MODIFIED BY EI 75-015 EFFECTIVE 2/13/1975; EI 77-002 EFFECTIVE 1/11/1977; EI 78-050 EFFECTIVE 8/18/1978; EI 78-052 EFFECTIVE 9/1/1978; EI 79-044 EFFECTIVE 10/25/1979; EI 80-010 EFFECTIVE 2/22/1980 MAIN OFFICE

REGIONAL OFFICES

SUPERSEDED BY EB 81-010 EFFECTIVE 3/16/1981

ENGINEERING INSTRUCTION

NEW YORK STATE DEPARTMENT OF TRANSPORTATION

SUBJECT: BRIDGE DESIGN DATA SHEETS

Subject Code: 7.35-2

Distribution: ☒ Main Office ☒ Regions ☐ Special

Code: EI 74-89

Date: 9/23/74

Supersedes: See below

APPROVED:

R. M. Kamp

Deputy Chief Engineer (Structures)

BDD	74-1	Supersedes	73-1
"	74-2	"	73-2
"	74-3	"	73-3
"	74-4	"	73-4
"	74-10	"	72-10
"	74-11	"	72-11
"	74-12	"	72-12
"	74-14	"	72-14
"	74-~~5~~40	"	72-40
"	74-51	"	73-51
"	74-52	"	73-52
"	74-56	"	73-56

Attached are copies of the above noted sheets for distribution to your personnel. The principal changes on these sheets are listed below.

BDD 74-1, 2, 3 and 4
The item numbers were changed to conform with the Standard Specifications, dated January 2, 1973.

BDD 74-10, 74-14
The distance between the last bridge railing post and the first post on the approach railing was changed from 5'-0" to 6'-0" to agree with the railing sheets.

The shoulder break line was changed to line up with the end of the wingwall.

BDD 74-11, 74-12
References to 73 BDD sheets were changed to 74.

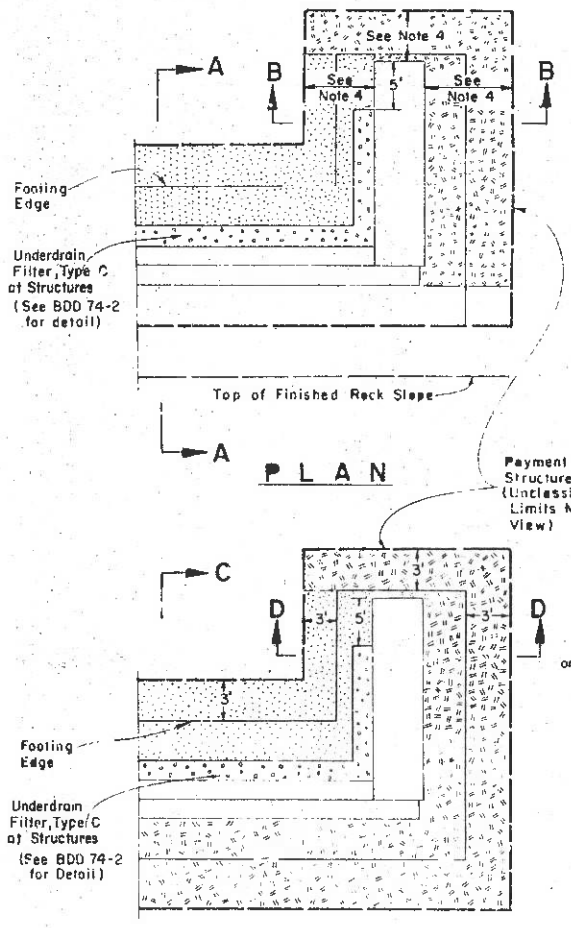
BDD 74-40
References to the Highway Standard sheets were changed to agree with the new Highway Standard sheets.

BDD 74-51, 74-52
Item numbers were changed to conform with the Standard Specifications.

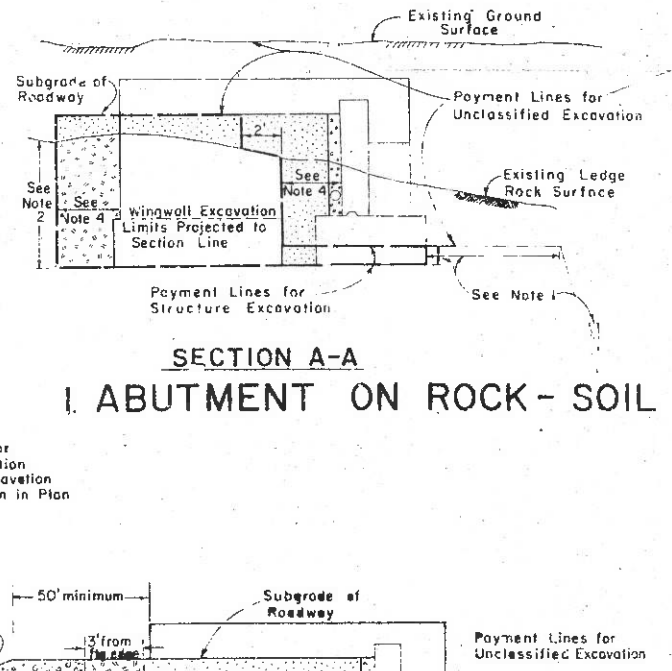
BDD 74-56

The depth of the anchor system has been made the same for 2 and 4 Rail Steel Bridge Railing. In addition, references to appropriate AISI specifications were added.

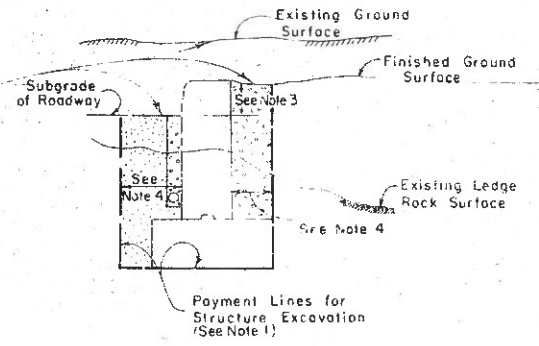
BDD 74-1



PLAN



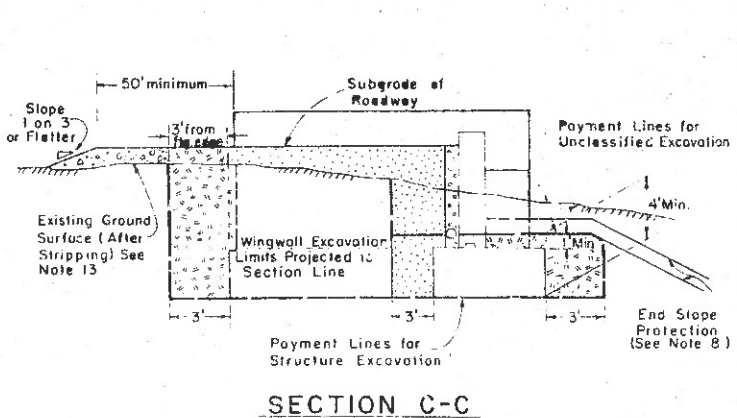
SECTION A-A



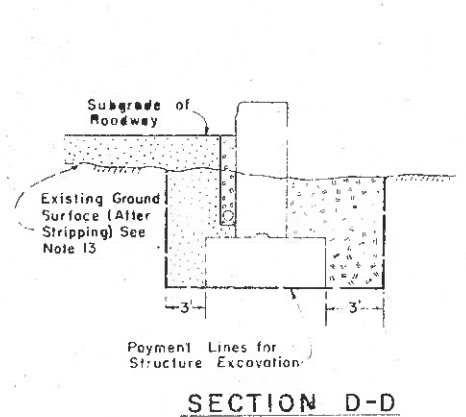
SECTION B-B

1. ABUTMENT ON ROCK - SOIL AND ROCK CUT

Payment Lines for Structure Excavation (Unclassified Excavation Limits Not Shown in Plan View)



SECTION C-C



SECTION D-D

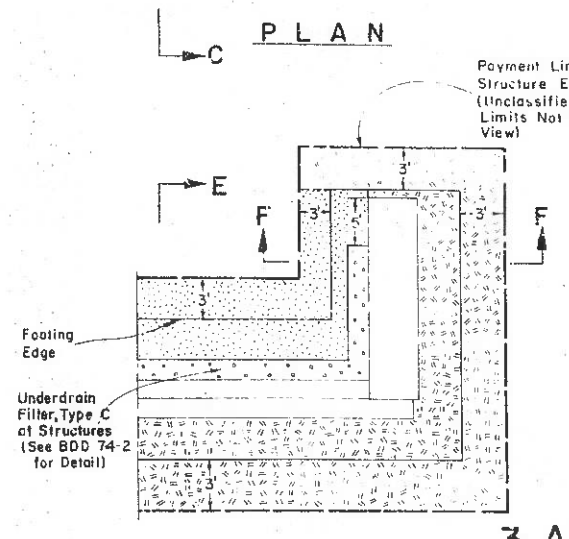
2. ABUTMENT ON SOIL OR PILE FOUNDATION

CASE 1 SOIL CUT - SUBGRADE ABOVE EXISTING GROUND

C

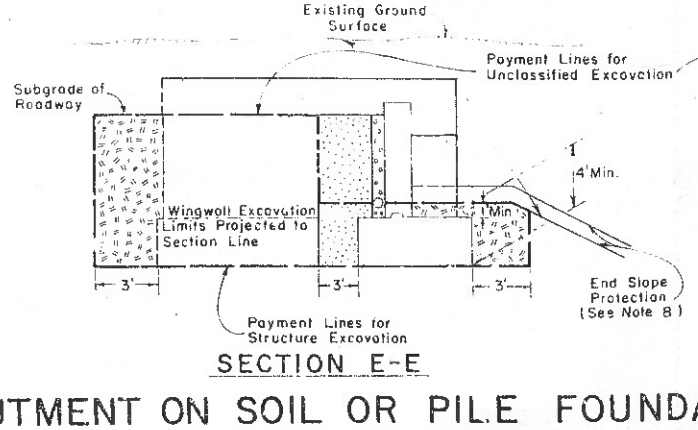
PLAN

Payment Lines for Structure Excavation (Unclassified Excavation Limits Not Shown in Plan View)

