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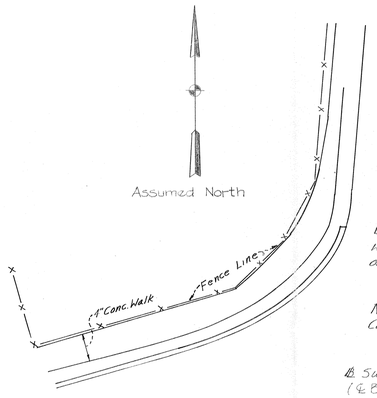
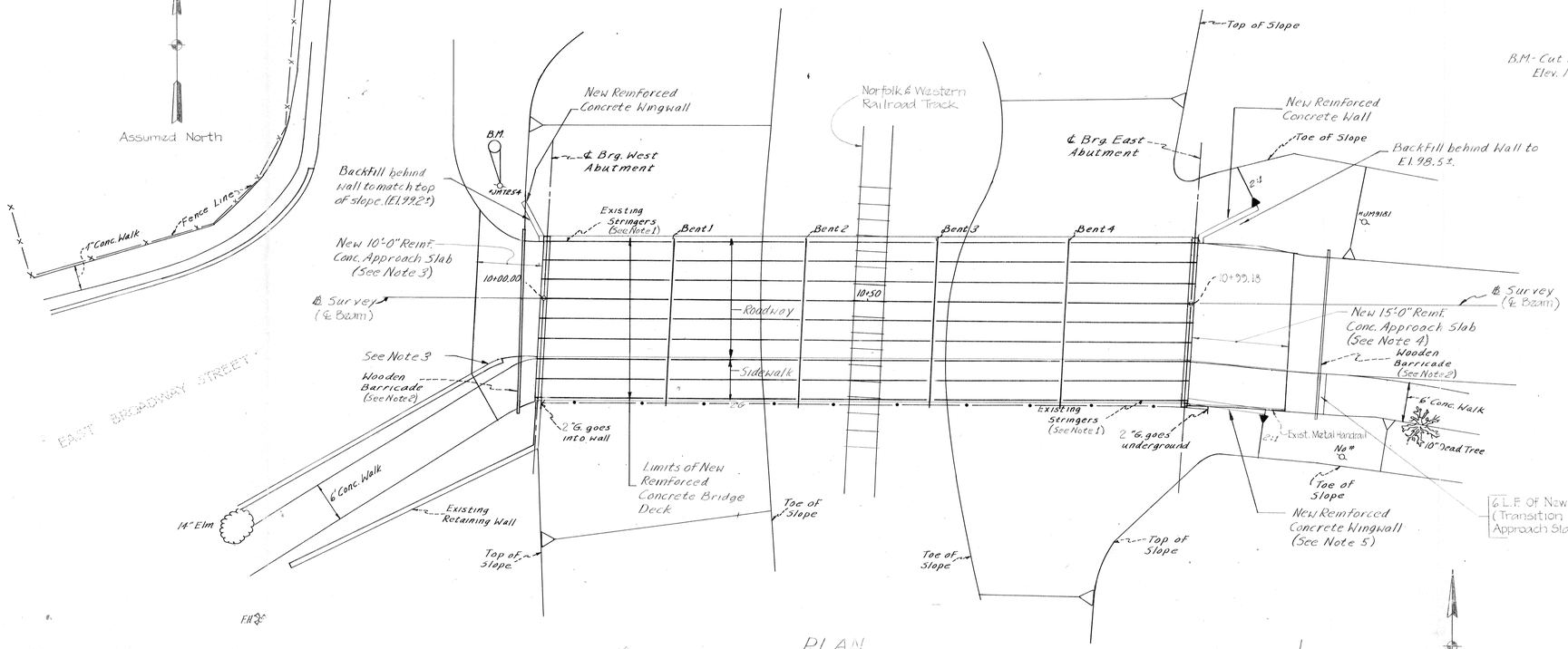


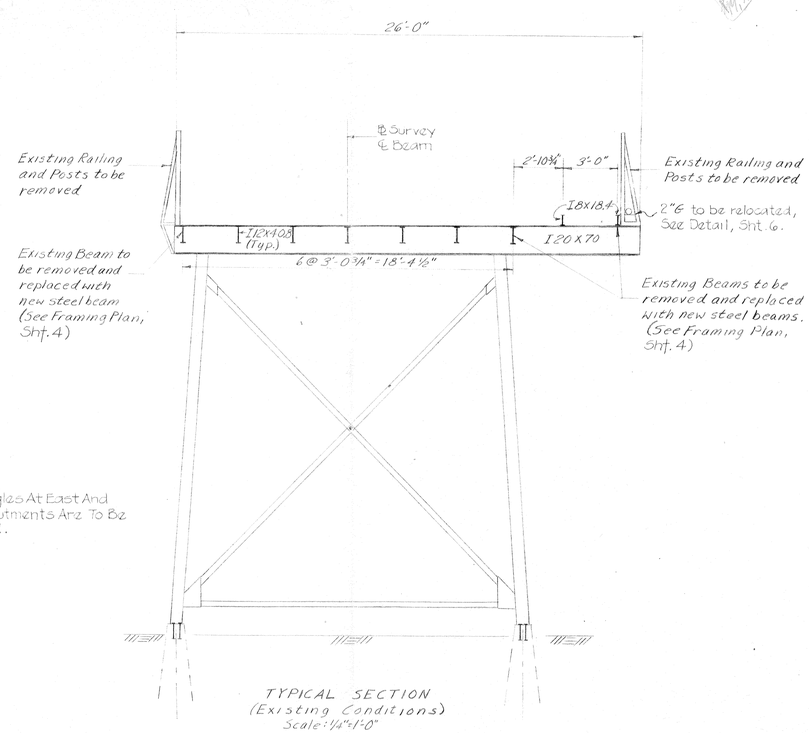


B.M.- Cut nail in Power Pole #JM7254
Elev. 100.00 (Assumed Datum)

NOTES:

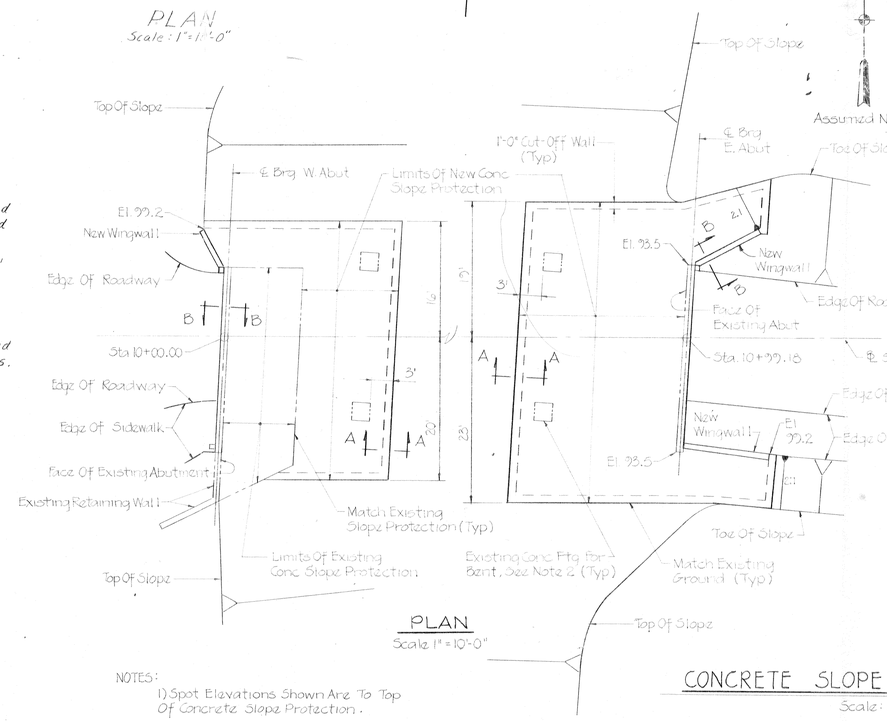
1) Existing reinforced concrete bridge deck was removed in July 1976.
2) Existing wooden barricades are to be removed and the existing paving and sidewalk are to be repaired as required.
3) Remove existing paving, curb and sidewalk as required to construct approach slab. Construct new curb and sidewalk integrally with approach slab to match existing curb, paving and sidewalk at end of approach slab and bridge deck, sidewalk and curb at bridge.
4) Remove existing paving and sidewalk as required to construct curb and sidewalk integrally with approach slab to match bridge deck, sidewalk and curb at bridge and existing sidewalk and paving at end of slab.
5) Relocate 2" gas line as required to construct new wingwall.

PLAN
Scale: 1" = 1'-0"



NOTE:
Curb Angles At East And West Abutments Are To Be Removed.

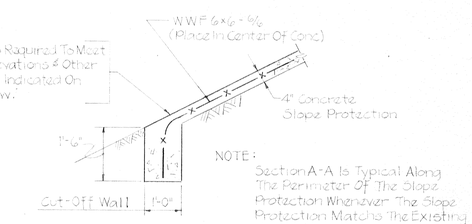
TYPICAL SECTION
(Existing Conditions)
Scale: ¼" = 1'-0"



PLAN
Scale: 1" = 10'-0"

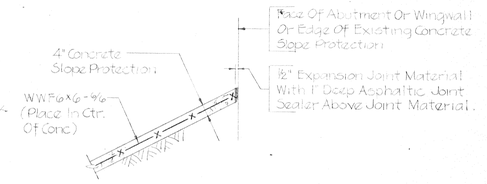
NOTES:

1) Spot Elevations Shown Are To Top Of Concrete Slope Protection.
2) Top Of Existing Concrete Footings For Bents Shall Be 6" Min. Above Slope Protection.



NOTE:
Section A-A Is Typical Along The Perimeter Of The Slope Protection Whenever The Slope Protection Matches The Existing Ground.

SECTION A-A
Scale ½" = 1'-0"



SECTION B-B
Scale ½" = 1'-0"

CONCRETE SLOPE PROTECTION DETAILS
Scale: As Noted

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Design EBW									
Check SWR									

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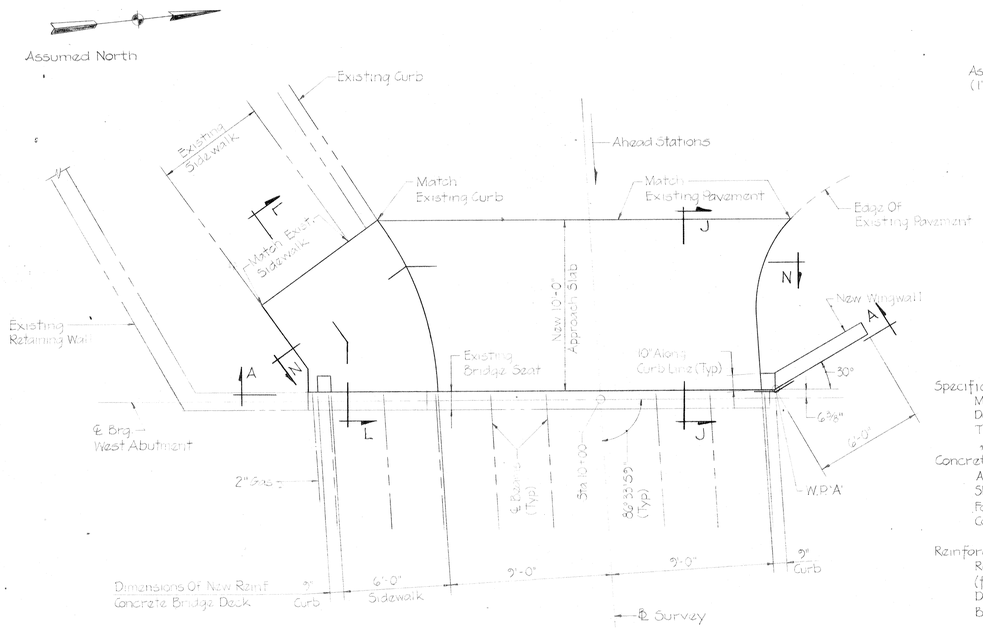
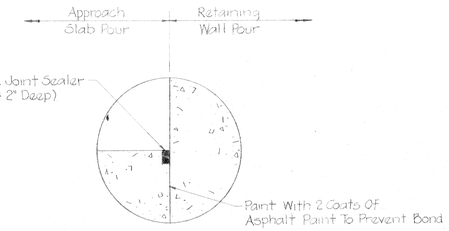


PLAN
AT WEST ABUTMENT
Scale: ¼" = 1'-0"



DETAIL A
Not to Scale

GENERAL NOTES

Specifications:
Material And Workmanship Are To Conform With The Virginia Department Of Highways, Road And Bridge Specifications, And The Special Provisions

Concrete:
All Concrete For The Wingwalls, Approach Slabs And Slope Protection Shall Be Class A3 Concrete (f'c = 3000 psi) Using Crushed Stone Or Gravel For Coarse Aggregate. All Concrete For The Bridge Deck Shall Be Class A4 Concrete (f'c = 4000 psi) Using Lightweight Aggregate.

