



BUCKS COUNTY CONSERVATION DISTRICT

1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901-5550
www.bucksccd.org

November 15, 2011

In Pursuit of Environmental Excellence

Pennsylvania Department of Transportation
C/O Charles Davies
7000 Geerdes Blvd.
King of Prussia, PA 19406

Subject: S.R. 2020, Section AMT (Tyburn Road)
NPDES Permit # PAG02000909105-1
TMP#: ROW
Total Project Acres: 45.31 Limit of Disturbance: 20.91
Date of Plan: 07/12/2011 Sheets: 1-29 of 29
Location: Tyburn Road, S.R. 2020, Morrisville, PA 19067
Falls Township, Bucks County, PA

Dear Sir:

Enclosed is the above-referenced permit that authorizes the discharge of stormwater from the construction activity described in the permit application. Please ensure that the E&S, PCSM and Preparedness Prevention and Contingency (PPC) Plans are fully implemented and available at the construction site.

The E&S Plan and PCSM Plan were reviewed solely to determine whether it is adequate to satisfy the requirements of the Department's rules and regulations. The Bucks County Conservation District assumes no responsibility for the design or implementation of the plans or the proper construction and/or operation and maintenance of the best management practices contained in the plans.

Please read carefully Parts A, B, and C of the permit, which detail the terms and conditions of this authorization. Conservation District staff and/or representatives of the Department will inspect this earth disturbance activity to determine compliance with applicable permit requirements, Chapters 92, 93, 96 and 102 rules and regulations, and The Clean Streams Law.

Permit requirements and federal regulations at 40 CFR Section 122.21(b) require "...when a facility or activity is owned by one person but is operated by another person; it is the operator's duty to obtain a permit." *Please be advised that once an operator (as defined in Pa. Code Chapter 102 Section 102.1) has been selected for the project, the operator must either be added as a co-permittee or the permit responsibility must be transferred to the operator.* The enclosed form must be used to designate a co-permittee/transferee. This form must be received by this office at least 30 days prior to the co-permittee/transferee action taking place.

Enclosed is a Notice of Termination (NOT) form that must be completed and filed with this office within seven working days after earth disturbance activities have ceased and final stabilization has been achieved. The NOT is a permit requirement, as well as a regulatory requirement under Pa. Code Chapter 102 Regulations. An Operation and Maintenance (O&M) Plan must be submitted with the NOT that outlines the maintenance schedule and identified the responsible party for the long term operation and maintenance of the PCSM BMPs. Please be advised that responsibilities under the terms and conditions of this permit will continue until the NOT has been filed and acknowledged.

RE: S.R. 2020, Section AMT (Tyburn Road) / NPDES Permit # PAG02000909105-1

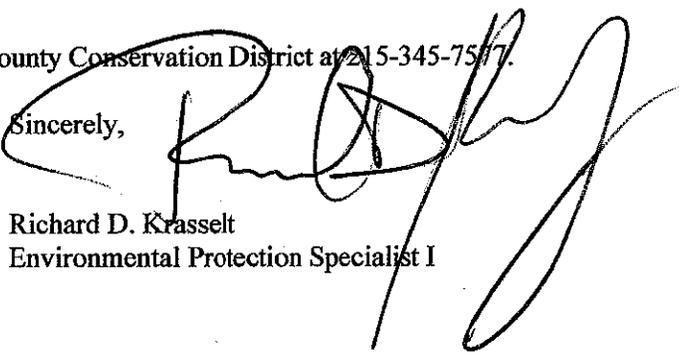
The Bucks County Conservation District must be notified by telephone or by mail at least seven working days prior to the start of earth disturbance activities. A preconstruction conference is required. The conference will be scheduled when the preconstruction notification is provided.

The purpose of this conference is to review all aspects of the permit with you, your consultant, and the Department's inspectors who will be assigned to your site. You will have an opportunity to seek clarification or additional information regarding any of the conditions placed on your permit. This will also give the Department the opportunity to reach a common understanding with all parties regarding the meaning and intent of each permit condition.

This authorization does not relieve the permittee from applying for and obtaining any and all additional permits or approvals from local, state or federal agencies for the earth disturbance activity described in the permit application.

If you have any questions, please call the Bucks County Conservation District at 215-345-7577.

Sincerely,


Richard D. Krasselt
Environmental Protection Specialist I

RM/

cc: /NPDES File/E&S/NPDES Report File
/Falls Township Supervisor
/Falls Township Engineer
/Michael Grantner, McCormick Taylor, 2001 Market Street, 10th Floor, Philadelphia, PA 19103
/Rich Krasselt, Site Inspector
/Sharon Moore, DEP SE Regional Office, 2 East Main Street, Norristown, PA 19401



**APPROVAL OF COVERAGE UNDER THE GENERAL NPDES
PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH
CONSTRUCTION ACTIVITIES
PAG-02 (2009 Amendment)**

NPDES PERMIT NO: PAG02000909105-1

Project Name & Address

S.R. 2020, Section AMT (Tyburn Road)
Tyburn Road, S.R. 2020
Morrisville, PA 19067
Falls Township, Bucks County, PA

Permittee Name & Address

Pennsylvania Department of Transportation
7000 Geerdes Blvd.
King of Prussia, PA 19406

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 *et seq.* ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 *et seq.*, the Department of Environmental Protection hereby approves the Notice of Intent (NOI) submitted for coverage to discharge stormwater to the following surface water(s):

Pidcock – Mill Creek (WWF)

from 1 to less than 5 acres of earth disturbance with a point source discharge (or)
 5 or more acres of earth disturbance

subject to the department's enclosed PAG-02 which incorporates all effluent limitations, monitoring and reporting requirements, and other terms, conditions, criteria and special requirements for the discharge of stormwater from point sources composed entirely of stormwater associated, in whole or in part, with construction activity, as defined in this general permit, to surface waters of this commonwealth, including through municipal separate storm sewers and nonmunicipal separate storm sewer. Authorization to discharge is subject to the implementation of the plans and additional associated information submitted as part of the NOI.

APPROVAL TO DISCHARGE IN ACCORDANCE WITH THE TERMS AND CONDITIONS HEREIN MAY COMMENCE ON THE DATE OF THE APPROVAL OF COVERAGE, AND IS VALID FOR A PERIOD OF TWO YEARS WHEN CONDUCTED PURSUANT TO SUCH TERMS AND CONDITIONS. COVERAGE MAY BE EXTENDED BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT IF A TIMELY ADMINISTRATIVELY COMPLETE AND ACCEPTABLE NOI RENEWAL IS SUBMITTED TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT AT LEAST 180 DAYS PRIOR TO DATE OF COVERAGE TERMINATION, UNLESS PERMISSION FOR SUBMISSION AT A LATER DATE HAS BEEN GRANTED BY THE DEPARTMENT. THE PERMIT MAY BE TERMINATED PRIOR TO THE EXPIRATION DATE UPON RECEIPT AND ACKNOWLEDGEMENT OF A NOTICE OF TERMINATION FORM AND APPROVAL BY THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT. NO CONDITION OF THIS PERMIT SHALL RELEASE THE PERMITTEE OR CO-PERMITTEE FROM ANY RESPONSIBILITY OR REQUIREMENT UNDER PENNSYLVANIA, OR FEDERAL ENVIRONMENTAL STATUTES, REGULATIONS OR LOCAL ORDINANCES.

COVERAGE APPROVAL DATE: 11/15/2011

COVERAGE EXPIRATION DATE: 11/15/2013

AUTHORIZED BY: _____

TITLE: Environmental Protection Specialist I

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**GENERAL NPDES
PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

PAG-02 (2009 Amendment)

This permit applies to earth disturbance activities that disturb five (5) or more acres, or an earth disturbance on any portion, part, or during any stage of, a larger common plan of development or sale that involves five (5) or more acres of earth disturbance, AND, earth disturbance activities with a point source discharge to surface waters of this commonwealth that disturb from one (1) to less than five (5) acres, or an earth disturbance on any portion, part, or during any stage of, including earth disturbance activities of less than one acre, that are part of a larger common plan of development or sale that involves one (1) to less than five (5) acres of disturbance with a point source discharge to surface waters of this commonwealth.

This permit does not apply to agricultural plowing and tilling, timber harvesting activities, and road maintenance activities.

Earth disturbance activities associated with oil and gas exploration, production, processing or treatment operations or transmission facilities may be required to obtain permit coverage under the Erosion and Sediment Control General Permit-1 (ESCGP-1).

1. DEFINITIONS

Note: Terms used in this permit not otherwise defined herein shall have the meaning attributed to them in 40 CFR Part 122.

Accelerated Erosion – The removal of the surface of the land through the combined action of human activities and the natural processes, at a rate greater than would occur because of the natural process alone.

Authorized Conservation District – A conservation district, as defined in Section 3(c) of the conservation district law (3 P.S. Section 851(c), as amended) that has the authority under a delegation agreement executed with the department.

Best Management Practices (BMPs) – Activities, facilities, measures, planning, or procedures used to protect, maintain, reclaim and restore the quality of waters, and existing and designated uses within this commonwealth. BMPs include PPC Plans, E&S Plans, PCSM Plans, Storm Water Management Act Plans, and other treatment requirements, operating procedures, and practices to control project site runoff, spillage or leaks, and other drainage from the construction activity.

Clean Fill – Uncontaminated, nonwater soluble, nondecomposable, inert, solid material to include soil, rock, stone, dredged material, used asphalt, and brick, block, or concrete from construction and demolition activities that is separate from other waste and is recognizable as such. The term does not include materials placed in or on the waters of this commonwealth unless otherwise authorized. The term "used asphalt" does not include milled asphalt or asphalt that has been processed for re-use.

Co-Permittee – Person(s) identified in this permit as responsible for the discharges of stormwater associated with construction activity who is jointly and individually responsible together with the permittee for compliance with all conditions of this permit and applicable laws.

Department – The Department of Environmental Protection ("DEP") of this commonwealth.

Director – The Director of the Bureau of Watershed Management, or any authorized employee thereof.

Distribution Facilities – A facility owned/operated by a local gas utility that distributes it via lower pressure service lines to small industrial, commercial or residential customers. This earth disturbance is not considered oil and gas exploration, production, processing or treatment operation or transmission facilities, and may need to obtain coverage under an NPDES permit.

Earth Disturbance Activity – A construction or other human activity which disturbs the surface of the land, including, but not limited to, land clearing and grubbing, grading, excavations, embankments, land development, agricultural cultivation and animal heavy use areas, timber harvesting activities, road maintenance activities, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock, or earth materials.

Effluent Limitation or Standard – A restriction established by the department or the administrator of the Environmental Protection Agency on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into surface waters. Effluent limits can be technology based or water quality based and may include BMPs.

Erosion – The natural process by which the surface of the land is worn away by water, wind, or chemical action.

Erosion and Sediment Control Plan (E&S Plan) – A site-specific plan identifying BMPs to minimize accelerated erosion and sedimentation and which meets the requirements of 25 Pa. Code Chapter 102, Rules and Regulations.

Municipality – Any county, city, borough, town, township, or other governmental unit when acting as an agent thereof or any combination of those acting jointly. For the purposes of this definition, town includes an incorporated town.

NOI – Notice of Intent – A request, on a form developed by the department for coverage under this General NPDES Permit for Stormwater Discharges Associated with Construction Activities.

NOT – Notice of Termination – A request, on a form provided by the department, to terminate coverage under this General NPDES Permit for Stormwater Discharges Associated with Construction Activities.

Operator – A person who has one or more of the following:

- (i) Oversight responsibility of earth disturbance activity on a project site or a portion thereof, who has the ability to make modifications to the E&S Plan, PCSM Plan, or site specifications.
- (ii) Day-to-day operational control over earth disturbance activity on a project site or a portion thereof to ensure compliance with the E&S Plan.

Owner – A person who holds legal title to the land subject to construction activity. This term also includes the person(s) who held legal title to the land subject to construction activity at the time such activity was commenced on a site.

Permanent Stabilization – Long-term protection of soil and water resources from accelerated erosion.

Person – Any natural person, partnership, association, corporation, business organization, or any agency, instrumentality or entity of Federal or State Government. Whenever used in any clause prescribing and imposing a penalty, or imposing a fine or imprisonment or both, the term "person" shall not exclude the members of an association and the directors, officers, or agents of a corporation.

Point Source - Any discernable, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, Concentrated Animal Feeding Operation, landfill leachate collection system, or vessel or other floating craft, from which pollutants are or may be discharged.

Post Construction Stormwater Management Plan (PCSM Plan) – A site specific plan identifying BMPs to manage changes in stormwater runoff volume, rate, and water quality after earth disturbance activities have ended and the project site is permanently stabilized.

Preparedness, Prevention and Contingency Plan (PPC Plan) – A written plan that identifies an emergency response program, material and waste inventory, spill and leak prevention and response, inspection program, housekeeping program, security and external factors, developed and implemented at the construction site to control potential discharges of pollutants other than sediment into waters of the commonwealth. Potential pollutants at construction activities can include, but are not limited to pesticides, fertilizers, lime, petrochemicals, construction related chemicals and solvents, wastewater, wash water, core drilling wastewater, cement, sanitary waste, or hazardous waste.

Runoff Coefficient – The fraction of total rainfall that will appear at the conveyance as runoff.

Stabilization -The proper placing, grading, constructing, reinforcing, lining, and covering of soil, rock, or earth to ensure their resistance to erosion, sliding, or other movement.

Stormwater – Runoff from precipitation, snow melt runoff, and surface runoff and drainage.

Surface Waters – Perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps and estuaries, excluding water at facilities approved for wastewater treatment such as wastewater treatment impoundments, cooling water ponds and constructed wetlands used as part of a wastewater treatment process.

Transferee – persons identified through the co-permittee/transferee form as having new responsibility for the discharges of stormwater during construction activities and responsibility for compliance with all conditions of this permit and all applicable laws for discharges of stormwater during the construction activity.

Waters of this Commonwealth – Rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs and other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this commonwealth.

Wetlands – Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas.

2. AUTHORITY AND RESPONSIBILITIES OF THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICTS

- a. The department or authorized conservation district may notify the permittee at any time that the permit terms and conditions are not being met. Upon plan review or site inspection, the department or authorized conservation district may require E&S Plan revisions or other appropriate action to ensure compliance with the conditions of this permit.
- b. The department or authorized conservation district has the right to enter onto the site to conduct inspections, conduct monitoring or require monitoring where necessary in appropriate circumstances such as where a danger of water pollution or degradation is present, or water pollution or degradation is suspected to be occurring from a construction activity subject to this permit. The permittee and co-permittee shall commence such monitoring upon notification from the department or authorized conservation district. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.
- c. The department or authorized conservation district may request copies of records required by this permit, which could include the records required under Part A, Section 3 of this permit.
- d. The department may require by written notice any person authorized by this permit to apply for an Individual NPDES permit. This notice shall include the following: (1) a brief statement of the reasons for the decision, (2) an application form for an Individual NPDES permit, and (3) a statement setting a 90-day deadline for the owner or operator to file an application.

3. NOTICE OF INTENT (NOI) SUBMITTAL

a. General Information and Requirements

- (1) Persons proposing to discharge stormwater associated with construction activities and eligible persons proposing to expand the scope of a previously authorized construction activity which discharges stormwater, who wish to be covered by this general permit, must submit an administratively complete and acceptable Notice of Intent (NOI) to the department or authorized conservation district and receive authorization from the department or authorized conservation district prior to commencing the construction activity. The NOI shall be filed in accordance with the detailed instructions specified in the NOI instruction package.
- (2) Operators of all construction activities shall develop, implement, and maintain erosion and sediment and postconstruction stormwater management (PCSM) BMPs and other pollution prevention measures required by this permit to minimize accelerated erosion and sedimentation before, during, and after construction activities.
- (3) Erosion and sediment control BMPs shall be designed and implemented to meet the standards and specifications identified in the department's *Erosion and Sediment Pollution Control Manual*, No. 363-2134-008, as amended and updated, or an approved alternative, when legally authorized.
- (4) PCSM BMPs shall be designed and implemented to meet the standards and specifications identified in the department's *Stormwater Best Management Practices Manual*, No. 363-0300-002, as amended and updated, or approved alternative, when legally authorized.

- (5) The E&S Plan, PCSM Plan, and Preparedness, Prevention and Contingency (PPC) Plan shall identify appropriate BMPs that will be implemented to ensure that existing and designated uses of surface water are protected and maintained.
 - (6) The permittee or co-permittee shall have the E&S Plan, PPC Plan, PCSM Plan, and other documents required by this permit maintained at the site and available for review by the department, conservation district or other authorized local, state, or federal agent or representative.
- b. The following activities are not eligible for coverage under this permit:
- (1) Discharges to waters with a designated or existing use of High Quality or Exceptional Value pursuant to 25 Pa. Code Chapter 93;
 - (2) Discharges which contain hazardous pollutants, toxics, or any other substance which - because of its quantity, concentration, or physical, chemical, or infectious characteristics - may cause or contribute to an increase in mortality or morbidity in either an individual or the total population, or pose a substantial present or future hazard to human health or the environment when discharged into surface waters of this commonwealth;
 - (3) Discharges which individually or cumulatively have the potential to cause significant adverse environmental impact;
 - (4) Discharges to waters for which NPDES general permit coverage are prohibited under 25 Pa. Code Chapter 92;
 - (5) Discharges which are not, or will not be, in compliance with any of the terms or conditions of this general permit;
 - (6) Discharges from a person who has failed and continues to fail to comply or has shown a lack of ability or intention to comply with a regulation, permit, and schedule of compliance or order issued by the department;
 - (7) Discharges subject to categorical point source effluent limitations promulgated by EPA;
 - (8) Discharges which do not, or will not, result in compliance with applicable effluent limitations or water quality standards;
 - (9) Discharges from construction activities for which the department requires an Individual NPDES permit to ensure compliance with the Clean Water Act, the Clean Streams Law, or rules and regulations promulgated thereto; or where a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
 - (10) Discharges associated with coal mining or noncoal mining activities pursuant to the department's regulations at 25 Pa. Code Chapters 77 and 86-90;
 - (11) Discharges associated with a construction activity that may adversely affect a Pennsylvania or federal endangered or threatened species or its critical habitat;
 - (12) Discharges from a site where other point source(s) require the issuance of an Individual NPDES permit; and
 - (13) Discharges to surface waters identified as impaired waters where the proposed discharge will result in a net change (pre-condition to post condition) in volume or rate or water quality of the stormwater.
 - (14) Persons are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a total maximum daily load (TMDL) established or approved by EPA unless the E&S and PCSM Plans include implementation measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, persons must implement conditions applicable to their discharges necessary for consistency with the assumptions and requirements of such TMDL. If a specific wasteload allocation has been established that would apply to the discharge, persons must implement necessary steps to meet that allocation.
- c. Persons requesting a renewal of coverage under this general permit must submit to the department or authorized conservation district an administratively complete and acceptable NOI, at least 180 days prior to the expiration date of the coverage, unless permission has been granted by the department or authorized conservation district for submission at a later date. In the event that a timely, administratively complete, and

PART A

EFFLUENT LIMITATIONS, MONITORING, AND REPORTING REQUIREMENTS

1. EFFLUENT LIMITATIONS

a. BMPs

This permit establishes narrative performance based effluent limitations in the form of BMPs identified in E&S Plans, PCSM Plans, and PPC Plans which control the rate, volume and quality of stormwater runoff and associated pollutants from being discharged into surface waters and which replicate preconstruction infiltration and runoff conditions to the maximum extent practicable.

b. Applicable Effluent Limitations

All stormwater discharges associated with construction activities must comply with applicable effluent limitations established in 25 Pa. Code Chapters 91, 92, 93, 96, 102, and 105.

c. Water Quality Based Effluent Limitations

Water quality based effluent limitations shall be imposed under applicable state and federal law when necessary to ensure that the water quality standards of the receiving water are attained. Discharges of stormwater associated with a construction activity shall not result in a violation of such water quality standards.

2. MONITORING, INSPECTION, AND REPORTING REQUIREMENTS

a. Visual Inspections

The permittee and co-permittee(s) must ensure that visual site inspections are conducted weekly, and within 24 hours after each measurable rainfall event throughout the duration of construction and until the receipt and acknowledgement of the NOT by the department or authorized conservation district. The visual site inspections and reports shall be completed in a format provided by the department, and conducted by qualified personnel, trained and experienced in erosion and sediment control, to ascertain that E&S BMPs and PCSM BMPs are properly constructed and maintained to effectively minimize pollution to the waters of this commonwealth. A written report of each inspection shall be kept and include at a minimum:

- (1) a summary of site conditions, E&S BMP and PCSM BMP, implementation and maintenance and compliance actions; and
- (2) the date, time, name and signature of the person conducting the inspection.

b. Noncompliance Reporting

Where E&S, PCSM or PPC BMPs are found to be inoperative or ineffective during an inspection, or any other time, the permittee and co-permittee(s) shall, within 24 hours, contact the department or authorized conservation district, by phone or personal contact, followed by the submission of a written report within 5 days of the initial contact. Noncompliance reports shall include the following information:

- (1) any condition on the project site which may endanger public health, safety, or the environment, or involve incidents which cause or threaten pollution;
- (2) the period of noncompliance, including exact dates and times and/or anticipated time when the activity will return to compliance;
- (3) steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance; and
- (4) the date or schedule of dates, and identifying remedies for correcting noncompliance conditions.

c. Supplemental Monitoring

The department or authorized conservation district may require additional monitoring where an increased risk of potential water pollution is present, or water pollution is suspected to be occurring from a construction activity subject to this general permit, or for any reason in accordance with, 25 Pa. Code Section 92.41. The permittee or co-permittee shall commence such monitoring upon notification from the department or authorized conservation district.

3. RECORD KEEPING

a. Retention of Records

The permittee and co-permittee(s) shall retain records of all monitoring information including copies of all monitoring and inspection reports required by this permit, and records of data used to complete the Notice of Intent for this permit, for a period of three years from the date of the termination of coverage under this permit.

b. Reporting of Monitoring Reports

Monitoring results shall be submitted to the department or authorized conservation district upon request.

4. DISCHARGES CONSISTENT WITH TERMS AND CONDITIONS OF THE PERMIT

All discharges authorized by this NPDES permit shall be consistent with the terms and conditions of the permit.

PART B
STANDARD CONDITIONS

1. MANAGEMENT REQUIREMENTS

a. Permit Modification, Termination, or Revocation and Reissuance

- (1) The general permit will expire 2 years from the date of its issuance. The department will publish a notice in the *Pennsylvania Bulletin* of the draft, renewed, or reissued general permit or of any amendments to this general permit, and after a comment period notice of the final, renewed, reissued or amended general permit will be published in the *Pennsylvania Bulletin*. Any person with an unexpired approval of coverage under the general permit shall be responsible for complying with the final renewed, reissued or amended general permit. Such persons shall be covered by the general permit even if the discharger has not submitted a separate NOI to be covered by such final renewed, reissued or amended general permit. Such person may request coverage under an individual permit. See 40C.F.R. § 122.28(b)(2)(vi); 25 Pa. Code § 92.81(c) and (d).
- (2) This permit may be modified, suspended, revoked, reissued, or terminated during its term for any of the causes specified in 25 Pa. Code Chapters 92 and 102, or to require compliance with updated Effluent Limitation Guidelines, impaired water listings, or new TMDL's.
- (3) The department may modify, revoke, suspend, or terminate previously issued coverage under this general NPDES permit and require the stormwater discharger to apply for and obtain an Individual NPDES permit in accordance with 25 Pa. Code Chapters 92 and 102.
- (4) The filing of a request by the permittee or co-permittee for a permit or coverage modification, revocation, reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not eliminate any existing permit conditions.
- (5) Permit modification or revocation will be conducted according to 25 Pa. Code Chapters 92 and 102.

b. Duty to Provide Information

- (1) The permittee or co-permittee(s) shall furnish to the department or authorized conservation district within 30 days of the date of request any information that the department or conservation district may request to determine whether cause exists for modifying, revoking, reissuing, or terminating this permit or coverage approved under this permit or to determine compliance with this permit.
- (2) The permittee or co-permittee shall furnish, upon request, to the department or authorized conservation district copies of records required to be kept by this permit.
- (3) When the permittee or co-permittee becomes aware that they failed to submit any relevant facts or submitted incorrect information in the NOI, E&S Plan, PCSM Plan, or PPC Plan or in any other report to the department or authorized conservation district, the permittee or co-permittee shall within 24 hours of becoming aware of the deficiency submit or correct such facts or information.
- (4) The permittee or co-permittee shall give seven calendar days advance notice to the department or authorized conservation district of any planned physical alterations or additions to the permitted facility which could, in any way, substantially affect the quality and/or quantity of stormwater discharged from the activity.

c. Signatory Requirements

Documents required, submitted, or maintained under this permit shall be signed in accordance with the following:

- (1) Notices of Intent, Transferee/Co-permittee Form, and Notices of Termination.
 - (a) Corporations: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production, or operating facilities, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

- (b) Partnerships or sole proprietorships: a general partner or the proprietor, respectively; or
 - (c) Municipalities, State, Federal, or other public agencies: either a principal executive officer or ranking elected official such as: (1) the chief executive officer or secretary of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- (2) All reports, plans, documents, and other information required by the permit or requested by the department or authorized conservation district shall be signed by a duly authorized representative of the permittee.
- (3) If there is a change in the duly authorized representative of the permittee or co-permittee, respectively, the permittee or co-permittee shall notify the department or authorized conservation district within 30 days of the change.

d. Transfer of Ownership or Control

- (1) This permit is not transferable to any person except after notice and acknowledgment by the department or authorized conservation district.
- (a) In the event of any pending change in control or ownership of facilities from which the authorized discharges emanate, the permittee or co-permittee shall notify the department or authorized conservation district using the form entitled "Transferee/Co-permittee Application" of such pending change at least 30 days prior to the change in ownership or control.
 - (b) The Transferee/Co-permittee Application form shall be accompanied by a written agreement between the existing permittee and the new owner or operator stating that the existing permittee shall be liable for violations of the permit up to and until the date of coverage transfer and that the new owner or operator shall be jointly and individually liable for permit violations under the permit from that date on.
 - (c) After receipt of an administratively complete and acceptable transferee/co-permittee application form, the department or authorized conservation district shall notify the existing permittee and the new owner or operator of its decision concerning approval of the transfer of ownership or control. Such requests shall be deemed approved unless the department or authorized conservation district notifies the applicant otherwise within 30 days.
- (2) The department or authorized conservation district may require the new owner or operator to apply for and obtain an Individual NPDES permit.
- (3) For purposes of this permit, operators shall include general contractors. If, prior to construction activities, the owner is the permittee and an operator/general contractor is later identified to become a co-permittee, the owner shall:
- (a) Notify the department or authorized conservation district by submitting an administratively complete and acceptable Transferee/Co-permittee Application Form.
 - (b) Ensure that monitoring reports and any other information requested under this permit shall reflect all changes to the permittee and the co-permittee name.
- (4) After receipt of the documentation described in (3) above, the permit will be considered modified by the department or authorized conservation district. For the purposes of this permit, this modification is considered to be a minor permit modification.
- (5) Upon authorization of a change in ownership or control, the existing permittee shall provide a copy of the permit and approved plans to the new owner and/or co-permittee.

e. Removed Substances

Solids, sediments, and other pollutants removed in the course of treatment or control of stormwater shall be disposed in accordance with federal and state law and regulations in order to prevent any pollutant in such materials from adversely affecting the environment.

f. Facilities Construction, Operation and Maintenance

The permittee and co-permittee(s) are responsible for the design, installation, operation and maintenance of the BMPs identified in the E&S Plan, PCSM Plan, and PPC Plan.

g. Adverse Impact

The permittee and co-permittee(s) shall take all reasonable steps to prevent, minimize or cease any discharge in violation of this permit.

h. Reduction, Loss, or Failure of the BMPs

Upon reduction, loss, or failure of the BMPs, the permittee and co-permittee shall take immediate action to restore the BMPs or provide an alternative method of treatment. Such restored BMPs or alternative treatment shall be at least as effective as the original BMPs.

i. Termination of Coverage

NOT: Upon permanent stabilization of earth disturbance activities associated with construction activity that are authorized by this permit and when BMPs identified in the PCSM Plan have been properly installed, the permittee and/or co-permittee of the facility must submit a NOT form that is signed in accordance with Part B, Section 1.c, Signatory Requirements, of this permit. All letters certifying discharge termination are to be sent to the department or authorized conservation district. The NOT must contain the following information: facility name, address, and location, operator name and address, permit number, identification and proof of acknowledgment from the person(s) who will be responsible for operation and maintenance of the PCSM BMPs in accordance with the approved PCSM Plan, and the reason for permit termination. Until the permittee has received written acknowledgement of the NOT, the permittee will remain responsible for operating and maintaining all E&S BMPs and PCSM BMPs on the project site and will be responsible for violations occurring on the project site.

j. Completion Certificate and Final Plans

Within 30 days after the completion of earth disturbance activities authorized by this permit, including the permanent stabilization of the site and proper installation of PCSM BMPs in accordance with the approved PCSM Plan, or upon submission of the NOT if sooner, the permittee shall file with the department or authorized conservation district a statement signed by a licensed professional and by the permittee certifying that work has been performed in accordance with the terms and conditions of this permit and the approved E&S and PCSM Plans.

