



DUNLOP TIRE CORPORATION
TONAWANDA, NEW YORK

SPECIFICATIONS FOR CONSTRUCTION

**CLOSURE PLAN
FOR
INACTIVE WASTE SITE NO's 915018 A, B, & C**

VOLUME 1 OF 2

MARCH 1993

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DUNLOP TIRE CORPORATION
TONAWANDA, NEW YORK

SPECIFICATIONS FOR LANDFILL REMEDIATION AND CAPPING

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Dan Pyanowski

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ATTACHMENT D: FORM F-1989, WORK AND SERVICES

ATTACHMENT E: FORM T053, TERMS AND CONDITIONS

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APPENDICES UNDER SEPARATE COVER

APPENDIXDESCRIPTION

I	Soil Boring Logs
II	Monitoring Well Construction Details
III	Test Trench/Test Pit Logs
IV	Clay Borrow Compaction and Test Pad Data
V	Outline of Minimum Requirements for the Site Health and Safety Plan

1.0 INTRODUCTION

1.1 Description of Specification

These Specifications are presented by Dunlop Tire Corporation to cover the general requirements for the complete installation of landfill site remediation by capping, at our production facility, located in Tonawanda, New York.

It is intended that the selected Contractor shall be responsible for the complete materials supply, delivery, unloading, site preparation and installation as directed in these Specifications. These Specifications and sketches, and/or drawings referenced herein, describe the minimum requirements for the completion of the intended work.

The selected Contractor will assume full responsibility for the total project work, as described in these Specifications.

1.2 Dunlop Contacts

- A. For questions regarding clarification of these specifications, please contact:

Daniel J. Pyanowski
Central Environmental Engineer
Dunlop Tire Corporation
P.O. Box 1109
Buffalo, New York 14240
716-879-8274 Fax: 716-879-8563

- B. For questions regarding "Terms and Conditions" of this quotation, please contact:

Mr. Arthur J. Williams
Purchasing Manager
Dunlop Tire Corporation
P.O. Box 1109
Buffalo, New York 14240
716-879-8403
Fax: 716-879-8222

2.0 DRAWINGS AND STANDARDS

2.1 Applicable Standards

Materials and workmanship involved in this contract shall be in accordance with the following latest revisions of codes and standards: OSHA, AISC, AWS, ANSI, NEMA, JIC, IEEE and NETA, NYSEDC.

2.2 Drawing List

The attached drawings and any information or instructions stated on the drawings constitute essential and integral parts of the purchase order and the resulting contract. The Contractor is responsible to verify dimensional correctness on all drawings before construction begins and must bring any discrepancies to the attention of the Owner.

<u>DRAWING</u> <u>NO.</u>	<u>COMPANY</u>	<u>DESCRIPTION</u>
--	URS Consultants, Inc.	Title Sheet
1	URS Consultants, Inc.	Index, Legend, Abbreviations and General Notes
2	URS Consultants, Inc.	Existing Site Conditions
3	URS Consultants, Inc.	Final Grading Plan Sheet 1 of 2
4	URS Consultants, Inc.	Final grading Plan Sheet 2 of 2
5	URS Consultants, Inc.	Operations Plan
6	URS Consultants, Inc.	Landscaping Plan
7	URS Consultants, Inc.	Miscellaneous Details
8	URS Consultants, Inc.	Miscellaneous Details
9	URS Consultants, Inc.	Miscellaneous Details
10	URS Consultants, Inc.	Miscellaneous Civil Details
11	URS Consultants, Inc.	Creek Cross Sections

3.0 GENERAL CONDITIONS

3.1 Definition of Terms

- A. The terms "Owner", "Buyer", or "Owner's Engineer", as used herein, shall mean Dunlop Tire Corporation, or its authorized representative.
- B. The term, "Contractor" or "Vendor", as used herein, shall be the selected Contractor, and any Sub-Contractors commissioned by the Contractor.
- C. The term "Superintendent", as used herein, shall mean the superintendent, foreman, or supervisor, who is charged by the Contractor, with the responsibility of representing the Contractor on the job, for the purpose of supervising all project work.
- D. "Specification" means the Technical Specification of the Owner, all specifications of the Contractor (or any instrument in the nature of specifications) attached to or made a part of the Proposal, and all supplementary specifications hereinafter referred to; together with all maps, plans, and drawings to any of the foregoing annexed or in any of them referred to, as well as all maps, plans, and drawings not so annexed which may hereinafter from time to time be needed during the course of the work or in connection with its satisfactory completion.
- E. "Work" means the construction, installation, equipment, material, and/or work, labor, and services which constitute the completed production, installation or provided for, described, or indicated in the Contract.
- F. "Proposal" means the completed "Form of Proposal" with specifications submitted by the Contractor, and all maps, plans, or drawings thereto annexed or therein to.

3.2

Intent of Specifications

- A. It is the intent of these Specifications to establish the overall functional objectives and constraints required to accommodate the Owner's practices and standards.
- B. It is not the intent of these Specifications to restrict the Contractor, such that he cannot, from his experience, and in his estimation, provide a service, which will produce the intended results. The Contractor is encouraged to offer alternative methods, when such restrictions are perceived. In each case, alternates are to be clearly identified as such, and will be subject to the Owner's prior approval.
- C. Quality, reliability, and schedule attainment, are of prime importance in design, materials supply, and construction.
- D. These Specifications and attached drawings are presented in good faith as being an accurate description of the work to be done. In any case where these Specifications are deficient, the Contractor shall bring these deficiencies to the attention of the Owner's Engineer for resolution. In no case will the Contractor be relieved of the responsibility for the successful and timely completion of this project.
- E. This project contains milestones, which are of critical importance to Dunlop, and the Contractor will be expected to take all reasonable steps to assure that the project remains on schedule at all times. If, in the judgement of the Owner's Engineer, the Contractor is not exercising all reasonable means to keep the project on schedule, or if the Contractor fails to show good faith in executing the conditions of these Specifications, Dunlop reserves the right to terminate this Contract at no further charge or penalty.
- F. In any event that Dunlop elects to cancel any portion of the work covered by these Specifications, our liability shall be limited to full payment for all work completed, plus any additional costs the Contractor has incurred for committed labor or materials.

3.2 Intent of Specifications (cont.)

- G. Contractor can and should approach Owner with any and all cost and time saving ideas.

3.3 Terms of Obligation

- A. No verbal agreement, or conversation with any officer, agent, or employee of the Owner, or Contractor, shall affect, or modify the terms or obligations of these Specifications, unless confirmed in writing, and acknowledged, in writing, by the other party .
- B. In no case will payment be made for any additional labor or materials, without prior written authorization from the Owner's Engineer.

3.4 Safety

- A. If services required herein, affect the Owner's place of employment, fixtures, or goods, therein, the Contractor warrants that the Owner's place of employment, fixtures, or goods, insofar as such services affecting it, or them, will be in compliance with the Occupational Safety and Health Act of 1970, and within then applicable standards, rules, regulations, and orders therein.
- B. Contractor shall pursue his work in a safe manner at all times, taking all necessary precautions to avoid damages or injury to the public, his employees, the Project, and the site. He shall comply with all laws, ordinances, codes, rules, and regulations relative to safety and the prevention of accidents, with the manual entitled "Accident Prevention in Construction" of the Associated General Contractors of America (latest revision), unless prevention of accidents is regulated by a more stringent local code or ordinance, and with any safety requirements of the Owner of which he is advised, including the Owner's General Safety Regulations for Contractors. The Contractor shall comply with the Owner's safety requirements and regulations pertaining to the Project or to any operating plant or other facility of the Owner's, at the Site, to the extent applicable. He shall also prepare and implement a Site Health and Safety Plan in accordance with 4.0 - GENERAL REQUIREMENTS.

3.4 **Safety (cont.)**

- C. A Safety Representative shall be appointed by each Contractor to monitor the work activity for compliance with the Project Safety Program and all O.S.H.A., State, and Dunlop's Safety Procedures. **All Contractors must have an approved First Aid Kit on the job site.**
- D. Particular attention is called to the requirements of wearing hard hats and other necessary personal protection equipment by all personnel when at the Site; maintaining good housekeeping conditions in all work areas; properly constructing all scaffold, scaffold working platforms and access ladders; barricading and shoring all excavations and/or floor openings; protecting persons and property from injury or damage resulting from burning, welding, or any other Contractor's operations, including the providing of adequate fire fighting equipment.

3.5 **Work Included**

- A. The work to be done by the Contractor shall consist of furnishing all labor, materials, equipment, tools, supplies, transportation, and superintendence, necessary for, and incidental to, the completion of work required as shown, indicated, or noted on the drawings and in these specifications.
- B. The Contractor shall verify all dimensions and sizes prior to the commencement of the Scope of Work, and should use all drawings provided, only to assist in defining the Scope of Work. Errors resulting from the Contractor's failure to check/verify and discovered in the process of doing the work, shall be corrected at Contractor's expense.
- C. As punch list work is identified by the Owner's Engineer, the Contractor shall provide segregated crew(s) from the construction efforts, at the Contractor's expense, to provide immediate disposition of any and all remedial type work.

3.5 **Work Included (cont.)**

- D. The Contractor shall make copies as required, available to the Owner's Engineer, and furnish these copies as requested of all information concerning work performed by the Contractor, or his agents. This action will be required in a timely manner, as the work progresses and at the completion of the contract.
- E. The Contractor shall furnish and install all materials required for temporary protection of existing facilities and equipment as directed by the Owner's Engineer.

3.6 **Proposals**

- A. All bidders are hereby notified and requested to thoroughly examine all specifications and drawings. If there is any doubt or obscurity as to the meaning of any part of these specifications or drawings, bidders shall request an explanation from the Owner, before submitting their proposal.
- B. The Owner reserves the right to accept or reject any or all proposals.

3.7 **Examination of Premises**

- A. Contractor will be held to have examined the site so as to compare actual conditions, with conditions shown on the drawings and described in these Specifications, and to have satisfied himself, generally, as to the condition of the premises, before the delivery of his proposal. No allowance will be made subsequently, in behalf of the Contractor, by reason of any omission, on his part, to include the cost of all items of work, either labor or materials, whether they are, or are not, especially or particularly shown or noted, but which are implied, or required, to attain the completed conditions contemplated by the Owner.

3.8 **Drawings**

- A. All work shall be constructed in accordance with the drawings and specifications enumerated in, and which became a part of the contract or purchase order covering this job. Any information shown on the plans, but not specified in these specifications, shall become part of these specifications. Any information written in these specifications, but not shown on the plans, likewise, shall become part of the plans or drawings.
- B. In any instance, where the Contractor shall deviate from the drawings, without prior authorization from the Owner, the Contractor shall, at the Owner's option, make appropriate corrections or changes, in accordance with the Dunlop Drawing Standards, at no expense to the Owner.
- C. All conflicts between the Scope of Work, Contract Documents, Drawings, or Specifications, will be resolved and disposition given, by the Owner's Engineer.

3.9 **Materials and Workmanship**

- A. All materials will be new, unless salvaged material is specified by the Owner. The Contractor will supply engineering data and/or cut sheet diagrams on all purchased materials.

3.9 **Materials and Workmanship (cont.)**

- B. All workmanship shall be first-class in all respects, and in accordance with the best modern construction practices.
- C. Any solvents used for any purpose, must be approved by the Owner's Engineer, before being brought on to the premises.

3.10 **Personnel & Supervision**

- A. The Contractor will utilize only qualified trades personnel on the job at all times.
- B. It is the Contractor's responsibility to maintain the appropriate number of personnel on the job site, to keep the job on schedule.
- C. The Contractor shall maintain a dedicated and qualified Supervisor on the project job site at all times work is scheduled. This Supervisor must be technically oriented, in that he will verify that proper procedures are being followed by trades personnel, and actively assist in the start up and commissioning of equipment.
 - 1. There will be no exceptions to this requirement. Failure to have a Supervisor on site at all times, unless otherwise agreed to by the Owner's Engineer, will be deemed an act of bad faith by the Contractor, and could result in the cancellation of the Contract.
 - 2. The assigned supervisor for this Contract shall work solely on this Contract and no others on or off the project site, and such person(s) shall be satisfactory to the Owner's Engineer and if deemed unsatisfactory, be replaced promptly. The supervisor shall represent the Contractor, and all instructions given to or requested from him shall be as binding as if given to or requested from the Contractor. This Supervisor shall not be replaced during the progress of the work without the Owner's prior consent or request.

3.10 **Personnel & Supervision (cont.)**

- D. The Contractor's Supervisor will be responsible for the conduct of all Sub-Contract trades people on this project with respect to the adherence to Dunlop's Safety Guidelines and Plant Rules.
- E. The Contractor's Supervisor will work directly with the Owner's Engineer to execute the implementation of this project.
- F. The Contractor's Supervisor shall have the authority to make decisions relative to cost; such as, estimating, pricing extra work, accepting and signing Modifications, Change Orders, and Extra Work Orders, as requested by the Owner's Engineer. All requests relative to pricing shall be submitted to the Owner's Engineer within 24 hours of his request.

3.11 **Coordination of Work**

- A. The Contractor's work shall proceed in a safe and well planned manner, so as not to interrupt normal plant or office operations. These areas shall be protected from exterior elements, dirt and dust, by use of drop curtains and/or temporary wooden partition walls, as deemed necessary by the Owner's Engineer.

3.12 **Permits**

The Contractor must obtain and pay for any and all permits, licenses, certificates, inspections, and any other legal fees required in the scope of his work. Contractor shall give inspecting authorities proper notice for all required inspections.

3.13 **Sub Contractors**

The Contractor must submit with his proposal, the names of all sub-contractors for approval by the Owner.

3.14 **Laying Out Work**

The Contractor shall immediately, upon entering the job site, for the purpose of beginning work, locate all general and specific reference points and take such action as is necessary to prevent their destruction, lay out the work,

3.14 **Laying Out Work (cont.)**

measurements of buildings, grading, elevations, utilities, and any other work under the Contract. The Contractor must exercise proper precaution to verify all dimensions shown on the drawings, and will be held responsible for any error resulting from his failure to exercise such precaution.

3.15 **Insurance and Indemnification**

- A. The Contractor shall insure each and every one of his employees on the project with respect to Workman's Compensation and Public Liability Insurance. The Contractor shall indemnify and protect Dunlop Tire Corporation from any loss or recoveries from damage of life, limb, or property occasioned by his negligence, or those of his agents, employees, or workmen.
- B. The Contractor agrees to obtain, and have in force during the term of this Contract, the below described insurance coverage relating to the work, with the Owner as named insured. Such insurance shall be carried with insurance companies satisfactory to the Owner, and the Contractor will furnish the Owner with certificates evidencing such insurance coverage prior to commencing any work under this Contract and shall contain the following language: Dunlop Tire Corporation is to be named an additional Insured on a direct, primary basis, as respects work performed for it by or for the named insured. Such certificates shall provide at least ten (10) days written notice of any policy cancellation to be given to the Owner. Three (3) copies of each certificate, evidencing such coverage, are to be mailed to the Owner's Purchasing Agent. The certificates must show the Contract number, so that the Owner can identify the same by project. The insurance coverage shall so obtain and keep in force as follows:
 - 1. Workman's Compensation and/or Employers Liability Insurance as required under the laws applicable to the work, which shall cover all of Contractor's employees, agents, or workmen engaged in the work.
 - 2. Automobile Public Liability Insurance covering all automotive equipment used in connection with the work, with not less than \$500,000/\$1,000,000 bodily injury and \$1,500,000 property damage coverage.

3.15 Insurance and Indemnification (cont.)

3. Comprehensive Public Liability Insurance (including contractual liability insurance covering the indemnification appearing in this section) with not less than \$500,000/\$1,000,000 bodily injury coverage and property damage insurance with limits of \$500,000, per occurrence.
4. Risk insurance to be provided by Contractor:
 - a. For construction projects an, "All Risk Builders Risk Policy" for 100% value of contract.
 - b. For equipment installation projects, an "All Risk Installation Policy" for 100% value of contract.
- C. The Contractor shall specifically require his Sub-contractors to obtain like coverage to that specified above, and prior to commencing work, submit certificates evidencing such insurance to the Owner, as provided above.
- D. The Contractor agrees to indemnify the Owner against, and hold the Owner harmless, from any and all claims, liabilities, obligations, governmental penalties, fines, and causes of action of whatsoever kind or nature for injury or death of any person (including the Owner's employees) and for damage to, or destruction of, property (including the Owner's property) resulting from any and all acts or omissions of the Contractor or of any Sub-Contractor's employees, or the concurrent negligence of the Owner in connection with the performance of the work covered by this Contract. This indemnification is limited to the extent of the insurance coverage, and does not include consequential damage. A certificate of proof of coverage, with the Owner named as insured, on a direct, primary basis, must be supplied prior to commencing work.

3.16 **Repairs**

- A. The Contractor will repair, to the satisfaction of the Owner, without any cost to the Owner, all damages occurring during construction, to existing buildings, furnishings, fencing, glass, road surfaces, production material (in process or in storage), plant production equipment, or any of the Owner's property.
- B. If damage is done to adjoining property, and the Contractor shall fail to immediately repair the same, the Owner will have the power to cause such repairs to be made, and the cost thereof shall be deducted from the amount due or to become due to the Contractor under his Contract and to include a 25% surcharge for overhead expenses incurred by the Owner.

3.17 **Work Period**

- A. The Contractor shall furnish sufficient forces, and shall work such hours, including night shifts, weekends, holidays, and overtime, as may be necessary to ensure the prosecution of the work, in accordance with the Owner's approved progress schedule.

If in the opinion of the Owner, the Contractor falls behind the progress schedule, the Contractor will be required to take such steps as may be necessary, to improve his progress. These steps may include any or all of the following: increasing the number of shifts, increasing the manpower, increasing or implementing overtime operations, and/or days of work, including Saturdays, Sundays, and Holidays.

The Owner shall not be charged with the cost of any additional work required to bring the project back on schedule.

- B. If the Contractor does not maintain the approved progress schedule, and does not adhere to the Owner's request for additional effort, the Owner may, at his option, cancel the Contract, with liability limited only to payment for work completed and materials furnished on site.

3.18 **Cleaning Up**

A. General

1. The Contractor shall, at all times, keep the premises free from accumulations of waste materials, debris, or rubbish caused by his employees or work, and at the completion of the work, he shall remove all accumulated debris from the Owner's premises and dispose of by legal means.
At the completion of the work, the Contractor shall promptly remove all of his tools, scaffolding, and surplus materials, and leave his work broom clean.
2. On a daily basis, during the course of the work, the Contractor will cleanup the job site, to the Owner's satisfaction.
3. In the event the Contractor fails to comply with the requirements of the above paragraph "2", the Owner's Engineer, at his option, may employ a custodial service to have the work area cleaned to his satisfaction. The cost of this service will be charged to the Contractor.
4. Because the work is to be performed at or adjacent to an operating facility, the Contractor, his employees, or agents, must guard carefully against contaminating any of the products being manufactured at the facility. They must assure that no foreign materials of any kind are introduced into any such products.

B. Progress Cleaning

1. Contractor shall broom sweep entire area daily during the execution of the project, insuring all debris, trash, dirt, dust, or any other foreign materials are removed.
2. Contractor shall broom sweep any other areas utilized or affected by his work during this project, including loading and unloading areas, storage areas, crew areas, and any other areas, as directed by the Owner's Engineer.

3.18 **Cleaning Up (cont.)**

3. During any uncrating or unpacking, the Contractor shall remove ALL wood, crates, boxes, paper, packing materials, and any other trash or debris from the site DAILY. Accumulation at the job site will not be tolerated.

As directed by the Owner's Engineer, the Contractor shall sort all refuse material. Such material deemed recycleable will be taken by the Contractor to the Owner's recycling container on the plant property.

4. All installations shall be thoroughly cleaned prior to the Owner's final acceptance. This includes all marks, oil, grease, carbon black dust, weld marks, chalk marks, crayon, etc.
5. The Contractor will retain all stored items in an orderly arrangement, allowing maximum access, without impeding drainage or traffic, and providing the required protection of materials.
6. The Contractor will not allow the accumulation of scrap, debris, waste material, and any other items not required for the project.
7. Daily, and more often if necessary, completely remove all scrap, debris, and waste materials from the job site.
8. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire and ecological protection.
9. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site; re-stack, tidy, or otherwise service all arrangements to meet the requirements of the subparagraph 3.21-B.6 above.

3.18 **Cleaning Up (cont.)**

C. **Final Cleaning**

1. Definition: Except as otherwise specifically provided, "clean" (for the purpose of this article) shall be interpreted as meaning the level of cleanliness generally provided by skilled professional cleaning personnel using commercial quality building maintenance equipment (power cleaners) and materials.
2. General: Prior to completion of the work, remove from the job site all tools, surplus material, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.21-C.1 above.
3. Timing: Schedule final cleaning as approved by the Owner's Engineer to enable the Owner to accept a completely clean project.

D. **Compatibility of Cleaning Materials**

1. Contractor shall insure the compatibility of all cleaning materials with materials being cleaned prior to their use.

3.19 Regulations and Compliance

- A. The Contractor's work shall be subject to all applicable provisions, and be performed in strict compliance with all Federal, State, and Local codes, laws, regulations, standards, and ordinances including those of the Occupational Safety and Health Act (O.S.H.A.), in addition to all Owner's rules and orders.
- B. The Contractor will provide all temporary construction barriers that contain all dust, dirt, and debris, as needed to eliminate both blowing dust and tracked construction materials to non-construction and public areas, as well as temporary construction barriers to meet O.S.H.A. safety guidelines on personnel safety.

The Contractor shall provide their own sanitary facilities as needed which meet the requirements of the Owner and local Health Authorities.

3.20 Plant Rules

The following plant rules are to be observed & adhered to for all Contractors performing work at the Buffalo Plant, located at Sheridan Drive and River Road, Tonawanda, New York.

- A. Workmen to enter and leave the plant only through the designated gates. All workmen are to park in the designated lot only.

Vehicles for delivering equipment, as well as Contractors' Superintendents, will be allowed to proceed to and from the job site, upon approval of Owner's Engineer.
- B. Contractors' and subcontractors' workmen, are not to enter any plant buildings unless they have been assigned specific work therein. No workmen will be permitted to wander in the plant roadway. Workmen are only authorized to travel to and from the work site and must otherwise remain therein.

At all times, workmen must display their Contractors' badge, from Dunlop's security, whether escorted or otherwise.

3.20

Plant Rules (cont.)

- C. Smoking is prohibited, except in areas specifically designated as such. Owner's Engineer shall be consulted for this designation.
- D. Workmen will not be allowed to use the Plant Cafeteria, vending machines, or employee break areas.
- E. A vending truck will be allowed on the premises, outside, if required. The Contractor is to arrange this service and coordinate it through Dunlop Plant Security, main gate.
- F. All Contractors and Subcontractors may be required to open their lunch boxes, packages, or vehicles, for inspection upon entering or leaving the plant.
- G. Creating, or contributing to unsanitary conditions is prohibited.
- H. Willful, deliberate, or continued violation of, or disregard of safety rules, or common safety practices is prohibited. Reference "Contractor's Safety Guidelines".
- I. Contractors are not permitted to use plant restrooms and must make provisions for same. If portable toilet facilities are required, their exact location is subject to approval by the Owner's Engineer. The Contractor will be responsible for their maintenance.
- J. Limited portable washroom facilities may be provided by the Owner, if necessary, for the use by all Contractors. Any additional facilities requested by the Contractor will be subject to the approval of the Owner's Engineer.
- K. The Contractor will be responsible for providing potable water for his workmen.

3.20 Plant Rules (cont.)

- L. The Contractor shall secure daily welding and burning permits from the Owner's Engineer, before any welding, burning, or grinding shall take place. The Contractor shall furnish his workmen with suitable fire extinguishers to have on the job site.

Contractors shall supply and enforce the use of approved flame resistant flash curtains during any burning, welding, or grinding operations.

- M. No solid or liquid material shall be dumped, poured, or allowed to drain into any plant or yard sewers, man-holes, or drains.
- N. Contractors are not permitted to operate trucks or cars within the plant without specific permission from the Owner's Engineer.
- O. The use of plant compressed air is not permitted.
- P. Contractors must take all reasonable precautions to ensure that their work does not interfere with plant production.
- Q. The Contractor must supply all of the tools and equipment necessary to perform his work. The use of DTC tools and/or equipment is prohibited. Use of the plant store room by Contractors is prohibited. Contractor lay down areas will be given to the successful bidder at the time of contract award.
- R. Hard hats will be worn by all Contractors and Subcontractors at all times, in areas designated as "hard hat area". Owner's Engineer shall be consulted as to applicability.

3.20 **Plant Rules (cont.)**

- S. Contractor must comply with O.S.H.A. standard 1910, 1200 Hazard Communication Section. All Contractors must contact DTC Safety Engineer for instruction and discussion of requirements for use of hazardous materials before initial entrance to the job site.

3.21 **Progress Schedule**

- A. At least ten (10) days prior to submitting the first Application for Payment, the Contractor shall submit a schedule of values, as required below.
- B. The schedule of values shall be in the form of a progress chart, of suitable scale, to indicate the approximate percentage of work scheduled for completion at any time.
- C. The Owner will make monthly progress payments, based upon Contractor's applications for payment. Progress payments shall not exceed 90% of the work completed, or materials and equipment installed in place.
- D. Balance of final payment will be made thirty (30) days after 100% of job completion, against the Contractor's application for payment, and upon the Owner's inspection and satisfaction of compliance.

3.22 **Waiver of Lien Rights**

The Contractor agrees to keep the Owner's premises and work free and clear of all mechanic's liens, and to furnish to the Owner proper affidavits and/or waivers certifying thereto.

3.23 **Proposal Bond**

- A. A certified check or bank draft, in a sum equal to five percent (5%) of the total amount of the bid, including alternates, payable to Dunlop Tire Corporation, shall be furnished with each bid, or a guarantee proposal bond, furnished by a solvent surety company authorized to do business in the State of New York, in an amount of five percent (5%) of the bid, may be furnished, in lieu of the certified check. Such proposal bond, or certified check shall be conditioned that if the bid be accepted, a contract will be entered into and the performance of said contract properly secured. As soon as contracts are awarded, all certified checks, or proposal bonds, accompanying unsuccessful bids, will be returned.

3.24 **Bonds**

- A. The successful Contractor shall furnish an indemnity, or Performance Bond to the Owner, in the full amount (100 percent) of the Contract, as a guarantee of good faith on behalf of the Contractor, that the terms of these Specifications shall be complied with, in every particular.
- B. The Contractor's bond will not be released until after the one (1) year warranty period has expired and all provisions of the Contract have been fulfilled to the satisfaction of the Owner's Engineer.
- C. The successful contractor shall also furnish a Labor and Materials Payment Bond, in the full amount (100%) of the Contract.
- D. The successful Contractor shall provide Dunlop Tire Corporation with above bonds no later than 10 days after award of contract.

