



ROUTE 18
TRANSPORTATION IMPROVEMENTS
**COMMUNITY
PARTNERING TEAM**
CITY OF NEW BRUNSWICK

ROUTE 18 Transportation Improvements
Route 1 to Route 27 (Section 2F, 7E, 11H)
City of New Brunswick • Middlesex County

TRAFFIC MITIGATION PLAN

December 2004



State of New Jersey
Department of Transportation
Division of Project Management

TRAFFIC MITIGATION PLAN

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TRAFFIC MITIGATION

CHAPTER 1 – THE APPROACH

This document discusses the provisions included in the contract documents which will aid in the mitigation of traffic congestion during construction. The provisions are addressed through the construction contract specifications, staging and traffic control sequencing, temporary construction and permanent improvements on local streets and intersections.

The stage construction approach was set to consider the establishment of reasonable workspaces while maintaining the existing traffic flows, minimizing the impact of access to and from New Brunswick and detours along the City streets. The project requires detours along the local street network, specifically George Street and Neilson Street that are parallel to Route 18. The detours are necessary during construction of the 4 interchanges along the project corridor. The staging removes each interchange from service in sequence, thereby requiring traffic to access the City from the adjacent interchange and utilizing a parallel street as a detour. The Route 18 corridor and adjacent street network are currently congested causing delay to the traveling public. Proposed construction will cause additional burden to the roadway network.

The Project has set the staging and temporary construction to facilitate traffic operations including:

- Commercial Avenue jug handle replaced with two median left turn lanes
- Temporary widening and overlays to maintain traffic lanes on Route 18 and local streets
- Closure of adjacent interchanges not allowed

The project has included improvements beyond the Route 18 Right of Way that will provide some relief during construction and to the detour routes including:

- Extended left turn lane on Route 27 (Albany Street) SB at the Neilson Street intersection
- Phelps Avenue extension to Labor Center Way for local access
- Neilson Street two way operation, Tabernacle St. to Commercial Ave. (City implemented)
- Commercial Avenue – Neilson Street intersection signalization
- Commercial Avenue – George Street intersection signalization modification
- Route 18 Dynamic Message Sign (DMS) sign at New Jersey Turnpike Interchange 9

The project has included contract provisions to minimize construction and detour duration, and communicate the traffic operation changes. The following items are included in the construction contract:

- Allowable lane closure timeframes
- Incentives: Early completion / acceleration incentives by interchange for detour movements
- Liquidated Damages: Lane occupancy charges and penalties for non- compliance with allowable lane closures and construction schedule
- New Brunswick and Major Stakeholder Events: Contractor Work restrictions
- Traffic Surveillance – CCTV (web access)
- Portable dynamic message boards (5)
- Emergency Towing Service
- Contractor / Engineer access to traffic signalization equipment for timing optimization

The NJDOT has implemented a comprehensive communication plan that is vital to the Traffic Mitigation during construction. Communication Tools include:

- Web Access: NJDOT, Rutgers, New Brunswick, KMM
- Rutgers Radio and Television
- Regional Communication: NJDOT Traffic Operations
- Route 1 DMS / Highway Advisory Radio (HAR)
- Route 18 Extension DMS / HAR
- NJ Turnpike DMS / HAR

This document contains the information and requirements which are included in the construction contract documents. This document is a reference document only and is not part of the construction contract. The Communication Plan should be referenced as a partner document as it is essential to the mitigation of traffic congestion during the construction of the Route 18 project in New Brunswick.

CHAPTER 2 - CONTROLLING FACTORS

The stage construction approach was set to establish reasonable construction work spaces, maintaining existing traffic flows where feasible, minimizing the impact of access to and from New Brunswick and minimizing detours along the City Streets. The following is a list of controlling factors:

1. No two adjacent interchanges can be closed simultaneously; established to maintain access to and from the City of New Brunswick.
2. Roadway work zones built to full or half lane increments only; to follow best construction practices.
3. Route 1 to Paulus Blvd – Priority to minimize traffic impacts to Route 18 through this area. This resulted in maximizing the limits of mill and overlay operation to limit loss of active travel lanes during construction in this vicinity. Loss of active traffic lanes in this area could result in significant back-ups.
4. George Street Interchange – Preparation of rock cut, lead time for special materials, confined space, shop drawing approval for retaining wall, specialty construction of retaining wall. Scheduled this construction activity to begin in the first year of the project.
5. Commercial Avenue – Priority to remove existing traffic signal to improve traffic operations.
6. New Street Interchange – geometric constraints (skew angle between existing & proposed). This resulted in completing this interchange first.
7. Route 27 (Albany Street) Interchange – geometric constraints (skew angle between existing & proposed), staging of structures critical to MPT on Route 18. This resulted in a detailed three stage construction sequence.