2. COMPLIANCE RESPONSIBILITIES

a. Duty to Comply

The permittee and co-permittee must comply with all terms and conditions of this General Permit. Any permit noncompliance constitutes a violation of the Pennsylvania Clean Streams Law and the federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation, reissuance, or modification; or for denial of a permit or permit renewal.

b. Penalties for Violations of Permit Conditions

The permittee and co-permittee may be subject to criminal and/or civil penalties for violations of the terms and conditions of this general permit under Sections 602 and 605 of the Clean Streams Law, 35 P.S. Sections 691.602 and 691.605, and under the Clean Water Act as specified in 40 CFR Sections 122.41(a) (2) and (3), which are incorporated by reference.

c. Need to Halt or Reduce Activity Not a Defense

The permittee and/or co-permittee may not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

d. Penalties and Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee or co-permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA (33 U.S.C. §1321) or Section 106 of Comprehensive Environmental Response, Compensation, and Liability Act (Act 42 U.S.C. §9601).

e. Property Rights

This permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

f. Severability

The provisions of this permit are severable; and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

g. Other Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee or co-permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

h. Right of Entry

Pursuant to Sections 5(b) and 305 of the Pennsylvania Clean Streams Law (35 P.S. §§691.5(b) and 691.305), 25 Pa. Code Chapter 92, and §1917-A of the Administrative Code, the permittee and co-permittee shall allow the head of the department, the EPA Regional Administrator, and/or an authorized representative of EPA, DEP, conservation district or, in the case of a facility which discharges to a municipal separate storm sewer, an authorized representative of the municipal operator or the separate storm sewer receiving the discharge, upon the presentation of credentials and other documents, as may be required by law, to:

- (1) Enter upon the permittee's or co-permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
- (3) Inspect any facilities or equipment (including monitoring and control equipment); and
- (4) Observe or sample any discharge of stormwater.

i. Availability of Reports

Except for data determined to be confidential under Section 607 of the Clean Streams Law (35 P.S. §691.607), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the department or authorized conservation district. As required by the Clean Water Act, the Clean Streams Laws, and 25 Pa. Code, and the department's regulations, permit applications, permits, and other documents related to this permit shall not be considered confidential.

j. Penalties for Falsification of Reports

Section 309(c)(4) of the Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years or by both. In addition, criminal sanctions are set forth for false swearing and unsworn falsification at 18 Pa. C.S. §§4903-4904.

PART C
OTHER CONDITIONS

1. PROHIBITION OF NONSTORMWATER DISCHARGES

All discharges covered by this permit shall be composed entirely of stormwater. Discharges of material other than stormwater must be in compliance with an NPDES permit (other than this permit) issued for the discharge. Discharge of sewage or industrial waste (other than sediment under this permit) to an E&S BMP is not permitted.

The permittee/co-permittee may not discharge floating materials, oil grease, scum, foam, sheen, and substances which: produce odor, taste, or turbidity or settle to form deposits in concentrations or amounts sufficient to be, or create a danger of being, inimical to the water uses to be protected or human, animal, plant or aquatic life.

2. EROSION AND SEDIMENT CONTROL PLANS

- a. An E&S Plan must be prepared, developed, and implemented by qualified personnel trained and experienced in erosion and sediment control, for each activity covered by this permit in accordance with the department's Chapter 102 Rules and Regulations and department guidance. Each E&S Plan must be submitted to the department or authorized conservation district and approved. The BMPs shall be designed to minimize the potential for accelerated erosion and sedimentation in order to protect, maintain, reclaim, and restore water quality and existing and designated uses. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual*, No. 363-2134-008, as amended and updated. The manual is available from the department or authorized conservation district or can be downloaded from the department's Web site at www.depweb.state.pa.us. E&S Plans and BMPs, and revisions thereto, which meet the requirements of 25 Pa. Code Chapters 93, 96, and 102, are conditions of this permit and incorporated by reference.
- b. E&S Control Plans required under this permit are considered reports that shall be available to the public under Section 607 of the Clean Streams Law and 25 Pa. Code Chapter 92 of the department's regulations. The owner or operator of a facility with stormwater discharges covered by this permit shall make E&S Plans available to the public upon request. E&S Plans must be made available at the site of the construction activity at all times.
- c. The staging of earth disturbance activities and maintenance requirements contained in the approved E&S Plan must be followed.
- d. Upon the installation or stabilization of all perimeter sediment control BMPs and at least 3 days prior to proceeding with the bulk earth disturbance activities, the permittee or co-permittee shall provide notification to the department or authorized conservation district.
- e. The E&S Plan must be consistent with the assumptions and requirements of any available Wasteload Allocations (WLAs) for the discharges as set forth in any applicable Total Maximum Daily Loads (TMDLs) established for the receiving waters.

3. RECYCLING AND DISPOSAL OF BUILDING MATERIALS AND WASTES

All building materials and wastes must be removed from the site and recycled or disposed in accordance with the department's Solid Waste Management Regulations at 25 Pa. Code §260.1 *et seq.*, §271.1 *et seq.*, and §287.1 *et seq.* No building material or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.

4. PREPAREDNESS, PREVENTION AND CONTINGENCY PLANS

If toxic, hazardous, or other polluting materials will be on site, the permittee or co-permittee(s) must develop a PPC Plan for use while those materials are on site. The PPC Plan shall be developed in accordance with department regulations. The PPC Plan shall identify areas which may include, but are not limited to, waste management areas, raw material storage areas, fuel storage areas, temporary and permanent spoils storage areas, maintenance areas, and any other areas that may have the potential to cause noncompliance with the terms and conditions of this permit due to the storage, handling, or disposal of any toxic or hazardous substances such as oil, gasoline, pesticides, herbicides, solvents, etc. BMPs shall be developed and implemented for each identified area. The PPC Plan shall be maintained on site at all times and shall be made available for review at the department's or authorized conservation districts' request.

5. POSTCONSTRUCTION STORMWATER MANAGEMENT PLANS

- a. A PCSM Plan must be prepared, developed, and implemented for each activity covered by this permit in accordance with the department's 2002 *Comprehensive Stormwater Management Policy*, DEP Policy No. 392-0300-002, and addressed under several regulatory programs administered by the department. These regulatory programs utilize narrative based effluent limitations in the form of BMPs to achieve the regulatory standard to protect, maintain, and improve the commonwealth's water resources through comprehensive site planning and BMP design guidance. Various BMPs and their design standards are listed in the *Pennsylvania Stormwater Best Management Practices Manual*, No. 363-0300-002, as amended and updated. The manual is available from the department or authorized conservation district or can be downloaded from the department's Web site at www.depweb.state.pa.us. Each PCSM Plan must be submitted to the department or authorized conservation district. The PCSM plan must employ stormwater management BMPs to control the volume, rate, and water quality of the postconstruction stormwater runoff so as to protect and maintain the chemical, physical, biological properties and existing/designated uses of the waters of this commonwealth.
- b. PCSM Plans required under this permit are considered reports that shall be available to the public under Section 607 of the Clean Streams Law and 25 Pa. Code Chapter 92 of the department's regulations. The owner or operator of a facility with stormwater discharges covered by this permit shall make PCSM Plans available to the public upon request. The PCSM Plans must be made available at the site of the construction activity at all times.
- c. Permittees and co-permittees are responsible for ensuring that a licensed professional have oversight responsibilities for the design and proper installation of BMPs identified in the PCSM Plan prior to the submission of the NOT for this permit. The licensed professional shall certify that the BMPs identified in the plan have been installed in accordance with the approved plan. The installation schedule of PCSM BMPs and maintenance requirements contained within the approved PCSM Plan must be followed; and failure to comply with the installation schedule is a violation of this permit, the Clean Streams Law, and the Clean Water Act.
- d. The stormwater management program must be consistent with the assumptions and requirements of any available Wasteload Allocations (WLAs) for the discharges as set forth in any applicable Total Maximum Daily Loads (TMDLs) established for the receiving waters.

6. PRECONSTRUCTION CONFERENCES

The permittee or co-permittee shall contact the department or authorized conservation district at least seven days before construction is to begin to determine if a preconstruction conference is required. The permittee, co-permittee, and others undertaking the earth disturbance activity must attend a preconstruction conference when requested by the department or authorized conservation district. The permittee or co-permittee must bring a copy of their NPDES permit, a copy of the stamped plan from the conservation district, and all associated department approvals/permits which must be available at the conference upon request.

7. SPOIL OR BORROW AREA

An E&S Plan shall be submitted to the department or authorized conservation district and implemented for all spoil and borrow areas, regardless of their location.

Clean Fill Requirements

Any person placing clean fill that has been affected by a spill or release of a regulated substance must use department Form FP-001 to certify the origin of the fill material and the results of the analytical testing to qualify the materials as clean fill. The form must be retained by the owner of the property receiving the fill. Fill material not qualifying as clean fill is regulated fill and must be managed in accordance with the department's municipal or residual waste regulations based on 25 Pennsylvania Code Chapters 287 or 271, whichever is applicable.

8. PHASED PROJECTS

Prior to the commencement of earth disturbance activities for subsequent phases of the project, the permittee or co-permittee shall submit an E&S Plan and PCSM Plan and supporting information for each additional phase or portion of the project to the department or authorized conservation district for approval. Coverage under this permit is only granted for those phases or portions of a project for which an E&S Plan and PCSM Plan has been submitted and approved by the department or authorized conservation district. Subsequent phases commenced after termination of this PAG-02, 2009 Amendment, shall be responsible for complying with the final renewed, reissued, or amended general permit.

9. CLARIFICATION ASSISTANCE

The permittee or co-permittee shall contact the department or authorized conservation district for clarification of any requirements contained in the E&S Plan, PCSM Plan, PPC Plan, or other documents related to this permit.

10. WETLAND PROTECTION

If hydric soils or other wetland features are present, a wetland determination must be conducted in accordance with department procedures. All wetlands identified must be included on the E&S Plan and PCSM Plan. Special precautions must be taken to protect wetlands and other water resources identified in the NOI, plans, and other supporting documents.

11. INFILTRATION BMPs

Where infiltration BMPs are being utilized, the permittee and co-permittee must ensure that soil compaction is avoided or minimized in those areas. If the areas planned for infiltration BMPs are compromised, additional soil testing must be performed to verify that the BMP will perform as planned.

12. STABILIZATION

Upon completion or temporary cessation of the earth disturbance activity the project site shall be immediately stabilized in accordance with the recommendations contained in the Erosion and Sediment Pollution Control Program Manual (E&S Manual), Commonwealth of Pennsylvania, Department of Environmental Protection No. 363-2134-008, April 2000, as amended and updated. Erosion and sediment control BMPs shall be implemented and maintained until permanent stabilization is completed and PCSM BMPs are operational.

13. SEWAGE FACILITIES

Earth disturbance may not commence until all related Act 537 Sewage Facilities Planning approvals have been obtained.

BUCKS COUNTY CONSERVATION DISTRICT
1456 FERRY ROAD, SUITE 704
DOYLESTOWN, PA 18901

In Pursuit of Environmental Excellence

**SHOULD YOU SELL THIS PROPERTY AND/OR
ARE NO LONGER THE RESPONSIBLE PARTY FOR THE SITE,**

OR

**IF THE SITE IS COMPLETE & STABILIZED,
YOU MAY NEED TO TERMINATE YOUR RESPONSIBILITY.**

OR

**IF YOU NEED TO ADD, DELETE OR CHANGE A CO-PERMITTEE,
THE PROPER FORM(S) MUST BE FILED (SEE ATTACHED)**

WITH BUCKS CONSERVATION DISTRICT

30 DAYS PRIOR.

**YOU AND/OR THE CO-PERMITTEE
ON YOUR NPDES PERMIT OR PERMIT AMENDMENTS
MAY STILL BE HELD RESPONSIBLE FOR ANY
VIOLATIONS THAT MAY OCCUR ON THE NAMED SITE.
MONETARY PENALTIES COULD BE ASSESSED TO YOU**

IF YOU ARE NAMED AS:

**FACILITY OWNER, CURRENT PERMITTEE, OR
CO-PERMITTEE ON THE ISSUED PERMIT OR
PERMIT AMENDMENTS.**

**INSTRUCTIONS FOR THE
TRANSFEREE / CO-PERMITTEE APPLICATION FORM FOR A GENERAL OR INDIVIDUAL NPDES PERMIT
FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

Who may file the Transferee/Co-Permittee Application Form: This form may be used by an applicant seeking to apply for either complete or partial operational control of earth disturbance activities at a site which are already authorized by either an Individual or General NPDES Permit. Federal NPDES Regulations at 40 C.F.R. §122.21(b) require that Operator(s) must become a permittee. An operator is a person who meets either of the following criteria: 1.) You have operational control of construction project plans and specifications, including the ability to make modifications to those plans and specifications; OR 2.) You have day-to-day operational control (supervision) of those activities at the project that are necessary to ensure compliance with the Erosion and Sediment Control Plan for the site or ensure compliance with other permit conditions, i.e., General Contractors. Subcontractors generally do not have supervisory control over earth disturbance activities and therefore usually should not become a permittee or co-permittee. If prior to construction activities, there is no operator, the owner must apply for the permit. Once the operator has been selected, the operator must use this application either to be made a co-permittee or to have the permit transferred to the contractor. Failure of the operator to be added to the permit is a violation of federal and state law and regulation.

Where to file the Transferee/Co-Permittee Application Form: Send this form to the reviewing entity, either to the local county conservation district that is participating as the reviewing entity or, if the Department is the reviewing entity, to the appropriate DEP Regional Office, Permitting and Technical Services Section.

When to file the Application: This application must be filed at least 30 days prior to the proposed change of ownership and/or operational control which will result in the transfer of permit responsibility, coverage and liability.

Completing the Application: TYPE OR PRINT IN BLOCK LETTERS IN THE APPROPRIATE SPACES

- Section A. Permit Information** - Check the appropriate box and enter the Permit Number and date of issuance of the existing Individual or General NPDES Permit assigned to the construction activity at the site identified in Section C below.
- Section B. Current Permittee Information** - Enter the full name, address and telephone number of the individual or organization and contact person that is the current permittee. The Regional Office can supply the Client ID # and Applicant Code, if known.
- Section C. Site Information** - Enter the DEP Site ID#, site name, site address/location, county and municipality of the site where the construction activity authorized by the NPDES Permit is located. Include the date on which the transfer of Permit responsibility, coverage and liability will occur. The Regional Office can supply the Site ID #.
- Section D. Transferee/Co-Permittee Information** - Enter the full name, address and telephone number of the individual or organization and contact person that is applying to assume operational control of construction activities at the site. The Regional Office can supply the Client ID # and Applicant Code, if known.
- Section E. Compliance Review** - The individual or organization referenced in Section D must indicate if any other environmental permits have been received or are pending from DEP as well as their past compliance history and if they are currently in compliance with environmental laws, rules and regulations, permits, orders and schedules of compliance.
- Section F. Certification and Signature of Applicant** - The new Transferee/Co-Permittee Applicant (named in Section D) must complete the required certification that the information contained in this application is true, accurate, and complete; the BMPs are or will be designed and fully implemented in accordance with the NPDES Permit requirements and will meet the applicable standards and limitations of the permit; and further that the applicant has read, understands and agrees to abide by the terms and conditions of the permit. The application shall be signed as follows:
- a. **For a corporation** - By a responsible corporate officer, which means: (1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (2) The manager of one or more manufacturing, production or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. **For a partnership or sole proprietorship** - By a general partner or the proprietor, respectively; or
 - c. **For a municipality, State, Federal or other public agency** - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (1) the chief executive officer of the agency, or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

The application shall be notarized in the space provided.

**CO-PERMITTEE AGREEMENT
ASSUMPTION OF RESPONSIBILITY UNDER A GENERAL OR
INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

Permit Number _____

Name of Facility / Project _____

Municipality _____

County _____

The following parties agree to a change in ownership and/or operational control under the above referenced permit effective _____.

_____ hereby assumes joint and severable responsibility, coverage, and liability under the permit for any obligations, duties, responsibilities and violations under said permit. _____ shall remain liable under the permit for violations of the permit conditions up to and including the above referenced date AND until a Notice of Termination is filed and acknowledged by the Bucks County Conservation District.

[The following paragraph should be used for multiple co-permittees.]

Attached is a description of site responsibilities and a map or plan drawing depicting the limits of permit responsibility, coverage, and liability for each co-permittee.

**(Current Permittee(s))
Signature Required**

**(New Co-permittee(s))
Signature Required**

**TRANSFeree AGREEMENT
ASSUMPTION OF RESPONSIBILITY UNDER A GENERAL OR
INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

Permit Number _____

Name of Facility / Project _____

Municipality _____

County _____

The following parties agree to a change in ownership and/or operational control under the above referenced permit. _____ hereby assumes, effective _____ all responsibility, coverage and liability under the permit for any obligations, duties, responsibilities, and violations under said permit. _____ shall remain liable under the permit for violations of the permit up to and including _____ until the Bucks County Conservation District acknowledges the Co-Permittee/Transferee Form. The Department may hold _____ and _____ jointly and severably liable under said permit for any breach of permit obligations, responsibilities, or violations.

[The following paragraph should be used for multiple transferees.]

Attached is a description of site responsibilities and a map or plan drawing depicting the limits of permit responsibility, coverage, and liability for each transferee.

(Current Permittee(s))
Signature Required

(New Co-permittee(s))
Signature Required



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF WATERSHED MANAGEMENT

OFFICIAL USE ONLY
 PA _____

**TRANSFeree/CO-PERMITTEE APPLICATION FOR A GENERAL OR
 INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH
 CONSTRUCTION ACTIVITIES**

TYPE OR PRINT IN BLOCK LETTERS

A. PERMIT INFORMATION

Check here if applying for permit transfer. Check here if applying to be added as a co-permittee.

GENERAL OR INDIVIDUAL NPDES PERMIT FOR DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES FOR WHICH APPLYING AS TRANSFEREE/CO-PERMITTEE.

PERMIT NO.: _____ DATE ISSUED: _____

B. CURRENT PERMITTEE INFORMATION

DEP Client ID# (if known)		Applicant Type / Code (if known)		
Organization Name or Registered Fictitious Name		Employer ID# (EIN)	Contact Person	
Individual Last Name	First Name	MI	Suffix	SSN
Additional Individual Last Name	First Name	MI	Suffix	SSN
Mailing Address Street				
City	State	ZIP+4	County	Phone

C. SITE INFORMATION

DEP Site ID# (if known) Site Name

DEVELOPMENT NAME (IF APPLICABLE):

SITE ADDRESS/LOCATION:

COUNTY: _____ MUNICIPALITY: _____

DATE OF TRANSFER OF PERMIT RESPONSIBILITY, COVERAGE AND LIABILITY: _____, 20____

CO-PERMITTEE/TRANSFEREE AGREEMENT: Attach a written agreement signed by all parties involved with the change of operational control. The letter should provide a specific date (not less than 30 days after the date this application is submitted) for the transfer or sharing of permit responsibility, coverage, and liability between the current and new permittee/co-permittee. A SAMPLE Co-Permittee Agreement letter and a SAMPLE Transferee Agreement letter are attached for reference.

D. TRANSFEREE/CO-PERMITTEE INFORMATION				
DEP Client ID# (if known)		Applicant Type / Code (if known)		
Organization Name or Registered Fictitious Name		Employer ID# (EIN)	Contact Person	
Individual Last Name	First Name	MI	Suffix	SSN
Additional Individual Last Name	First Name	MI	Suffix	SSN
Mailing Address Street				
City	State	ZIP+4	County	Phone

E. COMPLIANCE REVIEW	
Yes <input type="checkbox"/>	No <input type="checkbox"/>
Does the applicant (owner and/or operator) have or require other environmental permits issued by the Department for this project? If yes, list each permit and the compliance history of the permitted facility or operation.	
Permit Program: _____	
Permit Number: _____	
Brief Description: _____	
Compliance History: _____	
<p>If the applicant is not in compliance with any environmental law or regulation, or Department permit, order or schedule of compliance, or has failed and continues to fail to comply, or has shown a lack of ability or intent to comply with environmental laws or regulations or any Department permit, order, or schedule of compliance, as indicated by past or continuing violations, provide a narrative description of how the applicant will achieve compliance including the appropriate milestones.</p>	

F. CERTIFICATION AND SIGNATURE OF APPLICANT

Applicant Certification

I certify under penalty of law that this application and all related attachments were prepared by me or under my direction or supervision by qualified personnel to properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the General or Individual NPDES Permit, and BMP's and other controls are or will be implemented to ensure that water quality standards and effluent limits are attained. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment or both for knowing violations.

Print Name and Title of Person Signing

() _____

Telephone Number of Person Signing

Signature of Applicant

Date of Application Signed

Notarization: _____

Sworn to and Subscribed to Before Me This _____

_____ Day of _____, 20____

Notary Public

NOTARY
SEAL

Commonwealth of Pennsylvania

County of _____

My Commission Expires: _____

**CO-PERMITTEE AGREEMENT
ASSUMPTION OF RESPONSIBILITY UNDER A GENERAL OR
INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

Permit Number _____

Name of Facility / Project _____

Municipality _____

County _____

The following parties agree to a change in ownership and/or operational control under the above referenced permit effective _____.

_____ hereby assumes joint and severable responsibility, coverage, and liability under the permit for any obligations, duties, responsibilities and violations under said permit. _____ shall remain liable under the permit for violations of the permit conditions up to and including the above referenced date AND until a Notice of Termination is filed and acknowledged by the Bucks County Conservation District.

[The following paragraph should be used for multiple co-permittees.]

Attached is a description of site responsibilities and a map or plan drawing depicting the limits of permit responsibility, coverage, and liability for each co-permittee.

**(Current Permittee(s))
Signature Required**

**(New Co-permittee(s))
Signature Required**

**TRANSFeree AGREEMENT
ASSUMPTION OF RESPONSIBILITY UNDER A GENERAL OR
INDIVIDUAL NPDES PERMIT FOR STORMWATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

Permit Number _____

Name of Facility / Project _____

Municipality _____

County _____

The following parties agree to a change in ownership and/or operational control under the above referenced permit. _____ hereby assumes, effective _____ all responsibility, coverage and liability under the permit for any obligations, duties, responsibilities, and violations under said permit. _____ shall remain liable under the permit for violations of the permit up to and including _____ until the Bucks County Conservation District acknowledges the Co-Permittee/Transferee Form. The Department may hold _____ and _____ jointly and severably liable under said permit for any breach of permit obligations, responsibilities, or violations.

[The following paragraph should be used for multiple transferees.]

Attached is a description of site responsibilities and a map or plan drawing depicting the limits of permit responsibility, coverage, and liability for each transferee.

(Current Permittee(s))
Signature Required

(New Co-permittee(s))
Signature Required



OFFICIAL USE ONLY
 PA _____

**NOTICE OF TERMINATION
 OF A GENERAL OR INDIVIDUAL NPDES PERMIT
 FOR STORMWATER DISCHARGES ASSOCIATED WITH
 CONSTRUCTION ACTIVITIES**

- OR -

FOR AN EROSION AND SEDIMENT CONTROL PERMIT

1. **PERMIT INFORMATION:**
 Check the appropriate boxes.
 NPDES Stormwater Permit # _____ Erosion and Sediment Control Permit # _____
 Check one:
 I/we am/are no longer the Owner(s) or Operator(s) of the Construction Activity.
 Earth disturbance activity has ceased and the site is stabilized.

2. **EARTH DISTURBANCE SITE LOCATION:**
 Facility/Development Name: _____
 Municipality: _____ County: _____
 Latitude: ____° / ____' / ____" Longitude: ____° / ____' / ____"
 U.S.G.S. Quad Map Name: _____

3. **PERMITTEE/CO-PERMITTEE SUBMITTING THIS NOTICE OF TERMINATION:**

PERMITTEE	CO-PERMITTEE
Name: _____	Name: _____
Address: _____	Address: _____
City: _____	City: _____
State: _____ Zip Code: _____	State: _____ Zip Code: _____
Telephone Number: _____	Telephone Number: _____

4. **PERMITTEE INFORMATION AND ACKNOWLEDGEMENT (IF APPLICABLE):** (This Section must be completed by the permittee to acknowledge that a co-permittee is submitting this Notice. Leave this section blank if a Co-Permittee is not listed in Section 3.)

Name: _____
 Address: _____
 City: _____
 State: _____ Zip Code: _____
 Telephone Number: _____

I hereby acknowledge that the co-permittee submitting this Notice (identified in Section 3 above) is withdrawing as a permittee.

Name and Official Title of Permittee

Signature: _____

Date Signed: _____, 20____

5. **CERTIFICATION (To be completed by person(s) listed in Section 3):**

I certify under penalty of law that (1) all discharges associated with earth disturbance activities at the site that are authorized by the NPDES permit or Erosion and Sediment Control Permit identified in Section 1 above have been eliminated, the site has been stabilized and Post Construction Stormwater Management BMPs have been installed or (2) I am no longer an owner or operator of the construction activity. I understand that by submitting this Notice of Termination, I am no longer authorized to conduct earth disturbance activities under the above referenced NPDES permit, or under the Erosion and Sediment Control Permit and that discharging stormwater from construction activities to waters of the Commonwealth is unlawful where the discharge is not authorized by an NPDES permit. I also understand that the submittal of the Notice of Termination does not release a permittee from liability for any violations of this permit or of the federal Clean Water Act, the Pennsylvania Clean Streams Law and the regulations promulgated pursuant thereto or from liability for any environmental damages occurring as a result of any earth disturbance activities conducted at the site. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Official Title of person listed under Section 3:

Signature: _____

Notarization:

Commonwealth of Pennsylvania

County of _____

Sworn to and Subscribed to Before Me This

_____ Day of _____, 20_____

**NOTARY
SEAL**

My Commission Expires: _____

Notary Public

Who may file a Notice of Termination (NOT) form:

Permittees or Co-permittees who are presently covered under an Individual NPDES Permit, the Pennsylvania General NPDES Permit for discharges of stormwater associated with construction activities or an Erosion and Sediment Control Permit may submit an NOT form when: (1) they are no longer the owner or operator of the construction activity at a site which has not been stabilized, or (2) any earth disturbance activity or discharges associated with construction activity at the site have been terminated and the site has been stabilized. For construction activities, elimination of all stormwater discharges occurs when disturbed soils at the construction site have been stabilized and temporary erosion control BMP's have been removed.

PENNDOT FORM EDD-VI

ENVIRONMENTAL DUE DILIGENCE (EDD) PHASE 1
VISUAL INSPECTION FORM

DATE: _____

SR/SEC: _____ COUNTY: _____

SEGMENT: _____

ECMS
Project#: _____

ACTIVITY: _____

Location: _____

Visual Site Inspection (EDD-PHASE 1):

- *Stressed Vegetation* Yes [] No []
- *Staining on Soils* Yes [] No []
- *Staining Along PennDOT ROW
or on ROW Materials* Yes [] No []
- *Detectable Odors* Yes [] No []

Comments: Attached additional pages or information as necessary.

Findings

Check one:

- Due diligence inspection performed and no visual evidence of a spill or release in project ROW was detected.
- Due diligence inspection performed and evidence of a spill or release in project ROW was detected. Phase 2 documents attached.
- Due diligence not applicable for this project. No waste or fill.

SIGNATURE: _____

PRINTED NAME: _____

TITLE: _____

ORGANIZATION: _____

*** FORM MUST BE MAINTAINED FOR A MINIMUM 5 YEARS IN THE PROJECT FILE***

PENNDOT EDD-VII

CLEAN FILL ENVIRONMENTAL DUE DILIGENCE [EDD] PHASE 2

DATE : _____

SR/SEC : _____ ECMS PROJECT # : _____

SEGMENT : _____

COUNTY : _____

ACTIVITY : _____

LOCATION : _____

A Phase 1 EDD was conducted for the above project and has identified evidence of a potential spill or release of regulated substances to the material. A Phase 2 EDD was performed.

Findings Check all that apply:

- 1. Based on the results of the Phase 2 investigations, it has been determined that **no** spill or release has occurred.
- 2. Based on the results of the Phase 2 investigations, there is documented evidence that a spill or release has occurred. **MUST COMPLETE ITEM 3**
- 3. If Item 2 is checked, Item 3 must be completed: The materials were Collected and sampled, in accordance with Appendix A of the PADEP Management of Fill Guidance, and
 - All regulated substances analyzed were reported as non-detectable. Form FP-001 must be completed along with the laboratory data, and provided to the property owner of the fill receiving site. Attach documentation.
 - The concentration of regulated substances detected were below the levels indicated in Table FP-1a/1b. Form FP-001 must be completed along with the laboratory data, and provided to the property owner of the fill receiving site. Attach documentation.
 - The concentration of regulated substances detected exceeds the levels in Table FP-1a/1b, but are below the levels indicated in Table GP-1a/1b. **The material is Regulated Fill** and must be approval by the PENNDOT Project Manager for use. If approved, PADEP General Permit WMGR096 must be obtained.
 - The concentration of regulated substances detected exceeds the levels in Table GP-1a/1b. **The materials are a waste.** Manage in accordance with applicable PA Solid Waste Management Act waste regulations. Attach documentation.

SIGNATURE : _____

PRINTED NAME : _____

TITLE : _____

ORGANIZATION : _____

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

NOTE: PERSONS INVOLVED IN PERFORMING EDD ACTIVITIES DO NOT NEED TO COMPLETE ALL STEPS OF THIS PROCESS. ONLY THOSE REQUIRED FOR PROPERLY CHARACTERIZING MATERIALS TO DETERMINE THEY ARE CLEAN FILL.

