

PERMIT NO. 99-1835



# CONSTRUCTION PERMIT APPLICATION

**Application Completes:** Sections I, II, III (optional), IV, VI, and VII

## I. IDENTIFICATION

1. Proposed Work Site at: Drum Point Recreation Complex
2. Name of Owner in Fee: Township of Brick Tel. ( 732 ) 262-1057
- Address 401 Champas Bridge Rd, Brick, NJ 08723  
street municipality zip code
3. Ownership in Fee: Public X Private
4. Principal Contractor: Lucas Electric Co. Tel. ( 609 ) 448-5218
- Address 1381 Route 130, Windsor, NJ 0831
- License No. OR, if new home, Builder Reg. No. 9758 Exp. Date
- Federal Employee No. 22-211-8387 FAX: ( 609 ) 448-8612
5. Architect or Engineer Birdsall Engineering Inc Tel. ( 732 ) 681-1165
- Address 1700 F Street, So. Brunswick, NJ 07229
6. Responsible Person in Charge of Work Matt Lucas, President
- Tel. ( 609 ) 448-5218 FAX ( 609 ) 448-8612

**V. FEE SUMMARY (for office use only)**

- |                                      |    | Update | Update     |
|--------------------------------------|----|--------|------------|
| 1. Building                          | \$ |        |            |
| 2. Electrical                        |    | X      | 11/4/99 ob |
| 3. Plumbing                          |    |        |            |
| 4. Fire Protection                   |    |        |            |
| 5. Elevator Devices                  |    |        |            |
| 6. Subtotal                          | \$ |        |            |
| 7. Less 20% for<br>State Plan Review |    |        |            |
| 8. Subtotal                          | \$ |        |            |
| 9. DCA Training Fee                  |    |        |            |
| 10. Subtotal                         |    |        |            |
| 11. Cert. of Occupancy               |    |        |            |
| 12. Other                            |    |        |            |
| 13. TOTAL                            | \$ | EXEMPT |            |

## VI. BUILDING/SITE CHARACTERISTICS

1. Number of Stories \_\_\_\_\_
2. Height of Structure \_\_\_\_\_ ft.
3. Area — Largest Floor \_\_\_\_\_ sq. ft.
4. New Building Area \_\_\_\_\_ sq. ft.
5. Volume of New Structure \_\_\_\_\_ cu. ft.
6. Construction Classification \_\_\_\_\_
7. Total Land Area Disturbed \_\_\_\_\_ sq. ft.
8. Flood Hazard Zone \_\_\_\_\_
9. Base Flood Elevation \_\_\_\_\_ ft.
10. Wetlands    yes \_\_\_\_\_  
                      no \_\_\_\_\_
11. Max. Live Load \_\_\_\_\_
12. Max. Occupancy Load \_\_\_\_\_

(office use only)

## II. PROPOSED WORK

1. ☐ Minor Work
2. ☐ New Building
3. ☐ Addition
4. ☐ Alteration
5. ☐ Fire Protection
6. ☐ Plumbing
7. ☒ Electrical
8. ☐ Elevator Devices
9. ☐ Asbestos Abat. Subch. 8
10. ☐ Lead Hazard Abatement
11. ☐ Demolition

TOTAL COSTS

Est. Cost

**OPTIONAL** (for office use only)

[illegible]

## IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/  
Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
3. ☐ Pressure Vessels
4. ☐ Refrigeration Systems
5. ☐ Cross-Connections/Backflow Preventers
6. ☐ Hazardous Uses/Places of Assembly
7. ☐ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks

## VII. DESCRIPTION OF BUILDING USE

### A. RESIDENTIAL

1. ☐ Hotels (R-1)
2. ☐ Multi-Family (R-2)
3. ☐ Two-Family (R-3) BOCA
4. ☐ Two-Family (R-4) CABO
5. ☐ One-Family (R-3) BOCA
6. ☐ One-Family (R-4) CABO

No. of dwelling units:

Before Construction

### After Construction

Net Gain or Loss

### B. NON-RESIDENTIAL

1. State Specific Use:

2. Use Group:

3. Change in Use Group, Indicate Former:

LDS BR 10511690

# CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.vii:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:32-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☒ Check if contractor.

Agent Name Lucas Electric Co.

Address 1381 Route 130

WINDSOR, New Jersey 08561

Telephone ( 609 ) 448-5218

Signature [Signature]

III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.

OFFICE DATE RECEIVED: \_\_\_\_\_

| VIII. PRIOR APPROVALS CHECKLIST<br>(office use only)                 | LOCAL APPROVAL    |            | COUNTY APPROVAL   |            | REGIONAL APPROVAL |            | STATE APPROVAL    |            | COMMENTS |
|----------------------------------------------------------------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|----------|
|                                                                      | Prelimin. Initial | Final Date | Prelimin. Initial | Final Date | Prelimin. Initial | Final Date | Prelimin. Initial | Final Date |          |
| <input type="checkbox"/> Zoning Officer                              |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Planning Board                              |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Zoning Board                                |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Sewer Authority                             |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Water Authority                             |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Police Department                           |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Health Department                           |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Soil Conservation                           |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> N.J. Department of Community Affairs        |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> N.J. Department of Transportation           |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> N.J. Department of Environmental Protection |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/> Utility Dig No.                             |                   |            | X                 | X          | X                 | X          | X                 | X          |          |
| <input type="checkbox"/>                                             |                   |            |                   |            |                   |            |                   |            |          |
| <input type="checkbox"/>                                             |                   |            |                   |            |                   |            |                   |            |          |

| IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE (office use only—optional) |                                |
|----------------------------------------------------------------------------|--------------------------------|
| Name of Code & Edition                                                     | Name of Code & Edition         |
| Building _____                                                             | Energy _____ Other _____       |
| Electrical _____                                                           | Barrier Free _____             |
| Plumbing _____                                                             | Flood Hazard _____             |
| Fire Protection _____                                                      | As Built Elevation Cert. _____ |
| Mechanical _____                                                           | Other _____                    |

| X. CERTIFICATES ISSUED (office use only)                      | DATE ISSUED | DATE EXPIRED | DATE REISSUED | DATE EXPIRED |
|---------------------------------------------------------------|-------------|--------------|---------------|--------------|
| <input type="checkbox"/> Temporary Certificate of Occupancy   | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Temporary Certificate of Compliance  | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Continued Certificate of Occupancy   | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Certificate of Compliance            | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Certificate of Occupancy             | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Certificate of Approval              | No. _____   | _____        | _____         | _____        |
| <input type="checkbox"/> Lead Abatement Clearance Certificate | No. _____   | _____        | _____         | _____        |

PLAN REVIEW SHEET

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

NEW SUBMITTAL ( )

DESCRIPTION: \_\_\_\_\_

REVISION ( )

ZONING:

DATE RECEIVED: \_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

BUILDING:

DATE RECEIVED: \_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

PLUMBING:

DATE RECEIVED: \_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

ELECTRIC:

DATE RECEIVED: \_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

FIRE:

DATE RECEIVED: \_\_\_\_\_

DATE APPROVED: \_\_\_\_\_

CERTIFICATES ISSUED

DATE ISSUED: \_\_\_\_\_ BUILDING: \_\_\_\_\_ TEMP ( ) FINAL ( )

DATE ISSUED: \_\_\_\_\_ PLUMBING: \_\_\_\_\_ TEMP ( ) FINAL ( )

DATE ISSUED: \_\_\_\_\_ ELECTRIC: \_\_\_\_\_ TEMP ( ) FINAL ( )

DATE ISSUED: \_\_\_\_\_ FIRE: \_\_\_\_\_ TEMP ( ) FINAL ( )

TOWNSHIP OF BRICK  
401 CHAMBERS BRIDGE RD  
DIVISION OF INSPECTIONS

UCC NEW JERSEY  
CONSTRUCTION  
PERMIT

Date Issued 04/15/99  
Control #  
Permit # 99-1032

|                    |                                            |                                   |      |
|--------------------|--------------------------------------------|-----------------------------------|------|
| IDENTIFICATION     | Block 548                                  | Lot 21                            | Qual |
| Work Site Location | 41 DRUM POINT RD                           |                                   |      |
|                    | LIGHT POLES                                |                                   |      |
| Owner in Fee       | TOWNSHIP OF BRICK                          |                                   |      |
| Address            | 401 CHAMBERS BRIDGE RD<br>BRICK, NJ 08723- |                                   |      |
| Telephone          | (732)262-1057                              |                                   |      |
|                    | Contractor                                 | LUCAS ELECTRIC CO                 |      |
|                    | Address                                    | 1381 RT 130<br>WINDSOR, NJ 08561- |      |
|                    | Telephone                                  | (609)448-5218                     |      |
|                    | Lic. No. or Bldrs. Reg. No.                | 9758                              |      |
|                    | Federal Exp. No.                           | 22-2118387                        |      |

Is hereby granted permission to perform the following work:

- |                                                |                                             |                                                |
|------------------------------------------------|---------------------------------------------|------------------------------------------------|
| <input type="checkbox"/> BUILDING              | <input type="checkbox"/> PLUMBING           | <input type="checkbox"/> LEAD HAZARD ABATEMENT |
| <input checked="" type="checkbox"/> ELECTRICAL | <input type="checkbox"/> FIRE PROTECTION    | <input type="checkbox"/> DEMOLITION            |
| <input type="checkbox"/> ELEVATOR DEVICES      | <input type="checkbox"/> ASBESTOS ABATEMENT | <input type="checkbox"/> OTHER                 |
- (Subchapter 8 only)

DESCRIPTION OF WORK:  
LIGHT POLES

NOTE: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$ 260,000

Construction Official [Signature] 04/15/99  
Date

PAYMENTS (Office Use Only)

|                    |   |
|--------------------|---|
| Building           | 0 |
| Electrical         | 0 |
| Plumbing           | 0 |
| Fire Protection    | 0 |
| Elevator Devices   | 0 |
| Other              |   |
| DCA Training Fee   | 0 |
| Cert. of Occupancy | 0 |
| Other              |   |
| Total              | 0 |
| Check No.          |   |
| Cash               |   |
| Collected By       |   |



**BUILDING  
SUBCODE  
TECHNICAL SECTION**

**A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.**

Block 548 Lot 21  
Work Site Location Drum Point Recreation Complex  
Drum Point Road, Brick, New Jersey 08723  
Owner in Fee Township of Brick  
Address 401 Chambers Bridge Rd  
Brick, New Jersey 08723  
Tele. ( 732 ) 262-1057  
Contractor Lucas Electric Company, Inc.  
Address 1381 Route 130  
Windsor, New Jersey 08561  
Tele. ( 609 ) 448-5218 Fax ( 609 ) 448-8612  
Lic. No. or Bktrs. Reg. No. 9758  
Federal Emp. No. 22-211-8387

**JOB SUMMARY (Office Use Only)**

| PLAN REVIEW                                                                                                                    | Date | Initial | INSPECTIONS  | Dates (Month/Day) |          |         |
|--------------------------------------------------------------------------------------------------------------------------------|------|---------|--------------|-------------------|----------|---------|
|                                                                                                                                |      |         | Type:        | Failure           | Approval | Initial |
| <input type="checkbox"/> No Plans Required                                                                                     |      |         | Footings     |                   |          |         |
| <input type="checkbox"/> All                                                                                                   |      |         | Foundations  |                   |          |         |
| <input type="checkbox"/> Footings                                                                                              |      |         | Slab         |                   |          |         |
| <input type="checkbox"/> Foundations                                                                                           |      |         | Frame        |                   |          |         |
| <input type="checkbox"/> Frame                                                                                                 |      |         | Barrier-Free |                   |          |         |
| <input type="checkbox"/> Other                                                                                                 |      |         | Insulation   |                   |          |         |
| Joint Plan Review Required:                                                                                                    |      |         | Finishes     |                   |          |         |
| <input type="checkbox"/> Elec. <input type="checkbox"/> Plumb. <input type="checkbox"/> Fire <input type="checkbox"/> Elevator |      |         | Energy       |                   |          |         |
| SUBCODE APPROVAL                                                                                                               |      |         | Mechanical   |                   |          |         |
| <input type="checkbox"/> CO <input type="checkbox"/> CCO <input type="checkbox"/> CA                                           |      |         | TCO          |                   |          |         |
| Date: _____                                                                                                                    |      |         | Other        |                   |          |         |
| Approved by: _____                                                                                                             |      |         | Final        |                   |          |         |
|                                                                                                                                |      |         | Barrier-Free |                   |          |         |

**B. BUILDING CHARACTERISTICS**

Use Group Present Proposed  
Const. Class Present Proposed  
No. of Stories \_\_\_\_\_  
Height of Structure \_\_\_\_\_ Ft.  
Area — Largest Floor \_\_\_\_\_ Sq. Ft.  
New Bldg. Area/All Floors \_\_\_\_\_ Sq. Ft.  
Volume of New Structure \_\_\_\_\_ Cu. Ft.  
Total Land Area Disturbed \_\_\_\_\_ Sq. Ft.

**Est. Cost of Bldg. Work:**  
1. New Bldg. \$ 10,000.00  
2. Alteration \$ \_\_\_\_\_  
3. Total (1+2) \$ 10,000.00



Date Received \_\_\_\_\_  
Date Issued \_\_\_\_\_  
Control # \_\_\_\_\_  
Permit # \_\_\_\_\_

**C. CERTIFICATION IN LIEU OF OATH**

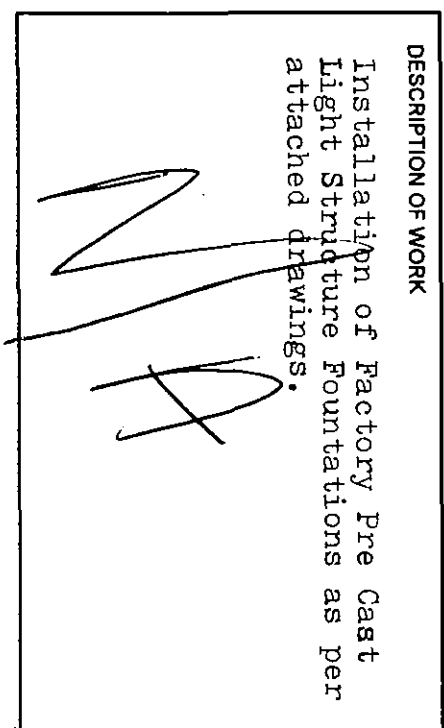
I hereby certify that I am the agent of owner or record and am authorized to make this application.

Signature \_\_\_\_\_

**D. TECHNICAL SITE DATA**

**DESCRIPTION OF WORK**

Installation of Factory Pre Cast  
Light Structure Foundations as per  
attached drawings.



**TYPE OF WORK:**

- ☐ New Building  
☐ Addition  
☐ Alteration  
☐ Roofing  
☐ Siding  
☐ Fence \_\_\_\_\_ Height (exceeds 6')  
☐ Sign \_\_\_\_\_ Sq. Ft.  
☐ Pool  
☐ Asbestos Abatement Subchapter 8  
☐ Lead Haz. Abatement NJAC 5:17  
☒ Other Inst. Pre Cast Bases  
☐ Demolition

**FEE (Office Use Only)**

Administrative Surcharge \$ \_\_\_\_\_  
Minimum Fee \$ \_\_\_\_\_  
DCA Training Fee \$ \_\_\_\_\_  
TOTAL FEE \$ \_\_\_\_\_

U.C.C. F110  
(rev. 3/88)

1 White = Inspector Copy  
3 Pink = Office Copy

2 Canary = Office Copy  
4 Gold = Applicant Copy



**ELECTRICAL  
SUBCODE  
TECHNICAL SECTION**

**A. IDENTIFICATION—APPLICANT:** COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO. 1-800-272-1000.

Block 548 Lot 21

Work Site Location Drum Point Recreation Complex

Drum Point Road, Brick, New Jersey 08723

Owner In Fee/Occupant Township of Brick

Address 401 Chambers Bridge Rd.

Brick, New Jersey 08723

Tele. ( 732 ) 262-1057

Contractor Lucas Electric Company, Inc.

Address 1381 Route 130

Windsor, New Jersey 08561

Tele. ( 609 ) 448-5218 Fax ( 609 ) 448-8612

Lic. No. 9758

Federal Emp. No. 22-211-8387

**B. ELECTRICAL CHARACTERISTICS**

Use Group Present Proposed

☐ Pole/Pad #  ☐ Temporary ☐ Other

Building Occupied as  Utility Co.

Est. Cost of Elec. Work \$ 260,000.00

**JOB SUMMARY (Office Use Only)**

PLAN REVIEW Date Initial INSPECTIONS

☒ No Plans Required Type:  Failure  Failure  Approval Initial

Joint Plan Review Required:  Rough  4/27/99 Wm

☐ Building ☐ Plumbing Temp. Serv.  4/29/99 Wm

☐ Fire ☐ Elevator Constr. Serv.

☒ Elec. Plans Approved TCO

Date: 4/14/99 Other

Approved by: [Signature] Service

Final

SUBCODE APPROVAL

☐ CO  Temp. Cut-In-Card Date Issued

Date: 4/14/99 CA Final Cut-In-Card Date Issued

Approved by: [Signature]

**C. CERTIFICATION IN LIEU OF OATH**

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Applicant's Signature/Contractor's Seal and Signature

☒ Licensed Electrical Contractor ☒ Exempt Applicant



Date Received  
Date Issued  
Control #  
Permit #

4/15/99  
99-1032

**D. TECHNICAL SITE DATA**

QTY. SIZE ITEMS

184 1500 Lighting Fixtures

Receptacles

Switches

Detectors

16 70' Light Poles

Motors—Fract. HP

Emergency & Exit Lights

Communications Points

Alarm Devices/F.A.C. Panel

**TOTAL NUMBERS**

Pool Permit/with UW Lights

Storable Pool/Spa/Hot Tub

KW Elec. Range/Receptacle

KW Over/Surface Unit

KW Elec. Water Heater

KW Elec. Dryer/Receptacle

KW Dishwasher

HP Garbage Disposal

KW Central A/C Unit

HP/KW Space Heater/Air Handler

KW Baseboard Heat

HP Motors 1/+ HP

KW Transformer/Generator

AMP Service

AMP Subpanels

AMP Motor Control Center

KW Elec. Sign/Outline Light

[Signature]

FEE (Office Use Only)

Administrative Surcharge \$

Minimum Fee \$

DCA Training Fee \$

TOTAL FEE \$

Owner:  
TOWNSHIP OF BRICK

Contract Documents For

PROPOSED LIGHTING IMPROVEMENTS  
DRUM POINT RECREATION COMPLEX  
MARCH, 1999

List of Contract Documents Bound Herein

Invitation to Bid  
Bid Form

Exhibit BF-A  
Exhibit BF-B  
Exhibit BF-C  
Exhibit BF-D  
Exhibit BF-E  
Exhibit BF-F  
Exhibit BF-G

Schedule of Prices  
Non-Collusion Affidavit  
Consent of Surety  
Certificate of Ownership  
Contractors Experience Statement  
List of Subcontractors  
Checklist of Enclosed Documents

Instructions to Bidders  
Notice of Award  
Agreement

Exhibit AG-A Construction Performance Bond  
Exhibit AG-B Construction Payment Bond

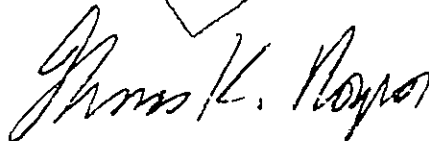
Affirmative Action Evidence  
General Conditions  
Supplementary Conditions

Exhibit SC-A Resident Project Representative  
Exhibit SC-B Schedule of Dispute Resolution

Specifications - General Requirements, Part I  
Specifications - General Requirements, Part II  
Exhibit GR-A Schedule of Insurance Requirements  
Exhibit GR-B Prevailing Wages  
Specifications - Technical Requirements  
Appendix No. 1 - Electrical Supplemental Specifications

List of Contract Documents Bound Separately

Construction Drawings Sheets 1 & 2, Dated: March 8, 1999



Thomas K. Rospos, P.E.  
License No. 27028

BIRDSALL ENGINEERING, INC.  
1700 Main Street  
South Belmar, NJ 07719

## **INVITATION TO BID**

**NOTICE TO BIDDERS** is hereby given that bids are invited and will be received as set forth herein.

**OWNER:** Township of Brick, Ocean County, New Jersey

**TITLE OF WORK:** Proposed Lighting Improvements  
Drum Point Recreation Complex

**LOCATION OF WORK:** The project is located at the Drum Point Recreation Complex on the Drum Point/Emma Havens School property in the Township of Brick.

### **GENERAL DESCRIPTION OF WORK:**

The work of this Contract consists of general work; ballfield lighting; electrical work; and restoration.

### **ADDRESS FOR RECEIVING BIDS:**

TOWNSHIP OF BRICK  
401 CHAMBERS BRIDGE ROAD  
BRICK, NJ 08723

### **ENGINEER'S NAME AND ADDRESS:**

BIRDSALL ENGINEERING, INC.  
1700 MAIN STREET  
SOUTH BELMAR, NJ 07719

ATTN: Thomas K. Rospos, P.E.  
PHONE: (732) 681-1165

### **EXAMINATION OF CONTRACT DOCUMENTS:**

Contract Documents may be examined Monday through Friday, during normal business hours, at the office of the Purchasing Agent at the Township Municipal Building at the address set forth above.

### **OBTAINING CONTRACT DOCUMENTS:**

Contract Documents may be obtained only at the office of the Purchasing Agent at the Township Municipal Building at the address and hours set forth above upon payment, per set of Contract Documents, of \$50.00. No refunds will be made.

### **USE OF CONTRACT DOCUMENTS:**

Contract Documents are available solely for the purpose of obtaining Bids on the Work and not to confer a license or grant for any other purpose.

### **BID SECURITY:**

Bid Security is required in an amount of not less than ten percent (10%) of the total amount indicated in the Bid, but not in excess of Twenty Thousand Dollars (\$20,000.00).

### **CONSENT OF SURETY:**

Certificate from a Surety Company is required indicating consent to be bound as surety and guarantor for performance required under the Contract Documents.

**SUBMISSION OF BIDS:**

The complete bid form and other items required shall be placed in sealed envelopes and delivered prior to bid opening to the Owner at the above Address for Receiving Bids.

**PUBLIC BID OPENING AND READING:**

Date: March 19, 1999  
Time: 11:00 a.m., Prevailing Time  
Place: Township of Brick  
Municipal Building  
401 Chambers Bridge Road  
Brick, NJ 08723

None.

**STATUTORY REQUIREMENTS:**

Bidders are required to comply with all applicable statutory requirements including the requirements of P.L. 1975, C. 127 (NJAC 17:27) (Affirmative Action) and of P.L. 1963, C. 150 (Prevailing Wage).

**REJECTION OF BIDS:**

The right is reserved by the Owner to reject any or all bids or to waive any immaterial defect or informality in any bid, if deemed in the best interest of the Owner.

**BY ORDER OF THE MAYOR AND COUNCIL OF THE TOWNSHIP OF BRICK**

**JOSEPH SCARPELLI, MAYOR**

**ATTEST: Scott MacFadden, Township Administrator**

**BID FORM**

**THIS BID SUBMITTED TO:** Township of Brick, Ocean County, New Jersey

**TITLE OF WORK:** Proposed Lighting Improvements  
Drum Point Recreation Complex

**LOCATION OF WORK:** The project is located on the Drum Point School property in the Township of Brick.

1. BIDDER has examined all Contract Documents including Addenda.
2. BIDDER understands and accepts the terms and conditions of the Invitation to Bid, Instructions to Bidders, and all other Contract Documents.
3. In accordance with Paragraph 3.1 of the Agreement, the Work will be completed and ready for final payment within thirty (30) days from the date when the Contract Time commences to run.
4. In accordance with Paragraph 3.2 of the Agreement, damages for delay are \$500.00 per day.
5. In accordance with Paragraph 5.1 of the Agreement, progress payments will be made less retainage in an amount equal to two percent (2%) if the Contract is over \$100,000., and ten percent (10%) if the Contract is under \$100,000.
6. The Work shall be completed in accordance with the Schedule of Prices set forth by BIDDERS in EXHIBIT BF-A which is attached hereto and made a part hereof.
7. BIDDER will, if this Bid is accepted by Owner, enter into the Agreement included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents.
8. BIDDER has completed the following additional EXHIBITS which are attached hereto and made a part hereof:

BF-B NON-COLLUSION AFFIDAVIT  
BF-C CONSENT OF SURETY  
BF-D CERTIFICATE OF OWNERSHIP  
BF-E CONTRACTORS EXPERIENCE STATEMENT  
BF-F LIST OF SUBCONTRACTORS  
BF-G CHECKLIST OF ENCLOSED DOCUMENTS

9. BIDDER has included with this Bid Form a Bid security in an amount and under the terms and conditions indicated in the Instructions to Bidders.

**BID FORM**

10. BIDDER is organized under the laws of the State of \_\_\_\_\_ as a  
\_\_\_\_\_ (indicate proprietorship, partnership, or corporation) as follows:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

11. Communications concerning this Bid should be addressed to the attention of  
\_\_\_\_\_ as follows:

\_\_\_\_\_ at the above address and telephone.

\_\_\_\_\_ at the following address and telephone

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

**SIGNED BY:**

\_\_\_\_\_  
(Signature)

Name \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_  
(Signature)

Name \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**SCHEDULE OF PRICES  
PROPOSED LIGHTING IMPROVEMENTS  
DRUM POINT RECREATION COMPLEX  
TOWNSHIP OF BRICK, OCEAN COUNTY, NEW JERSEY**

| <u>Item<br/>No.</u>                 | <u>Item Title, Quantity or Lump Sum<br/>and Price Bid in Words</u>                                   | <u>Item<br/>Total</u> |
|-------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------|
| <i>Section 1. - General Work</i>    |                                                                                                      |                       |
| 1.                                  | GENERAL WORK, for a LUMP SUM PRICE of<br>.....dollars and<br>..... cents, for an Item Total of       | \$ _____.             |
| <i>Section 2. - Lighting</i>        |                                                                                                      |                       |
| 2.                                  | BALLFIELD LIGHTING, for a LUMP SUM PRICE of<br>.....dollars and<br>..... cents, for an Item Total of | \$ _____.             |
| <i>Section 3. - Electrical Work</i> |                                                                                                      |                       |
| 3.                                  | ELECTRICAL WORK, for a LUMP SUM PRICE of<br>.....dollars and<br>..... cents, for an Item Total of    | \$ _____.             |
| <i>Section 4. - Restoration</i>     |                                                                                                      |                       |
| 4.                                  | SITE RESTORATION, for a LUMP SUM PRICE of<br>.....dollars and<br>..... cents, for an Item Total of   | \$ _____.             |

*For informal comparison of Bids to identify the apparent lowest responsible Bid, the Grand Total of Item Totals for the Bid is as follows:*

**SECTIONS 1 THROUGH 4, INCLUSIVE**

\$ \_\_\_\_\_.

BID FORM  
EXHIBIT BF-B

NON-COLLUSION AFFIDAVIT

OWNER: \_\_\_\_\_  
\_\_\_\_\_

TITLE OF WORK: \_\_\_\_\_  
(Complete above exactly as given in Invitation to Bid)

STATE OF NEW JERSEY        }  
                                      } ss:  
COUNTY OF                    }

I, \_\_\_\_\_ of the \_\_\_\_\_ of \_\_\_\_\_  
in the County of \_\_\_\_\_ and the State of \_\_\_\_ of full age, being duly sworn according  
to Law on my oath depose and say that:

I am \_\_\_\_\_  
of the firm of \_\_\_\_\_

the Bidder making the Bid for the above named Work, and that I executed the said Bid with full  
authority so to do; that said Bidder has not, directly or indirectly, entered into any agreement,  
participated in any collusion, or otherwise taken any action in restraint of free, competitive  
bidding in connection with the above named Work; and that all statements contained in said Bid  
and in the affidavit are true and correct, and made with full knowledge that the OWNER relies  
upon the truth of the statements contained in said Bid and in the statements contained in this  
affidavit in awarding the contract for the said Work.

I further warrant that no person or selling agency has been employed or retained to solicit  
or secure such contract upon an agreement or understanding for a commission, percentage,  
brokerage or contingent fee, except bona fide employees or bona fide established commercial or  
selling agencies maintained by \_\_\_\_\_

\_\_\_\_\_  
(Name of Contractor) (N.J.S.A. 52:34-15)

\_\_\_\_\_  
(Also type or print name of affiant under signature)

Subscribed and sworn to  
before me this     day  
of             19     .

NOTARY PUBLIC of  
My commission expires             , 19     .

BID FORM  
EXHIBIT BF-C

CONSENT OF SURETY

OWNER: \_\_\_\_\_

TITLE OF WORK: \_\_\_\_\_  
(Complete above exactly as given in Invitation to Bid)

In consideration of the premises and of One Dollar (\$1.00), lawful money of the United States, it is in hand paid by the Contractor, the receipt whereof, is hereby acknowledged, the undersigned surety consents and agrees that if the contract, for which the preceding Bid is made, be awarded to the person or persons submitting the same as contracted, it will become bound as surety and guarantor for its faithful performance in an amount equal to one hundred percent (100%) of the Contract Price, and will execute as surety thereto when required to do so by the Owner, and if the said Contractor shall omit or refuse to execute such contract, if so awarded, it will pay without proof of notice and on demand to the Owner any increase between the sum of which the said Contractor would have been entitled upon the completion of the said Contract and the sum which the said Owner may be obligated to pay to another contractor to whom the contract may be afterwards awarded, the amount in such case to be determined by the bids plus the cost, if any, of readvertising for bids for this work, less the amount of any certified check or bid bond payable and received.

In witness whereof, said surety has caused these presents to be signed and attested by a duly authorized officer and its corporate seal to be hereto affixed this

\_\_\_\_\_ day of \_\_\_\_\_, 19\_\_.

(A corporate acknowledgment and statement of authority to be here attached by the surety company.)

\_\_\_\_\_  
(Surety Company)

BY: \_\_\_\_\_  
(Surety Company)  
(Attorney-In-Fact)

Attest: \_\_\_\_\_

BID FORM  
EXHIBIT BF-D

CERTIFICATE OF OWNERSHIP

OWNER: \_\_\_\_\_

TITLE OF WORK: \_\_\_\_\_  
(Complete above exactly as given in Invitation to Bid)

If BIDDER is a proprietorship check here \_\_\_\_\_ and do not complete this certificate.

In accordance with P.L. 1977, Chapter 33, approved March 8, 1977, stating:

An Act requiring corporate and partnership bidders for State, County, Municipal or school district contracts to submit a list of the names and addresses of all stockholders owning 10% or more of the stock of their corporate stockholders or in the case of a partnership, the names and addresses of those partners owning a 10% or greater interest therein.

If BIDDER is a joint venture this Certificate must be made for each partnership or corporation comprising the joint venture. Additional sheets may be used if necessary in which case they should be noted herein, attached hereto and made a part hereof.

The BIDDER certifies the following information:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

## CONTRACTOR'S EXPERIENCE STATEMENT

**Bidders and proposed Subcontractors may be required to submit additional information regarding their respective financial condition prior to the award of the contracts.**

[illegible]

(Add supplementary pages if necessary)

**BID FORM  
EXHIBIT BF-F**

**LIST OF SUBCONTRACTORS**

As per  
**THE LOCAL PUBLIC CONTRACT LAW**  
N.J.S.A. 40A:11-1  
and P.L. 1997, Chapter 408

**BID OPENING DATE** \_\_\_\_\_

**PROJECT** \_\_\_\_\_ **PROJECT NO.** \_\_\_\_\_

**LOCATION** \_\_\_\_\_

**CONTRACTOR** \_\_\_\_\_

| Name Under Which<br>Subcontractor<br>Licensed | License<br>No. | Address of Office<br>Mill or Shop | Specific<br>Description of<br>Subcontract | Percent<br>Description of<br>Subcontract | Price Quote to<br>be Awarded to<br>Subcontractor |
|-----------------------------------------------|----------------|-----------------------------------|-------------------------------------------|------------------------------------------|--------------------------------------------------|
|                                               |                |                                   |                                           |                                          |                                                  |
|                                               |                |                                   |                                           |                                          |                                                  |
|                                               |                |                                   |                                           |                                          |                                                  |
|                                               |                |                                   |                                           |                                          |                                                  |
|                                               |                |                                   |                                           |                                          |                                                  |

I, \_\_\_\_\_, Certify that the price quotes submitted above will be awarded to each  
(NAME OF CONTRACTOR)  
Subcontractor should I be awarded the Contract.

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**SIGNED BY:** \_\_\_\_\_

**CHECKLIST OF ENCLOSED DOCUMENTS**

The Contractor shall use the following checklist to make certain that all of the required documents have been completed.

- \_\_\_\_\_ All unit prices submitted and extensions properly computed
- \_\_\_\_\_ Total price stated in figures and writing
- \_\_\_\_\_ Acknowledgment of Addenda (If Applicable)
- \_\_\_\_\_ Bid Guaranty in the form and amount as prescribed
- \_\_\_\_\_ Non-Collusion Affidavit (EXHIBIT BF-B)
- \_\_\_\_\_ Consent of Surety (EXHIBIT BF-C)
- \_\_\_\_\_ Certificate of Ownership (EXHIBIT BF-D)
- \_\_\_\_\_ All forms signed, certified and notarized as required
- \_\_\_\_\_ Contractor's Experience Statement (EXHIBIT BF-E)
- \_\_\_\_\_ List of Subcontractors (EXHIBIT BF-F)

All required documents shall be enclosed in the sealed envelope containing the proposal.

\_\_\_\_\_ Checklist of Enclosed Documents

## INSTRUCTIONS TO BIDDERS

### Table of Contents

| <u>No.</u> | <u>Title</u>                       | <u>Page</u> |
|------------|------------------------------------|-------------|
| 1.         | Defined Terms                      | IB-2        |
| 2.         | Contract Documents                 | IB-2        |
| 3.         | Organization of Contract Documents | IB-2        |
| 4.         | Physical Conditions                | IB-3        |
| 5.         | Schedule of Prices                 | IB-3        |
| 6.         | Submission of Bids                 | IB-4        |
| 7.         | Disposition of Bids                | IB-5        |
| 8.         | Award of Contract                  | IB-5        |
| 9.         | Commencement of Contract Time      | IB-6        |
| 10.        | Contract Time                      | IB-6        |
| 11.        | Damages                            | IB-6        |
| 12.        | Retainage                          | IB-6        |

## INSTRUCTIONS TO BIDDERS

### 1. Defined Terms

Terms used in these instructions to Bidders which are defined in the General Condition and Supplementary Conditions have the meanings assigned to them therein.

### 2. Contract Documents

2.1 Bidder should verify that the Contract Documents are complete in the number of documents as indicated by the List of Documents, and in the number of pages in each document.

2.2 Bidder must use a complete set of Contract Documents in preparing Bid; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of an incomplete set of Contract Documents.

2.3 Bidder has the responsibility prior to submitting Bid to examine the Contract Documents thoroughly and notify the Engineer of all conflicts, errors or discrepancies, or of questions or meaning or intent.

2.4 Addenda may be issued to modify the Contract Documents in response to notifications made by Bidders, or for other reasons. Addenda will be mailed or delivered at least five days prior to Bid opening to prospective Bidders who obtained Contract Documents.

2.5 Bidders may contact Engineer at the location and during the hours given in the Invitation to Bid to verify the number, if any, of Addenda issued.

### 3. Organization of Contract Documents

3.1 The Bid form contains understandings and representations made by Bidder in submitting the Bid; in addition, the Schedule of Prices is included.

3.2 The form of Notice of Award and Agreement which may be executed by the Owner with the Successful Bidder is incorporated in the Contract Documents.

3.3 The General Conditions incorporated in the Contract Documents are the STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT prepared by the Engineers' Joint Contract Documents Committee and approved and endorsed by The Associated General Contractors of America. Amendments or supplements to specific articles or paragraphs in the Standard General Conditions to be included herein are identified by a notation at the article or paragraph so amended or supplemented.

3.4 The actual amendments or supplements to the Standard General Conditions are made in the Supplementary Conditions by reference to the specific article or paragraph so amended or supplemented. The Supplementary Conditions also contain additional paragraphs incorporating language required under New Jersey statutes.

3.5 The General Requirements of the Specifications contain additional amendments and supplements to the Standard General Conditions of the Construction

Contract with regard to general and administrative matters, and also contain details for the Work of this Contract.

3.6 The Technical Requirements of the Specifications may cover a breakdown of the Goods and/or Service by Sections; solely for reference and payment, and not for dividing Goods and/or Service among subcontractors or suppliers. Each section includes general information on the Work included, and the method of payment. Items in the Technical Sections for which payment is to be made are listed in the Schedule of Prices in the Bid Form.

3.7 The Drawings are complementary to the Specifications to show size, form, location and arrangement of various elements of the Work.

#### 4. Physical Conditions

4.1 Paragraph 4.2 of the General Conditions set forth responsibilities for the adequacy of data regarding subsurface conditions and physical conditions and possible changes in the Contract Documents due to differing conditions. Reference is made to the General Requirements for identification of report(s) and drawing(s) on subsurface and physical conditions which have been utilized by Engineer in preparation of the Contract Documents. Copies of reports and drawings listed in General Requirements that are NOT included with the Bidding Documents may be examined at the office of the Engineer at the address and during hours set forth in the Invitation to Bid. The reports and drawings listed in the General Requirement are not part of the Contract Documents, but the technical data contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.2 of the General Conditions are identified and established in the General Requirements.

4.2 Paragraph 4.3 of the General Conditions indicates that information and data reflected in the Contract Documents with respect to Underground Facilities at or contiguous to the site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities or others, and Owner and Engineer shall not assume responsibility for the accuracy or completeness thereof.

4.3 Bidder, prior to submitting a Bid, may conduct at Bidder's expense any additional examinations, investigations, explorations and tests pertaining to subsurface and physical conditions, and to Underground Facilities, which are deemed necessary by Bidder to determine an appropriate Bid for performing and furnishing the Work in accordance with the Contract Document. Owner will provide Bidder with access to the site for the purposes set forth in this paragraph upon agreement of the Bidder to restore the site as nearly as possible to its original condition.

#### 5. Schedule of Prices

Bidder, with regard to completing Exhibit BF-A, the Schedule of Prices of the Bid Form, is advised as follows:

5.1 The Owner, if a public body, is exempt from New Jersey State Sales and Use Taxes and equipment to be incorporated in the Work, and such taxes shall not be included.

5.2 The quantities indicated for Unit Price Work, if any, are estimates and not guaranteed, and final payment will be based on actual quantities constructed.

5.3 The Agreement, if made, will be on the basis of materials and equipment indicated in the Drawings or specified in the Specifications without consideration of possible substitute items.

5.4 The lands upon which the Work are to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Contractor.

5.5 The amount Bid for each item must be written in words where indicated; these written entries shall control with regard to price of the Bids received.

## 6. Submission of Bids

6.1 Bidder must provide all information requested in the Bid Form and in attachments thereto by appropriate entries handwritten in ink or typewritten.

6.2 Bidder must sign the Bid Form as follows:

- (a) Proprietorship, signature shall be that of the Proprietor.
- (b) Partnership, signatures shall be that of the person or persons authorized to sign and attest for the partnership.
- (c) Corporation, signatures shall be that of the person or persons authorized to sign and attest for the corporation.

6.3 If Bidder is a joint venture set forth the full name of the identity or identities comprising the joint venture. Each joint venturer must sign in the manner indicated for the respective form of ownership as set forth in Paragraph 6.2 of these Instructions to Bidders.

6.4 Bidder must submit with the Bid Form a Bid Security made payable to Owner in an amount of not less than ten percent (10%) of the total amount indicated in the Bid Form, but not in excess of Twenty Thousand Dollars (\$20,000.00), in the form of a certified or bank check or a Bid Bond issued by a surety authorized to do business in New Jersey.

6.5 Contract Documents with the exception of the Drawings should be returned intact with the completed Bid Form bound in place as originally received, the whole to constitute the Bid.

6.6 Bids including Bid Security and other required documents, shall be submitted at the time and place indicated in the Invitation to Bid and shall be enclosed in opaque sealed envelopes, marked with the title of the work and name and address of the Bidder. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it.

6.7 Bids may be modified or withdrawn by a document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

## 7. Disposition of Bids

7.1 OWNER any time prior to Bid opening may withdraw the Invitation to Bid and not accept Bids. Any Bid received under this circumstance will be returned, unopened to Bidder.

7.2 OWNER may open Bids and (unless obviously non-responsive) read aloud publicly.

7.3 OWNER will reject Bids other than the three (3) apparent lowest responsible bids and return Bid Security for rejected Bids within ten (10) business days after the date of Bid opening.

7.4 OWNER may hold the three (3) apparent lowest responsible Bids subject to acceptance for sixty (60) days after the day of the Bid opening; and the Bid security of these Bidders will be returned as follows: (1) to the unsuccessful Bidders within three (3) business days after a Notice of Award is made to Successful Bidder, and (2) to the Successful Bidder after the Agreement is executed and the required contract security furnished.

7.5 OWNER, in evaluating Bids, will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, and other data, as may be requested in the Bid Form.

7.6 OWNER reserves the right to reject any and all Bids, to waive any informalities and to reject nonconforming, nonresponsive, unbalanced or conditional Bids.

7.7 OWNER may conduct reasonable investigations as deemed necessary to assist in the evaluation of Bids and to establish the responsibility, qualifications and financial ability of Bidders to perform and furnish the Work in accordance with the Contract Documents.

## 8. Award of Contract

8.1 OWNER, if the Contract is awarded, will award it to the lowest responsible Bidder. The lowest Bid will be determined based on the total of the Bid price for each item as indicated in words in the Bid Form. The written entries will control over numerical entries regardless of whether there are arithmetic discrepancies between the written amount and the numerical entries.

8.2 OWNER will give the Successful Bidder a Notice of Award within sixty (60) days after the day of the Bid opening, if the Contract is to be awarded.

8.3 OWNER's Notice of Award to the Successful Bidder will be transmitted with the required number of unsigned counterparts of the Agreement.

8.4 Successful Bidder, within fifteen days after receiving Notice of Award shall sign and deliver the required number of counterparts of the Agreement to Owner with the required Bond. Paragraph 5.1 of the General Conditions and the Supplementary Conditions set forth Owner's requirements as to performance and payment Bonds.

8.5 Bidder, in submitting Bid, understands and agrees that the Bid security may be forfeited as liquidated damages, and not as a penalty, if the Bidder is determined to

be Successful Bidder and thereafter fails to execute the Agreement and furnish the required Bonds within the stipulated time.

8.6 OWNER, within ten (10) days after receiving the Agreement and bonds, shall deliver one signed counterpart to Contractor, and thereby establish the effective Date of Agreement.

#### 9. Commencement of Contract Time

9.1 OWNER may give CONTRACTOR a Notice to Proceed within thirty (30) days after the Effective Date of the Agreement, and indicate therein the day on which the Contract Time will commence to run.

9.2 If a Notice to Proceed is not given, the Contract Time will commence to run on the thirtieth day after the Effective Date of the Agreement.

9.3 In no event will the Contract Time commence to run later than the ninetieth day after the Bid openign or the thirtieth day after the Effective Date of Agreement, whichever is earlier, unless otherwise agreed upon by OWNER and CONTRACTOR.

#### 10. Contract Time

See Paragraph 3 of Bid Form.

#### 11. Damages

See Paragraph 4 of Bid Form.

#### 12. Retainage

See Paragraph 5 of Bid Form.

## NOTICE OF AWARD

Dated: \_\_\_\_\_ Job No. \_\_\_\_\_

To: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Owner: \_\_\_\_\_

Title of Work: \_\_\_\_\_

Location: \_\_\_\_\_

You are hereby notified that your Bid for the above Work has been accepted and you are awarded a contract per enclosed copy of Resolution of Award of Contract.

Four copies of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award, that is by \_\_\_\_\_, 199\_\_\_\_.

1. You must deliver to the OWNER four fully executed counterparts of the Agreement including the Contract Documents. The cover of the bound Contract Documents and the title sheet of Drawings must bear your authorized signature.
2. You must deliver with the executed Agreement, Construction Performance and Payment Bonds as specified in the General Conditions (Paragraph 5.1) and Supplementary Conditions (Paragraph SC-5.1) in the form set forth in Exhibits AG-A and AG-B of the Agreement.
3. You must deliver the required Affirmative Action Evidence deliver with the executed Agreement.

## NOTICE OF AWARD

Failure to comply with these conditions within the time specified will entitle **OWNER** to consider your bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

Within ten days after you comply with the conditions mentioned above, **OWNER** will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

You are advised that, in accordance with Paragraph 2.7 of the General Conditions, you will be required following Notice to Proceed to deliver certificates of insurance prior to starting any Work at the site.

OWNER: \_\_\_\_\_

BY: \_\_\_\_\_  
(Authorized Signature)

Title: \_\_\_\_\_

cc: Engineer

## AGREEMENT

THIS AGREEMENT is dated as of the \_\_\_\_\_ day of \_\_\_\_\_  
in the year 19\_\_\_\_ by and between \_\_\_\_\_

hereinafter called **OWNER** and

hereinafter called **CONTRACTOR**

**OWNER** and **CONTRACTOR**, for and in consideration of the mutual covenants, promises and agreements hereinafter set forth, agree to and with each other as follows:

### Article 1. **WORK**

**CONTRACTOR** shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

### Article 2. **ENGINEER**

The Project has been specified by:

**BIRDSALL ENGINEERING, INC.**  
1700 F Street  
South Belmar, New Jersey 07719

who is hereinafter called **ENGINEER** and is to act as **OWNER's** representative, assume all duties and responsibilities and have the rights and authority assigned to **ENGINEER** in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

### Article 3. **CONTRACT TIME AND DAMAGES.**

3.1 **Contract Time.** The Work required under the Contract Documents shall be completed and ready for final payment in accordance with Paragraph 14.13 of the General Conditions within \_\_\_\_\_ days from the date when the Contract Time commences to run as provided in Paragraph 2.3 of the General Conditions. This Contract Time is hereby made of the essence.

3.2 **Damages.** If the **CONTRACTOR** fails to have the work completed and ready for final payment on or before the Contract time specified in Article 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions, **OWNER** shall receive from **CONTRACTOR** a sum of money calculated at \_\_\_\_\_ Dollars (\$ \_\_\_\_\_) per day times the number of days of delay in completion of the Work, including Sundays and legal holidays.

The above sum is agreed upon to include intangible losses suffered by **OWNER** for matters such as public health and welfare, and the like. It is mutually agreed between the parties that this sum of money shall not preclude the **OWNER** from instituting an action for actual damages above and beyond the sum set forth above.

If monies due or to become due to the **CONTRACTOR** exceed the sum as set forth above, said sum shall be deducted from monies due, or to become due to the **CONTRACTOR**. In case the sum as set forth above shall exceed the amount of all monies due or to become due the **CONTRACTOR**, then the **CONTRACTOR** or his surety shall pay the balance to the **OWNER**.

#### Article 4. **CONTRACT PRICE.**

4.1 **OWNER** shall pay **CONTRACTOR** for performance of the Work as Bid with any alternates authorized herein in accordance with the Contract Documents in current funds at the prices set forth in the Bid Form which is attached hereto and made a part hereof; and in accordance with any amendments made to the Contract Documents subsequent to execution of this Agreement in accordance with Paragraph 3.4 of the General Conditions.

4.2 The Contract Price as shown in the Schedule of Prices (Exhibit BF-A) of the Bid Form is

#### Article 5. **PAYMENT PROCEDURES.**

**CONTRACTOR** shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by **ENGINEER** as provided in the General Conditions.

5.1 Progress Payments. **OWNER** shall make progress payments in accordance with **OWNER's** established payment procedures on the basis of **CONTRACTOR's** Applications for Payment as recommended by **ENGINEER** during construction on the basis of the progress of the Work. Progress payments may be made less retainage in an amount equal to:

less the aggregate of payments previously made and less such amounts as **ENGINEER** shall determine or **OWNER** may withhold, in accordance with Paragraph 14.7 of the General Conditions.

5.2 Final Payment. Upon final completion and acceptance of the Work in accordance with Paragraph 14.13 of the General Conditions, **OWNER** shall pay the remainder of the Contract Price as recommended by **ENGINEER** as provided in said Paragraph 14.13.

#### Article 6. **CONTRACTOR'S REPRESENTATIONS.**

In order to induce **OWNER** to enter into this Agreement **CONTRACTOR** makes the following representations:

6.1 **CONTRACTOR** has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

6.2 **CONTRACTOR** has studied carefully all reports of exploration and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in Paragraph 4.2 of the General Conditions, and accepts the determination set forth in Paragraph SC-4.2 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which **CONTRACTOR** is entitled to reply.

6.3 **CONTRACTOR** has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in Paragraph 6.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as **CONTRACTOR** considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by **CONTRACTOR** for such purposes.

6.4 **CONTRACTOR** has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect to said Underground Facilities are or will be required by **CONTRACTOR** in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with other terms and conditions of the Contract Documents, including specifically the provisions of Paragraph 4.3 of the General Conditions.

6.5 **CONTRACTOR** has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

6.6 **CONTRACTOR** has given **ENGINEER** written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by **ENGINEER** is acceptable to **CONTRACTOR**.

#### Article 7. **CONTRACT DOCUMENTS.**

7.1 The Contract Documents which comprise the entire Agreement between **OWNER** and **CONTRACTOR** concerning the Work consists of the following:

- Addenda Numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive  
(if applicable)
- Invitation to Bid
- Bid Form
  - Exhibit BF-A Schedule of Bid Prices
  - Exhibit BF-B Non-Collusion Affidavit
  - Exhibit BF-C Consent of Surety
  - Exhibit BF-D Certificate of Ownership
- Instructions to Bidders
- Notice of Award
  - Agreement
  - Exhibit AG-A Construction Performance Bond
  - Exhibit AG-B Construction Payment Bond
- Affirmative Action Evidence
- General Conditions
- Supplementary Conditions
  - Exhibit SC-A Resident Project Representative
- Specifications - General Requirements, Part I
- Specifications - General Requirements, Part II
  - Exhibit GR-A Schedule of Insurance Requirements
  - Exhibit GR-B Prevailing Wages
- Specifications - Technical Requirements
- Drawings, Bound Separately (if applicable)

7.2 The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraphs 3.4 and 3.5. of the General Conditions.

7.3 The documents listed in Paragraph 7.1 above are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in Paragraphs 3.4 and 3.5 of the General Conditions.

Article 8. MISCELLANEOUS.

8.1 Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

8.2 No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

8.3 **OWNER** and **CONTRACTOR** each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, **OWNER** and **CONTRACTOR** have signed this Agreement.

OWNER\_\_\_\_\_

CONTRACTOR\_\_\_\_\_

By\_\_\_\_\_

By\_\_\_\_\_

Attest\_\_\_\_\_

Attest\_\_\_\_\_

(Affix Seal)

(Affix Seal)

Address for giving notices

Address for giving notices

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Construction Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

## CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

## BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
  - 3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
  - 4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
  - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
  - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
    1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or
    2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
  - 6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
  - 6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions.
  - 12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 12.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
  - 12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
  - 12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

# Construction Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

## CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

## BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

**PROCUREMENT, PROFESSIONAL AND SERVICE CONTRACTORS  
AFFIRMATIVE ACTION REQUIREMENTS**

**A. Contractors**

1. Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, a procurement contractor should present one of the following to the public agency:
  - a. An existing federally approved or sanctioned affirmative action program.

Or
  - b. A Certificate of Employee Information Report Approval (Sample contained in Forms and Documents Section).

Or
  - c. If the contractor cannot present "a", or "b", and the contractor has never before applied for "b", the contractor is required to submit a completed Employee Information Report (Form AA302) contained in the sample Forms and Documents section of this manual. This form will be made available to contractors by the public agency awarding the contract or the State Affirmative Action Office. The State Affirmative Action Office will provide these forms to public agencies.
2. A contractor's bid must be rejected as non-responsive if a contractor fails to submit either "a", "b", or "c", listed above in #1, within the time specified after the public agency submits the contract to the contractor for signing.
3. When the Employee Information Report is completed by the Contractor, the copy marked "Public Agency" will be submitted to the public agency, the copy marked "Contractor" will be retained by the contractor, and the remaining copies will be forwarded immediately to:

Affirmative Action Office  
Department of the Treasury  
State House  
CN 209  
Trenton, NJ 08625

# Construction Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

## CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

## BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

## SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_  
Name and Title:

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
  - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
  - 2.2. Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
  - 4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
  - 4.2. Claimants who do not have a direct contract with the Contractor:
    1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
    2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
    3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
  - 6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
  - 6.2. Pay or arrange for payment of any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the Owner. Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (iii), or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

#### 15. DEFINITIONS

- 15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
- 15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

THE FOLLOWING SIX (6) PAGES APPLY TO PROCUREMENT, PROFESSIONAL AND  
SERVICE CONTRACTS ONLY

**PROCUREMENT, PROFESSIONAL AND SERVICE CONTRACTORS  
AFFIRMATIVE ACTION REQUIREMENTS**

**A. Contractors**

1. Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, a procurement contractor should present one of the following to the public agency:
  - a. An existing federally approved or sanctioned affirmative action program.
  - Or
  - b. A Certificate of Employee Information Report Approval (Sample contained in Forms and Documents Section).
  - Or
  - c. If the contractor cannot present "a", or "b", and the contractor has never before applied for "b", the contractor is required to submit a completed Employee Information Report (Form AA302) contained in the sample Forms and Documents section of this manual. This form will be made available to contractors by the public agency awarding the contract or the State Affirmative Action Office. The State Affirmative Action Office will provide these forms to public agencies.
2. A contractor's bid must be rejected as non-responsive if a contractor fails to submit either "a", "b", or "c", listed above in #1, within the time specified after the public agency submits the contract to the contractor for signing.
3. When the Employee Information Report is completed by the Contractor, the copy marked "Public Agency" will be submitted to the public agency, the copy marked "Contractor" will be retained by the contractor, and the remaining copies will be forwarded immediately to:

Affirmative Action Office  
Department of the Treasury  
State House  
CN 209  
Trenton, NJ 08625

U.S. Department of Labor

Employment Standards Administration  
Office of Federal Contract  
Compliance Programs  
Newark Area Office  
134 Evergreen Place, Fourth Floor  
East Orange, NJ 07018



February 27, 1985

Reply to the Attention of:

President

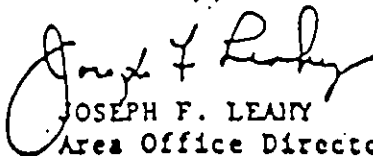
Dear

Our recent compliance review of your establishment's equal employment opportunity policies and practices was completed on February 27, 1985.