CHAPTER 3 - CONSTRUCTION SEQUENCE

The Construction Sequence is provided to the contractor to demonstrate a feasible approach to construct the project and to address the allowable construction zones, traffic movements and project constraints. This sequence is included in the contract documents however a contractor may deviate from this sequence if approved by the Department of Transportation.

3.1 Stage 1 – Project Mobilization, Temporary Pavement, Miscellaneous Improvements

- a. Close the following:
 - i. Crest Road
- b. Open the following:
 - i. None
- c. Construct the following:
 - i. Overlay Route 18 mainline from Route 1/18 interchange to Paulus Boulevard
 - ii. Paulus Boulevard North (in part)
 - iii. Labor Center Way
 - iv. Unnamed Tributary Culvert Replacement (*continues to Stage 1A*)
 - v. Route 27 (Albany Street), between Burnet Street & Neilson Street (night work)
 - vi. Clearing & stripping throughout project limits
 - vii. Temporary paving (widening & median paving) throughout project limits
- d. Detours will be in effect for the following movements (Reference TC-31):
 - i. Route 27 (Albany Street) NB (nighttime only) – detour to Neilson Street to New Street to Route 18 NB to Ramp C-27 (Route 18 NB to Route 27 (Albany Street) NB) to Route 27 (Albany Street)
 - ii. Route 27 (Albany Street) NB to Route 18 SB (nighttime only) – detour to Neilson Street to New Street to Route 18 SB
 - iii. Route 27 (Albany Street) SB (nighttime only) – detour to Johnson Dr. to George Street to Route 27 (Albany Street)
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. Route 27 (Albany Street), between Burnet Street & Neilson Street
 - ii. Route 18 Lane Closures
 1. Temporary paving throughout project limits
 2. Utility crossings
 3. Drainage crossings

3.2 Stage 2 – Reconstruct New Street Interchange & Construct Route 18 SB

- a. Close the following:
 - i. Dewey Drive
 - ii. Carpenter Road South
 - iii. Commercial Avenue jug handle
 - iv. New Street Interchange
- b. Open the following:
 - i. Commercial Avenue widening
 - ii. Median double left turn Route 18 NB to Commercial Avenue
- c. Construct the following:
 - i. Retaining/Noise Walls #15 & 16 (along Route 18 NB & SB from Route 1 to Paulus Blvd)
 - ii. Paulus Boulevard North (*continues to Stage 2A*)
 - iii. Carpenter Rd. Pedestrian Bridge
 - iv. Retaining Wall #4 (along Ramp GS & Gibbons Drive)
 - v. Retaining Wall #5B & 6 (Antilles Field Rock Cut)
 - vi. New Street Interchange
 - vii. Lyle Brook Culvert (*continues to Stage 2B*)
 - viii. Route 18 SB B roadway
 - ix. Route 27 (Albany Street) Pedestrian Underpass (pre-cast elements)
- d. Detours will be in effect for the following movements (Reference TC-60 & 61):
 - i. Route 18 NB to New Street (Ramp NR) – detour to Commercial Avenue to George Street to New Street
 - ii. Route 18 NB to New Street (Ramp NR) (TRUCKS) – detour to Route 27 (Albany Street) (Ramp A) to Route 27 (Albany Street) to Neilson Street to New Street
 - iii. New Street (Ramp NS) to Route 18 NB – detour to Neilson Street to Commercial Avenue to Route 18 NB
 - iv. New Street (Road NE) to Route 18 SB – detour to George Street to Route 18 SB (Ramp GS)
 - v. Route 27 (Albany Street) SB (77 hour closure) – detour to River Road to Route 18 SB (Ramp D – Section 2A) to George Street to Route 27 (Albany Street)
 - vi. Route 27 (Albany Street) SB to Route 18 SB (77 hour closure) – detour to River Road to Route 18 SB (Ramp D – Section 2A)

- vii. Route 27 (Albany Street) NB (77 hour closure) – detour to George Street to Route 18 NB (Ramp F – Section 11F) to River Road to Route 27 (Albany Street)
- viii. Route 18 NB to Route 27 (Albany Street) NB (77 hour closure) – detour to River Road (Ramp A – Section 2A) to Route 27 (Albany Street)
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. Route 18 - New Street structural steel placement
 - ii. Utility crossings
 - iii. Drainage crossings