EDD Phase 2: STEP 1

- **Property ownership and use histories (deed reviews) for evidence of potential releases of wastes or chemicals from operations along the PennDOT ROW:**

Land and Property Use and Ownership Types Found (Check All That Apply):

- *Public* []
- *Private* []
- *Agricultural* []
- *Industrial* []
- *Commercial* []
- *Residential* []
- *Unused* []
- *Other* []

(Specify) _____

- **Searching environmental databases to determine the existence of potential impacts from any types of waste sites or related activities that exist or may have existed within the vicinity of the PennDOT ROW: (See Appendix 1)**

Databases Searched (Check All That Apply):

- *PennDOT* []
- *PA DEP* []
- *US EPA* []
- *Other* []

(Specify) _____

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

- **Conducting Interviews with All Relevant Parties to determine whether there had been any incidents that involved the release of substances directly to the PennDOT ROW:**

Interviews Conducted (Check All That Apply):

- *Former Property Owners* []
- *Current Property Owners* []
- *Former Land Owners* []
- *Current Land Owners* []
- *Fire Departments* []
- *Hazardous Materials Teams* []
- *Regulatory Agencies* []

(Specify) _____

- **Examination of aerial photographs in order to determine all land uses within the vicinity of the ROW:**

- Aerial Photographs Evaluated Yes [] No []; if “Yes”: refer to Appendix 1 for a Pennsylvania Department of Conservation and Natural Resources (PA DCNR) web site address for locating aerial photographs.

- **Examination of Sanborne or other fire insurance maps (*there is an additional cost for obtaining these*), in order to determine the existence of businesses that may have had any prior releases of **regulated substances** to the PennDOT ROW:**

- *Sanborne Fire Insurance Maps Examined* []; refer to Appendix 1 for web site address and telephone number for obtaining these maps;
- *Alternate Fire Insurance Maps Examined* []

(Specify) _____

EDD Phase 2 STEP 2:

- **Sampling and Analysis of PennDOT ROW Materials. If there is documented evidence of a spill or release, materials must be tested to determine if they are clean fill, **regulated fill, or** to characterize for proper waste disposal.**
- **Sampling and analysis should be conducted in accordance with Appendix A of the PA DEP Management of Fill Guidance: 258-2182-773 April 24, 2004.**

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES

Pennsylvania Department of Environmental Protection (PA DEP) -Related Sites

- **Pennsylvania Municipal and Residual Waste Facilities** (web link: www.dep.state.pa.us/dep/deputate/airwaste/wm/mrw/Docs/Landfill_list.htm); (this website contains descriptions of all Pennsylvania landfills and incinerators (site name, permit number, host county, municipality, and contact person), all arranged by PA DEP region; for more information, click on either the facility name link (this leads to the PA DEP Environmental Facility Application and Compliance Tracking System (E-Facts) information about any specific facility) or contact person (e-mail) link).
- **Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) Sites** (web link: www.pasitefinder.state.pa.us/Site_listing.asp); this website contains information on all Act 2 sites that have been completed to date and updates that are made to the website when needed; click on the “more details” box associated with each site listed to obtain an interactive “E-Map” location/link for any site selected along with pertinent site information).
- **Pennsylvania Hazardous Sites Cleanup Act (HSCA) Sites** (web link: www.dep.state.pa.us/dep/deputate/airwaste/wm/hscp/docs/HSCA_Site_List.pdf); this website brings up a list of Pennsylvania HSCA sites that are arranged by PA DEP Region and shows municipality, county, number and dates for HSCA responses (interim and remedial levels), in addition to the site status (complete, listed on Pennsylvania Priority List, or de-listed).
- **Pennsylvania Storage Tank Release and Active Storage Tank Sites** (web link for storage tank releases: www.dep.state.pa.us/dep/deputate/airwaste/wm/Tanks/Document/tank_release.htm); this website contains a listing of all known storage tank incidents, and is arranged by PA DEP region (with each regional incident alphabetized by county); other details included are facility I. D. #, site name, address, city, county, incident description, confirmation date, type of incident (underground storage tank release (petroleum or hazardous material), or above-ground storage tank release; click on the “Tank Incidents” PDF or Adobe Acrobat Files to see the entire list of storage tank releases to date); web link for active storage tanks: www.dep.state.pa.us/dep/deputate/airwaste/wm/tanks/storagetanks/tank_listings.htm; click on the PA DEP Regional links to obtain Excel spreadsheet lists of storage tanks; information similar to what can be found on the storage tank release sites (except releases) can be found on the active storage tanks list).

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES

United States Environmental Protection Agency (US EPA)-Related Sites

- ***Pennsylvania Comprehensive Environmental Response and Liability Act (CERCLA/Superfund) Sites*** (web link: www.epa.gov/reg3hwmd/super/PA/index.htm); this website contains information on all Pennsylvania Superfund sites, including name, address, city, county, zip code, US EPA I. D. number, and National Priority List (NPL) status; click on the site name to learn more about any Superfund site).
- ***Pennsylvania Resource Conservation and Recovery Act (RCRA) Facilities*** (web link: www.epa.gov/reg3wcmd/ca/pa.htm); this website contains information for all Pennsylvania RCRA sites, including facility name (click on this for more details), US EPA I. D. number, location (click on this link to get a map showing the site in relation to nearby roadways), environmental indicators (human exposure, groundwater – click on either of these to get the documentation sheets for either or both), and clean up status (initiated, remedy selected, complete with or without controls, construction completed)).
- ***Toxic Release Inventories (TRI)*** (web link: www.epa.gov/tri); this website is from the US EPA, and contains some background information about TRI is and how it is used; releases for specific areas can be found by entering a zip code on the title page; from here, the user can view the facilities that are part of the TRI for the zip code entered, and the extent of releases that have occurred over the years (starting with 1989, and continuing through 2001, the latest year for which TRI information is available); click on the name of any facility shown to obtain a detailed report about the releases and related activities associated with the facility (onsite, off-site, air emissions, water discharges, land disposal)).
- ***Comprehensive Federal and State Site Environmental Database (Enviro-Facts)*** (web link: www.epa.gov/enviro/index_java.html); this website contains information about virtually every type of environmental matter known, both in terms of facilities and the media affected by these facilities' collective activities; under the “**topics**” tab, click on the links related to “*waste*”, “*water*”, “*air*”, “*toxics*”, “*land*”, “*radiation*”, “*maps*”, and “*other*”, to determine the type of media information desired; under the “**advanced capabilities**” tab, click on the “*queries*”, “*maps*”, or “*reports*” links to locate more specific information; from here, the user will be led to a page where queries about any type of environmental site can be entered using a zip code, county or State abbreviation; click on the “find it” link to locate information about one or multiple environmental sites, or, to generate map locations for the any type of environmental site activity desired; the map is interactive, and the user can “zoom in” for closer details about the site; this database may include information on sites from the aforementioned Municipal and Residual Waste, Storage Tanks, RCRA, HSCA, CERCLA, Act 2, and TRI databases; sites with National Pollutant Discharge Elimination System (NPDES) and radiation-related permits also included in this database).

ENVIRONMENTAL DUE DILIGENCE PHASE 2: CLEAN FILL DETERMINATION

APPENDIX 1: LISTING OF WEB SITES AND RELATED CONTACTS FOR ENVIRONMENTAL DUE DILIGENCE DATABASE SEARCHES

Sites for Aerial Photographs and Fire Insurance Maps

- ***Aerial Photographs:*** Aerial photographs may be accessed via the Pennsylvania Department of Conservation and Natural Resources (PA DCNR) web site (web link: www.dcnr.state.pa.us/topogeo/gismaps/aerials.aspx.htm; click on the “Proceed to the new DCNR” link, then click on the “Aerial Photos” option; this will lead to a link for the U. S. Geological Survey’s Aerial Photo Finder; information can be sought, and site location maps can be generated by selecting the “zip code”, “populated place”, or “map location” options).
- ***Sanborne Fire Insurance Maps:*** These maps may be obtained from EDR Sanborne, Inc., at 1-800-352-0050, or at www.edrnet.com; click on the “Sanborne Maps” link, and then click on the phrase “Download Sample” to view an example of this map type. **There is an additional cost for obtaining these maps.**

ENVIRONMENTAL DUE DILIGENCE (EDD) PHASE 1
VISUAL INSPECTION FORM

DATE: 6/4/12
SR/SEC: 2020/AMT COUNTY: Backs
SEGMENT: 0040/0080
ECMS
Project#: 90197
ACTIVITY: Bridge / Roadway Reconstruction
Location: Falls Township

Visual Site Inspection (EDD-PHASE 1):

- Stressed Vegetation Yes [] No []
- Staining on Soils Yes [] No []
- Staining Along PennDOT ROW
or on ROW Materials Yes [] No []
- Detectable Odors Yes [] No []

Comments: Attached additional pages or information as necessary.

Findings

Check one:

- Due diligence inspection performed and no visual evidence of a spill or release in project ROW was detected.
- Due diligence inspection performed and evidence of a spill or release in project ROW was detected. Phase 2 documents attached.
- Due diligence not applicable for this project. No waste or fill.

SIGNATURE: 
PRINTED NAME: Timothy Gunner
TITLE: Project Manager
ORGANIZATION: AECOM

EXHIBIT C

NATIONAL RAILROAD PASSENGER CORPORATION
TEMPORARY PERMIT TO ENTER UPON PROPERTY
C.E.-17 (REVISED 3/01/10)

Date:
File: E-47-
W.E.:

ATTN:

1. TEMPORARY PERMISSION. Temporary permission is hereby granted to _____ (hereinafter called "Permittee"), to enter property owned and/or controlled by the National Railroad Passenger Corporation (hereinafter called "Railroad"), for the purpose of _____ at _____, State of _____, under the terms and conditions set forth below.

2. LOCATION AND ACCESS. (Give map reference, description or both)

(hereinafter called "Property").

3. INDEMNIFICATION. Permittee shall defend, indemnify and hold harmless Railroad, its officers, directors, employees, agents, servants, successors, assigns and subsidiaries, irrespective of their negligence or fault, from and against any and all losses and liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits, costs and expenses (including cost of defense and attorneys' fees), which any or all of them may hereafter incur, be responsible for, or pay as a result of injury, death, disease, or occupational disease to any person, and for damage (including environmental contamination and loss of use) to or loss of any property, including property of Railroad, arising out of or in any degree directly or indirectly caused by or resulting from activities of or work performed by Permittee, its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee. The foregoing obligation shall not be limited by the existence of any insurance policy or by any limitation on the amount or type of damages, compensation, or benefits payable by or for Permittee or any contractor or subcontractor, and shall survive the termination of this Temporary Permit for any reason. As used in this paragraph, the term "Railroad" also includes all commuter agencies and other railroads with rights to operate over Railroad property, and their respective officers, directors, employees, agents, servants, successors, assigns and subsidiaries.

4. CONSIDERATION FOR PREPARATION OF TEMPORARY PERMIT. Permittee will pay to Railroad the sum of Seven Hundred Fifty Dollars (\$750.00) as compensation for the preparation of this Temporary Permit. This fee is to be delivered to Railroad at the address set forth in paragraph 17 hereof.

5. STARTING OF USE OF PROPERTY. Permittee shall notify Railroad's Deputy Chief Engineer-Construction, or his designee, at least ten (10) days in advance before entering upon, or starting any work on, the Property. No entry upon or use of the Property will be permitted until a fully executed copy of this Temporary Permit is returned to Railroad, and specific permission to enter upon the Property is received by Permittee from Railroad's Director Project Initiation & Development. (See paragraph 17 for contact information.)

6. RAILROAD OPERATIONS. All activities performed by or on behalf of Permittee shall be performed so as not to interfere with Railroad's operations or with any of Railroad's facilities. In no event shall personnel, equipment or material cross a track or tracks without special advance permission from Railroad's Deputy Chief Engineer-Construction or his designee. If, in the opinion of Railroad's Deputy Chief Engineer-Construction or his designee, conditions warrant at any time, Railroad will provide flag service and/or other protection at the sole cost and expense of Permittee, and Permittee agrees to pay to Railroad the full cost and expense therefor.

7. CLEARANCES. All equipment and material of Permittee shall be kept at all times not less than

fifteen (15) feet from the centerline of the outside track, unless specifically otherwise authorized in writing by Railroad's Deputy Chief Engineer-Construction or his designee. Permittee shall conduct all operations so that no part of any equipment shall foul an operated track; transmission, communication or signal line; or any other structure or facility of Railroad.

8. **RESTORATION OF PREMISES.** Upon completion of its work, Permittee shall, at the option of Railroad, (a) leave the Property in a condition satisfactory to Railroad, or (b) restore the Property to its original condition. This may include, without limitation, the restoration of any fences removed or damaged by Permittee.

9. **TERM OF TEMPORARY PERMIT.** This Temporary Permit shall commence on the date Railroad receives a fully executed copy of this Temporary Permit pursuant to paragraph 17 hereof and shall extend until the end of the period Railroad determines is necessary for Permittee to accomplish the purpose set forth in paragraph 1 hereof; provided, however, Railroad reserves the right to revoke this Temporary Permit at any time, and in no event shall this Temporary Permit extend beyond _____, 201_. Under no circumstances shall this Temporary Permit be construed as granting to Permittee any right, title or interest of any kind in any property of Railroad.

10. **PROTECTION.** All work on, over, under, within or adjacent to the Property shall be performed in accordance with the document entitled "SPECIFICATIONS REGARDING SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY," a copy of which is attached hereto as Attachment A and incorporated herein by reference.

11. **INSURANCE.** Before Permittee commences any work on, over, under, within or adjacent to the Property, Permittee and its contractors (unless Permittee opts to provide the required coverage for them), shall furnish to Railroad's Director Project Initiation & Development, evidence of the insurance coverages specified in the document entitled "INSURANCE REQUIREMENTS - NATIONAL RAILROAD PASSENGER CORPORATION," a copy of which is attached hereto as Attachment B and incorporated herein by reference.

12. **SAFETY ORIENTATION CLASS.** No person may enter within twenty-five (25) feet of the Property until he/she has attended Railroad's Safety Orientation Class, as noted in paragraph 12 of Attachment A.

13. **COMPLIANCE BY CONTRACTORS.** Permittee shall take all steps necessary to ensure that its contractors and subcontractors comply with the terms and conditions of this Temporary Permit.

14. **SUPPORT SERVICES; COSTS; PAYMENTS.** Railroad shall not be responsible for any costs incurred by Permittee in relation to any matter whatsoever. Permittee is required to reimburse Railroad for all costs incurred by Railroad in relation to this Temporary Permit. Without limiting the foregoing, Permittee is required to reimburse Railroad for all costs incurred by Railroad in connection with the review of any plans, drawings or other submissions made by Permittee.

Railroad's costs, expenses and labor charges will be billed to Permittee at Railroad's standard force account rates. Except as specified in paragraph 4 hereof, all payments due from Permittee to Railroad under this Temporary Permit shall be due and payable within thirty (30) days from the date of invoice. Permittee shall have no right to set off against any payment due under this Temporary Permit any sums which Permittee may believe are due to it from Railroad for any reason whatsoever. In the event that Permittee shall fail to pay, when due, any amount payable by it under this Temporary Permit, Permittee shall also pay to Railroad, together with such overdue payment, interest on the overdue amount at an annual rate of six (6) percentage points over and above the rate published from time to time by *The Wall Street Journal* as the prime commercial lending rate (or the highest rate allowed by law, if less than the foregoing), calculated from the date the payment was due until paid. All payments due from Permittee to Railroad hereunder shall be: (a) made by check drawn from currently available funds; (b) deemed made

only upon receipt by Railroad of collected funds; (c) made payable to National Railroad Passenger Corporation; and (d) delivered to the National Railroad Passenger Corporation, 23615 Network Place – GROUP, Chicago, IL 60673-1236. (However, the permit fee referenced in paragraph 4 hereof and the Railroad Protective Liability premium referenced in Attachment B, if applicable, shall be delivered to Railroad at the address set forth in paragraph 17 hereof.) All payment obligations of Permittee under this Temporary Permit shall survive the termination or expiration of this Temporary Permit.

15. **ENVIRONMENTAL AND GEOTECHNICAL TESTS AND STUDIES.** Permittee shall not perform any environmental or geotechnical tests or studies (e.g., air, soil or water sampling) unless specifically identified and authorized in paragraph 1 of this Temporary Permit. If any such tests or studies are performed, Permittee shall promptly furnish to Railroad, at no cost, a copy of the results including any reports or analyses obtained or compiled. Except as may be required by applicable law or as authorized by Railroad in writing, Permittee shall not disclose the results of any such tests or studies to anyone other than Railroad or Permittee's client. Failure to comply with the provisions of this clause shall result in immediate termination of this Temporary Permit and forfeiture of all compensation paid Railroad therefor.

16. **SEVERABILITY.** If any provision of this Temporary Permit is found to be unlawful, invalid or unenforceable, that provision shall be deemed deleted without prejudice to the lawfulness, validity and enforceability of the remainder of the Temporary Permit.

17. **ACCEPTANCE.** To confirm acceptance of this Temporary Permit, one fully executed copy must be returned to: Director Project Initiation & Development, National Railroad Passenger Corporation, 30th Street Station, Mail Box 64, Philadelphia, PA 19104 (215/349-1127). The second copy may be retained for your file.

NATIONAL RAILROAD PASSENGER CORPORATION

By: _____
DEPUTY CHIEF ENGINEER - CONSTRUCTION

Date: _____

AGREED TO AND ACCEPTED:

By: _____
(signature)

Title: _____
Must be an Owner/Partner or
duly authorized representative

Date: _____

AMTRAK SPECIAL PROVISIONS

THE FOLLOWING AMTRAK SPECIAL PROVISIONS ARE INCLUDES IN THIS DOCUMENT:

- REQUIREMENTS FOR TEMPORARY PROTECTIONS SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES – SECTION 01520A
- BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY - SECTION 01142A
- REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS – SECTION 02261A
- AMTRAK TRACK MONITORING REQUIREMENTS
- BLASTING PROCEDURES – EP 3003
- EP 3016 – STORMWATER DRAINAGE AND DISCHARGE FROM ADJACENT PROPERTIES ONTO AMTRAK RIGHT-OF-WAY

SECTION 01520A – REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES

PART 1 - GENERAL

1.1 SCOPE

- A. This engineering practice describes items to be included in the design and construction of temporary protection shields for construction overhead and near to Amtrak tracks.
- B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

- A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer
- B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative
- C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

- A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.
- B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.
- C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS WORKING ON OVERHEAD OR NEARBY DEMOLITION AND/OR CONSTRUCTION ADJACENT TO AMTRAK TRACKS, SHALL CONFORM TO THE FOLLOWING

DESIGN AND CONSTRUCTION REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDING:

- A. The Contractor shall maintain a specified level of protection to railroad facilities, during demolition and construction activities that occur overhead and nearby Amtrak tracks, as shown on the Contract Plans, as detailed in the Contract Specifications, and as described below.
- B. Prior to the start of construction, the Contractor shall submit to Amtrak for review and approval, detailed, site specific plans for temporary protection shields. The plans will be reviewed as to the methods of erection, and as to whether or not the proposed installation will provide the required level of protection. No construction shall proceed until the Contractor has received written approval of the Contractor's complete, site specific plans, from Amtrak.
- C. The Contractor shall design the protection shields to conform to all applicable and governing federal, state and local laws and regulations.
- D. Drawings for the proposed temporary protection shields shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.
- E. Protection shields shall be designed for the following, minimum load and size criteria.
 - 1. The horizontal shield design liveload on horizontal surfaces shall be the greater of a minimum of 100 pounds per square foot (psf) [5000 Pascals] or the anticipated liveload to be produced by the Contractor's anticipated operations. When determining the appropriate design live load, the designer shall consider factors such as the physical capacity of proposed debris-catching platforms to retain materials, and the type of equipment the platforms might support. Positive means of demolition and construction controls shall be provided to assure that debris that may collect on the shield will not exceed the design live load. The horizontal protection shield, in plan view, shall cover no less than the area directly over the tracks plus ten feet minimum beyond the centerline of the outermost tracks.
 - 2. The vertical shield shall be designed to carry a minimum 30 psf [1500 Pascals] allowance for wind load. The vertical shield shall extend a minimum of 6'-6" [1950 millimeters] above the top of the adjacent surface, such as curb or sidewalk. Anti-climb wings shall be installed at each end, as necessary, to restrict access to the railroad property.
- F. The vertical and horizontal clearance envelopes required for maintenance of railroad operations, shall be indicated on the site specific work plans. These clearances are subject to review and approval by Amtrak. If applicable, both temporary and permanent envelopes shall be indicated on the plans. The temporary protection shields shall be installed outside the limits of these minimum vertical and horizontal clearances shown on the site specific work plans.
- G. In electrified territory, temporary protection shields shall be bonded and grounded.
- H. Temporary protection shields shall be designed and constructed to prevent dust, debris, concrete, formwork, paint, tools, or anything else from falling onto the railroad property below.
- I. The temporary protection shields shall be attached to the structure in accordance with site specific work plans submitted by the Contractor and approved by Amtrak. Drilling in structural members and welding will generally not be permitted in members that are scheduled to remain in place in the reconstructed structure. For existing members scheduled for demolition or for later reconstruction, any proposed attachment shall be designed with consideration of potential existing, deteriorated conditions.
- J. The Contractor shall provide the Amtrak on-site representative, for review and approval prior to any construction activity in the effected area, a proposed construction schedule for the installation, maintenance and removal of the temporary protection shields.

- K. The temporary protection shields shall be installed prior to the start of any other work over the railroad in the effected areas. No construction shall proceed until the Amtrak on-site representative reviews and approves the Contractor's installed protection. Before proceeding with the work, Amtrak must be satisfied, in its sole judgment, that sufficient protection has been provided to proceed with the work.
- L. The Contractor shall install and remove temporary protection shields only when an Amtrak representative is on-site.
- M. The Contractor shall not install or remove temporary protection shields during train operations.
- N. Temporary protection shields shall remain in place for the duration of construction activities over and nearby the railroad in the effected areas. The Contractor may remove temporary construction only after approved by Amtrak on-site representatives.
- O. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

END OF SECTION 01520A

SECTION 01142A – SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SCOPE

- A. Amtrak requires that a site-specific work plan for accomplishing hoisting operations be prepared for every applicable project, and for each type of lift on a project.
 - 1. The plan shall demonstrate adherence to Amtrak safety rules.
 - 2. The plan shall demonstrate constructibility.
 - 3. The plan shall minimize impact to rail operations.
 - 4. The approved plan will provide the basis for field inspection/ verification of the actual work.
- B. Preparation, review and approval of the Crane/ Hoisting site-specific work plan does not relieve the Contractor from meeting other Amtrak requirements for adequate planning and documentation of proposed work procedures within the Right-of-Way of the railroad..
- C. Current Amtrak safety rules shall be adhered to in every respect.
- D. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

- A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer
- B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative
- C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

- A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.
- B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

- C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

- 3.1 THE CONTRACTOR SHALL PROVIDE, AT A MINIMUM, THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL BY AMTRAK ENGINEERING STRUCTURES:
 - A. Plan view showing location(s) of cranes, operating radii, with delivery and/or disposal locations shown. Provide all necessary dimensions for locating the elements of the plan.
 - B. Plans and computations showing the weight of the pick.
 - C. Crane rating sheets, demonstrating that cranes are adequate for 150% of the calculated pick weight. That is, the cranes shall be capable of picking 150% of the load, while maintaining normal, recommended factors of safety. The adequacy of the crane for the proposed pick shall be determined by using the manufacturer's published crane rating chart and not the maximum crane capacity. Crane and boom nomenclature is to be indicated.
 - D. Calculations demonstrating that slings, shackles, lifting beams, etc. are adequate for 150% of the calculated pick weight.
 - E. Location plan showing obstructions, indicating that the proposed swing is possible. "Walking" of load using two cranes will not be permitted. Rather, multiple picks and repositioning of the crane may be permitted to get the load to the needed location for the final pick, if necessary.
 - F. Data sheet listing types and sizes of slings and other connecting equipment. Include copies of catalog cuts for specialized equipment. Detail attachment methods on the plans.
 - G. A complete procedure, indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.
 - H. Temporary support of any components or intermediate stages, as may be required.
 - I. A time schedule of the various stages, as well as a schedule for the entire lifting process.

END OF SECTION 01142A

SECTION 02261A – REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS

PART 1 - GENERAL

1.1 SCOPE

- A. This engineering practice describes items to be included in the design and construction of temporary sheeting and shoring construction adjacent and proximate to Amtrak tracks.
- B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

- A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer
- B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative
- C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

- A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.
- B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.
- C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for temporary sheeting and shoring has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS INSTALLING TEMPORARY CONSTRUCTION SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS SHALL CONFORM TO THE FOLLOWING:

- A. Footings for all piers, columns, walls, or other facilities shall be located and designed so that any temporary sheeting and shoring for support of adjacent track or tracks during construction, will not be closer than toe of ballast slope. The dimension from gage of rail to toe of ballast, along tangent track, is 7'-5"; see dimensions on Track standard plans for curved track dimensions.
- B. USE OF SHEETING: When support of track or tracks is necessary during construction of the above-mentioned facilities, interlocking steel sheeting, adequately braced and designed to carry Cooper E80 live-load plus 50 percent impact allowance is required. Soldier piles and lagging will be permitted for track support ONLY when required penetration of steel sheet piling cannot be obtained, due to site-specific conditions that make steel sheet piling placement impracticable, in the opinion of the authorized, Amtrak design review engineer.
 - 1. For usual soil conditions and limited excavations, sheeting is required when the near-track excavation extends beneath or nearer to the track than the Theoretical Railroad Embankment Line. The Theoretical Railroad Embankment Line is defined as a line that starts at grade, ten foot from the centerline of the outer track, and extends downward, away from the track, at a slope of 1-1/2 horizontal to one vertical.
 - 2. For special soil conditions, such as soft organic soils and rock conditions, and for unusual excavation conditions, temporary supports for excavations may be necessary even when the limits fall beyond the Theoretical Railroad Embankment Line, requiring site specific analysis by a professional, geotechnical engineer.
 - 3. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".
- C. Exploratory trenches, three feet deep and 15 inches wide in the form of an "H", with outside dimensions matching the proposed outside dimensions of sheeting, shall be hand dug, prior to placing and driving the sheeting, in any area where railroad or utility underground installations are known or suspected. These trenches are for exploratory purposes only, and shall be backfilled and immediately compacted, in layers. This work shall be performed only in the presence of a railroad inspector.
- D. Absolute use of track is required while driving sheeting adjacent to running track. Track usage shall be prearranged per standard procedures, through the Amtrak project representative.
- E. Cavities adjacent to sheet piling, created by pile driving, shall be filled with sand, and any disturbed ballast shall be restored and tamped immediately.
- F. Sheet piling cutoffs
 - 1. During construction, sheeting shall be cut off at an elevation no higher than the top of tie.
 - 2. At the completion of construction activities involving the use of sheet piling, sheet piling may be pulled if there will be no adverse impact to the railroad track support bed, as determined by the Amtrak site engineer. This will generally be permitted when both of these conditions are met:
 - a. the sheeting face is at least ten feet distant from the centerline of track, and
 - b. the bottom of the excavation that the sheeting supported prior to backfilling, does not fall within an assumed influence zone under the tracks. The assumed influence

zone is defined as the area, as seen in cross-sectional view, falling beneath the Theoretical Underground Track Disturbance Line. This line is defined as a line that starts at the end and bottom of the ties, and extends from the track outward and downward at a one-to-one (45-degree) slope.

