

THE PORT AUTHORITY OF NY & NJ

Traffic Standard Details

TD10

Legend, Notes and Abbreviations

No.	Date	Revision	Approved

DEPUTY DIRECTOR – DESIGN _____ DATE _____

PROGRAM DIRECTOR _____ DATE _____

CHIEF ENGINEER _____ DATE _____

Drawing Number **TD10.00**
PID#

MAINTENANCE OF TRAFFIC

1. FOR ADDITIONAL TECHNICAL AND USAGE REQUIREMENTS OF TRAFFIC CONTROL DEVICES AND WORK AREA PROTECTION SEE DIVISION 1 CLAUSE ENTITLED "MAINTENANCE OF TRAFFIC AND WORK AREA PROTECTION".
2. ALL TRAFFIC CONTROL AND WORK AREA PROTECTION DEVICES SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, LATEST EDITION.
3. ALL TEMPORARY TRAFFIC CONTROL AND WORK AREA PROTECTION DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK.
4. THE TEMPORARY MAINTENANCE OF TRAFFIC AND WORK AREA PROTECTION DEVICE LOCATIONS SHOWN ON THE CONTRACT DRAWINGS ARE SCHEMATIC, EXCEPT AS NOTED. LOCATION OF TRAFFIC CONTROL DEVICES MAY BE MODIFIED TO MEET FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
5. ALL CLOSURES SHALL BE COORDINATED WITH THE ENGINEER. A SCHEDULE OF WORK SHALL BE SUBMITTED AT LEAST TWO WEEKS IN ADVANCE FOR APPROVAL BY THE ENGINEER.
6. MAINTAIN ACCESS FOR PEDESTRIANS, MATERIAL, DELIVERIES AND EQUIPMENT TO ADJACENT PROPERTIES, DRIVEWAYS AND BUILDING ENTRANCES AT ALL TIMES. ALL TEMPORARY FACILITIES REQUIRED TO MAINTAIN ACCESS SHALL BE CLEARLY MARKED, SIGNED, SECURED, WELL LIT AND PROTECTED.
7. TEMPORARY CONSTRUCTION SIGNS
 - A. SHALL BE TYPE I, PLYWOOD OR ALUMINUM PANEL CONFORMING TO SPECIFICATIONS SECTION 02850 OR 02851, RESPECTIVELY.
 - B. SHALL BE PLACED ON X-BASE SIGN SUPPORTS OR TYPE III BREAKAWAY BARRICADES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER, AND SHALL BE PLACED OUTSIDE THE TRAVEL LANE.
 - C. SHALL BE POSTED AT 60 INCH MINIMUM VERTICAL CLEARANCE AND 2FT MINIMUM OFFSET FROM ANY TRAVEL LANE UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.
 - D. SHALL INCLUDE THE CONTRACT NUMBER AND NAME OF CONTRACTOR ON BACK OF EACH SIGN.
 - E. ORANGE REFLECTORIZED SHEETING SHALL BE FLUORESCENT ORANGE.
 - F. SHALL BE RETROREFLECTIVE, EXCEPT FOR BLACK COLOR WHICH SHALL BE OPAQUE. SIGNS SHALL BE COVERED WITH OPAQUE MATERIAL OR REMOVED WHEN THE WORK THAT ARE INTENDED FOR IS NOT IN PROGRESS.
8. IN ADDITION TO THOSE NOTED ON THE CONTRACT DRAWINGS, ANY EXISTING SIGNS WHICH COULD CAUSE CONFUSION TO MOTORISTS DURING CONSTRUCTION SHALL BE COVERED WITH AN OPAQUE MATERIAL, SUCH AS CANVAS, AND COVERS SHALL BE REMOVED WHEN THE CONFLICT IS ABATED.
9. TRAFFIC ENFORCEMENT AGENT SERVICES PROVIDED BY THE AUTHORITY SHALL BE REQUESTED TO THE ENGINEER AT LEAST 72 HOURS IN ADVANCE OF THE TIME WHEN SUCH SERVICES ARE REQUIRED BY THE CONTRACTOR. ADVISE THE ENGINEER OF THE LOCATION WHERE THESE SERVICES ARE TO BE PERFORMED AND THE DURATION OF TIME WITHIN WHICH THESE SERVICES ARE TO BE PERFORMED.
10. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN CROSSWALKS AND SIDEWALKS IN OPERATION AT ALL TIMES UNLESS OTHERWISE SHOWN ON CONTRACT DRAWINGS. IF IN CONFLICT WITH THE PROGRESS OF CONSTRUCTION, PEDESTRIAN CROSSWALKS AND SIDEWALKS MAY BE RELOCATED TO AN INTERIM LOCATION AS APPROVED BY THE ENGINEER.
11. ALL OPEN TRENCHES SHALL BE COVERED WITH STEEL ROADWAY PLATES AS SHOWN ON CONTRACT DRAWINGS. FOR ADDITIONAL REQUIREMENTS FOR ROADWAY PLATES SEE DIVISION 1 OF THE SPECIFICATIONS.
12. TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS OF SECTION 02588, SHALL BE INSTALLED ON ALL UNFINISHED AND FINISHED ROADWAYS UNTIL THE PERMANENT PAVEMENT MARKINGS ARE INSTALLED. PERMANENT OR TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED IN THE AREA OF WORK PRIOR TO BEING OPENED TO NORMAL OPERATIONS. TEMPORARY MARKINGS SHALL BE MAINTAINED TO THE SATISFACTION OF THE ENGINEER UNTIL PERMANENT MARKINGS ARE INSTALLED. AT NO TIME SHALL ROADWAYS BE OPENED TO NORMAL TRAFFIC OPERATIONS WITHOUT SUCH MARKINGS HAVING BEEN INSTALLED.
13. ALL OPEN TRENCHES WITHIN PEDESTRIAN WALKWAYS AND CROSSWALKS TO BE OPENED TO TRAFFIC SHALL BE COVERED WITH APPROPRIATE PROTECTION. FOR ADDITIONAL REQUIREMENTS SEE DIVISION 1 OF THE SPECIFICATIONS.

