



CUY-90-14.90

PID 77332/85531

APPENDIX EX-32

CUY-090-1674 PID 0.517

(Reference Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

E1-D

Q-17

STATE OF OHIO ACI-1057(9) ~ LIMITED ACCESS
 DEPARTMENT OF HIGHWAYS
CUY-42-18.77
 CUYAHOGA COUNTY
 CITY of CLEVELAND

CUY-90-16.74 ±

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	ACT-1057(9)	

1
129

This improvement is especially designed for through traffic and has been declared a Limited Access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

CUYAHOGA COUNTY
 CUY-42-18.77
 16.74 (TR90)

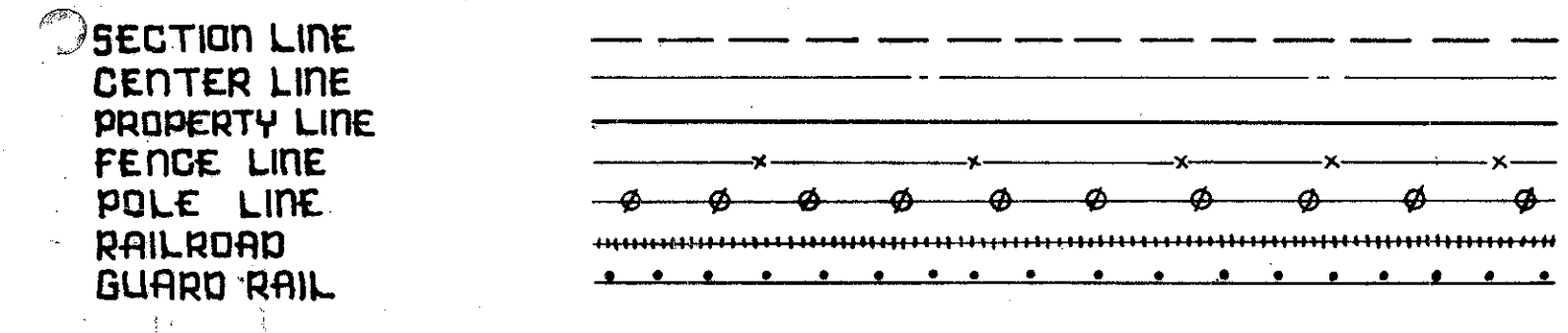
The standard specifications of The State of Ohio Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

The right of way for this improvement will be provided by the State of Ohio.

NOTE: Section No CUY-42R-18.81 appearing throughout these plans shall be considered reading CUY-42-18.77

CONVENTIONAL SIGNS



INDEX OF SHEETS

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- LINE DATA -

SEE LOCATION PLAN SHEET No 2

EAST 22ND ST. STRUCTURE STA. 0-200
CEDAR AVE RELOCATION STRUCTURE STA. 2+09.74
 BEGIN WORK STA. 0+200
 SUSPEND WORK STA. 3+25
 WORK LENGTH E. 22ND ST. & CEDAR RELOCATION STRUCTURES = 525 LIN. FT. OR 0.099 MI.

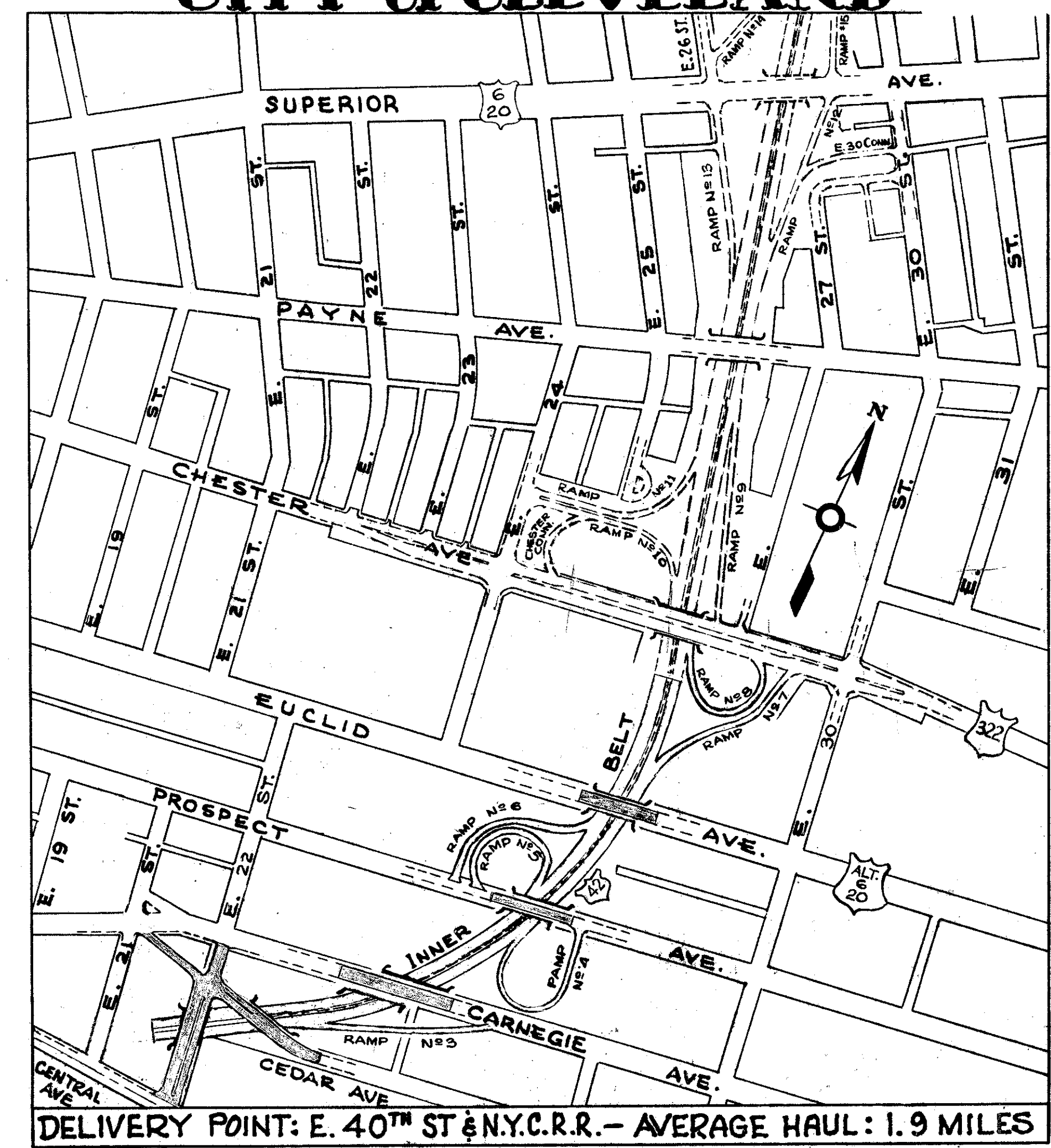
CARNEGIE AVE STRUCTURE STA. 7+75.10
 RESUME WORK STA. 4+75
 SUSPEND WORK STA. 9+25
 WORK LENGTH CARNEGIE AVE STRUCTURE = 450 LIN. FT. OR 0.085 MI.

PROSPECT AVE STRUCTURE STA. 14+10.89
 RESUME WORK STA. 13+00
 SUSPEND WORK STA. 15+75
 WORK LENGTH PROSPECT AVE STRUCTURE = 275 LIN. FT. OR 0.052 MI.

EUCLID AVE STRUCTURE STA. 19+44.79
 RESUME WORK STA. 18+50
 END WORK STA. 21+30
 WORK LENGTH EUCLID AVE STRUCTURE = 280 LIN. FT. OR 0.053 MI.

NET LENGTH WORK FOR PROJECT ACI-1057(9) = 1530 LIN. FT. OR 0.289 MI.

LENGTH OF PROJECT ACI-1057(9) = 0.00 LIN. FT. OR 0.000 MI.



LOCATION PLAN

SCALE IN FEET
1" = 400'

PORTION TO BE IMPROVED
 STATE HIGHWAYS
 OTHER HIGHWAYS

SCALES

PLAN 1" = 50'
 PROFILE HOR. 1" = 50'
 PROFILE VER. 1" = 10'

STANDARD DRAWINGS			
DR-1	1-3-55	I-8 C.B. No 7	5-1-52
G-7.07	6-1-56	I-8 M.H. No 1	5-1-52
T-35	1-2-56	I-8 M.H. No 1A	1-3-55
B.T. 5070.71E	No 1 10-1-47	I-8 M.H. No 2	5-1-52
		I-12	7-1-54
T.J.	5-1-56		
L.J. No 1	7-1-55	I-15 No 1	8-1-55
I-23.415	4-24-58	I-15 No 2A	6-1-57

STANDARD DRAWINGS			
		AS-1-54	Rev. 12-1-54
I-21-23	8-1-56	RB-1-55	3-1-55
L-1	4-1-50		
L-3	4-1-50		
L-3-A	4-1-50		

SUPPLEMENTAL SPECIFICATIONS	
5	6-8-55
9	6-24-58
E-101	1-1-57
S-114	Rev. 8-1-57

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

- Approved *Archie A. Evans*
Date 8-28-58 Division Deputy Director
- Approved *C. H. Makover*
Date 9-24-58 Deputy Director of Planning and Programming
- Approved *W. H. Arrman*
Date 9-19-58 Engineer of Bridges
- Approved *P. E. Shultz*
Date 2-22-58 Engineer of Location and Design
- Approved *P. E. Masten*
Date 9-22-58 Deputy Director of Design and Construction
- Approved *George J. Thompson*
Date First Assistant Director
- Approved *W. H. Hall*
Date 9/24/58 Director of Highways
- Approved *Louis L. Drasler*
Date 8/29/58 Director of Public Service, City of Cleveland

Sheets 47, 48, 52, 53 revised 11-4-58
 Sheets 47, 48, 52, 53, 66, 67, 71, 73, 79, 82, 89, 92, 98, 100, 101, 102, 103, 109, 124, 126 all revised 11-25-58.
 Sheets 53 & 71 revised 12-9-58
 Sheet 124 revised 12-17-58
 Sheets 53 & 92 revised 12-18-58
 Sheets 110, 117 & 116 revised 1-26-59

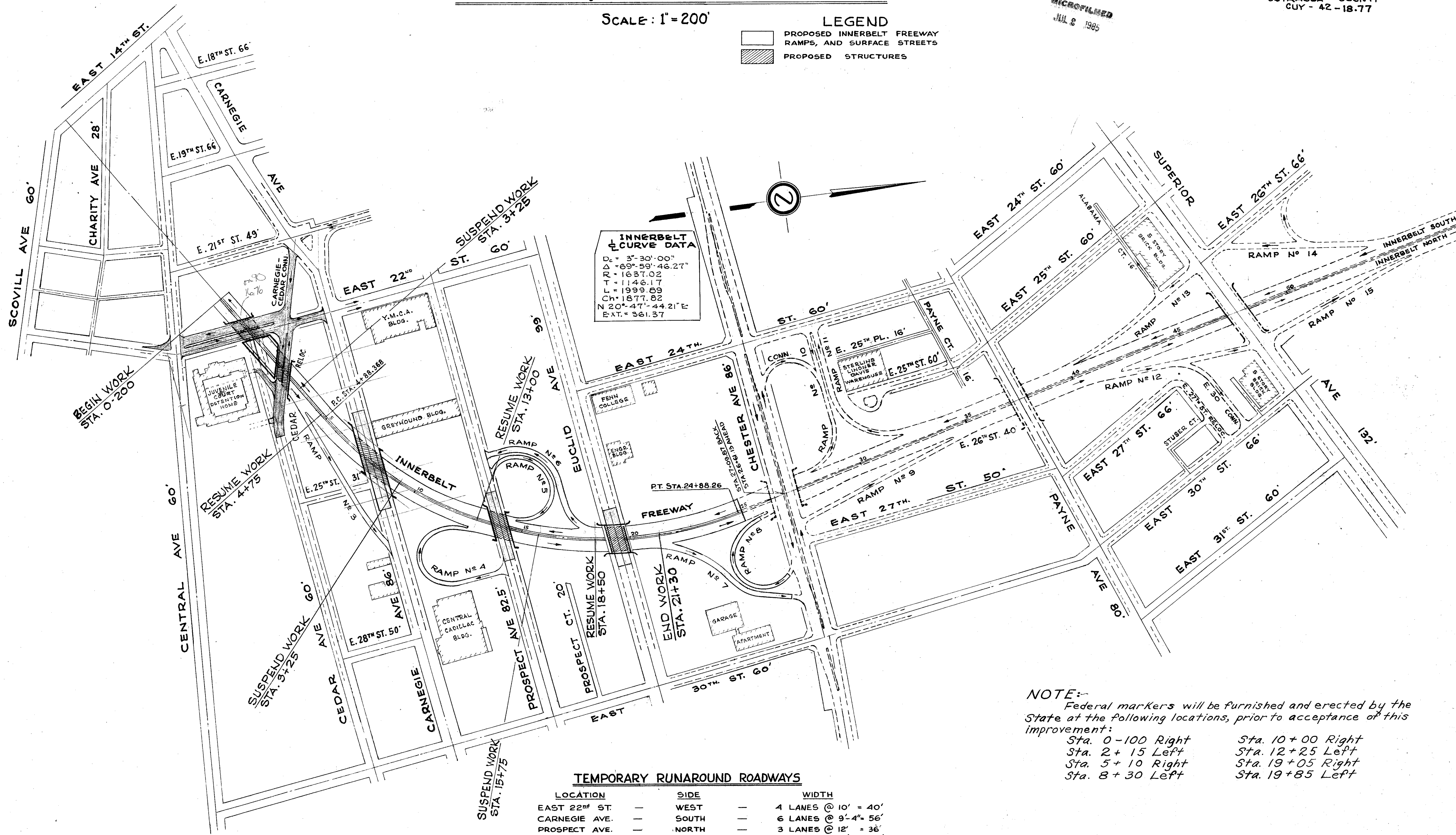
FILE NO. CUY-42-18.77
 CUYAHOGA COUNTY CITY OF CLEVELAND
 DATE OF LETTING 195
 CONTRACT NO. 0005-2A

LOCATION PLAN

SCALE: 1" = 200'

LEGEND

MICROFILMED
JUL 2 1985



INNERBELT CURVE DATA
 $D_c = 3^\circ 30' 00''$
 $\Delta = 69^\circ 59' 46.27''$
 $R = 1637.02$
 $T = 1146.17$
 $L = 1999.89$
 $Ch = 1877.82$
 $N 20^\circ 47' 44.21'' E$
 $EXT = 361.37$

NOTE:
 Federal markers will be furnished and erected by the State at the following locations, prior to acceptance of this improvement:
 Sta. 0+00 Right Sta. 10+00 Right
 Sta. 2+15 Left Sta. 12+25 Left
 Sta. 5+10 Right Sta. 19+05 Right
 Sta. 8+30 Left Sta. 19+85 Left

TEMPORARY RUNAROUND ROADWAYS

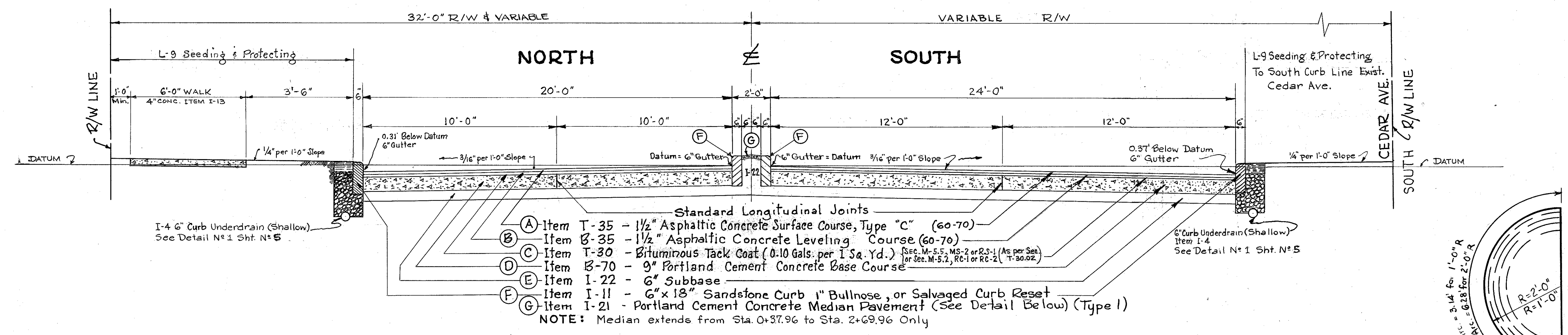
LOCATION	SIDE	WIDTH
EAST 22 ND ST.	WEST	4 LANES @ 10' = 40'
CARNEGIE AVE.	SOUTH	6 LANES @ 9'-4" = 56'
PROSPECT AVE.	NORTH	3 LANES @ 12' = 36'
EUCLID AVE.	NORTH	5 LANES @ 10' = 50'

CUY. - 42-18.77
CUYAHOGA COUNTY

TYPICAL SECTIONS

20', 24', and 2-35' PAVEMENTS

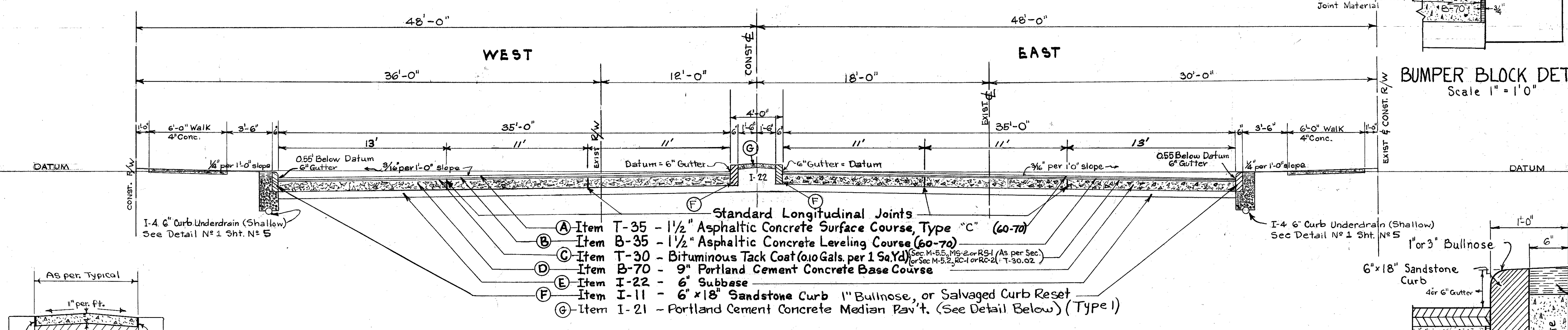
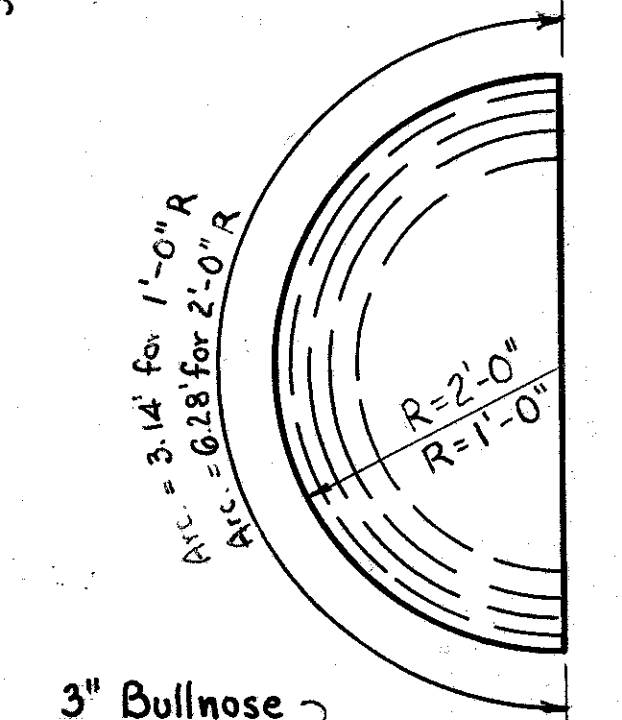
TYPE T-35 ASPHALTIC CONCRETE PAVEMENTS



CEDAR AVE RELOC.

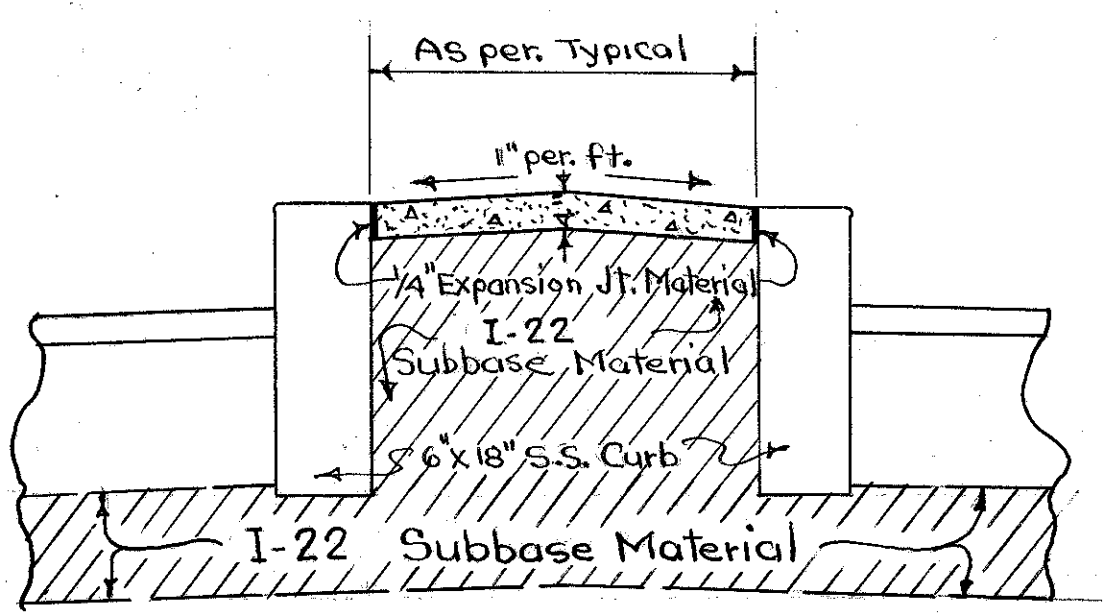
SCALE: 3/8" = 1'-0"

This Typical Section is for illustrative purposes ~ See Extra Area Sht. # 21



BUMPER BLOCK DETAIL

Scale 1" = 1'-0"



DETAIL OF I-21 MEDIAN

EAST 22ND STREET

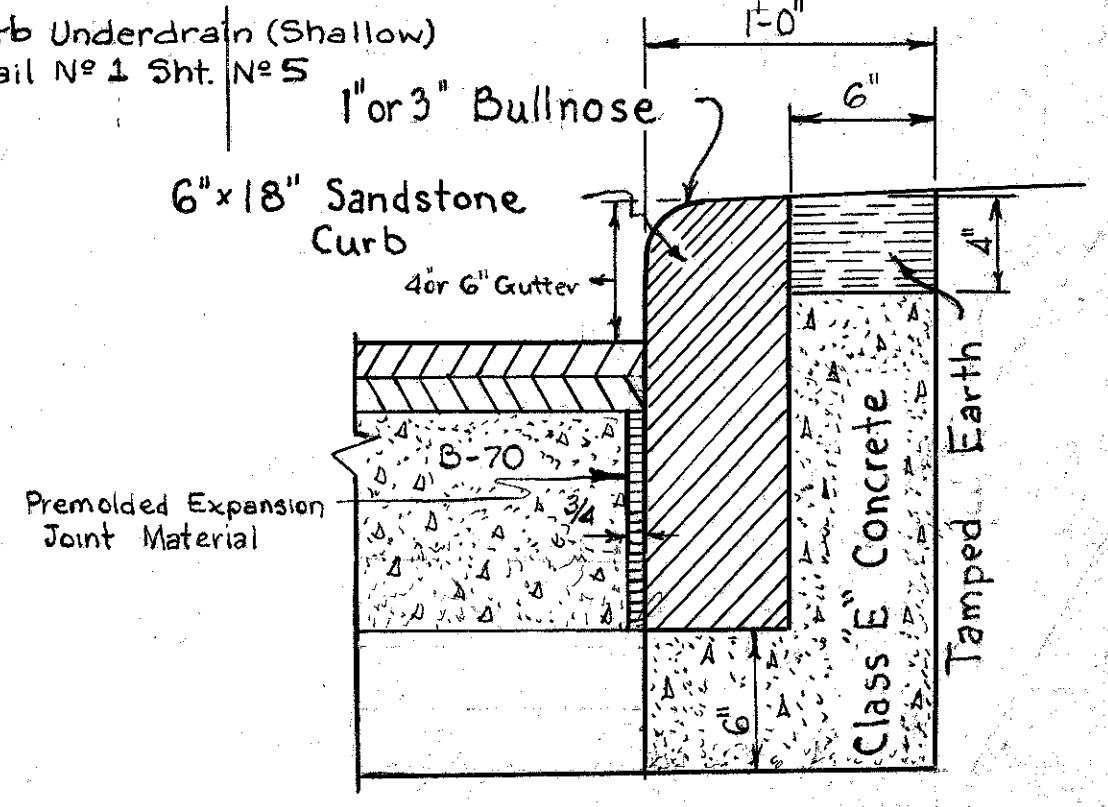
SCALE 1/4" = 1'-0"

Sta. 0+81.01 to Sta. 2+43.93

NOTE:

Bumper block sandstone shall meet the requirements of Sec. I-11.02 of the Construction and Material Specifications.

The three quarter (3/4) inch Premolded Joint Material shall meet the requirements of Section M-10.02 of the Standard Specifications. It shall be placed in front of the Radial Curb and Bumper Blocks. The cost of the Joint and the cost of class "E" concrete to be included in price bid per lineal foot of curb.

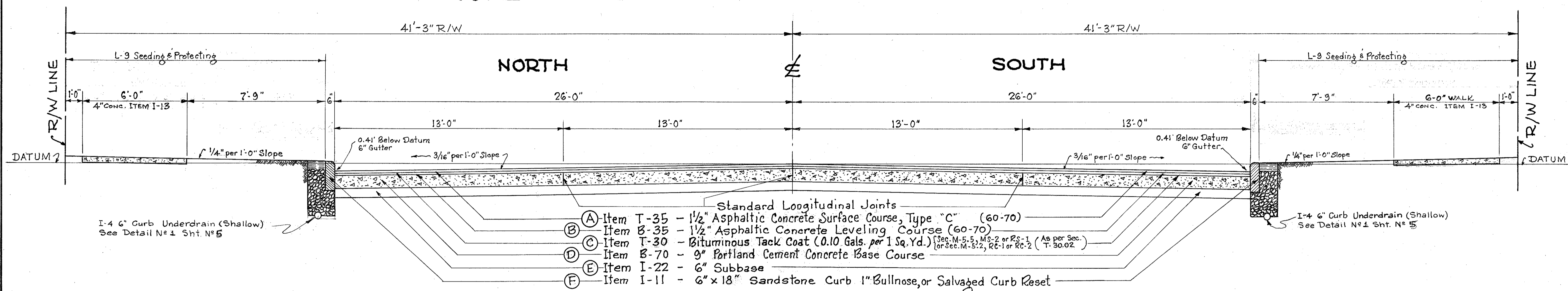


For Radii 55 Feet & Less
RADIAL CURB DETAIL
Scale 1 1/2" = 1'-0"

TYPICAL SECTIONS

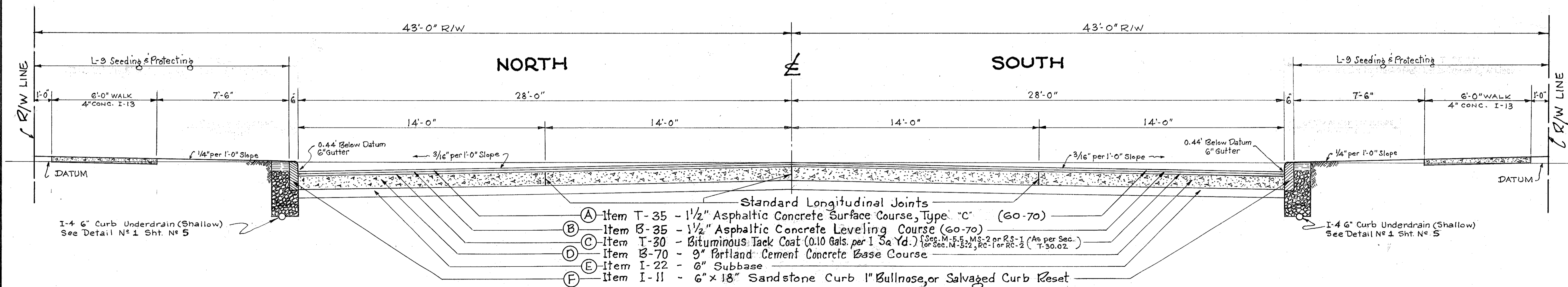
52'-0" and 56'-0" PAVEMENTS

TYPE T-35 ASPHALTIC CONCRETE PAVEMENTS



PROSPECT AVE.

SCALE 3/8" = 1'-0"
Sta. 3+50 to Sta. 10+08.33
Sta. 12+22.63 to Sta. 12+75



CARNEGIE AVE

SCALE 3/8" = 1'-0"
Sta. 4+50 to Sta. 5+57.49
Sta. 8+06.63 to Sta. 9+00

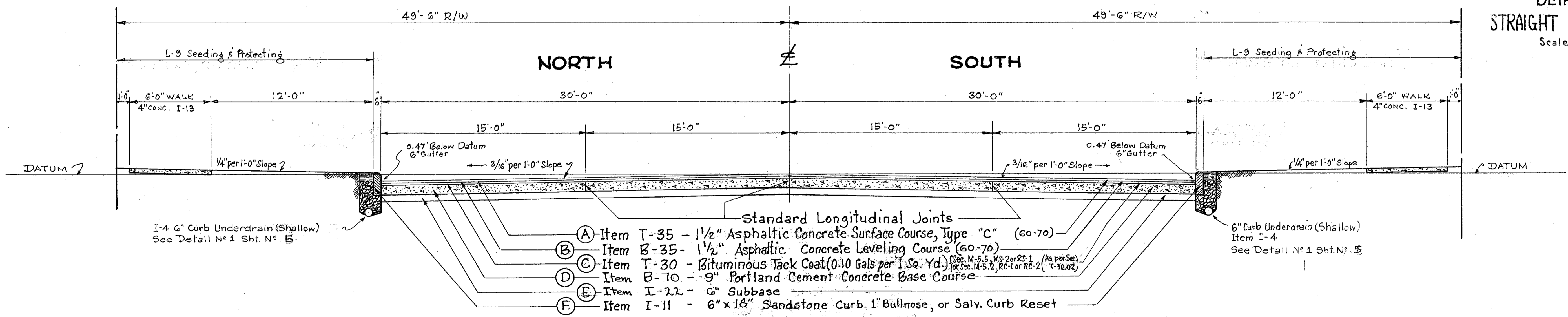
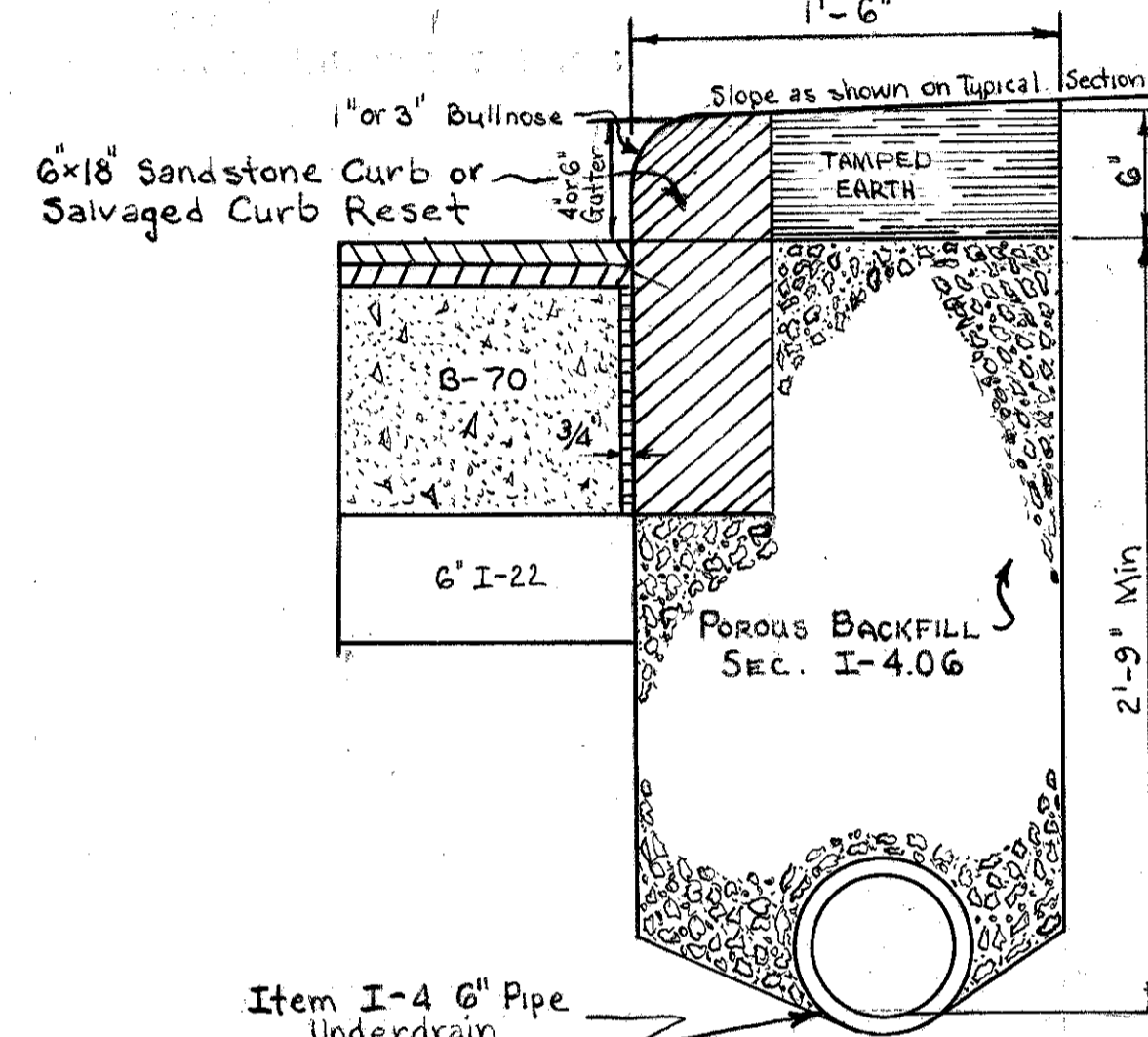
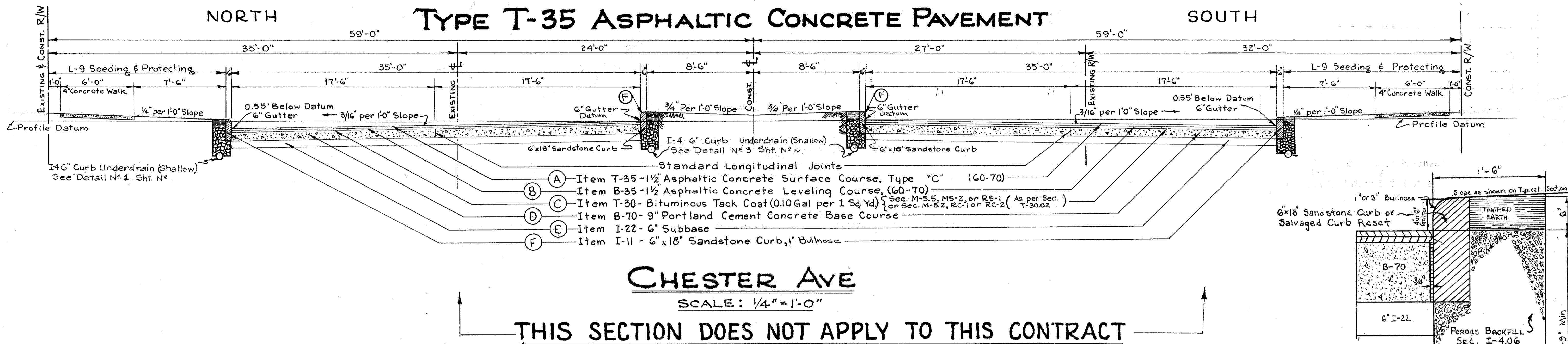
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	5 129
2	OHIO			

CUY. - 42 - 18.77
CUYAHOGA COUNTY

TYPICAL SECTION

60'-0" PAVEMENT

TYPE T-35 ASPHALTIC CONCRETE PAVEMENT



GENERAL NOTES

DESIGN SPEED

The design speed for the Innerbelt Freeway Section CUY-42-18.77 is 50 miles per hour.