3. Sheet piling that is to be left in-place, shall be cut off below the ground line
 - a. at least eighteen inches below final ground line at the sheeting, and
 - b. no higher than 24 inches below the elevation of the bottom of the nearest ties
 4. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".
- G. The excavation adjacent to the track shall be covered, ramped and protected by handrails, barricades and warning lights, as required by applicable safety regulations, and as directed by Amtrak.
- H. Final backfilling of excavation shall conform to project specifications.
- I. The Contractor shall provide Amtrak with a detailed schedule of proposed construction operations, detailing each step of the proposed temporary construction operations in proximity to Amtrak tracks, so that Amtrak may review and approve the proposed operations, and may properly inspect and monitor operations.
- J. Drawings for the proposed temporary sheeting and shoring shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.
- K. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.
1. When Amtrak grants approval for sheeting closer than standard minimum clearances, the Contractor shall develop a survey plan, if not already required by the project, for the adjacent tracks, to be conducted prior to, during, and after the temporary sheeting construction operations. If settlement is detected, construction operations shall be suspended until the track has been returned to its initial condition, and stabilized, as determined by the Amtrak project site representative.
2. The Contractor shall stockpile ten (10) tons of approved ballast at the project site, and maintain that amount in ready reserve, to allow for the possible need to restore track profile.
- L. Particular care shall be taken in the planning, design and execution of temporary construction, as relates to railroad slope protection and drainage facilities. Erosion and sediment control best management practices shall be designed and employed, as approved by Amtrak. Any unintended disruption to railroad drainage facilities, caused by the temporary construction, shall be promptly remedied, as directed by the Engineer, solely at the Contractor's cost.
- M. The following Information Sketch is attached:
1. Figure No. SK-1: Normal Requirements for Sheet Piling Adjacent to Track

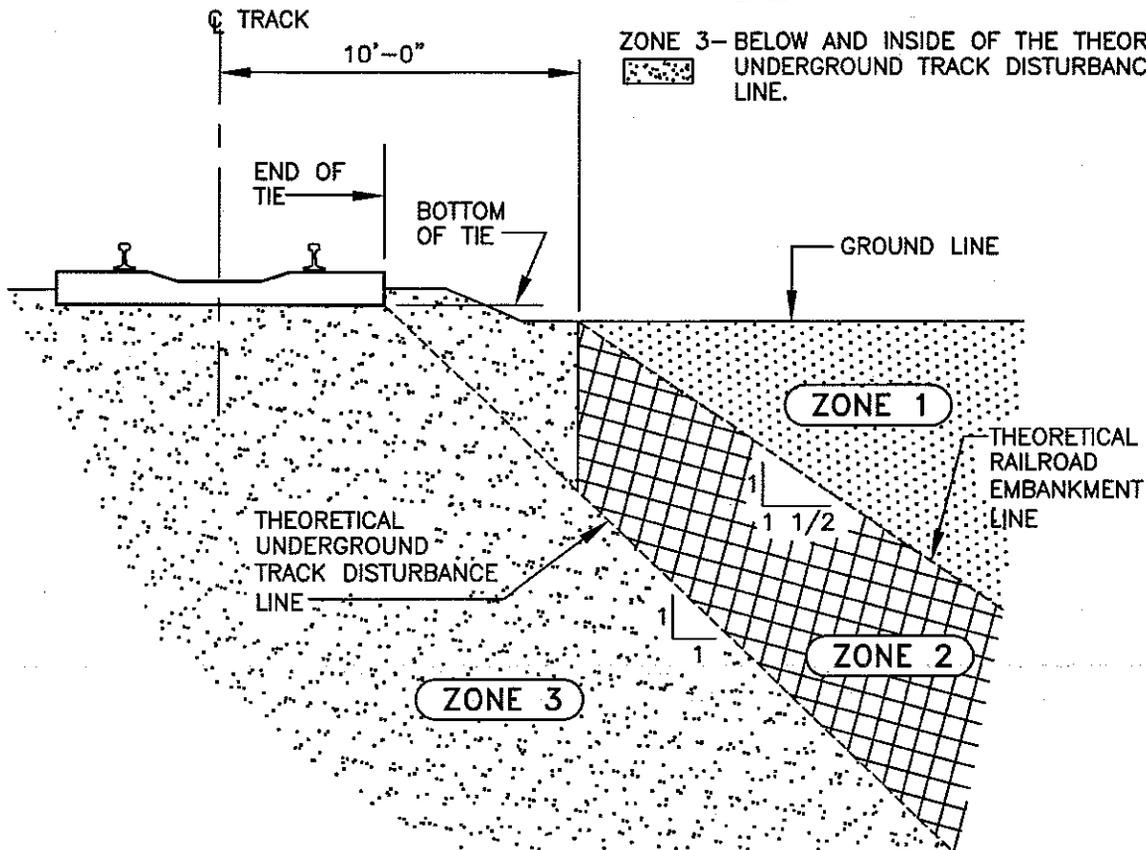
END OF SECTION 02261A

LEGEND

ZONE 1— ABOVE AND OUTSIDE THE THEORETICAL RAILROAD EMBANKMENT LINE.

ZONE 2— FARTHER THAN 10 FEET FROM THE CENTERLINE OF TRACK, BELOW THE THEORETICAL RAILROAD EMBANKMENT LINE AND ABOVE THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.

ZONE 3— BELOW AND INSIDE OF THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.



NORMAL REQUIREMENTS FOR SHEET PILING ADJACENT TO TRACK

- ① EXCAVATIONS WITHIN ZONE 1 — ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE — DO NOT NORMALLY REQUIRE SHEETING TO PROTECT RAILROAD ROAD BED. SHEETING MAY BE REQUIRED FOR OTHER REASONS.
- ② EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHEETING, BUT THE SHEETING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.
- ③ EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHEETING TO BE LEFT IN PLACE AND CUT-OFF PER REQUIREMENTS.

Amtrak®

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Office of Chief Engineer
STRUCTURES

National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

SKETCH 1

SPEC. 02261A - REV. 1

Designed CJR Drawn JLM Date 6/06/01

File No:	
Design No:	3501
Sheet No.	1 of 1
SK-1	

Track Monitoring

Scope: If any work that could potentially affect the stability of the track is occurring within 50 feet of a track, or within the influence line of a track, then monitoring points shall be established along the track. The influence line descends from a point one foot horizontally away from the outside end of the tie bottom one unit vertically for every unit and a half horizontally.

Safety: All work close enough to foul a track must only be performed under the direction of qualified railroad personnel. People performing track monitoring are classified as Roadway Workers and must be trained in Roadway Worker Protection.

Points: Each location shall include a point on the top of rail marked with paint or crayon on the field side of the rail and used for vertical measurements, and a point on the tie for horizontal measurements. In wood ties, the point shall be marked with a PK nail or similar surveyor's marker; on concrete or steel ties the point shall be marked with paint.

Point Locations: Reference points shall be established along the track beginning at the point where the work is closest to the track. Points shall continue to be placed at intervals of 50 feet along the track to the point where the work ends or does not meet the conditions outlined above, and then at 50 feet, 100 feet, and 200 feet away from the end point(s). Where more than one track may be affected, points shall be established on each track that could be affected.

Measurement Accuracy: Monitoring points shall be established to within 0.001 feet, and monitoring shall be done to 0.01 feet.

Monitoring: Monitoring shall be performed at the beginning and end of every shift of work. Points shall be measured, the measurements recorded, and the numbers compared with previous measurements. All points shall be measured each time monitoring occurs, except for the points 200 feet away from the end of work; these points shall only be measured if any of the other measurements exceeds an allowable deviation.

Allowable deviations: If track is found to have moved either vertically or horizontally by more than one half of the Amtrak Maintenance limits as specified in Amtrak's MW-1000 for the particular class of track involved, then all work shall cease immediately and the contractor shall immediately notify the designated Amtrak Project Engineer. Work may not resume until the designated Amtrak Project Engineer has inspected the site and approved.

Track Maintenance: Deficiencies in track surface and alignment caused by construction activities shall be corrected solely by Amtrak forces at project expense.

TRACK CLASS	MAX. PASSENGER SPEED (MPH)	CROSS LEVEL (INCHES) The Difference in Cross Level Between Any Two Points Less Than		DEVIATION FROM PROFILE 31' CHORD INCHES		DEVIATION FROM HORIZONTAL ALIGNMENT INCHES	DEVIATION FROM HORIZONTAL ALIGNMENT INCHES
		10'	62'	31' CHORD	62' CHORD	31' CHORD	62' CHORD
		MAINTENANCE LIMITS					
1	15	1	2 1/4	2 5/8	2 1/4	N/A	3 3/4
2	30	1	1 5/8	2 1/4	2	N/A	2 1/4
3	60	1	1	1 1/2	1 5/8	N/A	1 1/4
4	80	1	1	1 1/8	1 1/2	N/A	1
5	90	1	1	3/4	1	N/A	1/2
6	110	3/4	1	3/4	3/4	3/8	1/2
7	125	3/4	1	3/4	3/4	3/8	3/8
8	160	3/4	1	1/2	3/4	3/8	3/8
9	200	3/4	1	3/8	1/2	3/8	3/8
1/2 MAINTENANCE LIMITS							
1	15	1/2	1 1/8	1 5/16	1 1/8	N/A	1 7/8
2	30	1/2	13/16	1 1/8	1	N/A	1 1/8
3	60	1/2	1/2	3/4	13/16	N/A	5/8
4	80	1/2	1/2	9/16	3/4	N/A	1/2
5	90	1/2	1/2	3/8	1/2	N/A	1/4
6	110	3/8	1/2	3/8	3/8	3/16	1/4
7	125	3/8	1/2	3/8	3/8	3/16	3/16
8	160	3/8	1/2	1/4	3/8	3/16	3/16
9	200	3/8	1/2	3/16	1/4	3/16	3/16

 ENGINEERING PRACTICES	ORIGINAL ISSUE DATE 01/25/01		NUMBER EP3003	
	REVISED DATE N/A			
	TITLE BLASTING PROCEDURES			PAGE 1 OF 2
	RECOMMENDED by Craig Rolwood	DATE 1/25/01		
APPROVED by CHIEF ENGR, STRUCTURES James Richter	DATE 2/13/01			

SCOPE AND NATURE

To establish a uniform policy for blasting on and adjacent to Amtrak's Right-of Way.

SPECIAL REFERENCE

Note: The former number for this engineering practice is 208.

SPECIAL MATERIALS

N/A

PROCEDURE

Blasting is restricted on and adjacent to Amtrak's Right-of-Way. Approval to blast must be given by the Assistant Vice President or Chief Engineer of the appropriate discipline.

Requests for approval to blast must provide the information requested below and conform to all requirements listed:

1. Provide a site plan defining the blast area and location of nearest or other related structure.
2. Provide a soil and rock profile of the blast zone.
3. Limit the peak particle velocity to two inches per second, except for certain sensitive areas, such as tunnels, bridge piers and abutments, oilostatic duct lines, central instrument houses and underpinning. For these sensitive areas, limit maximum peak particle velocity to between 0.5 inches per second and one inch per second, depending on the facility.
4. Maintain a scale distance of 50 when maximum peak particle velocity is two inches per second. Maintain an initial scale distance of 60 when maximum peak particle velocity is limited to a range of 0.5 inches per second to one inch per second. This initial scale distance may be adjusted to 50 after the initial blast, if conditions permit.

$$\text{Scale distance} = \frac{\text{Distance from blast to structure (in feet)}}{\sqrt{\text{Weight of explosives per delay (in pounds)}}}$$

5. Use a non-electric detonation system whenever possible.
 - a. If electric caps are used, a check must be made for stray currents, induced current and radio frequency energy to ensure that this hazardous, extraneous electricity is at an acceptable level.

TITLE BLASTING PROCEDURES	ORIGINAL ISSUE DATE 01/25/01	NUMBER EP3003
	REVISED DATE N/A	
		PAGE 2 OF 2

- b. Amtrak uses two-way radios for trains control. The radios operate at 160 MHz range, and cannot be turned off during the charging and priming operation.
- 6. Provide an open face for maximum relief for burden.
- 7. Obtain the services of a qualified vibration and blasting consultant to monitor all blasting activity.
- 8. All blasting operations must be coordinated with Amtrak's Senior Project Engineer on the site.
- 9. A pre-blast and post-blast survey may be obtained. The survey will include photographs and an inspection of all nearby, Amtrak owned and other facilities. The survey will be used to determine any changes that occurred due to the blasting operation.

REPORTING

N/A

RESPONSIBILITY

Area Construction Engineer	Comply with procedure
Senior Director Construction	Assure compliance with procedure
Asst. Vice President Engineering or Chief Engineer, Structures	Approval to Blast Required

 ENGINEERING PRACTICES	ORIGINAL ISSUE DATE 04/24/01	NUMBER EP3016	
	REVISED DATE N/A		
TITLE STORM WATER DRAINAGE AND DISCHARGE FROM ADJACENT PROPERTY ONTO AMTRAK RIGHT-OF-WAY	RECOMMENDED by <i>Anthony Scorpio</i>	DATE 4/25/01	PAGE 1
	APPROVED by CHIEF ENGR, STRUCTURES <i>James Richter</i>	DATE 4/27/01	OF 2

SCOPE AND NATURE

There are many areas along the railroad corridor that are receiving storm water from adjacent property that results in flooding during the smallest of storms. Increased storm water flow to the railroad property increases deposits of excessive amounts of sedimentation and could cause fouling of the track structure. With the introduction of the High Speed Rail Trains, passenger safety is of the utmost importance. Diminished track support from flooding and sedimentation will not be allowed.

It is Amtrak's policy to limit the resultant discharge and drainage of storm water from the development of adjacent properties to no more than pre-existing conditions, as demonstrated by engineering analyses through governmental regulatory processes.

It is Amtrak's policy to protect the railroad right-of-way from sediment, erosion and excess runoff during all stages of construction activities on adjacent properties, as demonstrated by engineering analyses through governmental regulatory processes.

SPECIAL REFERENCE

The following policy is to augment Specification 02861 of EP3005, Pipeline Occupancy Requirements and Specifications, and other Amtrak I&C, design and construction standards.

SPECIAL MATERIALS

N/A

PROCEDURE

The discharge of storm water onto railroad property will be prohibited for all construction projects on or adjacent to Railroad property, unless the applicant can demonstrate that there will be a "zero net runoff" result in the peak flow and total volume based on a 100 Year Storm event, and that receiving waters downstream will not be impacted.

Computations indicating this design and suitable topographic plans, prepared by a Professional Engineer, licensed in the state in which the work will be performed, shall be submitted to the Chief Engineer for approval at least 60 days in advance of construction. If the drainage is to discharge into an existing drainage channel on or under the Railroad Right of Way, a hydraulic analysis of the existing structures must be included.

Formal approval of the proposed design, by the appropriate governmental agency or agencies, must be submitted with the computations. Control of soil erosion and sedimentation must be demonstrated on the design plans in accordance with the appropriate state and local regulations.

TITLE STORM WATER DRAINAGE AND DISCHARGE FROM ADJACENT PROPERTY ONTO AMTRAK RIGHT-OF-WAY	ORIGINAL ISSUE DATE 04/24/01	NUMBER EP3016
	REVISED DATE N/A	PAGE 2 OF 2

The Contractor shall be responsible for control of the site and protection of railroad property during the entire construction project, through completion. The design of sedimentation, erosion and runoff control during construction shall accommodate conditions of every phase of construction.

Review, monitoring and approval process:

1. The Contractor shall conform to this Amtrak policy, and demonstrate conformance by standard Amtrak review submissions and approvals, as noted above.
2. Amtrak I&C shall assure that agencies and other third parties proposing construction on or adjacent to Amtrak Right-of-Way conform to Amtrak policy detailed herein.
3. Amtrak Design and Construction shall review the Contractor's proposed design and construction procedures for conformance with Amtrak policy, as demonstrated through appropriate engineering analyses and the government regulatory process.
4. Amtrak Construction shall monitor the activities of the Contractor on-site to assure compliance/ adherence to approved procedures throughout the construction period.

REPORTING

N/A

RESPONSIBILITY

Amtrak I&C Staff	Comply with Procedure
Director I&C	Assure Compliance
Amtrak Design Staff	Comply with Procedure
Director Structures Design	Assure Compliance
Amtrak Construction Staff	Comply with Procedure
Sr. Director Construction	Assure compliance



AMTRAK
HR - Employee Development
30th & Market Streets - 3 North - Box 1
Philadelphia, PA 19104
Fax Number: 215-349-3731

Contractor Safety & Security Awareness Training Request

This is in response to your request to schedule Amtrak's Contractor/Lessee Safety and Awareness Training. The safety of Amtrak's passengers and all employees working on the property (Amtrak or Contractor) is our highest priority. For your protection, Amtrak requires your employees to comply with all safety regulations ("Specifications Regarding Safety and Protection of the Railroad Traffic and Property").

Amtrak's Project Manager or Engineer assigned to your project will assist you with obtaining a temporary "Permit to Enter upon Property." All permits to enter Amtrak property are obtained by contacting the Director of I&C projects. The qualification card that successful participants will receive will be valid for one year from date of issue. Safety violations will result in the immediate suspension of work within the railroad's property limits. Amtrak requires you to formally accept, by signing the authorization form, the terms and/or applicable training service fees prior to setting the training schedule. The costs are outlined in the attached documents.

Please complete the Training Authorization and return it to the address or fax number on the form. If you have any questions with any aspect of the training services, contact Dawn Bey, Employee Development Specialist, at (215) 349-1553.

NO ONE WILL BE ADMITTED TO A CLASS OR PERMITTED TO PARTICIPATE IN A CLASS WITHOUT FIRST PRESENTING A VALID PHOTO IDENTIFICATION

ALL ATTENDEES MUST BE ABLE TO READ, COMPREHEND AND DEMONSTRATE THEIR UNDERSTANDING OF THE MATERIALS PRESENTED AS WELL AS ALL SAFETY INSTRUCTIONS, BRIEFINGS AND WARNINGS

Thank you.

Jesse Flohr, Manager Employee Development
30th St. Station, 3rd Floor NW
Philadelphia, PA 19104
215-349-3704

Amtrak Employee Development
Revised 6/2011



TRAINING REQUEST FORM
COMPLETE ALL FIELDS
PLEASE CLEARLY PRINT OR TYPE
SEPARATE FORMS MUST BE COMPLETED
FOR ALL SUB-CONTRACTORS

Company Name: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

Contact Person: _____

Contact Person Number: _____

Contact Person Email: _____

Is your work in conjunction with an Amtrak Project? Yes No

Name of Amtrak Project requiring this training: _____

Amtrak Project Manager or Contact: _____

If Applicable: Work Order: _____ Function: _____

Res Center: _____ PO Number: _____

Is another company responsible for the cost of this training? Yes No

If Yes, Company Name: _____

Billing Address: _____

City: _____ State: _____ Zip: _____

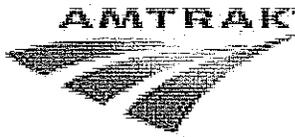
Contact Person: _____

Contact Person Number: _____

Brief Description of the work your company or firm is performing:

Number of personal that require the training: _____

NOTE: If the personnel that you are requesting training for are not all employees of your company or they are sub-contractors, you must provide a separate authorization for each sub-contractor or group.



Amtrak will schedule contractor training classes at the following locations:

Washington DC – Union Station	<input type="checkbox"/>	Groton, CT	<input type="checkbox"/>
Baltimore Penn Station, MD	<input type="checkbox"/>	Providence, RI	<input type="checkbox"/>
Baltimore, MD - Quad Ave	<input type="checkbox"/>	Chicago, IL	<input type="checkbox"/>
Philadelphia, PA – 30 th St. Station	<input type="checkbox"/>	Niles, MI	<input type="checkbox"/>
Lancaster, PA	<input type="checkbox"/>	St. Louis, MO	<input type="checkbox"/>
Princeton Jct., NJ	<input type="checkbox"/>	New Orleans, LA	<input type="checkbox"/>
Newark, NJ – Penn Station	<input type="checkbox"/>	Sanford, FL	<input type="checkbox"/>
New York, NY – Penn Station	<input type="checkbox"/>	Miami, FL	<input type="checkbox"/>
Albany, NY	<input type="checkbox"/>	Seattle, WA	<input type="checkbox"/>
New Haven, CT	<input type="checkbox"/>	Los Angeles, CA	<input type="checkbox"/>
Other <input type="checkbox"/>	_____		

Amtrak may agree to schedule classes at other locations subject to the following conditions:

1. Amtrak reserves the right to refuse training requests for locations other than those listed above unless agreed to in advance.
2. Additional charges as specified below may be charged for classes not conducted at an Amtrak location.
3. Amtrak reserves the right to bill for the minimum charge where attendees fail to appear and do not call to cancel at least 24 hours in advance.

Please list any special concerns, requests, or requirements:

Please acknowledge agreement and approve training cost

(Signature)

(Type or Print Name)

Date

(Contact Number)



CONTRACTOR SAFETY & AWARENESS TRAINING

AMTRAK Contractor Safety Enrollment Coordinator:

Dawn Bey
30th & Market Streets, 3rd Floor NW, Box 1
Philadelphia, PA 19104
(215) 349-1553
contractortraining@amtrak.com

Charges for Contractor Safety & Awareness Training are as follows:

Minimum Class Cost (5 or less Participants) = \$700.00

Participant Class Size	Cost Per Person
6 to 10	\$100.00
11 to 15	\$ 90.00
16 or more	\$ 80.00

REPLACEMENT CARDS WILL BE PROVIDED FOR A FEE OF \$50.00
Contact Dawn Bey @ 215-349-1553

NOTE: There is an additional \$700.00 charge for classes held at the contractor's location unless waiver is agreed to in advance

Return this training request form to:

Amtrak Engineering Employee Development
30th & Market Streets, 3NW, Box 1
Philadelphia, PA 19104
Fax Number (215) 349-3731
Email: contractortraining@amtrak.com

EXHIBIT D

**INDEMNITY FROM CONTRACTORS PERFORMING
DESIGN AND/OR ENGINEERING FUNCTIONS**

This form is to be copied, executed by a duly-authorized representative, and returned to Amtrak at the address specified in the Agreement. Amtrak will not review any documents until this form has been received.

_____ (“Contractor”) hereby agrees to release and further agrees to defend, indemnify, and hold harmless National Railroad Passenger Corporation (Amtrak) and its employees, directors, agents and officers (and any other affected railroad) from and against any and all suits, claims, demands, damages and losses (including all costs and attorneys’ fees) of whatsoever kind or nature arising out of any act, error or omission caused by Contractor, its subcontractors, agents, and/or employees in connection with the design of improvements to a highway bridge known as Tyburn Road Bridge above Amtrak’s railroad tracks at railroad milepost 59.87 in Falls Township, Pennsylvania. The foregoing obligation shall not be limited by the existence of any insurance policy and/or by any limitation on the amount and/or type of damages, compensation and/or benefits payable by or for Contractor or its contractor or any subcontractor, and shall survive the termination of this Agreement for any reason.

DULY AUTHORIZED

By: _____

Its: _____

Date: _____

Witness:

By: _____

Print Name: _____

TABLE 4
MITIGATION TRACKING SYSTEM MATRIX TEMPLATE

Project Name: Tyburn Road - Section AMT Restoration

Project Location: Falls Township, Bucks County, Pennsylvania

MITIGATION CATEGORY	RESOURCE/REFERENCE NUMBER	RESPONSIBLE PARTY	SOURCE DOCUMENTS	PART 4 OF 5: CONSTRUCTION		
				MITIGATION COMMITMENT	CONTRACTOR ^{2, 3} DATE/INITIALS	CONSTRUCTION PROJECT MANAGER ³ DATE/INITIALS
NATURAL RESOURCES						
Soil Erosion and Sedimentation		Contractor	E&S Control Plan	Approved E&S Pollution Control Plan and NPDES Permit; use of filter sock at the base of disturbed and created slopes to protect sensitive resources.		
Vegetation		Contractor	Sheet 2 of 31 of the E&S Plans	Per the executive order on invasive plant species, the contractor will be directed to avoid use of any plants listed on the noxious weed control list.		
Threatened and Endangered Plants and Animals		Contractor	CE 1b Evaluation Section B:A-3; PNDI	Voluntary conservation measure to identify and avoid impacts to Lupine and Sand blackberry. Update PNDI annually.		
SAFETY AND MOBILITY						
Traffic Controls		Contractor	Approved detour plan.	Modified signing to facilitate traffic flow; coordination with emergency service providers		

² Contractor Name

Contractor Responsible Individual: _____

³ The Contractor is to initialize the matrix for a given mitigation line-item immediately after the individual line-item has been implemented and/or completed. The Contractor is to coordinate with the Construction Project Manager (or Environmental Monitor) to review the individual mitigation line items and to receive concurrence (PM or EM initials) for completed line items. This coordination is to be on a regular basis (such as periodic site inspections or status meetings, as determined for the project).

PREVAILING WAGES PROJECT RATES

Project Nam : ECMS#90197, SR:2020, SECTION:AMT, Tyburn road bridge
over AMTRAK
Awarding Agency: PennDOT
Contract Award Dat : 9/20/2012
Serial Number: 12-04548
Project Classification: Highway
Determination Dat : 7/16/2012
Assigned Field Office : Philadelphia
Field Office Phone Number: 215-560-1858
Toll Free Phone Number:

Bucks County

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	5/1/2010		\$39.64	\$28.00	\$67.64
Asbestos & Insulation Workers	5/1/2011		\$40.39	\$28.00	\$68.39
Asbestos & Insulation Workers	5/1/2012		\$41.39	\$28.00	\$69.39
Boilermaker (Commercial, Institutional, and Minor Repair Work)	1/1/2010		\$23.59	\$15.15	\$38.74
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2011		\$24.22	\$16.02	\$40.24
Boilermakers	1/1/2011		\$37.35	\$28.12	\$65.47
Boilermakers	1/1/2012		\$37.62	\$29.85	\$67.47
Bricklayer	5/1/2009		\$33.97	\$21.74	\$55.71
Bricklayer	5/1/2010		\$33.97	\$22.49	\$56.46
Bricklayer	5/1/2011		\$33.97	\$23.29	\$57.26
Bricklayer	5/1/2012		\$34.97	\$23.59	\$58.56
Carpenter - Chief of Party (Surveying & Layout)	5/1/2010		\$40.19	\$23.34	\$63.53
Carpenter - Chief of Party (Surveying & Layout)	5/1/2011		\$40.77	\$23.84	\$64.61
Carpenter - Chief of Party (Surveying & Layout)	5/1/2012		\$41.34	\$24.34	\$65.68
Carpenter - Chief of Party (Surveying & Layout)	5/1/2013		\$42.55	\$24.34	\$66.89
Carpenter - Chief of Party (Surveying & Layout)	5/1/2014		\$43.99	\$24.34	\$68.33

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter - Instrument Person (Surveying & Layout)	5/1/2010		\$34.95	\$23.34	\$58.29
Carpenter - Instrument Person (Surveying & Layout)	5/1/2011		\$35.45	\$23.84	\$59.29
Carpenter - Instrument Person (Surveying & Layout)	5/1/2012		\$35.95	\$24.34	\$60.29
Carpenter - Instrument Person (Surveying & Layout)	5/1/2013		\$37.00	\$24.34	\$61.34
Carpenter - Instrument Person (Surveying & Layout)	5/1/2014		\$38.25	\$24.34	\$62.59
Carpenter - Rodman (Surveying & Layout)	5/1/2012		\$16.54	\$21.88	\$38.42
Carpenter - Rodman (Surveying & Layout)	5/1/2013		\$17.02	\$21.88	\$38.90
Carpenter - Rodman (Surveying & Layout)	5/1/2014		\$17.60	\$21.88	\$39.48
Carpenters	5/1/2010		\$34.95	\$23.34	\$58.29
Carpenters	5/1/2011		\$35.45	\$23.84	\$59.29
Carpenters	5/1/2012		\$35.95	\$24.34	\$60.29
Carpenters	5/1/2013		\$37.00	\$24.34	\$61.34
Carpenters	5/1/2014		\$38.25	\$24.34	\$62.59
Cement Masons	11/1/2009		\$32.20	\$24.96	\$57.16
Cement Masons	5/1/2010		\$32.20	\$25.71	\$57.91
Cement Masons	5/1/2011		\$32.45	\$26.46	\$58.91
DockBuilder/Pile Drivers (Building, Heavy & Highway)	7/1/2009		\$37.50	\$26.63	\$64.13
DockBuilder/Pile Drivers (Building, Heavy & Highway)	7/1/2010		\$37.60	\$27.57	\$65.17
DockBuilder/Pile Drivers (Building, Heavy & Highway)	7/1/2011		\$38.15	\$28.27	\$66.42
DockBuilder/Pile Drivers Divers (Building Heavy & Highway)	7/1/2010		\$45.12	\$27.57	\$72.69
Drapery Installers	5/1/2009		\$31.09	\$21.34	\$52.43
Drywall Finisher	5/1/2009		\$32.79	\$21.37	\$54.16
Drywall Finisher	5/1/2010		\$33.00	\$22.41	\$55.41
Drywall Finisher	5/1/2011		\$33.11	\$23.45	\$56.56
Electric Lineman	5/31/2010		\$44.62	\$19.50	\$64.12
Electric Lineman	5/31/2011		\$45.63	\$19.77	\$65.40
Electric Lineman	11/28/2011		\$46.67	\$20.04	\$66.71
Electric Lineman	5/28/2012		\$47.72	\$20.33	\$68.05
Electric Lineman	11/26/2012		\$48.79	\$20.61	\$69.40

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Electricians & Telecommunications Installation Technician	1/1/2010		\$47.34	\$26.37	\$73.71
Electricians & Telecommunications Installation Technician	7/4/2011		\$47.34	\$29.05	\$76.39
Elevator Constructor	1/1/2011		\$48.15	\$21.99	\$70.14
Elevator Constructor	1/1/2012		\$49.30	\$23.84	\$73.14
Floor Layer	5/1/2010		\$37.41	\$24.06	\$61.47
Floor Layer	5/1/2012		\$38.76	\$24.86	\$63.62
Floor Layer	5/1/2013		\$39.91	\$24.86	\$64.77
Floor Layer	5/1/2014		\$41.26	\$24.86	\$66.12
Glazier	5/1/2009		\$36.64	\$23.81	\$60.45
Glazier	5/1/2010		\$36.67	\$24.53	\$61.20
Glazier	5/1/2011		\$37.35	\$25.25	\$62.60
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2010		\$44.70	\$26.69	\$71.39
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2011		\$44.70	\$27.19	\$71.89
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2012		\$44.70	\$28.14	\$72.84
Iron Workers (Riggers)	7/1/2009		\$34.77	\$17.25	\$52.02
Iron Workers (Riggers)	7/1/2010		\$35.02	\$17.75	\$52.77
Iron Workers (Riggers)	7/1/2011		\$35.52	\$23.98	\$59.50
Iron Workers - Reinforcing Steel Mesh - Rebar	7/1/2009		\$37.18	\$24.40	\$61.58
Iron Workers - Reinforcing Steel Mesh - Rebar	7/1/2010		\$37.43	\$24.90	\$62.33
Iron Workers - Reinforcing Steel Mesh - Rebar	7/1/2011		\$38.03	\$25.40	\$63.43
Laborers (Class 01 - See notes)	5/1/2010		\$23.85	\$22.30	\$46.15
Laborers (Class 01 - See notes)	5/1/2011		\$24.75	\$22.30	\$47.05
Laborers (Class 01 - See notes)	5/1/2012		\$25.15	\$23.00	\$48.15
Laborers (Class 02 - See notes)	5/1/2010		\$25.97	\$21.73	\$47.70
Laborers (Class 02 - See notes)	5/1/2011		\$26.87	\$21.73	\$48.60
Laborers (Class 02 - See notes)	5/1/2012		\$26.45	\$22.85	\$49.30
Laborers (Class 03 - See notes)	5/1/2010		\$24.37	\$22.28	\$46.65
Laborers (Class 03 - See notes)	5/1/2011		\$25.17	\$22.28	\$47.45
Laborers (Class 03 - See notes)	5/1/2012		\$25.45	\$23.23	\$48.68