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**THE PORT AUTHORITY
OF NY & NJ**

CHIEF

No.	Date	Revision	Approved

ENGINEERING DEPARTMENT

PANYNJ

Traffic Standard

Details

TRAFFIC

Title

LEGENDS, NOTES AND ABBREVIATIONS

**MAINTENANCE OF
TRAFFIC
STANDARD NOTES**

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent. All recipients of Contract documents, including bidders and those who do not bid and their prospective subcontractors and suppliers who may receive all or a part of the Contract documents or copies thereof, shall make every effort to ensure the secure and appropriate disposal of the Contract documents to prevent further disclosure of the information contained in the documents. Secure and appropriate disposal includes methods of document destruction such as shredding or arrangements with release handlers that ensure that third persons will not have access to the documents' contents either before, during, or after disposal. Documents may also be returned for disposal purposes to the Contract Desk on the 3rd Floor, 3 Gateway Center, Newark NJ 07102 or the office of the Director of Procurement, One Madison Avenue, 7th Floor, New York, NY 10017. It is a violation of law for any person to alter a document in any way, unless acting under the direction of a licensed professional engineer or registered architect. If this document bearing the seal of an engineer/architect is altered, the altering engineer/architect shall affix to the document their seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration.

Designed by _____ Drawn by _____ Checked by _____

Date _____ 11/01/2010

Contract Number _____

Drawing Number **TD10.01**

PID#

GENERAL NOTES:

1. IN ADDITION TO THE NOTIFICATIONS SPECIFIED IN DIVISION 1 OF THE SPECIFICATIONS, CONTACT ALL UTILITY OPERATORS NOT AFFILIATED WITH ONE CALL IN ORDER TO LOCATE ALL OTHER UTILITIES WITHIN THE PROJECT AREA.
2. DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS ARE DERIVED FROM THE ORIGINAL CONSTRUCTION AND FROM THE DRAWINGS OF THE SUBSEQUENT REHABILITATION AND REPAIRS. THEY MAY VARY FROM THE ACTUAL CONDITIONS AS EXIST IN THE FIELD. CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS ALL DIMENSIONS, CURVATURES, AND ELEVATIONS OF EXISTING STRUCTURES THAT MAY BE REQUIRED TO LOCATE, ALIGN, DIMENSION, AND DETAIL ANY CONSTRUCTION REQUIRED TO PERFORM THE WORK. FIELD MEASUREMENTS SHALL BE PERFORMED PRIOR TO AND COORDINATED WITH THE PREPARATION OF SHOP DRAWINGS AND MANUFACTURING, FABRICATION, AND INSTALLATION OF ALL ITEMS OF CONSTRUCTION. ALL VARIATIONS FROM THE CONTRACT DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE PREPARATION OF SHOP DRAWINGS. DIMENSIONS BASED ON FIELD MEASUREMENTS TAKEN BY THE CONTRACTOR SHALL BE CLEARLY MARKED ON THE WORKING DRAWINGS AND THE SHOP DRAWINGS.
3. THE LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE APPROXIMATE. PERFORM THE FOLLOWING:
 - A) VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES WITHIN THE WORK AREA PRIOR TO CONSTRUCTION.
 - B) EXERCISE EXTREME CAUTION WHEN WORKING ADJACENT TO EXISTING POWER, COMMUNICATIONS, WATER OR GAS AND FUEL LINES TO PREVENT DAMAGE TO THESE LINES.
 - C) IMMEDIATELY REPAIR ANY DAMAGE TO EXISTING UTILITIES IN A MANNER APPROVED BY THE ENGINEER, AT NO COST TO THE AUTHORITY.
4. MAINTAIN UTILITIES IN ACTIVE OPERATION AT ALL TIMES. PROVIDE BYPASS PIPING AND PUMPING WHERE REQUIRED. ALL NEW UTILITY SYSTEMS SHALL BE OPERATIONAL BEFORE ANY EXISTING SYSTEMS ARE ABANDONED OR REMOVED. IF EXISTING UTILITIES ARE TAKEN OUT OF SERVICE FOR CONNECTIONS, THE TIMING SHALL BE AS APPROVED BY THE ENGINEER.
5. ENSURE THAT ALL PIPES, CATCH BASINS, MANHOLES, SWALES, ETC. WITHIN AND NEAR THE AREA OF WORK ARE KEPT FREE FROM MATERIALS THAT WOULD HAMPER THE PERFORMANCE OF THE DRAINAGE SYSTEMS. FURNISH AND INSTALL SOIL EROSION AND SEDIMENTATION CONTROL DEVICES AS SHOWN ON THE CONTRACT DRAWINGS. UPON COMPLETION OF CONSTRUCTION, REMOVE ACCUMULATED SEDIMENT AND REMOVE CONTROL DEVICES.
6. NOTIFY THE ENGINEER AT LAST 2 WEEKS IN ADVANCE OF ANY WORK WHICH MAY AFFECT STREET AND TUNNEL OPERATIONS OR THE MOBILITY OF FIRE, POLICE, OR AMBULANCE SERVICES.
7. SEQUENCES OF CONSTRUCTION SHOWN ON THE CONTRACT DRAWINGS ARE GENERAL. PRIOR TO START OF WORK, SUBMIT AND OBTAIN THE ENGINEER'S APPROVAL OF:
 - A. CONSTRUCTION SCHEDULE.
 - B. CONSTRUCTION PROCEDURES AND TYPES OF EQUIPMENT.
8. THE WORD "REPLACE", WHERE IT APPEARS ON THE CONTRACT DRAWINGS SHALL MEAN: REMOVE AND DISPOSE OF THE EXISTING ITEM, AND FURNISH AND INSTALL THE SPECIFIED ITEM IN ITS PLACE.
9. THE WORD "INSTALL", WHERE IT APPEARS ON THE CONTRACT DRAWINGS SHALL MEAN: FURNISH AND INSTALL THE SPECIFIED ITEM.
10. THE PHRASES "REMOVE AND REPLACE" OR "REMOVE AND INSTALL" SHALL MEAN: REMOVE EXISTING CONSTRUCTION AND REPLACE WITH NEW CONSTRUCTION MATERIALS AS NOTED ON THE DRAWINGS AND/OR SPECIFIED.
11. MATERIALS THAT ARE TO REMAIN IN PLACE OR ARE TO REMAIN THE PROPERTY OF THE AUTHORITY SHALL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS THAT ARE TO REMAIN IN PLACE, INCLUDING CURBS AND SIDEWALKS, OR WHICH ARE TO REMAIN THE PROPERTY OF AUTHORITY, THE DAMAGED MATERIALS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