3.3 Stage 3 – Construct Commercial Avenue Interchange (Part 1 of 2) & Reconstruct Route 27 (Albany Street) Interchange (Part 1 of 3)

- a. Close the following:
 - i. Commercial Avenue Interchange in part
 - ii. Richmond Street
 - iii. Burnet Street
 - iv. Ramp B (Route 27 (Albany Street) SB to Route 18 SB)
- b. Open the following:
 - i. New Street Interchange
- c. Construct the following:
 - i. Paulus Boulevard South
 - ii. Ramp PJ (Paulus Blvd jug handle)
 - iii. Route 18 SB widening from Paulus Boulevard to Phelps Avenue
 - iv. Gibbons Drive
 - v. Commercial Avenue SB abutment and approach
 - vi. Noise Walls #5 & 7 (along Route 18 SB between Commercial Avenue & New Street)
 - vii. Richmond Street
 - viii. Burnet Street
 - ix. Route 18 SB-A over Route 27 (Albany Street)
 - x. Ramp B (Route 27 (Albany Street) SB to Route 18 SB)
 - xi. Johnson Drive (*continues to Stage 3A*)

- d. Detours will be in effect for the following movements (Reference TC-91 & 92):
- i. Route 18 SB to Commercial Avenue – detour to New Street (Ramp NW) to George Street to Commercial Avenue
 - ii. Route 18 SB to Commercial Avenue (TRUCKS) – detour to New Street (Road NW) to Livingston Avenue to Suydam Street to Commercial Avenue
 - iii. Commercial Avenue to Route 18 SB – detour to George Street to Route 18 SB (Ramp GS)
 - iv. Route 18 NB to Commercial Avenue – detour to George Street to Commercial Avenue
 - v. Commercial Avenue to Route 18 NB – detour to George Street to New Street to Route 18 NB
 - vi. Commercial Avenue to Route 18 NB (TRUCKS) – detour to Suydam Street to Livingston Avenue to New Street to Route 18 NB
 - vii. Route 27 (Albany Street) SB to Route 18 SB – detour to Neilson Street to New Street (Road NE) to Route 18 SB
 - viii. Route 27 (Albany Street) NB to Route 18 SB – detour to Neilson Street to New Street (Road NE) to Route 18 SB
 - ix. Johnson Drive NB to Route 18 SB – detour to George Street to Bishop Street to Route 18 SB (Ramp T – Section 11F)
 - x. Johnson Drive SB to Route 18 SB – detour to Route 27 (Albany Street) to Neilson Street to New Street to Route 18 SB (Road NE)
- e. Nighttime Road Closures will be in effect for the following activities:
- i. Demolition of pedestrian structure at Tabernacle Way
 - ii. Partial demolition of Route 18 SB over Route 27 (Albany Street) structure
 - iii. Route 18 SB-A over Route 27 (Albany Street) structural steel placement

3.4 Stage 4 – Construct Commercial Avenue Interchange (Part 2 of 2), Reconstruct Route 27 (Albany Street) Interchange (Part 2 of 3) & Construct Route 18 NB B

- a. Close the following:
 - i. Ramp A (Route 18 SB to Route 27 (Albany Street) SB)
 - ii. Ramp C-27 (Route 18 NB to Route 27 (Albany Street) NB) (*Stage 4A1*)
- b. Open the following:
 - i. Burnet Street
 - ii. Ramp B (Route 27 (Albany Street) SB to Route 18 SB)
 - iii. Route 18 SB-A over Route 27 (Albany Street)
- c. Construct the following:
 - i. Route 18 NB-B between Boathouse Drive & Amtrak viaduct
 - ii. Commercial Avenue NB abutment
 - iii. Ramp C-27 (Route 18 NB to Route 27 (Albany Street) NB) (*Stage 4A1*)
 - iv. Route 18 NB-B over Route 27 (Albany Street)
 - v. Ramp A (Route 18 SB to Route 27 (Albany Street) SB)
 - vi. Route 27 (Albany Street) Pedestrian Underpass (Cast in place elements) (*Stage 4A1*)
- d. Detours will be in effect for the following movements (Reference TC-113 & 117):
 - i. Route 18 NB to Commercial Avenue – detour to George Street to Commercial Avenue
 - ii. Commercial Avenue to Route 18 NB – detour to George Street to New Street to Route 18 NB (Ramp NS)
 - iii. Commercial Avenue to Route 18 NB (TRUCKS) – detour to Suydam Street to Livingston Avenue to New Street to Route 18 NB (Ramp NS)
 - iv. Route 18 NB to Route 27 (Albany Street) SB (Ramp A) – detour to New Street (Ramp NR) to Neilson Street to Route 27 (Albany Street)
 - v. Route 18 NB to Route 27 (Albany Street) NB (Ramp C-27) – detour to New Street (Ramp NR) to Neilson Street to Route 27 (Albany Street) (*Stage 4A1*).
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. Partial demolition of Route 18 NB over Route 27 (Albany Street) structure
 - ii. Route 18 NB B structural steel placement