Reinforcing Steel:
Reinforcing Steel Shall Conform To A.S.T.M. Designation A-615, Grade 40 (fy = 40,000 psi). All Splices Shall Be Lapped A Minimum Of 24 Bar Diameters Unless Otherwise Noted. Minimum Cover For Any Bar Shall Be 2" Unless Otherwise Noted.

Structural Steel:
All Structural Steel Shall Conform To A.S.T.M. Designation A-36.

Chamfer:
All Exposed Corners Of Concrete Shall Be Chamfered ¾" × ¾" With Milled Chamfer Strips Except Where Indicated By The Following Notation On The Plans "Do Not Chamfer"

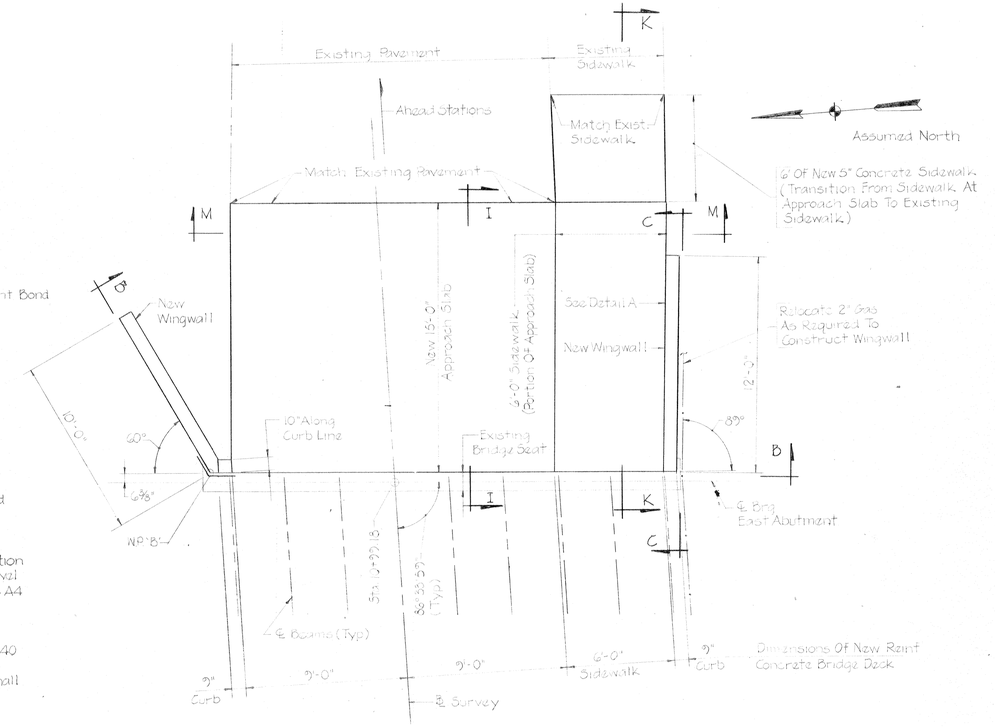
Painting Of New And Existing Structural Steel:
All New And Existing Structural Steel Shall Be Cleaned And Painted In Accordance With The Specifications.

Dampproofing:
Dampproofing Shall Be Applied To The Rear Face Of Wingwalls That Will Be In Contact With Earth.

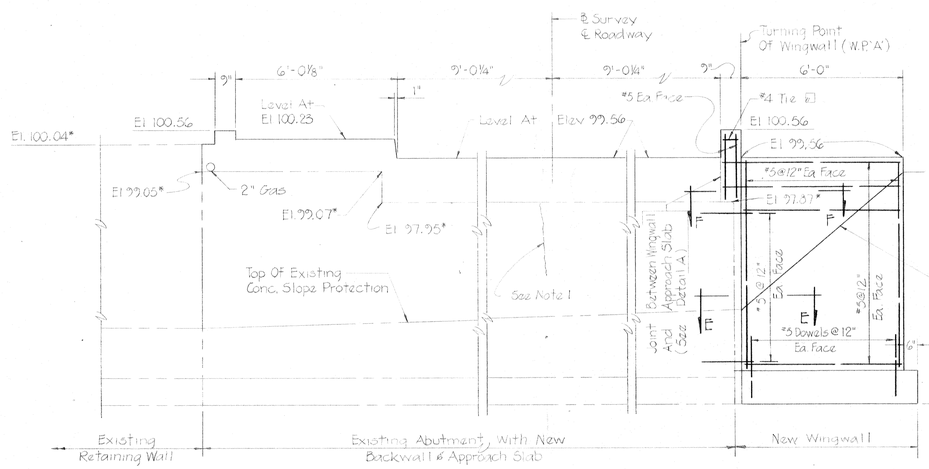
Waterproofing:
Apply 2-Ply Membrane Waterproofing, 18" Wide, To The Earth Side Of All Construction Joints

Design:
Dead Load – 5" Reinforced Concrete Deck Using Lightweight Aggregate With Provision Of 25 psf For Future Wearing Surface.

Live Load – AASHTO Type 3 Or Type 3S2 Vehicle.