3.25 **Charges Payable to Owner**

If the Owner's Engineer incurs any cost for repairs to the work or other work, removing rejected work, moving or off loading Contractor's materials because of Contractor's fault or negligence, removing Contractor's rubbish or clean up occasioned by Contractor, Contractor shall reimburse owner in full, for all costs incurred plus 25 per cent overhead and administrative cost.

3.26 **Reporting Requirements**

Contractor shall promptly submit the schedules and reports set forth below and in addition, those schedules and reports as requested by the Owner's Engineer pursuant to the General Terms and Conditions.

1. The Contractor shall provide a Bar Chart Schedule. The schedule shall show manpower required by time interval and shall reflect percent completion by time interval.
2. A biweekly report showing scheduled progress versus actual progress giving details of how work will be completed in relation to the schedule
3. Daily labor alert report if the Contractor's available manpower is not sufficient to meet the schedule for performance of the work.
4. Procurement schedule for the procurement and receipt of materials, equipment, and Subcontracted services by Contractor and a monthly report of all such materials, equipment and services.

3.27 **Liquidated Damages**

In the event that the completion of the Work should be delayed by more than one (1) week beyond the said completion target date due to the reasons attributable to the Contractor, the Contractor agrees to pay the Owner, as liquidated damages, 1/4 percent of the Contract value per full business day, counting from scheduled completion date; however, in no event shall such liquidated damages exceed 10 percent of the full purchase order amount.

3.28 **Completion and Acceptance**

The Owner shall have the right to enter into, and occupy, or use a portion of the work under this contract before completion and acceptance of the work as a whole. Such partial occupancy or use before completion shall not be construed as acceptance of the work.

3.29 **Confidential Information**

- A. All drawings, specifications, technical data and other information furnished to the Contractor by the Owner in connection with this contract are, and shall remain, the property of the Owner, and may **not** be copied or otherwise reproduced or used in any way except in connection with work performed under this contract, or disclosed to third parties or used in any manner detrimental to the interests of the Owner. The Contractor **must** have on file with Dunlop a signed confidentiality agreement form. Forms are available from the Owner's Engineer.
- B. The Contractor agrees to insert in any subcontract a restriction on the use of such information, data, drawings, and specifications familiar to that which was set forth in the preceding paragraph. The Contractor shall require its subcontractors to comply with the provisions of this specification.

3.30 **Assignment**

This Contract may not be assigned or transferred by the Contractor in whole or in part without the Owner's prior written approval.

3.31 **Additional Work**

It is reasonable to assume that in the course of this project, the Contractor may be requested to perform additional work not covered by these Specifications. **All additional work must have a written Extra Work Order (EWO) assigned, prior to work being started.**

- 1. In such instances, where possible, the Contractor will be requested to give a fixed cost estimate, prior to starting this work.
- 2. In some instances, at the discretion of the Owner's Engineer, the Contractor may be requested to perform additional work on a time-and-materials basis.

3.31 Additional Work (cont.)

- a. The Contractor will provide a list of the standard hourly and premium rates (daily overtime, Saturday, Sunday, & Holidays) for each trade to be used on this project. This list is to be presented at the time of submission of the Contractor's quotation.
 - b. In such instances where additional work is performed by the Contractor on a time-and-materials basis, time sheets for that labor must be approved by the Owner's Engineer on a daily basis.
 - c. When invoicing for additional work performed on a time-and-materials basis, the Contractor shall include with his invoice, copies of all associated daily time sheets and material invoices.
3. All additional work must have prior written authorization of the Owner's Engineer. In no case will payment be made for additional work without prior written authorization by the Owner's Engineer.
 4. If for any reason the work schedule is to be accelerated or overtime is needed due to Dunlop delays, it is to be understood that the Owner will pay only for the premium portion of any overtime that is needed.

3.32 Work Outside of Stated Work Schedule

- A. Upon submission of his quotation, unless otherwise stated, the Contractor agrees that all work included in these Specifications, will be completed within the defined time limits, work days, and work hours, as stated in the Project Implementation Schedule.
- B. In the event that it is necessary for the Contractor to work additional hours, or furnish additional trades people to complete Project Milestones on schedule, and this additional work is not due to any delay caused by Dunlop, then the Contractor shall work these additional hours without surcharge to Dunlop.

3.32 **Work Outside of Stated Work Schedule (cont.)**

1. If such additional work, as described above, is due to a delay caused by Dunlop, then this additional work will be performed by the Contractor, at the discretion of the Owner's Engineer, under the conditions of "Additional Work", as described above.
- C. In the event that the Contractor is requested to perform work outside the defined work schedule, for the convenience of Dunlop, then this work will be performed by the Contractor under the conditions of "Additional Work", as described above.
- D. During the course of the project, the work schedule may be altered to meet special circumstances, with the mutual agreement of both the Contractor and the Owner's Engineer. In such instances, no financial penalty will be incurred by the Contractor or Dunlop.

3.33 **Disputed Work**

- A. In any event, where there is a dispute in the scope of work to be performed by the Contractor, or whether he is entitled to any additional payment, he shall notify the Owner's Engineer in writing immediately and continue to proceed diligently with the work as directed by the Owner's Engineer. The resolution of the dispute shall be determined by the Owner's Engineer and the Contractor with reasonable promptness, but in no event shall any delay in such determination excuse the prompt performance of the work as requested by the Owner's Engineer.
- B. In addition, the Contractor shall submit to the Owner's Engineer, on a daily basis, time and material sheets for costs the Contractor feels he has incurred for disputed work performed, pending resolution and disposition between the Contractor and the Owner's Engineer.

ITEM 4.1

SUMMARY OF WORK

1.0 SCOPE:

1.0.1 This section provides a brief description of the major work components covered under this Contract. A more complete description of the work is provided in individual sections of these Specifications and on the Drawings. The Contractor shall furnish all equipment, labor, and materials, health and safety, quality control services, and execution of all work necessary to complete the specified work for final acceptance. The Contractor shall make his own determination of the potential hazards at the site from the available data.

1.0.2 The following documents are available for the Contractor's review, both at Dunlop's Tonawanda office and at URS Consultant's Inc., 282 Delaware Avenue, Buffalo, New York 14202, (716) 856-5636.

- Conceptual IRM Closure Plan, November 1992, URS
- Report of Field Investigation, April 1992, URS
- Completion of Hydrogeologic Investigation, February 1986, Conestoga Rovers
- Investigation of Inactive Waste Disposal Sites, October 3, 1983, Conestoga Rovers.

1.1 General Requirements:

As minimum requirements, Contractor shall observe and follow pertinent procedures identified in applicable Federal, State, and local rules and regulations in conducting the work. Other applicable regulations not explicitly included in these Specifications shall be adhered to in conducting the work. The Contractor shall be responsible for contacting and informing the proper Federal, State and local agencies of the nature and timing of work on site, hauling activities and for securing all necessary and applicable permits required to construct the work covered by this Contract.

1.1.1 Existing Features: The Contractor shall protect and maintain survey stations grid stakes, fences, and roads against damage from equipment and vehicular traffic. Damages shall be repaired by the Contractor at no additional expense to the Owner.

1.1.2 Utilities: The Contractor shall protect utility lines, trees and appurtenances that are to remain. Damages shall be repaired by the Contractor at no additional expense to the Owner.

1.1.3 Materials and Equipment: Materials and equipment shall be adequate in capacity for the required usage, must not create unsafe conditions, and shall meet requirements of applicable codes and standards and the approval of the Engineer.

1.2 Description of Work:

The following work is included in this Contract:

1.2.1 Temporary Site Facilities: Provide and maintain temporary site facilities during the performance of this Contract which include the Engineer's office, security, construction roads, personnel and equipment decontamination facilities, staging facilities, and removal of the same at the completion of the work.

1.2.2 Temporary Site Utilities: Provide, operate, and maintain all temporary site utilities including telephone, electricity, water and sanitary services.

1.2.3 Site Operations Plans: Prepare and implement Contractor Quality Assurance and Quality Control Plan; Site Health and Safety Plan; Erosion and Sediment Control Plan; Dust Control and Road Maintenance Plan; Security Plan; and all other plans required under this Contract and under applicable Federal, State and local laws.

1.2.4 Removal of Abandoned Tires and Debris: Exposed and buried tires, tire fragments and debris encountered during construction activities shall be removed, segregated and deposited in dumpsters provided by the Owner. The Owner will be responsible for the disposal of collected waste.

1.2.5 Clearing and Grubbing:

1.2.6 Grading Fill: Grading fill obtained from excavations, areas of waste consolidation, existing stockpiles and stripping operations shall be used to construct the subbase of the cover system.

1.2.7 Drainage Structures: Drainage swales, corrugated metal pipe culverts and drains, stone protected areas shall be constructed and existing manholes shall be modified.

1.2.8 Cover System: Consisting of an 18 inch low permeability soil layer constructed as a single lift using material mainly excavated from the onsite borrow area overlain by a 6-inch vegetative soil layer of onsite material that was previously stripped and stockpiled.

1.2.9 Stone Access Roads and Walkways

1.2.10 Fence Work: Existing fence shall be removed and either stored or replaced using salvaged fence, and temporary security fencing shall be installed.

1.2.11 Turf: Seed, mulch and fertilizer shall be applied on all areas covered by the vegetative layer, areas disturbed by excavation and stockpiling, and regraded areas.

1.2.12 Tree Relocation: Evergreen trees shall be removed and relocated.

1.2.13 Well Abandonment: Existing monitoring wells to be abandoned.

1.2.14 All other activities required to satisfactory complete all work covered under this contract not specifically discussed but necessary for the project construction and final acceptance.

1.2.15 The Contractor shall maintain drainage and dewatering of site areas that are affected as a result of construction activities and all erosion and sediment control procedures as necessary till final acceptance.

1.3 Work Sequence:

The Contractor shall complete all seeding operations by September 30, 1993.

ITEM 4.2

CONTRACTOR USE OF SITE

1.0 SCOPE:

This item specifies the Contractor's rights and responsibilities with respect to the use of the Project Site.

1.1 General Requirements:

1.1.1 No construction activity will be permitted until required submittals, if applicable, for that activity have been approved by the Engineer as provided in the individual sections of these specifications.

1.1.2 The Contractor shall limit onsite operations to the areas shown on Drawings or as directed by the Engineer. Other areas are not to be used by the Contractor unless authorized by the Engineer in writing.

1.1.3 The Contractor must coordinate the use of all proposed access routes, haul routes, entry and exit locations with the Engineer.

1.1.4 The hours of operation for construction activities will be from 7:00 AM to 6:00 PM, unless written approval for extended hours is obtained from the Engineer.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

The Contractor shall be responsible for complying with the site health and safety requirements identified in these specifications and shall be responsible for the protection of both project and existing features, equipment and materials.

* * * * *

ITEM 4.3

COORDINATION WITH OWNER'S OPERATIONS

1.0 SCOPE:

This item specifies the Contractor's responsibility to coordinate the various activities associated with this project with the Owner to ensure the construction work does not disturb and/or impede ongoing facility operations.

1.1 General Requirements:

The Contractor shall coordinate construction of the work under this Contract with the work of any other contractor.

Except as otherwise specified, the Contractor shall keep the Owner and Engineer fully informed at least 48 hours prior to the beginning of any work which may affect the Owner's operations.

1.2 Submittals:

1.2.1 The Contractor shall submit in writing, detailed descriptions and schedules of proposed construction procedures during periods that may interfere with the Owner's operations. The information shall be submitted to the Engineer not less than 14 days prior to initiating this work. Information submitted to the Engineer shall include a complete inventory of materials and equipment on hand or needed to perform the work. No work which interferes with the Owner's operations will be permitted until the Engineer has reviewed and approved, in writing, the proposed construction plans and procedures submitted by the Contractor.

1.2.2 If, in the opinion of the Engineer, the Contractor does not or will not have sufficient materials and equipment on-site to complete the work, his schedule will be rejected and he will not be permitted to perform the work at the scheduled time. Submission and approval or rejection of detailed descriptions and schedules does not relieve the Contractor his responsibility to complete the Contract within the allowed contract time.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

(Not Applicable)

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ITEM 4.4

MEASUREMENT AND PAYMENT

1.0 SCOPE:

This item specifies the methods and procedures that will be used to measure the work performed by the Contractor and to provide payment. The Contractor shall be responsible for determining the scope of work included in each bid item. Payment to the Contractor for the quantities of work measured using the methods specified in each item at the prices presented in the accepted bid, will constitute complete compensation for all work shown on the drawings, provided in the specifications or other contract documents and all costs of accepting the general risks, liabilities and obligations expressed or implied. Payment shall include, but not necessarily be limited to, compensation for furnishing all plant, supervision, labor, equipment, overhead, profit, materials, services required to accomplish and complete the work specified under each Item and all other required work to the satisfaction of the Engineer.

1.1 Payment Items:

1.1.1 Lump Sum Items: The work performed under lump sum items will not be measured except for determining reasonable interim payments.

1.1.2 Interim Payments: Interim payments will be made in accordance with the estimated value of work done as determined by the Contractor and approved by the Engineer.

1.1.3 Unit Price Items: Payments will be made for unit price items in accordance with the measurement methods set forth in this section by the Contractor or where specified payment limits are unclear, as determined reasonable by the Engineer at the unit prices entered in the Bidding Schedule.

1.2 Submittals:

1.2.1 Lump Sum Breakdowns: The Contractor shall submit for review his proposed lump sum breakdowns for determination of interim payments.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Project Startup and Site Services (Payment Item No. 1):

3.1.1 This item consists of mobilization of all construction equipment and materials required to complete the work associated with this project to the site and removal of the same following project completion. Payment for removal and replacement of sign structure and propane tank is covered under this item. Work described in the following specification items is also included for

payment under this item with the exception of those individual items specifically designated for payment elsewhere:

3.1.1.1 ITEM: COORDINATION WITH OWNER'S OPERATIONS

3.1.1.2 ITEM: PROJECT MEETINGS

3.1.1.3 ITEM: SURVEY REQUIREMENTS

3.1.1.4 ITEM: SUBMITTALS

3.1.1.5 ITEM: CONSTRUCTION SCHEDULE

3.1.1.6 ITEM: CONTRACTOR QUALITY ASSURANCE AND QUALITY CONTROL

3.1.1.7 ITEM: CONTINGENCY WORK

3.1.1.8 ITEM: EROSION AND SEDIMENT CONTROL

3.1.1.9 ITEM: DUST CONTROL AND ROADWAY MAINTENANCE

3.1.1.10 ITEM: TEMPORARY FACILITIES

3.1.1.11 ITEM: SECURITY

3.1.1.12 ITEM: WARRANTY OF CONSTRUCTION

3.1.1.13 ITEM: PROJECT RECORD DOCUMENTS

3.1.1.14 ITEM: PROJECT CLOSEOUT

3.1.2 Payment will be made on a lump sum basis.

3.2 Site Health and Safety (Payment Item No. 2):

3.2.1 This item consists of the preparation and implementation of the Contractor's Site Health and Safety Plan described in ITEM: SITE HEALTH AND SAFETY.

3.2.2 Payment will be made on a lump sum basis.

3.3 Clearing and Grubbing (Payment Item Nos. 3a and 3b):

3.3.1 This item consists of performing all work specified in ITEM: CLEARING AND GRUBBING as shown on the Drawings.

3.3.2 Measurement of areas cleared and grubbed will be made on an acreage basis. Areas cleared and grubbed with tree removal will be measured separately from areas that do not require tree removal.

3.3.3 Payment for each item will be made for the actual area cleared and grubbed at the unit price per acre.

3.4 Abandoned Tire and Debris Removal (Payment Item No. 4):

3.4.1 This item consists of removal, segregation and placement of tires, tire fragments and miscellaneous debris in the appropriate waste dumpsters as described in ITEM: ABANDONED TIRE AND DEBRIS REMOVAL.

3.4.2 Measurement will be based upon the actual volume of dumpsters filled.

3.4.3 Payment will be made for actual volume of material placed in the dumpsters at the unit price per cubic yard.

3.5 Excavation, Filling and Backfilling (Payment Item No. 5):

3.5.1 This item consists of excavating, loading, hauling, placing and compacting material used as grading and common fill removed during consolidation of waste areas, and all other ancillary work as described in ITEM: CONSOLIDATION OF WASTE AREAS and ITEM: EXCAVATION, FILLING, BACKFILLING AND SITE GRADING.

3.5.2 Measurement will be based upon the compacted inplace volume after final placement. No measurement for materials over excavated beyond design limits will be made.

3.5.3 Payment will be made for the actual volume installed at the unit price per cubic yard. No payment will be made for rehandling material or for handling over excavated material.

3.6 Low Permeability Soil Placement (Payment Item No. 6):

3.6.1 This item consists of excavating, stockpiling, loading, hauling, placing, compacting, controlling the moisture of the low permeability soil material as described in ITEM: COVER SYSTEM, including construction of the test pad and providing assistance for testing and all other ancillary work described in ITEM: COVER SYSTEM.

3.6.2 Measurement will be based upon the actual inplace volume. Measurement will not include any quantity placed beyond the required limits shown on the Drawings.

3.6.3 Payment will be made for the actual volume of low permeability soil placed at the unit price per cubic yard.

3.7 Offsite Low Permeability Soil (Payment Item No. 7):

3.7.1 This item consists of testing, hauling and stockpiling low permeability soil from offsite sources as described in ITEM: COVER SYSTEM.

3.7.2 Measurement of the volume brought onsite will be based on the compacted in-place quantity.

3.7.3 Payment will be made for the offsite low permeability soil at the unit price per cubic yard.

3.8 Offsite Vegetative Soil (Payment Item No. 8):

3.8.1 This item consists of testing, hauling and stockpiling vegetative soil from offsite sources as described in ITEM: COVER SYSTEM.

3.8.2 Measurement of the volume brought onsite will be based on the in-place quantity.

3.8.3 Payment will be made for the actual volume material brought onsite at the unit price per cubic yard.

3.9 Site Drainage Structures (Payment Item No. 9):

3.9.1 This item consists of furnishing the materials and performing the work described in the following specification items as shown in the Drawings.

3.9.1.1 ITEM: CORRUGATED METAL PIPE

3.9.1.2 ITEM: ADJUST EXISTING DRAINAGE STRUCTURES

3.9.1.3 ITEM: ASPHALT PAVEMENT

3.9.1.4 ITEM: STONE FILLING for erosion protection on the borrow area slope and 18 inch corrugated metal pipe's discharge at creek.

3.9.1.5 ITEM: GRANULAR MATERIALS for use as backfill over the corrugated metal pipe located beneath the asphalt pavement.

3.9.1.6 ITEM: EXCAVATION, FILLING, BACKFILLING AND SITE GRADING for backfilling and compaction of the material placed beneath the asphalt pavement.

3.9.2 Payment will be made on a lump sum basis.

3.10 Access Roads (Payment Item No. 10):

3.10.1 This item consists of furnishing and placing the geotextile and granular material described in ITEM: GEOTEXTILE and ITEM: GRANULAR MATERIALS to the lines and grades shown on the Drawings.

3.10.2 Measurement of the access roads surface area will be made on a square foot basis.

3.10.3 Payment will be made for the actual area of access road installed at the unit price per square foot.

3.11 Walkways (Payment Item No. 11):

3.11.1 This item consists of furnishing and placing the geotextile and granular material described in ITEM: GEOTEXTILE and ITEM: GRANULAR MATERIALS to the lines and grades shown on the Drawings.

3.11.2 Measurement of the walkway's surface area will be made on a square foot basis.

3.11.3 Payment will be made for the actual area of walkway installed at the unit price per square foot.

3.12 Fence Work (Payment Item Nos. 12a and 12b):

3.12.1 This work consists of removing, storing and reinstalling sections of chain-link fence as described in ITEM: FENCING at locations shown on the Drawings.

3.12.2 Measurement of the fence removed and stored will be made on a linear foot basis. Measurement of fence removed, stored and reinstalled will be made on a linear foot basis.

3.12.3 Payment for each item will be made at the unit price per linear foot.

3.13 Tree Relocation (Payment Item No. 13):

3.13.1 This item consists of excavation, transport and replanting the evergreen trees as described in ITEM: TREE RELOCATION, to locations shown on the Drawings.

3.13.2 Measurement and payment will be made for each tree that has been removed and replanted at its final location.

3.14 Vegetative Layer (Payment Item No. 14):

3.14.1 This item consists of excavating, stockpiling, hauling and spreading the vegetative soil as described in ITEM: EXCAVATION, FILLING, BACKFILLING AND SITE GRADING and ITEM: COVER SYSTEM, and vegetating that soil as described in ITEM: TURF.

3.14.2 Measurement of the vegetated area will be made following final inspection on an area basis.

3.14.3 Payment will be made for the actual area vegetated at the unit price per square foot.

3.15 Well Abandonment (Payment Item No. 15):

3.15.1 This item consists of abandoning designated existing monitoring wells as described in ITEM: WELL ABANDONMENT, at locations shown on the Drawings.

3.15.2 Depth measurements for each well to be abandoned will be made on a linear foot basis prior to sealing from the invert of the monitoring well to ground surface.

3.15.3 Payment will be made for the actual depth of abandonment at the unit price per linear feet.

3.16 Drum Removal/Staging (Payment Item No. A):

3.16.1 This contingency item consists of removing unanticipated drummed waste encountered during intrusive work and the staging (including construction of the staging pad) of this waste on-site as coordinated with the Owner, as specified in ITEM: CONTINGENCY WORK. If directed, the Contractor shall relocate the drums to Dunlop's hazardous waste storage area.

3.16.2 Measurement and payment will be made for each drum removed and staged.

3.17 Drum Overpacking (Payment Item No. B):

3.17.1 This contingency item consists of providing overpack drums if necessary to handle drums removed under the provisions for Payment Item No. A. Conditions for which overpacking will be required shall be defined in the Contractor's Contingency Plan, as required by ITEM: CONTINGENCY WORK.

3.17.2 Measurement and payment will be made for each overpacked drum/container.

3.18 Level "B" Protection (Payment Item No. C):

3.18.1 This contingency item consists of providing level B personnel protective equipment for Contractor's personnel, if necessary, during implementation of the Contractor's Contingency Plan in accordance with ITEM: CONTINGENCY WORK. Conditions for which level B protection is required shall be defined in the Contractor's Contingency Plan.

3.18.2 Measurement will be by the worker-day by summing the number of workers required to don level B equipment each day, regardless of the length of time spent in level B or the number of times the worker is required to suit-up for that day.

3.18.3 Payment will be made for the actual number of worker-days expended and will be full compensation for all materials, equipment and support personnel required to provide level B protection.

3.19 Contaminated Soil Handling (Payment Item No. D):

3.19.1 This contingency item consists of removing unanticipated contaminated soil encountered during intrusive work and the on-site staging (including construction of the staging pad) of this

waste as coordinated with the Owner in accordance with the Contractor's Contingency Plan and as specified in ITEM: CONTINGENCY WORK.

3.19.2 Measurement will be on a cubic yard basis as measured in the staging area.

3.19.3 Payment will be made for the actual volume of waste material removed at the unit price per cubic yard.

4.0 CREDITED WORK:

4.1 Decontamination Water Disposal (Credit Payment Item No. D):

4.1.1 This item provides a mechanism to credit the Owner in the event the decontamination water generated during this Contract can be discharged to the onsite creek as described in ITEM: SITE HEALTH AND SAFETY.

4.1.2 Measurement of the decontamination water discharged to the creek will be made on a volume basis.

4.1.3 A credit will be given to the Owner at the unit price per gallon.

ITEM 4.5

PROJECT MEETINGS

1.0 SCOPE:

This item specifies the requirements for convening project meetings prior to and during the execution of work.

1.1 General Requirements:

The Engineer shall schedule and administer preconstruction meetings, weekly progress meetings, and other meetings that are required during the progress of the Work. The Engineer shall:

1. Prepare agenda for meetings.
2. Distribute written notice of each meeting.
3. Make physical arrangements for meetings.
4. Preside at meetings.
5. Record the minutes; include significant proceedings and decisions.
6. Reproduce and distribute copies of minutes to those that were present and to parties affected by decisions made at the meeting.

1.2 Representatives of contractor, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.3 Pre-construction Meeting:

The Pre-Construction Meeting will be held within 7 days of the execution of the purchase order for this Contract.

1.3.1 Attendance:

- o Owner's Representative.
- o Engineer
- o Contractor's Representatives.
- o Major Subcontractor's Representatives

1.3.2 Minimum Agenda:

1. Distribute and discuss:
 - o List of major subcontractors.
 - o Tentative Construction Schedule.
2. Designation of responsible personnel.
3. Processing of field decisions and Change Orders.
4. Adequacy of distribution of Contract Documents.
5. Submittal of shop drawings, project data and materials information.
6. Procedures for maintaining Record Documents.
7. Use of premises:
 - o Office and storage areas.
 - o Owner's requirements.
8. Major equipment deliveries and priorities.
9. Housekeeping procedures.
10. Progress Payment schedules and procedures.

1.4 Progress Meetings:

Progress meetings shall be scheduled at a minimum of once per week. Additional meetings will be scheduled if necessary to resolve significant questions, establish new guidelines, introduce new aspects of the project or to address other items that will effect the progress of the work if requested by either the Contractor or the Engineer.

1.4.1 Location of meetings will be determined at the preconstruction meeting.

1.4.2 Attendance:

- o Owner's Representative
- o Engineer
- o Contractor
- o Subcontractors or Suppliers as pertinent to agenda.

1.4.3 Minimum Agenda

1. Review and approve minutes of previous meeting.

2. Review Work progress since last meeting.
3. Note field observations, problems and decisions.
4. Identify problems which impede planned progress.
5. Review delivery problems.
6. Develop corrective measures and procedures to regain planned schedule.
7. Review Construction Schedule as indicated.
8. Plan progress during next work period.
9. Review submittal schedules, expedite as required to maintain schedule.
10. Maintaining quality and work standards.
11. Review changes proposed for:
 - o Effect on Construction Schedule.
 - o Effect on Completion Date.
12. Complete other current business.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

(Not Applicable)

* * * * *

ITEM 4.6

SURVEY REQUIREMENTS

1.0 SCOPE:

The Contractor shall provide all materials, labor, equipment and incidentals required to conduct proper surveys prior to, during and after construction activities.

1.1 Survey Control:

The Engineer will identify existing site reference points, benchmarks, and baselines as shown on the Drawings. Additional benchmarks that the Contractor may require for performance of work and for post construction documentation shall be established by the Contractor.

1.1.1 The Contractor shall perform surveys for measurement and payment of completed work.

1.2 Project Record Documents:

1.2.1 The Contractor shall maintain on site a complete, accurate log of the survey control work as it progresses.

1.2.2 Upon completion of the work, the Contractor shall submit Record Documents to the Engineer under the provisions of ITEM: PROJECT RECORD DOCUMENTS.

2.0 MATERIALS:

The Contractor shall provide all materials as required to properly perform the surveys, including, but not limited to, instruments, tapes, rods, measures, mounts and tripods, stakes and hubs, nails, ribbons, other reference markers, and all else as required. All material shall be of good professional quality and in first-class condition. Lasers, transits, and other instruments shall be calibrated and maintained in accurate calibration throughout the execution of the work.