3.5 Stage 5 – Reconstruct George Street Interchange (Part 1 of 2), Reconstruct Route 27 (Albany Street) Interchange (Part 3 of 3) & Reconstruct Mainline Route 18 (Part 1 of 3)

- a. Close the following:
 - i. Ramp GS (George Street to Route 18 SB)
 - ii. George Street flyover (Route 18 NB to George Street)
- b. Open the following:
 - i. Route 18 NB-B from Commercial Avenue to Amtrak viaduct
 - ii. Commercial Avenue Interchange
 - iii. Richmond Street
 - iv. Route 18 NB-B over Route 27 (Albany Street)
 - v. Ramp A (Route 18 SB to Route 27 (Albany Street) SB)
 - vi. Ramp C-27 (Route 18 NB to Route 27 (Albany Street) NB)
- c. Construct the following:
 - i. Route 18 SB from Phelps Avenue to George Street
 - ii. Newell \ Phelps Connector
 - iii. Ramp GS (George Street to Route 18 SB)
 - iv. George Street SB T bridge abutment
 - v. George Street
 - vi. Route 18 NB-A from Boathouse Drive to Amtrak viaduct
 - vii. Route 18 SB-A from Route 27 (Albany Street) to Boathouse Drive in part
- d. Detours will be in effect for the following movements (Reference TC-140):
 - i. Route 18 NB to George Street – detour to Commercial Avenue to George Street
 - ii. George Street to Route 18 SB – detour to Commercial Avenue to Route 18 SB (Road CE)
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. Demolition of George Street flyover (Route 18 NB to George Street)

3.6 Stage 6 – Reconstruct George Street Interchange (Part 2 of 2)

- a. Close the following:
 - i. Newell Avenue
 - ii. Phelps Avenue
- b. Open the following:
 - i. Newell \ Phelps Connector
 - ii. Ramp GS (George Street to Route 18 SB)
 - iii. Route 18 NB-A over Route 27 (Albany Street)

- c. Construct the following:
 - i. Ramp E & H (*Stage 6A*)
 - ii. Sign Structure # 14 (*Stage 6A*)
 - iii. Route 18 NB from Paulus Boulevard to George Street
 - iv. Carpenter Road North
 - v. George Street NB T bridge abutment and bridge
 - vi. Route 18 NB-B concrete arches and fill
 - vii. Boathouse Drive (*continues to Stage 6B*)
 - viii. Boyd Park Extension
 - ix. Route 27 (Albany Street) from Burnet Street to Raritan River Bridge (*continues to Stage 6C*)
- d. Detours will be in effect for the following movements (Reference TC-160 & 165):
 - i. Route 18 NB to George Street – detour to Commercial Avenue to George Street
 - ii. Route 1 SB to Route 18 NB (Ramp H) – detour to Ryders Lane to Route 1 NB to Route 18 NB (Ramp F – Section 2)
 - iii. Route 1 SB to Route 18 SB (Ramp E) – detour to Ryders Lane to Route 1 NB to Route 18 SB (Ramp B – Section 2)
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. George Street structural steel placement
 - ii. Route 18 NB-B concrete arch placement

3.7 Stage 7 – Reconstruct Mainline Route 18 (Part 2 of 3)

- a. Close the following:
 - i. None
- b. Open the following:
 - i. George Street
 - ii. Route 18 NB-B structure at George Street
- c. Construct the following:
 - iii. Route 18 NB-A from Paulus Boulevard to Boathouse Drive in part.
 - iv. Boyd Park Improvements
- d. Detours will be in effect for the following movements:
 - i. None
- e. Nighttime Road Closures will be in effect for the following activities:
 - i. None

3.8 Stage 8 – Reconstruct Mainline Route 18 (Part 3 of 3) & Final Paving/Striping/Landscaping

a. Close the following:

- i. None

b. Open the following:

- i. None

c. Construct the following:

- i. Route 18 NB-A & SB-A from Route 1/18 Interchange to Boathouse Drive in part. (*Continues to Stage 8A3*)
- ii. Ramp C-1 (*Stage 8A3 & 8A4*)
- iii. Final paving
- iv. Landscaping

d. Detours will be in effect for the following movements:

