

cc: DiMartino
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Copy to:
Mr. A.E. Shaw, Jr. P.E.,
Amtrak
National Railroad Passenger Corp.
30th Street Station, Suite 330
Philadelphia, PA 19104

38009
10-29-87

Dispatched
OCT 29 1987
Bureau of Heavy Construction
Mail Room

October 29, 1987

Mr. Ahmet Gursoy
Project Manager
Parsons Brinckerhoff Quade & Douglas, Inc.
One Penn Plaza
New York, NY 10119

RE: Westside Connection Project, North Access Tunnel from W. 33rd Street to W. 38th Street, Borough of Manhattan

Dear Mr. Gursoy:

In reply to your letter dated September 24, 1987 with which you submitted two (2) additional sets of final contract drawings, specifications and structural computations for the above referenced project, please be advised of the following comments of this department:

1. Show details of the pressure relief manhole shown on sheet No. C-11. A note should be added to the plans that the pressure relief manhole will have a manhole cover inscribed "Amtrak" and that the pressure relief manhole the connection to chamber No. 1 shall be maintained by Amtrak.
2. Indicate type of proposed catch basins to be maintained by N.Y.C.D.E.P. as per comment No. 9 of our letter dated July 16, 1987.
3. Provide splash blocks underneath the downspouts to direct the flow to the catch basins. Show details of splash blocks.
4. Refer to your reply to comment No.1 of our letter dated July 6, 1987. Add a note "all internal manholes, catch basins and catch basin connections carrying flow from Amtrak yard shall be maintained by Amtrak." Label them on the plans.

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-2-

- ✓ 5. The existing 15" and proposed 16" D.I.P. sewer connecting into the flow redirection chamber has been labeled as local R. R. drain. This is not true as it is carrying street drainage from the bridge drain pipe. This proposed catch basin receiving bridge drain flow must be connected a new manhole on the proposed 3'-6" x 3'-6" conc. box combined sewer.
- ✓ 6. It appears that the existing manhole on the existing 15" combined sewer in W. 33rd Street near proposed chamber No. 3 is in direct conflict with it as shown on drawing No. C-11.
- ✓ 7. Encase the proposed 48" sewer as per comment No. 14 of our letter dated July 21, 1987.
- ✓ 8. Refer to comment No. 11 of our letter dated July 21, 1987. The profile does not show type of sewer, slope, size, surface elevation, rim elevation, cover, bedding etc. Also the profile must be shown to a scale so that the data/information can be properly interpreted. Scale 1"=10' is too small. Your reasoning in your letter dated July 21, 1987 does not hold good as the complicated site conditions can not be evaluated at this scale and much of the important details that could affect the proposed sewers can not be properly shown at this scale. It is not necessary to show the plan and profile on the same sheet. It is only the horizontal scale that should be the same on the plan and profile.
- ✓ 9. Delete all construction joints (EJ) as shown on the profile on drawing No. S-32.
- ✓ 10. It is a Bureau of Sewers practice to show invert elevations both at D/S and U/S ends. This is in reference to comment No. 5 of our letter dated April 15, 1987 to you.
- ✓ 11. Comply with our comment No. 15 of our letter dated July 6, 1987 to you regarding easement and maintenance agreement.
- ✓ 12. Change the size of the existing sewer 3'-0" X 4'-9" to 4'-9" X 3'-0" on drawing No. C-11 to match details on sheet No. S-36.
- ✓ 13. The existing 4'-6" X 2'-0" brick sewer as shown in section B on drawing No. S-36 will require a 1'X1' R.C. collar. Indicate the material of the existing 4'-9" X 3'-0" sewer. Show concrete encasement around the proposed 48" R.C. sewer in section E on drawing No. S-35.

