



*John P. Kelly, Director
Frank Sadeghi, Deputy Director
Robert S. Arace, Commissioner
Jennifer Bacchione, Commissioner
Virginia E. Haines, Commissioner*

Jennifer L. Bowens, Purchasing Agent

*County of Ocean
Administration Building
101 Hooper Avenue
Toms River, NJ 08754*

BID

NORTHERN RECYCLING CENTER EDDY CURRENT SEPARATOR

2025

ADVERTISEMENT DATE: July 23, 2025

OPENING: September 3, 2025, 11:00 am

Bid Category: 22- Public Works, Park Equipment and Construction Services

Notice to Bidders

NOTICE IS HEREBY GIVEN that sealed bids for the furnishing and delivery of **NORTHERN RECYCLING CENTER EDDY CURRENT SEPARATOR** for the County of Ocean, will be received by the Purchasing Agent of the County of Ocean on **Wednesday, September 3, 2025 at 11:00 am**, prevailing time.

Bids will be received electronically via the County's Online Procurement Portal. Specifications are available on the Procurement Portal or for viewing only, in the Department of Purchase, Room #224, Administration Building, 101 Hooper Avenue, Toms River, New Jersey. Direct all inquiries to Jennifer L. Bowens, Purchasing Agent.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and P.L. 1975 C. 127 (N.J.A.C. 17:27-1 et seq.) regarding equal employment opportunities and with the requirements of P.L. 1977 C.33 regarding corporate and/or partnership ownership.

Bid Security in the amount of 10% of the total bid shall be supplied in the form of a Certified Check, Cashier's Check or Bid Bond, but not in excess of \$20,000.00. E-bonds through Surety2000 or Tinubu are also acceptable. See Vendor Questionnaire for additional information regarding e-bonds.

Pe-Bid Meeting: A non-mandatory pre-bid meeting will be held Tuesday, August 5, 2025 at 10:00 AM on-site at 601 New Hampshire Avenue, Lakewood, NJ 08701. While attendance is not required, prospective bidders are strongly encouraged to attend, as the meeting will provide valuable insight into the scope and conditions of the project.

Project Schedule: Project to be completed within 150 calendar days of Notice to Proceed. Project to have a Liquidating Damage Clause of \$500.00 per day after date of Contract completion. Project to start on or about October 2025.

Electronic Submission Site: <https://procurement.opengov.com/portal/oceancounty/>

The right to reject any and all bids is reserved in accordance with applicable law.

By order of the Board of Commissioners of the County of Ocean.

Signed:

JOHN P. KELLY, Director

JENNIFER L. BOWENS, Purchasing Agent

Contact Information and Project Timeline

Summary

The purpose of this bid package is to provide the County of Ocean with a Contractor who will supply the materials or services described and specified herein.

Contact Information

For further information regarding these specifications, contact

Jessica Hannold

Senior Buyer

Email: jhannold@co.ocean.nj.us

Phone: [\(732\) 929-2103](tel:(732)929-2103)

Department:

Solid Waste Management

Timeline

Advertising Date	July 23, 2025
Pre-Bid Meeting (Non-Mandatory)	August 5, 2025, 10:00am A non-mandatory pre-bid meeting will be held on-site at 601 New Hampshire Avenue, Lakewood, NJ 08701. While attendance is not required, prospective bidders are strongly encouraged to attend, as the meeting will provide valuable insight into the scope and conditions of the project.
Question Submission Deadline	August 8, 2025, 12:00pm
Bid Opening Date	September 3, 2025, 11:00am Administration Building, 101 Hooper Ave., Room 119, Toms River, NJ, 08753

Instructions to Bidders

Bid Opening

All bids will be opened publicly in the Administration Building, Room 119, 101 Hooper Avenue, Toms River, New Jersey, commencing at 11:00 am, prevailing time on Wednesday, September 3, 2025.

Electronic Bid Submissions

Bids must be submitted electronically through Ocean County's Procurement Portal by the date and time stipulated in the Notice to Bidders.

Deadline Instructions

The County will not be responsible for late bids, and no bids will be accepted if received after the time stipulated in the notice to bidders.

Completion of all Documents

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package and must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

NOTE: In order to access any DocuSign forms in this solicitation, you must first click "Draft Response".

Instructions on how to access the forms through DocuSign are available in the Attachments. Please note that in order to view the forms as a .pdf document, you must access DocuSign first. Once you access DocuSign, the option to download, save, print and complete the forms becomes available

Right to Reject

The County reserves the right to reject all bids in accordance with N.J.S.A. 40A:11-13.2, to waive any informalities in the bid and to accept the lowest responsible bid in accordance with applicable law.

Bidder Default

In case of default by the bidder or contractor, the County of Ocean may procure the articles or services from other sources and hold the bidder or contractor responsible for any excess cost occasioned thereby.

Indemnity

The bidder, if awarded a contract, agrees to protect, defend and save harmless the County against any damage for payment for the use of any patented material process, article or device that may

enter into the manufacture, construction or form a part of the work covered by either order or contract, and he further agrees to indemnify and save harmless the County from suits or actions of every nature and description brought against it, for, or on account of injuries or damages received or sustained by any party or parties by, or from any of the negligent acts of the contractor, his servants or agents.

Insurance Requirements

The contractor shall maintain primary insurance to protect against all claims under Workmen's Compensation, Comprehensive General Liability and Automobile. Except for Workmen's Compensation, all coverage shall apply as primary coverage with respect to any other insurance or self-insurance program afforded to the County. There shall be no endorsement or modification of this coverage to make it excess over other available insurance/coverage; alternatively, if the CGL and umbrella, excess of reinsurance states that it is pro rata, it shall be endorsed to be primary with respect to the County. Primary Coverage shall be subject to approval for adequacy of protection as per the following limits:

Worker's Compensation

1. Limits according to Worker's compensation Laws of the State of New Jersey.
2. Contractor's Liability not less than \$100,000.

Comprehensive General Liability

1. Bodily Injury - \$500,000 per person; \$1,000,000 per occurrence.
2. Property Damage - \$1,000,000 per occurrence.

Comprehensive General Liability Details

Comprehensive Automobile Liability shall include the following:

Business auto liability insurance or its equivalent with a minimum limit of \$1,000,000 per accident and including coverage for all of the following:

- A. Liability arising out of the ownership, maintenance or use of any auto;
- B. Auto non-ownership and hired car coverage.
- C. Contractor's Worker's Compensation, Comprehensive General Liability and
- D. Comprehensive Automobile Liability arising out of subcontractor's operations shall be identical as that listed above.

Proof of Insurance

Copies of each insurance certificate shall be furnished to the County when requested.

Specifications

It is to be understood by the bidder that this bid is submitted on the basis of specifications prepared by the County and the fact that any bidder is not familiar with these specifications or conditions will not be accepted as an excuse.

Bid Security

A Bid Security in the form of a Bond, Cashier's Check or Certified Check, made payable to the County of Ocean in the amount of ten percent (10%) of the total amount of the bid (but not in excess of \$20,000.00) must accompany each proposal as a guarantee which may be forfeited and retained by the County in lieu of its other legal remedies if a successful bidder's proposal is accepted by the County and he shall fail to execute and return to the County the required contract and bonds within twenty-one (21) days after the award of the contract by the County.

Performance Bond

A Performance Bond in the form of a Certified Check (cash) or Bond, from a surety company authorized to transact business in the State of New Jersey, in the amount of 100% of total bid will be required from the successful bidder, to insure faithful performance of the contract. The Performance Bond and contract must be filed with the County of Ocean within twenty-one (21) days of the award resolution, or the contract will be subject to rescission.

Subcontractor's NJ Business Registration Certificate

A copy of bidder's and named sub-contractors' New Jersey Business Registration Certificate should be included with the bid. If they are not, they will be required prior to award of the contract.

Pricing Proposal

Bidders must use the pricing proposal provided in the bid specifications.

Pricing

Insert prices for furnishing all of the material and/or labor described or required. Prices shall be net, including any charges for packing, crating, containers, etc. and all transportation charges fully prepaid by the contractor F.O.B. destination and placement at locations specified by the County. No additional charges will be allowed for any transportation costs resulting from partial shipments made at the vendor's convenience when a single shipment is ordered.

Payment

Payments will be made upon the approval of vouchers submitted by the successful bidders in accordance with the requirements of the Board of Commissioners and subject to the Board of Commissioners customary procedures. The County will not pay interest or late fees regardless of language provided.

Discrepancy in Pricing

In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the OWNER of the extended totals shall govern.

Award Timeframe

Award will be made by Ocean County Board of Commissioners within sixty (60) days after receipt of bids.

Prevailing Wage & Labor Laws

The New Jersey Prevailing Wage Act (P.L. 1963, Chapter 150) and provisions of the State Labor Laws must be complied with by the successful bidder, if applicable. The current Prevailing Wage Rates can be found online at <https://www.nj.gov/labor/wageandhour/prevailing-rates/public-works/currentprevailingwage.shtml>.

All Certified Payrolls for Public Works Projects **must** be submitted online via the New Jersey Wage Hub website which can be accessed through the following link: <https://njwages.nj.gov/>. Certified payrolls must be submitted within ten (10) days of the payment of wages for each pay period, **both** online via New Jersey Wage Hub and hard copy to the contracting unit.

Equal or Tie Bids

The County of Ocean reserves the right to award at their discretion to any one of the tie bidders where it is most advantageous for the County to do so, pursuant to N.J.S.A. 40A:11-6.1.

Tax Exempt

The County of Ocean is exempt from any State sales tax or Federal excise tax.

Equivalent Product

For purpose of evaluation where an equivalent product is being furnished, bidder must indicate any variation to our specifications no matter how slight. If no variations are indicated, it will be construed that the bid fully complies with our specifications.

Quantities

Quantities shown are approximate and the County reserves the right to decrease or omit quantities. The County also reserves the right to increase quantities to twenty (20) percent of the maximum quantities listed at the unit price bid, in accordance with N.J.A.C. 5:30-11.3.

Delivery of Goods and Services

Delivery shall be made upon receipt of a Purchase Order issued by the Ocean County Department of Purchase, upon which delivery locations and needed quantities shall be indicated.

American Goods and Products

All contractors must comply with the provisions of New Jersey Statute Title 40A:11-18, when applicable.

Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq

The bidder must comply with the provisions of "The Public Works Contractor Registration Act", if applicable.

- All named contractors must be registered with the Department of Labor and Workforce Development pursuant to the Public Works Contractor Registration Act at the time the proposal is received, or the proposal will be determined to be non-responsive.
- Any non-listed contractor must be registered with the Department of Labor and Workforce Development prior to physically starting work. It is the responsibility of the General Contractor to insure that all non-listed sub-contractors comply.
- Contractors are encouraged to submit their and all named sub-contractors' Public Works Contractor Registration Certificates with the bid.

Assignment

This agreement shall not be assigned without the written consent of the County of Ocean.

NJ One Call

By presenting a bid, contractor declares that he is aware of and, if required, will comply with the requirements of the "Underground Facility Protection Act (Public Law 1994, Chapter 118)" prior to commencing any intended excavation. The telephone number to call is 1-800-272-1000.

Special Surety Bid Requirements for Certain Construction Projects

The attention of the bidder is called to the provisions of N.J.S.A. 2A:44-143 which requires that the County of Ocean shall only accept performance and payment bonds from surety companies meeting the requirements of that statute. The bidder shall deliver with its bid a Consent of Surety. The Bidder's Surety Company shall complete the "Certificate of Surety Company" which bidder shall submit with its bid.

Owner's Approval of Security Bond and Bond Company

The form of the security bond and the company shall have the approval of the Owner. The surety company shall have minimum ratings, and a financial size category appropriate to the project size as listed below and as shown in the latest report of Best's Key Rating Guide, Property-Casualty, issued by A.M. Best Company, Oldwick, New Jersey.

Size Rating Financial Size

0 to 1 million A- IV

1 million to 5 million A- VII

5 million to 10 million A- VIII

10 million and over A- IX

Fulfilled Surety Requirements

The Bidder shall provide documentation that the Surety has fulfilled the requirements of N.J.S.A. 2A:44-143. Should the Bidder elect to use a Surety which does not fulfill the minimum Best's Key Rating above or is not rated by the A.M. Best Company, the Bidder must provide documentation, and any information required for the verification of presented documentation, that the surety is rated in one of the three highest categories by an independent, nationally recognized United States rating company in accordance to the "Administrative Procedure Act." The bond shall be maintained in full force for a period of twelve (12) months after the date of final acceptance by the Owner of the work, to guarantee that the Contractor will make good any faults and/or defects in the work arising from improper or defective workmanship or materials which may appear during that period.

New Jersey Business Registration Requirements

Pursuant to N.J.S.A. 52:32-44, Ocean County ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

- (1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
- (2) the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.
- (3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at [http://www.state.nj.us/revenue/busregcert.shtml](http://www.state.nj.us/reasury/revenue/busregcert.shtml).

Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

Pay to Play Requirements

Starting in January 2007, all business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC) pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

Close-Out Documentation - Commissioning Review

The general contractor shall schedule a meeting at the job site with his consultants, other prime contractors, the facility user, the Purchasing Agent or her designee, Solid Waste Management, the Architect and consultants. The purpose of this meeting will be a final review prior to the final certificate of occupancy and close-out of the project (100%). The meeting shall include, but not be limited to, review of all equipment and operation of same, lighting requirements, HVAC equipment, sprinkler systems, period maintenance schedule, manuals, schedules, warranties, etc. This process shall be part of the basic services under the base contract.

Statement of Ownership

The provisions of N.J.S.A. 52:25-24.2 applies to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited liability corporations, limited liability partnerships, and Subchapter S corporations.

Review by State Comptroller

Pursuant to N.J.S.A. 52:15C-14(d), if the total consideration of the project exceeds \$3,000,000 million dollars, relevant records of private vendors or other persons entering into contracts with the Owner are subject to audit or review by the New Jersey Office of the State Comptroller. Therefore, the Contractor shall maintain all documentation related to products, transactions or services under this contract for a period of five years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

Certification of Non-Debarment

Pursuant to N.J.S.A. 52:32-44.1 (P.L. 2019, c.406) any natural person, company, firm, association, corporation, or other entity prohibited, or “debarred,” from contracting with Federal Government agencies, shall also be prohibited from contracting for public works in the state of New Jersey. This prohibition also extends to any affiliate organization(s) held by or subject to the control of an entity of that prohibited person or entity. Prior to awarding a contract for public works, a local unit must obtain written certification from the contracting person or entity through the form below, attesting to their non-debarment from contracting with Federal Government agencies.

Open Public Records Act (OPRA)

** ATTENTION**

Responses received pursuant to this solicitation are subject to complete disclosure pursuant to the Open Public Records Act. Please note that disclosure includes any and all attachments and addenda supplementing the solicitation response. Accordingly, please do not include personal identifying information in any supplementary documents submitted with the solicitation response.

Important Instructions for Electronic Submittal

The County is accepting electronic bid submissions with Open Gov by following these instructions:

Sign up for a FREE account at <https://procurement.opengov.com/portal/oceancounty>

Once you have completed account registration, browse back to this page: [County's OpenGov Electronic Bid Portal \(https://procurement.opengov.com/portal/oceancounty/\)](https://procurement.opengov.com/portal/oceancounty/)

Click on the bid of interest, then click "Draft Response".

Follow the instructions to submit the electronic bid.

It is important to note that this process should be completed well in advance of the bid deadline / bid opening. **DO NOT WAIT UNTIL THE LAST MINUTE.** The County's electronic submission system will not allow electronic bids to be submitted once the deadline has passed, even if you've already started the process. The deadline is based on the countdown timer found on the OpenGov bid submission page.

Award Method

Contract will be awarded based on the total base bid including the allowance.

Mandatory Equal Employment Opportunity

N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)

N.J.A.C. 17:27

EXHIBIT B

CONSTRUCTION CONTRACTS

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, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, up grading, 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.

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, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, 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.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer, pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act. When hiring or scheduling workers in each construction trade, the contractor or subcontractor agrees to make

good faith efforts to employ minority and women workers in each construction trade consistent with the targeted employment goal prescribed by N.J.A.C. 17:27 7.2; provided, however, that the Dept. of LWD, Construction EEO Monitoring Program may, in its discretion, exempt a contractor or subcontractor from compliance with the good faith procedures prescribed by the following provisions, A, B and C, as long as the Dept. of LWD, Construction EEO Monitoring Program is satisfied that the contractor or subcontractor is employing workers provided by a union which provides evidence, in accordance with standards prescribed by the Dept. of LWD, Construction EEO Monitoring Program, that its percentage of active "card carrying" members who are minority and women workers is equal to or greater than the targeted employment goal established in accordance with N.J.A.C. 17:27-7.2. 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 business 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 N.J.S.A. 10:5-31 et. seq., as supplemented and amended from time to time and the Americans with Disabilities Act. If the contractor or subcontractor is unable to obtain said assurances from the construction trade union at least five business days prior to the commencement of construction work, the contractor or subcontractor agrees to afford equal employment opportunities minority and women workers directly, consistent with this chapter. 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 women workers consistent with affording equal employment opportunities as specified in this chapter, the contractor or subcontractor agrees to be prepared to provide such opportunities to minority and women workers directly, consistent with this chapter, by complying with the hiring or scheduling procedures prescribed under (B) below; and the contractor or subcontractor further agrees to take said action immediately if it determines that the union is not referring minority and women workers consistent with the equal employment opportunity goals set forth in this chapter.

(B) If good faith efforts to meet targeted employment goals have not or cannot be met for each construction trade by adhering to the procedures of (A) 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:

(1) To notify the public agency compliance officer, the Dept. of LWD, Construction EEO Monitoring Program, and minority and women referral organizations listed by the Division pursuant to N.J.A.C. 17:27-5.3, of its workforce needs, and request referral of minority and women workers;

(2) To notify any minority and women workers who have been listed with it as awaiting available vacancies;

(3) Prior to commencement of work, to request that the local construction trade union refer minority and women workers to fill job openings, provided the contractor or subcontractor has a referral agreement or arrangement with a union for the construction trade;

(4) To leave standing requests for additional referral to minority and women workers with the local construction trade union, provided 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;

(5) If it is necessary to lay off some of the workers in a given trade on the construction site, layoffs shall be conducted in compliance with the equal employment opportunity and non-discrimination standards set forth in this regulation, as well as with applicable Federal and State court decisions;

(6) To adhere to the following procedure when minority and women workers apply or are referred to the contractor or subcontractor:

(i) The contractor or subcontractor shall interview the referred minority or women worker.

(ii) If said individuals have never previously received any document or certification signifying a level of qualification lower than that required in order to perform the work of the construction trade, the contractor or subcontractor shall in good faith determine the qualifications of such individuals. The contractor or subcontractor shall hire or schedule those individuals who satisfy appropriate qualification standards in conformity with the equal employment opportunity and non-discrimination principles set forth in this chapter. However, a contractor or subcontractor shall determine that the individual at least possesses the requisite skills, and experience recognized by a union, apprentice program or a referral agency, provided the referral agency is acceptable to the Dept. of LWD, Construction EEO Monitoring Program. If necessary, the contractor or subcontractor shall hire or schedule minority and women workers who qualify as trainees pursuant to these rules. All of the requirements, however, are limited by the provisions of (C) below.

(iii) The name of any interested women or minority individual shall be maintained on a waiting list, and shall be considered for employment as described in (i) above, whenever vacancies occur. At the request of the Dept. of LWD, Construction EEO Monitoring Program, the contractor or subcontractor shall provide evidence of its good faith efforts to employ women and minorities from the list to fill vacancies.

(iv) If, for any reason, said contractor or subcontractor determines that a minority individual or a woman is not qualified or if the individual qualifies as an advanced trainee or apprentice, the contractor or subcontractor shall inform the individual in writing of the reasons for the determination, maintain a copy of the determination in its files, and send a copy to the public agency compliance officer and to the Dept. of LWD, Construction EEO Monitoring Program.

(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 Dept. of LWD, Construction EEO Monitoring Program and submitted promptly to the Dept. of LWD, Construction EEO Monitoring Program upon request.

(C) The contractor or subcontractor agrees that nothing contained in (B) above shall preclude the contractor or subcontractor from complying with the union hiring hall or apprenticeship policies in any applicable collective bargaining agreement or union 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. However, where the practices of a union or apprenticeship program will result in the exclusion of minorities and women or the failure to refer minorities and women consistent with the targeted county employment goal, the contractor or subcontractor shall consider for employment persons referred pursuant to (B) above without regard to such agreement or arrangement; provided further, however, that the contractor or subcontractor shall not be required to employ women 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 women workers residing within the geographical jurisdiction of the union.

After notification of award, but prior to signing a construction contract, the contractor shall submit to the public agency compliance officer and the Dept. of LWD, Construction EEO Monitoring Program an initial project workforce report (Form AA 201) electronically provided to the public agency by the Dept. of LWD, Construction EEO Monitoring Program, through its website, for distribution to and completion by the contractor, in accordance with N.J.A.C. 17:27-7. The contractor also agrees to submit a copy of the Monthly Project Workforce Report once a month thereafter for the duration of this contract to the Division 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/or off-the-job programs for outreach and training of minorities and women.

(D) The contractor and its subcontractors shall furnish such reports or other documents to the Dept. of LWD, Construction EEO Monitoring Program as may be requested by the Dept. of LWD, Construction EEO Monitoring Program 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 Dept. of LWD, Construction EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C.17:27-1.1 et seq.

Americans with Disabilities Act

Equal Opportunity For Individuals With Disabilities

The CONTRACTOR and the COUNTY do hereby agree that the provisions of title II of the Americans with Disabilities Act of 1990 (the "Act") (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the COUNTY pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the CONTRACTOR, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the COUNTY in any action or administrative proceeding commenced pursuant to this Act. The CONTRACTOR shall indemnify, protect and save harmless the COUNTY, its agents, servants and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the COUNTY'S grievance procedure, the CONTRACTOR agrees to abide by any decision of the COUNTY which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the COUNTY or if the COUNTY incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The COUNTY shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the COUNTY or any of its agents, servants and employees, the COUNTY shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the COUNTY or its representatives.

It is expressly agreed and understood that any approval by the COUNTY of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect and save harmless the COUNTY pursuant to this paragraph.

It is further agreed and understood that the COUNTY assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provision of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the COUNTY from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

Scope of Work

SCOPE OF WORK

See "Attachments", "Project Documents" for detailed specifications.

Vendor Questionnaire

OpenGov Vendor Account Verification*

I hereby confirm that I am logged into OpenGov using an account directly associated with the Business Name (and corresponding Tax ID number) as provided in all solicitation documentation. I fully understand that, if awarded a contract with Ocean County, the company information listed in the Contract Information Field will be used for the preparation of all contract documents. *Failure to adhere to these requirements may result in the rejection of this bid.*

Please confirm

*Response required

Bid Security*

PHYSICAL HARD COPY BID SECURITY INSTRUCTIONS:

Upload a copy of your Bid Security. Bid Security shall be in the form of a cashier's check, certified check, or bid bond.

Original Hard-Copy Bid Security *must be received by* 11:00 am *prevailing time on* Wednesday, September 3, 2025 *or your submission will be rejected.*

BID BOND MUST BE LABELED WITH THE TITLE AND DATE THE BID IS DUE

EXAMPLE: BID BOND FOR NORTHERN RECYCLING CENTER EDDY CURRENT SEPARATOR OPENING ON Wednesday, September 3, 2025

Original may be mailed or hand delivered to:

Clerk of the Board
Ocean County Administration Building
101 Hooper Avenue, Room 328
Toms River, NJ 08753

Bid Security may also be hand delivered at the public bid opening and may not be received after 11:00 am prevailing time on Wednesday, September 3, 2025.

The County is not responsible for late submissions and no consideration will be made for bid security received after the date and time stipulated in the Notice to Bidders ***even if you have completed your bid online.***

If the original bid security is not received by the date and time stipulated in the Notice to Bidders, your submission will be rejected.

ELECTRONIC BID SECURITY INSTRUCTIONS:

If your company is using the electronic bond verification, please upload a digital copy of the confirmation of the filing of the electronic bond then proceed to Question #2, "Electronic Verification of Bid Security" to input your bond's serial number.

Please note, the only acceptable file forms are as follows:

**Documents (doc, docx, rtf, txt, xls, xlsx, pdf)
Images (jpg, bmp, tif)**

*Response required

Electronic Verification of Bid Security*

The County has accounts with two (2) online Bid Security programs: Surety2000 and Tinubu. Use of these platforms is fee-based and bidders can utilize either platform to obtain an electronically issued, verified and legal bid bond which can be used for bidding purposes. *No bid bond can be created by the bonding agent on the site without the Surety agency being fully aware of that bond.* Only agents appointed directly by the Surety agencies can issue bid bonds electronically.

To use Surety2000, please use this link to access the site: www.surety2000.com.

To use Tinubu, please use this link to access the site: www.tinubu.com/ebonding

You must complete all necessary steps to log in to the site and obtain the bid bond.

Bond Identifier:OCSWMECS925

USE THIS CODE WHEN EXECUTING YOUR BID BOND.

Once an official bid bond is issued, use the space below to input your company's E-Bond Serial Number.

The number will look like this from Surety2000: **SNJ5185268**

The number will look like this from Tinubu: **1234-4567-7891-0123**

This number will then be used at the bid opening to verify your company's bid bond.

If you are not using this method for Bid Security submission please write "N/A" in the field provided.

Please note that the County is **not responsible** for late submissions and no consideration will be made for bid security received after the date and time stipulated in the Notice to Bidders **even if you have electronically submitted your bid on time.**

If the original bid security is not able to be verified by the date and time stipulated in the Notice to Bidders, your submission will be rejected.

*Response required

Confirmation of Understanding of Bid Security*

Accompanying this Proposal is a guarantee payable to County of Ocean for 10% of the total bid, not to exceed \$20,000, which the undersigned agrees is to be forfeited as liquidated damages, and not as a penalty, if contract is awarded to the undersigned and the undersigned shall fail to execute the contract or shall fail to furnish the Performance Bond and Payment Bond required, within the stipulated time, otherwise said check will be returned to the undersigned.

By Confirming, Bidder understands that Bid Security in the amount of 10% of the total bid not to exceed \$20,000 must be received by the date and time stipulated in the Notice to Bidders and that failure to supply the Bid Security is automatic cause for rejection of the bid.

Please confirm

*Response required

Electronic Acknowledgment of Addenda*

Bidder understands and confirms that addenda posted in the "Addenda & Notices" section of this solicitation has been acknowledged.

Please confirm

*Response required

BID DOCUMENT CHECKLIST*

Please download the below Bid Document Checklist, complete, and upload.

- [Bid_Document_Checklist.pdf](#)

*Response required

STATEMENT OF OWNERSHIP*

FAILURE TO SUBMIT THIS DOCUMENT IS MANDATORY CAUSE FOR REJECTION OF YOUR PROPOSAL.

The Statement of Ownership document *must be* from this proposal package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

[Click here to go to the form](#)

*Response required

List of Designated Sub-Contractors*

Please access the DocuSign Link below in order to complete the list of designated contractors.

Failure to submit this document with your bid submission is mandatory cause for rejection of your bid.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

[Click here to go to the form](#)

*Response required

REQUESTED DOCUMENTS TO BE EXECUTED

Documents include:

- Signature Page
- Non Collusion Certification
- Affirmative Action Questionnaire

These documents must be received by Ocean County prior to contract award. However, submission of these documents with your proposal is strongly suggested to streamline the review process.

All documents should be from this proposal package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

*Response Suggested

[Click here to go to the form](#)

CONTRACT INFORMATION*

Should your company be awarded a contract with Ocean County, please provide the contact name and address where the contract documents should be mailed.

*Response required

Certificate of Employee Information Report

Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, a Contractor should present one of the following to the County of Ocean:

- (a) An existing federally approved or sanctioned affirmative action program.
- (b) A New Jersey Certificate of Employee Information Report Approval.
- (c) If the Contractor cannot present "a" or "b", the Contractor is required to submit a completed Employee Information Report (Form AA201 for Construction). This form is available [here](#).

QUESTIONS BELOW MUST BE ANSWERED BY ALL CONTRACTORS:

1. Do you have a Federally approved or sanctioned Affirmative Action Program?

If yes, please upload a photocopy of such approval.

2. Do you have a State of New Jersey "Certificate of Employee Information Report" approval?

If yes, please upload a photocopy of such certificate.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Copy of Bidder's New Jersey Business Registration Certificate

A Valid BRC is required Prior to Award of Contract. Please upload your company's BRC.

Use the following link to check the status of your company's BRC:

https://www1.state.nj.us/TYTR_BRC/jsp/BRCLoginJsp.jsp

NOTE: a BRC is not required at the time of bid submission, only prior to award of the contract.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Mandatory Equal Employment Opportunity Statement*

Does the BIDDER comply with the [#Mandatory Equal Employment Opportunity Statement?](#)

Yes

No

*Response required

Americans with Disabilities Act Provisions*

Does the BIDDER comply with the [#Americans with Disabilities Act Provisions?](#)

Yes

No

*Response required

Public Works Registration Certificate

All workers performing public works activities shall be paid prevailing wages in accordance with the "New Jersey Prevailing Wage Act," P.L.1963, c.150 (C.34:11-56.25 et seq.). All contractors and subcontractors shall comply with the provisions of "The Public Works Contractor Registration Act," P.L.1999, c.238 (C.34:11-56.48 et seq.).

- All named contractors must be registered with the Department of Labor and Workforce Development pursuant to the Public Works Contractor Registration Act at the time the proposal is received, or the proposal will be determined to be non-responsive.
- Any non-listed contractor must be registered with the Department of Labor and Workforce Development prior to physically starting work. It is the responsibility of the General Contractor to ensure that all non-listed sub-contractors comply.
- Contractors are encouraged to submit their and all named sub-contractors Public Works Contractor Registration Certificates with the bid.

This certificate must be received by Ocean County prior to contract award. However, submission of this certificate with your proposal is strongly suggested to streamline the review process.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

CERTIFICATION OF NON-DEBARMENT FOR PUBLIC WORKS CONTRACTS

Before a contracting agency can award a contract for public work as defined in P.L. 2019, c.406, the contractor must provide a written certification to the contracting unit that neither the contractor nor the contractor's affiliates are debarred by the federal government from contracting with a federal agency. The term "affiliate" means any entity that directly, indirectly, or constructively controls the contractor, or any entity that the contractor directly, indirectly, or constructively controls, or is subject to the control of a common entity. The law considers an entity to be in control of another entity if it owns, directly or indirectly, more than 50% of the ownership.

This form must be received by Ocean County prior to contract award. However, submission of this form with your proposal is strongly suggested to streamline the review process

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

[Click here to go to the form](#)

Contractor's Data Sheet

As evidence of the bidder's qualifications, (s)he shall be required to submit with this bid proposal information requested on the Contractor's Data Sheet.

Please complete the form by clicking on the link. Make sure that the email you complete the form with matches the email of your vendor account.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

DOCUSIGN WORKS BEST IN THE GOOGLE CHROME BROWSER

[Click here to go to the form](#)

ADDITIONAL VENDOR DOCUMENTATION

Please submit any additional information you wish to be considered as part of your bid package.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Acknowledgment of Documents and Forms from this Bid Package*

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package as forms change frequently and the most updated

forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

- Please confirm
- *Response required

Bid Documents*

By submitting a response to this solicitation, the Vendor understands and acknowledges that all required documents to this solicitation must be submitted and that failure to do so may be cause for rejection.

Bidder also understands that only one (1) bid submission shall be considered. Please DO NOT Submit a manual bid response. Submitting a manual response in addition to the electronic response is cause for rejection of your bid.

- Please confirm
- *Response required

Pricing Proposal

NORTHERN RECYCLING CENTER EDDY CURRENT SEPARATOR

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
1	GENERAL CONDITIONS: (Includes project management and administration, mobilization, insurance and bonding, scheduling, starting up the new processing equipment and testing equipment according to the Contract Specifications, etc.)	1	LS		
2	DEMOLITION: (Includes all demolition, removal work, and modifications to existing equipment required to meet the intent of the project.)	1	LS		
3	EDDY CURRENT SEPARATOR: (Includes designing, furnishing, and installing the eddy current separator, its chutes, its wiring & integration with the overall system, and all else required to meet the intent of the Contract Plans and Specifications.)	1	LS		
4	CONVEYOR POSITION 28: (Includes designing, furnishing, and installing the proposed Position 28 conveyor, its structural supports, its skirting, hopper, chute, any required modifications to structural steel for conveyor installation, its wiring & integration with the overall system, and all else as required to meet the intent of the Contract Plans and Specifications.)	1	LS		
5	RELOCATING COMPACTOR: (Includes designing, furnishing, and installing a new chute to feed the compactor, relocating the existing compactor, its wiring & integration with the overall system, and all else as required to meet the intent of the Contract Plans and Specifications.)	1	LS		

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
6	STEEL WORK: (Includes furnishing and installing the structural framing, service platform grating, and guard railings in accordance with the Contract Plans and Specifications.)	1	LS		
ALLOWANCE					
7	MISCELLANEOUS REPAIRS ALLOWANCE: Contractor shall include in the total bid an allowance of \$25,000 for the cost of any miscellaneous repairs (outside the base bid award) directed to be performed by the Owner as the facility.	1	LS	\$25,000.00	
TOTAL					



John P. Kelly, Director
Frank Sadeghi, Deputy Director
Robert S. Arace, Commissioner
Jennifer Bacchione, Commissioner
Virginia E. Haines, Commissioner

Jennifer L. Bowens, Purchasing Agent

**COUNTY OF OCEAN
ADMINISTRATION BUILDING
101 HOOPER AVENUE
TOMS RIVER, NEW JERSEY 08753**

BID

SPECIFICATIONS

FOR

**NORTHERN RECYCLING CENTER
EDDY CURRENT SEPARATOR**

2025

**Bid Category: Public Works, Park Equipment, and Construction
Services – 22**

David Heber
New Jersey Professional Engineer - License Number 56504

OCEAN COUNTY BOARD OF COMMISSIONERS
OCEAN COUNTY, NEW JERSEY

NORTHERN RECYCLING CENTER
EDDY CURRENT SEPARATOR

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INFORMATION FOR BIDDERS

0.00 Definitions

The attention of all bidders is directed to the Article of the Contract entitled, "Definitions", for definitions of the terms, Owner, Contractor, Engineer, Contract Documents, Contract, Contract Price, Specifications, Substantial Completion, Contract Drawings and General Conditions.

In the Contract Documents the words "Bid", "bid", "Proposal" and "proposal" are used interchangeably.

0.01 Location of Work

The site of the work to be performed under the Contract is located within Ocean County's Northern Recycling Center located at 601 New Hampshire Avenue, Lakewood, Ocean County, New Jersey.

0.02 Contract Drawings

The Contract Drawings, forming an integral part of this project, bear the following title:

NORTHERN RECYCLING CENTER
EDDY CURRENT SEPARATOR

OCEAN COUNTY BOARD OF COMMISSIONERS
601 NEW HAMPSHIRE AVENUE, LAKEWOOD, OCEAN COUNTY, NEW JERSEY 08701

Copies of the Contract Documents shall be furnished to interested parties as set forth in the Notice to Bidders.

0.03 Phases Comprising the Project

The work on this project will be performed under a single overall Contract comprising of demolition, general construction, equipment work, fire protection, and electrical work.

0.04 Date and Place of Opening Bids

Sealed Proposals for this work, as required by the Contract Documents and as specified herein, including the furnishing of all required plant, labor, equipment, materials, facilities and services, will be received at the time and place stated in the Notice to Bidders and at that time unsealed and the contents publicly announced.

0.05 Preparation of Bid

Bids must be submitted on the prescribed forms. In the event of a discrepancy between the unit price bid in words and in figures, the unit price is to govern. In the event of a discrepancy between the unit price bid for any pay item and the extension shown for that item under the column of the proposal form designated "Amount", the unit price is to govern. Where a unit price is bid for a pay item but no extension is provided, the Engineer will provide the extension based on the unit price bid and the estimated quantity for that pay item. Where an extension is provided by the bidder in the "Amount" column, but no unit price appears in the "Unit Price" column of the proposal form, the Engineer will provide the unit price by dividing the "Amount" figure provided by the Bidder by the estimated quantity. When no figure is provided by the Bidder in both the "Unit Price" and "Amount" columns for one or more pay items, or where no figure is provided in the "Amount" column for one or more lump sum pay items, the Owner shall reject the Bid.

The Bid shall contain the full name and address of every person, partnership, corporation, and limited liability company having an interest in the bid. In addition, any trade name of the bidder must be set forth in full. When an individual proprietor bids, the bid must be signed for or on behalf of the proprietor. When a partnership bids, the bid must be signed for or on behalf of each general partner. When a corporation bids the president and secretary (or assistant secretary) must sign, except that other officers of the corporation may sign, provided a corporate resolution, certified by the corporate secretary (or assistant secretary) duly authorizing such other officers to sign, accompanies the bid. When a limited liability company ("LLC") bids, the bid must be signed by a managing member of that limited liability company. Bids signed by an agent must be accompanied by a Power of Attorney duly acknowledged before a notary public, evidencing the authority of the agent to act for the principal or principals. All corporations, partnerships, and limited liability companies must complete the statement form which appears on the Bid pages pursuant to the requirements of N.J.S.A. 52:25-24.2.

Bidders with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10 percent or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10 percent or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10 percent or greater beneficial interest.

0.06 Right to Accept or Reject Bids

The Owner will evaluate bids and any award will be made to the lowest responsible bidder whose bid conforms to this solicitation in accordance with N.J.S.A. 40A:11-4. The Owner reserves the right to reject all bids pursuant to N.J.S.A. 40A:11-13.2 and any bid that is nonresponsive or submitted by a bidder that is not responsible, and to waive minor informalities or irregularities in bids received in accordance with applicable law.

The Owner may reject bids which are incomplete, conditional, or obscure, or which contain additions not called for, alterations, or irregularities of any kind.

No bid will be accepted which does not contain a price for every bid item contained in the Bid forms.

No contract for work shall be awarded to a contractor or subcontractor who is included on the New Jersey State Treasurer's list of debarred, suspended or disqualified bidders. Submission of false, deceptive, or fraudulent statements or information by bidders shall result in bid rejection or, if applicable, revocation of an awarded contract. Additionally, any such bidder will be subject to the criminal and/or civil penalties provided by all applicable state and federal laws.

0.07 Withdrawal of Bids

N.J.S.A. 40A:11-23.3 authorizes a bidder to request withdrawal of a public works bid due to a mistake on the part of the bidder. A mistake is defined by N.J.S.A. 40A:11-2(42) as a clerical error that is an unintentional and substantial computational error or an unintentional omission of a substantial quantity of labor, material, or both, from the final bid computation.

A bidder claiming a mistake under N.J.S.A. 40A:11-23.3 must submit a request for withdrawal, in writing, by certified or registered mail to the Owner. The bidder must request withdrawal of a bid due to a mistake, as defined by the law, within five business days after opening of the bids. Since the bid withdrawal request shall be effective as of the postmark of the certified or registered

mailing, Owner may contact all bidders, after bids are opened, to ascertain if any bidders wish to, or already have exercised a request to withdraw their bid pursuant to N.J.S.A. 40A:11-23.3.

A bidder's request to withdraw the bid shall contain evidence, including any pertinent documents, demonstrating that a mistake was made. Such documents and relevant written information shall be reviewed and evaluated by the owner's designated staff pursuant to the statutory criteria of N.J.S.A. 40A:11-23.3.

If a bidder withdraws a bid, the bidder shall be disqualified from future bidding on the same project, including whenever all bids are rejected pursuant to N.J.S.A. 40A:11-13.2.