- i. None

e. Nighttime Road Closures will be in effect for the following activities:

- i. None

CHAPTER 4 - ALLOWABLE LANE CLOSURE SCHEDULE

The following Allowable Lane Closure requirements are included in the Contract Documents:

4.1 NON-HOLIDAYS

a. ROUTE 18 NORTH AND SOUTH:

(THREE TRAVEL LANES EACH DIRECTION - MP 40.6 TO 41.9 OR STA. 65+400 TO 67+540)
(TWO TRAVEL LANES EACH DIRECTION - MP 41.9 TO 42.6 OR STA. 67+540 TO 68+460)

ALL LANES MAINTAINED (EACH DIRECTION)

MONDAY THROUGH FRIDAY 6:00 AM TO 9:00 PM
SATURDAY 8:00 AM TO 8:00 PM
SUNDAY 9:00 AM TO 8:00 PM

TWO LANES MAINTAINED (EACH DIRECTION IN THREE-LANE SECTION ONLY)

MONDAY THROUGH THURSDAY 9:00 PM TO 6:00 AM (NEXT DAY)
FRIDAY 9:00 PM TO 8:00 AM (SATURDAY)
SATURDAY 8:00 PM TO 9:00 AM (SUNDAY)
SUNDAY 9:00 PM TO 6:00 AM (MONDAY)

ONE LANE MAINTAINED (EACH DIRECTION IN THREE OR TWO-LANE SECTION)
AND RAMP CLOSURE HOURS

MONDAY THROUGH THURSDAY 11:00 PM TO 5:00 AM (NEXT DAY)
FRIDAY 11:00 PM TO 6:00 AM (SATURDAY)
SATURDAY 11:00 PM TO 6:00 AM (SUNDAY)
SUNDAY 11:00 PM TO 5:00 AM (MONDAY)

NOTE:

DURING THE PAVING OF THE SURFACE COURSE ALONG ROUTE 18,
THE ABOVE HOURS SHALL APPLY FOR:

ROUTE 18 NORTH - MP 40.6 TO 41.2 OR STA. 65+520 TO 66+320
ROUTE 18 NORTH - MP 42.4 TO 42.6 OR STA. 68+340 TO 68+460
ROUTE 18 SOUTH - MP 40.6 TO 41.5 OR STA. 65+400 TO 66+800
ROUTE 18 SOUTH - MP 42.2 TO 42.6 OR STA. 67+900 TO 68+440

A COMPLETE CLOSURE OF THE "LOCAL" ROADWAYS WILL ONLY BE PERMITTED
DURING THE HOURS SHOWN ABOVE FOR "ONE LANE MAINTAINED". A COMPLETE CLOSURE OF THE
"EXPRESS" ROADWAYS WILL ONLY BE PERMITTED DURING THE HOURS SHOWN ABOVE FOR "TWO
LANES MAINTAINED". THIS SHALL APPLY FOR:

ROUTE 18 NORTH - MP 41.2 TO 42.4 OR STA. 66+320 TO 68+340
ROUTE 18 SOUTH - MP 41.5 TO 42.2 OR STA. 66+800 TO 67+900

b. ROUTE 1 NORTH AND SOUTH:

(THREE TRAVEL LANES EACH DIRECTION)

ALL LANES MAINTAINED (EACH DIRECTION)

MONDAY THROUGH FRIDAY 6:00 AM TO 9:00 AM AND 3:00 PM TO 8:00 PM

SATURDAY 8:00 AM TO 8:00 PM

SUNDAY 9:00 AM TO 8:00 PM

TWO LANES MAINTAINED (EACH DIRECTION)

MONDAY THROUGH THURSDAY 9:00 AM TO 3:00 PM AND 8:00 PM TO 6:00 AM (NEXT DAY)

FRIDAY 9:00 AM TO 3:00 PM AND 8:00 PM TO 8:00 AM (SATURDAY)

SATURDAY 8:00 PM TO 9:00 AM (SUNDAY)

SUNDAY 8:00 PM TO 6:00 AM (MONDAY)

ONE LANE MAINTAINED (EACH DIRECTION)

MONDAY THROUGH THURSDAY 10:30 PM TO 5:30 AM (NEXT DAY)

FRIDAY 10:30 PM TO 8:00 AM (SATURDAY)

SATURDAY 10:30 PM TO 8:00 AM (SUNDAY)

SUNDAY 10:30 PM TO 5:30 AM (MONDAY)

c. ROUTE 27 NORTH AND SOUTH:

(ONE TRAVEL LANE - NORTH AND TWO TRAVEL LANES - SOUTH)

d. ROUTE 172 EAST AND WEST:

(TWO TRAVEL LANES EACH DIRECTION)

ALL LANES MAINTAINED (EACH DIRECTION)

MONDAY THROUGH FRIDAY 6:00 AM TO 9:00 AM

AND 3:00 PM TO 8:00 PM

SATURDAY 8:00 AM TO 8:00 PM

SUNDAY 9:00 AM TO 8:00 PM

ONE LANE MAINTAINED (EACH DIRECTION)

MONDAY THROUGH THURSDAY 9:00 AM TO 3:00 PM

AND 8:00 PM TO 6:00 AM (NEXT DAY)

FRIDAY 9:00 AM TO 3:00 PM AND 8:00 PM TO 8:00 AM (SATURDAY)

SATURDAY 8:00 PM TO 9:00 AM (SUNDAY)

SUNDAY 8:00 PM TO 6:00 AM (MONDAY)

ROUTE 27 FULL ROADWAY CLOSURE

(PASSABLE LANE FOR EMERGENCY VEHICLE USE MUST BE MAINTAINED)

STAGE 1 OVERNIGHT WORK

MONDAY THROUGH THURSDAY 10:00 PM TO 5:00 AM (NEXT DAY)

FRIDAY 11:00 PM TO 6:00 AM (SATURDAY)

SATURDAY 11:00 PM TO 8:00 AM (SUNDAY)

SUNDAY 9:00 PM TO 5:00 AM (MONDAY)

STAGE 2 ALBANY STREET PEDESTRIAN UNDERPASS REPLACEMENT

(ONE TIME CLOSURE ONLY)

SATURDAY 12:00 AM TO TUESDAY 5:00 AM

e. MISCELLANEOUS

THE ALLOWABLE COMPLETE ROADWAY CLOSURE HOURS FOR THE ERECTION OF OVERHEAD SIGN STRUCTURES OR STRUCTURAL STEEL ARE BETWEEN THE HOURS OF 11:00 PM AND 5:00 AM (FOLLOWING DAY) FOR THE MAXIMUM OF 15-MINUTES DURATION. AFTER EACH STOPPAGE, TRAFFIC MUST BE ALLOWED TO FLOW FREELY BEFORE THE NEXT STOPPAGE WILL BE PERMITTED.

A DETOUR PLAN MUST BE PROVIDED FOR ALL TEMPORARY OR LONG-TERM RAMP CLOSURES.

TRAFFIC OPERATIONS NORTH (201-797-3676) MUST BE NOTIFIED AT LEAST 72 HOURS BEFORE ANY LANE CLOSURES AND ONE WEEK PRIOR TO ANY RAMP CLOSURES BEING PERFORMED.

NO WORK THAT WILL INTERFERE WITH THE FLOW OF TRAFFIC WILL BE PERMITTED ON THE DAY OF GRADUATION, HOME FOOTBALL GAMES OR MAJOR SPORTING EVENTS AT RUTGER'S UNIVERSITY. CONSTRUCTION ACTIVITIES WHICH IMPACT ACCESS TO THE DOUGLASS DEVELOPMENTAL DISABILITIES CENTER ON GIBBONS DRIVE WILL NOT BE PERMITTED DURING THE HOURS OF 8:30-10:00 AM & 2:00-4:00 PM. (MONDAY THRU FRIDAY)

PEDESTRIAN ACCESS ALONG ROUTE 27 MUST BE MAINTAINED AT ALL TIMES

4. 2 ALLOWABLE LANE CLOSURE SCHEDULE FOR HOLIDAYS

NO LANE CLOSURES WILL BE PERMITTED ON THE FOLLOWING HOLIDAYS:

- * EASTER SUNDAY (INCLUDING 6:00 AM SATURDAY UNTIL NOON MONDAY)
- * MEMORIAL DAY (SEE NOTE BELOW)
- * JULY 4TH (SEE NOTE BELOW)
- * LABOR DAY (SEE NOTE BELOW)
- * ELECTION DAY (6:00 AM UNTIL 8:00 PM THE DAY OF)
- * THANKSGIVING DAY (SEE NOTE BELOW)
- * CHRISTMAS DAY (SEE NOTE BELOW)
- * NEW YEARS DAY (SEE NOTE BELOW)

NOTE:

If Holiday Falls On	No Lane Closures Permitted
Sunday or Monday	6:00 AM Friday until Noon Tuesday
Tuesday	6:00 AM Friday until Noon Wednesday
Wednesday	6:00 AM Tuesday until Noon Thursday
Thursday	6:00 AM Wednesday until Noon Monday
Friday or Saturday	6:00 AM Thursday until Noon Monday