3.0 EXECUTION:

The Contractor shall exercise extreme care during the execution of all phases of the work to minimize disturbance to existing property and landscape in areas surrounding the work site.

3.1 Inspection:

3.1.1 The Contractor shall verify with the Engineer locations of site reference and survey control points prior to starting work. The Contractor shall promptly notify the Engineer of any discrepancies discovered.

3.1.2 The Contractor shall submit a certificate signed by the Surveyor, certifying that elevations and locations of site features are in conformance, or nonconformance, with Contract Documents.

Any nonconformance shall be documented and subject to review by the Engineer prior to final disposition (i.e., payment, corrective actions, etc.).

3.2 Survey Reference Points:

3.2.1 Contractor shall protect survey control points prior to starting site work and preserve permanent reference points during construction. The Contractor shall not relocate site reference points without prior approval from the Engineer.

3.3 Survey Requirements:

3.3.1 The Contractor shall reference survey and site reference points to the provided control monuments. Locations of survey control points will be recorded, with horizontal and vertical data, on Project Record Documents.

3.3.2 The Contractor shall establish lines and levels and lay out by instrumentation, site features to be constructed including necessary stakes for cut, fill, placement, and grading operations, slopes, and invert elevations.

3.3.3 The Contractor shall, with his own personnel, obtain working or construction lines and/or grades as needed.

3.3.4 All work not done with the methods and equipment as submitted by the Contractor and approved by the Engineer shall be removed and replaced by the Contractor at his own expense unless instructed otherwise by the Engineer.

3.3.5 It shall be the duty of the Contractor to keep the Engineer informed of the times and places at which he intends to work in order to provide the Engineer an ample opportunity to furnish and/or check the lines and elevations with minimum inconvenience or delay to the Contractor.

3.4 Surveys for Measurement and Payment:

3.4.1 The Contractor shall perform surveys, in a manner acceptable to the Engineer, to determine quantities of unit cost work and percent of completed lump sum work.

3.4.2 The Contractor's Project Manager shall sign Surveyor's field notes and shall calculate and certify quantities for payment purposes.

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ITEM 4.7

SUBMITTALS

1.0 SCOPE:

This item specifies the requirements for submittals to be provided by the Contractor. Applicable sections of these specifications contain a "Submittal" paragraph which delineate submittals.

1.1 Plans, Shop Drawings, Project Data and Samples:

1.1.1 Plans and shop drawings, specified in individual sections include but, are not necessarily limited to procedures, fabrication and erection/installation drawings, scheduled information, setting diagrams, and coordination drawings/schedules, as applicable to the work.

1.1.2 All details on shop drawings submitted for approval shall show clearly the elevations of the various parts to the main members and lines of the structure, and where correct fabrication of the work depends upon field measurements. Such measurements shall be made and noted on the drawings before submitting for approval.

1.1.3 Product data includes standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, manufacturer's printed statements of compliances and applicability, product photographs, production or quality control inspection and test reports and certifications.

1.1.4 Samples specified in applicable sections include physical examples of the items to be used in the work

1.1.5 Product data and samples shall also include, if requested by the Engineer items of disposable clothing, safety equipment, breathing apparatus, communication devices, items of equipment to be used on the site, and any other items which are required for the safety and health of all personnel on the site.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1. Initial Submittal:

The Contractor shall review plans, shop drawings, product data, and samples prior to submitting the initial 4 copies of the proposed plan/shop drawing to determine and verify the following:

3.1.1 Procedures and methods of operation.

3.1.2 Field measurements.

3.1.3 Field construction criteria.

3.1.4 Catalog data and similar information.

3.1.5 Conformance with these Specifications.

3.1.6 The Contractor shall notify the Engineer in writing, at the time of the initial submittal, of any deviations in the submittals or substitutions from the requirements specified in the Contract Documents.

3.2 Review Procedures:

One of the following statements will be checked by the Engineer after reviewing the submittal.

- o No Exception Taken
- o Revise as Noted
- o Amend and Resubmit
- o Rejected - See Remarks

Two copies of the reviewed submittal shall be returned to the Contractor with the Engineer's review comments. The Contractor shall respond to the statements checked on the submittal in the following manner:

- o No Exceptions Taken - submit 3 additional copies of the submittal.
- o Revise as Noted - make corrections and submit 5 copies of revised submittal.
- o Amend and Resubmit - address comments and resubmit 4 copies for additional review.
- o Rejected - See Remarks - review comments and provide 4 copies of the new submittal.

3.3 The review and approval of plans, shop drawings, samples or catalog data by the Engineer will not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the Contractor.

3.4 No portion of the work requiring a plan, shop drawing, working drawings sample, or catalog data shall be started nor shall any materials be fabricated, installed, or used on this site prior to the written approval or qualified approval of such item. The Engineer will not be liable for any expense or delay due to corrections of remedies required to accomplish conformity.

3.5 Project work, materials, and installation shall conform with approved plans, shop drawings, working drawings, applicable samples, and catalog data.

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ITEM 4.8

CONSTRUCTION SCHEDULE

1.0 SCOPE:

This item specifies the requirements for preparation and updating the construction schedule.

1.1 General Requirements:

The Contractor shall be responsible for developing a schedule in graphic form identifying all major activities and operations, the order and interdependence of activities and the anticipated duration of each activity operation. Work shall be scheduled to ensure construction activities do not disturb/impece ongoing facility operations.

1.2 Submittals:

1.2.1 The Contractor shall submit the Construction Schedule within 7 days following execution of the purchase order indicating start and completion dates for the various stages of work to the Engineer for review. If required by the Engineer, the Contractor shall resubmit the revised schedule within 7 days of receiving the reviewed copy.

1.2.2 The Contractor shall submit updated schedules on the first day of each month.

1.3 Form of Schedule:

1.3.1 The Contractor shall prepare the construction schedule for each of the 3 closure areas in the form of a horizontal bar-chart. There will be a separate distinct horizontal bar column for each trade or work activities. The schedule shall present each item of work chronologically indicating the beginning date for each item.

1.3.2 Horizontal Time Scale: The schedule shall be prepared with a two week time scale. The first day of each half month shall be identified.

1.4 Contents of the Schedule:

1.4.1 Schedule will show the complete sequence of construction activity associated with each closure area.

1.4.2 All work shall be identified in phases or other logically grouped activities.

1.4.3 Subschedules used to define critical portions of the entire schedule shall be indicated or highlighted.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Contractor to Schedule Work:

3.1.1 The Contractor shall keep the Engineer informed sufficiently in advance of the time and places at which he intends to work in order that lines and grades for payment can be measured and recorded by the Contractor and checked by the Engineer with minimum inconvenience and delay to both.

3.1.2 If the latest computed completion time does not coincide with the time allowed by the contract, the sequence of activities and/or time for performance of activities shall be revised by means of concurrent operations, additional manpower, additional shifts, overtime, etc. expediting procedures necessary to meet the contract completion date.

3.2 Updating and Changes:

The Contractor must submit monthly updates of the project schedule to the Engineer for identification of the following:

3.2.1 Changes occurring since previous submission of updated schedule.

3.2.2 Progress of each activity, showing completion dates, including, major changes in schedule and activities modified since previous updating

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ITEM 4.9

CONTRACTOR QUALITY ASSURANCE AND QUALITY CONTROL

1.0 SCOPE:

This item specifies requirements of the Contractor's quality control system. The Contractor shall use this section as guidance to develop a complete and detailed Contractor's Quality Assurance and Quality Control (QAQC) Plan.

1.1 General Requirements:

The Contractor's quality control system through inspection, equipment/system operation, and reporting shall demonstrate and document the extent of compliance of all work with the requirements, standards, and quality identified in these specifications. Inspection reports shall make reference to specific drawings and/or specification requirements and shall identify the equipment and procedures utilized during construction. The burden of proof of contract compliance is placed on the Contractor and not assumed by the Owner.

1.2 Coordination Meeting:

At the Pre-Construction Meeting, the Contractor shall meet with the Engineer and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including control activities, administration of the system for both onsite and offsite work.

1.3 Submittals:

The Contractor shall submit his Contractor's Quality Control Plan (CQCP) to the Engineer for review prior to commencing construction activities. Construction shall be permitted only after acceptance of the CQCP or an interim plan applicable to the particular feature of work to be started.

The CQCP shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by any subcontractors, fabricators, suppliers, and purchasing agents:

1.3.1 A description of the quality control organization, including the lines of authority and acknowledgment that the Contractor shall implement for all aspects of the work specified.

1.3.2 The Project Manager responsible for the overall management of the project, including quality and production, will be identified.

1.3.3 Procedures for scheduling, reviewing, certifying, and managing submittals, including those of any subcontractors, offsite fabricators, suppliers and purchasing agents. Procedures shall be in accordance with ITEM: SUBMITTALS.

1.3.4 Procedures for tracking preparatory, initial, and follow-up control phases.

1.3.5 Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.

1.4 Acceptance of Plan:

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Owner reserves the right to require the Contractor to make changes in his CQCP and operations as necessary, to obtain the quality specified.

1.5 Notification of Changes:

After acceptance of the CQCP, the Contractor shall notify the Engineer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Engineer.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Quality Control Plan:

3.1.1 CQC Manager: The Contractor shall identify an individual within his organization at the site of the work, who shall be responsible for overall management of Quality Assurance Quality Control (QA/QC) and have the authority to act in all QA/QC matters for the Contractor. This QA/QC system manager shall have supervisory experience on similar construction projects.

3.2 Control:

Contractor QA/QC is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract Documents. The QA/QC shall be adequate to cover all construction operations, including both onsite and offsite activities, and will be keyed to the proposed construction sequence. The QA/QC control system shall include at a minimum the following three phases of control conducted by the QA/QC system manager for all definable features of work:

3.2.1 Preparatory Phase: This phase shall be performed prior to commencing work on each definable feature of work, and shall include:

3.2.1.1 A review of each paragraph of applicable specifications.

3.2.1.2 A review of the contract plans.

3.2.1.3 A check to assure that all materials and equipment have been tested, submitted, and approved.

3.2.1.4 A check to assure that provisions have been made to provide required control survey and documentation.

3.2.1.5 Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

3.2.1.6 A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawing or submitted data, and are properly stored.

3.2.1.7 A review of the appropriate activity hazard analysis to assure that safety requirements are met.

3.2.1.8 A check to ensure that the portion of the plan for the work to be performed has been accepted by the Engineer.

3.2.2 Initial Phase: This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

3.2.2.1 A check of preliminary work to ensure that it is in compliance with contract requirements.

3.2.2.2 Verification of full contract compliance. Verify required control survey and document.

3.2.2.3 Establish level of workmanship and verify that it meets minimum acceptable workmanship standards.

3.2.2.4 Resolve all differences.

3.2.2.5 Check safety to include compliance with and upgrading of the site Health and Safety Plan.

3.2.3 Follow-up Phase: Daily checks shall be performed to assure continuing compliance with contract requirements, including control surveying/monitoring, until completion of the particular feature of work. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming or non-approved work.

3.2.4 Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of work as determined by the Engineer if the quality of on-going work is unacceptable; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.3 Surveys:

The Contractor shall perform surveys specified or required to verify that control measures are adequate to provide a product which conforms to contract requirements. The Contractor shall perform the following activities and record and provide the following data:

3.3.1 Verify that survey procedures comply with contract requirements.

3.3.2 Verify that survey equipment is available, calibrated and are in good working condition.

3.3.3 Verify that all record documents are completed in accordance with the specifications and have been submitted to the Engineer for review and approval.

3.4 Completion Inspection:

At the completion of all work or any increment thereof the Engineer shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved plans and specifications. Such a list of deficiencies shall be submitted to the Contractor's Project Manager. The Contractor shall estimate the date by which the deficiencies will be corrected. The Engineer shall make a second inspection to ascertain that all deficiencies have been corrected. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof.

3.5 Documentation:

The Contractor shall maintain records and factual evidence required to ensure construction activities and imported materials conform to the Contract Documents and Contractor's submittals that have been approved by the Engineer. Records of approved variances from these records shall include, but are not limited to the following:

3.5.1 Survey control activities performed with results, noting the deficiencies and corrective action.

3.5.2 Delivery receipts of materials.

3.5.3 Written records of approved variances.

3.6 Notification of Noncompliance:

The Engineer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

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ITEM 4.10

SITE HEALTH AND SAFETY

1.0 SCOPE:

This item specifies the minimum requirements for health, safety, and emergency response for the project. The Contractor shall develop and implement a written Site Health and Safety Plan (SHASP) which at a minimum meets the requirements of this item and complies with applicable Federal and State regulations. The SHASP shall be submitted for review to the Engineer before any onsite work can be initiated. The SHASP, complete with all comments addressed, will be made a part of the Contract Documents. An outline of minimum requirements approved by NYSDEC is included as an Appendix for the Contractor's reference.

1.1 References:

The Site Health and Safety Plan shall meet applicable requirements contained in the following publications.

1.1.1 29 CFR 1910, General Industry, Occupational Safety and Health Administration (OSHA) Safety and Health Standards.

1.1.2 29 CFR 1926, Construction Industry, OSHA Safety and Health Standards.

1.1.3 USEPA Order 1440.2, Health and Safety Requirements for Employees Engaged in Field Activities, July 12, 1981.

1.1.4 NIOSH/OSHA/USCG/USEPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.

1.1.5 Standard Operating Safety Guides, United States Environmental Protection Agency, Office of Emergency and Remedial Response, November 1984.

1.1.6 "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Incides." American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio, Current Edition.

1.1.7 "Guide to Occupational Exposure Values." American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio, Current Edition.

1.1.8 Department of Labor, Occupational Safety and Health Administration, 29 CFR, Part 1910, Air Contaminants; Final Rule, January 19, 1989.

1.1.9 "Pocket Guide to Chemical Hazards" National Institute for Occupational Safety and Health and Occupational Safety and Health Administration, Publication No. 90-117, Cincinnati, Ohio, June, 1990.

1.2 Definitions:

1.2.1 Onsite Personnel: Onsite personnel shall include the Contractor, Subcontractor(s), the Owner and his representatives, and the local, state, and federal government representatives having jurisdiction over the work performed under this contract, as well as all employees/agents of these parties. Also included are plant personnel on the Dunlop property including employees of Dunlop and individuals who are conducting business with Dunlop.

1.2.2 Visitors: All personnel present on site not qualifying as Onsite Personnel.

1.2.3 Health and Safety Manager: The Health and Safety Manager (HSM) must have a formal education and training in occupational health and safety with a minimum of three years experience in hazardous waste site operations. The HSM must have a working knowledge of State and Federal Occupational Safety and Health Regulations. He shall be responsible for the development, implementation, and oversight of the SHASP and shall provide necessary direction and supervision to the Site Health and Safety Officer. He shall also be responsible for site-specific training, review of air monitoring data, and review of any accident reports. The HSM shall be available during normal working hours.

1.2.4 Site Health and Safety Officer: The Site Health and Safety Officer (SHSO) must have a minimum of two years of related experience. He must have a working knowledge of State and Federal Occupational Safety and Health Regulations and must have demonstrable experience in the proper use of air monitoring instrumentation used at the site. The SHSO shall be certified in CPR and first aid. The SHSO must be on site during active working hours. The responsibilities of the SHSO are as follows:

- a. Implement the SHASP on site
- b. Enforce day-to-day health and safety protocols in effect on site
- c. Require that all workers involved in intrusive activities on the site have had appropriate waste site worker training and medical examinations, and review and maintain training and medical certifications on site
- d. Require that all personnel entering the site understand the provisions of the SHASP
- e. Conduct daily health and safety inspections and prepare weekly reports
- f. Conduct periodic training sessions in proper use and maintenance of personal protective equipment and safety practices
- g. Check the condition of all emergency equipment weekly and its availability on a daily basis
- h. Conduct periodic emergency response drills
- i. Conduct daily health and safety meetings each morning
- j. Direct and advise Contractor personnel, visitors, and Subcontractor(s) on all aspects, especially changes, related to health and safety requirements at the site
- k. Conduct necessary health and safety monitoring
- l. Conduct air monitoring program
- m. Monitor site and perimeter conditions and determine all necessary changes in levels of personal protection and, if warranted, execute work stoppages

- n. Report changes in site conditions and changes in personal protection requirements to the Engineer
- o. Prepare accident/incident reports
- p. Prepare and maintain all Field Activities Forms in an orderly fashion

1.2.5 **Monitoring:** Monitoring includes the use of real-time direct reading field instruments to provide necessary information for the selection of proper personal protective equipment for onsite personnel and visitors and for the protection of general public health and the environment during the performance of the work on site.

1.2.6 **Medical Consultant:** The Medical Consultant must be a physician that is certified in occupational medicine and familiar with potential site hazards of the project. The Medical Consultant shall be available to consult with local emergency medical services and will provide medical evaluations of personnel assigned to the project.

1.3 **Site Safety and Health Plan Requirements:**

This contract will require work which may involve exposure to physical and chemical hazards. The Contractor shall ensure adequate protection for all onsite personnel and implement a complete Site Health and Safety Plan for all personnel working on or visiting the site.

1.3.1 The Site Health and Safety Plan shall address, as a minimum, the following subject areas in accordance with 29 CFR, 1910.120:

1.3.1.1 Health and safety organization (responsibilities, qualifications, and chain-of-command).

1.3.1.2 A health and safety risk or hazard analysis for each site task and operation to be performed.

1.3.1.3 Provisions for employee training to assure compliance with 1910.120(e).

1.3.1.4 Personal protective equipment (PPE) to be used by employees for each of the site tasks and operations being conducted to eliminate potential exposures as required by the personal protective equipment program in 1910.120(g)(5).

1.3.1.5 Medical surveillance requirements in accordance with 1910.120(f).

1.3.1.6 Real-time air monitoring to identify and monitor exposures to onsite personnel and offsite receptors; personnel and environmental sampling techniques and instrumentation to be used.

1.3.1.7 Site control measures in accordance with 1910.120(d).

1.3.1.8 Personnel and equipment decontamination procedures in accordance with 1910.120(k).

1.3.1.9 Standard Operating Safety Procedures, engineering controls, and work practices.

1.3.1.10 An Emergency Response Plan meeting the requirements of 1910.120(i) for safe and effective responses to emergencies, including communications, emergency rescue, fire protection, ambulance service, first aid, spill/release response, PPE, and other equipment.

1.3.1.11 First aid requirements.

1.3.1.12 Confined space entry procedures meeting the requirements of 1910.146 (Federal Register, Vol. 58, No. 9, January 14, 1993).

1.3.1.13 A spill containment program meeting the requirements of 1910.120(j).

1.3.1.14 Heat/cold stress monitoring.

1.3.1.15 Logs, reports, and record keeping.

1.3.1.16 Site description and contamination evaluation.

1.4 Submittals:

1.4.1 The Contractor's Site Health and Safety Plan (SHASP) submitted to the Engineer prior to the startup of work.

1.4.2 Written certification of hazardous waste site worker training (initial and refresher), site-specific health and safety training, first aid training, and medical surveillance for all personnel participating in intrusive construction activities.

1.4.3 Signed Certificate from last page of Dunlop Tire Corporation, Buffalo Plant - Safety Guidelines for Contractors (Attachment A of Project Health and Safety Plan) acknowledging receipt, understanding of, and adherence to said document.

1.5 Compliance:

1.5.1 Consistent disregard for the provisions of the SHASP by the Contractor or his Subcontractor(s), or employees shall be deemed just and sufficient cause for stoppage of work. Such work stoppage shall not form the basis of claim for either extra payment or extension of time for the project completion.

1.5.2 The Contractor's compliance with the minimum requirements in these specifications does not relieve the Contractor from the responsibility of implementing proper health and safety procedures under unforeseen conditions.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Responsibilities:

The Contractor shall: (a) develop and submit for review a Site Health and Safety Plan; (b) employ a Health and Safety Manager, Site Health and Safety Officer, and a Medical Consultant; and (c) conduct all necessary monitoring activities to protect his onsite personnel and others in the area.

3.2 Site Safety and Health Plan Implementation:

The SHASP shall be developed and implemented by the Contractor's HSM. The requirements described herein shall be used as a minimum outline description of the SHASP. The SHASP shall be site-specific and incorporate an assessment of the hazards associated with the remediation work to be performed under this Contract. The SHASP shall address potential hazards associated with the performance of work.

3.3 Site Health and Safety Plan Elements:

3.3.1 Health and Safety Organization: The Contractor shall submit a health and safety organization chart naming key project personnel, defining their duties, responsibilities, and presenting a structure to implement the SHASP as well as address problems and take corrective actions. Key project personnel will at a minimum include the Contractor's Project Manager, Health and Safety Manager, Site Health and Safety Officer, and Medical Consultant.

3.3.2 Hazard Assessment: The purpose of the Hazard Assessment is to provide information necessary for selecting personal protective equipment, establishing air monitoring requirements, and determining health and safety procedures necessary to protect all onsite personnel, the environment, and the public.

3.3.2.1 Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:

- a. Nature of potential contaminants
- b. Locations of potential contaminants at the project site
- c. Levels of contaminants
- d. Potential for personnel/public exposure during various site activities
- e. Effects of potential contaminants on human health

3.3.2.2 Physical Hazards: The Contractor shall assess the potential for physical hazards affecting personnel during the performance of work.

3.3.3 Training:

3.3.3.1 General: The Contractor shall certify that all personnel assigned to or regularly entering areas of intrusive activity beyond the Support Zone for the purpose of performing or supervising

work, for health, safety, security, or administrative purposes, for maintenance, or for any other site-related function, have received appropriate health and safety training in accordance with 29 CFR 1910.120 (e). Training shall consist of a minimum of 40 hours initial off-site training and three (3) days onsite experience. Twenty-four (24) hours of initial off-site training is acceptable for workers on site only occasionally for a specific limited task and who are unlikely to be exposed over Permissible Exposure Limits (PELs). In addition, the Contractor's supervisory personnel shall have a minimum of eight (8) hours additional specialized training on managing hazardous waste operations. Documentation of all such training shall be submitted to the Engineer before any employees will be allowed beyond the Support Zone.

3.3.3.2 Site-Specific Training: All personnel assigned to or entering active intrusive work areas of the site shall complete one site-specific training session to guarantee that all such personnel are familiar with the use of health and safety, respiratory, and protective equipment and with the safety and security procedures required for the site. The initial site-specific training session shall be conducted by the HSM. The Contractor shall notify the Engineer at least five (5) days prior to the initial site-specific training session so that the Owner and Government personnel involved in the project may attend. Follow-up site-specific training sessions for new personnel or visitors shall be conducted by the SHSO. The Contractor shall provide site-specific training to all Contractor's and Subcontractor's employees and Government representatives consistent with the requirements of OSHA Standard 29 CFR 1910.120, prior to the commencement of work. The site-specific training program shall address all elements of the SHASP.

3.3.3.3 Records: The Contractor shall keep records of all training periods, documenting date, attendance, and topics covered. Additionally, the Contractor shall be responsible for, and shall guarantee that, only personnel successfully completing the required training are permitted to enter active intrusive work areas of the site.

3.3.4 Medical Surveillance: The Contractor shall provide the services of a Medical Consultant who is a physician board certified in occupational medicine to perform the medical examinations for all employees who perform intrusive work in the Exclusion Zone, in accordance with 29 CFR 1910.120(f). The Medical Consultant shall review the medical examination results to certify if Contractor's personnel are fit to perform assigned tasks using personal protective equipment. The medical surveillance protocol to be implemented is the Medical Consultant's responsibility but shall meet the requirements of USEPA, OSHA Standards 29 CFR 1910.134, and ANSI Z88.2-1980. The components of the Contractor's medical examination shall include the elements listed in Table 10-1 of the Project Health and Safety Plan, as a minimum. The Contractor shall maintain and preserve medical records on workers permitted to enter beyond the Support Zone for 30 years after they leave employment as per 29 CFR Part 1910.20.

3.3.4.1 Onsite personnel entering the Exclusion Zone, and not employed by the Contractor or his Subcontractor shall be required to sign a declaration that he/she has undergone a physical examination of the same or similar scope and has been certified fit to enter contaminated areas requiring personal protective equipment necessary for this project.

3.3.4.2 Lost-Time Injuries: Any employee who develops a lost-time injury or illness during the period of the contract as a result of work in the Exclusion Zone must be evaluated by the Medical Consultant. The employee's supervisor shall be provided with a written statement indicating the

employee's fitness (ability to return to work), signed by the Medical Consultant prior to allowing the employee to re-enter the Exclusion Zone. A copy of this written statement shall be submitted to the Engineer. An accident report describing the events leading up to and causing the injury or illness shall be submitted to the Engineer.

3.3.5 Site Control: The Contractor shall establish a system to control access to the site. This system shall be incorporated into the layout of the site into work zones. The work zones shall include the Support Zone, Contamination Reduction Zones, and Exclusion Zones (active intrusive work areas). The system shall assure that only authorized persons enter active intrusive work areas.

3.3.5.1 The Contractor shall restrict access and mark the outer limits of the active intrusive work areas with high visibility barrier tape or flagging and signs warning unauthorized personnel not to enter.

3.3.5.2 If construction is concurrent, the Contractor will be responsible for establishing a means of communication between the active work areas. The Contractor will also be responsible for establishing a means of communication between workers within the same work area.

3.3.5.3 Site security shall be established and maintained according to ITEM: SECURITY.

3.3.6 Standard Safety Practices: The Contractor shall develop, implement, and enforce safe work practices and engineering safeguards for the work covered under these specifications. General site health and safety directives for conducting onsite work which shall be included in the SHASP and enforced during site activities include but are not limited to:

3.3.6.1 Eating and smoking shall be prohibited except in designated areas outside the Exclusion Zone and Contamination Reduction Zone as identified by the SHSO.

3.3.6.2 Before initiating any nonroutine operation in any restricted area, all personnel shall consult the SHSO about health and safety requirements for the operations.

3.3.6.3 A buddy system shall be implemented for all activities involving the use of respiratory protective equipment.

3.3.6.4 The Contractor shall implement protocols for loading and unloading material on site. These protocols shall include DOT requirements covering such items as grounding, placarding, driver qualifications, and the use of wheel locks. Operation of other heavy construction equipment shall be in accordance with OSHA Standard 29 CFR Part 1926.

3.3.7 Personal Protective Equipment: The Contractor shall provide all onsite personnel with appropriate personal protective equipment and protective clothing as required by the SHASP. The Contractor shall ensure that all safety equipment and protective clothing is kept clean and well-maintained.

3.3.7.1 Selection of personal protective equipment is based on the potential toxicity or physical dangers associated with hazardous materials and possible routes of exposure. Based on known

or anticipated hazards, personnel will be required to wear a minimum of Level D protection. The adequacy of personal protection shall be confirmed through air monitoring conducted by the Contractor's Site Health and Safety Officer (SHSO). If the need to upgrade the level of personal protection arises, the SHSO will provide his personnel with the appropriate equipment. PPE selection, evaluation, and reselection is an on-going process directly related to the change in conditions as encountered at the site.