UTILITY ADJUSTMENT

Any and all work required for Public or Private Utilities will be done by and at the expense of their respective owners, unless otherwise noted in the plans.

CO-OPERATION WITH OTHER CONTRACTORS

Adjustments, relocations, and revisions of existing utilities and construction of new utilities will have to proceed concurrently with this construction. Therefore, it is the Contractor's obligation to cooperate with the other contractors, or agencies carrying on their respective operations during the construction of this Project, so as not to interfere with their normal procedure.

EXCAVATION AND BACKFILL AT STRUCTURES

PART 1.. The lump sum bid for Item E-2 Excavation for Structures shall include all of the work, cofferdams & materials necessary to meet the requirements hereinafter set forth. The limits of Item E-2 are shown on the plan to include only that excavation below the line designated on the plans as the Top of the proposed backfill. The excavation above the Top of the backfill line necessary for the construction of the structures and retaining walls shall be measured and paid for as Item E-101 Roadway Excavation. The contractor shall perform only that excavation below the proposed backfill line necessary to construct bridge abutments, piers and retaining walls as required. The excavated material obtained from both Roadway and Structure excavation that is suitable for use in embankments shall be stockpiled at specific areas designated by the Engineer within the Right of Way limits shown on the Plan between Central Ave. and Chester Ave. Unsuitable material shall be disposed of in accordance with the provisions of Sec. E-101.06(a). After completion of the Piers, Abutments and Walls, backfill shall be placed to the elevation of the proposed subgrade as shown on the Plans for that portion of the roadway between the abutments or retaining walls, and to the original ground line in back of the Walls and Abutments, in accordance with Sec. E-2.08. The cost of the above work, excluding the quantities paid for as Cu. Yds. of E-101 Roadway Excavation, shall be included in the Lump Sum Bid for Item E-2 Excavation for Structures as per Plan.

PART 2.. After the work described in Part 1 has been completed for all of the structures, and upon written instruction from the Director, the contractor shall backfill the remaining areas affected by the structure excavation to an elevation that will permit the area to be drained and shall construct connections to existing drainage facilities. During these operations adequate drainage shall be provided by the contractor by pumping or other methods acceptable to the Director. Backfill material shall be taken from material stockpiled as described in Part 1. The drainage connections required are shown on the Plans and will be paid for under the appropriate item of which they are a part. The backfill placed above the elevation of the proposed subgrade need not meet the compaction requirements of Sec. E-101.08. The contractor shall exercise care and provide suitable protection when placing backfill around the newly constructed piers, abutments, wingwalls and retaining walls to insure against damage from

construction methods. Protection shall be provided in a manner acceptable to the Engineer to prevent discoloration of the new concrete. The cost of placing the backfill described in the above operation will be paid for at the Contract Lump Sum Bid for Item E-1, Embankment as per plan, for each structure with the exception of the structures at East 22nd Street and Cedar Avenue. The backfill of these Two (2) structures and the retaining walls between them shall be considered as One Lump Sum for bidding purposes. It is anticipated that a contract will be let for an adjacent and overlapping project on which the suitable excavation obtained from this contract will be placed as embankment by another contractor. Therefore, any or all of the work described in Part 2 may be non-performed at the direction of the Engineer depending on the timing of the individual contracts.

PART 3.. The contractor shall at all times maintain suitable drainage in excavated areas by pumping or other methods acceptable to the Director. In the event that the work described in Part 2 is non-performed the contractor shall maintain his pumping operations until all the work described in Part 1 is completed and for an additional period of time as stipulated by the Director not to exceed a period of Sixty (60) calendar days. The cost of the pumping will be included in the Lump Sum Price Bid for Item E-2 Excavation for Structures.

*In order to prevent discoloration of Finished Concrete, the water level shall at no time be higher than the elevation of the subgrade of proposed future pavement adjacent thereto.

TREE REMOVAL

Removal of trees and stumps 12" or more in diameter shall be in accordance with Item E-9, except that cost shall be included in the Unit Price Bid per cubic yard for Item E-101 Roadway Excavation.

ADDITIONAL DRIVES (Non-Limited Access-Portions Only)

For any additional Driveways built at the direction of the Engineer other than those shown on these Plans, quantities shall be provided and paid for at the Unit Price Bid for the various Items required.

TEMPORARY ROADWAY

The cost of removal and disposal of all existing pavements, curbs, public walks, and any other incidentals necessary in constructing the Temporary Run-Around Roadways shall be included in the Lump Sum Price Bid for Item S-15 Temporary Run-Around Road.

Guard Rail needed for Temporary Roadways as shown on Sheet Nos. 12, 16, 18 and 20 of these Plans shall be the Steel Beam Type (Deep) No. 2-A, and shall be kept visible at night by installing caution lights (of a minimum sixty (60) wattage amber light bulbs) on every third (3rd) guard rail post. Cost of installation of Guard Rail and Caution Lights shall be included in the Lump Sum Price Bid for Item S-15 Temporary Run-Around Road.

When it is no longer needed on the temporary roads, the amount of guard rail that is suitable for re-use, in the opinion of the Engineer, may be used in place of the same amount of new guard rail as set up in the plans. The cost of removing and rebuilding the guard rail for re-use shall be included in the unit price bids for Item I-15 Steel beam (deep) guard rail standard Type N^o 2-A and barrier Type N^o 2-B.

Should the guard rail on Temporary Roads not be Re-Used, it shall become the property of the Contractor.

SALVAGED CURB

Curb removed from E. 22nd St., CEDAR Ave., CARNEGIE Ave., PROSPECT Ave., and EUCLID Ave. was considered to be 40% salvagable, and curb removed from the remainder of the existing city streets involved was considered to be totally unsalvagable for the purpose of determining the length of curb to be removed for reuse. The length of curb available for resetting was determined by making a 10% deduction for breakage and dressing of this curb removed for reuse.

If an additional amount of the existing curb to be removed is found to be in salvagable condition, such curb shall be removed as per Item E-8 REMOVAL FOR REUSE OF EXISTING CURB and shall be reset as per Item I-11 SANDSTONE CURB RESET in the place of I-11 6"X18" SANDSTONE CURB as called for in the plans.

Salvaged curb shall be placed only within the city street areas affected by this improvement and it shall not be interspersed with new curb. Ninety-five (95) percent of all salvaged curb reset shall be at least three (3) feet in length.

JOINT DETAIL

For spacing and detail of Joints see Standard Drawings and Extra Area Sheet Numbers 21 thru 23

CURB HEIGHT TRANSITION ON APPROACH SLABS

Uniformly transition the roadway curb height to the structure curb height within the approach slab.

SUBGRADE COMPACTION

The subgrade under drives paved with T-70 material shall be compacted for a depth of six (6) inches to the density requirements as shown in Table III Sec. E-101.09. Payment for the subgrade compaction as specified above shall be included in the unit price bid for Item E-101 Roadway Excavation.

SURVEY DATA

For centerline data of existing streets from Central Avenue to Superior Avenue, see Detailed Map No. I-3 [adjusted & Survey Data] on File in Division Office.

RIGHT OF WAY

For Limits of RIGHT OF WAY required see sheet numbers 24 thru 27

Parcel numbers used on this project begin with Parcel No. 1 and end with Parcel No. 212 as shown on the Right of Way Sheets mentioned above. Wherever Section CUY-42R-18.81 is mentioned in the description of these Parcels it shall be considered to read Section CUY-42-18.77.

GENERAL NOTES

FIELD OFFICE

The Contractor shall provide a suitable field office in accordance with sec. 5-0.01 (b) having a minimum of 500 Sq. Ft. of floor space. The Contractor shall have a telephone installed and maintained during construction of this project.

CONSTRUCTION LAYOUT STAKES

See note in proposal for work included in this lump sum pay item.

TRAFFIC MAINTENANCE:

Two-way traffic (three (3) effective lanes) shall be maintained on existing Central Ave.; and, by use of either the existing or proposed pavements and structures, or the respective temporary run-around roads, two-way traffic shall be maintained on Carnegie Ave. (six (6) effective lanes), Prospect Ave. (three (3) effective lanes) and Euclid Ave. (five (5) effective lanes), except that a lesser number of effective lanes may be maintained on Euclid Ave. and on Central Ave. during construction of sewers where specifically directed by the engineer. The periods of restriction to less than the above stated number of effective lanes shall be held to an absolute minimum, and in no event shall less than three (3) effective lanes be available for traffic on Euclid Ave., nor shall less than two (2) effective lanes be available for traffic on Central Ave.

The Euclid Ave. and E. 30 St. sewer (sheet no. 35) shall be constructed, including re connecting all necessary existing connections and replacing of pavement, before the Euclid Ave. temporary runaround road is opened to traffic.

The construction of this sewer shall be achieved as one continuous operation held to a minimum duration, during which time two-way traffic (minimum of two (2) effective lanes) shall be maintained on E. 30 St.

Two-way traffic (minimum of three (3) effective lanes, except during sewer construction described below) shall be maintained on existing E. 22 St., and two-way traffic (minimum of two (2) effective lanes) shall be maintained on existing Cedar Ave. until the Cedar Ave. Relocation structure and pavement mergers have been constructed and opened to traffic. The E. 22 St. sewer (sheet no. 28), and the sewer crossovers shown on sheet no. 29, shall also be constructed and the pavement replaced before the temporary run-around road is opened to traffic. The duration of this sewer construction shall be held to an absolute minimum, during which time two-way traffic (minimum of two (2) effective lanes) shall be maintained on E. 22 St.

During construction of the E. 22 St. structure, two-way traffic (four (4) effective lanes) shall be maintained on E. 22 St. by use of the temporary run-around road.

MANHOLE FRAME AND COVER CASTINGS

The Castings for Manholes shall be the Special Frame and Cover as per City of Cleveland standard as detailed in the Plans.

Salvaged Manhole castings shall be used as noted in the Plans.

REMOVAL OF EXISTING SEWERS AND SEWER APPURTENANCES IN EXCAVATION

Where Existing Sewers and Sewer Appurtenances are encountered in excavation laying above subgrade or Backslopes, removal of such items shall be included in excavation. Cost of this removal to be included in Item E-101, "Roadway Excavation."

ABANDONED SEWERS AND DRAINS

The Contractor shall plug or bulkhead all existing sewers and drains which were or are to be abandoned encountered on the project. The Contractor shall provide all materials, labor and equipment to seal the sewers and drains in a manner satisfactory to the Engineer. All costs pertaining to this item of work shall be included in the price bid for Item E-101, "Roadway Excavation" or as noted in the Plans. Satisfactory sealing shall consist of constructing an 8" thick brick masonry bulkhead or equivalent inside the Sewer or Drain.

RECONNECTING EXISTING CONNECTIONS

Notes on Plan Sheets call for Reconnecting Existing Connections to New Sewers in City Streets. These Connections shall be made in accordance with the "City of Cleveland" Standard Drawings. City of Cleveland will furnish Contractor with Standard Drawings.

SALVAGED CASTINGS

Castings for Drainage Structures called for in the Plans to be abandoned or removed as per General Note, "Removal of Sewer Appurtenances in Excavation," shall be carefully salvaged and re-used where called for in the Plans or as Directed by the Engineer.

In case more salvagable Castings (City Type: Spec. C.I. #4 or C.B. #4 or M.H.) should be available than called for in the Plans to be used as salvage, then the said salvagable Castings should be used in place of New Castings called for on Drainage Structures. The Drainage Structure will then be paid for as the Price Bid for Drainage Structure with Salvage Castings. City Type castings (Spec. C.I. or C.B. #4), and M.H. Castings, not used as salvage on the Project, shall be stored on the site and the City of Cleveland will haul them away. Should the City of Cleveland not claim any or all of the castings, they shall become the property of the Contractor.

CALCULATIONS

T-35 ASPHALTIC CONCRETE SURFACE COURSE

Euclid Ave.	{ Sta. 5+50 to Sta. 6+11.64 } { Sta. 7+55.26 to Sta. 8+10 }	= 116.38 x 60 = 6982.80 Sq.Ft.
Prospect Ave.	{ Sta. 9+50 to Sta. 10+33.33 } { Sta. 11+97.63 to Sta. 12+75 }	= 160.70 x 52 = 8356.40 " "
Carnegie Ave.	{ Sta. 4+50 to Sta. 5+82.49 } { Sta. 7+81.63 to Sta. 9+00 }	= 250.86 x 56 = 14048.16 " "
E. 22 St.	{ Sta. 0+81.01 to Sta. 2+68.93 } { Sta. 3+96.43 to Sta. 4+21.43 }	= 212.92 x 70 = 14904.40 " "
Cedar Ave. Reloc.	{ Sta. 1+04.18 to Sta. 1+29.18 } { Sta. 2+85.94 to Sta. 3+10.94 }	= 50.00 x 45 = 2250.00 " "
Cedar-Carnegie Conn.	Sta. 1+12 to Sta. 2+76.06	= 164.06 x 24 = 3937.44 " "
TOTAL		= 0.125 ÷ 27 x 50479.20 Sq.Ft. = 234 CU.YDS. ✓

B-35 ASPHALTIC CONCRETE LEVELING COURSE

Total from T-35 Calculations = **234 CU.YDS.** ✓

T-30 BITUMINOUS TACK COAT @ 0.10 GAL./SQ.YD.

Total from T-35 Calculations = 50479.20 Sq.Ft. ÷ 9 x 0.10 = **561 GAL.** ✓

I-22 SUBBASE

Total from T-35 Calculations = 50479.20 Sq.Ft. ÷ 54 = 935 Cu.Yds.
E. 22nd St. (Median) Sta. 0+81.01 to Sta. 2+68.93 = 187.92 Lin.Ft. x 5.5 ÷ 27 = **973 CU.YDS.** ✓

B-70 9" CONCRETE BASE COURSE

Prospect Ave.	{ Sta. 9+50 to Sta. 10+08.33 } { Sta. 12+22.63 to Sta. 12+75 }	= 110.70 x 52 ÷ 9 = 640 Sq. Yds.
Carnegie Ave.	{ Sta. 4+50 to Sta. 5+57.49 } { Sta. 8+06.63 to Sta. 9+00 }	= 200.86 x 56 ÷ 9 = 1250 " "
E 22 St.	Sta. 0+81.01 to Sta. 2+43.93	= 162.92 x 70 ÷ 9 = 1267 " "
Cedar Carnegie Conn.	Sta. 1+12 to Sta. 2+76.06	= 164.06 x 24 ÷ 9 = 438 " "
Euclid Ave.	{ Sta. 5+50 to Sta. 5+86.64 } { Sta. 7+80.26 to Sta. 8+10 }	= 66.38 x 60 ÷ 9 = 442 " "
		4037 SQ.YDS. ✓

E-8 REMOVAL AND DISPOSAL OF EXISTING PAVEMENT

Euclid Ave.	Sta. 5+50 to Sta. 8+10	= 260 Lin.Ft. x 60 ÷ 9 = 1783 Sq. Yds.
Prospect Ave.	Sta. 9+50 to Sta. 12+75	= 325 " " x 52 ÷ 9 = 1878 " "
Carnegie Ave.	Sta. 4+50 to Sta. 9+00	= 450 " " x 56 ÷ 9 = 2800 " "
E 25 St. (South of Carnegie)	{ Sta. 1+65 to Sta. 2+00 } { Sta. 2+90 to Sta. 3+29.5 }	= 74.5 " " x 18 ÷ 9 = 149 " "
Cedar Ave.	Sta. 0+18 to Sta. 4+68	= 450 " " x 40 ÷ 9 = 2000 " "
E. 22 St.	Sta. 0+20 to Sta. 3+41	= 321 " " x 37 ÷ 9 = 1320 " "
" " "	Sta. 3+41 to Sta. 6+72	= 331 " " x 34 ÷ 9 = 1250 " "
Additional for returns at intersections		82 " "
		11262 SQ.YDS. ✓

E-8 REMOVAL AND DISPOSAL OF EXISTING CURB

E. 25 St Sta. 1+65 to Carnegie Ave. = 344 Lin.Ft.
Euclid, Prospect, Carnegie, Cedar Ave. & E. 22 St. (See "Removal for Reuse") 3876 x 60% = 2326 " "
2670 LIN.FT. ✓

E-8 REMOVAL FOR REUSE OF EXISTING CURB

Euclid Ave. (Length of Existing Curb to be removed) = 647 Lin.Ft.
Prospect Ave. " " " " " " " = 620 " "
Carnegie Ave. " " " " " " " = 812 " "
Cedar Ave. " " " " " " " = 889 " "
E 22 St. " " " " " " " = 908 " "
Estimated 40% in Salvagable Conditions 3876 Lin.Ft. x 40% = 1550 Lin.Ft.
Curb Removed along Juvenile Detention Home Property - Plan Sheet N# 11 **84 " "**
1634 LIN.FT. ✓

I-II SANDSTONE CURB RESET

Curb Removed for Reuse (Less Detention Home Curb & Breakage = 1550 - (10% x 1550) = 1395 Lin.Ft.
Curb Reset along Juvenile Detention Home Property - Plan Sheet N# 11 = 67 " "
1462 LIN.FT. ✓

I-II 6"x18" SANDSTONE CURB

Euclid Ave (N & S. Sides)	Sta. 5+50 to Sta. 6+11.64 = 61.64 Lin.Ft. x 2	= 123.28 Lin.Ft.
" " " "	Sta. 7+55.26 to Sta. 8+10 = 54.74 " " x 2	= 109.48 " "
" " (North Side)	Sta. 3+51 to Sta. 5+50	= 199.00 " "
" " " "	Sta. 8+10 to Sta. 10+23	= 213.00 " "
Prospect Ave. (N & S. Sides)	Sta. 9+50 to Sta. 10+33.33 = 83.33 " " x 2	= 166.66 " "
" " " "	Sta. 11+97.63 to Sta. 12+75 = 77.37 " " x 2	= 154.74 " "
" " (North Side)	Sta. 8+58 to Sta. 9+50	= 92.00 " "
" " " "	Sta. 12+75 to Sta. 14+04	= 129.00 " "
Carnegie Ave. (N & S. Sides)	Sta. 4+50 to Sta. 5+82.43 = 132.49 " " x 2	= 264.98 " "
" " " "	Sta. 7+81.63 to Sta. 9+00 = 118.92 " " x 2	= 236.74 " "
" " (South Side)	Sta. 1+29 to Sta. 2+83.97	= 154.97 " "
" " " "	Sta. 9+00 to Sta. 10+12	= 112.00 " "
E. 22 St. (E & W. & Median)	Sta. 0+81.01 to Sta. 2+68.93 = 187.92 " " x 4	= 751.68 " "
Cedar Carnegie Connection	Sta. 1+12 to Sta. 2+76.06 = (North Side) 1" Radius Bullnose	= 164.06 " "
" " "	Sta. 1+12 to Sta. 2+76.06 = (South Side) 3" Radius Bullnose	= 164.06 " "
	Gross Total	= 3035.65 Lin.Ft.
	Curb to be Reset	= 1395 Lin.Ft.
		1641 LIN.FT.

I-21 4" CONCRETE MEDIAN PAVEMENT (TYPE 1)

E 22 St. Sta. 0+81.01 to Sta. 2+68.93 = 187.92 Lin.Ft. x 9 ÷ 9 = **63 SQ.YDS.**

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	9 129
2	OHIO		

CUYAHOGA COUNTY
SEC. CUY-42-18.77

I-7 REINFORCED CONCRETE APPROACH SLABS (T=13")

Euclid Ave.	$2 \times 25 \times 60 \div 9$	=	333 Sq. Yds.
Prospect Ave.	$2 \times 25 \times 52 \div 9$	=	289 " "
Carnegie Ave.	$2 \times 25 \times 56 \div 9$	=	311 " "
E 22 St.	$2 \times 25 \times 70 \div 9$	=	394 " "
Cedar Ave. Relocation	$1 \times 25 \times 46 \div 9 = 389 + 5$ (See Sheet N ^o 21)	=	139 " "
" " "	$1 \times 25 \times 44 \div 9 = 128 + 11$ (" " ")	=	122 " "
			1588 SQ. YDS.

E-101 COMPACTED SUBGRADE

TOTAL I-7 Reinforced Concrete Approach Slabs	=	1588 Sq Yds.
TOTAL B-70 9" Concrete Base Course	=	9626 " "
		11214 SQ YDS.

E-11 WATER @ 5 GAL PER CU. YD.

TOTAL Embankment From X-Sections & Sht. 13 =	$228 \text{ Cu. Yd.} \times 5 \div 1000 =$	1.14 M Gal
TOTAL I-22 Subbase Material	$1747 \text{ " " } \times 5 \div 1000 =$	8.74 " "
		9.88 M. GAL.

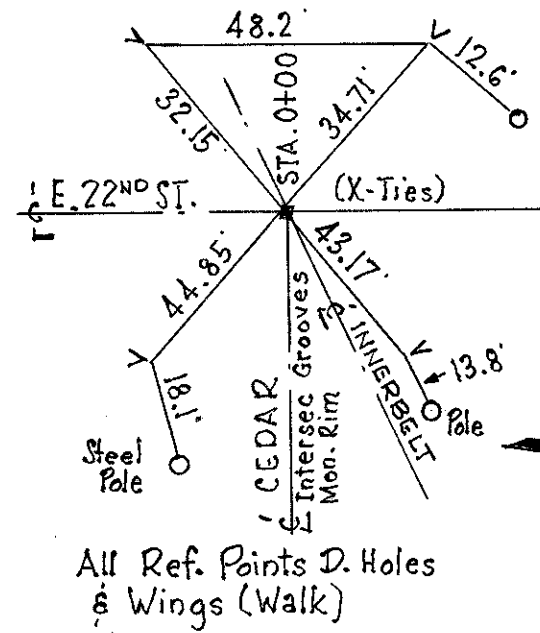
L-9 AGRICULTURAL LIMING MATERIAL @ 100 LBS PER 1000 SQ. FT.

TOTAL Seeding Area from Sht. #10 =	$1613 \text{ Sq. Yd} \times 9 = 14,517 \text{ Sq. Ft.}$	
	$\frac{14,517 \times 100}{1000 \times 2000} =$	0.78 TON

L-9 COMMERCIAL FERTILIZER (10-6-4) @ 20 LBS PER 1000 SQ. FT.

	$\frac{14,517 \times 20}{1000 \times 2000} =$	0.15 TON
--	---	----------

2 A85-T.B.M.#6, D.H. in curb on S.W. cor. of E. 22ND ST. Carnegie Ave, 7.41' W. of C.E.I. steambox, 2.41' E. of W. edge of S. walk of Carnegie, 8.66' N. of S. edge of S. walk of Carnegie.
Adjusted Elev. 671.629



All Ref. Points 2' Holes & Wings (Walk)

CUYAHOGA COUNTY
CUY-42-18.77

11
129

S.S. CURB - 13' WIDE - 0.7' HIGH				
REF. NO	STATION		ITEM E-8	ITEM I-11
	FROM	TO	REMOVAL FOR RE-USE OF EXIST. S.S. CURB	REMOVAL FOR RE-USE OF EXIST. S.S. CURB
I-C	E. 22 ND ST. 2+80	CEDAR AVE 0+89	84	67
TOTAL			84	67

MEDIAN GUTTER = DATUM, 0+03.74 = E. CENTRAL AVE & CONSTR. E. E. 22ND ST.

PROPOSED STRUCTURE
TYPE: Continuous steel beams with reinforced concrete deck and substructure.
SPANS: 61.25'-61.25' c/c bearings
ROADWAY: 74'-0" f/f curbs
SIDEWALKS: 2 @ 8'-0"
LOAD FREQUENCY: CF 2000 (51)
SKEW: 25°-51' R.F.
WEARING SURFACE: Bituminous
APPROACH SLABS: A3-1-54 (25' long)
ALIGNMENT: Tangent

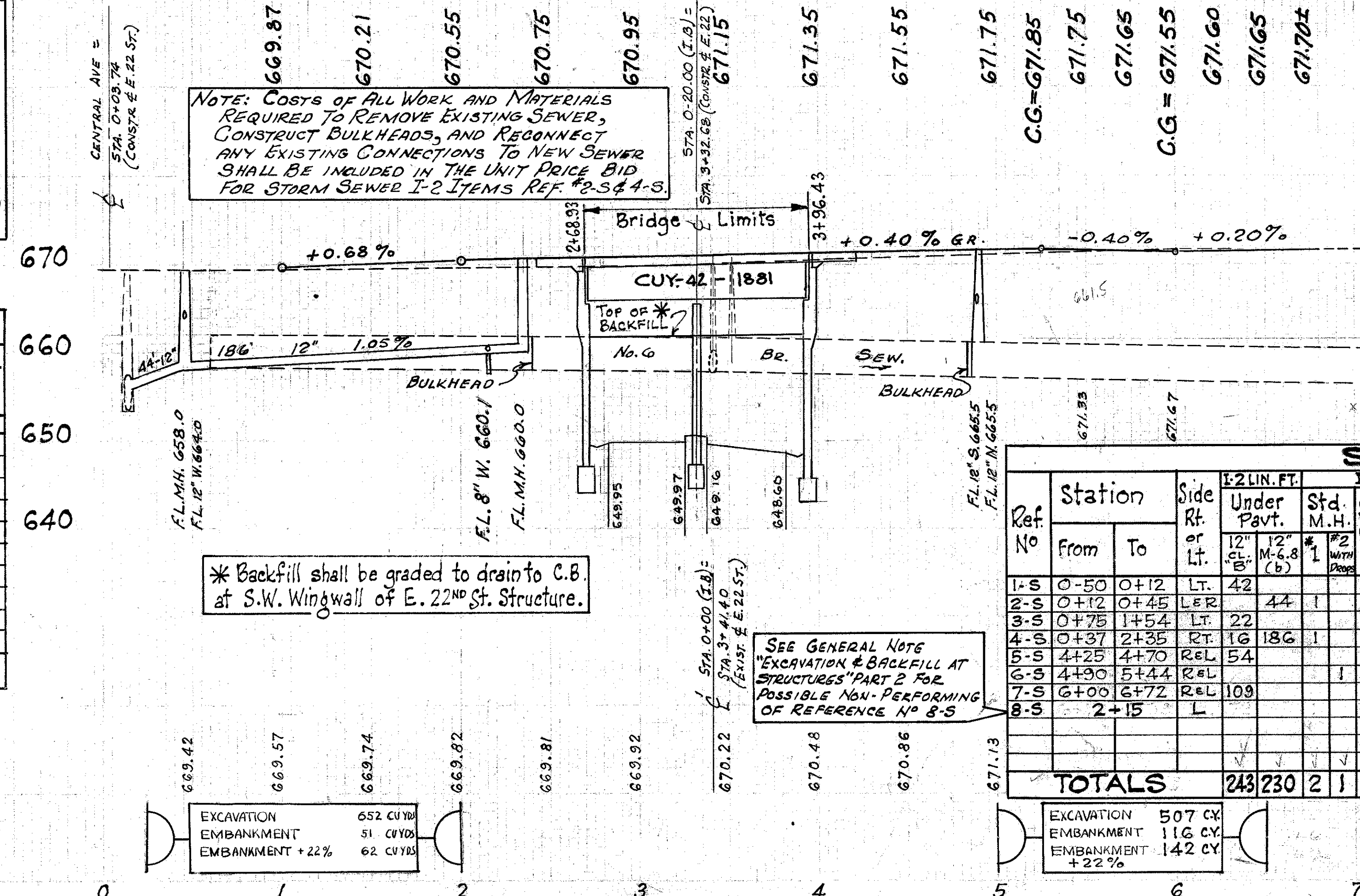
NOTE: COSTS OF ALL WORK AND MATERIALS REQUIRED TO REMOVE EXISTING SEWER, CONSTRUCT BULKHEADS, AND RECONNECT ANY EXISTING CONNECTIONS TO NEW SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STORM SEWER I-2 ITEMS REF. #2-S44-3

6" UNDERDRAINS					
REF. NO	STATION		SIDE RT. OR LT.	I-4 LIN. FT. CURB SHALLOW	I-5 EACH 6" PIPE SPECIALS
	FROM	TO			
1-F	0+147	0+50	LT.	100	
2-F	0+81	2+48	LT.	164	
3-F	0+37	2+84	RT.	246	
4-F	3+80	4+84	LT.	102	
5-F	5+52	6+30	LT.	126	34
6-F	5+55	6+31	RT.	74	
7-F	6+71		LT.	21	
TOTALS				833	34

DRIVEWAY QUANTITIES				
Street	Station		SIDE RT. OR LT.	ITEM E-8
	From	To		REMOVAL & DISPOSAL OF EXIST. DRIVE PAVTS.
E. 22 ND ST.	4+18	6+45	RT.	69
CEDAR	1+25	1+46	LT.	27
CEDAR	1+47	1+72	RT.	18
CARNEGIE	0+36	0+64	RT.	23
TOTAL				137

SIDEWALK					
Ref. No	Station		Side Rt. or Lt.	ITEM E-8	ITEM I-13
	From	To		REMOVAL & DISPOSAL OF EXIST. WALK	4" PORTLAND CEMENT CONCRETE WALK
1-W	0+27	0+117	R	1036	640
2-W	0+15	0+26	R	185	185
3-W	0+35	6+71	L	5092	3444
4-W	2+70	5+56	R	1505	372
5-W	6+30	6+70	R	865	900
6-W	0+30	1+85	R	1805	2060
7-W	0+30	2+37	L	1116	
8-W	0+02	1+53	L	60	1070
TOTAL				11,664	8671

EXIST. ELEVATION 0+00 = E. CENTRAL AVE & EXIST. E. E. 22ND ST.



* Backfill shall be graded to drain to C.B. at S.W. Wingwall of E. 22ND St. Structure.

SEE GENERAL NOTE "EXCAVATION & BACKFILL AT STRUCTURES" PART 2 FOR POSSIBLE NON-PERFORMING OF REFERENCE NO 8-5

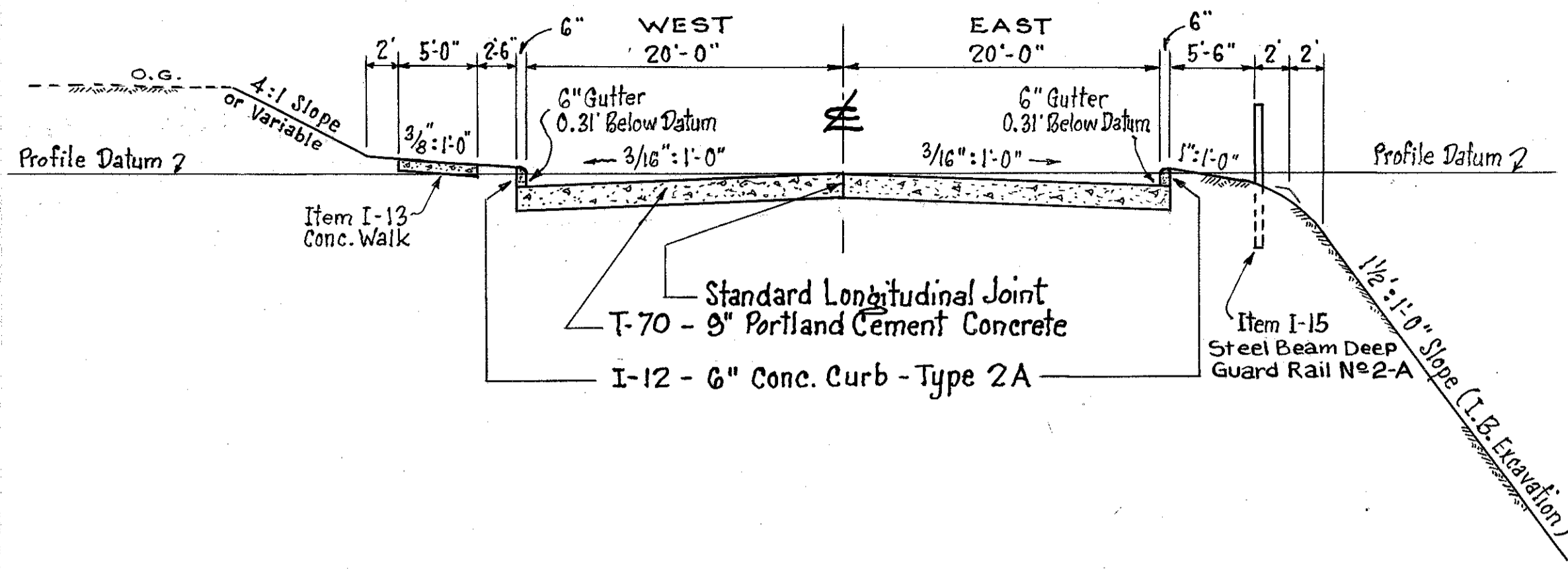
EXCAVATION	652 CY
EMBANKMENT	51 CY
EMBANKMENT + 22%	62 CY

EXCAVATION	507 CY
EMBANKMENT	116 CY
EMBANKMENT + 22%	142 CY

STORM SEWERS																		
Ref. No	Station		Side Rt. or Lt.	I-2 LIN. FT. UNDER PAVT.	I-3 EACH 24" C.B. #4 Saly. Castg.	I-4 SPEC. C.I. #4 Saly. Castg.	I-5 ADJUST TO GRADE C.B. #7	I-6 MOD. STD. C.B. #7	I-7 3" CONC. BASE COURSE	I-8 3" ASPH. CONC. SURF. COURSE	I-9 REMOVAL & DISP. OF EXIST. PAVT.	I-10 3" CONC. PAVT.	I-11 ABANDON C.B.					
	From	To																
1-S	0+50	0+12	LT.	42														
2-S	0+12	0+45	LER	44														
3-S	0+75	1+54	LT.	22														
4-S	0+37	2+35	RT.	16	186						140	140						
5-S	4+25	4+70	REL	54														
6-S	4+90	5+44	REL	54														
7-S	6+00	6+72	REL	109														
8-S	2+15		L										30					
TOTALS				243	230	2	1	1	2	1	2	1	29	2.0	198	169	5	90

PLAN & PROFILE - EAST 22ND ST. - CENTRAL AVE to PROSPECT AVE

TYPICAL SECTION RUN-AROUND
SCALE: 1/8"=1'-0" HOR. - 1/4"=1'-0" VER.