We found no apparent deficiencies or violations of Executive Order 11246, as amended, Section 503 of the Rehabilitation Act of 1973 or of 38 USC 2012 (the Vietnam Era Veterans' Readjustment Assistance Act). Accordingly, your establishment is deemed to be in compliance with these laws based on the material reviewed.

The Office of Federal Contract Compliance Programs sincerely appreciated the cooperation and courtesies extended by you and your staff during the conduct of the compliance review.

Sincerely,

  
JOSEPH F. LEAMY  
Area Office Director

cc: ✓ John C. Beason, Sr. Employment Affirmative Action Representative  
Louis J. Zanon, Manager Employment/Employee Relations

Certification \_\_\_\_\_

### CERTIFICATE OF EMPLOYEE INFORMATION REPORT APPROVAL

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of \_\_\_\_\_ to \_\_\_\_\_



State Treasurer

VOID  
SAMPLE ONLY

State of New Jersey

**AFFIRMATIVE ACTION EMPLOYEE INFORMATION REPORT****IMPORTANT—** READ INSTRUCTIONS ON BACK OF FORM CAREFULLY BEFORE COMPLETING FORM. TYPE OR PRINT IN SHARP BALL POINT PEN. FAILURE TO PROPERLY COMPLETE THE ENTIRE FORM MAY DELAY ISSUANCE OF YOUR CERTIFICATE.**SECTION A — COMPANY IDENTIFICATION**

|                                                                                                                                            |                                                                                                                                                                                                           |                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| 1. FID. NO. OR SOCIAL SECURITY                                                                                                             | 2. TYPE OF BUSINESS<br><input type="checkbox"/> 1. MFG. <input type="checkbox"/> 2. SERVICE <input type="checkbox"/> 3. WHOLESALE<br><input type="checkbox"/> 4. RETAIL <input type="checkbox"/> 5. OTHER | 3. TOTAL NO. EMPLOYEES IN THE ENTIRE COMPANY |
| 4. COMPANY NAME                                                                                                                            |                                                                                                                                                                                                           |                                              |
| 5. STREET                                                                                                                                  | CITY                                                                                                                                                                                                      | COUNTY STATE ZIP CODE                        |
| 6. NAME OF PARENT OR AFFILIATED COMPANY (IF NONE, SO INDICATE)                                                                             |                                                                                                                                                                                                           | CITY STATE ZIP CODE                          |
| 7. DOES THE ENTIRE COMPANY HAVE A TOTAL OF AT LEAST 50 EMPLOYEES? <input type="checkbox"/> YES <input type="checkbox"/> NO                 |                                                                                                                                                                                                           |                                              |
| 8. CHECK ONE: IS THE COMPANY: <input type="checkbox"/> SINGLE-ESTABLISHMENT EMPLOYER <input type="checkbox"/> MULTI-ESTABLISHMENT EMPLOYER |                                                                                                                                                                                                           |                                              |
| 9. IF MULTI-ESTABLISHMENT EMPLOYER, STATE THE NUMBER OF ESTABLISHMENTS IN N.J. <input type="text"/>                                        |                                                                                                                                                                                                           |                                              |
| 10. TOTAL NUMBER OF EMPLOYEES AT ESTABLISHMENT WHICH HAS BEEN AWARDED THE CONTRACT <input type="text"/>                                    |                                                                                                                                                                                                           |                                              |
| 11. PUBLIC AGENCY AWARDED CONTRACT                                                                                                         | CITY                                                                                                                                                                                                      | STATE ZIP CODE                               |

**OFFICIAL USE ONLY**

|                            |        |                                             |                               |
|----------------------------|--------|---------------------------------------------|-------------------------------|
| DATE RECEIVED<br>MO/DAY/YR | COUNTY | OUT OF STATE PERCENTAGES<br>MINORITY FEMALE | ASSIGNED CERTIFICATION NUMBER |
|----------------------------|--------|---------------------------------------------|-------------------------------|

**SECTION B — EMPLOYMENT DATA**

12. Report all permanent, temporary and part-time employees ON YOUR OWN PAYROLL. Enter the appropriate figures on all lines and in all columns. Where there are no employees in a particular category, enter a zero. Include ALL employees, not just those in minority categories, in columns 1, 2 &amp; 3.

| JOB CATEGORIES                                                                         | ALL EMPLOYEES                    |                |                  | MINORITY GROUP EMPLOYEES (Permanent) |          |                 |       |        |          |                 |       |  |
|----------------------------------------------------------------------------------------|----------------------------------|----------------|------------------|--------------------------------------|----------|-----------------|-------|--------|----------|-----------------|-------|--|
|                                                                                        | Col. 1<br>TOTAL<br>(Cols. 2 & 3) | Col. 2<br>MALE | Col. 3<br>FEMALE | MALE                                 |          |                 |       | FEMALE |          |                 |       |  |
|                                                                                        |                                  |                |                  | BLACK                                | HISPANIC | AMERICAN INDIAN | ASIAN | BLACK  | HISPANIC | AMERICAN INDIAN | ASIAN |  |
| Officials and Managers                                                                 |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Professionals                                                                          |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Technicians                                                                            |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Sales Workers                                                                          |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Office and Clerical                                                                    |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Craftworkers (Skilled)                                                                 |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Operatives (Semi-skilled)                                                              |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Laborers (Unskilled)                                                                   |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Service Workers                                                                        |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| TOTAL                                                                                  |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Total employment from Previous Report (if any)                                         |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| The data below shall NOT be included in the figures for the categories described above |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |
| Temporary and Part-time Employees                                                      |                                  |                |                  |                                      |          |                 |       |        |          |                 |       |  |

|                                                                                                                                                                                                                  |                                                                                                                                         |                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 13. HOW WAS INFORMATION AS TO RACE OR ETHNIC GROUP IN SECTION B OBTAINED?<br><input type="checkbox"/> 1. VISUAL SURVEY <input type="checkbox"/> 2. EMPLOYMENT RECORD <input type="checkbox"/> 3. OTHER (SPECIFY) | 15. IS THIS THE FIRST EMPLOYEE INFORMATION REPORT (AA-302) SUBMITTED?<br><input type="checkbox"/> 1. YES <input type="checkbox"/> 2. NO | 16. IF NO, DATE OF LAST REPORT SUBMITTED<br>MO. DAY YEAR |
| 14. DATES OF PAYROLL PERIOD USED<br>From: To:                                                                                                                                                                    |                                                                                                                                         |                                                          |

**SECTION C — SIGNATURE AND IDENTIFICATION**

|                                                                                |                   |         |                                              |
|--------------------------------------------------------------------------------|-------------------|---------|----------------------------------------------|
| 17. NAME OF PERSON COMPLETING FORM (Print or Type)<br>(CONTRACTOR EEO OFFICER) | SIGNATURE<br>(16) | TITLE   | DATE<br>MO. DAY YEAR                         |
| 18. ADDRESS (NO. & STREET)                                                     | (CITY)            | (STATE) | (ZIP CODE) PHONE (AREA CODE, NO., EXTENSION) |

WHITE - AFFIRMATIVE ACTION OFFICE; CANARY - AFFIRMATIVE ACTION OFFICE DP;  
PINK - PUBLIC AGENCY; GOLD - CONTRACTOR

## EXHIBIT A

### P.L. 1975, c. 127 (N.J.A.C. 17:27) Mandatory Affirmative Action Language Procurement, Professional or Service Contract

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this non-discrimination clause;

The contractor or subcontractor, where applicable, will in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, sex, affectional and sexual orientation;

The contractor or subcontractor, where applicable, will send to each labor union or representative or workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Public Agency Compliance Officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations, promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to attempt in good faith to employ minority and female workers consistent with the applicable county employment goals prescribed by N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time or in accordance with a binding determination of the applicable county employment goals determined by the Affirmative Action Office pursuant to N.J.A.C. 17:-5.2 promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time.

The contractor or subcontractor agrees to inform in writing appropriate recruitment agencies in the area, including employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

The contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and conform with the applicable employment goals, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (N.J.A.C. 17:27).

## **CONSTRUCTION CONTRACTS - AFFIRMATIVE ACTION REQUIREMENTS**

### **A. Mandatory Contract Language and Refusal to Sign Contract**

A construction contractor must sign a contract containing the mandatory language of Exhibit "B".

If a construction contractor refuses to sign a contract containing the mandatory affirmative action contract language at the time the contract is submitted for signing by the public agency, then the public agency shall reject the contractor's bid as non-responsive. When such a rejection occurs, the same affirmative action requirements shall apply to any other contractor selected by the public agency in accordance with contracting laws and procedures.

### **B. Initial Document Submissions**

If, prior to or at the time of the public agency submits a contract for signing, a construction contractor does not submit to the public agency evidence of an existing federally approved or sanctioned Affirmative Action Program; then no later than three (3) days after the contractor signs the construction contract, the contractor shall complete and submit the Projected Manning Table Form AA201 (Construction) to the public agency and Affirmative Action Office. The contractor should retain the copy of marked "Contractor", submit the copy marked "Public Agency" to the public agency and the remaining copies will be forwarded immediately to:

Affirmative Action Office  
Department of the Treasury  
State House  
CN 209  
Trenton, NJ 08625

Form AA201 is contained in the Sample Forms and Documents Section of this manual. Form AA201 is an estimate of the contractor's and subcontractor's workforce by craft. This form will be obtained from the public agency awarding the contract. The State Affirmative Action Office will provide these forms to the public agencies.

### **C. Contracts with Subcontractors**

Contractors must require its subcontractors to agree to the mandatory provisions of Exhibit "B".

### **D. Construction Contract Reports**

Construction contractors shall be responsible for the completion of Monthly Employment Utilization Reports for each project on forms made available by the Affirmative Action Office. The report shall include an analysis of the contractor and its subcontractor's workforce. The monthly Employee Utilization Report, Form AA202 shall be submitted to the Affirmative Action Office and Public Agency Compliance Officer no later than the seventh work day of each month for the duration of each project.

- 1) Construction contractors must fill out Manning Reports.
- 2) No work may begin until initial Manning Report is filed.
- 3) Payments to the Contractor will be withheld if these monthly reports are not current.

**INITIAL PROJECT WORKFORCE REPORT-CONSTRUCTION**

Official Use Only

Assignment \_\_\_\_\_

Code \_\_\_\_\_

READ INSTRUCTIONS ON BACK CAREFULLY BEFORE COMPLETING THIS FORM.  
TYPE OR PRINT IN SHARP BALL-POINT PEN.

DISTRIBUTION: Affirmative Action Office, Affirmative Action  
Office DP, Public Agency, Contractor

① Name and address of Prime Contractor

(NAME)

(STREET ADDRESS)

(CITY)

(STATE)

(ZIP CODE)

② MBE ☐

WBE ☐

③ Name and Address of Public Agency Awarding Contract

Date of Contract Award

Contract No.

Dollar Amount of Contract

④ Name and Location of Project

County \_\_\_\_\_

| ⑤<br>Trade or Craft    | Total Number Employees |    |        | Total Minority and<br>Female Employees |    |        | Projected<br>Phase-in<br>Date | Projected<br>Completion<br>Date |
|------------------------|------------------------|----|--------|----------------------------------------|----|--------|-------------------------------|---------------------------------|
|                        | J                      | AP | Female | J                                      | AP | Female |                               |                                 |
| 01 Asbestos Worker     |                        |    |        |                                        |    |        |                               |                                 |
| 02 Bricklayer or Mason |                        |    |        |                                        |    |        |                               |                                 |
| 03 Carpenter           |                        |    |        |                                        |    |        |                               |                                 |
| 04 Electrician         |                        |    |        |                                        |    |        |                               |                                 |
| 05 Glazier             |                        |    |        |                                        |    |        |                               |                                 |
| 06 HVAC Mechanic       |                        |    |        |                                        |    |        |                               |                                 |
| 07 Ironworker          |                        |    |        |                                        |    |        |                               |                                 |
| 08 Operating Engineer  |                        |    |        |                                        |    |        |                               |                                 |
| 09 Painter             |                        |    |        |                                        |    |        |                               |                                 |
| 10 Plumber             |                        |    |        |                                        |    |        |                               |                                 |
| 11 Roofer              |                        |    |        |                                        |    |        |                               |                                 |
| 12 Sheet Metal Worker  |                        |    |        |                                        |    |        |                               |                                 |
| 13 Sprinkler Fitter    |                        |    |        |                                        |    |        |                               |                                 |
| 14 Steamfitter         |                        |    |        |                                        |    |        |                               |                                 |
| 15 Surveyor            |                        |    |        |                                        |    |        |                               |                                 |
| 16 Tiler               |                        |    |        |                                        |    |        |                               |                                 |
| 17 Truck Driver        |                        |    |        |                                        |    |        |                               |                                 |
| 18 Laborer             |                        |    |        |                                        |    |        |                               |                                 |
| 19 Other               |                        |    |        |                                        |    |        |                               |                                 |
| 20 Other               |                        |    |        |                                        |    |        |                               |                                 |
| 21 Other               |                        |    |        |                                        |    |        |                               |                                 |
| 22 Other               |                        |    |        |                                        |    |        |                               |                                 |

⑥ Completed By (AA Officer) Print or Type

(NAME)

(SIGNATURE)

(TITLE)

(AREA CODE)

(TELEPHONE NO.)

(EXT.)

(DATE)

3714

DATE

(CITY) \_\_\_\_\_ (STATE) \_\_\_\_\_ (ZIP CODE) \_\_\_\_\_

Date of Award

6. Name and Location of Project

MBE ☐ WBE ☐

County

[illegible]

## EXHIBIT B

### P.L. 1975, C. 127 (N.J.A.C. 17:27) MANDATORY AFFIRMATIVE ACTION LANGUAGE CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

- a. The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or affectional and sexual orientation. The Contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex.. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause;
- b. The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex;
- c. The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- d. The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to P. L. 1975, C. 127, as amended and supplemented from time to time.
- e. When scheduling workers in each construction trade, the contractor or subcontractor agrees to attempt in good faith to employ minority and female workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27-7.3; provided, however, that the Affirmative Action Office may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by 1, 2. 3 below, as long as the Affirmative Action Office is satisfied that the contractor is scheduling workers provided by a union which provides evidence, in accordance with standards prescribed by the Affirmative Action Office, that its percentage of active "card carrying" members who are minority and female workers is equal to or greater than the applicable employment goal prescribed by N.J.A.C. 17:27-7.3, promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:
  - A. If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules

promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as supplemented and amended from time to time. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five days prior to the commencement of construction work, the contractor or subcontractor agrees to attempt to hire minority and female workers directly, consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and female workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire minority and female workers directly, consistent with the applicable employment goal, by complying with the hiring procedures prescribed under (c) below; and the contractor or subcontractor further agrees to take said action immediately if it determines or is so notified by the Affirmative Action Office that the union is not referring minority and female workers consistent with the applicable employment goal.

B. If the scheduling of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of (b) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable county employment goals:

1. To notify the Public Agency Compliance Officer, Affirmative Action Office, and at least one approved minority referral organization of its manpower needs, and request referral of minority and female workers;
2. To notify any minority and female workers who have been listed with it as awaiting available vacancies;
3. Prior to commencement of work, to request the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, to refer minority and female workers to fill job openings;
4. To leave standing requests for additional referral to minority and female workers with the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State Training and Employment Service and other approved referral sources in the area until such time as the workforce is consistent with the employment goal;
5. If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and female employees remain on the site consistent with the employment goal; and to employ any minority and female workers so laid off by the contractor or any other construction site in the area on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing P.L. 1975, c. 127;
6. To adhere to the following procedure when minority and female workers apply or are referred to the contractor or subcontractor:

- i. If said individuals have never previously received any document or certification signifying a level of qualification lower than that required, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each construction trade is not consistent with the applicable employment goal, it shall employ such persons which satisfy appropriate qualification standards; provided however, that a contractor or subcontractor shall determine that the individual at least possesses the skills and experience recognized by any worker skills and experience classification determination which may have been made by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Affirmative Action Office and provided further, that, if necessary, the contractor or subcontractor shall hire minority and female workers who qualify as trainees pursuant to these rules. All of these requirements, however, are limited by the provisions of (D) below.
    - ii. If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of said female or minority group individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable employment goal.
    - iii. If, for any reason, said contractor or subcontractor determines that a minority individual or a female is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing with the reasons for the determination, maintain a copy in its files, and send a copy to the Affirmative Action Office.
  7. To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the Affirmative Action Office and submitted promptly to that office upon request.
- C. The contractor or subcontractor agrees that nothing contained in (B) preceding provision shall preclude the contractor or subcontractor from complying with the hiring hall or apprenticeship provisions in any applicable collective bargaining agreement or hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement; provided, however, that where the practices of a union or apprenticeship program will result in the exclusion of minorities and females or the failure to refer minorities and females consistent with the county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to said provisions (B) without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ female and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds

the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade. Also, the contractor or subcontractor agrees that, in implementing the procedures of (B) above, it shall, where applicable, employ minority and female workers residing within the geographical jurisdiction of the union.

- D. The contractor agrees to complete an Initial Project Manning Report on forms provided by the Affirmative Action Office or in the form prescribed by the Affirmative Action Office and submit a copy of said form at time of award of construction contract and to submit a copy of the Monthly Project Manning Report once a month thereafter for the duration of this contract to the Affirmative Action Office and to the Public Agency Compliance Officer. The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and off-the-job programs for outreach and training of minority and female trainees employed on the construction projects.
- E. The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (N.J.A.C. 17:27).

STANDARD  
GENERAL CONDITIONS  
OF THE  
CONSTRUCTION CONTRACT

Prepared by  
Engineers' Joint Contract Documents Committee  
and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*A practice division of the*  
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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AMERICAN CONSULTING ENGINEERS COUNCIL

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AMERICAN SOCIETY OF CIVIL ENGINEERS

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CONSTRUCTION SPECIFICATIONS INSTITUTE

This document has been approved and endorsed by

The Associated General  Contractors of America

These General Conditions have been prepared for use with the Owner-Contractor Agreements (No. 1910-8-A-1 or 1910-8-A-2, 1983 editions). Their provisions are interrelated and a change in one may necessitate a change in the others. Comments concerning their usage are contained in the *Commentary on Agreements for Engineering Services and Contract Documents*, No. 1910-9, 1981 edition. For guidance in the preparation of Supplementary Conditions, see *Guide to the Preparation of Supplementary Conditions* (No. 1910-17, 1983 edition). When bidding is involved, the *Standard Form of Instructions to Bidders* (No. 1910-12, 1983 edition) may be used.

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1015 15th Street, N.W., Washington, D.C. 20005

American Society of Civil Engineers  
345 East 47th Street, New York, NY 10017

Construction Specifications Institute  
601 Madison St., Alexandria, VA 22314

## TABLE OF CONTENTS OF GENERAL CONDITIONS

| <i>Article<br/>Number</i> | <i>Title</i>                                                                                                   | <i>Page</i>   |
|---------------------------|----------------------------------------------------------------------------------------------------------------|---------------|
| 1                         | DEFINITIONS .....                                                                                              | 7             |
| 2                         | PRELIMINARY MATTERS .....                                                                                      | 8             |
| 3                         | CONTRACT DOCUMENTS:<br>INTENT, AMENDING AND REUSE .....                                                        | 9             |
| 4                         | AVAILABILITY OF LANDS: PHYSICAL CONDITIONS:<br>REFERENCE POINTS .....                                          | 10            |
| 5                         | BONDS AND INSURANCE .....                                                                                      | 11            |
| 6                         | CONTRACTOR'S RESPONSIBILITIES .....                                                                            | 14            |
| 7                         | OTHER WORK .....                                                                                               | 18            |
| 8                         | OWNER'S RESPONSIBILITIES .....                                                                                 | 19            |
| 9                         | ENGINEER'S STATUS DURING CONSTRUCTION .....                                                                    | 19            |
| 10                        | CHANGES IN THE WORK .....                                                                                      | 21            |
| 11                        | CHANGE OF CONTRACT PRICE .....                                                                                 | 21            |
| 12                        | CHANGE OF CONTRACT TIME .....                                                                                  | 24            |
| 13                        | WARRANTY AND GUARANTEE: TESTS AND<br>INSPECTIONS: CORRECTION, REMOVAL OR<br>ACCEPTANCE OF DEFECTIVE WORK ..... | 24            |
| 14                        | PAYMENTS TO CONTRACTOR AND COMPLETION .....                                                                    | 26            |
| 15                        | SUSPENSION OF WORK AND TERMINATION .....                                                                       | 29            |
| <del>16</del>             | <del>ARBITRATION Deleted</del> .....                                                                           | <del>31</del> |
| 17                        | MISCELLANEOUS .....                                                                                            | 31            |

# INDEX TO GENERAL CONDITIONS

## Article or Paragraph Number

|                                                                   |                             |                                                                         |                              |
|-------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------|------------------------------|
| Acceptance of Insurance .....                                     | 5.13                        | Contractor's Warranty of Title .....                                    | 14.3                         |
| Access to the Work .....                                          | 13.2                        | Contractors—other .....                                                 | 7                            |
| Addenda—definition of (see definition of<br>Specifications) ..... | 1                           | Contractual Liability Insurance .....                                   | 5.4                          |
| Agreement—definition of .....                                     | 1                           | Coordinating Contractor—definition of .....                             | 7.4                          |
| All Risk Insurance .....                                          | 5.6                         | Coordination .....                                                      | 7.4                          |
| Amendment, Written .....                                          | 1, 3.1.1                    | Copies of Documents .....                                               | 2.2                          |
| Application for Payment—definition of .....                       | 1                           | Correction or Removal of Defective Work .....                           | 13.11                        |
| Application for Payment, Final .....                              | 14.12                       | Correction Period, One Year .....                                       | 13.12                        |
| Application for Progress Payment .....                            | 14.2                        | Correction, Removal or Acceptance of Defective<br>Work—in general ..... | 13.11-13.14                  |
| Application for Progress Payment—review of ....                   | 14.4-14.7                   | Cost—net decrease .....                                                 | 11.6.2                       |
| Arbitration .....                                                 | 16                          | Cost of Work .....                                                      | 11.4-11.5                    |
| Authorized Variation in Work .....                                | 9.5                         | Costs, Supplemental .....                                               | 11.4.5                       |
| Availability of Lands .....                                       | 4.1                         |                                                                         |                              |
| Award, Notice of—defined .....                                    | 1                           |                                                                         |                              |
|                                                                   |                             | Day—definition of .....                                                 | 1                            |
| Before Starting Construction .....                                | 2.5-2.7                     | Defective—definition of .....                                           | 1                            |
| Bid—definition of .....                                           | 1                           | Defective Work, Acceptance of .....                                     | 13.13                        |
| Bonds and Insurance—in general .....                              | 5                           | Defective Work, Correction or Removal of .....                          | 13.11                        |
| Bonds—definition of .....                                         | 1                           | Defective Work—in general .....                                         | 13, 14.7, 14.11              |
| Bonds, Delivery of .....                                          | 2.1, 5.1                    | Defective Work, Rejecting .....                                         | 9.6                          |
| Bonds, Performance and Other .....                                | 5.1-5.2                     | Definitions .....                                                       | 1                            |
|                                                                   |                             | Delivery of Bonds .....                                                 | 2.1                          |
| Cash Allowances .....                                             | 11.8                        | Determination for Unit Prices .....                                     | 9.10                         |
| Change Order—definition of .....                                  | 1                           | Disputes, Decisions by Engineer .....                                   | 9.11-9.12                    |
| Change Orders—to be executed .....                                | 10.4                        | Documents, Copies of .....                                              | 2.2                          |
| Changes in the Work .....                                         | 10                          | Documents, Record .....                                                 | 6.19                         |
| Claims, Waiver of—on Final Payment .....                          | 14.16                       | Documents, Reuse .....                                                  | 3.6                          |
| Clarifications and Interpretations .....                          | 9.4                         | Drawings—definition of .....                                            | 1                            |
| Cleaning .....                                                    | 6.17                        |                                                                         |                              |
| Completion .....                                                  | 14                          | Easements .....                                                         | 4.1                          |
| Completion, Substantial .....                                     | 14.8-14.9                   | Effective date of Agreement—definition of .....                         | 1                            |
| Conference, Preconstruction .....                                 | 2.3                         | Emergencies .....                                                       | 6.22                         |
| Conflict, Error, Discrepancy—Contractor<br>to Report .....        | 2.5, 3.3                    | Engineer—definition of .....                                            | 1                            |
| Construction Machinery, Equipment, etc. ....                      | 6.4                         | Engineer's Decisions .....                                              | 9.10-9.12                    |
| Continuing Work .....                                             | 6.29                        | Engineer's—Notice Work is Acceptable .....                              | 14.13                        |
| Contract Documents—amending and<br>supplementing .....            | 3.4-3.5                     | Engineer's Recommendation of Payment .....                              | 14.4, 14.13                  |
| Contract Documents—definition of .....                            | 1                           | Engineer's Responsibilities, Limitations<br>on .....                    | 6.6, 9.11, 9.13-9.16         |
| Contract Documents—Intent .....                                   | 3.1-3.3                     | Engineer's Status During Construction—in general ....                   | 9                            |
| Contract Documents—Reuse of .....                                 | 3.6                         | Equipment, Labor, Materials and .....                                   | 6.3-6.6                      |
| Contract Price, Change of .....                                   | 11                          | Equivalent Materials and Equipment .....                                | 6.7                          |
| Contract Price—definition .....                                   | 1                           | Explorations of physical conditions .....                               | 4.2                          |
| Contract Time, Change of .....                                    | 12                          |                                                                         |                              |
| Contract Time, Commencement of .....                              | 2.3                         | Fee, Contractor's—Costs Plus .....                                      | 11.6                         |
| Contract Time—definition of .....                                 | 1                           | Field Order—definition of .....                                         | 1                            |
| Contractor—definition of .....                                    | 1                           | Field Order—issued by Engineer .....                                    | 3.5.1, 9.5                   |
| Contractor May Stop Work or Terminate .....                       | 15.5                        | Final application for Payment .....                                     | 14.12                        |
| Contractor's Continuing Obligation .....                          | 14.15                       | Final inspection .....                                                  | 14.11                        |
| Contractor's Duty to Report Discrepancy<br>in Documents .....     | 2.5, 3.2                    | Final Payment and Acceptance .....                                      | 14.13                        |
| Contractor's Fee—Cost Plus ...                                    | 11.4.5.6, 11.5.1, 11.6-11.7 | Final Payment, Recommendation of .....                                  | 14.13-14.14                  |
| Contractor's Liability Insurance .....                            | 5.3                         |                                                                         |                              |
| Contractor's Responsibilities—in general .....                    | 6                           | General Provisions .....                                                | 17.3-17.4                    |
|                                                                   |                             | General Requirements—definition of .....                                | 1                            |
|                                                                   |                             | General Requirements—principal<br>references to .....                   | 2.6, 4.4, 6.4, 6.6-6.7, 6.23 |

|                                                       |                      |                                                      |                                 |
|-------------------------------------------------------|----------------------|------------------------------------------------------|---------------------------------|
| Giving Notice .....                                   | 17.1                 | Payments to Contractor—when due .....                | 14.4, 14.13                     |
| Guarantee of Work—by Contractor .....                 | 13.1                 | Payments to Contractor—withholding .....             | 14.7                            |
| Indemnification .....                                 | 6.30-6.32, 7.5       | Performance and other Bonds .....                    | 5.1-5.2                         |
| Inspection, Final .....                               | 14.11                | Permits .....                                        | 6.13                            |
| Inspection, Tests and .....                           | 13.3                 | Physical Conditions .....                            | 4.2                             |
| Insurance, Bonds and—in general .....                 | 5                    | Physical Conditions—Engineer's review .....          | 4.2.1                           |
| Insurance, Certificates of .....                      | 2.7, 5               | Physical Conditions—existing structures .....        | 4.2.2                           |
| Insurance—completed operations .....                  | 5.3                  | Physical Conditions—explorations and reports .....   | 4.2.1                           |
| Insurance, Contractor's Liability .....               | 5.3                  | Physical Conditions—possible document change .....   | 4.2.5                           |
| Insurance, Contractual Liability .....                | 5.4                  | Physical Conditions—price and time adjustments ..... | 4.2.5                           |
| Insurance, Owner's Liability .....                    | 5.5                  | Physical Conditions—report of differing .....        | 4.2.3                           |
| Insurance, Property .....                             | 5.6-5.13             | Physical Conditions—Underground Facilities .....     | 4.3                             |
| Insurance—Waiver of Rights .....                      | 5.11                 | Preconstruction Conference .....                     | 2.8                             |
| Intent of Contract Documents .....                    | 3.3, 9.14            | Preliminary Matters .....                            | 2                               |
| Interpretations and Clarifications .....              | 9.4                  | Premises, Use of .....                               | 6.16-6.18                       |
| Investigations of physical conditions .....           | 4.2                  | Price, Change of Contract .....                      | 11                              |
| Labor, Materials and Equipment .....                  | 6.3-6.5              | Price-Contract—definition of .....                   | 1                               |
| Laws and Regulations—definition of .....              | 1                    | Progress Payment, Applications for .....             | 14.2                            |
| Laws and Regulations—general .....                    | 6.14                 | Progress Payment—retainage .....                     | 14.2                            |
| Liability Insurance—Contractor's .....                | 5.3                  | Progress schedule .....                              | 2.6, 2.9, 6.6, 6.29, 15.2.6     |
| Liability Insurance—Owner's .....                     | 5.5                  | Project—definition of .....                          | 1                               |
| Liens—definitions of .....                            | 14.2                 | Project Representation—provision for .....           | 9.3                             |
| Limitations on Engineer's                             |                      | Project Representative, Resident—definition of ..... | 1                               |
| Responsibilities .....                                | 6.6, 9.11, 9.13-9.16 | Project, Starting the .....                          | 2.4                             |
| Materials and equipment—furnished by Contractor ..... | 6.3                  | Property Insurance .....                             | 5.6-5.13                        |
| Materials and equipment—not                           |                      | Property Insurance—Partial Utilization .....         | 5.15                            |
| incorporated in Work .....                            | 14.2                 | Property Insurance—Receipt and Application           |                                 |
| Materials or equipment—equivalent .....               | 6.7                  | of Proceeds .....                                    | 5.12-5.13                       |
| Miscellaneous Provisions .....                        | 17                   | Protection, Safety and .....                         | 6.20-6.21                       |
| Multi-prime contracts .....                           | 7                    | Punch list .....                                     | 14.11                           |
| Notice, Giving of .....                               | 17.1                 | Recommendation of Payment .....                      | 14.4, 14.13                     |
| Notice of Acceptability of Project .....              | 14.13                | Record Documents .....                               | 6.19                            |
| Notice of Award—definition of .....                   | 1                    | Reference Points .....                               | 4.4                             |
| Notice to Proceed—definition of .....                 | 1                    | Regulations, Laws and .....                          | 6.14                            |
| Notice to Proceed—giving of .....                     | 2.3                  | Rejecting <i>Defective</i> Work .....                | 9.6                             |
| "Or-Equal" Items .....                                | 6.7                  | Related Work at Site .....                           | 7.1-7.3                         |
| Other contractors .....                               | 7                    | Remedies Not Exclusive .....                         | 17.4                            |
| Other work .....                                      | 7                    | Removal or Correction of <i>Defective</i> Work ..... | 13.11                           |
| Overtime Work—prohibition of .....                    | 6.3                  | Resident Project Representative—definition of .....  | 1                               |
| Owner—definition of .....                             | 1                    | Resident Project Representative—provision for .....  | 9.3                             |
| Owner May Correct <i>Defective</i> Work .....         | 13.14                | Responsibilities, Contractor's—in general .....      | 6                               |
| Owner May Stop Work .....                             | 13.10                | Responsibilities, Engineer's—in general .....        | 9                               |
| Owner May Suspend Work, Terminate .....               | 15.1-15.4            | Responsibilities, Owner's—in general .....           | 8                               |
| Owner's Duty to Execute Change Orders .....           | 11.8                 | Retainage .....                                      | 14.2                            |
| Owner's Liability Insurance .....                     | 5.5                  | Reuse of Documents .....                             | 3.5                             |
| Owner's Representative—Engineer to serve as .....     | 9.1                  | Rights of Way .....                                  | 4.1                             |
| Owner's Responsibilities—in general .....             | 8                    | Royalties, Patent Fees and .....                     | 6.12                            |
| Owner's Separate Representative at site .....         | 9.3                  | Safety and Protection .....                          | 6.20-6.21                       |
| Partial Utilization .....                             | 14.10                | Samples .....                                        | 6.23-6.28                       |
| Partial Utilization—definition of .....               | 1                    | Schedule of progress .....                           | 2.6, 2.8-2.9, 6.6, 6.29, 15.2.6 |
| Partial Utilization—Property Insurance .....          | 5.15                 | Schedule of Shop Drawing                             |                                 |
| Patent Fees and Royalties .....                       | 6.12                 | submissions .....                                    | 2.6, 2.8-2.9, 6.23, 14.1        |
| Payments, Recommendation of .....                     | 14.4-14.7, 14.13     | Schedule of values .....                             | 2.6, 2.8-2.9, 14.1              |
| Payments to Contractor—in general .....               | 14                   | Schedules, Finalizing .....                          | 2.9                             |
|                                                       |                      | Shop Drawings and Samples .....                      | 6.23-6.28                       |
|                                                       |                      | Shop Drawings—definition of .....                    | 1                               |
|                                                       |                      | Shop Drawings, use to approve                        |                                 |
|                                                       |                      | substitutions .....                                  | 6.7.3                           |



## GENERAL CONDITIONS

### ARTICLE I—DEFINITIONS *See SC-1*

Wherever used in these General Conditions or in the other Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

*Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

*Agreement*—The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

*Application for Payment*—The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

*Bid*—The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

*Bonds*—Bid, performance and payment bonds and other instruments of security.

*Change Order*—A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

*Contract Documents*—The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements issued pursuant to paragraphs 3.4 and 3.5 on or after the Effective Date of the Agreement.

*Contract Price*—The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

*Contract Time*—The number of days (computed as provided in paragraph 17.2) or the date stated in the Agreement for the completion of the Work.

*CONTRACTOR*—The person, firm or corporation with whom OWNER has entered into the Agreement.

*defective*—An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to ENGINEER's recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

*Drawings*—The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents.

*Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

*ENGINEER*—The person, firm or corporation named as such in the Agreement.

*Field Order*—A written order issued by ENGINEER which orders minor changes in the Work in accordance with paragraph 9.5 but which does not involve a change in the Contract Price or the Contract Time.

*General Requirements*—Sections of Division 1 of the Specifications.

*Laws and Regulations; Laws or Regulations*—Laws, rules, regulations, ordinances, codes and/or orders.

*Notice of Award*—The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

*Notice to Proceed*—A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.

*OWNER*—The public body or authority, corporation, association, firm or person with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

*Partial Utilization*—Placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

*Project*—The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

*Resident Project Representative*—The authorized representative of ENGINEER who is assigned to the site or any part thereof.

*Shop Drawings*—All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

*Specifications*—Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto.

*Subcontractor*—An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

*Substantial Completion*—The Work (or a specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if there be no such certificate issued, when final payment is due in accordance with paragraph 14.13. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

*Supplementary Conditions*—The part of the Contract Documents which amends or supplements these General Conditions.

*Supplier*—A manufacturer, fabricator, supplier, distributor, materialman or vendor.

*Underground Facilities*—All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

*Unit Price Work*—Work to be paid for on the basis of unit prices.

*Work*—The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

*Work Directive Change*—A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER and recommended by ENGINEER,

ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.22. A Work Directive Change may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time as provided in paragraph 10.2.

*Written Amendment*—A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the nonengineering or nontechnical rather than strictly Work-related aspects of the Contract Documents.

## ARTICLE 2—PRELIMINARY MATTERS

### *Delivery of Bonds:*

2.1. When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

### *Copies of Documents:* See SC-2.2

2.2. OWNER shall furnish to CONTRACTOR up to ten copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

### *Commencement of Contract Time; Notice to Proceed:*

2.3. The Contract Time will commence to run on the thirtieth day after the Effective Date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement. ~~In no event will the Contract Time commence to run later than the seventy-fifth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.~~ See SC-2.3

### *Starting the Project:*

2.4. CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

### *Before Starting Construction:*

2.5. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown

thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to ENGINEER any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from ENGINEER before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

2.6. Within ten days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to ENGINEER for review:

*See General Requirements  
GR-4*

2.6.1. an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

2.6.2. a preliminary schedule of Shop Drawing submissions; and

2.6.3. a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission.

2.7. Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to ENGINEER, certificates (and other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with paragraphs 5.3 and 5.4, and OWNER shall deliver to CONTRACTOR certificates (and other evidence of insurance requested by CONTRACTOR) which OWNER is required to purchase and maintain in accordance with paragraphs 5.6 and 5.7.

*See SC-2.7*

#### *Preconstruction Conference:*

2.8. Within twenty days after the Effective Date of the Agreement, but before CONTRACTOR starts the Work at the site, a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to discuss the schedules referred to in paragraph 2.6, to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

#### *Finalizing Schedules:*

2.9. At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, ENGINEER and others as appropriate will be held to finalize the schedules submitted in accordance with para-

graph 2.6. The finalized progress schedule will be acceptable to ENGINEER as providing an orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on ENGINEER responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility therefor. The finalized schedule of Shop Drawing submissions will be acceptable to ENGINEER as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to ENGINEER as to form and substance.

### ARTICLE 3—CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

#### *Intent:*

3.1. The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or ENGINEER, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to ENGINEER, or any of ENGINEER's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16. Clarifications and interpretations of the Contract Documents shall be issued by ENGINEER as provided in paragraph 9.4.

3.3. If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to ENGINEER in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification

from ENGINEER; however, CONTRACTOR shall not be liable to OWNER or ENGINEER for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

#### *Amending and Supplementing Contract Documents:*

3.4. The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:

- 3.4.1. a formal Written Amendment,
- 3.4.2. a Change Order (pursuant to paragraph 10.4), or
- 3.4.3. a Work Directive Change (pursuant to paragraph 10.1).

As indicated in paragraphs 11.2 and 12.1, Contract Price and Contract Time may only be changed by a Change Order or a Written Amendment.

3.5. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

- 3.5.1. a Field Order (pursuant to paragraph 9.5),
- 3.5.2. ENGINEER's approval of a Shop Drawing or sample (pursuant to paragraphs 6.26 and 6.27), or
- 3.5.3. ENGINEER's written interpretation or clarification (pursuant to paragraph 9.4).

#### *Reuse of Documents:*

3.6. Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of ENGINEER; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and ENGINEER and specific written verification or adaptation by ENGINEER.

### **ARTICLE 4—AVAILABILITY OF LANDS: PHYSICAL CONDITIONS; REFERENCE POINTS**

#### *Availability of Lands:*

4.1. OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and

such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER's furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

*See General Requirements GR-13*  
**Physical Conditions:**

4.2.1. *Explorations and Reports:* Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon nontechnical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

*See General Requirements GR-14*  
4.2.2. *Existing Structures:* Reference is made to the Supplementary Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the site that have been utilized by ENGINEER in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3. *Report of Differing Conditions:* If CONTRACTOR believes that:

4.2.3.1. any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2. any physical condition uncovered or revealed at the site differs materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22), notify OWNER and ENGINEER in writing about the inaccuracy or difference.

4.2.4. *ENGINEER's Review:* ENGINEER will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise OWNER in writing (with a copy to CONTRACTOR) of ENGINEER's findings and conclusions.

4.2.5. *Possible Document Change:* If ENGINEER concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change in the Contract Documents is required, a Work Directive Change or a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6. *Possible Price and Time Adjustments:* In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference. If OWNER and CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefor as provided in Articles 11 and 12.

#### *Physical Conditions—Underground Facilities:*

4.3.1. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to OWNER or ENGINEER by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

4.3.1.1. OWNER and ENGINEER shall not be responsible for the accuracy or completeness of any such information or data; and,

4.3.1.2. CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 6.20 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2. *Not Shown or Indicated.* If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.22), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and ENGINEER. ENGINEER will promptly review the Underground Facility to

determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of. If the parties are unable to agree as to the amount or length thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

#### *Reference Points:*

4.4. OWNER shall provide engineering surveys to establish reference points for construction which in ENGINEER's judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

## ARTICLE 5—BONDS AND INSURANCE

#### *Performance and Other Bonds:*

5.1. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act. *See SC - 5, 1*

5.2. If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of

the Project is located or it ceases to meet the requirements of paragraph 5.1. CONTRACTOR shall within five days thereafter substitute another Bond and Surety, both of which must be acceptable to OWNER.

*Contractor's Liability Insurance:*

See Exhibit  
SC-A

5.3. CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as is appropriate for the Work being performed and furnished and as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance and furnishing of the Work and CONTRACTOR's other obligations under the Contract Documents, whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

5.3.1. Claims under workers' or workmen's compensation, disability benefits and other similar employee benefit acts;

5.3.2. Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

5.3.3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

5.3.4. Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (b) by any other person for any other reason;

5.3.5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom;

5.3.6. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

5.3.7. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

See SC-5.3.8

The insurance required by this paragraph 5.3 shall include the specific coverages and be written for not less than the limits of liability and coverages provided in the Supplementary Conditions, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed or renewal refused until at least

thirty days' prior written notice has been given to OWNER and ENGINEER by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work in accordance with paragraph 13.12. In addition, CONTRACTOR shall maintain such completed operations insurance for at least two years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

*Contractual Liability Insurance:*

See Exhibit  
SC-A

5.4. The comprehensive general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to CONTRACTOR's obligations under paragraphs 6.30 and 6.31.

*Owner's Liability Insurance:*

5.5. OWNER shall be responsible for purchasing and maintaining OWNER's own liability insurance and, at OWNER's option, may purchase and maintain such insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

*Property Insurance:*

See Exhibit  
SC-A

5.6. Unless otherwise provided in the Supplementary Conditions, OWNER shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER's consultants in the Work, all of whom shall be listed as insureds or additional insured parties, shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the Supplementary Conditions, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment.

5.7. OWNER shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER AND ENGINEER's consultants in the Work, all of whom shall be listed as insured or additional insured parties.

5.8. All the policies of insurance for the certificates or other evidence thereof required to be purchased and maintained by OWNER in accordance with paragraphs 5.6 and 5.7 will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least thirty days' prior written notice has been given to CONTRACTOR by certified mail and will contain waiver provisions in accordance with paragraph 5.11.2.

5.9. OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR. Subcontractors or others in the Work to the extent of any deductible amounts that are provided in the Supplementary Conditions. The risk of loss within the deductible amount, will be borne by CONTRACTOR. Subcontractor or others suffering any such loss and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

See 5C-5.10 5.10. If CONTRACTOR requests in writing that other special insurance be included in the property insurance policy, OWNER shall, if possible, include such insurance, and the cost thereof will be charged to CONTRACTOR by appropriate Change Order or Written Amendment. Prior to commencement of the Work at the site, OWNER shall in writing advise CONTRACTOR whether or not such other insurance has been procured by OWNER.

#### *Waiver of Rights:*

5.11.1. OWNER and CONTRACTOR waive all rights against each other for all losses and damages caused by any of the perils covered by the policies of insurance provided in response to paragraphs 5.6 and 5.7 and any other property insurance applicable to the Work, and also waive all such rights against the Subcontractors, ENGINEER, ENGINEER's consultants and all other parties named as insureds in such policies for losses and damages so caused. As required by paragraph 6.11, each subcontract between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of OWNER, CONTRACTOR, ENGINEER, ENGINEER's consultants and all other parties named as insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to the proceeds of insurance held by OWNER as trustee or otherwise payable under any policy so issued.

5.11.2. OWNER and CONTRACTOR intend that any policies provided in response to paragraphs 5.6 and 5.7 shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any of the parties named as insureds or additional insureds, and if the insurers require separate waiver forms to be signed by ENGINEER or ENGINEER's consultant OWNER will obtain the same, and if

such waiver forms are required of any Subcontractor, CONTRACTOR will obtain the same.

#### *Receipt and Application of Proceeds:*

5.12. Any insured loss under the policies of insurance required by paragraphs 5.6 and 5.7 will be adjusted with OWNER and made payable to OWNER as trustee for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of paragraph 5.13. OWNER shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.

5.13. OWNER as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within fifteen days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If required in writing by any party in interest, OWNER as trustee shall, upon the occurrence of an insured loss, give bond for the proper performance of such duties.

#### *Acceptance of Insurance:*

5.14. If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with paragraphs 5.3 and 5.4 on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing thereof within ten days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.7. If CONTRACTOR has any objection to the coverage afforded by or other provisions of the policies of insurance required to be purchased and maintained by OWNER in accordance with paragraphs 5.6 and 5.7 on the basis of their not complying with the Contract Documents, CONTRACTOR shall notify OWNER in writing thereof within ten days of the date of delivery of such certificates to CONTRACTOR in accordance with paragraph 2.7. OWNER and CONTRACTOR shall each provide to the other such additional information in respect of insurance provided by each as the other may reasonably request. Failure by OWNER or CONTRACTOR to give any such notice of objection within the time provided shall constitute acceptance of such insurance purchased by the other as complying with the Contract Documents. See 5C-5.14

#### *Partial Utilization—Property Insurance:*

5.15. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no

such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or lapse on account of any such partial use or occupancy.

## ARTICLE 6—CONTRACTOR'S RESPONSIBILITIES

### *Supervision and Superintendence:*

6.1. CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.2. CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

### *Labor, Materials and Equipment: See SC-6.3*

6.3. CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER's written consent given after prior written notice to ENGINEER.

6.4. Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.5. All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to ENGINEER, or any of ENGINEER's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16. *See SC-6.5*

### *Adjusting Progress Schedule:*

6.6. CONTRACTOR shall submit to ENGINEER for acceptance (to the extent indicated in paragraph 2.9) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto. *See General Requirements GR-5*

### *Substitutes or "Or-Equal" Items:*

6.7.1. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by ENGINEER if sufficient information is submitted by CONTRACTOR to allow ENGINEER to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by ENGINEER will include the following as supplemented in the General Requirements. Requests for review of substitute items of material and equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or

royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish at CONTRACTOR's expense additional data about the proposed substitute.

*See SC- 6.7.1*

6.7.2. If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to ENGINEER, if CONTRACTOR submits sufficient information to allow ENGINEER to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by ENGINEER will be similar to that provided in paragraph 6.7.1 as applied by ENGINEER and as may be supplemented in the General Requirements.

6.7.3. ENGINEER will be allowed a reasonable time within which to evaluate each proposed substitute. ENGINEER will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without ENGINEER's prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute. ENGINEER will record time required by ENGINEER and ENGINEER's consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not ENGINEER accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER's consultants for evaluating each proposed substitute.

#### *Concerning Subcontractors, Suppliers and Others:*

6.8.1. CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and ENGINEER as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom OWNER or ENGINEER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.8.2. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by

OWNER and ENGINEER and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's or ENGINEER's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by OWNER or ENGINEER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or ENGINEER to reject defective Work.

6.9. CONTRACTOR shall be fully responsible to OWNER and ENGINEER for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or ENGINEER and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or ENGINEER to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.10. The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.11. All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and ENGINEER and contains waiver provisions as required by paragraph 5.11. CONTRACTOR shall pay each Subcontractor a just share of any insurance moneys received by CONTRACTOR on account of losses under policies issued pursuant to paragraphs 5.6 and 5.7.

#### *Patent Fees and Royalties: See SC- 6.12*

6.12. CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER

or ENGINEER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others. The existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

#### *Permits:*

6.13. Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement, CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

*See General Requirements G2-15*

#### *Laws and Regulations:*

6.14.1. CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor ENGINEER shall be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

6.14.2. If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give ENGINEER prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to ENGINEER, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

*Taxes: See SC-6.15*

6.15. CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the

place of the Project which are applicable during the performance of the Work.

#### *Use of Premises:*

6.16. CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or ENGINEER by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance of the Work.

6.17. During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

6.18. CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

#### *Record Documents:*

6.19. CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to ENGINEER for reference. Upon com-

pletion of the Work, these record documents, samples and Shop Drawings will be delivered to ENGINEER for OWNER.

#### *Safety and Protection:*

6.20. CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.20.1. all employees on the Work and other persons and organizations who may be affected thereby;

6.20.2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.20.3. other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of OWNER or ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and ENGINEER has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.21. CONTRACTOR shall designate a responsible representative at the site whose duty shall be the prevention of accidents. This person shall be CONTRACTOR's superintendent unless otherwise designated in writing by CONTRACTOR to OWNER.

#### *Emergencies:*

6.22. In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR, without special instruction or authorization from ENGINEER or OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variations.

#### *Shop Drawings and Samples:*

6.23. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to ENGINEER for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.9), or for other appropriate action if so indicated in the Supplementary Conditions, ~~five~~ copies (unless otherwise specified in the General Requirements) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as ENGINEER may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable ENGINEER to review the information as required. See SC-6.23; SC-6.23.1

6.24. CONTRACTOR shall also submit to ENGINEER for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.25.1. Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

6.25.2. At the time of each submission, CONTRACTOR shall give ENGINEER specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on

each Shop Drawing submitted to ENGINEER for review and approval of each such variation.

6.26. ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but ENGINEER's review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by ENGINEER, and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by ENGINEER on previous submittals.

6.27. ENGINEER's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called ENGINEER's attention to each such variation at the time of submission as required by paragraph 6.25.2 and ENGINEER has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.25.1.

6.28. Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to ENGINEER's review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

#### *Continuing the Work:*

6.29. CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by paragraph 15.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

#### *Indemnification:*

6.30. To the fullest extent permitted by Laws and Regulations CONTRACTOR shall indemnify and hold harmless OWNER and ENGINEER and their consultants, agents and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising out of or resulting from the performance of the Work,

provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Law and Regulations regardless of the negligence of any such party.

6.31. In any and all claims against OWNER or ENGINEER or any of their consultants, agents or employees by any employee of CONTRACTOR, any Subcontractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.30 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.32. The obligations of CONTRACTOR under paragraph 6.30 shall not extend to the liability of ENGINEER, ENGINEER's consultants, agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications.

## ARTICLE 7—OTHER WORK

### *Related Work at Site:*

7.1. OWNER may perform other work related to the Project at the site by OWNER's own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if CONTRACTOR believes that such performance will involve additional expense to CONTRACTOR or requires additional time and the parties are unable to agree as to the extent thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

7.2. CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CON-

TRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of ENGINEER and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

7.3. If any part of CONTRACTOR's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to ENGINEER in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR's failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or non-apparent defects and deficiencies in the other work.

*Coordination:*

7.4. If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Supplementary Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Supplementary Conditions. Unless otherwise provided in the Supplementary Conditions, neither OWNER nor ENGINEER shall have any authority or responsibility in respect of such coordination.

*See SC-7.5*

ARTICLE 8—OWNER'S RESPONSIBILITIES

8.1. OWNER shall issue all communications to CONTRACTOR through ENGINEER.

8.2. In case of termination of the employment of ENGINEER, OWNER shall appoint an engineer against whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former ENGINEER. ~~Any dispute in connection with such appointment shall be subject to arbitration.~~ *See SC-8.2*

8.3. OWNER shall furnish the data required of OWNER under the Contract Documents promptly and shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 14.4 and 14.13.

8.4. OWNER's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER's identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing struc-

tures which have been utilized by ENGINEER in preparing the Drawings and Specifications.

8.5. OWNER's responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in paragraphs 5.5 through 5.8.

8.6. OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.

8.7. OWNER's responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.

8.8. In connection with OWNER's right to stop Work or suspend Work, see paragraphs 13.10 and 13.11. Paragraph 13.2 deals with OWNER's right to terminate services of CONTRACTOR under certain circumstances.

ARTICLE 9—ENGINEER'S STATUS DURING CONSTRUCTION

*Owner's Representative:*

9.1. ENGINEER will be OWNER's representative during the construction period. The duties and responsibilities and the limitations of authority of ENGINEER as OWNER's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and ENGINEER.

*Visits to Site:*

9.2. ENGINEER will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. ENGINEER will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. ENGINEER's efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations as an experienced and qualified design professional, ENGINEER will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

*Project Representation: See SC-9.3*

9.3. If OWNER and ENGINEER agree, ENGINEER will furnish a Resident Project Representative to assist ENGINEER in observing the performance of the Work. The duties, responsibilities and limitations of authority of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions. If OWNER designates another agent to represent OWNER at the site who is not ENGINEER's agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Supplementary Conditions.

#### *Clarifications and Interpretations:*

9.4. ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Article 11 or Article 12.

#### *Authorized Variations in Work:*

9.5. ENGINEER may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER, and also on CONTRACTOR who shall perform the Work involved promptly. If CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time and the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefor as provided in Article 11 or 12.

#### *Rejecting Defective Work:*

9.6. ENGINEER will have authority to disapprove or reject Work which ENGINEER believes to be *defective*, and will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

#### *Shop Drawings, Change Orders and Payments:*

9.7. In connection with ENGINEER's responsibility for Shop Drawings and samples, see paragraphs 6.23 through 6.29 inclusive.

9.8. In connection with ENGINEER's responsibilities as to Change Orders, see Articles 10, 11 and 12.

9.9. In connection with ENGINEER's responsibilities in respect of Applications for Payment, etc., see Article 14.

#### *Determinations for Unit Prices:*

9.10. ENGINEER will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR. ENGINEER will review with CONTRACTOR ENGINEER's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). ENGINEER's written decisions thereon will be final and binding upon OWNER and CONTRACTOR, unless, within ten days after the date of any such decision, either OWNER or CONTRACTOR delivers to the other party to the Agreement and

to ENGINEER written notice of intention to appeal from such a decision.

#### *Decisions on Disputes:*

9.11. ENGINEER will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Time will be referred initially to ENGINEER in writing with a request for a formal decision in accordance with this paragraph, which ENGINEER will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered by the claimant to ENGINEER and the other party to the Agreement promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to ENGINEER and the other party within sixty days after such occurrence unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim. *See SC-9.11*

9.12. When functioning as interpreter and judge under paragraphs 9.10 and 9.11, ENGINEER will not show partiality to OWNER or CONTRACTOR and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by ENGINEER pursuant to paragraphs 9.10 and 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by OWNER or CONTRACTOR of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

#### *Limitations on ENGINEER's Responsibilities:*

9.13. Neither ENGINEER's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of ENGINEER to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.14. Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be

effective to assign to ENGINEER any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

9.15. ENGINEER will not be responsible for CONTRACTOR's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and ENGINEER will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Contract Documents.

9.16. ENGINEER will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

#### ARTICLE 10—CHANGES IN THE WORK

10.1. Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work: these will be authorized by a Written Amendment, a Change Order, or a Work Directive Change. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2. If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Work Directive Change, a claim may be made therefor as provided in Article 11 or Article 12.