3.3.7.2 Various levels of PPE must be made available on site during construction activities. It is anticipated that Level D, Level D-Modified, and Level C PPE will be required. Components of all applicable levels of personal protection and the anticipated levels of protection for various activities and locations are presented in Section 5.0 of the Project Health and Safety Plan (Appendix).

3.3.8 Decontamination:

3.3.8.1 Equipment Decontamination: The Contractor shall construct a decontamination pad within the Contamination Reduction Zone(s) for removing soil from all vehicles and equipment leaving the exclusion zone(s). The decontamination pad(s) shall include a high-pressure water wash area for equipment and vehicles. A designated clean area shall be established within the Contamination Reduction Zone(s) for performing equipment maintenance.

Any item taken into the Exclusion Zone must be assumed to be contaminated and must be carefully inspected and/or decontaminated before the item leaves the area. All contaminated vehicles, equipment, and materials shall be cleaned and decontaminated to the satisfaction of the Engineer prior to leaving the area. All construction material shall be handled and brought on site in such a way as to minimize the potential for contaminants being carried off site. Separate, clearly-marked parking and delivery areas shall be established.

Water used for personnel and equipment decontamination will be collected and stored in temporary tanks. The Contractor shall obtain samples of the stored decontamination water at a minimum frequency of 1 sample for every 5,000 gallons for analyses by an approved New York State certified testing laboratory to determine the method of disposal. Samples will be analyzed for the parameters identified on the Table 4.10-1.

Results will be submitted to the Engineer for review. If the Engineer deems concentrations of the decontamination water suitable the Contractor shall discharge the decontamination water upstream of the control dam to the Dunlop's pond. Otherwise the Contractor shall send the water to an approved, licensed treatment facility for ultimate disposal.

3.3.8.2 Personnel Decontamination: Personnel shall be required to go through a thorough decontamination procedure in the Contamination Reduction Zone prior to entering the Support Zone. Decontamination shall consist of soap and water washing of worker's hands, and face, and wet wiping of worker's boots or shoes.

3.3.9 Air Monitoring: Real-time air monitoring shall meet the minimum requirements of Section 6.0 of the Project Health and Safety Plan.

TABLE 4.10-1

DUNLOP TIRE CORPORATION
WASTE SITE CLOSURE
MINIMUM TESTING REQUIREMENTS FOR
DECONTAMINATION WATER

TEST	TEST METHOD
TCL Volatiles	40 CFR Part 136-624
TCL Semivolatiles	40 CFR Part 136-625
TAL Metals	EPA 200 Series
pH	EPA 150.1
Oil & Grease	EPA 413.1
Total Suspended Solids	EPA 160.2
Settable Solids	EPA 160.5
Phenols	EPA 420.1
Zinc	EPA 289.2

Note: Tests shall be performed at a minimum frequency of one per 5,000 gallons or once per load.

3.3.10 Emergency Equipment and First Aid Requirements:

3.3.10.1 Fire Extinguishers: The type and number of fire extinguishers shall be determined by the Contractor. Inspection and maintenance shall be the responsibility of the Contractor. At least one 20-lb type ABC fire extinguisher shall be located at each entrance to each active work area with additional units located in onsite offices, and on each piece of heavy equipment. These fire extinguishers shall be utilized for putting out equipment or personnel fires and not to be employed as sole fire fighting equipment for large site fire.

3.3.10.2 Emergency Eye Wash: Portable emergency eye wash units shall be provided by the Contractor. These portable units must be protected from freezing and shall be located close to the work area and at each equipment decontamination station. The emergency eye wash units shall meet the requirements specified in ANSI Z358.1-1981.

3.3.10.3 First Aid Kits: The size and number of kits shall be sufficient for the maximum number of people on site at one time. The kits shall be equipped as per the recommendations of the Medical Consultant and shall be able to provide stabilization for patients requiring offsite treatment and general first aid. The first aid kit locations shall be specially marked and provided with adequate water and other supplies necessary to cleanse and decontaminate burns, wounds, or lesions.

3.3.10.4 Onsite Emergency Vehicle: The Contractor shall provide at all times while onsite work proceeds, a designated emergency vehicle which will be used to transport injured personnel to the hospital for treatment. This vehicle shall contain a map showing the route and written directions to the hospital.

3.3.11 Emergency Response Plan and Procedures

3.3.11.1 The Contractor shall develop an Emergency Response Plan which shall be submitted as part of the SHASP. This plan shall be designed to delineate contingency procedures to be used in the event of injuries to employees or other site-related accidents. The Emergency Response Plan shall include the procedures to be used to mitigate the harmful effects of chemical exposure as well as rescue and first aid services to be rendered. The Contractor shall coordinate with local agencies (fire department, police department, emergency medical services, etc.) prior to beginning work.

3.3.11.2 Emergency response agencies and current telephone numbers are listed in Section 8.0 of the Project Health and Safety Plan.

3.3.11.3 The Contractor shall include in the SHASP a set of contingency procedures. At a minimum, these procedures shall describe:

- a) The actions that the Contractor will take in response to a worker injury or illness, a heavy equipment related accidents, fires, explosions, or any spill of contaminated materials;

- b) The name, address, and phone number (home and office) of the person(s) designated by the Contractor to act as emergency coordinator;
- c) A list of all emergency equipment at the site;
- d) Escape routes which will be used in the event of a sudden release, explosion, fire, etc.;
- e) A map showing the route to the nearest hospital;

3.3.11.4 The Contractor shall prepare a Contingency Plan designed to prevent the spread of contaminants to adjacent areas. The plan shall incorporate a comprehensive air monitoring program which will follow NYSDEC and NYSDOH guidelines for a Community Air Monitoring Plan and shall meet the minimum requirements of the Project Contingency Plan.

3.3.11.5 The Contractor shall promptly report in writing to the Engineer and Owner all accidents arising out of, or in connection with, the performance of the work, whether on or adjacent to the site, which caused death, personal injury, or property damage, giving full details and statements of witnesses.

3.3.11.6 Accident Investigation and Reporting: The Contractor shall develop a system, including forms, on which the pertinent details about accidents, damage, existing hazards, and actions taken to alleviate problems can be listed. These forms shall be appended to the Contractor's SHASP.

3.3.12 Heat/Cold Stress Monitoring:

3.3.12.1 As a minimum, the Contractor shall establish work/rest schedules based on ambient conditions and the level of protection being utilized and identify necessary physiological monitoring requirements.

3.3.12.2 Procedures to monitor, avoid, and treat heat/cold stress shall be established in accordance with "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities," NIOSH/OSHA/USCG/EPA, October 1985; U.S. Dept. of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety Health; Publication No. 85-115.

3.3.12.3 Field implementation of the Heat/Cold Stress Prevention Plan shall be performed by a person with current first aid/CPR certification who is trained to recognize symptoms of heat and cold stress.

3.3.13 Spill Control Plan: The Contractor shall provide spill control measures; including methods, means, and facilities required to prevent contamination by site wastes, contaminated groundwater, equipment fuels, oils, and greases, and any other potentially hazardous materials. If a spill occurs, the following actions, at a minimum, shall be taken by the Contractor.

- a. Notify the Owner and Engineer immediately.

- b. Take immediate measures to control and contain the spill within the site boundaries.
- c. Keep unnecessary people away, isolate the hazardous area, and deny entry.
- d. Stay upwind; keep out of low lying areas.
- e. Allow no flares, smoking, or flames in hazard area.
- f. For liquids, keep combustibles away from the spilled material.

3.3.14 Fires: The Contractor shall develop procedures for responding to both small and large fires which shall address the following minimum actions:

3.3.14.1 Evacuation procedures.

3.3.14.2 Extinguishing methods.

3.3.14.3 Notification of emergency response services, Engineer, and Owner.

3.3.15 Logs, Reports, and Recordkeeping: The Contractor shall maintain logs and reports covering the implementation of the SHASP. The format shall be developed by the Contractor to include Daily Safety Logs, Air Monitoring Logs, and a Close-Out Safety Report. These logs and reports shall be appended to the Contractor's SHASP.

3.3.15.1 Daily Safety Logs shall be completed by the SHSO and submitted to the Engineer on a daily basis. These logs shall include:

- a. Date.
- b. Work area(s) checked.
- c. Employees present in work areas.
- d. Equipment being utilized by employees.
- e. Protective clothing being worn by employees.
- f. Protective devices being used by employees.
- g. Accidents or breaches of procedure.

3.3.15.2 Air Monitoring Logs shall be completed by the SHSO and submitted to the Engineer on a daily basis. These logs shall include:

- a. Date of report.
- b. Equipment utilized for air monitoring.
- c. Real-time air monitoring readings from each work location.
- d. Calibration records.
- e. Signature of individual taking readings.
- f. Specific locations of real-time readings.
- g. Exact time monitoring was conducted.
- h. Meteorological conditions.
- i. Any required equipment repair.

3.3.15.3 Close-out Safety Report: At the completion of the work, the Contractor shall submit a Close-out Safety Report. The report shall be signed and dated by the Site Health and Safety

Officer and submitted to the Engineer. The report shall include procedures and techniques used to decontaminate equipment, vehicles, and decontamination facilities. The report shall include a summary of safety aspects of the entire project.

3.4 Posted Regulations:

3.4.1 The Contractor shall develop a series of posted regulations which shall address onsite protocols regarding use of personal protective equipment, personal hygiene, and provisions for smoking and eating on the site.

3.4.2 These protocols shall be posted at various locations on site and shall be reviewed with the Contractor's personnel.

3.5 Communications:

A hardline telephone communications system shall be established by the Contractor. Two way radios shall be utilized for onsite communication. A map giving directions to the nearest hospital and a list of emergency numbers, including the Owner, Engineer, police, fire, ambulance, hospital, and the NYSDEC shall be prominently posted near the telephone.

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ITEM 4.11

CONTINGENCY WORK

1.0 SCOPE:

This item specifies the minimum requirements for developing contingency procedures in the event unanticipated wastes are encountered. The Contractor shall develop and implement a written Contingency Plan which at a minimum meets the requirements of this item and complies with applicable Federal and State regulations. The Contingency Plan shall be submitted to the Engineer for review before intrusive work can be initiated. The Contingency Plan, complete with all comments addressed, will be made part of the Contract Documents.

1.1 General Requirements:

The work for this Contract will involve the disturbance and exposure of waste materials which include construction and demolition debris, silt, ash, slag, carbon black, asphalt, coal, and rubber tires. Although not anticipated, it is possible that during intrusive work, wastes of a potentially hazardous nature such as drummed or other containerized wastes, or zones of soil significantly contaminated with low flashpoint industrial or petroleum wastes, or chlorinated solvents may be encountered. It will be the Contractor's responsibility to remove and stage unanticipated waste. Dunlop will be responsible for analysis and disposal of the waste.

1.2 References:

The Contingency Plan shall meet applicable requirements contained in the following publications.

1.2.1 29 CFR 1910, General Industry, Occupational Safety and Health Administration (OSHA) Safety and Health Standards.

1.2.2 29 CFR 1926, Construction Industry, OSHA Safety and Health Standards.

1.2.3 USEPA Order 1440.2, Health and Safety Requirements for Employees Engaged in Field Activities, July 12, 1981.

1.2.4 NIOSH/OSHA/USCG/USEPA, Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, October 1985.

1.2.5 Standard Operating Safety Guides, United States Environmental Protection Agency, Office of Emergency and Remedial Response, November 1984.

1.3 Submittals:

1.3.1 Contingency Plan: The Contractor shall develop a Contingency Plan which identifies facilities, equipment, procedures, methods and materials required to handle unanticipated wastes. The Contingency Plan at a minimum, shall address the following waste handling elements.

1.3.1.1 An outline of general methods, equipment, materials and procedures to be utilized in handling the most likely types of problem wastes, such as drums or highly contaminated soils containing industrial or petroleum wastes with a low flashpoint, or chlorinated solvents.

1.3.1.2 A health and safety plan that defines in advance the criteria for upgrade of personal protective equipment and itemizes equipment which must be onsite and ready for immediate use in case of such an event.

1.3.1.3 Drum inspection procedures and checklist.

1.3.1.4 Drum handling procedures, including overpacking criteria.

1.3.1.5 Contaminated soils handling procedures.

1.3.1.6 A detail of a waste staging pad capable of temporarily storing drums or highly contaminated soils containing industrial or petroleum waste with a low flashpoint, or chlorinated solvents. Sampling and analysis of staged waste will be performed by Dunlop.

1.3.2 The Contractor shall include in his Contingency Plan a section on emergency response procedures. Those issues which, at a minimum, need to be discussed are presented below:

1.3.2.1 Pre-Emergency Plan including:

1.3.2.1.1 A list of prioritized emergency contacts.

1.3.2.1.2 Requirement to notify involved parties of scheduled activities. This will include coordination with Dunlop so that outside parties such as the local police department, fire department, health department and emergency response departments will have been notified.

1.3.2.1.3 Confirmation that contingency health and safety equipment is on-site.

1.3.2.1.4 Site-specific health and safety training in accordance with the Contractor's Health and Safety Plan must have been completed before the start of work.

1.3.2.2 Duties, responsibilities and authority of Contractor's personnel.

1.3.2.3 Health and safety requirements for contingency work.

1.3.2.4 Security related duties.

1.3.2.5 Evacuation signals, routes and procedures.

1.3.2.6 Implementation of a Community Air Monitoring Plan in accordance with NYSDOH guidelines.

1.3.2.7 Requirements for a critique of the response, and follow-up action based upon this critique.

1.3.3 Event Specific Waste Handling Plans: The Contractor shall develop an Event Specific Waste Handling Plan for each contingency event. This plan shall meet in the minimum requirements of this section.

2.0 MATERIALS:

The Contingency Plan and Event Specific Waste Handling Plan shall include a description of materials to be utilized in implementation of the plans. Manufacturer's literature shall be provided, when appropriate.

3.0 EXECUTION:

3.1 Waste Handling:

3.1.1 The Contractor shall handle and monitor the removal and staging of unanticipated wastes. The Contractor shall identify general methods and procedures for inclusion in the Contingency Plan. Staging of wastes shall be coordinated with Dunlop. If so directed, the Contractor shall relocate drums to Dunlop's hazardous waste storage area.

3.1.2 Upon encountering unanticipated waste, specific waste handling procedures for that event must be developed for submittal as an Event Specific Waste Handling Plan.

3.2 Emergency Response Procedures:

In the event of a fire, explosion, spill or other release involving a combustible, toxic or other hazardous substance or material. The Contractor shall take action to minimize hazards to human health and the environment.

ITEM 4.12

EROSION AND SEDIMENT CONTROL

1.0 SCOPE:

This item specifies the Contractor's requirements for erosion and sediment control. Dunlop's existing surface water discharge permit has strict requirements for suspended solids. It is necessary, therefore, for the Contractor to be diligent in managing sediments in surface water runoff the work areas.

1.1 General Requirements:

The Contractor shall develop, implement and maintain an Erosion and Sediment Control Plan that complies with applicable Federal, State and local ordinances and regulations.

1.2 References:

Publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation and shall be the latest published version.

1.2.1 New York Guidelines to Urban Erosion and Sediment Control.

1.3 Submittals:

The Contractor shall submit an Erosion and Sediment Control Plan to the Engineer for review prior to commencement to work. The Erosion and Sediment Control Plan shall address sediment runoff controls and erosion controls, both during construction and the turf establishment period. The plan must address control measures for active and inactive work areas where either surface vegetation has been disturbed or material has been stockpiled. Information on the products identified in the plan shall be included along with samples of the materials when requested.

2.0 MATERIALS:

The Contractor shall be responsible for selecting appropriate sediment and erosion control materials.

3.0 EXECUTION:

The Contractor shall be responsible for selecting the appropriate materials and control methods such as; check dams; temporary seeding; sedimentation basin; silt fences; straw bales; mulch; erosion control blankets; netting; and anchors, to ensure the loading of suspended solids in water discharged off site during this project do not exceed the limits of the discharge permit; and to protect the complete cover system from erosion damage.

The Contractor will be responsible for implementing the Sediment and Erosion Control Plan to the satisfaction of the Engineer. Erosion and sediment control measures will continue until the Engineer accepts the work in accordance with ITEM: PROJECT CLOSEOUT. This includes maintenance of the site through the winter and spring if necessary. The Contractor will repair damaged areas to the satisfaction of the Engineer. Temporary controls shall be removed upon acceptance of the work.

The requirements of the New York Guidelines for Urban Erosion and Sediment Control shall apply.

ITEM 4.13

DUST CONTROL AND ROADWAY MAINTENANCE

1.0 SCOPE:

This item specifies the requirements for controlling dust generated during the execution of the work under this contract and earthen materials tracked onto roadways (both onsite and offsite) by Contractor's operations.

1.1 General Requirements:

The Contractor shall take necessary measures, in addition to those required by Federal, State and local laws and regulations, to minimize the migration of dust and earthen material from construction areas. Wind indicators and air monitoring shall be utilized in accordance with ITEM: SITE HEALTH AND SAFETY.

1.2 Submittals:

The Contractor shall submit a Dust Control and Roadway Maintenance Plan. This Plan shall identify equipment and describe procedures to minimize the creation and dispersion of dust and the removal of earthen materials tracked on to site and offsite paved roadways by construction vehicles. The Plan shall address major construction activities that will contribute to these situations and the Contractors approach to control them.

2.0 MATERIALS:

(Not Applicable)

3.0 - EXECUTION:

3.1 Dust Control:

Contractor shall ensure compliance with all applicable standards and regulations concerning exposure levels to dust that may be present during site activities. The Contractor shall be responsible to provide dust control measures as needed.

3.1.1 Air monitoring personnel shall monitor work areas for levels of total particulants for comparison with action levels defined in the Air Monitoring Plan. When air monitoring personnel indicate that the work area may contain elevated levels of particulants, the Contractor shall restrict some or all work practices until control procedures have been instituted to prevent contaminant migration. Control measures shall include water application, erection of wind barriers near sensitive populations, and work stoppage above certain wind velocities.

3.1.2 Dust generating surfaces within the active work limits shall be sprayed with water to provide complete moistening of the ground, or as otherwise directed by the Engineer.

3.1.3 The Contractor shall comply with all applicable regulations for obtaining and using water that is clean, free from salt, oil and other deleterious materials.

3.2 Residues Control:

The Contractor shall be responsible for the removal and disposal of earthen material that is tracked onto site and offsite paved roadways by construction vehicles. The Contractor shall continually inspect roadways and remove the materials immediately to maintain a clean hazard free driving surface.

3.2.1 Earthen materials swept up from roadway surfaces shall be deposited as fill. This fill will be placed below the low permeability soil cover. Work will be scheduled to accommodate this requirement.

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ITEM 4.14

TEMPORARY FACILITIES

1.0 SCOPE:

This item specifies requirements for furnishing, operating, and maintaining temporary facilities and utilities, and removal of the same on completion of the project.

1.1. Facilities:

All facilities shall be installed at locations approved by the Engineer and shall include the following:

1.1.1 Engineer's office.

1.1.2 Contractor's office.

1.1.3 Equipment storage.

1.1.4 Personnel and equipment decontamination and support facilities.

1.1.5 Contractor's temporary access roads, and staging areas.

1.2 Utilities:

The Contractor shall enter into a service agreement/contract with the Owner or Public Utilities for the utilities used during the project. Locations of Owner owned utilities are shown on the Drawing. Utilities shall include the following.

1.2.1 Electricity and lighting.

1.2.2 Telephone service.

1.2.3 Water supply.

1.2.4 Sanitary facilities.

1.2.5 Fuel supply.

1.3 Submittals:

The Contractor shall submit the purposed layout of the temporary facilities to the Engineer for review and approval with the following information prior to mobilizing.

1.3.1 Electricity supply and lighting - source point, layout locations, fixtures and materials. Contractor shall identify voltage, amperage, etc. of the required electrical service.

1.3.2 **Water supply and sanitary facilities** - source point, layout locations, fixtures, materials and methods of disposal. Include **statement of required water pressure and approximate volume of water needed.**

1.3.3 **Traffic Control Plan** - The Contractor shall submit a plan which has been approved by local authorities concerning traffic control between the site and affected local streets.

1.4 **Requirements of Regulatory Agencies:**

1.4.1 **Electricity and lighting** shall be in accordance with Federal, state and local regulations as well as local utility company requirements. All work shall be in accordance with the National Electric Code.

1.4.2 **Sanitary facilities, and disposal of sanitary wastes,** shall be in accordance with state and local regulations.

2.0 **MATERIALS:**

All materials shall be suitable for their intended use and shall conform to applicable codes and standards. Manufacturers requirements shall be strictly adhered to. Used materials may be utilized provided that they are sound and capable of performing the intended function.

3.0 **EXECUTION:**

All work shall be performed by competent, trained workmen, skilled in the field to which they are executing the work.

3.1 **Electricity and Lighting:**

3.1.1 Temporary electric service for the project site shall be provided where required. It shall be the responsibility of the Contractor to coordinate electric service installation. The Contractor is responsible for determining actual power requirements and arranging with the Owner or the local utilities for installation and service of transformer(s) with associated wiring and electrical equipment, as necessary to perform site work activities. The Contractor is responsible for ensuring that the system is sufficient and adequate for all temporary power needs.

3.1.2 Service shall be brought to the project site by buried conduit or from conventional above ground poles. All work shall be by personnel familiar with code requirements and qualified for the work to be performed.

3.1.3 **Project Completion:** The Contractor shall be responsible for disconnecting and removing the temporary electrical and lighting systems at the completion of the work.

3.2 **Telephone Service:**

3.2.1 The Contractor shall make all arrangements and pay all costs for providing telephone services as specified herein and for his additional requirements. The services required include:

Telephone service for Engineer's field office as described in paragraph: Engineer's Offices.

A minimum of one direct line telephone in Contractor's Field Office.

3.2.2 Removal: Contractor shall be responsible for arranging for removal of all telephone service at the completion of the site work.

3.3 Water System:

3.3.1 The Contractor shall provide adequate water required for washwater, decontamination and dust control. The Contractor is responsible for determining actual water requirements necessary to perform site work activities and for installation of all water service for the project site.

3.3.2 An adequate supply of potable water shall be provided on site.

3.3.3 Site water may be stored in holding tanks and distribution piping or by tank trucks or any combination thereof at approved locations.

3.4 Sanitary Waste System:

3.4.1 Waste from sanitary facilities shall be discharged to the existing sanitary sewer shown on the Drawings.

3.5 Traffic Control:

3.5.1 The Contractor shall control vehicular traffic on the site and ensure safe and efficient operations. The Contractor shall provide and maintain flagmen as required by local authorities with jurisdiction on roads used by the Contractor.

3.6 Facility Requirements:

3.6.1 Prior to installation of offices and sheds, the Contractor shall consult with the Engineer in regard to location, access, and related facilities. All buildings and trailers other than storage sheds shall be provided with the following minimum requirements:

3.6.1.1 Lighting; electric, non-glare type producing a minimum illumination level of 50 foot-candles measured at desk height.

3.6.1.2 Heating and cooling; capable of maintaining ambient temperature within the structure of 70 degrees Fahrenheit (plus or minus 3 degrees).

3.6.1.3 Potable water.

3.6.1.4 Fire extinguisher; non-toxic dry chemical type, UL-approved for Class A, B and C fires (minimum rating of 2A, 10B, 10C).

3.6.1.5 Temporary offices and trailers shall be provided with proper safety features including exits, safety doors and any other precaution called out by National Fire Protection Standards, state and local standards, and any other applicable standards.

3.6.1.6 Fire and smoke detectors meeting applicable standards.

3.6.2 Janitorial services shall be supplied on a daily basis.

3.6.3 Facilities shall be structurally sound and weather-tight, with floors raised above ground and open to allow free circulation of air.

3.6.4 Living quarters shall not be established at the site.

3.7 Project Offices:

3.7.1 The Contractor shall supply and maintain two lockable field offices for use during construction meeting the minimum requirements as presented herein. The Engineer's office shall have a minimum of 240 square feet of usable space. The Engineer's office shall consist of a trailer placed on concrete blocks and leveled, with adequate wooden steps and handrails provided at each exterior door. The trailer and associated equipment shall be new or recently renovated to a like new condition subject to the Engineer's approval. The interior shall consist of wood-grain paneling. The following shall be provided by the Contractor:

3.7.1.1 Engineer's office:

- o Vertical filing plan rack for three sets of 30" x 42" plans each.
- o Shelf set, two shelves 12 inches deep by 3 feet long (attached to wall).
- o Chalk board with chalk and erasers.
- o Adjustable inclined plan table or drafting board 3' wide by 5' long.
- o Office desk (60 inches by 30 inches laminated top) with lockable drawers, swivel chair, and table (60 inches by 30 inches laminated top).
- o Telephone - a separate telephone line.
- o Waste basket.
- o Six straight backed chairs.
- o One desktop, heavy-duty, electric, dry-process photocopying machine and an adequate supply of copy paper. The supply of copy paper shall be replenished by the Contractor as required by the Engineer.
- o One fire-resistant, four-drawer, lockable filing cabinet, legal size.
- o Toilet Facilities: Office shall contain a separately enclosed room, properly ventilated and complying with applicable sanitary codes, including hot and cold running water and a flush type toilet.
- o Storage Room: Office shall contain a separately enclosed room with a locking door. The room shall be located a minimum of 15-feet from any occupied work area. A metal cabinet shall be securely bolted to the floor of the enclosed room. The cabinet shall measure 36" wide, 42" high and 24" deep and be equipped with lockable doors having concealed hinges. The back and sides, and doors of the

cabinet shall be fabricated from 24 gauge steel material. The top and bottom of the cabinet shall be constructed from 20 gauge steel. The color shall be black.

3.7.1.2 Personnel Decontamination Facilities: Separate trailer for personal decontamination and recreation/break room shall be provided by the Contractor for his personnel in accordance with ITEM: SITE HEALTH AND SAFETY.

ITEM 4.15

SECURITY

1.0 SCOPE:

This item along with Security Guidelines, describe site security measures that will be implemented by the Contractor during construction. The Contractor shall use Gate 3 and 5 to enter and exit the site.

1.1 General Requirements:

1.1.1 Site access shall be under the scrutiny of Dunlop's security staff. Dunlop's personnel shall monitor all movements on site and shall have access to any area or property for routine investigations. The Contractor shall instruct his personnel to co-operate with the security staff's requests.

1.1.2 The level of security required to protect Contractor's equipment, materials and work areas both during working and nonworking hours is left to the Contractor's discretion. However, the Contractor is solely responsible for personnel, visitors and property within the project site limits and any theft or damage involving the project.

1.1.3 The Contractor shall provide project personnel, including the owner, the Engineer and visitors, with security identification cards.

The identification cards shall have the following information:

- o Name of the individual
- o Occupation
- o Name of employer

1.1.4 The Contractor shall maintain a current list of authorized persons and submit copies of the updated list to the Engineer on request.