NOTE: For Plan & Profile of E. 22ND St. and utility Locations. See Sheet No 11

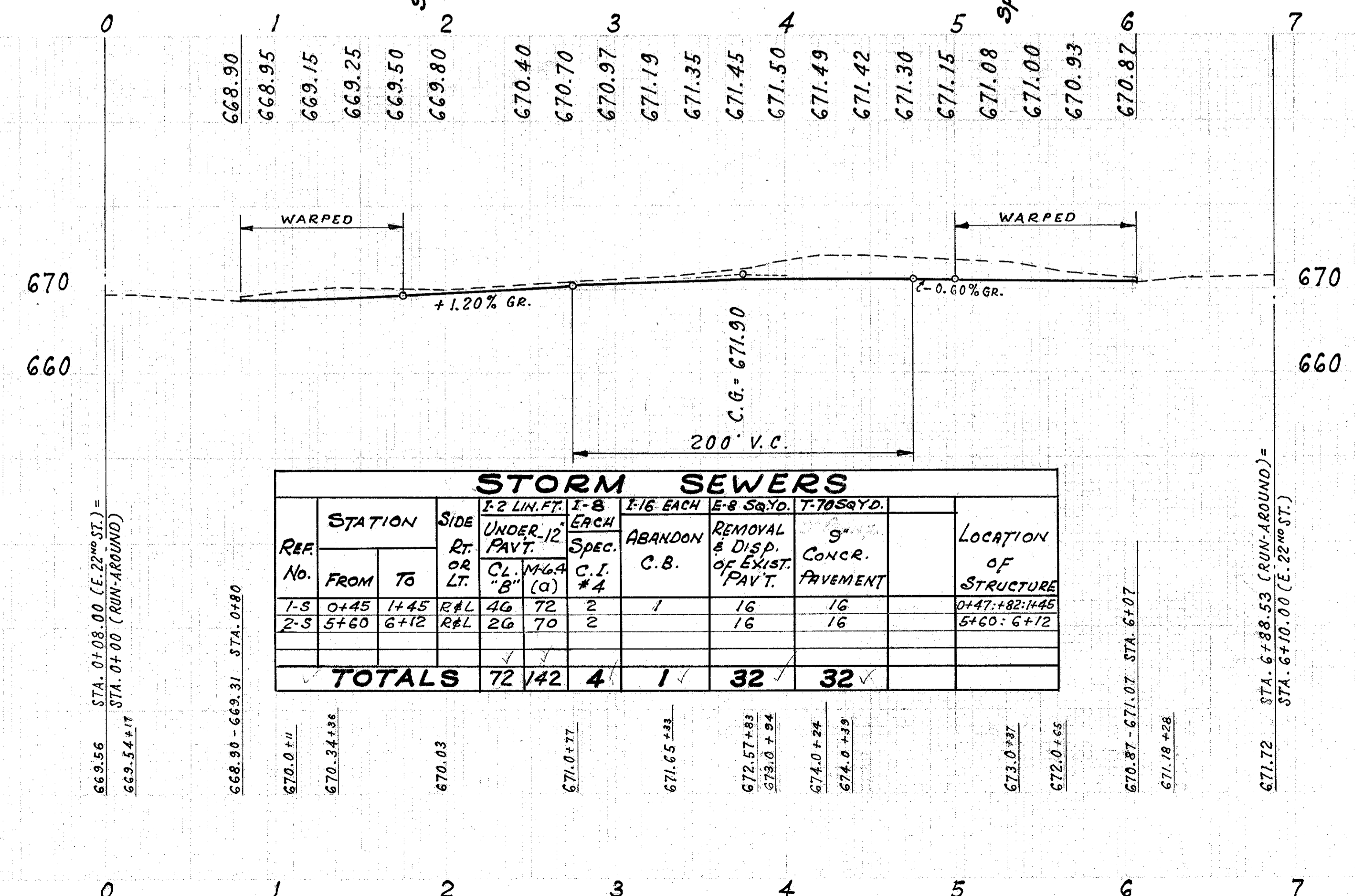
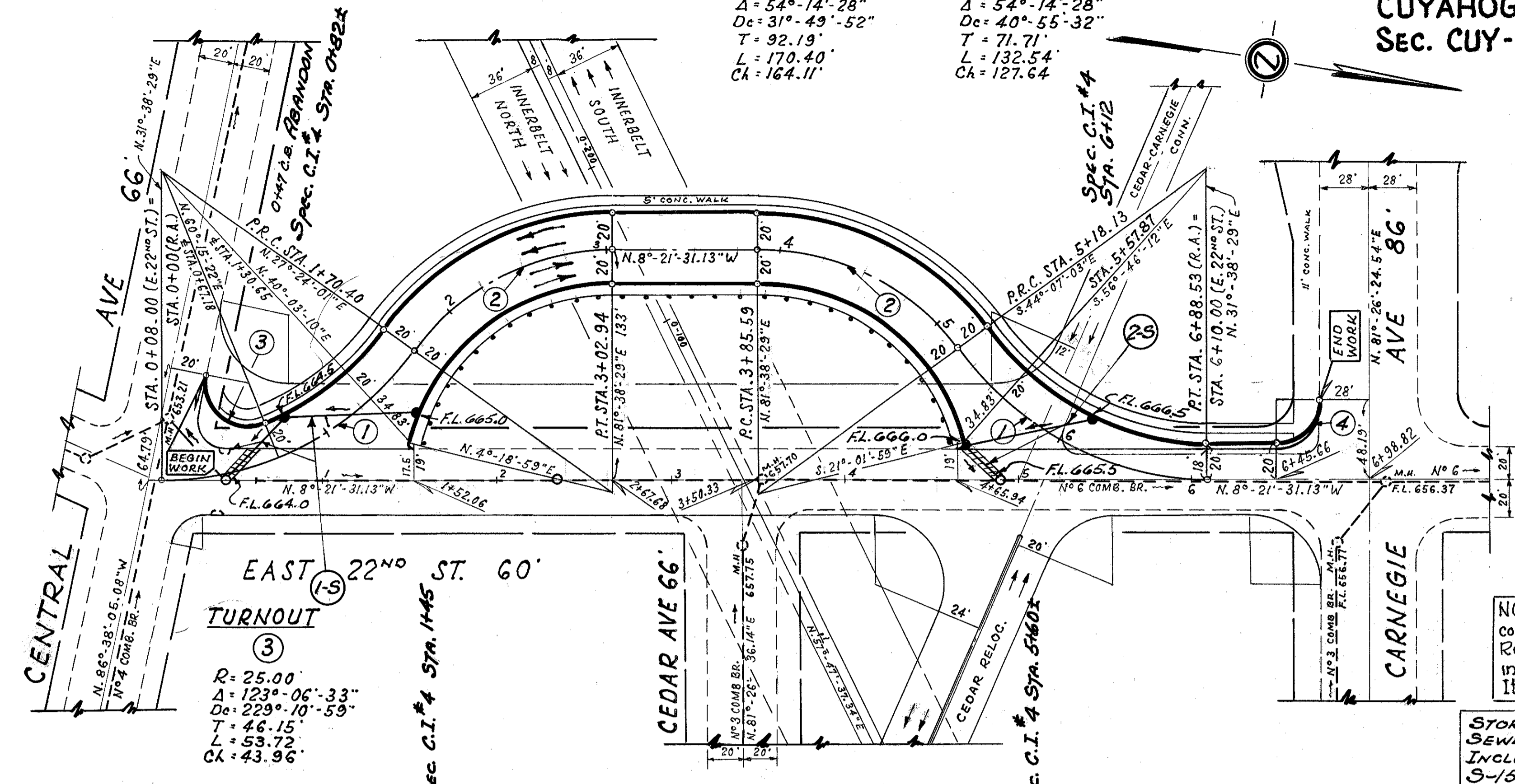
2 AB5-T.B.M.#6, D.H. in curb on S.W. cor. of E. 22ND St. & Carnegie Ave, 741' W. of C.E.I. steambox, 2.41' E of W. edge of S. walk of Carnegie, 8.66' N. of S. edge of S. walk of Carnegie. Adjusted Elev. 671.629

RUN-AROUND & CURVE DATA

① R=180.00'
Δ=54°-14'-28"
Dc=31°-49'-52"
T=92.19'
L=170.40'
Ch=164.11'

② R=140.00'
Δ=54°-14'-28"
Dc=40°-55'-32"
T=71.71'
L=132.54'
Ch=127.64'

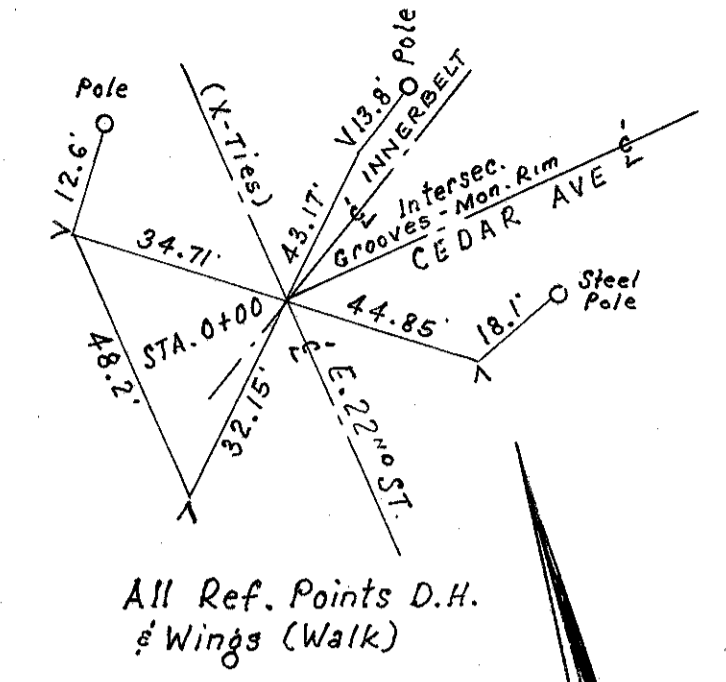
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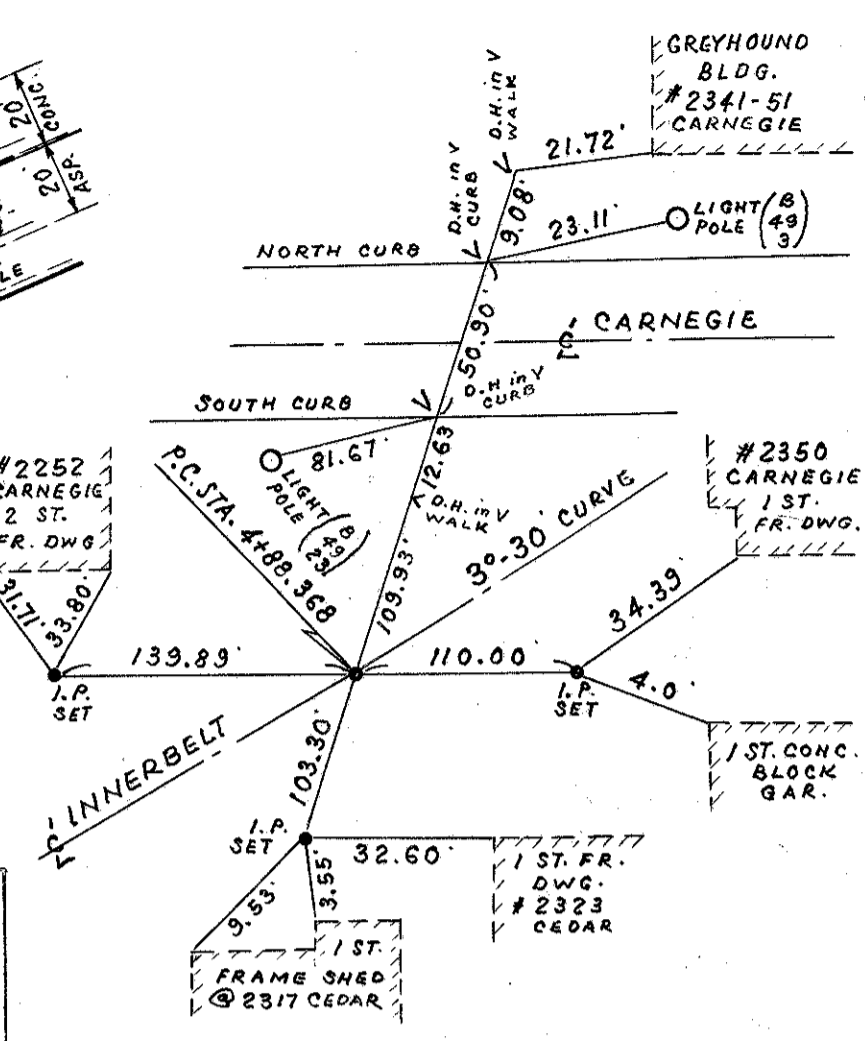
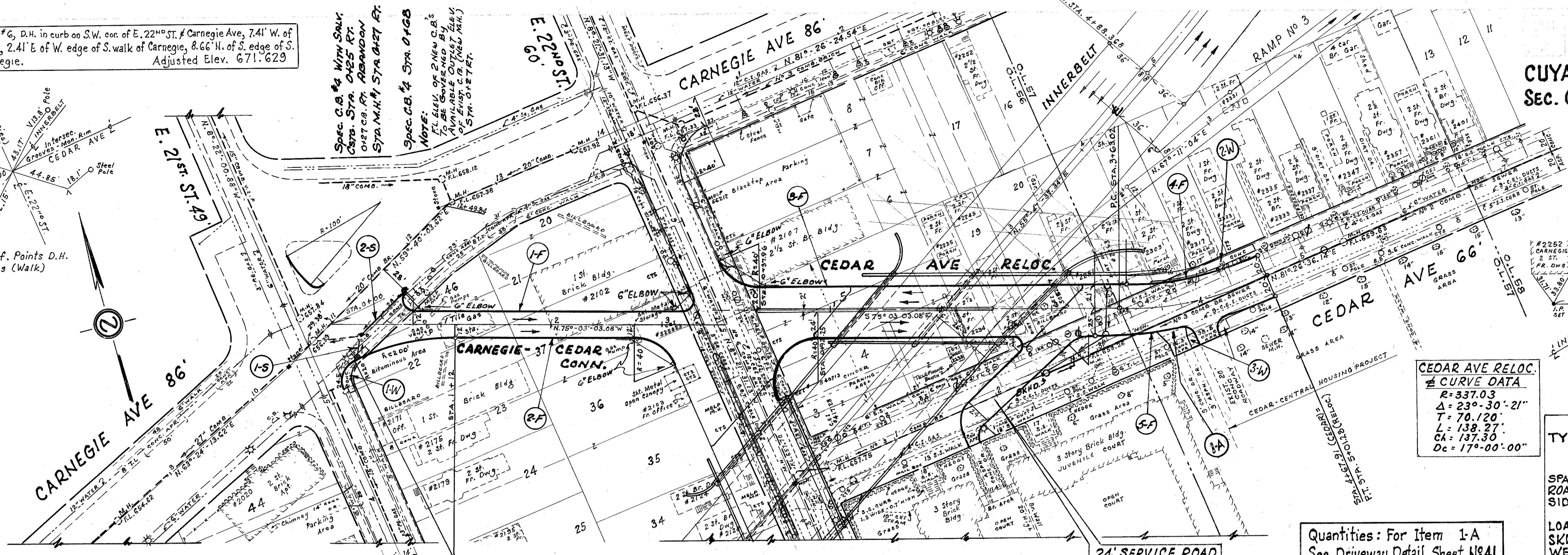
STORM SEWERS										
REF. No.	STATION		SIDE RT. OR LT.	I-2 LIN. FT. UNDER 12 PAVT.		I-8 EACH SPEC. C.I. #4	I-16 EACH ABANDON C.B.	I-8 Sq.Yd. REMOVAL & DISP. OF EXIST. PAVT.	I-70Sq.Yd. 9" CONCR. PAVEMENT	LOCATION OF STRUCTURE
	FROM	TO		CL. W-6.9 "8" (α)	C.I. #4					
1-S	0+45	1+45	R&L	46	72	2	1	16	16	0+47: +82: 1+45
2-S	5+60	6+12	R&L	26	70	2		16	16	5+60: 6+12
TOTALS				72	142	4	1	32	32	

CUYAHOGA COUNTY
Sec. CUY-42-18.77

2 AB5 - T.B.M. # 6, D.H. in curb on S.W. cor. of E. 22nd St. & Carnegie Ave, 7.41' W. of C.E.I. steambox, 2.41' E. of W. edge of S. walk of Carnegie, 8.66' N. of S. edge of S. walk of Carnegie.
Adjusted Elev. 671.629



Spec. C.B. # 4 WITH S&W
COST. STA. 0+25 TO
0+70 C.B. BY ABANDON
STA. M.H. STA. 0+27 TO
Spec. C.B. # 4 STA. 0+68
NOTE:
FL. LEVEL OF 2 NEW C.B.'S
TO BE GOVERNED BY
AVAILABLE OUTLET ELEV.
OF EXIST. C.B. (NEW M.H.)
SYM. 0+127 ET.



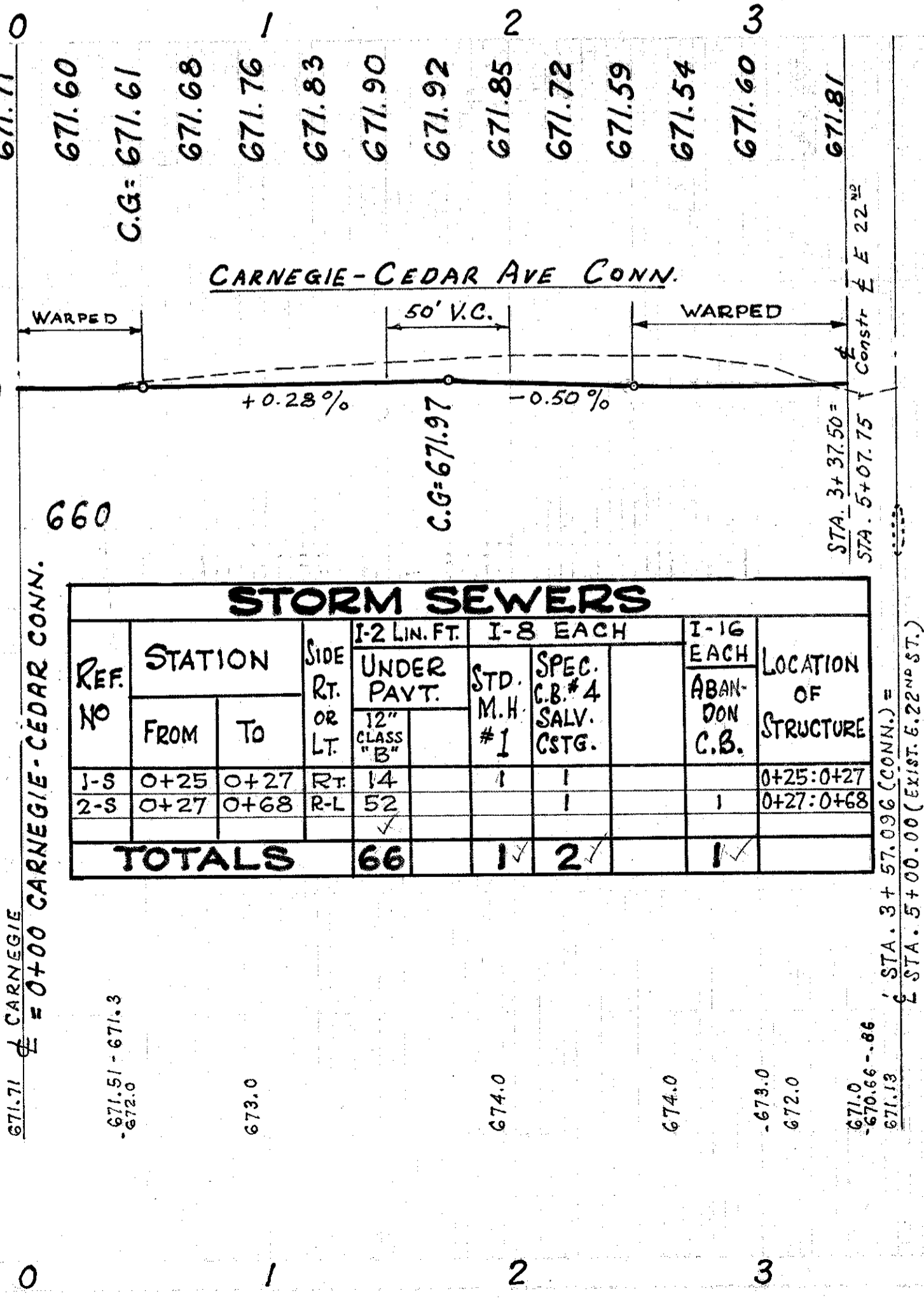
CEDAR AVE RELOC. CURVE DATA
R = 337.03
Δ = 23°-30'-21"
T = 70.120'
L = 138.27'
CA = 137.30'
Dc = 17°-00'-00"

PROPOSED STRUCTURE
TYPE: Continuous steel beams with reinforced concrete deck and reinforced concrete substructure.
SPANS: 73.37' & Variable (74.18' to 80.57')
ROADWAY: 46'-0" f/f curbs
SIDEWALK: 8'-0" S.W. on North & 2'-0" Safety curb South.
LOAD FREQUENCY: C.F. = 2000 ('51)
SKEW: 40°-51' & 44°-30'
WEARING SURFACE: Bituminous
APPROACH SLABS: AS-1-54 (25' Long)
ALIGNMENT: Tangent

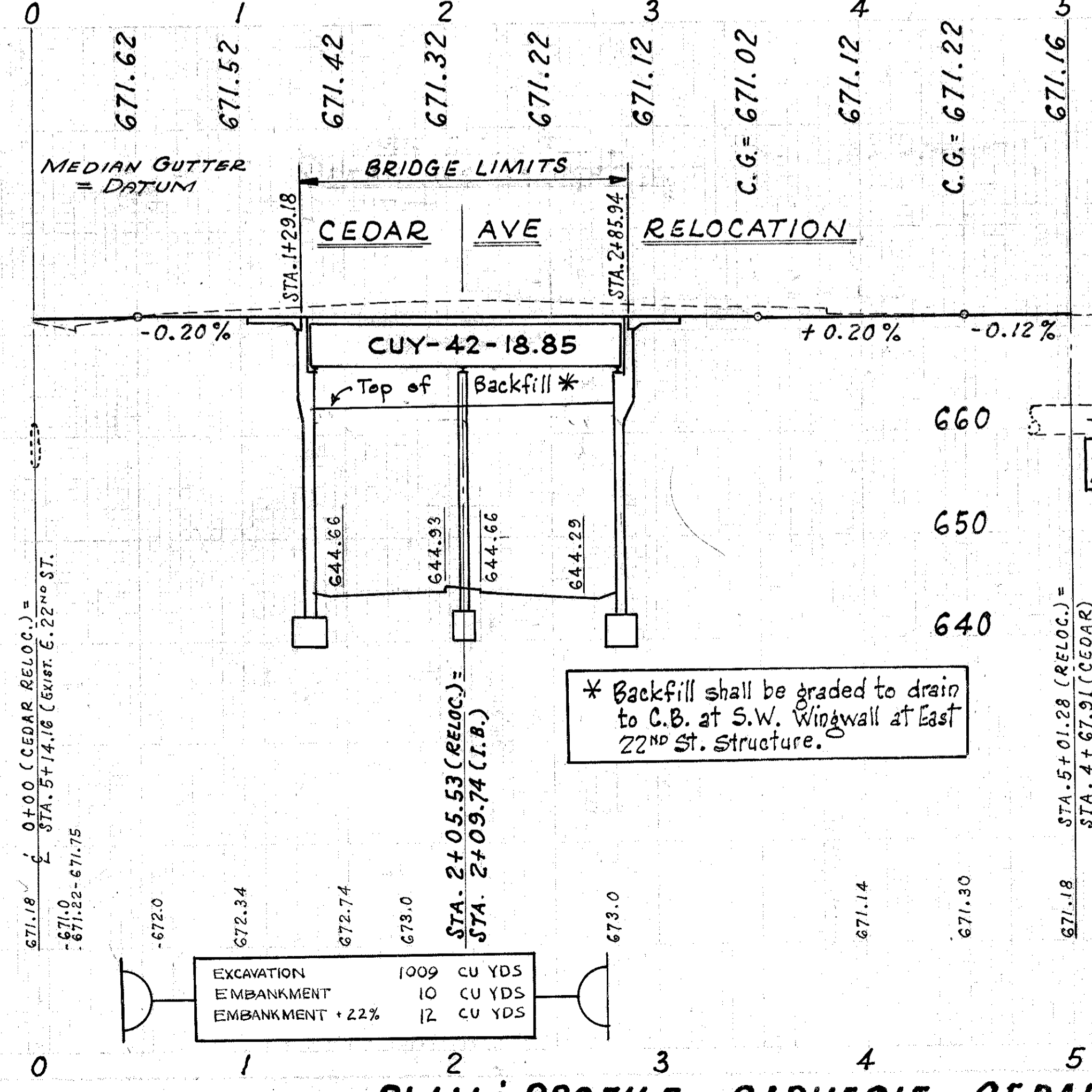
Quantities: For Item 1-A
See Driveway Detail Sheet No. 1

24' SERVICE ROAD
See Extra Area
Sheet No. 21

Ref. No	Station	SIDEWALK		TOTAL
		From	To	
1-W	10+63	547	275	1848
2-W	5+01	1415	1276	
3-W	3+70	139	297	
TOTAL				2101



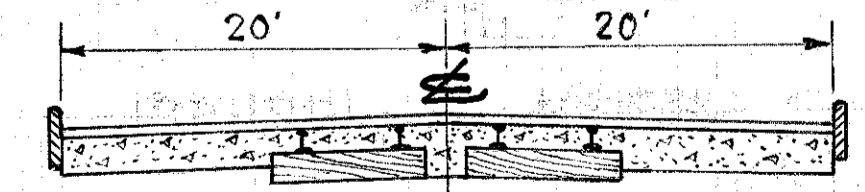
Ref. No	STATION	SIDE RT. OR LT.	I-2 LIN. FT.		I-8 EACH		I-16 EACH	LOCATION OF STRUCTURE
			UNDER PAYT.	STD. M.H. #1	SPEC. C.B. # 4 SALV. CSTG.	ABANDON C.B.		
1-3	0+25	0+27	R-T	14	1	1	1	0+25:0+27
2-8	0+27	0+68	R-L	52	1	1	1	0+27:0+68
TOTALS			66	1	2	1		



EXCAVATION	1009	CU YDS
EMBANKMENT	10	CU YDS
EMBANKMENT + 22%	12	CU YDS

REF. NO	STATION	SIDE RT. OR LT.	I-4 LIN. FT.		I-5 EACH	
			CURB SHALLOW	OUTLETS FOR UNDERDRAINS	6'-EL BOW	
1-F	C.B. 0+68	5+52 E. 22	Lt.	231	28	3
2-F	0+25	4+84 E. 22	Rt.	254	40	2
3-F	5+55 E. 22	1+46	Lt.	108	46	2
4-F	3+05	4+68	Lt.	176		
5-F	2+60	4+68	Rt.	250		
TOTAL			1019	114	7	

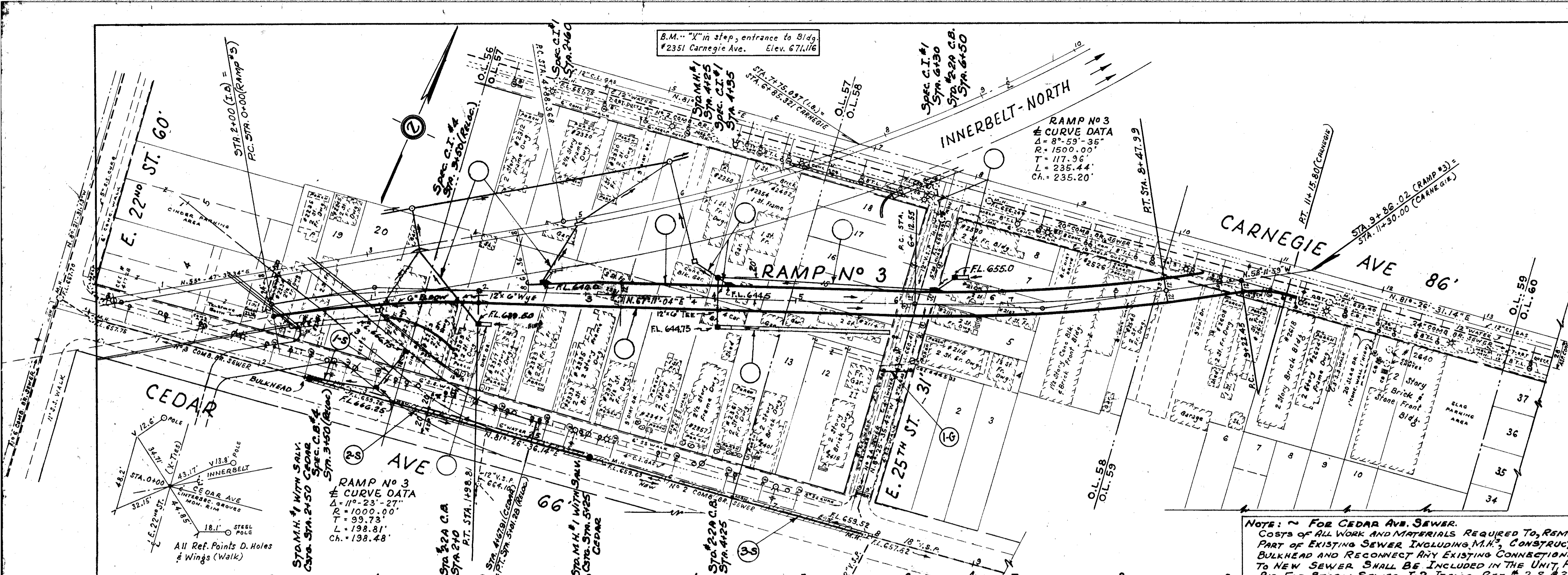
Street	Station @ Apron	SIDE RT. OR LT.	ITEM E-8		ITEM I-11		ITEM E-101		ITEM L-9	
			REMOVAL OF EXIST. CURB	REMOVAL OF EXIST. DRIVES	REMOVAL OF EXIST. CURB	REMOVAL OF EXIST. CURB	EMBANK. TO REPLACE PAVT.	SEEDING & PROTECTING		
CEDAR	2+50	Lt.	5							
CEDAR	3+36	Lt.	5							
CARNEGIE	11+49	Rt.	23	29	29	5	23			
CARNEGIE	12+88	Rt.	25	31	31	6	25			
E. 21 ST.	5+15	Rt.	31	5	5	1	2			
TOTAL			112	65	65	12	50			



8" Concrete Base with 3" Asphalt Surface over Car Tracks. 5" S.S. Curb.
ADJOINING PAVEMENT CEDAR AVE
Scale: 1" = 10' Hor. - 1" = 5' Vert.

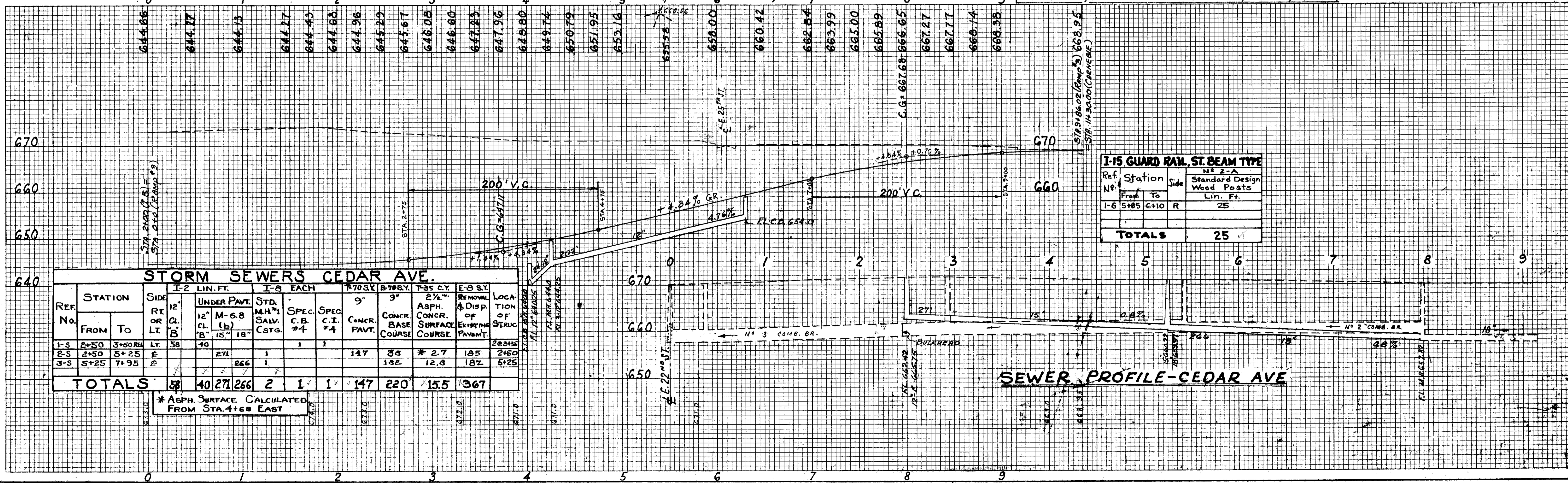
PLAN & PROFILE - CARNEGIE - CEDAR AVE CONNECTION & CEDAR AVE RELOCATION

CUYAHOGA COUNTY
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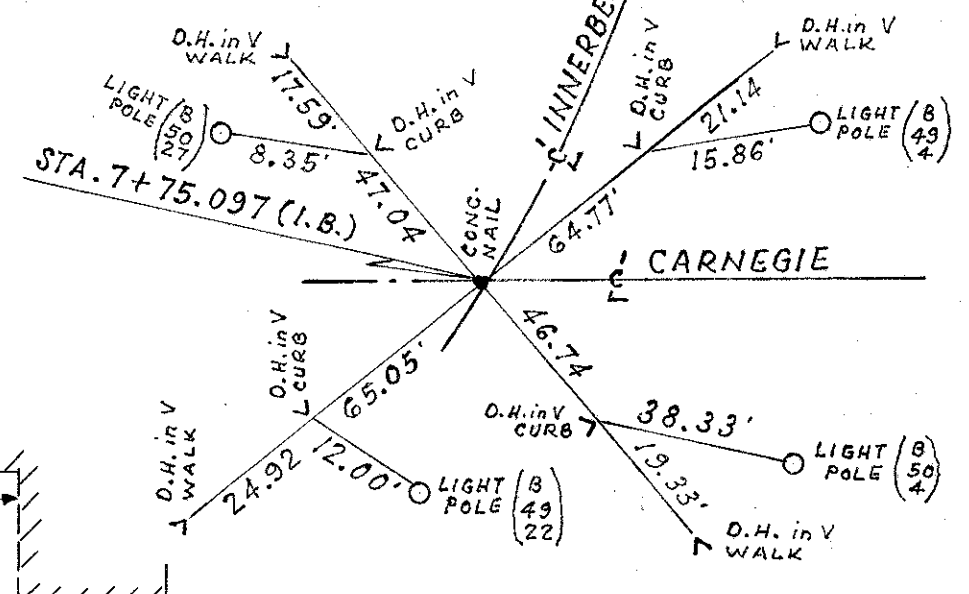
NOTE:
 This sheet is included in these plans for the purpose of showing the Cedar Ave. Sewer Quantities and Profile. All other items on this sheet, with the exception of Guard Rail Item 1-G, are not part of this Contract.

NOTE: ~ FOR CEDAR AVE. SEWER.
 COSTS OF ALL WORK AND MATERIALS REQUIRED TO REMOVE PART OF EXISTING SEWER INCLUDING M.H.'S, CONSTRUCT BULKHEAD AND RECONNECT ANY EXISTING CONNECTIONS TO NEW SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STORM SEWER I-2 ITEMS REF. # 2-S # 3-S.