10.3. CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.22 and except in the case of uncovering Work as provided in paragraph 13.9.

10.4. OWNER and CONTRACTOR shall execute appropriate Change Orders (or Written Amendments) covering:

10.4.1. changes in the Work which are ordered by OWNER pursuant to paragraph 10.1, are required because of acceptance of defective Work under paragraph 13.13 or correcting defective Work under paragraph 13.14, or are agreed to by the parties;

10.4.2. changes in the Contract Price or Contract Time which are agreed to by the parties; and

10.4.3. changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by ENGINEER pursuant to paragraph 9.11;

provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 6.29.

10.5. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

#### ARTICLE 11—CHANGE OF CONTRACT PRICE

11.1. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

11.2. The Contract Price may only be changed by a Change Order or by a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this paragraph 11.2.

11.3. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1. through 11.9.3. inclusive).

11.3.2. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2.1).

11.3.3. On the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5) plus a CONTRACTOR's Fee for overhead and profit (determined as provided in paragraphs 11.6 and 11.7).

*Cost of the Work:*

11.4. The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.5:

11.4.1. Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

11.4.2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

11.4.3. Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of ENGINEER, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR's Cost of the Work. All subcontracts shall be subject

to the other provisions of the Contract Documents insofar as applicable.

11.4.4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5. Supplemental costs including the following:

11.4.5.1. The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

11.4.5.2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

11.4.5.3. Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of ENGINEER, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof—all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

11.4.5.4. Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.5. Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

11.4.5.6. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER in accordance with paragraph 5.9), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's Fee. If, however, any such loss or damage

requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7. The cost of utilities, fuel and sanitary facilities at the site.

11.4.5.8. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

11.4.5.9. Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER in accordance with paragraph 5.9.

11.5. The term Cost of the Work shall not include any of the following:

11.5.1. Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1 or specifically covered by paragraph 11.4.4—all of which are to be considered administrative costs covered by the CONTRACTOR's Fee.

11.5.2. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.

11.5.3. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

11.5.4. Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

11.5.6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

#### CONTRACTOR's Fee:

11.6. The CONTRACTOR's Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

11.6.1. a mutually acceptable fixed fee; or if none can be agreed upon.

11.6.2. a fee based on the following percentages of the various portions of the Cost of the Work:

11.6.2.1. for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR's Fee shall be fifteen percent;

11.6.2.2. for costs incurred under paragraph 11.4.3, the CONTRACTOR's Fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

11.6.2.3. no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;

11.6.2.4. the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR's Fee by an amount equal to ten percent of the net decrease; and

11.6.2.5. when both additions and credits are involved in any one change, the adjustment in CONTRACTOR's Fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.4, inclusive.

11.7. Whenever the cost of any Work is to be determined pursuant to paragraph 11.4 or 11.5, CONTRACTOR will submit in form acceptable to ENGINEER an itemized cost breakdown together with supporting data.

#### Cash Allowances:

11.8. It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to ENGINEER. CONTRACTOR agrees that:

11.8.1. The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

11.8.2. CONTRACTOR's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the

allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by ENGINEER to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### *Unit Price Work:*

11.9.1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by ENGINEER in accordance with Paragraph 9.10.

11.9.2. Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.9.3. Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the amount of any such increase.

### ARTICLE 12—CHANGE OF CONTRACT TIME

12.1. The Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered by the party making the claim to the other party and to ENGINEER promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time

shall be determined by ENGINEER in accordance with paragraph 9.11 if OWNER and CONTRACTOR cannot otherwise agree. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2. The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefor as provided in paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 7, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

12.3. All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) for delay by either party.

### ARTICLE 13—WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

#### *Warranty and Guarantee:*

13.1. CONTRACTOR warrants and guarantees to OWNER and ENGINEER that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

#### *Access to Work:*

13.2. ENGINEER and ENGINEER's representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

#### *Tests and Inspections:*

13.3. CONTRACTOR shall give ENGINEER timely notice of readiness of the Work for all required inspections, tests or approvals.

13.4. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish ENGINEER the required certificates of inspection, testing or approval. CONTRACTOR shall also

be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER's or ENGINEER's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. ~~The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by OWNER (unless otherwise specified).~~

*See SC-13.4*

13.5. All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by ENGINEER if so specified).

*See SC 13.5*

*See SC 13.5.1*

13.6. If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of ENGINEER, it must, if requested by ENGINEER, be uncovered for observation. Such uncovering shall be at CONTRACTOR's expense unless CONTRACTOR has given ENGINEER timely notice of CONTRACTOR's intention to cover the same and ENGINEER has not acted with reasonable promptness in response to such notice.

13.7. Neither observations by ENGINEER nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR's obligations to perform the Work in accordance with the Contract Documents.

#### *Uncovering Work:*

13.8. If any Work is covered contrary to the written request of ENGINEER, it must, if requested by ENGINEER, be uncovered for ENGINEER's observation and replaced at CONTRACTOR's expense.

13.9. If ENGINEER considers it necessary or advisable that covered Work be observed by ENGINEER or inspected or tested by others, CONTRACTOR, at ENGINEER's request, shall uncover, expose or otherwise make available for observation, inspection or testing as ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is *defective*, CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals), and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be *defective*, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction; and, if the parties are unable to agree as to the amount or extent

thereof, CONTRACTOR may make a claim therefor as provided in Articles 11 and 12.

#### *Owner May Stop the Work:*

13.10. If the Work is *defective*, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

#### *Correction or Removal of Defective Work:*

13.11. If required by ENGINEER, CONTRACTOR shall promptly, as directed, either correct all *defective* Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by ENGINEER, remove it from the site and replace it with *nondefective* Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

#### *One Year Correction Period:*

13.12. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be *defective*, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such *defective* Work, or, if it has been rejected by OWNER, remove it from the site and replace it with *nondefective* Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the *defective* Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

#### *Acceptance of Defective Work:*

13.13. If, instead of requiring correction or removal and replacement of *defective* Work, OWNER (and, prior to ENGINEER's recommendation of final payment, also ENGINEER) prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential

costs attributable to OWNER's evaluation of and determination to accept such *defective* Work (such costs to be approved by ENGINEER as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to ENGINEER's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by CONTRACTOR to OWNER.

*OWNER May Correct Defective Work:*

13.14. If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct *defective* Work or to remove and replace rejected Work as required by ENGINEER in accordance with paragraph 13.11, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by ENGINEER, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefor as provided in Article 11. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's *defective* Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

## ARTICLE 14—PAYMENTS TO CONTRACTOR AND COMPLETION

*Schedule of Values:*

14.1. The schedule of values established as provided in paragraph 2.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to ENGINEER. Progress payments on account of Unit Price Work will be based on the number of units completed.

*Application for Progress Payment:*

14.2. At least twenty days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to ENGINEER for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER's interest therein, all of which will be satisfactory to OWNER. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*CONTRACTOR's Warranty of Title:*

14.3. CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

*Review of Applications for Progress Payment:*

14.4. ENGINEER will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing ENGINEER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Ten days after presentation of the Application for Payment with ENGINEER's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due and when due will be paid by OWNER to CONTRACTOR.

14.5. ENGINEER's recommendation of any payment requested in an Application for Payment will constitute a

representation by ENGINEER to OWNER, based on ENGINEER's on-site observations of the Work in progress as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation); and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or OWNER to withhold payment to CONTRACTOR.

14.6. ENGINEER's recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR's being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.

14.7. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

14.7.1. the Work is *defective*, or completed Work has been damaged requiring correction or replacement,

14.7.2. the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3. OWNER has been required to correct *defective* Work or complete Work in accordance with paragraph 13.14, or

14.7.4. of ENGINEER's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

OWNER may refuse to make payment of the full amount recommended by ENGINEER because claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling

OWNER to a set-off against the amount recommended, but OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action.

#### *Substantial Completion:*

14.8. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment. *See SC 14.8*

14.9. OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

#### *Partial Utilization:*

14.10. Use by OWNER of any finished part of the Work, which has specifically been identified in the Contract Docu-

(including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as revised from time to time);

15.2.7. if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.8. if CONTRACTOR disregards the authority of ENGINEER; or

15.2.9. if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if there be one) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ENGINEER and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

15.3. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.4. Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

*Contractor May Stop Work or Terminate:*

15.5. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

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ARTICLE 16 DELETED

## ARTICLE 17—MISCELLANEOUS

### *Giving Notice:*

17.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### *Computation of Time:*

17.2.1. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.2.2. A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

### *General:*

17.3. Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omis-

sion or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

17.4. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.30, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

See SC-18

representation by ENGINEER to OWNER, based on ENGINEER's on-site observations of the Work in progress as an experienced and qualified design professional and on ENGINEER's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of ENGINEER's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10, and to any other qualifications stated in the recommendation); and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment ENGINEER will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to ENGINEER in the Contract Documents or that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER or OWNER to withhold payment to CONTRACTOR.

14.6. ENGINEER's recommendation of final payment will constitute an additional representation by ENGINEER to OWNER that the conditions precedent to CONTRACTOR's being entitled to final payment as set forth in paragraph 14.13 have been fulfilled.

14.7. ENGINEER may refuse to recommend the whole or any part of any payment if, in ENGINEER's opinion, it would be incorrect to make such representations to OWNER. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect OWNER from loss because:

14.7.1. the Work is *defective*, or completed Work has been damaged requiring correction or replacement,

14.7.2. the Contract Price has been reduced by Written Amendment or Change Order,

14.7.3. OWNER has been required to correct *defective* Work or complete Work in accordance with paragraph 13.14, or

14.7.4. of ENGINEER's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

OWNER may refuse to make payment of the full amount recommended by ENGINEER because claims have been made against OWNER on account of CONTRACTOR's performance or furnishing of the Work or Liens have been filed in connection with the Work or there are other items entitling

OWNER to a set-off against the amount recommended, but OWNER must give CONTRACTOR immediate written notice (with a copy to ENGINEER) stating the reasons for such action.

#### *Substantial Completion:*

14.8. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall notify OWNER and ENGINEER in writing that the entire Work is substantially complete (except for items specifically listed by CONTRACTOR as incomplete) and request that ENGINEER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR and ENGINEER shall make an inspection of the Work to determine the status of completion. If ENGINEER does not consider the Work substantially complete, ENGINEER will notify CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers the Work substantially complete, ENGINEER will prepare and deliver to OWNER a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. OWNER shall have seven days after receipt of the tentative certificate during which to make written objection to ENGINEER as to any provisions of the certificate or attached list. If, after considering such objections, ENGINEER concludes that the Work is not substantially complete, ENGINEER will within fourteen days after submission of the tentative certificate to OWNER notify CONTRACTOR in writing, stating the reasons therefor. If, after consideration of OWNER's objections, ENGINEER considers the Work substantially complete, ENGINEER will within said fourteen days execute and deliver to OWNER and CONTRACTOR a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as ENGINEER believes justified after consideration of any objections from OWNER. At the time of delivery of the tentative certificate of Substantial Completion ENGINEER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. Unless OWNER and CONTRACTOR agree otherwise in writing and so inform ENGINEER prior to ENGINEER's issuing the definitive certificate of Substantial Completion, ENGINEER's aforesaid recommendation will be binding on OWNER and CONTRACTOR until final payment. *See SC 14.8*

14.9. OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

#### *Partial Utilization:*

14.10. Use by OWNER of any finished part of the Work, which has specifically been identified in the Contract Docu-

ments, or which OWNER, ENGINEER and CONTRACTOR agree constitutes a separately functioning and useable part of the Work that can be used by OWNER without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1. OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and substantially complete. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. CONTRACTOR at any time may notify OWNER and ENGINEER in writing that CONTRACTOR considers any such part of the Work ready for its intended use and substantially complete and request ENGINEER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion. If ENGINEER does not consider that part of the Work to be substantially complete, ENGINEER will notify OWNER and CONTRACTOR in writing giving the reasons therefor. If ENGINEER considers that part of the Work to be substantially complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

14.10.2. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to ENGINEER and within a reasonable time thereafter OWNER, CONTRACTOR and ENGINEER shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and ENGINEER that such part of the Work is not ready for separate operation by OWNER, ENGINEER will finalize the list of items to be completed or corrected and will deliver such list to OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed ENGINEER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work.

14.10.3. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.15 in respect of property insurance.

*Final Inspection:*

14.11. Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, ENGINEER will make a final inspection with OWNER and CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

*Final Application for Payment:*

14.12. After CONTRACTOR has completed all such corrections to the satisfaction of ENGINEER and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 6.19) and other documents—all as required by the Contract Documents, and after ENGINEER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full: an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

*Final Payment and Acceptance:*

14.13. If, on the basis of ENGINEER's observation of the Work during construction and final inspection, and ENGINEER's review of the final Application for Payment and accompanying documentation—all as required by the Contract Documents, ENGINEER is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, ENGINEER will, within ten days after receipt of the final Application for Payment, indicate in writing ENGINEER's recommendation of payment and present the Application to OWNER for payment. Thereupon ENGINEER will give written notice to OWNER and CONTRACTOR that the Work is acceptable subject to the provisions of paragraph 14.16.

Otherwise, ENGINEER will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Thirty days after presentation to OWNER of the Application and accompanying documentation, in appropriate form and substance, and with ENGINEER's recommendation and notice of acceptability, the amount recommended by ENGINEER will become due and will be paid by OWNER to CONTRACTOR.

14.14. If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed and if ENGINEER so confirms, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of ENGINEER, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to ENGINEER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

#### *Contractor's Continuing Obligation:*

14.15. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by ENGINEER, nor the issuance of a certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor the issuance of a notice of acceptability by ENGINEER pursuant to paragraph 14.13, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.16).

#### *Waiver of Claims:*

14.16. The making and acceptance of final payment will constitute:

14.16.1. a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of

CONTRACTOR's continuing obligations under the Contract Documents; and

14.16.2. a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

## ARTICLE 15—SUSPENSION OF WORK AND TERMINATION

### *Owner May Suspend Work:*

15.1. OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and ENGINEER which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 11 and 12.

### *Owner May Terminate:*

15.2. Upon the occurrence of any one or more of the following events:

15.2.1. if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

15.2.2. if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

15.2.3. if CONTRACTOR makes a general assignment for the benefit of creditors;

15.2.4. if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR's creditors;

15.2.5. if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

15.2.6. if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents

(including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.9 as revised from time to time):

15.2.7. if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.8. if CONTRACTOR disregards the authority of ENGINEER; or

15.2.9. if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety, if there be one) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by ENGINEER and incorporated in a Change Order, but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

15.3. Where CONTRACTOR's services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.4. Upon seven days' written notice to CONTRACTOR and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

*Contractor May Stop Work or Terminate:*

15.5. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or ENGINEER fails to act on any Application for Payment within thirty days after it is submitted, or OWNER fails for thirty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and ENGINEER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if ENGINEER has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and ENGINEER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 6.29 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

[The remainder of this page was left blank intentionally.]

ARTICLE 16 DELETED

## ARTICLE 17—MISCELLANEOUS

### *Giving Notice:*

17.1. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### *Computation of Time:*

17.2.1. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.2.2. A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

### *General:*

17.3. Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omis-

sion or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

17.4. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.30, 13.1, 13.12, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER and ENGINEER thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

*See SC-18*

SUPPLEMENTARY CONDITIONS

Table of Contents

| <u>Article Number</u>    | <u>Title</u>                                            | <u>Page</u> |
|--------------------------|---------------------------------------------------------|-------------|
|                          | Introductory Statement.                                 |             |
|                          | PART I                                                  |             |
|                          | <u>AMENDMENTS AND SUPPLEMENTS TO GENERAL CONDITIONS</u> |             |
| SC-1                     | Defined Terms                                           | 1           |
| SC-2.2                   | Copies of Documents                                     | 1           |
| SC-2.3                   | Contract Time                                           | 2           |
| SC-2.7                   | Insurance Certificates                                  | 2           |
| SC-3.2                   | Intent of Documents                                     | 2           |
| SC-4.2                   | Physical Conditions                                     | 3           |
| SC-5.1                   | Performance and Payment Bonds                           | 3           |
| SC-5.3, 5.4, 5.6 and 5.7 | Insurance Coverage Requirements                         | 3           |
| SC-5.3.8                 | Railroad Insurance                                      | 3           |
| SC-5.6                   | Property Insurance                                      | 3           |
| SC-5.7                   | Boiler, Machinery or Additional Property<br>Insurance   | 4           |
| SC-5.10                  | Insurance Requests (Deleted)                            | 4           |
| SC-5.14                  | Acceptance of Insurance                                 | 4           |
| SC-6.3                   | Work Outside Regular Hours                              | 4           |
| SC-6.5                   | Domestic Materials                                      | 4           |
| SC-6.7.1                 | Substitute Items                                        | 5           |
| SC-6.12                  | Patent Fees and Royalties                               | 5           |
| SC-6.15                  | Taxes                                                   | 5           |
| SC-6.23                  | Shop Drawings, Number Required                          | 5           |
| SC-6.23.1                | Other Submittals, Number Required                       | 5           |
| SC-7.5                   | Separate Contractor Claims                              | 6           |
| SC-8.2                   | Appointment of Engineer                                 | 6           |
| SC-9.3                   | Project Representation                                  | 6           |
| SC-9.11                  | Decisions on Disputes                                   | 7           |

SUPPLEMENTARY CONDITIONS

Table of Contents  
(continued)

| <u>Article Number</u> | <u>Title</u>                                        | <u>Page</u> |
|-----------------------|-----------------------------------------------------|-------------|
| SC-13.4               | Tests and Inspections (Payment)                     | 7           |
| SC-13.5               | Tests and Inspections (Acceptable<br>Organizations) | 7           |
| SC-13.5.1             | Tests and Inspections (Review)                      | 7           |
| SC-14.8               | Substantial Completion                              | 7           |

PART II

STATUTORY CONTRACT REQUIREMENTS

|         |                                                    |        |
|---------|----------------------------------------------------|--------|
| SC-18   | Statutory Requirements                             | 8      |
| SC-18.1 | Scope                                              | 8      |
| SC-18.2 | Prevailing Wage                                    | 8      |
| SC-18.3 | Affirmative Action Regulations                     | 8 - 11 |
| SC-18.4 | Resident Citizens to be Preferred<br>In Employment | 12     |

EXHIBITS

|              |                                                                                                                       |
|--------------|-----------------------------------------------------------------------------------------------------------------------|
| Exhibit SC-A | A Listing of Duties, Responsibilities and Limitations of<br>Authority of The Resident Project Representative (4 pgs.) |
|--------------|-----------------------------------------------------------------------------------------------------------------------|

## SUPPLEMENTARY CONDITIONS

### Introductory Statement

Part I of these Supplementary Conditions amend or supplement the General Conditions and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

Part II of these Supplementary Conditions supplement the Contract Documents to the extent required under New Jersey Statutes

### PART I AMENDMENTS AND SUPPLEMENTS TO GENERAL CONDITIONS

#### SC-1 Defined Terms

The terms used in these Supplementary Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

Add the following terms to the definitions in Article 1 of the General Conditions:

"Bidder" - One who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a bid to a Bidder.

"General Conditions" - Refers to Standard General Conditions of the Construction Contract, as included in the Contract Documents.

"General Requirements" - Refers to the General Requirements of the Specifications which is the part of the Contract Documents which amends or supplements the General Conditions with regard to Specifications.

"Successful Bidder" - The lowest, qualified, responsible and responsive Bidder to whom Owner makes an award.

#### SC-2.2 Copies of Documents

Amend paragraph 2.2 of the General Conditions to read as follows:

OWNER shall furnish to CONTRACTOR five (5) copies of the Contract Documents. Additional copies will be furnished, upon request, at the cost of reproduction.

### SC-2.3 Contract Time

Amend the last sentence of paragraph 2.3 of the General Conditions to read as follows:

In no event will the Contract Time commence to run later than the ninetieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### SC-2.7 Insurance Certificates

Delete Paragraph 2.7 of the General Conditions in its entirety and insert the following in its place:

Before any Work at the site is authorized, CONTRACTOR shall deliver to ENGINEER, in triplicate, certificates as evidence of insurance which CONTRACTOR is required to purchase and maintain in accordance with Article 5. The certificates delivered by Contractor shall contain for each insurance policy required the following information: policy number, effective date, names and addresses of insureds, type of coverage, limits of liability, location of operations to which insurance applies, and expiration date. In addition, the certificates shall refer to these Contract Documents and state that the policy or policies provide the coverage and the amount of coverage required by the Contract Documents. Further the certificates shall state that thirty days prior written notice shall be given to OWNER of cancellation or material change in the policy.

### SC-3.2 Intent of Documents

Add the following language at the end of Paragraph 3.2 of the General Conditions.

If there is any conflict between the provisions of the Contract Documents and any referenced provisions, the language of the Contract Documents will take precedence over that of any standard specification, manual or code.

### SC-4.2 Physical Conditions

See General Requirements of the Specifications.

### SC-5.1 Performance and Payment Bonds

Add the following language at the end of Paragraph 5.1 of the General Conditions:

CONTRACTOR shall furnish separate Performance and Payment Bonds, each in an amount equal to 100 percent of the Contract Price, on forms included in the Contract Documents as exhibits to the Agreement.

SC-5.3, 5.4, 5.6 and 5.7 Insurance Coverage Requirements

See Exhibit GR-A, Schedule of Insurance Requirements, which is included in Part II of the General Requirements of the Specifications.

SC-5.3.8 Railroad Insurance

Add a new paragraph immediately after Paragraph 5.3.7 of the General Conditions which is to read as follows:

5.3.8 If the Work requires entry on any railroad right-of-way, insurance coverage and amount of coverage shall be provided in accordance with the requirements of the railroad.

SC-5.6. Property Insurance

Delete Paragraph 5.6 of the General Conditions in its entirety and insert the following in its place:

CONTRACTOR shall purchase and maintain until final payment property insurance upon the Work at the site. This insurance shall include the interest of OWNER, CONTRACTOR, Subcontractors, ENGINEER and Engineer's consultants in the Work (all of whom shall be listed as insureds or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, and shall include damages, losses and expenses arising out of or resulting from any insured loss incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph 5.6 shall comply with the requirements of GC-5.8.

SC-5.7 Boiler, Machinery or Additional Property Insurance

Amend Paragraph 5.7 of the General Conditions by striking out the first word "OWNER" and replacing it with the following words:

"If required in the Schedule of Insurance Requirements of Exhibit SC-A attached hereto and made a part hereof, CONTRACTOR ..."

and as so amended Paragraph 5.7 remains in effect.

SC-5.10 Insurance Requests (Deleted)

Delete Paragraph 5.10 of the General Conditions.

SC-5.14 Acceptance of Insurance

Delete Paragraph 5.14 of the General Conditions in its entirety and insert the following in its place:

If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR on the basis of its not complying with the Contract Documents, OWNER shall notify CONTRACTOR in writing thereof. CONTRACTOR shall provide such additional information in respect of insurance as OWNER may reasonably request, before any Work at the Site is authorized.

SC-6.3 Work Outside Regular Hours

Add the following language at the end of Paragraph 6.3 of the General Conditions:

If such consent is given by OWNER, it will be with the understanding that CONTRACTOR shall reimburse OWNER for the charges of ENGINEER for services provided by ENGINEER under the Contract Documents relating to the CONTRACTOR'S work outside regular hours.

SC-6.5 Domestic Materials

Add the following language at the end of Paragraph 6.5 of the General Conditions:

Only manufactured and farm products of the United States, preferably in the State of New Jersey, shall be used as materials in the prosecution of the work under this contract.

SC-6.7.1 Substitute Items

Paragraph 6.7.1 of the General Conditions is supplemented as follows:

Prior to initiating the written application required under paragraph 6.7.1 of the General Conditions, CONTRACTOR shall briefly outline the proposed substitute to the extent necessary for ENGINEER, if deemed appropriate by ENGINEER, to estimate the cost of engineering services for any redesign which may be required and for evaluating the proposed substitute. The ENGINEER's estimate shall be incorporated in the CONTRACTOR's application for the proposed substitute in the itemization of estimated costs required in accordance with paragraph 6.7.1 of the General Conditions. The ENGINEER's estimate will also serve to advise CONTRACTOR of the reimbursement to OWNER required under paragraph 6.7.3 of the General Conditions.

SC-6.12 Patent Fees and Royalties

Add the following language at the end of Paragraph 6.12 of the General Conditions:

OWNER or ENGINEER have no actual knowledge of any license fee or royalty due on any material or equipment specified in the Contract Documents.

SC-6.15 Taxes

Add the following language at the end of Paragraph 6.15 of the General Conditions:

Owner, if a public body, is exempt from New Jersey State Sales and Use Taxes on materials and equipment incorporated in the Work, and said taxes shall not be included in the Contract Price. Contractor is responsible for obtaining and executing the forms necessary for claiming the exemption.

SC-6.23 Shop Drawings, Number Required

Amend paragraph 6.23 of the General Conditions to require six copies of Shop Drawings.

SC-6.23.1 Other Submittals, Number Required

Add a new paragraph immediately after Paragraph 6.23 of the General Conditions which is to read as follows:

Other submittals required under the Contract Documents shall be made in the same number of copies as required for Shop Drawings, unless otherwise indicated.

PART II  
STATUTORY LANGUAGE REQUIREMENTS

SC-18      Statutory Requirements

Add a new article after Article 17 of the General Conditions to include Paragraphs SC-18.1, SC-18.2, SC-18.3, SC-18.4 and SC-18.5 as set forth below.

SC-18.1    Scope

The paragraphs under this Article 18 contain language mandatory for public contracts under the laws of the State of New Jersey. Nothing in these paragraphs shall be construed to relieve CONTRACTOR of responsibility to comply with all Laws and Regulations as set forth in the Contract Documents.

SC-18.2    Prevailing Wage

The regulations regarding Prevailing Wage are set forth in Exhibit GR-B which is included in Part II of the General Requirements of the Specifications.

SC-18.3    Affirmative Action

(Remainder of Page Intentionally Blank)

#### SC-6.7.1 Substitute Items

Paragraph 6.7.1 of the General Conditions is supplemented as follows:

Prior to initiating the written application required under paragraph 6.7.1 of the General Conditions, CONTRACTOR shall briefly outline the proposed substitute to the extent necessary for ENGINEER, if deemed appropriate by ENGINEER, to estimate the cost of engineering services for any redesign which may be required and for evaluating the proposed substitute. The ENGINEER's estimate shall be incorporated in the CONTRACTOR's application for the proposed substitute in the itemization of estimated costs required in accordance with paragraph 6.7.1 of the General Conditions. The ENGINEER's estimate will also serve to advise CONTRACTOR of the reimbursement to OWNER required under paragraph 6.7.3 of the General Conditions.

#### SC-6.12 Patent Fees and Royalties

Add the following language at the end of Paragraph 6.12 of the General Conditions:

OWNER or ENGINEER have no actual knowledge of any license fee or royalty due on any material or equipment specified in the Contract Documents.

#### SC-6.15 Taxes

Add the following language at the end of Paragraph 6.15 of the General Conditions:

Owner, if a public body, is exempt from New Jersey State Sales and Use Taxes on materials and equipment incorporated in the Work, and said taxes shall not be included in the Contract Price. Contractor is responsible for obtaining and executing the forms necessary for claiming the exemption.

#### SC-6.23 Shop Drawings, Number Required

Amend paragraph 6.23 of the General Conditions to require six copies of Shop Drawings.

#### SC-6.23.1 Other Submittals, Number Required

Add a new paragraph immediately after Paragraph 6.23 of the General Conditions which is to read as follows:

Other submittals required under the Contract Documents shall be made in the same number of copies as required for Shop Drawings, unless otherwise indicated.

#### SC-7.5 Separate Contractor Claims

Add a new paragraph immediately after paragraph 7.4 of the General Conditions which is to read as follows:

7.5 Should CONTRACTOR cause damage to the work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR'S performance of the Work or lack of same at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, or any other person, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall indemnify and hold OWNER and ENGINEER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER and ENGINEER to the extent based on a claim arising out of CONTRACTOR's performance or lack of same of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work or lack of same by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or ENGINEER or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Time attributable thereto, CONTRACTOR may make a claim for an extension of time in accordance with Article 12. An Extension of the Contract Time shall be CONTRACTOR's exclusive remedy with respect to OWNER and ENGINEER for any delay, disruption, interference or hinderance caused by any separate contractor. This paragraph does not prevent recovery from OWNER or ENGINEER for activities that are their respective responsibilities.

#### SC-8.2 Appointment of Engineer

Delete the last sentence of Paragraph 8.2 of the General Conditions.

#### SC-9.3 Project Representation

Add the following language at the end of Paragraph 9.3 of the General Conditions:

The duties, responsibilities and limitations of any Resident Project Representative and assistants furnished by the ENGINEER are as set forth in Exhibit SC-A, "A Listing of the Duties, Responsibilities and Limitations of Authority of the Resident Project Representative" which is attached hereto and made a part hereof.

#### SC-9.11 Decisions or Disputes

Add the following language at the end of Paragraph 9.11 of the General Conditions:

Failure by the claimant to give written notice as set forth above within thirty days shall result in ENGINEER'S decision being final and binding upon the OWNER and CONTRACTOR.

#### SC-13.4 Tests and Inspections (Payment)

Amend the last sentence of paragraph 13.4 of the General Conditions to read as follows:

The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by CONTRACTOR.

#### SC-13.5 Tests and Inspections (Acceptable Organizations)

Delete Paragraph 13.5 of the General Conditions in its entirety and insert the following in its place:

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER, CONTRACTOR and ENGINEER.

##### SC-13.5.1 Tests and Inspections (Review)

Add a new paragraph immediately after Paragraph 13.5 of the General Conditions which is to read as follows:

ENGINEER will receive and review certificates of inspections, tests or approvals which are submitted in accordance with the Contract Documents, but such review will be only to determine that their content complies with the requirements of, and the certified results indicate compliance with, the Contract Documents.

#### SC-14.8 Substantial Completion

Add the following language at the end of Paragraph 14.8 of the General Conditions:

Neither tentative nor definitive certificates will be issued. However, the procedures set forth in the paragraph may be used as a prelude to final acceptance.

PART II  
STATUTORY LANGUAGE REQUIREMENTS

SC-18      Statutory Requirements

Add a new article after Article 17 of the General Conditions to include Paragraphs SC-18.1, SC-18.2, SC-18.3, SC-18.4 and SC-18.5 as set forth below.

SC-18.1    Scope

The paragraphs under this Article 18 contain language mandatory for public contracts under the laws of the State of New Jersey. Nothing in these paragraphs shall be construed to relieve CONTRACTOR of responsibility to comply with all Laws and Regulations as set forth in the Contract Documents.

SC-18.2    Prevailing Wage

The regulations regarding Prevailing Wage are set forth in Exhibit GR-B which is included in Part II of the General Requirements of the Specifications.

SC-18.3    Affirmative Action

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## AFFIRMATIVE ACTION REGULATIONS

### P.L. 1975, C. 127 (N.J.A.C. 17:27) MANDATORY AFFIRMATIVE ACTION LANGUAGE CONSTRUCTION CONTRACTS

During the performance of this contract, the contractor agrees as follows:

- i. The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or sex. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause;
  - ii. The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex;
  - iii. The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
  - iv. The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to P. L. 1975, C. 127, as amended and supplemented from time to time.
- (b) When hiring workers in each construction trade, the contractor or subcontractor agrees to attempt in good faith to employ minority and female workers in each construction trade consistent with the applicable employment goal prescribed by N.J.A.C. 17:27-7.3; provided, however, that the Affirmative Action Office may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by 1, 2, and 3 below, as long as the Affirmative Action Office is satisfied that the contractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Affirmative Action Office, that its percentage of active "card carrying" members who are minority and female workers is equal to or greater than the applicable employment goal prescribed by N.J.A.C. 17:27-7.3, promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time. The contractor or subcontractor agrees that a good faith effort shall include compliance with the following procedures:
1. If the contractor or subcontractor has a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor shall, within three days of the contract award, seek assurances from the union that it will cooperate with the contractor or subcontractor as it fulfills its affirmative action obligations under this contract and in accordance with the rules promulgated by the Treasurer pursuant to

P.L. 1975, c. 127, as supplemented and amended from time to time. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five days prior to the commencement of construction work, the contractor or subcontractor agrees to attempt to hire minority and female workers directly, consistent with the applicable employment goal. If the contractor's or subcontractor's prior experience with a construction trade union, regardless of whether the union has provided said assurances, indicates a significant possibility that the trade union will not refer sufficient minority and female workers consistent with the applicable employment goal, the contractor or subcontractor agrees to be prepared to hire minority and female workers directly, consistent with the applicable employment goal, by complying with the hiring procedures prescribed under (c) below; and the contractor or subcontractor further agrees to take said action immediately if it determines or is so notified by the Affirmative Action Office that the union is not referring minority and female workers consistent with the applicable employment goal.

- (c) If the hiring of a workforce consistent with the employment goal has not or cannot be achieved for each construction trade by adhering to the procedures of (b) above, or if the contractor does not have a referral agreement or arrangement with a union for a construction trade, the contractor or subcontractor agrees to take the following actions consistent with the applicable county employment goals:
1. To notify the Public Agency Compliance Officer, Affirmative Action Office, and at least one approved minority referral organization of its manpower needs, and request referral of minority and female workers;
  2. To notify any minority and female workers who have been listed with it as awaiting available vacancies;
  3. Prior to commencement of work, to request the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, to refer minority and female workers to fill job openings;
  4. To leave standing requests for additional referral to minority and female workers with the local construction trade union, if the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade, the State training and employment service and other approved referral sources in the area until such time as the workforce is consistent with the employment goal;
  5. If it is necessary to lay off some of the workers in a given trade on the construction site, to assure, consistent with the applicable State and Federal statutes and court decisions, that sufficient minority and female employees remain on the site consistent with the employment goal; and to employ any minority and female workers so laid off by the contractor or any other construction site in the area on which its workforce composition is not consistent with an employment goal established pursuant to rules implementing P.L. 1975, c. 127;
  6. To adhere to the following procedure when minority and female workers apply or are referred to the contractor or subcontractor:
    - i. If said individuals have never previously received any document or certification signifying a level of qualification lower than that required, the contractor or subcontractor shall determine the qualifications of such individuals and if the contractor's or subcontractor's workforce in each

construction trade is not consistent with the applicable employment goal, it shall employ such persons which satisfy appropriate qualification standards; provided however, that a contractor or subcontractor shall determine that the individual at least possesses the skills and experience recognized by any worker skills and experience classification determination which may have been made by a public Agency Compliance Officer, union, apprentice program or a referral agency, provided the referral agency is acceptable to the Affirmative Action Office and provided further, that, if necessary, the contractor or subcontractor shall hire minority and female workers who qualify as trainees pursuant to these rules. All of these requirements, however, are limited by the provisions of (d) below.

- ii. If the contractor's or subcontractor's workforce is consistent with the applicable employment goal, the name of said female or minority group individual shall be maintained on a waiting list for the first consideration, in the event the contractor's or subcontractor's workforce is no longer consistent with the applicable goal.
  - iii. If, for any reason, said contractor or subcontractor determines that a minority individual or a female is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing with the reasons for a determination, maintain a copy in its files, and send a copy to the Public Agency Compliance Officer and to the Affirmative Action Office.
7. To keep a complete and accurate record of all requests made for the referral of workers in any trade covered by the contract, on forms made available by the affirmative Action Office and submitted promptly to that office upon request.
- (d) The contractor or subcontractor agrees that nothing contained in (c) above shall preclude the contractor or subcontractor from complying with the hiring hall or apprenticeship provisions in any applicable collective bargaining agreement or hiring hall arrangement, and, where required by custom or agreement, it shall send journeymen and trainees to the union for referral, or to the apprenticeship program for admission, pursuant to such agreement or arrangement: provided, however, that where the practices of a union or apprenticeship program will result in the exclusion of minorities and females or the failure to refer minorities and females consistent with the county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (c) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ female and minority advanced trainees and trainees in numbers which result in the employment of advanced trainees and trainees as a percentage of the total workforce for the construction trade, which percentage significantly exceeds the apprentice to journey worker ratio specified in the applicable collective bargaining agreement, or in the absence of a collective bargaining agreement, exceeds the ratio established by practice in the area for said construction trade, also, the contractor or subcontractor agrees that, in implementing the procedures of (c) above, it shall, where applicable, employ minority and female workers residing within the geographical jurisdiction of the union.
  - (e) The contractor agrees to complete an Initial Project Manning Report on forms provided by the Affirmative Action Office or in the form prescribed by the Affirmative Action Office and submit a copy of said form no later than three days after signing a construction contract; provided, however, that the public agency may extend in a particular case the allowable time for submitting the form to no more than 14 days; and to submit a copy of the Monthly Project Manning Report once a month thereafter for the duration of this contract to the Affirmative

Action Office and to the Public Agency Compliance Officer. The contractor agrees to cooperate with the public agency in the payment of budgeted funds, as is necessary, for on-the-job and off-the-job programs for outreach and training of minority and female trainees employed on the construction projects.

- (f) The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (NJAC 17:27).

Affirmative Action Officer:

Any bidders not aware of their obligations as they apply to contracts with the Owner can contact before submitting bids:

Chief Affirmative Action Officer  
New Jersey Department of Treasury  
State House  
Trenton, New Jersey 08625

or

Owner

A LISTING OF THE DUTIES, RESPONSIBILITIES AND LIMITATIONS OF AUTHORITY OF THE RESIDENT PROJECT REPRESENTATIVE.

ENGINEER shall furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing performance of the Work of the Contractor.

Through more extensive on-site observations of the Work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER shall endeavor to provide further protection for OWNER against defects and deficiencies in the Work; but, the furnishing of such services will not make ENGINEER responsible for or give ENGINEER control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for CONTRACTOR'S failure to perform the Work in accordance with the Contract Documents.

The duties and responsibilities of the RPR are limited to those of ENGINEER in the construction Contract Documents, and are further limited and described as follows:

A. General

RPR is ENGINEER'S agent at the site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the on-site work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

B. Duties and Responsibilities of RPR

1. Schedules: Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. Conferences and meetings: Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:

a. Serve as ENGINEER'S liaison with CONTRACTOR, working principally through CONTRACTOR'S superintendent and assist in understanding the intent of the Contract Documents; and assist ENGINEER in serving as OWNER'S a liaison with CONTRACTOR when CONTRACTOR'S operations affect OWNER'S on-site operation.

b. Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.

4. Shop Drawings and Samples:

a. Record date of receipt of Shop Drawing and samples.

b. Receive samples which are furnished at the site by CONTRACTOR AND NOTIFY ENGINEER of availability of samples for examination.

c. Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

a. Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.

b. Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

c. Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe record and report to ENGINEER appropriate details relative to the test procedures and startups.

d. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

6. Interpretation of Contract Documents:

Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.

7. Modifications:

Consider and evaluate CONTRACTOR'S suggestions for modifications in Drawings or Specifications and Report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

## 8. Records:

a. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract. ENGINEER'S clarifications and interpretations of the Contract Documents, progress reports, and other Project related documents.

b. Keep a diary or log book, recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes. Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to ENGINEER.

c. Record names, addresses and telephone numbers of all CONTRACTORS, subcontractors and major suppliers of materials and equipment.

## 9. Reports:

a. Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR'S compliance with the progress schedule and schedule of Shop Drawing and sample submittals.

b. Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

c. Draft proposed Change Orders and Work Directive Changes obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Directive Changes and Field Orders.

d. Report immediately to ENGINEER and OWNER upon the occurrence of any accident.

## 10. Payment Requests:

Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations ENGINEER, noting particularly the relationship of the payment requested to the schedule of values. Work completed and materials and equipment delivered at the site but not incorporated in the Work.

## 11. Certificates, Maintenance and Operation Manuals:

During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the WORK.

## 12. Completion:

- a. When CONTRACTOR nears completion of work, submit to CONTRACTOR a list of observed items requiring completion or correction.
- b. Conduct final inspection in the company of ENGINEER, OWNER and CONTRACTOR and prepare a final list of items to be completed or corrected.
- c. Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

C. Limitations of Authority  
Resident Project Representative:

1. Shall not authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by ENGINEER.
2. Shall not exceed limitations of ENGINEER'S authority as set forth in the Contract Documents.
3. Shall not undertake any of the responsibilities of CONTRACTOR, subcontractors or CONTRACTOR'S superintendent.
4. Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.
5. Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.
6. Shall not accept Shop Drawing or sample submittals from anyone other than Contractor.
7. Shall not authorize OWNER to occupy the Project in whole or in part.
8. Shall not participate in specialized field or laboratory tests or inspections conducted by others except as specifically authorized by ENGINEER.

**SUPPLEMENTARY CONDITIONS**  
**SCHEDULE OF DISPUTE RESOLUTION**

SC-16.02 Mediation

A. OWNER and CONTRACTOR agree that they shall submit any and all unsettled Claims or counterclaims, disputes, or other matters in question between them arising out of or relating to the Contract Documents or the breach thereof to mediation by the American Arbitration Association [prior to either of them initiating against the other a demand for arbitration pursuant to paragraph SC-16.03, unless delay in initiating arbitration would irrevocably prejudice one of the parties. The 30 day time limit within which to file a demand for arbitration as provided in paragraphs SC-16.03.B and 16.03.C shall be suspended with respect to a dispute submitted to mediation within that time limit and shall remain suspended until 10 days after the termination of the mediation.] The mediator of any dispute submitted to mediation under this agreement shall not serve as arbitrator of such dispute unless otherwise agreed.

SC-16.03 Arbitration

A. All Claims or counterclaims, disputes, or other matters in question between OWNER and CONTRACTOR arising out of or relating to the Contract Documents or the breach thereof (except for Claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.16) not resolved under the provisions of paragraph SC-16.02 will be decided by binding arbitration in accordance with the American Arbitration Association then obtaining, subject to the limitations of this paragraph SC-16.03. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. No demand for arbitration of any Claim or counterclaim, dispute, or other matter that is required to be referred to ENGINEER initially for decision in accordance with paragraph 9.11 & 9.12 will be made until the earlier of: (i) the date on which ENGINEER has rendered a written decision, or (ii) the 31st day after the parties have presented their final evidence to ENGINEER if written decision has not been rendered by ENGINEER before that date. No demand for arbitration of any such Claim or counterclaim, dispute, or other matter will be made later than 30 days after the date on which ENGINEER has rendered a written decision in respect thereof in accordance with paragraph 9.11; and the failure to demand arbitration within said 30 day period will result in ENGINEER's decision being final and binding upon OWNER and CONTRACTOR. If ENGINEER renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned.

C. Notice of the demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator, and a copy will be sent to ENGINEER for information. The demand for arbitration will be made within the 30 day period specified in paragraph SC-16.03B, and in all other cases within a reasonable time after the Claim or counterclaim, dispute, or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such Claim or other dispute or matter in question would be barred by the applicable statute of limitations.

D. Except as provided in paragraph SC-16.03.E, no arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder, or in any other manner any other individual or entity (including ENGINEER, and ENGINEER's Consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. the inclusion of such or other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and

2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings; and

3. the written consent of the other individual or entity sought to be included and of OWNER and CONTRACTOR has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.

E. Notwithstanding paragraph SC-16.03.D, if a Claim or counterclaim, dispute, or other matter in question between OWNER and CONTRACTOR involves the Work of a Subcontractor, either OWNER or CONTRACTOR may join such Subcontractor as a party to the arbitration between OWNER and CONTRACTOR hereunder. CONTRACTOR shall include in all subcontract required by paragraph 6.11.G a specific provision whereby the Subcontractor consents to being joined in an arbitration between OWNER and CONTRACTOR involving the Work of such Subcontractor. Nothing in this paragraph SC-16.03.E nor in the provisions of such subcontract consenting to joinder shall create any claim, right, or cause of action in favor of Subcontractor and against OWNER, ENGINEER or ENGINEER's Consultant that does not otherwise exist.

F. The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal.

SPECIFICATIONS  
GENERAL REQUIREMENTS

Table of Contents

| <u>Article</u> | <u>Title</u>                              |
|----------------|-------------------------------------------|
|                | Introductory Statement                    |
|                | PART I                                    |
|                | <u>GENERAL AND ADMINISTRATIVE MATTERS</u> |
| GR-1           | Defined Terms                             |
| GR-2           | Abbreviations for Referenced Standards    |
| GR-3           | Project Meetings                          |
|                | 3.1 Preconstruction Conference            |
|                | 3.2 Progress Meetings                     |
|                | 3.3 Finalizing Schedules                  |
| GR-4           | Construction Schedules                    |
|                | 4.1 Submission                            |
|                | 4.2 Stages of Work, Estimated             |
|                | 4.3 Shop Drawings, Preliminary            |
|                | 4.4 Values, Preliminary                   |
| GR-5           | Adjusted Construction Schedules           |
|                | 5.1 Stages of Work, Adjusted              |
|                | 5.2 Shop Drawings, Adjusted               |
|                | 5.3 Values, Adjusted                      |
| GR-6           | Measurement of Quantities                 |
|                | 6.1 Lineal Feet                           |
|                | 6.2 Square Yards                          |
|                | 6.3 Cubic Yards                           |
|                | 6.4 Cubic Yards Truck Measure             |
|                | 6.5 Acres                                 |
|                | 6.6 Weight                                |

## SPECIFICATIONS

### GENERAL REQUIREMENTS

#### Introductory Statement

Part I of these General Requirements amend or supplement the General Conditions and other provisions of the Contract Documents with regard to general and administrative matters. All provisions which are not so amended or supplemented remain in full force and effect.

Part II of these General Requirements sets forth details for the Work of this Contract.

#### PART I

#### GENERAL AND ADMINISTRATIVE MATTERS

##### GR-1 Defined Terms

The terms used in these General Requirements which are defined in the General Conditions and Supplementary Conditions have the meanings assigned to them therein.

##### GR-2 Abbreviations for Referenced Standards

Reference to standard Specifications, manuals or codes of any technical society, organization or association, if made in these Specifications, may be made using the following abbreviations:

|        |                                                                           |
|--------|---------------------------------------------------------------------------|
| AASHTO | American Association of State Highway and Transportation Officials        |
| ACI    | American Concrete Institute                                               |
| AISC   | American Institute of Steel Construction                                  |
| ANSI   | American National Standards Institute                                     |
| APA    | American Plywood Association                                              |
| ASHRAE | American Society of Heating, Refrigerating and Air Conditioning Engineers |
| ASME   | American Society of Mechanical Engineers                                  |
| ASTM   | American Society for Testing and Materials                                |
| AWPA   | American Wood Preservers' Association                                     |
| AWPI   | American Wood Preservers' Institute                                       |
| AWWA   | American Water Works Association                                          |
| IES    | Illuminating Engineering Society                                          |
| NEC    | National Electric Code                                                    |
| NEMA   | National Electrical Manufacturers Association                             |
| NFPA   | National Forest Products Association                                      |
| NJAC   | New Jersey Administrative Code                                            |
| NJDEP  | New Jersey Department of Environmental Protection                         |
| NJDOT  | New Jersey Department of Transportation                                   |
| NJDWM  | New Jersey Division of Waste Management (of the NJDEP)                    |
| NJSA   | New Jersey Statutes Annotated                                             |
| NSPC   | National Standard Plumbing Code                                           |
| OSHA   | Occupational Safety and Health Administration                             |
| SSPC   | Steel Structures Painting Council                                         |
| UL     | Underwriters Laboratories                                                 |
| USEPA  | United States Environmental Protection Agency                             |

### GR-3 Project Meetings

3.1 Preconstruction Conference. See Paragraph 2.8 of the General Conditions.

3.2 Progress Meetings. ENGINEER may require progress meetings if, in ENGINEER's opinion, the progress reports required under these General Requirements indicate material and significant departures from CONTRACTOR's submissions made in accordance with paragraph 2.6 of the General Conditions, or acceptable amendments thereto, as set forth in these General Requirements.

3.3 Finalizing Schedules. ENGINEER may waive the conference required under paragraph 2.8 of the General Conditions if, in ENGINEER's opinion, the submissions received from CONTRACTOR in accordance with paragraph 2.6 of the General Conditions are acceptable.

### GR-4 Construction Schedules

4.1 Submission. See paragraph 2.6 of the General Conditions.

4.2 Stages of Work, Estimated Progress Schedule:

The estimated progress schedule required under paragraph 2.6.1 of the General Conditions shall be keyed to the Work items set forth in the Technical Sections of these Specifications and to monthly periods from the commencement of Contract Time as set forth in paragraph 2.3 of the General Conditions. For each Work item and monthly period, the estimated percentage completion shall be tabulated. Unit Price Work shall be estimated based upon quantities given in the Bid Form. The total percentage for each Work item should equal 100 percent.

The Estimated Progress Schedule as submitted by CONTRACTOR for review by the ENGINEER shall provide an orderly progression of the Work to completion within the Contract Time, and shall indicate starting and completion dates for the various stages of the Work. The dates so indicated on the schedule are hereby made time of the essence.

4.3 Shop Drawings, Preliminary Schedule of Submissions:

The preliminary schedule of Shop Drawings required under paragraph 2.6.2 of the General Conditions shall include a list of proposed Shop Drawings with the proposed time of submission for each keyed to the estimated progress schedule described in these General Requirements.

4.4 Values, Preliminary Schedule:

The preliminary schedule of values required under paragraph 2.6.3 of the General Conditions shall be calculated based upon the estimated progress schedule, and the lump sum and unit prices set forth in the Bid, and shall be calculated for monthly periods following the commencement of Contract Time as set forth in paragraph 2.3 of the General Conditions.

## GR-5 Adjusted Construction Schedules

Paragraph 6.6 of the General Conditions is supplemented hereby to require adjustment to the three schedules required under paragraph 2.6 of the General Conditions. Adjusted schedules shall be submitted with Applications for Payment, and shall be required supporting documentation in accordance with paragraph 14.2 of the General Conditions.

### 5.1 Stages of Work, Adjusted Progress Schedule:

For each Work item and monthly period, the actual percentages shall be tabulated for Work completed as of the date of the Application for Payment and estimated percentages shall be tabulated for remaining Work and months, if any. Percentages for Unit Price Work shall be calculated based upon the quantities given in the Bid Form, so that upon completion of such Work, or prior thereto, the total of the tabulated percentages for a work item may be greater or less than 100.

The adjusted Progress Schedules as submitted by CONTRACTOR for review by the ENGINEER shall provide an orderly progression of the Work to completion within the Contract Time, and shall indicate starting and completion dates for the various stages of the Work. The dates so indicated on the schedule are hereby made time of the essence.

### 5.2 Shop Drawings, Adjusted Schedule of Submissions:

The Schedule of Shop Drawings shall be adjusted, if necessary, to reflect any changes in the estimates on the adjusted progress schedule.

### 5.3 Values, Adjusted Schedule:

The schedule of values shall be adjusted, if necessary, to reflect actual and estimated conditions.

## GR-6 Measurement of Quantities

Unless specified otherwise for specific items in the Schedule of Prices in the Bid Form, measurement of quantities for Unit Price work shall be as indicated in the Schedule of Prices in the Bid Form, and as described below.

"As constructed" measurements will be made according to neat dimensions as shown on the Drawings, or as authorized by Field Order.

6.1 Lineal Feet, as constructed, will be measured parallel to the base or foundation upon which the item is placed, such as along a pipeline or curb.

6.2 Square Yards, as constructed, will be calculated from linear measurements as defined above in GR 6.1.

6.3 Cubic Yards, as constructed, will be computed by standard engineering methods using horizontal and vertical measurements, and area projections thereon, as appropriate for the specific situation and method.

6.4 Cubic Yards Truck Measure, as furnished, will be measured at the point of delivery by volume in the truck used for hauling. Trucks must have a body such that the actual contents may be readily and accurately determined, and shall be loaded to at least their "water level capacity". Loads shall be leveled for checking volume, when required by ENGINEER.

6.5 Acres will be calculated by standard engineering methods using horizontal measurements.

6.5 Weight, in pounds or tons will be measured in accordance with the requirements of NJDOT Section 109.

## SPECIFICATIONS

### GENERAL REQUIREMENTS

#### Table of Contents

#### PART II

#### WORK OF THIS CONTRACT

| <u>Article</u> | <u>Title</u>                      |
|----------------|-----------------------------------|
| GR-7           | Site of Work                      |
| GR-8           | Description of Work               |
| GR-9           | Stages of Work                    |
| GR-10          | Work Under Separate Contracts     |
| GR-11          | Work by Others                    |
| GR-12          | Items Furnished by Owner          |
| GR-13          | Subsurface Conditions             |
| GR-14          | Surface and Subsurface Structures |
| GR-15          | Permits                           |
| GR-16          | Insurance Coverage Requirements   |
| GR-17          | Prevailing Wages                  |
| GR-18          | Supplemental Specifications       |

#### EXHIBITS

|      |                                    |
|------|------------------------------------|
| GR-A | Schedule of Insurance Requirements |
| GR-B | Prevailing Wages                   |

## PART II

### WORK OF THIS CONTRACT

#### GR-7 Site of Work

The project is located at the Drum Point Recreation Complex on the Drum Point/Emma Havens School property in the Township of Brick.

#### GR-8 Description of Work

In accordance with Paragraph 3.2 of the General Conditions it is the intent of the Contract Documents to describe functionally-complete Work to be constructed in accordance with the Contract Documents, as follows:

The work of this Contract consists of general work; ballfield lighting; electrical work; and restoration.

#### GR-9 Stages of Work

Supplementary requirements under Paragraph 2.6.1 of the General Conditions for starting and completion of the various stages of the Work are as set forth in the Technical Sections.

#### GR-10 Work Under Separate Contracts

None.

#### GR-11 Work By Others

PVC conduits and junction boxes were previously installed under a separate project.

#### GR-12 Items Furnished by Owner

None.

#### GR-13 Subsurface Conditions

In the preparation of Drawings and Specifications, ENGINEER has utilized the following report(s) of explorations and tests of subsurface conditions at the site of the Work:

None.

Copies of the reports and drawings listed above that are not included with the Bidding Documents may be examined of the office of the ENGINEER during regular business hours.

These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in Paragraph 4.2 of the General Conditions and as identified and established above are incorporated therein by reference.

#### GR-14      Surface and Subsurface Structures

In the preparation of Drawings and Specifications, ENGINEER has utilized the following drawing(s) of physical conditions in or relating to existing surface and subsurface structures (except Underground Facilities) which are at or contiguous to the site of the Work:

None.

Copies of the reports and drawings listed above that are not included with the Bidding Documents may be examined at the office of the ENGINEER during regular business hours.

These reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which CONTRACTOR is entitled to rely as provided in Paragraph 4.2 of the General Conditions and as identified and established above are incorporated therein by reference.