12. DEVICES SHOWN TO BE REMOVED IN THIS CONTRACT, DEBRIS AND OTHER UNUSED AND DAMAGED MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AWAY FROM AUTHORITY PROPERTY, AS APPROVED BY THE ENGINEER.
13. ALL REMOVED MATERIAL, AND DEBRIS SHALL BE DISPOSED OF IMMEDIATELY AND NOT STORED AT THE SITE.
14. UPON COMPLETION OF THE WORK, REMOVE ALL DEBRIS, EQUIPMENT AND UNUSED MATERIALS FROM AUTHORITY PROPERTY AND RESTORE THE "AREA AVAILABLE FOR CONTRACTOR'S USE" TO ITS ORIGINAL CONDITION, AS APPROVED BY THE ENGINEER, AT NO COST TO THE AUTHORITY.
15. AREAS BEYOND THE WORK LIMITS DISTURBED BY THE CONTRACTOR AND HIS EMPLOYEES SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
16. UNLESS OTHERWISE SHOWN ON CONTRACT DRAWINGS, CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) of 4000 PSI WITH A 1/2" MAXIMUM AGGREGATE STONE SIZE AND SHALL HAVE A BROOM FINISH IN ACCORDANCE WITH SPECIFICATION 03302. SUBMIT MIX DESIGN TO THE ENGINEER FOR APPROVAL.
17. EXCAVATED MATERIAL, EXCEPT FOR CONCRETE, ASPHALT AND ASPHALT MILLINGS SHALL BE USED FOR BACKFILLING AND FILLING PROVIDED IT MEETS THE FOLLOWING REQUIREMENTS:
 - A. THE MATERIAL DOES NOT CONTAIN DELETERIOUS AMOUNTS OF:
 - a. ORGANIC CLAYS, SILTS OR PEATS.
 - b. DEBRIS SUCH AS, BUT NOT LIMITED TO TIMBER, METAL, STONES, OR CONCRETE PIECES LARGER THAN THREE (3) INCHES IN SIZE.
 - B. THE MATERIAL IS NOT FROZEN. THE MATERIAL DOES NOT CONTAIN ICE.
 - C. THE MATERIAL IS NOT OIL SATURATED.
 - D. THE MATERIAL IS COMPACTABLE AS DETERMINED BY THE ENGINEER.
18. AS DETERMINED BY THE ENGINEER, ALL EXCESS OR UNSUITABLE EXCAVATED MATERIAL, EXCLUDING CONCRETE, ASPHALT, AND ASPHALT MILLINGS, SHALL BE STOCKPILED AT THE STOCKPILE AREA. SEGREGATE UNSUITABLE MATERIAL AND SUITABLE MATERIAL CONFORMING TO BACKFILL AND FILL. THE ENGINEER WILL SAMPLE, TEST AND CLASSIFY UNSUITABLE OR EXCESS EXCAVATED MATERIAL. THE CONTRACTOR, IF REQUESTED BY THE ENGINEER, SHALL PROVIDE FOR TRANSPORTATION AND DISPOSAL OF UNSUITABLE OR EXCESS EXCAVATED MATERIAL ON A "NET COST" BASIS. SEE NET COST NOTE 1. AS REQUIRED, AND APPROVED BY THE ENGINEER, FURNISH AND INSTALL CONTINUOUS TEMPORARY SILT FENCE OR HAY BALES AROUND PERIMETER OF STOCKPILE AREA.
19. ANY EXCAVATED MATERIAL, AS DETERMINED BY THE ENGINEER, WHICH DOES NOT MEET THE REQUIREMENTS OF NET COST NOTE 1, OR THAT IS IN EXCESS OF THAT REQUIRED FOR BACKFILLING AND FILLING, TO BE TESTED AND CLASSIFIED BY THE AUTHORITY AT NO COST TO THE CONTRACTOR, AND TO BE DISPOSED OF OFF SITE BY THE CONTRACTOR WHEN DIRECTED BY THE ENGINEER. COMPENSATION FOR THE LOADING, TRANSPORTATION, AND DISPOSAL OF SUCH MATERIAL TO BE ON A "NET COST" BASIS.
20. REPAIR ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE AUTHORITY.
21. EXISTING LANDSCAPING INCLUDING IRRIGATION SYSTEMS DAMAGED BY THE CONTRACTOR TO BE REPLACED IN-KIND, AT NO ADDITIONAL COST TO THE AUTHORITY AND IN ACCORDANCE WITH THE SPECIFICATIONS.
22. ALL AREAS OUTSIDE THE LIMITS OF CONSTRUCTION WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATION TO BE IMMEDIATELY RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE AUTHORITY.
23. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE DISCIPLINE SPECIFIC AUTHORITY HAVING JURISDICTION AND THE MOST CURRENT ACCEPTED VERSION OF THE NATIONAL ELECTRIC CODE (NEC), NATIONAL ELECTRIC SAFETY CODE, NFPA, OSHA REGULATIONS, AND ALL OTHER CODES AND REGULATIONS WHICH WOULD HAVE JURISDICTION IF THE AUTHORITY WERE A PRIVATE CORPORATION.