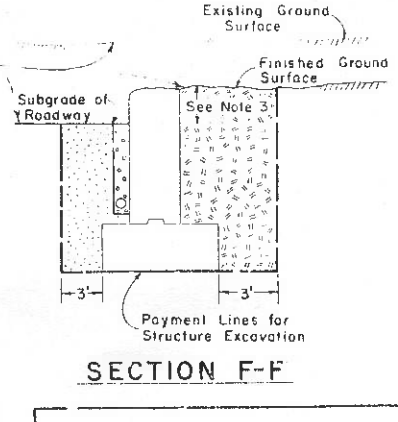


E

PLAN



SECTION E-E



SECTION F-F

3. ABUTMENT ON SOIL OR PILE FOUNDATION

CASE 2 SOIL CUT - SUBGRADE BELOW EXISTING GROUND

GENERAL NOTES

1. Dimensions for abutment setback, depth of embedment for abutments and wingwall footings, and finished rock slope to be determined by Soil Mechanics Bureau.
2. Step wingwall footing to obtain minimum embedment in rock, whenever feasible. The Soil Mechanics Bureau will provide allowable step elevation and bearing capacity criteria.
3. If the height between subgrade and finished ground exceeds 5', provide porous drainage material with outlet on outside of wingwall as shown on BDD 74-2, "Wall on Soil or Piles, Foundation-Soil Cut."
4. Minimum dimension shall be 3 feet. When the heel of the footing exceeds 3 feet, the footing shall be poured against the rock face.
5. At box bridges the payment line for Item 203.21 will be 2 feet above the top slab or to the subgrade of roadway, whichever is less.
6. At box bridges where construction equipment is to be allowed to cross over the installation before placement of adjacent embankment material, 1 vertical on 5 horizontal ramps with a minimum of 2' - 0" fill over top slab shall be constructed and compacted under the general specifications for excavation, Section "h. Embankments." Where these ramps cannot be utilized as part of the completed embankment, they shall be installed and removed at the Contractors expense.
7. Indicate on the plans the estimated depth of unsuitable material below the bottom of footing as reported by Soil Mechanics Bureau. Also place the following special note on the plans: "Unsuitable material shall be removed to the depths noted on the plans. No payment will be made for removal below these depths unless authorized in writing by the Engineer after consultation with the Regional Soils Engineer." The excavation shall be backfilled with Item 203.21 unless otherwise specified.
8. Slope protection treatment shall be as specified by Preliminary Plan Unit in conjunction with Soil Mechanics Bureau, as required.
9. At some sites, fill is to be placed to the subgrade of roadway and allowed to stand, in order to consolidate underlying material, before piles are driven. In this case, a detail should be used similar to the applicable case shown on Bridge Design Data Sheet B.D.D. 74-4 or 5.
10. Highway embankment material placed within these limits shall have a maximum dimension of 6 inches and shall be compacted to 95% of maximum density as defined by A.A.S.H.O. T 99. Quantity to be included in highway estimate.
11. Highway embankment material and Item 203.21 shall be placed simultaneously, in horizontal layers on both sides of the vertical payment line.
12. The rear limit of Item 203.21 for abutments with unsymmetrical wingwalls shall be defined by a vertical plane drawn parallel to the centerline of bearing from 3 feet outside the shorter wingwall. The remainder of the longer wall shall be backfilled with Item 203.21 in accordance with BDD 74-2, No. 7, "Walls on Soil or Pile Foundation."
13. Topsoil shall be stripped beneath abutments and piers in fills less than 20' in height from a rectangular or trapezoidal area bounded by lines 15 feet outside the abutment and wingwall footings, or to the toe of slope, whichever is less. The depth of stripping shall be determined by the Regional Soils Engineer and displayed on the highway cross sections by the Regional Design Engineer.

SPECIAL NOTE

The designer shall determine if sheeting is required for any of the structure excavations shown on these BDD sheets. If sheeting is required, complete details shall be shown on the plans.

LEGEND

- Select Structure Fill - Bridges (Item 203.21) - 100% Compaction Required Per A.A.S.H.O. T-99
- Underdrain Filter, Type C at Structures (Item 605.11) No Compaction Control Required.
- Embankment in Place (Item 203.03) - 90% Compaction Required (Subgrade Areas 95%) Per A.A.S.H.O. T-99
- Backfill with Suitable Excavated Material as Provided For Under Item 206.01, Structure Excavation - 95% Compaction Required Per AASHO T-99
- Area Enclosed Within These Lines Designates Payment Limits for Structure Excavation Item 206.01

REVISED 9/9/1974 (1973 Spec. Item No.)

Prepared and submitted for approval by the Soil mechanics Bureau

Wm. P. Hofmann, P.E. 9/29/72

Wm. P. Hofmann, Director

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

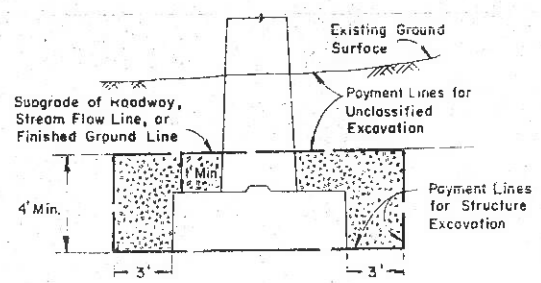
EXCAVATION AND BACKFILL PAYMENT LINES AND DETAILS FOR BRIDGES

Approved ... / 1973

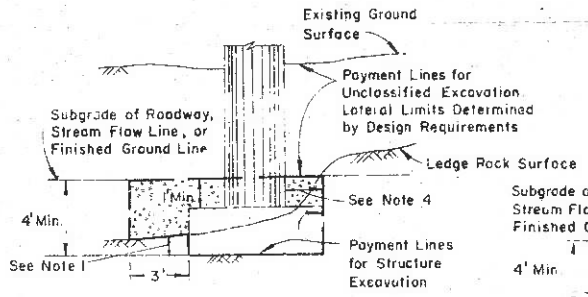
Deputy Chief Engineer (Structures)

BDD 74-1

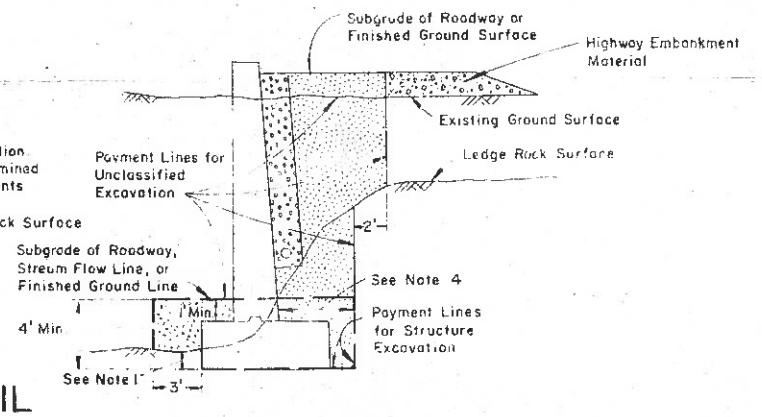
BDD 74-2



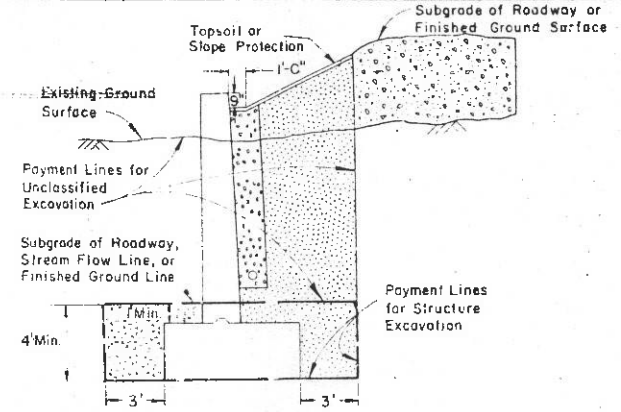
4. PIER ON SOIL OR PILE FOUNDATION - SOIL CUT



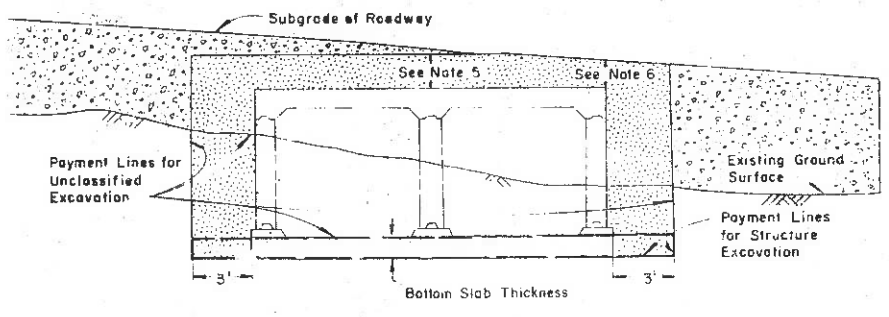
5. PIER ON ROCK, SOIL AND/OR ROCK CUT



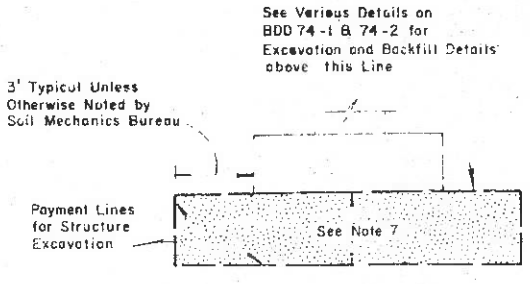
6. WALLS ON ROCK, SOIL AND/OR ROCK CUT



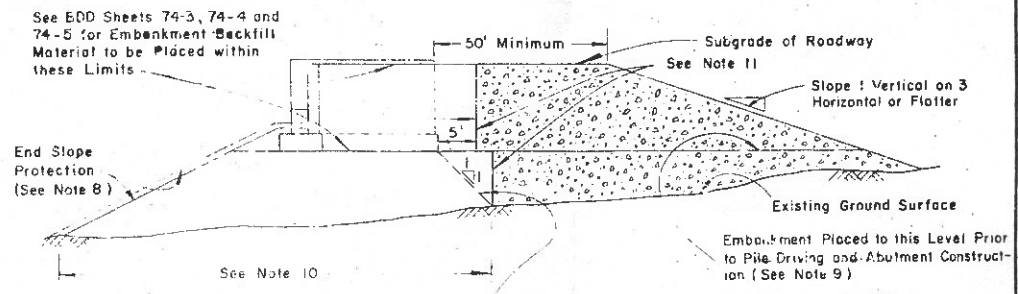
7. WALLS ON SOIL OR PILE FOUNDATION - SOIL CUT



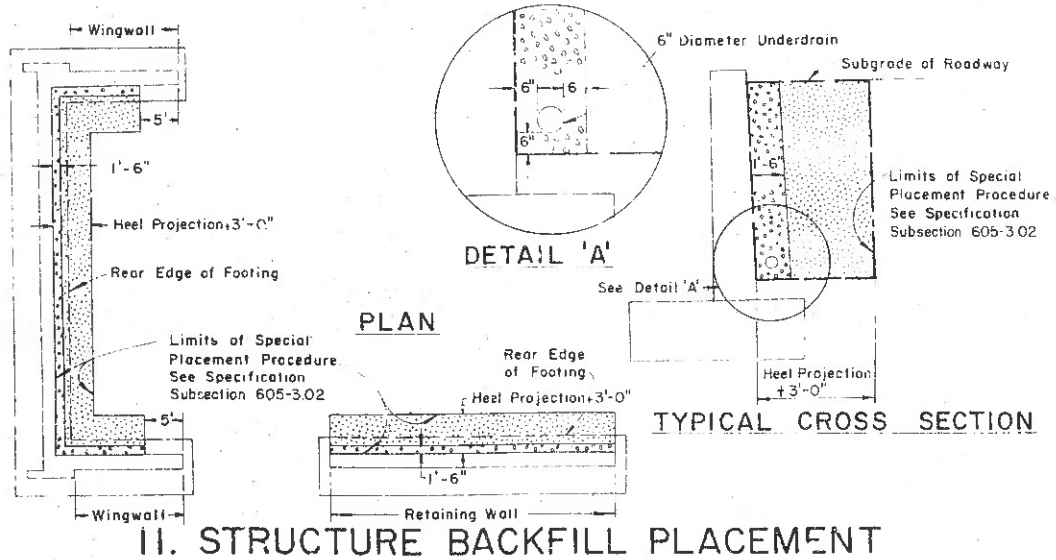
8. BOX BRIDGE-SOIL CUT



9. UNSUITABLE MATERIAL REMOVAL



10. ABUTMENT ON FILL PILE FOUNDATION



11. STRUCTURE BACKFILL PLACEMENT LIMITS FOR POROUS DRAINAGE AGGREGATE

LEGEND

- Select Structure Fill - Bridges (Item 203.21) 100% Compaction Required per A.A.S.H.O. T-99
- Select Subgrade (Item 203.04) 95% Compaction Required per A.A.S.H.O. T-99
- Underdrain Filter, Type C at Structures, Item 605.11
- Embankment in Place (Item 203.03) - 90% Compaction Required (Subgrade Areas 95%) Per A.A.S.H.O. T-99
- Backfill with Suitable Excavated Material as Provided For Under Item 206.01, Structure Excavation 95% Compaction Required Per A.A.S.H.O. T-99
- Area Enclosed Within These Lines Designates Payment Limits for Structure Excavation Item 203.01