#### GR-15      Permits

In accordance with Paragraph 6.13 of the General Conditions, OWNER has considered it necessary to obtain or initiate the obtaining of certain permits as set forth below:

None.

The CONTRACTOR shall obtain all permits and pay all fees as may be required for the construction of electrical work for this project. The CONTRACTOR shall obtain building permits from the local building department.

The CONTRACTOR shall be responsible for all applications, fees, improvements and coordination as required by the General Public Utilities (GPU) Company to properly complete this work.

#### GR-16      Insurance Coverage Requirements

Insurance coverage requirements are set forth in Exhibit GR-A, Schedule of Insurance Requirements, which is attached hereto and made a part hereof.

#### GR-17      Prevailing Wages

Prevailing wage requirements as received from the State of New Jersey are set forth in Exhibit GR-B which is made a part hereof. If not included herein, said requirements will be sent to prospective Bidders who obtained Contract Documents at least 5 days prior to Bid opening.

#### GR-18      Supplemental Specifications

The current specifications of the New Jersey Department of Transportation, as amended and supplemented herein shall be used for the construction of this project. The aforesaid specifications shall have the same force and effect as if they were set forth at length herein. The aforesaid specifications are herein referred to as NJDOT Specifications.

## SCHEDULE OF INSURANCE REQUIREMENTS

### PART A - LIABILITY INSURANCE

The limits of liability for the liability insurance required by Paragraph 5.3 of the General Conditions shall provide coverages for not less than the following amounts or greater where required by law or regulations and the coverages under Paragraph 5.4 and 5.5 shall be set forth below:

All liability insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work. In addition, CONTRACTOR shall maintain completed operations insurance for at least two years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

#### Worker's Compensation and Employers' Liability

(Paragraphs 5.3.1 and 5.3.2 of the General Conditions)

State:

Statutory

Applicable Federal (e.g. Longshoreman's):

Statutory

Employer's Liability:

\$100,000.00

#### Comprehensive General Liability

(Paragraphs 5.3.3 and 5.3.8 of the General Conditions)

Coverage shall include:

Comprehensive Form; Premises-operations; Explosion and Collapse Hazard (X/C); Underground Hazard (U); Products Liability and Complete Operations; Broad Form Property Damage; Independent Contractors; and Personal Injury, in the amount of coverage set forth below:

Bodily Injury and Property Damage, combined single limit of:

\$1,000,000.00      Each Occurrence

\$1,000,000.00      Aggregate

#### Comprehensive Automobile Liability

(Paragraph 5.3.7 of the General Conditions)

Bodily Injury and Property Damage shall be provided in the amount of coverage set forth above for Comprehensive General Liability.

#### Contractual Liability

(Paragraph 5.4 of the General Conditions)

Contractual Liability shall be provided for the coverage and in the amount of coverage set forth above for Comprehensive General Liability.

**SCHEDULE OF INSURANCE REQUIREMENTS**

Additional Liability

Additional Liability coverage for OWNER and ENGINEER shall be provided either:

- (a) By endorsement as additional insureds on CONTRACTOR's General Liability Policy, or
- (b) By issue of a separate Protective Liability Policy covering OWNER and ENGINEER for the coverage and in the amount of coverage set forth above for General Liability.

**PART B - PROPERTY INSURANCE**

All property insurance shall remain in effect until final payment.

Builder's Risk

(Paragraph 5.6 of the General Conditions)

Coverage shall include: "all-risk" form; fire; extended coverage; and theft. Coverage amount shall be as indicated:

The full insurable value of the Work at the Contract Price and shall be in the form of complete value.

Boiler and Machinery

(Paragraph 5.7 of the General Conditions)

Object to be Insured: NONE

Limits: Not Applicable



## State of New Jersey

CHRISTINE TODD WHITMAN  
Governor

DEPARTMENT OF LABOR  
PO BOX 389  
TRENTON NJ 08625-0389

MEL GELADE  
Commissioner

January 19, 1999

Issue date of Determination: JANUARY 20, 1999

Pursuant to Chapter 150 of the NJ Laws of 1963

Requesting officer: RICHARD MACDONALD, PURCHASING AGENT

Department, Agency: TOWNSHIP OF BRICK

Description of Work: INSTALLATION OF BALLFIELD NIGHT  
PLAY SPORTS LIGHTING

Location of Work: DRUM POINT SPORTS COMPLEX  
DRUM POINT ROAD

Municipality: BRICK

County: OCEAN

Value: 350,000.00

Date of request: JANUARY 12, 1999

Proposed Advertising Date: FEBRUARY 15, 1999

Applicable rates are those wages and fringe benefit rates in effect on the date the contract is awarded. All predetermined rate increases listed at time of contract award must also be paid, beginning on the dates specified. Rates may change between the time of issuance of this determination and the award of the public works contract. Therefore, prior to the award of the public works contract, verification must be made, with the Public Contracts Section, to insure that the rates contained in this determination are still prevailing. If a new rate is not listed after expiration date, the old rate will continue to prevail.

The wage rates herein determined shall be made a part of every contract for the performance of the described work. Contractors and sub-contractors shall post the prevailing wage rates, for each classification as herein determined, in a prominent and easily accessible place at the site of the work or at such places as are used to pay workers their wages.

Employers not paying the itemized employee benefits to a payee designated in a collective bargaining agreement shall pay them directly to the employee on each pay day as part of wages.

Enclosed with this determination is a list of contractors and subcontractors who are debarred from public works pursuant to N.J.S.A. 34:11-56.37. This list is also to be made part of every contract for the performance of the described work. Pursuant to N.J.S.A. 34:11-56.38, no contract shall be awarded or made to the listed contractors or subcontractors.

*Nelson Reeder / JS*

Nelson Reeder, Chief  
Public Contracts Section  
Office of Wage and Hour Compliance  
609-292-2259

Record#: 219

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DIVISION OF WAGE AND HOUR COMPLIANCE  
(609) 292-2337 • FAX (609) 695-1174

AD-18.4A (10-97)



## State of New Jersey

CHRISTINE TODD WHITMAN  
*Governor*

DEPARTMENT OF LABOR  
PO BOX 389  
TRENTON NJ 08625-0389

MEL GELADE  
*Commissioner*

January 19, 1999

Please provide information, as soon as available, as indicated below, and return to:

Public Contracts Section  
Office of Wage & Hour Compliance  
CN 389  
Trenton, New Jersey 08625-0289

Owner - Department - Agency: TOWNSHIP OF BRICK

Description of Work:

PLAY SPORTS LIGHTING

Location where work will be performed: DRUM POINT SPORTS COMPLEX  
DRUM POINT ROAD

Municipality: BRICK

County: OCEAN

Contractors: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date job to start (or started): \_\_\_\_\_

Record#: 219



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DIVISION OF WAGE AND HOUR COMPLIANCE  
(609) 292-2337 • FAX (609) 695-1174

AD-18.4A (10-97)

# Notice

## TO ALL PUBLIC WORKS EMPLOYERS:

Please be advised that effective February 18, 1992 Regulation N.J.A.C. 12:60-2.1 and 6.1 of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq requires that certified payroll records must be submitted to the public body for each employee on the project. The General Contractor is responsible for ensuring that each sub-contractor submits the certified payroll within ten (10) days of the payment of wages. The public body shall receive, file and make available for inspection during normal business hours the certified payroll records.

A copy of the certified payroll form may be obtained by contacting the New Jersey Department of Labor, Division of Wage and Hour Compliance, Public Contracts Section, PO Box 389, Trenton, NJ 08625-0389, telephone (609) 292-2259.

TERRITORY  
ENTIRE STATE

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

OPERATING ENGINEERS' RATES EXPIRATION DATE: 6-30-99

|                                                                                                                  | RATE   | FRINGE |
|------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                  | 7-1-98 | 7-1-98 |
| CLASSIFICATION:                                                                                                  |        |        |
| A-FRAME                                                                                                          | 28.03  | 14.70  |
| ASSISTANT<br>ENGINEER/OILER                                                                                      | 22.78  | 14.70  |
| ASPHALT CURBING<br>MACHINE                                                                                       | 26.12  | 14.70  |
| ASPHALT PLANT<br>ENGINEER...                                                                                     | 26.12  | 14.70  |
| ASPHALT SPREADER                                                                                                 | 26.12  | 14.70  |
| AUTOGRADE-<br>COMBINATION<br>SUBGRADER, BASE<br>MATERIAL<br>SPREADER & BASE<br>TRIMMER(CMI AND<br>SIMILAR TYPES) | 30.12  | 14.70  |
| AUTOGRADE-<br>PAVEMENT-<br>PROFILER (CMI AND<br>SIMILAR TYPES)                                                   | 30.12  | 14.70  |
| AUTOGRADE-<br>PAVEMENT-<br>PROFILER RECYCLE<br>TYPE (CMI AND<br>SIMILAR TYPES)                                   | 30.12  | 14.70  |
| AUTOGRADE-<br>PLACER-TRIMMER-<br>SPREADER<br>COMBINATION (CMI<br>AND SIMILAR<br>TYPES)                           | 30.12  | 14.70  |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                         | RATE   | FRINGE |
|-----------------------------------------------------------------------------------------|--------|--------|
|                                                                                         | 7-1-98 | 7-1-98 |
| AUTOGRADE SLIPFORM<br>PAVER (CMI AND SIMILAR<br>TYPES)                                  | 30.12  | 14.70  |
| AUTOGRADE CURECRETE<br>MACHINE (CMI AND<br>SIMILAR TYPES)                               | 26.12  | 14.70  |
| AUTOGRADE TUBE<br>FINISHER AND TEXTURING<br>MACHINE (CMI AND<br>SIMILAR TYPES)          | 26.12  | 14.70  |
| AUTOGRADE CURB<br>TRIMMER & SIDEWALK,<br>SHOULDER, SLIPFORM,<br>(CMI AND SIMILAR TYPES) | 26.12  | 14.70  |
| BACKHOE                                                                                 | 30.12  | 14.70  |
| BACKHOE (COMBINATION)                                                                   | 28.03  | 14.70  |
| BAR BENDING MACHINES<br>(POWER)                                                         | 26.12  | 14.70  |
| BATCHERS, BATCHING<br>PLANT & CRUSHER ON<br>SITE                                        | 26.12  | 14.70  |
| BELT CONVEYOR<br>SYSTEMS                                                                | 26.12  | 14.70  |
| BOILERS & STEAM<br>JENNIES (IRRESPECTIVE<br>OF THEIR USE)                               | 24.49  | 14.70  |
| BOOM TYPE SKIMMER<br>MACHINES                                                           | 26.12  | 14.70  |

\* Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                  | RATE   | FRINGE |
|------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                  | 7-1-98 | 7-1-98 |
| BOOM<br>ATTACHMENT ON<br>LOADERS                                 | 28.03  | 14.70  |
| BORING AND<br>DRILLING<br>MACHINES                               | 28.03  | 14.70  |
| BRIDGE DECK<br>FINISHER                                          | 26.12  | 14.70  |
| BROOM &<br>SWEEPERS                                              | 24.49  | 14.70  |
| BRUSH CHOPPER,<br>SHREDDER, TREE<br>SHREDDER AND<br>TREE SHEARER | 28.03  | 14.70  |
| BULLDOZERS (ALL)                                                 | 26.12  | 14.70  |
| CABLEWAYS                                                        | 28.03  | 14.70  |
| CAR DUMPERS<br>(RAILROAD)                                        | 26.12  | 14.70  |
| CARRYALLS                                                        | 28.03  | 14.70  |
| CENTRAL POWER<br>PLANTS                                          | 30.12  | 14.70  |
| CHIPPERS                                                         | 24.49  | 14.70  |

\* Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                                                                                                                                                                                              | RATE   | FRINGE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                                                                                                                                                                              | 7-1-98 | 7-1-98 |
| COMPRESSOR &<br>BLOWER TYPE<br>UNITS (USED<br>INDEPENDENTLY OR<br>MOUNTED ON DUAL<br>PURPOSE TRUCKS,<br>ON JOB SITE OR IN<br>CONJUNCTION WITH<br>JOB SITE, IN<br>LOADING &<br>UNLOADING OF<br>CONCRETE,<br>CEMENT, FLY ASH,<br>INSTANTCRETE OR<br>SIMILAR TYPE<br>MATERIALS) | 26.12  | 14.70  |
| COMPRESSOR<br>(SINGLE)                                                                                                                                                                                                                                                       | 24.49  | 14.70  |
| COMPRESSORS (2 OR<br>3 BATTERY)                                                                                                                                                                                                                                              | 26.12  | 14.70  |
| CONCRETE<br>BREAKING<br>MACHINE                                                                                                                                                                                                                                              | 26.12  | 14.70  |
| CONCRETE<br>FINISHING MACHINE                                                                                                                                                                                                                                                | 26.12  | 14.70  |
| CONCRETE PAVING<br>MACHINE                                                                                                                                                                                                                                                   | 30.12  | 14.70  |
| CONCRETE PUMP                                                                                                                                                                                                                                                                | 28.03  | 14.70  |
| CONCRETE<br>PUMPING SYSTEM,<br>PUMPCRETE &<br>SIMILAR TYPES                                                                                                                                                                                                                  | 28.03  | 14.70  |
| CONCRETE SAWS &<br>CUTTERS (RIDE ON<br>TYPE)                                                                                                                                                                                                                                 | 26.12  | 14.70  |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                           | RATE   | FRINGE |
|-----------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                           | 7-1-98 | 7-1-98 |
| CONCRETE SPREADERS-HETZEL, REXOMATIC AND SIMILAR TYPES                                                    | 26.12  | 14.70  |
| CONCRETE SPREADER (SMALL TYPE)                                                                            | 24.49  | 14.70  |
| CONCRETE VIBRATORS                                                                                        | 26.12  | 14.70  |
| CONVEYORS, UNDER 125 FEET                                                                                 | 26.12  | 14.70  |
| CONVEYORS, 125 FEET AND OVER                                                                              | 28.03  | 14.70  |
| CONVEYOR LOADERS (NOT INCLUDING ELEVATOR GRADERS)                                                         | 24.49  | 14.70  |
| CRANES (ALL TYPES, INCLUDING OVERHEAD AND STRADDLE TRAVELING TYPE)                                        | 30.12  | 14.70  |
| CRANES, GANTRY                                                                                            | 30.12  | 14.70  |
| CRANES, DERRICKS, PILE DRIVERS (ALL TYPES) WITH 100 FOOT BOOM (INCLUDING JIB AND/OR LEADS) UP TO 139 FEET | 29.77  | 14.70  |

\* Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                                                           | RATE   | FRINGE |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                                           | 7-1-98 | 7-1-98 |
| CRANES, DERRICKS,<br>PILE DRIVERS (ALL<br>TYPES) WITH 140<br>FOOT BOOM<br>(INCLUDING JIB<br>AND/OR LEADS)<br>AND OVER                     | 30.02  | 14.70  |
| CRUSHING<br>MACHINES                                                                                                                      | 26.12  | 14.70  |
| DERRICKS (LAND OR<br>FLOATING)                                                                                                            | 30.12  | 14.70  |
| DITCHING<br>MACHINE, SMALL<br>(DITCHWITCH,<br>VERMEER OR<br>SIMILAR)                                                                      | 26.12  | 14.70  |
| DRILL DOCTOR<br>(DUTIES INCLUDE<br>DUST COLLECTOR,<br>MAINTENANCE)                                                                        | 28.03  | 14.70  |
| DRILLMASTER,<br>QUARRYMASTER<br>(DOWN THE HOLE<br>DRILL) ROTARY<br>DRILL, SELF-<br>PROPELLED<br>HYDRAULIC DRILL,<br>SELF-POWERED<br>DRILL | 30.12  | 14.70  |
| DOPE POTS<br>(MECHANICAL WITH<br>OR WITHOUT PUMP)                                                                                         | 26.12  | 14.70  |
| DRAGLINES                                                                                                                                 | 30.12  | 14.70  |
| DUMPSTERS                                                                                                                                 | 26.12  | 14.70  |
| ELEVATOR                                                                                                                                  | 26.12  | 14.70  |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                               | RATE   | FRINGE |
|---------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                               | 7-1-98 | 7-1-98 |
| ELEVATOR<br>GRADERS                                           | 30.12  | 14.70  |
| ENGINES, LARGE<br>DIESEL (1620 HP)<br>AND STAGING PUMP        | 24.49  | 14.70  |
| FARM TRACTORS                                                 | 24.49  | 14.70  |
| FERTILIZING<br>EQUIPMENT<br>(OPERATION AND<br>MAINTENANCE OF) | 24.49  | 14.70  |
| FIELD ENGINEERS                                               |        |        |
| CHIEF OF PARTY                                                | 26.12  | 14.70  |
| TRANSIT/INSTRUMENT<br>MAN                                     | 22.78  | 14.70  |
| ROD/CHAINMAN                                                  | 20.20  | 14.70  |

SURVEY APPRENTICE-YEARLY SCHEDULE-FIRST TWO YEARS BASED ON  
ROD/CHAINMAN RATE: 1<sup>ST</sup> YEAR 70%, 2<sup>ND</sup> YEAR 75%. LAST TWO YEARS BASED ON  
TRANSIT/INSTRUMENT MAN'S RATE: 3<sup>RD</sup> YEAR 80%, 4<sup>TH</sup> YEAR 90%.

|                                                           |       |       |
|-----------------------------------------------------------|-------|-------|
| FINE GRADE<br>MACHINE (SMALL<br>TYPE)                     | 24.49 | 14.70 |
| FIREMAN                                                   | 26.12 | 14.70 |
| FORK LIFT<br>(ECONOMOBILE,<br>LULL, AND SIMILAR<br>TYPES) | 26.12 | 14.70 |
| FORM LINE<br>GRADERS (SMALL<br>TYPE)                      | 24.49 | 14.70 |
| FRONT END LOADER<br>(5 YARDS & OVER)                      | 30.12 | 14.70 |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
RATE FRINGE

|                                                           |        |        |
|-----------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                           | 7-1-98 | 7-1-98 |
| FRONT END LOADER<br>(2 YARDS BUT LESS<br>THAN 5 YARDS)    | 28.03  | 14.70  |
| FRONT END LOADER<br>(UNDER 1 YARD)                        | 24.49  | 14.70  |
| GENERATOR<br>(SINGLE)                                     | 24.49  | 14.70  |
| GENERATOR (2 OR 3<br>BATTERY)                             | 26.12  | 14.70  |
| GIRAFFE GRINDERS                                          | 26.12  | 14.70  |
| GRADALLS                                                  | 30.12  | 14.70  |
| GRADERS (FINISH)                                          | 28.03  | 14.70  |
| GRADER AND<br>MOTOR PATROLS                               | 26.12  | 14.70  |
| GRADER, RAGO                                              | 30.12  | 14.70  |
| GREASE, GAS, FUEL<br>& OIL SUPPLY<br>TRUCKS               | 24.49  | 14.70  |
| GROOVE CUTTING<br>MACHINE (RIDE ON<br>TYPE)               | 28.03  | 14.70  |
| GROUT PUMP                                                | 26.12  | 14.70  |
| GUNNITE MACHINES<br>(EXCLUDING<br>NOZZLE)                 | 26.12  | 14.70  |
| HAMMER<br>VIBRATORY (IN<br>CONJUNCTION WITH<br>GENERATOR) | 26.12  | 14.70  |
| HEATER PLANNER                                            | 28.03  | 14.70  |

\* Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|  | RATE | FRINGE |
|--|------|--------|
|--|------|--------|

|                                                                                                                                                                                                                                                                                  |        |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                                                                                                                                                                                  | 7-1-98 | 7-1-98 |
| HEATERS (NELSON OR OTHER TYPE INCLUDING)                                                                                                                                                                                                                                         | 24.49  | 14.70  |
| HELICOPTERS                                                                                                                                                                                                                                                                      |        |        |
| PILOT/ENGINEER                                                                                                                                                                                                                                                                   | 31.49  | 14.70  |
| CO-PILOT                                                                                                                                                                                                                                                                         | 30.12  | 14.70  |
| COMMUNICATIONS ENGINEER                                                                                                                                                                                                                                                          | 30.12  | 14.70  |
| HOISTS: ALL TYPE HOISTS, SHALL STEAM, GAS, DIESEL, ELECTRIC, AIR HYDRAYLIC, SINGLE AND DOUBLE DRUM, CONCRETE, BRICK SHAFT CAISSON, CONVEYOR, SNORKEL, ROOF, TUGGER, AND HOUSE CARS OR ANY OTHER SIMILAR TYPE HOISTING MACHINES, PORTABLE OR STATIONARY, EXCEPT CHICAGO BOOM TYPE | 28.03  | 14.70  |
| HOISTS (CHICAGO BOOMS)                                                                                                                                                                                                                                                           | 28.03  | 14.70  |
| HOISTS (ROOF, TUGGER, AERIAL PLATFORM HOIST ELEVATORS AND HOUSE CARS)                                                                                                                                                                                                            | 26.12  | 14.70  |
| HOPPERS                                                                                                                                                                                                                                                                          | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
RATE FRINGE

|                                                                                                                            |        |        |
|----------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                            | 7-1-98 | 7-1-98 |
| HOPPER DOORS<br>(POWER OPERATED)                                                                                           | 26.12  | 14.70  |
| HYDRO BLASTER                                                                                                              | 28.03  | 14.70  |
| HYDRAULIC<br>CRANES (10 TONS<br>AND UNDER)                                                                                 | 28.03  | 14.70  |
| HYDRO-AXE                                                                                                                  | 28.03  | 14.70  |
| JACKS, SCREW, AIR,<br>HYDRAULIC, POWER<br>OPERATED UNIT OR<br>CONSOLE TYPE<br>(NOT HAND JACK OR<br>PILE LOAD TEST<br>TYPE) | 28.03  | 14.70  |
| LADDERS<br>(MOTORIZED)                                                                                                     | 26.12  | 14.70  |
| LADDERVATOR                                                                                                                | 26.12  | 14.70  |
| LEAD ENGINEER,<br>FOREMAN<br>ENGINEER, SAFETY<br>ENGINEER<br>(MINIMUM)                                                     | 30.36  | 14.70  |
| LIGHTS, PORTABLE<br>GENERATING LIGHT<br>PLANT                                                                              | 24.49  | 14.70  |
| LOCOMOTIVE<br>(LARGE)                                                                                                      | 30.12  | 14.70  |
| DINKY TYPE                                                                                                                 | 26.12  | 14.70  |
| LOG SKIDDER                                                                                                                | 28.03  | 14.70  |
| MAINTENANCE<br>APPRENTICE (OILER)                                                                                          | 22.78  | 14.70  |
| MAINTENANCE<br>UTILITY MAN                                                                                                 | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                                                                                                                                                                                                                                     | RATE   | FRINGE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                                                                                                                                                                                                                     | 7-1-98 | 7-1-98 |
| MAINTENANCE AND REPAIR OF ASPHALT CURBING MACHINES, CONCRETE FINISHING MACHINES, CONCRETE VIBRATORS, GAS BUGGIES, LEVELING MACHINES, PORTABLE GENERATORS, POWER SAWS, COMPRESSOR EQUIPMENT OR COMPRESSOR UNITS USED IN CONNECTION WITH CEMENT, PAINT, INSULATING, CURBING AND SAND BLASTING (ALL AND SIMILAR TYPES) | 26.12  | 14.70  |
| MECHANIC                                                                                                                                                                                                                                                                                                            | 26.12  | 14.70  |

REGISTERED MECHANIC'S APPRENTICE RATE-BASED ON JOURNEYMAN MECHANIC'S WAGE: 1<sup>ST</sup> YEAR: 60%; 2<sup>ND</sup> YEAR: 70%; 3<sup>RD</sup> YEAR: 80%; 4<sup>TH</sup> YEAR: 90%

|                                  |       |       |
|----------------------------------|-------|-------|
| MECHANICS HELPER                 | 22.78 | 14.70 |
| MIXERS (EXCEPTING PAVING MIXERS) | 26.12 | 14.70 |
| MIXERS, CONCRETE SMALL           | 24.49 | 14.70 |
| MOTOR PATROL AND GRADERS         | 26.12 | 14.70 |
| MUCKING MACHINES                 | 30.12 | 14.70 |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                                       | RATE   | FRINGE |
|-----------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                       | 7-1-98 | 7-1-98 |
| MULCHING<br>EQUIPMENT<br>(OPERATION AND<br>MAINTENANCE OF)                                                            | 24.49  | 14.70  |
| PANS                                                                                                                  | 28.03  | 14.70  |
| PAVERS (ALL)<br>CONCRETE                                                                                              | 28.03  | 14.70  |
| PAVEMENT AND<br>CONCRETE<br>BREAKER i.e.<br>SUPERHAMMER<br>AND HOE RAM                                                | 30.12  | 14.70  |
| PAVEMENT<br>BREAKER - SMALL,<br>SELF-PROPELLED<br>RIDE ON TYPE (ALSO<br>MAINTAINS<br>COMPRESSOR OR<br>HYDRAULIC UNIT) | 26.12  | 14.70  |
| PAVEMENT<br>BREAKER TRUCK<br>MOUNTED                                                                                  | 26.12  | 14.70  |
| PILE DRIVER                                                                                                           | 30.12  | 14.70  |
| PIPE BENDING<br>MACHINE (POWER)                                                                                       | 26.12  | 14.70  |
| PITCH PUMP                                                                                                            | 26.12  | 14.70  |
| PLASTER PUMP<br>(REGARDLESS OF<br>SIZE)                                                                               | 26.12  | 14.70  |
| PLATE AND FRAME<br>FILTER PRESS                                                                                       | 28.03  | 14.70  |
| POST HOLE DIGGER<br>(POST POUNDER &<br>AUGER)                                                                         | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                 | RATE   | FRINGE |
|-------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                 | 7-1-98 | 7-1-98 |
| PUMPCRETE - UNIT<br>TYPE                                                                        | 28.03  | 14.70  |
| PUMPCRETE<br>MACHINES,<br>SQUEEZECONCRETE<br>AND CONCRETE<br>PUMPING<br>(REGARDLESS OF<br>SIZE) | 28.03  | 14.70  |
| PUMPS (4 INCH<br>SUCTION AND OVER<br>INCLUDING<br>SUBMERSIBLE<br>PUMPS)                         | 24.49  | 14.70  |
| PUMPS (2 INCH OR<br>LESS THAN 4 INCH<br>SUCTION<br>INCLUDING<br>SUBMERSIBLE<br>PUMPS)           | 24.49  | 14.70  |
| PUMPS DIESEL<br>ENGINE AND<br>HYDRAULIC<br>(IMMATERIAL OF<br>POWER)                             | 24.49  | 14.70  |
| ROAD FINISHING<br>MACHINES (SMALL<br>TYPE)                                                      | 24.49  | 14.70  |
| ROADWAY SURFACE<br>GRINDER                                                                      | 30.12  | 14.70  |
| ROD BENDING<br>MACHINES (POWER)                                                                 | 26.12  | 14.70  |
| ROLLERS - GRADE,<br>FILL, OR STONE<br>BASE                                                      | 24.49  | 14.70  |
| ROLLERS - BLACK<br>TOP                                                                          | 26.12  | 14.70  |
| SCALES, POWER                                                                                   | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                           | RATE   | FRINGE |
|-------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                           | 7-1-98 | 7-1-98 |
| SCOOPER (LOADER<br>& SHOVEL)                                                              | 30.12  | 14.70  |
| SCRAPERS                                                                                  | 28.03  | 14.70  |
| SEAMEN<br>PULVERIZING<br>MIXER                                                            | 26.12  | 14.70  |
| SEEDING<br>EQUIPMENT<br>(OPERATION AND<br>MAINTENANCE OF)                                 | 24.49  | 14.70  |
| SHOULDER<br>WIDENER                                                                       | 26.12  | 14.70  |
| SHOVELS                                                                                   | 30.12  | 14.70  |
| SIDE BOOMS                                                                                | 28.03  | 14.70  |
| SILOS                                                                                     | 26.12  | 14.70  |
| SKIMMER<br>MACHINES (BOOM<br>TYPE)                                                        | 26.12  | 14.70  |
| SPRINKLER &<br>WATER PUMP<br>TRUCKS (USED ON<br>JOBSITE OR IN<br>CONJUNCTION WITH<br>JOB) | 24.49  | 14.70  |
| SQUEEZE CRETE                                                                             | 28.03  | 14.70  |
| STEAM JENNIES<br>AND<br>BOILERS (IRRESPECT<br>IVE OF THEIR USE)                           | 24.49  | 14.70  |
| STEEL CUTTING<br>MACHINE (SERVICE<br>AND<br>MAINTENANCE)                                  | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                                                                                   | RATE   | FRINGE |
|---------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                   | 7-1-98 | 7-1-98 |
| STONE SPREADERS                                                                                   | 24.49  | 14.70  |
| STRADDLE CARRIERS                                                                                 | 28.03  | 14.70  |
| TAMPING MACHINES, VIBRATING RIDE-ON                                                               | 24.49  | 14.70  |
| TAMROCK DRILL                                                                                     | 26.12  | 14.70  |
| TEMPORARY HEATING PLANT (NELSON OR OTHER TYPE, INCLUDING PROPANE, NATURAL GAS OR FLOW TYPE UNITS) | 24.49  | 14.70  |
| TIRE REPAIR AND MAINTENANCE                                                                       | 22.78  | 14.70  |
| TRACTORS                                                                                          | 26.12  | 14.70  |
| TREE CHOPPER WITH BOOM                                                                            | 30.12  | 14.70  |
| TRENCH MACHINES                                                                                   | 30.12  | 14.70  |
| TUG CAPTAINS                                                                                      | 26.12  | 14.70  |
| TUNNEL BORING MACHINES                                                                            | 30.12  | 14.70  |
| VACUUM TRUCK                                                                                      | 28.03  | 14.70  |
| VIBRATING PLANTS (USED WITH UNLOADING)                                                            | 26.12  | 14.70  |
| WATER AND SPRINKLER TRUCKS (USE ON JOB SITE OR IN CONJUNCTION WITH JOB)                           | 24.49  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
RATE FRINGE

|                                                                                                                                                                                                                                                                                                                                              |        |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                                                                                                                                                                                                                                              | 7-1-98 | 7-1-98 |
| WELDER AND REPAIR MECHANIC                                                                                                                                                                                                                                                                                                                   | 26.12  | 14.70  |
| WELDING MACHINES (GAS DIESEL OR ELECTRIC CONVERTERS OF ANY TYPE - SINGLE: TWO OR THREE WITHIN 100')                                                                                                                                                                                                                                          | 24.49  | 14.70  |
| WELDING SYSTEM - MULTIPLE (RECTIFIER TRANSFORMER TYPE)                                                                                                                                                                                                                                                                                       | 24.49  | 14.70  |
| WELLPOINT SYSTEMS (INCLUDING INSTALLATION BY BULL GANG AND MAINTENANCE)                                                                                                                                                                                                                                                                      | 24.49  | 14.70  |
| WINCH TRUCKS (HOISTING)                                                                                                                                                                                                                                                                                                                      | 28.03  | 14.70  |
| WATER OPERATION: ON ALL POWER BOATS USED IN CONJUNCTION WITH PIPELINE, RIVER CROSSINGS AND ALL TYPE OF CONSTRUCTION. THE WORK PERFORMED BY THE CAPTAIN & TUG MAINTENANCE. ENGINEER SHALL BE ASSIGNED TO EMPLOYEES COVERED BY THIS AGREEMENT AND SHALL BE ASSIGNED TO EMPLOYEES COVERED BY THIS AGREEMENT AND THE FOLLOWING RATES SHALL APPLY | 26.12  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|                                   | RATE   | FRINGE |
|-----------------------------------|--------|--------|
| EFFECTIVE DATE:                   | 7-1-98 | 7-1-98 |
| CAPTAIN (POWER BOATS)             | 26.12  | 14.70  |
| TUG MASTER (POWER BOATS)          | 26.12  | 14.70  |
| MAINTENANCE APPRENTICE (DECKHAND) | 22.78  | 14.70  |

APPRENTICESHIP OPERATOR – ALL EQUIPMENT – YEARLY SCHEDULE BASED ON PIECE OF EQUIPMENT PERSON IS OPERATING 1<sup>ST</sup> YEAR – 60%, 2<sup>ND</sup> YEAR – 70%, 3<sup>RD</sup> YEAR – 80%, 4<sup>TH</sup> YEAR – 90%

WORK AT HAZARDOUS WASTE SITES

ON HAZARDOUS WASTE REMOVAL OR ASBESTOS REMOVAL WORK, OR ANY STATE OR FEDERALLY DESIGNATED HAZARDOUS WASTE SITE, WHERE THE OPERATING ENGINEER IS IN DIRECT CONTACT WITH HAZARDOUS MATERIAL AND WHEN PERSONAL PROTECTIVE EQUIPMENT IS REQUIRED FOR RESPIRATORY, SKIN AND EYE PROTECTION, THE OPERATING ENGINEER SHALL RECEIVE THE HOURLY WAGE PLUS AN ADDITIONAL TWENTY PERCENT (20%) OF THAT WAGE. FRINGE BENEFITS WILL BE PAID AT THE REGULAR RATE.

STRUCTURAL STEEL ERECTION

|                                                                  | RATE   | FRINGE |
|------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                  | 7-1-98 | 7-1-98 |
| AERIAL PLATFORM USED ON HOISTS                                   | 26.53  | 14.70  |
| ASSISTANT ENGINEER/OILER                                         | 23.24  | 14.70  |
| A-FRAME                                                          | 29.19  | 14.70  |
| APPRENTICE ENGINEER/OILER WITH COMPRESSOR OR WELDING MACHINE     | 26.53  | 14.70  |
| CHERRY PICKERS – 10 TONS AND UNDER (OVER 10 TONS USE CRANE RATE) | 29.19  | 14.70  |

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OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

|  | RATE | FRINGE |
|--|------|--------|
|--|------|--------|

|                                                                                                   |        |        |
|---------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                   | 7-1-98 | 7-1-98 |
| CHIEF OF PARTY                                                                                    | 26.53  | 14.70  |
| COMPRESSOR (SINGLE)                                                                               | 25.00  | 14.70  |
| COMPRESSOR (2 OR 3 IN BATTERY)                                                                    | 26.53  | 14.70  |
| CONVEYORS & TUGGER HOISTS                                                                         | 26.53  | 14.70  |
| CRANES (ALL CRANES – LAND OR FLOATING WITH BOOM – INCLUDING JIB, 140 FEET AND OVER ABOVE GROUND)  | 32.39  | 14.70  |
| CRANES (ALL CRANES – LAND OR FLOATING WITH BOOM – INCLUDING JIB, LESS THAN 140 FEET ABOVE GROUND) | 31.48  | 14.70  |
| DERRICKS (LAND OR FLOATING) WITH BOOMS, INCLUDING JIB, 140 FEET AND OVER ABOVE GROUND             | 32.39  | 14.70  |
| DERRICKS (LAND OR FLOATING) WITH BOOMS, INCLUDING JIB, LESS THAN 140 FEET ABOVE GROUND            | 31.48  | 14.70  |
| ELEVATORS OR HOUSE CARS                                                                           | 26.53  | 14.70  |
| FIREMAN                                                                                           | 26.53  | 14.70  |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.  
OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
RATE FRINGE

|                                                                                                                      |        |        |
|----------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                      | 7-1-98 | 7-1-98 |
| FORK LIFTS                                                                                                           | 26.53  | 14.70  |
|                                                                                                                      |        |        |
| GENERATORS                                                                                                           | 25.00  | 14.70  |
|                                                                                                                      |        |        |
| GENERATORS (2 OR 3)                                                                                                  | 26.53  | 14.70  |
|                                                                                                                      |        |        |
| HELICOPTERS:                                                                                                         |        |        |
| PILOT/ENGINEER                                                                                                       | 33.25  | 14.70  |
| CO-PILOT                                                                                                             | 32.39  | 14.70  |
| COMMUNICATING<br>ENGINEER                                                                                            | 32.39  | 14.70  |
|                                                                                                                      |        |        |
| HOISTS: ALL TYPE HOISTS<br>EXCEPT CHICAGO BOOM<br>TYPE                                                               | 29.19  | 14.70  |
|                                                                                                                      |        |        |
| JACKS: SCREW AIR<br>HYDRAULIC POWER<br>OPERATED UNIT OR<br>CONSOLE TYPE (NOT<br>HAND JACK OR PILE<br>LOAD TEST TYPE) | 29.19  | 14.70  |
|                                                                                                                      |        |        |
| LEAD ENGINEER,<br>FOREMAN ENGINEER,<br>SAFETY ENGINEER<br>(MINIMUM)                                                  | 30.81  | 14.70  |
|                                                                                                                      |        |        |
| MAINTENANCE<br>APPRENTICE (OILER)                                                                                    | 23.24  | 14.70  |
|                                                                                                                      |        |        |
| MAINTENANCE UTILITY<br>MAN                                                                                           | 26.53  | 14.70  |
|                                                                                                                      |        |        |
| ROD BENDING MACHINE<br>(POWER)                                                                                       | 26.53  | 14.70  |
|                                                                                                                      |        |        |
| ROD CHAINMAN                                                                                                         | 20.20  | 14.70  |
|                                                                                                                      |        |        |
| SIDE BOOMS                                                                                                           | 29.19  | 14.70  |
|                                                                                                                      |        |        |
| STRADDLE CARRIER                                                                                                     | 29.19  | 14.70  |

\*Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.

OVERTIME (3A)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
RATE FRINGE

|                                                                                                                  |        |        |
|------------------------------------------------------------------------------------------------------------------|--------|--------|
| EFFECTIVE DATE:                                                                                                  | 7-1-98 | 7-1-98 |
| TRANSIT/<br>INSTRUMENT MAN                                                                                       | 23.24  | 14.70  |
| WELDING<br>MACHINES, GAS,<br>DIESEL, OR<br>ELECTRIC<br>CONVERTERS OF<br>ANY TYPE - SINGLE                        | 25.00  | 14.70  |
| WELDING<br>MACHINES, GAS OR<br>ELECTRIC<br>CONVERTERS ON<br>ANY TYPE - 2 OR 3<br>IN BATTERY<br>INCLUDING DIESELS | 26.53  | 14.70  |
| WELDING SYSTEM,<br>MULTIPLE<br>(RECTIFIER<br>TRANSFORMER<br>TYPE)                                                | 25.00  | 14.70  |
| WATER OPERATION:                                                                                                 |        |        |
| CAPTAIN (POWER<br>BOATS)                                                                                         | 26.53  | 14.70  |
| TUG MASTER<br>(POWER BOATS)                                                                                      | 26.53  | 14.70  |
| MAINTENANCE<br>APPRENTICE<br>(DECKHAND)                                                                          | 23.24  | 14.70  |

\* Allocation of increase on 7-1-98 between rate and fringe benefits to be determined at a later date.

TEST BORING PRELIMINARY TO CONSTRUCTION

THE DRILLER SHALL BE EMPLOYED ON ALL WORK KNOWN AS CORE DRILLING, DIAMOND DRILLING, MUD DRILLING, PIPE DRIVING AND SETTING, SOUNDING WASH BORING, POUNDING, PROVING, TESTBORING, SHOT DRILLING, AUGER DRILLING FOR SOUNDING OR TEST BORING AND ON ANY WORK PERFORMED ON LAND OR WATER USED IN CONNECTION WITH SUCH ACTIVITIES, WHICH ARE PRELIMINARY TO THE CONSTRUCTION TRADES, INCLUDING THE MOVING, HAULING, LOADING AND UNLOADING OF SUCH EQUIPMENT BY VEHICLES AND THE OPERATION THEREOF.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

HOURLY PREVAILING WAGE RATE

|                   |          |
|-------------------|----------|
| EFFECTIVE DATE:   | 12-18-98 |
| JOURNEYMAN        | 22.23    |
| FOREMAN*          | 826.20   |
| *PER 40 HOUR WEEK |          |
| HELPER            | 18.72    |
| BENEFITS          | 7.69     |
| OVERTIME          | (5)      |

HAZARDOUS WASTE DIFFERENTIAL:

LEVEL A: 1.00/HOUR; LEVEL B: .75/HOUR; LEVEL C: .25/HOUR

DRILL FOR GROUND WATER SUPPLY

|                              |        |
|------------------------------|--------|
| EFFECTIVE DATE               | 8-1-96 |
| DRILLER                      | 22.69  |
| HELPER                       | 20.25  |
| BENEFITS                     | 6.00   |
| 1 <sup>ST</sup> YEAR TRAINEE | 11.27  |
| 2 <sup>ND</sup> YEAR TRAINEE | 13.68  |
| 3 <sup>RD</sup> YEAR TRAINEE | 16.13  |
| OVERTIME                     | (39)   |

\*+1.00 PER HOUR EACH FOR WELDING COURSE AND DRILLER LICENSE.

WHEN DRILLING WORK REQUIRES PERSONAL PROTECTIVE EQUIPMENT EQUAL TO OSHA LEVEL "A" THERE IS A \$3.00 PER HOUR PREMIUM; LEVEL "B" \$2.00 PER HOUR; LEVEL "C" \$1.00 PER HOUR.

THE WELL DRILLER AND/OR HIS HELPERS MAY PERFORM ALL OF THE LABOR RELATIVE TO THE CONSTRUCTION, FINISHING, AND SERVICING OF WELLS, PUMPS AND BORINGS FOR GROUND WATER SUPPLY. THE PRESENT METHODS OF WELL DRILLING ENTAILING, AS THEY DO, MANY DIVERSE JOB OPERATIONS CALLING FOR DRILLING, PUMP DISCHARGE, PIPINGS, AND THE OPERATION OF THE VARIOUS DIFFERENT TYPES OF RELATED POWER EQUIPMENT, SHALL ALL BE PROPERLY WITHIN THE JOB DUTIES AND FUNCTIONS OF THE WELL DRILLER AND/OR HIS HELPERS. IN THE EVENT THAT AN EXTENSION OF WORK SHOULD OCCUR BEYOND WATER WELL DRILLING FUNCTIONS AND INTO THE FIELD OF GENERAL CONSTRUCTION WORK, SUCH EXTENSION OF WORK WOULD COME UNDER THE APPROPRIATE RATES LISTED EXSEWHERE IN THIS WAGE DETERMINATION.

TRAINEES MUST WORK UNDER DIRECT SUPERVISION OF DRILLERS OR COMPETENT HELPERS. THERE IS NO LIMIT TO THE NUMBER OF TRAINEES AT A SITE.

NOTE: MARINE AND DREDGING RATES ARE AVAILABLE UPON REQUEST.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

| EFFECTIVE DATE                                                                                                                                                                                                                                                                                  | 5-1-98           | 3-1-99         | 9-1-99         | 3-1-00         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|----------------|----------------|
| BLASTER                                                                                                                                                                                                                                                                                         | 24.75<br>B 10.80 | 25.25<br>11.20 | 25.25<br>11.45 | 25.75<br>11.70 |
| GENERAL FOREMAN                                                                                                                                                                                                                                                                                 | 22.25<br>B 10.80 | 22.75<br>11.20 | 22.75<br>11.45 | 23.25<br>11.70 |
| FINISHER FOREMAN<br>CONCRETE FOREMAN                                                                                                                                                                                                                                                            | 22.20<br>B 10.80 | 22.70<br>11.20 | 22.70<br>11.45 | 23.20<br>11.70 |
| PIPE FOREMAN AND<br>GRADE FOREMAN                                                                                                                                                                                                                                                               | 21.70<br>B 10.80 | 22.20<br>11.20 | 22.20<br>11.45 | 22.70<br>11.70 |
| DRILL FOREMAN                                                                                                                                                                                                                                                                                   | 21.50<br>B 10.80 | 22.00<br>11.20 | 22.00<br>11.45 | 22.50<br>11.70 |
| LABOR FOREMAN,<br>ASPHALT FOREMAN                                                                                                                                                                                                                                                               | 21.25<br>B 10.80 | 21.75<br>11.20 | 21.75<br>11.45 | 22.25<br>11.70 |
| FINISHER, RAMMER, PAVER<br>GUNNITE NOZZLE MAN,<br>STONE- CUTTER, FORM<br>SETTER MANHOLES, CATCH<br>BASINS, INLET BUILDER                                                                                                                                                                        | 21.20<br>B 10.80 | 21.70<br>11.20 | 21.70<br>11.45 | 22.20<br>11.70 |
| TIMBERMAN WAGON DRILL<br>OPERATOR AND DRILL<br>MASTER                                                                                                                                                                                                                                           | 20.95<br>B 10.80 | 21.45<br>11.20 | 21.45<br>11.45 | 21.95<br>11.70 |
| SEWER PIPE, LASER MEN<br>CONDUIT AND DUCT LINE<br>LAYER, POWER TOOL<br>OPERATOR,JACK HAMMER,<br>CHIPPING HAMMER,<br>PAVEMENT BREAKER,POWER<br>BUGGY, CONCRETE CUTTER,<br>ASPHALT CUTTER,SHEET<br>HAMMER AND TREE CUTTER<br>OPERATORS,SAND BLASTING,<br>CUTTING,BURNING AND<br>OTHER POWER TOOLS | 20.75<br>10.80   | 21.25<br>11.20 | 21.25<br>11.45 | 21.75<br>11.70 |

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

| EFFECTIVE DATE                                                                                                                                                                                                                              | 5-1-98           | 3-1-99         | 9-1-99         | 3-1-00         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|----------------|----------------|
| WAGON DRILL OPERATOR<br>HELPER, DRILL MASTER<br>HELPER, POWDER<br>CARRIER & MAGAZINE<br>TENDER, SIGNAL MAN                                                                                                                                  | 20.45<br>B 10.80 | 20.95<br>11.20 | 20.95<br>11.45 | 21.45<br>11.70 |
| BASIC LABORER,<br>LANDSCAPE LABORER,<br>RAILROAD TRACK<br>LABORER, FLAGMAN,<br>TRAFFIC DIRECTOR,<br>SALAMANDER TENDER<br>PITMAN, DUMP MAN,<br>WATERPROOFING, RAKERS<br>& TAMPERS ON COLD<br>PATCH WORK, WRAPPING<br>AND COATING OF ALL PIPE | 20.25<br>B 10.80 | 20.75<br>11.20 | 20.75<br>11.45 | 21.25<br>11.70 |

TOXIC OR HAZARDOUS 3.00 PER HOUR OVER REGULAR APPLICABLE HOURLY WAGE  
WASTE LABORER RATE IN ZONES A, B OR C, 1.00 PER HOUR OUTSIDE ZONES A, B, C

FREE AIR TUNNEL JOBS

|                                                                                            | 5-1-98           | 3-1-99         | 9-1-99         | 3-1-00         |
|--------------------------------------------------------------------------------------------|------------------|----------------|----------------|----------------|
| WALKING BOSSES AND<br>SUPERINTENDANTS                                                      | 23.00<br>B 10.80 | 23.50<br>11.20 | 23.50<br>11.45 | 24.00<br>11.70 |
| HEADING FOREMAN, SHAFT<br>FOREMAN, ROD FOREMAN,<br>ELECTRICIAN FOREMAN,<br>RIGGING FOREMAN | 22.20<br>B 10.80 | 22.70<br>11.20 | 22.70<br>11.45 | 23.20<br>11.70 |

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

| EFFECTIVE DATE                                                                                                                                                                                                                                                                                                                                     | 5-1-98           | 3-1-99         | 9-1-99         | 3-1-00         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|----------------|----------------|
| IRON FOREMAN, CAULKING<br>FOREMAN, FORM FOREMAN<br>CEMENT FINISHING FORE-<br>MAN, CONCRETE FOREMAN,<br>TRACK FOREMAN, CLEANUP<br>FOREMAN, GROUT<br>FOREMAN                                                                                                                                                                                         | 21.70<br>B 10.80 | 22.20<br>11.20 | 22.20<br>11.45 | 22.70<br>11.70 |
| BLASTERS                                                                                                                                                                                                                                                                                                                                           | 24.70<br>B 10.80 | 25.20<br>11.20 | 25.20<br>11.45 | 25.70<br>11.70 |
| TOP LABOR FOREMAN                                                                                                                                                                                                                                                                                                                                  | 21.15<br>B 10.80 | 21.65<br>11.20 | 21.65<br>11.45 | 22.15<br>11.70 |
| SKILLED MEN (INCLUDING<br>MINERS, DRILL RUNNERS<br>IRON MEN, CONVEYOR MEN<br>MAINTENANCE MEN,<br>SAFETY MINERS, RIGGERS,<br>BLOCK LAYERS, CEMENT<br>FINISHER, TOD MEN,<br>CAULKERS, POWDER<br>CARRIERS, ALL OTHER<br>SKILLED MEN)                                                                                                                  | 21.30<br>B 10.80 | 21.80<br>11.20 | 21.80<br>11.45 | 22.30<br>11.70 |
| SEMI-SKILLED MEN<br>(INCLUDING MINERS'<br>HELPER, CHUCK TENDERS,<br>TRACK MEN, NIPPERS,<br>BRAKE MEN, DERAILED MEN,<br>CABLE MEN HOSE MEN,<br>GRAVEL MEN, FORM MEN,<br>BELL OR SIGNAL MEN TOP<br>OR BOTTOM, FORM<br>WORKERS, AND MOVERS<br>CONCRETE WORKERS,<br>SHAFT MEN, TUNNEL<br>LABORERS, CAULKERS<br>HELPER, ALL OTHER SEMI-<br>SKILLED MEN) | 21.15<br>B 10.80 | 21.65<br>11.20 | 21.65<br>11.45 | 22.15<br>10.58 |

OVERTIME FOR ALL CLASSIFICATIONS: (36)

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

ENTIRE STATE

HEAVY AND GENERAL LABORERS

| EFFECTIVE DATE                                                                      | 5-1-98         | 3-1-99         | 9-1-99         | 3-1-00         |
|-------------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|
| ALL OTHERS (INCLUDING<br>POWDER WATCHMEN,<br>CHANGE HOUSE<br>ATTENDANTS, TOP LABORS | 20.65<br>10.80 | 21.15<br>11.20 | 21.15<br>11.45 | 21.65<br>11.70 |

OVERTIME FOR ALL CLASSIFICATIONS: (36)

# NEW JERSEY DEPARTMENT OF LABOR PREVAILING WAGE RATE DETERMINATION

The following information applies to all rate categories in the attached Prevailing Wage Rate Determination:

## KEY TO ABBREVIATIONS:

|                                      |                                        |
|--------------------------------------|----------------------------------------|
| AF = Assistant Foreman Rate Per Hour | LAM = Layout Rate Per Hour             |
| B = Benefit Rate Per Hour            | LM = Lead Man Rate Per Hour            |
| CS = Cable Splicer Rate Per Hour     | PH = Probationary Helper Rate Per Hour |
| D = Effective Date of Wage Rate      | PR = Plan Reader Rate Per Hour         |
| DF = Deputy Foreman Rate Per Hour    | RT = Radio Tower Rate Per Hour         |
| F = Foreman Rate Per Hour            | SF = Sub-Foreman Rate Per Hour         |
| H = Helper Rate Per Hour             | T = Total Rate Per Hour                |
| J = Journeyman Rate Per Hour         |                                        |

## FRINGE BENEFITS:

Fringe benefits are an integral part of the prevailing wage rate and are in addition to those wages tabulated as rate per hour. Employers not paying these benefits to a payee designated in a collective bargaining agreement shall pay the benefits directly to the employee on each pay day.

## ASTERISK:

When an asterisk (\*) appears below a date, it indicates that there will be a future allocation between the hourly rate and the fringe benefit rate. The total rate is indicated under the future effective date.

## NOTE:

SNOW PLOWING CONTRACTS ARE NOT COVERED UNDER THE NEW JERSEY PREVAILING WAGE ACT.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

OCEAN COUNTY

ASPHALT LABORERS

ATLANTIC, BURLINGTON, CAMDEN, CAPE MAY, GLOUCESTER, MERCER, MONMOUTH  
OCEAN, AND SALEM COUNTIES:

| STREET                                                                | RATE    | RATE   | RATE   | RATE   |
|-----------------------------------------------------------------------|---------|--------|--------|--------|
| Effective Date:                                                       | 6-26-98 | 3-1-99 | 9-1-99 | 3-1-00 |
| Paving Foreman                                                        | 21.40   | 21.90  | 21.90  | 22.40  |
| Head Raker                                                            | 21.05   | 21.55  | 21.55  | 22.05  |
| Rakers, Screed Men                                                    | 20.90   | 21.40  | 21.40  | 21.90  |
| Tampers, Smoothers,<br>Kettlemen, Painters,<br>Shoveler & Roller Boys | 20.65   | 21.15  | 21.15  | 21.65  |
| TRAINEES** (STARTING<br>RATE)                                         | 13.90   | 13.90  | 13.90  | 13.90  |
| BENEFITS:                                                             | 10.75   | 11.15  | 11.40  | 11.65  |

Expiration Date: 2-28-01

Job Steward to receive +.40 per hour over regular hourly wage.

OVERTIME FOR ALL CLASSIFICATIONS: (36)

\*Trainee rates listed above apply to the first fifteen weeks of employment. Thereafter, said rate shall encrease to 75% of rakers rate for fifteen additional weeks. After the thirty week training period, the employee will then be paid at the full raker's rate. The trainee rate may only be paid to the fifth man on a four man asphalt laviorer's paving crew.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

BURLINGTON, HUNTERDON, MERCER, MIDDLESEX, MONMOUTH, OCEAN AND SOMERSET COUNTIES

CRAFT

TRUCK CLASSIFICATION;

RATE;

|                                                                                                                                       |        |
|---------------------------------------------------------------------------------------------------------------------------------------|--------|
| EFFECTIVE DATE:                                                                                                                       | 5-9-97 |
| Helper on Asphalt<br>Distributor, Pick-Up and Dump<br>Truck Drivers, Winch Straight<br>Truck Drivers, Water and Fuel<br>Truck Drivers | 24.45  |
| Straight Three-Axle Material<br>Driver                                                                                                | 24.50  |
| Tractor Trailer Truck Driver                                                                                                          | 24.50  |
| Euclid Type Vehicles (Except<br>Self Loading)                                                                                         | 24.60  |
| Winch Trailer Driver                                                                                                                  | 24.70  |
| Mechanic Helper                                                                                                                       | 24.22  |
| Benefits                                                                                                                              | 10.985 |
| Overtime Benefits                                                                                                                     | 12.635 |
| Overtime Code                                                                                                                         | (40)   |

Truck Foreman: \$.25 cents per hour above regular rate. Overtime shall be increased accordingly.