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 04 - See notes)	5/1/2011		\$25.27	\$21.65	\$46.92
Laborers (Class 04 - See notes)	5/1/2012		\$25.45	\$23.23	\$48.68
Laborers (Class 05 - See notes)	5/1/2011		\$25.42	\$21.45	\$46.87
Laborers (Class 05 - See notes)	5/1/2012		\$25.35	\$22.80	\$48.15
Landscape Laborer	4/1/2009		\$19.31	\$19.98	\$39.29
Landscape Laborer	5/1/2012		\$18.71	\$21.03	\$39.74
Marble Finisher	5/1/2009		\$28.63	\$19.22	\$47.85
Marble Finisher	5/1/2010		\$28.63	\$19.97	\$48.60
Marble Finisher	5/1/2011		\$28.68	\$20.72	\$49.40
Marble Finisher	5/1/2012		\$29.27	\$21.02	\$50.29
Marble Mason	5/1/2010		\$34.36	\$21.77	\$56.13
Marble Mason	5/1/2011		\$34.35	\$22.58	\$56.93
Marble Mason	5/1/2012		\$35.25	\$22.90	\$58.15
Millwright	7/1/2008		\$33.97	\$23.50	\$57.47
Millwright	7/1/2009		\$35.13	\$25.49	\$60.62
Millwright	7/1/2010		\$35.13	\$26.33	\$61.46
Millwright	7/1/2011		\$35.78	\$26.99	\$62.77
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2009		\$40.04	\$21.07	\$61.11
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2010		\$40.04	\$22.07	\$62.11
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2011		\$40.04	\$23.42	\$63.46
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2012		\$40.43	\$24.48	\$64.91
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2013		\$40.81	\$25.55	\$66.36
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2009		\$43.04	\$21.96	\$65.00
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2010		\$43.04	\$22.96	\$66.00
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2011		\$43.04	\$24.31	\$67.35
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2012		\$43.42	\$25.38	\$68.80
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2013		\$43.80	\$26.45	\$70.25
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2009		\$39.79	\$21.00	\$60.79
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2010		\$39.79	\$22.00	\$61.79

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2011		\$39.79	\$23.35	\$63.14
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2012		\$40.83	\$23.76	\$64.59
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2013		\$41.88	\$24.16	\$66.04
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2009		\$42.80	\$21.88	\$64.68
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2010		\$42.80	\$22.88	\$65.68
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2011		\$42.80	\$24.23	\$67.03
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2012		\$43.84	\$24.64	\$68.48
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2013		\$44.88	\$25.05	\$69.93
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2009		\$35.71	\$19.79	\$55.50
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2010		\$35.71	\$20.79	\$56.50
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2011		\$35.71	\$22.14	\$57.85
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2012		\$36.75	\$22.55	\$59.30
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2013		\$37.79	\$22.96	\$60.75
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2009		\$35.40	\$19.71	\$55.11
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2010		\$35.40	\$20.71	\$56.11
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2011		\$35.40	\$22.06	\$57.46
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2012		\$36.45	\$22.46	\$58.91
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2013		\$37.49	\$22.87	\$60.36
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2009		\$33.68	\$19.20	\$52.88
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2010		\$33.68	\$20.20	\$53.88
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2011		\$33.68	\$21.55	\$55.23
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2012		\$34.73	\$21.95	\$56.68
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2013		\$35.77	\$22.36	\$58.13
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2009		\$32.69	\$18.91	\$51.60
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2010		\$32.69	\$19.91	\$52.60
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2011		\$32.69	\$21.26	\$53.95

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2012		\$33.74	\$21.66	\$55.40
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2013		\$34.78	\$22.07	\$56.85
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2009		\$48.05	\$24.43	\$72.48
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2010		\$48.05	\$25.55	\$73.60
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2011		\$48.05	\$27.10	\$75.15
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2012		\$49.30	\$27.59	\$76.89
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2013		\$50.55	\$28.07	\$78.62
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2009		\$47.75	\$24.35	\$72.10
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2010		\$47.75	\$25.47	\$73.22
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2011		\$47.75	\$27.02	\$74.77
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2012		\$49.00	\$27.51	\$76.51
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2013		\$50.25	\$28.00	\$78.25
Painters Class 1 (see notes)	5/1/2009		\$32.31	\$19.24	\$51.55
Painters Class 1 (see notes)	10/1/2009		\$32.31	\$20.12	\$52.43
Painters Class 1 (see notes)	5/1/2010		\$32.31	\$20.84	\$53.15
Painters Class 1 (see notes)	5/1/2011		\$32.94	\$21.49	\$54.43
Painters Class 2 (see notes)	5/1/2009		\$40.85	\$19.59	\$60.44
Painters Class 2 (see notes)	10/1/2009		\$40.85	\$20.34	\$61.19
Painters Class 2 (see notes)	5/1/2010		\$40.85	\$20.94	\$61.79
Painters Class 2 (see notes)	5/1/2011		\$42.20	\$21.59	\$63.79
Painters Class 2 (see notes)	11/1/2011		\$44.17	\$21.62	\$65.79
Painters Class 3 (see notes)	5/1/2009		\$32.69	\$19.24	\$51.93
Painters Class 3 (see notes)	10/1/2009		\$32.69	\$20.12	\$52.81
Painters Class 3 (see notes)	5/1/2010		\$32.69	\$20.84	\$53.53
Painters Class 3 (see notes)	5/1/2011		\$33.32	\$21.49	\$54.81
Plasterers	5/1/2010		\$32.90	\$24.85	\$57.75
Plumbers	5/1/2010		\$41.53	\$26.01	\$67.54
Plumbers	5/1/2011		\$41.53	\$28.01	\$69.54
Plumbers	5/1/2012		\$41.53	\$30.26	\$71.79

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Pointers, Caulkers, Cleaners	5/1/2009		\$35.05	\$20.85	\$55.90
Pointers, Caulkers, Cleaners	5/1/2010		\$35.05	\$21.60	\$56.65
Pointers, Caulkers, Cleaners	5/1/2011		\$35.10	\$22.45	\$57.55
Pointers, Caulkers, Cleaners	5/1/2012		\$36.10	\$22.75	\$58.85
Roofers (Composition)	5/1/2009		\$30.00	\$23.10	\$53.10
Roofers (Composition)	5/1/2010		\$30.75	\$24.95	\$55.70
Roofers (Composition)	5/1/2011		\$30.75	\$25.95	\$56.70
Roofers (Shingle, Slate, Tile)	5/1/2009		\$23.25	\$13.62	\$36.87
Roofers (Shingle, Slate, Tile)	5/1/2011		\$23.75	\$15.62	\$39.37
Sheet Metal Workers	5/1/2010		\$38.36	\$32.67	\$71.03
Sheet Metal Workers (Building, Heavy, Highway)	5/1/2011		\$38.36	\$32.67	\$71.03
Sheet Metal Workers (Building, Heavy, Highway)	5/1/2012		\$39.66	\$33.27	\$72.93
Sign Makers and Hangars	5/21/2010		\$24.33	\$16.37	\$40.70
Sign Makers and Hangars	5/20/2011		\$23.70	\$17.69	\$41.39
Sprinklerfitters	5/1/2010		\$46.12	\$19.85	\$65.97
Sprinklerfitters	1/1/2011		\$46.62	\$19.85	\$66.47
Sprinklerfitters	5/1/2011		\$46.47	\$20.35	\$66.82
Sprinklerfitters	1/1/2012		\$46.65	\$20.82	\$67.47
Steamfitters	5/1/2012		\$44.17	\$26.86	\$71.03
Stone Masons	5/1/2010		\$34.36	\$21.77	\$56.13
Stone Masons	5/1/2011		\$34.35	\$22.58	\$56.93
Stone Masons	5/1/2012		\$35.25	\$22.90	\$58.15
Terrazzo Finisher	5/1/2009		\$32.41	\$18.31	\$50.72
Terrazzo Finisher	5/1/2010		\$32.41	\$19.06	\$51.47
Terrazzo Finisher	5/1/2011		\$32.41	\$19.96	\$52.37
Terrazzo Finisher	5/1/2012		\$33.06	\$20.26	\$53.32
Terrazzo Grinder	5/1/2011		\$32.66	\$19.96	\$52.62
Terrazzo Grinder	5/1/2012		\$33.31	\$20.26	\$53.57
Terrazzo Layers	5/1/2008		\$35.41	\$19.47	\$54.88
Terrazzo Mechanics	5/1/2009		\$35.41	\$20.92	\$56.33

PREVAILING WAGES PROJECT RATES

Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Terrazzo Mechanics	5/1/2010		\$35.41	\$21.67	\$57.08
Terrazzo Mechanics	5/1/2011		\$36.30	\$21.78	\$58.08
Terrazzo Mechanics	5/1/2012		\$37.05	\$22.08	\$59.13
Tile Finisher	5/1/2009		\$29.11	\$19.84	\$48.95
Tile Finisher	5/1/2010		\$29.11	\$20.59	\$49.70
Tile Finisher	5/1/2011		\$29.16	\$21.34	\$50.50
Tile Finisher	5/1/2012		\$29.77	\$21.64	\$51.41
Tile Layers	5/1/2009		\$36.15	\$20.28	\$56.43
Tile Layers	5/1/2010		\$36.15	\$21.03	\$57.18
Tile Layers	5/1/2011		\$36.20	\$21.78	\$57.98
Tile Layers	5/1/2012		\$36.95	\$22.08	\$59.03
Truckdriver class 1(see notes)	5/1/2007		\$23.50	\$11.92	\$35.42
Truckdriver class 1(see notes)	5/1/2010		\$26.00	\$13.48	\$39.48
Truckdriver class 1(see notes)	5/1/2011		\$26.65	\$13.90	\$40.55
Truckdriver class 1(see notes)	5/1/2012		\$27.54	\$14.16	\$41.70
Truckdriver class 1(see notes)	5/1/2012		\$26.65	\$14.16	\$40.81
Truckdriver class 2 (see notes)	5/1/2007		\$23.60	\$11.92	\$35.52
Truckdriver class 2 (see notes)	5/1/2010		\$26.00	\$13.48	\$39.48
Truckdriver class 2 (see notes)	5/1/2012		\$27.64	\$14.16	\$41.80
Truckdriver class 3 (see notes)	5/1/2007		\$23.85	\$11.92	\$35.77
Truckdriver class 3 (see notes)	5/1/2010		\$26.25	\$13.48	\$39.73
Truckdriver class 3 (see notes)	5/1/2012		\$27.89	\$14.16	\$42.05

PREVAILING WAGES PROJECT RATES

Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Carpenter - Chief of Party (Surveying & Layout)	5/1/2010		\$43.76	\$23.40	\$67.16
Carpenter - Chief of Party (Surveying & Layout)	5/1/2011		\$44.56	\$23.90	\$68.46
Carpenter - Chief of Party (Surveying & Layout)	5/1/2012		\$45.61	\$24.44	\$70.05
Carpenter - Chief of Party (Surveying & Layout)	5/1/2013		\$47.28	\$24.44	\$71.72
Carpenter - Instrument Person (Surveying & Layout)	5/1/2010		\$38.05	\$23.40	\$61.45
Carpenter - Instrument Person (Surveying & Layout)	5/1/2011		\$38.75	\$23.90	\$62.65
Carpenter - Instrument Person (Surveying & Layout)	5/1/2012		\$39.66	\$24.44	\$64.10
Carpenter - Instrument Person (Surveying & Layout)	5/1/2013		\$41.11	\$24.44	\$65.55
Carpenter - Rodman (Surveying & Layout)	5/1/2010		\$30.44	\$23.40	\$53.84
Carpenter - Rodman (Surveying & Layout)	5/1/2011		\$31.00	\$21.89	\$52.89
Carpenter - Rodman (Surveying & Layout)	5/1/2012		\$31.73	\$23.43	\$55.16
Carpenter - Rodman (Surveying & Layout)	5/1/2013		\$32.89	\$23.43	\$56.32
Carpenters	5/1/2010		\$38.05	\$23.40	\$61.45
Carpenters	5/1/2011		\$38.75	\$23.90	\$62.65
Carpenters	5/1/2012		\$39.66	\$24.44	\$64.10
Carpenters	5/1/2013		\$41.11	\$24.44	\$65.55
Cement Masons	5/1/2010		\$31.10	\$25.46	\$56.56
Cement Masons	5/1/2011		\$31.35	\$26.21	\$57.56
Cement Masons	5/1/2012		\$32.60	\$26.21	\$58.81
Cement Masons	5/1/2013		\$33.85	\$26.21	\$60.06
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2010		\$44.70	\$26.69	\$71.39
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2011		\$44.70	\$27.19	\$71.89
Iron Workers (Bridge, Structural Steel, Ornamental, Precast, Reinforcing)	7/1/2012		\$44.70	\$28.14	\$72.84
Laborers (Class 01 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 01 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 01 - See notes)	5/1/2012		\$26.00	\$22.95	\$48.95
Laborers (Class 02 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 02 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 02 - See notes)	5/1/2012		\$26.20	\$22.95	\$49.15

PREVAILING WAGES PROJECT RATES

Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 03 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 03 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 03 - See notes)	5/1/2012		\$26.20	\$22.95	\$49.15
Laborers (Class 04 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 04 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 04 - See notes)	5/1/2012		\$20.80	\$22.95	\$43.75
Laborers (Class 05 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 05 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 05 - See notes)	5/1/2012		\$26.85	\$22.95	\$49.80
Laborers (Class 06 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 06 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 06 - See notes)	5/1/2012		\$26.90	\$22.95	\$49.85
Laborers (Class 07 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 07 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 07 - See notes)	5/1/2012		\$26.75	\$22.95	\$49.70
Laborers (Class 08 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 08 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 08 - See notes)	5/1/2012		\$26.50	\$22.95	\$49.45
Laborers (Class 09 - See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 09 - See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 09 - See notes)	5/1/2012		\$26.35	\$22.95	\$49.30
Laborers (Class 10- See notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 10- See notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 10- See notes)	5/1/2012		\$26.50	\$22.95	\$49.45
Laborers (Class 11 -See Notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 11 -See Notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 11 -See Notes)	5/1/2012		\$26.40	\$22.95	\$49.35
Laborers (Class 12 -See Notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 12 -See Notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 12 -See Notes)	5/1/2012		\$28.10	\$22.95	\$51.05
Laborers (Class 13 -See Notes)	5/1/2010		\$25.15	\$22.00	\$47.15

PREVAILING WAGES PROJECT RATES

Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Laborers (Class 13 -See Notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 13 -See Notes)	5/1/2012		\$30.13	\$22.95	\$53.08
Laborers (Class 14 -See Notes)	5/1/2010		\$25.15	\$22.00	\$47.15
Laborers (Class 14 -See Notes)	5/1/2011		\$25.95	\$22.00	\$47.95
Laborers (Class 14 -See Notes)	5/1/2012		\$26.15	\$22.95	\$49.10
Landscape Laborer	4/1/2010		\$18.44	\$19.90	\$38.34
Landscape Laborer	5/1/2012		\$18.84	\$20.30	\$39.14
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2009		\$40.24	\$24.84	\$65.08
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2010		\$41.94	\$26.09	\$68.03
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2012		\$44.17	\$26.86	\$71.03
Truckdriver class 1(see notes)	5/1/2010		\$25.90	\$13.48	\$39.38
Truckdriver class 1(see notes)	5/1/2011		\$26.65	\$13.90	\$40.55
Truckdriver class 1(see notes)	5/1/2012		\$27.39	\$14.16	\$41.55
Truckdriver class 2 (see notes)	5/1/2010		\$26.00	\$13.48	\$39.48
Truckdriver class 2 (see notes)	5/1/2011		\$26.65	\$13.90	\$40.55
Truckdriver class 2 (see notes)	5/1/2012		\$27.49	\$14.16	\$41.65
Truckdriver class 3 (see notes)	5/1/2010		\$26.25	\$13.48	\$39.73
Truckdriver class 3 (see notes)	5/1/2011		\$26.90	\$13.90	\$40.80
Truckdriver class 3 (see notes)	5/1/2012		\$27.74	\$14.16	\$41.90

Notes:

If you can not find a classification under Heavy/Highway please refer to the Building classifications.

For further information on construction types review the ["Notes as Referenced in Predeterminations"](#) on the Labor and Industry Website. Go to www.dli.state.pa.us, scroll down to the picture labeled "Labor Law Compliance" and click the picture. Then scroll down on the left menu and click on the "Prevailing Wage" link.

Notes for Building Laborers in Five (5) County Area (Philadelphia Area)

Philadelphia, Montgomery, Bucks, Chester and Delaware

BUILDING LABORERS

CLASS 1

Common Laborer

CLASS 2

Asbestos Removal

CLASS 3

Mason Tenders

CLASS 4

Forklift Laborer (In conjunction with the Mason Tenders)

CLASS 5

Plaster Tender

Notes for Heavy & Highway Laborers in Five (5) County Area (Philadelphia Area)

Philadelphia, Montgomery, Bucks, Chester and Delaware

HEAVY & HIGHWAY LABORERS

CLASS 1

Yardwork Laborers
Scale Mix Yardwork Laborers
Scale Mixer Men
Bumermen
Feeders
Dustmen

CLASS 2

General Journeyman Laborer
Asphalt Shevelers
Sheeting, Shoring & Lagging Laborers
Stone, Granite & Artificial Stone Setting Laborer
HOD Carriers
Scaffold Builders
Relief Joints & Placing Gabions
Pneumatic Tool Laborers
Concrete Forms & Stripping Laborers
Concrete & Lumber Material Laborers
Steel * Steel Mesh (Carrying & Handling)
Form Pinner
Mortar Mixers
Pouring & Placing Concrete
Grade Men

CLASS 3

Vibrator Laborer
Finsih Surface Asphalt Rackers
Jackhammer Operators
Paving Breaker Operator
Pipelayer & Caulker (All Joints up to Within 5 Feet of Building Foundation Line)
Conduit & Duct Layers

CLASS 4

Flagperson

CLASS 5

Miners

CLASS 6

Welders & Burners

CLASS 7

Miner Bore Driver

Blasters

Drillers

Pneumatic Shield Operator

CLASS 8

Miners Helpers

Form Setters

CLASS 9

Trackmen

Brackmen

Groutmen

Bottom Shaft Men

All Other Laborers in Free Air Tunnels

Underpinning

CLASS 10

Circular Caissons

Welders, Burners & Air Tuggers

CLASS 11

Powdermen

Multiple Wagon Drill Operator Laborers

CLASS 12

Caisson Laborer Foreman

CLASS 13

Toxic/Hazardous Waste Handler

CLASS 14

Wagon Drill/Hydraulic Track Drill Operator Laborer

Definitions for 5 County Building, Heavy, Highway Operators

Chester, Montgomery, Bucks, Philadelphia, & Delaware

Operators Class 1

Handling Steel & Stone in Connection with Erection	Cranes doing Hook Work * **
Any Machines Handling Machinery	Cable Spinning Machine
Helicopter	Concrete Pumps (Building)
High Rail/Burro Crane	Rail Loader (Winch Boom Type)

Machines Similar to above including remote control equipment

Operators Class 1 (A)

Machines Handling Steel, or the Functional Equivalent, and Stone in connection with Erection 15 Ton and over Factory Rating	Cranes doing Hook Work 15 Ton and over Factory Rating * **
Any Machines Handling Machinery	High Rail/Burro Crane 15 Ton and over Factory Rating
Rail Loader (Winch Boom Type) 15 Ton and over Factory Rating	Concrete Pumps (Building) 120 Feet of Boom Length or less (200 yard pour or less)
Equipment in Wage Group 1 that does not require an Oiler	

Machines Similar to above including remote control equipment

Operators Class 2

All Types of Cranes * **	All Types of Backhoes
Cableways	Conveyor Loaders (Euclid-Type Wheel)
Drag Lines	All Types of Shovels
Derricks	Pavers 21E & Over
Trench Shovels	Trenching Machines
Pippin Type Backhoes	Hoist with Two Towers
Building Hoists – Double Drum (Unless used as a Single Drum)	Front-End Loaders
Boat Captain	Bobcat
Side Boom	Directional Boring Machines
Vermeer Saw Type Machine	Vermeer Saw Type Machine (Other than Hand

	Held)
Tractor Mounted Hydro Axe	Chipper with Boom
All Autograde & Concrete Finishing Machines	Bundle Puller-Extractors (Tubular Type)
Production Switch Tamper	Ballast Regulators
Tie Replacer	Rail/Road Loader
Power Jack Liner	Portable Rock Crusher
Keystones	Tandem Scrapers
Milling Machine	Mucking Machines in Tunnel
Gradalls	Tower Type Crane Operation, Erecting, Dismantling, Jumping or Jacking
Drills Self-Contained (Drillmaster Type)	Fork Lift (20 feet & over)
Motor Patrols (Fine Grade)	Batch Plant with Mixer
Carryalls, Scrapers & Tournapulls	Rollers (High Grade Finishing)
Spreaders (Asphalt)	Bulldozers & Tractors
Mechanic – Welder	Concrete Pumps (Heavy, Highway)

Machines Similar to above including remote control equipment

Operators Class 2 (A)

Crawler Backhoes and Crawler Gradalls over One Cubic Yard Factor Rating	Hydraulic Backhoes over One Cubic Yard Factor Rating
Single Person Operation Truck Cranes 15 Ton and Over Factory Rating	Cherry Picker Type Machinery and Equipment 15 Ton and Over Factory Rating
Concrete Pumps (Heavy/Highway)	Equipment in Wage Group 2 that does not require an Oiler

Machines Similar to above including remote control equipment

Operators Class 3

Conveyors (Except Building Conveyors)	Building Hoists (Single Drum)
Well Drillers	Asphalt Plant Engineers
Fork Lift Trucks of all Types	Ditch Witch (Small Trencher)
Motor Patrols	Concrete Breaking Machines (Guillotine Only)
Rollers	Fine Grade Machines
Stump Grinder	High or Low Pressure Boilers
Elevator Operator (New Construction)	

Machines Similar to above including remote control equipment

Operators Class 4

Seamen Pulverizing Mixer	Form Line Graders
Farm Tractors	Road Finishing Machines
Concrete Spreaders (Heavy, Highway)	Grease Truck
Power Broom (Self-Contained)	Seed Spreader

Machines Similar to above including remote control equipment

Operators Class 5

Conveyors (Building)	Welding Machines
Heaters	Well Point Pumps
Compressors	Pumps
Miscellaneous Equipment Operator	Tireman, Power Equipment
Maintenance Engineers (Power Boats)	Elevator Operator (Renovations)
House Car	

Machines Similar to above including remote control equipment

Operators Class 6

Fireman
Oilers & Deck Hands (Personnel Boats)
Grease Truck Helper

Machines Similar to above including remote control equipment

Operators Class 7 (A) (Toxic/Hazardous Waste Removal)

Handling Steel & Stone In Connection with Erection	Cranes doing Hook Work
Any Machines Handling Machinery	Cable Spinning Machine
Helicopters	Concrete Pumps (Building)
High Rail/Burro Crane	Rail Loader (Winch Boom Type)

Machines Similar to above including remote control equipment

Operators Class 7 (B) (Toxic/Hazardous Waste Removal)

All Types of Cranes	All types of Backhoes
Cableways	Conveyor Loader (Euclid-Type Wheel)
Drag Lines	Keystones
All Types of Shovels	Derricks

Pavers 21E & Over	Trench Shovels
Trenching Machines	Gradalls
Front-End Loaders	Boat Captain
Hoist with Twp Towers	Concrete Pumps (Heavy, Highway)
Building Hoists-Double Drum (Unless Used as a Single Drum)	Milling Machine
Mucking Machines in Tunnel	Pippin Type Backhoes
Bobcat	Tandem Scrapers
Side Boom	Tower Type Crane – Operation, Erecting
Dismantling, Jumping or Jacking	Directional Boring Machines
Vermeer Saw Type Machine (Other Than Hand Held)	Drills Self-Contained (Drillmaster Type)
Fork Lift (20Ft & Over)	Tractor Mounted Hydro Axe
Motor Patrols (Fine Grade)	Chipper with Boom
Batch Plant with Mixer	All Autograde & Concrete Finishing Machines
Carryalls, Scrapers & Tournapulls	Rollers (high Grade Finishing)
Bundle Pullers/Extractors (Tubular)	Spreaders (Asphalt)
Bulldozers & Tractors	Mechanic – Welders
Production Switch Tamper	Ballast Regulators
Tie Replacer	Rail/Road Loader
Power Jack Liner	

Machines Similar to above including remote control equipment

* On Building Projects - On all machines with booms, jibs, masts and leads, including tower cranes, 100 feet from ground up, fifty (\$.50) cents per hour additional will be paid for each increment of 25 feet over 100 feet. On cranes with booms (including jibs, masts and leads) 200 feet and over, two (2) operators will be required. When two (2) operators are employed, no oiler will be required.

Booms to be measured from the ground up. Tower cranes calculated from ground up and out for purpose of boom pay

** On Heavy and Highway Projects: On all machines with booms, jibs, masts, and leads, including tower cranes, 100 ft. and over, thirty-five (\$.35) cents per hour additional will be paid for each increment of 25' over 100'. On cranes with booms (including jibs, masts and leads) 200 ft. and over, two (2) operators will be required. When 2 operators are employed, no oiler will be required. Booms to be measured from the ground up.

ASBESTOS REMOVAL -- ASBESTOS WORKER/LABORER

AMENDED FOR 11/21/97

The removal of asbestos containing materials should be handled as follows:

1. The removal of all insulation materials, whether they contain asbestos or not, from mechanical systems (pipes, boilers, ducts, flues, breachings, etc.) will be recognized as work to be classified as Asbestos Worker.
2. On all mechanical systems (pipes, boilers, ducts, flues, breachings, etc.) that are going to be scrapped, the removal of all insulating material, whether they contain asbestos or not, will be classified as Laborers.
3. The removal of all asbestos containing materials from walls, ceilings, floors, columns and all other non-mechanical structures and surfaces, etc., will be held to the classification of Laborers (with the exception of roofing materials).
4. The term "removal" shall not include sealing, labeling and dropping of scrap material into appropriate containers. After the drop, the final disposal will be classified as Laborers.
5. The loading at the designated area of all materials that have been removed, bagged and tagged, as well as clean-up and all unloading, burying and other work required at the disposal site should be classified as Laborers.

Notes for Building, Heavy, Highway Truckdriver

Truckdriver Class 1

Single Axle

Truckdrivers Class 2

Tandem

Tri-Axle

Semi-Trailer (Combination)

Truckdrivers Class 3

Speciality Vehicles

Painters Notes for Building, Heavy, Highway Painters

Cameron, Crawford, Forest, Potter & Warren Counties

Painters Class 1 - Industrial Rates (Heavy/Highway)

Painters Class 2 - Commercial Rates (Building)

Allegheny, Fayette, Greene & Washington Counties

Painters Class 1 - Industrial Brush & Roll (Heavy/Highway)

Painters Class 2 - Industrial Sandblast & Spray (Heavy/Highway)

Painters Class 3 - Bridge, Hot Stack, & Transmission Towers (Heavy/Highway)

Painters Class 4 - Painter Tender I (Heavy/Highway)

Painters Class 5 - Painter Tender II (Heavy/Highway)

Painters Class 6 - Commercial Painting & Paperhanging (Building)

Armstrong, Beaver, Bedford, Blair, Butler, Cambria, Centre, Clarion, Clearfield, Elk, Fulton, Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Mercer, Mifflin, Somerset, Venango & Westmoreland Counties

Painters Class 1 - Industrial Brush & Roll (Heavy/Highway)

Painters Class 2 - Industrial Sandblast & Spray (Heavy/Highway)

Painters Class 3 - Bridge, Hot Stack, & Transmission Towers (Heavy/Highway)

Painters Class 4 - Painter Tender I (Heavy/Highway)

Painters Class 5 - Painter Tender II (Heavy/Highway)

Painters Class 6 - Commercial Painting & Paperhanging (Building)

Bucks, Chester, Delaware, Montgomery & Philadelphia Counties

Painters Class 1 - Brush, Roller & Spray

Painters Class 2 - Bridge

Painters Class 3 - Wallcoverer

Adams, Berks, Bradford, Carbon, Clinton, Columbia, Cumberland, Dauphin, Franklin, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, Lycoming, Monroe, Montour, Northampton, Northumberland, Perry, Pike, Schuylkill, Snyder, Sullivan, Susquehanna, Tioga, Union, Wayne, Wyoming & York Counties

Painters Class 1 - Commercial*

Painters Class 2 - Industrial (includes Structural Steel, Industrial Spray & Sandblasting)*

Painters Class 3 - Bridge*

<p>* \$1.00per hour above the rate for all classifications for work done in the following manner: Steel, Spray, Epoxy, HIPAC Coatings, Catalyzed Epoxy, Urethanes, Removers, Swing, Basket, and Sandblasting</p>
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Clinton County

Painters Class 1 - Spray

Painters Class 2 - Brush & Roller

Steel Escalation Option

The undersigned hereby certifies that he/she is authorized to make a decision, on behalf of the Bidder, regarding application of the provisions of the Standard Special Provision entitled "Price Adjustment for Steel Cost Fluctuations" to the following project:

ECMS Project No. _____ S.R. _____, Section _____ Letting Date _____

SSP SUBSECTION	CATEGORY NAME	OPTION-IN*	OPTION-OUT**
4.a	Guide Rail and Metal Median Barrier	<input type="checkbox"/>	<input type="checkbox"/>
4.b	Reinforcement Bars	<input type="checkbox"/>	<input type="checkbox"/>
4.c	Piles	<input type="checkbox"/>	<input type="checkbox"/>
4.d	Steel Sign Structure(s)	<input type="checkbox"/>	<input type="checkbox"/>
4.e	Fabricated Structural Steel	<input type="checkbox"/>	<input type="checkbox"/>
4.f	Precast Reinforced Concrete Box Culvert(s) / Prestressed Concrete Bridge Beam(s)	<input type="checkbox"/>	<input type="checkbox"/>

* Checking here **elects** the option to apply the provisions of the SSP entitled "Price Adjustment for Steel Cost Fluctuations" to the steel used in applicable materials placed as part of the work items in the indicated category.