CHAPTER 5 - CONTRACTOR INCENTIVES AND LIQUIDATED DAMAGES

In an effort to minimize the impact to the traveling public, the contract documents have included specifications for liquidated damages and incentives for early completion. The approach is to reduce construction duration at locations which require detours for construction, thereby reducing the duration of the detour and congestion. The following specifications have been included in the contract:

5.1 CONTRACT SPECIFICATIONS

a. TIME OF COMPLETION

108.10 Time of Completion.

- A.** All work required for completion of Route 27 Underpass, Structure No. 1217-153 and roadway, within the work limits that require the one-time closure of Route 27, shall be completed in seventy-seven (77) continuous hours. The period shall begin on a Saturday 12:00 AM with the one-time full closure of Route 27 (Stage 2).
- B.** All work required for completion of New Street Bridge and opening of all traffic movements to and from New Street shall be completed in 338 calendar days. The period shall begin with the closure of any traffic movement to or from New Street (Stage 2).
- C.** All work required for completion of Commercial Avenue Bridge West abutment, Ramps CE and CW, and opening of traffic movements to and from Route 18 southbound shall be completed in 48 calendar days. The period shall begin with the closure of any traffic movement to or from Commercial Avenue (Stage 3).

- D. All work required for the completion of Ramps E and H, Route U.S. 1 southbound to Route 18, and opening of all traffic movements shall be completed in 31 calendar days from when the ramps are closed (Stage 6A).
- E. All work required for completion of George Street Bridge and opening of all traffic movements to and from George Street shall be completed in 450 calendar days. The period shall begin when the existing George Street Bridge or Ramp GS is closed (Stage 6).
- F. All work required for Substantial Completion shall be completed by May 22, 2009.
- G. **The entire Work of the Project shall be completed by July 25, 2009.]**

b. LIQUIDATED DAMAGES/INCENTIVE PAYMENTS FOR EARLY COMPLETION

108.16 Liquidated Damages/ Incentive Payments For Early Completion.

LIQUIDATED DAMAGES

A. The Contractor and the Department recognize that delay in Completion results in damages to the State in terms of the effect of the delay on the use of the Project, upon the public convenience and economic development of the State, and also results in additional costs to the State for engineering, inspection, and administration of the Contract. Because it is difficult or impossible to accurately estimate the damages incurred; therefore, the parties agree that if the Contractor fails to complete the Contract within the time stated in these Special Provisions, or within such further time as may have been granted in accordance with the provisions of the Contract, the Contractor shall pay the State liquidated damages in accordance with the following paragraph. Such liquidated damages shall be paid for each and every day, as hereafter, defined that the Contractor is in default to complete the Contract.

LIQUIDATED DAMAGES SHALL BE AS FOLLOWS:

1. For each hour that the Contractor fails to complete Construction Operations, as specified in Item A of Subsection 108.10 of these Special Provisions, for Stage 2, the Contractor shall pay liquidated damages to the State in the amount of \$2,000.00.
2. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item B of Subsection 108.10 of these Special Provisions, for Stage 2, the Contractor shall pay liquidated damages to the State in the amount of \$5,000.00.
3. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item C of Subsection 108.10 of these Special Provisions, for Stage 3, the Contractor shall pay liquidated damages to the State in the amount of \$5,000.00.

4. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item D of Subsection 108.10 of these Special Provisions, for Stage 6A, the Contractor shall pay liquidated damages to the State in the amount of \$10,000.00.
5. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item E of Subsection 108.10 of these Special Provisions, for Stage 6, the Contractor shall pay liquidated damages to the State in the amount of \$5,000.00.
6. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item F of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of \$5,000.00.
7. For each Calendar Day that the Contractor fails to complete the entire Work of the Project, as specified in Item G of Subsection 108.10 of these Special Provisions, for Completion, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of \$5,000.00 provided that Construction Operations as specified for Substantial Completion are actually completed.

INCENTIVE PAYMENT FOR EARLY COMPLETION

E. For this particular contract, the Department agrees to pay the Contractor an "incentive payment for early completion", but only where the Contractor actually and fully completes the Construction Operations as specifically specified in Subsection 108.10 and fully and completely complies with the provisions set forth in the paragraphs below and subject to the conditions and limitations set forth below. There are five (5) separate forms of incentive payment for early completion" (incentive payment) set forth in Subparts 1 through 5 below, which are mutually exclusive. If the Contractor does not meet the conditions applicable to receive the incentive payment set forth in any subpart, the Contractor may however, receive incentive payments under the other subparts, provided the Contractor actually and fully completes the Construction Operations as specifically specified in Subsection 108.10, subject to the provisions of this Subsection.