EXPIRATION DATE 4-30-98

HAZARDOUS WASTE REMOVAL: (+ \$3.00 premium per hour)

On hazardous waste removal work on a State designated hazardous waste site where the driver is in direct contact with hazardous materials and when personal protective equipment is required for respiratory, skin and eye protection, the driver shall receive an additional \$3.00 per hour on the hourly wage rate. A hazardous waste related certified worker at a designated hazardous waste site who is not working in a zone requiring level A, B or C personal protection shall receive an hourly wage rate plus \$1.00 per hour.

|                           |            |
|---------------------------|------------|
| MATERIAL DELIVERY DRIVERS | D 10-15-96 |
| DRIVER                    | 14.00      |
| BENEFITS                  | 6.98       |
| NEW HIRES                 |            |
| FIRST 6 MONTHS            | 12.00      |
| AFTER 6 MONTHS            | 12.00      |
| AFTER 2 YEARS             | 13.00      |
| BENEFITS                  | 6.98       |
| OVERTIME                  | (5)        |

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

| CRAFTS                                     |   |         |        | OVERTIME |                          |
|--------------------------------------------|---|---------|--------|----------|--------------------------|
| AIR CONDITIONING AND REFRIGERATION         |   | 3-20-98 | 3-1-99 | 3-1-00   | EXPIRATION DATE: 2-28-01 |
|                                            | J | 21.58   | 22.48  | 23.38    |                          |
|                                            | B | 7.15    | 7.22   | 7.29     |                          |
|                                            | T | 28.73   | 29.70  | 30.67    | (34)                     |
| HEAT & FROST INSULATORS ASBESTOS WORKERS** |   | 1-1-96  | 3-6-98 | 7-24-98  | EXPIRATION DATE:6-30-99  |
|                                            | J | 25.115  | 25.245 | 25.365   |                          |
|                                            | B | 12.325  | 13.745 | 14.375   |                          |
|                                            | T | 37.44   | 38.99  | 39.74    |                          |
|                                            |   |         |        |          |                          |
|                                            | F | 26.115  | 26.245 | 26.365   |                          |
|                                            | B | 12.325  | 13.745 | 14.375   |                          |
|                                            | T | 38.44   | 39.99  | 40.74    |                          |
| ABATEMENT HELPERS                          |   |         |        |          |                          |
| FIRST LEVEL                                | H | 15.985  | 17.05  | 17.47    |                          |
|                                            | B | 4.97    | 5.53   | 5.68     |                          |
|                                            | T | 20.96   |        | 23.15    |                          |
|                                            |   |         |        |          |                          |
| SECOND LEVEL                               | H | 17.58   | 17.58  | 17.76    |                          |
|                                            | B | 12.325  | 12.325 | 14.375   |                          |
|                                            | T | 29.91   | 29.91  | 32.135   |                          |
| OVERTIME                                   |   |         |        |          | (35)                     |

\*\*Also applies to the removal of insulation materials/asbestos from mechanical systems including containment erection & demolition and placing material in appropriate containers.

|              |         |         |      |                          |
|--------------|---------|---------|------|--------------------------|
| BOILERMAKERS | 8-29-97 | 8-21-98 |      | EXPIRATION DATE: 7-31-99 |
| J 30.21      | 30.23   |         |      |                          |
| B 15.19      | 16.18   |         |      |                          |
| T 45.40      | 46.41   |         |      |                          |
| AF 32.21     | 32.21   |         |      |                          |
| B 15.93      | 16.98   |         |      |                          |
| T 48.14      | 49.19   |         |      |                          |
| F 32.71      | 32.71   |         |      |                          |
| B 16.11      | 17.18   |         |      |                          |
| T 48.82      | 49.89   |         | (44) |                          |

|                             |         |        |        |                        |
|-----------------------------|---------|--------|--------|------------------------|
| BOILERMAKERS-MINOR REPAIRS* | 7-17-98 | 2-9-99 | 2-9-00 | EXPIRATION DATE 2-8-01 |
| MECHANIC                    | 19.35   | 19.95  | 20.55  |                        |
| BENEFITS                    | 5.55    | 6.15   | 6.75   |                        |

\*These wage rates shall apply to all Public Works for minor repair work. For the purpose of this section, minor work means repair work in the field where the contract amount does not exceed \$12,500.00.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

CRAFTS

OVERTIME

|                          |          |                           |
|--------------------------|----------|---------------------------|
| BRICKLAYERS STONE MASONS | 11-20-98 | EXPIRATION DATE: 10-31-99 |
|                          | J 26.25  |                           |
|                          | DF 28.85 | (53)                      |
|                          | F 31.45  |                           |
|                          | B 12.80  |                           |

|            |           |        |        |                          |
|------------|-----------|--------|--------|--------------------------|
| CARPENTERS | D 4-29-97 | 5-8-98 | 5-1-99 | EXPIRATION DATE: 4-30-00 |
|            | J 26.44   | 27.14  | *      |                          |
|            | B 11.26   | 11.57  | *      |                          |
|            | T 37.70   | 38.71  | 39.70  |                          |
|            |           |        |        |                          |
|            | F 30.41   | 31.21  | *      |                          |
|            | B 12.93   | 13.28  | *      |                          |
|            | T 43.34   | 44.49  | 45.34  | (51)                     |

|                                |           |        |         |        |                          |
|--------------------------------|-----------|--------|---------|--------|--------------------------|
| CARPENTERS, RESILIENT FLOORING | D 7-16-97 | 2-4-98 | 6-26-98 | 5-1-99 | EXPIRATION DATE: 4-30-00 |
|                                | J 24.80   | 25.34  | 26.05   | *      |                          |
|                                | B 9.78    | 9.94   | 10.23   | *      |                          |
|                                | T 34.58   | 35.28  | 36.28   | 37.28  |                          |
|                                |           |        |         |        |                          |
|                                | F 26.80   | 27.34  | 28.05   | *      |                          |
|                                | B 10.58   | 10.73  | 11.08   | *      |                          |
|                                | T 37.38   | 38.07  | 39.13   | 40.13  | (43)                     |

CEMENT MASONS, CEMENT FINISHERS SAME AS BRICKLAYERS

|                             |              |                          |
|-----------------------------|--------------|--------------------------|
| DIVERS                      | D 7-1-98     | EXPIRATION DATE: 6-30-99 |
|                             | DIVER 28.90  |                          |
|                             | TENDER 24.08 |                          |
|                             | B 15.36      | (58)                     |
| DOCK BUILDERS PILEDRIVERMEN | D 7-1-98     | EXPIRATION DATE: 6-30-99 |
|                             | J 24.08      |                          |
|                             | F 28.90      |                          |
|                             | B 15.36      | (58)                     |

|                   |              |                          |
|-------------------|--------------|--------------------------|
| DRYWALL FINISHERS | D 8-29-97    | EXPIRATION DATE: 7-31-98 |
|                   | J 27.25      |                          |
|                   | F + 1 HR/DAY |                          |
|                   | B 10.38      | (24)                     |

|               |                                      |           |           |                          |
|---------------|--------------------------------------|-----------|-----------|--------------------------|
| ELECTRICIAN** | 6-26-98                              | 5-31-99   | 5-29-00   | EXPIRATION DATE: 5-28-01 |
| CS, J         | 28.83                                | 29.89     | 30.95     |                          |
| PR            | 30.27                                | 31.38     | 32.50     |                          |
| (2-10 W) F    | 31.72                                | 32.89     | 34.05     |                          |
| B             | 18%+7.13                             | 18%+7.13  | 18%+7.13  |                          |
| OVERTIME 1 ½  | B 18%+10.62                          | 18%+10.62 | 18%+10.62 |                          |
| 2X            | B 18%+14.11                          | 18%+14.11 | 18%+14.11 |                          |
|               | +2.00 PER HOUR FOR WORK OVER 50 FEET |           |           | (8)                      |

SECOND SHIFT: + 10% (8 HOURS PAY FOR 7 ½ HOURS WORK) 4:30 PM TO 12:30 AM

THIRD SHIFT: + 15% (8 HOURS PAY FOR 7 HOURS WORK) 12:30 AM TO 8:00 AM

\*\* ALSO APPLIES TO FIRE AND BURGLAR ALARM WORK

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

CRAFTS

OVERTIME

|                       |         |                          |
|-----------------------|---------|--------------------------|
| ELEVATOR CONSTRUCTORS | 6-26-98 | EXPIRATION DATE: 5-31-99 |
| J                     | 31.625  |                          |
| F                     | 35.58   |                          |
| H                     | 22.14   |                          |
| 6 MONTHS PH           | 15.81   |                          |
| UNDER 5 YEARS B       | 6¢+6.46 |                          |
| OVER 5 YEARS B        | 8¢+6.46 | (2)                      |

HELPER TO JOURNEYMAN RATIO 1:1 EXCEPT ON JOBS WHERE TWO TEAMS ARE WORKING, ONE EXTRA HELPER MAY BE EMPLOYED FOR THE FIRST TWO TEAMS AND AN EXTRA HELPER FOR EACH ADDITIONAL THREE TEAMS. FURTHER, THE EMPLOYER MAY USE AS MANY HELPERS AS NEEDED UNDER THE DIRECTION OF A JOURNEYMAN IN WRECKING OLD PLANTS, HANDLING AND HOISTING MATERIAL, AND ON FOUNDATION WORK. WHEN REMOVING OLD AND INSTALLING NEW CABLES ON EXISTING ELEVATORS, EMPLOYER MAY USE TWO HELPERS TO ONE MECHANIC.

ON ELEVATOR SERVICE THE OVERTIME CODE IS (5), AND THE HELPER TO JOURNEYMAN RATIO: 1:3

|          |         |        |        |        |                          |
|----------|---------|--------|--------|--------|--------------------------|
| GLAZIERS | 10-1-97 | 5-1-98 | 5-1-99 | 5-1-00 | EXPIRATION DATE: 4-30-01 |
| J        | 27.43   | 27.83  | 28.25  | 28.75  |                          |
| F        | 28.93   | 29.33  | 29.75  | 30.25  |                          |
| B        | 9.52    | 10.12  | 10.36  | 10.47  | (3)                      |

HAZARD/HEIGHT PAY: +\$1.00 OVER 20 FEET

|                                                      |       |         |        |        |                          |
|------------------------------------------------------|-------|---------|--------|--------|--------------------------|
| IRONWORKERS                                          | D     | 7-15-97 | 7-1-98 | 7-1-99 | EXPIRATION DATE: 6-30-00 |
| STRUCTURAL, ORNAMENTAL, PRECAST DECKING & SHEETMETAL |       |         |        |        |                          |
| J                                                    | 26.40 |         | 26.56  | *      |                          |
| B                                                    | 16.63 |         | 17.72  | *      |                          |
| T                                                    | 43.03 |         | 44.28  | 45.53  |                          |
| F                                                    | 28.40 |         | 28.56  | *      |                          |
| B                                                    | 16.63 |         | 17.72  | *      |                          |
| T                                                    | 45.03 |         | 46.28  | 47.53  |                          |

REINFORCED CONCRETE RODS & MESH; FURNITURE & PARTITION INSTALLER; RIGGING (HAND OR POWER)

|   |       |  |       |       |  |
|---|-------|--|-------|-------|--|
| J | 24.40 |  | 24.56 | *     |  |
| B | 16.63 |  | 17.72 | *     |  |
| T | 41.03 |  | 42.28 | 43.53 |  |
| F | 26.40 |  | 26.56 | *     |  |
| B | 16.10 |  | 17.72 | *     |  |
| T | 43.03 |  | 44.28 | 45.53 |  |

METAL WINDOWS, CURTAIN WALLS & GLAZING

|   |       |  |       |       |  |
|---|-------|--|-------|-------|--|
| J | 21.79 |  | 21.95 | *     |  |
| B | 16.63 |  | 17.72 | *     |  |
| T | 38.42 |  | 39.67 | 40.92 |  |
| F | 23.97 |  | 23.95 | *     |  |
| B | 16.63 |  | 17.72 | *     |  |
| T | 40.60 |  | 41.67 | 43.10 |  |

Continued on Next Page

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

| CRAFTS |               |       |       | OVERTIME |  |
|--------|---------------|-------|-------|----------|--|
|        | FENCE ERECTOR |       |       |          |  |
|        | J 23.00       | 23.16 | *     |          |  |
|        | B 16.63       | 17.72 | *     |          |  |
|        | T 39.63       | 40.88 | 42.13 |          |  |
|        |               |       |       |          |  |
|        | F 25.00       | 25.16 | *     |          |  |
|        | B 16.63       | 17.72 | *     |          |  |
|        | T 41.63       | 42.88 | 44.13 | (36)     |  |

|                                           |   |            |                          |
|-------------------------------------------|---|------------|--------------------------|
| LABORERS                                  | D | 6-26-98    | EXPIRATION DATE: 3-31-99 |
| (ASBESTOS & HAZARDOUS WASTE<br>REMOVAL) * | J | 19.70      |                          |
|                                           | F | + 1 HR/DAY |                          |
|                                           | B | 9.62       | (13)                     |

\*Applies to removal of asbestos materials from walls, ceilings, floors, columns and all other non-mechanical systems including mechanical systems to be scrapped, including containment erection & demolition and placing material in appropriate containers.

|                     |            |            |          |        |                          |
|---------------------|------------|------------|----------|--------|--------------------------|
| LABORERS (BUILDING) | D          | 6-26-96    | 5-1-97   | 5-1-98 | EXPIRATION DATE: 4-30-99 |
| CLASS A             | J          | 17.92      | *        | *      |                          |
|                     | B          | 11.12      | *        | *      |                          |
|                     | T          | 29.07      | 29.82    | 30.57  |                          |
| CLASS B             | J          | 17.45      | *        | *      |                          |
|                     | B          | 11.12      | *        | *      |                          |
|                     | T          | 28.57      | 29.32    | 30.07  |                          |
| CLASS C             | J          | 14.83      | *        | *      |                          |
|                     | B          | 11.12      | *        | *      |                          |
|                     | T          | 25.95      | 26.70    | 27.45  |                          |
|                     | F          | 17.95      | *        | *      |                          |
|                     | B          | 11.12      | *        | *      |                          |
|                     | T          | 29.07      | 30.20    | 32.95  | (7)                      |
|                     | + 1 HR/DAY | + 1 HR/DAY | +1HR/DAY |        |                          |

CLASS A: Specialist laborer including jack hammer, tamper, motorized tampers and compactors, street cleaning machines, scaffold builders, hydro demolition equipment, motorized lifts, riding motor buggy operator, conveyor operator, Bobcat operator, mortar man, burners, nozzle man on gunite work.

CLASS B: Basic laborer includes all work not included in Class A or Class C.

CLASS C: Janitorial-type light clean up work associated with the turnover of a project or part of a project to the owner.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

| CRAFTS                       |   |         |                          | OVERTIME |
|------------------------------|---|---------|--------------------------|----------|
| LATHERS; SAME AS CARPENTERS; |   |         |                          |          |
| MARBLE SETTERS               | D | 12-6-94 | EXPIRATION DATE: 4-30-95 |          |
|                              | J | 29.61   |                          |          |
|                              | F | +10.00  |                          |          |
|                              | B | 15.33   | (45)                     |          |

MASONS; SAME AS BRICKLAYERS;

|             |   |         |        |        |                          |
|-------------|---|---------|--------|--------|--------------------------|
| MILLWRIGHTS | D | 4-29-97 | 5-8-98 | 5-1-99 | EXPIRATION DATE: 4-30-00 |
|             | J | 26.94   | 27.64  | *      |                          |
|             | B | 11.47   | 11.77  | *      |                          |
|             | T | 38.41   | 39.41  | 40.41  |                          |
|             | F | 30.98   | 31.79  | *      |                          |
|             | B | 13.17   | 13.51  | *      |                          |
|             | T | 44.15   | 45.30  | 46.15  | (51)                     |

|                         |   |            |                          |  |  |
|-------------------------|---|------------|--------------------------|--|--|
| MOSAIC-TERRAZZO SETTERS | D | 1-1-96     | EXPIRATION DATE: 6-30-96 |  |  |
|                         | J | 28.38      |                          |  |  |
|                         | F | + 1 HR/DAY |                          |  |  |
|                         | H | 27.07      |                          |  |  |
|                         | B | 12.52      | (47)                     |  |  |

|                              |   |          |          |          |          |                          |
|------------------------------|---|----------|----------|----------|----------|--------------------------|
| PAINTERS                     | D | 5-1-97   | 5-1-98   | 5-1-99   | 5-1-00   | EXPIRATION DATE: 4-30-01 |
|                              | J | 27.25    | 27.75    | 28.25    | 28.75    |                          |
|                              | F | 29.95    | 30.50    | 31.00    | 31.60    |                          |
|                              | B | 27%+2.58 | 27%+2.58 | 27%+2.58 | 27%+2.58 |                          |
| SPRAY/SANDBLASTING/HIGH WORK | J | 29.75    | 30.25    | 30.75    | 31.25    |                          |
|                              | F | 32.50    | 33.00    | 33.50    | 34.10    |                          |
|                              | B | 27%+2.58 | 27%+2.58 | 27%+2.58 | 27%+2.58 | (9)                      |

|                                      |                   |  |  |  |  |      |
|--------------------------------------|-------------------|--|--|--|--|------|
| BRIDGE/TUNNEL/TANK                   |                   |  |  |  |  |      |
| Equipment Tender/Containment Builder | 80% of Journeyman |  |  |  |  |      |
| Support Personnel                    | 65% of Journeyman |  |  |  |  | (56) |

|                                        |   |          |          |          |          |                          |
|----------------------------------------|---|----------|----------|----------|----------|--------------------------|
| PAINTERS (REPAINT)                     | D | 5-1-97   | 5-1-98   | 5-1-99   | 5-1-00   | EXPIRATION DATE: 4-30-01 |
|                                        | J | 21.40    | 21.65    | 21.80    | 22.00    |                          |
|                                        | F | 23.50    | 23.80    | 24.00    | 24.20    |                          |
|                                        | B | 27%+2.58 | 27%+2.58 | 27%+2.59 | 27%+2.60 |                          |
| SPRAY/SANDBLASTING/HIGH WORK (Repaint) | D | 5-1-97   | 5-1-98   | 5-1-99   | 5-1-00   |                          |
|                                        | J | 23.40    | 23.65    | 23.80    | 24.00    |                          |
|                                        | F | 25.50    | 25.80    | 26.00    | 26.20    |                          |
|                                        | B | 27%+2.58 | 27%+2.58 | 27%+2.59 | 27%+2.60 | (18)                     |

On jobs where no major alterations occur, and not more than 3 other trades are present, but excluding bridges, stacks, elevated tanks and generating stations.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

| CRAFTS                 |   |         |        |        | OVERTIME |                          |
|------------------------|---|---------|--------|--------|----------|--------------------------|
| PAINTERS LINE STRIPING | D | 1-22-97 | 7-1-97 | 7-1-98 | 7-1-99   | EXPIRATION DATE: 6-30-00 |
|                        | J | 23.30   | 23.71  | 24.58  | 25.48    |                          |
|                        | F | 23.80   | 24.21  | 25.08  | 25.98    |                          |
| 1ST YEAR               | H | 17.50   | 17.78  | 18.43  | 19.11    |                          |
| 2ND YEAR               | H | 18.67   | 18.97  | 19.66  | 20.38    |                          |
| 3RD YEAR               | H | 19.83   | 20.15  | 20.89  | 21.66    |                          |
|                        | B | 1.50    | 1.70   | 1.90   | 2.05     | (38)                     |

PIPEFITTERS SAME AS PLUMBERS

PLASTERERS SAME AS BRICKLAYERS

|          |   |         |  |  |                          |
|----------|---|---------|--|--|--------------------------|
| PLUMBERS | D | 7-24-98 |  |  | EXPIRATION DATE: 6-30-99 |
|          | J | 29.58   |  |  |                          |
|          | B | 14.05   |  |  |                          |
|          | T | 43.63   |  |  |                          |
|          |   |         |  |  |                          |
|          | F | 31.65   |  |  |                          |
|          | B | 14.05   |  |  |                          |
|          | T | 45.70   |  |  | (36)                     |

SECOND SHIFT +25% (8 HOURS PAY FOR 7 ½ HOURS WORK)

THIRD SHIFT +30% (8 HOURS PAY FOR 7 ½ HOURS WORK)

MAINTENANCE WORK:

SECOND SHIFT + 15% (8 HOURS PAY FOR 7 1/2 HOURS WORK)

THIRD SHIFT + 15% (8 HOURS PAY FOR 7 HOURS WORK)

|         |         |        |        |        |                          |
|---------|---------|--------|--------|--------|--------------------------|
| ROOFERS | 4-23-98 | 5-1-98 | 5-1-99 | 5-1-00 | EXPIRATION DATE: 4-30-01 |
| J       | 23.50   | 23.75  | *      | *      |                          |
| B       | 11.70   | 12.20  | *      | *      |                          |
| T       | 35.20   | 35.95  | 36.70  | 37.45  |                          |
|         |         |        |        |        |                          |
| F       | 24.50   | 24.75  | *      | *      |                          |
| B       | 11.70   | 12.20  | *      | *      |                          |
| T       | 36.20   | 36.95  | 37.70  | 38.45  |                          |

MOPPER & FELT LAYING MACHINES SLAG DISPENSER:

|   |       |       |       |       |     |
|---|-------|-------|-------|-------|-----|
| J | 24.00 | 24.25 | *     | *     |     |
| B | 11.70 | 12.20 | *     | *     |     |
| T | 35.70 | 36.45 | 37.20 | 37.95 | (4) |

|                       |   |        |  |  |                                                 |
|-----------------------|---|--------|--|--|-------------------------------------------------|
| ROOFERS               | D | 6-4-97 |  |  | EXPIRATION DATE: 4-30-98                        |
| SHINGLE, SLATE & TILE |   |        |  |  | Slater & Slaters Helper wages shall be \$1.00 o |
|                       | J | 18.75  |  |  | applicable rate.                                |
|                       | F | 19.00  |  |  | 1 Helper to 2 Journeymen                        |
| 4 OR MORE MEN         | F | 19.75  |  |  |                                                 |
|                       | H | 9.38   |  |  |                                                 |
|                       | B | 5.52   |  |  | (4)                                             |

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
COUNTY - OCEAN

CRAFTS

OVERTIME

| SHEET METAL WORKERS | 2-4-98 | 6-1-98 | 6-1-99 | EXPIRATION DATE: 5-31-00 |
|---------------------|--------|--------|--------|--------------------------|
| J                   | 28.00  | *      | *      |                          |
| B                   | 13.79  | *      | *      |                          |
| T                   | 41.79  | 43.29  | 45.04  |                          |
| F                   | 29.50  | *      | *      |                          |
| B                   | 13.79  | *      | *      |                          |
| T                   | 43.29  | 44.79  | 46.54  | (11)                     |

| SHEET METAL SIGN INSTALLATION | 12-4-98 | 4-1-99 | 4-1-00 | EXPIRATION DATE: 3-31-01 |
|-------------------------------|---------|--------|--------|--------------------------|
| J                             | 19.00   | 19.72  | 20.48  |                          |
| B                             | 8.79    | 9.17   | 9.51   |                          |
| T                             | 27.79   | 28.89  | 29.99  |                          |
| F                             | 20.25   | 20.97  | 21.73  |                          |
| B                             | 8.79    | 9.17   | 9.51   |                          |
| T                             | 29.04   | 30.14  | 31.24  | (60)                     |

| SPRINKLER FITTERS | 1-1-98 | 4-10-98 | 1-1-99 | 4-1-99 | 1-1-00 | EXPIRATION DATE: 3-31-00 |
|-------------------|--------|---------|--------|--------|--------|--------------------------|
| J                 | 27.55  | 27.27   | 27.77  | 30.65  | 30.65  |                          |
| F                 | 29.05  | 29.27   | 29.27  | 32.15  | 32.15  |                          |
| B                 | 6.35   | 6.85    | 6.40   | 6.40   | 6.45   | (28)                     |

| TILE SETTERS                            | D 1-19-98 | 5-1-98  | 11-1-98 | 5-1-99  | 11-1-99 | EXPIRATION DATE: 4-30-00 |
|-----------------------------------------|-----------|---------|---------|---------|---------|--------------------------|
| J                                       | 24.58     | J 25.08 | J 25.43 | J 25.83 | J 26.33 |                          |
| B                                       | 12.53     | B 13.03 | B 13.18 | B 13.78 | B 13.78 |                          |
| F + 10.00 PER DAY ABOVE JOURNEYMAN RATE |           |         |         |         |         | (25)                     |
| TILE SETTER HELPERS                     | D 6-17-94 |         |         |         |         | EXPIRATION DATE: 4-30-95 |
| H                                       | 20.55     |         |         |         |         |                          |
| B                                       | 11.07     |         |         |         |         | (25)                     |

WELDERS SAME RATE AS CRAFT TO WHICH WELDING IS INCIDENTAL;

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.  
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

| CRAFT                                     |                       | INTERVAL         |                      | PERIOD AND RATES |          |          |          |          |          |          |           |   |  |
|-------------------------------------------|-----------------------|------------------|----------------------|------------------|----------|----------|----------|----------|----------|----------|-----------|---|--|
| AIR<br>CONDITIONING<br>&<br>REFRIGERATION |                       | 1 to 3<br>months | 4 to<br>12<br>months | YEARLY           | 2        | 3        | 4        | 5        | 6        | 7        | 8         | 9 |  |
|                                           |                       | 40%              | 45%                  |                  | 55%      | 65%      | 75%      | 85%      |          |          |           |   |  |
|                                           |                       | <u>1</u>         | <u>2</u>             | <u>3</u>         | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> |   |  |
| ASBESTOS<br>WORKERS                       | YEARLY                |                  | 8.88                 | 10.15            | 11.41    | 15.22    | 19.02    |          |          |          |           |   |  |
| BOILERMAKERS                              | 1,000<br>HOURS        |                  | 60%                  | 65%              | 70%      | 75%      | 80%      | 85%      | 90%      | 95%      |           |   |  |
| BRICK<br>LAYER                            | 6<br>MONTHS           |                  | 50%                  | 55%              | 65%      | 75%      | 85%      | 95%      |          |          |           |   |  |
|                                           | BENEFITS              |                  | 2.13                 | 2.13             | 8.17     | 9.31     | 10.45    | 11.59    |          |          |           |   |  |
| CARPENTERS                                | 6<br>MONTHS           | 1<br>6           | 45%                  | 50%              | 55%      | 60%      | 65%      | 70%      | 80%      | 90%      |           |   |  |
|                                           | BENEFITS              |                  | 39% +<br>.15         |                  |          |          |          |          |          |          |           |   |  |
| INDENTURED                                | AFTER MAY<br>1, 1997: |                  |                      |                  |          |          |          |          |          |          |           |   |  |
|                                           | 6<br>MONTHS           |                  | 40%                  | 45%              | 50%      | 55%      | 65%      | 75%      | 85%      | 95%      |           |   |  |
|                                           | BENEFITS              |                  | 39% +<br>.15         |                  |          |          |          |          |          |          |           |   |  |
| CARPENTERS<br>RESILIENT<br>FLOORING       | 6 MONTHS              |                  | 12.07                | 13.04            | 13.70    | 15.73    | 17.75    | 17.75    | 19.91    | 19.91    |           |   |  |
|                                           | BENEFITS              |                  | 4.79                 | 5.17             | 5.42     | 6.22     | 7.01     | 7.01     | 7.86     | 7.86     |           |   |  |
| Indentured<br>after<br>5-1-97             |                       |                  |                      |                  |          |          |          |          |          |          |           |   |  |
|                                           | Yearly                |                  | 50%                  | 60%              | 70%      | 80%      |          |          |          |          |           |   |  |
|                                           | Benefits              |                  | 50%                  | 60%              | 70%      | 80%      |          |          |          |          |           |   |  |
| CEMENT<br>FINISHERS<br>& MASONS           | 6 MONTHS              |                  | 50%                  | 55%              | 60%      | 70%      | 80%      | 90%      |          |          |           |   |  |
|                                           | BENEFITS              |                  | 2.13                 | 2.13             | 8.17     | 9.31     | 10.45    | 11.59    |          |          |           |   |  |
| DOCKBUILDER                               | 6 MONTHS              |                  | 60%                  | 65%              | 70%      | 75%      | 80%      | 85%      |          |          |           |   |  |
| DIVERS                                    | BENEFITS              |                  | 13.69                |                  |          |          |          |          |          |          |           |   |  |
| DRYWALL                                   | 6<br>MONTHS           |                  | 9.00                 | 12.00            | 15.00    | 18.00    |          |          |          |          |           |   |  |
| FINISHERS                                 | BENEFITS              |                  | 8.63                 | 9.63             | 10.63    | 11.38    |          |          |          |          |           |   |  |

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.  
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

| CRAFT       |          | INTERVAL    |                         | PERIOD AND RATES |      |                         |               |      |      |      |      |      |    |
|-------------|----------|-------------|-------------------------|------------------|------|-------------------------|---------------|------|------|------|------|------|----|
|             |          |             |                         | 1                | 2    | 3                       | 4             | 5    | 6    | 7    | 8    | 9    | 10 |
| ELECTRICIAN | 1st YEAR |             | 1st<br>1000<br>HOURS    | 35%              |      | 2ND<br>1000<br>HOURS    | 40%           |      |      |      |      |      |    |
|             | BENEFITS |             |                         | 18% +<br>4.40    |      |                         | 18% +<br>4.61 |      |      |      |      |      |    |
|             | OVERTIME | 1<br>½<br>X |                         | 18% +<br>5.79    |      |                         | 18% +<br>6.00 |      |      |      |      |      |    |
|             | OVERTIME | 2<br>X      |                         | 18% +<br>7.18    |      |                         | 18% +<br>7.39 |      |      |      |      |      |    |
|             | 2ND YEAR |             | 1ST<br>750<br>HOURS     | 45%              |      | 2ND<br>750<br>HOURS     | 50%           |      |      |      |      |      |    |
|             | BENEFITS |             |                         | 18% +<br>4.82    |      |                         | 18% +<br>5.03 |      |      |      |      |      |    |
|             | OVERTIME | 1<br>½<br>X |                         | 18% +<br>6.21    |      |                         | 18% +<br>6.42 |      |      |      |      |      |    |
|             | OVERTIME | 2<br>X      |                         | 18% +<br>7.60    |      |                         | 18% +<br>7.81 |      |      |      |      |      |    |
|             | 3RD YEAR |             | 3500 -<br>4250<br>HOURS | 55%              |      | 4250 -<br>5000<br>HOURS | 60%           |      |      |      |      |      |    |
|             | BENEFITS |             |                         | 18% +<br>5.24    |      |                         | 18% +<br>5.45 |      |      |      |      |      |    |
|             | OVERTIME | 1<br>½<br>X |                         | 18% +<br>6.63    |      |                         | 18% +<br>6.84 |      |      |      |      |      |    |
|             | OVERTIME | 2<br>X      |                         | 18% +<br>8.02    |      |                         | 18% +<br>8.23 |      |      |      |      |      |    |
|             | 4TH YEAR |             | 5000 -<br>6500<br>HOURS | 70%              |      |                         |               |      |      |      |      |      |    |
|             | BENEFITS |             |                         | 18% +<br>5.87    |      |                         |               |      |      |      |      |      |    |
|             | OVERTIME | 1<br>½<br>X |                         | 18% +<br>7.26    |      |                         |               |      |      |      |      |      |    |
|             | OVERTIME | 2<br>X      |                         | 18% +<br>8.65    |      |                         |               |      |      |      |      |      |    |
|             | 5TH YEAR |             | 6500 -<br>8000<br>HOURS | 85%              |      |                         |               |      |      |      |      |      |    |
|             | BENEFITS |             |                         | 18% +<br>6.50    |      |                         |               |      |      |      |      |      |    |
|             | OVERTIME | 1<br>½<br>X |                         | 18% +<br>7.89    |      |                         |               |      |      |      |      |      |    |
|             | OVERTIME | 2<br>X      |                         | 18% +<br>9.28    |      |                         |               |      |      |      |      |      |    |
|             |          |             |                         |                  |      |                         |               |      |      |      |      |      |    |
| GLAZIERS    | 6 MONTHS |             | 30%                     | 35%              | 40%  | 45%                     | 50%           | 55%  | 60%  | 65%  | 75%  | 85%  |    |
|             | BENEFITS |             | 4.75                    | 6.59             | 6.85 | 7.11                    | 7.38          | 7.64 | 7.90 | 8.16 | 8.69 | 9.21 |    |

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.  
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

| CRAFT                |                                        | INTERVAL |              | PERIOD AND RATES |          |          |          |          |          |          |          |           |  |
|----------------------|----------------------------------------|----------|--------------|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|--|
|                      |                                        |          | <u>1</u>     | <u>2</u>         | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>10</u> |  |
| IRONWORKERS          | 6 MONTHS                               |          | 60%          | 70%              | 80%      | 80%      | 90%      | 90%      |          |          |          |           |  |
| MARBLE SETTERS       | 6 MONTHS                               |          | 50%          | 55%              | 65%      | 70%      | 80%      | 95%      |          |          |          |           |  |
|                      | BENEFITS                               |          | 10.62        | 11.09            | 12.03    | 12.50    | 13.44    | 14.86    |          |          |          |           |  |
| MILLWRIGHTS          | 6 MONTHS                               |          | 40%          | 45%              | 50%      | 55%      | 60%      | 70%      | 80%      | 90%      |          |           |  |
|                      | BENEFITS                               |          | 39% +<br>.15 |                  |          |          |          |          |          |          |          |           |  |
|                      | INDENTURE<br>D AFTER<br>MAY 1,<br>1997 |          |              |                  |          |          |          |          |          |          |          |           |  |
|                      | 6 MONTHS                               |          | 40%          | 45%              | 50%      | 55%      | 65%      | 75%      | 85%      | 95%      |          |           |  |
|                      | BENEFITS                               |          | 39% +<br>.15 |                  |          |          |          |          |          |          |          |           |  |
| MOSAIC &<br>TERRAZZO | 6 MONTHS                               |          | 45%          | 50%              | 60%      | 70%      | 80%      | 85%      |          |          |          |           |  |

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

APPRENTICE RATE SCHEDULE

OCEAN COUNTY

THE APPRENTICE RATE IS BY PERCENTAGE OF THE JOURNEYMAN'S RATE UNLESS OTHERWISE INDICATED.  
APPRENTICE BENEFIT RATE EQUALS JOURNEYMAN BENEFIT RATE UNLESS OTHERWISE NOTED.

|          |         | <u>1</u>          | <u>2</u> | <u>3</u> | <u>4</u>          | <u>5</u> | <u>6</u> | <u>7</u> | <u>8</u>           | <u>9</u> | <u>10</u> |
|----------|---------|-------------------|----------|----------|-------------------|----------|----------|----------|--------------------|----------|-----------|
| PAINTERS | 4 MONTH | 30%               | 40%      | 50%      | 60%               | 70%      | 75%      | 80%      | 85%                | 90%      |           |
| BENEFITS |         | YEAR 1: 15% + .25 |          |          | YEAR 2: 18% + .50 |          |          |          | YEAR 3: 22% + 1.00 |          |           |

|             |         |       |       |       |       |       |  |  |  |  |  |
|-------------|---------|-------|-------|-------|-------|-------|--|--|--|--|--|
| PIPEFITTERS | YEAR    | 35%   | 45%   | 55%   | 65%   | 75%   |  |  |  |  |  |
|             | BENEFIT | 10.07 | 12.95 | 15.83 | 18.71 | 21.59 |  |  |  |  |  |

|            |          |      |      |      |      |       |       |  |  |  |  |
|------------|----------|------|------|------|------|-------|-------|--|--|--|--|
| PLASTERERS | 6 MONTHS | 50%  | 55%  | 65%  | 75%  | 85%   | 95%   |  |  |  |  |
|            | BENEFIT  | 2.13 | 2.13 | 8.17 | 9.31 | 10.45 | 11.59 |  |  |  |  |

|          |         |      |      |       |       |       |  |  |  |  |  |
|----------|---------|------|------|-------|-------|-------|--|--|--|--|--|
| PLUMBERS | YEARLY  | 35%  | 45%  | 55%   | 65%   | 75%   |  |  |  |  |  |
|          | BENEFIT | 8.50 | 9.36 | 10.21 | 11.07 | 11.92 |  |  |  |  |  |

|         |          |      |      |       |       |  |  |  |  |  |  |
|---------|----------|------|------|-------|-------|--|--|--|--|--|--|
| ROOFERS | 6 MONTHS | 47%  | 52%  | 60%   | 75%   |  |  |  |  |  |  |
|         | BENEFITS | 6.47 | 6.47 | 11.45 | 11.45 |  |  |  |  |  |  |

|                     |         |       |       |       |       |  |  |  |  |  |  |
|---------------------|---------|-------|-------|-------|-------|--|--|--|--|--|--|
| SHEET METAL WORKERS | YEARLY  | 14.00 | 16.80 | 19.60 | 22.40 |  |  |  |  |  |  |
|                     | BENEFIT | 8.22  | 8.67  | 11.43 | 12.22 |  |  |  |  |  |  |

|                               |          |     |     |     |     |     |     |     |     |     |     |
|-------------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SHEET METAL SIGN INSTALLATION | 6 Months | 35% | 40% | 45% | 50% | 55% | 60% | 65% | 70% | 75% | 80% |
|-------------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|                  |          |      |      |      |      |      |      |      |      |      |      |
|------------------|----------|------|------|------|------|------|------|------|------|------|------|
| SPRINKLER FITTER | 6 MONTHS | 40%  | 45%  | 50%  | 55%  | 60%  | 65%  | 70%  | 75%  | 80%  | 85%  |
|                  | BENEFITS | 3.58 | 3.58 | 3.58 | 3.58 | 5.78 | 5.78 | 5.78 | 5.78 | 5.78 | 5.78 |

|             |         |      |      |      |      |       |       |  |  |  |  |
|-------------|---------|------|------|------|------|-------|-------|--|--|--|--|
| STONE MASON | 6 MONTH | 50%  | 55%  | 65%  | 75%  | 85%   | 95%   |  |  |  |  |
|             | BENEFIT | 2.13 | 2.13 | 8.17 | 9.31 | 10.45 | 11.59 |  |  |  |  |

|              |           |     |     |     |     |     |     |  |  |  |  |
|--------------|-----------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| TILE SETTERS | 875 HOURS | 45% | 50% | 55% | 60% | 70% | 80% |  |  |  |  |
|--------------|-----------|-----|-----|-----|-----|-----|-----|--|--|--|--|

The overtime provision for apprentices is the same as the journeyman's for each specified craft. Refer to the specific craft to determine the overtime code, then refer to the overtime rate schedule.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION

ESTABLISHMENT OF RATIO OF APPRENTICES TO JOURNEYMEN FOR PUBLIC WORK PROJECTS, N.J.A.C.  
12:60-7.

"Apprentice" means an individual who, while performing work on a public work project, is registered, in good standing, in an apprenticeship program approved or certified by the New Jersey State Director, Bureau of Apprenticeship and Training, United States Department of Labor.

If there is no ratio of apprentices to journeymen for a particular craft, then the ratio of apprentice to journeymen shall be one apprentice to every four journeymen.

If there is no apprentice rate provided, the employer shall pay the employees not less than the journeyman rate even if an employee is registered in an apprentice program for that trade.

RATIO OF APPRENTICES TO JOURNEYMEN

| CRAFT                            | RATIO | CRAFT                   | RATIO |
|----------------------------------|-------|-------------------------|-------|
| AIR CONDITIONING & REFRIGERATION | 1:4   | IRONWORKER (STRUCTURAL) | 1:7   |
| ASBESTOS WORKER                  | 1:4   | IRONWORKER (ORNAMENTAL) | 1:4   |
| BOILERMAKER                      | (1) * | MARBLE SETTER           | 1:4   |
| BRICKLAYER                       | 1:4   | MILLWRIGHT              | 1:5   |
| CARPENTER                        | 1:5   | PAINTER                 | 1:4   |
| CARPENTERS RESILIENT FLOORING    | (2) * | PIPEFITTER              | 1:4   |
| CEMENT MASON                     | 1:4   | PLASTERER               | 1:4   |
| CEMENT FINISHER                  | 1:4   | PLUMBER                 | 1:4   |
| DOCKBUILDER                      | 1:4   | ROOFER                  | (4) * |
| DRYWALL FINISHER                 | 1:2   | SHEETMETAL WORKER       | 1:3   |
| ELECTRICIAN                      | (3) * | SPRINKLER FITTER        | 1:1   |
| GLAZIER                          | 1:2   | STONE MASON             | 1:4   |
|                                  |       | TILE SETTER             | 1:4   |

\* See Below:

- (1) BOILERMAKER: (One apprentice will be allowed for the first 5 journeymen, 1 apprentice for the next 10 journeymen and 1 apprentice for each succeeding 20 journeymen up to a maximum of 5 apprentices per contractor on any one job.
- (2) CARPENTERS RESILIENT FLOORING: One apprentice shall be allowed to every two journeymen or major fraction thereof. No more than three apprentices on any one job or project.
- (3) ELECTRICIAN: One First Year Apprentice to one Apprentice to three Journeymen; 1 Apprentice, 1 Journeyman; 1 First Year Apprentice, 1 Apprentice, 1 Journeyman; 1 First Year Apprentice, 1 Apprentice, 2 Journeymen; 1 First Year Apprentice, 1 Apprentice, 3 Journeymen; 1 First Year Apprentice, 2 Apprentices, 4 Journeymen; 2 First Year Apprentices, 2 Apprentices, 4 Journeymen.
- (4) ROOFER: 1:2, 2:4, 3:6, 4:8, 5:10, 6:12, 7:14.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (1) Time and one-half the rate including benefits for the first two hours before or after the regular 8 hour day Monday through Friday, and time and one-half for the first 10 hours on Saturday. All work on Sunday and Holidays and all hours over and above the first 10 hours, Monday through Saturday, shall be paid at double the rate, including benefits. On scheduled overtime (e.g. six 10 hour days, etc.) an employee shall not receive overtime until they have worked forty hours. If forty hours straight time is not available because of a holiday or anytime not available through no fault of the employee, such as weather, this rule shall not apply.
- (2) Double the hourly rate for all hours worked in excess of 8 a day and for all hours on Saturdays, Sundays and Holidays.
- (3) Time and one-half the hourly rate after 8 hours a day Monday through Thursday. Double the hourly rate after 8 hours on Friday and double the hourly rate for all hours worked on Saturdays, Sundays and Holidays.
- (3a) Time and one-half the hourly rate after 8 hours per day and for all hours on Saturday. Double time for all hours on Sundays and Holidays. The double time rate shall also apply for all hours of overtime and for Saturday work on water crossings pertaining to all bi-state pipeline work, bi-state tunnel and bi-state bridge construction, alteration or resurfacing work on bi-state projects. When working with other trades who receive a higher rate of overtime, the machine operator will also receive the higher rate. The benefit rate is increased accordingly for time and one-half work or double time. Where the bid documents and/or Contract require the Employer to work restricted hours or for any mutually agreed reason an Employer may work four (4) ten (10) hour days at the straight time rate during a week. If Friday is worked time and one-half (1 1/2) will be paid for all hours.
  - (a) Where Saturdays, Sundays or Holidays (or days celebrated as such) are worked, the employees covered shall be paid on a unit basis of one day at the specified overtime rates.
- (4) Time and one-half the hourly rate after 8 hours a day and for all hours on Saturdays, Sundays and Holidays.
- (5) Time and one-half the hourly rate after 8 hours per day and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays.
- (6) Time and one-half the hourly rate after 7 hours per day on new work, and 8 hours per day on old re-roofing work. Time and one-half for all hours of work on Saturdays, Sundays and Holidays.
- (7) Time and one-half the hourly rate over 8 hours per day and for all hours on Saturday. Double the hourly rate for all hours on Sundays and Holidays. Benefits on overtime hours are paid at time and one-half. If 32 hours or less are worked due to weather conditions during the week, Saturday hours (up to a total of 40 hours per week) may be paid at straight time. Time and one-half would then be paid after 40 hours on Saturday. Four 10 hour days may be worked, and the fifth day may be used as a make-up day for hours lost due to weather conditions. Straight time may be paid for hours up to forty.
- (8) Time and one-half including benefits for the hours worked from the end of the 8 hour workday until Midnight, Monday through Friday and for 8 hours worked on Saturday. All other work performed outside the regular scheduled working hours and work on Sundays and Holidays shall be paid for at double the straight time rate of pay including benefits.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (9) Time and one-half the hourly rate after 8 hours per day and 40 hours per week. Double the hourly rate on Sundays and Holidays. In the event work is lost due to weather or job conditions, work may be accomplished on Saturday and Sunday at the regular straight time rate to make up for the lost time.
- (10) Double the hourly rate, including benefits, for all hours worked in excess of 7 a day and for all hours on Saturdays, Sundays and Holidays.
- (11) Double the hourly rate, including benefits, for all hours worked in excess of 8 a day and for all hours on Saturdays, Sundays and Holidays.
- (12) Time and one-half the hourly rate for all hours worked in excess of 7 a day, and double the rate for all hours on Saturdays, Sundays and Holidays. All fringe benefits on overtime shall be paid at one and one-half the fringe benefit rate. Whenever any of the other basic building trades work an 8th hour at straight time, employees in this craft will work the 8th hour at straight time.
- (13) Time and one-half the hourly rate including benefits for all hours over 8 in a day. Double time for all hours on Saturdays, Sundays and Holidays. Benefits on double time work are paid at time and one-half.
- (14) Time and one-half for the first 2 hours of overtime after 8 hours on Mondays through Fridays (except in Atlantic City where all overtime hours are double time.) Double time thereafter. Double time for all hours on Saturdays, Sundays and Holidays.
- (15) Time and one-half the hourly rate for all hours over 8 Monday through Friday. Double the hourly rate for all hours on Saturdays, Sundays and Holidays. Benefits are paid straight time for all hours worked per week.
- (16) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 10 hours on Saturdays; double time thereafter. Double time for all hours on Sundays and Holidays.
- (17) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 10 hours on Saturdays, double time thereafter. Double time on Sundays and Holidays. When overtime is worked, fringe benefits shall be double time or time and one-half, depending on the overtime rate.
- (18) Eight hour day, forty hour week (Monday through Sunday inclusive.) All work over eight (8) hours in any one day or all work over forty (40) hours in any one week shall be paid at the rate of time and one-half.
- (19) Time and one-half the hourly rate over 8 hours per day and 40 hours per week, and for all hours on Saturday. Double the hourly rate for all hours on Sundays and Holidays.
- (20) Time and one-half the hourly rate including benefits for all hours over 8 in a day, and for the first 8 hours on Saturday. Double the hourly rate including benefits for all other overtime. Double the hourly rate including benefits on Holidays.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (21) Time and one-half the hourly rate after 8 hours per day and all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays. Saturday may be used as a make up day when an employee on his own accord fails to work on any day of the work week Monday through Friday. Then such employee, if he works on Saturday of the week during the week of the absence, shall be paid the straight time rate, provided that all time worked before and after the established 8 hour work day Monday through Saturday or more than 40 hours of straight time work per week shall be paid one and one-half time the wage rate. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (22) Time and one-half the hourly rate after eight (8) hours per day and forty (40) hours per week. Time and one-half for hours worked on Saturdays. Double time for all hours worked on Sundays and Holidays. Whenever any other crafts are working overtime and are receiving double time for overtime, double time shall be paid.
- (23) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 8 hours on Saturdays; double time thereafter. Double time on Sundays and Holidays.
- (24) Time and one-half the hourly rate for all overtime hours after 7 or 8 hours per day (at the option of the employer) and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays.
- (25) Time and one-half the hourly rate including benefits after 7 hours per day and double the hourly rate including benefits for all hours on Saturdays, Sundays and Holidays.
- (26) Time and one-half the hourly rate including benefits after 8 hours per day. Double the hourly rate including benefits for all hours on Saturdays, Sundays and Holidays.
- (27) Time and one-half the hourly rate including benefits for the 9th and 10th hours on Monday through Friday, double time including benefits thereafter. Time and one-half the rate including benefits for the first 8 hours on Saturday. Double time including benefits thereafter. Double time including benefits for all hours on Sundays and Holidays.
- (28) The work day shall be 8 hours, or shall conform to the practice on the job site. Four days at ten hours a day may be worked at straight time. All hours in excess of the designated workday shall be considered overtime. All overtime except for Sundays and Holidays shall be at the rate of time and one-half. All hours on Sundays and Holidays shall be at double time.
- (29) Time and one-half the hourly rate including benefits for the first two hours of overtime after 8 hours per day, double time thereafter. Double time including benefits for all hours on Saturdays, Sundays and Holidays.
- (30) Time and one-half the hourly rate including benefits after 8 hours per day and Saturdays. Double the hourly rate including benefits for all hours on Sundays and Holidays.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (31) Time and one-half after eight hours for the first four hours of overtime including benefits on Mondays through Fridays, remaining time at double time. The first eight hours on Saturdays shall be at time and one-half including benefits, the remaining time at double time. Double time including benefits for all hours on Sundays and Holidays.
- (32) Time and one-half the hourly rate including benefits for all hours over 8 in a day. Double time for all hours on Saturdays, Sundays and Holidays. Benefits on double time work are paid at time and one-half.
- (33) Time and one-half the hourly rate for all hours over 8 per day and forty hours per week. Double the hourly rate on Sundays irrespective of the amount of hours worked during the week. If workers are given 24 hours notice Monday through Saturday, the first 2 hours of overtime after 8 hours may be paid at + 10% of the regular hourly pay rate. Sunday work may be paid at time and one-half the hourly rate provided at least two days notice is given.
- (34) Time and one-half the hourly rate for all hours over eight (8) on Mondays through Fridays, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays. Triple the hourly rate for all hours on Holidays.
- (35) Time and one-half the hourly rate for all hours over eight (8) from Monday to Friday, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and observed Holidays, except Labor Day which is triple the hourly rate.
- (36) Time and one-half the hourly rate after 8 hours per day and Saturdays. Double the hourly rate on Sundays and Holidays. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (37) Double the hourly rate for all hours over 7 per day, and for all hours on Saturdays and Sundays. Triple the hourly rate for all hours on Holidays.
- (38) Time and one-half the hourly rate for all hours over 8 per day, and for all hours on Saturdays and Sundays. Double time and one-half for all hours on Holidays.
- (39) Time and one-half the hourly rate over 8 hours per day and 40 hours per week. Double time on Sundays, and double time and one-half for all hours on Holidays.
- (40) Time and one-half the hourly rate after 8 hours per day Monday thru Friday, and time and one-half for all hours on Saturdays. Double time and one-half the rate of pay on Sundays, and double time on Holidays. Workers may work 4 ten hour days, Monday through Thursday at straight time pay. Friday shall be used as a make up day for days lost due to inclement weather or for other mutually agreed reason. If Friday is not a make up day, all hours worked on Friday shall be paid at time and one-half.
- (41) Time and one-half the hourly rate including fringe benefits for the first two (2) hours worked after 8 hours per day Monday through Friday, and time and one-half the hourly rate including fringe benefits for the first 10 hours on Saturday. All other hours of work, except for Holidays, shall be paid at double the rate including benefits. Double the hourly rate including benefits on Sundays and Holidays, and Triple the hourly rate including benefits on Labor Day, Christmas Day, New Year's Day and Easter Sunday.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (42) Time and one-half the hourly rate for the first two hours after 8 hours per day, double time thereafter. Time and one-half for the first 8 hours on Saturday, double time thereafter. Double time on Sundays and Holidays. Workers may work 4 ten hour days. When working 4 ten hour days, the first two hours after 10 hours per day are at time and one-half. The first 10 hours on the fifth day are at time and one-half. All other overtime hours are at double time. For weeks in which an employee switches from eight hour to ten hour work days or ten hour to eight hour work days, the overtime rate of time and one-half shall apply for work over forty hours. All other overtime shall be at double time including Sundays and Holidays.
- (43) Time and one-half the hourly rate including fringe benefits over 7 hours per day and on Saturdays. Double time including benefits on Sundays and Holidays. Whenever any of the other basic building trades work an 8th hour at straight time, employees in this craft will work the 8th hour at straight time.
- (44) Time and one-half the hourly rate after 8 hours Mondays through Fridays, and for all hours on Saturdays. Double the hourly rate for all hours on Sundays and Holidays. If any other craft employed by the same employer or subcontractor is receiving double time in lieu of the time and one-half, they shall receive the double time automatically.
- (45) Time and one-half the hourly rate including benefits for all overtime hours over 7 per day Mondays through Fridays. At the discretion of the employer, employees may work an 8 hour day. Double the hourly rate including benefits on Saturdays, Sundays and Holidays.
- (46) Eight hours shall constitute the regular work day. Any two hours of overtime per day, Monday through Friday, shall be at time and one-half including benefits. Any other overtime shall be at double time the rate including benefits. All work performed on Saturdays and Sundays shall be paid at double the rate including benefits. All work performed on Holidays by a Journeyman shall be at double time including benefits. Foreman working on a Holiday receive double time for hours worked plus 8 hours holiday pay including benefits.
- (47) Double the hourly rate for all hours over 7 in a day, and double the hourly rate for all hours on Saturdays, Sundays and Holidays. When the majority of workers on a project are working an 8 hour day, the workers of this craft may work an 8 hour day if agreed by the majority of workers.
- (48) Time and one-half the hourly rate including benefits after 8 hours per day and for all hours on Saturdays. Double the hourly rate including benefits for all hours on Sundays and Holidays. Workers may work 4 ten hours days, Monday through Thursday at straight time pay. Friday shall be used as a make-up day. If Friday is not a make-up day, all hours are at time and one-half the hourly rate including benefits.
- (49) Double the hourly rate for all hours over 8 in a day and over 40 in a week. Double the hourly rate on holidays. On heavy and highway and utility construction work, use overtime code (36).
- (50) Time and one-half the hourly rate over 8 hours per day and 40 hours per week. Time and one-half the rate for all hours on Saturday. Double the hourly rate on Sundays and Holidays. Whenever the majority of other crafts work a shorter workday, members of this craft will work the shorter day. During Daylight Savings Time, hours can be worked at 4 ten hour days at straight time. All time over 40 hours will be paid at the time and one-half rate.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (51) Time and one-half Monday through Fridays after 8 hours per day and for all hours on Saturdays including benefits; Sundays & Holidays shall be double time including benefits. In the event a Carpenter is working overtime with one of the following trades: Bricklayers & Allied Craftworkers, Locals No. 4 & 5; Northern New Jersey District Council of Ironworkers; Ironworkers Local No. 68; Operating Engineers Local No. 825; or New Jersey Building Laborers, who receive double time, then in that case the Carpenters shall also receive double time. Four (4) ten hour days may be worked, when mutually agreed. Monday through Thursday at straight time pay. Friday shall be used as a make-up day at straight time for days lost due to inclement weather or for other mutually agreed reasons. If Friday is not a make-up day, all hours worked on Friday shall be paid at time and one-half including benefits. In all other instances, five eight-hour days shall be worked Monday through Friday at straight time pay.
- (52) Time and one-half the hourly rate including benefits over 8 hours per day Monday through Friday and over 40 hours per week. Time and one-half the hourly rate for all hours on Saturdays, Sundays and Holidays. If work is held up because of weather, holidays (excluding Labor Day), or other unavoidable delay, employees may work up to 8 hours on Saturday, at the regular rate to make up and complete a 40 hour week.
- (53) The first two hours of overtime after 8 hours per day, Monday through Friday shall be at the double time rate. All other overtime after the first two hours, and all hours on Saturdays shall be at time and one-half. Double time for all hours on Sundays and Holidays. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (54) The first hour of overtime after 8 hours per day, Monday through Friday shall be at the double time rate. All other overtime after the first hour, and all hours on Saturdays shall be at time and one-half. Double time for all hours on Sundays and Holidays. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (55) All time worked before and after the established 8 hour day, Monday through Friday, and all time worked on Saturday shall be paid at the rate of time and one-half. All hours worked on Sundays and Holidays shall be paid at the double time rate. Saturday may be a make-up day due to weather conditions, and straight time may be paid up to 8 hours. All other hours over 8 shall be at the applicable overtime rate. If any of the following trades receive a more beneficial overtime rate, the Bricklayers will be paid the higher overtime rate: Carpenters, Laborers, Ironworkers, and Operating Engineers.
- (56) The standard work day of eight (8) hours for the job or portion thereof to which any such change of starting time applies shall begin with such agreed starting time, unless the Local Collective Bargaining Agreement allows for four (4) ten (10) hour days in which case the overtime and the shift requirements for theis will be locally agreed to with a copy of such agreement filed with the appropriate signatures in the Brotherhood offices.