Prepared and submitted for approval by the Soil Mechanics Bureau

Wm. P. Hofmann, P.E. 9/29/72

Wm. P. Hofmann, Director

Note: For General Notes See Drawing BDD-74-1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

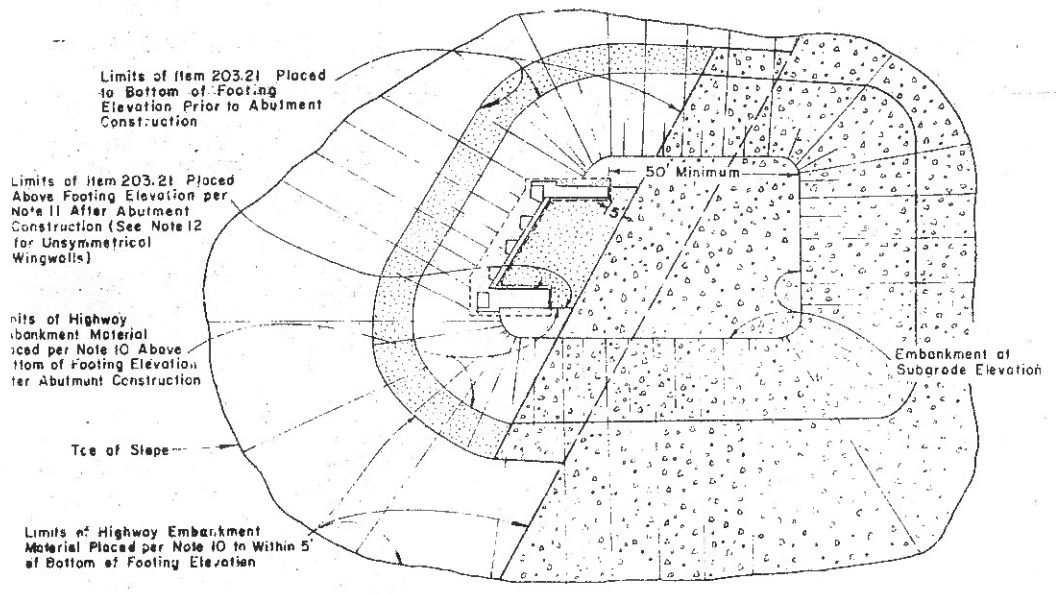
EXCAVATION AND BACKFILL PAYMENT LINES AND DETAILS FOR BRIDGES

Approved [illegible] 1973

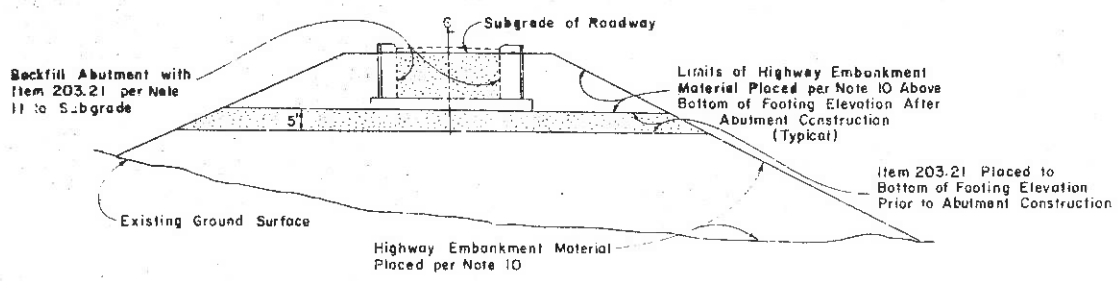
Deputy Chief Engineer (Structures)

REVISED 9/9/1974
(1973 Spec Item No.

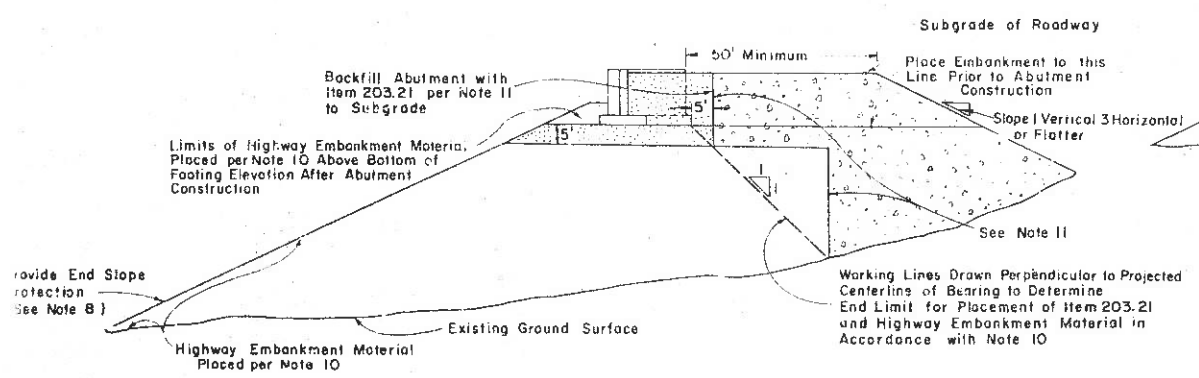
BDD 74-3



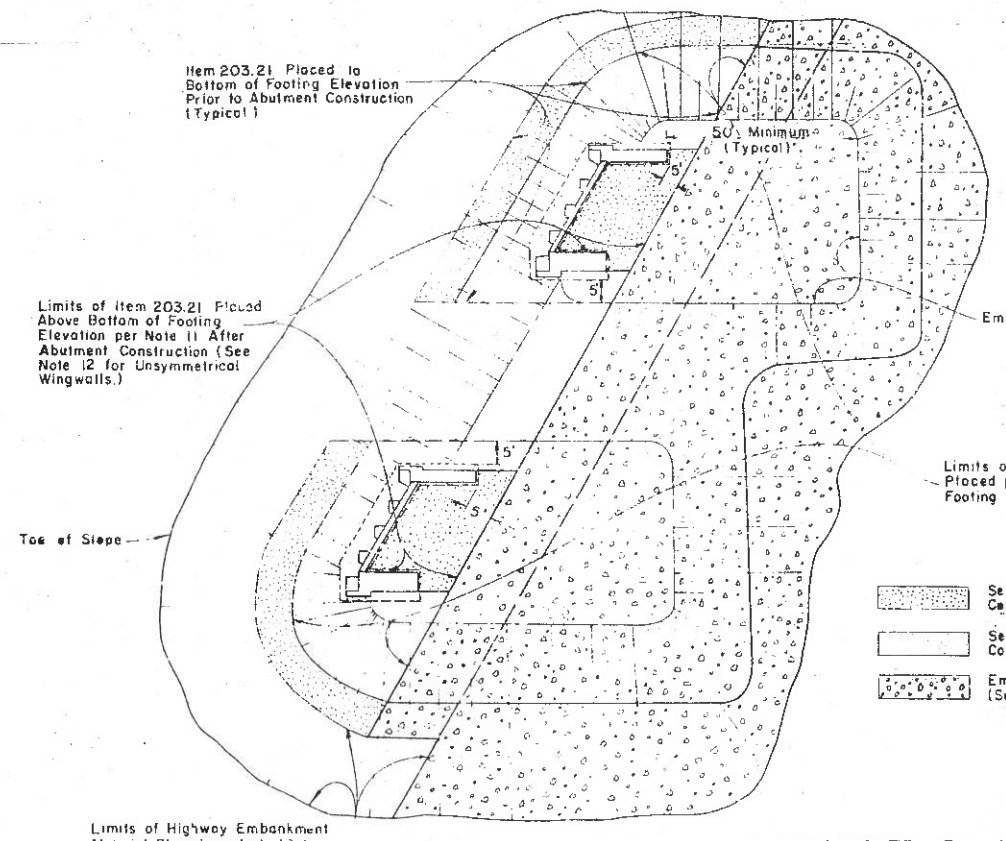
TYPICAL EMBANKMENT PLAN
SINGLE ABUTMENT



TYPICAL CROSS SECTION
THRU SINGLE ABUTMENT



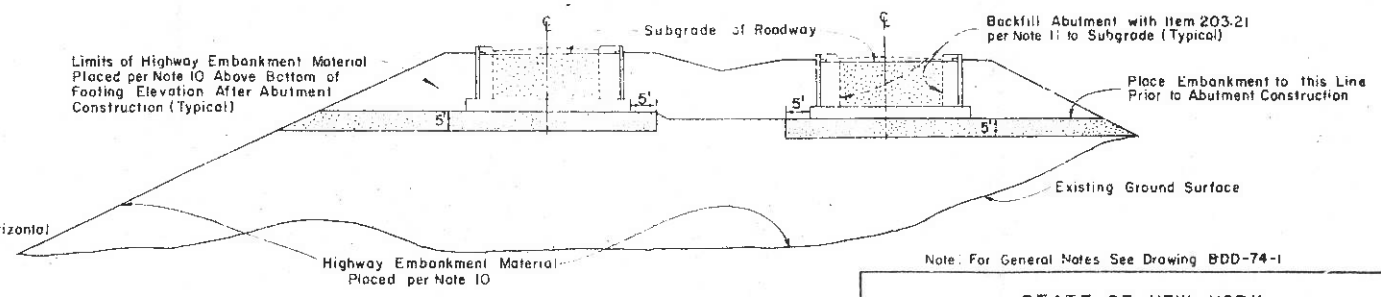
TYPICAL CENTERLINE SECTION
SINGLE OR TWIN ABUTMENTS



LEGEND

- Select Structure Fill-Bridges (Item 203.21)-100% Compaction Required Per A.A.S.H.O. T-99
- Select Subgrade (Item 203.04)-95% Compaction Required Per A.A.S.H.O. T-99
- Embankment in Place (Item 203.03)-90% Compaction Required (Subgrade Areas 95%) Per A.A.S.H.O. T-99

TYPICAL EMBANKMENT PLAN
TWIN ABUTMENTS



TYPICAL CROSS SECTION
THRU TWIN ABUTMENTS

Note: For General Notes See Drawing BDD-74-1

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

PLACEMENT LIMITS OF ITEM 203.21 FOR ABUTMENTS FOUNDED ON SPREAD FOOTINGS REQUIRING NO CONSOLIDATION OF FOUNDATION SOIL

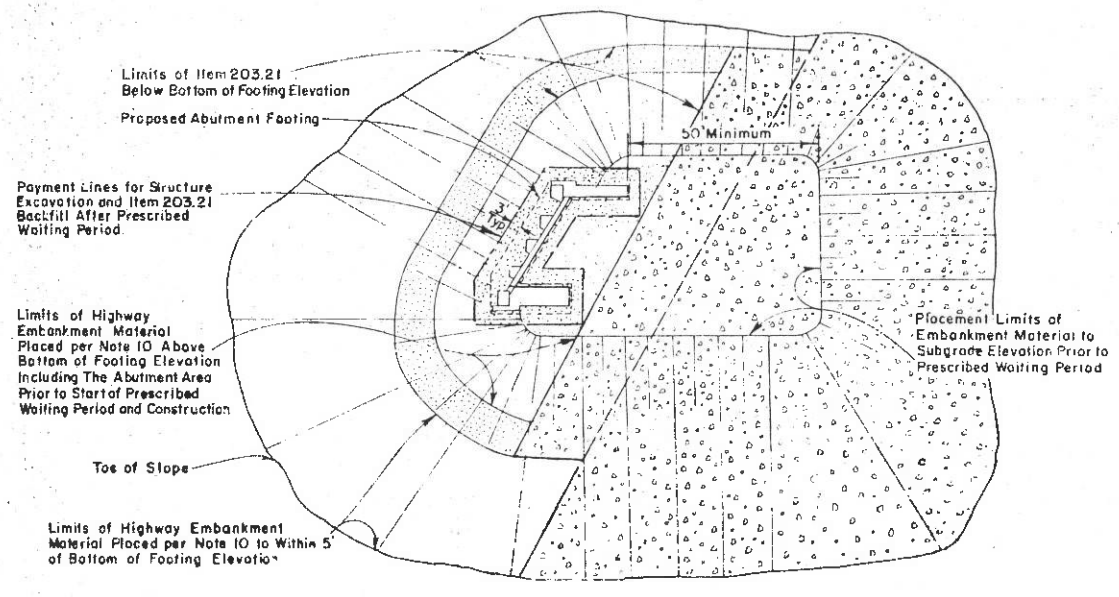
REVISED 9/9/1974
(1973 Spec, Item No.)