0.08 Items of Work

The Bidder understands that the Owner may, without limitation, increase, decrease or eliminate items of work to be performed under the Contract. The Bidder further understands that in case of any error or inconsistency in the figures, the unit prices stated in the proposal shall govern.

The prime Contractor (the bidder) shall perform on the site and with its own organization, work equivalent to at least 25% (by cost) of the total amount of work to be performed under this Contract. This percentage may be reduced by a supplemental agreement to this Contract if during the performance of the work the Contractor requests a reduction and the Owner determines that the reduction would be to the advantage of the Owner.

0.09 Addenda and Interpretations

No interpretations of the meaning of the Contract Drawings, Specifications or other Contract Documents will be made to any bidder orally. Any request for interpretations shall through the County bid portal, and, to be given consideration, must be received by the Questions Submission Deadline stipulated in Procurement Portal. Any and all revisions, interpretations, or supplemental instructions will be in the form of written addenda to the Contract Documents which, if issued, will be distributed by the Procurement Portal on which the Contract Documents were obtained no later than seven (7) days, Saturdays, Sundays, and holidays excepted prior to the date fixed for opening of bids.

Failure of any bidder to review any addenda shall not relieve the bidder from any obligation under such addenda. All addenda so issued shall become part of the Contract Documents. If any addenda materially change the solicitation, the Owner may postpone the date for the opening of bids within the provisions of N.J.A.C. 5:34-9.3.

0.10 Bid Security

Each bid must be accompanied by a certified check, cashiers check, bid bond or e-bond prepared on the "Special Surety Requirements Sample Form" in the Contract Documents, or on an equivalent form which has been approved by Owner's attorney; duly executed by the Bidder as principal and having as surety thereon a surety company duly authorized to issue bonds in New Jersey, in the amount of 10% of the total amount bid, but not in excess of \$20,000.

Such checks or bid bonds except those of the three apparent lowest responsible bidders, shall, unless otherwise requested by the bidder, be returned within ten (10) days after the opening of the bids, Sundays and holidays excepted, and the bids of such bidders shall be considered as withdrawn. Within three days, Sundays and holidays excepted, after the awarding and signing of the Contract and the approval of the Contractor's performance bond, insurance and other submissions required in the Information for Bidders, the bid security of the remaining unsuccessful bidders shall be returned to them. The check or bid bond of the bidder to whom the Contract is awarded shall be retained until the required performance bond, insurance and other submissions

required in the Information for Bidders is submitted and approved and the Contract is signed. If, for any reason, the Owner does not make an award within sixty (60) days after the opening of bids, the Owner may request that each of the three apparent lowest responsible bidders agree to hold their bids open for consideration for a longer period.

Bid security shall remain in effect for a minimum of sixty (60) calendar days from the date of opening of bids, except as set forth above. In the event that a bidder shall agree to an extension of the sixty (60) day period for making award, such bidder shall be required to ensure that their bid security shall remain in effect to cover the period of extension.

An attorney-in-fact who signs any bid bonds or other bonds required by the Contract Documents shall file with each bond a certified copy of a Power of Attorney duly acknowledged before a notary public authorizing the attorney-in-fact to execute said bonds in behalf of the surety.

0.11 Certificate of Surety

Each bidder must accompany his bid with an appropriate certificate from a surety company duly authorized to issue bonds in New Jersey and satisfactory to the Owner, stating that such surety company will provide the bidder with the bonds in such sums as are required by the Contract Documents for the faithful performance of the Contract including the payment of the labor and material furnished in the prosecution thereof and the faithful performance of the contract provisions relating to Contract warranties and the repair and maintenance of the Contract Work and keeping the same in good and serviceable condition. All surety bonds in connection with the advertisement and award of this Contract must be written by a surety company whose qualification and authority to issue bonds in New Jersey has been certified by the New Jersey Commissioner of Insurance pursuant to the provisions of N.J.S.A. 17:17-1 et seq. The Certificate of Surety must have attached to it a valid power of attorney, issued by the surety, stating that the person who signed the Certificate on behalf of the surety is authorized to commit the surety to the issuance of bonds in an amount at least equal to the total bid.

With respect to all payment and performance bonds in the amount of \$850,000 or more, the surety must hold a current Certificate of Authority issued by the United States Secretary of the Treasury pursuant to 31 U.S.C. Sec. 9305, that is valid in New Jersey as listed annually in the United States Treasury Circular 570, all as required by and subject to the exceptions and exemptions of N.J.S.A. 2A:44-143.

With respect to payment and performance bonds in the amount of more than \$3.5 million, there are further certification requirements under N.J.S.A. 2A:44-143 which must be observed.

N.J.S.A. 2A:44-143 requires that a Surety Disclosure Statement and Certification be attached to the payment and performance bonds. The requisite form of such Certification is set forth in the Bid pages herein. The Owner may not accept a payment bond or a performance bond unless the required Surety Disclosure Statement and Certification, complete in all respects and duly acknowledged according to Law, is attached thereto.

0.12 Obligation of Bidders

At the time of the opening of bids, each bidder will be conclusively presumed to have read and to be thoroughly familiar with the Contract Documents, including all addenda and interpretations issued. The failure or omission of any bidder to examine the Contract Documents and any addenda thereto or interpretations thereof shall in no way relieve the bidder from any obligation in respect of his bid. Failure of the bidder to acknowledge the bidder's receipt of any notice or revisions or addenda to the advertisement or bid documents, in the manner set forth in the Bid pages of the Contract Documents, shall be deemed a fatal defect that shall render the bid proposal unresponsive and that cannot be cured by the Owner.

0.13 Examination of and Familiarity with the Work

Each bidder must inform himself fully of the conditions under which the Work will be performed. Failure to do so will not relieve the successful bidder of the obligation to furnish all plant, labor, material, equipment, facilities and services necessary to carry out the provisions of the Contract Documents, and to complete the Work for the consideration set forth in the bid.

Bidders are expected to read and become familiar with the Contract Documents, including all addenda; to visit the site of the Work; to make their own estimates of the plant, labor, material, equipment, facilities and services needed to perform the Work; to make any required tests and inspections and to evaluate the difficulties attending the execution of the proposed Contract, including local conditions, site conditions, location and availability of utilities, labor, transportation facilities, uncertainties of weather, subsurface conditions and other contingencies. In no case will the Owner or the Engineer assume any responsibility whatsoever for any interpretation, deduction or conclusion to be drawn from the Bidder's examination of the site where the Work is to be performed. Failure to become aware of all conditions affecting the Work will not relieve the successful bidder from assuming all responsibility for estimating the difficulties and cost of completely performing the complete Work. The failure or omission of any bidder to receive or examine any form, instrument or document; or to make any required tests or inspections shall in no case relieve the successful bidder from any obligation under the Contract Documents.

Neither the Owner nor the Engineer make any express or implied representations or warranties as to the accuracy of the information shown on drawings of any previous construction or any interpretation of same. The Contractor shall ascertain by his own field inspections the accuracy of the information shown on any existing drawings or reports.

0.14 Bidder Submissions

In order to be considered an adequate submission, each mandatory item listed on the Vendor Questionnaire must meet the requirements of the relevant statute and, in the case of the execution of the Contract Documents, must be legally binding on the bidder. The failure of the bidder to provide any item in proper form by the time set for award shall result in the rejection of the Bid. These items identified on the Vendor Questionnaire are mandatory for award.

0.15 Rescission of Award

It is expressly understood and agreed by the bidder that, in addition to and not in lieu of any other provisions of the Contract Documents, the Owner shall condition any award made by it upon consummation of financing and/or upon receipt of the necessary approvals of the State and Federal agencies involved and, further, may, at any time, rescind any award made by it, if financing satisfactory to the Owner cannot be consummated as contemplated, if such financing does not continue to be available on terms satisfactory to the Owner, if the requisite State and Federal agencies do not approve said Contract, or if any court of competent jurisdiction shall enjoin or otherwise prohibit the Owner from proceeding with the work.

0.16 Failure of Bidders to Enter Contract

On a date and time to be set by the Owner and notified to the successful bidder, but in any case within twenty-one (21) days, Sundays and holidays excepted, after notification of the award of the Contract, the successful bidder shall deliver as directed at time of execution to the Owner, in quadruplicate, the duly executed Contracts. The successful bidder shall simultaneously deliver to the Owner an executed Performance Bond of a responsible surety company authorized to issue bonds in New Jersey and satisfactory to the Owner, as specified herein, and evidence of all certificates of insurance required in the Contract Documents.

The Contractor shall also submit at that time a detailed Cost Breakdown as further described in the Article of the Information for Bidders, entitled, "Cost Breakdown, Construction Schedule and Shop Drawing Schedule." This Cost Breakdown must be satisfactory to the Owner prior to the Owner's signing the Contract and may or may not, in the discretion of the Engineer, be used by the Engineer as a basis for evaluating periodic Applications for payment.

The Contractor shall also submit at that time a detailed Construction Schedule Bar Graph and detailed Shop Drawing Submission Schedule, which are further described in the Article of the Information for Bidders, entitled, "Cost Breakdown, Construction Schedule Bar Graph and Shop Drawing Submission Schedule" and which must be satisfactory to the Owner prior to the Owner's signing the Contract. Copies of the referenced documents shall be provided to the Engineer at the same time.

Should the successful bidder fail or refuse to execute and deliver the Contract, bonds, certificate of insurance, Cost Breakdown, Construction Schedule Bar Graph, Shop Drawing Submission Schedule, or any of them, satisfactory to the Owner, within twenty-one (21) days after the Contractor has received notice of the award, Sundays and holidays excepted, or within such further time period as the Contractor and Owner may in writing agree, the Owner shall have the right to rescind the award and declare the amount of the Contractor's bid security to be forfeited to the Owner, as liquidated damages for such failure or refusal.

0.17 Security for Faithful Performance and Maintenance (Bonds)

The execution of the Contract is contingent *inter alia* upon the Contractor's furnishing of the Performance Bond as set forth herein.

The Performance Bond shall be in a sum equal to 100% of the accepted bid as security for the faithful performance of the Contract and for the payment of all persons performing labor or furnishing materials in connection with the Contract. The Performance Bond shall remain in effect until completion and acceptance by the Owner as specified in the Article of the Contract, entitled "Final Estimate and Payment (XXXVI)"; and the furnishing of the Maintenance Bond to cover the Contractor's obligations specified in the Article of the Contract, entitled "Maintenance Period (XLI)".

The Maintenance Bond shall be in a sum equal to 100% of the Contract Price according to N.J.S.A. 40A:11-22, as security for the faithful performance of the Contract during the Maintenance Period, as specified in the Articles of the Contract, entitled "Warranty (XL)" and "Maintenance Period (XLI)". The Maintenance Bond shall be furnished to the Owner prior to completion and acceptance by the Owner as specified in the Article of the Contract, entitled "Final Estimate and Payment (XXXVI)" and shall remain in effect for a period of two (2) years from such completion and acceptance.

The Performance Bond and Maintenance Bond shall be in the forms included in the Contract Documents, or in equivalent forms which have received the prior approval of the Owner's Attorney.

An attorney-in-fact who signs any bonds must file with each bond a certified copy of his power of attorney authorizing him to execute said bonds on behalf of the surety.

0.18 Interference or Delay

Insofar as possible, the Contractor must employ such methods or means so as will not cause any interruption of or interference with the Work of any other contractor or subcontractor on this Contract or on any other on-going project contracted for by the Owner, or operations conducted by

the Owner, whether or not they are directly associated with this Contract. All contractors will be required to cooperate to the end so that the Work will be brought to a successful conclusion as rapidly as possible, but the Owner cannot guarantee that no interference or delay will be caused thereby. In the event that the delay is caused by the Owner's negligence, bad faith, active interference, or tortious conduct, then the Contractor may make a claim for its damages caused by said delay. The Owner will review and evaluate the merits of each claim submitted. The Owner will endeavor to work cooperatively with the Contractor to resolve these issues in a timely manner. The Contractor shall refer to the requirements of Article 0.24 Information for Bidders, entitled, "Cost Breakdown, Construction Schedule and Shop Drawing Submission Schedule."

0.19 Lines and Grades

Attention of bidders is directed to the following specific requirements regarding the establishing and transferring of lines and grades.

- a) The Engineer will establish the locations as shown on the Contract Drawings. The Contractor shall run all offset lines, set the drive stakes, set batter boards, and take all other measurements in order to lay out the Work in accordance with the Contract Documents. The Contractor shall be aware that the alignment may change slightly due to the existing utilities.
- b) No separate payment will be made to the Contractor for the cost of establishing lines and grades or for the cost of assisting the Engineer in checking of the Work or for delay in checking the Work, but the cost thereof shall be included in prices bid for the various items.

0.20 Insurance Requirements

The Contractor shall not commence any work under the Contract until the Contractor has obtained, at the Contractor's own expense, all insurance as set forth in the Contract Article entitled, "Insurance (VII)" and has delivered all certificates of insurance as required by the Article VII, Insurance, set forth in the Contract. The Contractor shall not permit any subcontractor of any tier to begin work until the required insurance and certificates of insurance have been provided to the Owner and Engineer by the subcontractor. Such insurance and certificates of insurance must be in a form satisfactory to the Owner.

Ocean County, Atlantic Coast Recycling, and Mott MacDonald shall be named as additional insureds on all certificates of insurance submitted by the Contractor, except Workers' Compensation Insurance.

0.21 Time Limit

The Contractor is required to begin work within ten (10) calendar days of Contractor's receipt of a written Notice to Proceed issued by the Owner. The Contractor shall prosecute the work diligently and uninterruptedly, at a rate to ensure completion sufficient for final acceptance of all work within **150 consecutive calendar days** from the day of the Contractor's receipt of the written Notice to Proceed. The Contractor shall comply with all provisions in the Contract Documents regarding intermediate times of completion of construction, which are indicated below.

The Contractor shall complete certain minimum amounts of work under this Contract by specified times as shown in the following Schedule of Intermediate Completion Times.

Intermediate Completion Time, In Consecutive Calendar Days After Contractor's Receipt of Written Notice to Proceed	Minimum Percentage Dollar Value of Work to be Completed Under the Contract (Percentage of Completion)
30	10%
120	50%
150	100%

Time is of the essence for final completion of all work within the time period starting from the Contractor's receipt of the Notice to Proceed and for the intermediate completion of the work by the above Intermediate Completion Times.

0.22 Damages

The bidder shall refer to the Article of the Contract entitled, "Damages and Liquidated Damages (XXII)".

0.23 Site Conditions

Bidders are encouraged to visit the site to witness the conditions.

0.24 Cost Breakdown, Construction Schedule and Shop Drawing Submission Schedule

On a date and time set by the Owner and notified to the successful bidder, but in any case within twenty-one (21) days, Sundays and holidays excepted, after notification of the award of the Contract, the successful bidder shall deliver to the Owner and the Engineer (in addition to the other documents referred to in the Article of the Information for Bidders entitled, "Failure of Bidders to Enter Contract (0.16)"), a detailed Cost Breakdown, a detailed Construction Schedule Bar Graph, and a detailed Shop Drawing Submission Schedule. The breakdown and schedules are for the review of the Owner and the Engineer who may elect to comment upon the contents as it may suit their respective interests. No Contract will be signed by the Owner until these documents are accepted by the Owner and Engineer. The Contractor hereby agrees to any extension of the time limit set forth in N.J.S.A. 40A:11-24(b) necessary for this purpose.

Neither the comments upon nor the acceptance of the Cost Breakdown or Construction Schedule Bar Graph or Shop Drawing Submission Schedule by the Owner or Engineer shall relieve the Contractor of his responsibility for the means, methods, techniques, sequences and procedures of construction, or for the safety precautions and programs incident thereto; and neither the Owner nor the Engineer will be responsible for the Contractor's failure to perform the work in accordance with the Contract Documents.

The detailed Cost Breakdown will be a reference document to which the Owner and Engineer may (but need not) refer in determining the value of the work-in-place in order to approve the periodic Applications for Payment. The detailed Cost Breakdown must be sufficiently detailed to permit complete appraisal of the work to the degree that will permit all parties to be fairly treated. This breakdown may, but will not necessarily be used as a basis for determining the cost of any change orders which might occur during the period of construction.

The cost breakdown shall limit the total cost of engineering and preparation of shop drawings at no more than 10% of the contract value. No more than 30% of the contract

value shall be paid for the fabrication of conveyor and eddy current separator prior to the equipment being delivered to the site.

The Cost Breakdown shall set forth, in detail, a true and representative breakdown of costs, by each major Specification Division, for each of the individual components listed in the Scope of Contract; and shall include the expected delivered costs of all materials and equipment to be installed and the costs for the plant, labor, construction equipment, facilities, services and overhead to be incurred in connection with each such component and in connection with the Contract generally. The Cost Breakdown must also include line items for testing and maintenance, where applicable. The Cost Breakdown shall, as nearly as possible, reflect the true cost of each item, and the Owner reserves the right to reject the Cost Breakdown if the Owner considers it unbalanced, unreasonable, unsatisfactory or lacking in detail. The burden of proof shall be upon the Contractor to substantiate the correctness of the proposed Cost Breakdown as fit for its intended purpose. If the Contractor fails to provide a Cost Breakdown satisfactory to the Owner, the Owner shall, in its sole discretion, have the right to have a Cost Breakdown supplied by the Engineer and, in such case, the Contractor agrees to be bound by the Cost Breakdown to be supplied by the Engineer. In preparing his bid, the Contractor shall limit mobilization costs in accordance with N.J.A.C. 7:14-2.9(b).

The Construction Schedule Bar Graph is to be a graphical representation of all significant construction and construction-related activities indicating their duration and the concurrence with the various contract activities.

The Construction Schedule Bar Graph must be in accordance with the calendar days permitted for construction and the Intermediate Completion Times and must indicate appropriately the percentage of work scheduled for completion by any given day of the Schedule.

The detailed Shop Drawing Submission Schedule must account for each item for which shop drawings are required, must indicate the equipment manufacturer proposed for use and the time frame estimated from first submittal to projected final approval of any item.

The Contractor shall enter his actual progress on the Construction Schedules and shall deliver copies to the Owner and Engineer at least once each month. If at any time, in the opinion of the Owner, progress is not being maintained as required by the Construction Schedules, amendments shall be made to the Construction Schedules to regain the progress in the work required by the Contract Documents, without additional cost to the Owner. In this circumstance the Owner may require the Contractor to increase its level of effort and to submit for review any amendments to the Construction Schedules as the Owner deems necessary to demonstrate how the required rate of progress will be regained. The amendments shall be subject to the review of the Owner, but action or inaction by the Owner shall not relieve the Contractor of any responsibility under the Contract. Failure of the Contractor to comply with the requirements of the Owner shall be grounds for the Owner to order the Contractor to discontinue the work under the Article of the Contract entitled, "Right of the Owner to Terminate the Contract (XLIII)" or Give a Three (3) Day Deficiency Notice.

Further, the Contractor may be required by the Owner to submit supplementary Construction Schedules, concurrent with applications for monthly progress payments, which will show the order in which the Contractor will start various parts of the work and the estimated dates of completion of these parts. Such submissions, acceptable to the Owner and Engineer, may be a prerequisite for consideration of applications for progress payments and shall be revised to indicate the progress of the work and the projected schedule at the time of the applications for the progress payments.

0.25 Field Measurements

Contractor to field measure the existing structures, equipment, pits prior to the design and fabrication of new equipment and structural elements.

0.26 Preconstruction and Progress Photographs N/A (NOT IN CONTRACT)

0.27 Subsurface Structures and Utilities N/A (NOT IN CONTRACT)

0.28 Materials and Equipment

In order to establish standards of quality, the Engineer, in the detailed specifications, may have referred to certain "Brand Name" products by name and/or catalog number. This procedure is not to be construed as eliminating from competition other products of equivalent or better quality by other suppliers or manufacturers where fully suitable in design and manufacture.

The Contractor's bid must be based upon the materials and equipment named in the Specifications, or materials and equipment of equivalent quality and effectiveness. The first named supplier shall be considered as the standard of reference, for the Engineers design and for the equivalency determination to be made by the Engineer.

A. Proprietary Goods and Services

Engineering may require Contractor to provide certain specified goods and services that are proprietary in nature. In such cases, the goods and services may be purchased by stipulating the proprietary goods and services in the bid specification in any case in which the resolution authorizing the contract so indicates, and the special need for such proprietary goods or services is directly related the performance, completion or undertaking of the purpose for which the contract is awarded.

B. Equivalent Materials and Equipment

Following execution of the Contract with the successful bidder, the Contractor may then submit to the Engineer for consideration the use of materials and equipment which the Contractor believes to be equivalent to or better than those specified. Requests for review of equivalent items of material and equipment will not be accepted by the Engineer from anyone other than the Contractor.

To be considered an equivalent, the materials and equipment must be shown by the Contractor to meet all requirements of the Specifications herein; be of similar type, function and quality; be cost effective, as compared to the materials and equipment named, in all respects, including first costs, operating costs and maintenance costs; and must perform satisfactorily.

C. Substitution of Materials and Equipment

The procedure to be followed for review of proposed substitutions for the materials and equipment not equivalent to those specified is as follows:

Requests for review of substitute items of material and equipment will not be accepted by the Engineer from anyone other than the Contractor. If the Contractor wishes to furnish or use a substitute item of material or equipment, the Contractor shall make a written application to the Engineer for acceptance thereof, certifying that the proposed substitute will be similar and of equal or better substance and quality to that specified, will be suited to the same use and will perform properly the same functions as that specified.

The application will state whether or not acceptance of the substitute for use in the work will require a change in the Drawings or specifications to adapt the design to the 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 shall be identified in the application and available warranties, 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 a substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Engineer in evaluating the proposed substitute.

The Engineer may require the Contractor to furnish at the Contractor's expense, additional data about the proposed substitute including without limitations the anticipated reduction of the Contract Price. The Engineer will be the sole judge of acceptability and no substitute will be ordered or installed without the Engineer's prior written acceptance. The Owner may require the Contractor to furnish, at the Contractor's expense, a special performance guarantee or other surety with respect to any substitute.

D. Furnishing of Different Materials or Equipment: Substitute and Equal

The following provisions shall apply to the furnishing of materials or equipment that are substitutes for or that are to be considered as equals to those called for in the specifications.

As used herein, "substitute" materials or equipment refers to a difference between what the Engineer designed and what the Contractor proposes to provide such that some design change or other accommodation would be required. A substitute would include, but not be limited to, materials or equipment that accomplish the same goal as the specified materials or equipment, but may have different size, shape, electrical characteristics, or structural or mechanical requirements, and, therefore, would require possible redesign by the Engineer, or possible changes in construction.

As used herein, "equivalent" or "equal" materials or equipment refers to materials or equipment that are essentially the same as those which were specified, but come from a different manufacturer, and may therefore have minor differences but do not require any redesign, or construction changes to accommodate.

It shall be the responsibility of the Contractor to ensure that materials and equipment to be furnished, including any substitute or any equal materials or equipment, fit the space available. The Contractor shall make necessary measurements to ascertain space requirements, including those for connections.

All redesign and other additional costs incurred by the Owner as a result of the Contractor's furnishing substitute or equal materials or equipment shall be borne by the Contractor.

All materials and equipment must be new unless expressly stated otherwise in the Contract Documents.

The Contractor is responsible for providing documentation for review by the Engineer of any proposed substitute materials or equipment and any proposed equal materials or equipment so as to enable the Engineer to determine if the proposed materials or equipment are acceptable. For any proposed substitute materials or equipment, the Engineer will record the time required by the Engineer and the Engineer's consultants in evaluating the Contractor's proposals for any substitutions for items named in the specifications and in making changes in the Drawings or Specifications occasioned thereby.

Whether or not the Engineer accepts a proposed substitute, the Contractor shall reimburse the Owner for the charges of the Engineer and the Engineer's consultants for evaluating any proposed substitution for named items. All redesign and other additional costs incurred by the Owner as a result of the Contractor's furnishing substitute materials or equipment shall be borne by the Contractor. The Owner shall bear the cost of reviewing "proposed equivalent or equal" materials and equipment.

Following review and written acceptance by the Engineer and Owner, the Contractor may proceed with ordering and installing the substitute materials and equipment, or the equivalent or equal materials and equipment, as the case may be.

0.29 Construction Terms and Conditions

The bidder is advised that the terms and conditions set forth in the Contract Documents will be rigidly enforced. This Information for Bidders is included as part of the Contract Documents.

0.30 Nondiscrimination Provisions

Bidders are required to comply with all applicable Federal and State Statutes, Rules and Regulations including but not limited to Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d-2000D-4A) and the discrimination and affirmative action provisions of N.J.S.A. 10:2.1 through 10:2-4, the New Jersey Law against Discrimination, N.J.S.A. 10:5-1, et. seq., and the rules and regulations promulgated pursuant thereto.

Prior to award, the successful bidder must submit a signed certification stating that it and its subcontractors shall comply with the discrimination and affirmative action provisions of N.J.S.A. 10:2-1 through 10:2-4, the New Jersey Law Against Discrimination (N.J.S.A. 10:5-1 et. seq.), and the rules and regulations promulgated pursuant thereto, including but not limited to N.J.A.C. 17:27-1 et. seq.

Successful bidders shall, upon request, submit a list of all subcontractors who will perform work on the project and written signed statements from authorized agents of the labor pools with which they will or may deal for employees on the work, together with supporting information to the effect that said labor pools will affirmatively cooperate in or offer no hindrance to the recruitment, employment, and equal treatment of employees seeking employment and performing work under the contract or, a certification as to what efforts have been made to secure such statements when such agents or labor pools have failed or refused to furnish same prior to the award of the Contract.

0.31 State Mandatory Affirmative Action Language, Construction Contracts

Refer to "Mandatory Equal Employment Opportunity" language provided on Procurement Portal.

0.32 Solid Waste Disposal

The bidder is directed to N.J.A.C. 7:26-1, et. seq., Rules of the Department of Environmental Protection, Division of Solid and Hazardous Waste. The Contractor shall be required to follow the applicable rules and regulations. In general, these regulations require that all solid wastes (including, without limitation, concrete, black top, demolition or construction debris, unacceptable fill, etc.) must be disposed in an approved, licensed disposal facility. Also, any truck hauling this type of material to a landfill must obtain all permits and/or licenses required by the New Jersey Department of Environmental Protection.

Prior to the removal of any solid waste material from the site, the Contractor shall submit a written statement from a licensed solid waste disposal facility operator which grants the Contractor permission to use the facility for the disposal of materials originating at the Owner's project site.

Under the price bid, the bidder shall include the cost of all permit and disposal fees and hauling costs which may be necessary for compliance with all applicable laws and regulations.

0.33 New Jersey State Sales and Use Tax Exemption

Materials and equipment purchased for permanent installation in the project will be exempt from the New Jersey State Sales and Use Tax. Each Bidder shall take this exemption into account in calculating his bid. It shall be the Contractor's responsibility to file the necessary exemption applications.

0.34 Allowances

The Contractor shall include the allowance item in their bid. Details of the work covered by such allowances will be found under the Specification Section 012100.

The Contractor will submit a proposal for the work as requested by the Owner for review. A Contract adjustment for the difference between the actual invoiced cost and the Contract allowance will be made through a change order with either a reduction in cost to the contract (if actual invoiced cost is lower than allowance amount indicated below) or an addition to the contract price (if the invoiced cost of the item exceeds the allowance).

0.35 Department of Labor, Safety and Health Regulations

The Contractor shall comply with all applicable requirements of the Federal Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1972 (P.L. 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (P.L. 91-54).

0.36 Prompt Payment

Provided the Contractor is performing all obligations required under the Contract Documents, the Owner agrees to make payment to the Contractor at least once each month as the work progresses and to retain only such amounts as may be permitted by law and the Contract Documents and in accordance with Prompt Payment Act, N.J.S.A. 2A:30A-1 et seq.

0.37 Construction Plans and Specifications

Upon award of the Contract, the Contractor may obtain, free of charge, four (4) complete sets of Drawings and Specifications. Additional sets of Drawings and Specifications may be purchased by the Contractor for the cost of printing and shipping.

0.38 Bidders Referred to Laws and Safety

The attention of all bidders is specifically directed to the provisions of Federal, State, County and Municipal laws, statutes and regulations that may apply to the work, including particularly all safety regulations. The provisions of the U.S. Occupational Safety and Health Act (OSHA) and its implementing regulations and all safety standards promulgated thereunder shall be observed by the Contractor in the performance of the Contract, whether or not they would otherwise be applicable.

Such provisions refer to obstruction of streets, traffic safety, open burning, maintaining of signals, excavation, storing and handling of explosives, etc. Particular note is to be taken of those provisions affecting the Contractor and his employees in the prosecution of the work and his relation to any political subdivision or person. All applicable laws, statutes, ordinances and regulations shall be obeyed and complied with by the Contractor, his subcontractors and all of his representatives, including, without limitation, all applicable provisions of Federal and New Jersey State Labor Laws.

The Contractor shall be solely and completely responsible for conditions in, on or near the job site, including safety of his operations during performance of the work. This requirement will apply continuously 24 hours a day until final acceptance of the Work by the Owner and shall not be limited to normal working hours.

Construction observation of the Contractor's performance by the Engineer is not intended to and shall not include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.

The Contractor shall provide to the Owner and the Engineer, in writing, prior to beginning any work, the names and emergency telephone numbers of the Contractor's "competent person" or "competent persons" as defined in 29 CFR Section 1926.32 (f), one or more of whom shall be present at the construction site at all times whenever construction activities are taking place. Prior to beginning any work, the Contractor shall also submit emergency action plans, where applicable and as required by OSHA, Title 29 CFR, Part 1910 and Part 1926. In addition to any action plan required by OSHA, a written emergency action plan shall be required for confined space entry, trenching/excavation, underground and overhead utilities.

0.39 Subcontractor Requirements

The laws pertaining to public bidding in the State of New Jersey on contracts for the erection, alteration or repair of any public building, require that a prime contractor list his subcontractors at the time of bid for any of the following subcontracted work:

- (1) The plumbing and gas fitting and all kindred work;
- (2) Steam power plants, steam and hot water heating and ventilating apparatus and all kindred work;
- (3) Electrical work; and
- (4) Structural steel and ornamental iron work.

Whenever a bid sets forth **more than one** subcontractor for any of the specialty trade categories (1) through (4) specified hereinabove in this section, the bidder shall submit to the Owner a certificate signed by the bidder listing each subcontractor named in the bid for that category. The certificate shall set forth the scope of work for which the subcontractor has submitted a price quote and which the bidder has agreed to award to each subcontractor should the bidder be awarded the contract. The certificate shall be submitted to the Owner simultaneously with the list of the subcontractors. The certificate may take the form of a single certificate listing all subcontractors or, alternatively a separate certificate may be submitted for each subcontractor. If a bidder does not submit a certificate or certificates to the Owner, the Owner shall award the contract to the next lowest responsible bidder.

0.40 Pre-Construction and Construction Conferences

Before construction is started, a preconstruction conference shall be held. During the first conference the Owner, his Engineer, and the Contractor will discuss the procedures to be followed by the Contractor during the construction process.

During the construction, job meetings shall be held at frequent intervals (a minimum of one every other week) to review construction and restoration progress and to resolve difficulties which might delay completion of the work. Attendees at these meetings shall include representatives of the Owner, the Engineer and the Contractor.

0.41 State Wage Rates and Contractor Registration

The Contractor's attention is directed to the prevailing wage rates listed on the State Wage Rate (SWR) pages and to the applicable provisions of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq., governing the prevailing rates of wages for workmen who are employed on this project. All applicable provisions of said Prevailing Wage Act and Amendments thereto shall be considered part of this Contract and made a part hereof.

The Bidder does also declare and represent that in the event of any change of such prevailing rates at any time before the execution and delivery of the Contract between the Bidder and the Owner for the work of construction of the project, or at any time thereafter, the new rates, if applicable, will become minimum rates for work performed thereafter under said Contract. No increase in the Contract price shall be claimed by the Bidder and no such increase will be granted by the Owner as a result of such change.

The Contractor is specifically directed to the following requirements as set forth by the Act (to the extent applicable):

- a. All workmen engaged in the performance of services directly under this public work Contract shall be paid not less than the prevailing rate of wages as specified.
- b. Each Contractor and subcontractor shall keep an accurate record showing the name, craft trade, and actual hourly rate of wages paid to each workman employed by him in connection with said public work. Records shall be preserved for two years from date of payments.
- c. The Contractor and Subcontractor shall post the prevailing wage rates for each craft and classification involved, as determined by the Commissioner of Labor and Industry, including the effective date of any changes thereof, in prominent and easily accessible places at the site of the work, or at such place or places as are used by them to pay workmen their wages.
- d. In the event that it is found that any workman employed by the Contractor or any Subcontractor covered by such a Contract is paid less than the required wage rates, the Owner may terminate the Contractor's or Subcontractor's right to proceed with the work, or such part of the work as to which there has been a failure to pay required wages, and to prosecute the work to completion or otherwise, and the Contractor and his Surety shall be liable to the Owner for any excess costs occasioned thereby.
- e. The Contractor and Subcontractors shall file written statements to the Owner certifying to the amounts then due and owing from them to any and all workmen or wages due on account of said work. Said statements shall be filed prior to the final payment certificate and again prior to the final payment of any retained

percentage funds by the Owner. The statements shall set forth the names of the persons whose wages are unpaid (if any) and the amount due to each. The statements shall be verified by the oath of the Contractor or Subcontractor as the case may be.

- f. Fringe benefits are part of prevailing wage rates; employers not paying these fringe benefits to a party designated in a collective bargaining agreement shall pay benefits directly to employee on each pay day.

Each bidder shall read carefully and fully said published wage rates, and shall predicate and bid on said rates as minimum requirements. Submission of bid shall imply that Bidder has carefully inspected all said wage rates, that the Bidder is thoroughly familiar with all provisions of the Prevailing Wage Act and that should he be awarded a contract, he will fully and faithfully comply with all provisions of the Prevailing Wage Act.

Contractors must comply with New Jersey's Prevailing Wage Act N.J.S.A. 34:11-56.25 et seq., and for any contract subject to the Prevailing Wage Act, every worker employed in the performance of the contract must be an apprentice participating in a registered apprenticeship program or must have completed a registered apprenticeship, unless the contractor or subcontractor certifies that those workers shall be paid not less than the journey worker's rate established for the apprentice able trade performed pursuant to N.J.S.A. 34:11-56.25 et seq.

The Bidder's attention is directed to the provisions of N.J.S.A. 34:11-56.48, which requires a current, valid registration with the New Jersey Department of Labor and Workforce Development as a condition to bidding on or engaging in a contract for a public work, as defined therein.

Unless the Bidder is registered with the New Jersey Department of Labor and Workforce at the time of bid opening, the bid will be considered non-responsive.

0.42 Change Orders

During the course of the construction of the Project, it may be necessary to make modifications to the Contract. If a modification should become necessary, it shall be made only in writing and in accordance with the terms of the Contract and N.J.A.C. 5:30-11.3.

0.43 Project Observation

The Contractor's attention is directed to the fact that Mott MacDonald, LLC with offices in Iselin, New Jersey, or any other Engineer authorized by the Owner, will provide observation services, which will include observing the progress and quality of the executed Work and determining, in general, if the Work is proceeding in accordance with the Contract Documents.

0.44 Observer's Service for Saturdays, Sundays, Holidays and Off-Hours

The excess cost of wages, overhead and fees of observers employed or engaged by the Owner shall be paid by the Owner.

0.45 American Goods and Products

All bidders are advised that in accordance with the requirements of the Local Public Contracts Law, N.J.S.A. 40A:11-18 only manufactured and farm products of the United States, wherever available, shall be used in the Contract work. If the use of foreign products is required, the advance written approval of the Owner is required.

0.46 Access to the Work and Records

The representatives of the Federal Department of Labor, the New Jersey Department of Environmental Protection and the New Jersey Department of Labor and any other governmental entity having jurisdiction shall be afforded access to the work and project records under this contract. The Contractor shall provide proper facilities for such access and inspection.

0.47 Joint Venture Bidder Responsibility

Joint Venture bidders must submit a true and correct copy of their Joint Venture agreement. That document must include:

1. A detailed description of the specific purpose to be accomplished by the Joint Venture.
2. The date on which the Joint Venture was formed.
3. Complete contact information for each Joint Venture Partner.
4. Names and titles of each Joint Venture representative authorized to execute documents on behalf of the Joint Venture.
5. The specific responsibility of each Joint Venture partner.

Joint Venture bidders must also insure that any Performance Bonds, Certificates of Insurance, or other security devices be issued to and on behalf of the EXACT legal name of the Joint Venture.

Each Joint Venture Partner must have sufficient experience in its particular area of expertise in order to satisfy the Project Owner and its Consulting Engineer that the Contract will be fully and timely performed.

0.48 Quality of Materials and Workmanship

The attention of bidders is directed to the exacting requirements of the Contract requiring the Contractor to provide safe, watertight and otherwise adequate structures. The bidder shall realize fully that the first class materials and workmanship specified must be supplied in full measure in order to produce acceptable structures and equipment of the kind specified and as designed to give uninterrupted service for an extended period.

0.49 Dewatering Facilities N/A (NOT IN CONTRACT)

0.50 Connections to Existing Mains and Valve Operation N/A (NOT IN CONTRACT)

0.51 Interruption in Traffic Flow and Traffic Control N/A (NOT IN CONTRACT)

0.52 Right-to-Know Labeling

All containers are required to provide New Jersey Right-to-Know labeling.

All containers, including shipping cartons, shall bear a label indicating the chemical name(s) and Chemical Abstracts Service number(s) of all hazardous substances in the container, and all other substances which are among the five most predominant substances in the container, or their trade secret registry number(s). (N.J.A.C. 8:59-5).

"Container" means a receptacle used to hold a liquid, solid or gaseous substance such as bottles, bags, barrels, boxes, cans, cylinders, drums, and cartons. (N.J.A.C. 8:59-1.3).

0.53 Extra Material on Hand

Existing facilities which are to be expanded or modified are sized and located in accordance with the best information available. The Contractor shall be prepared to accommodate changes in the size or location by maintaining at the job site additional pipe, fittings and valves in the ranges of sizes being dealt with. This additional material shall be available to prevent delays in construction.

0.54 Debarment

No Owner shall enter into a contract for work with any person debarred, suspended or disqualified from contracting pursuant to N.J.S.A. 40A:11-4(b).

Owner shall insert in every contract for work on a project a clause stating that the contractor may be debarred, suspended or disqualified from contracting on any project financially assisted by the State or the Department if the contractor commits any of the acts listed in N.J.A.C. 7:1D-2.2.

0.55 Americans With Disabilities Act (Equal Opportunity for Individual with Disabilities)

The Contractor and the Owner do hereby agree that the provision of Title II of the Americans With Disabilities Act of 1990 (the "Act") (42 U.S.C. 12101 et. seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this Agreement. In providing any aid, benefit, or service on behalf of the Owner pursuant to this Agreement, the Contractor agrees that the performance shall be in strict compliance with the Act. In the event that the Contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this Agreement, the Contractor shall defend the Owner in any action or administrative proceeding commenced pursuant to this Act. The Contractor shall indemnify, protect, and save harmless the Owner, its agents, servants and employees from and against any and all suits, claims, losses, demands or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The Contractor shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the Owner's grievance procedure, the Contractor agrees to abide by any decision of the Owner which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the Owner or if the Owner incurs any expense to cure a violation of the Act which has been brought pursuant to its grievance procedure, the Contractor shall satisfy and discharge the same at its own expense.

The Owner shall, as soon as practicable after a claim has been made against it, give written notice thereof to the Contractor along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the Owner or any of its agents, servants, and employees, the Owner shall expeditiously forward or have forwarded to the Contractor every demand, complaint, notice, summons, pleading or other process received by the Owner or its representatives.