NEW JERSEY DEPARTMENT OF LABOR  
PREVAILING WAGE RATE DETERMINATION  
1-15-99

OVERTIME RATE SCHEDULE FOR CRAFTS IN THE STATE OF NEW JERSEY

- (57) The regular work week shall consist of five (5) days of eight (8) hours each exclusive of the meal period, Monday through Friday with time and one half (1 ½) after (8) hours and time and one half after forty hours, and on Saturdays. When all trades agree at the inception of project, workers may work four (4) ten (10) hour days. All hours worked over ten (10) hours per day and forty (40) hours per week shall be paid at time and one half (1 ½). Time is computed from the time of the employee's arrival at the job site or yard, as ordered by the Employer, until the time of his leaving.
- (58) Time and one-half the hourly rate for the 9th and 10th hours on Mondays through Fridays; double time thereafter. Time and one-half for the first 8 hours on Saturdays; double time thereafter. Double time on Sundays and Holidays. When mutually agreed the employees may be required to work four (4) ten (10) hour at the straight time wage and fringe benefit rate. These four (4) ten (10) hour shall be Monday through Thursday, unless inclement weather prevents work on any such day in which event Friday shall be a make-up day at the straight time wage and fringe benefit rate. In the event that the four (4) ten (10) days situation is implemented the following conditions shall still prevail: (1) The foreman shall still be guaranteed a minimum of eight (8) hours (wages and fringe benefits); (2) The show up time for employees shall be the same as during a regular work week. (3) The following overtime provisions shall be in effect: any hours worked in excess of ten (10) Monday through Thursday shall be at the double time rate; any hours worked in excess of forty (40) on Friday up to ten (10) hours shall be at the time and one-half (1 1/2) rate.
- (59) Time and one half after 8 hours Monday to Friday, time and one half for all hours on Saturday and Sunday. Holiday work is regular holiday pay plus regular hourly rate of pay.
- (60) All hours worked before 8:00a.m. and after 4:30p.m. during the regular work week shall be paid at the rate of time and one-half. All hours worked on Saturday between 8:00a.m. and 4:30p.m. shall be paid at the rate of time and one-half. All hours worked on Sunday shall be paid at the rate of double time. All hours worked on Saturday before 8:00a.m. and after 4:30p.m. shall be paid at the rate of double time. Holiday pay shall be double time for hours worked plus 8 hours straight time.



STATE OF NEW JERSEY  
DEPARTMENT OF LABOR  
DIVISION OF WAGE & HOUR COMPLIANCE

Christine Todd Whitman  
Governor

PO Box 389  
Trenton, New Jersey 08625-0389

Mel Gelade  
Commissioner

January 15, 1999

LISTED CONTRACTORS AND SUBCONTRACTORS

PURSUANT TO N.J.S.A. 34:11-56.37 AND 34:11-56.38 - PREVAILING WAGE ACT

NO PUBLIC WORKS CONTRACT MAY BE AWARDED TO ANY OF THE FOLLOWING CONTRACTORS AND SUBCONTRACTORS OR TO ANY FIRM, CORPORATION OR PARTNERSHIP IN WHICH THEY HAVE AN INTEREST UNTIL THE EXPIRATION DATE GIVEN.

| <u>CONTRACTOR AND SUBCONTRACTOR</u>          | <u>ADDRESS</u>                          | <u>EXPIRATION DATE:</u> |
|----------------------------------------------|-----------------------------------------|-------------------------|
| AAC CONSTRUCTION                             | 114 MACARTHUR AVE., GARFIELD, NJ 07026  | 07-24-01                |
| FILLIPPO AIELLO SR., PARTNER                 | 114 MACARTHUR AVE., GARFIELD, NJ 07026  | 07-24-01                |
| FILLIPPO AIELLO JR., PARTNER                 | 114 MACARTHUR AVE., GARFIELD, NJ 07026  | 07-24-01                |
| CIRO D'AMOTO, PARTNER                        | 122 MACARTHUR AVE., GARFIELD, NJ 07026  | 07-24-01                |
| A&A GOMES CONSTRUCTION CO.                   | 140 HARPER ST., NEWARK, NJ 07030        | 10-20-01                |
| ANTONIO M. GOMES, PRES.                      | 121 S. MIDLAND AVE., KEARNY, NJ 07032   | 10-20-01                |
| ANTONIO GOMES, JR., V.P.                     | 121 S. MIDLAND AVE., KEARNY, NJ 07032   | 10-20-01                |
| A M SILVA CONSTRUCTION                       | 209 MONTCLAIR AVE., NEWARK, NJ 07104    | 06-29-01                |
| MARIA BEATRIZ SILVA, PRES.                   | 73 MANCHESTER PL., NEWARK, NJ 07104     | 06-29-01                |
| MARIA GILDA SILVA, V.P.                      | 209 MONTCLAIR AVE., NEWARK, NJ 07104    | 06-29-01                |
| A&S SERVICE CO., INC.                        | 91 E. SOMERSET ST., RARITAN, NJ 08869   | 05-14-99                |
| GEORGE R. SHEATS, PRESIDENT                  | 11 E. SPRING ST. SOMERVILLE, NJ 08876   | 05-14-99                |
| ANTHONY L. TRILONE, V.P.                     | 25 FEATHERBED LN., STOCKTON, NJ 08859   | 05-14-99                |
| AIR TECH SERVICES, INC.                      | 2121 RT 33, HAMILTON TWP., NJ 08619     | 12-05-99                |
| JOSEPH DINATALE, V.P.                        | 2121 RT 33, HAMILTON TWP., NJ 08619     | 12-05-99                |
| ALL SERVICES ELEVATOR INDUSTRIES CORPORATION | 462 CENTRAL AVE., JERSEY CITY, NJ 07307 | 04-26-99                |
| RALPH OTIS, PRES. & V.P.                     | 462 CENTRAL AVE., JERSEY CITY, NJ 07307 | 04-26-99                |
| ALLIED MECHANICAL CONTRACTORS INC.           | 36 LONGPOINT DR., BRICK, NJ 08723       | 09-02-00                |
| E.J.GRAEF, DIRECTOR                          | 36 LONGPOINT DR., BRICK, NJ 08723       | 09-02-00                |
| AMERICAN ELECTRICAL CONTRACTORS, INC.        | PO BOX 8170, SADDLE BROOK, NJ 07662     | 07-01-99                |
| RAEES BOOTER, PRESIDENT                      | PO BOX 8170, SADDLE BROOK, NJ 07662     | 07-01-99                |
| ANTONI POLSKI T/A P A MASON CO.              | 42 GLENN DR., KEASBY, NJ 08832          | 12-30-99                |

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| APPLIED WATERPROOFING<br>AND RESTORATION INC.<br>MICHAEL A. SYLVESTER, PRESIDENT          | PO BOX 316, WEST ORANGE, NJ 07052<br>70 LUDDINGTON RD., WEST ORANGE, NJ 07502                                                                                   | 07-09-00.<br>07-09-00                    |
| ARASA INC., T/A RAPID AIR SYSTEMS<br>CECILIA WALSH, PRESIDENT                             | 3 WOLLEY AVE., LONG BRANCH, NJ 07740<br>590 OCEAN BLVD., LONG BRANCH, NJ 07740                                                                                  | 05-29-99<br>05-29-99                     |
| ARLENE CONSTRUCTION<br>V. A. BAIARDI, PRES.                                               | PO BOX 5758, CLARK, NJ 07066<br>1441 RARITAN RD., CLARK, NJ 07066                                                                                               | 01-15-02<br>01-15-02                     |
| ARROW PAVING CO.<br>ROBERT STEVENS, OWNER                                                 | 2120 HWY 37 E., TOMS RIVER, NJ 08753<br>2120 HWY 37 E., TOMS RIVER, NJ 08753                                                                                    | 09-11-00<br>09-11-00                     |
| ASPINO ELECTRIC<br>ANIBAL J. OSPINO, PRESIDENT                                            | 328 GRAFTON AVE., NEWARK, NJ 07104<br>196 BROADWAY, BAYONNE, NJ 07302                                                                                           | 01-15-02<br>01-15-02                     |
| ASSOCIATED ROOFING & SHEETMETAL INC<br>RICHARD J. GREELY, JR., PRES.                      | 1087 PROSPECT AVE. MOUNTAIN SIDE NJ 07092<br>1087 PROSPECT AVE. MOUNTAIN SIDE NJ 07092                                                                          | 11-05-00<br>11-05-00                     |
| ATLAS COMMERCIAL INTERIORS<br>JOHN LOCKMAN, PRESIDENT                                     | BOX 48, RT 77, MULLICA HILL, NJ 08062<br>361 BRIDGETON PIKE, MULLICA HILL, NJ 08062                                                                             | 07-20-01<br>07-20-01                     |
| BARBAGLI CONSTRUCTION<br>KENNETH BARBAGLI, OWNER                                          | 149 S. MAIN ST., ELMER, NJ 08318<br>149 S. MAIN ST., ELMER, NJ 08318                                                                                            | 09-16-01<br>09-16-01                     |
| BARNEY BRESNAHAN T/A<br>BARNEY BRESNAHAN CO.                                              | 1600 RT 71, APT 3, BELMAR, NJ 07719                                                                                                                             | 03-07-00                                 |
| BELLE MEAD WALL SYSTEMS INC.,<br>JAMES J. JANKOWICZ, PRESIDENT<br>EVE JANKOWICZ, DIRECTOR | 140 MOUNTAINVIEW RD. BELLE MEAD NJ 08502<br>44 MOUNTAINVIEW RD. BELLE MEAD NJ 08502<br>44 MOUNTAINVIEW RD. BELLE MEAD NJ 08502                                  | 07-01-99<br>07-01-99<br>07-01-99         |
| BIG MOUNTAIN CONTRACTING CO.<br>DEBORAH PETERS, OWNER<br>GEORGE W. PETERS, OWNER          | RD 1 BX. 134-B, BEECH CREEK, PA 16822<br>RD 1 BX. 134-B, BEECH CREEK, PA 16822<br>RD 1 BX. 134-B, BEECH CREEK, PA 16822                                         | 05-14-99<br>05-14-99<br>05-14-99         |
| BRADLEY ELEVATOR CO.<br><br>JOSEPH BRADLEY, PRES.<br><br>FRANK SCARPO, SEC-TREAS.         | 43 N. DAY ST., ORANGE, NJ 07051<br>663 FRANKLIN AVE., #252, NUTLEY,<br>NJ 07110<br>432 GRAYLOCK PKWY, BELLEVILLE, NJ<br>07104<br>2 MIDWOOD PL., WAYNE, NJ 07470 | 10-14-01<br><br>10-14-01<br><br>10-14-01 |
| BRAZDON LANDSCAPING & IRRIGATION<br>INC.<br>JOSEPH BRAZEDON JR., PRESIDENT                | 115 HADDON AVE., WEST BERLIN, NJ 08091<br>115 HADDON AVE., WEST BERLIN, NJ 08091                                                                                | 09-02-00<br>09-02-00                     |
| BRODER CONSTRUCTION<br><br>DEAN BRODER, OWNER                                             | 342 S. HOPE CHAPTER ST., JACKSON, NJ<br>08527<br>342 S. HOPE CHAPTER ST., JACKSON, NJ<br>08527                                                                  | 07-24-01<br><br>07-24-01                 |
| BUSHWOOD ENTERPRISES, INC.<br>ANTHONY P. BACZEWSKI, PRES.<br>HAROLD GOODMAN, V.P.         | 27 MONMOUTH ST., RED BANK, NJ 07701<br>207 HOLLAND RD., HOLMDEL, NJ 07733<br>27 MONMOUTH ST., RED BANK, NJ 07701                                                | 08-19-99<br>08-19-99<br>08-19-99         |
| CAPITAL CABLING INC.<br>LAWRENCE STAMPER, PRESIDENT                                       | 9123 BEL AIR RD. BALTIMORE, MD 21236<br>9123 BEL AIR RD. BALTIMORE, MD 21236                                                                                    | 12-30-99<br>12-30-99                     |

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| CASTLE ABATEMENT CORP.                              | 620 RAMSEY AVE., HILLSIDE, NJ 07205            | 03-04-00 |
| JAMES JOSEPH JAMES, PRESIDENT                       | 620 RAMSEY AVE., HILLSIDE, NJ 07205            | 03-04-00 |
| CLARK SHEET METAL WORKS, INC                        | 1945 RUTHERFORD ST., RAHWAY, NJ 07065          | 03-25-01 |
| JAMES V. CHRISTOS, JR., PRESIDENT                   | 1945 RUTHERFORD ST., RAHWAY, NJ 07065          | 03-25-01 |
| CLARVIS SOANES T/A SCOT'S<br>CONSTRUCTION & WELDING | 525 SMITH COURT, CLIFFWOOD, NJ 07721           | 03-07-00 |
| COLOR PAINTING CONTRACTORS INC.                     | 124 16 <sup>TH</sup> ST., NEWARK, NJ 07103     | 09-15-00 |
| RUDOLFO BRAMBAUER, PRESIDENT                        | 68 KIRK ST., WEST ORANGE, NJ 07052             | 09-15-00 |
| COMMERCIAL WINDOW INSTALLATION INC                  | 539 PEMBROOKE CT. MILLERSVILLE MD 21108        | 05-28-99 |
| KATHLEEN O'ROARK, PRESIDENT                         | 539 PEMBROOKE CT. MILLERSVILLE MD 21108        | 05-28-99 |
| CONTROL CONSTRUCTION INC. T/A<br>MASON CONTRACTORS  | 15 MARLIN AVE. W EDISON, NJ 08818              | 10-01-01 |
| CARMINE MAZZA, OWNER                                | 15 MARLIN AVE. W EDISON, NJ 08818              | 10-01-01 |
| CONSOAR CORPORATION                                 | 49 CEDAR AVE PO BX 161 MONTCLAIR NJ<br>07042   | 07-01-99 |
| HERMAN P. CONNOR, PRESIDENT                         | 49 CEDAR AVE PO BX 161 MONTCLAIR NJ<br>07042   | 07-01-99 |
| MARY SOARES, SECRETARY                              | 49 CEDAR AVE PO BX 161 MONTCLAIR NJ<br>07042   | 07-01-99 |
| COONEY AUTOMATIC SPRINKLER CO                       | 1501 SOUTH NEW RD., PLEASANTVILLE, NJ<br>08232 | 10-29-01 |
| ROGER T. COONEY III, PRES.                          | 1501 SOUTH NEW RD., PLEASANTVILLE, NJ<br>08232 | 10-29-01 |
| COOPER CONSTRUCTION & MGMT. INC.                    | 699 CROSS ST. SUITE 3 LAKEWOOD NJ 08701        | 06-03-99 |
| ROSS L. COOPER, PRESIDENT                           | 275 CHERRY QUAY RD., BRICK, NJ 08723           | 06-03-99 |
| CUTRUPI & CO.                                       | 260 LAFAYETTE PL., ENGLEWOOD, NJ 07631         | 05-21-01 |
| VINCENT D. CUTRUPI, PRES.                           | 750 RIVERVALE RD., RIVERVALE, NJ 07661         | 05-21-01 |
| DDAPP & SONS CONSTRUCTION                           | 902 LAMBERTON ST., TRENTON, NJ 08638           | 09-03-01 |
| PATRICIA PEREZ, PRESIDENT                           | 902 LAMBERTON ST., TRENTON, NJ 08638           | 09-03-01 |
| DAVID G. ARMSTRONG                                  | 200 CHAPEL RD, LISBON NY 13658                 | 12-13-99 |
| DEDICATED ASSOCIATES INC.                           | 54 WESTLEY RD., OLD BRIDGE, NJ 08857           | 12-30-99 |
| ANTHONY HENRY, PRESIDENT                            | 54 WESTLEY RD., OLD BRIDGE, NJ 08857           | 12-30-99 |
| DEL-VAL CONSTRUCTION                                | 321 CATTELL AVE., COLLINGSWOOD, NJ 08107       | 09-30-00 |
| ROBERT MOSER, PRESIDENT                             | 321 CATTELL AVE., COLLINGSWOOD, NJ 08107       | 09-30-00 |
| LARRY MOSER, V.P.                                   | 321 CATTELL AVE., COLLINGSWOOD, NJ 08107       | 09-30-00 |
| DESIGN ELECTRIC                                     | PO BOX 157, COLTS NECK, NJ 07724               | 09-30-00 |
| ROBERT KRELK, PRESIDENT                             | 2 SARATOGA CT., COLTS NECK, NJ 07724           | 09-30-00 |
| DESIGN LOC INC.                                     | 626 WOODLAND AVE., SPRING LAKE, NJ 07762       | 03-12-99 |
| MATI RAND, PRESIDENT                                | 626 WOODLAND AVE., SPRING LAKE, NJ 07762       | 03-12-99 |
| DIAMOND CARPENTRY CORP.                             | 3835 RICHMOND AVE., STATEN IS., NY 10312       | 01-24-00 |
| ANGELA MARIGLIANE, PRES.                            | 3835 RICHMOND AVE., STATEN IS., NY 10312       | 01-24-00 |

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| DOUGLAS A. BELL T/A<br>DEELUX PAINTING CO                 | 110 NOTTINGHAM WAY, WILLINGBORO, NJ 08046          | 10-30-99 |
| DREAM BUILDERS                                            | 1240 E. STATE ST., TRENTON, NJ 08609               | 12-02-01 |
| BENJAMIN R. SEABROOK, PRES.                               | 1240 E. STATE ST., TRENTON, NJ 08609               | 12-02-01 |
| E D I ELECTRIC INC.                                       | 122 TRENTON CIR., FAIRLESS HILLS, PA<br>19030      | 09-18-99 |
| LISA M. CAHILL, PRESIDENT                                 | 122 TRENTON CIR., FAIRLESS HILLS, PA<br>19030      | 09-18-99 |
| EDERICK POE CONTRACTORS                                   | 66 PROSPECT ST., TRENTON, NJ 08618                 | 01-14-02 |
| EDERICK POE, OWNER                                        | 66 PROSPECT ST., TRENTON, NJ 08618                 | 01-14-02 |
| FRANK PIACENTINI<br>T/A IMPACT HEATING & AIR CONDITIONING | 908 HIGHLAND AVE., PALMYRA NJ 08065                | 10-17-99 |
| FRANK W. REALE & SON PLUMBING                             | 222 KOSSUTH ST., RIVERSIDE NJ 08075                | 09-30-00 |
| FRANK W. REALE, OWNER                                     | 222 KOSSUTH ST., RIVERSIDE NJ 08075                | 09-30-00 |
| FRAZER ELECTRIC SERVICE CO.                               | 705 PARK AVE., SUITE 202, PLAINFIELD<br>NJ 07060   | 10-08-01 |
| LEON FRAZER, PARTNER                                      | 646 HAROLD PL., PISCATAWAY, NJ 08854               | 10-08-01 |
| IVAN RAY, PARTNER                                         | 670 WEST 8 <sup>TH</sup> ST., PLAINFIELD, NJ 07060 | 10-08-01 |
| GM TRUCKING ASSOCIATES, INC                               | 833 RANOCAS RD., MT. HOLLY, NJ 08060               | 06-29-01 |
| GARY MUSGRAVE, PRESIDENT                                  | PO BOX 674, JANELEW, W. VIRGINIA 26378             | 06-29-01 |
| GARDEN STATE ENVIRONMENTAL DRILLING                       | PO BOX 145, WHITING, NJ 08759                      | 10-28-00 |
| PAUL ELIA, PRESIDENT                                      | 1960 BALTIMORE AVE., WHITING, NJ 08759             | 10-28-00 |
| CLAUDE BRITTON, PRESIDENT                                 | 126 CALDWELL AVE., FORKED RIVER, NJ 08731          | 10-28-00 |
| GARDEN STATE ROOFING & SHEET METAL                        | 152 SHREVE AVE., BARRINGTON, NJ 08007              | 02-09-01 |
| MARTIN BALADA, PRESIDENT                                  | 152 SHREVE AVE., BARRINGTON, NJ 08007              | 02-09-01 |
| KATHLEEN BALADA, VP                                       | 152 SHREVE AVE., BARRINGTON, NJ 08007              | 02-09-01 |
| GRIFFIN, ROBERTS & ASSOC.<br>T/A NORTHEAST MASONRY CONT.  | 100 E. OCEANVIEW AVE., #511, NORFOLK<br>VA. 23503  | 01-05-01 |
| JONATHAN BAGWELL, VP/GEN'L COUNSEL                        | 100 E. OCEANVIEW AVE., #511, NORFOLK<br>VA. 23503  | 01-05-01 |
| H&M FIRE PROTECTION                                       | 2335 BROOKFIELD ST., VINELAND, NJ 08360            | 10-27-00 |
| CARL BOSTROM, PRESIDENT                                   | 2335 BROOKFIELD ST., VINELAND, NJ 08360            | 12-27-00 |
| HILDA BOSTROM, SEC./TREAS.                                | 2335 BROOKFIELD ST., VINELAND, NJ 08360            | 10-27-00 |
| H&R ELECTRICAL CORP., INC.                                | 228 BOUNDARY RD., MARLBORO, NJ 07746               | 12-03-00 |
| RICHARD PEROSI, DIRECTOR                                  | PO BOX 415, HOLMDEL, NJ 07733                      | 12-03-00 |
| HOWARD PEROSI, DIRECTOR                                   | 261 S HOLLAND AVE., HOLMDEL, NJ 07733              | 12-03-00 |
| HARRY RICH AFFILIATES INC.                                | 565 RAHWAY AVE., UNION, NJ 07083                   | 02-26-00 |
| PATRICK SORICELLO, PRESIDENT                              | 565 RAHWAY AVE., UNION, NJ 07083                   | 02-26-00 |
| PETER ANTONUCCI, V.P.                                     | 565 RAHWAY AVE., UNION, NJ 07083                   | 02-26-00 |
| JOSEPH V. DECHIARO, SEC./TREAS.                           | 565 RAHWAY AVE., UNION, NJ 07083                   | 02-26-00 |
| HAUSER CONTRACTING CO.                                    | 60 OLD CAMPLAIN RD., HILLSBORO,<br>NJ 08876        | 01-14-02 |
| ALFRED M. HAUSER, PRESIDENT                               | 60 OLD CAMPLAIN RD., HILLSBORO,<br>NJ 08876        | 01-14-02 |

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| JG NASILE PAINTING CO.                                  | 2114 SPRUCE ST., TRENTON, NJ 08638                       | 08-25-01 |
| GERALD J. NASILE, PRESIDENT                             | 315 LAMBERTVILLE-HOPEWELL RD.,<br>LAMBERTVILLE, NJ 08530 | 08-25-01 |
| J R LAND, INC                                           | PO BOX 442, THREE BRIDGES, NJ 08887                      | 01-12-02 |
| JIM REED, PRESIDENT                                     | 741 BUCCANEER LN.MANAHAWKIN, NJ 08050                    | 01-12-02 |
| JACK VOIT T/A CUSTOM STONE & STUCCO                     | 17 ISLAND RD., MONROEVILLE, NJ 08343                     | 10-30-99 |
| JAMES N. BOSLEY CONTRACTING                             | 120 WEST AVE, ATLANTIC HIGHLANDS<br>NJ 07716             | 10-30-00 |
| JAMES N. BOSLEY, OWNER                                  | 120 WEST AVE, ATLANTIC HIGHLANDS<br>NJ 07716             | 10-30-00 |
| JAMES LUSKER FIRE PROTECTION CORP.                      | 1052 BELL CT., TOMS RIVER, NJ 08753                      | 11-25-01 |
| JAMES LUSKER, PRES.                                     | 1052 BELL CT., TOMS RIVER, NJ 08753                      | 11-25-01 |
| JET ELECTRIC, INC.                                      | 37 THROCKMORTON LN,OLD BRIDGE NJ 08857                   | 02-09-01 |
| JOSEPH CARUSO, PRES/VP                                  | 6 EDITH CT., OLD BRIDGE, NJ 08857                        | 02-09-01 |
| CHRISTINE CARUSO, SEC/TREAS                             | 6 EDITH CT., OLD BRIDGE, NJ 08857                        | 02-09-01 |
| JOSEPH CICCONE AND SONS INC.                            | 5290 W.COPLEY RD.,WHITEHALL,PA 18052                     | 04-01-00 |
| STEVEN KOLBE, PRESIDENT                                 | 5290 W.COPLEY RD.,WHITEHALL,PA 18052                     | 04-01-00 |
| KMK CONSTRUCTION GROUP, INC.                            | 225 GORDONS CORNER RD., SUITE 2D,<br>MANALAPAN, NJ 07726 | 01-15-02 |
| KAIREN, INC.                                            | 54 HAAS RD., BASKING RIDGE, NJ 07920                     | 09-01-01 |
| MATTHEW M. KAIREN, PRESIDENT                            | 54 HAAS RD., BASKING RIDGE, NJ 07920                     | 09-01-01 |
| TED FAXON, OWNER                                        | 54 HAAS RD., BASKING RIDGE, NJ 07920                     | 10-16-01 |
| KENNETH EBLING PLUMBING .                               | 165 GAINSBORO RD., LAWRENCEVILLE,<br>NJ 08648            | 01-14-02 |
| KENNETH EBLING, OWNER                                   | 165 GAINSBORO RD., LAWRENCEVILLE<br>NJ 08648             | 01-14-02 |
| L&M CONSTRUCTION SERVICES, INC.                         | PO BX 813, BELLMAWR, NJ 08099                            | 04-12-99 |
| MICHAEL FAHY, PRESIDENT                                 | 146 LOGAN AVE. AUDUBON, NJ 08106                         | 04-12-99 |
| LAND ASSOCIATES, INC.                                   | 53 BARBOUR ST., HALEDON, NJ 07508                        | 10-23-01 |
| MARTIN VANBOERUM, PRES.                                 | 53 BARBOUR ST., HALEDON, NJ 07508                        | 10-23-01 |
| LIVARDO CONTRACTORS                                     | 359 E. 1 <sup>ST</sup> ST., CLIFTON, NJ 07011            | 01-03-99 |
| PHILIP LIVARDO, PARTNER                                 | 359 E. 1 <sup>ST</sup> ST., CLIFTON, NJ 07011            | 01-03-99 |
| STEVEN LIVARDO, PARTNER                                 | 359 E. 1 <sup>ST</sup> ST., CLIFTON, NJ 07011            | 01-03-99 |
| MBC CONSTRUCTION CO.                                    | 15 MEDFORD PL., WAYNE, NJ 07470                          | 10-23-01 |
| JACK MEYER, PRESIDENT                                   | 15 MEDFORD PL., WAYNE, NJ 07470                          | 10-23-01 |
| MARK CHRISTIANA                                         | 1036 OLD FOUNDRY RD.,NEWTON, NJ 07860                    | 12-05-99 |
| MERSIMI CONSTRUCTION                                    | 75 NEWARK POMPTON TPK #1,WAYNE,NJ07470                   | 09-06-99 |
| FEMI MERSIMI, OWNER                                     | 75 NEWARK POMPTON TPK #1,WAYNE,NJ07470                   | 09-06-99 |
| MICHAEL GUYET T/A<br>GUYET BUILDERS CO                  | 64 ROGERS AVE.,MANASQUAN,NJ 08736                        | 05-15-99 |
| MICHAEL J. HINCHLIFFE T/A<br>MJ HEAT & AIR CONDITIONING | 1471 KEARSLEY RD., ERIAL, NJ 08081                       | 03-04-00 |

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| MIRLA BUILDERS, INC.                      | 841 ERCAMA ST., LINDEN, NJ, 07036                                       | 10-17-99 |
| STEPHEN MIRANDO, PRESIDENT                | 841 ERCAMA ST., LINDEN, NJ 07036                                        | 10-17-99 |
| WILLIAM LAMORTE, V.P.                     | 841 ERCAMA ST., LINDEN, NJ 07036                                        | 10-17-99 |
| NTE CORPORATION                           | 395 Larkin Pl., PO Box 640, OAKHURST NJ 07755                           | 07-06-01 |
| NICKOLAS KOUKOUKIS, PRES.                 | 112 FORTUNATO PL., NEPTUNE, NJ 07753                                    | 07-06-01 |
| N&A MASONS CO.                            | 2307 4 <sup>TH</sup> AVE., TOMS RIVER, NJ 08753                         | 09-06-99 |
| NATHAN AMICO, OWNER                       | 2307 4 <sup>TH</sup> AVE., TOMS RIVER, NJ 08753                         | 09-06-99 |
| NEW LINE CONSTRUCTION INC.                | 13 KLEIN ST., OAKHURST, NJ 07755                                        | 05-16-00 |
| NORDIC ELECTRIC, INC.                     | 624 LEESVILLE AVE., RAHWAY, NJ 07065                                    | 01-11-99 |
| PER NUTH, PRESIDENT                       | 624 LEESVILLE AVE., RAHWAY, NJ 07065                                    | 01-11-99 |
| NORTHEAST CONSTRUCTION MGMT. INC.         | 8 RIDGEWOOD RD., FRANKLIN, NJ 07416                                     | 11-02-01 |
| PATRICK BARTON, PRESIDENT                 | 8 RIDGEWOOD RD., FRANKLIN, NJ 07416                                     | 11-02-01 |
| NORTHEAST MASONRY CONTRACTORS INC.        | 150 RAILROAD AVE., PATERSON, NJ 07501                                   | 01-05-01 |
| ERIC W. CUSTIS, PRES.                     | 322 HAMILTON AVE., APT. 3 PATERSON, NJ NJ 07501                         | 01-05-01 |
| NORTH SYRACUSE CONST., CO., INC.          | PO BOX 11, N. SYRACUSE, NY 13212                                        | 01-03-99 |
| RICHARD L. MONK, PRESIDENT                | PO BOX 62, SPRAKERS, NY 12166                                           | 01-03-99 |
| JEFFREY T. HARVEY, V.P.                   | 87 WINCHESTER DR., LIVERPOOL, NY 13088                                  | 01-03-99 |
| EUGENE P. HARVEY, V.P.                    | 4767 GRANGE RD., CLAY, NY 13041                                         | 01-03-99 |
| PAYNTER CONSTRUCTION INC.                 | 249 GREENWICH AVE., PAULSBORO, NJ 08066                                 | 03-07-99 |
| LAWRENCE PAYNTER, PRESIDENT               | 249 GREENWICH AVE., PAULSBORO, NJ 08066                                 | 03-07-99 |
| PCM CONSTRUCTION CORP.                    | 1358 HOOPER AVE., SUITE #269, TOMS RIVER, NJ 08753                      | 02-09-99 |
| PETER C. MURRAY, PRESIDENT                | 1252 RAIDER WAY, TOMS RIVER, NJ 08753                                   | 02-09-99 |
| BERNADETTE MURRAY, SECRETARY              | 1252 RAIDER WAY, TOMS RIVER, NJ 08753                                   | 02-09-99 |
| QUIGLEY ELECTRIC INC.                     | 4604 SCHOONER AVE., BRIGANTINE, NJ 08203                                | 03-15-99 |
| MARIA P. QUIGLEY, PRESIDENT               | 4604 SCHOONER AVE., BRIGANTINE, NJ 08203                                | 03-15-99 |
| RANCO MASONRY CONTRACTORS                 | 203 SUMMIT RD., ELIZABETH, NJ 07208                                     | 09-03-01 |
| JOSEPH RANDAZZA, SR., VP                  | 203 SUMMIT RD., ELIZABETH, NJ 07208                                     | 09-03-01 |
| RUSSELL KONDAS T/A DIAMOND DRYWALL        | 105 NEWPORT RD., SICKLERVILLE, NJ 08081                                 | 11-13-99 |
| SALVATORE CERAMI T/A CERAMI BRICKWORK     | 701 WOODCHUCK LN., TOMS RIVER, NJ 08753                                 | 02-26-99 |
| SAMMIE L. MCGRUFF & SONS ELECTRICAL, INC. | 654 JERUSALEM AVE., SCOTCH PLAINS, NJ PO BOX 48 SCOTCH PLAINS, NJ 07076 | 04-07-01 |
| SCENIC CREATIONS, INC.                    | PO BOX 484, CRANBURY, NJ 08512                                          | 04-17-00 |
| STANLEY E. RUTKOWSKI, PRESIDENT           | PO BOX 484, CRANBURY, NJ 08512                                          | 04-17-00 |
| SCOTT ROWE T/A QUALITY MASONRY            | 2 JACKSON ST., FREEHOLD, NJ 07728                                       | 02-26-00 |
| SDS INTERNATIONAL BUILDERS, INC.          | 55 TEAK RD., WAYNE, NJ 07470                                            | 12-05-99 |
| DRAGISA SOLDATOVIC, PRESIDENT             | 55 TEAK RD., WAYNE, NJ 07470                                            | 12-05-99 |

|                                        |                                                            |          |
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| SHAN ELECTRIC INC.                     | 5 COLTON CT., BAYVILLE, NJ 08721                           | 11-12-99 |
| STEVEN SHAN, PRESIDENT                 | 5 COLTON CT., BAYVILLE, NJ 08721                           | 11-12-99 |
| SOUTHERN INDUSTRIAL SAND, INC.         | MONROE INDUSTRIAL PARK, WILLIAMSTOWN NJ 08094              | 09-14-01 |
| HERBERT ELLSWORTH, PRES.               | PO BOX 220, WILLIAMSTOWN, NJ 08094                         | 09-14-01 |
| STRINGFELLOW-HUBBELL CONST. CO. INC    | PO BX 342, LUMBERTON, NJ 08048                             | 08-20-99 |
| MASON STRINGFELLOW, PRESIDENT          | PO BX 342, LUMBERTON, NJ 08048                             | 08-20-99 |
| RAY HUBBELL, V.P.                      | 31 N. MAPLE AVE., #503, MARLTON, NJ 08053                  | 08-20-99 |
| SUN-UP CONSTRUCTION                    | 1300 RACHEL TERR., 23, PINE BROOK, NJ 07058                | 12-07-01 |
| JOHN MELILLO, PRESIDENT                | 165 RYAN ST., S. PLAINFIELD, NJ 07080                      | 12-07-01 |
| JOHN DIBIASI, VICE PRESIDENT           | 165 RYAN ST., S. PLAINFIELD, NJ 07080                      | 12-07-01 |
| SYLVESTER THOMPSON & SONS, INC.        | 625 HAVEN ST., OCEAN CITY, NJ 08226                        | 02-16-99 |
| SYLVESTER THOMPSON JR. PRESIDENT       | 710 MAPLE CT., PLEASANTVILLE, NJ 08232                     | 02-16-99 |
| WAYNE THOMPSON JR. TREAS.              | 737 SIMPSON AVE., OCEAN CITY, NJ 08226                     | 02-16-99 |
| TELECONNECT SERVICES, INC.             | 67 CRESCENT ST., PENDELL, PA 19047                         | 10-27-00 |
| FRAN FISHER, PRESIDENT                 | 67 CRESCENT ST., PENDELL, PA 19047                         | 10-27-00 |
| THOMAS & SON BUILDING CONTRACTOR       | 1 LOCUST ST., LAKEHURST, NJ 08733                          | 12-22-01 |
| JAMES H. THOMAS, PRESIDENT             | 1 LOCUST ST., LAKEHURST, NJ 08733                          | 12-22-01 |
| TIMOTHY MILLER T/A MILLER CONSTRUCTION | 4 COLUMBIA AVE., NEWFIELD NJ 08344                         | 11-25-99 |
| TOM FIOR T/A D T FIOR BUILDERS CO.     | 250 FOREST DR., TURNERSVILLE, NJ 08012                     | 03-07-00 |
| U. S. CONTRACTORS CORP.                | 501 CALHOUN ST., TRENTON, NJ 08618                         | 10-09-01 |
| CHRIS PIECH, PRESIDENT                 | 104 LAKEDALE DR., LAWRENCEVILLE, NJ 08648                  | 10-09-01 |
| V. TUFARO & SONS, INC.                 | PO BOX 360, S. PLAINFIELD, NJ 07080                        | 10-22-01 |
| VINCENT TUFARO, JR. V.P.               | 163 COPPERTREE RD., EDISON, NJ 08820                       | 10-22-01 |
| NICHOLAS TUFARO, V.P.                  | 86 ALDERBERRY CT., EDISON, NJ 08820                        | 10-22-01 |
| V&V CREATIVE STUCCO INC.               | PO BOX 186, 30 CHASE ST. NUTLEY, NJ 07110                  | 08-19-99 |
| VINCENZO SICILIANO, PRESIDENT          | PO BOX 186, 30 CHASE ST. NUTLEY, NJ 07110                  | 08-19-99 |
| W&R ELECTRICAL CONTRACTORS INC.        | 54 AMHERST ST., EAST ORANGE, NJ 07019                      | 08-20-99 |
| BRENDA F. CLEGG, PRESIDENT             | 53 LINDEN AVE., IRVINGTON, NJ 07111                        | 08-20-99 |
| RONNIE HERBERT GRAY, V.P.              | 154 AMHERST ST., EAST ORANGE, NJ 07019                     | 08-20-99 |
| RHONDA W. GRAY, SEC.                   | 93 N. 15 <sup>TH</sup> ST., EAST ORANGE, NJ 07018          | 08-20-99 |
| W.M. BAHR LANDSCAPING CONT. INC.       | 334 GLENMERE AVE., NEPTUNE, NJ 07753                       | 10-28-99 |
| WILLIAM H. BAHR, PRESIDENT             | 334 GLENMERE AVE., NEPTUNE, NJ 07753                       | 10-28-99 |
| WHITE BUFFALO CONCRETE                 | 8 W. MAIN ST., 2 <sup>ND</sup> FLOOR, FARMINGDALS NJ 07727 | 10-07-01 |
| VALARIE WRIGHT                         | 390 FAIRFIELD RD., FREEHOLD, NJ 07728                      | 10-07-01 |

|                               |                                         |            |
|-------------------------------|-----------------------------------------|------------|
| WILKERSON ELECTRICAL SERVICES | 511 ROLLING PEAKS WAY,                  | 10-29-00 " |
|                               | SCOTCH PLAINS, NJ 07076                 |            |
| NATHAN WILKERSON, PRESIDENT   | 511 ROLLING PEAKS WAY,                  | 10-29-00   |
|                               | SCOTCH PLAINS, NJ 07076                 |            |
| WILLIE WILKERSON, V.P.        | 511 ROLLING PEAKS WAY,                  | 10-29-00   |
|                               | SCOTCH PLAINS, NJ 07076                 |            |
| WILLIAM KEATON T/A            | 23 GARFIELD AVE., TRENTON NJ 08609      | 10-02-99   |
| JOHNSON WELDING SVC.          |                                         |            |
| WIRETECH COMMUNICATIONS CORP. | ONE ON THE WATERFRONT, BORDENTOWN, NJ   | 12-18-00   |
|                               | 08505                                   |            |
| PATRICK W. CASEY, PRESIDENT   | 10 MCKNIGHT AVE., BORDENTOWN, NJ 08505  | 12-18-00   |
| WORLD WIND PIPING, INC.       | 322 W. PROSPECT AVE., KEYPORT, NJ 07735 | 10-02-99   |
| BRUCE LEWIS, PRESIDENT        | 322 W. PROSPECT AVE., KEYPORT, NJ 07735 | 10-02-99   |

DEBARRED PENDING OAL HEARING

TECHNICAL REQUIREMENTS  
FOR  
PROPOSED LIGHTING IMPROVEMENTS  
DRUM POINT RECREATION COMPLEX

Table of Contents

| <u>Section</u> | <u>Title</u>    |
|----------------|-----------------|
| 1.             | General Work    |
| 2.             | Lighting        |
| 3.             | Electrical Work |
| 4.             | Restoration     |

## TECHNICAL SECTION 1. GENERAL WORK

### A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **GENERAL WORK** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEM applicable to this Section is:

#### GENERAL WORK (1)

Additional Information. Additional information for all or part of the Work included under this Section is as follows:

(1) General Work shall include the cost of initiating the Contract, and such portions of the following that are required for the Project: setting up the CONTRACTOR's general plant, offices, shops, storage areas, sanitary and other facilities as required; providing access to the project sites; obtaining necessary permits and licenses, and payment of fees; protecting existing utilities; lighting work areas; providing working drawings; construction stakeout and surveying; sampling and testing of materials; providing required insurance and bonds; and restoration of all areas disturbed during the course of construction activity.

### B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

#### GENERAL WORK (1)

(1) The work under this Section shall include all preparatory work and operations, necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, and other work performed or costs incurred prior to beginning work.

(2) Materials shall include snow fence, lights or other means necessary to designate the limits of the project and prevent entry by the public to the site of the work.

(3) The CONTRACTOR shall provide all work required in connection with the layout for construction of the Project, using the control points and data furnished by the ENGINEER.

The CONTRACTOR shall furnish all necessary qualified personnel and adequate equipment to preserve such controls throughout the duration of the Contract, and shall lay out therefrom all of the lines and grades necessary for the complete construction of the Project.

(4) All necessary regulatory and warning signs, devices, barricades, traffic guides, lights, flares, and other devices necessary shall be in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highways*.

#### C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

##### Required Execution.

#### GENERAL WORK (1)

(1) CONTRACTOR shall provide barricades to protect the public from injury from the CONTRACTOR'S work. Barricades shall be placed so as to prevent unauthorized persons from entering the work area. Barricades shall consist of snow fence, lights or other means necessary to prevent entry to the work area.

(2) CONTRACTOR shall remove and dispose of all construction debris. All debris shall be cleaned up on a daily basis and placed in containers or trucks. The materials shall be removed from the site of work and disposed of by the CONTRACTOR at an approved disposal site at no additional cost to the OWNER.

(3) All Traffic Control devices for all work along roadways or in existing parking lots shall be placed and maintained in accordance with the *Manual on Uniform Traffic Control Devices for Streets and Highways*, latest edition.

(4) The CONTRACTOR shall take care and caution to preserve and protect all existing pavements, curbs, grass areas, mulch areas, fencing and other public property along and adjacent to the lines of work. Any destruction to any of the above, beyond the limits of work, or caused by careless construction procedures, shall be replaced by the CONTRACTOR at no additional cost to the OWNER.

(5) The CONTRACTOR shall provide all necessary survey work as required for construction of the facilities.

#### D. TESTS AND INSPECTIONS

Not Applicable this Section.

#### E. SUBMITTALS

Not Applicable this Section.

## F. PAYMENT

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for General Work (1) will be made at the Lump Sum price bid for this item in the Schedule of Prices in the Bid Form, which price shall include barricades and other devices for site protection; providing all survey and layout work; maintaining public safety; traffic control; daily removal and disposal of construction debris; mobilization; and all other work and materials described hereinabove.

## TECHNICAL SECTION 2. LIGHTING

### A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **LIGHTING** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. The ITEM applicable to this Section is:

### **BALLFIELD LIGHTING (2)**

Laws and Regulation. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work included under this Section attention is directed to the specific requirements of:

- (1) National Electrical Code
- (2) N.J. State Electrical Subcode
- (3) Local and Municipal Codes

Additional Information. Additional information for all or part of the work included under this section is as follows:

- (1) For ballfield lighting, there shall be provided a U.L. listing for all electrical components from its connection to the feeder conductors, to its completion at the lamp socket including all connections. This listing shall be based upon U.L. testing and evaluation of the compatibility of the enclosures and the components for use in combination in this application in addition to the individual components being U.L. listed or recognized.

### B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

### **BALLFIELD LIGHTING (2)**

Ballfield lighting shall be supplied by Musco Sports - Lighting, Inc. or approved equal and shall meet the following specifications:

Lighting Performance:

(1) Performance Criteria

- (a) The performance criteria requires lighting equipment which will provide initial average light levels of 62.5 footcandles infield, 37.5 footcandles outfield. A maintenance factor of .8 is to be used in determining the initial light value after adjustment for a tilt factor. These initial light levels will provide a maintained lighting level of 50 footcandles infield, 30 footcandles outfield. The light levels are to be stated in the numeric values to be obtained during the initial hours of the operation of the light system.

The contractor shall supply computer generated point by point light scans based on 155,000 lumens per lamp showing both initial and designated maintained footcandle levels.

- (b) Uniformity ratio-the footcandle level shall have a uniformity ratio of maximum to minimum of not greater than 2.0:1 infield, 2.5:1 outfield or better.

(2) Spill/Glare Light - Designated Areas

- (a) Maximum spill light values - light levels shall not exceed the designated maximum footcandles or average footcandles shown below. These levels shall be shown as initial footcandles and shall be measured at a distance of 150 feet from the boundary of each Baseball Field in any direction.

**Typical of Each Baseball Field**

| 150' From Field Boundary | Horizontal Footcandles | Footcandles with meter aimed toward brightest light bank |
|--------------------------|------------------------|----------------------------------------------------------|
| Max. Footcandles         | 0.66                   | 2.95                                                     |
| Average Footcandles      | 0.46                   | 2.00                                                     |

(3) Beam Definition

- (a) No one fixture shall exceed the candlepower or the specified degrees above the maximum candlepower in the vertical plane as specified in the following table:

| Nema Type Reflector | Candlepower | Degrees Above Maximum Candlepower in Vertical Plane |
|---------------------|-------------|-----------------------------------------------------|
| Nema 2              | 30,000      | 19 degrees                                          |
| Nema 3              | 30,000      | 19 degrees                                          |
| Nema 4              | 30,000      | 19 degrees                                          |
| Nema 5              | 30,000      | 28 degrees                                          |
| Nema 6              | 30,000      | 28 degrees                                          |

Point By Point Analysis:

(1) Computer Models - Test Stations

- (a) For Each Baseball Field: Infield test stations for the horizontal field measurements shall consist of 25 points covering 120' x 120' on an equally spaced 30' x 30' grid. (Commencing 15' outside each baseline.)
- (b) Outfield test stations for the horizontal illumination levels should cover the entire outfield area to 300 foot marker starting 15' outside the foul line. Test stations shall be on a 30' x 30' grid and consist of 75 locations.
- (c) Spill/glare test stations shall consist of horizontal footcandles and maximum footcandles on a line 150 feet from the boundary of the two playing fields. Horizontal maximum footcandle readings shall be shown every 30 feet on the line.
- (d) Kw Consumption shall not exceed 73.60 for each Baseball Field.

Light-Structure System:

- (1) General Description - The Light-Structure System shall be manufactured by Musco Sports Lighting, or approved equal and shall consist of:

- (a) Pre-stressed centrifrically spun concrete base.
- (b) Hot-dip galvanized steel shafts.
- (c) Hot-dip galvanized steel crossarms.

- (d) Fixture consisting of: lamp, lamp socket, reflector, lens, lamp cone, reinforcing retaining ring.
- (e) U.L. listed double fusing for the lamp circuits.
- (f) Enclosure to consist of: NEMA 3R enclosure with ballasts and capacitors.
- (g) Thermal magnetic breaker.
- (h) All wiring from the load side of the breaker to the lamp socket.
- (i) Plug-in or landing lug connection devices for all electrical circuits on the pole.
- (j) Aiming method for alignment of the luminaries.
- (k) Method for re-alignment of the luminaire after movement for relamping.

Luminaire Structure:

- (1) Factory Construction - The lamp and reflector mounting device shall be factory assembled to the crossarms and the crossarms shall be attached to a section of the pole by the manufacturer.
- (2) Single Photometric Unit - Each reflector shall be attached to the crossarm in such a way that its aiming position has been determined relative to all other fixtures on the pole so that in the factory all luminaries on the assembly are oriented to form a single photometric unit.
- (3) Lamps - Lamps shall be 1500 Watt Metal Halide and shall be manufactured by GE, Phillips or Sylvania. Venture lamps will not be used and no other type of lamps will be considered.
- (4) Reflector and Lamp Supports - The reflector shall be fastened to the lamp come with a reinforcing retaining ring containing an acrylic compressed fiber ring which centers and stabilizes the lamp in the reflector and provides heat shield to protect the lamp socket form heat.
- (5) Lens - A removable lens of impact and thermal resistant glass with silicone gasket shall be centered in a stainless steel lens rim and attached to the reflector with a hinged cable or chain.
- (6) Aiming - The manufacturer shall provide a memory position device for each luminaire on the assembly. The device shall provide for automatic repositioning of the aiming after relamping.
- (7) Field Alignment - Luminaire assembly shall be provided from the factory to the job site as a unit which may be universally oriented in a manner that the entire luminaire assembly can be field aimed as a single unit.
- (8) Materials and Coatings - All steel components shall be hot dip galvanized to ASTM A-123 standards. High purity reflector grade aluminum shall be alzak finished. All other aluminum components shall be heavy anodized to MIL-A-8625E Type III (commercial AAC12A41) specification and shall further be coated with a polyurethane powder coat paint. All non-current carrying fasteners, hinges, and

latches shall be stainless steel and shall be coated with a thermoset epoxy type organic coating such as Empigard to prevent galvanic interaction.

(9) Crossarm Welding - Crossarms for the luminaire assembly shall be welded to the pole section before galvanizing by certified welders. Any additional fasteners used for the attachment of accessories to the crossarm shall be stainless steel and coated with Empigard or equivalent.

(10) Structural Strength - The crossarm, reflector and its attachment to the pole shall be provided by the manufacturer such that it will structurally withstand winds of 125 m.p.h. with 1.3 gust factor without misalignment of any luminaire and without any damage to the crossarms or its components. Luminaries shall be attached to the crossarm by a minimum of two bolts, which fasteners shall be stainless steel and Empigard coated. There shall be no penetrations of the top or sides of the crossarm.

#### Wire Harness:

(1) Strain Relief - The wiring harness shall be supported at the top of the pole by a stainless steel wire mesh grip matched to the size of the harness. There shall be not more than 13 conductors supported by a single wire mesh grip. If harness is longer than 65', an interim wire mesh grip support shall be located approximately half way down the pole.

(2) Strain Relief Slippage - There shall be protection around the conductors, in addition to the insulation to protect from damage from the wire mesh grip and also to avoid slippage of the grip on the wire harness. The wire mesh grip shall also be clamped to the harness with a cable tie at the bottom of the grip to avoid loosening.

(3) Pole Attachment - The wire mesh grip shall be mechanically attached to the pole to an enclosed mounting loop so that it cannot accidentally be removed in any direction.

(4) Spiral Winding - The harness being supported by the wire mesh grip shall consist of multiple 14 gauge THHN conductors and shall be continuously spiral wound and bound with mylar wrap to prevent slippage of individual conductors within the wiring harness. Additionally, a cable tie shall be tightly wrapped around the harness at not more than 10' increments.

(5) Abrasion Bumper - There shall be provided at 2' below the wire mesh grip and then at not more than 10 ft. intervals along the entire length of the wire harness an abrasion protective bumper device of soft, durable abrasive resistant material not less than 2" in diameter attached around the wiring harness to protect the harness from striking and being abraded by the interior surface of the pole.

(6) Labeling - All wiring harness conductors shall be color-coded and clearly labeled.

(7) Plug-Ins - Each end of the wire harness shall be terminated into a plug-in with conductors sequenced consistent with the pattern of the wiring schematic provided by the manufacturer.

(8) Testing - All conductors and plug-ins shall be tested for resistance underload, for continuity, schematic sequence, and for insulation integrity. Manufacturer shall ship with the wire harness a copy of the test results.

(9) Grounding - There shall be included within the wiring harness one conductor for the use as a grounding conductor. The grounding conductor shall be equal in size to the load carrying conductors.

Electrical Component Enclosure (ECE):

(1) NEMA 3R - The ECE shall be a NEMA 3R rated gasketed enclosure to house the ballasts, capacitors, fuses, thermal magnetic circuit breaker, and distribution lugs.

(2) Two Compartments - The ECE shall be divided into two compartments. The upper compartment shall house the ballasts, capacitors, and fuses. The lower compartment shall provide for the thermal magnetic circuit breaker, distribution lugs, and connection of all circuits coming into and out of the ECE.

(3) Galvanize - The ECE shall be heavy hot dip galvanized to ASTM A-123 standards after fabrication to a thickness of not less than 3 mils. Continuous galvanized materials will not be accepted.

(4) Stainless Steel - All latches, hinges, and non-current carrying fasteners, either outside or inside the enclosure, shall be stainless steel and shall further be coated with a clear thermoset polymer coating such as Empigard to prevent galvanic interaction.

(5) Hinged Door Access - The access door to the ECE shall be attached by a full-length stainless steel hinge and shall be secured when closed by lockable stainless steel latches.

(6) Pole Attachment - The ECE shall attach to the pole by means of a device which is sufficient to align the ECE and support its weight. There shall be a sealed joint with a non-treaded connection to provide wiring access from the pole to the ECE for both the primary and secondary circuits. The connection shall be gasketed for water-tight protection. All wire passages shall be protected to prevent wire abrasion or damage.

(7) Capacitors - In the ECE, capacitor cases shall be made from zinc coated steel or aluminum and top coated with enamel. Each capacitor shall have a ground terminal welded to its case and such terminal shall be connected to ground via a grounding wire. The capacitor case shall not make direct contact with surface of the ECE.

(8) Disconnecting Device - There shall be provided within the ECE a U.L. listed thermal magnetic circuit breaker such that electrical power to all equipment on the pole served by the feeder circuit shall be disengaged by the operation of one switch. The breaker shall be located in a compartment separated from any capacitors or ballasts.