Prepared and submitted for approval by the Soil Mechanics Bureau
Wm. P. Hofmann, PE 9/29/72
Wm. P. Hofmann, Director

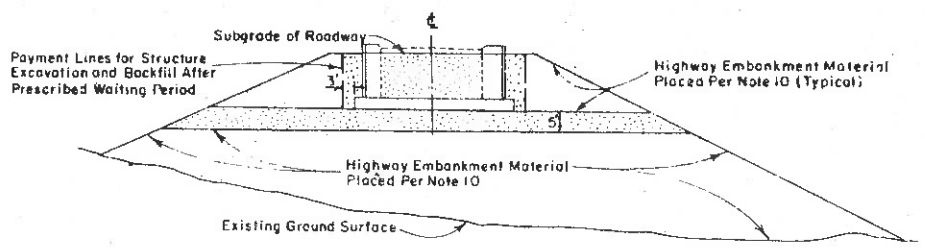
Approved 3/2/1973
Deputy Chief Engineer
(Structures)

BDD 74-3

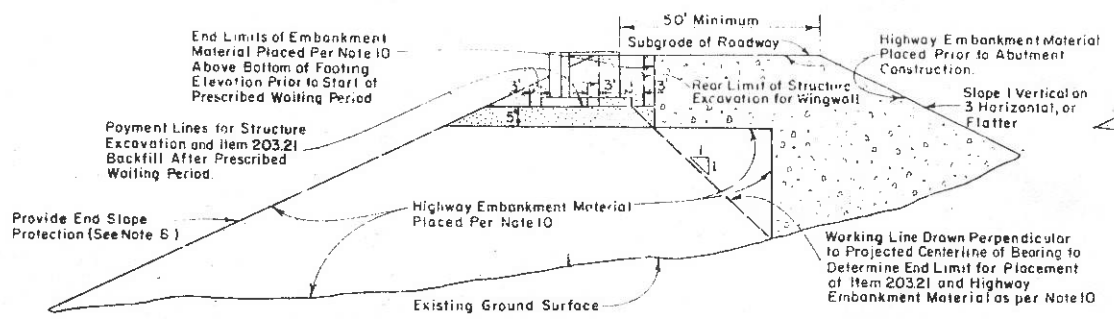
BDD 74-4



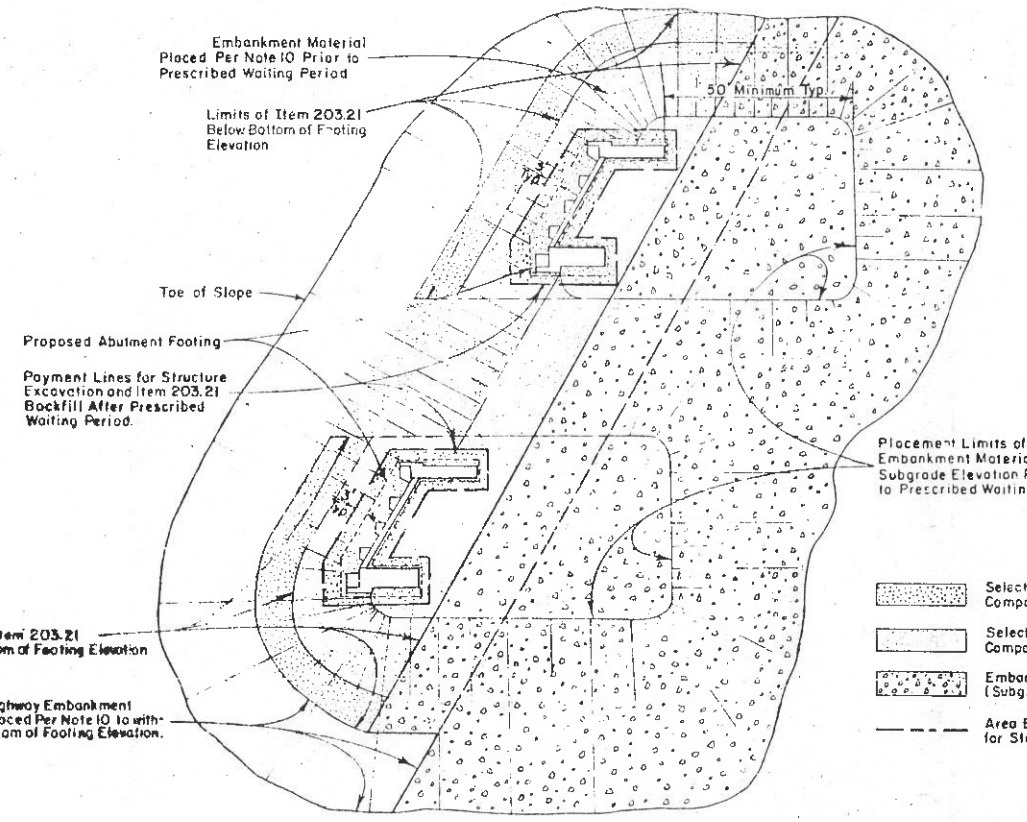
TYPICAL EMBANKMENT PLAN
SINGLE ABUTMENT



TYPICAL CROSS SECTION
THRU SINGLE ABUTMENT



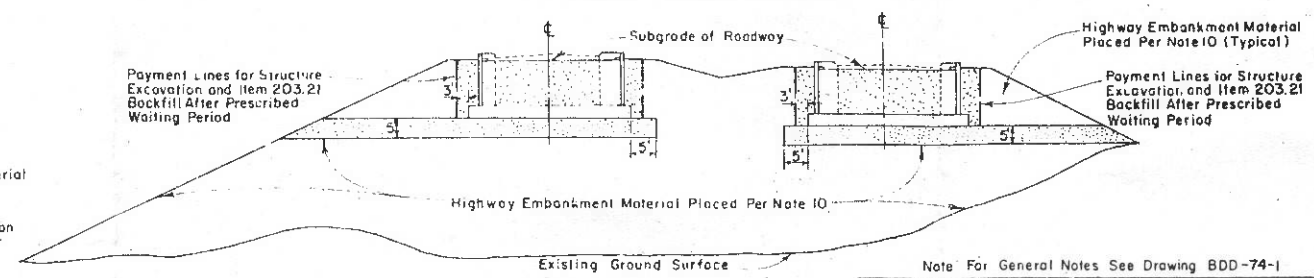
TYPICAL CENTERLINE SECTION
SINGLE OR TWIN ABUTMENTS



LEGEND

- Select Structure Fill-Bridges (Item 203.21)-100% Compaction Required Per A.A.S.H.O. T-99
- Select Subgrade (Item 203.04)-95% Compaction Required Per A.A.S.H.O. T-99
- Embankment in Place (Item 203.03)-90% Compaction Required (Subgrade Areas 95%) Per A.A.S.H.O. T-99
- Area Enclosed Within These Lines Designates Payment Limits for Structure Excavation Item 5B

TYPICAL EMBANKMENT PLAN
TWIN ABUTMENTS



TYPICAL CROSS SECTION
THRU TWIN ABUTMENTS

Note: For General Notes See Drawing BDD-74-1

REVISED 9/9/1974
(1973 Spec. Item No.)

Prepared and submitted for approval by the Soil Mechanics Bureau

Wm. P. Hofmann, P.E. 9/29/72

Wm. P. Hofmann, Director

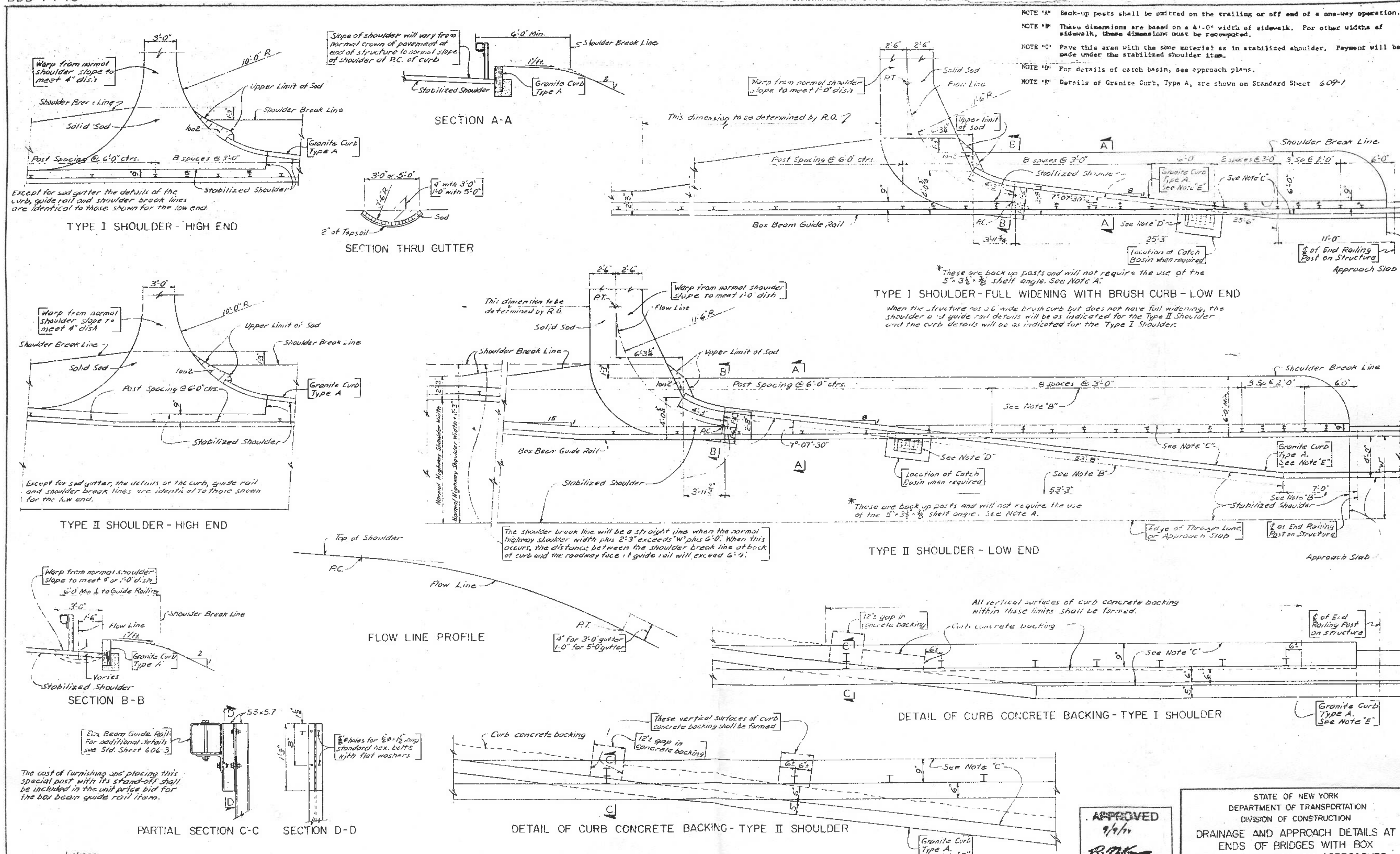
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