1. For each hour prior to 3:00 PM Monday following the beginning of the full closure of Route 27 that the Contractor actually and fully completes Construction Operations as specified in Subsection 108.10 Paragraph A, the Contractor will receive a per hour incentive payment of \$2,000.00 in addition to a minimum incentive payment of \$28,000.00, but is not to exceed a total maximum amount of \$46,000.00. The Contractor will not receive any per hour incentive payment or minimum incentive payment after 3:00 PM Monday following the beginning of the full closure of Route 27.

2. For each calendar day prior to the 338 Calendar Days allotted, that the Contractor actually and fully completes Construction Operations as specifically specified in Subsection 108.10 Paragraph B, the Contractor will receive a per day incentive payment of \$5,000.00, not to exceed a total maximum amount of \$400,000.00.
3. For each calendar day prior to the 48 Calendar Days allotted, that the Contractor actually and fully completes Construction Operations as specifically specified in Subsection 108.10 Paragraph C, the Contractor will receive a per day incentive payment of \$5,000.00, not to exceed a total maximum amount of \$75,000.00.
4. For each calendar day prior to the 31 Calendar Days allotted, that the Contractor actually and fully completes Construction Operations as specifically specified in Subsection 108.10 Paragraph D the Contractor will receive a per day incentive payment of \$10,000.00, not to exceed a total maximum amount of \$100,000.00.
5. For each calendar day prior to the 450 Calendar Days allotted, that the Contractor actually and fully completes Construction Operations as specifically specified in Subsection 108.10 Paragraph E, the Contractor will receive a per day incentive payment of \$5,000.00, not to exceed a total maximum amount of \$550,000.00.

c. LANE OCCUPANCY CHARGES

108.19 Lane Occupancy Charges

The rate or rates to be applied in the calculation of a Lane Occupancy Charge shall be in accordance with the following:

Route 1

Overrun of "Two Lanes Maintained" Time Limits	\$10/minute
Overrun of "One Lane Maintained" Time Limits	\$70/minute

Route 18

Overrun of "Two Lanes Maintained" Time Limits	\$20/minute
Overrun of "One Lane Maintained" Time Limits	\$10/minute

Route 27

Overrun of "One Lane Maintained" Time Limits	\$20/minute
Overrun of "Full Road Closure, Stage 1 Overnight Work" Time Limits	\$20/minute

Route 172

Overrun of "One Lane Maintained" Time Limits	\$10/minute
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Ramps

Overrun of "Ramp Closure" Time Limits	\$10/minute
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CHAPTER 6 - CONTRACTOR RESTRICTIONS

6.1 CONTRACT SPECIFICATIONS - NEW BRUNSWICK AND STAKEHOLDER EVENT

The following requirements have been included in the Contract Specifications address the many local events which occur in New Brunswick and adjacent communities which have the potential to be impacted by construction activities. The construction duration of 50 months requires a flexible approach as all events over the timeframe have not been scheduled and cannot be fully anticipated. Coordination through the Communications Plan will be essential.

a. LOCAL EVENTS AND PROJECTS

The Bidder shall examine the *Route 18 Section 2F, 7E, 11H Local Events and Project Information*, which is available with the Contract Documents so as to be fully aware of local events and projects on or adjacent to the site. The Bidder shall become fully aware of the local events and projects before bidding and how the activities affect its progress. The Bidder should also consider, and allow for in bidding, that the local events and projects may be subject to changes and updates for the duration of the Contract, and that awareness must be maintained for the duration of the Contract.

The Contractor shall maintain awareness of local events and projects for the duration of the Contract, which are within or adjacent to its area of operations, and plan its activities so as not to interfere with local events and projects. Interference will be determined by the Engineer and includes, but is not limited to noise, dust, use of easements, construction vehicle movements, equipment operation and storage, and material storage. Local events and projects sponsors include, but are not limited to the City of New Brunswick, Rutgers University, Johnson & Johnson, Middlesex County, and New Brunswick Development Corporation. Information may be obtained from, but is not limited to the participation and coordination with the NJDOT Construction Communications Team, which will administer the Route 18 Section 2F, 7E, 11H Construction Communications Plan.

The Contractor agrees to make no claim for additional payment or for an extension of contract time as a result of maintaining its awareness of local events and projects, planning its activities to avoid interference, or temporarily suspending its work as directed by the Engineer as a result of interference as determined by the Engineer.