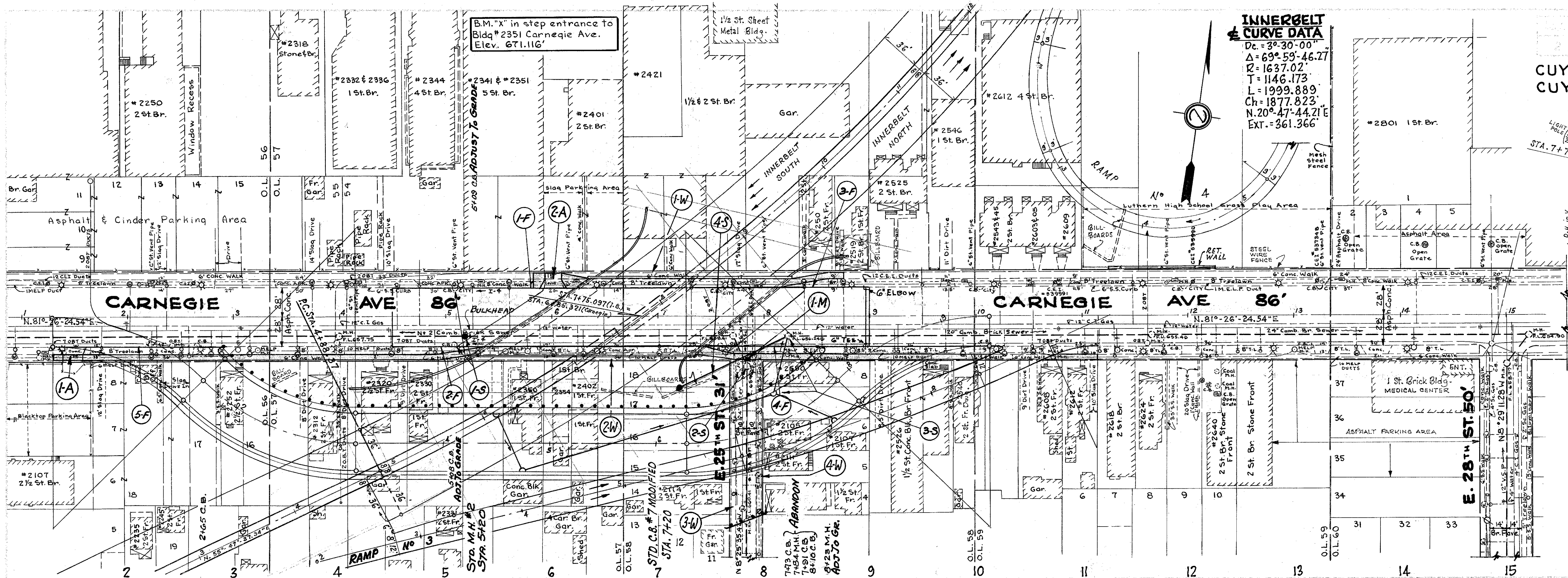


PLAN & PROFILE.. CEDAR AVE

**INNERBELT
& CURVE DATA**
 Dc = 3°-30'-00"
 Δ = 69°-59'-46.27"
 R = 1637.02'
 T = 1146.173'
 L = 1999.889'
 Ch = 1877.823'
 N. 20°-47'-44.21"E
 EXT. = 361.366'



PROPOSED STRUCTURE
 TYPE: Continuous steel girders with concrete deck and substructure.
 SPAN: Varies 98.04' - 92.36' c/c bearings on E of roadway.
 ROADWAY: 56'-0" f/f of curbs
 SIDEWALKS: 2 @ 8'-0"
 LOAD FREQUENCY: CF-2000 (51)
 SKEW: Varies
 WEARING SURFACE: Bituminous
 APPROACH SLABS: AS-1-54 (25' Long)
 ALIGNMENT: Tangent



QUANTITIES: For Items 1-A & 2-A
See Driveway Details Sht. No 41

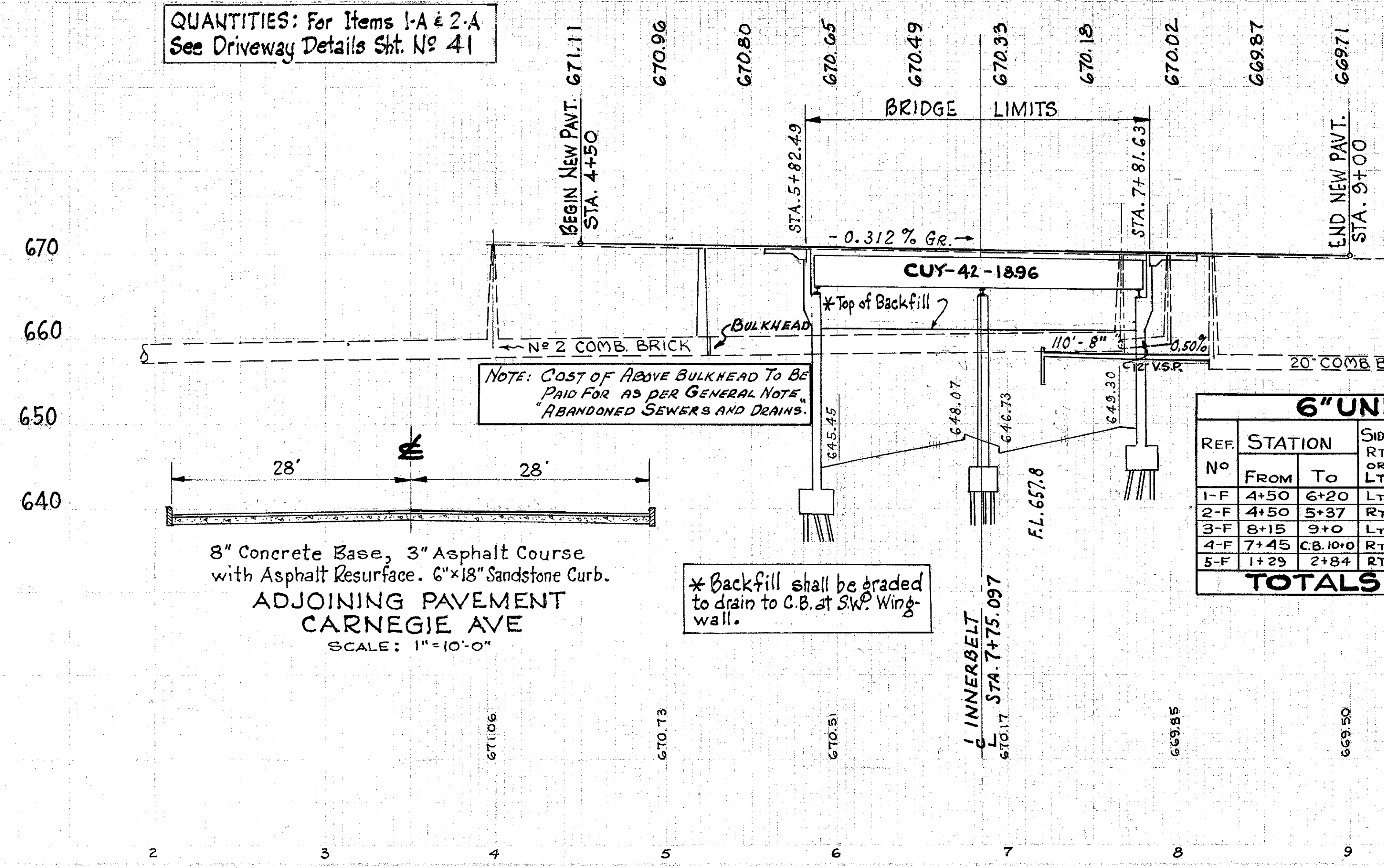
MONUMENT BOXES

ITEM No	STATION	MONUMENT BOX TYPE "A"	TYPE "B"
1-M	7+80.06	1	
TOTAL		1	

STORM SEWERS

REF. No.	STATION FROM TO	SIDE RT. or LT.	2-8 EACH STD. M.H. #2	ADJUST TO GRADE M.H.C.B.	1-16 EACH ABANDON C.B. M.H.	2-8 EACH MOD. STD. C.B. #7	LOCATION OF STRUCTURE	I-2 LIN. FT. UNDER PAVT. CL. "A" 8"	
1-S	5+20	RT.	1	2			5+08+09+20		
2-S	7+73	7+91	RT.		2	1	7+73+84+91		
3-S	8+10	8+23	RT.	1	1		8+23+8+10		
4-S	7+20	8+23	RT.			1	7+20	110	
TOTALS			1	1	2	3	1	1	110

SEE GENERAL NOTE EXCAVATION AND BACKFILL AT STRUCTURES PART 2 FOR POSSIBLE NON-PERFORMING OF REFERENCE NO 4-S



8" Concrete Base, 3" Asphalt Course with Asphalt Resurface. 6"x18" Sandstone Curb.
ADJOINING PAVEMENT CARNEGIE AVE
 SCALE: 1"=10'-0"

* Backfill shall be graded to drain to C.B. at S.W. Wing-wall.

6" UNDERDRAINS

REF. No	STATION FROM TO	SIDE RT. or LT.	CURB SHAL. LOW	1-4 LIN. FT. OUTLETS FOR UNDERDRAINS	1-5 EACH 6" PIPE SPECIALS ELBOW TEE
1-F	4+50	6+20	LT.	168	
2-F	4+50	5+37	RT.	86	
3-F	8+15	9+0	LT.	84	56
4-F	7+45	CB. 10+0	RT.	252	
5-F	1+29	2+84	RT.	154	
TOTALS				744	56

DRIVEWAY QUANTITIES

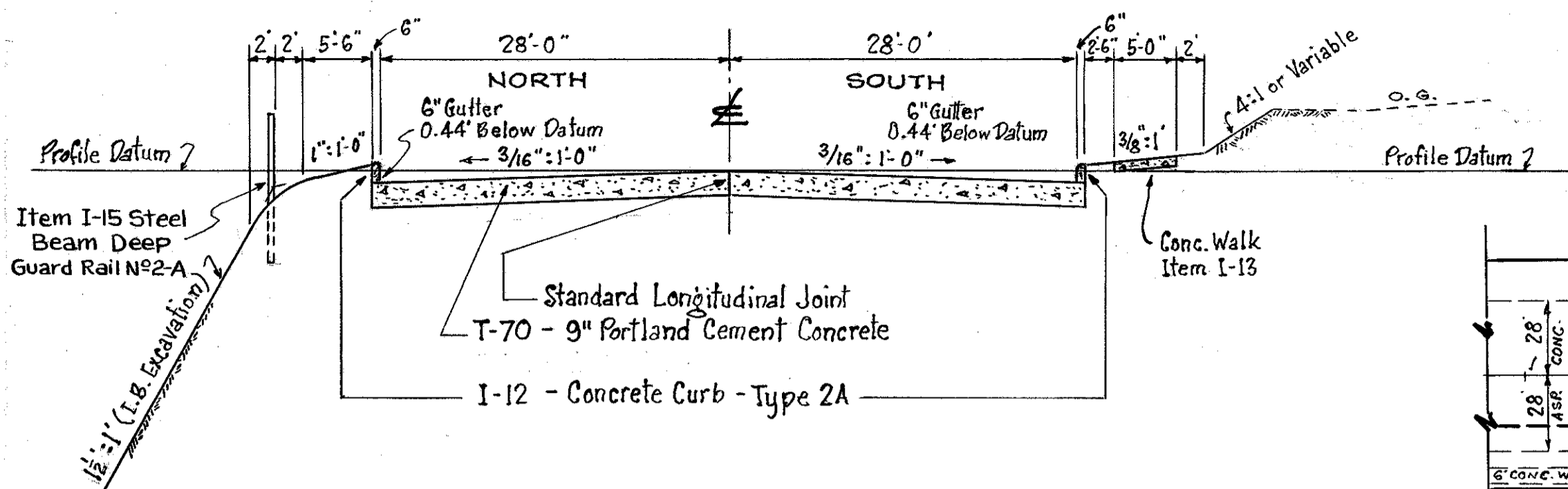
Street	Station FROM TO	SIDE RT. or LT.	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. DRIVE PAVT. SQ. YDS.
CARNEGIE	6+50	8+69	LT. 35
CARNEGIE	5+83	11+17	RT. 63
TOTAL			98

SIDEWALK

Ref. No	Station		SIDE RT. or LT.	ITEM E-8 REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.		ITEM I-13 4" PORTLAND CEMENT CONCRETE WALK SQ. FT.	
	From	To		WIDTH	SQ. FT.		
1-W	5+76	8+73	L	1853	Var.	805	
2-W	1+29	11+15	R	4712	6'	4396	
3-W	1+55	3+15	L	408			
4-W	1+70	3+15	R	388			
TOTAL				7361		5201	

TYPICAL SECTION RUN-AROUND

SCALE: 3/32" = 1'-0" HOR. - 1/4" = 1'-0" VER.



NOTE: For Plan & Profile of Carnegie Ave and utility Locations. See Sheet No 15

RUN-AROUND & CURVE DATA

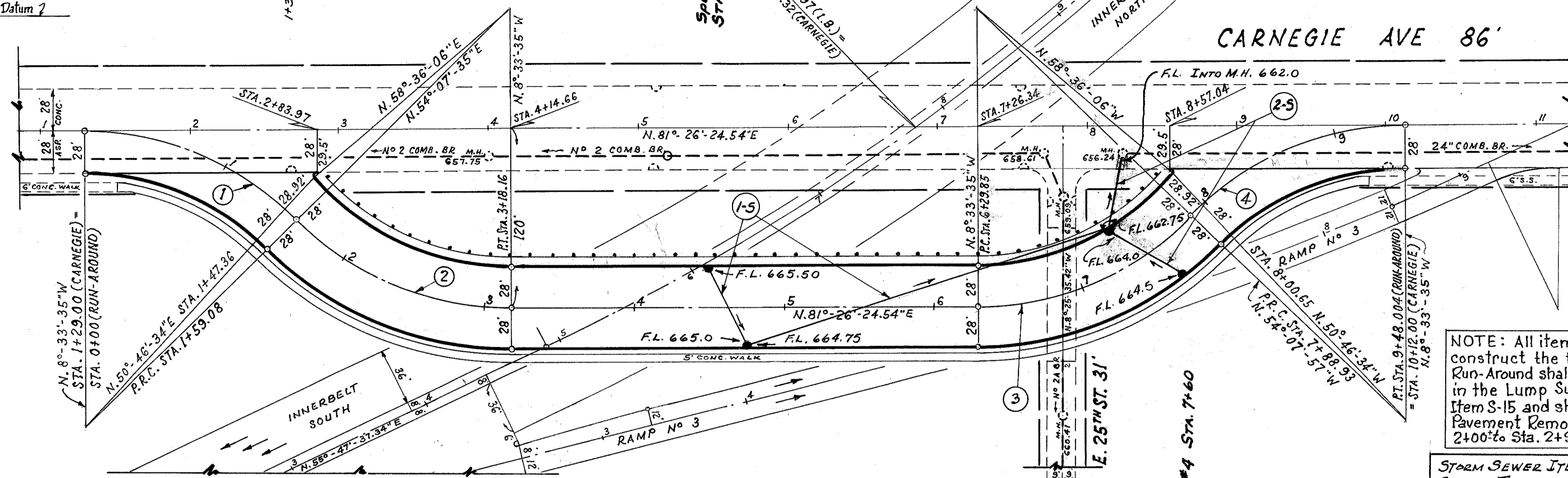
① ② ③ ④
 R = 200.00'
 Δ = 45°-34'-22"
 Dc = 28°-38'-51"
 T = 84.02'
 L = 159.08'
 CA = 154.92'

BULLNOSES

R = 1.5'
 Δ = 129°-57'-29"
 L = 3.40'

B.M. "X" in step, Entrance to Bldg.
 #2351 Carnegie Ave. Elev. 671.116

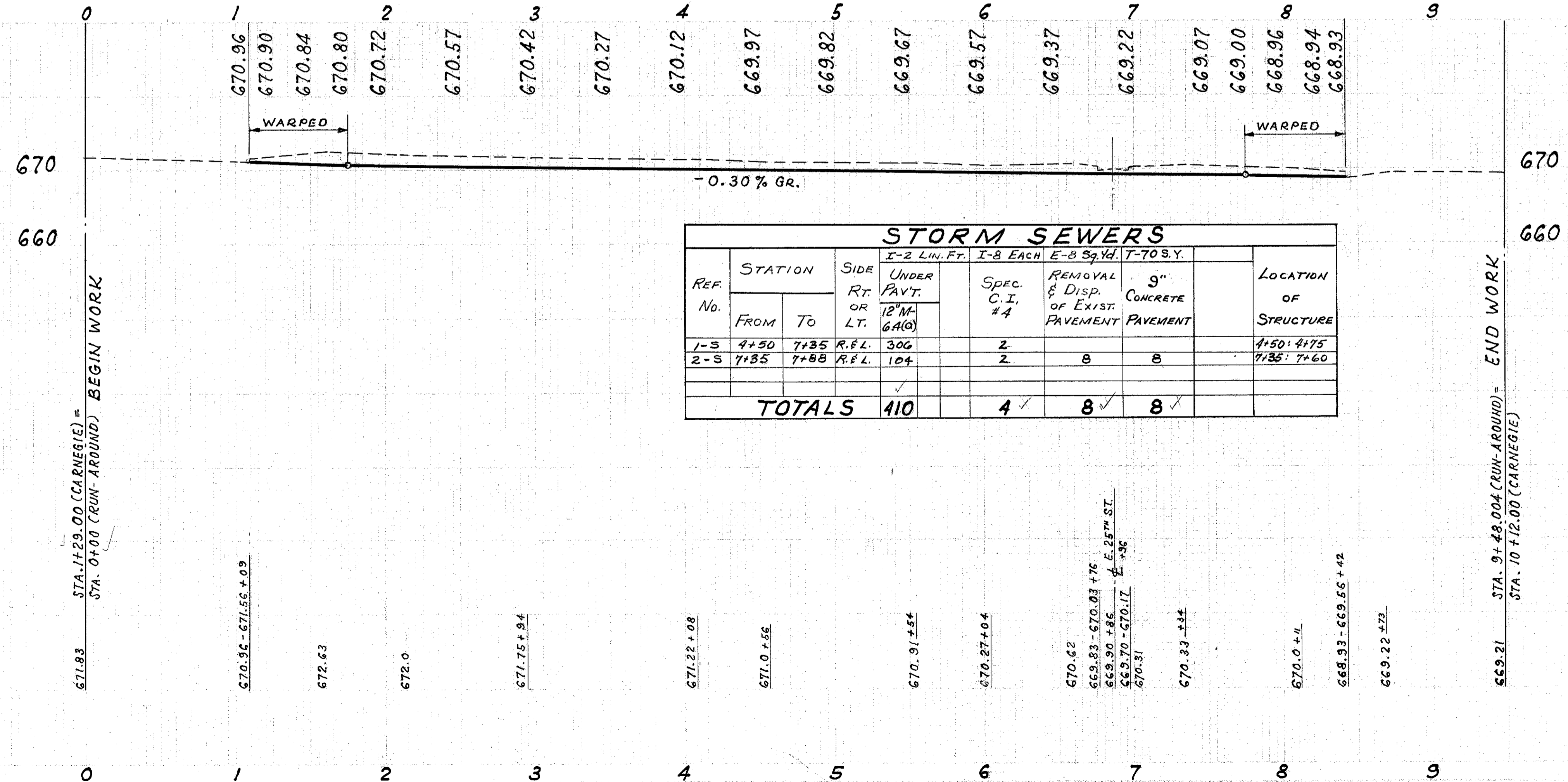
CUYAHOGA COUNTY
 SEC. CUY-42-18.77



NOTE: All items needed to construct the temporary Run-Around shall be included in the Lump Sum Price for Item S-15 and shall include Pavement Removal from Sta. 2+00 to Sta. 2+90 ± E. 25th St.

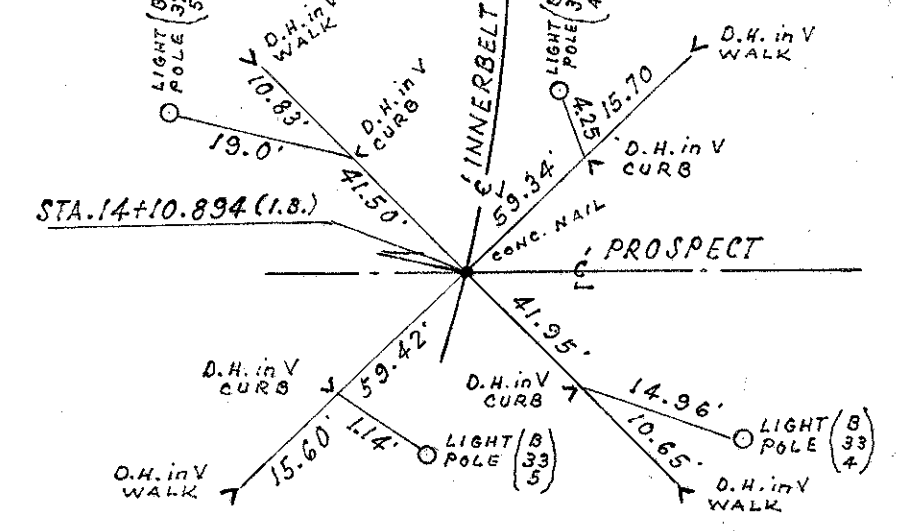
STORM SEWER ITEMS IN STORM SEWER TABLE ARE NOT TO BE INCLUDED IN BID FOR ITEM S-15 ABOVE.

NOTE: EXISTING C.B. AT STA. 1+36 IS TO REMAIN, EXCEPT THAT CURB BOX BE REMOVED FOR DURATION OF USE OF TEMPORARY RUNAROUND ROAD. CURB BOX TO BE REPLACED AFTER TEMPORARY ROAD IS REMOVED. COST OF ABOVE TO BE INCLUDED IN LUMP SUM BID FOR ITEM S-15. WARP RUN-AROUND PAVEMENT TO DRAIN TO C.B. STA. 1+36.

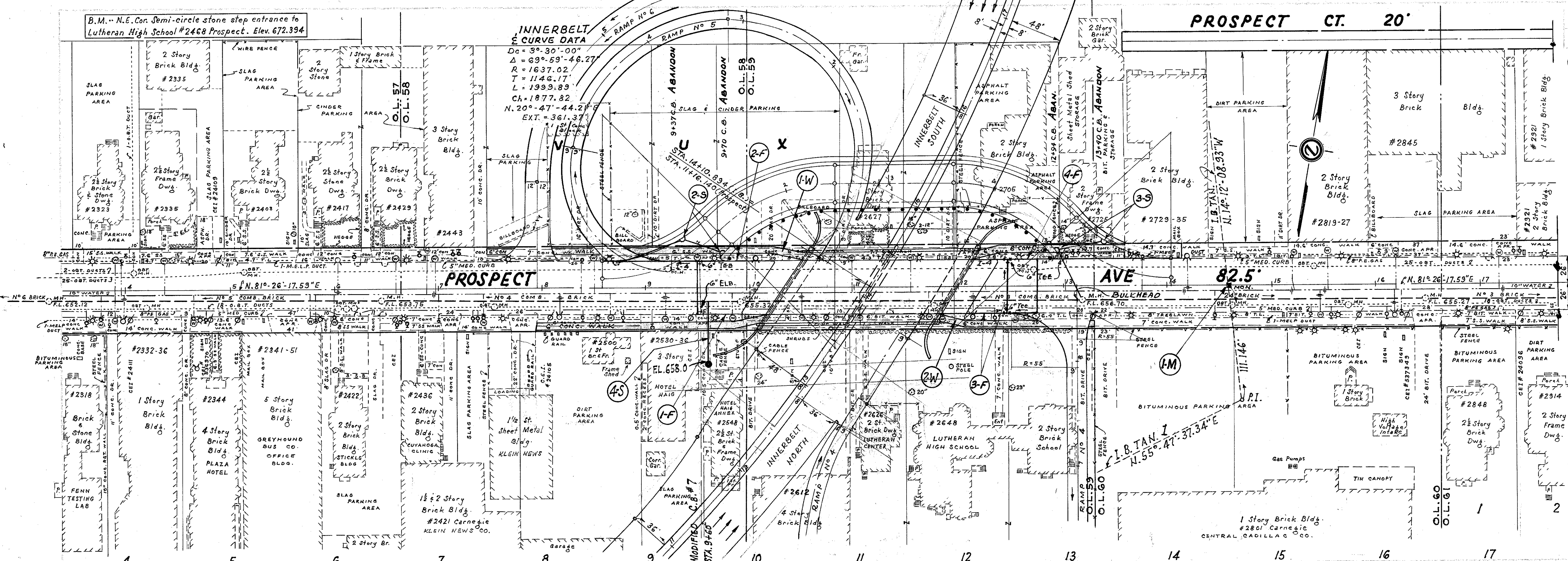


STORM SEWERS								
REF. No.	STATION		SIDE RT. OR LT.	I-2 LIN. FT. UNDER PAVT. 12" MIN. GA(O)	I-8 EACH	E-8 Sq. Yd.	T-70 S.Y.	LOCATION OF STRUCTURE
	FROM	TO						
1-S	4+50	7+35	R.F.L.	306	2	8	8	4+50: 4+75
2-S	7+35	7+88	R.F.L.	104	2	8	8	7+35: 7+60
TOTALS				410	4	8	8	

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T.B.M. "X" on S.E. cor. of step at W. entrance to offices upstairs of Pennsylvania Rubber Co. #2819 Prospect Ave. Elev. 670.557

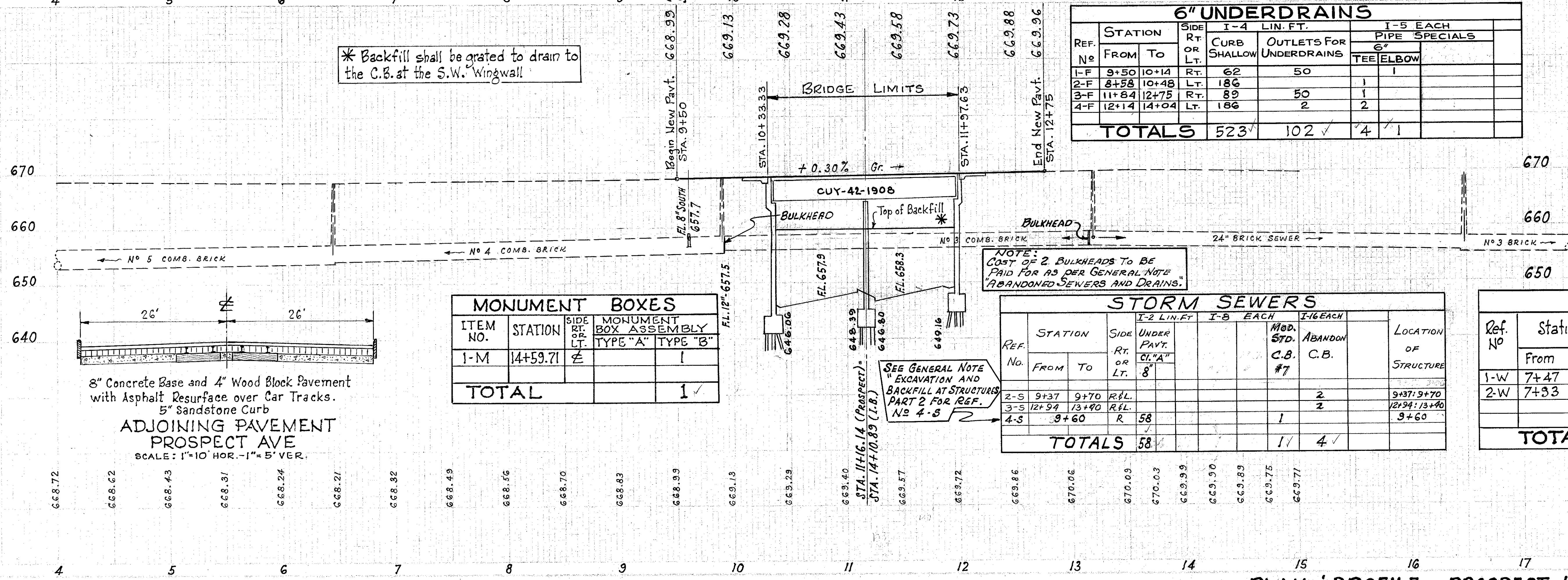


PROPOSED STRUCTURE
 TYPE: Continuous steel beam with reinforced concrete deck and substructure.
 SPAN: Vary from 80.08' to 78.83' c/c bearings @ ±.
 ROADWAY: 52'-0" f/f of curbs.
 SIDEWALKS: 2 @ 8'-0"
 LOADING FREQUENCY: CF 2000 (51)
 SKEW: Varies Left Forward
 WEARING SURFACE: Bituminous
 APPROACH SLABS: AS-1-54 (25' Long)
 ALIGNMENT: Tangent

REF. No	STATION FROM TO	SIDE RT OR LT	I-4 LIN. FT.		I-5 EACH PIPE SPECIALS	
			CURB SHALLOW	OUTLETS FOR UNDERDRAINS	TEE	ELBOW
1-F	9+50 10+14	RT.	62	50	1	1
2-F	8+58 10+48	LT.	186			
3-F	11+84 12+75	RT.	89	50	1	1
4-F	12+14 14+04	LT.	186	2	2	
TOTALS			523	102	4	1

Street	Station From To	Side Rt. or Lt.	E-8
			REMOVAL & DISPOSAL OF EXIST. DRIVE PAVT. SQ. YDS.
PROSPECT	8+25 12+89	L	109
PROSPECT	9+48 13+30	R	112
TOTAL			221

* Backfill shall be grated to drain to the C.B. at the S.W. Wingwall



ITEM NO.	STATION	SIDE RT. OR LT.	MONUMENT BOX ASSEMBLY TYPE "A" TYPE "B"
1-M	14+59.71	±	1
TOTAL			

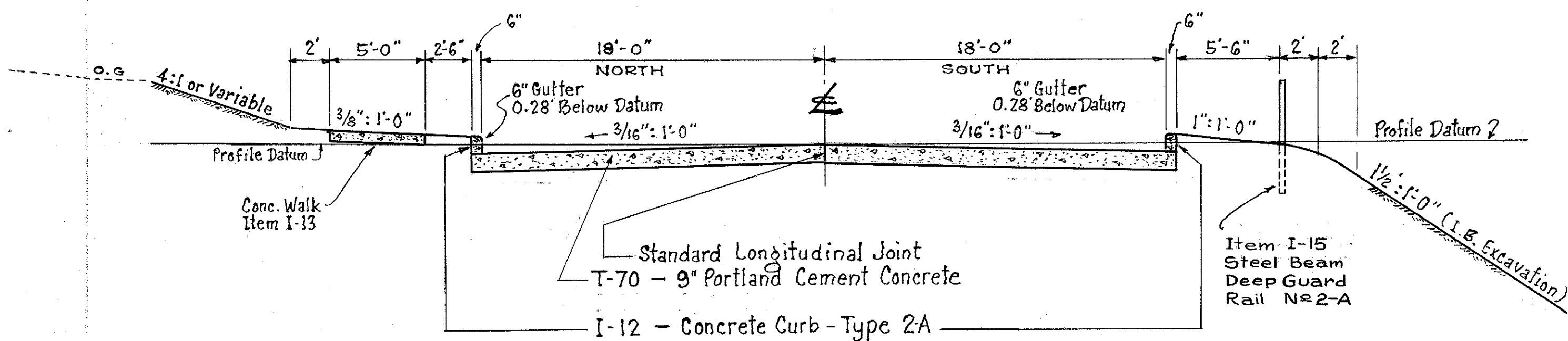
REF. No.	STATION FROM TO	SIDE RT. OR LT.	UNDER PAVT. CL. "A"	I-8 EACH		LOCATION OF STRUCTURE
				MOD. STD. C.B. #7	ABANDON C.B.	
2-S	9+37 9+70	R/L		2		9+37: 9+70
3-S	12+94 13+90	R/L		2		12+94: 13+90
4-S	9+60	R	58	1		9+60
TOTALS				5	4	

Ref. No	Station From To	Side Rt. or Lt.	E-8	I-13
			REMOVAL & DISPOSAL OF EXIST. WALK SQ. FT.	4" PORTLAND CEMENT CONC. WALK WIDTH SQ. FT.
1-W	7+47 14+15	L	3752	Var. 3085
2-W	7+93 13+30	R	3724	6' 2032
TOTAL			7476	5117

8" Concrete Base and 4" Wood Block Pavement with Asphalt Resurface over Car Tracks.
 5" Sandstone Curb
ADJOINING PAVEMENT PROSPECT AVE
 SCALE: 1"=10' HOR. - 1"=5' VER.

TYPICAL SECTION RUN-AROUND

SCALE: 3/16"=1'-0" HOR. - 1/4"=1'-0" VER.



T.B.M. "X" on S.E. cor. of step at W. entrance to offices upstairs of Pennsylvania Rubber Co. #2818 Prospect Ave. Elev. 670.557

NOTE: For Plan & Profile of Prospect Ave and utility Locations. See Sheet No 17

B.M. N.E. Cor. Semi-circle stone step entrance to Lutheran High School #2468 Prospect. Elev. 672.394

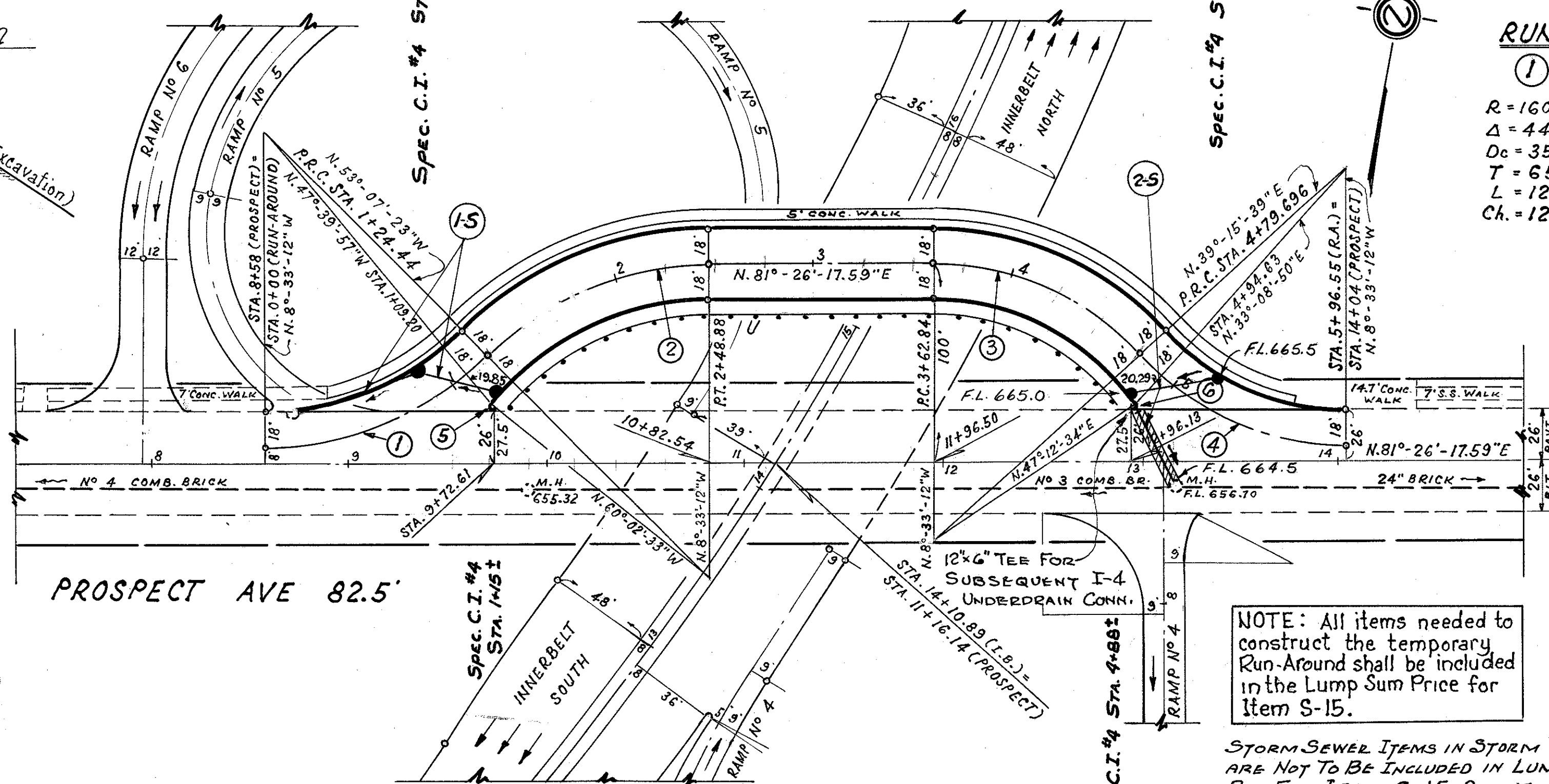
**CUYAHOGA COUNTY
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RUN-AROUND & CURVE DATA

①	②	③	④
R=160.00'	R=160.00'	R=140.00'	R=140.00'
Δ=44°-33'-41"	Δ=44°-33'-41"	Δ=47°-49'-21"	Δ=47°-49'-21"
Dc=35°-48'-35"	Dc=35°-48'-35"	Dc=40°-55'-31"	Dc=40°-55'-31"
T=65.56'	T=65.56'	T=62.07'	T=62.07'
L=124.44'	L=124.44'	L=116.85'	L=116.85'
Ch.=121.33'	Ch.=121.33'	Ch.=113.49'	Ch.=113.49'

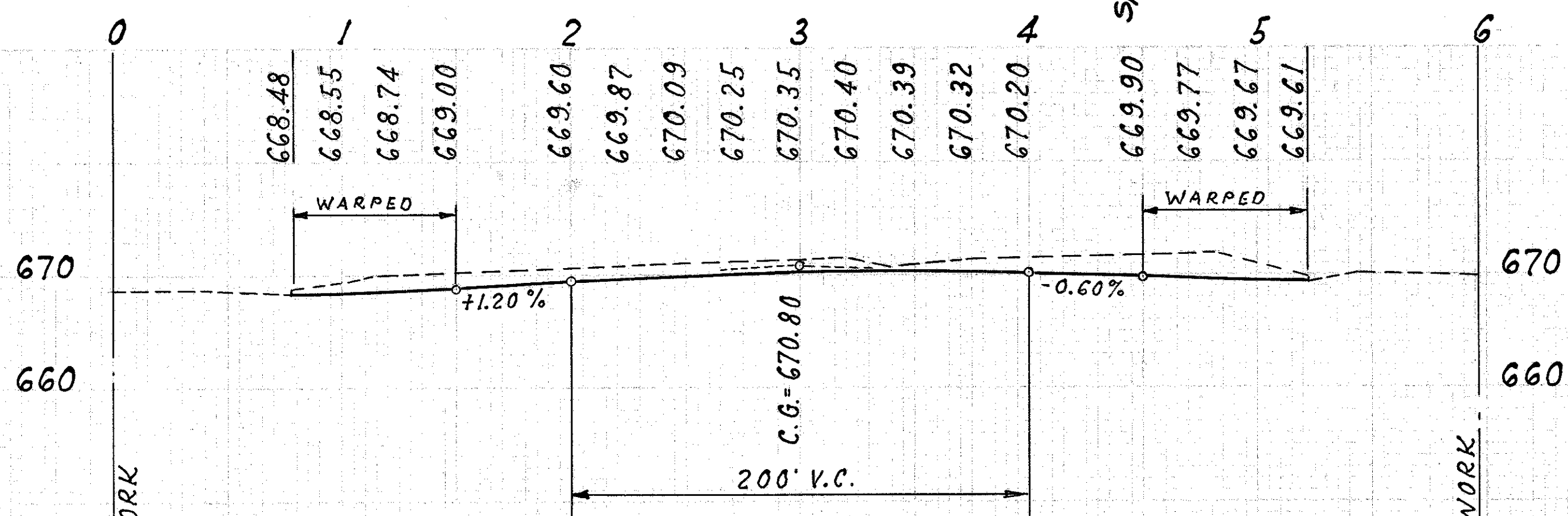
BULLNOSES

⑤	⑥
R=1.5'	R=1.5'
Δ=128°-31'-09"	Δ=124°-13'-44"
L=3.37'	L=3.25'



NOTE: All items needed to construct the temporary Run-Around shall be included in the Lump Sum Price for Item S-15.