It is expressly agreed and understood that any approval by the Owner of the services provided by the Contractor pursuant to this Agreement will not relieve the Contractor of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the Owner pursuant to this Paragraph.

It is further agreed and understood that the Owner assumes no obligation to indemnify or save harmless the Contractor, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the Contractor expressly

understands and agrees that the provisions of this indemnification clause shall in no way limit the Contractor's obligations assumed in this Agreement, nor shall in no way limit the Contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the Contractor from any liability, nor preclude the Owner from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

0.56 Security Measures of Owner

All Bidders shall become familiar with the Owner's security measures prior to the time of bid. The bid shall take into consideration any cost or effect on performance resulting from the Owner's requirements and limitations as it pertains to access and use of the Owner's facilities.

0.57 Business Registration Certificate for Bidder and Subcontractors

The Bidder's attention is directed to the provisions of N.J.S.A. 52:32-44 which requires registration with the New Jersey Department of Treasury, Division of Revenue and Enterprise Services as a condition to engaging in a contract that is publicly bid.

Bidders and their subcontractors of any tier must comply with the provisions of N.J.S.A. 52:32-44. Pursuant to N.J.S.A. 52:32-44, Bidder shall submit a copy of its Business Registration Certificates issued by the New Jersey Department of Treasury, Division of Revenue and Enterprise Services to the Owner prior to Contract Award. Bidder shall also submit copies of the Business Registration Certificates of all subcontractors required to be listed by the Bidder on the "List of Subcontractors" form of the Bid pages of the Contract Documents. Submission of the Business Registration Certificate for the Bidder and all subcontractors is mandatory for Contract Award.

SPECIAL CONDITIONS

0.01 General

A coordination meeting shall be held at the beginning of the project to coordinate when the construction activities are expected to begin. The contractor shall place allowances in his bid for schedule delays or inconveniences. This Contract shall be completed within 150 calendar days, which will begin upon receipt of the Notice to Proceed. Mobilization shall be coordinated with the County's Department of Solid Waste Management.

0.02 Access to Site

The General Contractor shall note that the facility is an active recycling center which processes material Monday through Friday 4:00 AM - 11:00 PM. Contractor to coordinate working hours with the Engineer and the facility's plant manager. A two-week notice will be required prior to any work performed at the recycling facility.

Site access is from Towbin Avenue. Contractor shall not disturb portions of Project site beyond areas in which the Work is indicated. Driveways, Walkways and Entrances: Keep entrances serving premises clear and available to Owner, Operator, Operator's employees, and emergency vehicles at all times.

Mobilization and staging of equipment and materials may occur at any time. The County will provide Contractor with a key to access the site freely during the construction phase. Contractor may access the site but will have limited access to construct inside the facility during processing hours. Contractor may have unrestricted access to the facility during non-processing hours.

The Contractor will be granted two shutdowns of Atlantic Coast Recycling's processing operations in the commingled building to perform work that can't be perform during while the plant is running.

Shutdown A: A 3-day shutdown that will begin on a Thursday at 11:00 PM and end at 4:00 AM the following Monday.

Shutdown B: A 4-day shutdown that will begin on a Friday at 11:00 PM and end at 4:00 am the following Wednesday.

The facility's Operator will clear the work area of material daily for the Contractor. It is anticipated that the Contractor will need to install protection to work and protect workers while the plant is operating. Contractor must keep the work area clean of paper and recyclables and must have a worker designated to "firewatch" during activities which produce sparks i.e. grinding and welding. Contractor will also be responsible to have a worker aid the equipment operators navigating forklifts and the like through tight areas and watch out for facility personnel. Contractor is required to provide their own "firewatch".

The Contractor shall make allowances in their bid for coordination with the Operator and providing a means to enable continuous processing operations during the normal processing

hours outline above. The Contractor and their Sub-Contractors will not be required to attend any safety meetings held by the Operator. Contractor may use the on-site restrooms.

0.03 Coordination with Facility Operator

The Operator of the facility will occupy the site's buildings during entire construction period. Contractor to cooperate with Owner and Operator during construction operations to minimize conflicts and facilitate Operator usage. Work must be performed so as not to interfere with Operator's day-to-day operations. Any electrical shutdowns may only occur during non-operating hours.

0.04 Air and Water Pollution and Solid Waste Control

The Contractor shall make himself aware of and shall comply with all current local, State and Federal Regulations governing air and water pollution control and solid waste control. Sediment shall be removed from construction generated water prior to discharging to drains. All construction materials shall be removed and disposed of at approved off-site locations.

0.05 Foreman

The Contractor must have an English-speaking foreman on the job site at all times construction is proceeding. The Foreman shall have access to a cell phone at all times.

0.06 Storage

Outdoor space will be made available for deliveries and storing equipment and materials. Space will be approximately 200' from building entrance. The Contractor will assume any responsibility for any and all materials stored on or off site. The storage areas shall be agreed upon at the pre-construction meeting. If storage areas beyond the contract working areas are needed by the contractor, it is not guaranteed that the area will be in close proximity to the work area.

0.07 Permits

The Contractor shall be responsible for scheduling, obtaining and paying for all building permits and inspections as required by Lakewood, NJ. The Contractor shall make himself fully aware of the requirements and the costs associated with permits and inspections for Lakewood prior to bidding this project. Permits and inspections shall be included in the bid price. Any signed and sealed drawings required by Lakewood, such as the building construction and design drawings, shall be the Contractor's responsibility. Mott MacDonald will provide four (4) sets of the contract drawings, signed and sealed.

0.08 Award of Contract

Bidders shall be prepared to submit bonding, insurance, project labor agreement, construction schedule, shop drawings and all else required by Contract Documents immediately upon notification that he is the successful Bidder. Any delay in the submission of complete and correct documentation may jeopardize the completion date, and the

Contractor will be subject to liquidated damages as stated in the Contract section of this specification.

0.09 Bonds

The Bidder to whom the Owner proposes to award the Contract shall furnish and deliver within twenty-one (21) days of the date of the acceptance of the Proposal, Surety Corporation Bonds, from reputable sureties authorized and licensed to do business in New Jersey and acceptable to the Owner for a) 100% Performance Bond, and b) 100% Maintenance Bond upon project completion.

NOTE: Approved Performance Bond and Maintenance Bond supplied by a New Jersey licensed Surety Company may be submitted in lieu of the enclosed Performance and Maintenance Bond Forms.

Any change in the plans, specifications or quantities shall in no way vitiate said bond. Said bond shall be in the sum not less than the amount of the bid and shall be maintained by the Contractor until the final acceptance of the work. Date of acceptance of the work shall be determined by the Owner after it shall have duly considered the acceptance report of the Engineer and authorized final payment. The Owner shall not unreasonably withhold acceptance.

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SCOPE OF CONTRACT

For the prices submitted in the proposal pages the Contractor shall furnish all labor, materials and equipment for the work contained on the drawings and specifications.

In general, the work shall include producing shop drawings, general construction, installation of recycling equipment, programming, final cleanup, and all else required to integrate the equipment in the recyclable processing stream. Work relating to all trades work shall be included as a part of this single overall contract.

During construction, all subcontractors shall cooperate regarding the use of available facilities and undertake the work within their contract areas of responsibility so as to facilitate the work of the other subcontractors. The scheduling of work shall be coordinated by the General Contractor with the review of the Engineer. Time scheduling shall be arranged to enable all subcontractors to work at the same time so far as may be practical. The General Contractor shall be responsible for overall construction operations at the site and coordination of various items of work to get complete working systems that is integrated with the existing equipment and processes the transferring of recyclables with maximum efficiency. Regularly scheduled job meetings shall be held by the Contractor to resolve differences relating to coordination of various phases of the work with his subcontractors so that there is no gaps in work installations between subcontractors. Site cleanup shall be the responsibility of the General Contractor, and they shall have the cooperation of all subcontractors on the site in this regard.

All work included on the Drawings and the Specifications shall be completed in full without further compensation than is provided for in the prices listed in the proposed pages regardless of whether or not such work is specifically mentioned in the Bid Items.

All coordination between the various trades shall be the Contractor's responsibility and he shall provide services of competent professionals to provide this coordination function to the extent of preparing necessary coordination drawings which interrelate with the shop drawings.

The Contractor is notified that all debris resulting from the construction operations shall be promptly disposed of off County property in approved areas.

Each bid item listed shall include all associated work and equipment whether mentioned in the bid item or not mentioned.

A monthly estimate will not be processed while the Contractor is in nonconformance with project requirements. Furthermore, before final inspection and acceptance of the Contract, all areas occupied by the Contractor in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures and equipment, and all parts of the work shall be left in an acceptable condition.

SPECIAL SURETY BID REQUIREMENTS

The attention of the Bidder is called to the provisions of N.J.S.A 2A:44-143 which requires that the County of Ocean shall only accept Performance and Payment Bonds from surety companies meeting the requirements of that statute. The Bidder shall deliver with their Bid a Consent of Surety. The Bidder's Surety Company shall complete the following certificate which the Bidder shall submit with their Bid.

CERTIFICATE OF SURETY COMPANY

The undersigned does hereby certify and state on behalf of _____
that it is authorized to make the following averments: Surety Company

- (1) The surety meets the requirements of P.L. 1996, Chapter 384 [N.J.S.A. 2A:44-143].
- (2) The surety shall deliver Performance and Payment Bonds in accordance with the requirements of the Consent of Surety which shall be accompanied by a Surety Disclosure Statement and Certification in the form set forth in the above statute.
- (3) The undersigned is authorized to sign this Certificate and
 - a. Acknowledges that if any of the foregoing averments are false, that he or she is subject to a punishment as provided by law.

Signature of Certifying Agent

Date

Printed/Typed Name of Certifying Agent

Title of Certifying Agent

The delivery of the foregoing Certificate of Surety Company is an integral part of the requirement for the provision of a Consent of Surety with the Bid and the failure to provide said certificate is a non-waivable defect and shall result in the rejection of the bid. Furthermore, the failure of the successful Bidder to deliver Performance and Payment Bonds from a surety company meeting the standards of N.J.S.A. 2A:44-143 and accompanying statutory disclosure information and certificate will result in the County of Ocean either rebidding the project or awarding the contract to the next lowest responsible bidder as it shall determine in its discretion.

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

_____, surety(ies) on the attached bond, hereby certifies(y) the following:

- (1) The surety meets the applicable capital and surplus requirements of R.S 17:17-6 or R.S. 17:17-7 as the surety's most current annual filing with the New Jersey Department of Insurance.

- (2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this state, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, _____ (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have those certified amounts):

- (3) (a) With the respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. sec. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

- (b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S. 17:18-9 as of _____ (date on which such limitation was so established) is as follows (indicating for each such surety's underwriting limitation and the date on which that limitation was established):

- (4) The Amount of the bond to which this statement and certification is attached is \$ _____.

(5) If, by virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bonds as set forth in items (3) (a) or (3) (b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:

and, (b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5) (a) satisfies the credit for reinsurance requirement established under P.L. 1993, c. 243 (c. 17:51B-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

CERTIFICATE

(To be completed by an authorized certifying agent for each surety on the bond)

I, _____, as _____
(Name of Agent) (Title of Agent)

for _____
(Name of Surety)

a (corporation/mutual insurance company/other) domiciled in _____,
(Indicating type of Business Organization) (Circle one.) (State of Domicile)

DO HEREBY CERTIFY that, to the best of my knowledge, the foregoing statements made by me are true and ACKNOWLEDGE that if any of those statements are false, this bond is VOID.

Signature of Certifying Agent

Date

Printed/Typed Name of Certifying Agent

Title of Certifying Agent

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we _____
_____, Hereinafter called the Principal, as Principal, and _____ a corporation
duly organized under the laws of the State of _____ and licensed or authorized to do business in
New Jersey, hereinafter called the Surety, as Surety, are held and firmly bound unto _____
hereinafter called the Oblige, in the sum of _____ Dollars
(\$ _____), for the payment of which sum well and truly to be made, the said Principal and the said Surety,
bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these
presents.

WHEREAS, The Principal has submitted a bid for _____

NOW, THEREFORE, if the Oblige shall accept the Bid of the Principal and the Principal shall enter into a Contract
with the Oblige in accordance with the terms of such bid and the Contract Documents; and give such bond or bonds
as may be specified in the Contract Documents with good and sufficient surety for the faithful performance of such
Contract, for the prompt payment of labor and material furnished in the prosecution thereof and for the
environmental maintenance requirements thereof; and deliver evidence of insurance and such other documents as
are required by the Contract Documents as conditions precedent to the Owner's execution of the Contract, all within
the times required in the Contract Documents, then this obligation shall be null and void, otherwise to remain in full
force and effect.

SIGNED AND SEALED this _____ day of _____ A.D. 20_____.

In the presence of:

PRINCIPAL (Seal)

WITNESS

TITLE

SURETY (Seal)

WITNESS

TITLE (Seal)

THE OCEAN COUNTY BOARD OF COMMISSIONERS
OCEAN COUNTY, NEW JERSEY

NORTHERN RECYCLING CENTER
EDDY CURRENT SEPARATOR

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THE OCEAN COUNTY BOARD OF COMMISSIONERS
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EDDY CURRENT SEPARATOR

THIS AGREEMENT, made and entered into this _____ day of _____, 20____, by and between the County of Ocean, State of New Jersey, party of the first part, hereinafter designated as the Owner, and _____ with legal address at _____ in the County of _____, State of _____, party of the second part, hereinafter designated as the Contractor.

Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents equal to the sum as set forth in the Bid form.

WITNESSETH, that the parties to these presents, each in consideration of the undertakings, promises and agreements on the part of the other herein contained, have undertaken, promised and agreed, and do hereby undertake, promise and agree, the party of the first part for itself and for its successors and assigns, and the party of the second part for itself and for its heirs, executors, administrators, successors and assigns, as follows:

ARTICLE I - DEFINITIONS

Wherever the words defined in this Article, or pronouns used in their stead, occur in the Contract Documents (as defined herein), they shall have the following meanings:

The word "Owner" shall mean the party of the first part above designated or any agency or officer duly authorized to act in its place under this Contract.

The word "Contractor" shall mean the party of the second part above designated, entering into this Contract for the performance of the Work required to be performed hereunder, and the legal representatives of the said party, or agents appointed to act for the said party in the performance of the Work.

The word "Engineer" shall mean Mott MacDonald, of 111 Wood Avenue South, Iselin, New Jersey, acting through properly authorized agents or project representatives, such agents or project representatives acting within the scope of their authority; or such other engineer named by the Owner in the event that Mott MacDonald is unable to act or ceases to act as the Engineer for the Owner.

The word "Contract" shall mean this Contract of the **Northern Recycling Center Eddy Current Separator**.

The words "Contract Documents" shall mean, collectively, all of the covenants, terms and conditions in this Contract and in the documents which constitute essential parts of this Contract and which are hereby made part hereof as if set forth at length herein, to wit:

- I. General Conditions
 - A. Notice to Bidders
 - B. Information for Bidders
 - C. Special Conditions
 - D. Scope of Contract
 - E. Bidder's Online Bid Submission
 - F. Surety and Bid Bonding
 - G. Contract

- H. Performance Labor and Material Payment Bond
- I. Surety Disclosure Statement and Certifications
- J. Maintenance Bond
- II. Technical Specifications
- III. Drawings

The words "Contract Price" shall mean the total amount earned by the Contractor and paid in the final estimate and payment under the Article of the Contract entitled, "Final Estimate and Payment".

The word "Specifications" shall mean, collectively, all of the terms and stipulations contained in the General Requirements and in the Detailed Specifications. The requirements of the General Requirements shall be considered part of each Division of the Detailed Specifications.

The words "Final Completion" or "final completion" shall mean the proper completion of all Work, for the entire project as contemplated and provided for under the Contract, sufficient for the acceptance by the Owner. If any items of work shall not have been properly completed, e.g., should any punch list items remain uncompleted, Final Completion shall not have been achieved. The Owner, with the advice of the Engineer, shall fix the date of Final Completion of all the Work and shall annotate the date of Final Completion upon the Contractor's final Application for Payment (Article XXXV).

The words "Substantial Completion" or "substantial completion" or "substantially complete" shall mean satisfactory completion of the major portions of the Contract Work, including, without limitation, inspection and testing and the issuance of any necessary governmental Certificates of Occupancy, so that the facility may be turned over to the Owner for its intended use or occupancy. The date of Substantial Completion shall be certified by the Engineer.

The words "Drawings" and "Contract Drawings" shall mean the drawings which show the character and scope of the Work to be performed and which are described in the Article of the Information for Bidders entitled, "Contract Drawings".

The words "General Conditions" shall mean everything hereinbefore defined under the word "Contract Documents", except for the Specifications and the Drawings.

The words "Work" or "work" shall refer to any and all labor, construction, demolition, materials, or equipment to be performed by or furnished by Contractor under the Contract.

Wherever in the Contract Documents the terms "ordered", "directed", "required", "allowed", "permitted", "instructed", "designated", "considered necessary", 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 the 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 the Article III of this Contract entitled, "Responsibility of the Engineer".

ARTICLE II - RIGHTS AND RESPONSIBILITY OF CONTRACTOR

A. General

All Work shall be performed in strict accordance with and completed in strict compliance with the Contract Documents. Observations, construction review, tests, recommendations, acceptances or approvals by the Engineer or by others, shall in no way relieve the Contractor of the obligation to perform and complete all Work in accordance with the Contract Documents.

All Work shall be performed under the direction and supervision of the Contractor.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction except where specific means, methods, techniques, sequences or procedures of construction are required by the Contract Documents.

B. Supervision

The Contractor shall provide and maintain a qualified superintendent, acceptable to the Owner, at all times during the progress of the Work and such superintendent shall give efficient supervision to the Work until its completion.

The superintendent shall have full authority to act on behalf of the Contractor, and all communications and instructions given to the superintendent shall be considered as given to the Contractor. It shall be the responsibility of the Contractor's superintendent to coordinate the Work of the Contractor with the Work of the Contractor's subcontractors and with the Work of other contractors and subcontractors working on the site.

The superintendent shall be present at the construction site at all times so as to ensure the proper performance and coordination of the Contractor's work and that of its subcontractors.

C. Use and Care of Construction Site and Property

The Contractor shall ensure that its personnel and equipment and those of its subcontractors, materialmen, suppliers, etc., shall enter only the land and areas identified in and expressly permitted by the Contract Documents. The Contractor shall further ensure that the use of the construction site or any other lands or areas to which the Contractor or any of its personnel, equipment, subcontractors, materialmen, suppliers, etc., are permitted entry (including, without limitation, easement and right-of-way areas), shall be limited to the uses permitted by the Contract Documents and such uses shall be conducted in the manner required by the Contract Documents.

The Contractor shall be fully responsible for all damage to the construction site and any other lands or areas (including, without limitation, any improvements, monuments, structures, trees or shrubs thereon) damaged by, in connection with or in any way related to the performance of the Work. Any injury or damage to the same shall be made good at the Contractor's expense.

The Contractor shall not enter upon or use private property for any purpose without obtaining the written permission of the owner.

The Contractor is responsible for locating all underground structures and facilities (whether shown in the Contract Drawings or not), for coordinating the Work with the owners of such underground structures and facilities, for the safety and protection thereof, and for repairing any damage thereto resulting from or in any way connected with the Work. The Contractor shall protect carefully from disturbance or damage all monuments and property markers until the Engineer has witnessed or otherwise referenced their location and consented to their removal in writing. The cost of such location, coordination, safety, protection and repair is deemed to be included in the accepted bid price for this Contract.

D. Safety

The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work and for construction site safety, generally. The Contractor shall be solely responsible for and shall take all precautions for the safety of all persons on the Work and other persons who may be affected thereby. The Contractor shall provide the necessary protection to prevent damage to all Work and materials and equipment to be incorporated in the Work and all other property at the construction site and at lands and areas which the

Contractor is authorized to enter under the Contract Documents. These requirements will apply continuously 24 hours per day until final acceptance of the Work by the Owner.

The Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property in or about the construction site and to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

The Engineer's observation of the Contractor's performance of the Work is to be solely on behalf of the Owner and not on behalf of the Contractor and is not intended to relieve or absolve the Contractor for any inadequacy of the Contractor's safety measures or safety plan(s).

E. Indemnification

The Contractor shall indemnify, defend, save and hold the Owner, Engineer and their respective consultants, and the officers, employees and agents of each of them and all owners of property upon which work is being performed hereunder pursuant to easement or right-of-way agreements, harmless from and against any damage, liability, loss, costs (including but not limited to reasonable attorneys' fees and court and other costs of collection) or claims arising out of, resulting from or related to, the performance or nonperformance of the Work provided for in the contract documents, except to the extent such claims arise from the negligence of the Owner, the Engineer, or their consultants, officers, employees or agents. The Contractor's indemnification obligations shall not be limited by the amounts of insurance required to be carried by the Contractor under this Contract.

The Contractor shall indemnify and save harmless the Owner and Engineer and all persons acting for or on behalf of them from all claims and liability of any nature or kind, including costs and expenses arising from or occasioned by any infringement or alleged infringement of patent rights on any invention, process, article or apparatus, or any part thereof, furnished and installed by said Contractor or arising from or occasioned by the use or manufacture thereof, including their use by the Owner.

These indemnification obligations are intended to provide the broadest indemnification permitted by law and shall be construed consistent with all applicable laws, including but not limited to the laws pertaining to indemnification. These indemnification provisions shall survive the completion and acceptance of the Contract, and shall be effective until the statutes of limitation and repose have expired.

ARTICLE III - RESPONSIBILITY OF THE ENGINEER

The Engineer shall initially decide, as an independent professional, questions which may arise as to the quality, quantity and acceptability of materials furnished, acceptability of the Work performed, rate of progress of the Work, interpretation of Drawings and Specifications and items related thereto, as provided herein. The duties and responsibilities of the Engineer as set forth herein shall not be extended except through written consent of the Engineer and the Owner.

a. **Observation of the Work:** The Engineer will make visits to the construction 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. The Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Engineer shall be provided access to all parts of the Work and shall be furnished with such information and assistance by the Contractor as the Engineer may require to make its observations and construction review. The Contractor shall also make all materials and equipment available at all times for observation by the Engineer. Observations may be made at the source of material or supply, whether mill, plant or shop, as well as at the construction site. The Engineer will keep the Owner informed of the progress of the Work and will endeavor to guard the Owner against defects and deficiencies in the Work.

b. Acceptability of Work: The Engineer shall have authority to disapprove or reject work which the Engineer believes to be defective work or work not in accordance with the Contract Documents and shall also have authority to require special inspection or testing of the Work as authorized in the Contract Documents, whether or not the Work is fabricated, installed or completed. The Contractor agrees to abide by the Engineer's decisions relative to the acceptability of the Work.

c. Engineer's Decisions: The Engineer will be the initial interpreter of the requirements of the Contract Documents and shall determine the acceptability of the Work thereunder on behalf of the Owner. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents will be referred to the Engineer in writing with a request for a formal decision in accordance with this subparagraph, which the Engineer will make within a reasonable time. Written notice of each such claim, dispute or other matter will be delivered by the claimant to the Engineer and to the other party promptly (but in no event later than thirty (30) days) after the occurrence of the event giving rise thereto, and adequate written supporting data will be submitted to Engineer within sixty (60) days after such occurrence unless the Engineer allows an additional period of time to ascertain more accurate data in support of the claim. The rendering of a formal decision by the Engineer with respect to any such claim, dispute or other matter will be a condition precedent to any exercise by the claimant of such rights or remedies as it may have under the Contract Documents or by laws or regulations in respect of any such claim, dispute or other matter.

d. Limitations of Engineer's Responsibilities: Neither the Engineer's authority nor responsibility under the Contract Documents shall give rise to any duty or responsibility of the Engineer to the Contractor, or any subcontractor or materialman of the Contractor, or to any other person performing any of the Work. The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for construction site safety generally, and the Engineer will not be responsible for the Contractor's failure to perform or complete the Work in accordance with the Contract Documents. The Engineer will not be responsible for the acts or omissions of the Contractor or of any subcontractor, any materialman, or any other person performing or furnishing any of the Work. Nothing herein shall be construed to increase, change, limit or reduce the Engineer's obligations to Owner as set forth in prior consulting agreements or contracts relating to this project.

ARTICLE IV - EXPLANATIONS AND WORK SEQUENCE

The Engineer shall make any explanations, clarifications and interpretations, requested in writing by the Contractor and considered necessary by the Engineer, as to the meaning and intention of the Contract Drawings and Specifications. Such explanations, clarifications and interpretations shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

The Contractor's order or sequence of execution of the Work and the general conduct of the Work shall be subject to the disapproval of the Engineer. The Engineer shall have authority to direct the Contractor that changes in the Contractor's means, methods, techniques, sequences or procedures of construction are necessary to accord with the intent of the Contract Documents or with good construction practice. However, the Engineer shall not be required to advise the Contractor on the substitute means, methods, techniques, sequences or procedures of construction to be utilized or on how the Contractor may overcome any particular problems or difficulties, but the Contractor shall have the responsibility to make proposals in this regard for the consideration of the Engineer.

The Contractor must consult with the Engineer as to the sequence of Work and intermediate times of completion as set forth in the Schedule of Intermediate Completion Times. The Contractor is hereby notified that the approved Construction Schedules must be considered the general sequence of the Work and the Engineer may request that they be amended, supplemented or modified from time to

time during the period of construction to accord with the intent of the Contract Documents, good construction practice, and the actual progress of the Work.

Such changes, amendments, supplements or modifications shall in no way entitle the Contractor to additional compensation or affect the responsibility of the Contractor for the Work.

ARTICLE V - CONTRACTOR'S REPRESENTATIVES, EMPLOYEES & OFFICE

The Contractor shall at all times enforce strict discipline and good order among the Contractor's employees and those of its subcontractors (of any tier) and materialmen and shall not employ on the Work any unfit person or anyone not skilled in the task assigned them.

The Contractor shall maintain an office at the site of the Work, where copies of the Contract Documents and of all working drawings shall be kept available for use at any time.

ARTICLE VI - DISCREPANCIES, ERRORS & OMISSIONS

The Contract Documents are intended to be mutually explanatory of each other, but should any discrepancy appear or any contradiction arise or be detected by the Contractor as to anything contained therein, the Contractor shall promptly call the same to the attention of the Engineer and the Contractor shall be deemed to have bid the Contract predicated on the more expensive way of performing such work and the interpretation and decision of the Engineer shall be binding on the Contractor. The Contractor shall be held responsible for all corrective measures and associated costs for failure to notify the Engineer of such discrepancy or contradiction.

Any correction of errors or omissions in the Contract Documents may be made by the Engineer when such correction is necessary for the proper fulfillment of the Contract as construed by him. Except as otherwise provided in this Article, where said correction of errors or omissions materially adds to the cost of or time required for the Work to be done by the Contractor, compensation for said additional work and/or an extension of time may be granted under the Article XXXI of this Contract entitled, "Changes, Changed Conditions, Change Orders".

If any item of work is required by the Drawings but is omitted in the Specifications, such item shall be required. If any item of work is required by the Specifications but omitted in the Drawings, such item shall be required. If any item of work is omitted both in the Drawings and Specifications, whether intentionally or otherwise, when the same is usually and customarily required to complete fully the Work specified herein, such item shall be required. None of the foregoing shall entitle the Contractor to extra compensation or an extension of time, but the said items of the Work shall be provided as if called for by all of the Contract Documents.

ARTICLE VII - INSURANCE

In accordance with the provisions of the Article 0.16 of the Information for Bidders entitled, "Failure to Enter Contract", as a condition precedent to the Owner's obligation to execute this Contract, the Contractor is required to submit evidence (consisting of Certificates of Insurance, Insurance Binders, and such other information and/or documentation that may be requested by the Owner) satisfactory to the Owner showing that the Contractor has obtained all insurance coverages required herein. Neither the Contractor nor any of the Contractor's agents, employees or subcontractors are permitted to enter the site or to perform any of the Work on the Contract unless all of the insurance required by the Contract Documents is in effect.

Nothing contained in this Article entitled, "Insurance" or in the Contract Documents shall be construed as limiting the extent of the Contractor's liability for claims or damages resulting from or related to the Contractor's operations under this Contract.

All insurance required hereunder (except Workers' Compensation Insurance policies) shall include the interests of the Owner; Contractor; Engineer and Engineer's consultants, all of whom shall be listed as additional insureds on such policies. Contractor waives all rights of subrogation against the Owner; Engineer and all parties named as additional insureds in such policies for all losses and damages caused by any of the perils covered by such policies and 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 additional insureds.

The Contractor acknowledges that the Owner, Engineer and Engineer's consultants have insurable interests in the project under the Contractor's insurance policies.

The Contractor shall purchase and maintain, at its sole expense, insurance as will provide protection from claims and liabilities 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 of Contractor's subcontractors or sub-subcontractors (of any tier), by anyone directly or indirectly employed by any of them to perform or furnish any work, or by anyone for whose acts any of them may be liable, with companies satisfactory to the Owner, as follows:

- a. Worker's Compensation and Employer's Liability Insurance - covering all of the Contractor's employees directly or indirectly engaged in the performance of this Contract. This insurance shall comply with the statutory requirements of the State or States involved and shall have an Employer's Liability Insurance limit of not less than \$500,000 for bodily injury by accident, \$500,000 for occupational disease and \$500,000 aggregate limit.
- b. Commercial General Liability Insurance - shall include Bodily Injury and Property Damage. Combined Single Limit with a limit no less than \$1,000,000 for any one occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products and Completed Operations Aggregate. Personal injury coverage must be included with a \$1,000,000 limit. A Per Project Aggregate must be included. Broad Form Property Damage Insurance must be included. Contractual Liability Insurance must be included, expressly insuring the Contractor's liability for occurrences assumed by the Contractor under the indemnification clause set forth in the Article of the Contract entitled, "Rights and Responsibility of Contractor", to the extent covered by the standard form of Commercial General Liability policy in New Jersey. Completed Operations Coverage must be provided for a minimum of 2 years from completion of the project.
- c. Comprehensive Automobile Liability Insurance - covering Contractor for claims arising from all owned, hired and non-owned vehicles with a limit of not less than \$1,000,000 combined single limit for bodily injury and property damage.
- d. Umbrella Liability Insurance - providing coverage at least as broad as that provided by the Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Employers Liability Insurance required in a., b., and c. above, with a limit of not less than \$3,000,000 per occurrence and \$3,000,000 aggregate.
- e. Builder's Risk Insurance - covering the project under construction in an amount equal to the accepted total bid price of the Contract. The insurance shall cover all risks of physical loss and damage including but not limited to theft, vandalism and malicious mischief, collapse, earthquake, flood and water damage, 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 insurance may have a deductible not to exceed \$10,000.00 which shall be borne by the Contractor.

- f. Policy Limits - specified above are minimum, and wherever the law requires higher limits, the higher limits shall govern.
- g. Periods of Coverage - The Builder's Risk Insurance shall remain in full force and effect until Substantial Completion shall have been certified by the Engineer, provided, however, that such coverage shall not be terminated unless and until the Owner shall have acknowledged in writing to the Contractor that the Owner's insurers have placed permanent insurance for the facility. All other policies required under this Contract shall remain in full force and effect until the Contractor's Maintenance Bond has been released.
- h. Certificates of the insurance required above must be filed with the Owner with a copy to the Engineer before the Contract is signed on behalf of the Owner. All Certificates of Insurance must provide for a minimum thirty (30) days prior written notice to the Owner of any policy cancellation, material change, or non-renewal.
- i. Forms of Policies - all liability insurance shall be on an occurrence basis.
- j. Subcontractors - shall be required by the Contractor to provide the following insurance:

(1) Worker's Compensation and Employer's Liability Insurance - covering all of the subcontractor's employees directly or indirectly engaged in the performance of this Contract . This insurance shall comply with the statutory requirements of the State or States involved and shall have an Employer's Liability Insurance limit of not less than \$500,000 for bodily injury by accident, \$500,000 for occupational disease and \$500,000 aggregate limit.

(2) Commercial General Liability Insurance – shall include Bodily Injury and Property Damage. Combined Single Limit with a limit of not less than \$1,000,000 for any one occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products and Completed Operations Aggregate. Personal Injury coverage must be included with a \$1,000,000 limit. A Per Project Aggregate must be included. Broad Form Property Damage must be included.

(3) Comprehensive Automobile Liability Insurance - covering subcontractor for claims arising from all owned, hired and non-owned vehicles with limits of not less than \$1,000,000 aggregate for bodily injury and property damage.

(4) Policy Limits - specified above are minimum, and wherever the law requires higher limits, the higher limits shall govern.

(5) Periods of Coverage - All policies required under this Contract for subcontractors shall remain in full force and effect until the Contractor's Maintenance Bond has been released.

(6) Certificates of Insurance and Insurance Binders as well as any additional information and/or documentation requested by the Owner, of the insurance required above must be filed with the Owner and the Engineer, in triplicate, before the subcontractor is permitted to start work. The Owner and Engineer must appear as additional insureds on all liability policies. All Certificates of Insurance and Insurance Binders must provide for a minimum thirty (30) days prior written notice to the Owner and Engineer of any policy cancellation, material change, or non-renewal.

The Contractor shall not allow any subcontractor to commence work on his subcontract until all insurance required of the subcontractor has been so obtained and the proper Certificates of Insurance and Insurance Binders have been provided to the Owner and Engineer.

Acceptance of the Contractor's insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

ARTICLE VIII - PATENTS AND COPYRIGHTS

The 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 publication which is the subject of patent rights or copyrights held by others. The Contractor shall provide the Owner with the vested rights to use such inventions, designs, processes, procedures or publications, as are related to the Work, in perpetuity.

The Contractor shall indemnify and save harmless the Owner and Engineer, and all persons acting for or on behalf of them, from all claims and liability of any nature of any kind, including costs and expenses, arising from or occasioned by any infringement or alleged infringement of patent rights or copyrights on any invention, design, process, product or publication, or any part thereof, furnished or installed or used in the performance of the Work by said Contractor or arising from or occasioned by the use or manufacture thereof, including their use by the Owner.

These provisions shall survive the completion and acceptance of the Contract, and shall be effective until the statutes of limitation and repose have run.

ARTICLE IX - REGISTRATION OF MOTOR VEHICLES

All motor vehicles used in connection with this Contract shall be registered, to the extent required by the laws, rules or regulations of the State of New Jersey.

ARTICLE X - PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision and clause required by law to be inserted in this Contract shall be deemed to be inserted herein as if set forth at length herein, and the Contract shall be read and enforced as though it were included herein, and if through mistake or inadvertence or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion and such adjustment shall be made without adjustment of the Contract Price or the time for performance of the Contract.

ARTICLE XI - PREVAILING WAGES

The Contractor shall pay not less than the prevailing wage rates as required by the New Jersey Prevailing Wage Act, the Article 0.41 of the Information for Bidders entitled, "State Wage Rates" and the Contractor shall comply with the applicable provisions of the Public Works Contractor Registration Act (N.J.S.A. 34:11-56.48 et seq.).

All laborers, workers and mechanics shall be paid not less than the prevailing rate of wage established by law for the type of work to be done in the place in which it is or is to be performed. The Contractor is obligated to pay the higher of the State or Federal wage rates. The violation of the foregoing provision shall constitute a breach of the Contract, and the foregoing provision shall be considered to be a contract for the benefit of the workers, laborers and mechanics, upon which such laborers, workers and mechanics shall have the right to maintain an action against their employers for the difference between the prevailing rate of wage and the rate of wage actually received by them.

Any such action by the workers shall be against their respective employers and not against the Owner or Engineer.

In the event it is found that any workman, employed by the Contractor or any subcontractor covered by this Contract, has been paid a rate of wages less than the prevailing wage required to be paid by this Contract, the Owner may terminate the Contractor's or subcontractor's right to proceed with the Work, or such part of the Work as to which there has been a failure to pay required wages and to prosecute the Work to completion or otherwise. The Contractor and his sureties shall be liable to the Owner for any excess costs occasioned thereby.

Contractors must comply with New Jersey's Prevailing Wage Act (N.J.S.A. 34:11-56.26) and for any contract subject to the Prevailing Wage Act every worker employed in the performance of the contract must be an apprentice participating in a registered apprenticeship program or must have completed a registered apprenticeship, unless the contractor or subcontractor certifies that those workers shall be paid not less than the journeyworker's rate established for the apprentice able trade performed pursuant to N.J.S.A. 34:11-56.25 et seq.

ARTICLE XII - COMPLIANCE WITH LAWS

The Contractor shall keep itself fully informed of all existing and future federal and state laws and municipal ordinances and regulations in any manner affecting the Work, those engaged or employed in the Work, the materials used in the Work, or in any way affecting the conduct of the Work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. If any discrepancy or inconsistency is discovered in the Contract Documents pertaining to the Work in relation to any such law, ordinance, regulation, order or decree, the Contractor shall forthwith report the same to the Engineer in writing.

The Contractor shall at all times observe and comply with and cause all its subcontractors agents and employees to observe and comply with, all applicable statutes, regulations, ordinances, orders and decrees in effect prior to or during the life of this Contract and shall indemnify the Owner and the Engineer, and their officers, agents and employees against any claim or liability arising from or based upon the violation or alleged violation of such statute, regulation, ordinance, order or decree, whether by himself, his subcontractors, or their agents or employees.

The provisions of the U.S. Occupational Safety and Health Act (OSHA) and its implementing regulations and all safety standards promulgated thereunder shall be observed by the Contractor in the performance of the Contract, whether or not they would otherwise be applicable.

ARTICLE XIII - RIGHTS-OF-WAY AND EASEMENTS

The Owner will obtain such rights-of-way and easements from federal, state, county, municipal and any other public authorities, railroad and utility companies and all other property owners, as are indicated in the Contract Documents. The Contractor shall inform himself of the location and extent of such rights-of-way and easements.

Any land, access, right-of-way or easement, not specifically shown in the Contract Documents as being furnished by the Owner, that may be required by the Contractor for temporary construction facilities or for storage of materials, shall be provided by the Contractor with no cost or liability to the Owner and the Contractor shall indemnify the Owner and the Engineers from and against all claims and liabilities arising out or connected therewith.

The Contractor is responsible for the restoration of rights-of-way and easement areas provided under the Contract Documents to good condition and as near to the original condition prior to disturbance by the Contractor as practicable. The required restoration includes, without limitation, the restoration of roads and other structures, trees, shrubbery, lawns and environmental features. Such restoration is a part of the Contract Work and shall be included in the coverage of the Contractor's bonds.

ARTICLE XIV - ACCESS TO THE WORK, DOCUMENTS AND INFORMATION

The Contractor shall provide the representatives of the Owner, the Engineer, and testing agencies and governmental agencies with jurisdictional interests, with access to the Work under this Contract, whenever it is in preparation or progress, for observation, inspection and testing. The Contractor shall provide proper facilities and safety protections for such access.

ARTICLE XV - PERMITS

Unless otherwise provided in the Contract Documents, the Contractor shall obtain and pay for all construction permits and licenses, including, without limitation, building permits, road opening permits and blasting permits. The Owner will reimburse the Contractor for the direct cost of obtaining such permits. The Contractor shall obtain the consent of and shall bear the charges of all utilities and agencies involved for connections with the Work. Any performance bonds or sureties required for the Permit will be paid for by the Contractor and not reimbursed by Owner.

The Lakewood Building inspector will require that the structural steel that was installed under this Contract be inspected by a licensed NJ Professional Engineer. The cost of a third-party inspection and report by a licensed PE is to be paid by the Contractor.

The conditions pertaining to construction activity made part of any such permits shall be considered conditions of the Contract and the Contractor shall comply with them without additional charge.

The methods of construction to be utilized by the Contractor must satisfy the requirements of the agencies having jurisdiction (County of Ocean and Lakewood). Generally, the "methods of construction" are defined as the means to be employed by the Contractor to obtain the end results required by the design.