1.1.5 The Contractor shall immediately notify the Engineer of security breaches, problems and changes to the established control.

1.1.6 The Contractor shall provide a temporary fence adjacent to AREA "B" to maintain site security until the permanent fence is reinstalled.

1.2 Submittals:

The Contractor shall prepare and submit a Security Plan to the Engineer for his review. Onsite mobilization may not begin prior to Engineer's review of the Security Plan. This plan will include:

1. Description of proposed daily security operation.

2. Provisions for conducting security checks including method and frequency.
3. Warning signs or markers to identify active work areas which may be hazardous in accordance with ITEM: SITE HEALTH AND SAFETY.
4. Materials and procedures for installing, maintaining and removing the temporary security fence required along Sheridan Drive (adjacent to AREA "B").

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Site Access:

The Contractor shall use Dunlop Gate 3 and 5 shown on the Drawings, to access the site. These gates shall be locked at the end of each work day. Dunlop security guards will be stationed at Gate 3 each day during Contractor working hours and Gate 5 whenever access is required. The Contractor shall notify the Engineer a minimum of 24 hours in advance so that arrangements can be made for opening and manning Gate 5.

3.2 Gate Control:

3.2.1 The security staff shall require each person entering the site through Gates 3 and 5 to display proper identification and to sign in and if a visitor, receive a visitors pass upon approval by the Contractor's Project Manager.

3.2.2 The security staff shall require all personnel and visitors having access to the site to sign in and sign out, and shall keep a record of all site access. A log of all visitors shall be maintained.

3.2.3 Vehicular access to the site shall be restricted to authorized vehicles only. Use of site-designated parking areas shall be restricted to vehicles of the Contractor, Subcontractor, and service personnel assigned to the site and actually on duty. Parking shall be in the Contractor's lot near Gate 3. Very limited parking will be available near Gate 5, when site "C" work commences.

3.2.4 Personal vehicles shall be parked in the Contractor's parking lot (shown in the Drawings) and shall not enter the active work areas unless authorized by the Engineer in advance.

3.2.5 Signature of visitors will be required on a form relieving Dunlop, its officers, employees, and agents of the liability or consequences related to potential hazards associated with site entry.

3.2.6 The Contractor shall always use the roads and access routes approved by the Engineer.

3.2.7 No visitors will be allowed other than those associated with contract operations, without written approval from Dunlop. Visitors shall not be permitted to enter active work areas without

3.2.8 The Contractor shall be responsible for turning off operations such as electricity, heating, air conditioning, machinery, etc., at the end of each workday. The Contractor shall lock trailers and other facilities and equipment at the completion of each workday, on weekends, or during non-working periods. Dunlop will not be responsible for any loss of Contractor's materials or belongings, any damage to Contractor's property or any damage to work areas. Dunlop's security staff, American Protective Services (APS) is available for direct contract with the Contractor for off hour security.

ITEM 4.16

WARRANTY OF CONSTRUCTION

1.0 SCOPE:

This item specifies the warranties of construction including requirements for equipment, materials and workmanship.

1.1 General Requirements:

In addition to any other warranties set out elsewhere in this contract, the Contractor warrants that work under this contract was performed by experienced and skilled trades people, conforms to the contract requirements and is free of any defect of equipment, material or design furnished, or workmanship by the Contractor or any of his subcontractors or suppliers.

1.1.1 The warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession prior to final acceptance, such warranty shall continue for a period of one year from the date the Owner takes possession.

1.1.2 The Contractor shall remedy at his own expense any failure to conform or any defect identified by the Engineer within the warranty period. In addition, the Contractor shall remedy at his own expense any damage to Owner controlled real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements or due to defective equipment, material or workmanship.

1.2 Notice of Failure:

The Engineer/Owner will notify the Contractor in writing within a reasonable time after the discovery of any failure, defect, or damage.

1.3 Contractor's Liability:

Should the Contractor fail to remedy any failure, defect, or damage described in paragraph 1.1.3, within a reasonable time after receipt of notice thereof, the Owner will have the right to replace, repair, or otherwise remedy such failure, defect, or damage at the Contractor's expense.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

(Not Applicable)

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ITEM 4.17

PROJECT RECORD DOCUMENTS

1.0 SCOPE:

This item specifies the requirements for maintenance and submittal of record documents and samples.

1.1 Maintenance of Documents and Samples:

The Contractor shall maintain on site the following items for the Engineer's review:

- 1.1.1 Construction schedule and progress record.
- 1.1.2 Contract Drawings marked-up with field changes.
- 1.1.3 Contract Specifications.
- 1.1.4 Addendum and Modifications.
- 1.1.5 Change Orders and other modifications to the contract.
- 1.1.6 Engineer Field Orders.
- 1.1.7 Manufacturer's certificates.
- 1.1.8 Daily work activity summary reports, including:
 - 1.1.8.1 Reports on any emergency response actions.
 - 1.1.8.2 Survey records.
 - 1.1.8.3 Records of all site work.
 - 1.1.8.4 Truck load tickets and delivery papers.
 - 1.1.8.5 Other items as may be required by the Engineer.

1.2 Record Documents:

1.2.1 Record Documents and samples shall be stored in the Contractor's Field Office apart from documents used for construction. The Contractor shall provide files, racks, and secure storage for Record Documents and samples.

1.2.2 The Contractor shall keep Record Documents and samples available for inspection by Engineer. Record Documents will be jointly inspected for accuracy and completeness by the

Engineer and a responsible representative of the Construction Contractor prior to submission of each pay estimate.

1.3 Submittals:

1.3.1 The Contractor shall deliver the following Record Documents at Final Acceptance as defined in ITEM: PROJECT CLOSEOUT:

1.3.1.1 Record Contract Drawings

1.3.1.2 Record Specifications

1.3.1.3 Record Shop Drawings

1.3.1.4 Requested Samples with Delivery Receipts

1.3.1.5 Copies of Survey Books

1.3.2 Record Documents and samples shall be transmitted with cover letters in triplicate, listing:

1.3.2.1 Date;

1.3.2.2 Project title and number;

1.3.2.3 Contractor's name, address, and telephone number;

1.3.2.4 Number and title of each Record Document; and

1.3.2.5 Signature of Contractor or authorized representative.

1.3.3 Documents must be submitted to and accepted by the Engineer at completion of work as a condition of final payment.

1.3.4 All submittals and samples shall become the property of the Owner once delivered.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Recording:

3.1.1 The Contractor shall record information on two sets of blue line full size Contract Drawings, and Shop Drawings.

3.1.2 Information shall be recorded by the Contractor on both sets concurrently with construction progress. No work shall be concealed or covered in a manner that would prevent inspection until required information is recorded and approved by the Engineer. All variations from the contract drawings, for whatever reason, including those occasioned by modifications and optional materials shall be indicated. These variations shall be shown in the same general detail utilized in the Contract Drawings.

3.1.3 These drawings shall be maintained in a current condition at all times until completion of the work and shall be available for review by the Owner at all times.

3.1.4 Contract Drawings and Shop Drawings shall be legibly marked in red ink and each item of actual construction recorded including:

3.1.4.1 Measured volumes of elements of construction in relation to survey datum.

3.1.4.2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

3.1.4.3 Field changes of dimension and detail.

3.1.4.4 Changes made by Modifications.

3.1.4.5 Details not on original Contract Drawings.

3.1.4.6 References to related shop drawings and modifications.

3.1.5 Specifications shall be legibly marked noting variances in materials, equipment or criteria.

3.1.5.1 Changes made by Addenda and Modifications.

3.1.6 Additionally the Contractor shall maintain manufacturer's certifications, equipment certifications, and field survey records required by individual Specification Items.

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ITEM 4.18

PROJECT CLOSEOUT

1.0 SCOPE:

This item specifies the activities necessary to close out the contract. The work shall consist of the complete removal of temporary facilities, cleaning the project site, site restoration as required, inspection, and administrative provisions for substantial completion and for final acceptance.

1.1 Submittals:

1.1.1 All record documents and samples shall be submitted according to ITEM: PROJECT RECORD DOCUMENTS.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Cleaning the Project Site:

3.1.1 Cleaning work shall include the following:

3.1.1.1 Removal of all waste remaining on site such as excess construction material, wood, debris other foreign material generated during the clearing and grubbing operation and protective clothing and other such health and safety related waste.

3.1.1.2 Disconnection and removal of all temporary facilities/utilities from the site;

3.1.1.3 Removal of all Contractor constructed access roads and parking areas; and

3.1.1.4 Restoration of disturbed/damaged areas to a condition better or equal to that which existed prior to construction.

3.2 Administrative Provisions:

3.2.1 Substantial Completion:

3.2.1.1 Prior to substantial completion, the Engineer shall present to the Contractor a punch list of work items to be completed in accordance with the Contract Documents.

3.2.1.2 When Contractor considers the work on the punch list to be substantially complete, he shall submit written notice with a list of items to be completed or corrected, and the estimated dates of the completion or correction.

3.2.2 Final Acceptance:

When the Contractor considers the work to be complete, he shall submit to the Engineer written certification that:

3.2.2.1 Contract Documents have been reviewed;

3.2.2.2 Work has been inspected for compliance with Contract Documents;

3.2.2.3 Work has been completed in accordance with Contract Documents, and deficiencies listed have been corrected; and

3.2.2.4 Work is complete and ready for final inspection.

3.2.2.5 Should the Engineer inspection find work incomplete, he will promptly notify the Contractor in writing listing observed deficiencies. The Contractor shall remedy the deficiencies and send a second certification of final completion. This procedure shall continue until such time as the Engineer is satisfied with such repairs and corrections.

3.2.2.6 When the Engineer finds work is complete, he will consider closeout submittals for Final Acceptance.

3.2.2.7 When the Contractor receives the Engineer's notice of Final Acceptance he shall submit his final invoice for payment.

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ITEM 5.1

ABANDONED TIRE AND DEBRIS REMOVAL

1.0 SCOPE:

This item specifies the requirements for removal of tires, and tire fragments from the tire disposal area identified on the Drawings. Tires or tire fragments encountered during other construction operations shall be handled in a similar manner. Other debris as defined below, encountered either in the tire disposal area or during other construction operations will also be removed in a similar manner as directed by the Engineer.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Waste Removal: The Contractor shall remove all exposed and buried tires, tire fragments and debris, including railroad ties, railroad rails, pallets, metal debris and other miscellaneous wastes identified by the Engineer, which may be encountered during construction activities. The wastes shall be segregated and deposited in the appropriate dumpsters. Loose material shall be removed from debris, to the satisfaction of the Engineer, prior to placement in dumpsters. The waste dumpsters will be provided by the Owner.

3.2 Waste Disposal: The Owner will be responsible for disposal of the collected waste.

ITEM 5.2

CLEARING AND GRUBBING

1.0 SCOPE:

This item specifies the requirements of clearing, grubbing, and disposing of all trees, brush, and stumps within and around the perimeter of the work areas identified on the Drawings or as directed by the Engineer.

1.1 Definitions:

1.1.1 Clearing: Clearing shall consist of the removal of trees and other vegetation including down timber, snags, and brush occurring in the work areas.

1.1.2 Grubbing: Grubbing shall consist of the removal of stumps, roots and matted roots from the work areas.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Clearing: Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require. Clearing shall also include the removal and disposal of structures that obtrude, encroach upon, or otherwise obstruct the work.

3.2 Grubbing: Material to be grubbed, together with stumps and roots shall be removed to a depth of not less than 6 inches below original ground surfaces. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with adjacent ground surfaces.

4.0 DISPOSAL:

Logs, stumps, roots, and other debris from the clearing and grubbing operations that can shall be satisfactorily disposed of offsite by the Contractor.

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ITEM 5.3

CONSOLIDATION OF WASTE AREAS

1.0 SCOPE:

This item specifies the requirements for removing the buried waste deposited in Northern Area "A" for placement in Central Area A. Other areas requiring removal of waste for placement under the cover system are also covered by this section.

Waste anticipated to be encountered will include construction and demolition debris, silt, ash, slag, carbon black, asphalt, coal and rubber tires. In the event that waste of a potentially more hazardous nature is encountered the requirements of ITEM: CONTINGENCY WORK, will be implemented.

1.1 Reference Standard:

Work shall be performed in compliance with all Federal, State, and local government regulations that apply to this type of work.

1.2 Submittals:

1.2.1 Materials Handling Plan: The Contractor shall submit a Materials Handling Plan for review prior to initiating this work. The plan will identify equipment and procedures to be utilized in excavation, loading, transportation and consolidation of the removed waste material.

1.2.2 Drainage/Dewatering Plan: The Contractor shall submit a Drainage/Dewatering Plan for review. The plan will identify temporary drainage/dewatering procedures and sedimentation control procedures to be utilized in minimizing runoff and for handling groundwater generated within excavations.

2.0 MATERIALS:

(Not Applicable)

3.0 EXECUTION:

3.1 Excavation of Waste:

The method of excavating the waste from designated areas shall be determined by the Contractors. Waste material shall be removed, loaded and transported from the existing location for placement as fill in designated areas. The limit of excavation shall proceed 6-inches beyond the point where waste is visually identified, or as directed by the Engineer. Corrective grading work including replacement fill, required due to over excavation by the Contractor will be performed at the Contractor's expense.

3.2 Waste Hauling:

Excavated wastes shall be loaded directly on trucks for transport to the designated fill area, stockpiling waste will not be permitted. Methods and equipment used for hauling shall be determined by the Contractor.

3.3 Drainage/Dewatering:

The Contractor shall take necessary precautions, and shall furnish all labor, equipment and materials needed to accommodate surface water and groundwater that may flow into the open excavations while removing wastes. Provisions and equipment for sediment control shall be available onsite, to minimize surface water migration, into open excavations and to handle groundwater generated within the excavation. Methods and equipment used to control drainage, dewatering and sedimentation shall be determined and implemented by the Contractor, to the satisfaction of the Engineer. Special attention shall be paid to the requirements of ITEM: EROSION AND SEDIMENT CONTROL.

3.4 Consolidation of Wastes:

Wastes removed from designated areas shall be deposited as fill in areas identified on the Drawings in accordance with ITEM: EXCAVATION, FILLING, BACKFILLING AND SITE GRADING or as directed by the Engineer. Methods and equipment used to place the waste shall be determined by the Contractor.

3.5 Decontamination:

All equipment used to excavate, load, transport and place the waste shall be properly decontaminated prior to leaving the site or use in another work area in accordance with ITEM: SITE HEALTH AND SAFETY.

ITEM 5-4

EXCAVATION, FILLING, BACKFILLING AND SITE GRADING

1.0 SCOPE:

This item specifies the requirements for removing the existing cover material, excavation, filling, backfilling, and site grading. Work includes; stripping and stockpiling of existing cover within and around the perimeter of designated work areas; excavation of drainage swales and pipe trenches; and excavation and filling required to establish the approximate contours shown on the Drawings, and intended tie-in details.

2.0 MATERIALS:

2.1 Grading fill material shall be obtained from onsite sources including stripped cover material, excavations, areas of waste consolidation, pipe trenches and drainage swales and existing stockpiles. Rubbish, metal, rubber debris, stumps, frozen material or other unsuitable materials as determined by the Engineer shall be removed.

2.2 Common fill material shall be obtained from onsite sources including stripped cover material, pipe trenches and drainage swales, existing stockpiles, borrow area, and areas designated by the Engineer. Unsuitable material, as determined by the Engineer, shall not be used as common fill.

2.3 Vegetative soil shall be obtained from existing cover material.

2.4 Low permeability soil shall be obtained primarily from the onsite borrow area as discussed in ITEM: COVER SYSTEM, but may also be partially obtained from onsite stockpiles an existing cover material.

3.0 EXECUTION:

3.1 Stripping and Stockpiling Existing Cover:

Existing cover material shall be removed within and around the perimeter of the work areas shown on the Drawings to the greatest possible depth without intermingling the cover material with underlying wastes. No stripping shall be started without approval of the Engineer. The limits of stripping, both horizontal and vertical, will be determined by the Engineer, prior to, during and at the completion of the stripping operation. The material shall be stockpiled for use as low permeability soil, vegetated soil or fill. The Engineer will direct which material will be stockpiled in each case. The Contractor shall be responsible for proper runoff control in accordance with ITEM: EROSION AND SEDIMENT CONTROL.

3.2 Excavation:

Excavation of every description, regardless of material encountered, shall be performed

to the lines and grades indicated or as directed by the Engineer. All excavation material shall be transported to and placed in approved fill areas. Excavations carried below the lines and grades indicated, or directed by the Engineer, shall be refilled to the proper grade with suitable material at the Contractor's expense.

3.3 Drainage Swales and Pipe Trenches:

Drainage swales and pipe trenches shall be constructed accurately to the cross sections and grades indicated. All roots, stumps, rock, and foreign matter in the sides and bottom of the swales shall be trimmed and dressed or removed to conform to the slope, grade, and shape of the section indicated. Care shall be taken not to excavate drainage swales or pipe trenches below the grades indicated. Excessive excavations shall be backfilled to grade with thoroughly compacted material at the Contractor's expense. All drainage swales and pipe trenches excavated under this section shall be maintained until final acceptance of the work. Material excavated from drainage swales and pipe trenches shall be disposed of in approved fill areas.

3.4 Preparation of Ground Surface for Fill:

All vegetation, such as roots, brush, heavy sods, heavy growth of grass, and all decayed vegetable matter, rubbish, and other miscellaneous waste materials within the area upon which fill is to be placed for grading purposes shall be removed before the fill is started. In no case will material and/or debris designated for clearing remain in or under the fill area.

3.5 Fill:

No frozen material will be permitted in the fill. The material shall be placed in successive horizontal layers for the full width of the cross section and shall be compacted to achieve a maximum thickness of 12-inches. Each layer shall be compacted to an unyielding state before the overlying lift is placed.

3.6 Finished Areas:

Cuts and fills shall be constructed to the approximate lines and grades shown on the Drawings. The Engineer reserves the right to deviate from the grades shown on the Drawings, if necessary, to accommodate actual material volumes. The degree of finish shall be that ordinarily obtainable from blade-grading operations prior to placement of subsequent layers.

3.7 Protection:

Newly graded areas shall be protected from traffic and from erosion. Any settlement or erosion that may occur from any cause, prior to acceptance, shall be repaired and grades reestablished to the required elevations and slopes. The requirements of ITEM: SEDIMENT AND EROSION CONTROL, shall apply.

ITEM 5.5
COVER SYSTEM

1.0 SCOPE:

This item specifies the construction and testing requirements for the low permeability soil and vegetated soil layers of the cover system.

1.1 References:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic description and shall be the latest published version.

1.1.1 American Society for Testing and Materials (ASTM)

ASTM D-422 Particle-Size Analysis of Soils

ASTM D-698 Moisture-Density Relations of Soil and Soil Aggregate Using 5.5-lb Rammer and 12-inch Drop (Standard Proctor)

ASTM D-2216 Laboratory Determination of Water Moisture Content of Soil, Rock, and Soil-Aggregate Mixtures

ASTM D-2922 Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

ASTM D-3017 Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

ASTM D-4318 Liquid Limit, Plastic Limit and Plasticity Index of Soils

1.1.2 Office of Chief of Engineers, Engineer Manual:

EM1110-2-1906 Laboratory Soils Testing and Change 1, Appendix VII:
Permeability Tests

1.1.3 New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.

NYSDOT - Section 713-Landscape Development Materials

1.2 Submittals:

1.2.1 Materials Handling Plan: The Contractor shall submit for review a materials handling plan that will identify equipment and procedures to be utilized in excavation, loading, transporting of the low permeability soil from the on-site borrow area. Methods and equipment for placing both the low permeability soil layer and the vegetative soil layer will be identified.

1.2.2 The Contractor shall submit 24-inch x 36-inch plan sheets indicating the elevations at each intersection point of a 50-ft by 50-ft grid before and after construction of the low permeability soil layer. The plan sheets shall indicate the thickness of the low permeability of soil layer at each intersection point and at the toes, midpoints, and top of slopes. The plan shall identify the limits of the closure area. The drawings shall include record contour lines of the top of graded fill, as the fill layer will dictate the final contours of the cover system. The low permeability soil layer record drawings shall be stamped by a surveyor or professional engineer licensed in the State of New York and submitted to the Engineer for review, adequately in advance (2-day minimum) of covering the low permeability compacted soil layer with the vegetative soil layer. The documentation shall be formally submitted to the Engineer, accompanied by a letter of transmittal.

1.2.3 The Contractor shall submit required test results and a 5-pound sample of each soil material. Samples shall be submitted in tagged bags that identify the type of material, project name, source and date the sample was taken.

2.0 MATERIALS:

2.1 Low Permeability Soil:

The low permeability soil material shall be obtained primarily from the borrow area shown on the Drawings, the stockpile in area "A" and other suitable materials made available from grading operations.

2.1.1 The low permeability material shall be free from roots, sumps and other miscellaneous wastes scheduled for removal under ITEM: CLEARING AND GRUBBING. If necessary the low permeability soil will be screened by the Contractor to remove roots and debris measuring more than 3-inches in any dimension.

2.1.2 The in-place permeability of the low permeable soil shall be 1×10^{-7} cm/sec or less when compacted.

2.1.3 The Contractor shall assist the Engineer in obtaining samples of borrow material. The frequency, location and depth well be as directed by the Engineer. Table 5.5-1 identifies the minimum testing frequency for borrow materials.

2.1.4 Results of the borrow material tests will be used by the Engineer to determine acceptable ranges of moisture content and maximum dry densities. This information will be used to establish a baseline for comparing the in-place moisture content and resulting compacted density of the low permeability soil layer.

2.1.5 Material with a remolded permeability exceeding the maximum permissible value for the low permeability soil, represented by the test, will not be used as low permeability soil.

TABLE 5.5-1

DUNLOP TIRE CORPORATION
WASTE SITE CLOSURE
MINIMUM TESTING FREQUENCY
FOR MATERIAL QUALITY TESTING OF LOW PERMEABILITY SOILS

TEST	FREQUENCY	TEST METHOD
Grain size with hydrometer	1 test per 2500 cy of material	ASTM D-422
Moisture content	1 test per 1000 cy of material	ASTM D-2216
Atterberg limits	1 test per 1000 cy of material	ASTM D-4318
Laboratory Permeability	1 test per 5000 cy of material	EM110-2-1906
Moisture-Density curve	1 per 5000 cy of material and when a change in material occurs	ASTM D-698

2.1.6 No material shall be used without prior approval of the Engineer. The Contractor shall schedule construction activities so that the proposed soil material is tested and results available a minimum of five working days prior to its planned use.

2.1.7 Sufficient volume of low permeability soil may not be available from onsite sources. The Contractor may be required to provide low permeability soil material from an approved offsite source consisting of material less than 3-inches in any dimension and classified as CL, SC GC, SM, GM or ML by the Unified Soil Classification System. The offsite material shall be capable of meeting the required in-place permeability of 1×10^{-7} cm/sec. The Contractor shall be required to perform the tests identified on Table 5.5-1 and submit the analyses to the Engineer prior to bringing the material onsite.

2.2 Vegetative Soil:

2.2.1 The vegetative soil shall consist of the material previously stripped by the Contractor and stockpiled at locations designated by the Engineer. The vegetative material shall be free from roots, stumps and other miscellaneous wastes scheduled for removal under ITEM: CLEARING AND GRUBBING. Wood chips generated during the clearing and grubbing operation will be mixed with the vegetative soil material prior to placing the 6-inch layer.

2.2.2 Sufficient volume of vegetative soil may not be available from onsite sources. The Contractor may be required to provide vegetative soil material from an approved off-site source that conforms to NYSDOT-713-01 Topsoil. The Contractor shall perform and submit the results of pH tests, organic content and gradation for every 5,000 cubic yards of material to the Engineer for review prior to bringing the material onsite.

3.0 EXECUTION:

3.1 Low Permeability Soil:

3.1.1 Low permeability soil shall be placed on the surface of the approved graded and compacted fill material as a single lift that will produce an 18-inch layer after compaction. The low permeability soil will be compacted with a minimum in-place density measuring 95 percent of the maximum dry density, as determined by Standard Proctor tests and shall exhibit an in-place permeability of 1×10^{-7} cm/sec or less.

3.1.2 Should the soil be too wet to permit proper compaction, all work on the portions of the compacted fill thus affected shall be delayed until the material has dried to an acceptable moisture content. Drying of the soil by manipulation may be necessary to obtain the proper moisture content throughout the material to achieve the specified compaction and permeability, and shall be accomplished by the Contractor, at no additional cost to the Owner. Any required manipulation of the material shall be performed to obtain a homogeneous moisture content prior to compaction.

3.1.3 Test Pad: A test pad will be constructed to demonstrate that the Contractor's proposed equipment and methods for placing the low permeability compacted soil layer are sufficient to achieve the density and permeability requirements.

3.1.3.1 The test pad shall be constructed as part of the initial cover system. Incorporation of the test pad into the extended cover system will require scarifying, blending and moisture addition as necessary and as directed by the Engineer. The location of 50 foot by 50 foot test pad shall be selected so the pad will not impede the progress of other construction activities.

3.1.3.2 The Engineer will carefully observe the test pad construction to determine and record minimum placement requirements necessary to achieve the required in-place moisture and density of the compacted layer.

3.1.4 Quality Control for Test Pad:

3.1.4.1 Test Frequencies: The Contractor shall treat the test pad as a separate entity in regards to the frequency of soil tests on borrow materials and in-place materials. The following tests and frequencies shall be used to determine the quality of the low permeability soil layer:

3.1.4.2 Moisture Content and Dry Density: The Engineer shall measure the moisture content and dry density of the compacted soil layer through the use of a nuclear densitometer to verify that a homogeneous compacted soil layer exists. A minimum of 4 tests shall be performed on the 18-inch compacted layer.

3.1.4.3 Permeability Testing: One 3-inch diameter Shelby tube sample shall be obtained from the test pad. The sample shall be collected by the Engineer with assistance from the Contractor.

3.1.5 Information obtained from the construction and testing of the test pad will serve to guide the Contractor and Engineer during construction of the low permeability soil layer. The Engineer will require the Contractor to construct another test pad area if the Contractor changes equipment and/or procedures to construct the compacted layer or if there is a significant change in the material that could affect the properties of the constructed compacted layer using established and approved procedures and equipment.

3.1.6 Installation of the Low Permeability Soil Layer:

3.1.6.1 Equipment, methods and procedures demonstrated to be effective in attaining the required moisture-density-permeability values during the construction and testing of the test pad, shall be incorporated for the placement and compaction of the low permeability soil layer of the cover system.

3.1.6.2 The soil material shall be of proper moisture content before rolling to obtain the specified compaction and permeability. Wetting or drying of the material and manipulation, when necessary, to obtain a uniform moisture content throughout the layer may be required.

3.1.6.3 Hauling and spreading equipment will not be considered as compaction equipment and will not be included in the count of the number of passes of compaction equipment over the work area.