PLACEMENT LIMITS OF ITEM 203.21 FOR ABUTMENTS REQUIRING EMBANKMENT CONSTRUCTION TO SUBGRADE PRIOR TO ABUTMENT CONSTRUCTION TO CONSOLIDATE FOUNDATION SOIL

Approved 3/2/1973

Deputy Chief Engineer
(Structures)

BDD 74-4



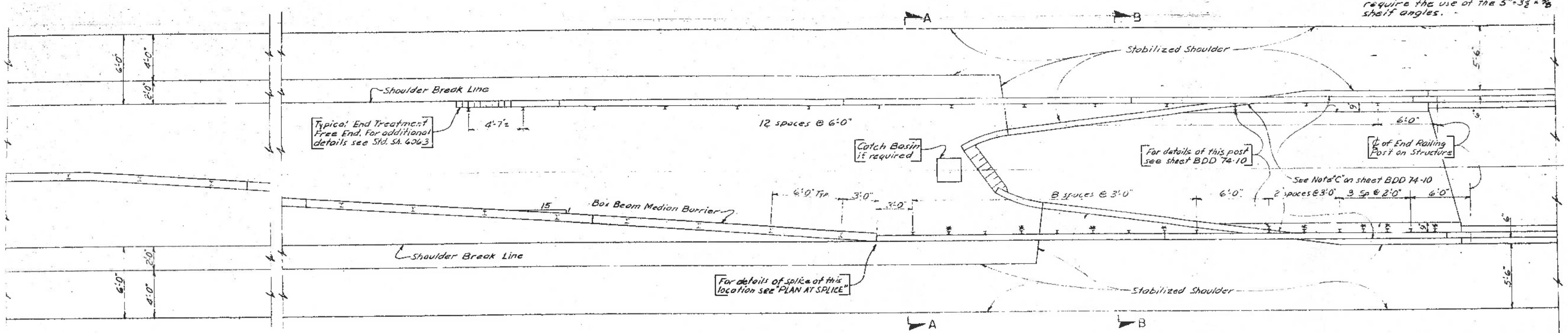
DETAILED BY J. HIPER
DETAIL CHECKED BY
Revised 9/74

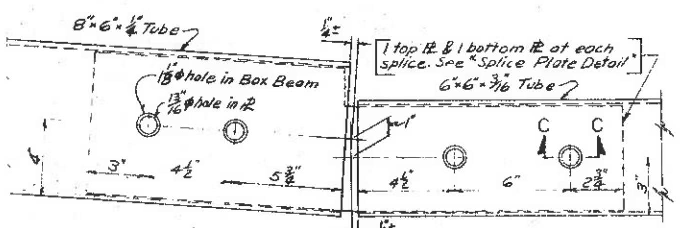
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

DRAINAGE AND APPROACH DETAILS AT ENDS OF BRIDGES WITH BOX BEAM GUIDE RAIL ON APPROACHES

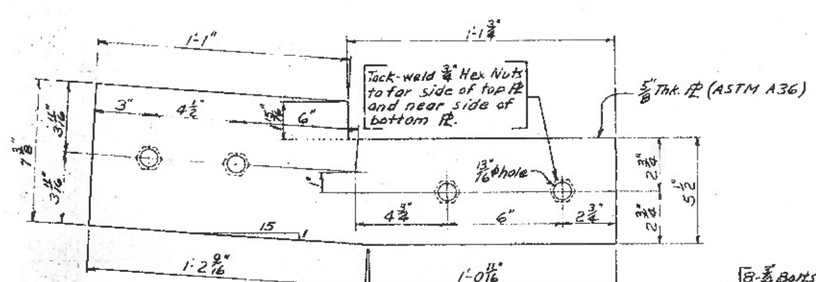
Note: For granite curb details see B.D.D. 74-10.

*- These are back-up posts and will not require the use of the 5" × 3½" × ⅜" shelf angles.

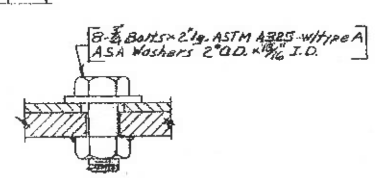




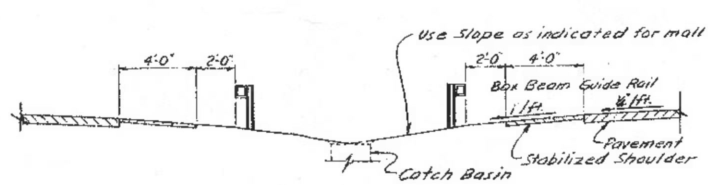
PLAN AT SPLICE



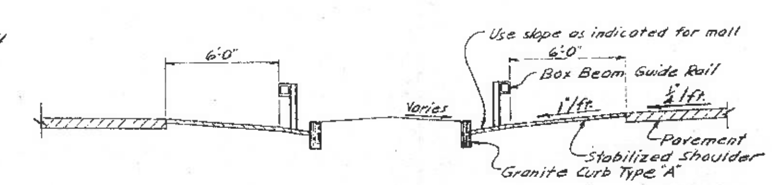
SPLICE PLATE DETAIL



SECTION C-C



SECTION A-A



SECTION B-B

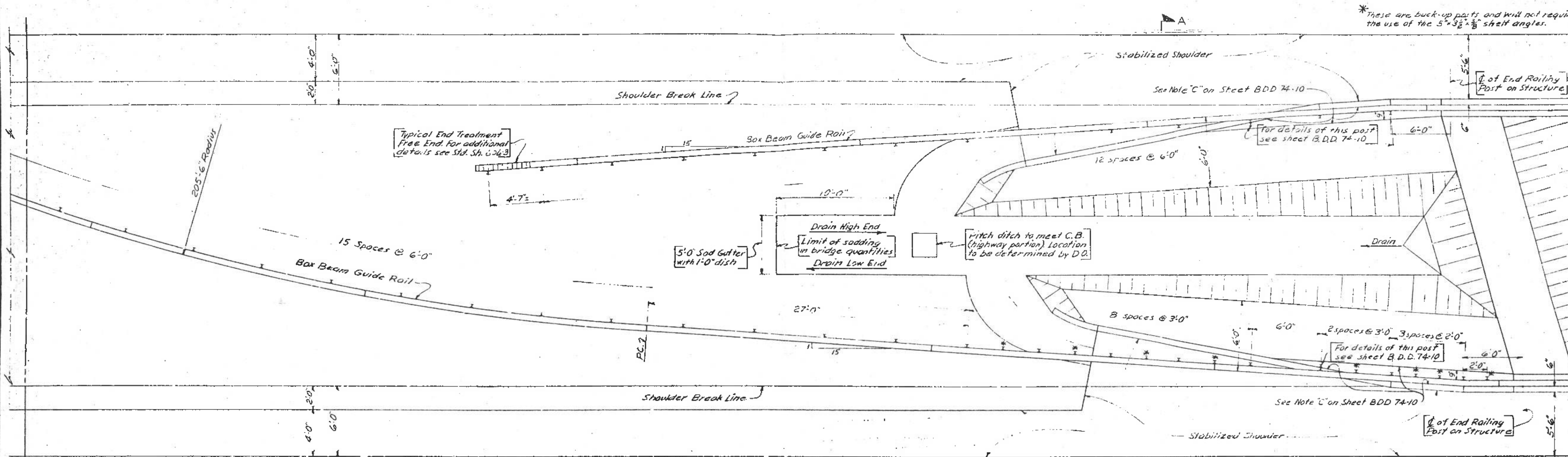
APPROVED 9/9/74

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

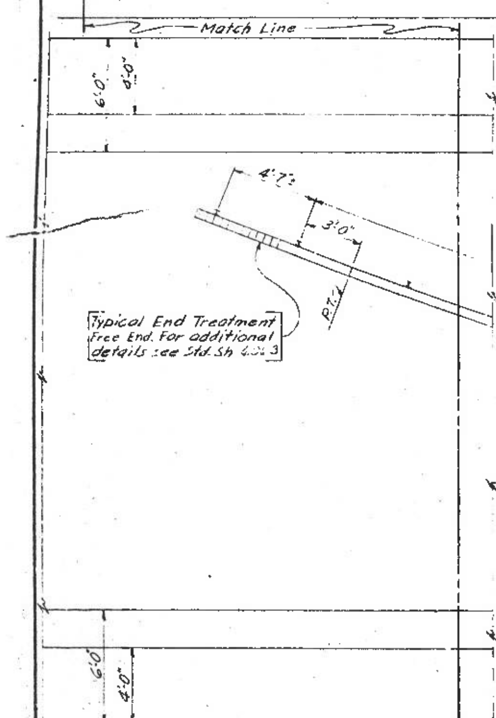
DRAINAGE AND APPROACH DETAILS AT MALL ENDS OF SPLIT BRIDGES WITH BOX BEAM MEDIAN BARRIER ON APPROACHES

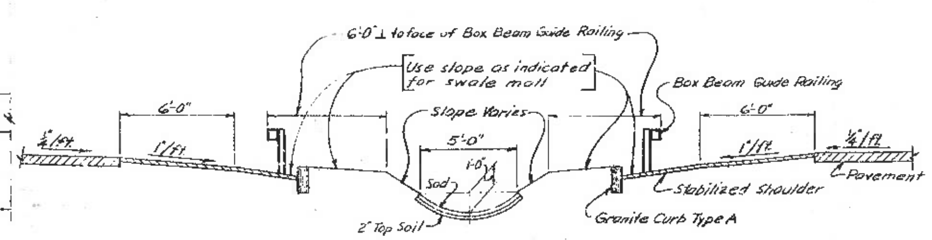
Note: For granite curb details, sod gutter details and Fur Flat Plan-High End see B.D.D. 74-14.

*These are back-up posts and will not require the use of the 5"×3½"×⅜" shelf angles.