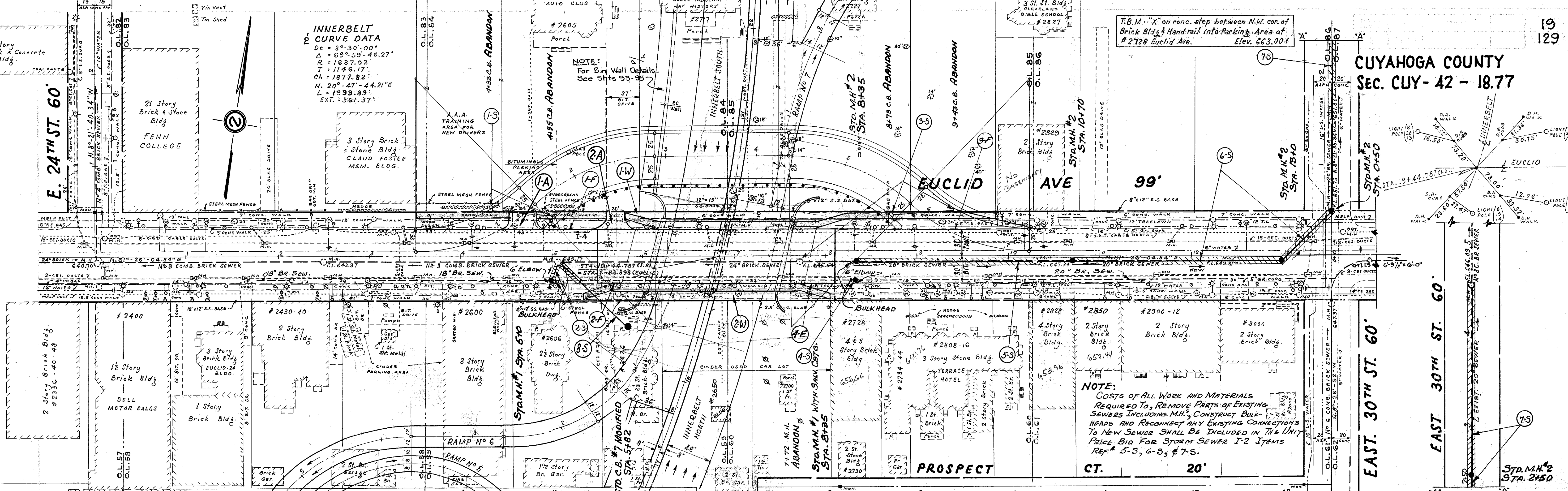
STORM SEWER ITEMS IN STORM TABLE ARE NOT TO BE INCLUDED IN LUMP SUM BID FOR ITEM S-15 ABOVE.



STORM SEWERS										
REF. No.	STATION		SIDE RT. OR LT.	UNDER PAVT. 12" M-6.4(a)	SPEC. C.I. #4	REMOVAL & DISPOSAL OF EXIST. PAVEMENT.	9" CONCRETE BASE COURSE	2 1/2" ASPH. SURFACE COURSE	PIPE SPECIAL 12"x6" TEE M-6.4(a)	LOCATION OF STRUCTURE
	FROM	TO								
1-S	0+15	1+15	R&L	104	2				1	
2-S	4+88	5+15	R&L	90	2	30	30	2.0	1	
TOTALS				194	4	30	30	2.0	1	

668.69 STA. 8+58.00 (PROSPECT) =
668.73 +41
668.45-668.82 +79
669.49
670.0 +16
670.99 +38
671.43 +17
670.63 +43
671.19 +88
671.78 +80
669.61-669.88 +22
669.96 +54
669.91 STA. 5+96.55 (RUN-AROUND) =
STA. 14+04.00 (PROSPECT)

CUYAHOGA COUNTY
SEC. CUY-42-18.77



T.B.M. 'X' on conc. step between N.W. cor. of Brick Bldg & Hand rail into Parking Area at #2728 Euclid Ave. Elev. 663.004

NOTE:
For Bit. Wall Details
See Shts 93-95

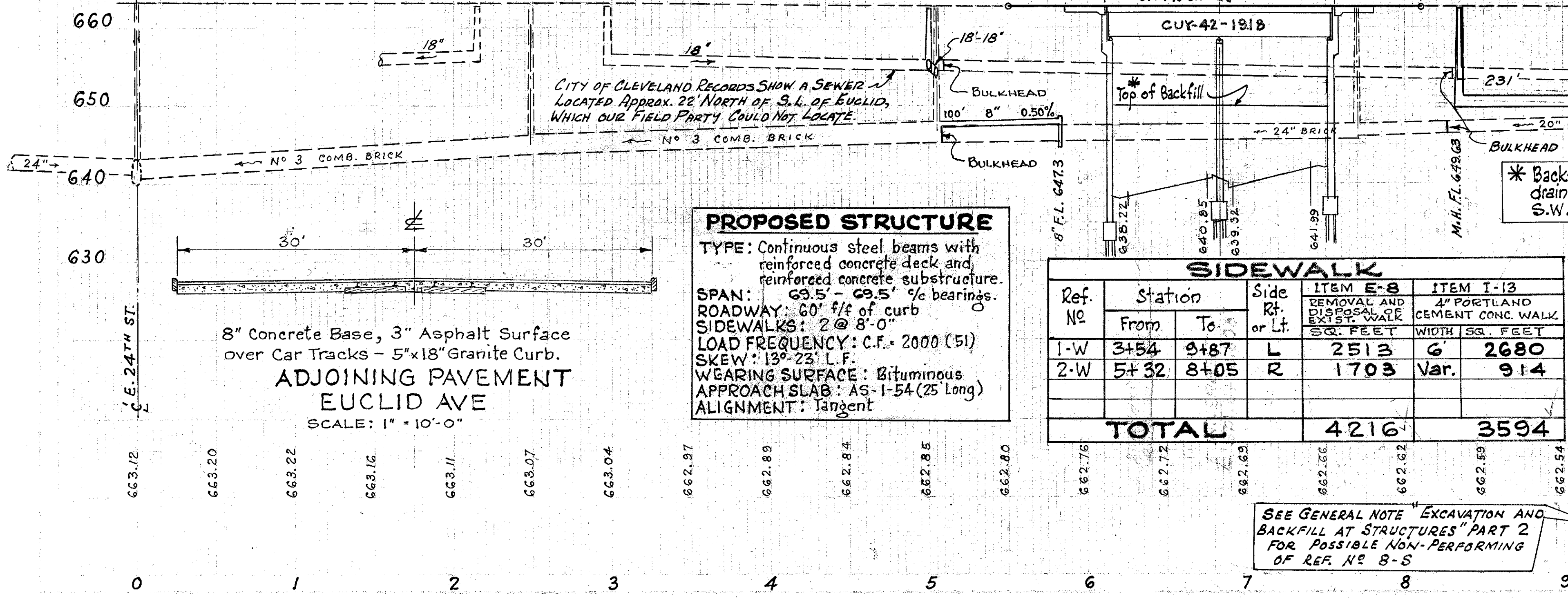
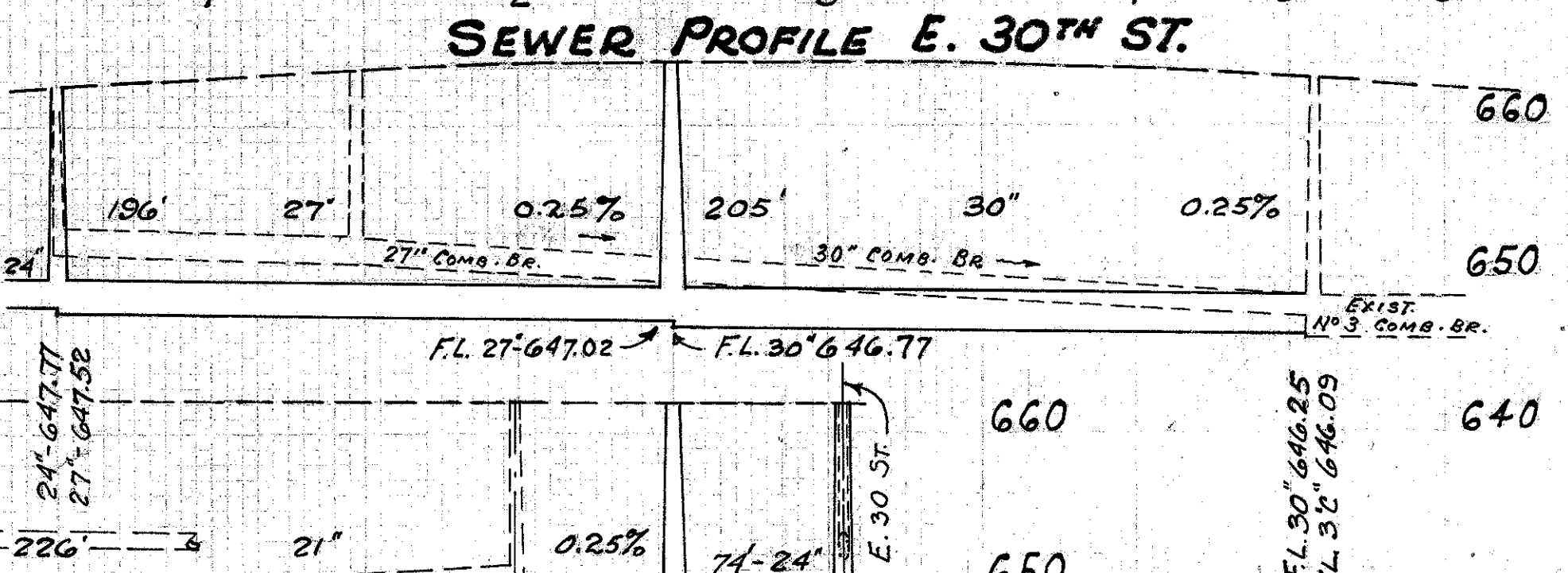
INNERBELT CURVE DATA
 $D_c = 3^\circ 30' 00''$
 $\Delta = 69^\circ 59' 46.27''$
 $R = 1637.02'$
 $T = 1146.17'$
 $CH = 1877.82'$
 $N. 20^\circ 47' 44.21'' E$
 $L = 1999.89'$
 $EXT. = 361.37'$

NOTE:
 COSTS OF ALL WORK AND MATERIALS
 REQUIRED TO REMOVE PARTS OF EXISTING
 SEWERS INCLUDING M.H.'S, CONSTRUCT BULK-
 HEADS AND RECONNECT ANY EXISTING CONNECTIONS
 TO NEW SEWER SHALL BE INCLUDED IN THE UNIT
 PRICE BID FOR STORM SEWER I-2 ITEMS
 REF. # 5-3, 6-3, & 7-5.

6" UNDER DRAINS

REF. No.	STATION		SIDE RT. OR LT.	I-4 LIN. FT.	I-5 EACH	
	FROM	TO			6" PIPE SHALLOW	SPECIAL ELBOW
1-F	3+51	6+18	LT.	267		
2-F	5+0	6+04	RT.	102		
3-F	7+66	C.B. 10+40	LT.	272		
4-F	7+51	8+35	RT.	82		
TOTALS				723	2	

QUANTITIES: For Items I-A & 2-A
 See Driveway Detail Sht. No 41



PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinforced concrete deck and reinforced concrete substructure.
 SPAN: 69.5' - 69.5' @ 8'-0" bearings.
 ROADWAY: 60' ± of curb
 SIDEWALKS: 2 @ 8'-0"
 LOAD FREQUENCY: C.F. 2000 (51)
 SKEW: 13° 23' L.F.
 WEARING SURFACE: Bituminous
 APPROACH SLAB: AS-1-54 (25' Long)
 ALIGNMENT: Tangent

SIDEWALK

Ref. No.	Station		Side RT. or Lt.	ITEM E-8 REMOVAL AND DISPOSAL EXIST. WALK SQ. FEET	ITEM I-13 1/2" PORTLAND CEMENT CONC. WALK SQ. FEET
	From	To			
1-W	3+54	5+87	L	2513	6 2680
2-W	5+32	8+05	R	1703	Var. 914
TOTAL				4216	3594

DRIVEWAY QUANTITIES

Street	Station		SIDE RT. OR LT.	E-8 (SQ. YDS.) REMOVAL & DISPOSAL OF EXIST. DR. PAVT
	From	To		
EUCLID	5+50	7+62	L	65
EUCLID	5+55	7+39	R	61
TOTAL				126

STORM SEWERS

REF. No.	STATION		SIDE RT. OR LT.	I-2 LIN. FT.		I-8 EACH		I-16 EACH	E-8 So. Yd.	B-10 So. Yd.	7-35 C.Y.	LOCATION OF STRUCTURE						
	From	To		UNDER PAVT	STO. M.H. #1	STO. M.H. #2	STO. M.H. #1 WITH SALK. CSTR.						STO. C.B. #7 MODIFIED					
1-S	4+33	4+95	LT.									4+33: 4+95						
2-S	5+0	5+06	RT.	18					14	14	1.0	5+0						
3-S	7+72	9+43	RT.					1				7+72: 9+43						
4-S		8+35	RT.									8+35						
5-S	8+35	10+70	RT.	231					160	160	11.0	8+35						
6-S	10+70	0+50 EX.	R/L	226	74				240	240	16.0	10+70: 13+10						
7-S	0+50 EX.	4+58 EX.			196	205			360	360	25.0	0+50: 2+50						
8-S	5+06	5+82	R.						25	25	2.0	5+82						
TOTALS				249	226	74	196	205	100	1	5	1	1	4	799	799	55.0	

SEE GENERAL NOTE "EXCAVATION AND BACKFILL AT STRUCTURES" PART 2 FOR POSSIBLE NON-PERFORMING OF REF. NO 8-S

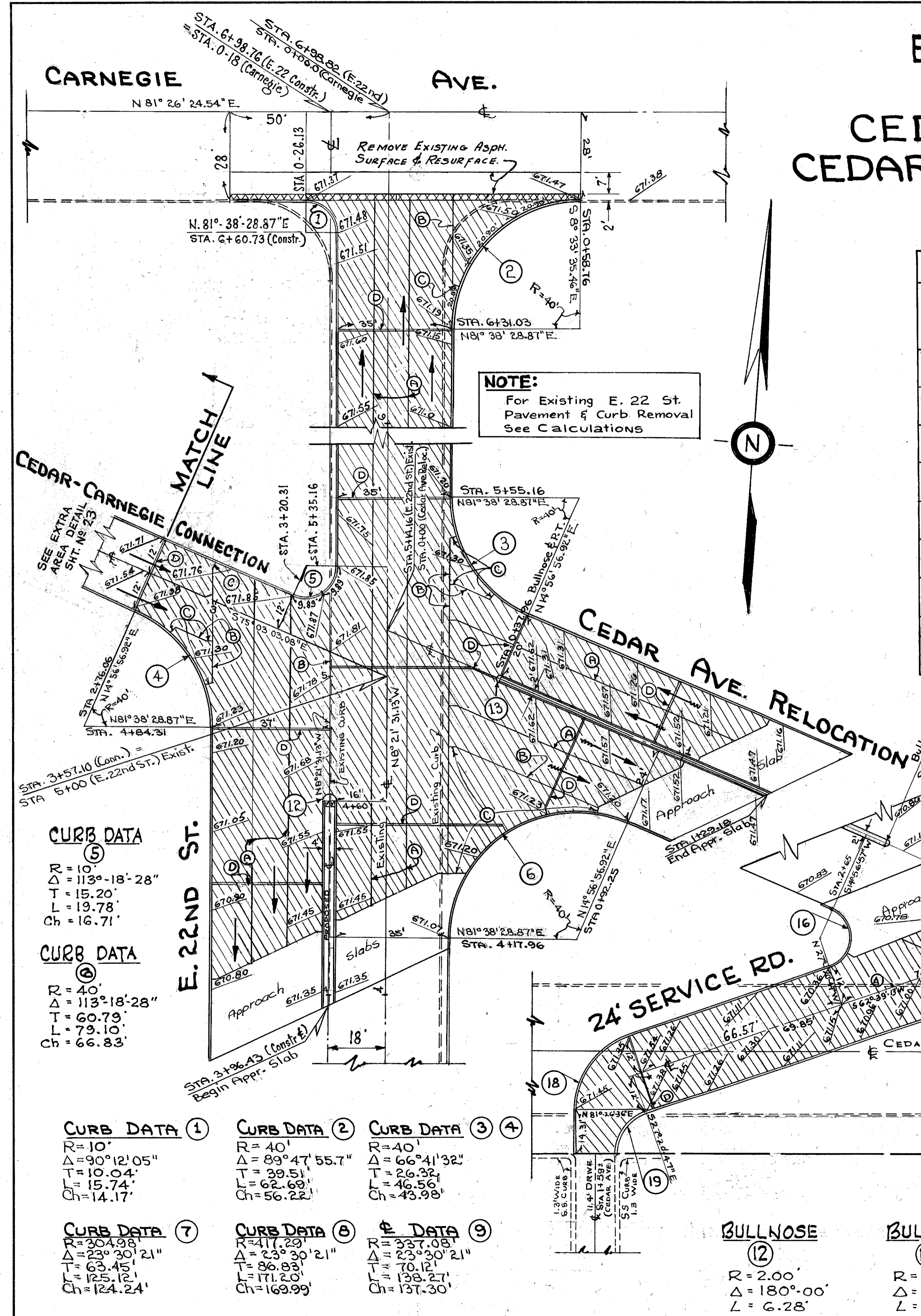
EXTRA AREA DETAIL

E. 22ND STREET

CEDAR AVE. RELOCATION

CEDAR-CARNEGIE CONNECTION

SCALE - 1" = 20'



NOTE:
For Existing E. 22 St. Pavement & Curb Removal See Calculations

LOCATION	EXTRA AREA QUANTITIES										I-21 4" Port. Concrete Median	E-8 Remove & Dispose of Exist. Pavement	E-8 Remove & Dispose of Exist. Pavement	E-8 Removal & Dispose of Exist. Curb		
	B-70 9" Portland Cement Concrete Base	T-35 1/2" Aspht. Concrete Surface Course	B-35 1/2" Min. Aspht. Concrete Leveling Course	I-22 Sub-base	6" X 18" RADIAL CURB 15' RAD. 125' RAD.	6" X 18" Straight	6" X 18" 10' Radial	2' Radius Bumper Block	1' Radius Bumper Block	6" X 18" 40' Radius					6" X 18" 11' RADIUS	
	Sq. Yds.	Sq. Yds.	Sq. Yds.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.		
East Gutter E. 22nd St. to Sta. 1+29.18 (Cedar Reloc.)	522	522	522	93		307.44			3.14	125.66				10		
Sta. 2+85.94 to Sta. 5+01.28 (Cedar Reloc.)	974	974	974	162		348.64				33.46						
Sta. 3+96.43 to Sta. 6+72.76 including Cedar Carnegie Turnout	539	1539	1539	269		506.83	35.52	6.28		109.25			21	24	35	
24' Service Rd.; South Gutter Cedar Reloc. to R/W Cedar Ave.	345	345	345	58	1747	47.13	193.30	24.21								
Sta. 0-50 to Sta. 0+58.76 (Carnegie)		85	85											85		
TOTAL	3380	3465	3465	582	1747	47.13	1356.21	59.73	6.28	3.14	234.91	33.46	31	85	24	35

TOTAL CURB 1758.33 Lin. Ft.

CURB DATA ⑤
R = 10'
Δ = 113°-18'-28"
T = 15.20'
L = 19.78'
Ch = 16.71'

CURB DATA ④
R = 40'
Δ = 113°-18'-28"
T = 60.79'
L = 79.10'
Ch = 66.83'

CURB DATA ①
R = 10'
Δ = 90°-12'-05"
T = 10.04'
L = 15.74'
Ch = 14.17'

CURB DATA ②
R = 40'
Δ = 89°-47'-55.7"
T = 39.51'
L = 62.69'
Ch = 56.22'

CURB DATA ③
R = 40'
Δ = 66°-41'-32"
T = 26.32'
L = 46.56'
Ch = 43.98'

CURB DATA ⑦
R = 304.98'
Δ = 23°-30'-21"
T = 63.45'
L = 125.12'
Ch = 124.24'

CURB DATA ⑧
R = 417.29'
Δ = 23°-30'-21"
T = 86.83'
L = 171.20'
Ch = 169.99'

CURB DATA ⑨
R = 337.08'
Δ = 23°-30'-21"
T = 10.12'
L = 139.27'
Ch = 137.30'

BULLNOSE ⑫
R = 2.00'
Δ = 180°-00'
L = 6.28'

BULLNOSE ⑬
R = 1.00'
Δ = 180°-00'
L = 3.14'

PAVEMENT JOINT LEGEND

- ① Standard Longitudinal Joint
- ② Standard Key Joint without Tie Bars
- ③ Expansion Joint without Dowels
- ④ Standard Expansion Joint
- ⑤ New Pavement & Pavement Removal
- ⑥ New Pavement (Asphalt Over Conc. Base)

CURB DATA ⑭
R = 11'
Δ = 76°-18'-13"
T = 8.64'
L = 14.65'
Ch = 13.59'

CURB DATA ⑮
R = 11'
Δ = 97°-58'-25"
T = 12.65'
L = 18.81'
Ch = 16.60'

CURB DATA ⑯
R = 10'
Δ = 137°42'-16"
T = 25.85'
L = 24.21'
Ch = 18.65'

CURB DATA ⑰
R = 25'
Δ = 42°-17'-44"
T = 9.67'
L = 18.02'
Ch = 18.04'

CURB DATA ⑱
R = 25'
Δ = 71°-12'-37"
T = 17.90'
L = 29.11'
Ch = 31.07'

EXTRA AREA DETAILS

CUY. - 42 - 18.77
CUYAHOGA COUNTY

EAST 22ND ST. & CENTRAL AVE

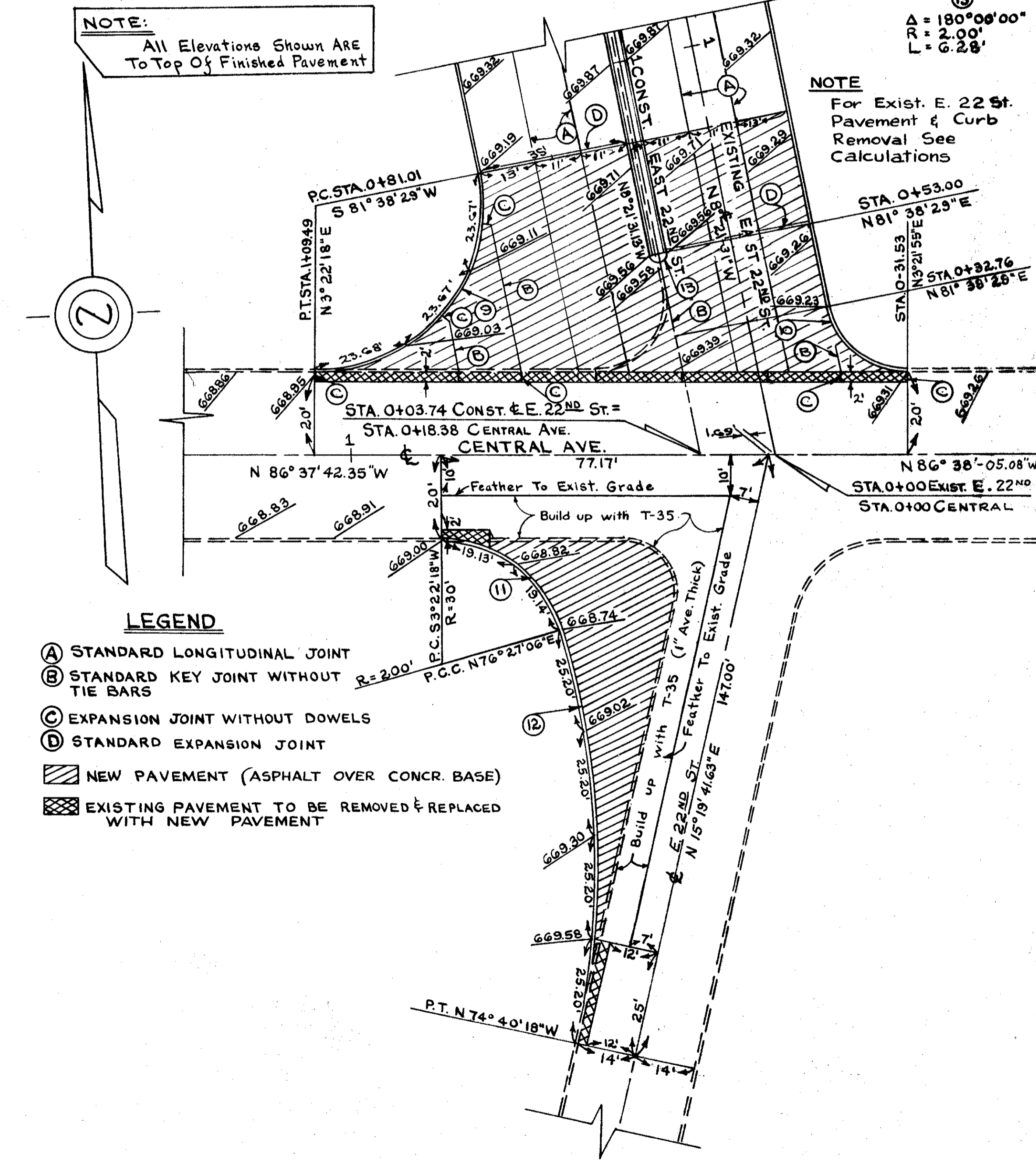
SCALE: 1" = 20'

CURVE DATA

EAST 22ND ST. & CENTRAL AVE.

⑨	⑪
Δ = 101°43'49"	Δ = 73°04'48"
R = 40.00'	R = 30.00'
T = 49.16'	T = 22.25'
L = 71.02'	L = 38.27'
Ch = 62.05'	Ch = 35.72'
⑩	⑫
Δ = 78°16'34"	Δ = 28°52'56"
R = 20.00'	R = 200.00'
T = 16.28'	T = 51.49'
L = 37.32'	L = 100.00'
Ch = 25.25'	Ch = 99.74'
⑬	
Δ = 180°00'00"	
R = 2.00'	
L = 6.28'	

LOCATION	EAST 22 ST. & CENTRAL AVE. QUANTITIES																		
	B-70 9" Concr. Base Course		I-22 Subbase		T-35 Asph. Conc. Surf. Course		B-35 1/2" Asph. Concr. Lev. Course		E-8 Removal & Disposal of Exist. Pavt		E-8 Removal & Disposal of Exist. Curb		I-21 4" Concret. Median Pavt Type I		I-II 6"x18" Sandstone Curb, 1" Bullnose or Salvaged Curb Reset				
	Sq. Yd.	Cu. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Sq. Yd.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Lin. Ft.	Sq. Yd.	20' Radius	30' Radius	40' Radius	2' Radius Bump. Blk.		
STA. 0+81.01 (E. 22 ND ST.) TO CENTRAL AVE.	564	98		564	564	31	67	9	104.27	37.32						71.02	6.28		
TAPER AT SW CORNER	187	31	156	187	187	12	175		100.80					38.27					
TOTALS	751	129	156	751	751	43	242	9	205.07	37.32	38.27	71.02	6.28						
TOTAL CURB = 357.96 Lin. Ft.																			



EXTRA AREA DETAIL
EAST 22ND ST. & CENTRAL AVE.

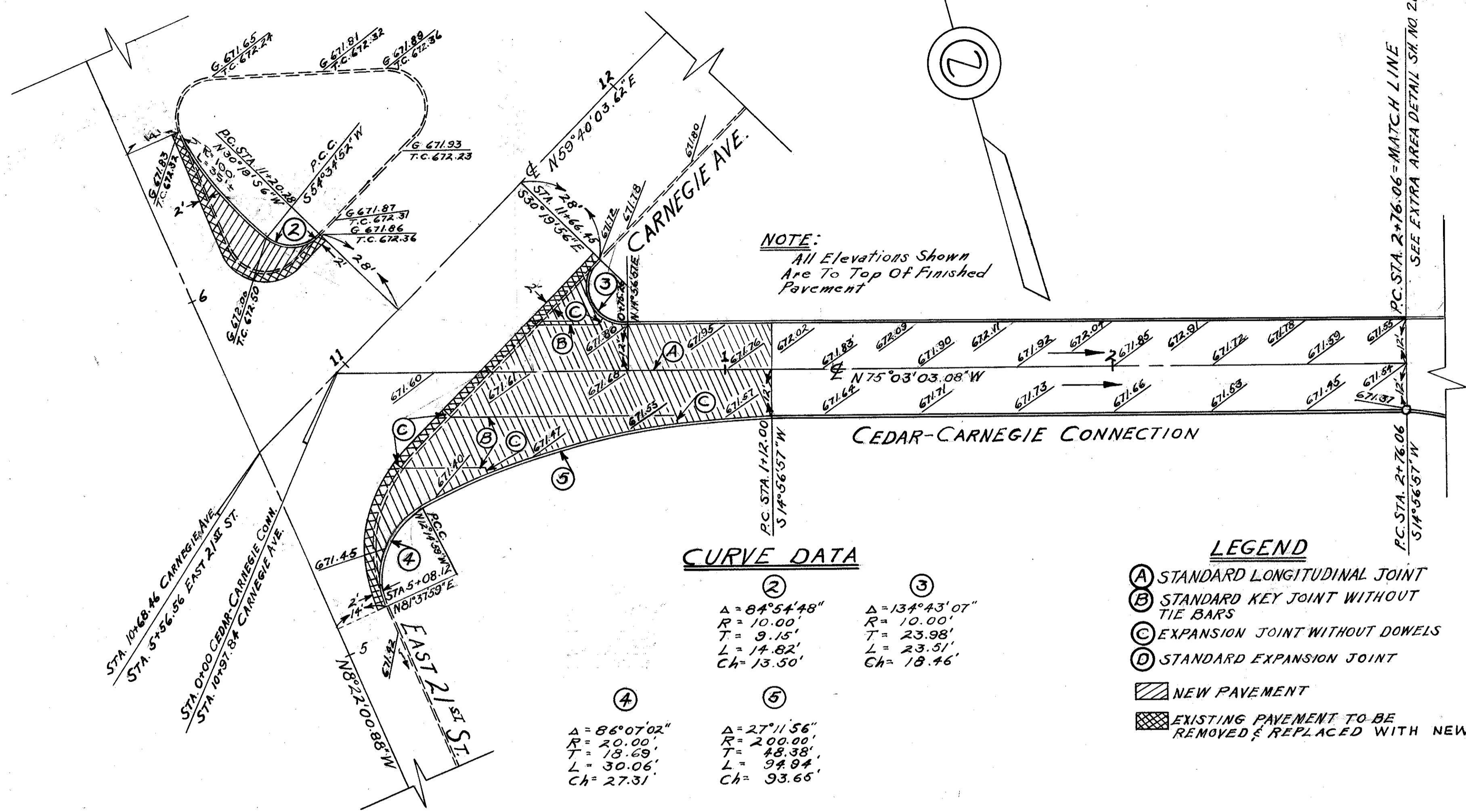
CUY. - 42 - 18.77
CUYAHOGA COUNTY

EXTRA AREA DETAIL CEDAR-CARNEGIE CONNECTION

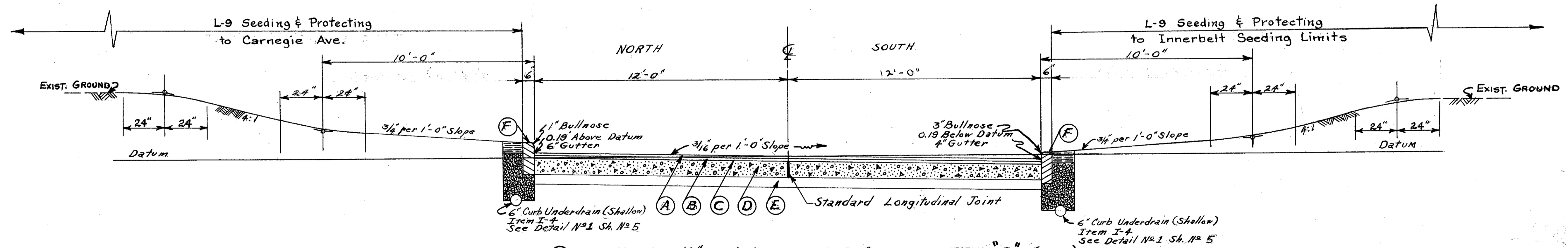
SCALE: 1" = 20'

LOCATION	EXTRA AREA QUANTITIES									
	B-70 9" Port. Cement Base Course	I-22 Sub base	E-8 Removal & Disposal of Exist. Pavement	T-35 1/2" Asph. Conc. Surf. Course	B-35 1/2" Asph. Concrete Leveling Course	E-8 Removal & Disposal of Exist. Curb	I-11 Sandstone Curb			
	Sq. Yds.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	2' Rad. 1" Bullnose	4' Rad. 1" Bullnose	3' Rad. 1" Bullnose	6" Rad. 3" Bullnose
Sta. 1112 (Conn.) So. Edge Carnegie	338	56	25	338	338	113				94.94
Sta. 1112 (Conn.) Sta. 5+08 (E. 21st)							30.06			
Sta. 1112 (Conn.) Sta. 11+66.45 (Carnegie)								23.51	36.74	
Traffic Island	42	7	14	42	42	60		14.82	35	
TOTALS	380	63	39	380	380	173	30.06	38.33	71.74	94.94

TOTAL CURB = 235.07 Lin. Ft.