** Checking here **declines** the option to apply the provisions of the SSP entitled "Price Adjustment for Steel Cost Fluctuations" to the steel used in applicable materials placed as part of the work items in the indicated category.

CONTRACTOR NAME

X

SIGNATURE

PRINTED NAME

DATE

The apparent low bidder is required to submit this form via fax to (717) 705-1504 by 3:00 pm prevailing local time within 7 calendar days after the bid opening. When the seventh calendar day after the bid opening falls on a day PennDOT offices are closed, submit this form via fax by 3:00 pm prevailing local time on the next business day.

If a properly completed form is not provided by the apparent low bidder within the time specified, the Department will consider the option to apply the price adjustment provisions to the project to be declined (i.e. Option-OUT will be selected for the project). If the form, when provided within the time specified, has been completed such that the Department is unable to ascertain the bidder's intention with regard to the inclusion of any one of the applicable steel product categories, the Department will consider the option to apply the price adjustment provisions to that product category to be declined (i.e. Option-OUT will be selected for the category). No further opportunity to elect steel escalation for the project or an individual steel product category will be made available to the bidder.

**Bridge / Structures Related Effective Policy Letters
For Contractor's Alternate Designs**

In addition to applicable portions of Design Manual Part 4, Pub 408, BC and BD standards, and AASHTO Bridge Specifications all applicable portions of the following design policy (strike-off) letters will apply for alternate designs developed by the contractor. These policy letters cover a variety of issues, concepts, and specifications. Unless specifically permitted by the Alternate Specifications Part A or Part B, the contractor is not permitted to utilize new concepts.

Number	Date	Subject
431-04-01	1/13/04	Quality Control of Design Submissions
431-06-01	1/24/06	Moratorium on Non-Composite Adjacent Prestressed Concrete Box Beam Bridges
431-09-14	12/2/09	Publication 15M, Design Manual Part 4 Change No. 1
431-10-12	8/29/10	Bridge Design Standards, BD-600M Series (Pub. 218M): September 2010 Edition
431-10-13	11/16/10	Bridge Construction Standards, BC-700M Series (Pub. 219M): October 2010 Edition
431-11-03	4/4/11	Publication 218M, BD-628M Modifications to Approach Slab Joints and Waterproofing Details Implementation into Active Projects in Construction
431-11-06	7/13/11	Modification to Publication 15M, Design Manual Part 4 Implementation Measures to Mitigate Corrosion Of Substructure J-Bar Reinforcement
431-11-08	7/29/11	Publication 15M, Design Manual Part 4 Addition of Section B 2.9P and Quality Assurance Form D-519 to Design Manual Part 4 for Construction Loading on Bridges
431-11-09	8/26/11	Publication 15M, Design Manual Part 4 Revision of Appendix J - Approved Commercially Available or Consultant - Developed Software
431-11-10	12/21/11	Summary of New Bridge and Structure Products
431-12-01	1/20/12	Publication 219M, BC-799M - Mechanically Stabilized Earth (MSE) Retaining Walls - Modifications to Drainage Pipe Requirements for 100-Year Design Life and Implementation into Active Projects
431-12-02	2/13/12	Implementation of AAAP Cement Concrete

ATTACHMENT "A"

CC4 Calculations – 302 Request #3517

Hole 1/16 - 1/2

- a. average baselines = sum of baseline / number of baselines
 $(.3 + .2 + .3) / 3$
 $= 0.266667$
 $= 0.3$ rounded to one decimal place
- b. adjusted block value = block value – average baseline
 (for block 1 and block 2)
 $(6.2 - 0.3 = 5.9)$ $(6.8 - 0.3 = 6.5)$ $(5.8 - 0.3 = 5.5)$
 $(5.5 - 0.3 = 5.2)$ $(5.2 - 0.3 = 4.9)$ $(5.8 - 0.3 = 5.5)$
- c. average block = sum adjusted block values / number of block values
 $(5.9 + 6.5 + 5.5 + 5.2 + 4.9 + 5.5) / 6$
 $= 33.5 / 6$
 $= 5.583333$
 $= 5.6$ rounded to one decimal place
- d. standard deviation block = $(\text{sum}(\text{adjusted block values} - \text{average block})^2) / (\text{number of block values} - 1))^{0.5}$
 $(((5.9 - 5.6)^2) + ((6.5 - 5.6)^2) + ((5.5 - 5.6)^2) + ((5.2 - 5.6)^2) + ((4.9 - 5.6)^2) + ((5.5 - 5.6)^2)) / (6 - 1))^{0.5}$
 $= ((0.09 + 0.81 + 0.01 + 0.16 + 0.49 + 0.01) / 5)^{0.5}$
 $= (1.57/5)^{0.5}$
 $= 0.314^{0.5}$
 $= 0.560357$
 $= 0.56$ rounded to two decimals
- e. 95% chloride content block = average block + $(1.654 * \text{standard deviation block})$
 $5.6 + (1.654 * 0.56)$
 $= 6.52624$
 6.52 rounded to two decimals
- f. adjusted control value = control value – average baseline
 (for control values)
 $(8.1 - 0.3 = 7.8)$ $(5.8 - 0.3 = 5.5)$ $(4.8 - 0.3 = 4.5)$
- g. average control = sum adjusted control values / number of control values
 $(7.8 + 5.5 + 4.5) / 3$

ATTACHMENT "A"

$$=17.8 / 3$$

$$= 5.93333$$

$$=5.9 \text{ rounded to one decimal}$$

h. standard deviation control = ((sum (adjusted control values – average control) **2) / (number of control values – 1) ** 0.5

$$(((7.8-5.9)**2) + (5.5-5.9)**2) + (4.5-5.9)**2) / (3-1)) **0.5)$$

$$=(((1.9**2) + (-0.4**2) + (-1.4**2)) / (3-1))**0.5)$$

$$= ((3.61 + 0.16 + 1.96) / 2) ** 0.5)$$

$$= (5.73/2) **0.5$$

$$= 2.865 ** 0.5$$

$$=1.692631$$

$$= 1.69 \text{ rounded to two decimals}$$

i. 95% chloride content control = average control + (1.645 * standard deviation control)

$$5.9 + (1.645 * 1.69)$$

$$=8.68005$$

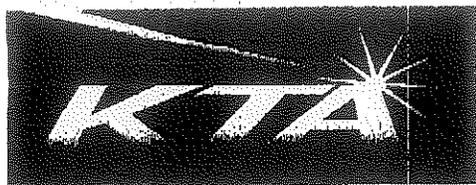
$$=8.68 \text{ rounded to two decimals}$$

ATTACHMENT "A"

BRIDGE DECK HIGH PERFORMANCE CONCRETE

Chloride content (lb./cu yd)

	Hole 1/16" to 1/2"				Hole 1/2" to 1"		
	1 03	2 02	3 03		1 03	2 02	3 03
Baseline				Baseline			
Control (ponded)	8.1	5.8	4.8		2.7	2.7	2.5
Block 1	6.2	6.8	5.8		4.1	2.2	2.2
Block 2	5.5	5.2	5.8		1.1	1.4	1.1
	<u>Std</u>	<u>95%</u>	<u>Chlor</u>		<u>Std</u>	<u>95%</u>	<u>Chlor</u>
	<u>Avg</u>	<u>Dev.</u>	<u>Content</u>		<u>Avg.</u>	<u>Dev</u>	<u>Content</u>
Baseline	0.3				0.3		
Control	5.9	1.68	8.68		2.3	1.2	2.50
Block	5.6	.56	6.52		1.7	1.14	3.58



KTA-Tator, Inc.
115 Technology Drive
Pittsburgh, Pennsylvania 15275
Phone 412-788-1300 - Fax 412-788-1306

FACSIMILE COVER LETTER

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: Mr. Thomas McNavage

FIRM: DMJM Harris

FAX NUMBER: 215-657-3479

FROM:

NAME: Melissa A. Swogger

DATE: April 21, 2008

TOTAL NUMBER OF PAGES ⁴ INCLUDING THIS PAGE. IF YOU DO NOT RECEIVED ALL THE PAGES, PLEASE CALL 788-1300, EXTENSION 114.

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KTA-TATOR, INC.

115 Technology Drive, Pittsburgh, PA 15275

April 21, 2008

Mr. Thomas McNavage
DMJM Harris
723 Electronic Drive
Suite 300
Horsham, PA 19044

**SUBJECT: Results of Analyzing Paint Chips for Lead,
Cadmium, Chromium, and Arsenic; KTA Project No. 250719**

Dear Mr. McNavage:

In accordance with your request, KTA-Tator, Inc. has submitted the samples to Schneider Laboratories in Richmond, Virginia for analysis. Samples were analyzed in accordance with "EPA Method 6010B." Briefly, this method entails digesting samples in acid, filtering, and analyzing by ICP Inductively Coupled Plasma Spectroscopy. Results of the testing can be found in the attached report, specifically in the column labeled "Total Analyte (μg)", "Conc. (% by wt.)" and "Analyte Conc. PPM."

If you have any questions or comments regarding this report, please contact this office at 412-788-1300, extension 230. If you have any questions regarding environmental hazards or possible disposal, please contact Dan O'Malley @412-788-1300, extension 138.

Very truly yours,

KTA-Tator, Inc. (KTA)

Melissa A. Swogger
Laboratory Technician

MAS/VDS:jas
Attachments

**Coatings & Corrosion Consulting • Environmental, Health & Safety • Laboratory Analysis
Materials Testing • NDT/Weld Inspection • Paint Inspection**

SCHNEIDER LABORATORIES

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AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

LABORATORY ANALYSIS REPORT

ACCOUNT #: 1861-08-2084
CLIENT: KTA-TATOR, Inc.
ADDRESS: 115 Technology Drive
Pittsburgh, PA 15275

DATE COLLECTED:
DATE RECEIVED: 4/10/2008
DATE ANALYZED: 4/11/2008
DATE REPORTED: 4/11/2008

PROJECT NAME: DMJM Harris

JOB LOCATION: Bucks County

PROJECT NO.: 250719

PO NO.:

Sample Type: PAINT

SLI ID:	Client ID:	Description:					MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method	(µg)	
Arsenic (As)	666	< 4.0	< 0.001	< 6	EPA 6010B	4.0	
Cadmium (Cd)	666	38.9	0.006	58	EPA 6010B	4.0	
Chromium (Cr)	666	459.3	0.069	690	EPA 6010B	10.0	
Lead (Pb)	666	204,900.0	30.766	307,658	EPA 6010B	4.0	

SLI ID:	Client ID:	Description:					MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method	(µg)	
Arsenic (As)	695	< 4.0	< 0.001	< 6	EPA 6010B	4.0	
Cadmium (Cd)	695	< 4.0	< 0.001	< 6	EPA 6010B	4.0	
Chromium (Cr)	695	4,776.0	0.687	6,872	EPA 6010B	10.0	
Lead (Pb)	695	109,260.0	15.721	157,209	EPA 6010B	4.0	

SLI ID:	Client ID:	Description:					MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method	(µg)	
Arsenic (As)	696	7.7	0.001	11	EPA 6010B	4.0	
Cadmium (Cd)	696	7.4	0.001	11	EPA 6010B	4.0	
Chromium (Cr)	696	122.9	0.018	177	EPA 6010B	10.0	
Lead (Pb)	696	54,950.0	7.895	78,951	EPA 6010B	4.0	

Sample contains substrate which may affect the calculation of weight percent.

Total Number of Pages in Report: 2

Results relate only to samples as received by the laboratory.

*Soil samples are tested as received unless noted as "Dried before analysis." Equivalent units: PPM = mg/kg. **MRL=Minimum Reporting Limit. Quality Control data available upon request. *Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. All testing is performed in strict accordance with Schneider Laboratories, Inc. protocol.*

SLI ID:	Client ID:	Description:			MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method (µg)
29694831	4	Tyburn Rd Over Warner Co Rd			
Arsenic (As)	694	< 4.0	< 0.001	< 6	EPA 6010B 4.0
Cadmium (Cd)	694	19.8	0.003	29	EPA 6010B 4.0
Chromium (Cr)	694	245.5	0.035	354	EPA 6010B 10.0
Lead (Pb)	694	358,800.0	51.700	517,003	EPA 6010B 4.0

SLI ID:	Client ID:	Description:			MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method (µg)
29694832	5	Tyburn Rd Over Conrail			
Arsenic (As)	679	142.4	0.021	210	EPA 6010B 4.0
Cadmium (Cd)	679	18.6	0.003	27	EPA 6010B 4.0
Chromium (Cr)	679	1,294.0	0.191	1,906	EPA 6010B 10.0
Lead (Pb)	679	173,300.0	25.523	255,228	EPA 6010B 4.0

SLI ID:	Client ID:	Description:			MRL**
Analyte	Sample Wt(mg)	Total (µg)*	Conc. (% by wt)	Conc. PPM	Analysis Method (µg)
29694833	6	Tyburn Rd Over Pennsylvania			
Arsenic (As)	669	33.0	0.005	49	EPA 6010B 4.0
Cadmium (Cd)	669	7.2	0.001	11	EPA 6010B 4.0
Chromium (Cr)	669	226.1	0.034	338	EPA 6010B 10.0
Lead (Pb)	669	48,280.0	7.217	72,167	EPA 6010B 4.0

Sample contains substrate which may affect the calculation of weight percent.

Analyst: M. TODD GIBSON

Total Number of Pages in Report: 2

Results relate only to samples as received by the laboratory.

M. Todd Gibson
 Reviewed By **M. Todd Gibson, Metals Manager**

Visit www.slabinc.com for current certifications.

Soil samples are tested as received unless noted as "Dried before analysis." Equivalent units: PPM = mg/kg. **MRL=Minimum Reporting Limit. Quality Control data available upon request. *Data precision justifies 2 significant figures. Unusual sample conditions, if any, are described. All testing is performed in strict accordance with Schneider Laboratories, Inc. protocol.

CATENARY STRUCTURE LOADING, DESIGN CRITERIA, AND STANDARDS FOR USE ON THE NORTHEAST CORRIDOR AND KEYSTONE BRANCH

National Railroad Passenger Corporation



Purpose:

This document outlines the requirements for the structural design of railroad catenary structures. The intent of the information contained herein is to provide general guidelines for the uniform and consistent design of these structures where practicable.

Contact:

Effective Date: September 17, 2007

For more information regarding this document, please contact:
Ray Verrelle, Jr. P.E.
Director of ET Design and Standards
Amtrak Engineering Department
National Railroad Passenger Corp.
30th Street Station, 4th Floor
Philadelphia, PA 19104
(215) 349-1907



Revision Record

Revision Number	Date	Description	By	Checked
0	9/17/07	Initial Issue	NA	NA



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SECTION 1 – GENERAL

A. INTRODUCTION AND SCOPE

1. This chapter prescribes criteria for the design and detailing of railroad catenary (support) structures. The design and construction of new and replacement catenary structures as well as the analysis and modification of existing structures for new loads or loading conditions shall conform to the minimum design requirements specified here-in.
2. Exemptions or exceptions to any provisions contained in this document must be authorized by Amtrak's Director of ET Design & Standards.
3. The basis for design of railroad catenary support structures shall be in accordance with AREMA Manual for Railway Engineering Chapter 33 Part 4, the National Electric Safety Code, Amtrak's AED-1, and as modified here-in.
4. Structures shall be detailed to accept Amtrak's standard catenary hardware.
5. All structures shall be grounded per NESC and NEC code requirements.

B. DESIGN CODES AND REFERENCES (latest editions)

- | | | |
|-----|----------|---|
| 1. | AREMA | Manual of Railway Engineering, Chapter 33 |
| 2. | AISC 310 | Hollow Structural Sections Connections Manual |
| 3. | AISC 325 | Steel Construction Manual– 13 th Edition |
| 4. | AISC 326 | Detailing for Steel Construction – 2 nd Edition |
| 5. | AISC 348 | Specification for Structural Joints Using ASTM A325 or A490 Bolts |
| 6. | NEC | National Electric Code |
| 7. | NESC | National Electric Safety Code |
| 8. | IBC | International Building Code |
| 9. | ACI 318 | Building Code Requirement for Structural Concrete |
| 10. | ASCE 7 | Minimum Design Loads for Buildings and Other Structures |
| 11. | AWS D1.1 | American Welding Society: Structural Welding Code – Steel |

END OF SECTION



SECTION 2 – LOADING REQUIREMENTS

A. BASIC LOADS

1. The basic loads applied to new catenary structures shall be in accordance with AREMA Chapter 33 Part 4, Amtrak's AED-1, and as modified by this document. The loads include:
 - (a) Dead weight of wires, wire supports, and supporting structure
 - (b) Curve pull forces and dead end loads
 - (c) Ice loads on the wires only
 - (d) Wind loads on the wires and structure
 - (e) Wire break loads
 - (f) Live loads (from cat walks, ladders, etc - refer to ASCE 7)
 - (g) Other loads as may be specific to the location and structure
2. Unless otherwise specified to be greater, an importance factor (I) of 1.0 shall be used for determining wind pressure on structures and supported facilities per NESC Section 25. Wind loading shall be in accordance with the provisions and requirements stated in the NESC.
3. Five (5) load conditions shall be reviewed:
 - (a) Icing Condition (Or NESC Rule 250 B)
 - Temperature = 0°F
 - 40 mph wind
 - ½ inch radial ice on all wires
 - Maximum lateral pole deflection at contact wire height = 6 inches*
 - (b) Design Condition (Or NESC Rule 250 C)
 - Temperature = 60°F
 - 90 mph wind
 - All structures and their supported facilities shall be designed to withstand the Basic Wind Speed in accordance with ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*, Chapter 6.0 and the National Electric Safety Code, Section 25. Based upon ASCE 7-02, Figures 6-1 and 6-1c, the basic wind speed (3 second gust) for the majority of Amtrak's Northeast Corridor is 90 mph.
 - (c) Operating Condition
 - Temperature = 60°F
 - 60 mph wind
 - Maximum lateral pole deflection at contact wire height = 4 inches*



- This combination is not used to compute member stresses, rather to compute lateral catenary support and wire deflections for the interface with the vehicle/pantograph system.

(d) Wire Break Condition

- Portal structures shall be designed to resist the unbalanced forces in the direction of the line resulting from broken wires. Two such wire break loads of not less than 1,000 pounds each shall be assumed as acting on any pole carrying transmission or signal wires or one wire break load of not less than 2,000 pounds shall be assumed as acting at any catenary attachment point to a steel member of a supporting structure. Both conditions shall be checked individually.
- Wire break loadings need not be considered as acting in conjunction with longitudinal wind forces.
- Special provisions for Cantilever Catenary Structures: Arms and arm/column connections need not be designed to resist wire break conditions. However, columns shall be designed to resist wire break loads applied to the section at the messenger wire height. Large deflection and non-elastic deformation to the arm is to be expected, however, overall structural failure shall be prohibited.

(e) Construction Condition

- The wind pressures calculated under the "Design" load case (b) shall be applied to the entire structure and supporting facilities without ice or wire wind loads. Any support or restraint provided by a wire must subsequently be removed.

**Deflection limitations stated pertain to lateral deflections at contact wire supports as it relates to pantograph registration. Overall structural deflections shall follow the recommendations and limitations stated in AISC.*

4. When modifying an existing structure the design criteria applicable to the period when the structure was originally designed may be used in lieu of requirements outlined in Part 2, Section 3.

B. WIRE DEAD LOADS

1. For the purposes of structure design, wire size and weights noted in Table 2.B-1 (following page) shall be assumed as a minimum unless larger wire sizes or heavier loads are required.



**Table 2.B-1
Wire Sizes and Weights**

Wire	Size	Material	Nominal Diameter (in)	Dead Load Wt lbs/linear foot	
				Bare @ 60°F	½" ice @ 0°F
Messenger	5/8"	stranded bronze	0.625	0.905	1.616
	5/8"	copper weld comp.	0.613	0.848	1.53
	7/16"	bronze	0.4375	0.453	1.05
	300 MCM	copper	0.630	0.926	1.63
Trolley	4/0	solid bronze	0.482	0.642	1.260
	336.4 MCM	bronze	0.680	1.02	1.690
	300 MCM	silver copper	0.574	0.908	1.575
Auxiliary	4/0	Copper	0.482	0.642	1.260
Hangers – clips 2 wire systems 3 wire systems				0.120	0.120
				0.080	0.080
Catenary Feeders	300 MCM	copper	0.714	0.945	1.70
	400 MCM	copper	0.728	1.235	1.985
	636 MCM	ACSR	0.990	0.874	1.80
	750 MCM	copper	0.998	2.316	3.25
	1000 MCM	copper	1.152	3.088	4.12
Transmission	250 MCM	copper hollow core (Type A)	0.731	0.783	1.55
	250 MCM	copper hollow core (Type NH)	0.818	0.803	1.62
	250 MCM	copper hollow core, hollow tube	0.731	0.844	1.61
	250 MCM	copper spiral I beam	0.731	0.803	1.57
	4/0	7 strand copper	0.522	0.653	1.29
	477 MCM	ACSR (26/7 "Hawk")	0.858	0.656	1.50
Signal Power	1/0	7 strand copper	0.368	0.326	0.866
Static	336.4 MCM	ACSR	0.563	0.291	0.952
	4/0	7 strand copper	0.522	0.653	1.29
	9/16"	Copperweld	0.572	0.700	1.35



C. WIND PRESSURES ON WIRES AND STRUCTURES

1. Basic wind loading equation:

- (a) Wind Pressure (lbs/ft²) = 0.00256*(V²)*(k_z)*(G_{RF})*(I)
- (b) V = Basic Wind Speed for a 3s Wind Gust
- (c) k_z = Velocity Pressure Exposure Coefficient (See Table 2.C-1)
- (d) G_{RF} = Gust Response Factor (See Table 2.C-2)
- (e) I = Importance Factor (1.0)

Height(ft)	k _z (Structure)	k _z (Wire)
≤ 33	0.90	1.00
33 to 50	1.00	1.10
50 to 80	1.10	1.20
80 to 115	1.20	1.30
115 to 165	1.30	1.40
165 to 250	1.40	1.50
>250	Use Formulas	Use Formulas

Formulas:

Structure: $k_z = 2.01 \times (0.67 \times h/900)^{(2/9.5)}$
Wire: $k_z = 2.01 \times (h/900)^{(2/9.5)}$

Note:

Minimum Value for k_z is 0.85

Height h (ft)	Structure G _{RF}	Wire G _{RF} , Span Length, L (ft)			
		≤ 250	250<L<500	500<L<750	500<L<750
≤ 33	1.02	0.93	0.86	0.79	0.75
33 to 50	0.97	0.88	0.82	0.76	0.72
50 to 80	0.93	0.86	0.80	0.75	0.71
80 to 115	0.89	0.83	0.78	0.73	0.70
115 to 165	0.86	0.82	0.77	0.72	0.69
165 to 250	0.83	0.80	0.75	0.71	0.68
>250	(1)	(1)	(1)	(1)	(1)

Note (1):

Use applicable formulae provided in NESIC.

D. LOAD COMBINATIONS AND FACTORS

1. Load combinations shall be generated to meet the five (5) load conditions outlined in Section 2.A.3. Load factors need not be applied when using ASD allowable factors (see Section 3.A.1).
2. The general load combinations shall be as noted in Table 2.D-1 (following page). Other load combinations may be required by Amtrak for special structures.



Table 2.D-1 Load Combinations		
Load Case	Combination	Description
1A	0 degree F, 1/2" Ice, 40mph Wind Perpendicular to Tracks	Structure DL + Wire DL with 1/2" Ice + Curve Pull @ 0 deg. + Dead-end @ 0 deg. +/- 40mph wind perpendicular to tracks
1B	0 degree F, 1/2" Ice, 40mph Wind Parallel to Tracks	Structure DL + Wire DL with 1/2" Ice + Curve Pull @ 0 deg. + Dead-end @ 0 deg. + 40mph wind parallel to tracks
2A	60 degrees F, Bare Wire, 90mph Wind Perpendicular to Tracks	Structure DL + Bare Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. +/- 90mph wind perpendicular to tracks
2B	60 degrees F, Bare Wire, 90mph Wind Parallel to Tracks	Structure DL + Bare Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. +/- 90mph wind parallel to tracks
3A	60 degrees F, Bare Wire, 60mph Wind Perpendicular to Tracks (for deflection only)	Structure DL + Bare Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. +/- 60mph wind perpendicular to tracks
3B	60 degrees F, Bare Wire, 60mph Wind Parallel to Tracks (for deflection only)	Structure DL + Bare Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. + 60mph wind parallel to tracks
4A	0 degree F, 40mph Wind Perpendicular to Tracks, wire break	Structure DL + Wire DL + Curve Pull @ 0 deg. + Dead-end @ 0 deg. +/- 40mph wind perpendicular to tracks + 2000 pound wire break load on the beam at a catenary support that generates the worst case stresses
4B	60 degrees F, Bare Wire, 90mph Wind Perpendicular to Tracks, wire break	Structure DL + Bare Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. +/- 90mph wind perpendicular to tracks + 2000 pound wire break load on the beam at a catenary support that generates the worst case stresses
4C	0 degree F, 40mph Wind Perpendicular to Tracks, wire break	Structure DL + Wire DL + Curve Pull @ 0 deg. + Dead-end @ 0 deg. +/- 40mph wind perpendicular to tracks + (2) 1000 pound wire break loads on the pole at a height to generate the worst case stresses (but must be where one of the crossarms are located)



4D	60 degree F, 90mph Wind Perpendicular to Tracks, wire break	Structure DL + Wire DL + Curve Pull @ 60 deg. + Dead-end @ 60 deg. +/- 90mph wind perpendicular to tracks + (2) 1000 pound wire break loads on the pole at a height to generate the worst case stresses (but must be where one of the crossarms are located)
5A	60 degrees F, No Support, 90mph Wind Perpendicular to Tracks	Structure DL +/- 90mph wind perpendicular to tracks (no wire support)
5B	60 degrees F, No Support, 90mph Wind Parallel to Tracks	Structure DL +/- 90mph wind parallel to tracks (no wire support)

- Based upon the requirements of AREMA, load factors (overload) shall be applied for steel design as noted in Table 2.D-2.

Table 2.D-2 Load Factors (Overload for LRFD design)	
Overload Factor	Description
1.5	Dead Load Structure including supports, signals, etc
1.5	Dead Load wires
1.0	Ice load on wires (1/2" radial)
1.65	Transverse Force due to bearing change of wires
1.65	Dead End Force
2.5	Transverse wind load on structure
1.1	Longitudinal wind load on structure
2.5	Transverse wind load on wires
1.0	Force created by wire breaking
1.6	Live Load (person on fixed ladder or platform)

- Based upon the requirements of AREMA, wind loading shape factors C, shall be applied for steel design as noted in Table 2.D-3 (following page).



Table 2.D-3 Shape Factors, C	
Factor C	Description
1.0	Wires
0.8	Cylindrical Sections
1.2	H Sections
1.8	Lattice Structures
1.4	Flat Surfaces

5. Based upon the requirements of AREMA, wind loading exposure factors, E shall be applied for steel design as noted in Table 2.D-4.

Table 2.D-4 Exposure Factors, E	
Factor E	Description
1.25	Operating Load Condition Factor (Flat exposed areas, high embankments, viaducts)
1.5	Design Load Condition Factor (Flat exposed areas, high embankments, viaducts)
0.8*	Design & Operating Condition Factor (Sheltered areas, deep cuts, deep forests)

* *Transverse (perpendicular to tracks) wind loads only*

6. Where the combination of vertical, transverse, or longitudinal loads may act simultaneously, the structure shall be designed to withstand the simultaneous application of these loads.