The Contractor shall, at its own expense, post all necessary sureties required by the agencies issuing the permits.

ARTICLE XVI - ASSIGNMENT

The Contractor shall not assign, transfer, convey, hypothecate, or otherwise dispose of this Contract, or his right, title or interest in or to the same or any part thereof, without the prior express consent, in writing, of the Owner, and the Contractor shall not assign, by power of attorney or otherwise, any of the moneys to become due and payable under this Contract unless by and with the like consent of the Owner. Consent by the Owner to an assignment of this Contract shall not, in any way, release the Contractor from the conditions, covenants and agreements herein undertaken to be done and performed by the Contractor, but such duty to perform shall continue as though such assignment had not been made.

ARTICLE XVII - SUBCONTRACTS

At the times set forth in the Contract Documents for certain subcontractors (See "List of Subcontractors" in Proposal Pages), and when requested by the Owner for other subcontractors, but in any case (for all subcontractors) prior to the subcontractor's being permitted to enter the construction site or to perform any Work, the Contractor shall submit, in writing, to the Owner and the Engineer, the names and addresses of all subcontractors proposed for the Work. The Contractor shall also submit to the Owner at such time(s) satisfactory evidence of the required insurance coverage for each proposed subcontractor.

Subcontractors named under N.J.S.A. 40A:11-16 may not be changed except at the request of or with the express prior written approval of the Owner for good cause shown. The Contractor shall be fully responsible to the Owner and Engineer for the acts and omissions of the Contractor's subcontractors (of any tier), materialmen and other persons and organizations performing or furnishing any of the Work and of their direct and indirect employees, to the same extent as Contractor is responsible for its own acts and omissions and those of its agents and employees. The Contract Documents shall not be construed as creating any contractual relation between any subcontractor (of any tier) and the Owner or Engineer.

The Contractor shall bind every subcontractor in writing to the terms of the Contract Documents applicable to the subcontractor's work and the Contractor shall require every subcontractor so to bind every sub-subcontractor of any tier. In such writing the subcontractor or sub-subcontractor (as the case may be) shall be required to indemnify, for the actions or omissions of such subcontractor or sub-subcontractor in the performance of its work, the indemnities identified in the Article II of this Contract entitled, "Rights and Responsibility of Contractor", in the Subsection E entitled, "Indemnification", to the same extent as the Contractor is required to indemnify such indemnities for claims and liabilities arising out of or in connection with the Contractor's work.

For convenience of reference and to facilitate the letting of Contracts and subcontracts, the Specifications are separated into titled sections. Such separation shall not, however, operate to make the Owner or the Engineer arbiters to establish limits of responsibility in the subcontracts between the Contractor and his subcontractors or sub-subcontractors.

ARTICLE XVIII - TIME OF BEGINNING WORK

The Contractor shall commence the Work within ten (10) calendar days after receipt of written Notice to Proceed from the Owner.

ARTICLE XIX - INTERMEDIATE TIMES OF COMPLETION AND DEFAULT

The Contractor hereby warrants that it will complete the Contract within the overall time period as set forth in the Contract Documents. It further warrants that it will complete its construction work as set forth in the Schedule of Intermediate Completion Times set forth in the Article 0.21 and 0.22 of the Information for Bidders entitled, "Time Limit" and "Damages", in the Special Conditions and any amendments, addenda, supplements and modifications thereto.

The time set forth therein and elsewhere for final completion and acceptance of the various phases of the Work are hereby made "time of the essence". In the event that Contractor fails to complete the Work within the time period required, at the option of the Owner, the Contractor shall be in default of this Contract.

In the event that the Contractor defaults in meeting a time period as set forth herein then the Owner shall, at any time thereafter before the Contractor has timely achieved a subsequent Intermediate Completion Time and before the full completion of the Contract, have the option of terminating the Contract. In the event that the Owner so terminates the Contract, the Contractor shall be paid for only such Work installed under the terms of the Contract, as shall be determined by the Engineer, and shall not be entitled to any additional monies for loss of profit for the Work to be performed under the terms of the Contract. The Owner shall withhold any payments due to the Contractor at the time of such termination until such time the Owner enters into an agreement for the balance of the Work. In the event that the Owner, in accordance with the bids received, awards the Contract to the lowest responsible bidder which requires the Owner to pay for the balance of the Work to be done in excess of the amount which was to be paid the Contractor for balance of Work, as determined by Engineer, then the Owner shall be authorized to apply any monies of the Contractor retained by the Owner toward this difference, remitting to Contractor the balance if any. In the event that such monies are insufficient to cover the said difference, the Contractor shall promptly pay any deficiency to the Owner.

In the event that the Owner elects not to declare Contractor in default, then Owner shall not be required to pay Contractor any monies for Work performed by Contractor until such time that Contractor overcomes his delay and completes the Work in accordance with a subsequent Intermediate Completion Time or completes the whole of the Work.

The Owner's remedies under this Article are in addition to and not in lieu of the Article XXII of this Contract entitled, "Damages and Liquidated Damages".

ARTICLE XX - FINAL COMPLETION

The Contractor's rate of progress shall be such that the Work shall be finally completed in accordance with the terms of this Contract within the time limit established for the project starting from the Contractor's receipt of the Notice to Proceed, unless and except as the Contractor shall be granted an extension of time under the Article XXI of this Contract entitled, "Suspension of Work, Delay and No Damage for Delay" or under the Article entitled, "Changes (XXXI)".

It is expressly understood and agreed by and between the Contractor and the Owner, that the Contract time for the completion of the Work and the intermediate Completion Times described in the Contract Documents are reasonable times taking into consideration the climatic conditions, economic conditions, labor force and other factors prevailing in the locality of the Work.

The time in which this contract is to be performed and completed and the Intermediate Completion Times are of the essence of this Agreement.

ARTICLE XXI - SUSPENSION OF WORK DELAY AND NO DAMAGES FOR DELAY

If the Contractor is delayed at any time in the progress of the Work for any of the following reasons, then the Time of Completion may be extended for such reasonable time as the Owner may decide, provided, however, that in no case shall the additional time exceed the time of the delay; but the Contractor shall have no right to, nor shall he make any claim whatsoever for damages, additional compensation or costs of any type by reason of the delay if caused by:

- (1) Lock-outs, strikes, fire, unavoidable casualties, war, natural disasters, acts of terrorism, civil or political disturbances; or
- (2) The negligence, tortious conduct, other wrongful acts or the default of other contractors, subcontractors, utility companies, or other companies or businesses, or their employees, agents or assigns, involved in the Project.

In the event that the delay is caused by the Owner's negligence, bad faith, active interference, or tortious conduct, the Contractor may make a claim for its damages caused by said delay. The Owner will review and evaluate the merits of each claim submitted. The Owner will endeavor to work cooperatively with the Contractor to resolve these issues in a timely manner.

The Contractor shall, as a condition precedent to any entitlement to an extension of time, notify the Engineer and the Owner in writing, as soon as possible but in any case within four (4) calendar days of the beginning of the delay, referencing this Article, the precise cause or causes of the delay, and any measures taken or to be taken to prevent or minimize the delay. The Contractor shall, as a further condition precedent to any entitlement to an extension of time, provide the Engineer and the Owner, in writing, as soon as possible or in any case within thirty (30) calendar days of the delay, the full particulars of the delay. The Contractor shall take all necessary action to prevent or minimize any such delay. The burden of proving that any extension of time is warranted shall rest with the Contractor.

ARTICLE XXII - DAMAGES AND LIQUIDATED DAMAGES

The parties acknowledge that in the event of a default in performance by the Contractor it is foreseeable that the Owner will suffer damages for which it is entitled to be compensated, both by virtue of the provisions of this Contract and as a matter of applicable law.

In the event the Contractor fails satisfactorily to complete all Work for the entire project as contemplated and provided for under this Contract on or before the time wherein final completion is required under the terms of the Contract Documents, the Contractor shall be liable for, and the Owner may deduct from the Contract price, the sum of \$500.00 as liquidated damages for each calendar day (Sundays and legal holidays included) of delay. Such damages shall continue for the period of time that final completion has not been met and the sum thereof is hereby, in view of the difficulty of estimating such damages, fixed and determined as liquidated damages which the Owner will suffer by such time delay. The sum determined pursuant to this paragraph is not a penalty but an attempt reasonably to forecast the potential harm due to intangible losses, such as revenue losses and general administrative costs caused by delay. The Contractor acknowledges that in submitting its bid and in setting the amount thereof it has ascertained the risk of nonperformance under this Article to the same extent as if the Contractor and the Owner had negotiated the amount of liquidated damages at arm's length.

In addition to and not in lieu of liquidated damages for the intangible costs of delay, the Contractor shall be liable for compensatory damages as allowed by law and in addition as hereinafter provided.

The Contractor agrees that, as compensatory damages due on account of delay in performance of the Contract, the Contractor shall be liable for and the Owner may deduct from the Contract Price the actual costs, resulting from the Contractor's failure to complete the Work contemplated herein within the time provided, for payment for the services of construction observers necessarily employed on the Work and for the services of the Engineer for any number of days in excess of the time allowed in the Contract Documents and for payment for all fines and penalties of whatever description imposed by the State of New Jersey or other governmental agency.

If the amounts of liquidated or compensatory damages due from the Contractor exceed the amounts of all monies due and to become due to the Contractor, the Contractor or his Surety shall pay the balance to the Owner.

ARTICLE XXIII - NIGHT, WEEKEND & HOLIDAY WORK

The Contractor shall notify the Engineer in advance of the nature and timing of the Work which it intends to do during nights or on weekends or holidays.

No night, weekend or holiday work shall be conducted in violation of law, including, without limitation, applicable noise restrictions.

The Contractor shall not be entitled to compensation beyond the bid amount for any costs incurred for work done during nights, weekends or holidays in order to accommodate the Owner's operational requirements.

Except where it is necessary for the Contractor to work nights, weekends, and holidays, as indicated above, the Contractor shall not schedule work to be done at night or on weekends or holidays except for the usual protective work such as pumping, tending of lights and heating apparatus, etc.

ARTICLE XXIV - ACCELERATION

If, in the opinion of the Owner, upon the advice of the Engineer, the Contractor is not making sufficient progress to complete this Contract within the time specified in the Contract Documents, based upon the remaining time within which the Work is required to be completed, the Owner may, after giving written notice to the Contractor, require the Contractor to accelerate its performance and employ sufficient means and make sufficient progress so that final completion will be achieved by the time required by the Contract Documents.

Neither the Owner so notifying the Contractor, nor the Owner's failure to notify the Contractor shall in any way relieve the Contractor from its obligation to complete its performance in a timely manner.

The Contractor shall not be entitled to any additional compensation by reason of such acceleration.

ARTICLE XXV - ILLEGAL DRUGS AND INTOXICATING LIQUORS

The Contractor shall strictly prohibit all persons from using or being under the influence of illegal drugs or intoxicating liquors upon or about the work site(s).

ARTICLE XXVI - EXAMINATION OF WORK AND TESTING

The representatives of the Engineer, the Owner, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at all reasonable times for their observation, inspection and testing. The Contractor shall provide proper and safe conditions for such access.

No work shall be covered without the advance authorization of the Engineer. The Contractor shall give the Engineer timely notice of the Contractor's intention to cover the Work and the Engineer shall act with reasonable promptness in response to such notice. If Work is covered without the Engineer's advance authorization, it must, if requested by the Engineer, be uncovered for the Engineer's observation and replaced at the Contractor's expense.

If the Engineer considers it necessary or advisable that Work which had been covered with the authorization of the Engineer be observed, inspected or tested, Contractor, at the Engineer's request, shall uncover, expose or otherwise make available for such observation, inspection or testing, 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, (at minimum fees and charges of engineers, architects, attorneys and other professionals), and Owner shall be entitled to an appropriate decrease in the Contract Price for such costs. If, however, such work is found not to be defective, Contractor shall be allowed an increase in the Contract Price for those costs directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

ARTICLE XXVII - DEFECTIVE WORK

Observation of the Work by the Owner and/or Engineer shall not relieve the Contractor of any of his obligations to fulfill the Contract as herein described, and defective work shall be made good, and unsuitable materials may be rejected, notwithstanding that such defective or unsuitable work or materials may previously have been overlooked by the Owner and/or Engineer and accepted or approved for payment. If the Work or any part thereof shall be found defective at any time before the final acceptance of the whole of the Work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Owner upon the advice of the Engineer, and if any material for use in the Work, or selected therefore, shall be condemned by the Engineer as unsuitable or not in conformity with the Contract Documents, the Contractor shall forthwith move such material from the vicinity of the Work. If the Contractor shall fail to remove or replace any defective or unsuitable materials or work within a reasonable time after written notice to the Contractor, the Owner may, without prejudice to any other remedy it may have, correct such deficiencies, and the expense thereof shall be borne by the Contractor.

ARTICLE XXVIII - PROTECTION OF WORK

The Contractor shall take all precautions to prevent damage to the Work, including, without limitation, damage caused by surface or ground waters. In case of damage to the Work of any kind whatsoever, the Contractor shall, at its own cost, make such repairs or replacements or rebuild such parts of the Work, in order that the finished Work may be completed as required by the Contract Documents.

ARTICLE XXIX - MISTAKES OF CONTRACTOR

The Contractor shall pay to the Owner all expenses, losses and damages caused by or relating to any defect, omission or mistake of the Contractor or of his materialmen, suppliers or subcontractors (of any tier), or their agents, or employees, or caused by or relating to the making good of such defect, omission or mistake.

ARTICLE XXX - TITLE TO WORK, MATERIALS AND EQUIPMENT

The Contractor warrants and guarantees that title to all work, materials, and equipment covered by an Application for Payment (Article XXXV), whether incorporated in the project or not, will pass to the Owner upon receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances.

The Contractor shall furnish releases of all liens, claims, security interests and encumbrances at the time the Contractor submits an Application for Payment for the Work, materials and equipment.

ARTICLE XXXI – CHANGES, CHANGED CONDITIONS, CHANGE ORDERS

The Owner may, at any time, by written order, and without notice to the sureties, make changes in the Work within the general scope of the Contract Documents, consisting of additions, deletions or other revisions. Such changes may include, without limitation, changes in the Contract Documents, Contract Drawings and Specifications, changes in the quantities, estimated quantities, design, line, grade, plan, form, dimensions or materials of the Work or any part thereof, changes in the method or manner of performing the Work, and changes in Owner-furnished property.

Any other written or oral orders (including, without limitation, directions, instructions, interpretations, or determinations) from the Owner or Engineer to the Contractor that cause material change in the requirements of the Contract Documents, may be authorized as changes under this Article; provided, as conditions precedent, that the Contractor gives the Owner and Engineer advance written notice at the earliest practicable time (in any case before beginning the Work which will be the subject of the claimed change and before incurring any costs in connection with the claimed change) of the date, circumstances and source of the alleged change; provided that the Contractor expressly states in the notice that the Contractor regards the order as a change in the requirements of the Contractor Documents and cites this Article of the Contract; and provided that the Owner determines that the claim of the Contractor is meritorious and issues a duly authorized written change order to that effect.

If any such change causes an increase or decrease in the cost of or time required for the performance of any part of the Work under this Contract, the Owner shall make an adjustment in the Contractor Price, the required completion times for the Contractor work, or both. If any change decreases the Work to be performed, the Contractor shall not be entitled to damages or anticipated profits on the Work that is eliminated.

This construction Contract is subject to changed conditions clauses in accordance with N.J.S.A. 40A:11-16.7 and N.J.S.A. 40A:11-16.8..

- A) A Contract subject to this section shall include the following differing site conditions provisions as per N.J.S.A. 40A:11-16.7:
- (1) If the Contractor encounters differing site conditions during the progress of the Work of the Contract, the Contractor shall promptly notify the Owner in writing of the specific differing site conditions encountered before the site is further disturbed and before any additional work is performed in the impacted area.
 - (2) Upon receipt of a differing site conditions notice in accordance with paragraph (1) of this

subsection, or upon the Owner otherwise learning of differing site conditions, the Owner shall promptly undertake an investigation to determine whether differing site conditions are present.

(3) If the Owner determines different site conditions that may result in additional costs or delays exist, the Owner shall provide prompt written notice to the Contractor containing directions on how to proceed.

(4) (a) The Owner shall make a fair and equitable adjustment to the Contract price and Contract completion date for increased costs and delays resulting from the agreed upon differing site conditions encountered by the Contractor.

(b) If both parties agree that the Owner's investigation and directions decrease the Contractor's costs or time of performance, the Owner shall be entitled to a fair and equitable downward adjustment of the Contract price or time of performance.

(c) If the Owner determines that there are no differing site conditions present that would result in additional costs or delays, the Owner shall so advise the Contractor, in writing, and the Contractor shall resume performance of the Contract, and shall be entitled to pursue a differing site conditions claim against the Owner for additional compensation or time attributable to the alleged differing site conditions.

(5) Execution of the Contract by the Contractor shall constitute a representation that the Contractor has visited the site and has become generally familiar with the local conditions under which the Work is to be performed.

(6) As used in this subsection, "differing site conditions" mean physical conditions at the Contract work site that are subsurface or otherwise concealed and which differ materially from those indicated in the Contract documents or are of such an unusual nature that the conditions differ materially from those ordinarily encountered and generally recognized as inherent in the work of the character provided for in the Contract.

B) A Contract subject to this section shall include the following suspension of work provisions as per N.J.S.A. 40A:11-16.7:

(1) The Owner shall provide written notice to the Contractor in advance of any suspension of work lasting more than 10 calendar days of the performance of all or any portion of the Work of the Contract.

(2) If the performance of all or any portion of the Work of the Contract is suspended by the Owner for more than 10 calendar days due to no fault of the Contractor or as a consequence of an occurrence beyond the Owner's control, the Contractor shall be entitled to compensation for any resultant delay to the project completion or additional Contractor expenses, and to an extension of time, provided that, to the extent feasible, the Contractor, within 10 calendar days following the conclusion of the suspension, notifies the Owner, in writing, of the nature and extent of the suspension of work. The notice shall include available supporting information, which information may thereafter be supplemented by the Contractor as needed and as may be reasonably requested by the Owner. Whenever a work suspension exceeds 60 days, upon seven days' written notice, either party shall have the option to terminate the Contract for cause and to be fairly and equitably compensated therefor.

(3) Upon receipt of the Contractor's suspension of work notice in accordance with paragraph (2) of this subsection, the Owner shall promptly evaluate the Contractor's notice and promptly advise the Contractor of its determination on how to proceed in writing.

- (4) (a) If the Owner determines that the Contractor is entitled to additional compensation or time, the Owner shall make a fair and equitable upward adjustment to the Contract price and Contract completion date.
- (b) If the Owner determines that the Contractor is not entitled to additional compensation or time, the Contractor shall proceed with the performance of the Contract Work, and shall be entitled to pursue a suspension of work claim against the Owner for additional compensation or time attributable to the suspension.
- (5) Failure of the Contractor to provide timely notice of a suspension of work shall result in a waiver of a claim if the Owner can prove by clear and convincing evidence that the lack of notice or delayed notice by the Contractor actually prejudiced the Owner's ability to adequately investigate and defend against the claim.
- C) A Contract subject to this section shall include the following change in character of work provisions as per N.J.S.A. 40A:11-16.7:
- (1) If the Contractor believes that a change directive by the Owner results in a material change to the Contract Work, the Contractor shall so notify the Owner in writing. The Contractor shall continue to perform all Work on the project that is not the subject of the notice.
- (2) Upon receipt of the Contractor's change in character notice in accordance with paragraph (1) of this subsection, the Owner shall promptly evaluate the Contractor's notice and promptly advise the Contractor of its determination on how to proceed in writing.
- (3) (a) If the Owner determines that a change to the Contractor's work caused or directed by the Owner materially changes the character of any aspect of the Contract Work, the Owner shall make a fair and equitable upward adjustment to the Contract price and Contract completion date. The basis for any such price adjustment shall be the difference between the cost of performance of the Work as planned at the time of contracting and the actual cost of such work as a result of its change in character, or as otherwise mutually agreed upon by the Contractor and the Owner prior to the Contractor performing the subject work.
- (b) If the Owner determines that the Contractor is not entitled to additional compensation or time, the Contractor shall continue the performance of all Contract Work, and shall be entitled to pursue a claim against the Owner for additional compensation or time attributable to the alleged material change.
- (4) As used in this subsection, "material change" means a character change which increases or decreases the Contractor's cost of performing the Work, increases or decreases the amount of time by which the Contractor completes the Work in relation to the contractually required completion date, or both.
- D) A Contract subject to this section shall include the following change in quantity provisions as per N.J.S.A. 40A:11-16.7:
- (1) The Owner may increase or decrease the quantity of Work to be performed by the Contractor.
- (2) (a) If the quantity of a pay item is cumulatively increased or decreased by 20 percent or less from the bid proposal quantity, the quantity change shall be considered a minor

change in quantity.

(b) If the quantity of a pay item is increased or decreased by more than 20 percent from the bid proposal quantity, the quantity change shall be considered a major change in quantity.

(3) For any minor change in quantity, the Owner shall make payment for the quantity of the pay item performed at the bid price for the pay item.

(4) (a) For a major increase in quantity, the Owner or Contractor may request to renegotiate the price for the quantity in excess of 120 percent of the bid proposal quantity. If a mutual agreement cannot be reached on a negotiated price for a major quantity increase, the Owner shall pay the actual costs plus an additional 10 percent for overhead and an additional 10 percent for profit, unless otherwise specified in the original bid.

(b) For a major decrease in quantity, the Owner or Contractor may request to renegotiate the price for the quantity of Work performed. If a mutual agreement cannot be reached on a negotiated price for a major quantity decrease, the Owner shall pay the actual costs plus an additional 10 percent for overhead and an additional 10 percent for profit, unless otherwise specified in the original bid; provided, however, that the Owner shall not make a payment in an amount that exceeds 80 percent of the value of the bid price multiplied by the bid proposal quantity.

(5) As used in this subsection, the term "bid proposal quantity" means the quantity indicated in the bid proposal less the quantities designated in the project plans as "if and where directed."

As a condition precedent to the Contractor's right to any entitlement to increased costs or an extension of time under this Article, the Contractor must fully document its claim to an adjustment within thirty (30) days after receipt of a written change request/directive from the Owner or within thirty (30) days after the Contractor gives notice of a constructive change. Such documentation shall, without limitation, include a written statement to the Owner and Engineer setting forth the full particulars of the Contractor's claimed entitlements and the claimed amounts, accompanied by full documentation and detailed accounting in support of all aspects of the claim. The Contractor shall update and supplement its claim and documentation as necessary at intervals not greater than thirty (30) days.

No claims for an adjustment shall be allowed if asserted after final payment under this Contractor.

Total value of change orders executed for a particular Contract shall not cause the originally awarded contract price to be exceeded by more than 20 percent unless otherwise authorized as per N.J.A.C. 5:30-11.

The following general policies shall apply to adjustments for lump sum projects under this Article:

(a) The Contractor shall be entitled to any additional identifiable Contractor Direct Costs associated with the changed work as identified above excluding Subcontractor's costs. For adjustments up to \$100,000, the Contractor may include up to 10-percent overhead factor to its additional identifiable direct job costs, but excluding the cost of any subcontracting, plus up to a 10-percent profit factor to its identifiable direct costs plus overhead amount.

- (b) These overhead and profit factors may be accepted by the Owner as reasonable in lieu of requiring the submission of additional supporting data. However, the Owner reserves the right to review any cost or profit element on a case-by-case basis.
- (c) Adjustments relating to changes in subcontracted work may be similarly handled and the Contractor may add up to 10 percent to the total cost (including overhead and profit factors) incurred by the Subcontractor. In such cases, the same reservation of rights shall apply.
- (d) For adjustments more than \$100,000, the above factors may be included initially for adjustments but will be subject to negotiation, cost and pricing data, and Owner review requirements.

In order to be allowable in adjustments, costs must be reasonable in nature and amount. Indirect Costs (overhead costs) must be allocable to the Contractor, i.e., chargeable to the Contractor on the basis of relative benefit received or other relationship. Direct Costs for changed work shall be limited to increases or decreases in the identifiable direct cost of the following:

- (a) Direct Labor costs, including the time of a foreman while engaged directly upon changed work.
- (b) Direct Labor employee insurance, social security and other direct costs assessed on Direct Labor payrolls by properly authorized public agencies.
- (c) Direct costs of equipment, materials and supplies installed in the Work. The direct cost of these items shall be the actual costs paid by Contractor to the suppliers of these items, without markup.
- (d) Direct costs of job equipment associated with the changed work. The compensable cost for construction equipment shall be based upon the most current costs established in the "Rental Rate Blue Book for Construction Equipment" (Blue Book) (published by Equipment Guide-Book Company) for each piece of equipment having a value in excess of \$50.00. Equipment and tools of lesser value are considered "small tools" and, as such, are considered to be part of overhead. Costs shall be based on an hourly rate determined by dividing the monthly rate listed in the cited "Blue Book" by 176. Overhead and profit factors shall only be applied to the rates charged for rental equipment. No overhead or profit will be allowed for Contractor-owned equipment.

Should the Owner and Contractor fail to agree upon any adjustment addressed by this Article, the Engineer shall initially fix the terms of the adjustment and if the Owner or Contractor shall be dissatisfied with the Engineer's actions in this regard, such party may give notice to the Engineer of a dispute and a request for a formal decision under the Article of this Contract entitled, "Responsibility of the Engineer". However, nothing shall excuse the Contractor from proceeding with the Contract as changed.

The change orders executed for this Contract shall, in no event, cause the originally awarded Contractor Price to exceed limitations set forth in N.J.A.C. 5:30-11et. seq., except as may be authorized under such regulation.

ARTICLE XXXII - CHANGES NOT TO AFFECT BOND

No modifications, omissions or additions to the terms of the Contract Documents shall in any way affect the obligations of the sureties on the Contractor's bonds.

ARTICLE XXXIII - DISCONTINUANCE OF WORK

If the Work to be done under this Contract shall be abandoned, or if this Contract or any part thereof shall be sublet without the previous written consent of the Owner, or if the Contract or any claim thereunder shall be assigned by the Contractor otherwise than as herein specified, or if at any time the Engineer or Owner shall be of the opinion, and shall so certify in writing, that the conditions herein specified as to the rate of progress are not fulfilled, or that the Work or any part thereof is unnecessarily or unreasonably delayed, or that the Contractor has violated any of the provisions of this Contract, the Owner may notify the Contractor by seven (7) days advance written notice with a copy mailed to the Contractor's sureties to discontinue all work, or any part thereof; and thereupon the Contractor shall discontinue such work or such part thereof as the Owner may designate, and the Owner may thereupon, by contract or otherwise as it may determine, complete the Work, or such part thereof, and charge the reasonable expense of so completing the Work or part thereof to the Contractor; and for such completion the Owner for itself or its contractors may take possession of and use or cause to be used in the completion of the Work or part thereof, any of such materials, equipment, machinery, implements, and tools of every description as may be found at the location of said work.

All expenses charged under this Article shall be deducted and paid by the Owner out of any monies then due or to become due the Contractor under this Contract, or any part thereof; and in such accounting the Owner shall not be held to obtain the lowest reasonable figures for the Work of completing the contract or any part thereof, or for insuring its proper completion, but all sums actually and reasonably paid therefore shall be charged to the Contractor. In case the expenses so charged exceed the sum which would have been payable under this contract if the same had been completed by the Contractor, the Contractor shall pay the amount of the excess to the Owner.

ARTICLE XXXIV - MONEY MAY BE RETAINED

The Owner may keep any monies which would otherwise be payable at any time hereunder, and apply the same or so much as may be necessary therefor, to the payment of any expenses, losses or damages, incurred by the Owner, and may retain until all claims are settled, so much of such money as the Owner shall be of the opinion shall reasonably be required to settle all claims filed with the Owner, its officers and agents, relating to this Contract.

ARTICLE XXXV - APPLICATIONS FOR PAYMENT

Except as hereinafter provided, the Contractor shall submit monthly a written Application for Payment for the approval of the Engineer on forms furnished by the Engineer for the value of the Work done to the date of the Application for Payment and the amount earned by the Contractor under the terms of the Contract Documents.

The Owner shall withhold 2% of the amount due on each Application for Payment for Contracts pursuant to N.J.S.A. 40A:11-16.3 unless the Contractor makes the deposits referred to in N.J.S.A. 40A:11-16.1. Such withholding shall be in addition to any retainage otherwise authorized by law or the Contract Documents.

The Owner shall make payments to the Contractor once each month as the Work progresses. Payment may be withheld at any time if the Work is not proceeding in accordance with the Contract Documents.

At least twenty (20) days before each monthly progress payment falls due for approval by the Owner (but not more often than once per month), the Contractor will submit to the Engineer an Application for Payment filled out and signed by the Contractor covering the Work performed during the period

covered by the Application for Payment and supported by such data as the Engineer may reasonably require.

Accompanying each Application for Payment shall be releases of any and all lien claims which may have been filed by persons claiming to have performed any labor or furnished any materials toward performance or completion of this Contract.

All invoices for payment shall be accompanied by the calculation of any applicable price adjustment (asphalt/fuel) as defined in the Information for Bidders 0.34 – Allowances. Calculations shall include the current price index, and the basic price index established at the time of bid.

Where any specific item(s) in the Application for Payment (work not completed) is questioned, the Engineer may delete those items from the Application for Payment and approve the acceptable portion of the Application for Payment.

For unit price Work the quantities set forth in the Contract Documents are estimated quantities. Such quantities are not guaranteed but are solely for the purpose of comparing Bids and determining the initial Contract Price. Determinations of the actual quantities for unit price Work will be made by the Engineer, whose decisions (by recommendation of an Application for Payment or otherwise) will be final and binding unless a formal decision is requested within the time provided in the Article III of this Contract entitled, "Responsibility of the Engineer" in the Sub-article entitled, "Engineer's Decisions".

Prior to performing unit price Work which would cause a net increase in the Contract Price by reason of the estimated quantity(ies) for such unit price Work being exceeded, the Contractor shall request that the Owner issue a change order under the Article XXXI of the Contract entitled, "Changes" to cover such increase. No increase in the Contract Price will be authorized without advance approval by change order.

Payment requested for stored materials and/or equipment shall, in addition to the conditions set forth in N.J.S.A. 40A:11-16.4, be subject to the following conditions:

- (a) The materials and/or equipment shall be received in a condition satisfactory for incorporation in the Work.
- (b) The materials and/or equipment shall be stored on Owner's Property or at an approved secure location in such manner that they will not be damaged due to weather, construction operations or any other cause.
- (c) An invoice from the supplier shall be furnished for each item which payment is requested.
- (d) The Contractor shall furnish written proof from the supplier of payment for at least 90% of the cost of the materials and/or equipment, no later than thirty (30) days after Contractor's receipt of the payment for such materials and/or equipment from the Owner. The Owner shall have the right to deduct from the next Application for Payment an amount equal to the cost of the said materials and/or equipment if adequate and timely proof of payment is not submitted by the Contractor.
- (e) Title to the stored materials and/or equipment shall pass to the Owner immediately upon the Owner's issuance of payment for the same. All stored materials and/or equipment for which the Owner has title shall be prominently labelled by the Contractor to indicate that title is in the Owner.
- (f) Risk of loss for the stored materials and/or equipment shall remain in the Contractor until the materials and/or equipment shall be incorporated into the works and finally

accepted by the Owner. The Contractor shall maintain (and provide evidence of) adequate insurance to cover the risk of loss of the stored materials and/or equipment.

- (g) All stored materials and/or equipment shall be, at all reasonable times, subject to the inspection of the Engineer and the Owner. The Contractor shall bear the cost of Engineer's time and expense incurred in travelling to the Contractor's storage site(s).

The Engineer will, within 20 days after receipt of each Application for Payment, either indicate in writing its approval of payment and present the Application for Payment to the Owner, or return the Application for Payment to the Contractor indicating in writing its reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the Application for Payment. The Owner shall review the Application for Payment at its next regularly scheduled meeting (provided that the Owner has received the Application for Payment in accordance with the Owner's standard payment procedure as indicated in Instruction to Bidders). Any Application for Payment shall be subject to correction in any subsequent Application for Payment. Upon presentation of invoice by the Contractor, Owner shall make payment in 30 days according to N.J.S.A. 2A:30A-1.

ARTICLE XXXVI - FINAL ESTIMATE AND PAYMENT

The Contractor shall, as soon as practical after the final completion of this Contract, submit to the Engineer, in writing, for his approval, a final Application for Payment.

All prior Applications for Payment shall be subject to correction in the final Application for Payment.

The Owner shall pay to the Contractor within 45 days of final completion and acceptance by the Owner, as provided by law, the entire balance of the Contract Price due hereunder, including the amount withheld pursuant to N.J.S.A. 40A:11-16.3, after deducting there from all previous payments and all amounts to be deducted and all amounts to be retained under the provisions of this Contract and as permitted by law. Such final payment shall not be made before the expiration of the time within which claims for labor performed and materials furnished under the Contract must be filed under the "Municipal Mechanics Lien Law" (N.J.S.A. 2A:44-125, et seq.) Contract completion or acceptance by the Owner and payment to the Contractor within 60 days thereof.

The Owner, with the advice of the Engineer, shall fix the date of final completion of the Work and shall annotate the date upon the final Application for Payment.

ARTICLE XXXVII - LIENS

If at any time before final payment any person or persons claiming to have performed any labor or furnished any materials, toward the performance or completion of this Contract, shall file proper notice of claim, the Owner shall retain, until the discharge thereof from the monies under its control, so much of such monies as shall be sufficient to satisfy and discharge the amount claimed to be due in such notice, together with the estimated cost of any action or actions to be incurred by the Owner in connection with the filing of such notice.

After such retainage, the balance of money which may be due to the Contractor shall not be paid by the Owner until the Contractor has delivered to the Owner an Affidavit to be signed personally by the Contractor, or by a General Partner if Contractor is a Partnership, or by the President or Secretary if Contractor is a Corporation, attesting to the payment of all others who supplied labor, materials or equipment for the Contract and for which a lien claim could be filed, with receipts in full to cover the potential claims of such other suppliers of labor, materials or equipment, such receipts to be attached to such Affidavit.

ARTICLE XXXVIII - WAIVERS

Neither the observation by the Owner or the Engineer nor any of their agents, nor any order, measurement, or certification by the Engineer, nor any order by the Owner for the payment of money nor payment for, nor acceptance of, the whole or any part of the Work by the Owner, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Owner, or any right to damages herein provided, nor shall any waiver of any breach of this Contract be held to be a waiver of any other or subsequent breach. Any remedy provided in this Contract shall be taken and construed as cumulative, that is, in addition to each and every other remedy herein provided, and, in addition to all other suits, actions, or legal proceedings, the Owner shall also be entitled as of right to a writ of injunction as a relief against any breach of any of the provisions of this Contract.

ARTICLE XXXIX - LIABILITY OF OWNER

No person, firm or corporation, other than the Owner, the Engineer and the Contractor, now has any interest hereunder, and no claim by any other person to be a beneficiary of this Contract shall be made or be valid, and neither the Owner nor any agent of the Owner, shall be liable for, or be held to pay, any money, except as herein provided. The acceptance by the Contractor of the final payment shall operate as and shall be a release to the Owner, the Engineer and every agent of the Owner and Engineer, for all claims by and liabilities to the Contractor for anything done or furnished for, or relating to the Work, or for any act or neglect of the Owner or the Engineer or of any person relating to or affecting the Work except the claim against the Owner for the remainder, if any there be, of the amounts deducted or retained as herein provided.

ARTICLE XL - WARRANTY

The Contractor warrants to the Owner and Engineer that the materials and equipment furnished by the Contractor or any Subcontractor (of any tier) under the Contract Documents will be fit for the intended purpose, of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. This warranty excludes remedy for damage or defect caused by others for whom the Contractor is not responsible, modifications not executed by the Contractor or its Subcontractors (of any tier), improper operation, or normal wear and tear under normal usage. In case of inquiry by the Engineer, the Contractor shall furnish evidence, satisfactory to the Engineer, as to the nature and quality of any work, materials or equipment furnished under the Contract. The foregoing warranty shall remain in effect until the end of the Maintenance Period described in the Article XLI of this Contract entitled "Maintenance Period" and the Owner shall have the remedies provided therein.

The Contractor will provide the Owner with all available manufacturer's warranties and the documentation therefore, covering the materials, equipment and goods supplied under the Contract. Such manufacturer's warranties shall survive the completion and acceptance of the Contract, and shall remain in effect according to their terms.

ARTICLE XLI - MAINTENANCE PERIOD

In addition to, and not in lieu of the Contractor's warranty, above, if, within two years from the date of Owner's final acceptance of the Contractor's work or such longer period of time as may be prescribed by law or regulation or by the terms of any special warranty required by the Contract Documents, any such work is found to be defective or requires repair, amendment, reconstruction, or rectification to keep the facility and its appurtenances in good and serviceable condition, the Contractor shall promptly, without cost to the Owner and in accordance with Owner's written instructions, either

correct such condition or, if the Work has been rejected by the Owner, remove it from the site and replace it with proper work. Such two-year period is referred to here as the "Maintenance Period."

The Contractor's maintenance obligation excludes remedy for damage or defect caused by others for whom the Contractor is not responsible, or caused by Owner's improper use or operation, or caused by the failure of the Owner to provide necessary lubricants.

Throughout the Maintenance Period, the Contractor shall also correct any settlement or erosion in fills or cuts and restore all ground areas to elevations indicated on the Contract Drawings when so instructed by the Owner or the Engineer.

The Contractor's Maintenance Bond shall remain in effect until the end of the Maintenance Period. The Maintenance Bond shall be in a sum equal to 100% of the Contract Price and furnished as specified in Section 0.17, "Security for Faithful Performance and Maintenance (Bonds)," of the Information for Bidders.

If the Contractor does not comply with the requirements of the above stated warranty obligations or maintenance obligations, promptly correct the Work, promptly comply with the terms of instructions of the Owner or Engineer, or, in an emergency where delay would cause material risk of loss or damage, the Owner may have the 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 borne by Contractor and may be deducted from amounts payable to the Contractor under the Contract. If instead of requiring correction or removal and replacement of the Work, the Owner prefers to accept it, the Owner may do so and the Owner shall be entitled to an appropriate decrease in Contract Price.

ARTICLE XLII - LEGAL ADDRESS OF CONTRACTOR

The address given in the bid or proposal submitted by the Contractor and the Contractor's office at or near the site of the Work are hereby designated as places to either of which notices, letters, and other communications to the Contractor may be certified, mailed or delivered. The delivery at the site office, or delivery to the address given in the bid or proposal or depositing in a postpaid wrapper directed to the address given in the bid or proposal, in any post office box regularly maintained by the U.S. Postal Service of any notice, letter or other communication to the Contractor, shall be deemed sufficient service thereof upon the Contractor, and the date of said service shall be the date of such delivery or mailing. The Contractor's address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the Owner with a copy to the Engineer. Nothing herein contained shall be deemed to preclude or render inoperative the personal service of any notice, letter or other communication upon a Contractor's representative.

ARTICLE XLIII - RIGHT OF THE OWNER TO TERMINATE CONTRACT OR GIVE A THREE (3) DAY DEFICIENCY NOTICE

In the event of any material delay or default in the performance of any of the provisions of the Contract Documents by the Contractor, or by any of his Subcontractors (of any tier), the Owner may serve written notice upon the Contractor and the surety(ies) of its intention to terminate the Contract, such notice to contain the reasons for the Owner's intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such delay or default shall cease or arrangements for the correction and cure of the delay or default satisfactory to the Owner shall be made, the Owner may, upon the expiration of said ten (10) days, terminate the Contract. In the event of any such termination, the Owner shall immediately serve notice thereof upon the Contractor and the surety(ies), and the surety(ies) shall have the right to take over and perform the Contract; provided, however, that if the surety(ies) do not commence performance of the Contract within ten (10) days from the date of the mailing to such surety(ies) of the notice of termination and correct and cure such delay or default or make arrangements for the correction and cure of the delay

or default satisfactory to the Owner, the Owner may take over the Work and prosecute the same to completion by contract or by force account for the account of and at the expense of the Contractor and may deduct the cost thereof from the payment then or thereafter due to the Contractor, and the Contractor and the surety(ies) shall be liable to the Owner for any excess cost caused to the Owner thereby, and in such event the Owner may take possession of and utilize in completing the Work, such of the Contractor's materials, equipment appliances, and plant as may be on the site of the Work and necessary or convenient therefor.