-3-

- ✓ 14. The sections as shown on drawing No. S-33 and S-35 for the proposed 3'-6" X 3'-6" and 6'-0" X 4'-0" comb. sewers have a flat bottom. This is no good. They must have a V at the bottom per N.Y.C.D.E.P. standards.
- 10/6/87 { 15. Show P.T., P.C., R, Δ, T for all the proposed chambers as shown on drawing Nos. S-33, S-34, S-35 and S-36 as was requested in a meeting held in this office on July 2, 1987. The details as shown do not meet the guidelines for the design of chambers as set forth by this department, a copy of which was given to you. The curves are too sharp. If the sizes of the proposed chambers change too much, revised structural computations, signed and sealed by a N.Y.S.P.E. will be required.
16. The proposed 3'-6" X 3'-6" and 6'-0" X 4'-0" conc. boxes are monolithic structures. Therefore the reinforcement from the bottom and top slabs should be carried into the walls of the proposed box sewers. Show the details of the access manhole and chimney on all the chambers on drawing Nos. S-33, S-34, S-35 and S-36. It is preferable to provide an opening on the flow redirection chamber near chamber No. 3 for maintenance purposes.
17. Show sections as marked in red on drawing Nos. S-33, S-34, S-35 and S-36 so as to show the details on the other opening. Show sections through the wiers and also show the details.
- 18. A sample for inverted siphon design was given to you. Your inverted siphon design is far different in many aspects that are not acceptable to this department.
- (i) The 16" D.I.P, sanitary pipe can not be carried into the proposed twin 6'-0" X 4'-0" comb. sewer U/S of maintenance chamber A. The clean out can not be cleaned by this arrangement. The 16" D.I.P. sanitary sewer must start in the maintenance chamber A as given in the sample. The wier location also should correspond to the same.
- (ii) The wier as shown D/S end in maintenance chamber is also not acceptable. Its location must be per sample given to you. The clean out can not be cleaned because of the proposed 16" sanitary sewer being in the way.
- (iii) Show the details of the clean out as per sample.
- (iv) Show different sections and details as were provided to you in the sample. Submit roof plan for chambers A and B.
- ✓ 19. Sections C and F as shown on drawing No. S-34 should be rotated 90° to match the details on drawing No. S-33.

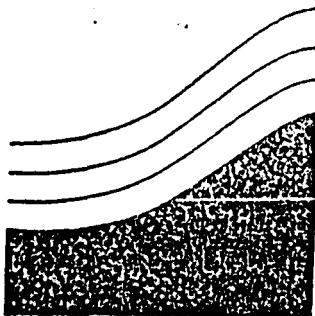
-4-

- ➔ 20. Show details of flow redirection chamber which is U/S end of flow distribution chamber.
- / 21. Show on drawing No. S-33 that the bottom manhole covers shall be Neenah R-1918-D series.
- 22. All reinforcement should be shown on the details as to its size and spacing. No numbering e.g. SDW2, 5S3WH9 is allowed.

Please submit three (3) complete sets of contract drawings revised in accordance to these comments and those marked in red on the plans for our review.

Very truly yours,

MAGDI FARAG, P.E., CHIEF
Division of Sewer Regulations &
Control, Bureau of Sewers



CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
2358 MUNICIPAL BUILDING, NEW YORK, N.Y. 10007
(212) 669-8200

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orig/file

HARVEY W. SCHULTZ
Commissioner

July 6, 1987

Mr. A. E. Shaw, Jr., P. E.
Amtrak
National Railroad Passenger Corp.
30th. Street Station Suite 330
Philadelphia, PA 19104

RE: Westside Connection Project, North Access Tunnel from W. 33rd St. to W. 38th. Street, Borough of Manhattan

Dear Mr. Shaw:

In reply to your letter dated June 4, 1987 with which you submitted three (3) sets of "90%" drawings, please be advised of the following comments of this department:

1. The drawings have not been revised in accordance with comment No.3 of our letter dated April 15, 1987. The size of the existing sewers, invert elevations etc. must be per as-built records. In case the existing inverts are different from the as-built records, a copy of field survey must be submitted to authenticate the same.
2. All elevations should be shown in reference to a sewer datum plane which is 2.75 ft. above the U.S.C.G.S. mean sea level at Sandy Hook, N.J. These elevations will not be computed as per not No.1 on drawing No. C-7.
3. Abandon existing 15" combined sewer as shown on drawing No. C-11. All existing connections to this sewer should be picked up by the proposed 3'-6"x 3'-6" combined sewer.
4. Manhole Nos.1,2 and 3 shall be chambers.
5. Label existing combined sewers, catch basin connections and internal yard drains on drawings No. C-11, C-12, and C-13 as discussed in a meeting held on July 2, 1987. All yard drain connections to the sewer system should be shown as house connections for which a permit is required from our Permit Control Section.