END OF SECTION



SECTION 3 – STRUCTURAL DESIGN REQUIREMENTS

A. GENERAL REQUIREMENTS

1. Structural steel analysis and design shall be per AISC Manual of Steel Construction, 13th edition (or latest). Either ASD or LRFD may be used.
 - (a) If ASD is used, use ASD allowable limits with no overload factors.
 - (b) If LRFD is used, use AREMA/NESC overload factors and AISC LRFD reductions.
2. Structural members shall be designed with consideration for additional future loading. Excess capacity to allow for such loading shall be determined using good engineering judgment.
3. Design modifications to existing structures shall be conducted using the original loading criteria. The allowable stresses shall not be greater than the design criteria in place at the time of the original design and construction. All structural members shall be designed with consideration for additional future loading based on good engineering judgment.
4. Allowable stresses shall not be increased one-third above stress values given in specifications when produced by wind loading unless it is approved by Amtrak's Director of ET Design and Standards
5. Structural Erection Diagrams (SED's) shall include a loading diagram. Loading diagrams should show Icing (0 degree, 40mph wind, 1/2" ice) condition along with reactions at foundation(s) and down guy(s) for both loading conditions.
6. Static wires which are permanently attached to the top of the column section are permitted (when required) to be considered a support in the longitudinal direction of the structure. The static wire shall not provide any structural support in the transverse direction.

B. BASIC DESIGN VALUES

1. Design values (taken from AISC) for structural steel design shall be used as shown in Table 3.B-1 (following page).



Table 3.B-1 Basic Steel Design Values				
Condition		ASD	LRFD	Related Info.
Tension		$0.6F_y A_g \leq 0.5F_u A_e$	$0.9F_y A_g \leq 0.75F_u A_e$	For A_e , see LRFD Equation D3-1
Bending	Strong Axis	$L_b \leq L_p$	$0.66F_y S_x$	See Note 1. $L_p = 300r_y / (F_y)^{1/2}$ L_r and strengths when $L_b > L_r$ are given in the AISC Manual
		$L_p < L_b \leq L_r$	Use linear interpolation between L_p & L_r	
	Weak Axis	$0.9F_y S_y$	$1.35F_y S_y$	
Shear (strong axis)		$0.4F_y A_w$	$0.6F_y A_w$	See Note 2.
Compression	$Kl / r \leq 800 / \sqrt{F_y}$	$0.6F_y A_g \times 0.658^P$	$0.9F_y A_g \times 0.658^P$	$P = F_y (Kl/r)^2 / 286,000$ See Note 3.
	$Kl / r > 800 / \sqrt{F_y}$	$150,000A_g / (Kl/r)^2$	$226,000A_g / (Kl/r)^2$	

Notes:

- Multiply equations given for $L_b \leq L_p$ by value in parentheses for W14x90 (0.97), W12x65 (0.98), and W6x15 (0.95).
 - Multiply equations given by 0.9 for W44x230, W40x149, W36x135, W33x118, W30x90, W24x55, W16x26, W12x14 and all C and MC-shapes. In weak axis, equations given can be adapted by using $A_w = 1.8bt_f$.
 - Not applicable to slender shapes. For slender shapes, use QF_y in place of F_y , where $Q = Q_s Q_a$ from Section E7. For C- and MC-shapes, also check Section E4.
2. Design equations (taken from AISC) for structural steel in combined bending and compression shall be used as shown in Table 3.B-2.

Table 3.B-2 Combined Bending and Compression Stress Design Values			
Condition		Equations	Related Info.
LRFD	$P_u / \Phi_C P_n \geq 0.20$	$(P_u / \Phi_C P_n) + \{(8/9)(M_{u,x} / \Phi_b M_{n,x} + M_{u,y} / \Phi_b M_{n,y})\} \leq 1.0$	See LRFD H1-1a
	$P_u / \Phi_C P_n < 0.20$	$(P_u / 2\Phi_C P_n) + (M_{u,x} / \Phi_b M_{n,x} + M_{u,y} / \Phi_b M_{n,y}) \leq 1.0$	See LRFD H1-1b
ASD	$f_a / F_a > 0.15$	$(f_a / F_a) + \{(C_{mx} f_{bx}) / [(1 - f_a / F_{ex})(F_{bx})] + (C_{my} f_{by}) / [(1 - f_a / F_{ey})]\} \leq 1.0$	See ASD H1-1
		$(f_a / 0.6F_y) + (f_{bx} / F_{bx}) + (f_{by} / F_{by}) \leq 1.0$	See ASD H1-2
	$f_a / F_a \leq 0.15$	$(f_a / F_a) + (f_{bx} / F_{bx}) + (f_{by} / F_{by}) \leq 1.0$	See ASD H1-3



2. Design values for connection design (Values taken from AISC) shall be used as shown in Table 3.B-3.

Table 3.B-3 Basic Connection Design Values				
Condition		ASD	LRFD	Related Info.
Bolts	Tension	$0.38F_uA_b$	$0.56F_uA_b$	---
	Shear (N bolts, per shear plane)	$0.2F_uA_b$	$0.3F_uA_b$	Mult. by 1.25 for X bolts
	Slip Resistance (Class A, STD holes)	$0.14F_uA_b$	$0.21F_uA_b$	Per slip plane (see Note 1)
	Bearing	$0.6F_uL_c t \leq 1.2F_u d_b t$	$0.9F_uL_c t \leq 1.8 F_u d_b t$	See Note 2.
Welds	Shear (all welds except CJP)	$0.3F_{EXX}A_w$	$0.45F_{EXX}A_w$	See Note 3.
	PJP Groove Welds	Tension	$0.32F_{EXX}A_w$	See AISC Section J2.1a.
		Compression	$0.48F_{EXX}A_w \leq 0.6F_yA_{BM}$	$0.72F_{EXX}A_w \leq 0.9F_yA_{BM}$
CJP Groove Welds	Strength equal to base metal		---	
Connected Parts	Tension	$0.6F_yA_g \leq 0.5F_uA_e$	$0.9F_yA_g \leq 0.75F_uA_e$	For A_e , see LRFD Equation D3-1
	Shear	$0.4F_yA_g \leq 0.3F_uA_n$	$0.6F_yA_g \leq 0.45F_uA_n$	---
	Block Shear	$0.3F_yA_{nv} + 0.5U_{bs}F_uA_{nt}$	$0.45F_yA_{nv} + 0.75U_{bs}F_uA_{nt}$	See Note 4.
	Compression	$Kl/r \leq 25$	$0.6F_yA$	$0.9F_yA$
$Kl/r > 25$		Same as for W-shapes with $A_g = A$.		

Notes:

- Slip checked as a serviceability limit state using ASD load combinations for ASD, LRFD load combinations for LRFD. For Class B surfaces, multiply by 1.43. For OVS or SSL holes, multiply by 0.85. For LSL holes, multiply by 0.7.
- For LSL holes parallel to the direction of load, multiply by 0.83.
- For fillet welds, multiply by 1.5 for transverse loading (90-degree load angle). For other load angles, see Section J2 of AISC Manual of Steel Construction.
- For calculation purposes, F_uA_{nv} cannot exceed F_yA_{gv} . $U_{bs} = 1$ for a uniform tension stress; 0.5 for non-uniform tension stress.

C. STANDARD COMPONENTS

- Columns
 - Columns shall be made from standard wide-flange or HSS sections.
 - Built-up wide-flange sections with the use of angles can be used in overbuild design cases to strengthen weak-axis bending (improving the L/r_y ratio) due to longitudinal wind loading. They can also be used in cantilever structure cases to strengthen regions where the in-plane wind loads create excessive torsion forces



in the member. Built-up sections shall be limited to the regions of the structure where the previously mentioned design cases dictate they be used.

- (c) Pole steps shall be provided 20'-0" above top of foundation and shall be spaced 1'-3" apart to the top of the column.
- (d) The columns shall be designed with a full moment base plate or direct embedment in a reinforced drilled concrete pier.

2. Catenary Beams

- (a) Catenary cross beam members used in portal frame structures shall be made from standard wide flange sections or HSS sections.
- (b) Cantilever arms shall be made from either WT sections or back to back angle sections.
- (c) Sag braces and struts shall be used where required and should be made of back to back angles.
- (d) Beams shall be shop cambered to negate the effects deflection due to self weight.

3. Signal Bridges

- (a) Signal bridges shall consist of box-girder sections with a non-skid surface provided as the top plate.
- (b) Handrails, ladders, and fall protection shall be designed and provided per applicable Amtrak and safety standards and codes.

4. Foundations

- (a) Design per ACI 318 and the International Building Code Chapter 18.
- (b) In general, foundations shall be of the drilled pier type (caisson). The use of a permanent steel casing (pipe steel) with a minimum 3/8" skin thickness and a yield strength of 35,000 psi is required for all catenary column foundations. Typical foundations shall be 48" diameter, having a depth ranging from 15'-0" to 30'-0", as required.
- (c) Exploratory trenches are to be hand dug in accordance with the approved construction drawings to determine the presence of any underground installation before proceeding. These trenches are to be backfilled and immediately compacted (See Section IV of Amtrak's AED-1 for more information).
- (d) Locate a 3' deep x 15" wide exploratory trenches on the design drawings. The extent of each trench shall be in the form of an "H" whose outside dimensions match the extent of the outside face of the foundation dimensions.
- (e) The permanent steel casing shall extend from the bottom of the excavated hole to 0'-6" above proposed grade. Temporary forms (Neat Forms preferred) shall



be used which extend from a minimum of 0'-6" below grade to the finished top of concrete. Normally, the top of concrete shall be even with the top of high rail.

- (f) In foundations where solid bedrock is encountered, the use of a reduced pile diameter (rock socket) is permissible. In these conditions the reinforcing steel in the rock socket portion of the pile shall extend into the larger section such that a full tension lap splice occurs. Shear at the socket/caisson interface must be checked.
- (g) Finished concrete shall slope away from the steel with a 1% to 2% slope.
- (h) Pier foundations shall contain reinforcing steel to withstand flexural bending forces created by active earth pressures. Rebar shall be deformed (uncoated) unless directed otherwise.
- (i) Piers shall contain confinement reinforcing. Typically, confinement steel consists of #4 ties with a maximum spacing of 1'-0" below grade, and 0'-6" above grade. Two (2) additional #4 ties shall be placed at the top and bottom of the foundation at a maximum spacing of 4". Continuous hoops (spiraled) cages are preferred. When a continuous hoop is not used, separate hoops shall have extra ties and hoops to ensure ease of placement. Tacks welds are allowed to be used near the outer ends of the cage to assist in the rigidity of the cage, however the designer must consider the effects of embrittlement when using this method.
- (j) For cast-in-place caissons, provide 3" clear cover to all reinforcing bars.
- (k) Pile head deflection and slope shall be considered as it pertains to the overall structure deflection. See Section 2.A.3 for structure deflection limitations.
- (l) In lieu of using foundation software (i.e. L-Pile) to determine the effects of a foundation on an embankment, the depth of foundations shall be increased per AREMA Chapter 33 Section 4.2.8.2.1. The required increase shall also be determined by calculations.
- (l) Ineffective soil depth shall be taken as a minimum of 2'-0" unless soil boring information is provided which shows otherwise.
- (m) Foundation design shall be done using the worst case loading condition (service loads) with a 1.5 safety factor (overturning) for caissons.
- (n) Design of anchor rods shall be in accordance with the ACI-318, Building Code Requirements for Reinforced Concrete (latest edition). The minimum embedment depth for anchor rods is 6'-0".

5. Guy Anchors and Assemblies

- (a) Guy anchors shall be designed using the worst case loading (service loads) with a 1.75 safety factor (sliding and uplift).
- (b) Type A-1, A-2, B-1, B-2, and caisson type guy anchors are preferred.
- (c) All components which come into contact with the earth or concrete shall be galvanized.



- (d) Guy anchors shall be placed in a vertically dug hole which is approximately the same dimensions as the anchor. In typical soil conditions, the minimum anchor embedment depth is 10'-0". In unstable conditions, areas of weak soil, high water tables, and/or areas susceptible to erosion a more detailed analysis must take place to determine the required embedment depth.

6. Cross Arms

- (a) 132-kV Transmission Arms are generally single 4x4x1/2" single steel angles for suspension assemblies and double 4x4x1/2" angles for dead-end assemblies and shall be bolted to the pole. 7/8" diameter steel sag rod shall be provided for all arms and shall be clamped to the pole.
- (b) Signal Power Feeder Arms are generally single 4x4x1/2" single steel angles for suspension assemblies and double 4x4x1/2" angles for dead-end assemblies and shall be clamped to the pole. 7/8" diameter steel sag rod is not required.
- (c) Cross Track Feeder Arms are generally double 4x4x1/2" angles, with struts, clamped to the pole.
- (d) Catenary Power Feeder Arms are generally double 4x4x1/2" angles. 7/8" diameter steel sag rod shall be provided for all arms and shall be clamped to the pole.
- (e) Double dead-ends shall always be provided for long-term flexibility unless directed otherwise.
- (f) All parts shall be galvanized.

7. Overhead Bridges

- (a) Wherever possible catenary connections to overhead bridges should be avoided. If required, they should consist of a 4" diameter galvanized steel pipe clamped by u-bolts to dropper brackets which are welded or bolted to the bridge. Prior approval from Amtrak's Engineering Department must be granted prior to attaching any catenary to an overhead bridge.

8. Miscellaneous Steel

- (a) Ladders for plain poles shall be provided when required. Anti-climb gates shall be provided on all ladders and shall extend fifteen-feet above the top of foundation or grade, whichever is higher.
- (b) Railings shall meet all current safety regulations.

D. MATERIALS

- 1. The steel material requirements of AREMA Chapter 15 Section 1.2 apply to railroad catenary structures as modified here-in. All other steel structures shall comply with AISC requirements except as modified here-in.



2. Fabrication of steel structures shall be in accordance with AISC as modified here-in. Third party fabrication shops shall be AISC certified or have demonstrated experience with the fabrication of catenary structures.
3. Galvanized steel is the preferred material for exposed applications.
4. The recommended steel material specifications are listed in Table 3.D-1.

Table 3.D-1 Steel Material Specifications	
Shape/Item	Material Specification
W- Shapes	ASTM A992 Grade 50 Hot Dip Galvanized
Hollow Structural Shapes	ASTM A500 Grade B Hot Dip Galvanized
Shapes and plates not embedded in concrete	ASTM A36 Hot Dip Galvanized
Shapes and plates embedded in concrete	ASTM A36 Hot Dip Galvanized
Welding Electrodes	E70xx low hydrogen (tensile strength $F_{EXX} = 70$ ksi)
High Strength Bolts	ASTM A325 Type 1 galvanized
Standard Hardened Washers	ASTM F436 Type 1 Hot Dip Galvanized
Heavy Hex Nuts	ASTM A563 Grade DH galvanized
Anchor Bolts or Rods	ASTM A449, Hot Dip Galvanized
Hardware	AISI C-1035 for clevises and turnbuckles. Turnbuckles shall be manufactured per ASTM F1145. AISI C-1030 for eye nuts and steel eye bolts. AISI C-1018 grade 2 for sleeve nuts. Cotter pins shall be stainless steel or bronze. All shall be Hot Dip Galvanized

5. Concrete shall be 4000psi at 28 days with a minimum w/c ratio of 0.45 minimum 5½% air content (if required).
6. Reinforcing steel shall be grade 60.

E. STEEL DESIGN DETAILS

1. Minimum plate thickness and member thickness is $\frac{3}{8}$ inch.
2. Anchor Rods and Base Plates
 - (a) Holes in base plates for anchor rods shall be oversized. Recommended oversize is 5/16" but shall not exceed AISC Code of Standard Practice.
 - (b) Minimum diameter of anchor rods is 1¼ inch. The recommended diameter is 2 inches.
 - (c) Each anchor bolt shall include two heavy hex nuts and a leveling nut.
 - (d) Provide plate washers where oversize holes are provided.



- (e) Welding on anchor rods will only be allowed in the bottom 12 inches.
- (f) The minimum embedment length of anchor rods is 6'-0".
- (g) Anchor rods shall be threaded at the top end a distance sufficient to provide for leveling or raking of the structure
- (h) The minimum thickness of base plates is 1". For cantilever structures, the minimum thickness is 1½". The recommended baseplate thickness is 2".

F. MISCELLANEOUS

1. All steel structures shall be grounded.
2. Galvanized coating thickness for structural members shall not be less than 2.3 oz/sf.
3. Provisions for the attachment of a static wire shall be provided on the top of all columns.
4. The catenary structure number shall be permanently marked on the inbound and outbound faces of all columns at four feet above groundline using reflective paint or signs.
5. Cadwelded grounding is an acceptable alternative to the grounding pad/lug.
6. The location of structures shall not violate the minimum railroad clearance requirements per MW1000.

END OF SECTION



Appendix A

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AMTRAK SPECIFICATION - AED-1

**PROCEDURES AND DESIGN CRITERIA TO BE
EMPLOYED BY ELECTRIFICATION CONSULTANTS
ENGAGED IN THE DESIGN OF
ELECTRIFICATION FACILITIES
ON THE
NATIONAL RAILROAD PASSENGER CORPORATION**

PREPARED BY:
AMTRAK - OFFICE OF THE DEPUTY CHIEF ENGINEER - ET
PHILADELPHIA, PA
(REVISED Nov. 2006)

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I. QUALIFIED CONSULTANTS LIST

- A. Amtrak maintains a list of “Qualified Electrification Consultants” for its own convenience and to facilitate the process of selecting firms to perform electrification design on Amtrak property. Consulting firms are included on Amtrak’s “Qualified” list based on the experience and knowledge of their key personnel, their past performance on electrification projects in general, and past performance on specific Amtrak projects.
- B. A Consultant may be removed from Amtrak’s “Qualified” List if it is determined the he no longer meets the requirements for inclusion as specified in paragraph “A” above.
- C. Application for inclusion on Amtrak’s “Qualified Electrification Consultants” list shall be submitted to:

R. G. Verrelle
Director - ET Design & Standards
National Railroad Passenger Corporation 30th Street Station, 4th Floor - South Tower
Philadelphia, PA 19104

Applications shall be the in form of a letter of interest and shall have attached the following information:

- 1. Key Personnel and their qualifications.
 - 2. Past and current electrification projects (other than Amtrak) with the names and telephone numbers of their clients.
 - 3. Past and current Amtrak electrification projects.
- D. A Consultant may be included on the “Qualified” list on a probationary basis pending performance on an Amtrak Electrification Project.
 - E. Consultants must re-apply for inclusion on Amtrak's Qualified List each calendar year. Submissions must be made prior to October 1st of the preceding year in order to be considered.

II. PROCEDURES

- A. Whenever the Term “Engineer” is used in this specification, it shall mean the Deputy Chief Engineer, ET of Amtrak or an authorized representative.
- B. Upon receipt of notice to proceed with design work, the Electrification Consultant shall so inform the Director of Design - Electric Traction of Amtrak, and shall also provide the name of the Consultants Personnel responsible for the project management. Any changes in the Electrification Consultant’s key personnel shall be approved by the Director - ET Design
- C. Consultant’s personnel, before entering Railroad property, shall execute an Amtrak “Permit to Enter Upon Property”, and attend Amtrak’s Contractor’s Safety Class.
- D. Prior to proceeding with the final design, the Consultant shall submit to Amtrak, for review and discussion, preliminary conceptual plans for the proposed electrification modifications. This is especially important in work involving changes to the catenary configuration, sectionalizing,

transmission lines, and signal power lines. The plans shall indicate the preliminary design concepts in sufficient detail for Amtrak design personnel to provide definitive direction in which to proceed with the design.

In conjunction with the conceptual submission, a field meeting shall be held between representatives of the Electrification Consultant and Amtrak's ET Design and Construction Departments to evaluate alternatives and establish an acceptable conceptual plan.

Following approval of the conceptual plans, submissions at the 30%, 60%, 90%, and final level, shall be provided for Amtrak's review and comment per the agreed upon schedule of submissions. Design calculations shall be submitted at all levels of submissions. The Electrification Consultant shall also provide an electrification cost breakdown at the 60% level and upon submission of final plans. Unless otherwise directed, submittals shall be sent to the attention of the Engineer.

- E. It shall be the responsibility of the Consultant to verify the information contained on Amtrak record drawings pertaining to the project work by on-site inspection.
- F. It shall be the responsibility of the Electrification Consultant to perform exploratory trenching to establish all underground Amtrak facilities such as ducts, pipes, and footings in all areas that excavation is required by the design. Hand dug exploratory trenches shall be as described in Section IV of this specification.
- G. Final drawings, specifications and calculations shall be submitted to Amtrak for approval prior to being issued for bidding or construction. Each drawing shall bear the stamp of a Professional Engineer, registered in the state in which the work will be performed.
- H. When it is necessary to revise existing Amtrak bonding and grounding plans, and sectionalizing plans, these Amtrak plans showing the revisions shall be submitted to the railroad upon completion of construction.
- I. Unless otherwise instructed, the Consultant shall utilize the current standard Amtrak structural, catenary, and electrical details and materials in the design of the project.
- J. The project sponsor (if other than Amtrak) shall be responsible for all liaison and coordination between all agencies and utilities that may be involved in the project work.
- K. The Electrification Consultant shall be responsible for review of all shop and manufacturers drawings for all structures, catenary material or electrical equipment designed or specified by him in connection with the project.

III. DESIGN DRAWNGS

The design drawings prepared by the Consultant for the proposed electrification system modifications shall include, but not be limited to the following, and shall be arranged as described below.

- A. The first drawing of the design set shall be a location plan sheet. The drawing shall contain, in addition to a plan of construction limits (scale not less than 1" = 100') the following information:
- 1) General notes - steel, concrete, excavation, etc.
 - 2) List of abbreviations used.
 - 3) Division of work and material supply legend.
 - 4) List of reference drawings.
 - 5) List of design drawings in set.
 - 6) Construction sequence.
- B. The next plan sheet shall be a profile drawing indicating the modifications to existing overhead lines (other than catenary) if required, and the relationship of the proposed construction to existing facilities. This profile drawing shall be drawn to a vertical scale 1" = 20' and a horizontal scale of 1" = 100'.
- C. The next plan sheets shall be wiring plan drawings indicating all existing and new information pertaining to the catenary system, its supporting structures and ancillary conductors. These wiring plan drawings shall be drawn to a scale 1" = 20', 1"=30' or 1"=40' (depending upon project size).
- D. The next plan sheets shall be the catenary profile drawings indicating the new and/or modifications to existing catenary wires and (if required) the relationship of the proposed construction to existing facilities. These profile drawings shall be drawn to a vertical scale 1" = 4' and a horizontal scale of 1" = 40'.
- E. The next group of design drawings shall present erection diagrams for all new permanent and temporary structures and existing modified structures. Erection diagrams shall be drawn to a scale of 1" = 10, and shall be accompanied by a structure loading diagram (on the same drawing) drawn to a scale of 1" = 20, indicating all design loads (vertical, wind, side pull) applied to the structure. Erection diagrams shall also be presented to indicate the total or partial removal of existing structures and steps that may be required to accomplish the removal. Each erection diagram sheet shall contain a bill of material listing assembled items required per structure such as poles, crossbeams, sag braces, cross arms, insulator assemblies, guy anchors and foundation types. All listed items shall be marked and the drawings showing those details shall also be listed. Modified structures must have erection diagrams that have all of the information from the original document transposed onto them. These drawings will supercede the original drawings. The drawings must be drawn so that existing and new material can be differentiated.

- F. Erection diagram sheets shall be followed by:
- 1) Structural steel design detail drawings.
 - 2) Foundation and guy anchor design detail drawings.
 - 3) Hardware and insulator assembly details which shall have bills of material identifying the various assembly components, including the manufacturers' name, and Amtrak AMMS number.
 - 4) Wire sags and tension charts, as required.
 - 5) Miscellaneous details as required.
 - 6) Underground duct relocation plan, profile and detail drawings if required.
 - 7) Electrical design drawings.
 - 8) Master Bill of Material indicating mark number, Amtrak reference drawing number, AMMS number, description, manufacturer, unit of measurement, and ordering totals of the material being used.
- G. On overhead bridge projects, drawings shall be prepared in accordance with Amtrak standard drawings ET1120-C, ET-1446-D, and ET-1447-D. These drawings shall indicate the temporary and permanent bonding and grounding of the bridge and shall contain a plan of the bridge crossing and all necessary details, clearances and elevations required to clearly show all of the work involved. Warning signs shall also be indicated and shall conform to current Amtrak standards as to location, size, and type used. An itemized bill of material (including Amtrak AMMS number) shall be included for all Railroad work.
- H. Existing Amtrak structure bonding and ground plans, sectionalizing plans, and other related drawings shall be revised (where applicable) to indicate modifications and submitted in accordance with Section II of this specification.
- I. Final structural and catenary drawings shall be accompanied by a suggested construction procedure outlining a step-by-step sequence to be followed to accomplish the project. This suggested procedure will be prepared to minimize electrical outages, track occupations, and interruptions to Railroad traffic and to maintain the safety of the workmen and the integrity of the transmission, catenary and signal systems during the proposed construction. All construction activities related to the project shall be integrated into the sequence of construction.
- J. Unless otherwise directed, plan submissions prior to the final plan submittal shall consist of (1) CD ROM containing all pertinent design documents in PDF file format. All submittals are to be sent to the Director – ET Design.
- K. Unless otherwise directed, after final plans are accepted and released for construction and material purchase, submit five (5) half-size sets of plans and (1) CD ROM containing all drawings in AutoCAD format. Submit material list and specifications, in their original file formats. Submittals shall be sent to the Director – ET Design.

IV. STRUCTURAL DESIGN CRITERIA

- A. All structural design shall be in accordance with the current Amtrak specifications for the Design of Catenary Supporting Structures with the following amendments:
- 1) Current AISC specifications shall be used for the design fabrication and the erection of structural steel, except that allowable stresses shall not be increased one-third above stress values given in specifications when produced by wind loading unless specifically approved by Amtrak.
 - 2) Current ACI Building Code Requirements for Reinforced Concrete shall be used for the design and construction of reinforced concrete structural elements of any structure.
 - 3) Soil boring information including location of borings shall be provided on the design drawings, preferably on the foundation drawings if possible. A soil boring shall be taken at each new foundation location of any modified or proposed new structure. When the number of foundations makes it impracticable to provide a boring for every foundation, a proposed boring plan must be submitted to the Engineer for approval. Foundations shall be designed in accordance with allowable soil bearing values of materials encountered.
 - 4) All design drawings shall be done under the supervision of a Professional Engineer, registered in the state where the work will be performed, who shall seal drawings submitted for final approval.
- B. The Consultant is advised that the following criteria is to be included in the design and construction of all permanent and temporary facilities adjacent to Amtrak tracks:
- 1) On electrification projects involving modifications to existing facilities, a minimum of 12'-0" (plus curvature allowance) is to be maintained from centerline of track to face any new pole or guy strand.
 - 2) On new electrification extensions or independent pole transmission lines a clearance of 18'-0" from centerline of track to face of pole or guy is required.
 - 3) New anchors and foundations shall be located and designed so that any temporary sheeting required for their construction will not be closer than toe of slope shown for standard track section (7'-5" is dimension from gage of rail to toe of ballast slope for tangent track; see dimension on Standard Plan No. 70003B for dimensions on curved track).
- Note: Minimum clearances less than those stated above must be approved by the Chief Engineer ET of Amtrak.**
- 4) Exploratory trenches (3) three feet deep and fifteen (15) inches wide in the form of an "H" with outside dimensions matching the outside sheeting dimensions, are to be hand dug to determine the presence of any underground installation. The design drawings shall show an outline of the exploratory trenches. All work must be done in accordance with Amtrak requirements for temporary sheeting and shoring to support Amtrak's facilities.

- 5) The following should be included in the general notes on all drawings for temporary sheeting, shoring and excavation to be performed adjacent to Amtrak's tracks:
 - a) The Contractor (if applicable) is to provide a schedule of each operation and obtain approval of Amtrak so that it may be properly supervised by Amtrak personnel.
 - b) Exploratory trenches are to be hand dug to determine the presence of any underground installation. Before proceeding, these trenches are to be back filled and immediately compacted. This work must be done in the presence of a railroad inspector.
 - c) Absolute use of track is required while driving sheeting adjacent to running track.
 - d) Cavities created by driving of sheet piling shall be filled with sand and any disturbed ballast should be restored and tamped immediately.
 - e) Sheet piling shall be cut off at top of tie during construction and then, after construction, shall be cut off eighteen (18) inches below existing ground line or grade and left in place.
 - f) The excavation should be covered and ramped each night and barricades and warning lights provided as directed by Amtrak.
 - g) Final back filling shall be as required by specifications.
 - h) When support of track or tracks is necessary during construction of above-mentioned facilities, interlocking steel sheeting adequately braced and designed to carry E-80 live load plus 50% impact is required. Soldier piles and lagging will be permitted for supporting adjacent track or tracks only when required penetration of steel sheet piling cannot be obtained or when in the opinion of the Engineer, steel sheet piling would be impracticable to place.
- 6) All drawings for temporary sheeting and shoring shall be prepared and stamped by a Professional Engineer and shall be accompanied by complete design computations when submitted for approval. The need for a Consultant to include details of temporary sheeting on design drawings will be determined when reviewing drawings submitted to Amtrak for structural approval.
- 7) Particular care shall be taken to avoid erosion or filling of Railroad's drainage facilities. Erosion and sediment control in the vicinity of the Railroad shall be as approved by the Engineer and the Railroad. Disrupted Railroad drainage facilities shall be corrected promptly as directed by the Engineer at the Contractor's sole expense.

V. ELECTRICAL DESIGN CRITERIA

- A. Electrical Clearances shall be in accordance with applicable, current Amtrak and AREMA specifications. Any deviation from the established Railroad standards must be approved by Amtrak. Vertical clearances between overhead electrical transmission lines and roadways must also meet state and local municipal requirements.
- B. The catenary gradient should be designed not to exceed the value $1/(5 \times \text{Speed})$ where practicable. As an alternate the catenary gradients specified in Chapter 33 of the AREMA Manual may be considered.