3.1.6.4 In small areas where large compaction equipment is not capable of reaching, the material shall be compacted to the same requirements, but shall be brought up in lifts not to exceed six

(6) inches. When the operation occurs adjacent to structures, the materials shall be placed and compacted uniformly in such a manner as to prevent wedging action or eccentric loading upon or against the structures.

3.1.6.5 The Contractor shall maintain the surface moisture of the completed layer to prevent desiccation cracking. Desiccation cracks in the low permeability soil layer shall be repaired by the Contractor.

3.1.7 Construction Quality Tests:

Minimum testing frequencies for construction quality evaluation are presented in Table 5.5-2.

3.1.8 The Contractor shall be responsible for repairing difficult work to the satisfaction of the Engineer. Holes resulting from the in-place permeability tests (2-3" diameter holes/acre) and the moisture density tests (9-1" diameter holes/acre performed by the Engineer with the Contractor's assistance, shall be sealed by the Contractor with bentonite or a soil bentonite mixture.

3.1.9 Tolerances:

Thickness tolerance for the 18-inch compacted low permeability soil layer shall be ± 1 inch as determined by survey.

3.2 Vegetative Soil Layer:

3.2.1 Depth of the low permeability soil layer shall be confirmed by a survey approved by the Engineer prior to placement of the vegetated soil layer.

3.2.2 Vegetative soil material shall not be placed if there is excessive moisture, frost, or other condition until it is suitable for spreading as determined by the Engineer. The soil shall be placed on the designated areas and spread to a minimum thickness of six (6) inches. After the soil is spread, all stiff clods, rocks, roots, or other foreign matter shall be cleared and disposed of by the Contractor as approved by the Engineer so that the finished surface will be acceptable for the seeding operation.

3.3 The Contractor shall be responsible for the stability of all in-place soil throughout the duration of the Contract, and shall replace any portion which, in the opinion of the Engineer, has become disturbed. The Contractor shall replace the damaged material to the specifications provided. The Contractor shall maintain, and retain responsibility for, the placed materials until the project is accepted by the Owner.

3.4 Weather Considerations:

When the weather is of such a nature as to endanger the quality of the material being placed, the placement of material shall be halted until the weather conditions are satisfactory. Under no condition shall material be placed during heavy rains.

3.5 Protection:

Newly graded areas shall be protected from traffic, erosion, and any settlement that may occur from any cause, prior to seeding or acceptance. Damaged areas shall be repaired and grades reestablished to the required elevations and slopes. The requirements of ITEM: EROSION AND SEDIMENT CONTROL, shall apply.

TABLE 5.5-2

DUNLOP TIRE CORPORATION
WASTE SITE CLOSURE
MINIMUM TESTING FREQUENCY FOR
CONSTRUCTION QUALITY TESTING

TEST	FREQUENCY	TEST METHOD
Density	9 Tests/Acre	ASTM 2922
Moisture	9 Tests/Acre	ASTM D-3017
Undisturbed Permeability	1 Test/Acre	EM110-2-1906

ITEM 5.6

GRANULAR MATERIALS

1.0 SCOPE:

This item specifies the requirements for constructing the permanent stone access roads, walkways and backfill material beneath asphalt pavement.

1.1 References:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic description only and shall be the latest published version.

1.1.1 New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.

NYSDOT - Section 304 - Subbase Course

1.2 Submittals:

The Contractor shall submit gradation and other applicable analyses for the proposed material that will be used to construct the stone access roads, walkways and used as backfill beneath asphalt pavement, to the Engineer for review.

2.0 MATERIALS:

2.1 Materials for the access roads, walkways and backfill material beneath asphalt shall consist of NYSDOT 304-2.02 Material Requirements - Type 2 material.

3.0 EXECUTION:

3.1 Placing:

The material shall be placed directly on the surface of the geotextile material defined in ITEM: GEOTEXTILE to the lines, grades and thicknesses shown on the Drawings in a manner to minimize segregation. Uncontrolled spreading from piles dumped on grade will not be permitted.

3.2 Compaction:

The Contractor shall compact the stone to an unyielding state.

3.3 Tolerance:

After compaction, the top surface shall not be more than 1/2" above or below the design grade as determined by survey.

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ITEM 5.7

GEOTEXTILE

1.0 SCOPE

This item specifies the Contractor's requirements for installing the geotextile fabric beneath the stone access roads and walkways at locations shown on the Drawings.

1.1 SUBMITTALS:

1.1.1 The Contractor shall provide the Engineer with written certification that the geotextiles meet or exceed the required minimum property values specified in these specifications.

1.1.2 The Contractor shall submit the manufacturer's written instructions for storage, handling, installation, with the conditions of the manufacturer's warranty.

2.0 MATERIALS:

2.1 Geotextile :

2.1.1 Geotextile shall be high modulus, woven material manufactured from monofilaments of polypropylene formed to a stable network to retain their relative position and shall be 600 X as manufactured by Mirafi, or an approved equal. The delivered geotextile shall demonstrate compliance with the property requirements presented in Table 5.7-1.

2.2 Manufacture of Geotextile:

2.2.1 All rolls of geotextile shall be identified with the manufacturer's name, product identification, lot number, roll number, and roll dimensions.

2.2.2 Geotextiles and thread shall be manufactured from first quality virgin materials.

2.3 Transport and Storage of Geotextile:

2.3.1 During shipment, the geotextile shall be protected from puncture, cutting, or any other damaging or deleterious conditions. Upon delivery of the geotextile rolls, the Contractor shall ensure that geotextile rolls are handled by appropriate means so that no damage is caused to the fabric to ensure conformance to the design specifications and the minimum roll properties.

2.3.2 The Engineer shall examine the geotextile rolls upon delivery for any deviation from these specifications. The Contractor shall make the necessary repairs or replace the damaged products delivered to the site to the satisfaction of the Engineer.

TABLE 5.7-1
MINIMUM PHYSICAL PROPERTIES REQUIREMENTS FOR GEOTEXTILE

Fabric Property	Unit	Test Method	Min. Avg. Roll Value
Weight	oz/yd ²	ASTM D-3776-84	6.0
Thickness	mils	ASTM D-1777-64	25
Grab Tensile Strength	lbs	ASTM D-4632-86	300
Grab Tensile Elongation	%	ASTM D-4632-86	15
Trapezoidal Tear Strength	lbs	ASTM D-4533-85	115
Mullen Burst Strength	psi	ASTM D-3786-87	600
Puncture Strength	lbs	ASTM D-4833-88	145
Apparent Opening Size	US Std. Sieve	ASTM D-4751-87	30-70
Permittivity	sec ⁻¹	ASTM D-4491-85	0.1
Flow Rate	gpm/ft ²	ASTM D-4491-85	9.2
UV Resistance After 500 hrs.	% strength retained	ASTM D-4355-84	90
Width Tensile Strength	lbs/in	ASTM D-4595-86	200 x 300
Width Tensile Elongation	%	ASTM D-4595-86	15 x 15

2.4 Sampling and Testing:

Upon delivery of the geotextile, the Engineer may retain samples and forward them to an independent laboratory for testing to ensure conformance to the design specifications. The Owner will be responsible for laboratory testing costs. The Contractor shall be responsible for all costs including shipping, testing and material replacement if the Owner's laboratory testing results in rejection of materials and material replacement. The Contractor shall accommodate the Engineer in obtaining the samples for such testing. All conformance testing will be performed by an approved testing laboratory. Samples shall be taken across the entire width of the roll and shall not include the first three lineal feet. Unless otherwise specified, samples shall measure three feet in the roll long dimension, and removed along the entire roll width. Samples will be taken at a minimum rate of one per manufacturer's lot.

3.0 EXECUTION:

3.1 Installation of Geotextile:

All geotextiles shall be handled in such a manner as to ensure that the geotextiles are not damaged in any way. Should the Contractor damage the geotextile to the extent that it is no longer usable as determined by these specifications, or the Engineer, or should laboratory testing prove the geotextile deficient, the Contractor shall replace the geotextile.

3.2 The geotextile shall be installed on prepared surfaces at locations shown on the Drawings and as per manufacturer's recommendation. Sharp objects and stones measuring 4 inches in any dimension shall be removed prior to installing the fabric.

3.3 In the presence of wind, all geotextiles shall be weighted with sandbags or approved equivalent until the aggregate material is placed.

3.4 Geotextile shall be laid in the direction of traffic. Fabric edges shall be overlapped a minimum of 2 feet.

3.5 The Contractor shall not allow heavy equipment to traffic on top of the geotextile without approved protection.

3.6 Geotextiles shall be covered with NYSDOT-Type 2 material in accordance with ITEM: GRANULAR MATERIALS, as soon as possible.

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ITEM 5.8

FENCING

1.0 SCOPE:

This item specifies the requirements for removing, storing and replacing sections of the chain-link fence at areas shown on the Drawings or as directed by the Engineer.

1.1 References:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic description and shall be the latest published version.

1.1.1 American Society for Testing and Materials (ASTM)

ASTM C 94 Ready-Mixed Concrete

1.1.2 Federal Specifications (FS)

FS RR-F-191/GEN (Rev K) Fencing, Wire and Post Metal and Gates, Chain-Link Fence Fabric, and Accessories

FS RR-F-191/1 (Rev D) Fencing, Wire and Post, Metal (Chain-Link Fence Fabric)

1.1.3 National Electric Safety Code - Subsection 9

1.2 Submittals:

1.2.2 Temporary Fence:

The Contractor shall submit manufacturer's literature on materials that will be used to construct the temporary security fence to the Engineer for review prior to removing sections of the existing permanent fence.

1.2.3 Barbed Wire:

Shop drawings identifying the barbed wire shall be submitted to the Engineer for review.

2.0 MATERIALS:

2.1 Braces:

Braces shall conform to FS RR-F-191/3, zinc-coated; Class 1 Grade A or B, steel pipe, size SP1 Class 3, form steel sections, size FS1, conforming to FS RR-F-191/3, may be used as braces if Class 3 line posts are furnished.

2.2 Accessories:

Accessories shall conform to FS RR-F-191/4. Ferrous accessories shall be zinc-coated. Truss rods shall be furnished for each terminal post. Truss rods shall be provided with

turnbuckles or other equivalent provisions for adjustment.

2.3 Barbed Wire:

The barbed wire shall consist of a single coil made of galvanized materials with 4-point barbs spread 4 inches apart. The existing holding brackets will be salvaged and reinstalled on the line posts.

3.0 EXECUTION:

Chain-link fabric, H-line posts, top rails and barbed wire brackets salvaged during removal shall be re-installed to the same lines and grades from which it was removed. The area on either side of the fence line shall be cleared to the extent indicated. New barbed wire will be installed on all reinstated lengths of fence.

3.1 Posts:

Posts shall be set plumb and in alignment. H-Section line posts may be mechanically driven such that the driven posts develop strengths at least equal to post, set in concrete. Driven posts shall be protected with drive caps when being set. Existing posts that were set in concrete shall be reset using concrete that conforms with ASTM C94.

3.2 Braces and Truss Rods:

Braces and truss rods shall be installed as required and in conformance with the standard practice for the fence furnished. Braces and truss rods shall extend from terminal posts to line posts. Diagonal braces shall form an angle of approximately 40 to 50 degrees with the horizontal.

3.3 Tension Wires:

Tension wires shall be installed along the bottom of the fence line and attached to the terminal posts of each stretch of the fence. Bottom tension wire shall be installed within the bottom six (6) inches of the installed fabric. Tension wire shall be pulled taunt and shall be free of sag.

3.4 Chain-Link Fabric:

The salvaged chain-link fabric shall be installed on the side of the post facing away from this property. Fabric shall be attached to terminal posts with stretcher bars and tension bands. Bands shall be spaced at approximately 15-inch intervals. Fabric shall be pulled taunt to provide a smooth uniform appearance free from sag. Fabric shall be fastened to line posts at approximately 15-inch intervals and fastened to tension wires at approximately 24-inch intervals. Fabric shall be cut by untwisting and removing pickets. Splicing shall be accomplished by weaving a single picket into the ends of the rolls to be joined.

3.5 Barbed Wire: Barbed wire strands shall be stretched and attached to the brackets mounted on the tops of the fence posts. The brackets shall be notched for securing the barbed wire strands brackets shall be securely fastened to the posts using either tack welds or pin bolts. The brackets shall be reinstalled to angle into the site.

3.6 Grounding: The Contractor shall furnish and install ground conforming to the requirements of Subsection 9 of the National Electric Safety Code.

3.7 Posts and chain link fabric that will not be reinstalled shall be neatly bundled, rolled and stored in an area designated by the Engineer.

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ITEM 5.9

STONE FILLING

1.0 SCOPE:

This item specifies the requirements for placing stone filling and bedding material at the locations shown on the Drawings or as directed by the Engineer.

1.1 References: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic description only and shall be the latest published version.

1.1.1 New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.

NYSDOT - Section 620 - Bank and Channel Protection

1.2 Submittals: The Contractor shall submit gradation and other applicable analysis for the proposed materials to the Engineer for review.

2.0 MATERIALS:

Materials used for stone filling and bedding shall conform to NYSDOT Sections 620-2 or Soundness Approval, 620-2.02 Stone Filling - Light and 620-2.05 Bedding Material.

3.0 EXECUTION:

3.1 Surface Preparation: The ground surface on which stone filling and bedding material is to be placed shall be prepared in accordance with NYSDOT 620-3.01 General.

3.2 Placement: The stone filling shall be placed in accordance with NYSDOT 620-3.02 and the bedding material shall be placed in accordance with NYSDOT 620-3.05.

ITEM 5.10

ADJUST EXISTING DRAINAGE STRUCTURES

1.0 SCOPE:

This section covers the material and construction requirements for altering existing brick manholes at locations identified on the Drawings.

1.1 General Requirements:

1.1.1 Alterations shall conform to the shape sizes, elevation and materials detailed in the Drawing or as directed by the Engineer.

1.1.2 Cast-iron frames, grates and covers shall be salvaged from existing structures for reuse at that location.

1.2 References:

The publications listed below form a part of this specification to the extend referenced. The publications are referred to in the text by basic description and shall be the latest published version.

1.2.1 American Society for Testing and Materials (ASTM)

ASTM C32 - Specification for Sewer and Manhole Brick (made from clay and shale)

ASTM C94 - Specification for Ready Mix Concrete

ASTM B221 - Aluminum Alloy Extruded Bars, Rods, Wire, Shapes and Tubes

2.0 MATERIALS:

2.1 Alteration Materials:

2.1.1 Bricks for manhole alterations shall conform to ASTM C32.

2.1.2 Mortar used for the alteration of existing manholes shall conform to ASTM C94.

2.1.3 Reinforcement if necessary shall conform to ASTM B221.

2.2 Delivery and Storage: Materials delivered to the site shall be inspected for damage, color, unloaded and stored with a minimum amount of handling.

3.0 EXECUTION:

3.1 Alterations to Existing Structures:

3.1.1 The existing brick structures shall be exposed and visually inspected to determine the depth to which the brick courses shall be removed (area where the structure is sound) prior to extending the existing structure.

3.1.2 Units for manholes must be designed so that only full length units are required to lay any one course.

3.1.3 All bricks and castings shall be laid in full mortar beds. Mortars have been stiffened because of evaporation of water, may be retempered by adding water as needed to restore the required consistency. Mortar used for filling vertical or inclined joints shall be of such consistency that will require rodding for placing. The mortar shall be rodded until it rises to the top and completely fills the joints.

3.1.4 Joints: All joints in masonry units shall be full mortar joints not greater than 1/2-inch wide on the inside and outside. When specified, the outside of each structure shall be plastered with 1/2-inch thick mortar coat.

3.2 Pipe Installations: All pipe built into the walls of the structure shall be flush with the inside face of the wall and shall project outside a sufficient distance to allow for proper connection with the adjoining pipe section. The masonry shall fit neatly and tightly around the pipe and shall be sealed with mortar.

3.3 Alterations: When adjustments of existing structures to proper grade is specified, the frames, covers, and gratings, shall be removed and the walls reconstructed as required. The cleaned frames shall be reset at the required elevation. Upon completion, each structure shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind and shall be kept clear of such accumulation until final acceptance of the work.

3.4 Frames and Grates: Frames, covers and grates shall be placed true to line and grade. Covers, grates and frames shall make firm, full and even bearing on their respective underlying surfaces and shall be non-rocking under the influence of traffic or other loads.

3.5 Field Repairs for Improperly Fitting Systems: The Contractor may propose to the Engineer reasonable field repair procedures for improperly fitting casting. No field repairs of improperly fitting fabricated frames and grates shall be allowed. Field repairs may include grinding and/or proper welding techniques for the materials involved. Repairs that involve welding shall be allowed only on steel castings, and constituent parts have full, uniform and even bearing contact on their respective underlying surfaces and that do not rock or move under the influence of traffic and other loads. All such repairs must be completed to the satisfaction of the Engineer and shall be performed at no additional cost to the Owner.

ITEM 5.11

TURF

1.0 SCOPE:

This item specifies the requirements for testing, seeding, mulching and maintenance of turf areas.

1.1 References:

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only and shall be the latest published version:

1.1.1 Agricultural Marketing Services (AMS)

AMS - 01 Federal Seed Act Regulations (Part 20):
 Certified Seed Regulations

1.1.2 Federal Specifications (FS)

FS JJJ-S-181 Seeds, Agricultural

1.2 Submittals:

1.2.1 Schedules: The Contractor shall submit a list of proposed soil amendment, seeding, mulching equipment and soil erosion materials to be used to perform the turfing operation. Descriptive data and intended delivery dates of the materials shall be included.

1.2.2 The Contractor shall submit a sample of the vegetative soil to the local office of the Soil Conservation Service and obtain their recommended fertilizer and lime application rates for each of the proposed seed mixes. The Contractor shall submit the results to the Engineer, who may alter the fertilizer and/or lime application rates based on the analyses. The Contractor shall bear all costs associated with this testing.

1.2.3 Certificates: The Contractor shall submit certificates of compliance certifying that materials meet the requirements specified, prior to the delivery of materials. Certificates for the following materials shall be included:

Seed;

Percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, date tested and state certified for the seed mixture.

Soil Amendments;

Conditioners, fertilizers and amendments shall bear the manufacturer's guarantees chemical analysis, and name of the product.

1.3 Delivery, Inspection, Storage and Handling:

1.3.1 Delivery: The Engineer shall be notified a minimum of seven days in advance of scheduled deliveries. Soil amendments may be furnished in bulk or in the original, unopened containers bearing the manufacturer's chemical analysis and name.

1.3.2 Inspection: Seed shall be inspected upon arrival at the job site by the Engineer for conformity to type and quality in accordance with paragraph: MATERIALS. Other materials shall be inspected for meeting specified requirements. Unacceptable materials shall be removed from the job site.

1.3.3 Storage and Handling: Materials shall not be dumped or dropped from vehicles, except for bulk deliveries in areas designated by the Engineer. Seed, and soil amendments shall be stored in cool, dry locations. Chemical treatment materials shall not be stored with other landscape materials.

2.0 MATERIALS:

2.1 Seed:

2.1.1 Seed Classification: State-approved seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance with AMS-01 and applicable state seed laws.

2.1.2 Seed Mixtures: Two seed mixtures shall be utilized for this site. Seed Mix 1 shall be used in all areas except for the steeper sloped areas of the creek and borrow area, where Seed Mix 2 will be used.

<u>Seed Mix 1</u>	<u>Rate in lb/acre</u>
Tall Fescue	20
Redtop	2
Perennial Ryegrass	5
Birdsfoot Trefoil	8
 <u>Seed Mix 2</u>	 <u>Rate in lbs/acre</u>
Creeping Red Fescue	20
Perennial Ryegrass	5
Redtop	2
Crownvetch	15

2.1.3 **Quality:** Seed shall conform to FS JJJ-S-181. Weed seed shall not exceed 1 percent by weight of the total mixture. Wet, moldy, or other wise damaged seed shall be rejected.

2.1.4 **Seed Mixing:** The field mixing of seed if required shall be performed on site in the presence of the Engineer using calibrated equipment.

2.2 **Soil Amendments:**

2.2.1 **Limestone:** Limestone shall have a minimum calcium carbonate equivalent of 90 percent and shall be ground to such a fineness that at least 90 percent will pass a 10-mesh sieve and at least 50 percent will pass a 60-mesh sieve and the specified rates of application are increased in linear proportion to the quantities passing the 60-mesh sieve where zero passage indicates doubling the application rate.

2.2.2 **Fertilizer:** Fertilizer shall be commercial grade, free flowing, uniform in composition and shall conform to applicable State and Federal regulations. Fertilizer shall bear the manufacturer's guaranteed statement of analysis. Fertilizer shall contain a minimum of percentage of 10 percent nitrogen of which 50 percent shall be organic, 10 percent available phosphoric acid and 10 percent potash.

2.3 **Mulch:** Mulch shall be straw or hay mulch, tacked with hydrophilic colloid; or fixed in place with disk land packers, disk harrows for other approved methods; or fiber mulch applied in applications of grass seed and fertilizer by the use of hydromulching machinery.

2.3.1 **Straw** shall be stalks from oats, wheat, rye, barley, or rice that are free from undesirable seeds, noxious weeds, mold, or other objectionable material. Straw shall be in an air-dry condition and suitable for placing with blower equipment.

2.3.2 **Hay** shall be native hay, sudan-grass hay, brooms edge hay, or other herbaceous mowings, free from undesirable seeds, noxious weeds, mold, or other objectionable material. Hay shall be in an air-dry condition and suitable for placing with blower equipment.

2.3.3 **Fiber mulch** shall be composed of partially digested wood fibers with green dye and dispersing agent. Fiber mulch may only be used on relatively flat areas where plant establishment is expected before September 30. In all other applications hay or straw mulch must be used.

2.4 **Non-Asphaltic Tackifier:** Hydrophilic colloid shall be applied at a rate recommended by the manufacturer. Application using hydraulic equipment suitable for mixing and applying a uniform mixture or other approved method will be utilized.

2.5 **Water:** Water shall not contain elements detrimental to specified seed mixes.

2.6 **Erosion Control:** The Contractor shall be responsible for erosion control of newly seeded and turfed areas until acceptance by the Engineer in accordance with ITEM: EROSION AND SEDIMENT CONTROL.

3.0 EXECUTION:

3.1 Seeding Times and Conditions:

Seed operations shall be performed during periods when beneficial results can be obtained. When drought, excessive moisture, cold weather or other unsatisfactory conditions prevail, the work shall be stopped if directed and appropriate sediment and erosion control methods implemented.

3.2 Site Preparation:

Surface irregularities resulting from construction activities shall be leveled to eliminate depressions. Disturbed and regraded areas shall be smoothed and raked to remove stones and other debris larger than 3 inches. The Engineer shall verify the condition and thickness of the vegetative soil layer in finished areas prior to seeding.

3.3 Application of Soil Amendments:

3.3.1 Fertilizer shall be uniformly applied at a rate of 600 pounds per acre. Fertilizer shall be incorporated into the soil to a minimum depth of 4 inches by disking, harrowing or other acceptable method.

3.3.2 Immediately following or simultaneously with the incorporation of the fertilizer, lime shall be uniformly applied at a rate of 3 tons per acre. Lime shall be incorporated into the soil to a minimum depth of 4 inches by disking, harrowing or other acceptable method.

3.3.3 Finished areas shall be protected by vehicular or pedestrian traffic and erosion.

3.4 Seeding:

Prior to seeding, any previously prepared seedbed areas compacted or damaged by interim rain, traffic or other cause, shall be reworked to restore the ground condition previously specified. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

3.4.1 Equipment Calibration: The equipment to be used and the methods of seeding and area preparation shall be subject to the inspection and approval of the Engineer prior to commencement of seeding operation. The Contractor shall conduct equipment calibration tests in the presence of the Engineer.

3.4.2 Applying Seed: The Contractor shall apply seed uniformly by approved broadcasting methods or hydroseeding.

3.4.2.1 Broadcast Seeding: Seed shall be uniformly broadcast at the specified rates for the appropriate area using broadcast seeders. Half of seed shall be broadcast in one direction, and the remainder at right angles to the first direction. Seed shall be covered with soil to an average depth of 1/4 inch using a harrow, steel mat drag, cultipacker, or other approved device.

3.4.2.2 Rolling: Immediately after seeding, the entire area shall be firmed with a roller not exceeding 90 pounds for each foot of roller width.

3.4.2.3 Mulch Straw or Hay: mulch shall be spread uniformly at the rate of 2 tons per acre. Fiber mulch shall be applied uniformly at a rate of 1 ton per acre. Mulch shall be spread by hand, blower - type mulch spreader or other approved method. Mulching shall be started in the windward side of relatively flat areas or on the upper part of a slope and continued uniformly until the area is covered. Mulch shall not be bunched. Mulch shall be anchored, as required, using V-type wheel land packer, a scalloped - disk land packer designed to force mulch into the soil surface or other suitable means to the satisfaction of the Engineer.

3.4.3 Hydroseeding: Seed and fertilizer shall be added to water and thoroughly mixed at the rates specified for the appropriate area to produce a homogeneous slurry. Wood cellulose fiber mulch shall be added at the rates recommended by the manufacturer after the seed fertilizer and water have been thoroughly mixed. Slurry shall be uniformly applied under pressure over the entire disturbed/regraded area. The hydroseeded area shall not be rolled.

3.5 Water:

Watering shall be started within 3 days after completing the seeded area. Water shall be applied at a rate sufficient to ensure moist soil conditions to a minimum depth of 1 inch. Run-off and puddling shall be prevented.

3.6 Erosion Control:

Erosion control materials shall be installed in accordance with the manufacturers instructions. Placement of the erosion control material shall be accomplished without damaging the installed material or duration to the finished grade. Sufficient erosion control shall be provided by the Contractor to the extent necessary, in accordance with ITEM: EROSION AND SEDIMENT CONTROL.

3.7 Restoration and Clean Up:

3.7.1 Restoration: Existing areas, pavements and facilities that have been damaged from the seeding operation shall be restored to original condition at Contractor's expense.

3.7.2 Clean Up: Excess and waste materials shall be removed from the turfing operation and shall be disposed of off site. Adjacent paved areas shall be cleaned.

3.8 Protection of Seeded Areas:

Immediately after seeding, the area shall be protected against traffic or other use as directed by the Engineer.

3.9 Turf Establishment:

Maintenance of the seeded areas shall include protecting embankments and ditches from erosion, maintaining erosion control materials and mulch, protecting seeded areas from traffic, and watering.

3.9.1 Watering: Watering shall be at intervals to obtain a moist soil conditions to a minimum depth of 1 inch. Frequency of watering and quantity of water shall be adjusted in accordance with the growth of the grass. Run-off, puddling and wilting shall be prevented.

3.9.2 Repair: The Contractor shall re-establish as specified herein, eroded, damaged or barren areas. Mulch shall also be repaired or replaced as required.

3.9.3 Fertilization: The Contractor shall re-fertilize all previously seeded areas during the first week in May if turf has not yet established and the vegetation has not been accepted by the Engineer.