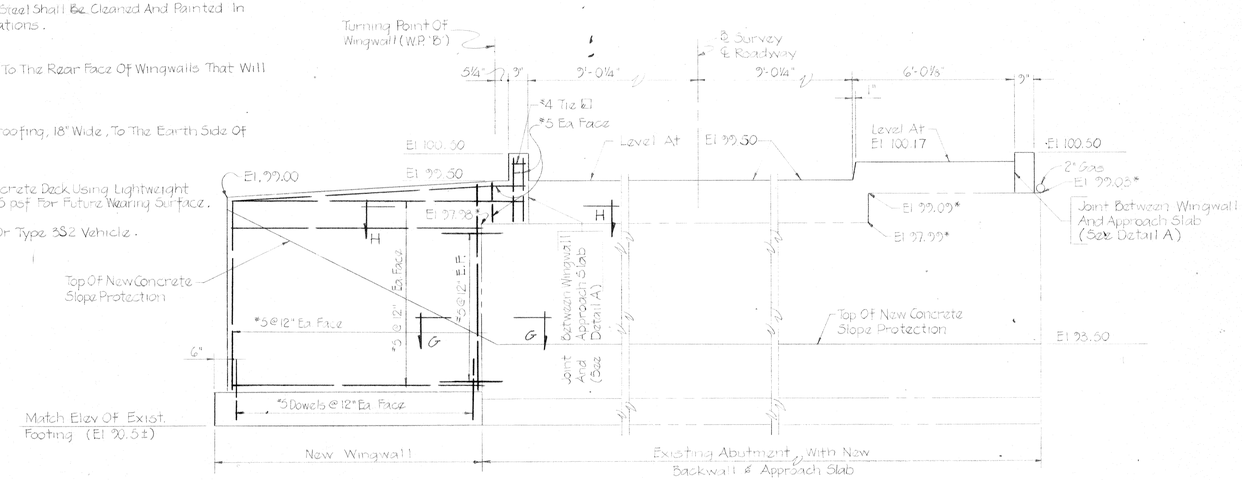
PLAN
AT EAST ABUTMENT
Scale: ¼" = 1'-0"



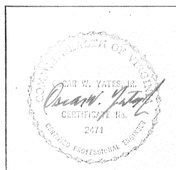
ELEVATION A-A
Scale: ⅜" = 1'-0"

NOTE 1:
Crack In Abutment To Be Patched With An Epoxy Adhesive Using An Approved Method Of Pressure Grouting.

"*"
Existing Bridge Seat Elevations And Top Of Existing Wall Elevations.



ELEVATION B-B
Scale: ⅜" = 1'-0"



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ABUTMENT WINGWALLS AND APPROACH SLAB DETAILS – I

IMPROVEMENTS TO EAST BROADWAY STREET BRIDGE

Sheet 2 of 6

DATE JAN 1977
SCALE AS SHOWN

JOB NUMBER 11-75-100

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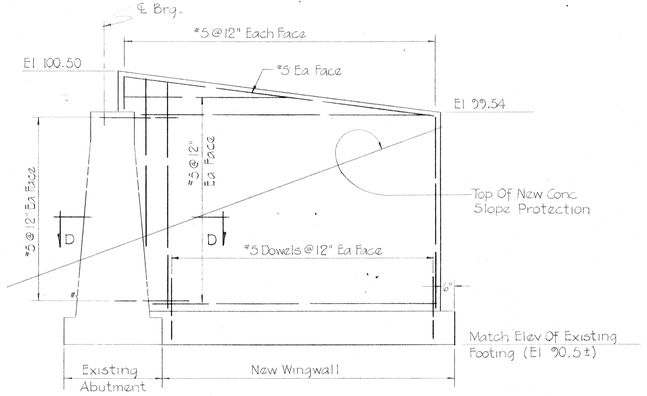
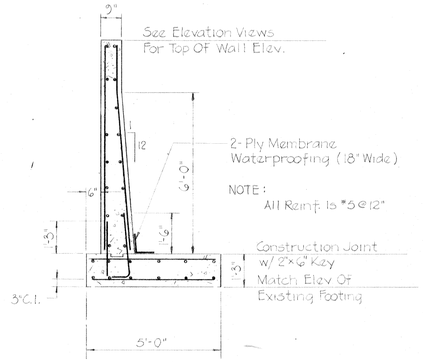


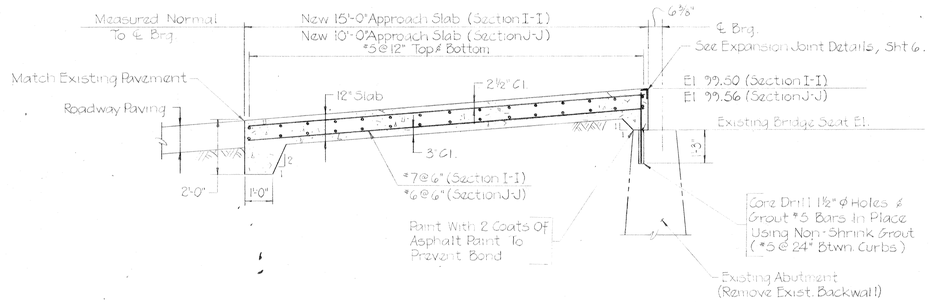
ELEVATION C-C

Scale 3/8" = 1'-0"



TYPICAL WINGWALL SECTION

Scale 3/8" = 1'-0"



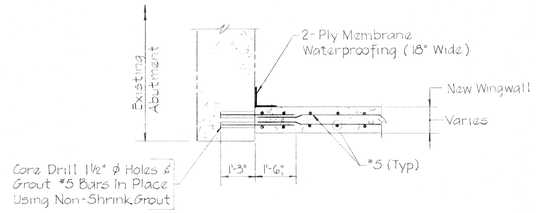
SECTION I-I

(East Approach Slab Shown)

SECTION J-J

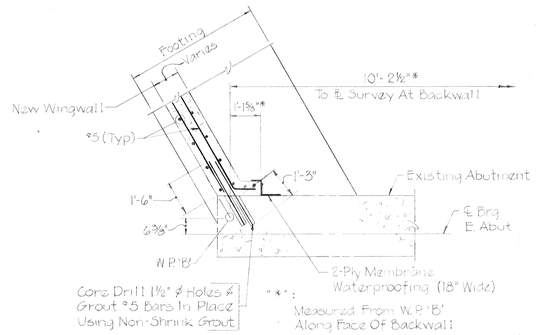
(West Approach Slab As Noted)

Scale 3/8" = 1'-0"