VI. CONSTRUCTION RELATED SERVICES

- A. The A/E shall provide a qualified on-site (E.T.) inspector for the duration of the construction of the project. The E.T. inspector shall be responsible for the following:
 - 1) Responding to Contractor's requests for information (R.F.I.'s).
 - 2) Evaluating Contractor's submittals.
 - 3) Reviewing shop drawings, calculations, and technical requirements.
 - 4) Preparing as-built drawings.
 - 5) Providing technical assistance during construction, testing and turnover.
 - 6) Attending project meetings.
 - 7) Participating in on-site inspections.
 - 8) Preparing revised design documents to clarify or modify drawings during construction.
 - 9) Assisting with preparation and resolution of punch list items.
 - 10) Other Construction Related Services as required.

The Inspector shall keep the Director E.T. Design or his representative apprised of all transactions related to the above Construction Related Services.

VII. RECORD TRACINGS

- A. Upon completion of the construction, the Consultant shall provide Amtrak with "as-built" or record drawings. This work will include the following.
- 1) Revisions to existing Amtrak tracings as required. These tracings include, but are not limited to, erection diagrams, overhead bridge drawings, track maps, bonding and grounding plans, catenary sectionalizing plans, impedance diagrams, and transmission profiles.
 - 2) Four (4) mil Mylar tracings shall be prepared for all new permanent facilities such as catenary structures at overhead bridges. These drawings shall be prepared on appropriate standard Amtrak tracings – four (4) mil Mylar. Permanent drawing numbers shall be obtained from Amtrak.
 - 3) One (1) CD ROM containing all electronic documents (except plans) in their original file format. Plans shall be submitted in AutoCAD format.
 - 4) Unless otherwise directed, final “as-built” documents are to be sent to the following address:

R. G. Verrelle

Director ET Design & Standards

National Railroad Passenger Corporation

30th Street Station, 4th Floor South Tower- Box 41

Philadelphia, Pa 19104

VIII. APPROVALS

_____ 12/5/07
R. G. Verrelle Jr. DATE
Director E.T. Design and Standards



R. J. Verhelle DATE 2/10/06
Deputy Chief Engineer Electric Traction

ATTACHMENT B
Temporary Permit to Enter Upon Property
For Construction Phase of Tyburn Road Bridge

INSURANCE REQUIREMENTS
NATIONAL RAILROAD PASSENGER CORPORATION (AMTRAK)
CHICAGO UNION STATION COMPANY (CUSCO)
WASHINGTON TERMINAL COMPANY (WTC)
Revised as of February 2, 2011

DEFINITIONS

In these Insurance Requirements "Railroad" or "Amtrak" shall mean National Railroad Passenger Corporation and as appropriate, its subsidiaries Chicago Union Station Company ("CUSCO") and Washington Terminal Company ("WTC"). "Contractor" shall mean the party identified as "Permittee" in the Temporary Permit to Enter Upon Property Agreement or the party with whom Amtrak has contracted in the Preliminary Engineering Agreement or Force Account Agreement, as well as its officers, employees, agents, servants, contractors, subcontractors, or any other person acting for or by permission of Permittee or Contractor. "Operations" shall mean activities of or work performed by Contractor. "Agreement" shall mean the Temporary Permit to Enter Upon Property Agreement, Preliminary Engineering Agreement, or Force Account Agreement, as applicable.

INSURANCE

Contractor shall procure and maintain, at its sole cost and expense, the types of insurance specified below. Contractor shall evidence such coverage by submitting to Amtrak the original Railroad Protective Liability Policy and certificates of insurance evidencing the other required insurance, prior to commencement of Operations. In addition, Contractor agrees to provide certified copies of the insurance policies for the required insurance within 30 days of Amtrak's written request. All insurance shall be procured from insurers authorized to do business in the jurisdiction(s) where the Operations are to be performed. Contractor shall require all subcontractors to carry the insurance required herein, or Contractor may, at its option, provide the coverage for any or all subcontractors, provided the evidence of insurance submitted by Contractor to Amtrak so stipulates. The insurance shall provide for thirty (30) days prior written notice to Amtrak in the event coverage is substantially changed, canceled or non-renewed. All insurance shall remain in force until all Operations are satisfactorily completed (unless otherwise noted below), all Contractor personnel and equipment have been removed from Railroad property, and any work has been formally accepted. The Contractor shall, at its sole expense, pay for all claims and damages which fall within such deductible or retained amount on the same basis as if there were full commercial insurance in force in compliance with these requirements. Contractor's failure to comply with the insurance requirements set forth herein shall constitute a violation of the Agreement.

Workers' Compensation Insurance complying with the requirements of the statutes of the jurisdiction(s) in which the Operations will be performed, covering all employees of Contractor. Employer's Liability coverage with limits of not less than \$1 million each accident or illness shall be included. A waiver of subrogation in favor of Amtrak is required.

In the event the Operations are to be performed on or over navigable waterways, a Longshoremen and Harbor Workers' Compensation Act Endorsement and a Maritime Coverage Endorsement are to be added, including coverage for wages, transportation, maintenance and cure.

In the event that the Contractor or its subcontractors are considered a railroad, Employers Liability coverage shall be extended to cover FELA with a limit of not less than \$10 million each accident, illness or occurrence.

Commercial General Liability Insurance covering liability of Contractor with respect to all operations to be performed and all obligations assumed by Contractor under the terms of the Agreement. Products-completed operations, independent contractors and contractual liability coverages are to be included, with the contractual exclusion related to construction/demolition activity within fifty (50) feet of the railroad and any Explosion/Collapse/Underground (X-C-U) exclusions deleted.

The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed. In addition the policy shall include an ISO endorsement form CG 24 17 10 01 or its equivalent providing contractual liability coverage for railroads listed as additional insureds. Coverage for such additional insureds shall be primary and non-contributory as respects any other insurance the additional insureds carry.

Coverage under this policy shall have limits of liability of not less than \$20 million each occurrence, combined single limit, for bodily injury (including disease or death), personal injury and property damage (including loss of use) liability.

Automobile Liability Insurance covering the liability of Contractor arising out of the use of any vehicles which bear, or are required to bear, license plates according to the laws of the jurisdiction in which they are to be operated, and which are not covered under Contractor's Commercial General Liability insurance. The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds with respect to the operations to be performed. Coverage under this policy shall have limits of liability of not less than \$5 million each occurrence, combined single limit, for bodily injury and property damage (including loss of use) liability.

In the event Contractor or any subcontractor will be transporting and/or disposing of any hazardous material or waste off of the jobsite, a MCS-90 Endorsement is to be added to this policy and the limits of liability are to be increased to \$5 million each occurrence.

Railroad Protective Liability (RRP) Insurance covering the Operations performed by Contractor or any subcontractor within fifty (50) feet vertically or horizontally of railroad tracks. The current ISO Occurrence Form (claims-made forms are unacceptable) in the name of the National Railroad Passenger Corporation (and as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue) shall have limits of liability of not less than \$5 million each occurrence, combined single limit, for Coverages A and B, for losses arising out of injury to or death of all persons, and for physical loss or damage to or destruction of property, including the loss of use thereof. A \$10 million annual aggregate shall apply. Additionally, Policy Endorsement CG 28 31 - Pollution Exclusion Amendment, is required to be endorsed onto the policy. Further, "Physical Damage to Property" as defined in the policy is to be deleted and replaced by the following endorsement:

"It is agreed that 'Physical Damage to Property' means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control."

The original RRP Liability Insurance Policy must be submitted to Amtrak prior to commencement of Operations.

In the alternative, and upon Amtrak's approval, Contractor may elect to have Amtrak insure the Operations under its Blanket RRP Liability Insurance Program. The premium, which shall be determined by the rate schedule promulgated by the insurer in effect as of the effective date of the Agreement, shall be prepaid by Contractor. In the event Contractor and Amtrak agree to insure the Operations under Amtrak's RRP Program, Contractor shall include the RRP premium of \$ _____ in addition to the

Permit Fee, and send its check made payable to National Railroad Passenger Corporation to the individual set forth below prior to commencement of Operations.

All Risk Property Insurance covering physical loss or damage to all property used in the performance of the Operations on a full replacement cost basis. The policy shall have limits of liability adequate to cover all property of Contractor (including personal property of others in Contractor's care, custody or control) and shall include a waiver of subrogation against Amtrak, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue.

Contractor's Pollution Liability Insurance covering the liability of Contractor arising out of any sudden and/or non-sudden pollution or impairment of the environment, including clean-up costs and defense, that arise from the Operations of Contractor with National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue named as additional insureds. Coverage under this policy shall have limits of liability of not less than \$2 million each occurrence. The coverage shall be maintained during the term of the project, and for at least two (2) years following Amtrak acceptance of the completion of all Operations to be performed.

Pollution Legal Liability Insurance is required if any hazardous material or waste is to be transported or disposed of off of the jobsite. Contractor, its subcontractor or transporter, as well as the disposal site operator, shall maintain this insurance. Contractor shall designate the disposal site, and must provide a certificate of insurance from the disposal facility to Amtrak. The policy shall name National Railroad Passenger Corporation, as appropriate CUSCO or WTC, and all commuter agencies and railroads that operate over the property or tracks at issue as additional insureds, with limits of liability of not less than \$2 million per claim.

Further, any additional insurance coverages, permits, licenses and other forms of documentation required by the United States Department of Transportation, the Environmental Protection Agency and/or related state and local laws, rules and regulations shall be obtained by Contractor.

Professional Liability Insurance covering the liability of Contractor for any and all errors or omissions committed by Contractor in the performance of the Operations, regardless of the type of damages. The coverage shall be maintained during the term of the Operations, and for at least three (3) years following completion thereof. The policy shall have limits of liability of not less than \$2 million per claim and in the annual aggregate. The policy may contain a deductible of a maximum of two hundred fifty thousand dollars (\$250,000), but in such case the deductible is the sole responsibility of Contractor, and no portion of such deductible is the responsibility of Amtrak.

Contractor may elect to satisfy this requirement through the addition of endorsement CG2279 "Incidental Professional Liability" to its CGL policy.

Claims-Made Insurance - If any liability insurance specified above shall be provided on a claims-made basis, then in addition to coverage requirements above, such policy shall provide that:

1. The retroactive date shall coincide with or precede Contractor's start of Operations (including subsequent policies purchased as renewals or replacements);
2. The policy shall allow for the reporting of circumstances or incidents that might give rise to future claims;
3. Contractor will use its best efforts to maintain similar insurance under the same terms and conditions that describe each type of policy listed above (e.g., Commercial General Liability, Professional Liability) for at least three (3) years following completion of the Operations; and

4. If insurance is terminated for any reason, Contractor will purchase an extended reporting provision of at least two (2) years to report claims arising from Operations.

Evidence of Insurance

Contractor shall furnish evidence of insurance as specified above at least fifteen (15) days prior to commencing Operations. THESE DOCUMENTS SHALL INCLUDE A DESCRIPTION OF THE PROJECT AND THE LOCATION ALONG THE RAILROAD RIGHT-OF-WAY (typically given by milepost designation) IN ORDER TO FACILITATE PROCESSING. The fifteen (15) day advance notice of coverage may be waived by Amtrak in situations where such waiver will benefit Amtrak, but under no circumstances will Contractor begin Operations without providing satisfactory evidence of insurance as approved by Amtrak. Such evidence of insurance coverage shall be sent to:

Director Project Initiation & Development
National Railroad Passenger Corporation
30th Street Station, Mail Box 64
Philadelphia, PA 19104-2817

ATTACHMENT A
Temporary Permit to Enter Upon Property
SPECIFICATIONS REGARDING SAFETY
AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY (Revised 2/3/06)

National Railroad Passenger Corporation (Railroad)

In the following Specifications, "Railroad" shall mean the National Railroad Passenger Corporation; "Chief Engineer" shall mean Railroad's Chief Engineer and/or his duly authorized representative; "Permittee" shall mean the party so identified in the Temporary Permit to Enter Upon Property; and "Contractor" shall mean the entity retained by the Permittee or the entity with whom Railroad has contracted in a Preliminary Engineering Agreement or Force Account Agreement, as applicable.

(1) Pre-Entry Meeting: Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

(2) Rules, Regulations and Requirements: Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroad's safety rules, regulations, or requirements shall be grounds for the immediate suspension of Permittee and/or Contractor work, and the re-training of all personnel, at Permittee's expense.

(3) Maintenance of Safe Conditions: If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

(4) Protection in General: Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to ensure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagmen, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.

(5) Protection for Work Near Electrified Track or Wire: Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any

overhead wire.

(6) Fouling of Track or Wire: No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer's representative. When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer's representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

If acceptable to the Chief Engineer's representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer's representative.

(7) Track Outages: Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad's right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad's trains or other property.

(8) Demolition: During any demolition, Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad's specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

Ballasted track structure shall be kept free of all construction and demolition debris.

(9) Equipment Condition: All equipment to be used in the vicinity of operating tracks shall be in "certified" first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad's property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer's representative. Under no circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan. To ensure compliance with this requirement, Permittee and/or Contractors must establish a twenty-five (25) foot foul line prior to the start of work by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer's representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

(10) Storage of Materials and Equipment: No material or equipment shall be stored on Railroad's property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

If permission is granted for the storage of compressed gas cylinders on Railroad property, they shall be stored a minimum of 25 feet from the nearest track in an approved lockable enclosure. The enclosure shall be locked when the Permittee and/or Contractor is not on the project site.

(11) Condition of Railroad's Property: Permittee and/or Contractors shall keep Railroad's property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad's property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of Permittee and/or Contractors and shall leave Railroad's property in a condition satisfactory to the Chief Engineer.

(12) Safety Training: All individuals, including representatives and employees of Permittee and/or Contractors, before entering onto Railroad's property or coming within twenty-five (25) feet of the centerline of the track or energized wire shall first attend Railroad's Safety Orientation Class. The Safety Orientation Class will be provided by Railroad's Safety Representative at Permittee's expense. A photo I.D. will be issued and must be worn/displayed while on Railroad property. All costs of complying with Railroad's safety training shall be at the sole expense of Permittee. Permittee and/or Contractors shall appoint a qualified person as their Safety Representative. He/she shall continuously ensure that all individuals comply with Railroad's safety requirements. All safety training records shall be maintained with the site specific work plan.

(13) No Charges to Railroad: It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad's expense.

Amtrak
Engineering Construction
4th Floor - South Tower
30th Street Station (Mail Box 64)
Philadelphia, PA 19104

Temporary Permits to Enter Upon Amtrak Property (PTEs)

Requests for Temporary Permits to Enter Upon Amtrak Property (PTEs) must be submitted to Amtrak in writing and include the following information:

1. Name of company requesting the permit (include address and telephone number)
2. Who's attention the permit should be addressed to
3. Addressee's e-mail address
4. Exact location of work (including railroad milepost, if known)
5. Specific work activity being performed on railroad property (please provide dollar value of the contract if work being performed is other than surveys or bridge inspections)
6. Projected duration of work being performed on railroad property

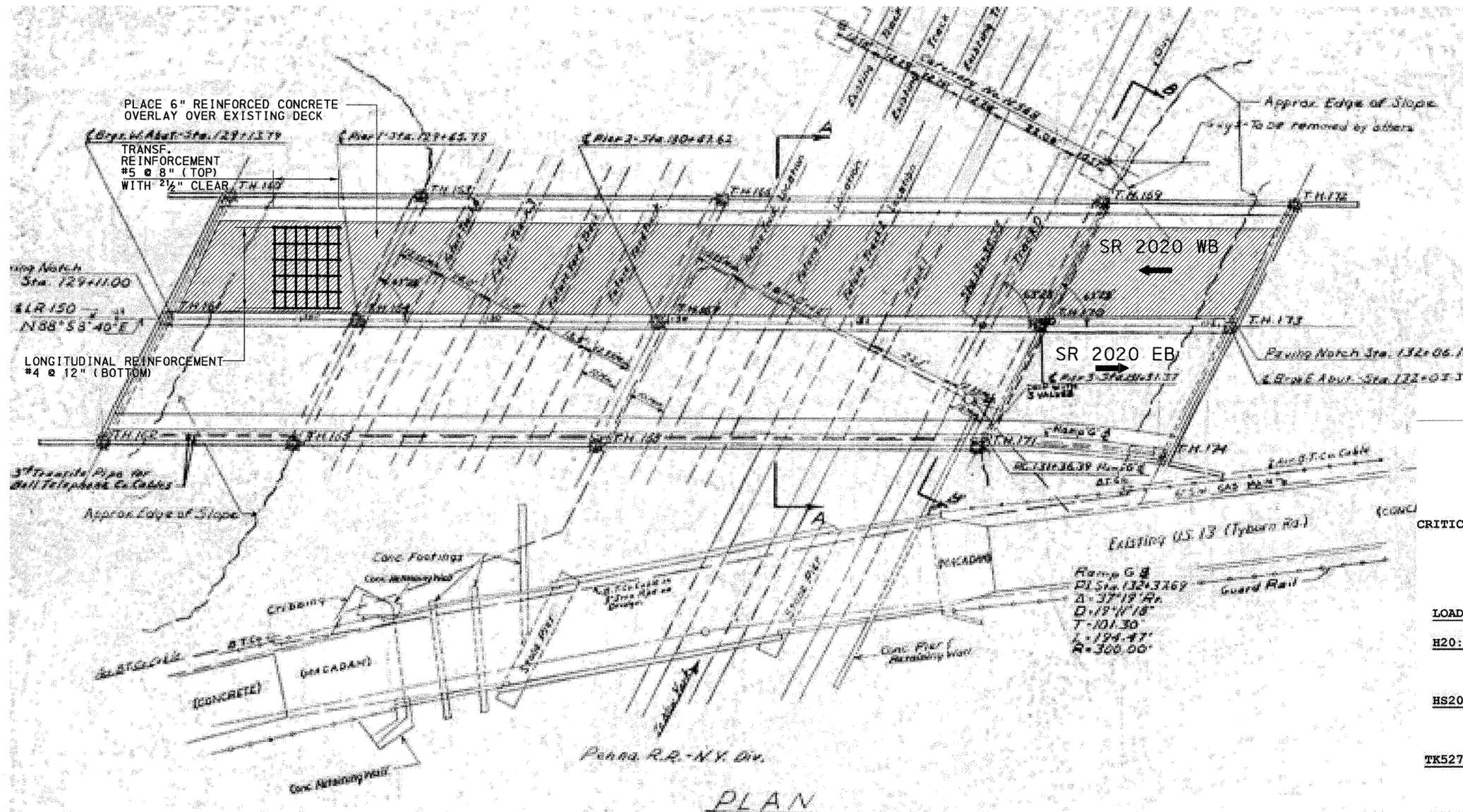
Note: *Temporary Permits for performing any environmental or geotechnical tests or studies (e.g., air, soil or water sampling) may be issued subsequent to completion of Amtrak's environmental review and approval process. Requests are reviewed on a case-by-case basis. Depending on the site specific circumstances, a separate Site Access Agreement that addresses environmental liability issues may be required prior to any Temporary Permit.*

All PTE Requests must be submitted to the Amtrak Engineering Construction Department by fax or mail as noted below:

- Faxed to (215) 349-3550
- Mailed to the following address:

Director I&C Projects
National Railroad Passenger Corporation
30th Street Station (Mail Box 64)
Philadelphia, PA 19104

Due to the heavy volume of requests for Temporary Permits to Enter Upon Amtrak Property, the processing time for initial Permit requests is approximately 30 days.



GENERAL NOTES

1. PLACE STEEL PLATES OVER EXISTING DECK HOLES.
2. PLACE 6" THICK CONCRETE (AAA OR AA) OVERLAY.
3. REINFORCEMENT (GRADE 60 UNCOATED) #5 @ 8"-TOP (2 1/2" CLEAR) TRANS. REINFORCEMENT AND #4 @ 12"-BOT LONGITUDINAL REINFORCEMENT.
4. DECK OVERLAY DESIGNED AS PER BD-655 AND BD 660 "CONCRETE DECK OVER ADJACENT P/S BOX BEAMS"
5. CONSTRUCT NEW WOOD SHIELDINGS IN BAYS 1 AND 2, REPAIR/REPLACE MISSING PLANKS IN BAYS 3-5. ALSO PLACE TIMBER SHEETING IN BAY 9 IN AREAS OF SIP DETEIORATION.

QUANTITIES:

AAA (OR AA) =	150 yd ³
#5 BARS =	12750 LB
#4 BARS =	6000 LB
#5 BARS: LENGTH = 28'-0" # =	436
#4 BARS LENGTH = 60'-0" # =	140

RATING SUMMARY

(Spans #1 & #4 Only)

CRITICAL MEMBER: TYPICAL INTERIOR GIRDER

(SPANS #1 & #4 - GOVERNING SPANS*)

LOAD FACTOR ANALYSIS

LOAD:	FACTOR	TONS	LOCATION (ft)	SPAN	
H20:	INVENTORY RATING (IR)	1.14	22.7	25.58	1
	OPERATING RATING (OR)	1.89	37.9	25.58	1
HS20:	INVENTORY RATING (IR)	0.81	29.1	25.58	1
	OPERATING RATING (OR)	1.35	48.4	25.58	1
TK527:	INVENTORY RATING (IR)	0.70	27.9	25.58	1
	OPERATING RATING (OR)	1.16	46.5	25.58	1
ML80:	INVENTORY RATING (IR)	0.66	24.1	25.58	1
	OPERATING RATING (OR)	1.10	40.1	25.58	1

Mark	Description	By	Chk' d.	Recm' d.	Date
REVISIONS					

S.R. PREVIOUSLY KNOWN AS L.R.

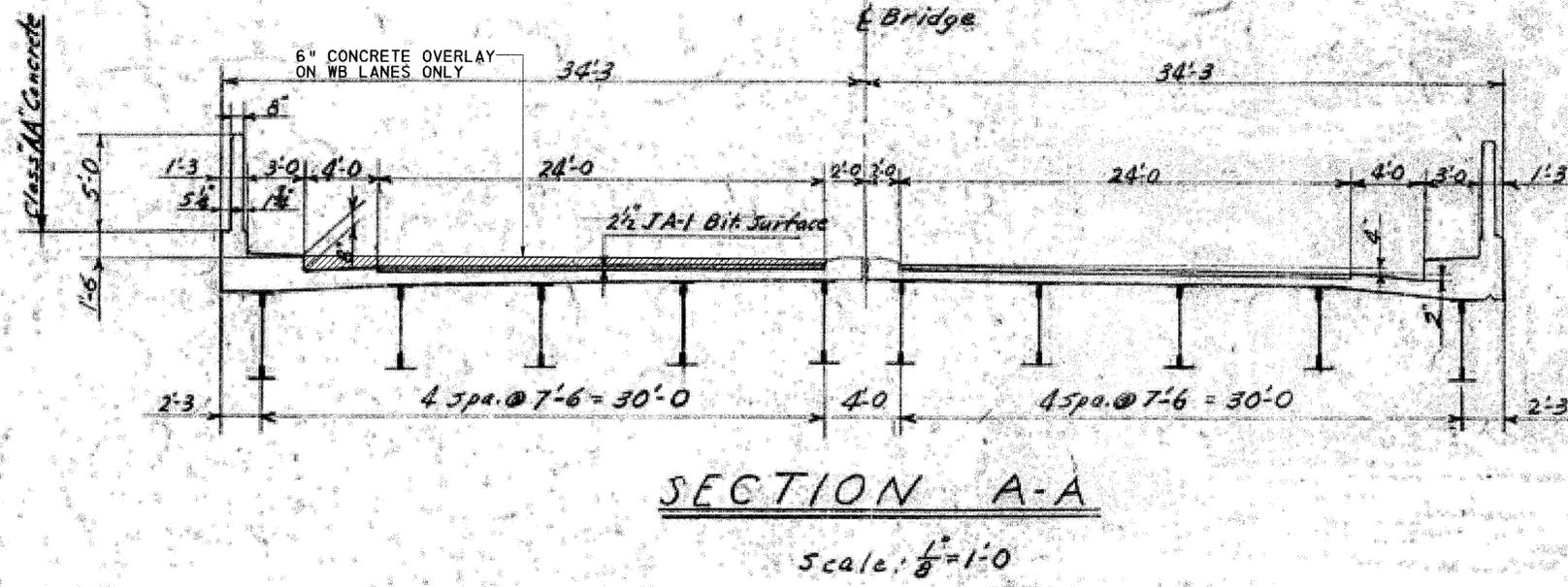
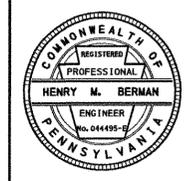
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

BUCKS COUNTY
S.R. 2020 SECTION TOL
SEGMENT 0060 OFFSET 0000
TYBURN RD OVER AMTRAK
TEMPORARY CONCRETE OVERLAY
GENERAL PLAN & SECTION

RECOMMENDED 02/11/2011

SHEET 1 OF 1

FOR INFORMATION ONLY



SECTION A-A

Scale: 1/8" = 1'-0"

D-4279A (6-08)

RAILROAD CROSSING
DATA FOR CONTRACTOR

Date: _____

PART A - Project Information & Description to be completed by the District

(Instructions: The District is to complete Part A then submit the D-4279A form to the Railroad for completion of Part B of this form. Submission of the D-4279A form to the Railroad should occur during the Final Design phase of the project. Information provided on this form could be used in the preparation of the written agreement between the State and the Railroad Company, if required, that addresses the 12 items as per 23 CFR 646.216 (d) (2))

PROJECT INFORMATION: Project Title: Tyburn Road over AMTRAK

County: Bucks

Municipality: Falls Township

Route/Section 2020, TYB

Road Name: Tyburn Road

AAR/DOT No: 530980Y

RR Mile Post: 59.87

Type of Crossing: RR Under

MPMS No.: 90197

ECMS No.: 90197

PUC Doc. No.: A-2011-2224560

Project Funding: 100% State

PROJECT DESCRIPTION: *(This description shall clearly indicate the following: 1. Proposed construction activities, 2. By whom the construction activities will be performed (Contractor or Department forces), 3. If use of railroad property will be required of the Department's contractor, and 4. If construction activities will be contained within existing or proposed temporary construction easements, required right-of-way, or aerial easements.)*

PART B - Information to be completed by Railroad.

(Instructions: The Railroad is to complete Part B of this form and return to the District with any supporting documents for inclusion in the Department's bid contract.)

General Information

Railroad Owner: **National Railroad Passenger Corporation (AMTRAK)**

Railroad Operator: **National Railroad Passenger Corporation (AMTRAK)**

1. (a) When and under what conditions will the contractor be allowed to work over the tracks or within the track area? **Per provisions of a fully executed Force Account Agreement between AMTRAK and project sponsor(s)**

2. (a) Describe the work which will be performed by railroad forces at the job site.
Catenary/Portal work, Primary track and electric traction and train operations protection services

(b) How many railroad employees will be assigned to work at the job sites? **To be determined**

3. (a) Will your company permit blasting as a means of demolition of the existing bridge? Yes No
If so, under what constraints? _____

(b) Will your company require a shield be erected over your tracks to protect your property from falling debris during demolition of the bridge? **At a minimum** Yes No

(c) If a shield is required, what vertical clearance from the top of the rail to underside of shield will you require and what design load do you want specified for the shield? : **Required vertical clearance is 23' - 4 1/4". Design live load for the shield is the greater of 100 psf or the anticipated live load to be produced by the Contractor's anticipated operations.**

12. If a temporary grade crossing is required, what procedures are necessary to obtain same? (*Explain or attach copy of Railroad procedures.*) **Not permitted.**

13. Describe any special license or permit fees required of the contractor. **Permit Fees \$500**

14. Is a Right of Entry Permit/Agreement required to be obtained by the contractor? **X**Yes No
(*Completion of this information does not replace or satisfy the requirements outlined in 23 CFR 646.216(e)(2)(iii) pertaining to Railroad property interest.*)
If "Yes" please complete the following.

(a) Right of Entry Permit Requirements: (*Explain when an Entry Permit is required by the Department's contractor and conditions/restrictions of the permit or attach copy of Railroad procedures.*)

Per provisions of force account agreement

(b) Process for obtaining a Right of Entry Permit: (*Explain the process involved for a Department's contractor to obtain an Entry Permit from the Railroad or attach copy of Railroad procedures.*)

Call:

**Kate McGrath (215) 349-1750 or
Charles McGloughlin (215) 349-4971**

(c) Timeframes associates with a Right of Entry Permit: (*Explain Entry Permit processing time lines or attach copy of Railroads procedures.*) **Varies**

(d) Costs of a Right of Entry Permit: (*Explain to required fee(s) to accompany Entry Permit.*)
Varies \$500 application fee

Railroad Contact Information

15. Railroad representative for contact by the Department's contractor for insurance requirements.

Name: **Charlie McGloughlin, RA**
Title: **Project Development Officer**
Address: **30th Street Station**
Telephone Number: **(215)349-4971**

16. Railroad representative for contact by the Department's contractor for Railroad Protective Services.

Name: **Richard Check**
Title: **Field Engineer**
Address: **Trenton, NJ 08609**
Telephone Number: **609-989-1737**

Railroad Specifications/Design Standards

17. Does the Railroad have Standard Special provisions that are to be included with the Department's construction bid contract? **Permit to Enter (attached)** **X**Yes No
If "Yes" please indicate where an electronic version can be obtained or attach a copy to this completed form when returned to the District.