In addition to and not in lieu of the termination remedy provided above or any other remedy the Owner may have, if the Contractor or Subcontractor (of any tier) should fail or neglect at any time to prosecute the Work properly or fail to perform any provision of the Contract Documents, the Owner may give a three (3) day written deficiency notice. The Owner, after three (3) days from the service of the three (3) day deficiency notice to the Contractor, may make good such deficiencies for the account of and at the expense of the Contractor and may deduct the cost thereof from the payment then or thereafter due to the Contractor and the Contractor and the surety(ies) shall be liable to the Owner for any excess cost caused to the Owner thereby.

In addition to and not in lieu of the termination remedies provided above, the Owner may terminate this Contract, in whole or in part, for the convenience of the Owner, if the Owner determines that such termination is in the Owner's interest. Such termination shall be by written notice to the Contractor specifying the extent of termination and the effective date. In case of such termination for convenience, the Contractor shall be paid for the Work satisfactorily completed to the date of termination, together with the reasonable costs of settlement of the Work terminated, but not for lost or anticipated profits on the Work terminated.

ARTICLE XLIV - USE AND OCCUPANCY PRIOR TO ACCEPTANCE BY OWNER

The Owner shall have the right to the possession, use and occupancy of any portion or unit of the project upon Substantial Completion as defined in this Agreement.

The possession, use or occupancy of any part or parts of the project by the Owner on Substantial Completion shall not operate to relieve the Contractor from its responsibility to complete all of the Work as specified in the Contract Documents. The possession, use or occupancy by the Owner of any part of the project, on Substantial Completion or otherwise, shall not constitute or necessarily imply final completion or acceptance of that part of the project or work by the Owner or Engineer.

The statutes of limitation and repose shall commence to run on the date of Substantial Completion certified by the Engineer.

ARTICLE XLV - PAYMENT FOR UNCORRECTED WORK

Should the Owner direct the Contractor not to correct work that has been damaged or that has not been performed in accordance with the Contract Documents, a deduction from the amount payable under the Contract, as determined by the Engineer, shall be made to compensate the Owner for the uncorrected work.

ARTICLE XLVI - ORAL AGREEMENTS

No oral order, objection, claim or notice by any party to the other shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by an express waiver or modification to the Contract Documents, in writing, and no evidence shall be introduced in any proceeding of any other alleged waiver or modification.

ARTICLE XLVII - CONTRACTOR BOOKS AND RECORDS

The Contractor shall maintain its books and records in accordance with generally-accepted accounting principles and auditing standards throughout the performance of this Contract and for five (5) years after final completion and acceptance.

The Contractor shall maintain all documentation related to products, transactions or services under this contract for a period of five (5) years from the date of final payment. Such records shall be made available to the New Jersey Office of the State Comptroller upon request.

ARTICLE XLVIII - DISPUTES

Disputes arising under this Agreement shall be submitted to a process of resolution pursuant to alternative dispute resolution practices, such as mediation, binding arbitration or non-binding arbitration, as required by N.J.S.A. 40A:11-50, pursuant to industry standards, prior to being submitted to a court for adjudication. The specific type of alternate dispute resolution to be utilized shall be selected by the Owner and the costs payable to the mediator or arbitrator(s) shall be borne equally by the Owner and Contractor.

Nothing in this Article shall prevent the Owner from seeking injunctive or declaratory relief in court at any time.

The alternative dispute resolution practices required by this Article shall not apply to disputes concerning the bid solicitation or award process, or to the formation of contracts or subcontracts to be entered into pursuant to N.J.S.A. 40A:11-1, et seq.

The joinder of parties to any dispute hereunder shall be governed by the provisions of N.J.S.A. 40A:11-50.

Pursuant to the provisions of N.J.S.A. 40A:11-50, the OWNER and the Contractor hereby agree with, represents and warrants to the ENGINEER that the ENGINEER shall not be made a party to any alternate dispute resolution process relating to the Construction Contract or its breach, other than non-binding mediation, the costs of which shall be borne by either the Owner or Contractor or both the Owner and the Contractor, as the case may be, but in no event by the Engineer.

Should the Contractor make any claim or claims against the OWNER or ENGINEER, or their agents and employees, based, in whole or in part, upon any alleged ENGINEER error or omission in connection with the project; the Contractor shall be responsible for the payment of ENGINEER'S costs of defense against such claims (including but not limited to reasonable attorney's fees), unless the ENGINEER is proved, in a court of competent jurisdiction, to have been guilty of negligence or willful misconduct which is determined to be the sole proximate cause of such claim or claims.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their names and affixed their seals:

COUNTY OF OCEAN

(Seal)

By: _____

Title

Attest:

Title

Contractor

By: _____

Title (Seal)

Attest:

Title

PERFORMANCE LABOR AND MATERIAL PAYMENT BOND

KNOW all men by these presents, that we, the undersigned,
_____, as principal and
_____, as sureties, are hereby held and firmly bound unto the
County of Ocean in the penal sum _____ dollars, for the
payment of which well and truly to be made, we hereby jointly and severally bind ourselves,
our heirs, executors, administrators, successors and assigns.

Signed this ___ day of _____, 20__.

The condition of the above obligation is such that whereas, the above named
principal on the _____ day of _____, 20__, enter into a contract
with the County of Ocean for construction associated with the **Northern Recycling Center
Eddy Current Separator** in accordance with the specifications which contract is by
reference made a part thereof, and is hereinafter referred to as the Contract.

Now, if the said _____ shall well and faithfully
do and perform the things agreed by _____ to be
done and performed according to the terms of said Contract, and shall pay all lawful claims
of beneficiaries as defined by N.J.S. 2A:44-143 for labor performed or materials, provisions,
provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or
consumed in the carrying forward, performing or completing of said contract, we agreeing
and assenting that this undertaking shall be for the benefit of any beneficiary as defined in
N.J.S.2A:44-143 having a just claim, as well as for the obligee herein; then this obligation
shall be void; otherwise the same shall remain in full force and effect; it being expressly
understood and agreed that the liability of the surety for any and all claims hereunder shall in
no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions
or additions in or to the terms of the said Contract or in or to the plans or specifications
therefore shall in any wise affect the obligation of said surety on its bond.

Recovery of any claimant under the bond shall be subject to the conditions
and provisions of N.J.S. 2A:44-143 to the same extent as if such conditions and provisions
were fully incorporated in the form set forth above.

IN WITNESS WHEREOF said principal and surety have hereunto set their respective hands and seals or caused these presents to be signed and sealed by their proper representatives on the day and date set forth above.

Principal

WITNESS/ATTEST

By

Surety

ATTEST

By

NOTE: If the principal (Contractor) is a partnership, the bond should be signed by each of the general partners.

If the principal (Contractor) is a corporation, the bond must be signed by and attested by duly authorized representatives and an enabling corporate resolution must be attached.

There are to be executed an appropriate number of counterparts of this Performance Bond corresponding to the number of counterparts of the Contract.

SURETY DISCLOSURE STATEMENT AND CERTIFICATION

_____, surety(ies) on the attached bond, hereby certifies(y) the following:

(1) The surety meets the applicable capital and surplus requirements of R.S. 17:17-6 or R.S. 17:17-7 as of the surety's most current annual filing with the New Jersey Department of Insurance.

(2) The capital (where applicable) and surplus, as determined in accordance with the applicable laws of this State, of the surety(ies) participating in the issuance of the attached bond is (are) in the following amount(s) as of the calendar year ended December 31, _____ (most recent calendar year for which capital and surplus amounts are available), which amounts have been certified as indicated by certified public accountants (indicating separately for each surety that surety's capital and surplus amounts, together with the name and address of the firm of certified public accounts that shall have certified those amounts):

(3)(a) With respect to each surety participating in the issuance of the attached bond that has received from the United States Secretary of the Treasury a certificate of authority pursuant to 31 U.S.C. sec. 9305, the underwriting limitation established therein and the date as of which that limitation was effective is as follows (indicating for each such surety that surety's underwriting limitation and the effective date thereof):

(b) With respect to each surety participating in the issuance of the attached bond that has not received such a certificate of authority from the United States Secretary of the Treasury, the underwriting limitation of that surety as established pursuant to R.S. 17:18-9 as of (date on which such limitation was so established) is as follows (indicating for each such surety that surety's underwriting limitation and the date on which that limitation was established):

(4) The amount of the bond to which this statement and certification is attached is

\$ _____

(5) If, by the virtue of one or more contracts of reinsurance, the amount of the bond indicated under item (4) above exceeds the total underwriting limitation of all sureties on the bond as set forth in items (3)(a) or (3)(b) above, or both, then for each such contract of reinsurance:

(a) The name and address of each such reinsurer under that contract and the amount of that reinsurer's participation in the contract is as follows:

and, (b) Each surety that is party to any such contract of reinsurance certifies that each reinsurer listed under item (5)(a) satisfies the credit for reinsurance requirement established under P.L. 1993, c.243 (c.17:51B-1 et seq.) and any applicable regulations in effect as of the date on which the bond to which this statement and certification is attached shall have been filed with the appropriate public agency.

MAINTENANCE BOND

KNOW all men by these presents, that we, the undersigned, _____ as principal, and _____, as sureties, are hereby held and firmly bound unto the County of Ocean in the penal sum of _____ dollars, for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____, 20____.

The condition of the above obligation is such that whereas, the above-named principal on the _____ day of _____, 20____, entered into a contract with the County of Ocean for construction associated with **Northern Recycling Center Eddy Current Separator** in accordance with the specifications which contract is by reference made a part thereof, and is hereinafter referred to as the Contract.

WHEREAS, the work under said Contract has been completed and accepted by the County of Ocean pursuant the requirements and conditions of the Contract on _____ day of _____, 20____.

WHEREAS, said Contract requires the above-named principal to guarantee all labor and materials incorporated in the work and repair or replace defective work for a period of two (2) years from the Owner's final acceptance per the Contract.

Now, if the said _____ shall well and faithfully do and perform all things agreed by _____ to be done and performed according to the Articles of the Contract entitled, "Warranty" and "Maintenance Period"; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

This Maintenance Bond is to remain in effect until the end of the Maintenance Period provided under the Contract.

The said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the said Contract or in or to the plans or specifications therefore shall in anyway affect the obligation of said surety on its bond.

IN WITNESS WHEREOF said principal and surety have hereunto set their respective hands and seals or caused these presents to be signed and sealed by their proper representatives on the day and date set forth above.

WITNESS/ATTEST

ATTEST

Principal

By _____

Surety

By _____

NOTE: If the principal (Contractor) is a partnership, the bond should be signed by each of the general partners.

If the principal (Contractor) is a corporation, the bond must be signed by and attested by duly-authorized representatives and an enabling corporate resolution must be attached.

There are to be executed an appropriate number of counterparts of this Maintenance Bond corresponding to the number of counterparts of the Contract.

SECTION 010000

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 CONTRACT DOCUMENTS

The Contract Documents for this work are identified in the Article of the Contract entitled "Definitions."

1.2 WORK INCLUDED

The following information is part of this Division:

- 010000 – General Requirements
- 011000 – Summary
- 012100 – Allowances
- 012500 – Substitute Design Procedure
- 013100 – Project Management and Coordination
- 013300 – Submittal Procedure
- 014000 – Quality Requirements
- 016000 – Product Requirements
- 017300 – Execution
- 017700 – Closeout Procedures
- 017900 – Demonstration and Training

1.3 PROJECT DESCRIPTION

A description of the work is included in the Scope of Contract section of the specifications. This description generally defines the work to be undertaken on this project and is to be supplemented by the remaining Contract Documents.

The Contractor is to furnish all labor, materials, and equipment required for the project and related construction for the Bid price. Contractor shall complete his work in accordance with the terms of this Contract and the requirements thereunder, including all general and detailed Specifications hereinafter outlined.

The Contractor is to provide administrative and scheduling personnel as well as provide all the labor, superintendence, materials, plant, tools and equipment necessary and required for properly performing and completing the work as described and more particularly specified within the time stipulated. Contractor is to furnish, erect, maintain and remove the construction plant and such temporary works as may be required. These requirements include, but are not restricted to, suitable quarters for workers where necessary.

The Contractor will be granted shutdowns of processing operations in the commingled building to allow the Contractor to perform the construction work which will require extended downtime. The shutdowns are described in the Special Conditions section and on the plans. The Contractor will be permitted to perform work while the facility is operational. If the work inhibits the processing of material, that work must be performed during non-processing hours or during the extended shutdown.

END OF SECTION 010000

SECTION 011000

SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Requirements and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Daily Facility Operations
 - 4. Future work.
 - 5. Access to site.
 - 6. Coordination with operator.
 - 7. Facility Operating Hours
 - 8. Specification and Drawing conventions.

1.3 PROJECT INFORMATION

- A. Project Identification: Northern Recycling Center Eddy Current Separator
- B. Project Location: Northern Recycling Facility, 601 New Hampshire Avenue, Lakewood, New Jersey, Block 1160.06 Lot 241
- C. Owner: County of Ocean, New Jersey
- D. Engineer/Project Coordinator: David Heber, Mott MacDonald, Phone: (973) 912-2512

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - 1. Contractor shall remove equipment and components as noted on the plans.
 - 2. Contractor shall install additional structural beams, replace the grating on the service platform, and install guard railings.
 - 3. Contractor shall design, provide, and install: the eddy current separator, conveyor, electrical connections, controls, structural supports, skirting, hoppers, chutes, and all

other equipment required to meet the functional description and contract documents. The existing power source for equipment shall be utilized. The Contractor will need to perform any reprogramming for operating newly installed equipment if necessary.

4. Contractor shall relocate the existing compactor.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.5 DAILY FACILITY OPERATIONS

A. General: Cooperate fully with Owner so work may be carried out smoothly, minimizing interference and delays of the recycling plant's operations and work under this Contract. Coordinate the Work of this Contract with the daily facility operations. See Scope of Contract for the allowable "shutdown" of the plant's processing of recyclables.

1.6 ACCESS TO SITE

A. Use of Site: Limit use of Project site as the site is an active recycling facility. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Driveways, Walkways and Entrances: Keep entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Outdoor space will be made available for deliveries and storing equipment and materials. Space will be approximately 200' from building entrance.

1.7 COORDINATION WITH OPERATOR

A. Full Owner Occupancy: Operator will occupy site buildings during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Operator usage. Perform the Work so as not to interfere with Operator's day-to-day operations.

1. Notify Owner not less than five business days in advance of activities that will affect Owner's operations or the shutdown period.

1.8 FACILITY OPERATING HOURS

A. Facility Operating Hours: Limit amount of work requiring the facility to shut-down operations. Normal operating hours are 4:00 a.m. to 11:00 p.m., Monday through Friday, unless otherwise indicated. Contractor is encouraged to work Saturdays, Sundays, and holiday hours.

1.9 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: Requirements of the Specifications are to be performed by Contractor unless specifically stated otherwise.

- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in the Specifications. Materials and products are identified by the typical generic terms used in the individual Specifications Sections.

END OF SECTION 011000

SECTION 012100

ALLOWANCES

PART 1: GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for Allowances.

1.02 DEFINITIONS

- A. Allowances is an amount established in the contract documents for inclusion in the contract sum to cover the cost of prescribed items not specified in detail, with provisions for variations between such amount and the finally determined cost of the prescribed items.

1.03 PROCEDURES

- A. Allowances have been established and are described herein. Materials or equipment furnished or installed or provided for work done under an Allowance shall be at the direction and authorization of the Engineer. The amount of the Allowance stipulated is an estimate only; payments under Allowances will be the actual cost of furnishing or installing or providing the Work included in the Allowance.
- B. Include the amounts stipulated herein for the Allowances in the Lump Sum Price bid for the Contract. The Lump Sum Price bid for the Contract will be decreased by the amount that the actual cost of the Allowance differs from the Allowance stipulated.
- C. For each Allowance, submit a cost estimate for the Work based on a list of required work stipulated by the Engineer. The estimate shall detail the equipment or material cost of each item provided under the Allowance. The estimate shall accurately reflect the material and labor costs required for installing the equipment or materials and shall not include work required under the base bid.

PART 2: PRODUCTS

Not Used

PART 3: EXECUTION

- A. Miscellaneous Repairs – Contractor shall include in the total bid an allowance of \$25,000 for the cost of any miscellaneous repairs (outside of the base scope) at the facility that are directed to be performed by the County.

END OF SECTION 012100

SECTION 012500

SUBSTITUTE DESIGN PROCEDURE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for a substitute design.
- B. Related Requirements
 - 1. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitute Design Requests: Submit each request for consideration to Engineer. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
 - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific

features and requirements indicated. Indicate deviations, if any, from the Work specified.

- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
 - h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
 - i. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within seven days of receipt of a request for a substitute design. Engineer will notify Contractor of acceptance or rejection of proposed substitution within seven days of receipt of additional information or documentation.
 - a. Forms of Acceptance: Change Order, Construction Change Directive, or Engineer's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitute design.

1.6 SUBSTITUTE DESIGN

- A. Substitutions: Submit requests for substitute design immediately as soon as possible, but not later than 14 days prior to time required for preparation and review of related submittals.
 1. Conditions: Engineer will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

- a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- b. Substitution request is fully documented and properly submitted.
- c. Requested substitution will not adversely affect Contractor's construction schedule.
- d. Requested substitution is compatible with other portions of the Work.
- e. Requested substitution has been coordinated with other portions of the Work.
- f. Requested substitution provides specified warranty.

END OF SECTION 012500

SECTION 013100

PROJECT MANAGEMENT AND COORDINATION

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination drawings.
 - 2. RFIs.
 - 3. Digital project management procedures.
 - 4. Project meetings.
- B. Related Requirements:
 - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 2. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
 - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to coordination drawings in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - e. Indicate required installation sequences.

- f. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Engineer indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
 - 1. Indicate supports of mechanical and electrical equipment, and related Work. Locate components on Drawings. Indicate areas of conflict with existing components.
 - 2. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
 - 3. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches (32 mm) in diameter and larger.
 - b. Locations of connections to: Panel board, switchgear, transformer, busway, and motor-control center.
 - c. Location of pull boxes and junction boxes.
 - 4. Review: Engineer will review coordination drawings to confirm that in general the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility.
- C. Coordination Digital Data Files: Prepare digital data files in an AutoCAD or Revit format for Engineer's review and as-built files.

1.4 REQUEST FOR INFORMATION (RFI)

- A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Engineer will return without response those RFIs submitted to Engineer by other entities controlled by Contractor.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date.
 - 4. Name of Contractor.
 - 5. Name of Engineer
 - 6. RFI number, numbered sequentially.
 - 7. RFI subject.
 - 8. Specification Section number and title and related paragraphs, as appropriate.

9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
 14. Attachments shall be electronic files in PDF format.
- C. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow seven (7) working days for Engineer's response for each RFI. RFIs received by Engineer after 2:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Engineers' action may include a request for additional information, in which case Engineers' time for response will date from time of receipt by Engineer of additional information.

1.5 DIGITAL PROJECT MANAGEMENT PROCEDURES

- A. Use of Engineers's Digital Data Files: Engineer has limited CAD drawings of the facility. Available drawings can be provided by Engineer for Contractor's use during construction.
1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
 2. Engineer makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings. The drawings must be checked by the Contractor.
- B. PDF Document Preparation: Where PDFs are required to be submitted to Engineer, prepare as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.

1.6 PROJECT MEETINGS

- A. General: Engineer will coordinate site a walk-through as requested at Project site.
- B. Preconstruction Conference: Engineer will conduct a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than 15 days after execution of the Agreement.

END OF SECTION 013100

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section. Contractor shall produce designs bearing a New Jersey PE signature and seal for structural elements supporting the new equipment/components and any electrical or fire protection shop drawings to obtain local building permits.

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:

1. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
2. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
3. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
4. Section 017900 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Engineer
4. Name of Contractor.

5. Name of firm or entity that prepared submittal.
6. Names of subcontractor, manufacturer, and supplier.
7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
8. Category and type of submittal.
9. Submittal purpose and description.
10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
11. Drawing number and detail references, as appropriate.
12. Indication of full or partial submittal.
13. Location(s) where product is to be installed, as appropriate.
14. Other necessary identification.
15. Remarks.
16. Signature of transmitter.

B. Options: Identify options requiring selection by Engineer.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Engineer on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. PDF/Electronic Submittals: Prepare submittals as PDF package or digital files, incorporating complete information into each file. Name file with submittal number.

1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF/Electronic package, and transmit to Engineer by sending via email.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals required by the same Specification Section as separate packages under separate transmittals.
4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.

- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow seven days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
 - 2. Resubmittal Review: Allow seven days for review of each resubmittal.
 - 3. Sequential Review: Where sequential review of submittals by Engineer, Owner, or other parties is indicated, allow 15 days for initial review of each submittal.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's action stamp.

1.6 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 - 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams that show factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 - 5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
 2. Digital Delivery: Provide digital Shop Drawing files as requested by Engineer.
- C. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of Engineer and Owner, and other information specified.
- E. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- F. Certificates:
1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
 2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
 5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
 6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding

Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

1.7 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Engineer.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
- C. Digital Delivery: Prepare design drawings in an AutoCAD format.

1.8 ENGINEER'S REVIEW

- A. Action Submittals: Engineer will review each submittal, indicate corrections or revisions required.
 - 1. PDF/Electronic Submittals: Engineer will indicate, via markup on each submittal, the appropriate action.
- B. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- C. Engineer will not review submittals received from sources other than Contractor.
- D. Submittals not required by the Contract Documents will be returned by Engineer without action.

END OF SECTION 013300

SECTION 014000

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Engineer and Owner are not limited by provisions of this Section.
 - 4. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- C. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Engineer.

1.4 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1.5 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
- G. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.6 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
- B. Schedule of Tests and Inspections: Mechanical Test and Duty Test

PART 2 - EXECUTION

2.1 TESTING

- A. Mechanical Tests: After all units are ready for continuous service, and when directed by the Engineer, the Contractor shall operate the equipment continuously for a period of at least two (2) hours, unless directed otherwise. During this mechanical test period, the Engineer will inspect the equipment for abnormal vibration, overheating of motors or bearings, and other defects or weaknesses. Any part of the unit showing a defect or weakness shall at once be replaced and made good in a manner satisfactory to the Engineer at the expense of the Contractor and/or his supplier.

An additional continuous two (2) hour mechanical test shall be made after all defects have been remedied. Duty or operation tests shall not be undertaken until mechanical testing for two (2) continuous hours have been completed.

- B. Duty Tests: After meeting the provisions of mechanical testing, duty tests to demonstrate the efficiency, capacity and adequacy of all equipment shall be performed with material processing occurring.
- C. Provisional Acceptance (Starting Date for Maintenance Period): Upon the completion of the mechanical testing and the duty-efficiency capacity testing, which comprise the demonstration of acceptability of the equipment, the Engineer will make a recommendation of provisional acceptance of the equipment to the Owner. Such acceptance will become final upon the fulfillment of the Contractor's guarantee and his compliance with all other provisions of the Contract.
- D. Guarantee: Equipment furnished under this Contract shall be guaranteed by the Contractor to perform the services required, in full compliance with these Specifications, for a period of two (2) years from the date of Provisional Acceptance. The Contractor shall, at his own expense, correct and promptly repair any and all damage or abnormal wear in the equipment or related components which were furnished as an integral part of the equipment by the manufacturer.

END OF SECTION 014000

SECTION 016000

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Requirements:
 - 1. Section 012500 "Substitute Design Procedure" for requests for substitutions.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. Comparable Product: Product that is demonstrated and approved by Engineer through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification.
- C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the

specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications. Submit a comparable product request, if applicable.

1.4 ACTION SUBMITTALS

- A. Product Specification Submittal: Comply with requirements in Section 013300 "Submittal Procedures." Show compliance with requirements.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.
 - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.6 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Engineer will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
 6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Sole Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 - a. Sole product may be indicated by the phrase: "Subject to compliance with requirements, provide the following: ..."
 2. Sole Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.

Comparable products or substitutions for Contractor's convenience will not be considered.

- a. Sole manufacturer/source may be indicated by the phrase: "Subject to compliance with requirements, provide products by the following: ..."
3. Limited List of Products: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered[
 - a. Limited list of products may be indicated by the phrase: "Subject to compliance with requirements, provide one of the following: ..."
4. Non-Limited List of Products: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, which complies with requirements.
 - a. Non-limited list of products is indicated by the phrase: "Subject to compliance with requirements, available products that may be incorporated in the Work include, but are not limited to, the following: ..."
5. Limited List of Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered.
 - a. Limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, provide products by one of the following: ..."
6. Non-Limited List of Manufacturers: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, which complies with requirements.
 - a. Non-limited list of manufacturers is indicated by the phrase: "Subject to compliance with requirements, available manufacturers whose products may be incorporated in the Work include, but are not limited to, the following: ..."
7. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
 - a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration of Comparable Products: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer may return requests without action, except to record noncompliance with these requirements:
1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant product qualities include attributes such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
 2. Evidence that proposed product provides specified warranty.
 3. List of similar installations for completed projects with project names and addresses and names and addresses of Engineer and owners, if requested.
 4. Samples, if requested.
- B. Submittal Requirements: Approval by the Engineer of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

END OF SECTION 016000

SECTION 017300

EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Installation of the Work.
 - 3. Cutting and patching.
 - 4. Progress cleaning.
 - 5. Protection of installed construction.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site.
 - 2. Section 013300 "Submittal Procedures" for submitting surveys.
 - 3. Section 017700 "Closeout Procedures" for submitting final as-builts with Project Record Documents.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

1.4 INFORMATIONAL SUBMITTALS

- A. Certificates: Submit certificate signed by professional engineer certifying that structural improvements comply with requirements.

1.5 QUALITY ASSURANCE

- A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 - 1. Structural Elements: When cutting and patching structural elements, notify Engineer of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
 - 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Plumbing piping systems.
 - f. Mechanical systems piping and ducts.
 - g. Control systems.
 - h. Communication systems.
 - i. Fire-detection and -alarm systems.
 - j. Conveying systems.
 - k. Electrical wiring systems.
 - l. Operating systems of special construction.
 - 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of existing equipment are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical, electrical and other construction affecting the Work.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information, in relation to existing equipment. If discrepancies are discovered, notify Engineer promptly.
- B. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

3.4 INSTALLATION OF THE WORK

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.

- F. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Allow for building movement, including thermal expansion and contraction.
 - 2. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- G. Repair or remove and replace damaged, defective, or nonconforming Work.

3.5 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Existing Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- E. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
- F. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Use containers intended for holding waste materials of type to be stored.

- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
- F. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- G. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- H. Limiting Exposures: Supervise construction operations to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

END OF SECTION 017300

SECTION 017700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

- 1. Final completion procedures.
- 2. Warranties.
- 3. Final cleaning.
- 4. Repair of the Work.

- B. Related Requirements:

- 1. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

1.3 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. As-built drawings showing all improvements made.

1.4 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.5 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete a final payment application.
- B. Inspection: Engineer will prepare a final Certificate for Payment after a final inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

C. Testing: See testing requirements in Section 014000 Quality Requirements.

1.6 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Engineer for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of the Work.

C. Warranty Electronic File: Provide warranties and bonds in PDF format.

PART 2 - EXECUTION

2.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an active recycling facility.

2.2 REPAIR OF THE WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

END OF SECTION 017700

SECTION 017900

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Instruction in operation and maintenance of the equipment.

1.3 INSTRUCTION

- A. Engage qualified instructor(s) to instruct Owner's personnel on how to adjust, operate, and maintain equipment.
- B. Scheduling: Provide instruction at mutually agreed-on time with Operator of facility.
- C. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

END OF SECTION 017900

SECTION 050000

METALS

PART 1: GENERAL

1.01 WORK INCLUDED

The Contractor is to furnish all labor, equipment, and materials required to comply with the intent of the Contract Documents pertaining to metals. All tests, samples shop drawings and certifications are to be provided in a timely manner in order not to delay the review process or the construction schedule.

1.02 RELATED WORK

Section 050000 Metals
Section 050500 Metal Fastenings
Section 051000 Structural Metal Framing
Section 055000 Metal Fabrications
Section 055210 Tube Railings

1.03 QUALITY ASSURANCE

All work under this Division of the Specifications is to be manufactured in accordance with criteria established by the following Agencies.

Occupational Safety and Health Administration
American Institute of Steel Construction -
Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings, eighth edition.
American Society of Civil Engineers -
Proceeding Paper 970, Aluminum Alloys.
Aluminum Association -
Aluminum Construction Manual
American Society for Testing and Materials
American Welding Society -
Structural Welding Code
All applicable local, State and Federal Building Codes.

In the case of conflicting requirements in any of the above listed Codes and Standards, the most stringent is to govern.

1.04 STANDARD REQUIREMENTS

In general, for the fabrication of all metal work items which will be exposed to view, the Contractor is to use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness. He is to remove such blemishes by grinding prior to cleaning, treating and application of surface finishes including zinc coatings.

1.05 SUBMITTALS

Shop drawings shall be submitted as per another Division of the Specification.

Shop drawings shall show complete details and schedules for the fabrication and shop assembly of members; and details, schedules, procedures and diagrams showing the sequence of erection. The Engineer's review of shop drawings shall be for general considerations only. Compliance with requirements for materials, fabrication, and erection of structural steel shall be the Contractor's responsibility.

Included in the shop drawings submission shall be details of cuts, connections, camber, holes, or other pertinent data. The Contractor shall indicate welds by standard AWS symbols; and show size, length, and type of each weld. He shall also provide setting drawings, templates, and directions for the installation of anchor bolts and other anchorages to be installed by others.

All shop drawings, tests, samples or other required preliminary information are to be submitted for the review and approval of the Engineer prior to the fabrication and/or delivery of materials to the Project Site, as per the requirements of another Division of these Specifications.

PART 2: PRODUCTS

2.01 ALUMINUM

Unless otherwise noted, aluminum is to be 6061-T6 alloy fabricated in accordance with the American Society of Civil Engineers (Proceeding Paper 970). Aluminum is to have a mill finish, unless otherwise specified.

Where aluminum comes in contact with other metals, the Contractor is to provide gasket material over the entire contact surfaces.

2.02 STEEL

Structural steel is to conform in every respect to the requirements of the "Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel" ASTM A572-97c, or A992 Grade 50. Materials are to be free from loose mill scale, rust pits, or other defects affecting their strength and durability.

Structural steel products are to be safeguarded against embrittlement in accordance with “Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement”, ASTM A143-03.

All base metal is to be thoroughly cleaned using appropriate solvents and wire brushes prior to pickling.

Zinc for galvanizing is to be of any grade conforming to “Specification for Zinc (Slab Zinc)”, ASTM B6-03. All galvanizing is to be done by the hot-dip process in conformity with all requirements of “Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products”, ASTM A123-02 and American Hot Dip Galvanizers Association, Inc. The coating shall have an average weight of 2.0 ounces per square foot.

Stainless steel is to conform to “Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip”, ASTM A167-96 and “Specification for Stainless Steel Bars and Shapes”, ASTM A276-03. Bolting materials are to conform to “Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service”, ASTM A193-03.

Unless otherwise shown on the Contract Drawings, all stainless steel is to be Type 304.

Bolts and nuts are to conform to the U.S. Standards and are to be clean cut and have well-fitted threads.

PART 3: EXECUTION

3.01 GENERAL REQUIREMENTS

To the greatest extent possible, bolts and inserts are to be placed before the concrete is placed or has been built, except where expansion bolt usage is permitted.

Welds are to be electric welds and are to be in accordance with best recognized practices.

All shapes and assemblies are to be of accurate dimension and free from any defects.

Work is to be accurately fabricated according to approved details with straight, true edges, sharp angles and smooth surfaces, free of pits and scratches. Curves are to be smooth and even.

Work is to be amply strong and rigid with sound, strong, secure joints. Exposed joints are to be precise and close fitting.

Fastenings are to be concealed where possible. Exposed welds are to be ground smooth. Exposed rivets, bolts and screws are to be countersunk. Provide lock washers or lock nuts for all bolts. Use galvanized fastenings and accessories for galvanized metal.

The Contractor is to do all drilling, tapping, cutting and fitting of miscellaneous metal necessary for installation of or attachment of engaging work.

Castings with weight variations exceeding 5% less than that which might be expected due to the casting dimensions will not be accepted. The Contractor is to furnish all equipment which would be necessary for weighing castings in the presence of the Engineer.

Metal items set in concrete are to be placed and securely anchored to the concrete forms prior to placing of concrete. Where metal items are to be placed in the concrete at a later date, openings are to be provided of adequate size and shape to accommodate those items to be placed. Metal items to be attached to concrete and/or masonry are to have inserts, sleeves, or other devices provided and placed in the work as it progresses.

Castings, metal shapes and assemblies are to be set in place true, level and plumb and shall be securely anchored to the materials in which they are inserted.

All aluminum in contact with concrete or masonry is to receive a heavy coating of bituminous paint with care taken to protect the aluminum finish on exposed sections. All aluminum surfaces are to be fully protected during and after erection.

Painting of all materials being furnished under this Division of the Specifications is specified in another Division of these Specifications. In general, bronze, stainless steel, and aluminum are not to be painted, except for aluminum in contact with concrete or dissimilar metals. Factory finished aluminum work is specified under the respective items.

3.02 TESTING

All elements supplied and/or erected may be subject to inspection and laboratory or field tests for strength, durability, appearance or other considerations. Tests are to be performed under separate contract, unless specifically mentioned to be included in this Division of the Specifications.

The tests are to be those which would be required by the Engineer. Testing is to be paid for by the Owner.

Such inspections and tests are not to relieve the Contractor of responsibility for providing materials and fabrication procedures in compliance with specified requirements.

The Contractor shall notify the Engineer in writing one week in advance of the starting of fabrication and/or erection of the steel members in order that the necessary inspection of the work may be made.

The Engineer shall have free access, and the Contractor shall provide same, to all points where materials for this Project are being fabricated or erected and all materials, equipment and workmanship shall be subject to inspection, tests and approval by the Engineer.

The Engineer reserves the right to reject any or all units delivered or included in the construction which do not meet the specified requirements itemized or construed to be included in the preceding paragraphs. Cost incurred due to rejected materials or improper construction are to be borne by the Contractor.

3.03 COORDINATION OF WORK

Before starting erection, the preparation of shop drawings and fabrication, the Contractor is to take field measurements where possible. He is not to delay the job progress and is to allow for the trimming and fitting wherever taking field measurements before fabrication might delay work. The commencement for work will be interpreted as acceptance of the underlying materials. Any inaccuracies shall be reported to the Engineer in writing.

Those materials, once delivered, are not to be used without notification from the Engineer's Field Representative.

It is to be the Contractor's responsibility to determine exactly how and when this work will be affected by the work of other subcontractors in this Project.

The Contractor is to satisfy himself as to the compatibility of those elements being delivered with the actual physical construction by measurements or other means. No element is to be modified without the modification being reviewed by the Engineer or the authorized representative.

The Contractor is to be held responsible for the accurate location of all his metal work. He is to engage the necessary services required to lay out the work accurately in the field and establish all grades, levels and locations for his work. He is to see that all items of his work which are to be built into other construction are installed at the proper time and that these items are correctly located and maintained in such a location during the course of the construction.

Any misfit due to errors in locations and inaccuracies in the setting of items or attachment of metal work is to be removed and made good in a manner as the Engineer will direct and at the expense of the Contractor.

3.04 FABRICATION

The Contractor is to preassemble items in the shop to the greatest extent possible to minimize field splicing and assembly. He is to disassemble units only as necessary for shipping and handling limitations. He is to clearly mark all units for reassembly and coordinated installation.

The Contractor is to use materials of the size and thicknesses shown or, if not shown, of the required sizes and thicknesses to produce strength and durability in the finished product. He is to work to dimensions shown or accepted on the shop drawings, using proven details of fabrication and support. The Contractor is to use the type of materials shown or specified for the various components of the work.

All work shall be fabricated in ample time so as not to delay the progress of the work and shall be delivered to the Project Site at such time as required for proper coordination.

The Contractor is to form all exposed work true to line and level with accurate angles and surfaces and straight sharp edges. He is to ease exposed edges to a radius of approximately 1/32", unless otherwise shown. He is to form bent-metal corners to the smallest radius possible without causing grain separation or otherwise impairing work.

The Contractor is to weld corners and seams continuously, complying with AWS recommendations. At exposed connections, the Contractor is to grind exposed welds smooth and flush to match and blend with adjoining surfaces. The Contractor shall not weld, cut or abrade the surface of exterior units which have hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.

The Contractor is to form exposed connections with hairline joints, flush and smooth, using concealed fasteners, wherever possible. He is to use exposed fasteners of the type shown, or if not shown, Phillips flat-head countersunk screws or bolts.

The Contractor is to provide for anchorage of the types shown, coordinated with the supporting structure. He is to fabricate and space anchoring devices to provide adequate support for their intended use.

The Contractor is to cut, reinforce, drill and tap all metal work as indicated to receive finish hardware and similar items.

3.05 STORAGE AND PROTECTION OF MATERIALS

All materials are to be effectively protected from injury which would harm their structural or appearance qualities. Such protection is to be provided during fabrication, delivery, erection and until the work is finally accepted.

Materials are to be stored in such a manner that they are completely protected from dirt, water and other materials.

All metal work received at the Project Site is to be placed upon substantial shores or blocking furnished by the Contractor. Shores or blocking are to be of sufficient size and strength to prevent any metal work from touching the ground, and to facilitate the later removal of the material. Each piece is to be placed so that water cannot stand thereon, and

so that bending under its own or superimposed weights or from any other causes will not damage the piece. The acceptance of material improperly stored is to be entirely at the discretion of the Engineer.

The Contractor is to use care in handling and erecting all materials and is to support materials properly at all times to ensure that they will not be bent, twisted or otherwise damaged. The Contractor is to notify the Engineer, in writing, before installation, of any defects or damages that cannot be corrected in the field and the material is to be returned to the shop, or new parts furnished, as the Engineer directs. The Contractor is to pay all expenses if such defects or damages are due to his negligence.

3.06 SPECIAL REQUIREMENTS

All special requirements, which pertain to specific areas of metals constructions, are to be as specified in the particular section of the specification relating to that work.

The Contractor is to employ the best industry-standard practice and conform to all applicable local, State and Federal Building Codes as minimum acceptable standards.

Metal items which are to be embedded in concrete or masonry and which are to be placed in the formwork before the concrete is placed or masonry set are to be furnished and delivered for setting and installation by the Contractor.

The Contractor is to provide the necessary holes in all steel for the attachment of work by others. He is to obtain all necessary information regarding any holes and detail the steel accordingly.

The Contractor is to be responsible for all damage to the work of others caused by the installation of his work. Any work or materials damaged because of carelessness, negligence or lack of precaution on the part of the Contractor is to be removed and made good at the expense of the Contractor.

3.07 INSTALLATION

The Contractor is to provide anchorage devices and fasteners where necessary for securing all metal fabrication to in-place construction including threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connections as required.

All cutting, drilling and fitting for the installation of all metal fabrication is to be performed by the Contractor. All work is to be set accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. He is to provide temporary bracing or anchors in formwork for items which will be built into concrete, masonry or similar construction.

