type E	Month

AJT:1991SPEC.12P