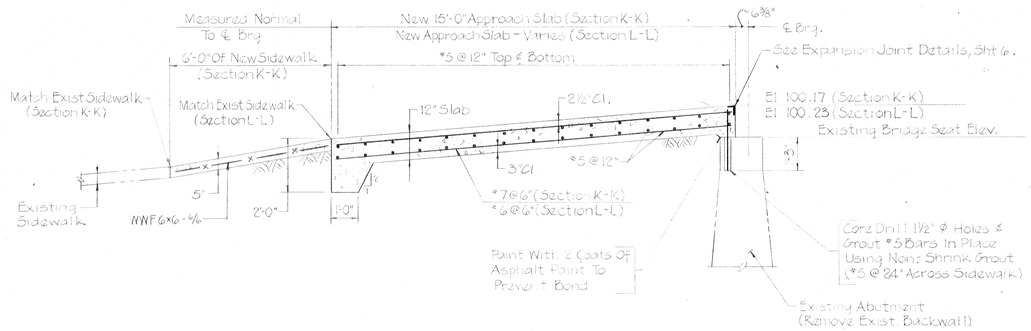
SECTION D-D

Scale 3/8" = 1'-0"



SECTION G-G

Scale 3/8" = 1'-0"



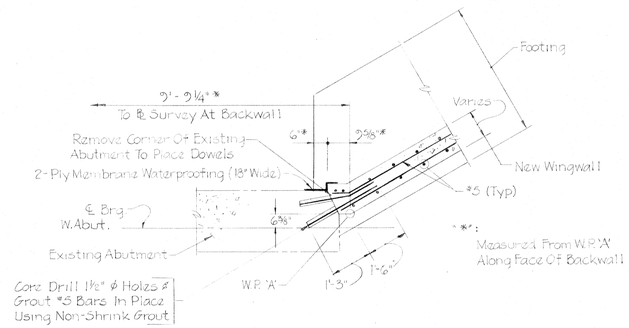
SECTION K-K

(East Approach Slab Shown)

SECTION L-L

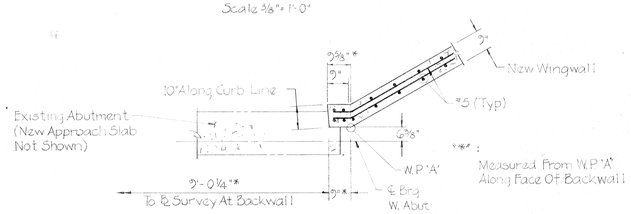
(West Approach Slab As Noted)

Scale 3/8" = 1'-0"



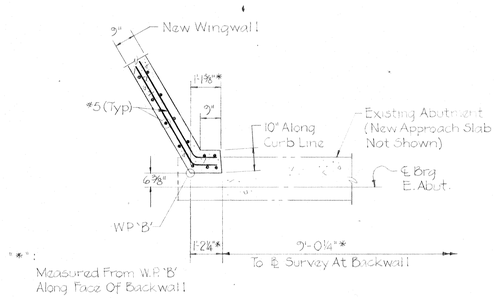
SECTION E-E

Scale 3/8" = 1'-0"



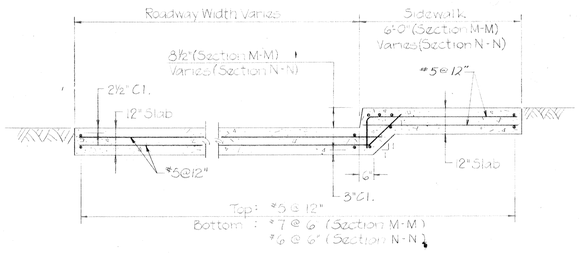
SECTION F-F

Scale 3/8" = 1'-0"



SECTION H-H

Scale 3/8" = 1'-0"



SECTION M-M

(East Approach Slab Shown)

SECTION N-N

(West Approach Slab As Noted)

Scale 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
R. W. YATES
LICENSED
2471
PROFESSIONAL ENGINEER

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HOPEWELL, VIRGINIA

ABUTMENT WINGWALLS AND APPROACH SLAB DETAILS – II

IMPROVEMENTS TO EAST BROADWAY STREET BRIDGE

Sheet	DATE	JOB NUMBER
3 of 6	JAN 1977	11-75-100
	SCALE AS SHOWN	

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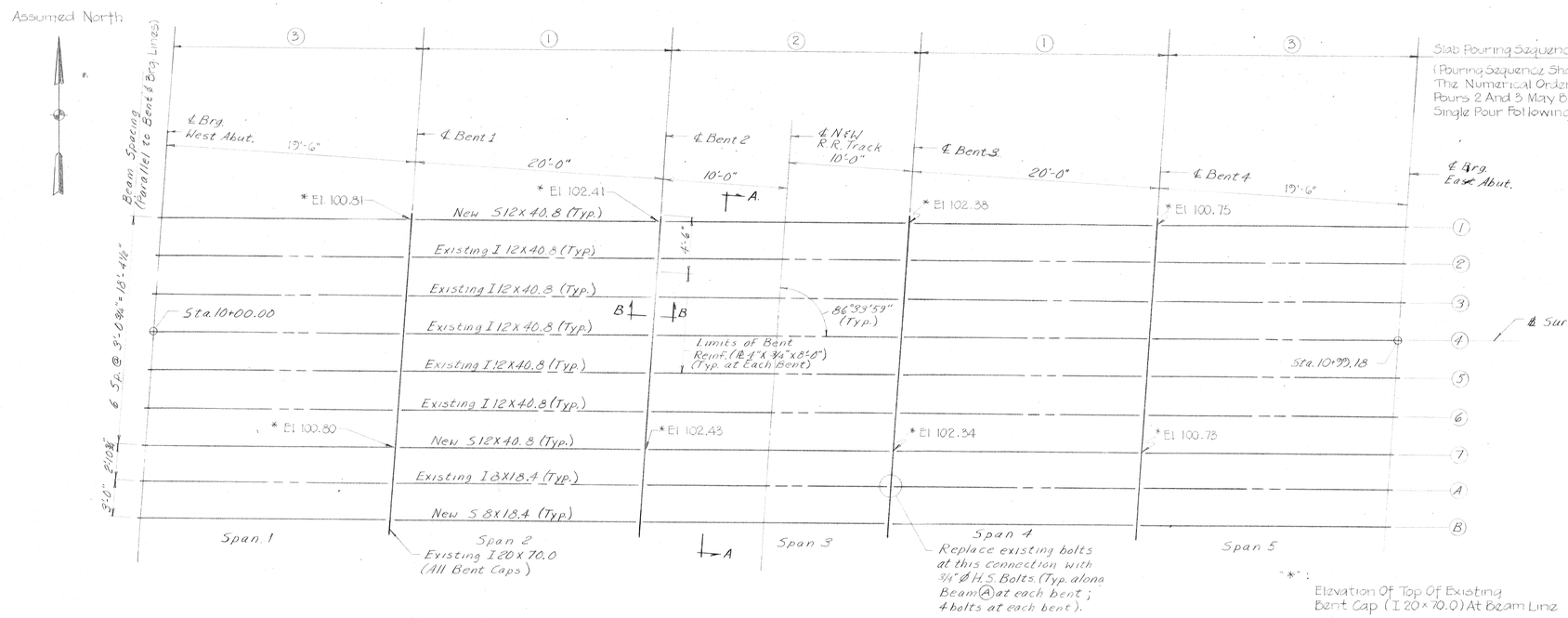