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-2-

6. There is no 15" D. 1 pipe. It should be 16" D.1. It is advised that it be class 56 pipe with push-on joints on concrete cradle.
7. All sewers in the area are combined sewers and should be labeled as such.
8. Show the size of the house connection from manhole No.7 to the flow adopter chamber. The 8" connection from the reservoir to manhole No.1 should not be bent. It should be straight. In case this flow is through a force main, a pressure relief manhole will be required before being discharged into manhole #1 as discussed in the meeting on July 2, 1987.
9. Use standard N.Y.C. D.E.P. catch basins instead of inlets. Show type of catch basins. It is preferable not to use more than two catch basins in series as shown on drawing No. C-13.
10. Delete profile for catch basin connections and house connections. Invert elevations for the proposed catch basins shall be determined in the field and as such should not be shown on the plans.
- 11. The profile for the proposed sewers as shown on drawing No.S-32 must be drawn in accordance with D.E.P. standards. It must show type of manholes, type of sewer, distance between manholes, slope, size, surface elevation, cover, bedding etc. All profiles must be drawn with a vertical scale such that the information/data can be properly interpreted. The scale 1"=10' is too small.
12. Drawing Nos.S-33, S-34, S-35, S-36, S-60, S-61 and S-62 can not be checked as no structural computations per comment No.11 of our letter dated April 15, 1987 have been submitted to this office.
13. Comply with comment Nos. 5,9,12 and 13 of our letter dated April 15, 1987 to you.
- 14. All sewers having cover of less than 4.0' need to be encased or submit structural computations that the proposed sewers can take the load at the proposed cover of less than 4.0'.
- 15. Submit easement and maintenance agreements.

-3-

16. Show the existing columns and footings along the route of the proposed sewer and inverted siphon. Show the details of reinforcement in all the chambers and inverted siphon.
17. The design of the inverted siphon does not meet D.E.P. criteria. An additional siphon for peak sanitary flow should be provided. This was conveyed to you on phone previously and in a meeting held on June 23, 1987.
18. A meeting was held on July 2, 1987 in which details of underpinning as shown on drawing Nos.S-45 and S-46 were discussed. Comments were given at this meeting and it was agreed that plans will be revised accordingly.
19. The title sheet should have a N.Y.S.P.E. seal and signatures.

Add the following notes:

- i) All proposed drainage work shall be done in conformance with the latest standards of the Department of Environmental Protection.
- ii) All existing standard basins should be repaired, if damaged, and cleaned, and flushed as necessary, to make them operable. Damaged castings should be replaced. Existing non-standard basins at locations where basins are required shall be replaced with new standard basins.
- iii) Abandoned drainage structures as shown on contract plans are to be cut down two (2) feet below subgrade and filled with compacted clean sand. All apex basins are to be abandoned and fall into this category. Basin connections not required shall be bulkheaded at both ends.
- iv) All existing sewer manholes within the contract limits should be adjusted as necessary, so that they will be flush with the finished grades after completion of the work. Any of these manholes which have damaged, worn or non-standard frames and covers should be provided with new 27" castings in accordance with the latest standards of N.Y.C.D.E.P. including any necessary modifications of the manhole masonry. Any damage to the manhole caused by this work shall be repaired, or replaced by the contractor, as directed by the engineer, and at no cost to the City.
- v) Where the height of an existing manhole permits more than one (1) basin connection to be made on the same wall, special precaution shall be taken to protect the structural integrity of the manhole. The minimum clearance between the outside walls of any two basin connections or between a basin connection and a sewer, vertically or horizontally, shall be 12 inches.