PLAN OF SWALE MALL - LOW END
FOR MALLS 36'-0" IN WIDTH OR GREATER
(36'-0" MALL SHOWN)





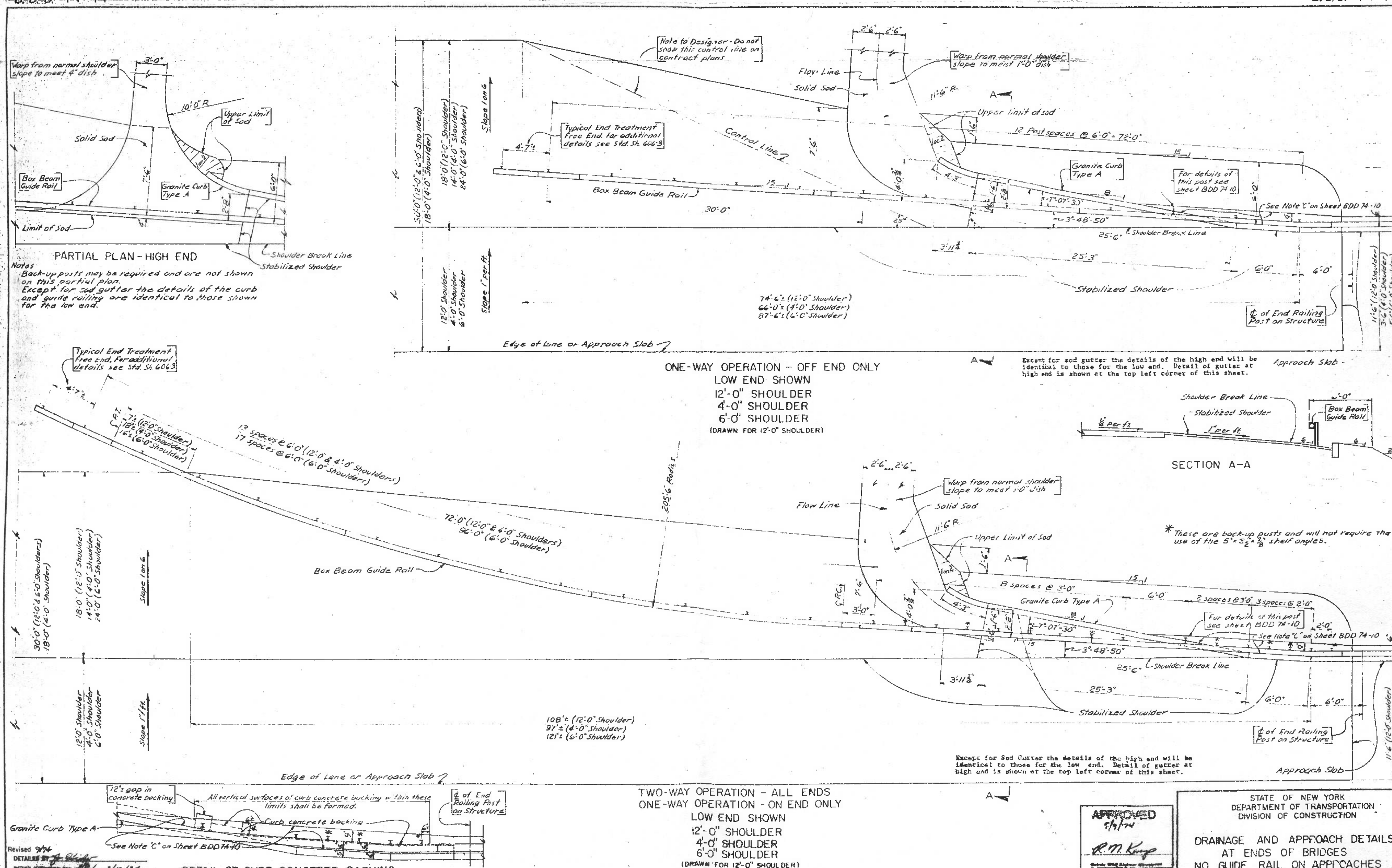
SECTION A-A

APPROVED 9/9/75

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

DRAINAGE AND APPROACH DETAILS
AT MALL ENDS OF SPLIT BRIDGES.
NO GUIDE RAIL ON APPROACHES

DETAILED BY / DETAIL CHECKED BY — Revised 9/74


PARTIAL PLAN - HIGH END
Notes
Back-up posts may be required and are not shown on this partial plan.
Except for sod gutter the details of the curb and guide railing are identical to those shown for the low end.
Warp from normal shoulder slope to meet 4" dish
3'-0"
10'-6" R
Upper Limit of Sod
Solid Sod
Box Beam Guide Rail
Granite Curb Type A
Limit of Sod
Shoulder Break Line
Stabilized Shoulder
Note to Designer - Do not show this control line on contract plans
Typical End Treatment Free End. For additional details see Std. Sh. 606-3
Control Line
Box Beam Guide Rail
Flow Line
Solid Sod
Warp from normal shoulder slope to meet 1'-0" dish
Upper limit of sod
12 Post spaces @ 6'-0" = 72'-0"
For details of this post see sheet BDD 74-10
See Note "C" on Sheet BDD 74-10
30'-0" (12'-0" & 6'-0" Shoulders)
18'-0" (4'-0" Shoulder)
18'-0" (12'-0" Shoulder)
14'-0" (4'-0" Shoulder)
24'-0" (6'-0" Shoulder)
Slope 1 on 6
12'-0" Shoulder
4'-0" Shoulder
6'-0" Shoulder
Slope 1" per ft.
74'-6" ± (12'-0" Shoulder)
66'-0" ± (4'-0" Shoulder)
87'-6" ± (6'-0" Shoulder)
Stabilized Shoulder
℄ of End Railing Post on Structure
11'-6" (12'-0" Shoulder)
3'-6" (4'-0" Shoulder)
5'-6" (6'-0" Shoulder)
Edge of Lane or Approach Slab
Approach Slab
ONE-WAY OPERATION - OFF END ONLY
LOW END SHOWN
12'-0" SHOULDER
4'-0" SHOULDER
6'-0" SHOULDER
(DRAWN FOR 12'-0" SHOULDER)
Except for sod gutter the details of the high end will be identical to those for the low end. Detail of gutter at high end is shown at the top left corner of this sheet.
SECTION A-A
Shoulder Break Line
Stabilized Shoulder
Box Beam Guide Rail
1" per ft.
* These are back-up posts and will not require the use of the 5" x 3½" x 3/8" shelf angles.
13 spaces @ 6'-0" (12'-0" & 4'-0" Shoulders)
17 spaces @ 6'-0" (6'-0" Shoulders)
72'-0" (12'-0" & 4'-0" Shoulders)
96'-0" (6'-0" Shoulders)
205'-6" Radius
8 spaces @ 3'-0"
2 spaces @ 3'-0", 3 spaces @ 2'-0"
Granite Curb Type A
108' ± (12'-0" Shoulder)
97' ± (4'-0" Shoulder)
121' ± (6'-0" Shoulder)
Except for Sod Gutter the details of the high end will be identical to those for the low end. Detail of gutter at high end is shown at the top left corner of this sheet.
TWO-WAY OPERATION - ALL ENDS
ONE-WAY OPERATION - ON END ONLY
LOW END SHOWN
12'-0" SHOULDER
4'-0" SHOULDER
6'-0" SHOULDER
(DRAWN FOR 12'-0" SHOULDER)
12" ± gap in concrete backing
All vertical surfaces of curb concrete backing within these limits shall be formed.
Curb concrete backing
Granite Curb Type A
See Note "C" on Sheet BDD 74-10
℄ of End Railing Post on Structure
DETAIL OF CURB CONCRETE BACKING
Revised 9/74
APPROVED 5/9/74
STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION
DRAINAGE AND APPROACH DETAILS AT ENDS OF BRIDGES NO GUIDE RAIL ON APPROACHES

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

APPROVED
9/9/74

DRAINAGE AND APPROACH DETAILS
AT ENDS OF BRIDGES WITH
CONCRETE PARAPETS AND BOX BEAM
GUIDE RAILS ON APPROACHES

BDD 74-40

NOTES

1. RAKE OUT JOINT TO A DEPTH OF 3/4" AND TUCK POINT FLUSH WITH EPOXY MORTAR.
2. THE COST OF FURNISHING AND PLACING ALL BOLTS, NUTS, WASHERS, SHELF ANGLES, STAND-OFFS AND THE 5"x5" TUBES SHALL BE INCLUDED IN THE BOX BEAM GUIDE RAIL ITEM.
3. DETAILS OF GRANITE CURB, TYPE A, ARE SHOWN ON STANDARD SHEET 609-1.
4. THE COST OF FURNISHING A.D PLACING THE 1" GALVANIZED STEEL PIPE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONCRETE IN THE PARAPET.
5. FOR DETAILS OF ALUMINUM RAILING SEE BDD 74 - 53.

PLAN - TYPE XI
SEE BDD 74-71

ELEVATION - TYPE XI
SEE BDD 74-71

SECTION B-B

SECTION C-C

SECTION A-A

DETAIL C

PLAN - TYPE IX
SEE BDD 74-71

ELEVATION - TYPE IX
SEE BDD 74-71

GRANITE CURB - TYPE T2

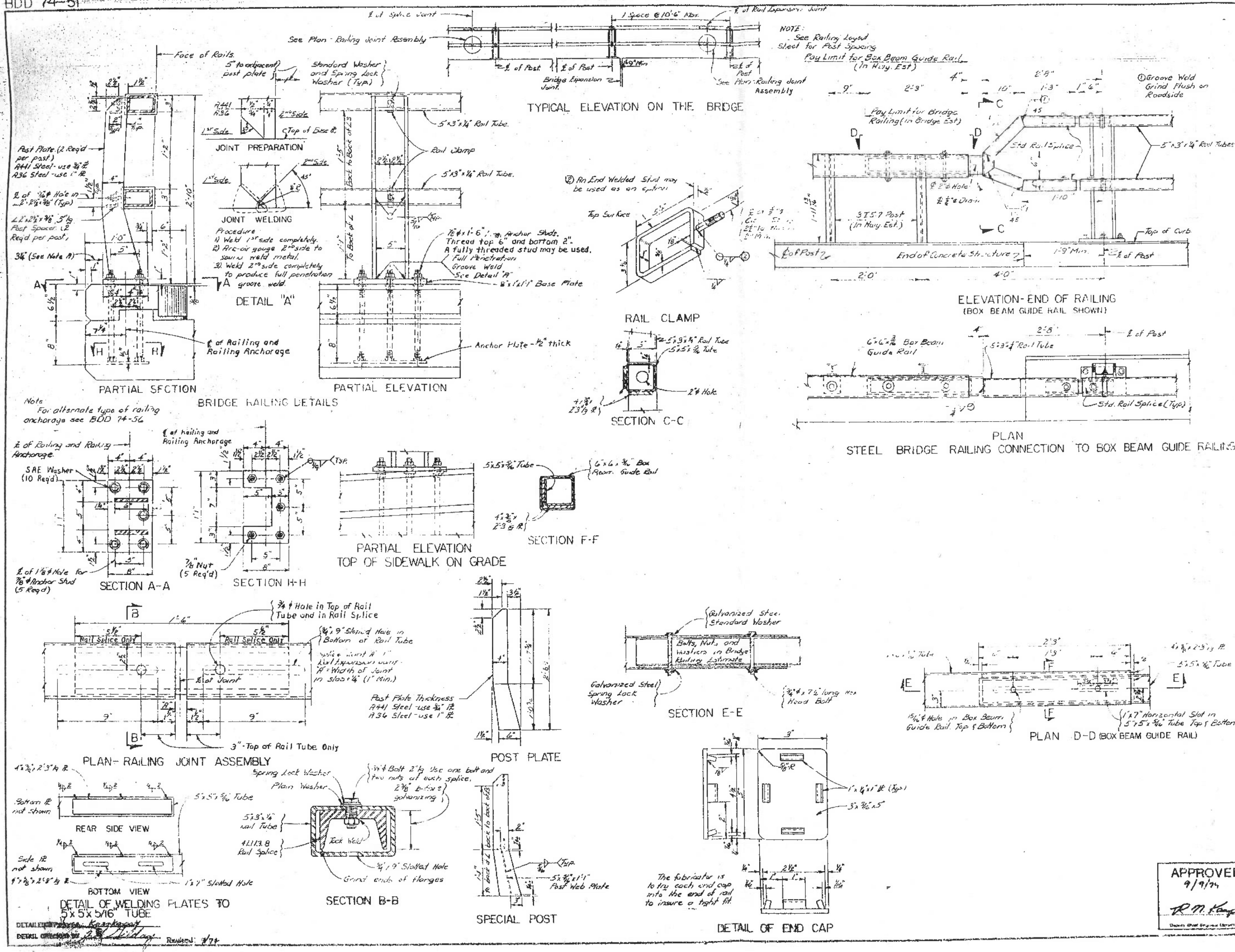
GRANITE CURB - TYPE R2

GRANITE CURB-TYPE R1

SECTION D-D

ANCHOR BAR

BDD 74-40



Notes:

All railing is to be fabricated and erected so that the rails are parallel to each other and to the parapet and so that the posts are truly vertical.