3.10 Acceptance:

3.10.1 Preliminary Inspection: Prior to the completion of the project, a preliminary inspection shall be held by the Engineer. The acceptability of the grass shall be determined. Areas that have unacceptable stand of grass as determined by the Engineer shall be repaired as soon as seeding conditions permit.

3.10.2 Final Inspection: A final inspection shall be held by the Engineer to determine whether deficiencies noted in the preliminary inspection have been corrected. Time for the inspection shall be established in writing.

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ITEM 5.12
TREE RELOCATION

1.0 SCOPE:

This item specifies the requirements for relocating existing evergreen trees.

1.1 Submittals:

1.1.1 The Contractor shall submit a Planting Schedule identifying the dates the evergreens will be relocated to the Engineer for review.

1.1.2 The Contractor shall provide certificates of inspection that accompany the shipments of the soil amendment materials and other test data to verify delivered materials comply with the specified requirements.

2.0 MATERIALS:

2.1 Topsoil: Topsoil used to relocate trees shall be obtained from the material stockpiled during the clearing and grubbing operation.

2.2 Peat Humus: Peat humus is a natural product of either sphagnum moss, reed, or sedge peat, taken from a fresh water site. Supply shredded material, free from lumps, roots, stones and other extraneous foreign matter, capable of passing through a 1/2-inch screen, which can easily be incorporated with the topsoil. Supply material which has been conditioned in storage piles after excavation for at least 6 months, including one freezing and thawing period. Supply peat humus with the following analysis:

- Not less than 90 percent organic matter by weight on an oven dry basis.
- pH range 5 to 7.5.
- Moisture content 35 percent at time of incorporation into soil.
- Water absorbing ability 150 percent to 350 percent by weight.

2.3 Bonemeal: Commercial, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.

2.4 Sand: Sand shall be washed and be of medium to fine grade.

2.5 Commercial Fertilizer: Fertilizer shall be uniform in composition and suitable for application with approved equipment. Fertilizer shall consist of not less than 10 percent available phosphoric acid, 3 to 5 percent total nitrogen and 3 to 5 percent soluble potassium.

2.6 **Tree Planting Soil:** Backfill soil for replanting trees shall be salvaged from the excavations from which the trees were removed. The soil will be supplemented with peat humus and coarse sand. Tree planting soil shall be mixed to the following proportion:

<u>Percent by Volume</u>	<u>Material</u>
60	Soil
30	Peat Humus
10	Coarse Sand

Three pounds of bonemeal will be added to each cubic yard of mixed planting soil. Add 5 pounds of 5-10-5 commercial fertilizer per cubic yard of tree planting soil for spring planting.

3.0 EXCAVATION:

3.1 The Contractor shall handle the trees in a manner that will minimize damage while removing the trees from their existing locations and planting them at their final locations as quickly as possible.

3.2 The Contractor shall mark the locations of the replanted trees in the area shown on the Drawings for approval by the Engineer prior to excavating the tree pits.

3.3 **Tree Pits:** Tree pit diameter shall be excavated to twice the root spread for trees up to and including a two foot root spread; pit diameters shall equal the root diameters plus two feet for root spreads 2 to 4 feet. The depths of all pits will be excavated to permit 6 inches of soil to be landfilled under the roots or balls.

3.4 **Obstructions Below Ground:** Rocks or other underground obstructions shall be removed to depths necessary to permit planting as directed by the Engineer unless other locations have been approved.

3.5 **Planting:** Evergreen trees shall be planted during seasons that will promote growth. Trees shall be set plumb at such a level that after settlement they bear the same relation to the level of the surrounding ground as they bore to the ground from which they were dug unless otherwise directed by the Engineer. Backfill material for all plants shall be thoroughly settled by firming or tamping. Backfill soil shall be carefully placed into plant pits in layers not to exceed 4 inches in depth and firmly tamped before additional backfill is placed. Thorough watering shall accompany backfilling unless otherwise approved.

3.6 Excess soil generated during the tree relocation shall be used at fill areas designated by the Engineer.

3.7 **Watering:** Replanted trees shall be watered 3 times a week by the Contractor or as ordered by the Engineer to ensure the soil adjacent to the trees remain moist.

ITEM 5.13

WELL ABANDONMENT

1.0 SCOPE:

This item specifies the requirements for abandonment of existing monitoring wells identified on the Drawings.

1.1 References:

Work associated with this effort shall be performed in accordance with the requirements of the latest published version of the following regulation:

NYSDEC 6NYCRR Part 360 Solid Waste Regulations Section 360-2.11 (8)(vi).

1.2 Submittals:

1.2.1 Well Abandonment Plan: The Contractor shall submit a well abandonment plan that identifies the material, equipment and procedures to be utilized in removing and sealing designated monitoring wells. Samples of the required forms shall be presented as an appendix of the plan.

1.2.2 Record Documents: Record documents indicating the actual quantities of materials used to seal each well and record drawings of each abandonment will be submitted to the Engineer at the completion of this work.

2.0 MATERIALS:

The monitoring wells will be sealed using a cement-bentonite mixture recommended by the Contractor which is appropriate to placement method and subject to the Engineer's review.

3.0 EXECUTION:

The Contractor shall protect the Owner's property from damage while performing the work. The wells shall be abandoned in a manner that precludes contaminants from entering the well.

3.1 Removal Procedures:

3.1.1 The protective casings surrounding the monitoring wells shall be removed without damaging the inner well casing.

3.1.2 The Contractor shall remove the well casing and screen from the borehole. The Contractor shall perforate the well screen or punch out the bottom cap of the well prior to removal. If the casing cannot be pulled or the well screen puncture is insufficient to allow tremie feeding of grout, the Contractor shall either pressure inject the grout or over drill the well prior

to **sealing**. Casing within the upper five feet of the finished ground surface (or proposed level) shall be removed.

3.2 **Sealing Procedures:**

3.2.1 Grouting shall proceed using a cement-bentonite mixture emplaced through a tremie pipe extended the length of the boring to five feet from the ground surface. The upper five feet shall be **backfilled** with native soil and compacted to an unyielding state.

3.2.2 If pressure grouting, the Contractor shall test the effectiveness of grout penetration within the filter pack around the well screen prior to sealing the remainder of the casing.

3.3 **The Contractor shall remove all waste materials from the site and restore the area to the condition that existed prior to construction.**

4.0 **QUALITY CONTROL:**

4.1 **Record Drawings:**

The Contractor shall document the type of materials, depths of removal, fill, backfill and procedures used to seal the well. This information will be shown on record drawings that depict the actual elevation of each abandoned well.

4.2 **Contractor's Log and Required Forms:**

The Contractor shall record the location of the well, actual depth, volume of grout and backfill material placed, elevation of finished grade and other pertinent data as determined by the Engineer. The required forms shall be completed by the Contractor to the satisfaction of the Engineer.

ITEM 5.14

CORRUGATED METAL PIPE

1.0 SCOPE:

This item specifies the requirements for furnishing and installing corrugated metal pipe and galvanized steel end sections.

1.1 **References:** The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic description and shall be the latest published version.

1.1.1 **New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.**

707-02	Round Corrugated Steel Pipe and Pipe Arches
707-10	Galvanized Steel End Sections

1.1.2 **American Society for Testing and Materials (ASTM) Publications:**

A 798	Installing Factory Made Corrugated Steel Sewer Pipe
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1.2 Submittals:

1.2.1 **Manufacturer's Recommendations:** The Contractor shall provide installation procedures and manufacturer recommendations to the Engineer for review and approval prior to installation of the corrugated metal pipes and galvanized steel end sections.

1.2.2 **Certification:** Certified copies of test reports demonstrating conformance to applicable pipe specifications shall be submitted to the Engineer for review and approval.

2.0 MATERIALS:

2.1 **Corrugated steel pipe** shall conform to Section 707-02 of the NYSDOT Specifications. The corrugated steel pipe shall be of the size shown on the Drawings.

2.2 **Joints for Corrugated Metal Pipe:** Transverse field joints shall be of such design that the successive connection of pipe sections will form a continuous line free of appreciable irregularities in the flow line. Suitable transverse field joints which satisfy the requirements for one or more of the joint performance categories can be obtained with the following types of connecting bands, furnished with suitable band-end fastening devices: corrugated bands, bands with projections, flat bands, and bands of special design that engage factory reformed ends of corrugated pipe. The space between the pipe and connecting hands shall be kept free from dirt and grit so that corrugations fit snugly. The connecting band, while being tightened, shall be tapped with soft-head mallet of wood, rubber or plastic, to take up slack and insure a tight joint.

2.2.1 Field joints for each type of corrugated metal pipe shall maintain pipe alignment during construction and prevent infiltration of fill material during the life of the installations. The type, size, and sheet thickness of the band and the size of angles or lugs and bolts shall be as indicated on the Drawings.

2.2.2 Connecting bands shall be of the type, size and sheet thickness of band, and the size of angles, bolts, rods and lugs as indicated on the Drawings. If the band has tended to loosen its grip on the bolts or rods, the band nuts shall be retightened and remain uncovered until a tight, permanent joint is assured.

2.3 Galvanized steel end sections shall conform to the requirements of Section 707-10 of the New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.

2.4 Delivery and Storage: Materials delivered to site shall be inspected for damage, unloaded, and stored with a minimum of handling. Materials shall not be stored directly on the ground. The inside of pipes and fittings shall be kept free of dirt and debris.

2.5 Handling: Materials shall be handled in such a manner as to insure delivery to the trench in sound, undamaged condition. Pipe shall be carried to the trench, not dragged.

3.0 EXECUTION:

3.1 Removal of Unstable Material:

Where wet or otherwise unstable soil incapable of properly supporting the corrugated steel pipe arch, as determined by the Engineer is unexpectedly encountered such material shall be removed to the depth required and replaced to the proper grade with select granular material, compacted as provided in paragraph: BACKFILLING. When removal of unstable material is due to the fault or neglect of the Contractor in his performance of shoring and sheeting, water removal, or other specified requirements, resulting material shall be excavated and replaced at the Contractor's expense.

3.2 Placing Pipe:

Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Pipelines shall be laid to the grades and alignment indicated on the Drawings. Proper facilities shall be provided for lowering sections of pipe into trench. No pipe shall be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. All pipe in place shall be inspected before backfilling, and those pipes damaged during placement shall be removed and replaced. Corrugated metal pipe shall be installed in accordance with ASTM A798.

3.3 Backfilling Pipe in Trenches:

After the pipe has been installed backfilling with material at a moisture content that will facilitate compaction, shall be placed along both sides of pipe in layers not exceeding 6 inches

in compacted depth. Material to be used for backfilling shall be select excavated material free from rocks, stumps, metal, rubber, or any other unsuitable material as determined by the Engineer.

3.4 Movement of Construction Machinery:

Displacement of or injury to the pipe shall be avoided during compaction of the fill material. Movement of construction machinery over a culvert or storm drain at any stage of construction shall be at the Contractor's risk. Any pipe damaged thereby shall be repaired or replaced. Fill material shall be compacted with deformation of fill material between perpendicular compaction passes is less than 1-inch or as directed by the Engineer.

ITEM 5.15

ASPHALT PAVEMENT

1.0 SCOPE:

This item specifies the requirements for saw cutting, removing and disposing of the existing asphalt pavement from the area shown on the Drawings, and replace the removed pavement with new asphalt meeting the lines and grades that existed prior to construction.

1.1 References: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic description only and shall be the latest published version.

1.1.1 New York State Department of Transportation (NYSDOT) Standard Specifications Construction and Materials.

NYSDOT - Section 401 - Plant Mix Pavements - General

NYSDOT - Section 403 - Hot Mix Asphalt Concrete Pavement

1.2 Submittals: The Contractor shall submit certificates of compliance from the manufacturers of the specified materials.

2.0 MATERIALS:

2.1 Binder Course: Asphalt concrete binder course material shall conform to NYSDOT - Section 401 and Section 403, Type 3 Binder.

3.0 EXECUTION:

3.1 Saw Cutting: Saw cutting of asphalt concrete shall be performed only where indicated on the Drawings or where ordered by the Engineer. Saw cutting equipment shall be capable of sawing asphalt concrete to the specified depth. The saw cut shall be made to the full depth of the existing asphalt pavement and shall be straight and true. All saw cut surfaces shall be thoroughly cleaned by means satisfactory to the Engineer. Care shall be exercised in saw cutting asphalt so as not to damage material designated to remain in place. All debris from the saw cutting work shall be disposed of on-site in a location to be determined by Dunlop Tire Corp.

3.2 Preparation of Finegrade: The paving surface shall be finegraded to the satisfaction of the Engineer. The grade shall consist of compacted, uniformly graded material with no segregation.

3.3 Placement of Binder Course: Placement of the binder course shall conform to NYSDOT - Section 401-3 Construction Details.

6.0 BID PROCEDURES

6.1 Pre-Bid Meeting and Site Inspection

- A. All prospective bidders are invited to attend a pre-bid meeting at the Owner's premises (10 Sheridan Drive, Reception Room) on **March 19, 1993 at 1:00 PM.** A one time only site inspection for all Contractors and Sub-contractors will be held at this time. There will be no other opportunity to inspect the premises, prior to submission of bids.

6.2 Submission of Bids

- A. All bids are to be submitted, in writing, to the attention of Mr. A. J. Williams, Purchasing Manager, Dunlop Tire Corporation, Buffalo, NY 14240, by the designated time and date specified in the Request for Quotations.
- B. All bids to be valid for a period of (60) days from the date of submission.
- C. All bids shall identify the names of the Contractor's intended Sub-Contractors, for the Owner's approval.

6.3 Sales Taxes

- A. Contractor shall not include in the bid any applicable State and local sales taxes on labor, equipment use and rental or materials.

6.4 Format of Bids

FORM OF PROPOSAL

- A. All Bidders will submit their quotations in the format of the attached "Bidding Schedule".
- B. Names of all Prospective Sub-Contractors.
- C. The hourly labor rates (straight time and premium time) for all contract and sub-contract labor trades, plus the Contractor's standard markups.
- D. The Contractor's standard markups for additional materials and equipment rental which may be required.
- E. The Contractors Equipment rental rates.

NOTE: Should it be necessary for the Contractor to perform any additional work on a "time and material" basis, then the rates described above shall apply and daily time sheets will be required.

In NO case will payment be made for any additional labor or materials, without prior, written authorization from the Owner's Project Engineer.

- F. Fill in Attachment "A" for items C, D, and E above.
- G. Contractor shall submit an outline of the technical approach to the capping project, emphasizing the following areas:
 - o Construction Schedule
 - o Sediment Control
 - o Drainage & Dewatering
 - o Quality Control
 - o Dust Control and Roadway maintenance
 - o Security
 - o Traffic Control
 - o Materials Handling
 - o Contingency for Encountering Wastes

This information shall be utilized in the bid selection process.

6.5 Invoices and Payments

- A. Dunlop will make monthly progress payments, against Contractor's invoice for this project
- B. Invoices covering additional work or materials **must** be submitted monthly **AND FOLLOW THE JOB PROCESS**.
 - 1. Invoices are to be in a format similar to the American Institute of Architects (A.I.A.) Form G702, itemizing the contract amount, all extra work orders to date and their numbers and amounts.
 - 2. Invoices submitted for time and materials work, must be accompanied by photocopies of approved time sheets, and materials invoices.
- C. In no case should invoices exceed payment for actual work completed.
- D. The Owner will make monthly progress payments, based upon Contractor's applications for payment. Progress payments shall not exceed 90% of the work completed, or materials and equipment installed in place.
- E. Balance of final payment will be made thirty (30) days after 100% of job completion, against Contractor's application for payment, and upon the Owner's inspection and satisfaction of compliance, in addition to Owner's receipt of record drawings and documents.

6.6 Terms and Conditions

- A. Forms T053 and F-1989, submitted with this Request for Quotation, constitute essential and integral parts of any order and resulting contract.
- B. It is understood that the Owner shall make no payments to the Contractor or Subcontractors for additional cost, for whatsoever reason, **without the prior written authorization and approval of the Project Engineer or his authorized representative.**

1.0 TIME AND MATERIALS RATES

CRAFTS RATES:

All rates shall include base rate, supervision, equipment, taxes, insurance, fringe benefits, and profit, consumables and all small tools with a value of less than five hundred dollars (\$500.00).

Classification	Straight	Time/Half	Double
Superintendent	_____	_____	_____
Foreman	_____	_____	_____
Journeyman	_____	_____	_____
Apprentice	_____	_____	_____
Others	_____	_____	_____

Straight Time Rate will apply to all hours worked as follows:

Time and One-Half Rate will apply to all hours worked as follows:

Double Time Rate will apply to all hours worked as follows:

1.1 EQUIPMENT RENTAL RATES

Rental rates shall include all fuel, lubricants, maintenance, repairs, overhead and profit. Rates shall include operating personnel (if required). State major equipment to be brought on site.

NOTE: Bidder to supply rental rate schedule.

The Contractor will show percent markups for the following:

- 1) On material: _____
- 2) On third tier work, Contract to Subcontract: _____
- 3) Non-owned equipment rental: _____

NOTE: Copies of original invoices shall be required prior to payment of account.

5.4 Format of Bids

FORM OF PROPOSAL

A. All Bidders will submit their quotations in the following format:

1. Labor	\$	_____
2. Materials	\$	_____
3. Equipment rental / usage.....	\$	_____
4. Cost of Performance Bond	\$	_____
5. Cost of Labor & Material Payment Bond....	\$	_____
Total Price	\$	_____

B. Names of all Prospective Sub-Contractors

C. The hourly labor rates (straight time and premium time) for all contract and sub-contract labor trades, plus the Contractor's standard markups.

D. The Contractor's standard markups for additional materials and equipment rental which may be required.

E. The Contractors Equipment rental rates.

NOTE: Should it be necessary for the Contractor to perform any additional work on a "time and material" basis, then the rates described above shall apply and daily time sheets will be required.

In NO case will payment be made for any additional labor or materials, without prior, written authorization from the Owner's Project Engineer.

F. Fill in Attachment "A" for items C, D, and E above.

DUNLOP TIRE CORPORATION
CLOSURE OF INACTIVE WASTE SITES NOs. 915018 A, B & C

BIDDING SCHEDULE

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
1	Project Startup and Site Services	LS	1	\$	\$
2	Site Health & Safety	LS	1	\$	\$
3	Clearing & Grubbing				
	a. With Tree Removal	Acre	6.5	\$	\$
	b. Without Tree Removal	Acre	2.0	\$	\$
4	Abandoned Tire and Debris Removal	CY	90	\$	\$
5	Excavation, Filling , Backfilling	CY	26,000	\$	\$
6	Low Permeable Soil Placement	CY	39,100	\$	\$
7	Offsite Low Permeable Soil	CY	5,150	\$	\$
8	Offsite Vegetative Soil	CY	3,650	\$	\$
9	Site Drainage Structures	LS	1	\$	\$
10	Access Roads	SF	4,300	\$	\$
11	Walkways	SF	1,850	\$	\$
12	Fence Work				
	a. Remove & Reinstall	LF	480	\$	\$
	b. Remove & Store	LF	850	\$	\$
13	Tree Relocation	Each	6	\$	\$
14	Vegetative Layer	SF	1,044,000	\$	\$
15	Well Abandonment	LF	228	\$	\$
Total of 1 through 15					\$

BIDDING SCHEDULE (Continued)

ATTACHMENT C

ITEM NO.	CONTINGENCY WORK	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
A	Drum Removal/Staging	Each	0	\$	\$
B	Drum Overpacking	Each	0	\$	\$
C	Level "B"	Worker-Days	0	\$	\$
D	Contaminated Soil Handling	CY	0	\$	\$

ITEM NO.	CREDITED WORK	UNIT	ESTIMATED QUANTITY	UNIT PRICE	ESTIMATED AMOUNT
I	Decontamination Water Disposal	Gallon	0	\$	\$

Total Labor \$ _____

Total Materials \$ _____

Total Equipment Rental/Usage \$ _____

Cost of Performance Bond \$ _____

Cost of Labor and Materials Payment Bond \$ _____

Total Price \$ _____

WORK AND SERVICES

If Seller is to perform any work or services for Buyer under this Order, then Seller agrees to the terms and conditions which follow. The terms and conditions are in addition to the other terms and conditions of this order, either as set forth on the Purchase Order itself or on any attachment thereto. If there is any inconsistency, then with respect to work and services to be performed, the terms and conditions which follow shall apply.

The Work

Seller shall perform all work covered by this Order. Seller represents that it is: (i) fully experienced and properly qualified to perform the work, (ii) properly and adequately equipped, organized and financed to do the work.

Seller acknowledges and agrees that it is an independent contractor and not an agent or employee of Buyer.

Seller shall furnish all labor, supplies, equipment and materials necessary to perform the work covered by this order.

Seller shall provide at all times during the course of the work a competent and qualified representative having general supervision of the work and full power to represent Seller in all matters pertaining to this Agreement and shall furnish necessary technical, supervisory, administrative as well as material and labor control personnel, including reasonable discipline and good order among its employees and shall not employ or continue to employ any unfit person or anyone not skilled in the work assigned to him.

The work shall be executed in good workmanlike manner by qualified, careful and efficient workers in strict conformity with the standards of the industry, and all materials and supplies furnished by Seller and used in connection with the work shall be new and of good quality and shall be in accordance with the plans and specifications approved by Buyer.

Seller shall confine its operations at the premises to limits prescribed by Buyer and shall not unreasonably encumber the premises or interrupt plant operations.

Buyer shall at all times be afforded access to all records, correspondence, instructions, receipts, vouchers and memoranda of every description pertaining to the work.

Seller shall, upon final completion of the work, turn over the work to Buyer in good order, promptly remove all of Seller's tools, machinery, equipment, facilities, and surplus materials and supplies. All surplus materials, tools, machinery, equipment, facilities, and supplies included in the cost of the work and not consumed in the work, if desired by Buyer, will be delivered to Buyer in the condition in which they were received, reasonable wear and tear and damage by the elements excepted.

Seller shall at all times keep the Buyer's premises free from accumulations of waste material or rubbish. At the completion of the work and services covered by this order, Seller shall leave the Buyer's premises broom clean.

Any and all materials included as a part of the work furnished shall be unloaded and stored within the Buyer's premises and shall remain Buyer's property.

Title to all the work completed at the premises or in the course of construction at the premises shall be in Buyer.

Seller shall provide all labor and equipment necessary to test, in accordance with the specifications, all work performed and materials supplied by Seller.

Seller shall inspect the premises and at all times take all necessary measures to protect the safety of all persons (including without limitation Seller's subcontractors and Seller's and subcontractors' employees, agents, suppliers, and invitees) who at Seller's or Buyer's request come onto the premises where Seller's work is to be performed, from all hazards, whether created by Buyer or others.

If work is to be performed hereunder on Buyer's premises, Seller represents that it has examined the premises and any specifications or other documents furnished in connection with the work and services covered by this order and that it has satisfied itself as to the condition of the premises and site and agrees that no allowance shall be made in respect of any error as to such on the part of Seller.

Compliance With Laws

It is agreed that Seller shall obtain all permits and licenses as necessary, and Seller shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. Seller shall be responsible for any violations of applicable laws, city ordinances and damages to personal property caused by it or its employees, or subcontractors or any employees of the subcontractors.

Hazardous Materials

Buyer has available to all outside contractors, information to comply with the OSHA Hazardous Communication Standard. This information is available upon request through the Buyer's Safety Department.

Seller is responsible for all chemicals brought on site by it and its subcontractors. Material Safety Data Sheets (29 CFR Part 1910, Subpart 2 - Toxic and Hazardous Substances, Occupational Safety and Health Administration) must be submitted for any hazardous material before it is brought into any facility of Buyer.

Payments

Unless otherwise provided in this order, Buyer shall make final payment to Seller within thirty (30) days after it falls due, as hereafter specified.

Payments may be withheld on account of (1) defective work not remedied, (2) claims filed, (3) failure of Seller to make payments properly to subcontractors or for labor, materials, or equipment, (4) damage to a third party, or (5) unsatisfactory prosecution of the work by Seller.

Final payment shall not be due until Seller has delivered to Buyer a complete release of all liens, arising out of this order or receipts covering in full all labor, materials and equipment for which a lien could be filed, or, at the discretion of the Buyer, a bond satisfactory to the Buyer indemnifying him against any lien.

Insurance and Indemnification

- (i) Seller shall keep the premises and work free and clear of all mechanic's liens. Seller hereby waives its right to any mechanic's lien or other lien under any applicable statutes or otherwise for work done or materials furnished in connection with the items. Seller shall obtain from any subcontractor or materialman prior to the performance of any work hereunder or the furnishing of any materials, a written waiver satisfactory to Buyer of its right to any such lien and shall deliver such waiver to Buyer promptly upon receipt thereof. If at any time there shall be evidence of the existence of any lien or claim, Buyer may use moneys then due or to become due to discharge such lien or satisfy such claim and credit such amounts against the amounts due or to become due to Seller.
- (ii) Seller shall perform the work at Seller's sole risk prior to its written acceptance by Buyer and replace at Seller's sole expense all work damaged or destroyed by any cause whatsoever.
- (iii) Seller shall indemnify and hold Buyer and its agents, consignees, employees and representatives harmless against all expenses (including attorneys' fees), damage claims, suits, or liabilities of every kind whatsoever by reason of, arising out of, or in any way connected with the work and services performed or to be performed hereunder, including without limitation the claims for injury or damage to the person, property or employees of Seller, agents, subcontractors, suppliers and representatives and Buyer's employees, agents, consignees and representatives.
- (iv) Seller shall maintain policies of liability insurance of such forms, types and such amounts and with such companies as may be designated by Buyer, which policies shall be written so as to protect Buyer and Seller from the risks enumerated in Section (iii). Such policies of insurance shall not be cancelable (including cancellation for non-renewal) except upon thirty (30) days' written notice to Buyer and proof of such insurance shall be furnished by Seller to Buyer. In addition, such policies shall protect all subcon-

tractors of Seller. Seller agrees to make prompt written report to the insurance company involved of all accidents, occurrences, injuries or losses which may occur and of any and all claims made against the persons insured under said policies of insurance and to send copies of such reports to Buyer within thirty-six (36) hours of the time that Seller obtained knowledge of the occurrence thereof.

- (v) Seller shall pay, as required by applicable laws, all payroll taxes or contributions or payments for unemployment insurance or Workmen's Compensation Insurance or old age pensions or annuities, including social security contributions, and shall hold Buyer harmless from any assessments against Buyer in connection therewith. Seller shall fully comply with all applicable employer's liability laws and Workmen's Compensation acts of each state or political subdivision in which the work and services are performed. Seller shall furnish Buyer with evidence of the foregoing satisfactory to Buyer.