NET COST:

1. WHEN AND AS DIRECTED BY THE ENGINEER, THE CONTRACTOR TO PERFORM THE FOLLOWING WORK AND WILL BE COMPENSATED AT THE NET COST THEREOF, AS DEFINED BELOW:

((SEE LIST OF STANDARD NET COST ITEMS TO INCLUDE HERE IN P:\Traffic\DESIGN\GENERAL ADMIN\Net Cost Items))

"NET COST" SHALL BE COMPUTED IN THE SAME MANNER AS IS COMPENSATION FOR EXTRA WORK, INCLUDING ANY PERCENTAGE ADDITION TO COST, AS SET FORTH IN THE CLAUSE OF THE FORM OF CONTRACT ENTITLED, "COMPENSATION FOR EXTRA WORK." PERFORMANCE OF SUCH NET COST WORK SHALL BE AS DIRECTED BY THE ENGINEER AND SHALL BE SUBJECT TO ALL PROVISIONS OF THE CONTRACT RELATING TO PERFORMANCE OF EXTRA WORK. COMPENSATION FOR SAID NET COST WORK SHALL NOT BE CHARGED AGAINST THE TOTAL AMOUNT OF COMPENSATION AUTHORIZED FOR EXTRA WORK.

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**GENERAL NOTES
AND
NET COST NOTES**

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Date _____ 11/01/2010

Contract Number _____

Drawing Number **TD10.04**

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GUIDE RAIL

1. THE OFFSET OF THE GUIDERAIL SHALL BE MEASURED FROM THE FACE OF CURB TO THE FACE OF RAIL. UNLESS OTHERWISE SPECIFIED ON THE CONTRACT DRAWINGS, THE FACE OF THE GUIDERAIL BEING INSTALLED SHALL BE FLUSH WITH THE FACE OF THE EXISTING CURB.
2. AT AREAS WHERE GUIDERAIL IS TO BE INSTALLED, NO WORK SHALL BEGIN UNTIL ALL MATERIALS, LABOR AND EQUIPMENT ARE AVAILABLE AND ALL UTILITIES IN THE WORK AREA ARE IDENTIFIED AND LOCATED. GUIDERAIL INSTALLATION SHALL NOT IMPACT ANY UTILITIES.
3. THE RAIL MOUNTING HEIGHT OF ALL GUIDERAIL PLACED BEHIND THE CURB (REGARDLESS OF CURB HEIGHT OR SPEED) SHALL BE MEASURED FROM THE PAVEMENT SURFACE WHEN THE OFFSET IS ONE FOOT OR LESS AND TO THE GROUND SURFACE UNDER THE FACE OF THE RAIL WHEN THE OFFSET IS GREATER THAN TEN FEET.
4. GUIDERAIL BLOCK-OUTS SHALL BE TREATED PINE. THE PINE SHALL BE MANUFACTURED FROM TIMBER HAVING A MINIMUM GRADE OF 1,200 PSI IN ACCORDANCE WITH THE CURRENT STANDARD GRADING, SUCH AS SOUTHERN PINE INSPECTION BUREAU. THE TIMBER SHALL BE TREATED WITH CCA PRESERVATIVE IN ACCORDANCE WITH AWWA, CATEGORY UC4A. THE CONTRACTOR SHALL SUBMIT MATERIAL CERTIFICATIONS FOR THESE BLOCK-OUTS TO THE ENGINEER FOR APPROVAL.
5. (LGA) ALL EXPOSED GALVANIZED BOX BEAM GUIDE RAIL ASSEMBLY ELEMENTS SHALL BE PAINTED WITH A N-26 SYSTEM (SEMI-GLOSS) AS PER THE SPECIFICATIONS SECTION 09910. THE TOP FINISH COAT SHALL BE DARK GRAY TO MATCH BENJAMIN MOORE COLOR 1631. PRIOR TO PAINTING, CLEAN ALL GALVANIZED SURFACES OF ALL DIRT, OR GREASE AND OTHER FOREIGN MATERIALS.
6. PROVIDE ADEQUATE PROTECTION AS APPROVED BY THE ENGINEER FOR ALL UTILITIES THAT ARE EXPOSED DURING CONSTRUCTION TO ENSURE AGAINST DAMAGE.

IMPACT ATTENUATORS

1. ALL IMPACT ATTENUATORS FURNISHED AND INSTALLED THROUGH THIS CONTRACT SHALL BE THE FOLLOWING, AS SPECIFIED ON THE CONTRACT DRAWINGS. NO SUBSTITUTIONS ARE PERMITTED.
 - A. QUADGUARD SYSTEM, MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC. AND DISTRIBUTED BY TRANSPRO INDUSTRIES, INC.
2. THE IMPACT ATTENUATORS SHALL BE INSTALLED AS PER THE MANUFACTURER'S REQUIREMENTS. ANY DEVIATION FROM SUCH REQUIREMENTS SHALL NOT BE PERMITTED.
3. THE CONTRACTOR SHALL COORDINATE WITH TRANSPRO INDUSTRIES TO CONFIRM ALL DIMENSIONS AND DETAILS PRIOR TO THE INSTALLATION OF IMPACT ATTENUATORS.
4. ANY IMPACT ATTENUATOR BEING REMOVED SHALL BE DONE SO TO THE EXISTING CONCRETE PAD AND BACK-UP BLOCK. THE CONTRACTOR SHALL PERFORM SAID REMOVALS IN SUCH A WAY AS TO PREVENT DAMAGE TO THE CONCRETE PAD AND BACK-UP BLOCK. IF THE ENGINEER DETERMINES THE CONTRACTOR'S REMOVAL OPERATIONS RESULTED IN DAMAGE TO THE ITEMS TO REMAIN, MAKE IMMEDIATE REPAIRS TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY. SUBMIT REPAIR DETAILS FOR SUCH REMEDIAL WORK FOR APPROVAL.