-4-

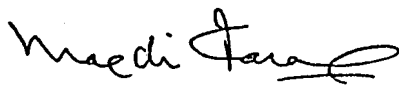
- vi) New catch basin connections should be 12" diameter ductile iron pipe, class 56 with internally locked "Push-On" joints laid on 6" of broken stone for the entire width of the trench and for one-half the pipe diameter. The broken stone shall be hard unweathered stone uniformly graded from $\frac{1}{4}$ " to $\frac{3}{4}$ " in diameter. It shall conform to commercial $\frac{1}{4}$ " to $\frac{3}{4}$ " stone.
- vii) Flush and clean all existing basin connections to be utilized to receive flows from all catch basins. Where the existing basin connections are found to be damaged or in deteriorating condition they should be replaced with new 12" diameter ductile iron pipe in accordance with the latest Department of Environmental Protection Standards.
- viii) All catch basins should have a hood on the outletting pipe.
- ix) All new proposed catch basins should be connected to an existing sewer at a sewer manhole. Catch basins shall not under any circumstance be connected to a sanitary sewer.
- x) All scuppers should be repaired, damaged, and cleaned and flushed as necessary, to make them operable. Damaged castings should be replaced. At locations where existing scuppers do not have 12" pipe or have deteriorated pipe, the pipe should be replaced with new 12" diameter class 56 D.I. Pipe.

The hydraulic computations as submitted by you are being reviewed by our Private Drainage Review Section. Their comments will be related to you when received from that office. No approval can be accorded before the hydraulics of the proposal is approved.

Please submit three (3) complete sets of contract drawings revised in accordance to these comments and those marked in red on the plans for our review.

Very truly yours,

Copy to:
Mr. Ahmet Gursoy
Project Manager
Parsons Brinckerhoff Quade &
Douglas, Inc.
One Penns Plaza
New York, NY 10119


MAGDI FARAG, P.E., CHIEF
Division of Sewer Regulations &
Control, Bureau of Sewers

cc: DiMartino
Farag
Lipski
Gainer
D. Smith
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Yee
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DISPATCHED

APR 17 1987

**WATER POLLUTION CONTROL
MAIL ROOM**

30089
LHS-1

April 15, 1987

Mr. A.E. Shaw, Jr., P.E.,
Amtrak
National Railroad Passenger Corp.
30th Street Station, Suite 330
Philadelphia, PA 19104

RE: Westside Connection Project North Access Tunnel from W. 33rd Street to W. 38th Street, Borough of Manhattan

Dear Mr. Shaw:

In reply to your letter dated March 24, 1987 and a letter dated April 6, 1987 from Parsons Brinckerhoff Quades & Douglas Inc., with which you submitted three (3) sets of "60%" drawings and two (2) sets of sewer relocation design drawings for the above referenced project, please be advised of the following comments of this department:

1. Show all elevations in reference to a sewer datum plane which is 2.75 ft. above the U.S. C.G.S. mean sea level at Sandy Hook, N.J.
2. Show 11th Avenue in relation to the existing tunnel and sewers on drawing Nos. C-9, C-10, C-11, C-13 and C-14.
3. There are several locations where existing sewer information as shown does not match our as-built records. A copy of the North River I&I study and as-built drawings for Capital Project SEN 00243 are enclosed for your reference. Drawings must be revised accordingly. In case you have more recent drawings, submit the same for our review.
4. Show legend for the proposed catch basin to be different than the proposed manhole.
5. Show existing invert elevation on the existing sewer whenever a new manhole or chamber is proposed. Show invert elevations at manholes, one U/S end and the other D/S end of this location.
6. Show the limits of abandonment of the existing sewer in W. 34th Street.

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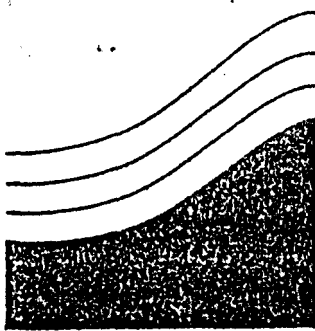
7. Clarify whether a proposed 15" E.S.V.P. sewer shown as connecting catch basins is a sewer or a catch basin connection. Be advised no more than two catch basins can be connected in series and that catch basin connection should be 12" D.I. Class 56 pipe with push-on joints on stone ballast. See NYC Standard.
8. Show the existing sewer to be picked up at manhole No. 1 and the existing sewer openings to be plugged at manhole No.2.
9. Show on the plan and profile the existing and proposed structures.
10. There is no record of a 12" storm sewer to be removed on drawing No. C-12, 12" C.M.P. on drawing No. C-12, 12" to be removed or abandoned on drawing No. C-13, 12" on drawing No. C-13A.
11. Submit structural computations signed and sealed by a N.Y.S.P.E. for flow distribution chamber, twin maintenance chamber A and B, flow adopter chamber. No bend of sewer is allowed between flow adopter chamber and manhole No. 2. Show type of manholes. Submit borings for the area. Show type of catch basins. Show type of proposed sewer.
12. Show the deflection angles, radius etc. for all the chambers.
13. Indicate that all sewers shown as to be abandoned have no house connections.
14. Submit drawing No. C-21 as part of contract drawings.
15. There is no need to show standard details of catch basin type 2, cast iron grating, cast iron manhole frame and cover, cast iron steps, manhole frame and cover, and vitrified clay pipe on conc. cradle on earth or rock as shown on drawing Nos. C-19 and C-20.