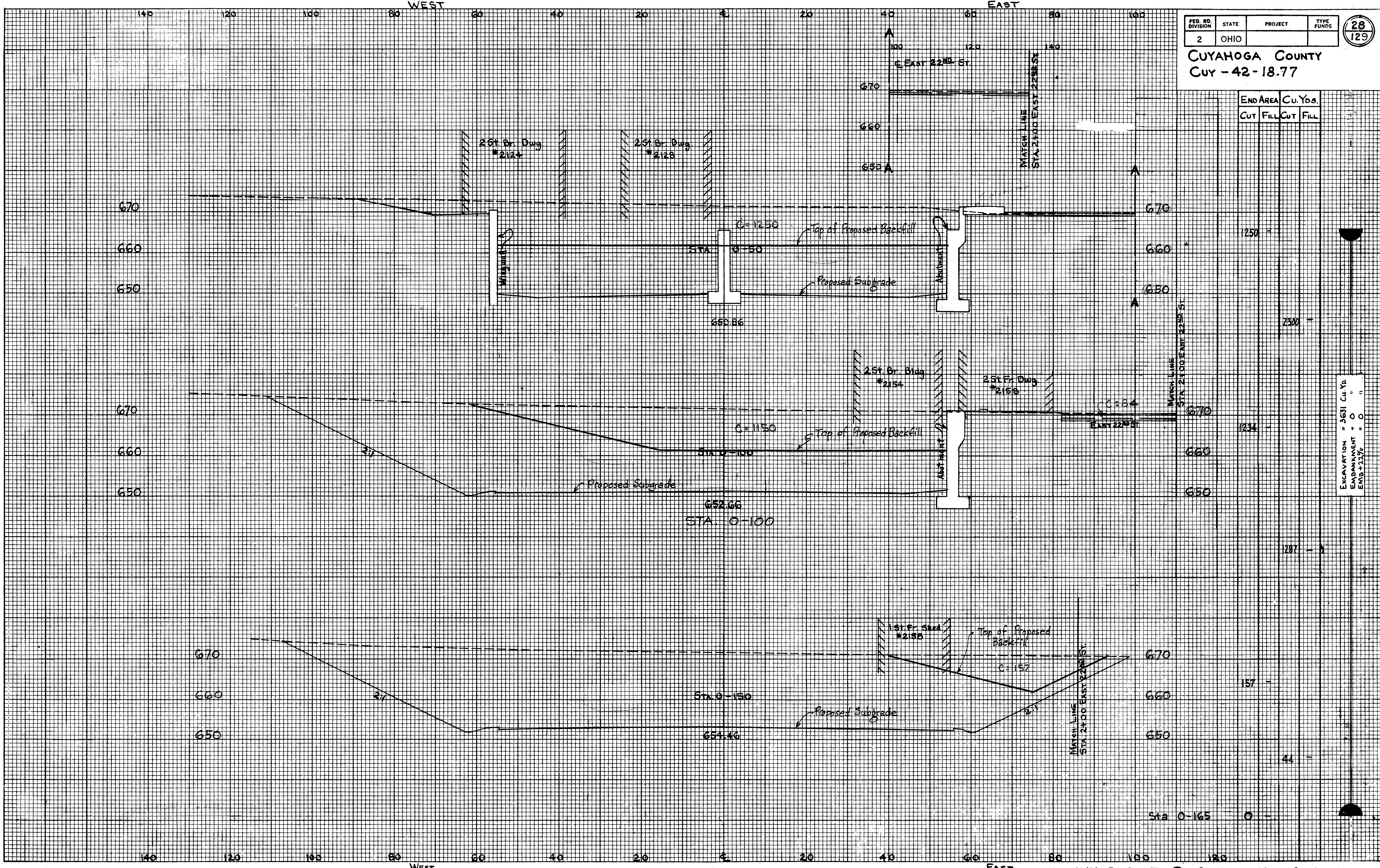


- LEGEND**
- (A) STANDARD LONGITUDINAL JOINT
 - (B) STANDARD KEY JOINT WITHOUT TIE BARS
 - (C) EXPANSION JOINT WITHOUT DOWELS
 - (D) STANDARD EXPANSION JOINT
 - ▨ NEW PAVEMENT
 - ▩ EXISTING PAVEMENT TO BE REMOVED & REPLACED WITH NEW PAVT.



- (A) Item T-35 - 1/2" Asphaltic Concrete Surface Course, Type "C" (60-70)
- (B) Item B-35 - 1/2" Asphaltic Concrete Leveling Course (60-70)
- (C) Item T-30 - Bituminous Tack Coat (0.10 Gals. per 1 Sq Yd.) (Sec. M-5.5 MS-2 or RS-1 (As per Sect.) or Sec. M-5.2, RS-1 RC-2 T-30.02)
- (D) Item B-70 - 9" Portland Cement Concrete Base Course
- (E) Item I-22 - 6" Subbase
- (F) Item I-11 - 6" x 18" Sandstone Curb or Salvaged Curb Reset

CUYAHOGA COUNTY
CUY-42-18.77



END AREA	Cu. Yds.	
	CUT	FILL
1250		
2500		
1134		
1287		
157		
44		
Sta 0-165	0	

EXCAVATION = 3631 Cu. Yd.
EMBANKMENT = 0
EMB = 2.7%

INNER BELT STA. 0-150 TO STA. 0-50

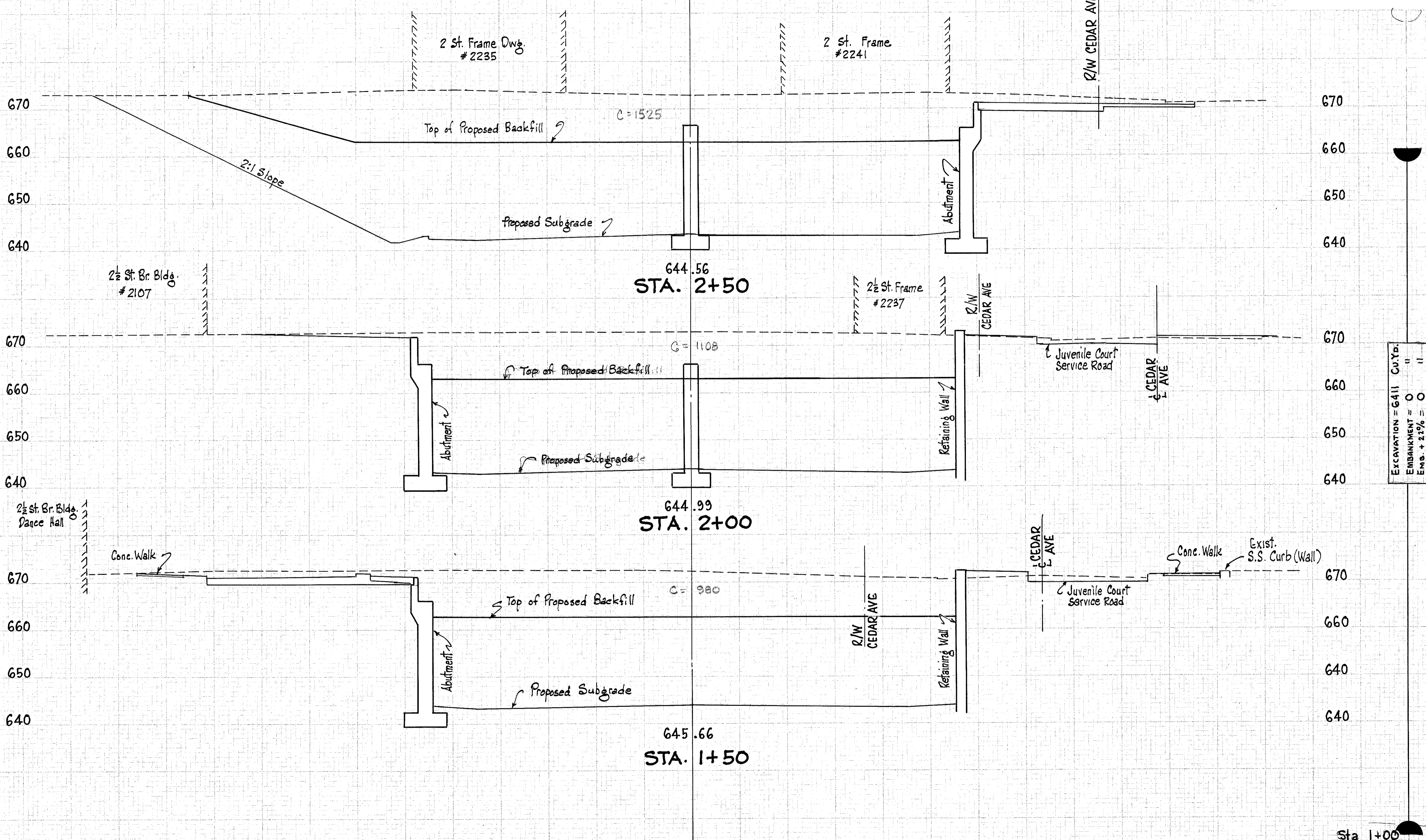
140 120 100 80 60 40 20 0 20 40 60 80 100 120

CUYAHOGA COUNTY
Sec. 42-18.77

END AREA		VOL. CUT	
SUB	PSL	CU	CU

WEST

EAST



Excavation = 6411 Cu. Yd.
 Embankment = 0 " "
 Emb. + 2 1/2% = 0 " "

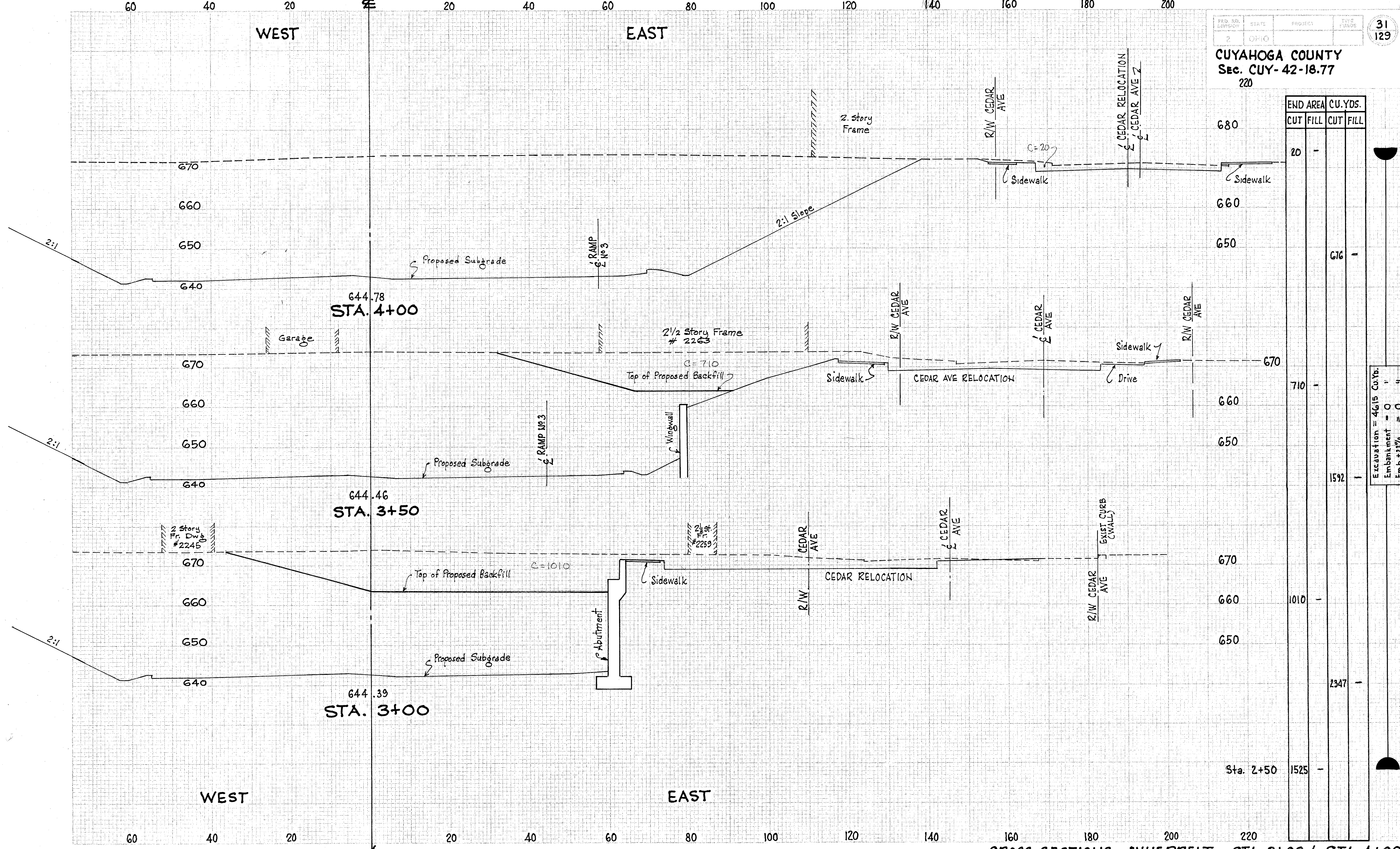
140 120 100 80 60 40 20 0 20 40 60 80 100 120

WEST

EAST

CROSS-SECTION .. INNERBELT .. STA. 1+50 to STA. 2+50

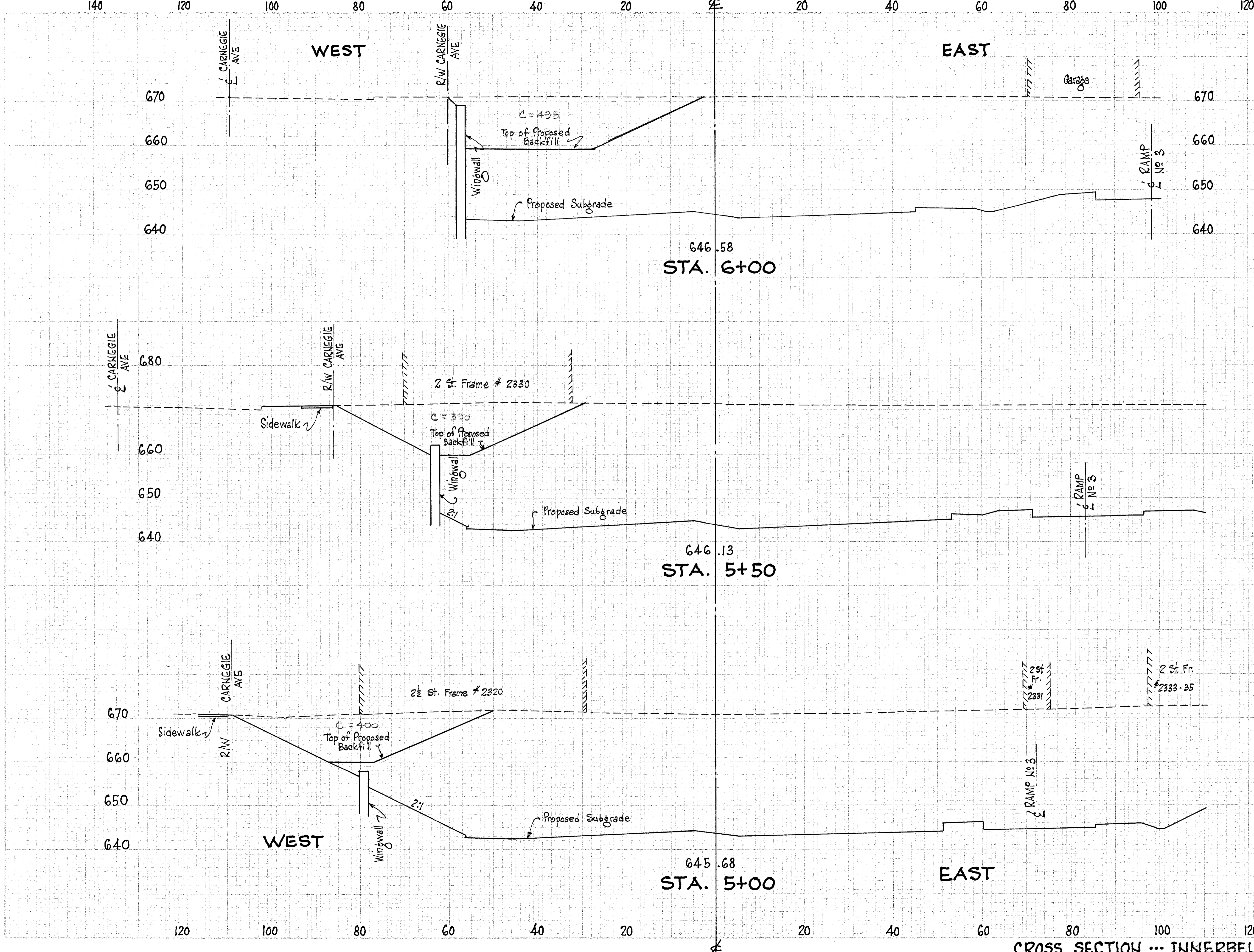
CUYAHOGA COUNTY
SEC. CUY-42-18.77
 220



END AREA	CU. YDS.	
	CUT	FILL
20	-	-
710	-	676
1592	-	1592
1010	-	2347
1525	-	-

Excavation = 4615 Cu. Yb.
 Embankment = 0
 Emb. + 22% = 0

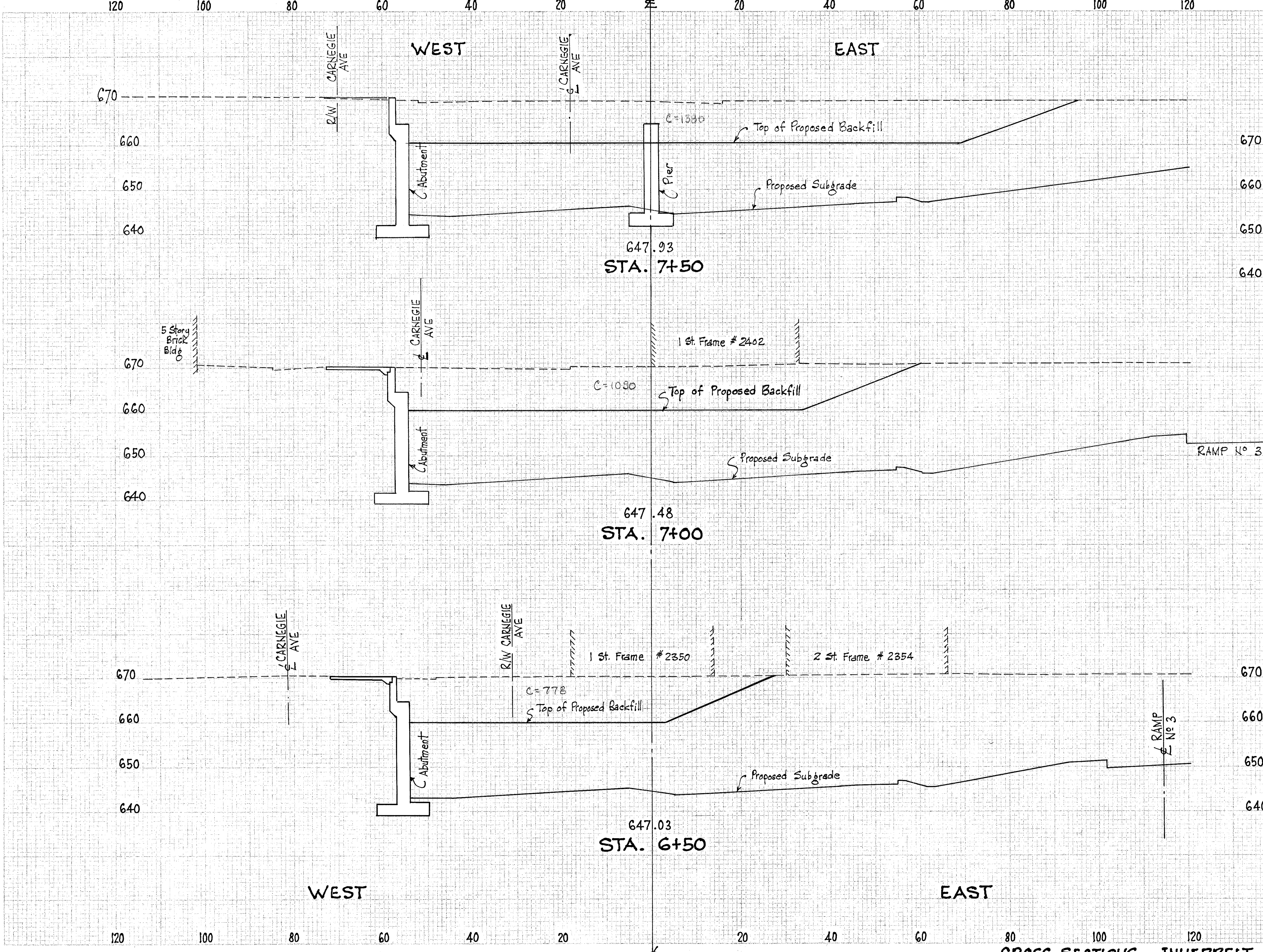
CROSS-SECTIONS .. INNERBELT .. STA. 3+00 to STA. 4+00



END AREA	CU. YDS.	
	CUT	FILL
498	-	-
390	-	-
400	-	-
0	-	-
822	-	-
731	-	-
185	-	-
0	-	-

Excavation = 1738 Cu. Yds.
 Embankment = 0 " "
 Emb + 2% = 0 " "

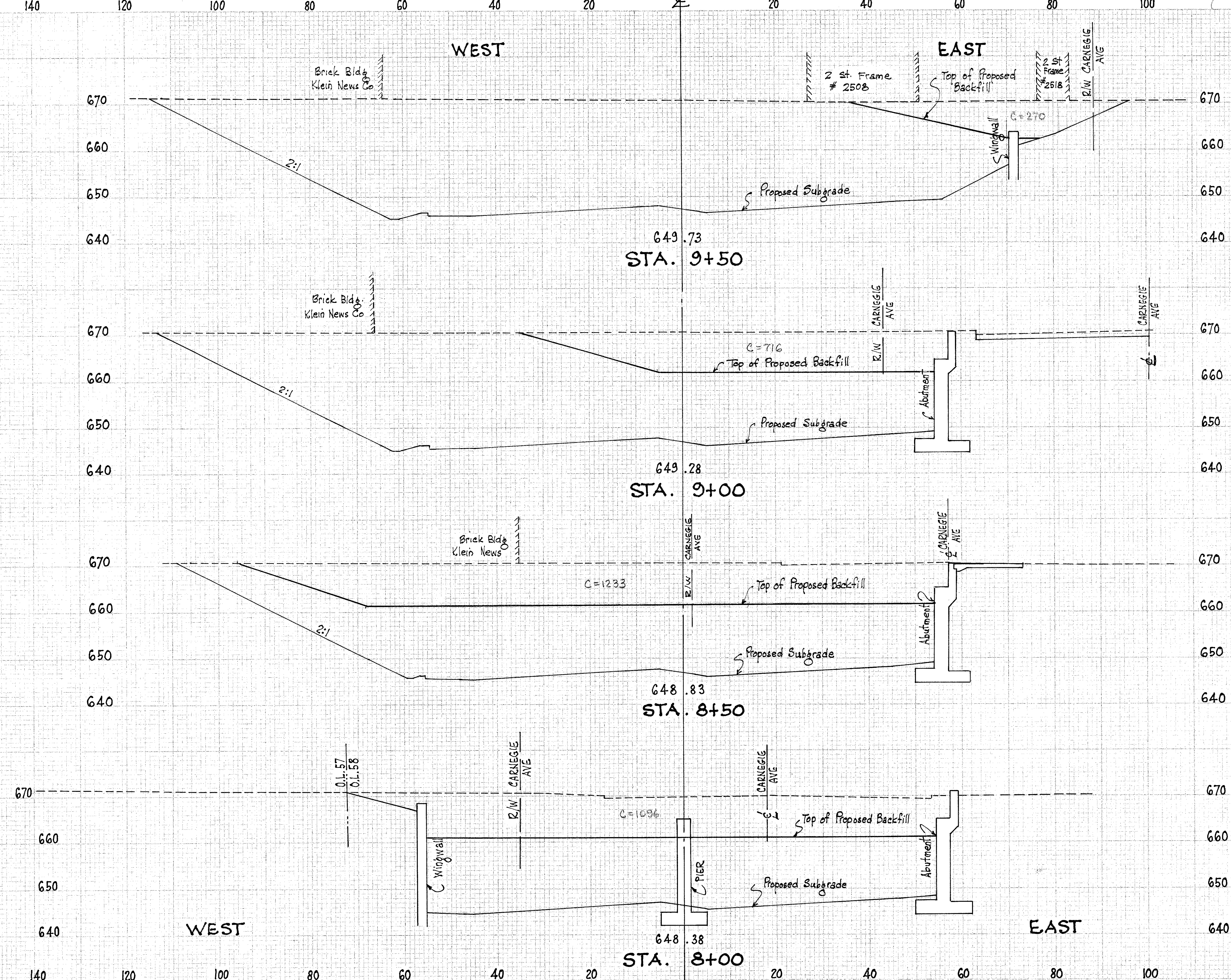
CROSS SECTION ... INNERBELT ... STA. 5+00 to STA. 6+00



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
1380	-		
		2287	-
1090	-		
		1730	-
778	-		
		1181	-
498	-		

EXCAVATION = 5198 Cu.Yd.
EMBANKMENT = 0 " "
EMB + 1.5% = 0 " "

CROSS-SECTIONS ... INNERBELT ... STA. 6+50 to STA. 7+50



Sta.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Sta. 9+75	0	-	125	-
	270	-		
			913	-
	716	-		
			1085	-
	1233	-		
			2156	-
	1096	-		
			2292	-
Sta. 7+50	1380	-		

Excavation = 7291 Cu. Yds.
Embankment = 0 " "
Emb. + 12% = 0 " "

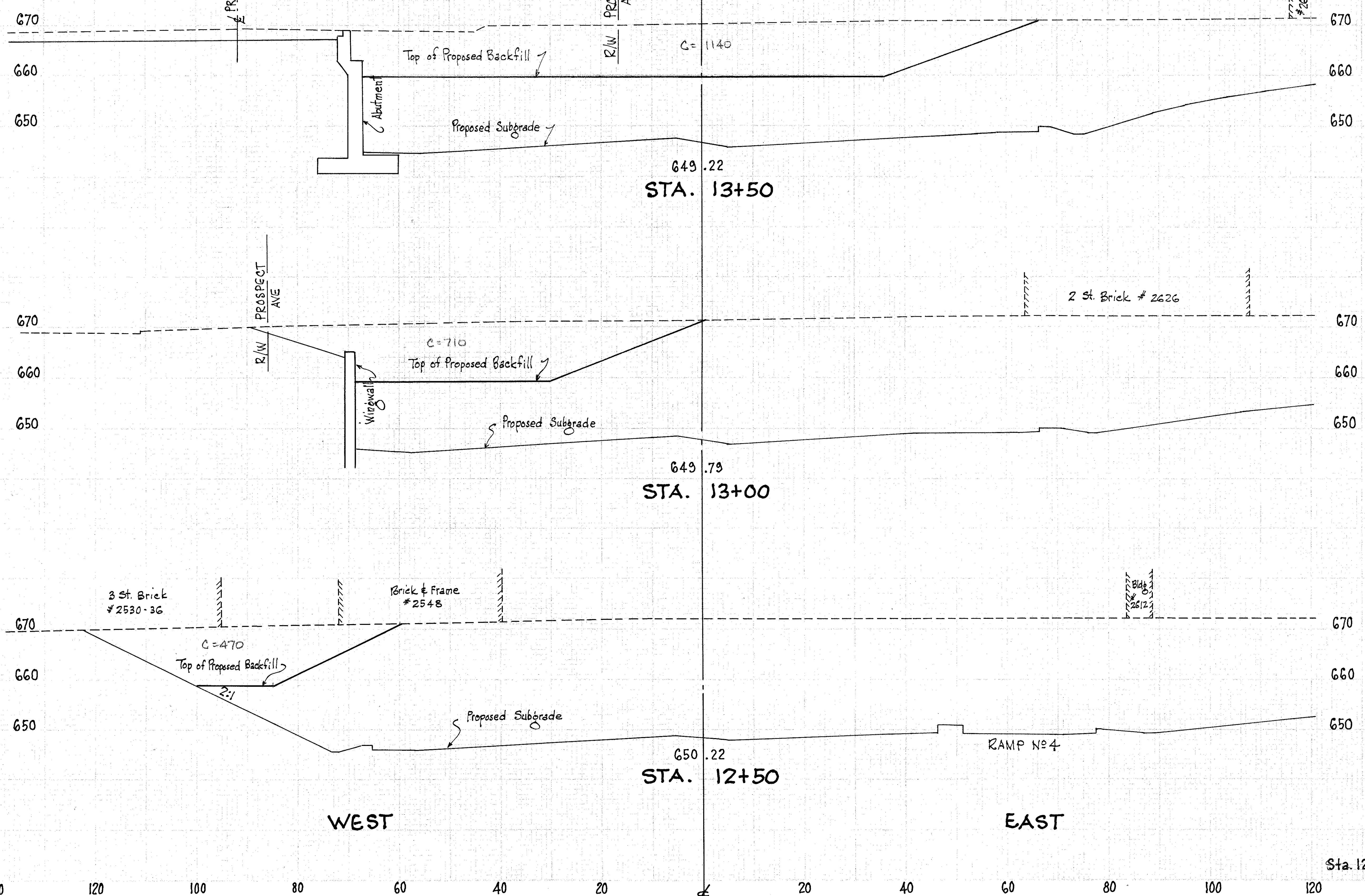
CROSS SECTIONS .. INNERBELT .. STA. 8+00 to STA. 9+50

TRIM LINE

140 120 100 80 60 40 20 0 20 40 60 80 100 120

2 OHIO
 CUYAHOGA COUNTY
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END AREA	CU. YDS.	
	CUT	FILL
1140	-	-
710	-	1713
470	-	1093
0	-	218
0	-	0

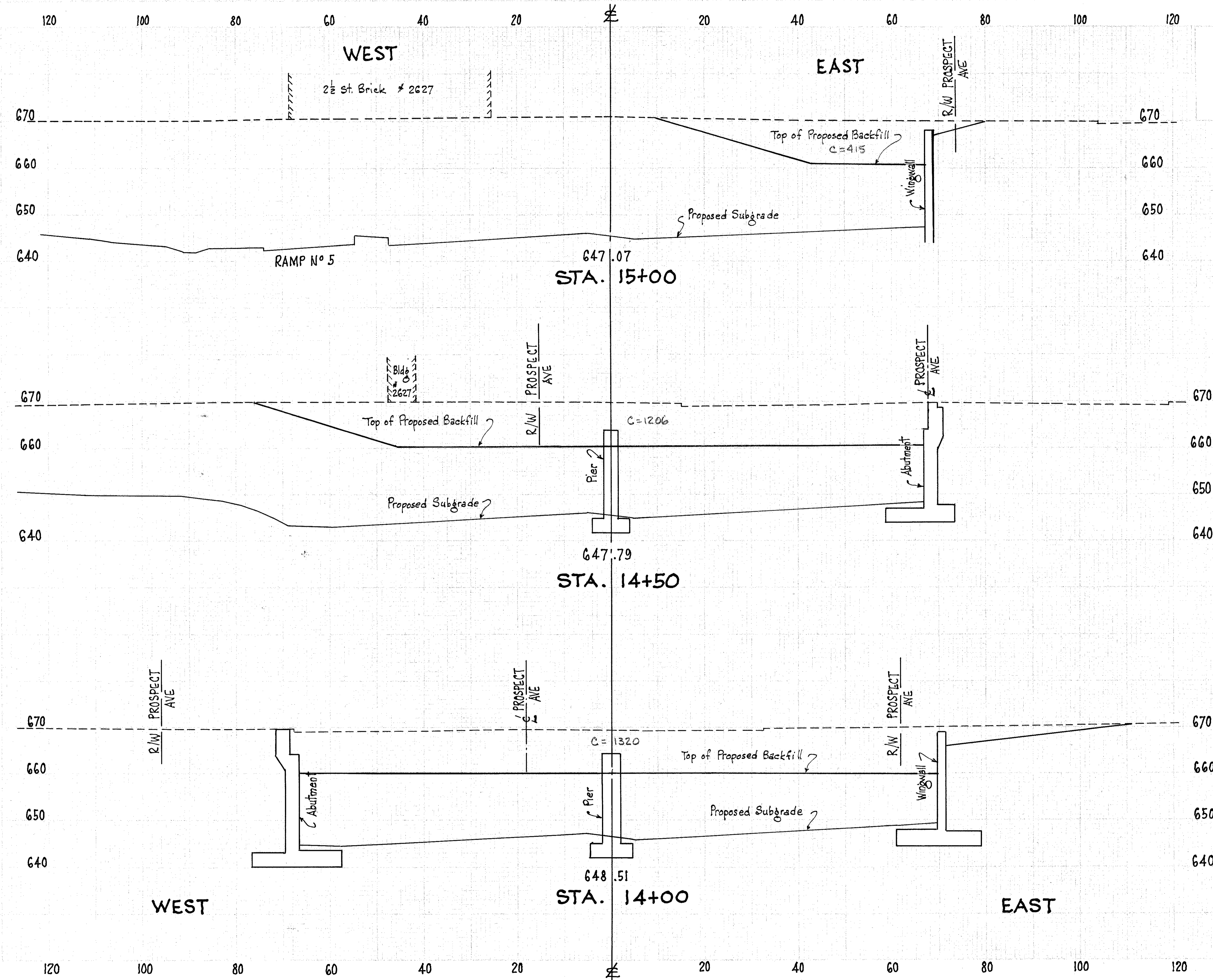
EXCAVATION 3024 Cu.Yd.
 EMBANKMENT 0 " "
 EMB. + 12%

140 120 100 80 60 40 20 0 20 40 60 80 100 120

CROSS SECTIONS - INNERBELT - STA. 12+50 to STA. 13+50

TRIM LINE

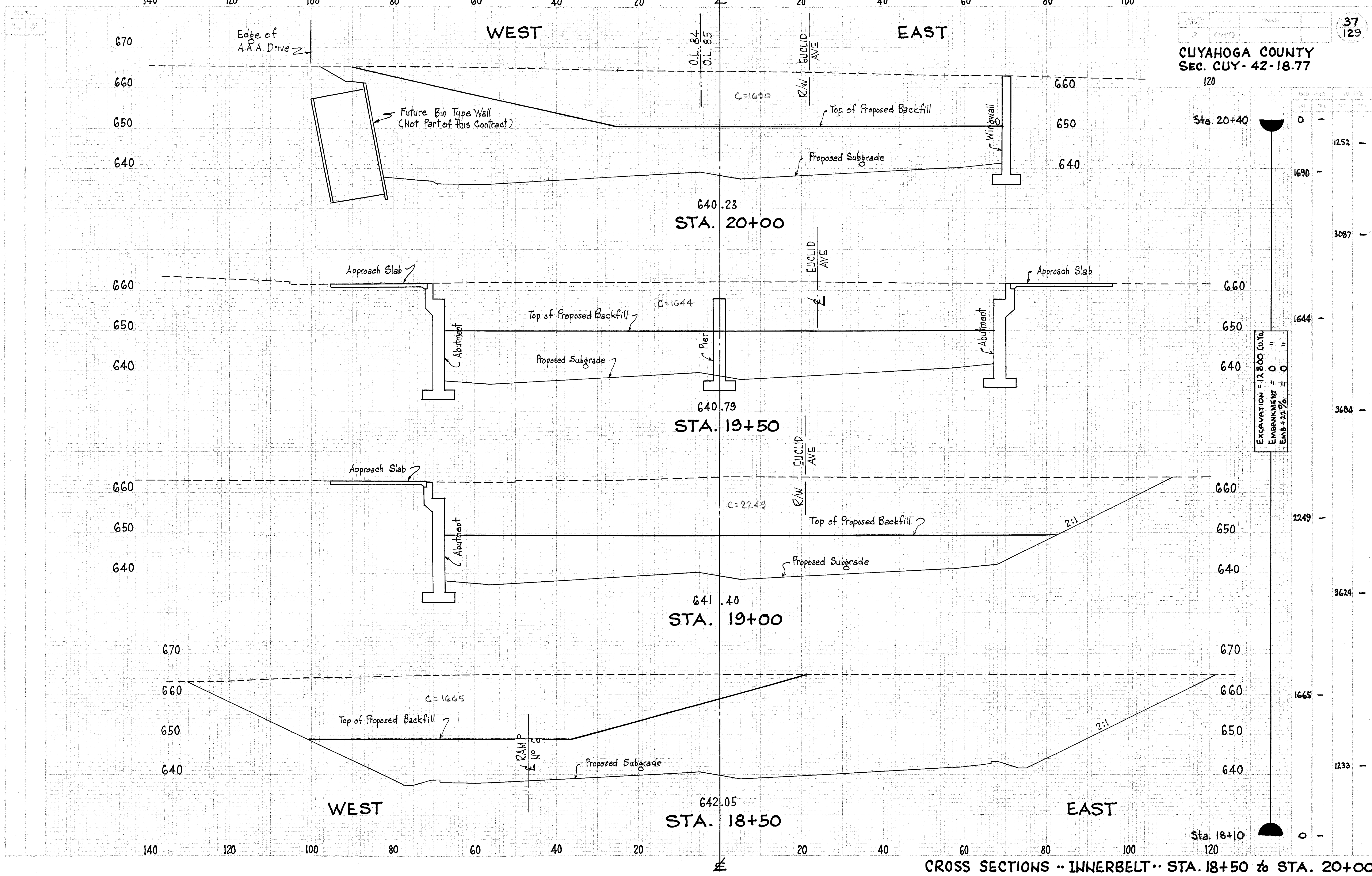
TRIM LINE ↗



Sta.	END AREA		CU. YDS.	
	CUT	FILL	CUT	FILL
Sta. 15+50	0	-	384	-
	415	-		
			1501	-
			1206	-
			2339	-
			1320	-
			2278	-
Sta. 13+50	1140	-		