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LEGENDS, NOTES AND ABBREVIATIONS

**GUIDE RAIL NOTES
AND
IMPACT ATTENUATOR
NOTES**

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Date _____ 11/01/2010

Contract Number _____

Drawing Number **TD10.05**
PID# _____

GENERAL SYMBOLS

NEW	EXISTING	REMOVAL	
			GANTRY SIGN STRUCTURE WITH FIXED MESSAGE PANELS
			CANTILEVER SIGN STRUCTURE WITH FIXED MESSAGE
			POST MOUNTED SIGN WITH FIXED MESSAGE PANEL
			POST MOUNTED BACK TO BACK SIGNS WITH FIXED MESSAGE PANELS
			POST MOUNTED RIGHT ANGLE SIGNS WITH FIXED MESSAGE PANELS
			POLE MOUNTED SIGN WITH FIXED MESSAGE PANEL
			POLE MOUNTED BACK TO BACK SIGNS
			POLE MOUNTED RIGHT ANGLE SIGNS WITH FIXED MESSAGE PANELS
			FENCE MOUNTED SIGN WITH FIXED MESSAGE PANEL
			GANTRY SIGN STRUCTURE WITH CHANGEABLE MESSAGE PANELS
			CANTILEVER SIGN STRUCTURE WITH CHANGEABLE MESSAGE PANEL
			DUAL POST GROUND MOUNTED SIGN
			DOUBLE POST MOUNTED SIGN WITH CHANGEABLE MESSAGE PANEL
			SIGN STRUCTURE LOCATION IDENTIFIER
			SIGN PANEL IDENTIFIER { SIGN STRUCTURE LOCATION, SIGN TEXT DESIGNATION
			EXISTING SIGN PANEL TO BE RELOCATED
			EXISTING SIGN PANEL TO BE MODIFIED AND/OR REPOSITIONED
			PEDESTRIAN PUSH BUTTON STANDARD WITH IDENTIFIER
			TRAFFIC SIGNAL STANDARD WITH IDENTIFIER
			TRAFFIC SIGNAL SPAN WIRE INSTALLATION WITH SPAN LENGTH
			TRAFFIC SIGNAL STANDARD WITH MAST ARM LENGTH
			TRAFFIC POST-TOP/SIDE-OF-POLE MOUNTED SIGNAL
			VEHICULAR SIGNAL HEAD WITH IDENTIFIER
			PEDESTRIAN SIGNAL HEAD WITH IDENTIFIER
			SIGNAL CONTROLLER AND CABINET GROUND MOUNTED
			SIGNAL CONTROLLER AND CABINET POLE MOUNTED
			VEHICLE DETECTOR WITH IDENTIFIER
			ROADWAY SURVEILLANCE SENSOR WITH IDENTIFIER
			PAVEMENT MARKING ARROW SYMBOL
			PAVEMENT MARKING LINE
			DIRECTION OF TRAFFIC (PERMANENT CONDITIONS)
			DIRECTION OF DETOUR (TEMPORARY TRAFFIC FLOW)
			DIRECTION OF HAUL ROUTE

NEW	EXISTING	REMOVAL	
			BOX BEAM
			THRIE BEAM
			W BEAM
			DUAL FACE W BEAM
			CONCRETE BARRIER (PERMANENT)
			CONCRETE BARRIER TO CURB TRANSITION SECTION
			PRECAST CONCRETE CONSTRUCTION BARRIER
			PRECAST CONCRETE CONSTRUCTION BARRIER WITH ATTACHED WARNING LIGHTS
			PRECAST CONCRETE CONSTRUCTION BARRIER TAPERED END SECTION
			TIMBER BARRICADE (ALL TYPES)
			WATER-FILLED BARRIER
			CURBED TRAFFIC GUIDE SYSTEM
			CURBED TRAFFIC GUIDE SYSTEM POSTS WITH BASE PLATE (WITHOUT CURB)
			TRAFFIC GUIDE POSTS (SEE NOTE 4, GENERAL NOTES)
			TWO-WAY PLOWABLE MONO-DIRECTIONAL WHITE PAVEMENT REFLECTOR
			TWO-WAY PLOWABLE MONO-DIRECTIONAL AMBER PAVEMENT REFLECTOR
			TWO-WAY PLOWABLE BI-DIRECTIONAL AMBER PAVEMENT REFLECTOR
			CRASH CUSHION ATTENUATOR
			SAND FILLED BARREL ARRAY
			DURA-CURB / QWICK KURB
			VIDEO DETECTION CAMERA