The Contractor is to fit exposed connections accurately together to form tight hairline joints. He is to weld connections which will not be left as exposed joints, but

cannot be shop welded because of shipping size limitations. All exposed joints are to be ground smooth and shop paint coats are to be touched-up. The Contractor is not to weld, cut or abrade the surfaces of exterior units which have been hot-dipped galvanized after fabrication, and are intended for bolted or screwed field connections.

The Contractor is to comply with the AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and the methods used in correcting welding work.

Cleaning and touch-up painting of field welds, bolted connections and abraded areas of the shop paint or galvanizing on all metal work are to be as specified in another Division of these Specifications.

3.08 SHOP PRIMING

Shop priming of metal work is to be compatible with the finished painting system, where applicable, as specified in Section 099000 of these Specifications. The shop priming is to be included as a part of the delivered metal. Any damaged shop priming shall be touched up.

3.09 CLEANING UP

The Contractor is to remove any rubbish that may accumulate from time to time as the Engineer will order and upon completion of the work, is to remove all rubbish occasioned as a result of the operation and leave the premises in a condition acceptable to the Engineer.

END OF SECTION

SECTION 050500

METAL FASTENINGS

PART 1: GENERAL

1.01 WORK INCLUDED

Under this Section of the Specifications, the Contractor is to furnish and install all metal fastenings as shown on the Contract Drawings and/or as specified herein.

All fasteners are to be of the best industry standard quality. They are to be chosen for suitability according to strength and durability, and appearance where exposed. Fasteners are to be of the same quality as, or better than, the materials which they fasten. Particular fasteners are described in more detail in other sections and Divisions of these Specifications. Fasteners shown on the Contract Drawings are to be furnished and supplied as detailed.

PART 2: PRODUCTS

2.01 METAL FASTENERS

All fasteners exposed to weather, or used in aluminum work, are to be stainless steel. Fasteners used for interior steel work are to be steel. Accessories, such as washers, are to be the same material and quality as the fasteners, and are to be appropriately sized. All bolts are to be of sufficient length that at least two threads are exposed after the nuts are tightened.

2.02 TRIM PIECES

Trim pieces used in conjunction with fasteners, or for concealment of connections, are to match the adjacent materials in terms of material and finish. Trim pieces are to be supplied where required for a neat, complete appearance, and are to be installed with quality workmanship. Trim pieces are to completely conceal any gaps or joints which they close off.

PART 3: EXECUTION

3.01 GENERAL REQUIREMENTS

All joints between dissimilar materials which react electrolytically are to be separated with appropriate insulators, such as micarta strips or approved equal, or protected with zinc chromate primer, as directed.

All metal fastenings are to be installed in conformance with the Manufacturer's recommendations and with the best practices in the construction industry.

END OF SECTION

SECTION 051000

STRUCTURAL METAL FRAMING

PART 1: GENERAL

1.01 STANDARD REQUIREMENTS

This Section of the Specifications covers the furnishing and installation of all structural steel framing indicated on the Contract Drawings or as detailed. This Section is to include steel columns and base plates, beams, girders, tubes, channels, angles, braces, gussets and other structural shapes. It is also to include all loose lintels, steel framed and hung or fastened lintels, connections, and all such other steel work as might normally be expected to be included in structural steel construction.

All connection methods normally employed in structural steel framing construction, such as welding or bolting, are to be included in this Section of the Specifications.

Shop priming of all structural steel elements is to be compatible with the finished painting system specified in another Section of these Specifications. The shop priming is to be included as a part of the delivered structural steel.

All current rules and regulations which have been adopted by the American Institute of Steel Construction (AISC) as Industry standards are to be made a part of this Specification except as specifically amended herein.

The Contract Drawings indicate the general arrangement and dimensions of the structural iron and steel. In general, the Contract Drawings are made to scale but the scale dimensions are not to be used.

If any inconsistencies or discrepancies between the Contract Drawings are found, they are to be reported immediately to the Engineer. The Contractor is to furnish the exact sections, weights, and kinds of materials called for, and must follow the exact details, methods and instructions called for by these Specifications and the accompanying Contract Drawings, to their full intent and purpose, unless otherwise agreed to by the Engineer. Substitution of other shapes of equivalent strength, but not of greater dimensions than those shown on the Contract Drawings will be allowed, subject to review by the Engineer.

Until mill orders are placed, the Engineer reserves the right to change the sections and sizes of materials shown on the Contract Drawings without affecting the conditions of the Contract, provided the character of the work is not materially changed.

The Contractor is to be held responsible for the accurate location of all his metal work including the location of all base plates, bearing plates, anchor bolts or other items used to attach his materials to other construction. He is to engage the necessary services required to lay out the work accurately in the field and establish

all grades, levels and locations for his work. He is to see that all items of his work which are to be built into other construction are installed at the proper time, that these items are correctly located and maintained in such a location during the course of construction.

Any misfit due to errors in locations and inaccuracies in the setting of base plates, bearing plates, anchor bolts or other items of attachment of metal work, is to be removed and made good in a manner as the Engineer may direct. Such corrections are to be made at the expense of the Contractor.

1.02 SUBMITTALS

Shop drawings shall be submitted as per other Sections or Divisions of these Specifications.

The Engineer may require that affidavits be furnished by the Manufacturer or fabricator, certifying that all materials delivered to the Project Site conform to AISC or these Specifications.

PART 2: PRODUCTS

2.01 STRUCTURAL STEEL

Structural Steel hot-rolled shapes shall conform to “Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel” ASTM A572-97c, or A992, Grade 50.

Plates shall conform to “Standard Specification for Carbon Structural Steel”, ASTM A36-97a.

Where stock material is approved for use, it is to conform to the requirements of the “AISC Code of Standard Practice” Part 5 Specifications and Codes of the Manual of Steel Construction, AISC.

2.02 FASTENERS

Unfinished bolts and nuts are to conform to “Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength”, ASTM A307-97. Grade A bolts shall be used for general applications and Grade B bolts can be used at flanged joints in piping systems with cast iron flanges. Bolts must be supplied with a mark signifying its type and grade.

High strength bolts shall conform to “Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength”, ASTM A325-02, Type 3. Bolts must be supplied with a mark signifying its type and grade.

High strength nuts shall conform to “Specification for Carbon and Alloy Steel Nuts for Bolts for High-Pressure and High-Temperature Service”, ASTM A194-03b. All other nuts must conform to “Specification for Carbon and Alloy Steel Nuts”, ASTM A563-00.

Washers must conform to either “Specification for Hardened Steel Washers”, ASTM F436-03, or “Specification for Compressible-Washer-Type Direct Tension Indicators for Use with Structural Fasteners”, ASTM F959-02. Washers must have manufacture mark.

2.03 ANCHORS

All anchors epoxied into concrete are to be ASTM A36 steel except as otherwise designated. The epoxy material shall be HIT-HY 200 VS as manufactured by HILTI or approved equal and supplied as a part of the HILTI System, or approved equal. A carbide bit shall be used for the drilling of holes for epoxy anchors, in no way shall a diamond-tipped bit be used for this application.

PART 3: EXECUTION

3.01 CONNECTIONS

Field welding will not be permitted, unless noted on the Contract Drawings or allowed by the Engineer, and then only under the safeguards and certifications required by local laws and authorities having jurisdiction of this work.

All connections for steel framing shall conform to Part 4 of the AISC Manual of Steel Construction, Allowable Stress Design, Ninth Edition, and shall be capable of supporting one-half the total uniform load capacity shown in the table of uniform load constants, Part 2 AISC Manual, for the given beam, span and grade of steel specified, unless a larger reaction is shown on the Contract Drawings. Where, due to framing a special connection must be used, it shall be capable of supporting the loading given above. All connections shall have fully pretensioned bolts in bearing unless otherwise designated.

Moment connections are to be as detailed on the Contract Drawings, are to be designed to resist wind moments only, and are to be provided in addition to standard end connections.

One-sided knife connections or other types of eccentric connections will not be permitted where two-sided connections can be used.

Welding, if used, is to be equivalent in strength to a bolted connection and is to be done in accordance with the current American Welding Society Specifications.

Filler metal for Arc-welding electrodes is to conform to “Specifications for Iron and Steel Arc Welding Electrodes” of the American Welding Society.

In general, shop fabricated connections may be welded or high strength bolted. Fastenings specifically shown on the Contract Drawings are to be used.

Field connections are to be high strength bolted unless welding is indicated.

Holes for the attachment of work by other trades are to be provided as required. Holes are to be punched or drilled; burning will not be permitted.

The bearing ends of columns are to be milled at right angles to the axis of the columns. Abutting surfaces are to be closely fitted.

Assembled parts are to be brought into close contact, and drift pins are to be used only for bringing members into position, not to enlarge or distort holes.

The Contractor is to make a thorough examination of the condition of masonry and concrete work on which his work is in any way dependent for its efficiency according to the intent of these Specifications.

Before starting the installation, he is to notify the Engineer of any defects which affect the satisfactory completion of the work of this Section. The starting of work in connection with structural steel is to imply the acceptance of the underlying surfaces.

3.02 TESTING

Where Slip-Critical Joints are called for on the Contract Drawings, they shall be tested using a Tension Calibrator. The Contractor shall supply the Engineer with required access and sufficient time to test Slip-Critical Joints prior to final approval.

3.03 WELDING

Where welding is specified or detailed on the Contract Drawings, it shall be done in strict accordance with the "Structural Welding Code" AWS D1.1, for procedures, appearance and quality of welds, and for the methods used in correcting welding work.

Welding electrodes shall be E70XX and the electrodes and fluxes shall conform to "Specification for Mild Steel Covered Arc-Welded Electrodes", AWS A5.1.

All welding shall be done by qualified welders with current AWS welding certificates. When required by the Engineer, copies of these certificates shall be presented.

The Engineer may require that certifications be provided stating that all welded work meets the requirements as specified herein. These certificates are to be

presented to the Owner through the Owner's representatives. Such certifications are to include individual qualified welder's certificates.

3.04 ERECTION

In general, the Contractor shall comply with the AISC Specifications and “Code of Standard Practice”; and as specified hereinbefore. The Contractor shall set all structural steel work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. He shall brace temporarily or anchor temporarily in formwork where work is to be built into concrete, masonry or similar construction. The Contractor shall also provide and install all necessary shoring bracing and temporary supports required during erection to ensure the stability of steel erected before final field connections have been made.

The Contractor shall furnish anchor bolts and other connections required for securing structural steel to foundations and other in-place work. He shall also furnish templates and other devices as necessary for presetting bolts and other anchors to accurate locations.

The Contractor shall clean concrete and masonry bearing surfaces and roughen to improve bond. He shall also clean the bottom surfaces of all base plates. Loose and attached base plates for structural members shall be set on wedges or other adjusting devices. The Contractor shall tighten all anchor bolts after the supported members have been positioned and plumbed. He shall not remove wedges or shims, but if they are protruding, shall cut off same flush with the edge of the base plates prior to packing with grout. The Contractor shall pack grout solidly between bearing surfaces and bases or plates to ensure that no voids remain. He shall finish all exposed surfaces, protect all installed materials, and allow for the proper curing.

All columns are to be set true and plumb and temporarily braced wherever necessary. All other framework is to be in proper alignment and at the levels required by the Contract Drawings.

The following error is permissible when erecting structural steel framing:

Individual pieces will be considered plumb or true when the error does not exceed 1 part in 500.

The Contractor shall not enlarge unfair holes in members by burning or by the use of drift pins, except in secondary bracing members. He shall ream holes that must be enlarged to admit bolts. Enlargement by burning will not be permitted.

The Contractor shall not use gas cutting torches in the field of correcting fabrication errors in the structural framing. Cutting shall be permitted only on secondary members which are not under stress, as acceptable to the Engineer. He shall finish gas-cut sections equal to a sheared appearance when permitted.

As erection progresses, the work is to be securely bolted up to take care of all dead load, wind and erection stresses.

Field bolts in work which will be exposed to the weather upon completion are to be stainless steel.

The Contractor shall splice members only where indicated.

The Contractor shall remove all temporary members and connections when permanent members are in place and final connections have been made.

Should any difficulties be encountered that are not covered by the Contract Drawings and these Specifications, the Contractor is to notify the Engineer and receive his instructions, and Contract Drawings, if necessary, before proceeding with the work. No cutting of sections, either flanges, webs, stems or angles is to be done by the Contractor without the consent of the Engineer unless this cutting is particularly specified or shown on the Contract Drawings.

3.05 REMOVAL OF EQUIPMENT

Upon completion of this work, the Contractor shall remove from the Project Site all temporary supports and other equipment to avoid delaying work of other trades.

END OF SECTION

SECTION 055000

METAL FABRICATIONS

PART 1: GENERAL

1.01 WORK INCLUDED

Metal fabrications include but are not limited to fasteners, supports, floor grating, and other such items which may require special fabrication to satisfy design intent.

1.02 QUALITY ASSURANCE

All work performed and materials installed by the Contractor are to be in strict accordance with the latest requirements of the following governing Codes and Standards:

Aluminum Association - Aluminum Construction Manual

American Society of Civil Engineers - Proceeding Paper 970

American Society for Testing and Materials -

ASTM A167 "Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip."

ASTM A193 "Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service"

ASTM A276 "Specification for Stainless and Heat-Resisting Steel Bars and Shapes"

ASTM B221 "Specification for Aluminum Alloy Extruded Bars, Rods, Shapes, and Tubes"

American Welding Society - "Structural Welding Code"

National Association of Architectural Metal Manufacturers -
"Metal Bar Grating Manual"

Occupational Safety and Health Administration

International Building Code, New Jersey Edition, 2022

In the case of conflicting requirements in any of the above listed Codes and Standards, the most stringent is to govern.

1.03 STANDARD REQUIREMENTS

Aluminum in contact with concrete, masonry or dissimilar metals is to be protected by paint such as zinc chromate or a bituminous coating, or by isolating micarta strips where appropriate.

Aluminum work is to be mill finished.

All joints between dissimilar materials, which react electrolytically, are to be separated with appropriate insulators, such as micarta strips or approved equal, or protected with zinc chromate primer, as directed.

1.04 SUBMITTALS

Shop drawings, tests, certifications, and product literature are to be submitted for record and approval purposes. No fabrication, delivery or installation is to begin without the Engineer's review and approval.

PART 2: PRODUCTS

Note: The list that follows is not intended to be a complete or detailed tabulation of all items or metal fabrications but may be used to indicate a generally acceptable standard of quality and design criteria.

2.01 FASTENERS AND SUPPORTS

Fasteners of stainless-steel nuts, bolts and washers; sufficient in size and number to transmit all loads normally anticipated. Supports are to be threaded rod, end-thread rod or rolled structural elements of aluminum; all suitably sized and located to carry or support intended loads.

2.02 SPECIAL FABRICATIONS

Steel, aluminum or stainless steel shall be detailed in accordance with best industry practice and suitable for the use intended.

2.03 GALVANIZED STEEL GRATINGS AND FRAMES

All steel construction; grating shall be in accordance with ANSI/NAAMM MBG 531 for light duty steel grating; materials shall be in conformance with ASTM A1011 for hot rolled carbon steel sheet and strip and ASTM 510 for carbon steel wire rods and coarse round wire. Bearing bars shall be rectangular with a height of 1-1/2", 1/8" thick, and spaced on 1³/₁₆" centers maximum with dove tail slots to accept cross bars. Cross bars shall be carbon steel tubing mechanically locked by swaging at right angles to the bearing bars at a maximum of 4" on center. Grating shall be designed to withstand a uniform load of 100 pounds per square foot over the clear span with deflection not to exceed 1/4". Steel shall be galvanized.

2.4 FOUNDATION BOLTS

All anchor bolts shall be set to the dimensions given on the shop drawings and shall be positioned by use of a template. In case of heavy equipment, it is recommended that anchor bolts be set in pipe sleeves and grouted upon completion of equipment installation. Such pipe sleeves are to be used to provide flexibility in the installation. All anchor bolts are to be provided with adjusting nuts and washers

for leveling the equipment. Stainless steel anchor bolts are to be installed for all equipment, consisting of stainless steel threaded top bolts, washers and shims, pinned to a carbon steel lower bolt by means of a carbon steel union.

PART 3: EXECUTION

3.01 GENERAL REQUIREMENTS

All work is to be performed in strict conformance with OSHA, NAAMM, ASCE, AA, AWS, ASTM, Local Building Codes, Safety Codes and the Contract Documents.

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SECTION 055210

PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Manufacturer's product lines of mechanically connected railings.
 - 2. Railing brackets.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.4 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.5 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Steel Tube Railings:

1. Viva Railings, LLC
2. Approved equal.

B. Source Limitations: Obtain each type of railing from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

- a. Uniform load of 50 lbf/ ft. applied in any direction.
- b. Concentrated load of 200 lbf applied in any direction.
- c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

- a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft.
- b. Infill load and other loads need not be assumed to act concurrently.

2.3 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.

1. Provide type of bracket with flange tapped for concealed anchorage to threaded hanger bolt and that provides 1-1/2-inch clearance from inside face of handrail to finished wall surface.

2.4 STEEL AND IRON

A. Tubing: ASTM A 500 or ASTM A 513.

- B. Plates, Shapes, and Bars: ASTM A 36/A 36M.
- C. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

2.5 FASTENERS

- A. General: Provide the following:
 - 1. Ungalvanized-Steel Railings: Plated steel fasteners complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5 for zinc coating.
 - 2. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Fasteners for Interconnecting Railing Components:
 - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
 - 2. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.

2.6 MISCELLANEOUS MATERIALS

- A. Shop Primers: Provide primers that comply with Section 09900 "Painting".
- B. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
 - 1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.
- C. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
- D. Intermediate Coats and Topcoats: Provide products that comply with Section 09900 "Painting".
- E. Epoxy Intermediate Coat: Complying with MPI #77 and compatible with primer and topcoat.
- F. Polyurethane Topcoat: Complying with MPI #72 and compatible with undercoat.

2.7 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch, unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that are exposed to weather in a manner that excludes water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- I. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- J. Form changes in direction by bending or by inserting prefabricated elbow fittings. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- K. Close exposed ends of railing members with prefabricated end fittings.

- L. Toe Boards: Where indicated, provide toe boards at railings around openings and at edge of open-sided floors and platforms. Fabricate to dimensions and details indicated.

2.8 STEEL AND IRON FINISHES

- A. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning."
- B. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," for shop painting.
- C. Shop-Painted Finish: Comply with Section 09900 "Painting". Color shall be Safety Yellow.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
 - 1. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
 - 3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.2 RAILING CONNECTIONS

- A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

- B. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.

3.3 ANCHORING POSTS

- A. Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.
- B. Anchor posts to metal surfaces with oval flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:
 - 1. For steel pipe railings, weld flanges to post and bolt to metal supporting surfaces.

3.4 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop painting to comply with SSPC-PA 1 requirements for touching up shop-painted surfaces.
 - 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 099000 "Painting".

3.5 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

END OF SECTION

SECTION 099000

PAINING

PART 1 - GENERAL

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Special Conditions and Division-1 Specification sections, apply to work of this section.

1.1 SUMMARY

- A. Section includes painting and finishing of exposed exterior items and surfaces.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's technical data sheets for each coating.

1.3 QUALITY ASSURANCE

- A. Materials:
 - 1. All coating materials required by this section shall be provided by a single manufacturer, unless otherwise required or approved.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. The brand-name products listed in the schedule at the end of this section and made by the following manufacturer are the basis of the contract documents:
 - 1. Benjamin Moore & Co.
- B. Products of the following manufacturers, provided they comply with requirements of the contract documents, will be among those considered in accordance with standard substitution procedures:
 - 1. Benjamin Moore & Company.
 - 2. Sherwin Williams Company.
 - 3. Approved Equal.

2.2 PRODUCTS

- A. Lead Content:
 - 1. Not more than 0.06 percent lead by weight (calculated as lead metal) in the total nonvolatile content of the paint or the equivalent measure of lead in the dried film.
 - 2. Exception: Where permitted by applicable regulations.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify that surfaces and conditions are ready for work in accordance with coating manufacturer's recommendations.

3.2 SURFACE PREPARATION

- A. Apply coatings to surfaces that are clean and properly prepared in accordance with manufacturer's instructions. Remove dirt, dust, grease, oils, and foreign matter. Prepare surface for proper texture necessary to optimum coating adhesion and intended finished appearance. Plan cleaning, preparation, and coating operations to avoid contamination of freshly coated surfaces.

3.3 MIXING AND THINNING

- A. Remove and discard any skin formed on surface of coatings in containers. Discard any containers where skin comprises 2 percent or more of the remaining material. Do not add thinner except as specifically recommended (not merely permitted) by the coating manufacturer for proper coating application under the circumstances prevailing at the project site when application equipment recommended by the coating manufacturer is employed. Use only the quantities and the types of thinner recommended.

3.4 PRIME COATS

- A. General:
 - 1. Field apply bottom coats scheduled except where the contract documents require shop coating of ferrous metals, then spot prime damaged areas.
 - 2. Ferrous metals that have not been shop primed shall be field primed promptly after arrival at the site or shall be stored away from the effects of weather.
 - 3. Re prepare and retouch damaged prime coats using approved, compatible primer.

3.5 FINISH COATS (COLOR TO BE SELECTED BY OWNER)

- A. Number of Coats and Minimum Coating Thickness:
 - 1. Apply not less than the number of coats indicated.
 - 2. Apply each coat to achieve not less than the dry film thicknesses recommended by manufacturer.
 - 3. Apply additional coats at no additional cost to the owner when necessary to achieve complete hiding, uniform texture, or uniform sheen and appearance.
 - 4. Finish coats shall be compatible with the primer.

3.6 SCHEDULE OF COATINGS FOR EXTERIOR NONTRAFFIC SURFACES

- A. Ferrous Metal: (Structural steel, conveyors, chutes, hoppers, etc.)
 - 1. Alkyd, gloss.
 - a. Bottom coat: 1 Coat BM Corotech Universal Primer (V131)
 - b. Intermediate coat: 1 Coat BM Corotech Quick Dry Enamel Gloss (V230)
 - c. Top coat: 1 Coat BM Corotech Quick Dry Enamel Gloss (V230)

END OF SECTION

Equipment Specifications

Section A

Conveyors

1.01 General

The Contractor shall furnish, deliver, install, paint, test, and make ready for operation the specified conveyor.

Contractor shall be responsible for the following:

- Providing the conveyor.
- Designing and providing all the supports.
- Locating motor locations.
- Coordinating with all equipment manufacturers the transition points of recyclable materials.
- Calculating the exact lengths and angle of each conveyor.
- Designing and supplying deflector shields (skirts), strip curtains, rubber flaps and hoppers to prevent spillage of materials at conveyor transition points with other conveyors and equipment.
- Ensuring that conveyors move the material without spillage and the belts and frames have a long service life.
- Providing the remote control panels for the equipment.
- Designing and coordinating the wiring diagrams between the control panel and equipment. The Contractor shall provide the conduit and wires and shall make and coordinate the terminations. The Contractor shall also provide the breakers as needed for the equipment.
- Provide smooth operation of the equipment as per the intent of this project.

It is the intent of this Specification to have one manufacturer/designer to coordinate all the equipment installation so as to ensure a smooth transition between equipment, correct process operation and to reduce horizontal and vertical conflicts.

1.02 General Requirements

All conveyors are to be furnished as complete units including all necessary accessories, fittings, mounting installation components, and any and all related equipment necessary for a complete operating system, all as specified herein.

Shop drawings, product literature, manufacturer's installation instructions, maintenance instructions, service data, wiring diagrams, and other necessary data are to be provided for record and approval. No conveyor or equipment is to be ordered, delivered, or installed without the Engineer's review and approval.

The Contractor is to be responsible for furnishing approved shop drawings, wiring diagrams, and like materials to the various subcontractors undertaking work covered by this section of Specifications to ensure the timely and proper completion of the work.

The Contractor is to conform to the requirements of other sections and/or divisions of the Specifications related to work such as spare parts and electrical equipment or such other work as might be required to complete the work under this section.

The Contractor is to coordinate the various services required with the conveyor and equipment list given on the Contract Documents. All electrical work required for the functional operations

of the equipment is to be included. The conveyors and equipment are to be installed in strict accordance with the manufacturer's detailed instructions.

All necessary adjustments for the safe and efficient operation are to be made for the conveyor. The proper operation of the conveyor is to be the responsibility of the Contractor and the equipment vendor.

The equipment vendor is to test all conveyors and equipment to verify proper operation of such equipment and also for the debugging and testing such that the operating conveyor system can be turned over to the facility's operator for unrestricted use of the equipment. The Contractor shall submit documentation revising the shop drawings to reflect the as-built conditions.

The conveyors and equipment must be able to withstand dowsing by liquids from the remaining contents of bottle and cans.

All "pinch points", sharp edges, moving parts, etc., must be shielded to prevent injury to any employee of the Recycling Facility or any other persons operating or working near the conveyors and equipment.

For the purposes of evaluation where an equivalent product is being proposed by the bidder, the bidder shall indicate any variation to these Specifications, no matter how slight. If no variations are indicated, it shall be construed that the conveyors and equipment bid fully complies with these Specifications.

The conveyor bid shall be the most current model.

Prior to delivery of the conveyor, it shall be the Vendor's responsibility to pre-inspect each conveyor so that they conform to the manufacturer's new conveyor and equipment pre-delivery specifications.

In addition to all other requirements of these Specifications, the conveyor shall meet the following conditions:

- a) Complete instructions on the care and maintenance of the conveyors and equipment, and a demonstration on the operation of the conveyor and its accessories shall be given by the Vendor.
- b) The Vendor and the equipment manufacturer shall guarantee that the conveyors supplied, and all the component parts shall comply with the latest Federal Safety Standards. This shall include covers at the head and tail pulleys and chain drives as required.

The color of the equipment and conveyor is to match the existing equipment. All pulleys are to be sized and designed providing zero slippage during full load.

The conveyor is to be identified by stenciling the name of each conveyor, as designated on the Engineer approved Shop Drawings. Stenciling shall be three (3) inches high, in white paint. The conveyor is to be bolted to the structural steel platform.

Conveyors are to be Hustler, Bollegraaf, CP Group, or equal.

1.03 Minimum Conveyor Standards

Frame:

- Closed frame construction design for easy maintenance. Frame shall be made of 3/16" formed steel plate with reinforcement (no structural steel will be accepted).
- All tail section and impact areas to be made of 1/4" bottom pan.
- Conveyors to be built with 5" diameter cema C flat roller on 36" center. Trough side to be made of minimum 3/16" steel plate
- Gusset reinforcements every 60" (3/16" plate minimum) or otherwise specified.
- All fiber sort conveyors to be 6" vertical side skirt type conveyors. All other conveyors to be 2 1/2" trough type conveyors.
- Extra side skirts to be made of 12 GA. Formed steel plate with reinforcing gusset and horizontal bends on top.
- All conveyor sections to be braced as necessary for extra strength.
- Connecting plates to be made of 3/16" thick precision cut steel plate for easy assembly. All sections to be bolted together (Minimal welding on site).
- All conveyor tail sections to have bolt on type rubber flaps if needed. All above ground tail sections to be equipped with necessary guards.
- All different sections to be independent.
- Return roller to be 4" diameter cema C type for 48" wide conveyor or smaller. Spaced every 12'-0" maximum.
- Carrying idlers to be 4" diameter cema B. All idler to be space 36" on center and 30" on center maximum at tail section.

Safety Guards and Others:

- All bolt on safety guards for easy maintenance.
- All mechanical fasteners shall be factory-torqued sufficiently, so as not to require re-tightening after start-up.

Bearings, Shafts and Pulleys:

- All tail section bearings to be lifetime or greaseable take up type or pillow block mounted on bolt on take up mechanisms (tensioning with travel screw) for easy maintenance.
- All head section bearings to be lifetime or greaseable pillow block type or four-bolt flange type mounted on heavily reinforced flange.
- Head and tail shaft sprockets shall have hubs with keyways and setscrew.

Rubber Belt

- To be one piece with no more than one mechanical belt splice.
- Belt to have a top layer, one inside layer, and a slide layer (total thickness 5.3 mm) except position 20 which shall have a top layer, three inside layers, and a slide layer (total thickness is 8.8 mm).

Drives and Motors:

- All gear reducers and motors to be helical in line shaft mount types. Motors are to be mounted on gear reducer. Provisions shall be made for torque limiters or shear pins.
- Conveyor to have a VFD to operate at variable speeds.

Structural Supports:

- All equipment supports to be made of square tubing for easy level adjustment and for better strength.
- All legs to have boot adjustments. Each boot will be attached using "Red Head anchors".
- Support bracings to be made of angle iron.

Transfer Panels:

- All transfer panel to be made of formed steel plate. Transfer panel to be bolt on type for easy access to head shafts. All transfer panels to be shop fabricated.
- Transitions to be equipped with rubber skirting, where necessary, to avoid material spillage.

Equipment Specifications
Section B
Eddy Current Separator

1.01 GENERAL

The Contractor shall furnish all engineering, labor, materials and equipment necessary to deliver and install an eddy current separator to recover any aluminum from the recycling plant's residue stream as specified in the Contract Documents. It is the intention of this specification to provide a complete installation which includes wiring for power and controls, supports, and chutes to manage the two fractions leaving the eddy current separator (residue and aluminum). The contractor is to coordinate all items of work in this specification and is responsible to for a complete functioning system.

The Contractor is responsible for acquiring and paying for all necessary permits required for the installation of the system.

The Contractor is to provide the eddy current separator as a complete unit including all necessary accessories, fittings, mounting installation components, and all related equipment necessary for a complete operating system, all as specified herein.

Layout drawings, product literature, manufacturer's installation instructions, maintenance instructions, service data, wiring diagrams and other necessary data are to be provided for record and approval. The eddy current separator is not to be ordered, delivered, or installed without the Engineer's and Owner's review and approval.

The Contractor is responsible for furnishing approved shop drawings, wiring diagrams and like materials to the various subcontractors undertaking work covered by this section of the Specifications to ensure the timely and proper completion of the work. The equipment is to be checked and tested by the equipment manufacturer prior to delivery.

Contractor is to conform to the requirements of other sections and/or divisions of the Specifications related to work as might be required to complete the work under this Contract.

All electrical work required for the functional operations of the equipment shall be the responsibility of the Contractor.

1.02 EDDY CURRENT SEPARATOR SPECIFICATIONS

The eddy current separator shall contain an eccentrically mounted magnetic rotor within a non-conductive larger diameter shell for separator of nonferrous metals. The basis of design model is a Model LT2 with 8 poles and 40" width manufactured by Eriez or approved equal. Eddy current separator shall be by Steinert, Eriez, or equal.

For the purposes of evaluation where an equivalent product is being proposed by the bidder, the bidder shall indicate any variation to these specifications, no matter how slight. If no variations are indicated, it shall be construed that proposed eddy current separator complies with these Specifications and shall include the following:

- Rotor Speed: 3,000 RPM
- Adjustable and expandable rack splitter.

- Urethane conveyor belt with (1) cleat and sidewalls.

In addition to all other requirements of these Specifications, the Contractor shall meet the following conditions:

- Provide complete instructions on the care and maintenance of the equipment.
- The eddy current separator bid shall be the most current model.

1.03 ELECTRICAL

The Contractor shall furnish and install all the electrical equipment and supplies necessary for a complete installation. Equipment shall be wired back to the nearest disconnect. If the motor to be furnished is not compatible with the existing wire size or breaker, Contractor shall include in his cost the price to upsize those electrical components. All equipment and wiring shall be adequately sized to handle and provide a reliable power source for the equipment. The wire size and conduit shall be designed by the Contractor. No conduit is to be placed on the floor of the building or ground. Match type of conduit with the existing. All conduit, wiring, equipment, and installation are to be in compliance with all applicable codes and regulations.

Equipment Specifications

Section C

Hoppers and Skirts

1.01 General

The Contractor shall design, construct, provide, install, and paint all hoppers, deflector shields, rubber flaps, covers, enclosures, chutes, bins, barriers, supports and skirts as shown on the Drawings or as required to meet the intent of the project.

All material used shall be 12-gauge mild steel unless specified otherwise. All sharp edges of plates and angles shall be rounded off. Where personnel are throwing material through hoppers, the edges shall have rubber strips around the entrance for safety. All welds shall be continuous and free from burrs and slag. All visible surfaces shall be painted in accordance with the painting specification and the Owners selection of color.

All angles, supports and dimensions are to be determined and coordinated with the equipment manufacturers by the Contractor. All bolts used shall be a minimum of 1/4". Washers and locknuts are to be used. Any dimensions given for chutes and hoppers shall be verified before fabrication with the equipment manufacturer to ensure the proper mating of conveyors or equipment. Shop drawings shall be submitted on each hopper and skirt. Every hopper shall be numbered with numbers three (3") inches high. The number shall be permanently painted so that it can be clearly seen when installed. All hoppers and bins shall be painted, and the Owner shall choose the color.

The Contractor shall allow in his bid for adjustments and additions to the hoppers, chutes and the like during equipment testing to reduce material spillage.

1.02 Hoppers/Chutes

It is the intent of the chutes and hoppers to direct the recyclable material onto conveyors, equipment, and into bunkers without spillage or clogging.

1.03 Skirts

As required to eliminate spillage of recyclable materials the contractor shall provide deflector shields or skirts. The skirts noted on the drawings shall be steel. Skirting not noted on the drawings may consist of metal rubber strips or clear vinyl curtain strips. The Contractor shall make an allowance for additional skirts that may be required during equipment testing to contain materials.

Equipment Specifications
Section D
Equipment Electrical

1.00 Description

The work shall include, but not be limited to, furnishing and installing breaker wiring and control wiring; furnishing and installing conduits, cable grounding, and related fittings and devices for the interconnection of new equipment; furnishing and installing conduits, cable, and related fittings and devices for the equipment; and all else necessary to complete the work as specified to achieve a fully functional and operational system. The power of the new equipment shall match that of the existing equipment and the new equipment shall be wired to the local disconnect. If new equipment furnished has a motor or load that is not compatible with the existing wiring and controls, Contractor shall include this work in their lump sum bid.

Work also includes disconnecting and removing existing conduits and wiring which is not incorporated into final work. All electrical work shall be performed by a licensed electrician.

The Contractor shall visit all sites and determine the full extent of his work in the area and include the full cost of his work in the price bid for this Contract. The Contractor shall coordinate all work with other portions of these Contract Documents. The cost of the work included within this section shall be included in the project's lump sum bid item.

1.01 Materials

- A. All materials and equipment shall be new.
- B. All materials and equipment shall comply with all applicable reference standards listed in this Section.
- C. Items of a similar application shall be of the same manufacturer.
- D. The label of listing by Underwriter's Laboratories, Inc., shall appear on all materials and equipment for which standards have been established by that agency.
- E. Where other agencies have established label or approval requirements, furnish all materials and equipment with either the required labels affixed or the necessary written approval.

1.02 Construction Requirements

All work shall be performed in strict compliance with the latest edition of the National Electrical Code of the National Fire Protection Association, and OSHA standards. All material and equipment shall be new and in accordance with the Federal and State Codes, and latest requirements of the National Electrical Code, the NEMA, ASTM, IEEE, ICEA, and OSHA standards.

Any labor or material, in addition to that described herein or shown on the Drawings, necessary to comply with the previously mentioned codes, and/or standards shall be performed and furnished by the Contractor. Violation of any code or standard requirement should be brought to the attention of the Engineer prior to bidding. In any event, after the contract is executed, no additional payment will be authorized due to labor, material, equipment for any other extra cost necessary to comply with the aforementioned codes and standards.

All material and equipment shall be new, without defects, and shall bear the inspection labels of the Underwriter's Laboratories, if the material is of the class inspected by said laboratories.

The Contractor shall furnish for review of the Engineer a PDF of each of the manufacturer's specifications, drawings, operating and maintenance instructions, and any other data required to provide a complete description of the equipment being supplied and the construction to be performed. The Contractor shall also furnish samples of electrical construction material such as conduit and cable, if instructed to do so by the Engineer.

Installation of materials or equipment before review and acceptance by the Engineer will be at the Contractor's risk. Equipment or materials installed by the Contractor and not accepted by the Engineer will be removed and replaced at the expense of the Contractor.

The Contractor shall perform such tests as required for all component parts of the completed installation to demonstrate the satisfactory functioning of all equipment and wiring and the adequacy of the entire electrical system. Any equipment or materials which fail under test shall be replaced and then retested until satisfactory results are obtained, entirely at the expense of the Contractor.

The Contractor shall assume full responsibility for the proper functioning and quality of the entire electrical installation to the extent that any breakdowns, deficiencies or deteriorations caused by poor workmanship, equipment, materials, or method of installation shall be promptly remedied and replaced by the Contractor. Any correction required during the guarantee period and established following a survey of the installation at the end of the guarantee period shall be modified as above. The terms of the guarantee are stipulated elsewhere in these specifications.

The Contractor shall provide all electrical labor, materials, equipment, machinery, tools, and perform operations necessary to install, equip, adjust and put the new equipment into satisfactory operation. The Contractor shall connect the various items or sections of the work so as to form a complete and properly operating entity.

Any labor, material, or equipment not specifically mentioned herein or shown on the drawings, which is necessary to complete any part of the equipment and electrical installation in order to constitute a satisfactorily operating entity shall be provided by the Contractor without additional compensation.

The Contractor shall supply conduit, cable, and all electrical equipment, etc... to make a complete electrical entity. The Contractor shall ground the equipment, motors, etc... as required by the NEC and manufacturer's requirements and recommendations.

1.03 Services by the Contractor

The Contractor shall furnish a PDF of detailed working or construction drawings in addition to those required for his own use, including conduit and equipment layouts, elementary and connection wiring diagrams. All wiring and diagrams shall show point to point wiring and shall bear wire numbers using a uniform numbering method so that wiring can be easily followed.

Conduit and equipment layouts shall be dimensioned and detailed. In addition, they shall be fully coordinated with work of other trades involved with work on this project.

It shall be the responsibility of the Contractor to secure all certified special wiring diagrams, specifications and drawings from equipment suppliers before wiring, installing, mounting, and/or connecting the equipment supplied. The accuracy of the certified wiring diagrams, specifications and drawings furnished by equipment suppliers is the responsibility of the Contractor and failure to wire or install in accordance with such certified wiring diagrams, specifications and drawings, furnished by others, shall be corrected at the Contractor's expense.

1.04 Raceways

A. Conduit

All conduit by the Contractor shall be rigid hot-dipped galvanized steel outside and standard metal conduit on the interior of the building unless otherwise noted.

Each length of conduit shall have Underwriter's approval label attached thereto.

Each length of conduit shall be shipped with one coupling at each end and a thread protector at each end.

Connection from rigid conduit to vibrating equipment, limit switches, transformers, pressure switches, solenoid valves, etc...in all areas shall be made with short lengths of liquid tight flexible neoprene jacketed metal conduit with a minimum length of 8" in nonhazardous areas and explosion proof flexible conduit in hazardous areas. All flexible conduit shall be provided with an appropriately sized equipment ground conductor with the raceway.

The minimum size conduit permitted is 3/4" unless noted otherwise for exposed work or conceal work underground in all locations.

Each piece of conduit installed shall be free from blisters and other defects. Each piece installed shall be cut square and taper reamed. Conduit connections to all enclosures, pull boxes, and fittings shall be screwed tightly into conduit hubs with only incomplete threads exposed. All conduit joints shall be butt tightly into the couplings.

Where standard couplings cannot be used, only union type couplings shall be used in all areas. Set screw couplings are not acceptable.

Conduit threaded in field shall have standard thread sizes and lengths. Conduit threads shall be coated with an acceptable sealer prior to tightening coupling and other screwed fittings.