EXCAVATION = 6502 CU. YD.
EMBANKMENT = 0 " "
EMB + 2.7% = 0 " "

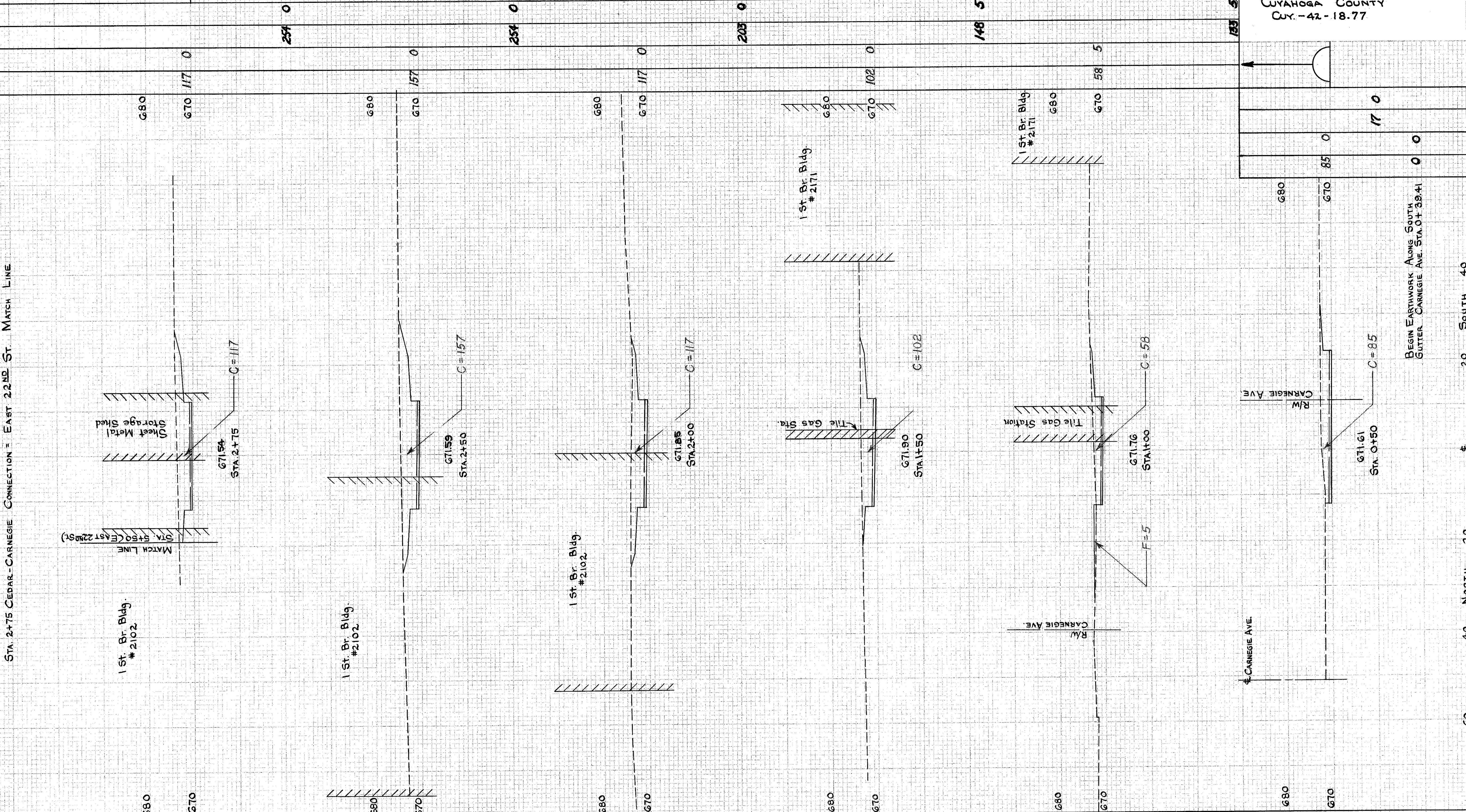
Trim Line ↘



SEEDING & SODDING	
WIDTH	AREA
Lin. Ft.	Sq. Yds.

END AREA	Cu. Yds
Cut	Fill
Cut	Fill

22	75	161	131	147	117	10	0
----	----	-----	-----	-----	-----	----	---



EXCAVATION
1009 CU.YDS
EMBANKMENT
10 CU.YDS
EMBANKMENT +22%
12 CU.YDS

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUYAHOGA COUNTY
Cuy.-42-18.77

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129

STA. 2+75 CEDAR-CARNEGIE CONNECTION - EAST 22ND ST. MATCH LINE

BEGIN EARTHWORK ALONG SOUTH
GUTTER, CARNEGIE AVE. STA. 0+50

CEDAR - CARNEGIE CONNECTION STA. 0+50 To STA. 2+75

SEEDING & SODDING	
WIDTH	AREA
Lin. Ft.	Sq. Yds.

120 100 80 WEST 60 40 20 0 20 40 60 EAST 80 100

PROJ. NO.	STATS.	PROJECT	DATE
2	OHIO		

39
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CUYAHOGA COUNTY
Cuy. 42-18.77

STA. 2+00 EAST 22ND ST = INNERBELT MATCH LINE

30

156

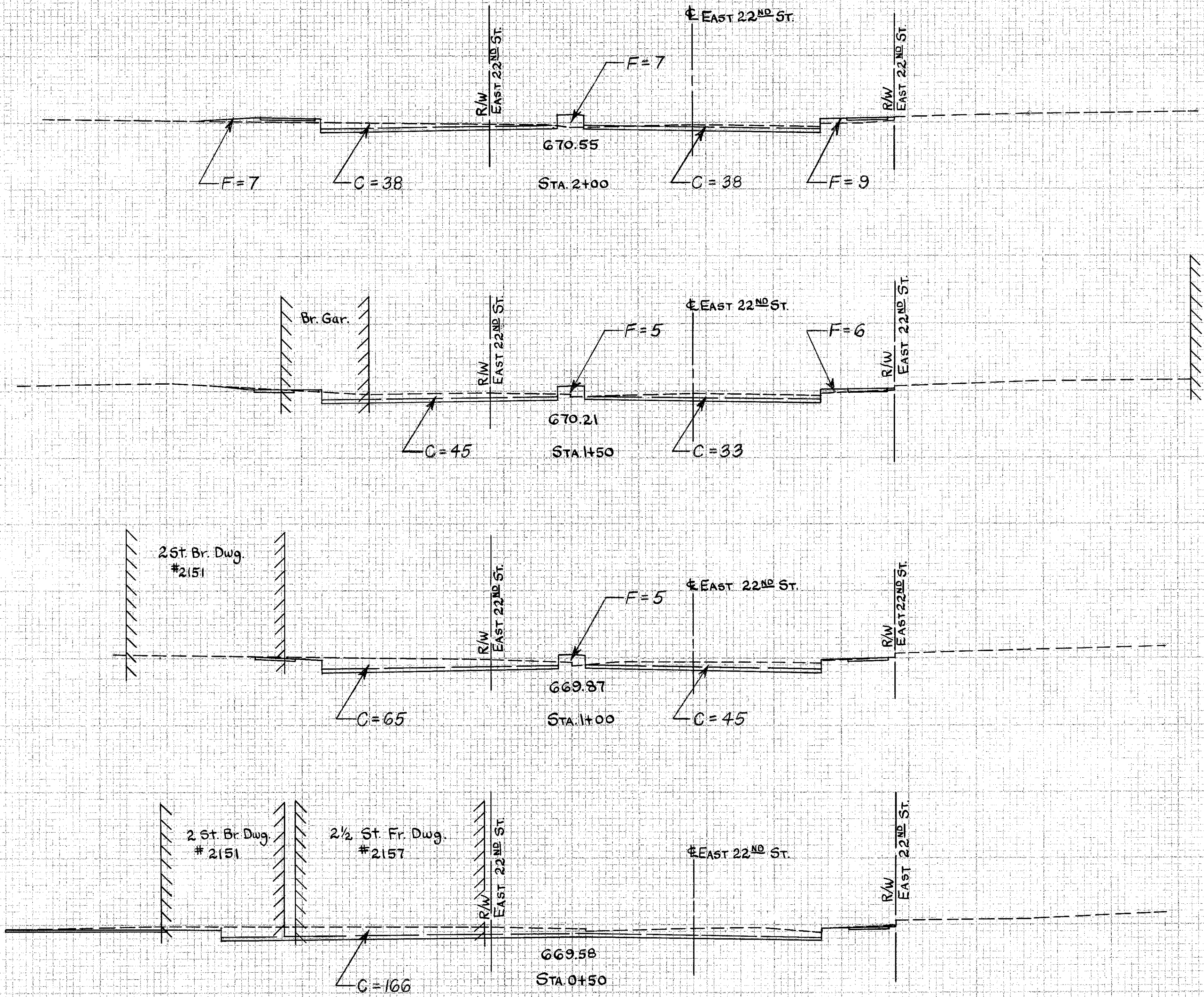
26

133

22

181

43



ELEVATION	END AREA		Cu. Yds	
	Cut	Fill	Cut	Fill
670				
660	76	23		
670			143	31
660	78	11		
670			174	15
660	110	5		
670			255	5
660	166	0		
			80	0
			0	0

EXCAVATION 652 CU.YDS.
EMBANKMENT 51 CU.YDS.
EMBANKMENT +2% 62 CU.YDS.

BEGIN EARTHWORK ALONG
NORTH GUTTER CENTRAL AVE.
STA. 0+24 (CONSTR. E. 22ND ST.)

120 100 80 WEST 60 40 20 0 20 40 60 EAST 80 100

EAST 22ND ST. STA. 0+24.17 TO STA. 2+00

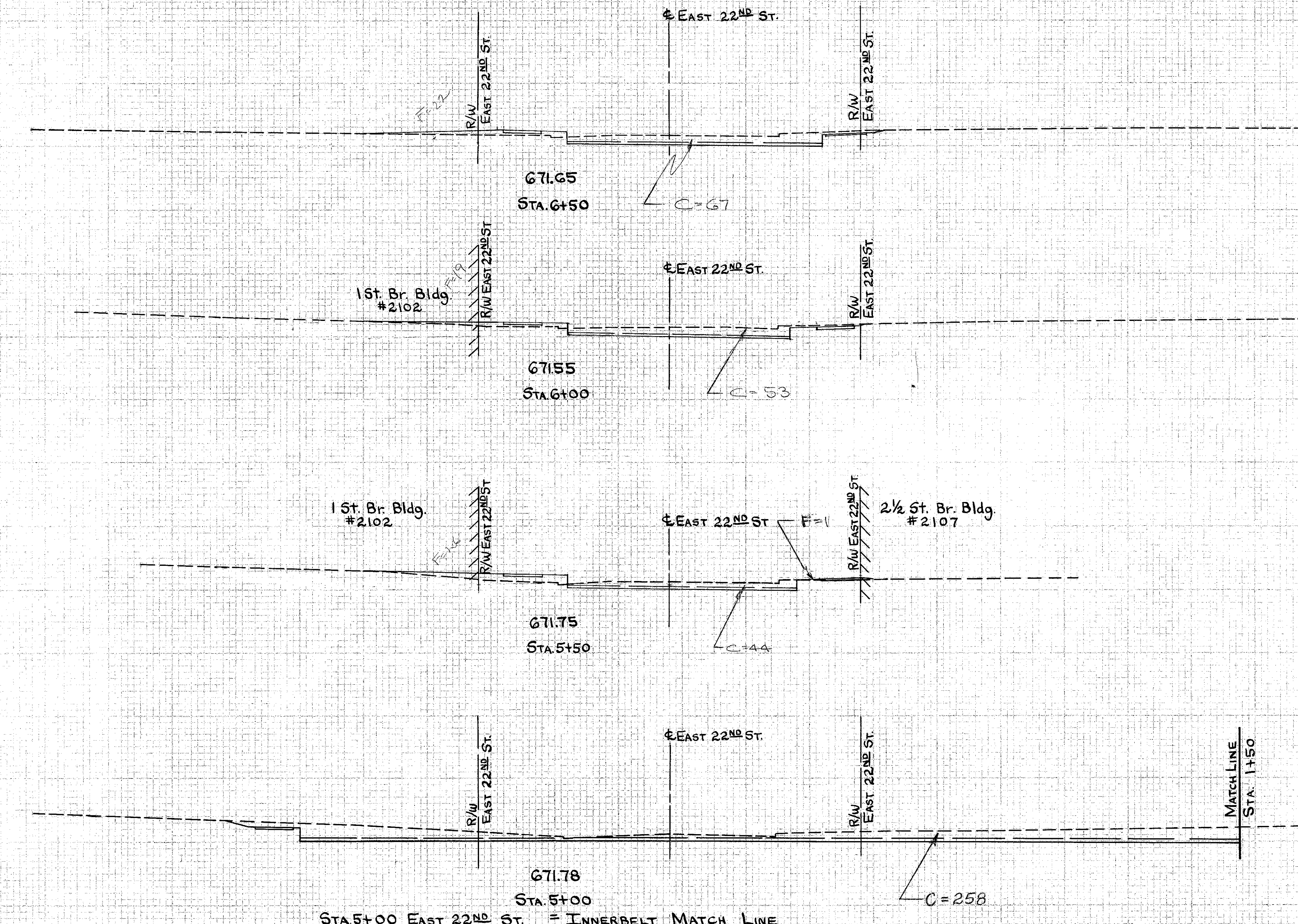
SEEDING & SODDING	
WIDTH	AREA
LIN. FT.	Sq. Yds.
27	30
27	155
32	161
29	111
11	

120 100 80 WEST 60 40 20 0 20 40 60 EAST 80 100

PROJECT NO.	STATE	PROJECT	TYPE
2	OHIO		ROADS

40
129

CUYAHOGA COUNTY
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END EARTHWORK ALONG
SOUTH GUTTER, CARNEGIE AVE.
STA. 6+71 (CONST. E. 22ND ST.)

END AREA	Cu. Yds.	
	CUT	FILL
670	0	0
660	67	22
670	111	38
660	53	19
670	90	43
660	44	27
670	280	25
660	258	0

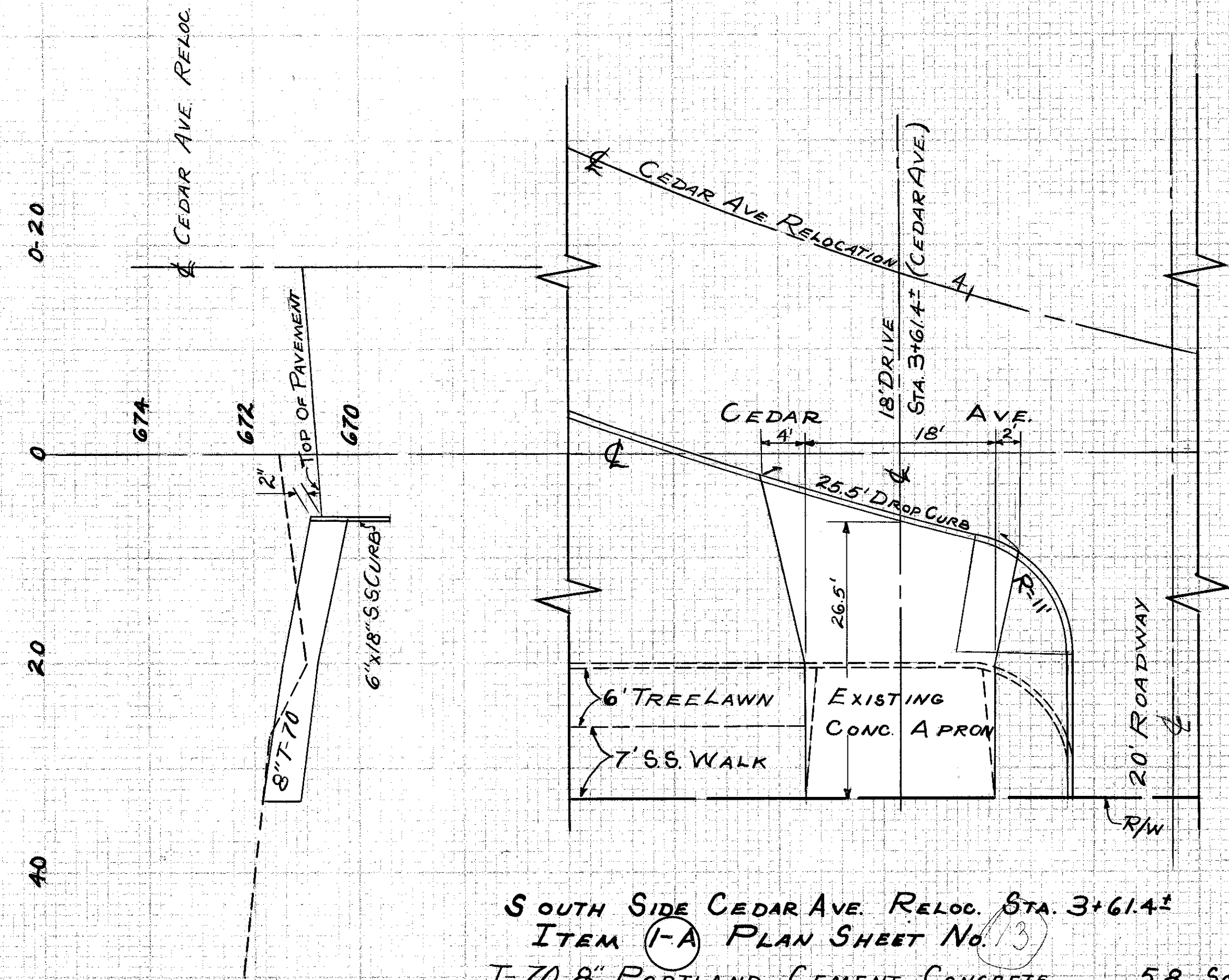
507 CU. YDS.
EXCAVATION
EMBANKMENT
EMBANKMENT + 22%
116 CU. YDS.
142 CU. YDS.

120 100 80 WEST 60 40 20 0 20 40 60 EAST 80 100

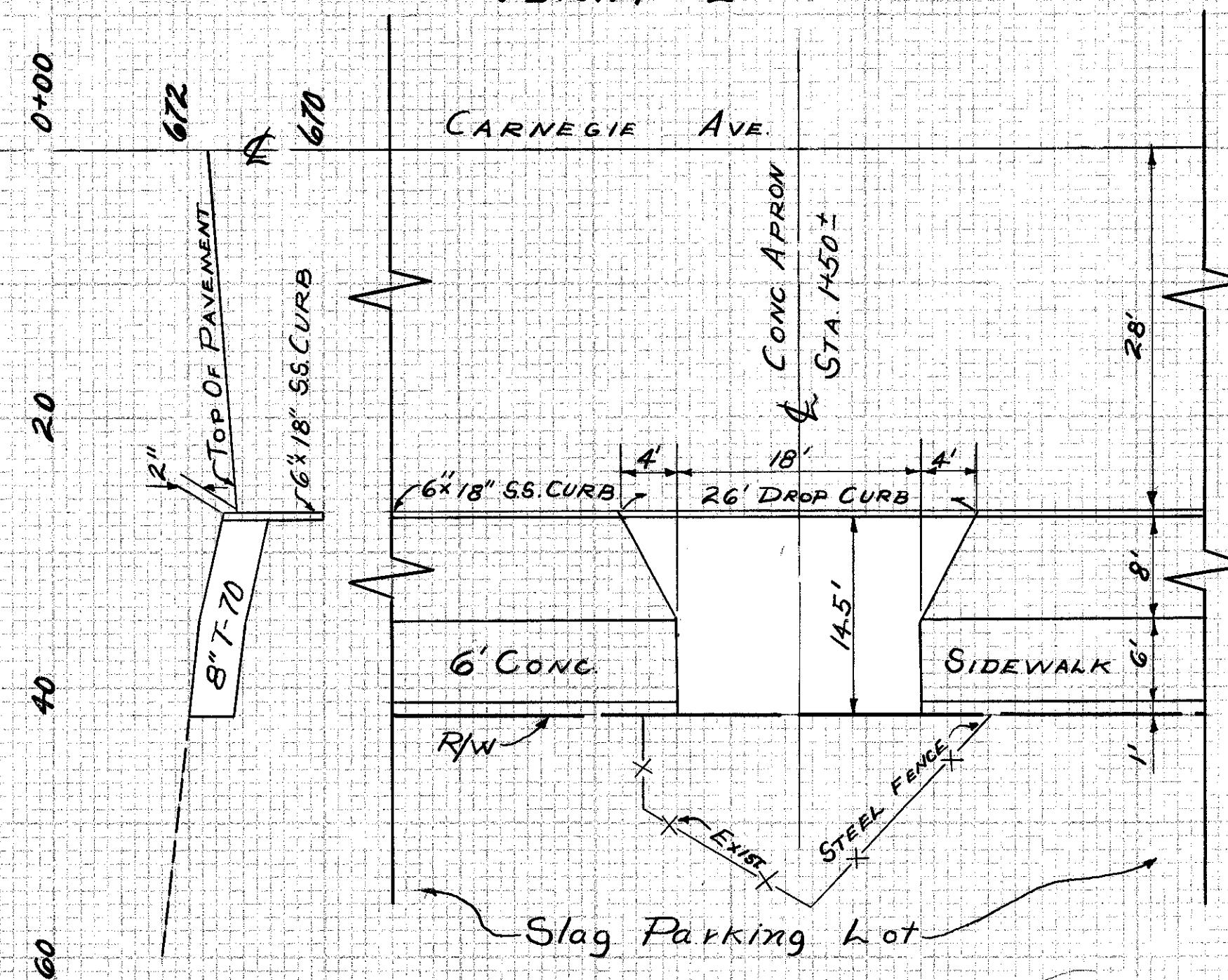
EAST 22ND ST. STA. 5+00 To STA. 6+70.82

DRIVEWAY DETAILS

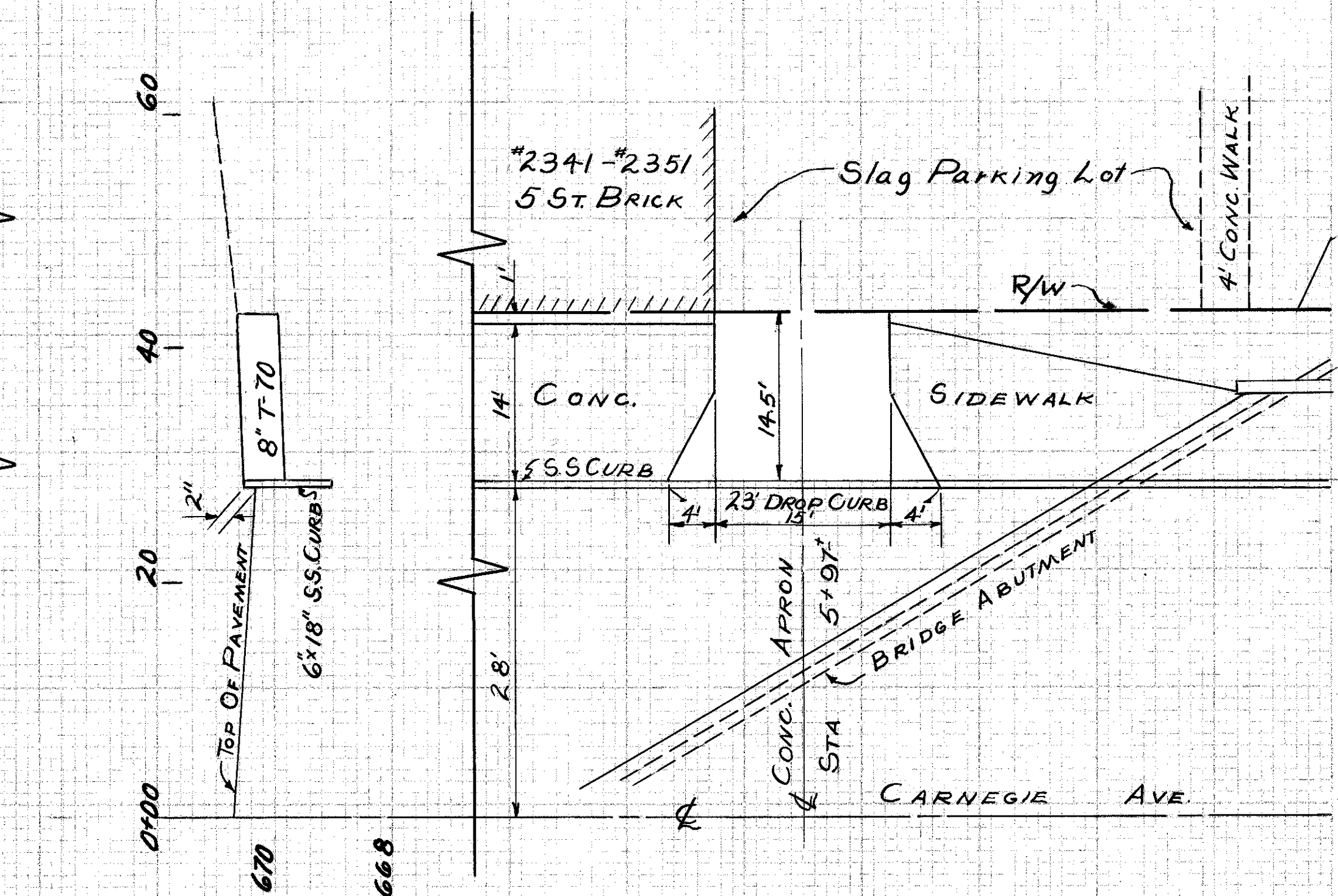
SCALE: HOR. 1"=10'
VERT. 1"=2'



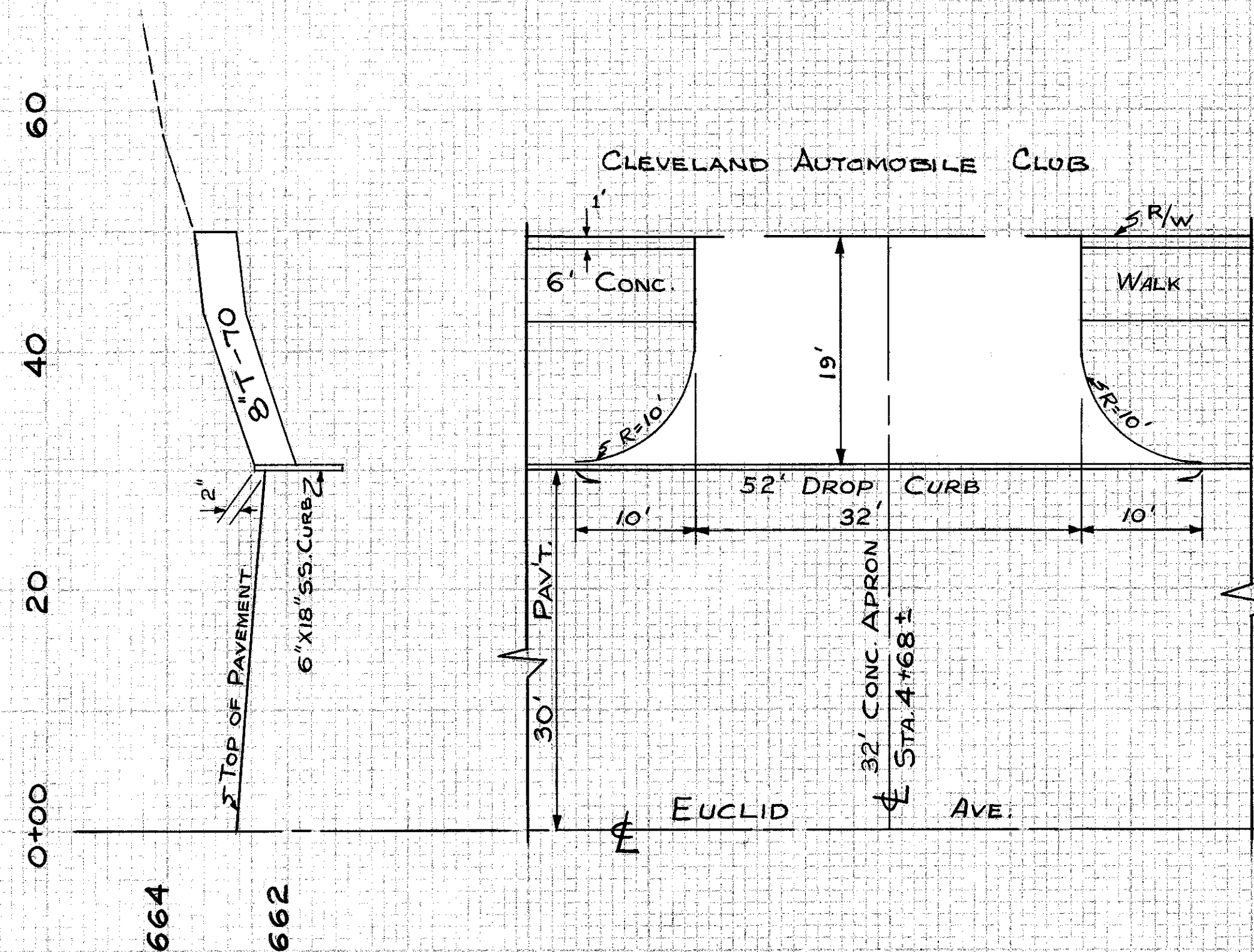
SOUTH SIDE CEDAR AVE. RELOC. STA. 3+61.4±
ITEM (1-A) PLAN SHEET No. 13
T-70 8" PORTLAND CEMENT CONCRETE 58 Sq. Yds. ✓
E-8 REMOVAL & DISPOSAL OF EXIST. CONC. APRON 2.5 Sq. Yds. ✓
E-101 EXCAVATION 9 Cu. Yds.