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TRAFFIC SYMBOLS LEGEND

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Designed by _____ Drawn by _____ Checked by _____

Date _____ 11/01/2010

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Drawing Number **TD10.06**

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FACILITY

AKG	GOETHALS BRIDGE
AKB	BAYONNE BRIDGE
AKO	OUTER BRIDGE CROSSING
EPAMT	ELIZABETH PORT AUTHORITY MARINE TERMINAL
EWR	NEWARK LIBERTY INTERNATIONAL AIRPORT
GWB	GEORGE WASHINGTON BRIDGE
HH	HOWLAND HOOK MARINE TERMINAL
HT	HOLLAND TUNNEL
JFK	JOHN F. KENNEDY INTERNATIONAL AIRPORT
LGA	LAGUARDIA AIRPORT
LT	LINCOLN TUNNEL
PA	PORT AUTHORITY
PN	PORT NEWARK

PAVEMENT MARKINGS

BWLL	BROKEN WHITE LANE LINE – 6" EXCEPT AS NOTED
BYLL	BROKEN YELLOW LANE LINE – 6" EXCEPT AS NOTED
CW	REGULAR CROSSWALK (12" WIDE)
CWHV	HIGH VISIBILITY CROSSWALK
D-BYBL	DOUBLE BROKEN YELLOW BARRIER LINE – TWO 6" BYLL, WITH 6" SPACE BETWEEN
D-BWBL	DOUBLE BROKEN WHITE BARRIER LINE – TWO 6" BWLL, WITH 6" SPACE BETWEEN
DWLL-S	DOTTED WHITE LANE LINE – SHORT – 6" EXCEPT AS NOTED
DWLL-L	DOTTED WHITE LANE LINE – LONG – 6" EXCEPT AS NOTED
DYDLL	DOUBLE YELLOW DOTTED LANE LINE
EZPL	EZ PASS LINE
FYBL	FULL YELLOW BARRIER LINE – TWO 6" SYLL, WITH 6" SPACE BETWEEN
FWBL	FULL WHITE BARRIER LINE – TWO 6" SWLL, WITH 6" SPACE BETWEEN
HC	DISABLED (HANDICAP) PARKING STALL
HCBL	HIGH CONTRAST BROKEN LINE
PYBL	PARTIAL YELLOW BARRIER LINE – ONE 6" SYLL AND ONE 6" BYLL, WITH 6" SPACE BETWEEN
PWBL	PARTIAL WHITE BARRIER LINE – ONE 6" SWLL AND ONE 6" BWLL, WITH 6" SPACE BETWEEN
SL	STOP LINE, 18" WHITE LINE 4' MINIMUM BEHIND CROSSWALK
SP	STANDARD PARKING STALL, 8"-6" x 18' TYPICAL
SWCHL	SOLID WHITE CHANNELIZING LINE – 12" EXCEPT AS NOTED
SWEL	SOLID WHITE EDGE LINE – 6" EXCEPT AS NOTED
SWLL	SOLID WHITE LANE LINE – 6" EXCEPT AS NOTED
SYCHL	SOLID YELLOW CHANNELIZING LINE – 12" EXCEPT AS NOTED
SYEL	SOLID YELLOW EDGE LINE – 6" EXCEPT AS NOTED
WPA	WHITE PREFORMED ARROW
WPW	WHITE PREFORMED WORD MESSAGE
WTA	WHITE THERMOPLASTIC ARROW
WTW	WHITE THERMOPLASTIC WORD MESSAGE
YL	YIELD LINE
ZM	ZIPPER MARKING (AIRSIDE ONLY)

ROADWAY FEATURES

CONC.	CONCRETE
D	DRAINAGE
DEG.	DEGREES
DGABC	DENSE GRADED AGGREGATE BASE COURSE
DIA.	DIAMETER
ELEV.	ELEVATION
HORIZ.	HORIZONTAL
HW	HEADWALL
JT.	JOINT
LF	LINEAR FEET
O.D.	OUTSIDE DIAMETER
PAV'T	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
POC	POINT ON CURVE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS
STA	STATION
TC	TOP OF CURB
TG	TOP OF GRATE
VERT.	VERTICAL
WA.M.	WALL MOUNT