Factory bent elbows or field bent elbows with approved tools may be used. Heating of conduit to facilitate bending is prohibited. Factory bent elbows shall be fabricated in accordance with the applicable requirements of these specifications.

All exposed conduit shall be installed, either parallel or perpendicular to structural members, unless impractical, and shall be grouped wherever possible. Conduit shall be attached to walls and ceilings with approved supports spaced a maximum of six (6) feet apart and shall form a neat, rigid installation. At least ¼" clearance from the walls and ceiling shall be maintained to prevent the accumulation of dirt and moisture behind and above the conduit where conduit is supported from the building walls or ceilings.

Explosion-proof conduit seals are to be installed in all conduits routed between hazardous and non-hazardous areas per the requirements of the NEC.

Conduit and/or conduit fittings shall not be welded together or to any steel structure.

Conduit shall be protected immediately after installation by installing flat non-corrosive metallic discs and steel bushings, designed for this purpose, at each end. Discs shall not be removed until it is necessary to clean the conduit and pull wire and cable.

Prior to pulling in wire and cables, each conduit shall be thoroughly cleaned inside to remove all sand and other foreign matter. Cleaning shall be performed with compressed air flowed by the passage of a swab. Spare and empty conduits shall have pull ropes installed in them.

B. Conduit Fittings, Boxes, Etc...

Cast fittings and boxes in nonhazardous areas shall be non ferrous metal or malleable iron thoroughly coated inside and outside with metallic zinc or cadmium after all machining has been completed. Cast fittings shall be provided with heavy threaded hubs to fit the conduit required. Covers shall be of the same material as the fittings to

which they are attached and shall be screwed on with rubber or neoprene gaskets between the covers and fittings. All cast fittings 1 ½” and above shall be of the mogul type. Where all thread nipples are used between fittings and electrical equipment, they shall be so installed that no threads are exposed.

Conduit fittings and boxes in hazardous areas shall be of explosion proof construction.

Control boxes, panels and all other wall mounted devices shall be solidly attached to walls or ceilings prior to installation of conduit. These devices shall be set true and plumb. Wooden plugs are not permitted for securing equipment or conduit to concrete or concrete block walls.

All wall mounted equipment shall be secure to a ¾” thick exterior grade plywood back panel. Back panel and spacers are to be given two (2) coats of water proof black paint prior to installation. Back panel to be sized to accommodate the equipment as shown or required.

All cast fittings are to be provided with stainless steel cover screws.

All conduits shall be terminated to enclosures and fittings with conduit hubs.

1.05 Wire and Cable

Each Coil or reel of insulated wire and cable furnished shall bear a tag, containing the Underwriters’ Laboratories approval stamp (providing cable is of the class inspected by said laboratory), name of manufacturer, trade designation, month and year manufacturer; and in no case shall be more than six months old, unless approved by the engineer, wire and cable shall not have been stored in the weather, and shall meet all applicable requirements of the ICEA.

Splices shall not be made in cast fitting such as “tee” or “L” types, but shall be in junction boxes of adequate size.

All splices and taps shall be made with bolted clamp type or indentation type pressure connectors. Wire nuts shall be permitted for power conductor sizes #10 AWG and smaller.

All splices and connections shall be taped with at least two layers of rubber tape and held in place with a full covering of friction or plastic electrical tape. The total thickness of tape shall be at least equal to or greater than the original thickness of the insulation of the conductor prior to stripping.

The best of care shall be exercised while installing wire and cable so as not to injure the conductor insulation. Only approved pulling compounds shall be used for pulling in any conductor.

Protection shall be provided against chafing conductors in all boxes and similar equipment.

All wire and cable shall be tagged at each end with Brady markers or approved equal on which shall be marked with the wire or cable number, as indicated on the Contractor's wiring diagrams. The figures on the tag must be clear and legible.

All installation in locations where the copper temperature will exceed 75 degrees F shall be wired in accordance with the latest ICEA requirements as authorized by the Engineer.

All power, control and lighting wiring shall be made with 600V insulated copper wire type XHHW-2 except where indicated otherwise. Minimum wire size shall be No. 12 AWG for power and lighting wiring. Conductors larger than No. 10 AWG shall be stranded. Aluminum or copperclad conductors are not permitted.

All wiring shall be installed in conduit unless noted otherwise.

1.06 Grounding

All equipment and enclosures and system neutrals shall be properly connected to ground in accordance with the requirements of the NEC and all equipment installation standards.

Ground cables shall consist of bare medium hard drawn 97.5% minimum conductivity stranded copper cable of sizes as required by the NEC.

Provide grounding type locknuts on all metallic conduits entering and leaving sheet steel enclosures such as panelboards, control panels, pull boxes, junction boxes, wireways, etc... Provide bonding jumpers at raceway fittings as applicable.

Provide a separate insulated ground wire in all conduits. Minimum ground cable size shall be No. 12 AWG.

All underground electrode conductor connections shall be made by the "thermoweld" copperthermite process. All equipment and enclosures not electrically connected to steel conduit shall be grounded in accordance with the NEC.

Surfaces where grounding connections are to be made shall be clean and dry. Steel surfaces shall be ground or filed to remove all scale, rust, grease, and dirt. Copper and galvanized steel shall be cleaned with emery cloth to remove all oxide before making connections.

1.07 Painting

All conduit hangers, or other non-galvanized structural supports for electrical equipment shall be painted.

Equipment enclosures such as panelboards, panels, control panels, etc..., which are factory painted, shall be "touched up" with spray paint under this specification section of a color and thickness to blend in with the factory paint on all areas which have been marred during installation.

1.08 Hardware

All conduit sleeves, mounting bolts, etc. shall be furnished and installed by the Contractor. All mounting hardware in all areas shall be stainless steel.

1.09 Electrical Tests

The Contractor shall furnish all instruments and a qualified technician to properly perform all tests required. Written notice of all tests shall be given to the Engineer at least ten (10) working days in advance.

Unless waived in writing by the Engineer, all tests shall be made in the presence of a duly authorized representative of the Engineer. When the presence of such representative is so waived, sworn statements, in duplicate, of the tests made and the results thereof, shall be furnished to the Engineer by the Contractor.

Costs of all tests shall be borne by the Contractor and shall be included in the price bid for this Contract.

All electrical circuits shall be tested to ensure circuit continuity, insulation resistance, proper splicing, and freedom from improper grounds. All tests shall be performed prior to energizing any portion of the work.

No equipment of new power feeders shall be energized until all tests, adjustments, and inspections have been made to the satisfaction of the Engineer and the Owner. Tests shall be conducted prior to connection into existing power systems and prior to terminating cable ends.

The cause of any failure shall be impartially examined by the Engineer and the results shall be binding on the Contractor, if the Engineer's judgment is such failure was caused by poor workmanship, materials and/or equipment provided by the contractor.

1.10 Acceptance

The operation of the equipment and the electrical installation by the owner does not constitute an acceptance of work. The final acceptance is to be made after the Contractor has adjusted all equipment furnished, including interfacing equipment furnished under other sections of the specifications, demonstrated that it fulfills the requirements of the specifications and plans and has furnished all the required certificates.

1.11 Payment

There is no separate payment for this section. The cost shall be included in the various lump sum prices in the bid proposal.

* * * * *

GENERAL NOTES

- ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH THE REGULATIONS AND GUIDELINES SET FORTH BY ALL AGENCIES HAVING JURISDICTION OVER THE WORK. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE BUILDING CODES AND REGULATIONS AND OBTAINING ALL NECESSARY AND REQUIRED PERMITS, INSPECTIONS, AND APPROVALS NECESSARY FROM LAKEWOOD, NJ TO PERFORM ALL WORK AND SERVICES HEREIN NOTED OR INDICATED ON THE DRAWINGS.
- THE SITE IS THE OCEAN COUNTY NORTHERN RECYCLING FACILITY LOCATED AT 601 NEW HAMPSHIRE AVENUE, LAKEWOOD, NEW JERSEY. IT IS A WORKING RECYCLING FACILITY. THE OCEAN COUNTY RECYCLING FACILITY IS COMPRISED OF TWO BUILDINGS: THE SINGLE STREAM BUILDING AND COMMINGLED BUILDING. UNPROCESSED RECYCLABLES ARE TIPPED IN THE SINGLE STREAM BUILDING AND IS PROCESSED TO REMOVE THE GLASS AND FIBER PRODUCTS. THE REMAINING COMMODITIES ARE SORTED OUT IN THE COMMINGLED BUILDING.
- THE BUILDING AND EQUIPMENT LAYOUTS PROVIDED ON THE DRAWINGS HAS BEEN OBTAINED FROM BEST AVAILABLE DRAWINGS AND SHALL NOT BE RULED ON AS BEING EXACT OR COMPLETE AS NUMEROUS EQUIPMENT PROJECTS HAVE BEEN INSTALLED OVER THE YEARS. ALL EXISTING CONDITIONS, EQUIPMENT, STRUCTURAL STEEL, AND UTILITY LOCATIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
- THE PROJECT IS LOCATED ON OCEAN COUNTY OWNED PROPERTY. THE RECYCLING FACILITY IS BEING OPERATED BY ATLANTIC COAST RECYCLING.
- NORMAL OPERATING HOURS AT THE RECYCLING FACILITY ARE 4:00 AM - 11:00 PM ON WEEKDAYS. IT IS IMPERATIVE THAT THE CONTRACTOR PROVIDE AN ALLOWANCE IN HIS BID FOR COORDINATION WITH THE EXISTING OPERATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL COORDINATION NECESSARY IS PERFORMED TO MINIMIZE INTERFERENCE WITH THE RECYCLING FACILITY OPERATIONS BEFORE BEGINNING WORK. A TWO WEEK NOTICE WILL BE REQUIRED BEFORE THE START OF ANY WORK AT THE FACILITY. THE CONTRACTOR IS PERMITTED TO WORK DURING OPERATING HOURS AS LONG AS WORK WILL NOT RESULT IN OPERATING DOWNTIME AS DETERMINED BY THE ENGINEER, THE OPERATOR (ATLANTIC COAST RECYCLING), OR THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING INFRASTRUCTURE OR EQUIPMENT, THAT WAS MEANT TO REMAIN, AND REPAIRS SHALL BE MADE SOLELY AT THE CONTRACTOR'S EXPENSE.
- IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR VISIT THE SITE OF WORK PRIOR TO PREPARING THEIR BID IN ORDER TO COMPLETELY FAMILIARIZE THEMSELVES WITH THE DIFFICULTIES ATTENDANT TO THIS PROJECT: PUBLIC SAFETY; EXISTING STRUCTURES; CONFLICTS; DAILY FACILITY OPERATIONS; AND EQUIPMENT. WHENEVER A CONFLICT IN ANY DISCIPLINE OCCURS BETWEEN THE REQUIREMENTS SHOWN ON THE CONTRACT DRAWINGS, THOSE SPECIFIED OR THOSE INDICATED BY ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL ASSUME THAT THE MOST SEVERE REQUIREMENT WILL BE IMPOSED AND PREPARE THEIR BID ACCORDINGLY. ANY WORK THAT REQUIRES STOPPAGE OF FACILITY OPERATIONS SHALL BE DONE OUTSIDE OF NORMAL OPERATING HOURS.
- UNCERTAINTY UNFORESEEN CONDITIONS MAY OCCUR AND SUCH CONDITIONS WILL REQUIRE CLOSE INTERACTION BETWEEN THE OWNER, THEIR ENGINEER, THE CONTRACTOR, AND VARIOUS REGULATORY AGENCIES IN ORDER TO RESOLVE THOSE ISSUES. EVERY EFFORT IS TO BE MADE TO RESOLVE SUCH ISSUES IN A TIMELY MANNER CONSISTENT WITH GOOD ENGINEERING PRACTICES AND ECONOMIES OF BOTH TIME AND MONEY TO THE SATISFACTION OF THE COUNTY.
- THE MEANS AND METHODS OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ITEMS LEFT AT THE RECYCLING FACILITY. ANY THEFT OR VANDALISM OF ITEMS ON SITE SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.
- CONTRACTOR IS TO DISPOSE ALL TRASH GENERATED AS A RESULT OF CONSTRUCTION OFFSITE AT THEIR OWN EXPENSE.
- TEMPORARY POWER, WATER, SANITARY, AND LIKE FACILITIES CAN BE PROVIDED BY THE RECYCLING FACILITY WITH THE EXCEPTION OF WELDING. CONTRACTOR SHALL PROVIDE A GENERATOR FOR FOR THEIR WELDING, IF REQUIRED.
- WORK WHICH WILL REQUIRE THE PROCESSING OPERATIONS TO SHUTDOWN OR THE FACILITY TO BE WITHOUT POWER WILL BE REQUIRED TO BE DONE OUTSIDE OF THE NORMAL OPERATING HOURS OR WITHIN THE ALLOWABLE SHUTDOWN PERIOD.
- ALL WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE NOISE, DUST, OR DISTURBANCE TO OCCUPANTS, ADJACENT SITES OR BUILDINGS.
- THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION SITE. ADEQUATE BARRIERS SHALL BE PROVIDED TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF THE WORK AREA. FIRE EXITS SHALL AT NO TIME BE BLOCKED.
- THE APPROVAL OF SUBMITTALS BY THE ENGINEER SHALL NOT BE CONSTRUED AS A COMPLETE CHECK, BUT WILL INDICATE ONLY THAT THE GENERAL METHOD OF CONSTRUCTION, MATERIALS, DETAILING AND OTHER INFORMATION ARE SATISFACTORY. APPROVAL WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY ERROR, WHICH MAY EXIST IN HIS SUBMITTALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIMENSIONS AND DESIGN OF ADEQUATE CONNECTIONS, DETAILS AND SATISFACTORY CONSTRUCTION OF ALL WORK.
- SUBMITTALS SHALL BE IN COMPLIANCE WITH CONTRACT REQUIREMENTS AND ACTUAL FIELD CONDITIONS. INCOMPLETE SUBMITTALS WILL NOT BE REVIEWED BY THE ENGINEER AND WILL BE RETURNED TO THE CONTRACTOR. REPRODUCED CONTRACT DRAWINGS WILL NOT BE ACCEPTED AS SHOP DRAWINGS. FIELD VERIFY CONSTRUCTION AND INSTALLATION REQUIREMENTS PRIOR TO SUBMITTAL PREPARATION AND SUBMISSION.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE.
- MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED ON THE DRAWINGS.

- THE CONTRACTOR MUST FULLY FAMILIARIZE HIMSELF OF THE CONDITIONS RELATING TO THE CONSTRUCTION AND LABOR UNDER WHICH THE WORK WILL BE PERFORMED AND COMPARE THE DRAWINGS AND SPECIFICATIONS WITH THE WORK IN PLACE. FAILURE TO DO SO WILL NOT RELIEVE CONTRACTOR OF HIS OBLIGATION TO FURNISH ALL LABOR AND MATERIAL NECESSARY TO CARRY OUT THE PROVISIONS OF THE CONTRACT DOCUMENTS AND TO COMPLETE THE CONTEMPLATED WORK FOR THE CONSIDERATION SET FORTH IN HIS BID. EACH CONTRACTOR / SUBCONTRACTOR, IN THE CARRYING OUT OF HIS WORK, SHALL EMPLOY SUCH CONSTRUCTION METHODS OR MEANS THAT WILL NOT CAUSE ANY INTERRUPTIONS OR INTERFERENCE WITHIN THE WORK OF ANY OTHER TRADES.
- THE CONTRACTOR SHALL REMOVE AND RELOCATE ALL EXISTING CONSTRUCTION, CONDUITS, PIPING, WIRING, UTILITIES, ETC. THAT MAY INTERFERE WITH NEW CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
- THE BUILDINGS SHALL REMAIN ACCESSIBLE TO THE OWNER AND OPERATOR AT ALL TIMES.
- THE CONSTRUCTION AREA SHALL BE THOROUGHLY CLEANED AFTER THE CONSTRUCTION.
- ALL CONSTRUCTION AND OTHER MATERIALS SHALL BE STORED AT THE DESIGNATED STORAGE AREA AS DESIGNATED BY THE OWNER AND ON COMPLETION OF WORK OR AS DEEMED NECESSARY ALL SURPLUS/ REFUSE/ DEBRIS MATERIAL SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF SITE AT NO ADDITIONAL COST TO THE OWNER.
- SHOULD DISCREPANCIES OCCUR BETWEEN CONTRACT DRAWINGS, SPECIFICATIONS, AND APPLICABLE CODES, STANDARDS, RULES, REGULATIONS, LAWS, ETC., THE MOST RIGOROUS REQUIREMENT SHALL APPLY.
- ANY WELDING OR ANY ACTIVITY THAT WILL GENERATE A SPARK IS PROHIBITED UNTIL THE CONTRACTOR CLEARS THE AREA OF COMBUSTIBLES AND PROVIDES A PERSON WITH A FIRE EXTINGUISHER TO STANDBY ON A FIRE WATCH WHILE THE WORK IS BEING PERFORMED. AFTER THE WORK IS PERFORMED, THE AREA SHALL BE INSPECTED TO ENSURE THAT THERE IS NO EVIDENCE OF A FIRE.
- CONTRACTOR WILL NEED TO COMMUNICATE THROUGHOUT THE PROJECT WITH ATLANTIC COAST RECYCLING. AT TIME ATLANTIC COAST RECYCLING WILL NEED TO ACCESS THE COMPACTOR AND THE BUNKER BENEATH THE SERVICE PLATFORM TO LOAD OUT RECYCLABLES AND RESIDUE.
- PLANS ARE MEANT TO BE PRINTED IN COLOR.
- PLANS ARE DIAGRAMMATIC AND THE FINAL DESIGN IS BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE

THE CONTRACTOR WILL BE PROVIDED WITH TWO SHUTDOWNS OF THE COMMINGLED BUILDING DURING THE PROJECT.

SHUTDOWN A: A 3-DAY SHUTDOWN THAT WILL BEGIN ON A THURSDAY AT 11:00 PM AND END AT 4:00 AM THE FOLLOWING MONDAY.

SHUTDOWN B: A 4-DAY SHUTDOWN THAT WILL BEGIN ON A FRIDAY AT 11:00 PM AND END AT 4:00 AM THE FOLLOWING WEDNESDAY.

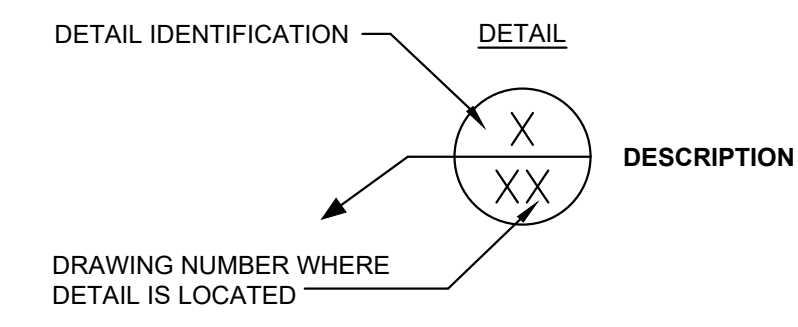
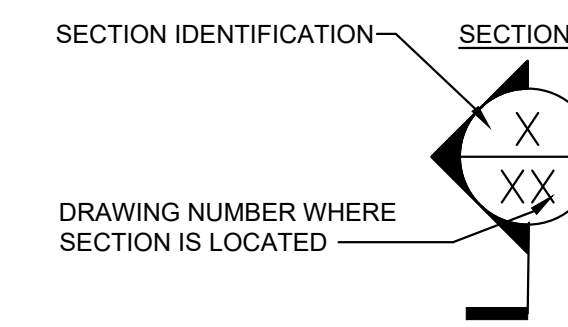
THE CONTRACTOR SHALL UNDERTAKE WORK PERFORMED UNDER THIS CONTRACT GENERALLY IN THE SEQUENCE BELOW WHICH IS INTENDED TO MINIMIZE DISRUPTIONS TO ATLANTIC COAST RECYCLING'S OPERATIONS.

- CONTRACTOR SHALL REMOVE POSITIONS 26, 28, 29, 30, 31, 32, 33, 44 BEFORE SHUTDOWN A. MATERIAL WILL CONTINUE TO BE CONVEYED ON POSITION 27 THROUGHOUT WORK.
- DURING SHUTDOWN A, CONTRACTOR SHALL REMOVE POSITION 25.
- THE PLATFORM GRATING/RAILINGS, AND THE STEEL ARE TO BE REMOVED. CONTRACTOR TO PERFORM ALL PLATFORM WORK, ELECTRICAL WORK (CONDUIT, WIRE, DISCONNECTS, ETC.) AND INSTALL EDDY CURRENT SEPARATOR (POSITION 29) AND ITS ALUMINUM CHUTE.
- PRIOR TO SHUTDOWN B, CONTRACTOR SHALL PRE-ASSEMBLE THE EQUIPMENT TO THE EXTENT POSSIBLE AND ALL PROPOSED EQUIPMENT, CONSTRUCTION EQUIPMENT, AND SUPPLIES SHALL BE ON-SITE FOR THE ENGINEER'S REVIEW.
- DURING SHUTDOWN B, THE COMPACTOR (POSITION 45) IS TO BE RELOCATED, THE PROPOSED CONVEYOR (POSITION 28) IS TO BE INSTALLED, AND THE EXISTING FINES SCREEN (POSITION 41) IS TO BE MODIFIED. CONTRACTOR SHALL START UP THE EQUIPMENT IN SEQUENCE AND TEST THE SYSTEM.
- ONCE THE FINES SCREEN (POSITION 41) HAS BEEN MODIFIED AND THERE IS NO LONGER ANY MATERIAL BEING CONVEYED ON POSITION 43, POSITION 43 CAN BE REMOVED.

ABBREVIATIONS

BLDG	BUILDING	MAX	MAXIMUM
B.S.	BOTH SIDES	NTS	NOT TO SCALE
CONC	CONCRETE	OC	ON CENTER
CONT	CONTINUOUS	OH	OVERHEAD
CONV	CONVEYOR	SF	SQUARE FEET
DWG	DRAWING	SP	SPACING
EL	ELEVATION	T/	TOP
EQ	EQUAL	T/O	TOP OF
EXIST	EXISTING	TYP	TYPICAL
FF	FINISHED FLOOR	VIF	VERIFY IN FIELD
FT	FOOT/FEET	W/	WITH
HP	HORSEPOWER	Ø	DIAMETER

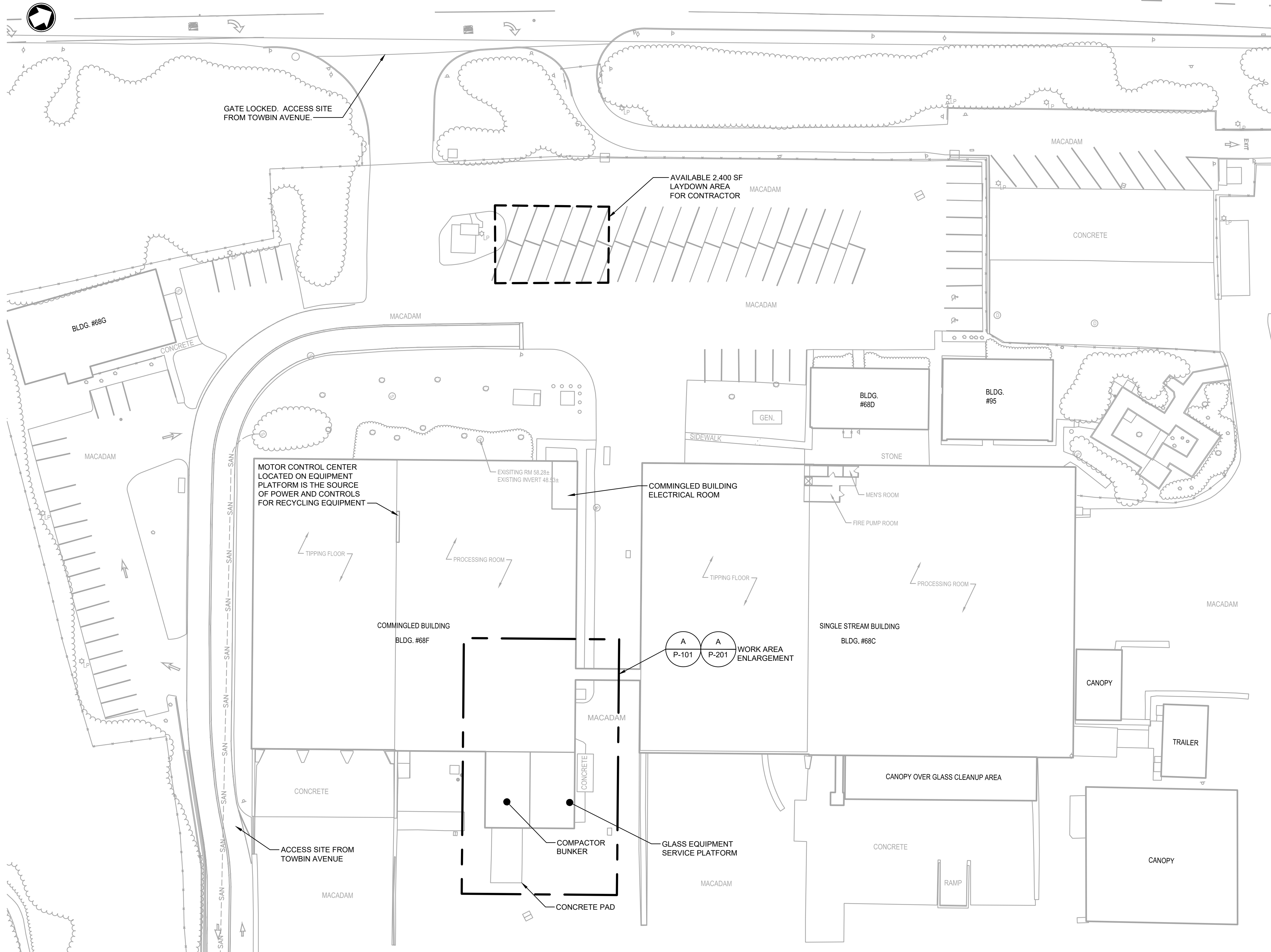
SYMBOLS



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	T +1 (800) 832 3272 F +1 (973) 376 1072 www.mottmacamericas.com								Drawn		Coordination	
							Dwg check		Approved	JJK		
							Scale at ANSI D	Status	Rev	Security		
							As Shown	APR	0	STD		
							Drawing Number		G-101			
							Project Number	B/O	Total			
							507111580-001	2	10			
							Rev	Date	Drawn	Description	Ch'k'd	App'd



LEGEND

- — — — — ENLARGEMENT BOUNDARY
- - - - - LAYDOWN AREA BOUNDARY

NOTE: SITE IS ONLY ACCESSIBLE FROM TOWBIN AVENUE. GATES ON NEW HAMPSHIRE AVENUE ARE LOCKED.

OVERALL SITE PLAN A
SCALE: 1" = 30'

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M M
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Client	OCEAN COUNTY BOARD OF COMMISSIONERS				
	101 HOOPER AVENUE				
	TOMS RIVER, NJ 08753				
Rev	Date	Drawn	Description	Ch'k'd	App'd

DAVID HEBER
NJ PROFESSIONAL ENGINEER LIC. No. 24GE05650400

_____ Date _____

Project Number **507111580-001** B/O **3** Total **10**

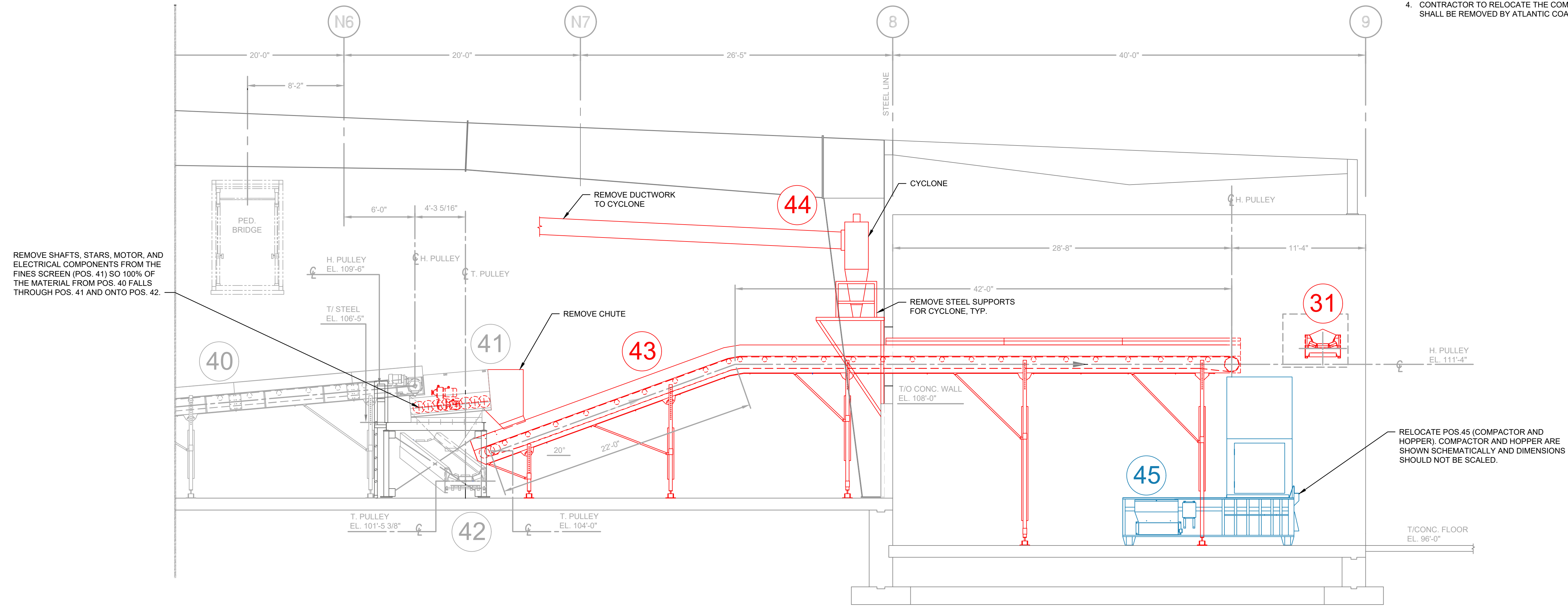
Designed		Eng check	DWH
Drawn		Coordination	
Dwg check		Approved	JJK
Scale at ANSI D 1" = 30'	Status APR	Rev 0	Security STD
Drawing Number	G-102		

Title
**NORTHERN RECYCLING CENTER
EDDY CURRENT SEPARATOR
LAKEWOOD, OCEAN COUNTY, NJ
OVERALL SITE PLAN**

NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

DEMOLITION NOTES:

1. CONTRACTOR TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING.
2. THE EQUIPMENT NOTED IN EXISTING EQUIPMENT TABLE AS "REMOVE" SHALL BE REMOVED IN THEIR ENTIRETY. THE REMOVAL INCLUDES SUPPORTS, ELECTRICAL WIRING AND CONDUITS TO THE EQUIPMENT, CONVEYOR FRAMES, MOTORS, ASSOCIATED CHUTES/DUCTWORK, AND APPURTENANCES.
3. CONTRACTOR TO ASSUME THAT THE EQUIPMENT TO BE REMOVED IS NOT OPERATIONAL OR SALVAGEABLE AND MUST BE DISPOSED OF.
4. CONTRACTOR TO RELOCATE THE COMPACTOR. THE COMPACTOR BOX SHALL BE REMOVED BY ATLANTIC COAST RECYCLING.

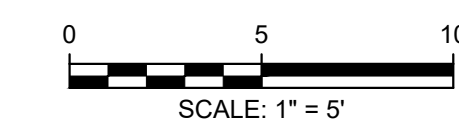


REMOVE SHAFTS, STARS, MOTOR, AND ELECTRICAL COMPONENTS FROM THE FINES SCREEN (POS. 41) SO 100% OF THE MATERIAL FROM POS. 40 FALLS THROUGH POS. 41 AND ONTO POS. 42.

RELOCATE POS.45 (COMPACTOR AND HOPPER). COMPACTOR AND HOPPER ARE SHOWN SCHEMATICALLY AND DIMENSIONS SHOULD NOT BE SCALED.

EXISTING RESIDUE LINE
DEMOLITION WORK - SECTION VIEW S1
SCALE: 1" = 5'

EXISTING EQUIPMENT LIST			
POS.	DESCRIPTION	ACTION	SEQUENCING
31	24"W x 26'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
40	36"W x 95'-0"L - FLAT IDLER CONVEYOR	REMAINS	
41	FINES SCREEN	MODIFY	SHUTDOWN B
42	30"W x 20'-0"L - TROUGH IDLER CONVEYOR	REMAINS	
43	36"W x 64'-0"L - FLAT IDLER CONVEYOR	REMOVE	AFTER SHUTDOWN B
44	STERNVENT CYCLONE	REMOVE	BEFORE SHUTDOWN A
45	COMPACTOR - WASTEQUIP MODEL 445HD-F	RELOCATE	SHUTDOWN B



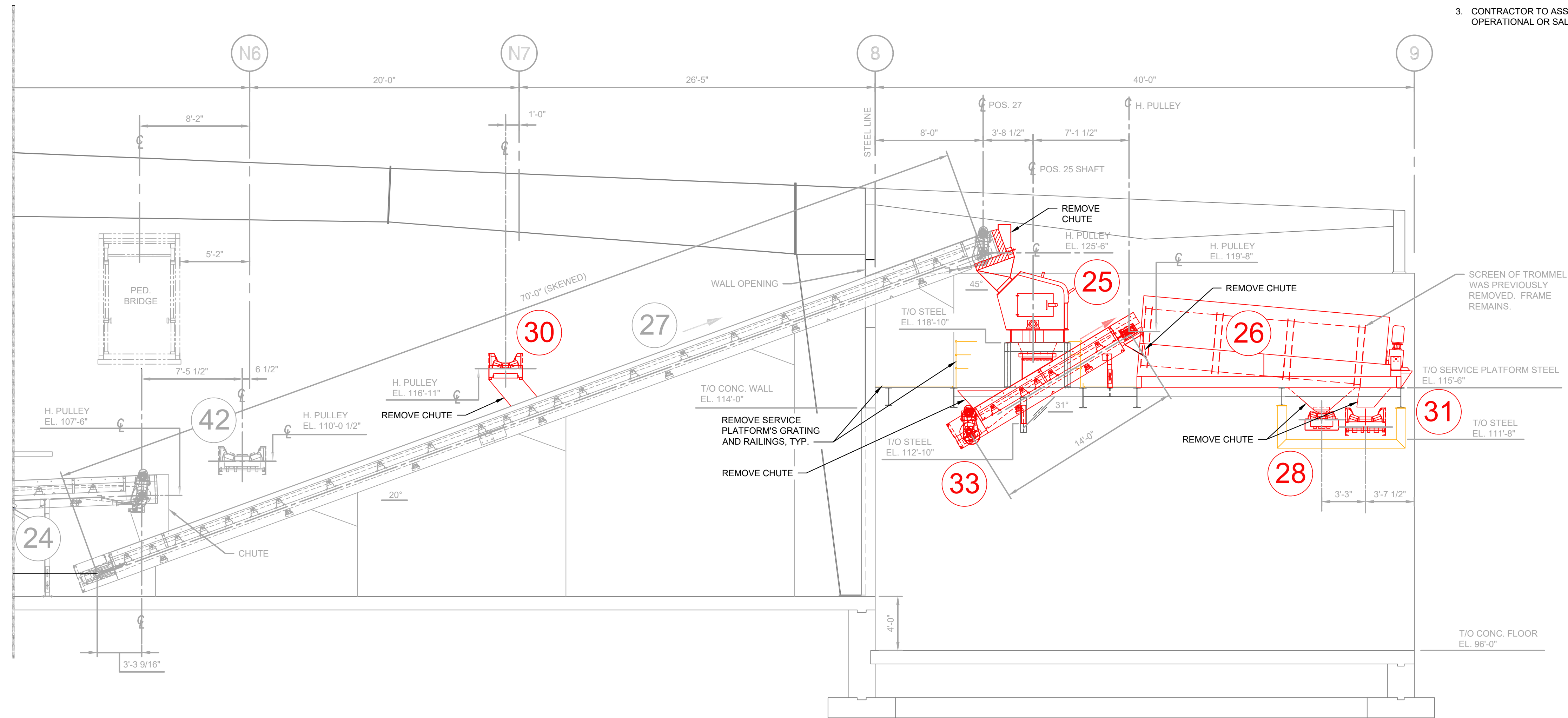
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Rev Date Drawn Description Ch'k'd App'd																

NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

DEMOLITION NOTES:

1. CONTRACTOR TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING.
2. THE EQUIPMENT NOTED IN EXISTING EQUIPMENT TABLE AS "REMOVE" SHALL BE REMOVED IN THEIR ENTIRETY. THE REMOVAL INCLUDES SUPPORTS, ELECTRICAL WIRING AND CONDUITS TO THE EQUIPMENT, CONVEYOR FRAMES, MOTORS, ASSOCIATED CHUTES/DUCTWORK, AND APPURTENANCES.
3. CONTRACTOR TO ASSUME THAT THE EQUIPMENT TO BE REMOVED IS NOT OPERATIONAL OR SALVAGEABLE AND MUST BE DISPOSED OF.