(9) Lugs - The breaker shall provide landing lugs for the conductors which provide power to the pole.

(10) Distribution Terminal Blocks - There shall be provided by the manufacturer a set of distribution terminal blocks which shall be factory wired from the breaker to the blocks. These blocks shall provide for termination of all ballast connection wiring.

(11) Fusing - There shall be provided an individual fuse for each ballast conductor except neutral conductors which shall not be fused or switched.

(12) Plug-In - All lamp supply circuits in the ECE shall be color-coded and labeled and shall terminate into a U.L. recognized plug-in device in the lower compartment of the ECE in a manner suitable for plug-in to the wiring harness.

(13) Wire Harness Connection - The wiring harness circuits from the lamps shall be attached to the ECE circuits by U.L. recognized plug-in connectors.

(14) Grounding - There shall be provided in the ECE located in the lower compartment of the enclosure one equipment grounding lug rigidly fastened to the enclosure, sized to accept up to 1/0 conductor. There shall also be provision in the upper compartment for a ground terminal of sufficient size to permit connection of the grounding conductors from the capacitors and the ground wire from the wiring harness.

(15) Ballast Type - There shall be an individual ballast for each luminaire. The ballast shall be a lead peak auto-regulating ballast and be available for use with 480 volt supply. The ballast shall be located remote from the luminaire crossarm and shall be placed approximately ten (10) feet above ground level. Ballast box must be a NEMA 3R enclosure and must be manufactured by the luminaire assembly manufacturer and all mounting hardware shall be included with the ballast box assembly. The remote ballast system described above shall be located on the same pole as the luminaire assembly in the NEMA 3R enclosure with the capacitors and the capacitors shall operate in ambient air not to exceed 70 degrees C. The assembly design shall be adaptable to various standard ballast and must retain U.L. listing.

(16) Drawings Attached - The manufacturer shall provide an electrical schematic of the ECE circuits, which schematic shall be of a durable material and affixed to the inside of the ECE door for use by maintenance personnel.

(17) Location - The ECE shall be attached to the pole with the lower end approximately 10 feet above grade at the pole foundation.

(18) U.L. Listing - The ECE shall be listed by U.L. both for use with 90 degrees C rated supply conductors and as suitable for use in wet locations.

#### Pole Structure:

(1) Safety Factors - ASHTO structural design criteria shall be used to determine the pole stress allowance.

(2) Wind Factors - The poles and foundations shall be designed to withstand 80 mph winds based upon BOCA-C standards utilizing the 50 year mean recurrent isotach wind map data.

(3) Height and EPA - The pole shall be designed to provide a mounting height above the surface at its foundation of 60 and 70 feet and to be of sufficient strength to support the effective projected area (EPA) of the pole and all of the attached devices including, as applicable, light fixtures, crossarms, mounting brackets, ballast boxes, and any other devices which are to be attached to the pole.

(4) Pole Material - The pole shaft shall be high strength low alloy tapered tubular steel with galvanized coating inside and out. All connections of pole sections shall be by slip fitting the top section over the lower section by a length of at least 1 1/2 diameters.

(5) Resistance to Corrosion - Steel components of the pole shall be hot dip galvanized ASTM A-123. Steel portions of the pole shall be constructed such that all segments of the pole can be readily heated to like temperatures in commercially available galvanizing methods.

To avoid problems of galvanize adherence to differing steel alloys, all steel components used for the pole must be of the same type steel.

All exposed steel components of the pole shall be at least 18" above the surface of the ground to avoid exposure of the steel to the heavily moisture and oxygen laden air, both above and below the surface. There shall be a cap to cover the top of the pole so that rain will not enter the interior of the pole.

To avoid stress corrosion of the pole, there shall be no critical stress points of the steel portion of the pole within 18" of the ground.

#### Foundation:

(1) Safety Factor - Broms safety factor of three (or UBC) shall be used in the foundation design.

(2) Foundation Strength - Any concrete portions of the pole in which steel components that provide tension strength are contained, shall be allowed to harden for a minimum of 28 days before stress loads of pole attachment are applied.

(3) Concrete Material - The foundation of the pole shall be constructed of not less than 9,500 psi pre-stressed certifiably cast concrete such that the steel reinforcement within the concrete shall be protected from slippage and exposure to oxidation through voids in the concrete or exposure of the steel through porous concrete material.

(4) Soil Conditions - The design criteria for these specifications are based on soil conditions with 2000 psf soil at the surface. It shall be the contractors responsibility to notify the owner of soil conditions other than the design criteria.

## C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

### Required Execution.

## BALLFIELD LIGHTING (2)

(1) Weight and size - To permit ease of handling of material at the job site and to avoid damage to the existing facility, no single component of the pole shall be in excess of 3,710 lbs., nor be greater than 41' in length.

(2) Backfill - The pole base shall be installed in an excavation as prescribed by the Broms or UBC standards for foundation design. Concrete backfill is required.

(3) Assembly - The pole base shall be separate from the pole such that the base may be installed, properly plumbed, and enlarged as to the bearing surface by concrete backfill allowing for inspection prior to the attachment of the steel pole.

(4) Electrical Wiring - The pole and the luminaries shall be designed such that all wiring remains underground before entering the base of the pole and that no wiring shall be exposed to sun or weather as it transitions through the pole and to the ballast and on to each lamp.

There shall be provided a non-threaded hot-dipped galvanized steel or concrete enclosed raceway for transition of the pole feeder conductor from the trench to the ECE.

(5) Field Connections - All field electrical connections on the pole shall be achieved by U.L. listed plug-in or lug method of attachment from the load side of the breaker/disconnect to the lamp socket. The feeder and grounding conductors from the service entrance to the pole shall be connected at the pole by landing lugs.

## D. TEST AND INSPECTIONS

Contract Requirements. Tests and inspections for the acceptance of materials and equipment, or work, shall be conducted in accordance with the Contract Documents, with attention to Paragraph 13.4 of the General Conditions, by organizations acceptable in accordance with Paragraph SC-13.5 of the Supplementary Conditions.

### Required Tests and Inspections.

(1) The CONTRACTOR shall arrange for inspection by all agencies having jurisdiction over work and shall pay the cost of all inspections and re-inspections.

(2) Before an application for final acceptance of the work will be considered, all tests deemed necessary to shown proper execution of the work shall have been performed and completed in the presence of the ENGINEER. Scheduling of all testing procedures shall be arranged to suit the convenience of the ENGINEER. For detailed description of tests, refer to individual trade specifications.

(3) Upon completion of his work, the CONTRACTOR shall perform tests and inspections of all equipment, material and wiring in his contract as directed by and in the presence of the ENGINEER or his representatives to determine whether all provisions of these Specifications and Drawings have been fulfilled. Wiring shall be tested for proper connections, short circuits and grounds using suitable testing instruments. All equipment shall be tested for proper performance. Upon completion of all tests to the satisfaction of the ENGINEER and upon delivery to the ENGINEER of all necessary certificates of approval, including final inspection certificates, the job will be accepted by and turned over to the OWNER.

(4) Additional testing regarding ballfield lighting is as follows:

- (a) All testing will be done with entire facility illuminated.
- (b) Horizontal footcandle readings shall be taken with the meter positioned horizontal 36 inches above grade.
- (c) Maximum footcandles as specified previously under spill/glare light shall be taken with the test cell positioned 36 inches above grade and aimed at the brightest light source.
- (d) Ambient light levels shall be measured at the specified test stations. Maximum ambient footcandle level explored in all planes for each test station shall be recorded. Once the maximum spill light readings as defined previously under spill/glare light have been recorded, subtract the ambient light readings from the respective footcandle readings at each test station.
- (e) Testing equipment for measurement of footcandle levels shall be a calibrated Gossen Panalux Electronic 2 or an approved equal.
- (f) For final approval of the project the manufacturer shall provide a final report from the test results that shall provide the following Items:
  - (1) Identification of number and location of the test stations.
  - (2) Actual horizontal footcandle readings taken at each test station.
  - (3) Actual spill/glare footcandle readings taken at each test station.
  - (4) Number of hours of operation.

## E. SUBMITTALS

Shop Drawings. Shop Drawings (6 copies) are required for the following:

(1) Detailed Manufacturer's Data on the ballfield lighting. Additionally, any U.L. Testing Reports that may be required.

The CONTRACTOR shall submit all shop drawings in accordance with the following procedure:

- (a) Include on transmittal sheet, number of copies submitted, the specification page and section number that the item is submitted under, and the CONTRACTOR's submittal number.

Additional Submittals. Additional submittals required are as follows:

### (1) Warranty

- (a) Manufacturer shall warrant in writing the entire structure (excluding fuses and lamps) to be free from defects in materials and workmanship for a period of seven years starting from the date of delivery.
- (b) Manufacturer agrees in writing to provide labor and materials for a period of two years to replace defective parts or repair defects in workmanship, or, at its election, to pay reasonable costs of labor for such repairs. For the remainder of the warranty period, replacement materials will be provided at no charge.
- (c) Lamps shall be warranted by the manufacturer in writing not to fail for two years from the date of delivery. Lamps which fail during the first year of the warranty period will be replaced and installed at no cost to the OWNER. Lamps which fail during the second 12 months will be replaced by the manufacturer but installation will be the OWNER's responsibility.
- (d) Manufacturer warrants in writing accurate alignment of the luminaries on the luminaire assembly for a period of seven years starting from the date of delivery.
- (e) The CONTRACTOR shall furnish to the OWNER of the facility 5% extra lamps and 6 extra fuses for future use.

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Paragraph 13.5 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph SC-13.5.1 of the Supplementary Conditions.

## F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by the ENGINEER prior to the Applications for Payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

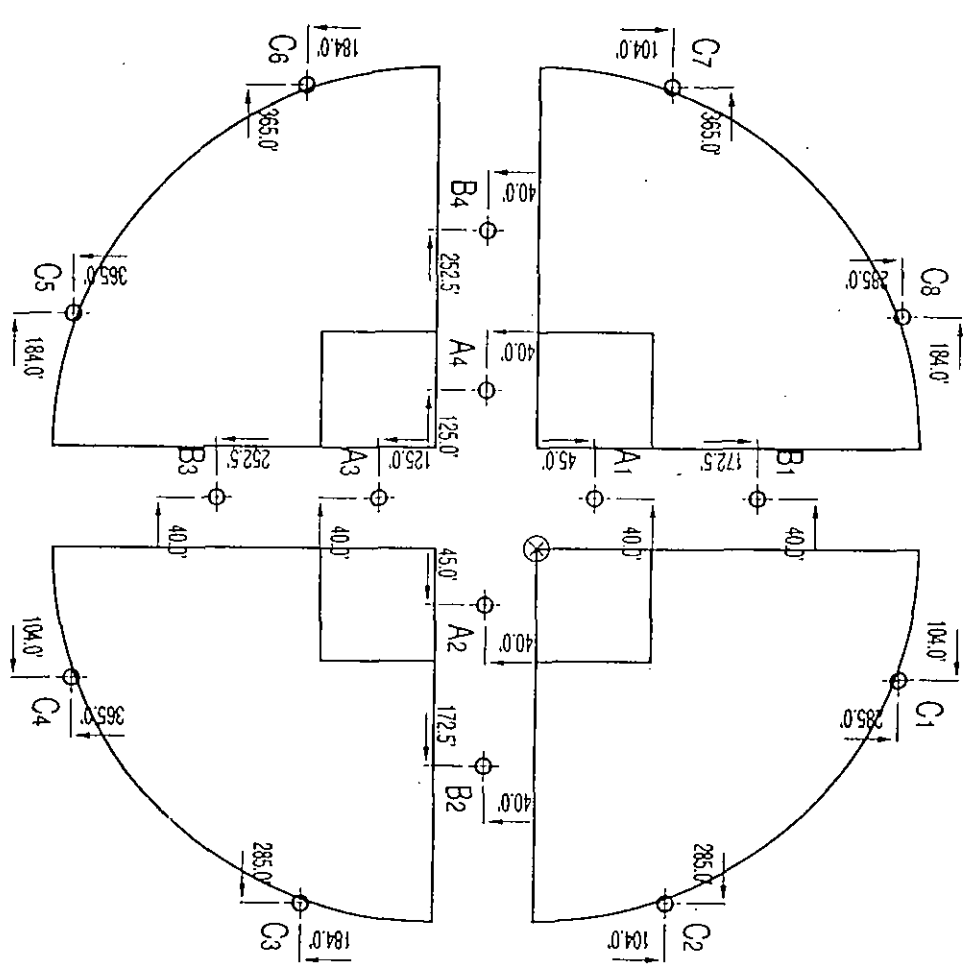
Quantities. Unit Price Work quantities will be determined in accordance with Article GR-6 of the General Requirements for the method and measurement for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

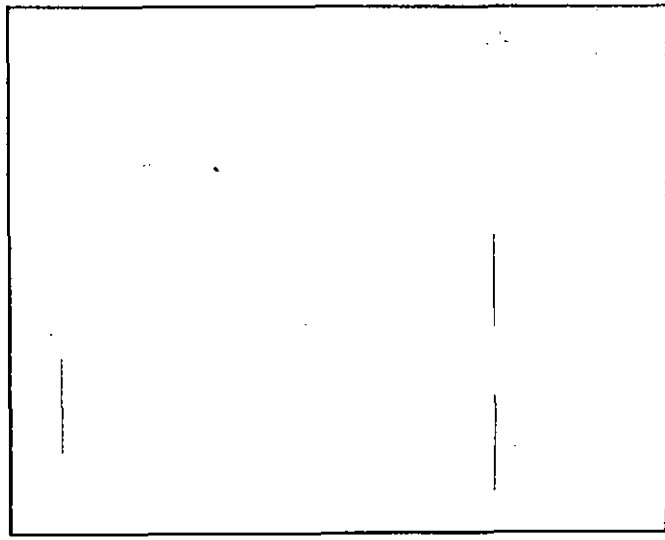
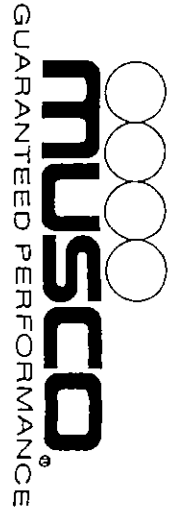
(1) Payment for Ballfield Lighting (2) will be made at the Lump Sum price bid for these items in the Schedule of Prices in the Bid Form, which price shall include all the work and materials described hereinabove.

BRICK, NJ DRUM POINT ROAD SCHOOL FIELDS  
300 RADIUS BASEBALL FIELDS

| EQUIPMENT LISTING |               |                 |           |             |             |
|-------------------|---------------|-----------------|-----------|-------------|-------------|
| Pole count        | Pole location | Mounting height | Pole size | Elev. /unit | Fixt. /unit |
| 4                 | A1-A4         | 70'             | 70'       | 0'          | 12          |
| 4                 | B1-B4         | 70'             | 70'       | 0'          | 24          |
| 8                 | C1-C8         | 70'             | 70'       | 0'          | 5           |



Pole location dimensions are relative to 0,0 reference point (X).



\*Refer to amperage draw for electrical sizing

\*\*Maintenance factor = ambient temp, factor  
X voltage factor X ballast factor X lamp  
lumen depreciation X luminaire dirt  
depreciation(per IES Manual RP-6-88,p.92)

\*\*\*Light Loss Factor(LLF) = average tilt factor  
X maintenance factor

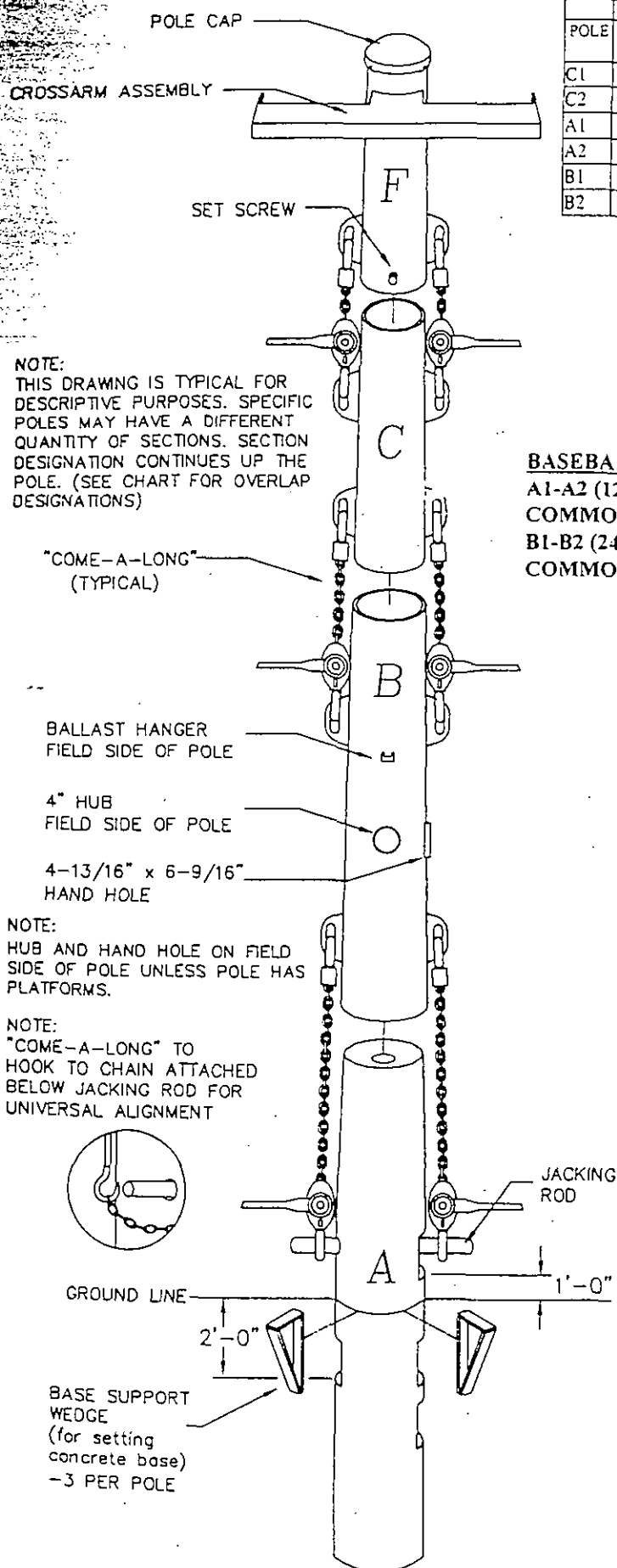
NOTE: Light level averages and uniformities  
are guaranteed by MUSCO. However,  
individual location measurements may vary  
from computer predictions

INSTALLATION REQUIREMENTS:  
Results assume +-3% nominal voltage at load  
side of ballast box and poles located within  
3' of design locations

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ten consent of Musco Sports Lighting Inc.

⊕ = Pole Location





NOTE:  
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POLES MAY HAVE A DIFFERENT  
QUANTITY OF SECTIONS. SECTION  
DESIGNATION CONTINUES UP THE  
POLE. (SEE CHART FOR OVERLAP  
DESIGNATIONS)

"COME-A-LONG"  
(TYPICAL)

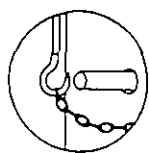
BALLAST HANGER  
FIELD SIDE OF POLE

4" HUB  
FIELD SIDE OF POLE

4-13/16" x 6-9/16"  
HAND HOLE

NOTE:  
HUB AND HAND HOLE ON FIELD  
SIDE OF POLE UNLESS POLE HAS  
PLATFORMS.

NOTE:  
"COME-A-LONG" TO  
HOOK TO CHAIN ATTACHED  
BELOW JACKING ROD FOR  
UNIVERSAL ALIGNMENT



GROUND LINE

BASE SUPPORT  
WEDGE  
(for setting  
concrete base)  
-3 PER POLE

| POLE | MTG<br>HT | NBR<br>FXT | CAT<br># | WEIGHT-lbs   |                | BURIAL      |              |             |              | OVERLAP |     |     |     |  |  |
|------|-----------|------------|----------|--------------|----------------|-------------|--------------|-------------|--------------|---------|-----|-----|-----|--|--|
|      |           |            |          | CONC<br>BASE | STEEL<br>SHAFT | HOLE<br>DIA | HOLE<br>DPTH | BUR<br>DPTH | BACK<br>FILL | B-C     | C-D | D-E | E-F |  |  |
| C1   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |  |
| C2   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |  |
| A1   | 70'       | 12         | LSS70A12 | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |  |
| A2   | 70'       | 12         | LSS70A12 | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |  |
| B1   | 70'       | 24         | LSS70D24 | 5180         | 2420           | 30"         | 16.0'        | 16.0'       | 2.0yd        | 24"     | NA  | NA  | 21" |  |  |
| B2   | 70'       | 24         | LSS70D24 | 5180         | 2420           | 30"         | 16.0'        | 16.0'       | 2.0yd        | 24"     | NA  | NA  | 21" |  |  |

Note: Design standard BOCA-C wind zone 80 mph

Backfill - concrete needed for backfill is 3000 PSI minimum strength

Overlap dimensions may vary  $\pm 6"$  based on:

- 1 - Steel pole tolerances,
- 2 - Concrete tolerances or
- 3 - Galvanizing thicknesses.

### BASEBALL FIELD

A1-A2 (12 FIXTURES)

COMMON POLES WITH 6 FIXTURES AIMED TO EACH FIELD

B1-B2 (24 FIXTURES)

COMMON POLES WITH 12 FIXTURES AIMED TO EACH FIELD

### NOTES:

- 1) Before assembling, visually inspect poles to confirm that nothing will impede the slip fit.
- 2) To be assured of meeting slip fit dimensions, (2) 1-1/2 ton "come-a-longs" should be used to firmly seat the sections together.
- 3) "Come-a-longs" not supplied by Musco unless ordered for the project.
- 4) Steel pole bottom should nominally rest 7" from the top handhole of the concrete base. (Do not include the handhole indentation as being part of the handhole.)
- 5) CAUTION: Care must be taken when mating steel to steel sections to confirm linear alignment and coupling alignment.

BRICK, NJ

DRUM POINT ROAD SCHOOL FIELDS

By: PGU

Scale: NONE

Date: 24-OCT-1997

Rep: MID-ATLANTIC

Nbr'S-54028230J

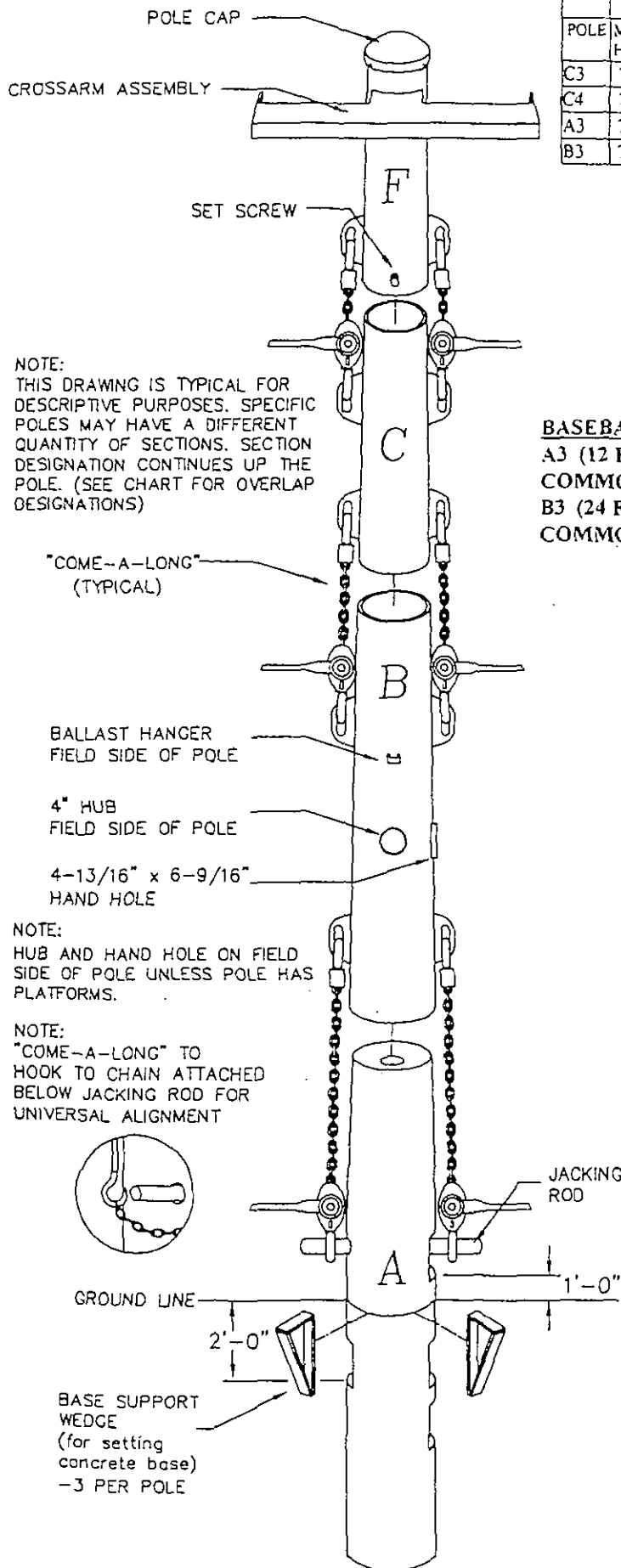
Order: 0

Rev:

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SPORTS-LIGHTING, INC.

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POLES MAY HAVE A DIFFERENT  
QUANTITY OF SECTIONS. SECTION  
DESIGNATION CONTINUES UP THE  
POLE. (SEE CHART FOR OVERLAP  
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"COME-A-LONG"  
(TYPICAL)

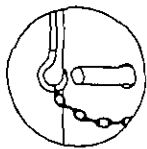
BALLAST HANGER  
FIELD SIDE OF POLE

4" HUB  
FIELD SIDE OF POLE

4-13/16" x 6-9/16"  
HAND HOLE

NOTE:  
HUB AND HAND HOLE ON FIELD  
SIDE OF POLE UNLESS POLE HAS  
PLATFORMS.

NOTE:  
"COME-A-LONG" TO  
HOOK TO CHAIN ATTACHED  
BELOW JACKING ROD FOR  
UNIVERSAL ALIGNMENT



GROUND LINE

BASE SUPPORT  
WEDGE  
(for setting  
concrete base)  
-3 PER POLE

| POLE | MTG<br>HT | NBR<br>FXT | CAT<br># | WEIGHT-lbs   |                | BURIAL      |              |             |              | OVERLAP |     |     |     |  |
|------|-----------|------------|----------|--------------|----------------|-------------|--------------|-------------|--------------|---------|-----|-----|-----|--|
|      |           |            |          | CONC<br>BASE | STEEL<br>SHAFT | HOLE<br>DIA | HOLE<br>DPTH | BUR<br>DPTH | BACK<br>FILL | B-C     | C-D | D-E | E-F |  |
| C3   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |
| C4   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |
| A3   | 70'       | 12         | LSS70A12 | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |  |
| B3   | 70'       | 24         | LSS70D24 | 5180         | 2420           | 30"         | 16.0'        | 16.0'       | 2.0yd        | 24"     | NA  | NA  | 21" |  |

Note: Design standard BOCA-C wind zone 80 mph

Backfill - concrete needed for backfill is 3000 PSI minimum strength

Overlap dimensions may vary +6" based on:

- 1 - Steel pole tolerances,
- 2 - Concrete tolerances or
- 3 - Galvanizing thicknesses.

#### BASEBALL FIELD

A3 (12 FIXTURES)

COMMON POLES WITH 6 FIXTURES AIMED TO EACH FIELD

B3 (24 FIXTURES)

COMMON POLES WITH 12 FIXTURES AIMED TO EACH FIELD

#### NOTES:

- 1) Before assembling, visually inspect poles to confirm that nothing will impede the slip fit.
- 2) To be assured of meeting slip fit dimensions, (2) 1-1/2 ton "come-a-longs" should be used to firmly seat the sections together.
- 3) "Come-a-longs" not supplied by Musco unless ordered for the project.
- 4) Steel pole bottom should nominally rest 7" from the top handhole of the concrete base. (Do not include the handhole indentation as being part of the handhole.)
- 5) CAUTION: Care must be taken when mating steel to steel sections to confirm linear alignment and coupling alignment.

BRICK, NJ

DRUM POINT ROAD SCHOOL FIELDS

By: PGU Scale: NONE Date: 24-OCT-1997

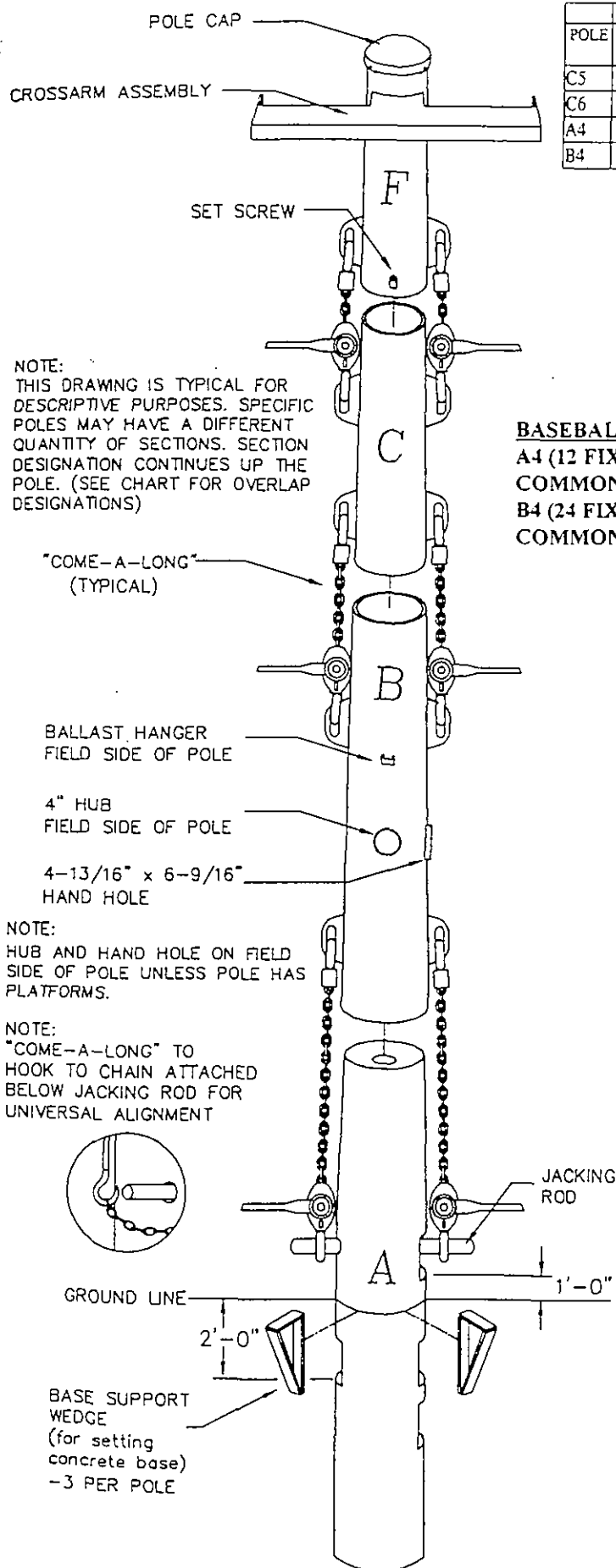
Rep: MID-ATLANTIC Nbr: S-54028230J

Order: Rev:

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NOTE:  
HUB AND HAND HOLE ON FIELD  
SIDE OF POLE UNLESS POLE HAS  
PLATFORMS.

NOTE:  
"COME-A-LONG" TO  
HOOK TO CHAIN ATTACHED  
BELOW JACKING ROD FOR  
UNIVERSAL ALIGNMENT

BASE SUPPORT  
WEDGE  
(for setting  
concrete base)  
-3 PER POLE

| POLE | MTG<br>HT | NBR<br>EXT | CAT<br># | WEIGHT-lbs   |                | BURIAL      |              |             |              | OVERLAP |     |     |     |
|------|-----------|------------|----------|--------------|----------------|-------------|--------------|-------------|--------------|---------|-----|-----|-----|
|      |           |            |          | CONC<br>BASE | STEEL<br>SHAFT | HOLE<br>DIA | HOLE<br>DPTH | BUR<br>DPTH | BACK<br>FILL | B-C     | C-D | D-E | E-F |
| C5   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |
| C6   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |
| A4   | 70'       | 12         | LSS70A12 | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | 13" |
| B4   | 70'       | 24         | LSS70D24 | 5180         | 2420           | 30"         | 16.0'        | 16.0'       | 2.0yd        | 24"     | NA  | NA  | 21" |

Note: Design standard BOCA-C wind zone 80 mph

Backfill - concrete needed for backfill is 3000 PSI minimum strength

Overlap dimensions may vary  $\pm 6"$  based on:

- 1 - Steel pole tolerances,
- 2 - Concrete tolerances or
- 3 - Galvanizing thicknesses.

### BASEBALL FIELD

A4 (12 FIXTURES)

COMMON POLES WITH 6 FIXTURES AIMED TO EACH FIELD

B4 (24 FIXTURES)

COMMON POLES WITH 12 FIXTURES AIMED TO EACH FIELD

### NOTES:

- 1) Before assembling, visually inspect poles to confirm that nothing will impede the slip fit.
- 2) To be assured of meeting slip fit dimensions, (2) 1-1/2 ton "come-a-longs" should be used to firmly seat the sections together.
- 3) "Come-a-longs" not supplied by Musco unless ordered for the project.
- 4) Steel pole bottom should nominally rest 7" from the top handhole of the concrete base. (Do not include the handhole indentation as being part of the handhole.)
- 5) CAUTION : Care must be taken when mating steel to steel sections to confirm linear alignment and coupling alignment.

BRICK, NJ

DRUM POINT ROAD SCHOOL FIELDS

By: PGU

Scale: NONE

Date: 24-OCT-1997

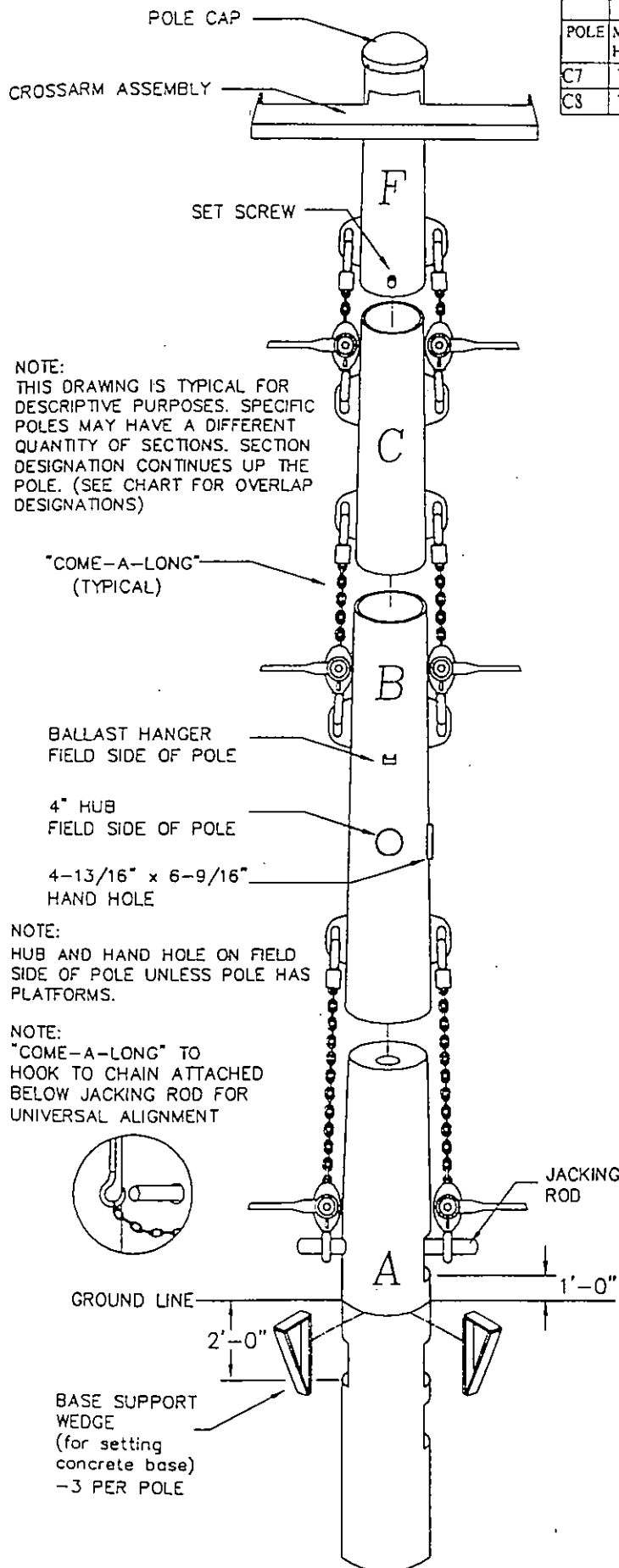
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Order: 0

Rev:

**MUSCO.**  
SPORTS-LIGHTING, INC.



| POLE | MTG<br>HT | NBR<br>EXT | CAT<br># | WEIGHT-lbs   |                | BURIAL      |              |             |              | OVERLAP |     |     |     |     |
|------|-----------|------------|----------|--------------|----------------|-------------|--------------|-------------|--------------|---------|-----|-----|-----|-----|
|      |           |            |          | CONC<br>BASE | STEEL<br>SHAFT | HOLE<br>DIA | HOLE<br>DPTH | BUR<br>DPTH | BACK<br>FILL | B-C     | C-D | D-E | E-F | F   |
| C7   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | NA  | 13" |
| C8   | 70'       | 5          | LSS70A5  | 2670         | 1090           | 30"         | 12.0'        | 12.0'       | 1.8yd        | 18"     | NA  | NA  | NA  | 13" |

Note: Design standard BOCA-C wind zone 30 mph

Backfill - concrete needed for backfill is 3000 PSI minimum strength

Overlap dimensions may vary +6" based on:

- 1 - Steel pole tolerances,
- 2 - Concrete tolerances or
- 3 - Galvanizing thicknesses.

#### NOTES:

- 1) Before assembling, visually inspect poles to confirm that nothing will impede the slip fit.
- 2) To be assured of meeting slip fit dimensions, (2) 1-1/2 ton "come-a-longs" should be used to firmly seat the sections together.
- 3) "Come-a-longs" not supplied by Musco unless ordered for the project.
- 4) Steel pole bottom should nominally rest 7" from the top handhole of the concrete base. (Do not include the handhole indentation as being part of the handhole.)
- 5) CAUTION : Care must be taken when mating steel to steel sections to confirm linear alignment and coupling alignment.

BRICK, NJ

DRUM POINT ROAD SCHOOL FIELDS

By: PGU

Scale: NONE

Date: 24-OCT-1997

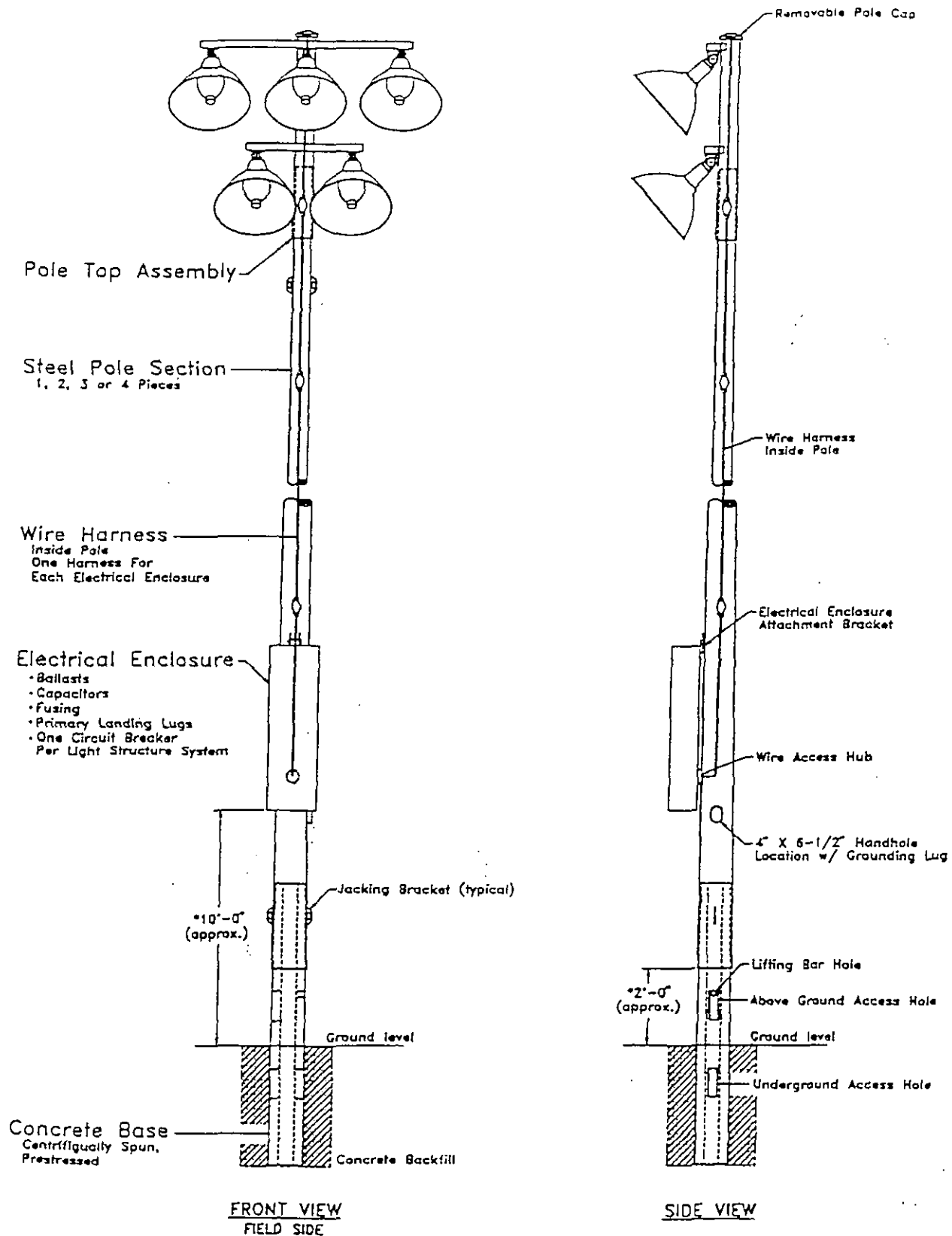
Rep: MID-ATLANTIC

Nbr: S-54028230J

Order: 0

Rev:

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Not to scale  
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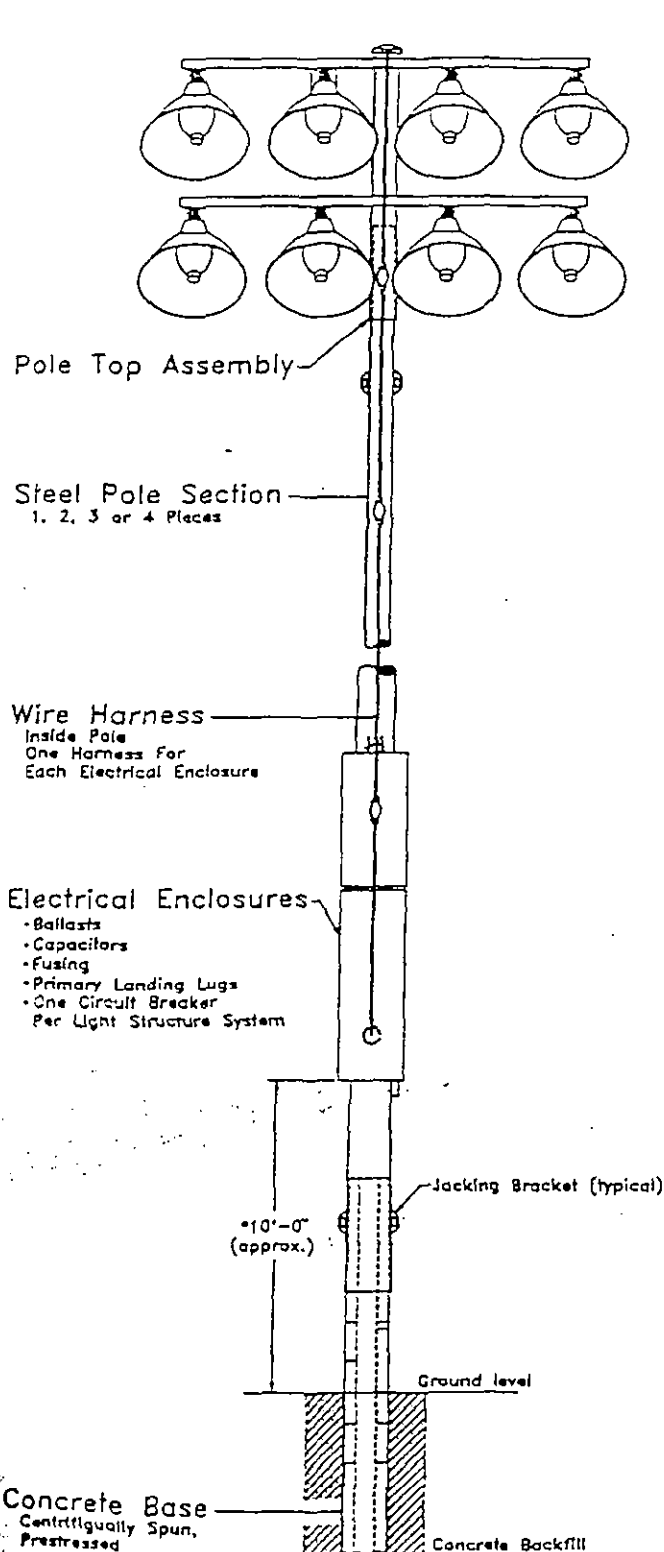
**\*Note:**  
Included with each project are the following:

- (1) Installation lifting bar
- (1) Offset installation level
- (3) Installation wedges

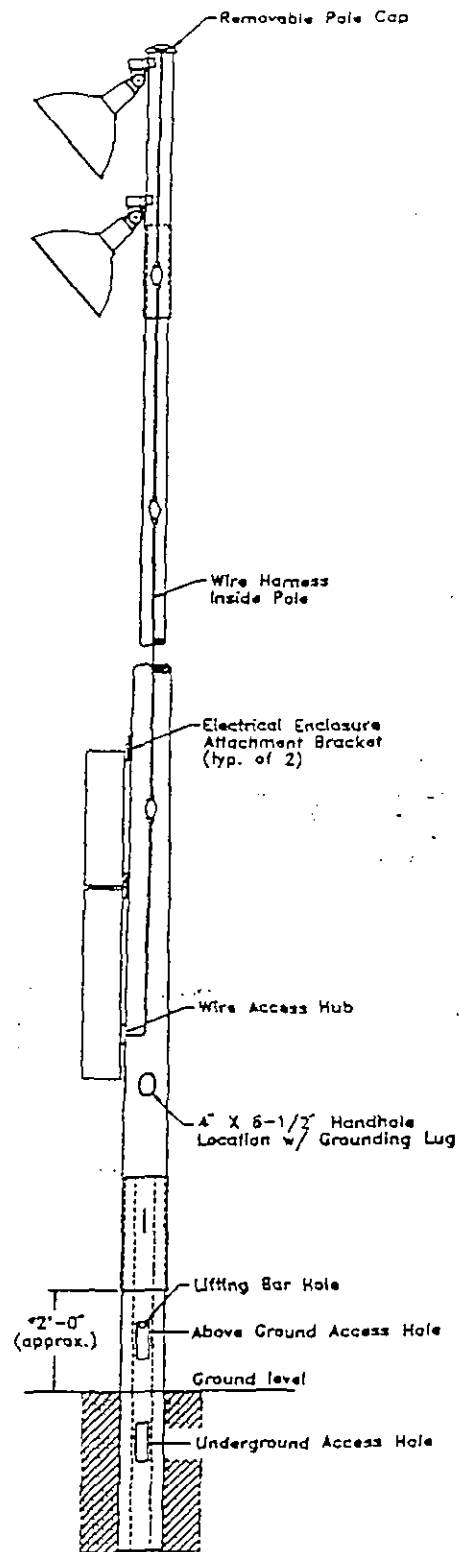
**\*Note:**  
This dimension for reference only. Variances will occur depending on the following:

- (1) Steel pole tolerances
- (2) Concrete tolerances
- (3) Galvanizing thicknesses

Based upon these, a variance may be seen. Additional variances will occur depending on the hole depth accuracy.



**FRONT VIEW**  
FIELD SIDE



**SIDE VIEW**

**Not to scale**

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**\*Note:**

Included with each project are the following:

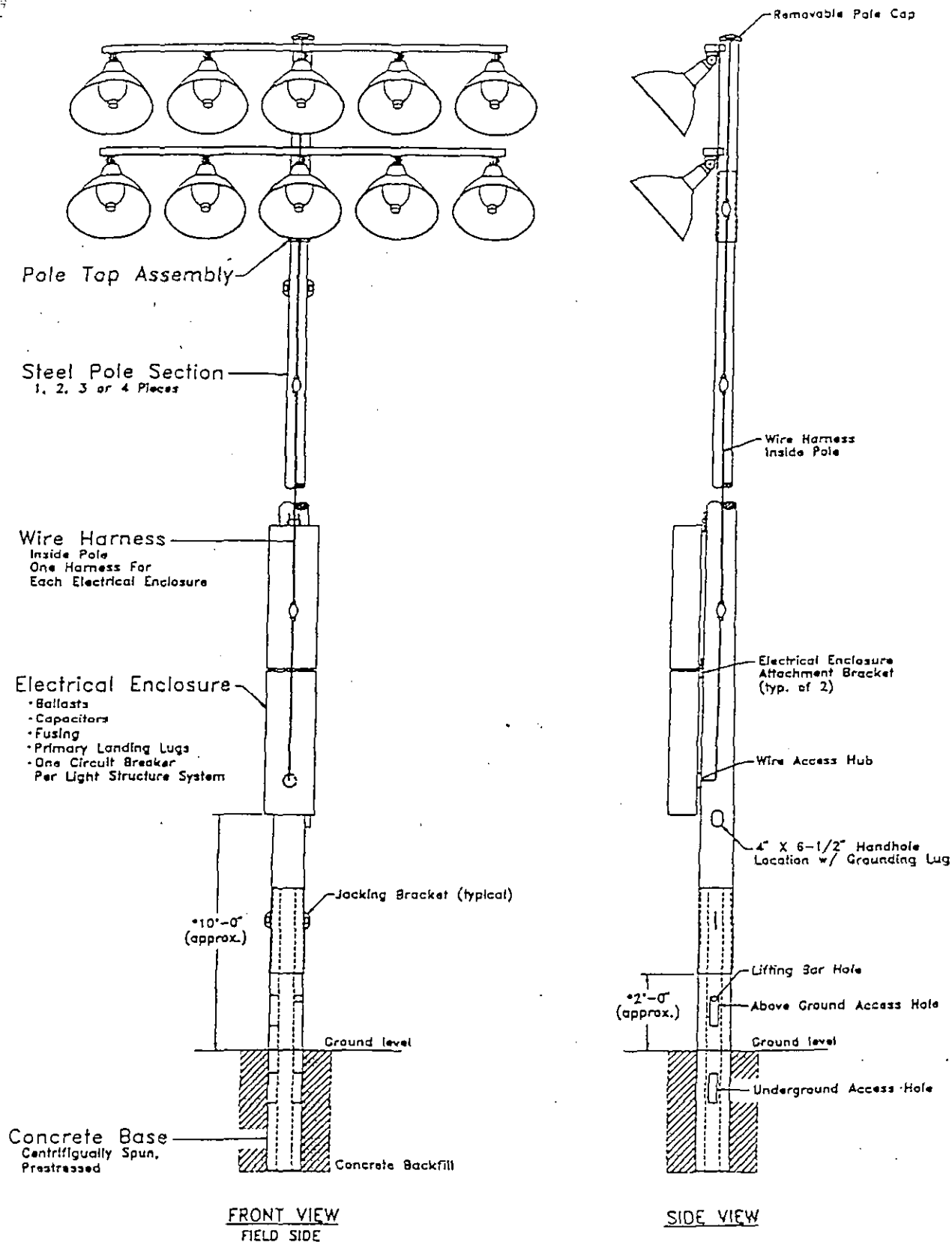
- (1) Installation lifting bar
- (1) Offset installation level
- (3) Installation wedges

**\*Note:**

This dimension for reference only. Variances will occur depending on the following:

- (1) Steel pole tolerances
- (2) Concrete tolerances
- (3) Galvanizing thicknesses

Based upon these, a variance may be seen. Additional variances will occur depending on the hole depth accuracy.