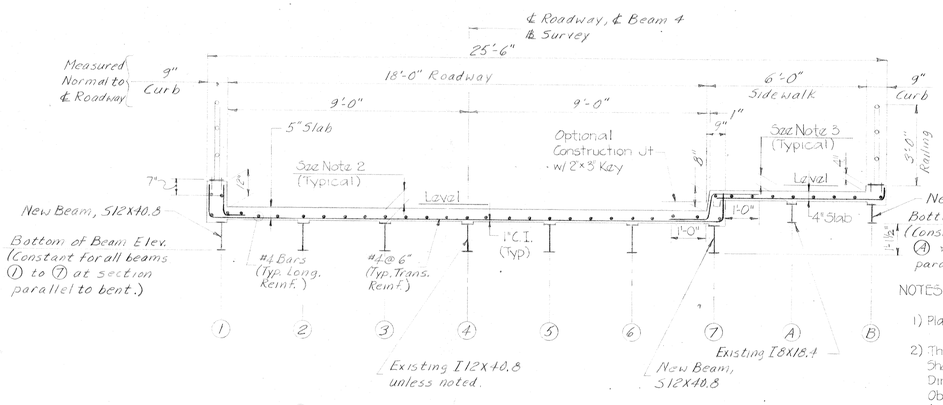
FRAMING PLAN
Scale: 3/16" = 1'-0"

Notes:
1) Remove handrail and posts along north and south side of bridge.
2) Remove curb angles at east and west ends of bridge.
3) Remove Beams 1, 7, and 8 in all spans including bearing plates at abutments and angles at bents. These existing beams should be used as a guide for fabricating the replacement beams and connections for these locations. The replacement beams' connection patterns should be identical to the existing beam except that the holes for handrail post connections and curb angle connections are not needed. Bearing details shall be as detailed on these plans. (Shop drawings (#252-19, 7 shts) are also available for the existing bridge.)

FINISHED DECK ELEVATIONS

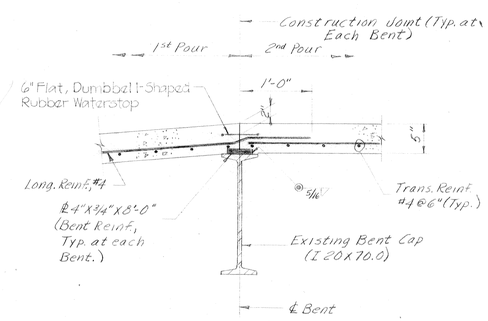
	North Curb	Roadway	Sidewalk	South Curb
℄ Brg West Abut	100.60	99.60	100.27	100.60
℄ Span 1	101.39	100.39	101.06	101.39
℄ Bent 1	102.18	101.18	101.85	102.18
℄ Span 2	102.99	101.99	102.66	102.99
℄ Bent 2	103.80	102.80	103.47	103.80
℄ Span 3	103.90	102.90	103.57	103.90
℄ Bent 3	103.74	102.74	103.41	103.74
℄ Span 4	102.93	101.93	102.60	102.93
℄ Bent 4	102.12	101.12	101.79	102.12
℄ Span 5	101.33	100.33	101.00	101.33
℄ Brg East Abut	100.54	99.54	100.21	100.54

Note: Finished Deck Elevations Given Are Top Of Proposed Concrete Deck.



SECTION A-A
(Parallel to Bent)
Scale: 3/16" = 1'-0"

NOTES:
1) Place Trans. Reinf. Normal To Beams.
2) This Dimension Is Approximately 6". However The Formwork Shall Be Adjusted Vertically To Increase Or Decrease This Dimension So That The Finished Deck Elevations May Be Obtained And A 5" Slab Is Maintained Between Beams. (Maximum Adjustment Anticipated = ± 1")
3) This Dimension Is Approximately 4½". However The Formwork Shall Be Adjusted Vertically To Increase Or Decrease This Dimension So That The Finished Deck Elevations May Be Obtained And A 4" Slab Is Maintained Between Beams. (Maximum Adjustment Anticipated = ± ½")



SECTION B-B
(Bent Reinf. and Construction Joint Details)
Scale: 1" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN W. YATES, JR.
CERTIFICATE NO. 2521
REGISTERED PROFESSIONAL ENGINEER

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FRAMING PLAN

IMPROVEMENTS TO
EAST BROADWAY STREET BRIDGE

Sheet 4 of 6

DATE JAN 1977
SCALE AS SHOWN

JOB NUMBER 11-75-100

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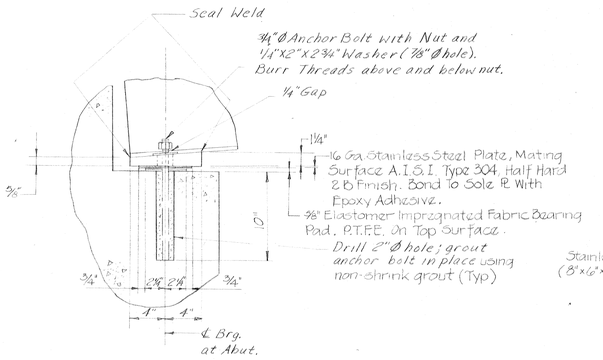
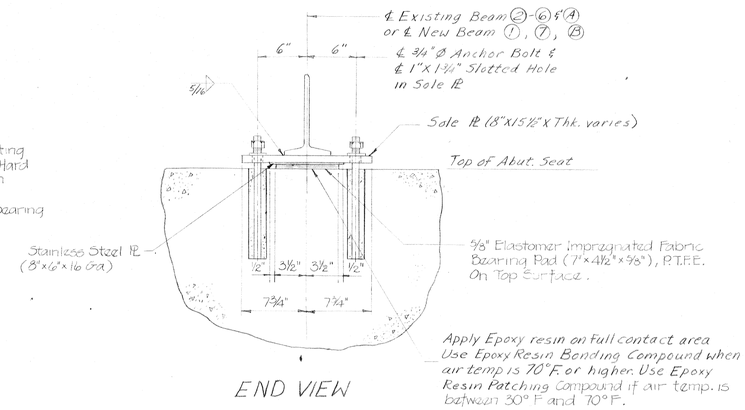