The Base Plates shall be perpendicular to the post unless otherwise noted. When the railing is to be placed on a preformed surface, the Base Plate may be parallel to the grade or may be perpendicular to the post and made level by the use of beveled shims.

Tubular steel rails, rail clamp assemblies including studs, nuts and washers, posts, post webs if required, post spacers, base plates, railing joint assemblies and any necessary shims and aluminum caulking compound shall be paid for under the railing item.

Anchor studs, nuts, washers and anchor plates shall be paid for under the railing item.

After the anchor stud nuts have been placed and tightened to the satisfaction of the Engineer, the studs shall be flame cut off 1/8 inch above the nut and the first thread above the nut shall be damaged.

Rails shall span a minimum of 3 posts. If this is impossible the absolute minimum shall be two posts with one of these posts being a special post.

Materials used in the manufacture of this railing shall conform to the requirements and/or specifications listed below.

- Rail Tubes – ASTM Designation A500 Grade B or A501.
- Rail Clamps and End Caps – ASTM Designation A36.
- Clamp Studs, Nuts and Washers – ASTM Designation A307.
- Channel Rail Splices – ASTM Designation A36.
- Tubular Rail Splices – ASTM Designation A500, Grade B or A501.
- Splice Plates – ASTM Designation A36
- 3/4" Post Plates – ASTM Designation A441
- 1" Post Plates – ASTM Designation A36
- Post Spacers – ASTM Designation A36 or 1020
- Base Plates – Same as post plate material
- Splice Bolts, Nuts and Washers – ASTM Designation A307
- Anchor Studs – ASTM Designation A449
- Nuts & Washers for Anchor Studs–ASTM Design. A325
- Anchor Plates – ASTM Designation A36
- Post Web Plates (if required) – Same as post plate material
- Plate Shims – ASTM Designation A36
- Beveled Shims – Material Specification 715-09

Galvanized Railing – All components of the railing including anchor studs, nuts, and washers shall be galvanized in accordance with Material Specification 719-01. Anchor Studs shall have a Class 2A thread fit prior to galvanizing. The cut portion of the anchor studs shall be given one field coat of dull Orange Primer and two field coats of Ready-Mixed Aluminum Paint conforming to the requirements of Material Specification 708-03 and 708-08 in that order.

All bolts shall have a Class 2A thread fit prior galvanizing.

Grind all edges of Post Plates and Base Plates so that all sharp edges are removed.

Railing post shall be erected to proper line and grade before concrete under post and in back of granite curb is poured.

When the railing is to be placed on a preformed surface the bottom of post or shim (whichever surface will be in direct contact with the preformed surface) shall be given a coating of aluminum caulking compound just prior to the installation of the post.

Unless covered by other Specifications, all dimensions related to the fabrication of the steel railing shall have a tolerance of ± 1/16".

INSTRUCTIONS TO DESIGNER

Do not place these instructions on the contract plans.

The railing details should clearly show that railing joints are to be placed in the railing panel spanning any transverse joint in the slab subject to deflection caused by live load or expansion.

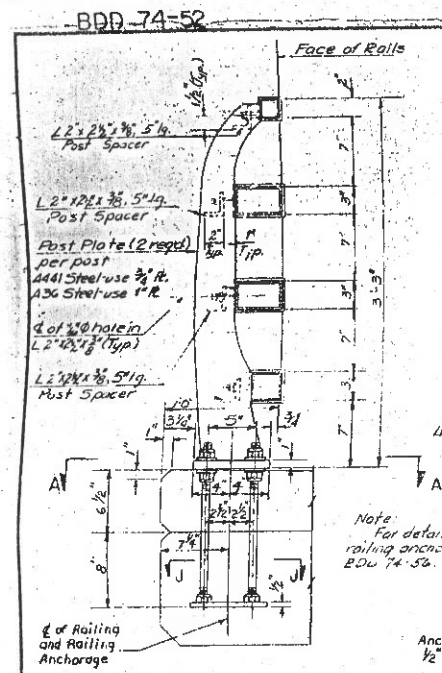
The post spacing shall be approximately uniform and as close to 10'-6" as possible for economy of posts.

Note A

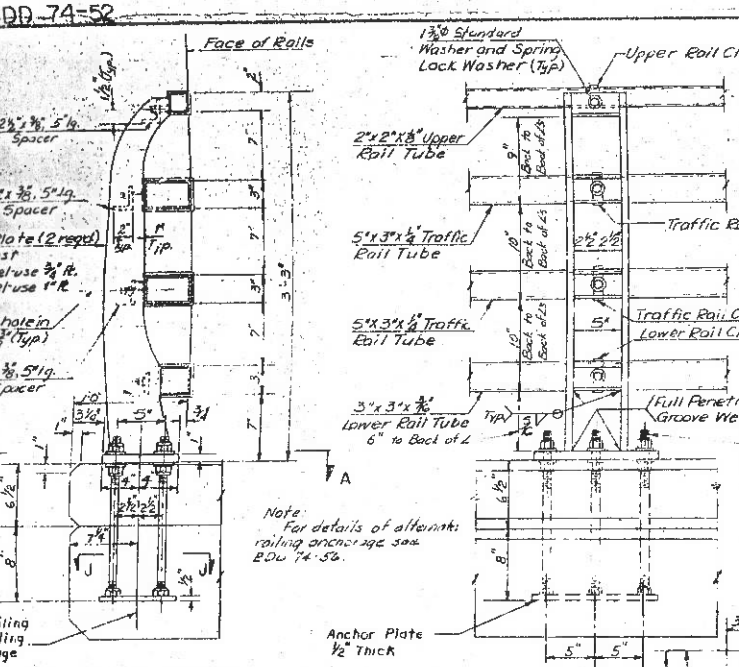
The details on this sheet are shown for a railing mounted on 1'-6" wide parapet curb on a superstructure. When the railing is to be mounted on a wall or a parapet curb with different fascia details than those shown the following minimum dimensions shall control: The minimum distance from edge of Railing Post Base Plate to the fascia shall be $1\frac{1}{2}$" and the minimum cover on the Anchor Stud shall be 2".

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

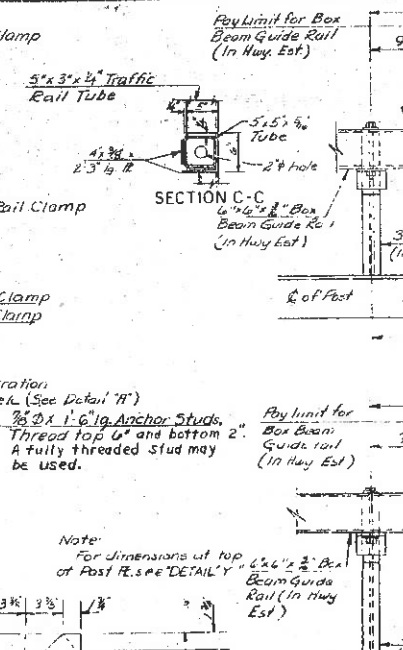
STEEL BRIDGE RAILING – TWO RAIL

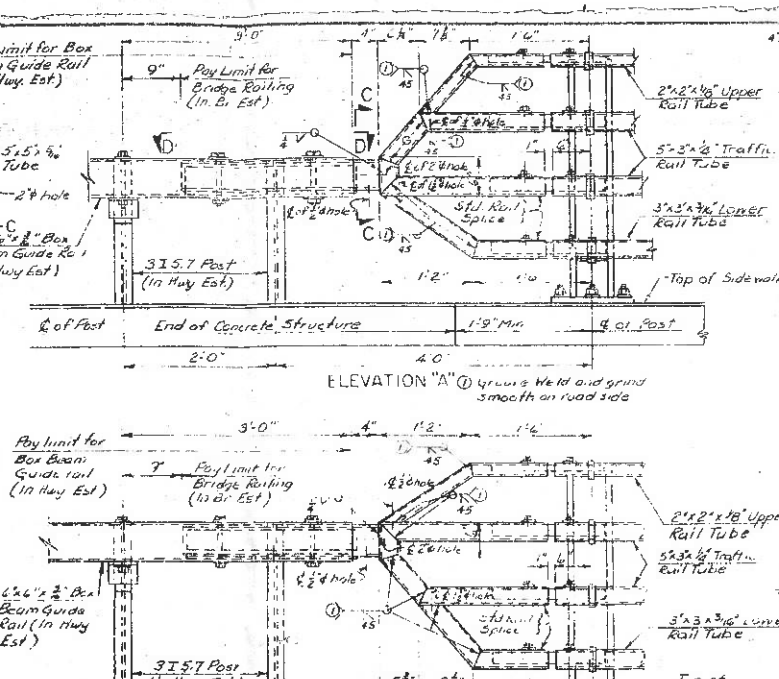


PARTIAL SECTION



PARTIAL ELEV.

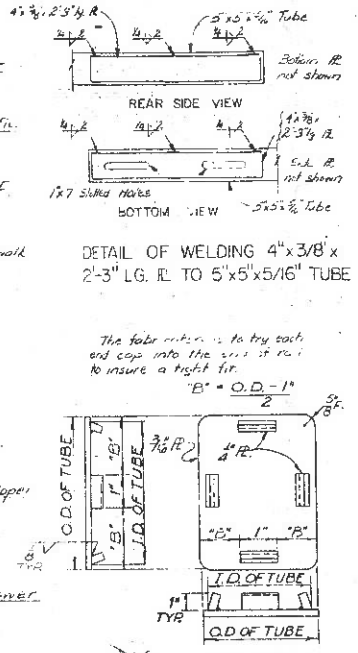




ELEVATION "A"

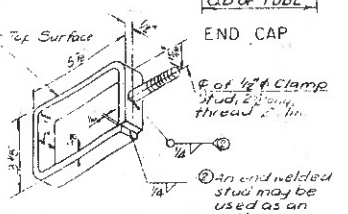
ELEVATION "B"

NOTE:
Elevation "A" is to be used when the height of the Approach Box Beam Guide Railing is measured from the roadway surface. Elevation "B" is to be used when the height of the Approach Box Beam Guide Railing is measured from the sidewalk or raised shoulder surface

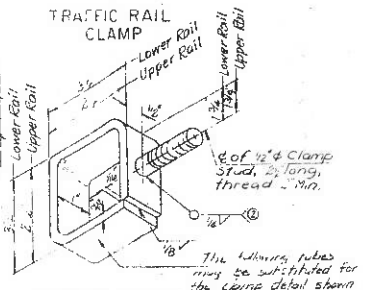


DETAIL OF WELDING 4"x3/8"x 2'-3" LG. PL TO 5"x5"x5/16" TUBE

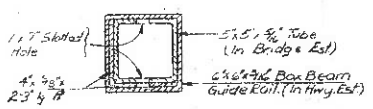
END CAP



TRAFFIC RAIL CLAMP



UPPER AND LOWER RAIL CLAMP



SECTION E-E

Notes:

All railing is to be fabricated and erected so that the rails are parallel to each other and to the top of curb or sidewalk and so that the posts are truly vertical.