**EXISTING FINES LINE
DEMOLITION WORK - SECTION VIEW**

SCALE: 1" = 5'

S2
P-103

EXISTING EQUIPMENT LIST			
POS.	DESCRIPTION	ACTION	SEQUENCING
24	24"W x 95'-6"L - TROUGH IDLER CONVEYOR	REMAINS	
25	PRIMARY GLASS CRUSHER	REMOVE	SHUTDOWN A
26	48"Ø TROMMEL SCREEN	REMOVE	BEFORE SHUTDOWN A
27	30"W x 70'-0"L - TROUGH IDLER CONVEYOR	REMAINS	
28	18"W x 15'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
30	18"W x 44'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
31	24"W x 26'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
33	30"W x 12'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
42	30"W x 20'-0"L - TROUGH IDLER CONVEYOR	REMAINS	

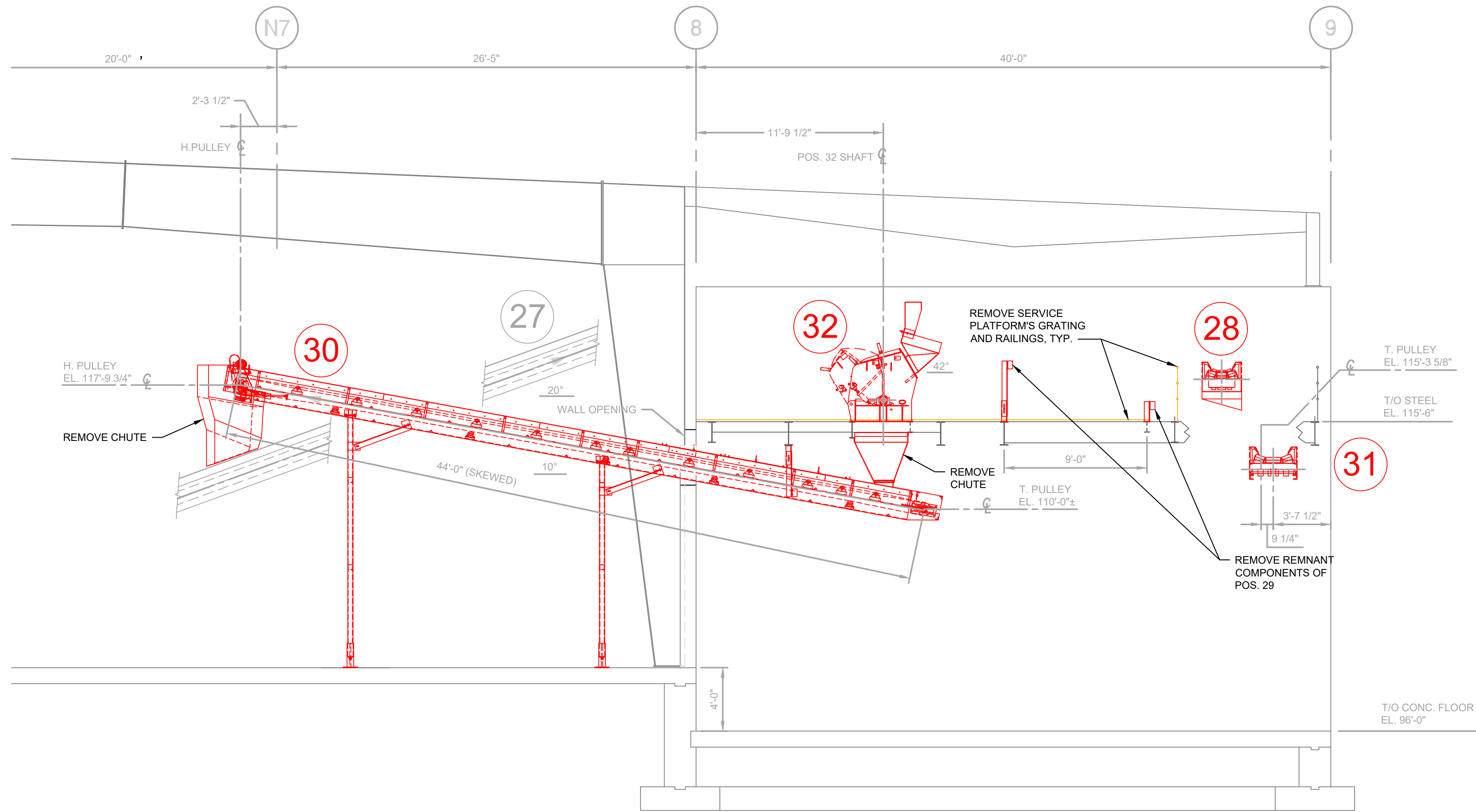


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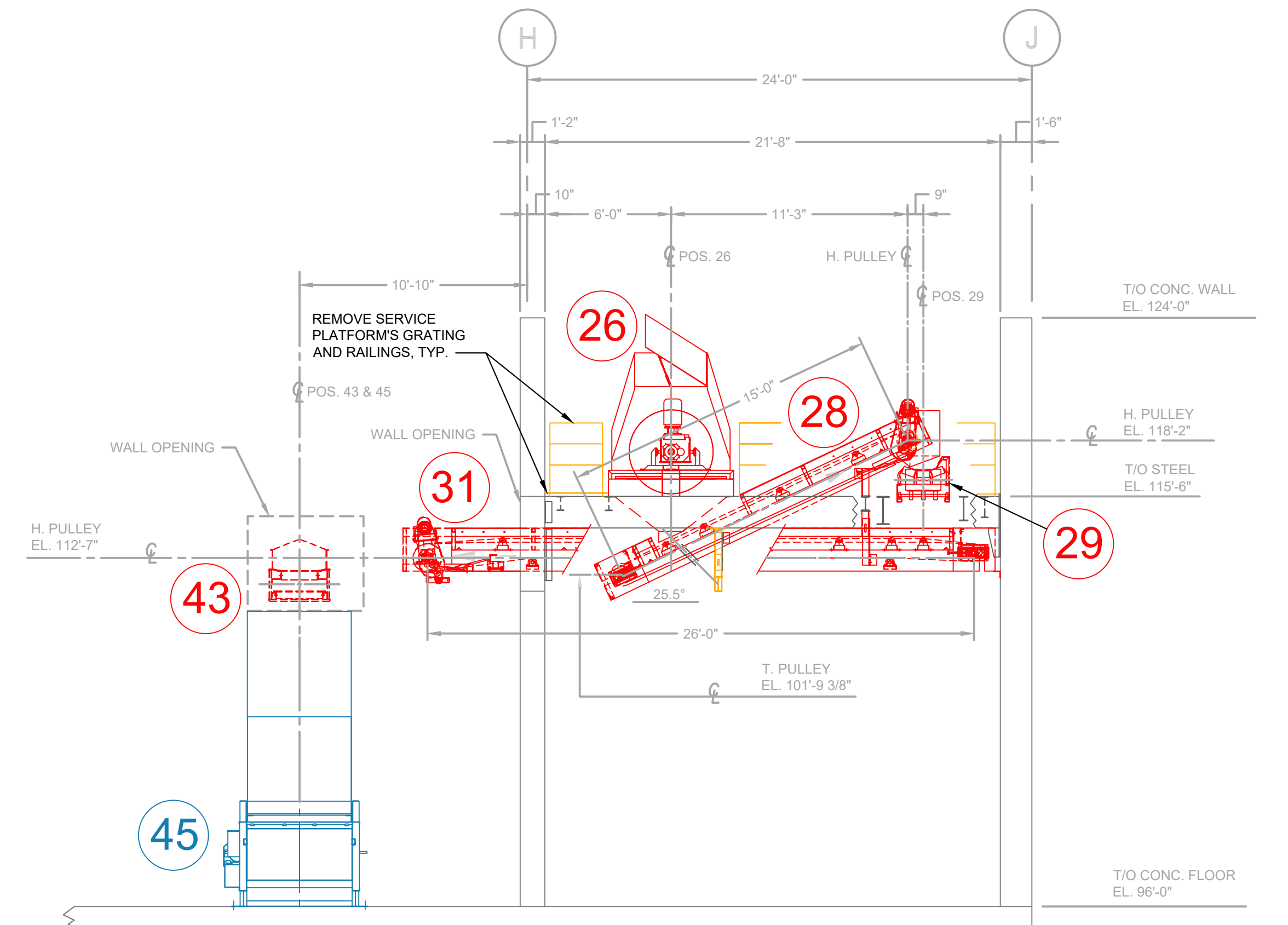
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Rev	Date	Drawn	Description	Ch'k'd	App'd

NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

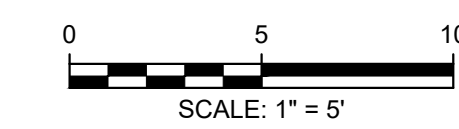
- DEMOLITION NOTES:**
- CONTRACTOR TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING.
 - THE EQUIPMENT NOTED IN EXISTING EQUIPMENT TABLE AS "REMOVE" SHALL BE REMOVED IN THEIR ENTIRETY. THE REMOVAL INCLUDES SUPPORTS, ELECTRICAL WIRING AND CONDUITS TO THE EQUIPMENT, CONVEYOR FRAMES, MOTORS, ASSOCIATED CHUTES/DUCTWORK, AND APPURTENANCES.
 - CONTRACTOR TO ASSUME THAT THE EQUIPMENT TO BE REMOVED IS NOT OPERATIONAL OR SALVAGEABLE AND MUST BE DISPOSED OF.
 - CONTRACTOR TO RELOCATE THE COMPACTOR. THE COMPACTOR BOX SHALL BE REMOVED BY ATLANTIC COAST RECYCLING.



**OLD GLASS RETURN LINE
DEMOLITION WORK - SECTION VIEW** (S3)
SCALE: 1" = 5'



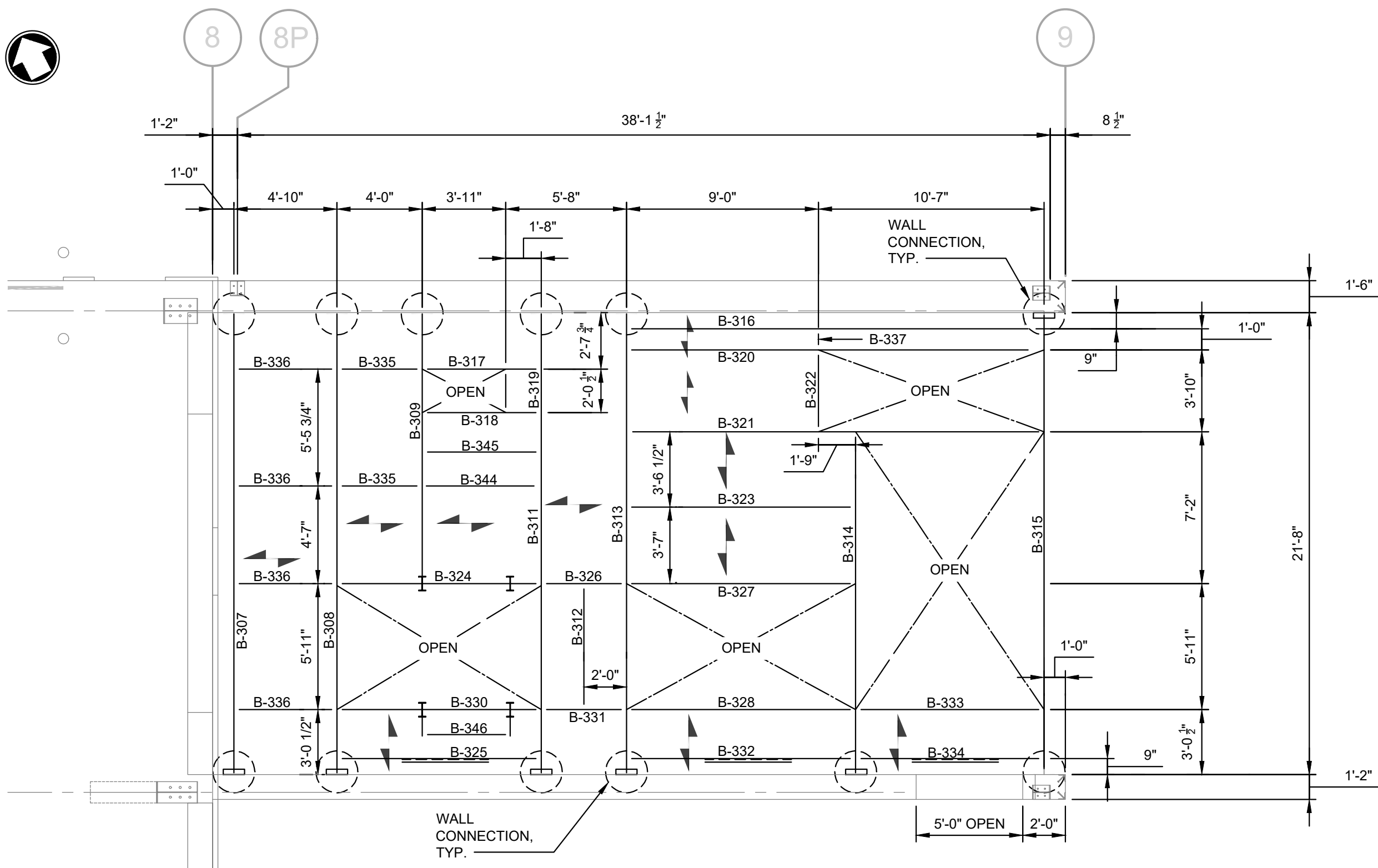
**OLD TROMMEL DISCHARGE LINE
DEMOLITION WORK - SECTION VIEW** (S4)
SCALE: 1" = 5'



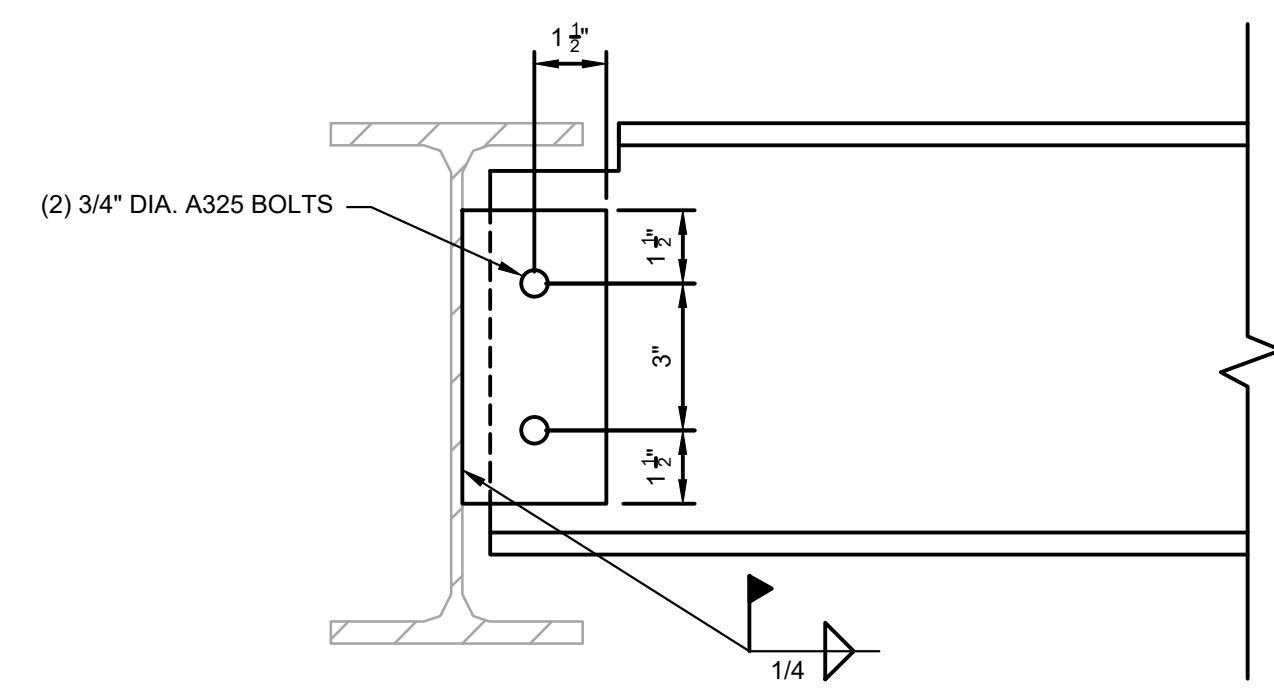
EXISTING EQUIPMENT LIST			
POS.	DESCRIPTION	ACTION	SEQUENCING
26	48"Ø TROMMEL SCREEN	REMOVE	BEFORE SHUTDOWN A
27	30"W x 70'-0"L - TROUGH IDLER CONVEYOR	REMAINS	
28	18"W x 15'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
29	18"W x 21'-6"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
30	18"W x 44'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
31	24"W x 26'-0"L - TROUGH IDLER CONVEYOR	REMOVE	BEFORE SHUTDOWN A
32	SECONDARY GLASS CRUSHER	REMOVE	BEFORE SHUTDOWN A
43	36"W x 64'-0"L - FLAT IDLER CONVEYOR	REMOVE	AFTER SHUTDOWN B
45	COMPACTOR - WASTEQUIP MODEL 445HD-F	RELOCATE	SHUTDOWN B

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	Drawn				Coordination			
				Dwg check		Approved	JKK	
				Scale at ANSI D 1" = 5'	Status APR	Rev 0	Security STD	
				Project Number 507111580-001	BIO 7	Total 10	Drawing Number P-104	



**SERVICE PLATFORM
EXISTING FRAMING PLAN**
SCALE: 1" = 5'
A
P-105



**TYPICAL BEAM TO BEAM SHEAR
CONNECTION DETAIL**
NTS
D-1
P-105

300 LINE STEEL SCHEDULE		
MARK	SIZE	REMARKS
B-307	W16 x 26	
B-308	W18 x 35	
B-309	W12 x 22	
B-311	W18 x 40	
B-312	W8 x 10	
B-313	W18 x 35	
B-314	W16 x 26	
B-315	W18 x 40	
B-316	W12 x 16	
B-317	W8 x 10	
B-318	W8 x 10	
B-319	W8 x 10	
B-320	W14 x 22	
B-321	W16 x 36	
B-322	W8 x 10	
B-323	W8 x 13	
B-324	W12 x 26	
B-325	W8 x 10	
B-326	W8 x 10	
B-327	W8 x 15	
B-328	W8 x 15	
B-330	W8 x 18	
B-331	W8 x 10	
B-332	W8 x 10	
B-333	W8 x 13	
B-334	W8 x 10	
B-335	W8 x 10	2 PCS. TOTAL
B-336	W8 x 10	4 PCS. TOTAL
B-337	W8 x 13	
B-338	W8 x 15	
B-344	W8 x 10	
B-345	LATER	
B-346	LATER	

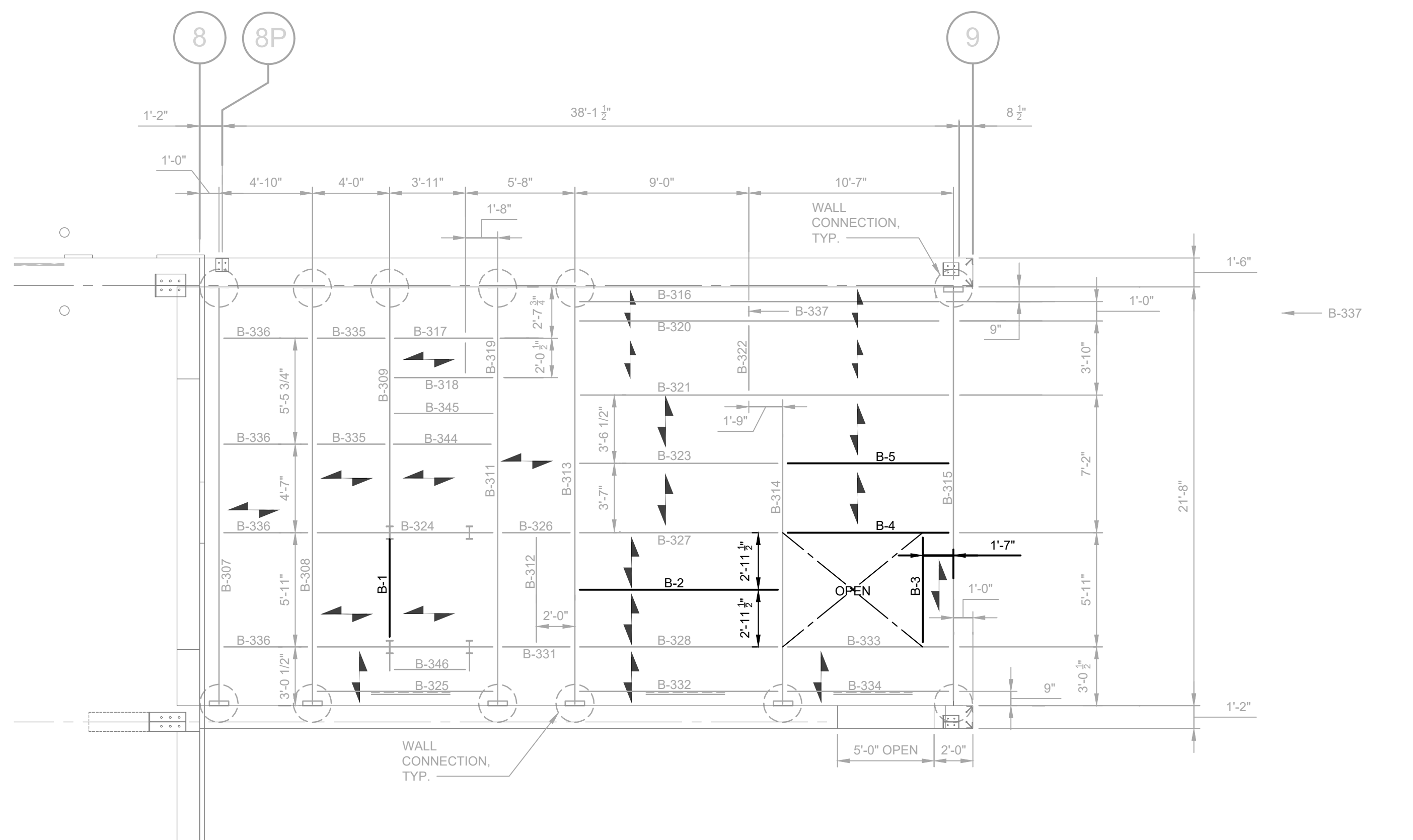
LEGEND

➤ DIRECTION OF GRATING BEARING BARS

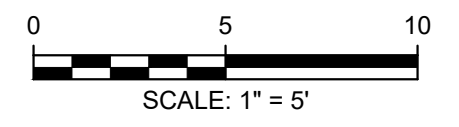
OPEN NO GRATING (OPEN TO BELOW)

- NOTES:**
- EXISTING STRUCTURAL STEEL IS GRADE 50 ASTM A992. THE STRUCTURAL STEEL AND CONNECTIONS ADEQUATELY SUPPORT THE LOADS OF THE EXISTING EQUIPMENT.
 - PROPOSED STEEL SHALL BE GRADE 50 ASTM A992.
 - STEEL DESIGN IS BASED ON EDDY CURRENT SEPARATOR THAT IS WIDER THAN 5'-11" AT ITS BASE.
 - CONTRACTOR SHALL PROVIDE ALL STEEL COMPONENTS AND ANY ADDITIONAL STEEL MEMBERS REQUIRED TO SUPPORT NEW EQUIPMENT, GRATING, AND GUARD RAILINGS.
 - ALL PROPOSED GRATING TO BE 1-1/2" X 1/8" SERIES GW-150A.

PROPOSED STEEL SCHEDULE	
MARK	SIZE
B-1	W12X22
B-2	W8X15
B-3	W8X15
B-4	W8X15
B-5	W8X13



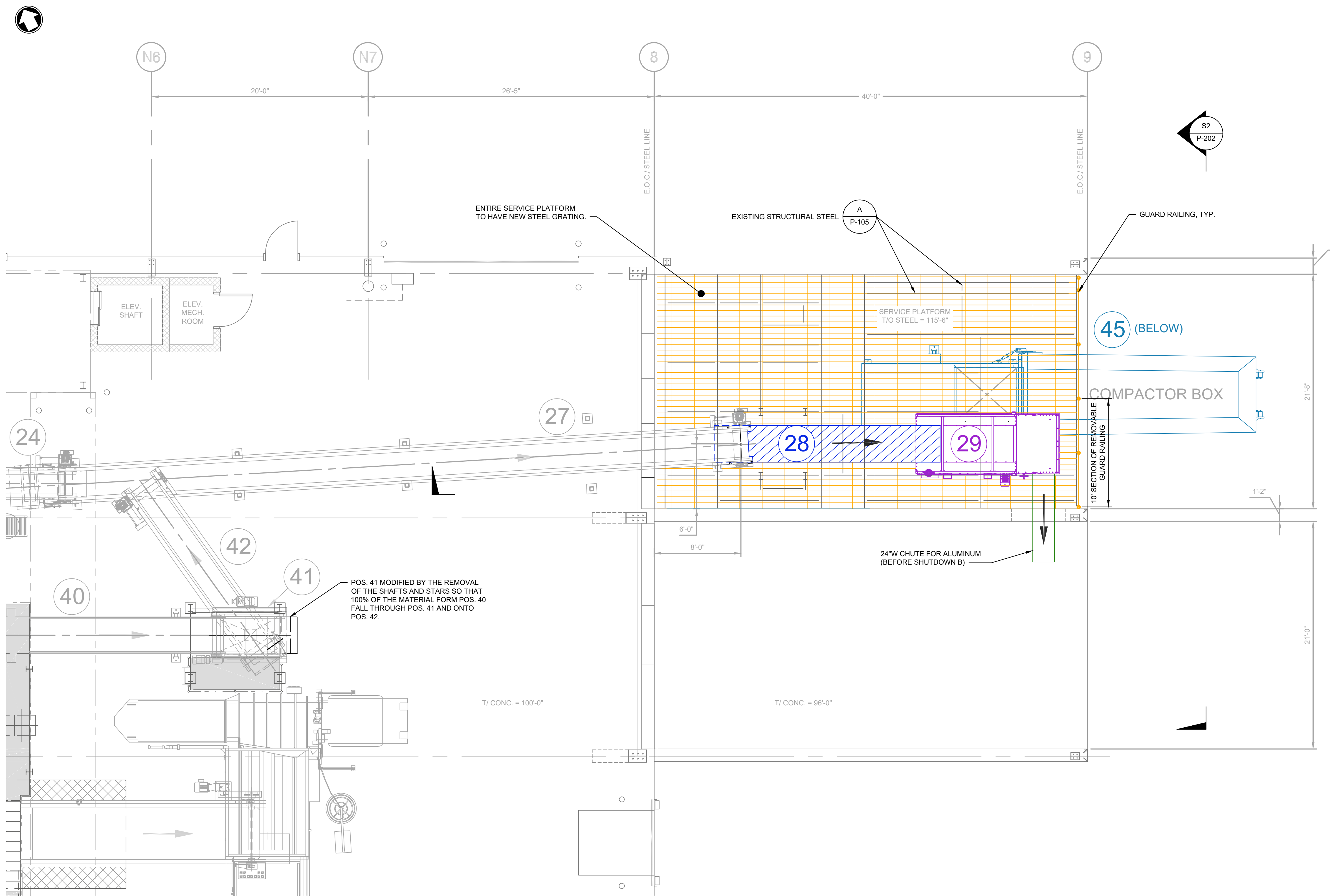
**SERVICE PLATFORM
NEW WORK FRAMING PLAN**
SCALE: 1" = 5'
B
P-105



NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

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	Drawn				Coordination			
				Dwg check		Approved	JJK	
				Scale at ANSI D 1" = 5'	Status APR	Rev 0	Security STD	
				Project Number 507111580-001	BIO 8	Total 10	Drawing Number P-105	
Rev	Date	Drawn	Description	Ch'k'd	App'd			



- FUNCTIONAL DESCRIPTION:**
- POSITION 41 IS TO BE MODIFIED SO THAT 100% OF THE MATERIAL CONVEYED FROM POSITION 40 WILL DROP THROUGH AND BE DEPOSITED ONTO POSITION 42.
 - MATERIAL FROM POSITION 24 AND POSITION 42 COMBINE ON POSITION 27.
 - MATERIAL CONVEYED ON POSITION 27 WILL FALL ONTO THE NEW POSITION 28
 - POSITION 28 WILL CONVEY THE MATERIAL AND DROP IT DIRECTLY ONTO THE NEW POSITION 29, THE EDDY CURRENT SEPARATOR.
 - POSITION 29 SEPARATED ALUMINUM FROM THE STREAM OF RECYCLABLES. THE ALUMINUM IS PROJECTED SO THAT IT FALL THROUGH THE CHUTE AT THE FAR END OF THE EDDY CURRENT SEPARATOR. ALL THE NON-ALUMINUM SHALL FALL OFF THE END OF THE EDDY CURRENT SEPARATOR'S CONVEYOR BELT.
 - THE NON-ALUMINUM IS TO FALL INTO THE COMPACTOR. CONTRACTOR TO EXTEND AND MODIFY OVERFLOW HOPPER AS NEEDED SO THAT THERE IS NO SPILLAGE.
 - THE ALUMINUM IS TO FALL ONTO A CHUTE ON WHICH THE ALUMINUM WILL SLIDE INTO THE ADJACENT BUNKER.

- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL STEEL AND PROVIDE ADDITIONAL STEEL AS NEEDED TO SUPPORT PROPOSED EQUIPMENT AND GRATING. STEEL TO BE DESIGNED BY A LICENSED NJ PROFESSIONAL ENGINEER.
 - CONTRACTOR SHALL REPLACE OR RELOCATE ANY ELECTRICAL CONDUITS SUPPORTED BY THE STRUCTURAL STEEL OR CONVEYORS BEING REMOVED IN THIS PROJECT. CONDUITS ARE NOT SHOWN ON DRAWINGS. CONTRACTOR TO REVIEW EXISTING CONDITIONS PRIOR TO BIDDING. CONTRACTOR TO CONDUITS MEANT TO REMAIN.
 - NEW EQUIPMENT SHALL MEET THE PROJECT'S SPECIFICATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR SURVEYING THE EXISTING ELECTRICAL AVAILABLE AT THE SERVICE PLATFORM FOR USE. CONTRACTOR SHALL PROVIDE NEW REPLACEMENT DISCONNECTS AND THE CONDUIT/WIRING FROM THE DISCONNECTS TO THE NEW EQUIPMENT.
 - THE CONTRACTOR TO PROVIDE THE CONDUITS AND WIRING FOR CONTROLS BACK TO THE MOTOR CONTROL CENTER SO THAT THE CONVEYOR (POS. 28) AND EDDY CURRENT SEPARATOR (POS. 29) STARTS AND STOPS WITH THE EXISTING SEQUENCE. CONTRACTOR MAY USE THE EXISTING WIRING FOR THE EQUIPMENT BEING REMOVED.
 - THE ELECTRICAL WIRING FOR THE COMPACTOR (POS. 45) SHALL BE RELOCATED WITH THE COMPACTOR TO THE ADJACENT BUNKER.
 - THE ENTIRE PLATFORM SHALL HAVE NEW STEEL GRATING SO THAT THERE ARE NO OPENINGS IN WHICH TO FALL.
 - CHUTES ARE TO BE PROVIDED TO AVOID SPILLAGE OF MATERIAL WHEN THE STREAM OF RECYCLABLES TRANSFERS FROM ONE PIECE OF EQUIPMENT TO ANOTHER.

NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.

NEW WORK PLAN
SCALE: 1" = 5'

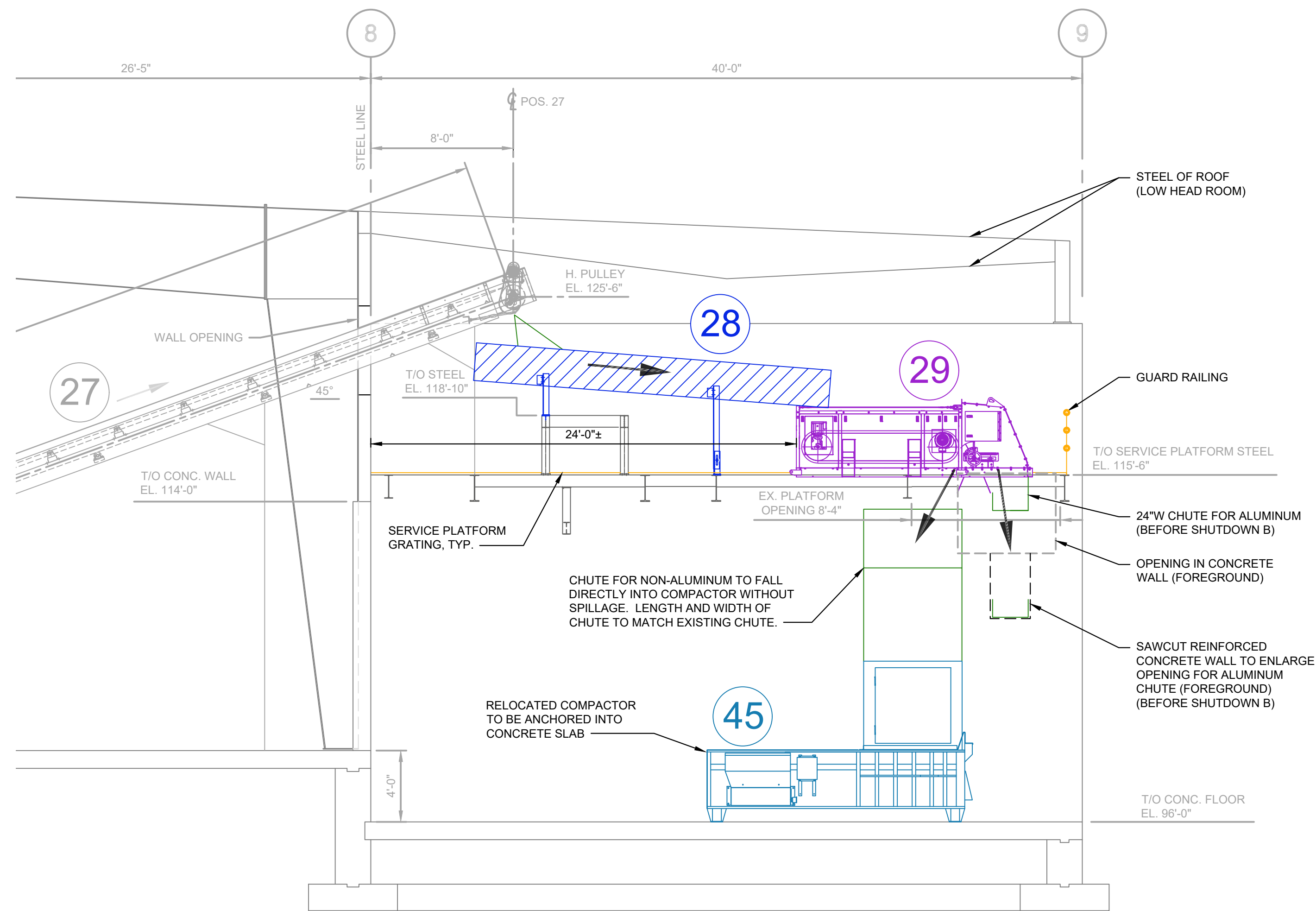


EQUIPMENT LIST			
POS.	DESCRIPTION	ACTION	SEQUENCING
24	24"W x 95'-6"L - TROUGH IDLER CONVEYOR	N/A (EXISTING)	
27	30"W x 70'-0"L - TROUGH IDLER CONVEYOR	N/A (EXISTING)	
28	36"W x 20'-0"L - FLAT IDLER CONVEYOR	PROVIDE NEW	SHUTDOWN B
29	36"W - EDDY CURRENT SEPARATOR	PROVIDE NEW	BEFORE SHUTDOWN B
40	36"W x 95'-0"L - FLAT IDLER CONVEYOR	N/A (EXISTING)	
41	FINES SCREEN	MODIFY	SHUTDOWN B
42	30"W x 20'-0"L - TROUGH IDLER CONVEYOR	N/A (EXISTING)	
45	COMPACTOR - WASTEQUIP MODEL 445HD-F	RELOCATE	SHUTDOWN B
	ADDITIONAL STRUCTURAL STEEL & GRATING	PROVIDE NEW	BEFORE SHUTDOWN B
	GUARD RAILINGS	PROVIDE NEW	AFTER SHUTDOWN B

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	Drawn				Coordination		Dwg check	
T +1 (800) 832 3272 F +1 (973) 376 1072 www.mottmacamericas.com			Project Number	507111580-001	B/O	9	Total	10
			Scale at ANSI D	1" = 5'	Status	APR	Rev	0
			Drawing Number	P-201			Security	STD
Rev	Date	Drawn	Description	Ch'k'd	App'd			

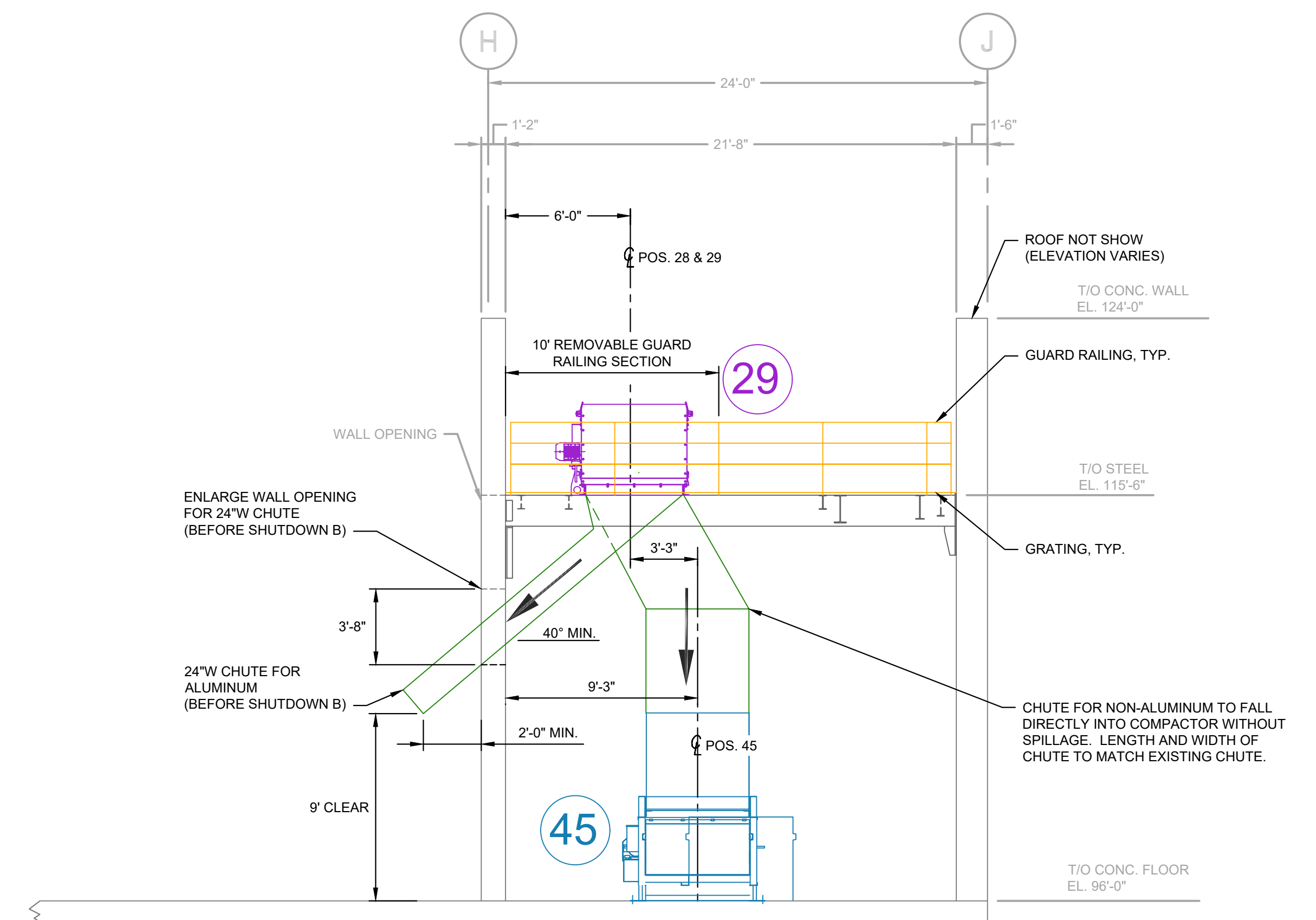
NOTE: CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.



**EDDY CURRENT LINE
NEW WORK - SECTION VIEW**

SCALE: 1" = 5'

S1
P-202



**ALUMINUM CHUTE
NEW WORK - SECTION VIEW**

SCALE: 1" = 5'

S2
P-202

NOTES:

- RELOCATED COMPACTOR TO BE ANCHORED INTO CONCRETE SLAB. NON-SHRINK GROUT SHALL BE USED TO LEVEL EXISTING CONCRETE SLAB.



EQUIPMENT LIST			
POS.	DESCRIPTION	ACTION	SEQUENCING
27	30"W x 70'-0"L - TROUGH IDLER CONVEYOR	N/A (EXISTING)	
28	36"W x 20'-0"L - FLAT IDLER CONVEYOR	PROVIDE NEW	SHUTDOWN B
29	36"W - EDDY CURRENT SEPARATOR	PROVIDE NEW	BEFORE SHUTDOWN B
45	COMPACTOR - WASTEQUIP MODEL 445HD-F	RELOCATE	SHUTDOWN B
	ADDITIONAL STRUCTURAL STEEL & GRATING	PROVIDE NEW	BEFORE SHUTDOWN B
	GUARD RAILINGS	PROVIDE NEW	AFTER SHUTDOWN B

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			Drawn		Coordination		
			Dwg check		Approved	JKJ	
			Scale at ANSI D 1" = 5'	Status APR	Rev 0	Security STD	
<p>Project Number 507111580-001</p>		<p>BIO 10</p>	<p>Total 10</p>	<p>Drawing Number P-202</p>			