SIDE VIEW



END VIEW

BEARING DETAILS AT ABUTMENTS FOR ALL BEAMS

Scale: 1½" = 1'-0"

SUGGESTED SEQUENCE FOR REPLACING BEARINGS AT ABUTMENTS

1) Remove all beams in spans 1 and 5. Beams ① and ⑦ should be removed by removing the bolts at the bent connection. This will leave the beams and the connection angles intact for use as a guide in fabricating the replacement beams and connections. Beams ② through ⑥ should be removed by removing the rivets at the beam connections, leaving the angles and bent connections intact. Beams Ⓐ and Ⓑ should be removed by removing the bolts connecting these beams to the top flange of the bent. Beam Ⓑ should be used as a guide in fabricating a replacement beam.

2) The existing bearing plates should be removed from beams ② through ⑥ and Ⓐ. The new sole plates should be welded to these beams and the beams stored until replacement.

3) All existing anchor bolts should be cut off flush with the abutment seat.

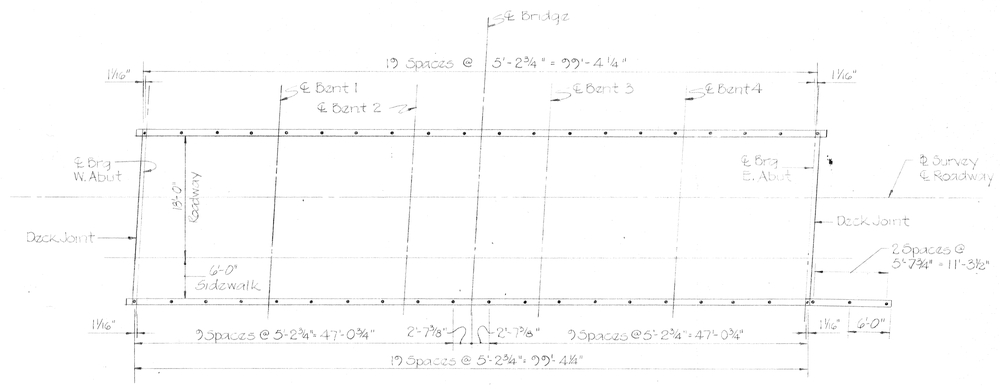
4) Drill holes and grout the new anchor bolts in place.

5) Clean the entire seat area.

6) Cement the elastomer impregnated fabric bearing pads in place.

7) Replace the existing beams ② through ⑥ and Ⓐ. Place New beams ①, ⑦, and Ⓑ. Use ¾" ϕ H.S. bolts at all connections.

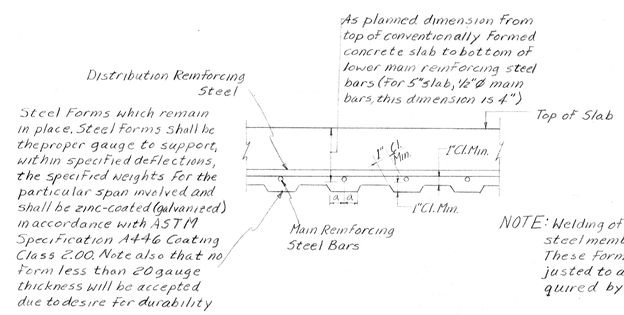
8) Complete the bearing assembly by placing the washer and nuts in position.



RAIL POST SPACING

Scale 3/32" = 1'-0"

Assumed North

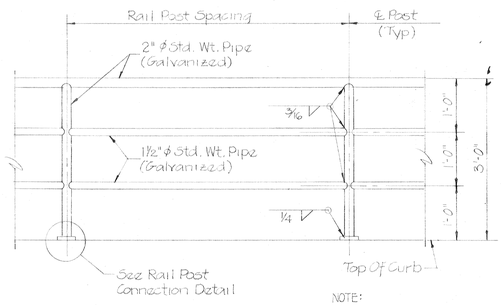


Steel Forms which remain in place. Steel forms shall be the proper gauge to support, within specified deflections, the specified weights for the particular span involved and shall be zinc-coated (Galvanized) in accordance with ASTM Specification A446 Coating Class 2.00. Note also that no form less than 20 gauge thickness will be accepted due to desire for durability.

NOTE: Welding of forms to any structural steel member will not be permitted. These forms shall be vertically adjusted to attain line and grade required by the Plans.

DETAIL OF STEEL FORMS WHICH REMAIN IN PLACE FOR CONCRETE SLAB SUPPORTED BY STEEL BEAMS

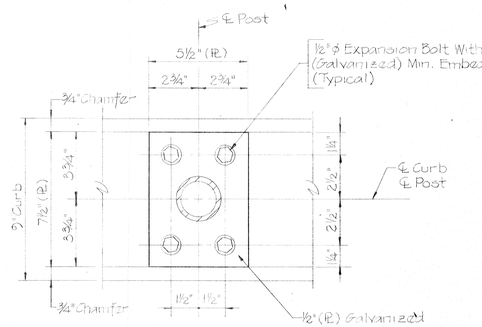
Not to Scale



NOTE: Provide Joints in Railing As Required For Erection.