The hydraulic computations as submitted by you are being reviewed by our Private Drainage Review Section. Their comments will be related to you when received from that office.

Please submit three (3) complete sets of contract drawings revised in accordance to these comments for our review. Drawing Nos. S-28, S-29, S-29A, S-30 and S-30A should be made part of the set.

Very truly yours,

DOUGLAS SMITH, P.E., ACTING CHIEF
Engineering Review Section,
Bureau of Sewer



CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
2358 MUNICIPAL BUILDING, NEW YORK, N.Y. 10007
(212) 669-8265

Rcd 7/16/87
A. Gursoy *August NM*
ES
2-AG/AMTRAK
by file

HARVEY W. SCHULTZ
Commissioner

Parsons, Brinkerhoff, Quade & Douglas, Inc.
One Penn Plaza
New York, NY 10119

July 15, 1987

Attn: Mr. Ahmet Gursoy, Project Manager

Re: AMTRAK North Tunnel, Dual Inverted Siphon at West 33rd Street and
11th Avenue, Borough of Manhattan

Dear Mr. Gursoy:

This in reply to your submittal of plans for the referenced project with your letters dated January 8, 1987 and June 4, 1987, and to your June 30, 1987 submittal of minutes of a meeting held on June 29, 1987. Please be informed of the following comments:

1. Item No. 3 in the minutes states that "Bureau of Sewers has accepted the siphon design hydraulically". This is incorrect. The meeting was held to clarify the relationship between the computation sheets and the contract drawings so that our review could be concluded expeditiously. Hydraulic acceptability can only be given by formal letter from this Department after complete review of all submitted computations and related material.
2. Regarding item No. 2 of your minutes of the meeting, be advised that should your final siphon design computations be found to be deficient, such design may require revision which in turn, may involve changes in sizes and/or elevations of existing or proposed sewers or dimensions of the siphon itself.
3. On drawing No. S-32 of your contract plans you show the existing 3'-0" X 4'-9" combined sewer entering new manhole No. 3 as having a height of 4'-9". Attached herewith for your information is an extract copy of a contract plan dated July 27, 1939 for the New York Central Railroad Company showing a cross section of this sewer (labeled S-S), indicating that the height is 3'-0".

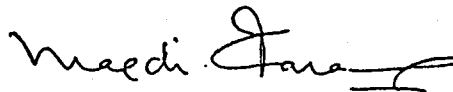
Parsons, Brinkerhoff, Quade & Douglas, Inc.
AMTRAK
Page 2

July 15, 1987

4. The New York Central Railroad plans also include a reference to a 6" C.I. house sewer emanating from the north side of West 33rd Street, which is connected to the existing 3'-0" X 4'-9" sewer in West 33rd Street. The elevation of this connection must be determined since it is crucial to the design of the inverted siphon.
5. Since the existing sewer in West 34th Street is to be rerouted to the upstream end of the new siphon, the house connection elevations along West 34th Street must also be considered in relation to the hydraulic grade elevations along the siphon route.
6. Your attention should be drawn to the attached New York Central drawings in which it is shown that the existing 15" diameter pipe in 11th Avenue north of West 33rd Street enters the 33rd Street sewer at a point approximately 5 feet downstream of the existing manhole. This point is at the same location as your proposed manhole No. 3.
7. As a result of recent discussions it is understood that your computations are being revised to reflect our comments regarding the apparent inadequacies in your computation of the hydraulic gradient difference between the upstream and downstream points of the siphon as shown in your January 8th submission.

All the above issues must be resolved satisfactorily before any hydraulic approval can be given for the submitted contract drawings.

Sincerely,



Magdi Farag, P.E. Chief
Div. of Sewer Regulation & Control
Bureau of Sewers

Enclosure