UTILITIES

COND.	CONDUIT
D.I.	DUCTILE IRON
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
EMH	ELECTRICAL MANHOLE
FH	FIRE HYDRANT
HPW	HIGH PRESSURE WATER
I.D.	INSIDE DIAMETER
LP	LIGHT POST
LPW	LOW PRESSURE WATER
MH	MANHOLE
UGE	UNDERGROUND ELECTRIC
UP	UTILITY POLE
S	SANITARY
VDC-M	VIDEO DETECTION CAMERA MOUNTED ON MAST ARM
WV	WATER VALVE
W	WATER

DIRECTION

EB	EAST BOUND
WB	WEST BOUND
NB	NORTH BOUND
SB	SOUTH BOUND

GENERAL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
A.B.C.	AGGREGATE BASE COURSE
A.C.	ASPHALT CONCRETE
ADA	AMERICAN DISABILITY ACT
A.O.B.E.	AS ORDERED BY ENGINEER
APPROX.	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
C. TO C.	CENTER TO CENTER
DWG.	DRAWING
EQ.	EQUAL
EXIST.	EXISTING
EXPWY	EXPRESSWAY
FT.	FEET
GR.M.	GROUND MOUNT
LBS.	POUNDS
MAX.	MAXIMUM
MB	MAILBOX
MIN.	MINIMUM
MPH	MILES PER HOUR
MOT	MAINTAINENCE OF TRAFFIC
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N/A	NOT AVAILABLE
NFF	NOT FOUND IN FIELD
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
REV.	REVISION
SF	SQUARE FEET
TD	TRAFFIC STANDARD DETAIL
TEMP.	TEMPORARY
TMA	TRUCK MOUNTED IMPACT ATTENUATOR
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VMS	VARIABLE MESSAGE SIGN
VMSU	VARIABLE MESSAGE SIGN UNIT
WMS	TEMPORARY SIGN STAND

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ENGINEERING DEPARTMENT

**PANYNJ
Traffic Standard
Details**

TRAFFIC

Title
LEGENDS, NOTES AND ABBREVIATIONS

**LIST OF TRAFFIC
ABBREVIATIONS**

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Date _____ 11/01/2010

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MAINTENANCE OF TRAFFIC SYMBOLS

-  TRAFFIC CONES
-  PLASTIC DELINEATOR DRUMS
-  SIGN LOCATION AND ORIENTATION ON TEMPORARY SIGN STAND
-  BREAKAWAY BARRICADE (TYPE III)
-  BREAKAWAY BARRICADE (TYPE III) WITH ATTACHED SIGN
-  TRAILER MOUNTED VARIABLE MESSAGE SIGN UNIT (VMSU)
-  TRAILER MOUNTED FLASHING ARROW SIGN UNIT (FASU)
-  BACK-UP VEHICLE WITH IMPACT ATTENUATOR AND FLASHING ARROW SIGN UNIT (FASU)
-  BACK-UP VEHICLE WITH IMPACT ATTENUATOR WITHOUT FASU
-  BACK-UP VEHICLE WITH FLASHING LIGHTS ONLY
-  FLASHING ARROW SIGN UNIT (FASU) DOUBLE ARROW INDICATION
-  FLASHING ARROW SIGN UNIT (FASU) LEFT OR RIGHT ARROW INDICATION
-  FLASHING ARROW SIGN UNIT (FASU) CAUTION MODE INDICATION
-  WARNING LIGHTS (TYPE A, B, OR C)
-  FLAG PERSON (GENERAL POSITION)
-  SAND-FILLED BARREL ARRAY
-  TEMPORARY IMPACT ATTENUATOR
-  CONTRACTOR VEHICLE
-  TRAFFIC LANE OR OTHER AREA CLOSED TO TRAFFIC
-  WORK AREA
-  PRECAST CONCRETE CONSTRUCTION BARRIER
-  PRECAST CONCRETE CONSTRUCTION BARRIER WITH ATTACHED WARNING LIGHTS
-  PRECAST CONCRETE CONSTRUCTION BARRIER TAPERED END SECTION
-  TIMBER BARRICADE (ALL TYPES)
-  WATER-FILLED BARRIER
-  CURBED TRAFFIC GUIDE SYSTEM
-  CURBED TRAFFIC GUIDE SYSTEM POSTS WITH BASE PLATE (WITHOUT CURB)
-  TRAFFIC GUIDE POSTS
-  TAXIWAY CLOSED MARKING

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Title
LEGENDS, NOTES AND ABBREVIATIONS

**MAINTENANCE OF
TRAFFIC SYMBOLS
AND LEGEND**

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