The Base Plates shall be perpendicular to the posts unless otherwise noted. When the railing is to be placed on a preformed surface the Base Plates may be parallel to the grade or may be perpendicular to the post and made level by the use of beveled shims.

Tubular steel rails, rail clamp assemblies including studs, nuts and washers, posts, post spacers, base plates, rail end caps, railing splices and any necessary shims and aluminum caulking compound shall be paid for under the railing item.

Anchor studs, nuts, washers and anchor plates shall be paid for under the railing item.

After the anchor stud nuts have been placed and tightened to the satisfaction of the Engineer, the studs shall be flame cut off 1/8 inch above the nut and the first thread above the nut shall be damaged.

Rail shall span a minimum of 2 posts.

Materials used in the manufacture of this railing shall conform to the requirements and/or specifications listed below.

Rail Tubes - ASTM Designation A500 Grade B or A501.
Rail Clamps - ASTM Designation A36
Clamp Studs, Nuts and Washers - ASTM Designation A307
Rail End Caps - ASTM Designation A36
Channel Rail Splices - ASTM Designation A36
Tubular Rail Splices - ASTM Designation A500 Grade B or A501
Splice Plates - ASTM Designation A36
3/4" Post Plates - ASTM Designation A441
1" Post Plates - ASTM Designation A36
Post Spacers - ASTM Designation A36 or 1020.
Base Plates - Same as post plate material
Splice Bolts, Nuts and Washers - ASTM Designation A307
Anchor Studs - ASTM Designation A449
Nuts&Washer for Anchor Studs-ASTM Design.A325
Anchor Plates - ASTM Designation A36
Beveled Shims - Material Specification 715-09

Galvanized Railing - All components of the railing including anchor studs, nuts, and washers shall be galvanized in accordance with Material Specification 719-01 Anchor studs shall have a Class 2A thread fit prior to galvanizing. The cut portion of the anchor studs shall be given one field coat of dull Orange Primer and two field coats of Ready-Mixed Aluminum Paint conforming to the requirements of Material Specifications 708-03 and 708-08 in that order. All bolts shall have a Class 2A thread fit prior to galvanizing.

Grind all edges of Post Plates and Base Plates so that all sharp edges are removed.

Railing post shall be erected to proper line and grade before concrete under post and in back of granite curb is poured.

Where the railing is to be placed on a preformed surface the bottom of post or ship (which-ever surface will be in direct contact with the preformed surface) shall be given a coating of aluminum caulking compound just prior to the installation of the post.

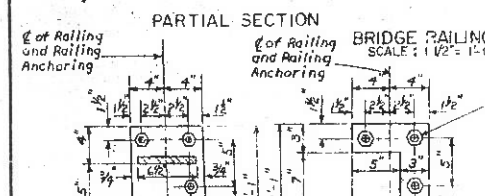
Unless covered by other Specifications, all dimensions related to the fabrication of the steel railing shall have a tolerance of ± 1/16".

INSTRUCTIONS TO DESIGNER

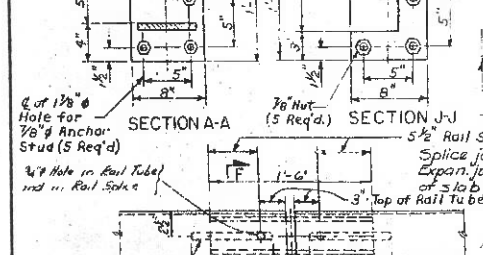
Do not place these instructions on the contract plans.

The post spacing shall be approximately uniform and as close to 12'-6" as possible for economy of posts.

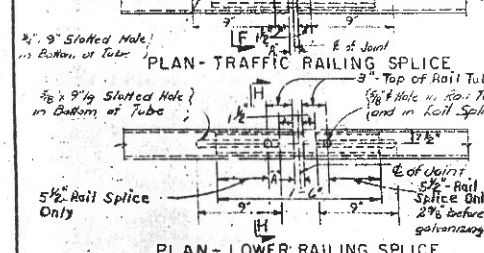
The railing details should clearly show that railing joints are to be placed in the railing panel spanning any transverse joint in the slab subject to deflection caused by live load or expansion.



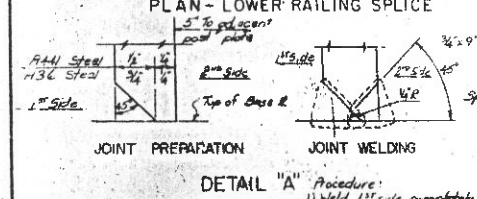
SECTION A-A SECTION J-J PARTIAL ELEV. TOP OF SIDEWALK ON GRADE



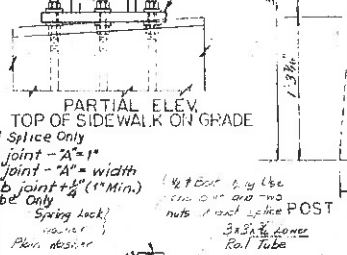
PLAN - TRAFFIC RAILING SPLICE

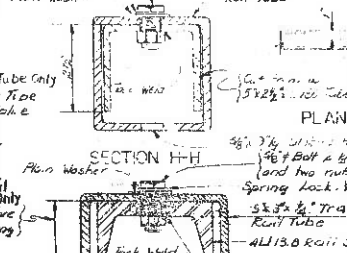


PLAN - LOWER RAILING SPLICE

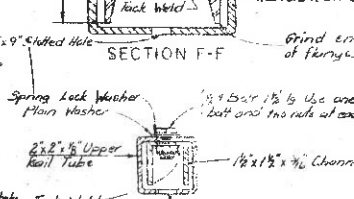


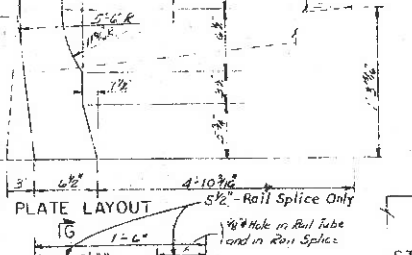
JOINT PREPARATION JOINT WELDING DETAIL "A"

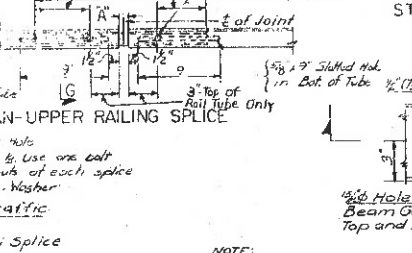


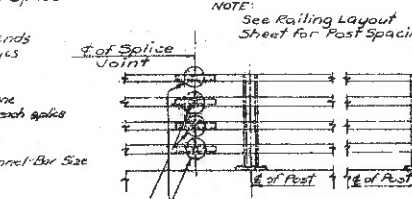


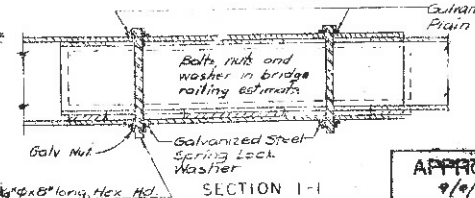
SECTION F-F SECTION G-G











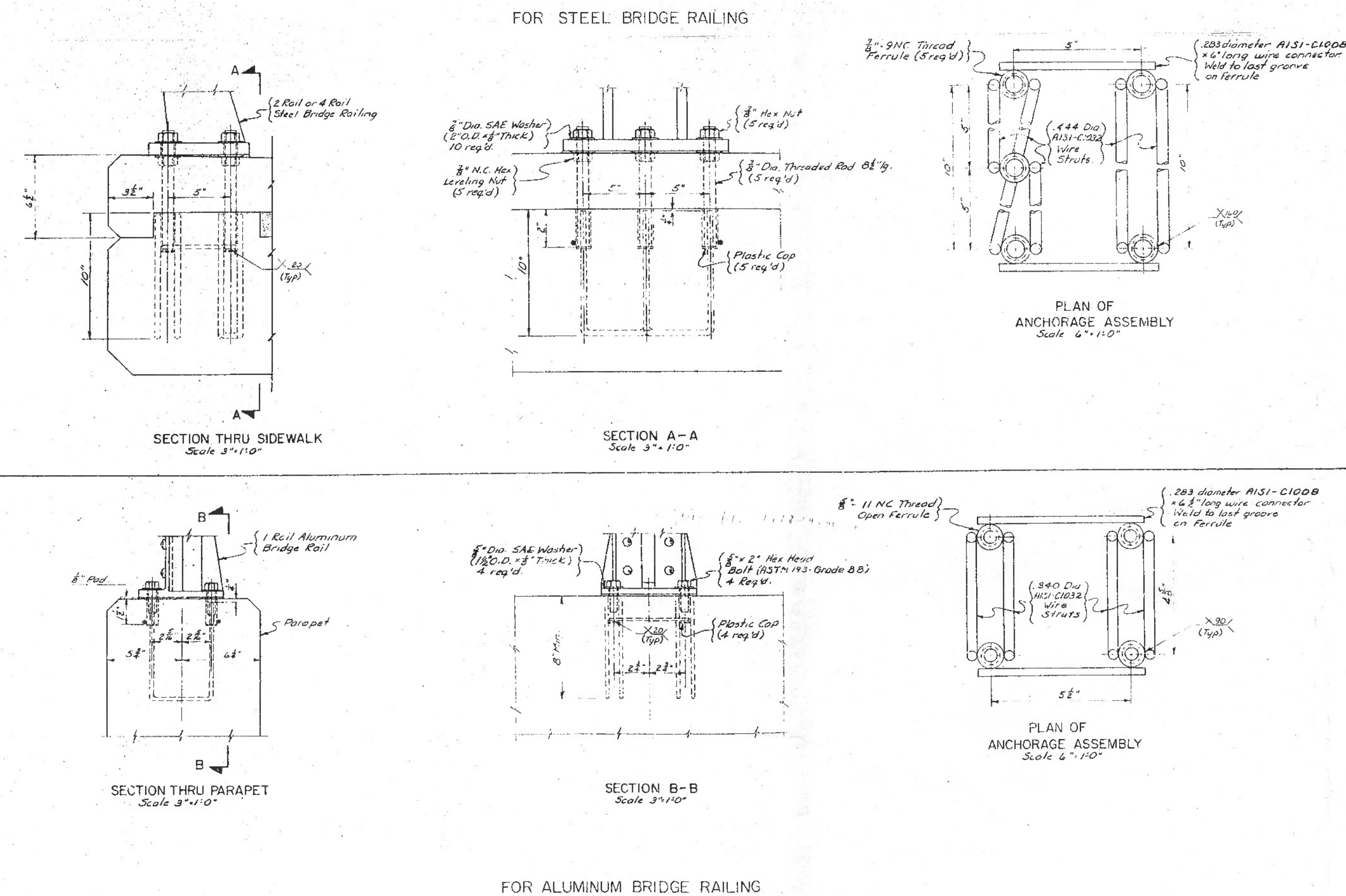
APPROVED 4/6/94

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

STEEL BRIDGE RAILING - FOUR RAIL

DESIGNED BY
DETAILED BY
DETAILED CHECKED BY

BDD 74-56



Note:

The reinforcement in the sidewalk and fascia is not shown.

The railing anchorage assembly shown for 2 or 4 rail steel railing shall *not* be used on uncurbed structures.

APPROVED 9/4/74

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
DIVISION OF CONSTRUCTION

ALTERNATE RAILING ANCHORAGE ASSEMBLY DETAILS

DETAILED BY: [illegible]
DETAIL CHECKED BY: [illegible]

Revised 8/74

BDD 74-56