- (vi) Seller represents and warrants that (i) no employee, agent or representative of Buyer nor any relative of any employee, agent or representative of Buyer has an ownership, financial or other proprietary interest in Seller or in any subcontractor to be employed or used by Seller in the performance of the work; for the purposes of this subparagraph, relative is defined as the spouse, child, parent, grandparent, brother, sister, aunt, uncle or the spouse or child of any such person; and (ii) all its employees, agents or representatives and those of any subcontractor employed or used by Seller in the performance of the work are eighteen years of age or older.

Termination

In addition to all rights provided herein or in any attachment hereto or by law, Buyer shall have the right to immediately cancel this order in whole or in part if Seller fails to promptly perform the work covered by, and as specified in this order, or any part thereof. Buyer shall not be liable in any way to Seller or to third parties for any damages which Seller claims result from any such cancellation.

DUNLOP TIRE CORPORATION

Important: The terms and conditions which follow are printed on the reverse side of the Dunlop Purchase Order. They, along with Form 1989, work and services, if attached, constitute essential and integral parts of any order and the resulting contract.

TERMS AND CONDITIONS

General Terms and Conditions Applicable to All Purchase Orders

In addition to the terms and conditions of any attachment hereto, the following terms and conditions shall apply with respect to this order:

Buyer as used herein means Dunlop Tire Corporation, its successors and assigns.

Buyer may inspect the items ordered hereunder during their manufacture, construction and/or preparation at reasonable times and shall have the right to inspect such items of the time of their delivery and/or completion. Items furnished hereunder may at any time be rejected for defects or defaults or defaults revealed by inspection, analysis, or manufacturing operations or use after delivery even though such items may have previously been inspected and accepted. Such rejected items may be returned to Seller for full refund to Buyer, including shipping and transportation charges.

Whenever Seller shall, by virtue hereof, have in its possession property of Buyer, Seller shall be deemed as insurer thereof and shall be responsible for its safe return to Buyer.

Whenever Buyer has the right to demand of Seller adequate assurance of due performance, Buyer shall be the sole judge of the adequacy of assurance given by Seller.

Seller shall not assign any right or delegate any duty arising hereunder and any such attempted assignment or delegation shall be null and void.

Buyer shall have the right to assign its rights hereunder to any corporation into which it shall be merged, with which it shall be consolidated, or by which it or all or substantially all of its assets shall be acquired.

No course of prior dealings between Buyer and Seller and no usage of the trade shall be relevant to supplement or explain this contract.

No delay or omission by Buyer in exercising any right or remedy hereunder shall operate as a waiver thereof or of any other right or remedy, and no single or partial exercise thereof or the exercise of any other right or remedy. All rights and remedies of Buyer hereunder are cumulative.

This Purchase Order, together with the attachments hereto, constitutes the complete agreement between Buyer and Seller and supersedes any prior or contemporaneous written or oral agreement between the parties.

This Purchase Order, or any contract resulting herefrom, cannot be modified or amended except in a writing signed by Buyer.

This Purchase Order, any contract resulting herefrom, and performance hereunder, shall be governed by the laws of the State of New York as amended.

Except as may be otherwise provided in this Purchase Order, the contract price includes all applicable federal, state and local taxes.

GOODS, MACHINERY, EQUIPMENT

If this order relates to the sale of goods, machinery or equipment, then Seller agrees to the terms and conditions which follow. These terms and conditions are in addition to the other terms and conditions of this order either as set forth on the Purchase Order itself or on any attachment thereto. If there is any inconsistency, then with respect to the sale of goods, machinery or equipment, the terms and conditions which follow shall apply.

ACCEPTANCE

Acceptance of this order must be limited to the terms hereof, expressed or implied, and any additional or different terms or conditions in any written acceptance or invoice are proposals which do not become a part hereof unless Buyer consents thereto in writing.

PRICE

The price which Seller charges in filling this order shall not be higher than that last charged or quoted to Buyer for such items (if there has been a change or quotation previously) unless Buyer otherwise expressly agrees in writing. If a price is set forth on the face of this order by the Buyer, such price shall control. In all events Seller shall charge the Buyer a price which is not in excess of the lowest prevailing market price for the same or similar items or the lowest price at which Seller is selling such items.

WARRANTIES AND INDEMNIFICATION

In addition to all warranties implied in fact or law, Seller expressly warrants that all goods covered by this order (i) shall be of good quality and workmanship and free from all defects; (ii) shall conform to all specifications, drawings, descriptions, and samples approved by Buyer; (iii) shall be merchantable. Seller further warrants that Seller has good title to the goods covered by this order free and clear of all liens and encumbrances and will transfer such title to Buyer. Acceptance of or payment for goods shall not constitute a waiver of warranties. Buyer's approval of sample furnished for inspection is to assist Seller and does not relieve Seller from responsibility to deliver goods conforming to all specifications, drawings and descriptions.

Seller shall indemnify and hold Buyer and its agents, consignees, employees and representatives harmless from and against all expenses (including attorney's fees), damage claims, suits, or liabilities of every kind whatsoever by reason of, arising out of, or in any way connected with accidents, occurrences, injuries, losses to or of any person or property which may occur before or after acceptance by Buyer, upon or about or in any way due to or resulting from in whole or in part, the design, preparation, manufacture, construction, completion and/or delivery of the items purchased under this order, including such as are caused by any subcontractor or supplier of Seller and excluding only such as are caused by the negligence of Buyer, other than where Buyer's negligence consists of its failure to discover a condition caused or permitted to exist by Seller or any subcontractor or supplier.

Upon notice from Buyer, Seller shall, at its sole expense, settle or defend any dispute or threatened action asserting any such claim. Seller's liability is not limited to the cost of the goods supplied hereunder.

Seller shall maintain policies of liability insurance of such forms, types and such amounts and with such companies as may be designated by Buyer, which policies shall be written so as to protect Buyer and Seller from the risks enumerated in this Section. Such policies of insurance shall not be cancelable except upon thirty (30) days' written notice to Buyer and proof of such insurance shall be furnished by Seller to Buyer. In addition, such policies shall protect all subcontractors of Seller. Seller agrees to make prompt written report to the insurance company involved of all accidents, occurrences, injuries or losses which may occur and of any and all claims made against the persons insured under said policies of insurance and to send copies of such reports to Buyer within thirty-six (36) hours of the time the Seller obtained knowledge of the occurrence thereof.

CANCELLATION

In addition to all other rights provided herein and by law, Buyer reserves the right to cancel this order in whole or in part (i) if the goods do not conform to any express or implied warranty, (ii) if Seller fails to make deliveries as directed by Buyer, (iii) if Seller becomes insolvent, (iv) if a petition under any chapter of the bankruptcy laws is filed by or against Seller, (v) if a receiver is appointed for Seller, (vi) if Seller should fail to use

properly skilled personnel, (vii) if Seller should fail to make prompt payment to any subcontractors if they may have or for any material, labor, transportation, supplies, fuel, use of equipment or any other expenses it incurs in the production or construction of the items covered by this order, (ix) or if Seller should fail to comply with any of its obligations in this purchase order. Buyer may take possession of the goods in whatever stage of completion they may be and contract with or employ any other person or persons to finish the goods and collect from Seller any additional expenses or damage which Buyer may suffer.

If this order requires or authorizes the delivery of goods in separate lots to be separately accepted and if any goods or tender do not conform hereto, Buyer may reject any or all goods affected or the entire installment and any undelivered installments.

In the event of causes beyond the control of Buyer, such as fire, flood, strikes, accidents or transportation difficulties, which would make it unwise in Buyer's discretion to accept delivery hereunder, Buyer shall have the option to cancel this purchase order without liability, or delay the delivery or completion of all or part of the goods.

TIME OF DELIVERY

If Buyer has inserted a delivery or completion date on the face of this order, Buyer reserves the right to cancel this order if said date is not met or if, prior to said date, Buyer in its discretion believes that said date will not be met. If a delivery or completion date is not so specified on the face of this order, a reasonable time will be allowed. Time is of the essence of this purchase order.

If this order provides for partial shipment, Buyer may suspend shipment of the balance upon notice to Seller, such suspended shipments to be shipped on or before last shipping date specified.

COMPLIANCE WITH LAW

Seller agrees to indemnify and save Buyer, its successors, assigns, customers and agents harmless against all costs, damages, claims and demands for actual or alleged direct or contributory infringement of any patents, either in the United States of America or any foreign countries, of any trademarks or any other proprietary rights in the United States of America or any foreign countries or similar rights because of the sale or use of the goods specified herein.

DISCLOSURE OF INFORMATION

Any unpatented knowledge or information concerning Seller's products, methods or manufacturing processes which Seller may disclose to Buyer shall, unless otherwise specifically agreed in writing signed by the parties hereto, be deemed to have been disclosed as a part of the consideration for this order, and Seller shall not assert any claim against Buyer as the result of Buyer's use thereof.

All drawings, specifications or samples loaned or furnished by Buyer to Seller for tendering or production or any other purposes, must be considered strictly confidential and shall be preserved in perfect order, to be returned promptly upon completion or termination of the work or activity for which the same were loaned or furnished.

CHANGES IN SPECIFICATIONS

Buyer shall have the right to make from time to time changes, additions, omissions, or alterations in the items or to packing, destinations, specifications, drawings, designs, or to postpone the delivery. Immediately upon such change being ordered, the parties shall undertake to agree to an appropriate adjustment in price, up or down and/or in the other terms of this purchase order. Such changes and such adjustments must be in writing to be binding upon Buyer.

DIES, TOOLS, JIGS

Unless otherwise herein agreed, die equipment, tools, jigs, fixtures and patterns used in the manufacture of goods to be furnished hereunder shall be supplied by and at the expense of Seller and shall be kept in good condition, and shall be replaced when necessary by Seller without expense to Buyer. Buyer has the option at any time to reimburse Seller for the whole or any part of said dies, tools, and patterns and replacements, and become the owner and entitled to the possession of same.

Seller shall be responsible for the proper maintenance and safe delivery to Buyer of all die equipment tools, jigs, fixtures and patterns paid for or supplied by Buyer and the same shall be subject to removal from Seller's plant on Buyer's written notice.

RISK OF LOSS

Title and risk of loss to and with respect to the items shall remain in Seller until the items in a completed state have been delivered to and accepted by Buyer or to an agent or consignee duly designated by Buyer at the location specified on the face hereof. Items which are to be shipped shall be shipped F.O.B. destination unless otherwise specified by Buyer. A packing slip must accompany each such shipment and if a shipment is to a consignee or agent of Buyer, a copy of the packing slip shall be forwarded concurrently to Buyer. If no such packing slip is sent, the count of weight by Buyer or its agent or consignee is agreed to be final and binding on Seller with respect to such shipment.

REPAIRS AND SERVICE

Buyer reserves the right to repair defective goods and charge Seller with Buyer's cost thereof.

If any of the goods furnished under this order are composed of more than one part, Seller shall furnish Buyer such quantity of component parts as Buyer may order at prices in proportion to the prices specified for the complete unit, notwithstanding such parts are ordered after this contract has been otherwise performed.

COMPLIANCE WITH FEDERAL, STATE & LOCAL LAWS

By acceptance hereof Seller warrants that in its performance hereunder it will comply with all applicable federal, state and local laws, rules, regulations, administrative and executive orders, and pertinent governmental procurement regulations. To the extent applicable, the following provisions of the Armed Services Procurement Regulations are incorporated herein by reference: 1-707.3 (a) "Utilization of Small Business Concerns"; 1-707.3 (b) "Small Business Subcontracting Program"; 1-805.3 (a) "Utilization of Concerns in Labor Surplus Areas"; 1-805.3 (b) "Labor Surplus Area Subcontracting Program"; 6-104.5 "Buy American Act"; 6-403 "Communist Areas"; 6-605.2 "Duty Free Entry - Canadian Supplies"; 7-103.13 "Renegotiation"; 7-103.19 "Officials Not to Benefit"; 7-104.24 "Suspension of Work"; 7-104.11 "Excess Profit"; 7-104.12 "Military Security Requirements"; 7-104.15 "Examination of Records"; 7-104.16 "Priorities, Allocations & Allotments"; 7-104.41 "Audit and Records"; 9-104 "Notice & Assistance Regarding Patent & Copyright Infringement"; 9-106 "Filing of Patent Applications"; 9-203 (b) "Rights in Technical Data"; 12-203 "Convict Labor"; 12-303.1 "Contract Work Hours Standards Act of 1964 - Overtime Compensation"; 12-605 "Walsh Healey Public Contracts Act."

Seller further warrants that it will comply with the Fair Labor Standards Act of 1938, as amended. Each invoice of goods must certify that the goods invoiced were produced in accordance with the Fair Labor Standards Act of 1938, as amended.

If goods ordered hereunder are to be used in Buyer's place of employment, Seller warrants that such goods will be in compliance with the Occupational Safety and Health

(over please)

EQUAL OPPORTUNITY CLAUSE

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

- 1) The supplier will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The supplier will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The supplier agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- 2) The supplier will, in all solicitations or advertisements for employees placed by or on behalf of the supplier, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.
- 3) This supplier will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the supplier's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- 4) The supplier will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
- 5) The supplier will furnish all information and reports, required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- 6) In the event of the supplier's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the supplier may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations or order of the Secretary of Labor, or as otherwise provided by law.
- 7) The supplier will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The supplier will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for non-compliance. Provided, however, that in the event the supplier becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the supplier may request the United States to enter into such litigation to protect the interests of the United States.

AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS

(a) The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.

(b) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(c) In the event of the Contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.

(d) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified handicapped employees and applicants for employment, and the rights of applicants and employees.

(e) The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, and is committed to take affirmative action to employ and advance in employment physically and mentally handicapped individuals.

(f) The contractor will include the provisions of this clause in every subcontract or purchase order of \$2,500 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to section 503 of the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA

(a) The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam Era in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam Era without discrimination based upon their disability or veterans status in all employment practices such as the following: employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The contractor agrees that all suitable employment openings of the contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed but excluding those of independently operated

corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required.

State and local government agencies holding Federal contracts of \$10,000 or more shall also list all their suitable openings with the appropriate office of the State employment service but are not required to provide those reports set forth in paragraphs (d) and (e).

(c) Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the contractor from any requirements in Executive Orders or regulations regarding nondiscrimination in employment.

(d) The reports required by paragraph (b) of this clause shall include, but not limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of nondisabled veterans of the Vietnam Era hired, (3) the number of disabled veterans of the Vietnam Era hired, and (4) the total number of nondisabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 USC 1787. The contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting office or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

(e) Whenever the contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The contractor may advise the State system when it is no longer bound by this contract clause.

(f) This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(g) The provisions of paragraphs (b), (d) and (e) of this clause do not apply to openings which the contractor proposed to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside of his own organization or employer-union arrangement for that opening.

(h) As used in this clause: (1) "All suitable employment openings" includes, but is not limited to, openings which occur in the following job categories: production and nonproduction; plant and office; laborers and mechanics; supervisory and nonsupervisory; technical, and executive, administrative, and professional openings as are compensated on a salary basis of less than \$25,000 per year. This term includes full-time employment, temporary employment of more than 3 days' duration, and part-time employment. It does not include openings which the contractor proposes to fill from within his own organization or to fill pursuant to a customary and traditional employer-union hiring arrangement nor openings in an educational institution which are restricted to students of that institution. Under the most compelling circumstances an employment opening may not be suitable for listing, including such situations where the needs of the Government cannot reasonably be otherwise supplied, where listing would be contrary to national security, or where the requirement of listing would otherwise not be for the best interest of the Government. (2) "Appropriate office of the State employment service system" means the local office of the Federal-State national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. (3) "Openings which the contractor proposes to fill from his own organization" means employment openings for which no consideration will be given to persons outside the contractor's organization (including any affiliates, subsidiaries, and the parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. (4) "Openings which the contractor proposes to fill pursuant to a customary and traditional employer-union hiring arrangement" means employment openings which the contractor proposes to fill from union halls, which is part of the customary and traditional hiring relationship which exists between the contractor and representatives of his employees.

(i) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(j) In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(k) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era for employment, and the rights of applicants and employees.

(l) The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era.

(m) The contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

DUNLOP TIRE CORPORATION
BUFFALO PLANT

SAFETY GUIDELINES FOR CONTRACTORS

1.0 INTRODUCTION

1.1 Purpose

This document has been prepared to acquaint contractors and their employees with some of their responsibilities and obligations regarding safety and security matters while on Dunlop Tire property. It will be the responsibility for contractors to read, understand, disseminate and abide by these standards.

1.2 Scope

Contractors, their employees, and subcontractors are required and encouraged during the performance of their contracts to comply with these safety standards.

In the event a contractor or it's employees believe they are being put at risk due to an unsafe event or condition beyond their control, they should immediately contact their supervisor, Dunlop Tire Representative or the Safety Engineer. If the Situation is not corrected to the satisfaction of the contractor, the contract employee should notify his representative and leave the affected area.

1.3 Limitations

Nothing contained in these guidelines is to be construed as relieving or absolving the contractor, subcontractor, or their employees from the duties and obligations imposed on them by law, including the Occupational Safety and Health Act or any relevant regulation.

The standards set forth in these guidelines are not inclusive, but will provide a basis for understanding their responsibilities and cover most tasks that contractors are normally assigned.

OSHA STANDARD 1910 Standard for General Industry, OSHA Standard 1926 Standard for Construction Industry, National Fire Codes, National Electrical Code, American National Standards Institute, et al, should be referenced for safety standards applicable to the contractor's project.

2.0 GENERAL RESPONSIBILITIES

- 2.1 Contractors are responsible for first-aid and transporting of employees to hospital emergency rooms or health providers.

The Dunlop Tire Medical Department will respond to emergency situations if needed or requested. Contractors should inform the Dunlop Tire Medical Department in advance which hospital or medical provider they wish their employees referred to.

- 2.2 Possession, use, or sale of any intoxicant, narcotic, barbiturate, mood altering, tranquilizing or hallucinogenic drug on Dunlop's premises is strictly forbidden, or, shall any contractor or subcontractor employee be under the influence of substances that could render that person unsafe for work.
- 2.3 Contractors are responsible to provide to their employees the necessary personal protective equipment necessary by tasks or applicable standard, i.e., hard hats, eye protections, welding hoods gloves, etc. Athletic shoes i.e., "sneakers" are not acceptable footwear. Shoes must be acceptable protective shoes of sturdy construction.
- 2.4 Contractors are responsible for supplying fire extinguishers, welding curtains, or other necessary safety equipment.
- 2.5 All motorized equipment brought on site shall be in good working condition to include hydraulics, exhaust, brakes, lights, horns, etc. Any deficiency such as oil or hydraulic leaks shall be repaired as quickly as possible, and/or removed from service.
- 2.6 Propane and/or electrical powered equipment is preferred for use within the plant interior. In the event diesel or gasoline powered equipment has to be used, prior approval must be obtained and a "Hot Work Permit" form issued by Dunlop for project assigned. Permits not to exceed one week in duration.
- 2.7 At no time will fire arms, ammunition, or any type of explosives, to include powder actuated tools be allowed on the premises without the expressed consent of the Dunlop Plant or Safety Engineer.
- 2.8 Fire protection systems, automatic sprinklers, yard hydrants, post indicator valves, fire pumps, fire hose, extinguishers, CO2 systems, shall not be blocked or impaired at any time.
- 2.9 Areas of work shall be kept free from debris and foodstuffs. Containers used for refuse will be emptied to prevent overflow. Scrap, excess, and packaging materials shall be removed from site daily.
- 2.10 All access roads will be kept open to allow for entrance of emergency vehicles.

- 2.11 Smoking is not permitted except in designated areas, break areas, and restrooms.
- 2.12 Horseplay is not permitted.
- 2.13 Fighting on Dunlop Tire property is strictly forbidden.
- 2.14 Running on plant property is not allowed except in cases of emergency.

3.0 SPECIFIC RESPONSIBILITIES

- 3.1 Dunlop Tire has in place a written Hazard Communication Program. Prior to any work being performed in an area where hazardous materials are stored or used, contractors and their employees must be made aware of the hazards involved, their location, and where Material Safety Data Sheets can be obtained. Contractors are responsible for specific training per OSHA Standard 1910.1200.
- 3.2 No materials that could be considered hazardous shall be introduced into the plant or used without prior approval of Dunlop Tire. Approved hazardous materials must be preceded by delivery to Dunlop of Materials Safety Data Sheets and prior to arrival on site materials shall be properly labeled per OSHA Standard 1910.1200.
- 3.3 Fire protection systems shall not be altered or shut-off without the approval of the Safety Engineer or appointed designee. If a system must be altered or shut-off, Dunlop Tire has to implement Industrial Risk Insurer's impairment procedure.
- 3.4 Contractors shall insure all cranes, lifts, backhoes, hoists, etc. have been inspected and found to be in good working condition prior to use in the plant. This is to include all chains, chokers, wire rope, brakes, booms, slings, have been inspected or load tested as required by pertinent OSHA regulations.
- 3.5 Welding, burning, brazing, or cutting shall be done in accordance with OSHA Standard 1910.252. Prior to any "hot work" being performed a burning permit will be obtained from the DTC Representative or DTC Engineer and all requirements of the burn permit accomplished. Permits will be issued on a daily basis and turned in to the guard house at the end of the work day. This procedure shall include the proper storage, segregation, and use of fuel gas cylinders, and oxygen cylinders.
 - 3.5.1 In the event that passers-by could be affected by arcing, hot slag, or sparks, welding curtains or non-flammable barriers shall be used. At no time will welding or cutting be performed without the use of welding curtains if the possibility of eye damage could occur. Any overhead welding or cutting requires that area below be roped off and/or a fire watch be posted.

- 3.6 Confined space work, i.e., tanks, pits, manholes, sewers, will not occur without the approval of the Dunlop Safety Engineer or his designee. Atmospheres within the confined spaces shall be tested for flammable, toxic vapors, and oxygen levels prior to entry. A safety watch shall be posted at the entrance of confined spaces to monitor all workers within the confined area, and respiratory rescue equipment shall be stationed in the area and persons trained in the use rescue equipment and safety ropes and harnesses will be stationed nearby where necessary.
- 3.7 Tow.motor operations shall be conducted in strict accordance with OSHA Standard 1910.178. Contractors are responsible for training and licensing of their operators. Contractors shall insure equipment is operated at safe speeds, lift personnel in approved and properly attached manlifts, and operate within the capacity of the equipment.
- 3.8 At any time trenching is done, OSHA Standard 1926.66 shall be followed. This will include the shoring of trenching if below five feet ground level and if the angle of repose cannot be established safely.
- 3.9 When any work performed on equipment or systems that could expose an employee or others to hazards such as moving parts, electrical shock, or the release of hazardous materials, a lock and tag-out procedure shall be used. Zero machine state should be attained prior to any work on equipment that could create hazards.
- 3.9.1 Temporary wiring to Dunlop power sources must be approved by the Dunlop Engineer, or person in charge of the project. All temporary wiring must be in accordance with National Electric Code Standards.
- 3.9.2 Ground Fault Interrupters must be used on all hook ups for power tools, lighting, extension cords, etc.
- 3.9.3 At any time persons must climb above ten feet and the use of manlifts is impossible, safety belts shall be issued and used to include tie-off to existing substantial structures to preclude injuries from a fall.
- 3.9.4 If any combustible or flammable liquid must be dispensed, only NFPA or UL approved safety cans shall be used. All drums of flammable or combustible liquid shall be properly bonded and grounded and safety spouts used. Gas welders, fork trucks etc. will be moved outside at least twenty feet for fueling.
- 3.9.5 Hazardous materials or hazardous waste will only be disposed of by approved methods and shall be

coordinated through Dunlop Tire Environmental Engineering.

3.9.6 During periods when either overhead work is being performed or holes, pits, or trenching are opened, appropriate barriers and signs shall be erected by the contractor to warn of such dangers and only authorized personnel allowed into the area.

3.9.7 In areas which are in or close to production personnel, the production supervisor of the area should be notified as to type of work that shall be performed.

4.0 GENERAL WORK RULES

- 4.1 Satisfactory Contractor insurance certificates must be on file with the Dunlop Tire purchasing department prior to entry to the plant.
- 4.2 Violation of Plant Security procedures shall not be tolerated.
- 4.3 Theft of Dunlop Tire or property of others will be grounds for discharge and possible criminal prosecution.
- 4.4 Willful, careless, or repeated destruction of property, materials, and equipment will not be tolerated.
- 4.5 Contractors shall employ only qualified personnel for all phases of the project work.
- 4.6 Contractors shall be responsible for the actions of all subcontractors, their personnel, and shall take all necessary actions to insure that all plant rules and regulations are followed.
- 4.7 Contractors shall have on site a qualified supervisor at all times when personnel are on site or work being performed.
- 4.8 Each contractor shall appoint a representative for coordination of all project activities and for plant directions and discussions.
- 4.9 Construction and demolition materials shall be transported off-site for proper disposal in a land fill approved for construction and demolition materials - NO DUMPING ON-SITE.

5.0 SECURITY GUIDELINES

- 5.1 Contractors shall use the appropriate contractor gate during posted hours. Saturday, Sunday, holidays or off hours contractors will contact Dunlop Security for entry and exit from contraction gate.

- 5.2 Contractors shall inform their employees that all vehicles and packages entering or exiting any gate are subject to search.
- 5.3 Contractors and their employees will be issued a numbered badge so as to identify their employees as the firm by which they are employed. These badges are issued at the contractors gate. These badges must be worn at all times while on Dunlop property.
- 5.4 Contractors shall park in the appropriate contractor's parking lot. Temporary admittance shall be permitted for loading or unloading of vehicles but vehicles must return to the designated area in the parking lot. Unrestricted access will only be allowed by the Plant Engineer, Engineering Manager, or Maintenance Manager. Abuse of vehicle privilege will result in total loss of vehicle access. Unrestricted vehicles shall have their company logo affixed for identification.
- 5.5 Contractors shall make every effort to mark tools, equipment and other property in such a way as to be easily identifiable as to owner. Marking should be done in such a manner as to not easily be erased. Methods to secure tools and equipment should be used such as gang boxes, temporary tool sheds, etc., when not in use.
- 5.6 Contractors shall supply the head of security with a list of names of all personnel allowed on site, and in the event of dismissal that an employee has been restricted from the site.
- 5.7 Contractors shall not be allowed in areas other than where their work is being performed.
- 5.8 At no time shall penetrations of the security fence be permitted without the expressed approval of the Plant Engineering Manager. Perimeter lighting will only be taken out of service with approval of the Plant Engineering Manager.

DUNLOP TIRE CORPORATION
BUFFALO PLANT
SAFETY GUIDELINES FOR CONTRACTORS

I, We the undersigned, representing _____

have read, understand and will adhere to the safety, work and security rules (Safety Guidelines for Contractors) as published by Dunlop Tire Corporation, Buffalo Plant. I, We fully recognize that the adherence to the guidelines published by Dunlop Tire, does not diminish our legal and financial obligations in the event of injury or death to a person employed by _____ or it's subcontractors, nor increase the liability of Dunlop Tire Corporation, Buffalo Plant, its employees, agents, officials, or representatives.

(Representative's Signature)

(Representative's Signature)

(Date)