Not to scale

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**\*Note:**

Included with each project are the following:

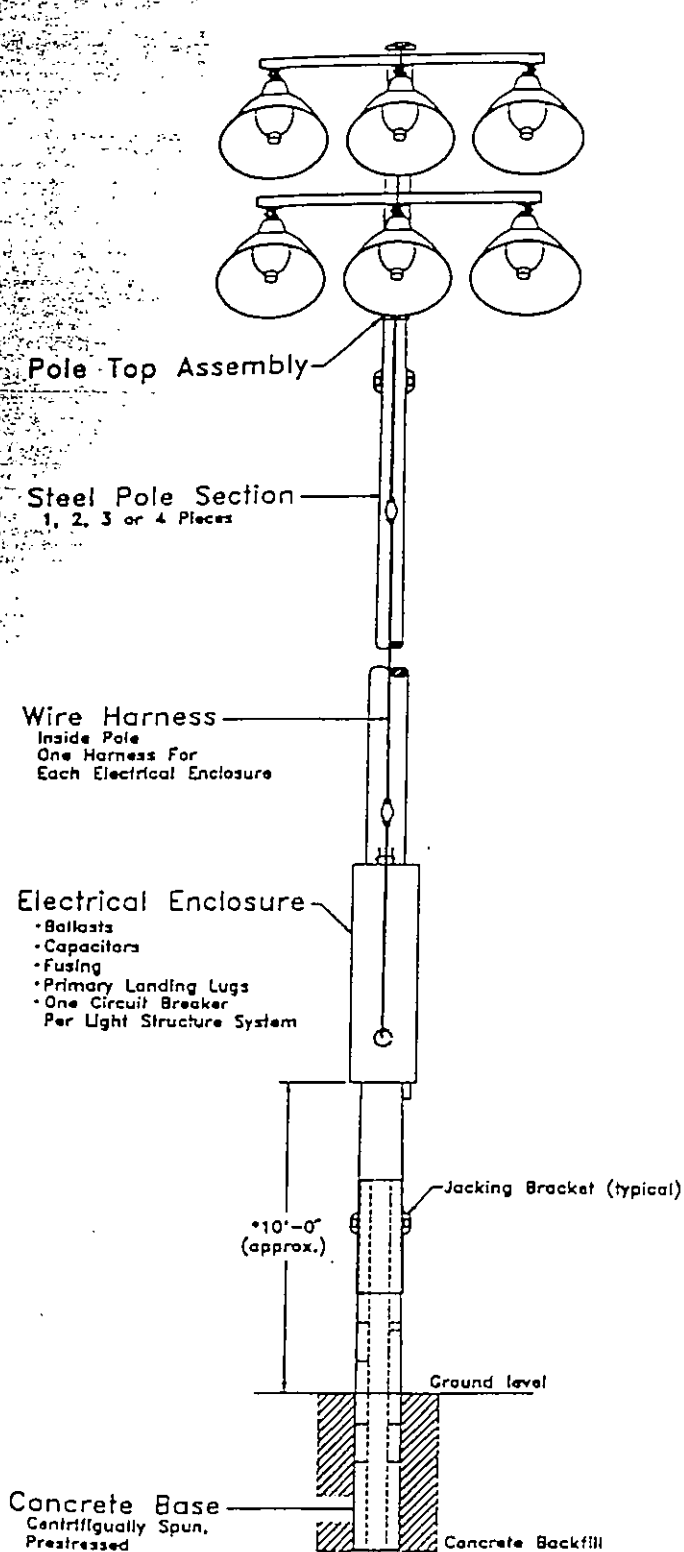
- (1) Installation lifting bar
- (1) Offset installation level
- (3) Installation wedges

**\*Note:**

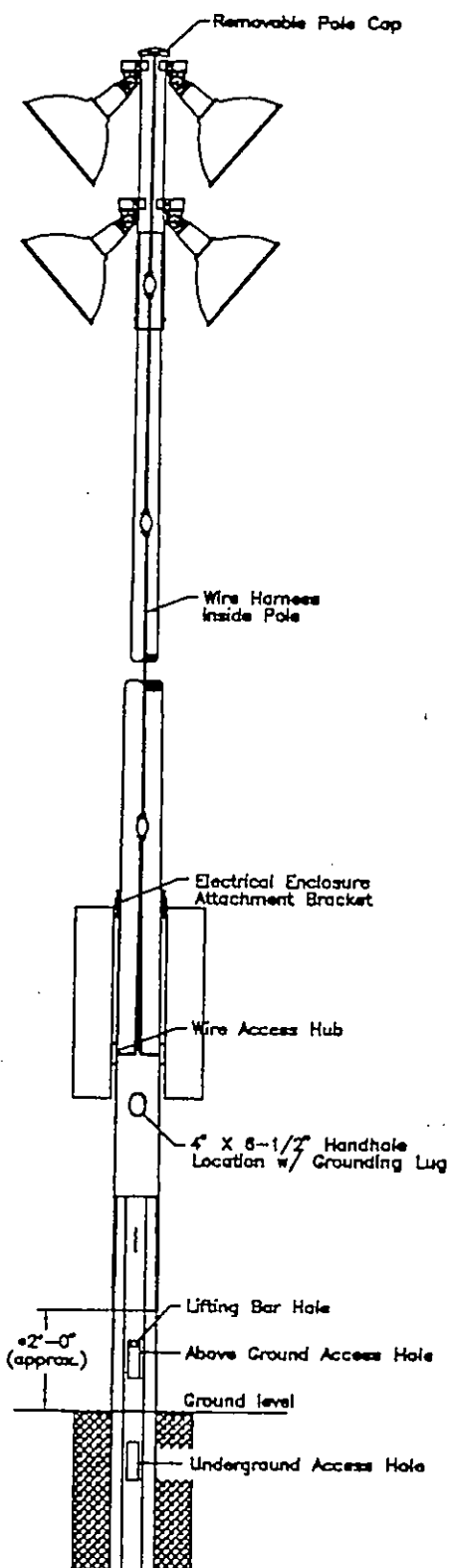
This dimension for reference only. Variances will occur depending on the following:

- (1) Steel pole tolerances
- (2) Concrete tolerances
- (3) Galvanizing thicknesses

Based upon these, a variance may be seen. Additional variances will occur depending on the hole depth accuracy



**FRONT VIEW**  
FIELD SIDE



**SIDE VIEW**

Not to scale  
© 1993 Musco Sports Lighting, Inc.

**\*Note:**  
Included with each project are the following:  
(1) Installation lifting bar  
(1) Offset installation level  
(3) Installation wedges

**\*Note:**  
This dimension for reference only. Variances will occur depending on the following:  
(1) Steel pole tolerances  
(2) Concrete tolerances  
(3) Galvanizing thicknesses  
Based upon these, a variance may be seen. Additional variances will occur depending on the hole depth accuracy.

### TECHNICAL SECTION 3. ELECTRICAL

#### A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **ELECTRICAL** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEM applicable to this Section is:

#### **ELECTRICAL WORK (3)**

Laws and Regulations. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work included under this Section attention is directed to the specific requirements of:

- (1) All provisions of the National Electrical Code.
- (2) State Electrical Subcode.

Additional Information. Additional information for all or part of the work included under this Section is as follows:

- (1) The CONTRACTOR shall perform all electrical work in accordance with the Supplemental Specifications included under Appendix No. 1 of this document.
- (2) Under this Section, the CONTRACTOR shall furnish all materials, labor and equipment to construct underground wiring, connect to power source and controller in existing building, connect to new poles and test all systems. Some components for lights are furnished and installed under other Sections of the Contract. The CONTRACTOR is ultimately responsible for all electrical work required to install and operate the new lighting system..
- (3) All work to be accomplished under this Contract shall be in strict conformance with the provisions of the current editions of the National Electric Code and State Electrical Subcode. In addition, the CONTRACTOR shall obtain all permits and pay all fees as may be required for the construction of the electrical work for this project. Upon completion of the construction of the work, the CONTRACTOR shall furnish the OWNER with a Certificate of Inspection and Approval from the Authority having jurisdiction over the electrical work.
- (4) The conduits and junction boxes have been installed previously under a separate contract. The CONTRACTOR should verify the location of these items prior to submission of bids. No additional compensation will be made for unknown dimensions of the existing conduits.

## B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

### Required Materials and Equipment.

## ELECTRICAL WORK (3)

(1) All materials and equipment shall be in accordance with the plans and/or Supplemental Specifications included in Appendix No. 1 of this document.

## C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

Supplemental Contract Requirements. It shall be the responsibility of the CONTRACTOR to obtain all permits for the Electrical Work and to pay all fees associated with said permits.

### Required Execution.

## ELECTRICAL WORK (3)

(1) All electrical work shall be in accordance with the Supplemental Specifications included in Appendix No. 1 of this document.

(2) Prior to starting work, the CONTRACTOR shall locate the existing conduits and junction boxes.

## D. TEST AND INSPECTIONS

Contract Requirements. Tests and Inspections for the acceptance of materials or equipment, or Work, shall be conducted in accordance with the Contract Documents, with attention to paragraph 13.4 of the General Conditions, by organizations acceptable in accordance with paragraph SC-13.5 of the Supplementary Conditions.

## E. SUBMITTALS

Shop Drawings. Shop Drawings (6 copies each) for the following are to be submitted to the ENGINEER prior to construction.

- (1) Schematic electrical Construction Drawings.
- (2) Detailed Manufacturer's Data on Enclosures, Switchgear and all other components and equipment.

Certifications. Tests and Inspections required under this Section shall be certified in accordance with the Contract Documents, with attention to Paragraph 13.5 of the General Conditions and shall be submitted for review by ENGINEER in accordance with Paragraph SC-13.5.1 of the Supplementary Conditions.

- (1) Certificate of Electrical Inspection.

## F. PAYMENT

Submittals Required. In addition to other requirements of the Contract Documents, the Applications for Payment shall be accompanied by the submittals required under this Section, if such submittals have not been submitted and acknowledged by ENGINEER prior to the Applications for payment. Failure by CONTRACTOR to provide submittals as required herein will constitute reason for ENGINEER to refuse recommending payment.

- (1) Payment for Electrical Work (3) will be made at the Lump Sum price bid for this item in the Schedule of Prices in the Bid Form, which price shall include furnish all materials, labor and equipment to construct and operate the new lighting system, connection to existing power source and controller, underground wiring, permits and fees, testing of all systems and all other work and materials described hereinabove.

## TECHNICAL SECTION 4. RESTORATION

### A. GENERAL

Work Included Under This Section. Furnish and perform Work to complete **SITE RESTORATION** as shown on the Drawings or specified herein, or both.

Work Items. Work included under this Section is listed as an ITEM in the Schedule of Prices in the Bid Form, and this ITEM may be indicated on Drawings by the term "CONSTRUCT", solely for the purposes of administration and payment. Such listing shall not relieve CONTRACTOR of responsibility to furnish and perform functionally-complete Work in its entirety, and incidental Work related thereto, under this Section. ITEM applicable to this Section is:

#### **SITE RESTORATION (4)**

Laws and Regulations. Among the Laws and Regulations applicable under the Contract Documents, for all or part of the work under this Section, attention is directed to the specific requirements of:

- (1) New Jersey Soil Erosion and Sediment Control Act Chapter 251, P.L., 1975 (NJSA 4:24-39 et. seq.).

### B. MATERIALS AND EQUIPMENT

Contract Requirements. Materials and equipment shall be furnished in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions, and shall meet the requirements of the reference or other standards as indicated below.

Required Materials and Equipment.

#### **SITE RESTORATION (4)**

- (1) Grass areas of the baseball fields disturbed during construction shall be restored utilizing topsoil and seed. Topsoil shall be fine, natural sandy loam surface material suitable for the growth of vegetation. Topsoil may be that which is removed from the project and/or supplemented as required by topsoil from other sources supplied by the CONTRACTOR. Topsoil shall be free from vegetable material, roots, stiff clay, subsoil, stones larger than 1 in. and all other undesirable debris. The topsoil furnished shall have a pH of between 5.9 and 6.4 and shall have a minimum organic content of not less than 3 percent by weight.

- (2) Lime shall be pulverized dolomitic limestone, equivalent to 50% calcium plus magnesium oxides. Fertilizer shall be a complete commercial fertilizer, proportioned 5-10-10 by weight to consist of Nitrogen, Phosphoric Acid and Potash respectively.

(3) Seed mixture for the permanent vegetative cover shall consist of 90% tall fescue (turf-type) and 10% perennial ryegrass. Tall fescue shall be Arid, Mustang or Olympic. Ryegrass shall be Manhattan, Pennfire or Premier.

(4) Mulch shall consist of unrotted small grain straw, hay or salt hay, applied to the seeded surface.

(5) Wood chips shall be applied to all disturbed areas between the baseball fields and around the outside perimeter of the baseball fields.

### C. EXECUTION

Contract Requirements. Work shall be performed in accordance with the Contract Documents, with attention to Paragraph 6.5 of the General Conditions which requires that all materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier.

#### Required Execution.

### SITE RESTORATION (4)

(1) All lawn areas and woodchip/mulch areas damaged or disturbed as the result of the work of this Contract shall be restored.

(2) All work of this section shall be performed in strict conformance with the requirements contained in the "Standards for Soil Erosion and Sediment Control in New Jersey".

(3) Topsoil shall be placed on the subgrade to a minimum depth of 4 in. and spread by raking and smoothing prior to planting of the seed mixture.

(4) Lime shall be added to the topsoil as required, to raise the pH level to between 6.5 and 6.9 (approximately 1,200 lbs. per Acre). With the lime, fertilizer shall be applied at a rate of 60 lbs. per acre and shall be worked into the topsoil with a disc, spring tooth harrow or other suitable equipment. Tillage shall be continued until a reasonably fine uniform seed bed has been prepared.

(5) Seeding shall be accomplished using suitable equipment to drill seed into the topsoil and provide a uniform application over the planting area. The CONTRACTOR shall, at the end of any day's seeding, place mulch over the newly seeded areas to protect the seed bed from erosion until the seed has germinated.

(6) It is required that a clean, thick stand of grass results from the work of this section, of a quality and density satisfactory to the OWNER. It is the CONTRACTOR's responsibility to protect all seeded areas from damage by trespass or erosion and to replace any defective areas as found necessary during the maintenance period of this contract. The CONTRACTOR will be required to repair or replace any topsoil, seeding and mulching that is defective or becomes damaged.

(7) Existing fencing, signs, pavements, and all decorative or functional landscape material which must be removed for the construction of work under this Contract shall be stored, preserved, and replaced upon completion of said work. All re-planted landscape materials shall be guaranteed by the CONTRACTOR for 1 year following transplanting. Any material which is destroyed or does not survive shall be replaced in kind by the CONTRACTOR.

(8) Existing wood chips which must be removed for the construction of work under this Contract shall be removed, stored and replaced upon completion of said work. Additional wood chips shall be applied at the discretion of the ENGINEER. Areas to receive wood chips include the areas between the baseball fields and around the perimeter of the baseball fields.

#### D. TESTS AND INSPECTIONS

Not Applicable this Section.

#### E. SUBMITTALS

Not Applicable this Section.

#### F. PAYMENT

Payment. Payment for furnishing or performing Work, or both, in accordance with the Contract Documents will be made for each Work Item under this Section as set forth in the Schedule of Prices in the Bid Form.

(1) Payment for Site Restoration (4) will be made at the Lump Sum price bid for this item in the Schedule of Prices in the Bid Form, which price shall include topsoiling, fertilizing, seeding, mulching, woodchips, cleanup, disposal of debris, replacing damaged items, and all other work and materials described hereinabove.

## SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

### 1.1 GENERAL

- A. Submittals: Submit Product Data for supporting devices and electrical identification.
- B. Comply with NFPA 70 for components and installation.
- C. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
  - 1. The Terms "Listed and Labeled": As defined in the National Electrical Code, Article 100.

### 1.2 PRODUCTS

- A. Building Wire: Single conductor, copper. Solid conductor for No. 10 AWG and smaller; stranded conductor for larger than No. 10 AWG.
  - 1. Thermoplastic Insulated Wire: Conform to NEMA WC 5.
  - 2. Cross-Linked, Polyethylene Insulated Wire: Conform to NEMA WC 7.
  - 3. Connectors and Splices: Units of size, ampacity rating, material, type, and class suitable for service indicated. Select to comply with Project's installation requirements.
- B. Channel and angle support systems, hangers, anchors, sleeves, brackets, fabricated items, and fasteners are designed to provide secure support from the building structure for electrical components.
  - 1. Material: Steel, except as otherwise indicated, protected from corrosion with zinc coating or with treatment of equivalent corrosion resistance using approved alternative finish or inherent material characteristics.
  - 2. Metal Items for Use Outdoors or in Damp Locations: Hot-dip galvanized steel, except as otherwise indicated.
- C. Steel channel supports have 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
  - 1. Fittings and accessories mate and match with channels and are from the same manufacturer.
- D. Nonmetallic Channel and Angle Systems: Structural-grade, factory-formed, fiberglass-resin channels and angles with 9/16-inch (14-mm) diameter holes at a maximum of 8 inches (203 mm) o.c., in at least 1 surface.
  - 1. Fittings and accessories mate and match with channels or angles and are from the

- same manufacturer.
2. Fitting and Accessory Material: Same as channels and angles, except metal items may be stainless steel.
- E. Sheet-Metal Sleeves: 0.0276-inch (0.7-mm) or heavier galvanized sheet steel, round tube, closed with welded longitudinal joint.
- F. Pipe Sleeves: ASTM A 53, Type E, Grade A, Schedule 40, galvanized steel, plain ends.
- G. Expansion Anchors: Carbon-steel wedge or sleeve type.
- H. Toggle Bolts: All-steel springhead type.
- I. Powder-Driven Threaded Studs: Heat-treated steel.
- J. Colored Adhesive Marking Tape for Raceways, Wires, and Cables: Self-adhesive vinyl tape not less than 3 mils thick by 1 inch wide (0.08 mm thick by 25 mm wide).
- K. Underground Line Warning Tape: Permanent, bright-colored, continuous-printed, vinyl tape with the following features:
1. Size: Not less than 4 mils thick by 6 inches wide (0.102 mm thick by 152 mm wide).
    - a. Compounded for permanent direct-burial service.
  2. Embedded continuous metallic strip or core.
    - a. Printed Legend: Indicates type of underground line.
- L. Tape Markers: Vinyl or vinyl-cloth, self-adhesive, wraparound type with preprinted numbers and letters.
- M. Color-Coding Cable Ties: Type 6/6 nylon, self-locking type. Colors to suit coding scheme.
- N. Interior Warning and Caution Signs: Preprinted, aluminum, baked-enamel finish signs, punched for fasteners, with colors, legend, and size appropriate to the application.
- O. Exterior Warning and Caution Signs: Weather-resistant, nonfading, preprinted, cellulose acetate butyrate signs with 0.0396-inch (1-mm), galvanized steel backing, with colors, legend, and size appropriate to the application. 1/4-inch (6.4-mm) grommets in corners for mounting.
- P. Fasteners for Metal Signs: Self-tapping stainless-steel screws or No. 10/32 stainless-steel machine screws with nuts and flat and lock washers.
- Q. Meter Sockets: Comply with serving utility company requirements.

### 1.3 EXECUTION

- A. Install components and equipment to provide the maximum possible headroom where mounting heights or other location criteria are not indicated.
- B. Install items level, plumb, and parallel and perpendicular to other building systems and components, except where otherwise indicated.
- C. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect for ease of disconnecting, with minimum interference with other installations.
- D. Give right of way to raceways and piping systems installed at a required slope.
- E. Feeders: Type THHN/THWN, copper conductor, in raceway, except as otherwise indicated.
- F. Branch Circuits: Type THHN/THWN, in raceway.
- G. Damp Locations and Outdoors Supports: Hot-dip galvanized materials or nonmetallic, U-channel system components.
- H. Dry Locations Supports: Steel materials.
- I. Support Clamps for PVC Raceways Supports: Click-type clamp system.
- J. Strength of Supports: Adequate to carry all present and future loads, times a safety factor of at least 4; 200-lb- (90-kg-) minimum design load.
- K. Install wires in raceway according to manufacturer's written instructions and NECA's "Standard of Installation."
- L. Conductor Splices: Keep to the minimum and comply with the following:
  - 1. Install splices and taps that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
  - 2. Use splice and tap connectors that are compatible with conductor material.
- M. Wiring at Outlets: Install with at least 12 inches (300 mm) of slack conductor at each outlet.
- N. Connect outlets and components to wiring systems and to ground as indicated and instructed by manufacturer. Tighten connectors and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening requirements specified in UL 486A.
- O. Install devices to securely and permanently fasten and support electrical components.

P. Raceway Supports: Comply with NFPA 70 and the following requirements:

1. Install individual and multiple raceway hangers and riser clamps to support raceways. Provide U bolts, clamps, attachments, and other hardware necessary for hanger assembly and for securing hanger rods and conduits.
2. Support parallel runs of horizontal raceways together on trapeze- or bracket-type hangers.
3. Spare Capacity: Size supports for multiple conduits so capacity can be increased by a 25 percent minimum in the future.
4. Support individual horizontal raceways with separate, malleable iron pipe hangers or clamps.
5. Hanger Rods: 1/4-inch (6-mm) diameter or larger threaded steel, except as otherwise indicated.
6. Spring Steel Fasteners: Specifically designed for supporting single conduits or tubing. May be used in lieu of malleable iron hangers for 1-1/2-inch (38-mm) and smaller raceways serving lighting and receptacle branch circuits above suspended ceilings and for fastening raceways to channel and slotted angle supports.
7. In vertical runs, arrange support so the load produced by the weight of the raceway and the enclosed conductors is carried entirely by the conduit supports, with no weight load on raceway terminals.

Q. Vertical Conductor Supports: Install simultaneously with conductors.

R. Miscellaneous Supports: Install metal channel racks for mounting cabinets, panelboards, disconnects, control enclosures, pull boxes, junction boxes, transformers, and other devices except where components are mounted directly to structural features of adequate strength.

S. In open overhead spaces, cast boxes threaded to raceways need not be separately supported, except where used for fixture support; support sheet-metal boxes directly from the building structure or by bar hangers. Where bar hangers are used, attach the bar to raceways on opposite sides of the box and support the raceway with an approved fastener not more than 24 inches (610 mm) from the box.

T. Sleeves: Install for cable and raceway penetrations of concrete slabs and walls, except where core-drilled holes are used. Install for cable and raceway penetrations of masonry and fire-rated gypsum walls and of all other fire-rated floor and wall assemblies. Install sleeves during erection of concrete and masonry walls.

U. Firestopping: Apply to cable and raceway penetrations of fire-rated floor and wall assemblies. Perform firestopping as specified in Division 7 Section "Firestopping" to reestablish the original fire-resistance rating of the assembly at the penetration.

V. Fastening: Unless otherwise indicated, securely fasten electrical items and their supporting hardware to the building structure. Perform fastening according to the following:

1. Fasten by means of wood screws or screw-type nails on wood; toggle bolts on hollow masonry units; concrete inserts or expansion bolts on concrete or solid masonry; and by machine screws, welded threaded studs, or spring-tension clamps on steel.

2. Threaded studs driven by a powder charge and provided with lock washers and nuts may be used instead of expansion bolts, machine screws, or wood screws.
  3. Welding to steel structure may be used only for threaded studs, not for conduits, pipe straps, or any other items.
  4. In partitions of light steel construction use sheet-metal screws.
  5. Drill holes in concrete beams so holes more than 1-1/2 inches (38 mm) deep do not cut main reinforcing bars.
  6. Drill holes in concrete so holes more than 3/4 inch (19 mm) deep do not cut main reinforcing bars.
  7. Fill and seal holes drilled in concrete and not used.
  8. Select fasteners so the load applied to any fastener does not exceed 25 percent of the proof-test load.
- W. Install concrete pads and bases according to requirements of Division 3 Section "Cast-in-Place Concrete."
- X. Install utility-metering equipment according to utility company's written requirements. Provide grounding and empty conduits as required by company.
- Y. Install identification devices where required.
1. Install labels where indicated and at locations for best convenience of viewing without interference with operation and maintenance of equipment.
  2. Coordinate names, abbreviations, colors, and other designations used for electrical identification with corresponding designations indicated on the Contract Documents or required by codes and standards. Use consistent designations throughout the Project.
  3. Self-Adhesive Identification Products: Clean surfaces of dust, loose material, and oily films before applying.
  4. Tag or label power circuits for future connection and circuits in raceways and enclosures with other circuits. Identify source and circuit numbers in each cabinet, pull box, junction box, and outlet box. Color coding may be used for voltage and phase indication.
  5. Identify Paths of Underground Electrical Lines: During trench backfilling, for exterior underground power, control, signal, and communication lines, install continuous underground plastic line marker located directly above power and communication lines. Locate 6 to 8 inches (150 to 200 mm) below finished grade. Where multiple lines installed in a common trench or concrete envelope do not exceed an overall width of 16 inches (400 mm), use a single line marker.
  6. For panelboards, provide framed, typed circuit schedules with explicit description and identification of items controlled by each individual breaker.
- Z. Cutting and Patching: Cut, channel, chase, and drill floors, walls, partitions, ceilings, and other surfaces necessary for electrical installations. Perform cutting by skilled mechanics of the trades involved. Repair disturbed surfaces to match adjacent undisturbed surfaces.

END OF SECTION 16050

## SECTION 16120 - CONDUCTORS AND CABLES

### 1.1 GENERAL

- A. Listing and Labeling: Provide wires and cables specified in this Section that are UL listed and labeled.

### 1.2 PRODUCTS

- A. Building Wires and Cables: UL-listed building wires and cables with conductor material, insulation type, cable construction, and rating as specified.
  - 1. Rubber Insulation Material: Comply with NEMA WC 3.
  - 2. Thermoplastic Insulation Material: Comply with NEMA WC 5.
  - 3. Cross-Linked Polyethylene Insulation Material: Comply with NEMA WC 7.
  - 4. Ethylene Propylene Rubber Insulation Material: Comply with NEMA WC 8.
  - 5. Conductor Material: Copper.
  - 6. Stranding: Solid conductor for No. 10 AWG and smaller; stranded conductor for larger than No. 10 AWG.
- B. Connectors and Splices: UL-listed, factory-fabricated wiring connectors of size, ampacity rating, material, type, and class for application and service indicated.

### 1.3 EXECUTION

- A. Use the following wires and insulation materials for the applications listed below:
  - 1. Service Entrance: Type RHW or THWN, in raceway.
  - 2. Feeders: Type THHN/THWN, in raceway.
  - 3. Branch Circuits: Type THHN/THWN, in raceway.
- B. Install wires and cables according to NECA's "Standard of Installation."
- C. Pull Conductors: Use manufacturer-approved pulling compound or lubricant where necessary. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- D. Use pulling means that will not damage cables or raceway.
- E. Install exposed cables, parallel and perpendicular to surfaces of exposed structural members, and follow surface contours where possible.
- F. Support cables according to Division 16 Section "Basic Electrical Materials and Methods."

- G. Seal around cables penetrating fire-rated elements according to Division 7 Section "Firestopping."
- H. Identify wires and cables according to Division 16 Section "Basic Electrical Materials and Methods."
- I. Conductor Splices: Keep to minimum.
- J. Use splice and tap connectors compatible with conductor material.
- K. Use oxide inhibitor in each splice and tap connector for aluminum conductors.
- L. Wiring at Outlets: Install conductor at each outlet, with at least 12 inches (300 mm) of slack.
- M. Connect outlets and components to wiring and to ground.

END OF SECTION 16120

## SECTION 16130 - RACEWAYS AND BOXES

### 1.1 GENERAL

- A. Submittals: Product Data for surface raceways, wireways and fittings, floor boxes, hinged-cover enclosures, and cabinets.
- B. Listing and Labeling: Provide raceways and boxes specified in this Section that are UL listed and labeled.
- C. Comply with NECA's "Standard of Installation."
- D. Comply with NFPA 70.

### 1.2 PRODUCTS

- A. Rigid Steel Conduit: ANSI C80.1.
- B. IMC: ANSI C80.6.
- C. EMT and Fittings: ANSI C80.3, with set-screw or compression type fittings.
- D. LFMC: Flexible steel conduit with PVC jacket.
- E. Fittings: NEMA FB 1; compatible with conduit/tubing materials.
- F. RNC: NEMA TC 2, Schedule 40 or 80 PVC.
- G. Sheet Metal Boxes: NEMA OS 1.
- H. Cast-Metal Boxes: NEMA FB 1, Type FD, cast box with gasketed cover.
- I. Nonmetallic Boxes: NEMA OS 2.
- J. Small Sheet Metal Pull and Junction Boxes: NEMA OS 1.
- K. Cast-Metal Pull and Junction Boxes: NEMA FB 1, cast aluminum with gasketed cover.
- L. Hinged-Cover Enclosures: NEMA 250, Type 1, with continuous hinge cover and flush latch.
- M. Cabinets: NEMA 250, Type 1, galvanized steel box with removable interior panel and removable front, finished inside and out with manufacturer's standard enamel. Hinged door in front cover with flush latch and concealed hinge. Key latch to match panelboards. Include metal barriers to separate wiring of different systems and voltage, and include

accessory feet where required for freestanding equipment.

### 1.3 EXECUTION

A. Outdoors: Use the following wiring methods:

1. Exposed: Rigid steel or IMC.
2. Underground, Single Run: RNC.
3. Underground, Grouped: RNC.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
5. Boxes and Enclosures: NEMA 250, Type 3R or Type 4.

B. Indoors: Use the following wiring methods:

1. Exposed: EMT.
2. Concealed: EMT.
3. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC; except in wet or damp locations, use LFMC.
4. Damp or Wet Locations: Rigid steel conduit.
5. Boxes and Enclosures: NEMA 250, Type 1; except use NEMA 250, Type 4, nonmetallic for damp or wet locations.

C. Install raceways, boxes, enclosures, and cabinets as indicated, according to manufacturer's written instructions.

D. Minimum Raceway Size: 3/4-inch trade size (DN16).

E. Conceal conduit and EMT, unless otherwise indicated, within finished walls, ceilings, and floors.

F. Keep raceways at least 6 inches (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.

G. Install raceways level and square and at proper elevations. Provide adequate headroom.

H. Complete raceway installation before starting conductor installation.

I. Support raceways as specified in Division 16 Section "Basic Electrical Materials and Methods."

J. Use temporary closures to prevent foreign matter from entering raceways.

K. Protect stub-ups from damage where conduits rise through floor slabs. Arrange so curved portion of bends is not visible above the finished slab.

- L. Make bends and offsets so ID is not reduced. Keep legs of bends in the same plane and straight legs of offsets parallel, unless otherwise indicated.
- M. Use raceway fittings compatible with raceways and suitable for use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings, unless otherwise indicated.
- N. Run concealed raceways, with a minimum of bends, in the shortest practical distance considering the type of building construction and obstructions, unless otherwise indicated.
- O. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.
  - 1. Run parallel or banked raceways together, on common supports where practical.
  - 2. Make bends in parallel or banked runs from same centerline to make bends parallel. Use factory elbows only where elbows can be installed parallel; otherwise, provide field bends for parallel raceways.
- P. Join raceways with fittings designed and approved for the purpose and make joints tight.
  - 1. Make raceway terminations tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight.
  - 2. Use insulating bushings to protect conductors.
- Q. Tighten set screws of threadless fittings with suitable tools.
- R. Terminations: Where raceways are terminated with locknuts and bushings, align raceways to enter squarely and install locknuts with dished part against the box. Where terminations are not secure with 1 locknut, use 2 locknuts: 1 inside and 1 outside the box.
- S. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into the hub so the end bears against the wire protection shoulder. Where chase nipples are used, align raceways so the coupling is square to the box and tighten the chase nipple so no threads are exposed.
- T. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line with not less than 200-lb (90-kg) tensile strength. Leave at least 12 inches (300 mm) of slack at each end of the pull wire.
- U. Stub-up Connections: Extend conduits through concrete floor for connection to freestanding equipment. Install with an adjustable top or coupling threaded inside for plugs set flush with the finished floor. Extend conductors to equipment with rigid steel conduit; FMC may be used 6 inches (150 mm) above the floor. Install screwdriver-operated, threaded flush plugs flush with floor for future equipment connections.
- V. Flexible Connections: Use maximum of 6 feet (1830 mm) of flexible conduit for recessed and semirecessed lighting fixtures; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquidtight flexible conduit in wet or damp locations.

Install separate ground conductor across flexible connections.

- W. Do not install aluminum conduits embedded in or in contact with concrete.
- X. PVC Externally Coated, Rigid Steel Conduits: Use only fittings approved for use with that material. Patch all nicks and scrapes in PVC coating after installing conduits.
- Y. Install hinged-cover enclosures and cabinets plumb. Support at each corner.
- Z. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure coatings, finishes, and cabinets are without damage or deterioration at the time of Substantial Completion.
  - 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
  - 2. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.
- AA. On completion of installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finish, including chips, scratches, and abrasions.

END OF SECTION 16130

## SECTION 16140 - WIRING DEVICES

### 1.1 GENERAL

- A. Submittals: Submit product data according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Comply with NFPA 70 "National Electrical Code" for devices and installation.
- C. Listing and Labeling: Provide products that are listed and labeled for their applications and installation conditions and for the environments in which installed.
  - 1. The Terms "Listed" and "Labeled": As defined in the "National Electrical Code," Article 100.
  - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

### 1.2 PRODUCTS

- A. Wiring Devices: Comply with NEMA Standard WD 1, "General Purpose Wiring Devices."
  - 1. Enclosures: NEMA 1 equivalent, except as otherwise indicated.
  - 2. Color: White except as otherwise indicated or required by Code.
- B. Snap Switches: Quiet-type a.c. switches, NRTL listed and labeled as complying with UL Standard 20 "General Use Snap Switches," and with Federal Specification W-S-896.
  - 1. Switch: 20 ampere, 120-277 V a.c.
  - 2. Receptacle: NEMA configuration 5-15R.
- C. Wall Plates: Single and combination types that mate and match with corresponding wiring devices. Features include the following:
  - 1. Color: Matches wiring device except as otherwise indicated.
  - 2. Plate-Securing Screws: Metal with heads colored to match plate finish.
  - 3. Material for Finished Spaces: Steel with wrinkled finish, white baked enamel, suitable for field painting, except as otherwise indicated.
  - 4. Material for Unfinished Spaces: Galvanized steel.

### 1.3 EXECUTION

- A. Install devices and assemblies plumb and secure.
- B. Install wall plates when painting is complete.

- C. Arrangement of Devices: Except as otherwise indicated, mount flush, with long dimension vertical, and grounding terminal of receptacles on top. Group adjacent switches under single, multigang wall plates.
- D. Protect devices and assemblies during painting.
- E. Switches: Where 3 or more switches are ganged, and elsewhere where indicated, identify each switch with approved legend engraved on wall plate.
- F. Receptacles: Identify the panelboard and circuit number from which served. Use machine-printed, pressure-sensitive, abrasion-resistant label tape on face of plate and durable wire markers or tags within outlet boxes.

END OF SECTION 16140

## SECTION 16452 - GROUNDING

### 1.1 GENERAL

- A. Submittals: Submit Product Data for grounding rods, connectors and connection materials, and grounding fittings according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Comply with NFPA 70.
- C. Comply with UL 467.
- D. Listing and Labeling: Provide products specified in this Section that are listed and labeled.
  - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
  - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

### 1.2 PRODUCTS

- A. Grounding and Bonding Products: Where types, sizes, ratings, and quantities indicated are in excess of National Electrical Code (NEC) requirements, the more stringent requirements and the greater size, rating, and quantity indications govern.
- B. Wire and Cable Grounding Conductors: Comply with Division 16 Section "Wires and Cables." Conform to NEC Table 8, except as otherwise indicated, for conductor properties, including stranding.
  - 1. Material: Copper.
  - 2. Equipment Grounding Conductors: Insulated with green color insulation.
  - 3. Grounding-Electrode Conductors: Stranded cable.
  - 4. Underground Conductors: Bare, tinned, stranded, except as otherwise indicated.
  - 5. Bare Copper Conductors: Conform to the following:
    - a. Solid Conductors: ASTM B 3.
    - b. Assembly of Stranded Conductors: ASTM B 8.
    - c. Tinned Conductors: ASTM B 33.
- C. Grounding Bus: Bare, annealed-copper bars of rectangular cross section.
- D. Braided Bonding Jumpers: Copper tape, braided No. 30 AWG bare copper wire, terminated with copper ferrules.
- E. Bonding Straps: Soft copper, 0.05 inch (1 mm) thick and 2 inches (50 mm) wide, except

as indicated.

- F. Pressure Connectors: High-conductivity-plated units.
- G. Bolted Clamps: Heavy-duty type.
- H. Exothermic-Welded Connections: Provided in kit form and selected per manufacturer's written instructions for specific types, sizes, and combinations of conductors and connected items.
- I. Grounding Rods: Copper-clad steel.
- J. Grounding Rods: Sectional type; copper-clad steel.
  - 1. Size: 3/4 inch by 120 inches (19 by 3000 mm).
- K. Test Wells: Fabricate from 15-inch- (400-mm-) long, square-cut sections of 8-inch- (200-mm-) diameter, Schedule 80, PVC pipe.

### 1.3 EXECUTION

- A. Equipment Grounding Conductors: Comply with NEC Article 250 for types, sizes, and quantities of equipment grounding conductors, except where specific types, larger sizes, or more conductors than required by NEC are indicated.
  - 1. Install equipment grounding conductor with circuit conductors for the items below in addition to those required by Code:
    - a. Feeders and branch circuits.
    - b. Lighting circuits.
    - c. Receptacle circuits.
    - d. Single-phase motor or appliance branch circuits.
    - e. Three-phase motor or appliance branch circuits.
    - f. Flexible raceway runs.
    - g. Armored and metal-clad cable runs.
- B. Metal Poles Supporting Outdoor Lighting Fixtures: Ground pole to a grounding electrode in addition to separate equipment grounding conductor run with supply branch circuit.
- C. Installation: Ground electrical systems and equipment according to NEC requirements, except where Drawings or Specifications exceed NEC requirements.
  - 1. Grounding Rods: Locate a minimum of 1-rod length from each other and at least the same distance from any other grounding electrode.
    - a. Drive until tops are 2 inches (50 mm) below finished floor or final grade, except as otherwise indicated.

- b. Interconnect with grounding-electrode conductors. Use exothermic welds, except at test wells and as otherwise indicated. Make these connections without damaging copper coating or exposing steel.
- 2. Metal Water Service Pipe: Provide insulated copper grounding conductors, sized as indicated, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes by grounding-clamp connectors. Where a dielectric main water fitting is installed, connect grounding conductor to street side of fitting. Do not install a grounding jumper across dielectric fittings. Bond grounding-conductor conduit to conductor at each end.
- 3. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with grounding-clamp connectors.
- 4. Test Wells: One for each driven grounding electrode, except as otherwise indicated. Set top of well flush with finished grade or floor. Fill with 1-inch- (25-mm-) maximum-size crushed stone or gravel.

END OF SECTION 16452

## SECTION 16460 - TRANSFORMERS

### 1.1 GENERAL

- A. Submittals: Submit product data and wiring diagrams according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product Test Reports: Certified copies of manufacturer's design and routine factory tests required by the referenced standards.
- C. Sound Level Test Reports: Certified copies of manufacturer's sound level tests applicable to equipment for this Project.
- D. Comply with NFPA 70 "National Electrical Code."
- E. Comply with IEEE C2 "National Electrical Safety Code."
- F. Listing and Labeling: Products are listed and labeled.
  - 1. The Terms "Listed" and "Labeled": As defined in the "National Electrical Code," Article 100.
  - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.

### 1.2 PRODUCTS

- A. General-Purpose, Dry-Type Transformers: Comply with NEMA Standard ST 20 "Dry-Type Transformers for General Applications."
  - 1. Transformers: Two-winding type, 3-phase units using 1 coil per phase in primary and secondary.
  - 2. Windings: All copper.
  - 3. Low Sound Level Units: Minimum of 3 dBA less than NEMA ST 20 standard sound levels when factory tested according to IEEE Standard C57.12.91, "Test Code for Dry-Type Distribution and Power Transformers."
  - 4. Enclosure: Indoor, ventilated.
  - 5. Insulation Class: 220 deg C
    - a. Insulation Temperature Rise: 150 deg C.
  - 6. Taps: Full capacity taps in high-voltage winding are as follows:
  - 7. 15 kVA through 500 kVA: Six 2.5-percent taps, 2 above and 4 below rated high voltage.

### 1.3 EXECUTION

- A. Arrange equipment to provide adequate spacing for access and for cooling air circulation.
- B. Identify transformers and install warning signs according to Division 16 Section "Electrical Identification."
- C. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not furnished, use those specified in UL 486A and UL 486B.
- D. Ground transformers and systems served by transformers according to Division 16 Section "Grounding."

END OF SECTION 16460

## SECTION 16470 - PANELBOARDS

### 1.1 GENERAL

- A. Submittals: Product Data for each type of panelboard, accessory item, and component specified.
- B. Listing and Labeling: Provide products specified in this Section that are UL listed and labeled.
- C. Comply with NFPA 70.
- D. Comply with NEMA PB 1.

### 1.2 PRODUCTS

- A. Panelboard Enclosures: *Flush- or surface-mounted cabinets as indicated. NEMA PB 1, Type 1, unless otherwise indicated to meet environmental conditions at installed location.*
- B. Panelboard Front: Secured to box with concealed trim clamps, unless otherwise indicated. *Front for surface-mounted panelboards shall be same dimensions as box. Fronts for flush panelboards shall overlap box, unless otherwise indicated.*
- C. Directory Frame: Metal, mounted inside each panelboard door.
- D. Bus: Hard drawn copper of 98 percent conductivity.
- E. Main and Neutral Lugs: Compression type.
- F. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment ground conductors. Bonded to box.
- G. Service Equipment Approval: Listed for use as service equipment for panelboards with main service disconnect switch.
- H. Lighting and Appliance Branch-Circuit Panelboards: Features include the following:
  - 1. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
  - 2. Doors: In panelboard front, with concealed hinges. Secure with flush catch and tumbler lock, all keyed alike.
- I. Distribution Panelboards: Features include the following:
  - 1. Doors: In panelboard front, except omit in fusible-switch panelboard, unless

otherwise indicated. Secure door with vault-type latch with tumbler lock, all keyed alike.

2. Branch-Circuit Breakers: Where overcurrent protective devices are indicated to be circuit breakers, use bolt-on circuit breakers, except circuit breakers 225-A frame size and greater may be plug-in type where individual positive-locking device requires mechanical release for removal.

J. Molded-Case Circuit Breaker: NEMA AB 1, handle lockable.

1. Characteristics: Frame size, trip rating, number of poles, and auxiliary devices as indicated and interrupting capacity rating to meet available fault current.
2. Application Listing: Appropriate for application, including Type SWD for switching fluorescent lighting loads and Type HACR for heating, air-conditioning, and refrigerating equipment.
3. Circuit Breakers, 200 A and Larger: Trip units interchangeable within frame size.
4. Circuit Breakers, 400 A and Larger: Field-adjustable short-time and continuous current settings.
5. Lugs: Mechanical lugs and power-distribution connectors for number, size, and material of conductors indicated.

### 1.3 EXECUTION

- A. Install panelboards and accessory items according to NEMA PB 1.1.
- B. Mounting Heights: Top of trim 74 inches (1880 mm) above finished floor, unless otherwise indicated.
- C. Mounting: Plumb and rigid without distortion of box. Mount flush panelboards uniformly flush with wall finish.
- D. Circuit Directory: Type directory to indicate installed circuit loads after balancing panelboard loads. Obtain approval before installing.
- E. Install filler plates in unused spaces.
- F. Provision for Future Circuits at Flush Panelboards: Stub four 1-inch (27-GRC) empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch (27-GRC) empty conduits into raised floor space or below slab not on grade.
- G. Wiring in Panelboard Gutters: Arrange conductors into groups, and bundle and wrap with wire ties after completing load balancing.
- H. Identify field-installed wiring and components and provide warning signs as specified in Division 16 Section "Basic Electrical Materials and Methods."
- I. Panelboard Nameplates: Label each panelboard with engraved laminated-plastic or metal

nameplates mounted with corrosion-resistant screws.

- J. Make equipment grounding connections for panelboards as indicated.
- K. Provide ground continuity to main electrical ground bus as indicated.
- L. Tighten electrical connectors and terminals, including grounding connections, according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.
- M. Field Quality Control: Perform acceptance tests as follows:
  - 1. Make insulation-resistance tests of each panelboard bus, component, and connecting supply, feeder, and control circuits.
  - 2. Make continuity tests of each circuit.
  - 3. Procedures: Perform each visual and mechanical inspection and electrical test stated in NETA ATS, Section 7.5 for switches and Section 7.6 for molded-case circuit breakers. Certify compliance with test parameters.
- N. Adjusting: Set field-adjustable switches and circuit-breaker trip ranges as indicated.

END OF SECTION 16470

## SECTION 16515 - INTERIOR LIGHTING

### 1.1 GENERAL

- A. Submittals: Submit Product Data describing fixtures, lamps, ballasts, and emergency lighting units according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Electrical Component Standard: Provide components that comply with NFPA 70 and that are listed and labeled by UL where available.
- C. Listing and Labeling: Provide fixtures, emergency lighting units, and accessory components specified in this Section that are UL listed and labeled for their indicated use and installation conditions on Project.
  - 1. Special Listing and Labeling: Provide fixtures for use in damp or wet locations, underwater, and recessed in combustible construction that are specifically listed and labeled for such use. Provide fixtures for use in hazardous (classified) locations that are listed and labeled for the specific hazard.

### 1.2 PRODUCTS

- A. Metal Parts: Free from burrs, sharp corners, and edges.
- B. Sheet Metal Components: Steel, except as indicated. Form and support to prevent warping and sagging.
- C. Doors, Frames, and Other Internal Access: Smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during relamping and when secured in operating position.
- D. Reflecting Surfaces: Minimum reflectance as follows, except as otherwise indicated:
  - 1. White Surfaces: 85 percent.
  - 2. Specular Surfaces: 83 percent.
  - 3. Diffusing Specular Surfaces: 75 percent.
  - 4. Laminated Silver Metallized Film: 90 percent.
- E. Lenses, Diffusers, Covers, and Globes: 100 percent virgin acrylic plastic or water white, annealed crystal glass, except as otherwise indicated.
  - 1. Plastic: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
  - 2. Lens Thickness: 0.125 inch (3 mm) minimum; except where greater thickness is

indicated.

- F. Fixture Support Components: Comply with Division 16 Section "Basic Electrical Materials and Methods."
  - 1. Single-Stem Hangers: 1/2-inch (12-mm) steel tubing with swivel ball fitting and ceiling canopy. Finish same as fixture.
  - 2. Twin-Stem Hangers: Two, 1/2-inch (12-mm) steel tubes with single canopy arranged to mount a single fixture. Finish same as fixture.
  - 3. Rod Hangers: 3/16-inch- (5-mm-) minimum diameter, cadmium-plated, threaded steel rod.
  - 4. Hook Hanger: Integrated assembly matched to fixture and line voltage and equipped with threaded attachment, cord, and locking-type plug.
- G. Fluorescent Fixtures: Conform to UL 1570.
- H. Fluorescent Ballasts: Electronic integrated circuit, solid-state, full-light-output, energy-efficient type compatible with lamps and lamp combinations to which connected.
  - 1. Certification by Electrical Testing Laboratory (ETL).
  - 2. Labeling by Certified Ballast Manufacturers Association (CBM).
  - 3. Type: Class P, high power factor, except as otherwise indicated.
  - 4. Sound Rating: "A" rating, except as otherwise indicated.
  - 5. Voltage: Match connected circuits.
  - 6. Lamp Flicker: Less than 5 percent.
  - 7. Minimum Power Factor: 90 percent.
  - 8. Total Harmonic Distortion (THD) of Ballast Current: Less than 20 percent.
  - 9. Conform to FCC Regulations Part 15, Subpart J for electromagnetic interference.
  - 10. Conform to IEEE C62.41, Category A, for resistance to voltage surges for normal and common modes.
  - 11. Multilamp Ballasts: Use 2, 3, or 4 lamp ballasts for multilamp fixtures where possible.
  - 12. Lamp-ballast connection method does not reduce normal rated life of lamps.
- I. Incandescent Fixtures: Conform to UL 1571.
- J. Exit Signs: Conform to UL 924 and the following:
  - 1. Sign Colors: Conform to local code.
  - 2. Minimum Height of Letters: Conform to local code.
  - 3. Arrows: Include as indicated.
  - 4. Lamps for AC Operation: Light-emitting diodes (LED), 70,000 hours minimum rated life.
- K. Emergency Lighting Units: Conform to UL 924. Provide self-contained units with the following features:
  - 1. Battery: Sealed, maintenance-free, lead-acid type with minimum 10-year nominal life and special warranty.

2. Charger: Minimum 2-rate, fully automatic, solid-state type, with sealed transfer relay.
  3. Operation: Relay automatically turns lamp on when supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. Relay disconnects lamps and battery and automatically recharges and floats on trickle charger when normal voltage is restored.
- L. Lamps: Comply with ANSI C78 series that is applicable to each type of lamp.
- M. Noncompact Fluorescent Lamp Life: Rated average is 20,000 hours at 3 hours per start when used on rapid start circuits.
- N. Finishes: Manufacturer's standard, except as otherwise indicated, applied over corrosion-resistant treatment or primer, free of streaks, runs, holidays, stains, blisters, and similar defects.

### 1.3 EXECUTION

- A. Set units plumb, square, and level with ceiling and walls, and secure according to manufacturer's written instructions and approved Shop Drawings. Support fixtures according to requirements of Division 16 Section "Basic Electrical Materials and Methods."
- B. Support for Recessed and Semirecessed Grid-Type Fluorescent Fixtures: Units may be supported from suspended ceiling support system. Install ceiling support system rods or wires at a minimum of 4 rods or wires for each fixture, located not more than 6 inches (150 mm) from fixture corners.
1. Install support clips for recessed fixtures, securely fastened to ceiling grid members, at or near each fixture corner.
  2. Fixtures Smaller than Ceiling Grid: Install a minimum of 4 rods or wires for each fixture and locate at corner of ceiling grid where fixture is located. Do not support fixtures by ceiling acoustical panels. Center in acoustical panel.
- C. Support for Suspended Fixtures: Brace pendants and rods over 48 inches (1200 mm) long to limit swinging. Support stem-mounted, single-unit, suspended fluorescent fixtures with twin-stem hangers. For continuous rows, use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of chassis, including one at each end.
- D. Lamping: Where specific lamp designations are not indicated, lamp units according to manufacturer's instructions.
- E. Connections: Ground lighting units. Tighten electrical connectors and terminals, including grounding connections, according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

END OF SECTION 16515

## SECTION 16525 - EXTERIOR LIGHTING

## 1.1 GENERAL

- A. *Submittals:* Submit *Product Data* describing *fixtures, lamps, ballasts, poles, and accessories* according to the Conditions of the Contract and Division 1 Specification Sections.
- B. *Electrical Component Standard:* Provide components that comply with NFPA 70 and that are listed and labeled by UL where available.
- C. *Comply with ANSI C2.*
- D. *Listing and Labeling:* Provide fixtures and accessories specified in this Section that are UL listed and labeled for their indicated use and installation conditions on Project.

## 1.2 PRODUCTS

- A. *Metal Parts:* Free from burrs, sharp edges, and corners.
- B. *Sheet Metal Components:* Corrosion-resistant aluminum, except as otherwise indicated. Form and support to prevent warping and sagging.
- C. *Housings:* Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed fixtures.
- D. *Doors, Frames, and Other Internal Access:* Smooth operating, free from light leakage under operating conditions, and arranged to permit relamping without use of tools. Arrange doors, frames, lenses, diffusers, and other pieces to prevent accidental falling during relamping and when secured in operating position. Provide for door removal for cleaning or replacing lens. Arrange for door opening to disconnect ballast.
- E. *Exposed Hardware Material:* Stainless steel.
- F. *Reflecting Surfaces:* Minimum reflectances as follows, except as otherwise indicated:
  - 1. *White Surfaces:* 85 percent.
  - 2. *Specular Surfaces:* 83 percent.
  - 3. *Diffusing Specular Surfaces:* 75 percent.
- G. *Plastic Parts:* High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.

- H. Lenses and Refractors: Materials as indicated. Use heat- and aging-resistant, resilient gaskets to seal and cushion lens and refractor mounting in fixture doors.
- I. High-Intensity-Discharge (HID) Fixtures: Conform to UL 1572.
- J. HID Ballasts: Conform to UL 1029, and ANSI C82.4. Constant wattage autotransformer (CWA) or regulating high-power-factor type, unless otherwise indicated.
  - 1. Ballast Fuses: One in each ungrounded supply conductor. Voltage and current ratings as recommended by ballast manufacturer.
  - 2. Operating Voltage: Match system voltage.
  - 3. Single-Lamp Ballasts: Minimum starting temperature of minus 30 deg C.
  - 4. Open circuit operation will not reduce average life.
  - 5. High-Pressure Sodium (HPS) Ballasts: Equip with a solid-state igniter/starter having an average life in pulsing mode of 10,000 hours at an igniter/starter case temperature of 90 deg C.
  - 6. Noise: Uniformly quiet operation, with a noise rating of B or better.
- K. Lamps: Comply with ANSI C78 series that is applicable to each type of lamp. Provide fixtures with indicated lamps of designated type, characteristics, and wattage. Where a lamp is not indicated for a fixture, provide medium wattage lamp recommended by manufacturer.
- L. Wind-load strength of total support assembly, including pole, arms, appurtenances, base, and anchorage, is adequate to carry itself plus fixtures indicated at indicated heights above grade without failure, permanent deflection, or whipping in steady winds of 100 mi./h (160 km/h) with a gust factor of 1.3.
- M. Arm, Bracket, and Tenon Mount Materials: Match poles' finish.
- N. Mountings, Fastenings, and Appurtenances: Corrosion-resistant items compatible with support components. Use materials that will not cause galvanic action at contact points. Use mountings that correctly position luminaire to provide indicated light distribution.
- O. Pole Shafts: Round, tapered.
- P. Pole Bases: Anchor type with galvanized steel hold-down or anchor bolts, leveling nuts, and bolt covers.
- Q. Poles: Steel tubing conforming to ASTM A 500, Grade B, carbon steel with a minimum yield of 46,000 psi (317 MPa). Poles are 1-piece construction up to 40 feet (12 m) in length and have access handhole in wall.
- R. Metal Pole Grounding Provisions: Welded 1/2-inch (12-mm) threaded lug, accessible through handhole.

- S. Steel Mast Arms: Fabricated from 2-inch NPS (DN50) black steel pipe, continuously welded to pole attachment plate with span and rise as indicated.
- T. Metal Pole Brackets: Designed to match pole metal. Provide cantilever brackets without underbrace, in sizes and styles indicated, with straight tubular end section to accommodate fixture.
- U. Concrete for Pole Foundations: Comply with Division 3 Section "Cast-in-Place Concrete." Use 3000-psi (20.7-MPa) strength, 28-day concrete.
- V. Finishes: Manufacturer's standard finish, except as otherwise indicated, applied over corrosion-resistant primer, free of streaks, runs, holidays, stains, blisters, and similar defects.

### 1.3 EXECUTION

- A. Set units plumb, square, level, and secure according to manufacturer's written instructions and approved Shop Drawings.
- B. Concrete Foundations: Construct according to Division 3 Section "Cast-in-Place Concrete."
- C. Embedded Poles: Set poles to indicated depth, but not less than 1/6 of pole length below finish grade. Dig holes large enough to permit use of tampers the full depth of hole. Backfill in 6-inch (150-mm) layers and thoroughly tamp each layer so compaction of backfill is equal to or greater than that of undisturbed earth.
- D. Pole Installation: Use web fabric slings (not chain or cable) to raise and set poles.
- E. Fixture Attachment: Fasten to indicated structural supports.
- F. Fixture Attachment with Adjustable Features or Aiming: Attach fixtures and supports to allow aiming for indicated light distribution.
- G. Lamp fixtures with indicated lamps according to manufacturer's written instructions. Replace malfunctioning lamps.
- H. Ground fixtures and metal poles according to Division 16 Section "Grounding."
  - 1. Poles: Install 10-foot (3-m) driven ground rod at each pole.
  - 2. Nonmetallic Poles: Ground metallic components of lighting unit and foundations. Connect fixtures to grounding system with No. 6 AWG conductor.