RAILING DETAIL

Scale ¾" = 1'-0"



RAIL POST CONNECTION DETAIL

Scale 3" = 1'-0"

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OSCAR W. YATES, JR.
CERTIFICATE No. 2471
CERTIFIED PROFESSIONAL ENGINEER

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Design EBW							SCALE AS SHOWN
Check SWR							JOB NUMBER 11-75-100

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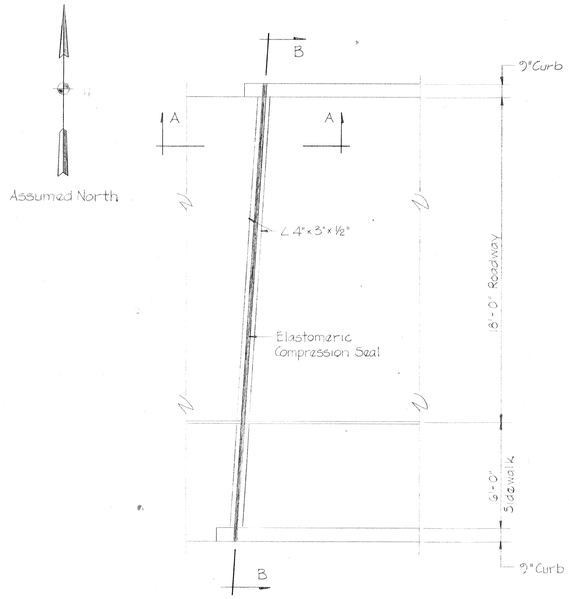
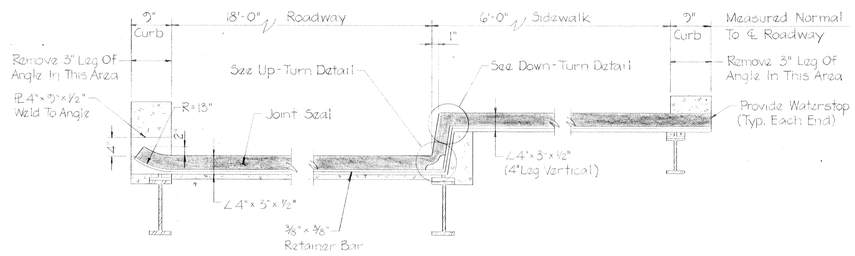
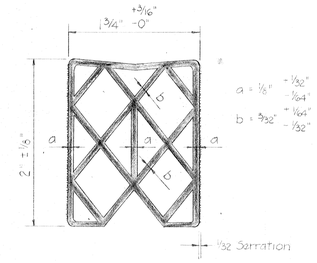


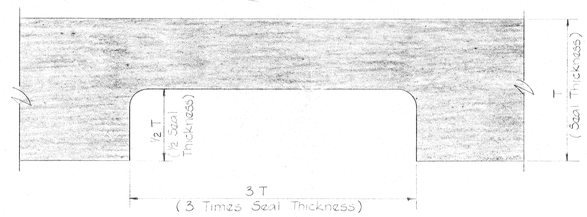
PLAN
AT WEST APPROACH
Scale: 1/4" = 1'-0"



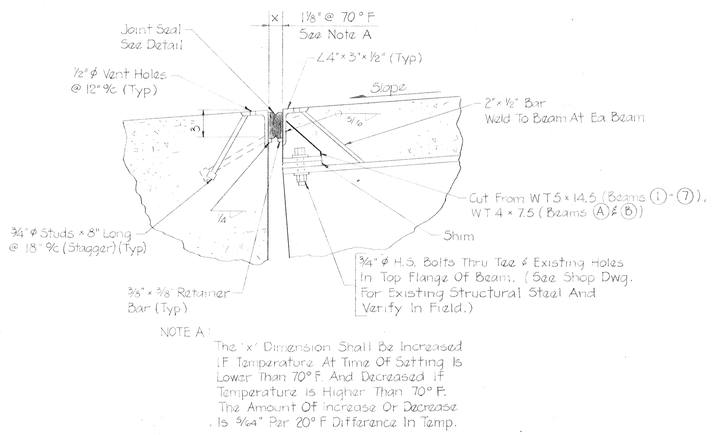
SECTION B-B
Scale: 3/4" = 1'-0"



ELASTOMERIC COMPRESSION SEAL DETAIL
Not to Scale

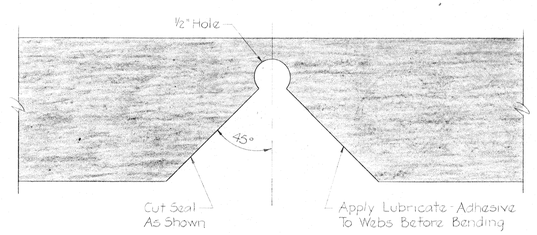


UP-TURN DETAIL
Not to Scale

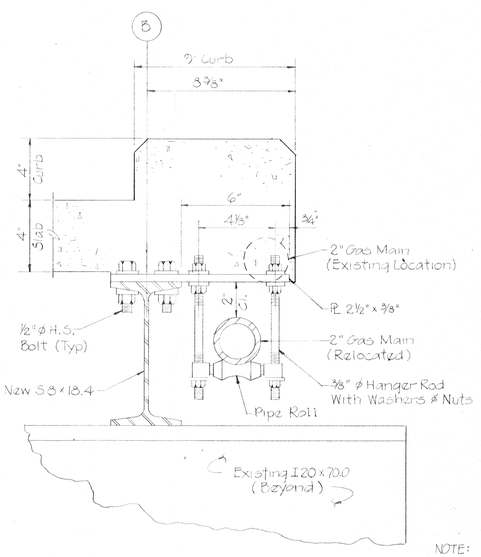


NOTE A:
The 'x' Dimension Shall Be Increased If Temperature At Time Of Setting Is Lower Than 70° F. And Decreased If Temperature Is Higher Than 70° F. The Amount Of Increase Or Decrease Is 9/64" Per 20° F Difference In Temp.

SECTION A-A
Scale: 1½" = 1'-0"



DOWN-TURN DETAIL
Not to Scale



NOTE:
Maximum Spacing Between Hangers = 10'.

2 INCH GAS MAIN HANGER DETAIL
Scale 3" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN W. YATES
CERTIFICATE No. 2471
REGISTERED PROFESSIONAL ENGINEER

Drafting SWR	DATE	REVISIONS	MCA ENGINEERING ASSOCIATES, INC. CONSULTING ENGINEERS MANASSAS, VIRGINIA 22110	DEPARTMENT OF PUBLIC WORKS HOPEWELL, VIRGINIA	EXPANSION JOINT DETAILS AT ABUTMENTS	IMPROVEMENTS TO EAST BROADWAY STREET BRIDGE	Sheet 6 of 6	DATE JAN 1977 SCALE AS SHOWN	JOB NUMBER 11-75-100
Check EBW									
Design EBW									
Check SWR									