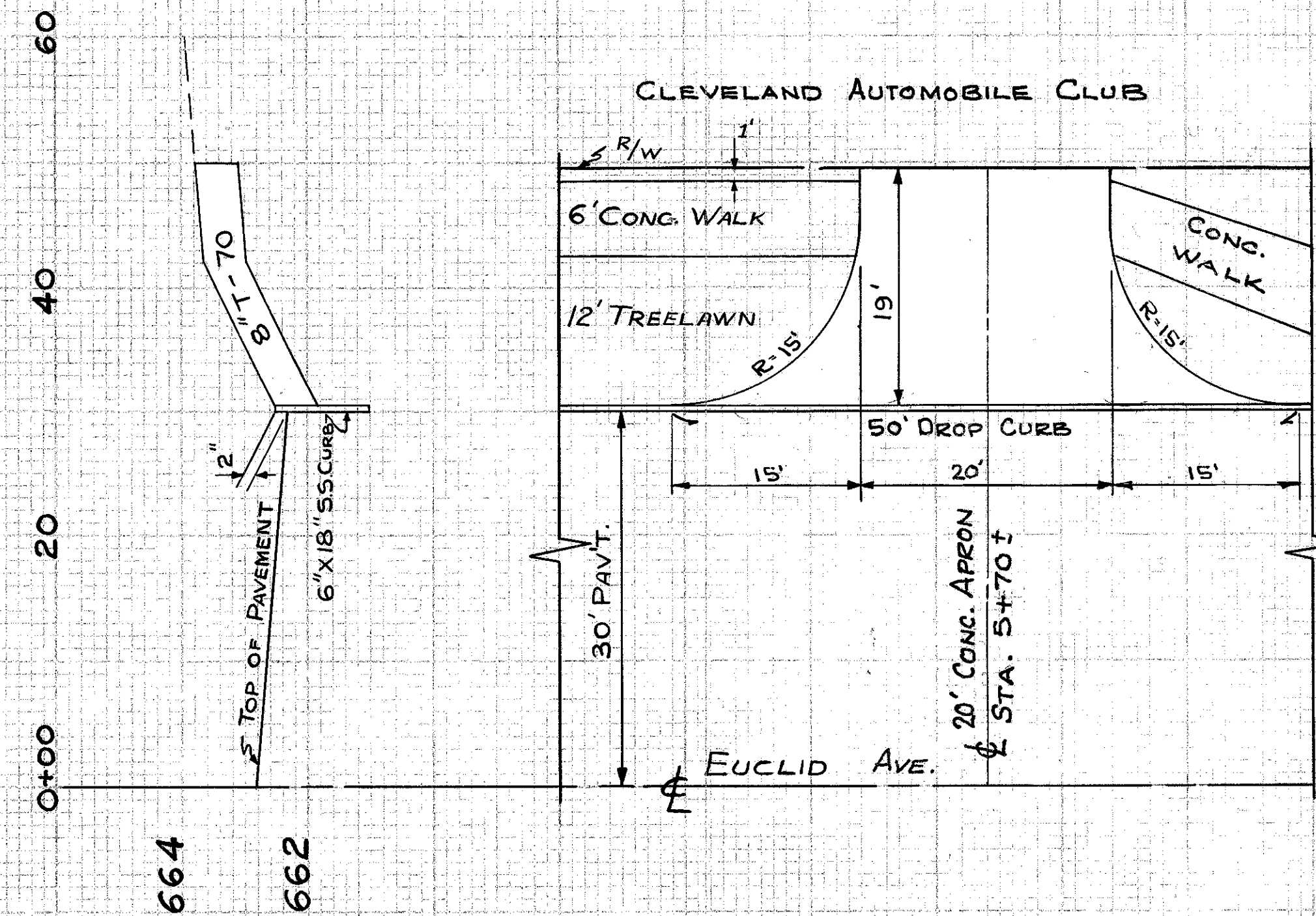
SOUTH SIDE CARNEGIE AVE. STA. 1+50±
ITEM (1-A) PLAN SHEET No. 15
T-70 8" PORTLAND CEMENT CONCRETE 32 Sq. Yds. ✓
E-8 REMOVAL & DISPOSAL OF EXIST. CONC. APRON 2.9 Sq. Yds. ✓



NORTH SIDE CARNEGIE AVE. STA. 5+97±
ITEM (2-A) PLAN SHEET No. 15
T-70 8" PORTLAND CEMENT CONCRETE 2.8 Sq. Yds. ✓
E-8 REMOVAL & DISPOSAL OF EXIST. CONC. APRON 2.6 Sq. Yds. ✓



NORTH SIDE EUCLID AVE. STA. 4+68±
ITEM (1-A) PLAN SHEET No. 19
T-70 8" PORTLAND CEMENT CONCRETE 72 Sq. Yds. ✓
(Removal of Existing 24' Conc. Apron to be included in Item 3-15)



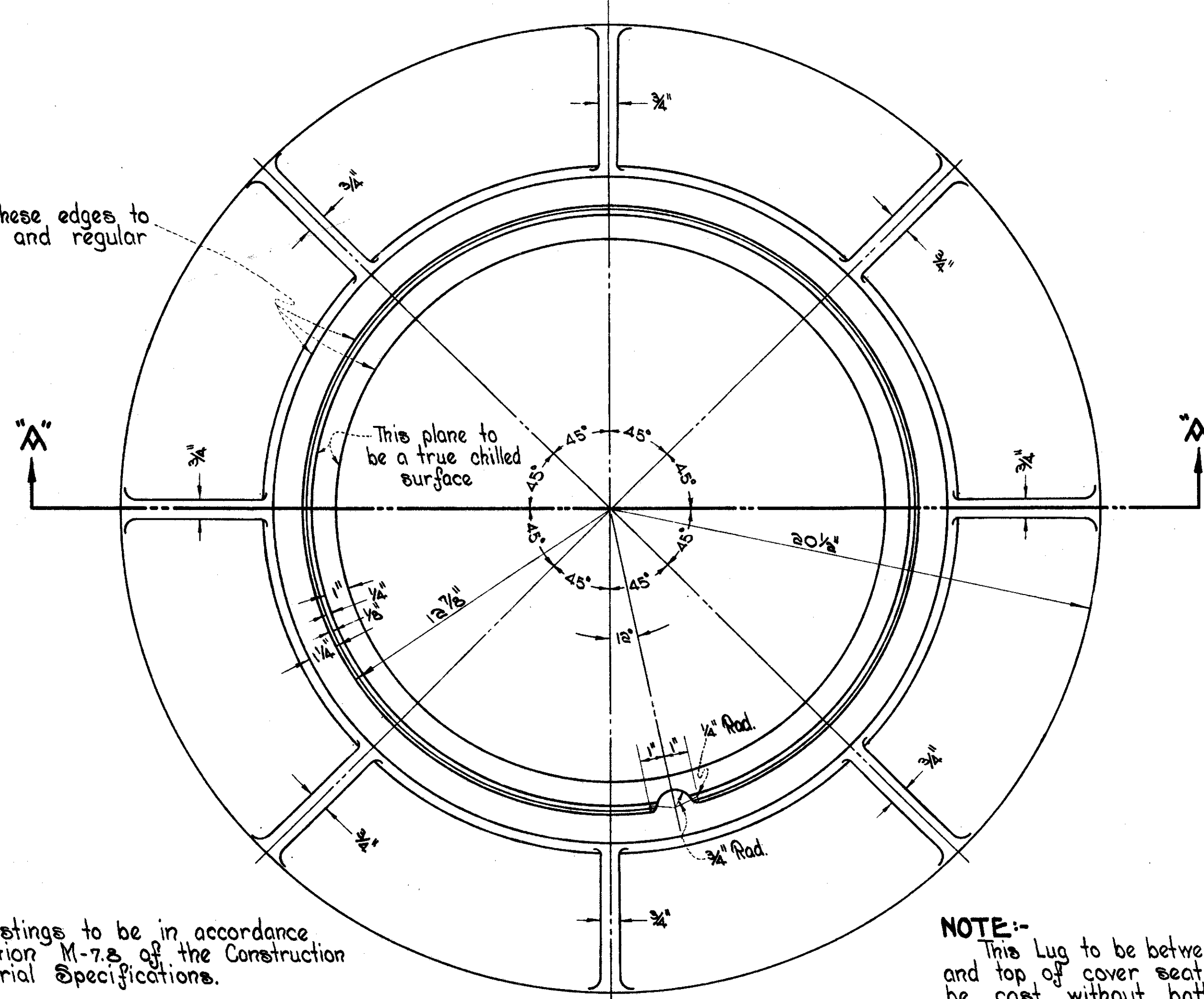
NORTH SIDE EUCLID AVE. STA. 5+70±
ITEM (2-A) PLAN SHEET No. 19
T-70 8" PORTLAND CEMENT CONCRETE 53 Sq. Yds. ✓
(See Driveway Table Sheet 19 for Removal of Existing 20' Conc. Apron)

SPECIAL MANHOLE FRAME

STANDARD CITY TYPE

Scale 3" = 1'-0"

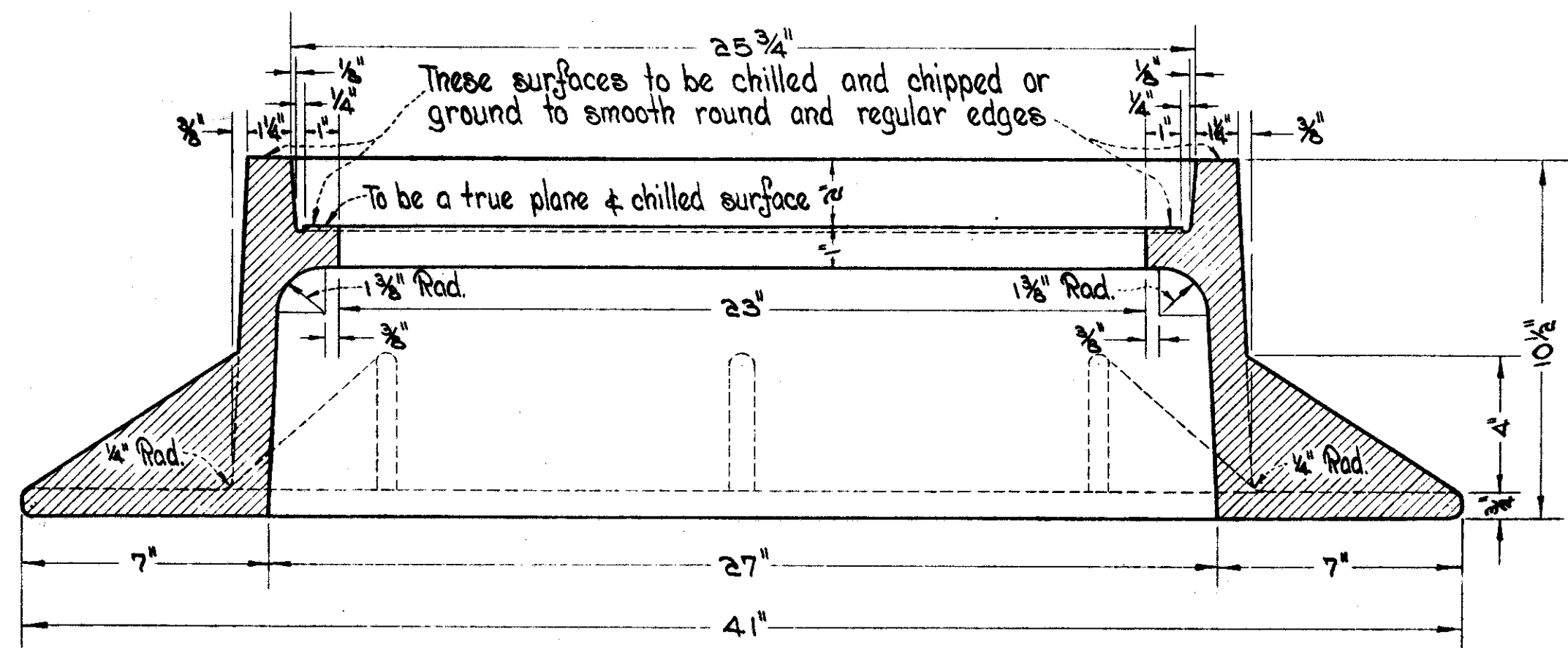
Grind or Chip these edges to smooth round and regular condition



PLAN

NOTE:- All castings to be in accordance with Section M-7.5 of the Construction and Material Specifications.

NOTE:- This Lug to be between top of frame and top of cover seat only and shall be cast without batter.



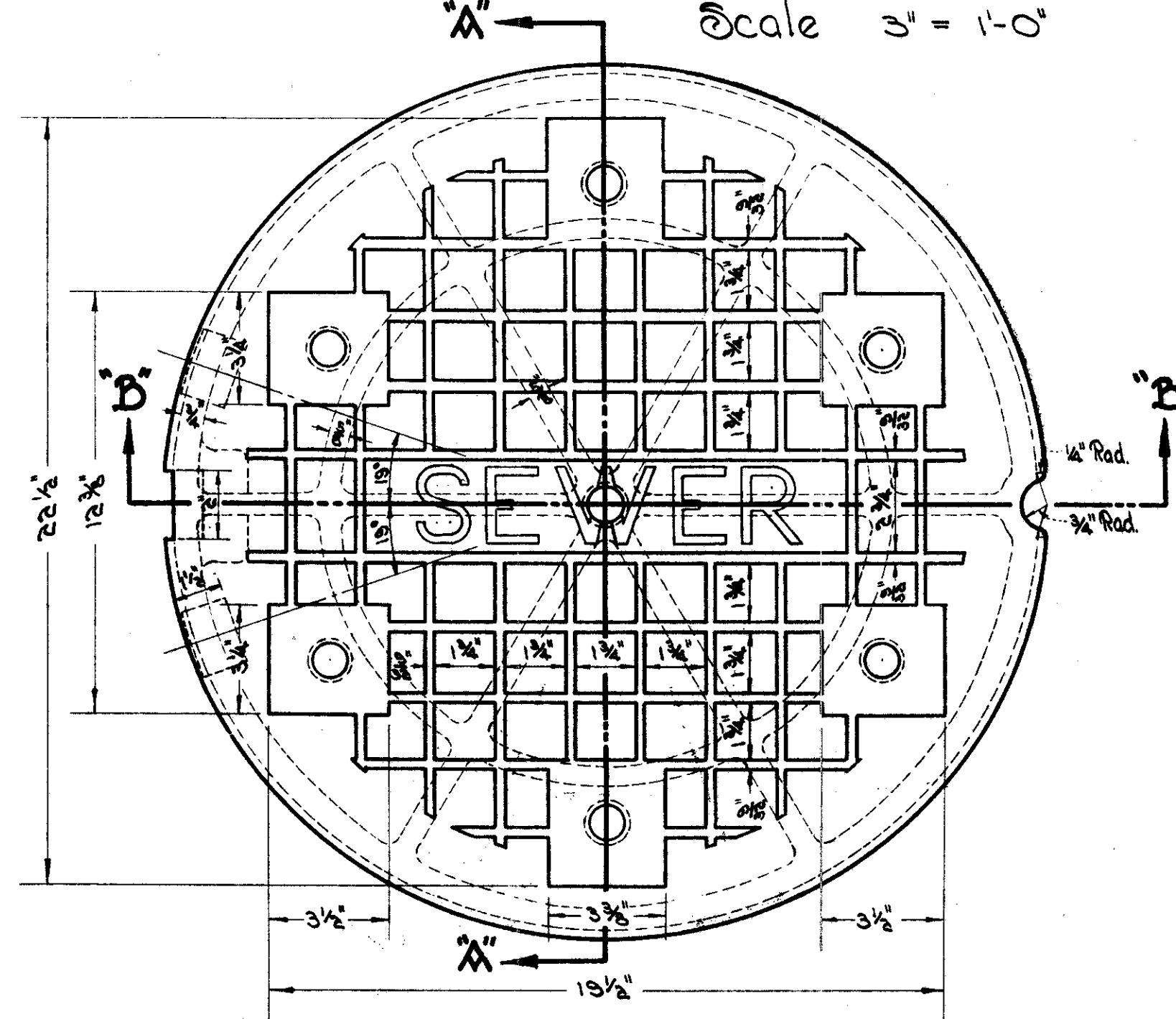
SECTION "A-A"

Weight of Frame 355 lbs.

SPECIAL COVER

STANDARD CITY TYPE

Scale 3" = 1'-0"

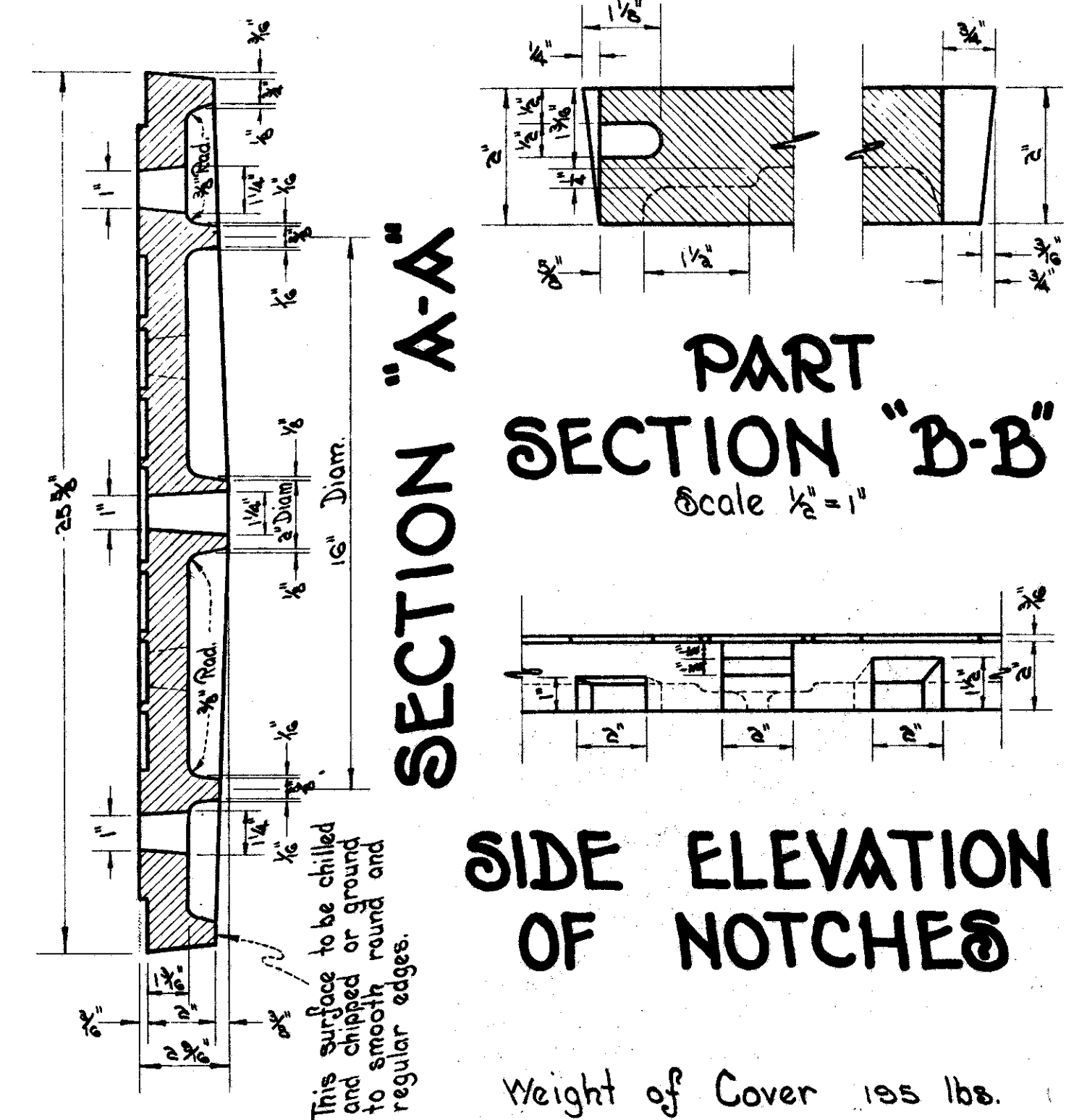


PLAN

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

Cuyahoga County
Cuy-42-18.77

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129



SECTION "A-A"

PART SECTION "B-B"
Scale 1/2" = 1"

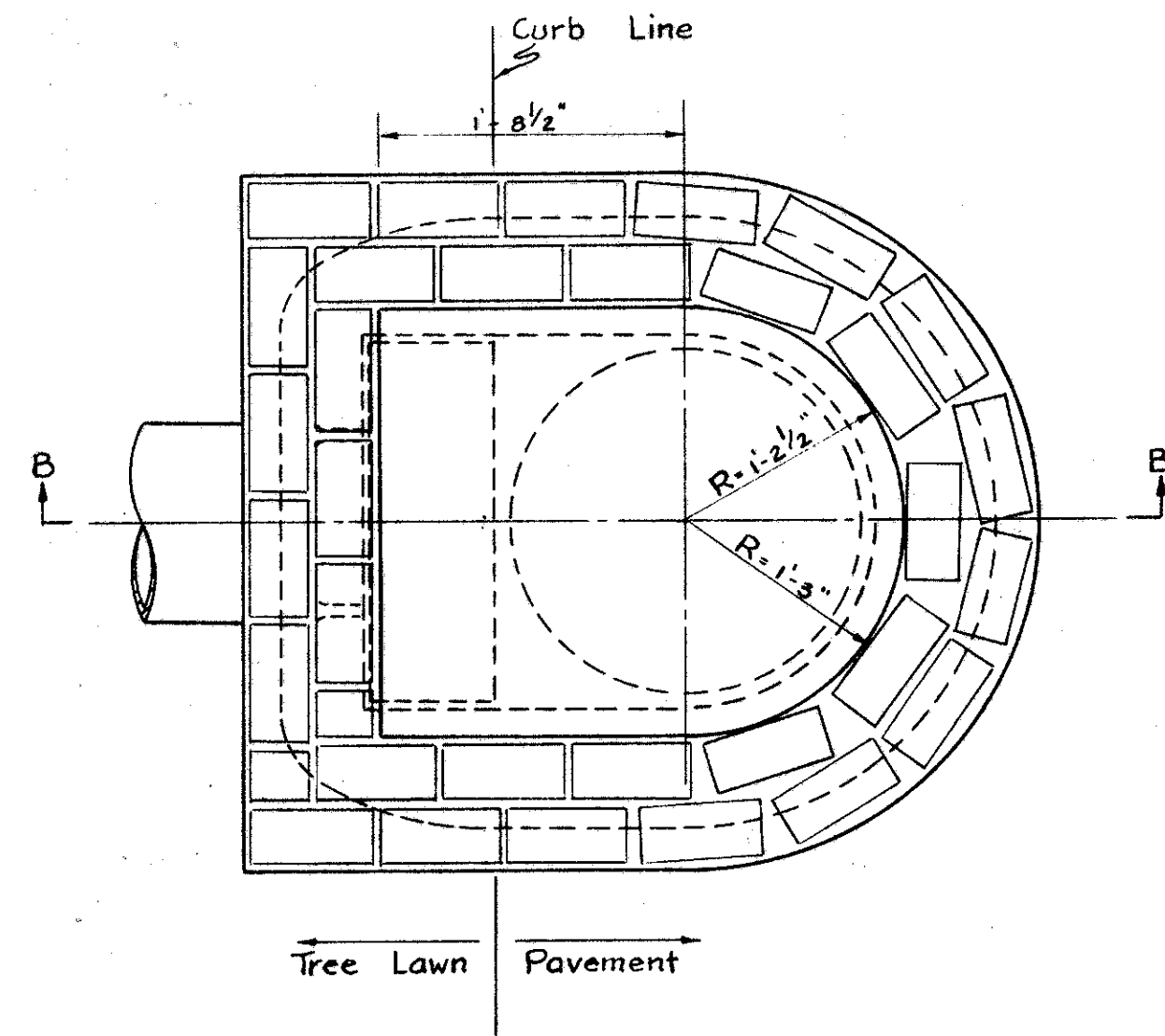
SIDE ELEVATION OF NOTCHES

Weight of Cover 155 lbs.

SPECIAL CURB INLET No 4

SPECIAL CATCH BASIN No 4

CUYAHOGA COUNTY
CUY-42-18.77

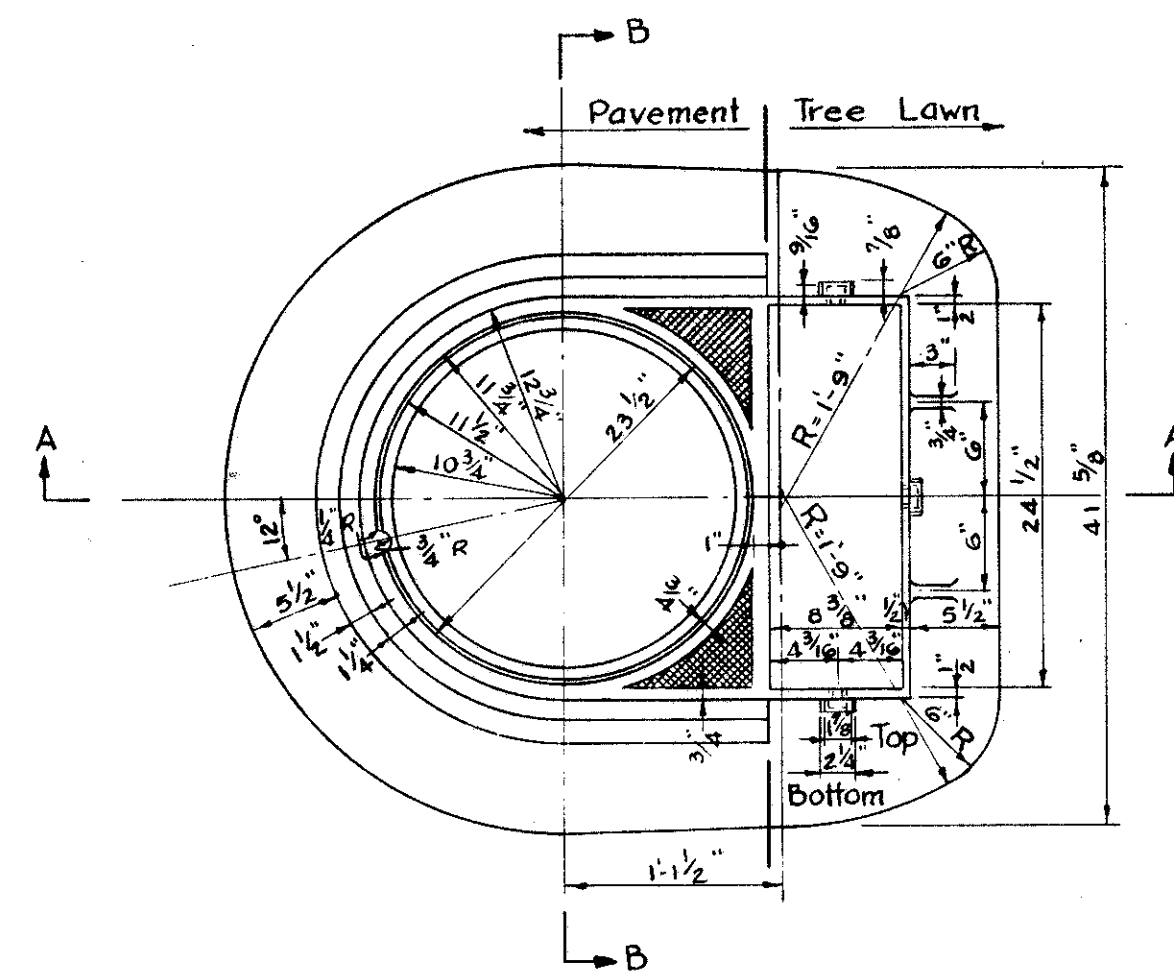


PLAN INLET BASIN

VIEW 'A-A'

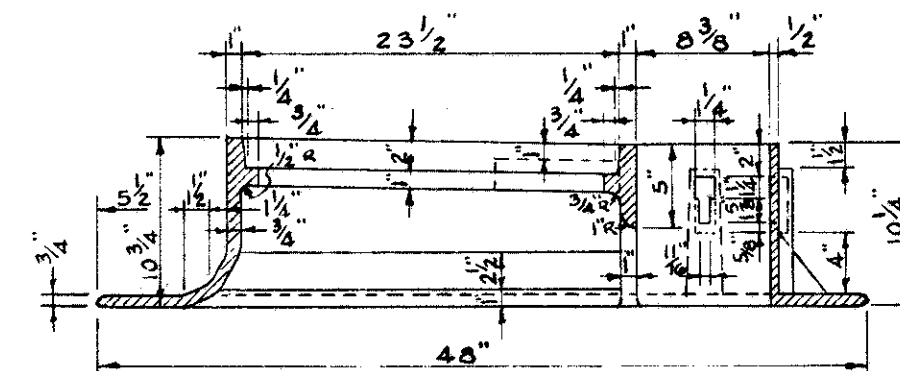
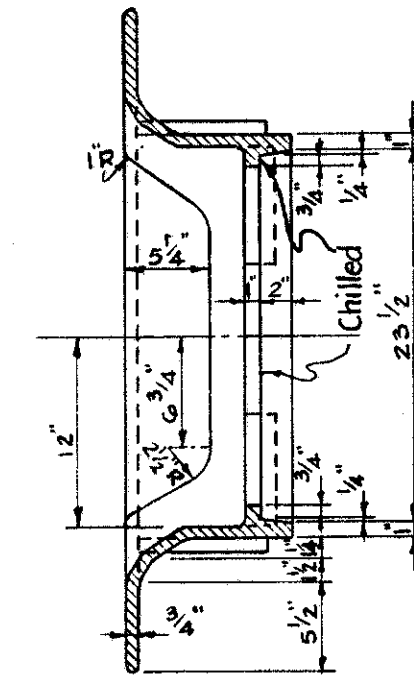
Scale: 1"=1'-0"

Position of casting shown in dashed lines



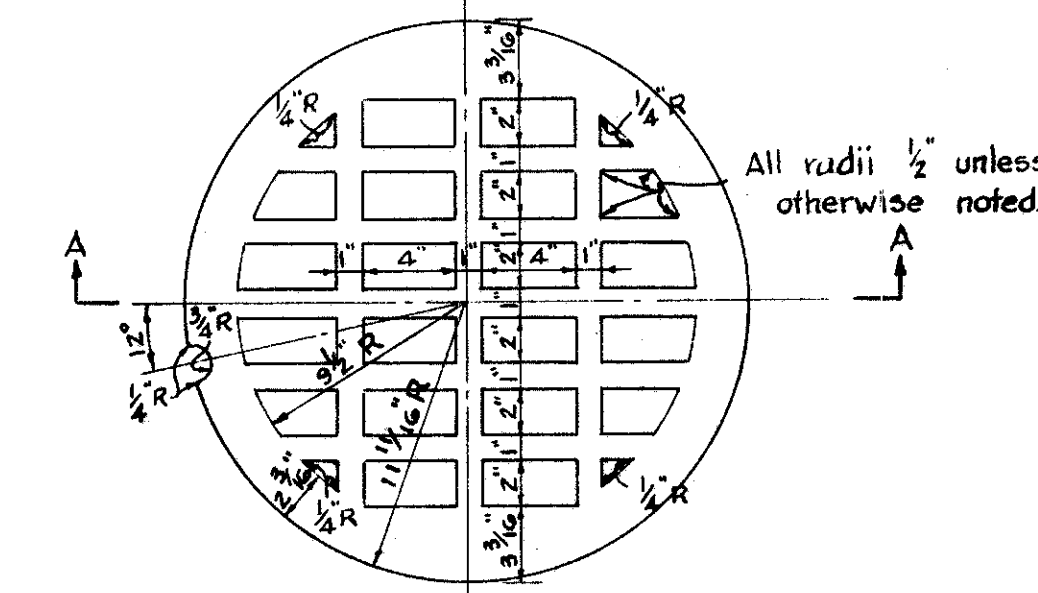
PLAN FRAME
(CAST IRON)

SECTION 'B-B'



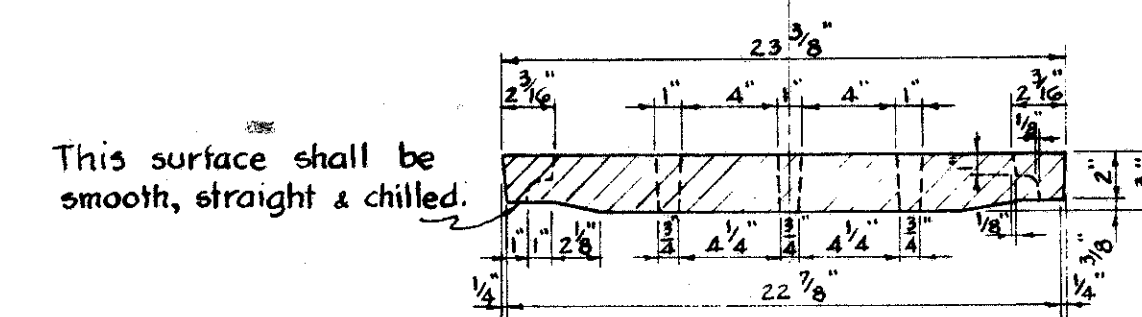
SECTION 'A-A'

Note:
Cover seat surface to be chilled & chipped or ground to smooth round regular edge.

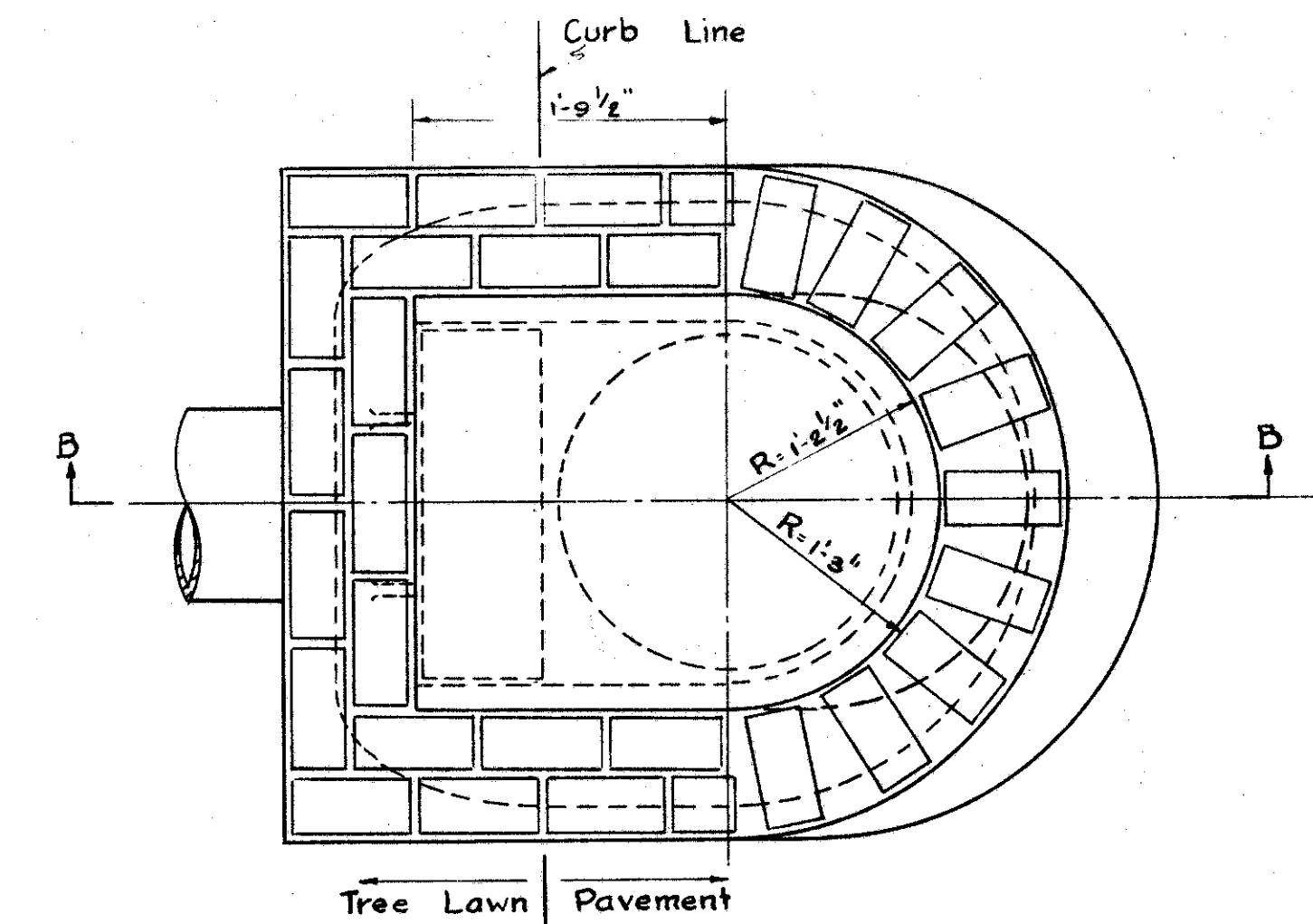


PLAN
CITY STANDARD CAST IRON
CATCH BASIN COVER

Scale: 1/2"=1'-0"



SECTION 'A-A'

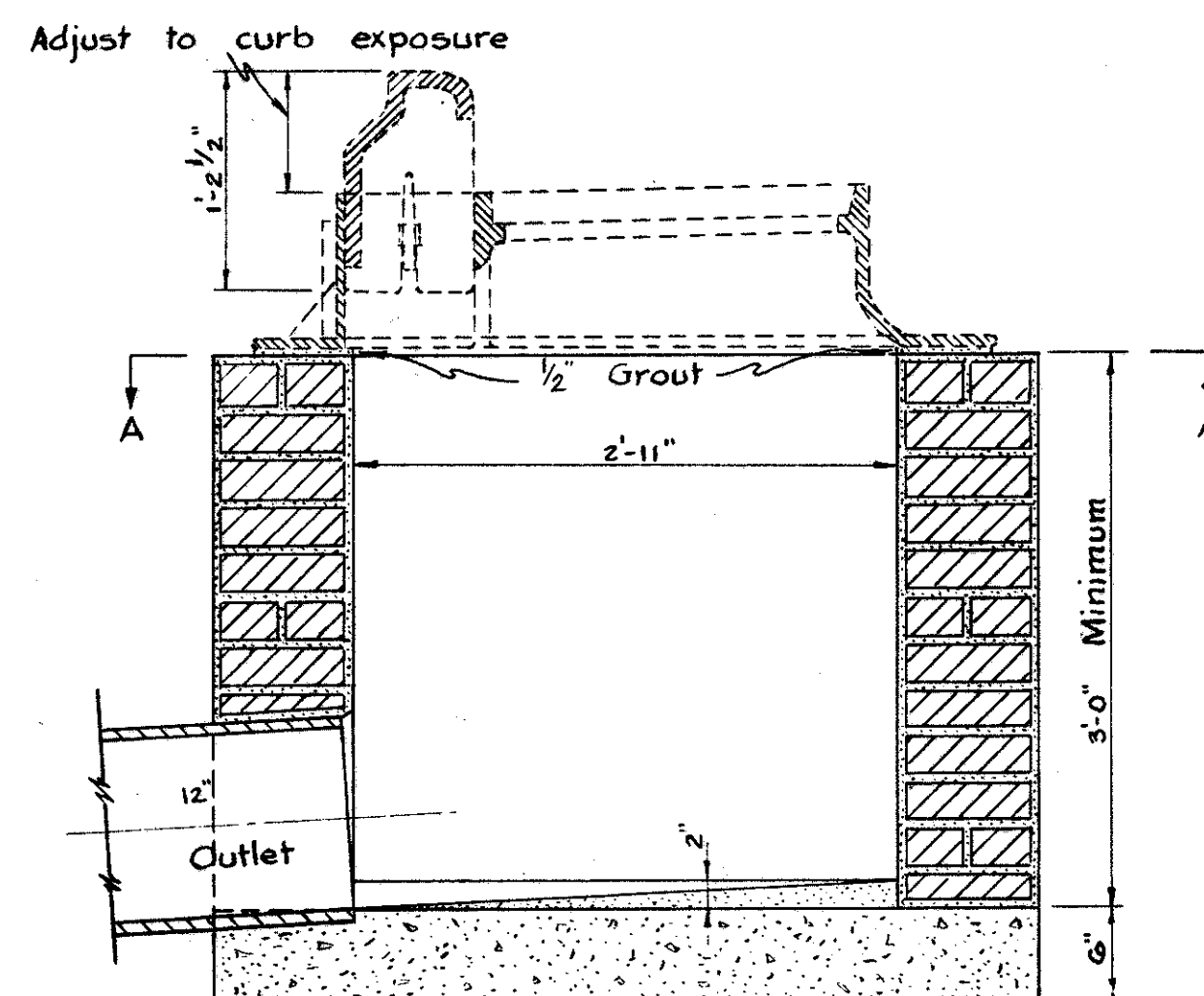


PLAN CATCH BASIN

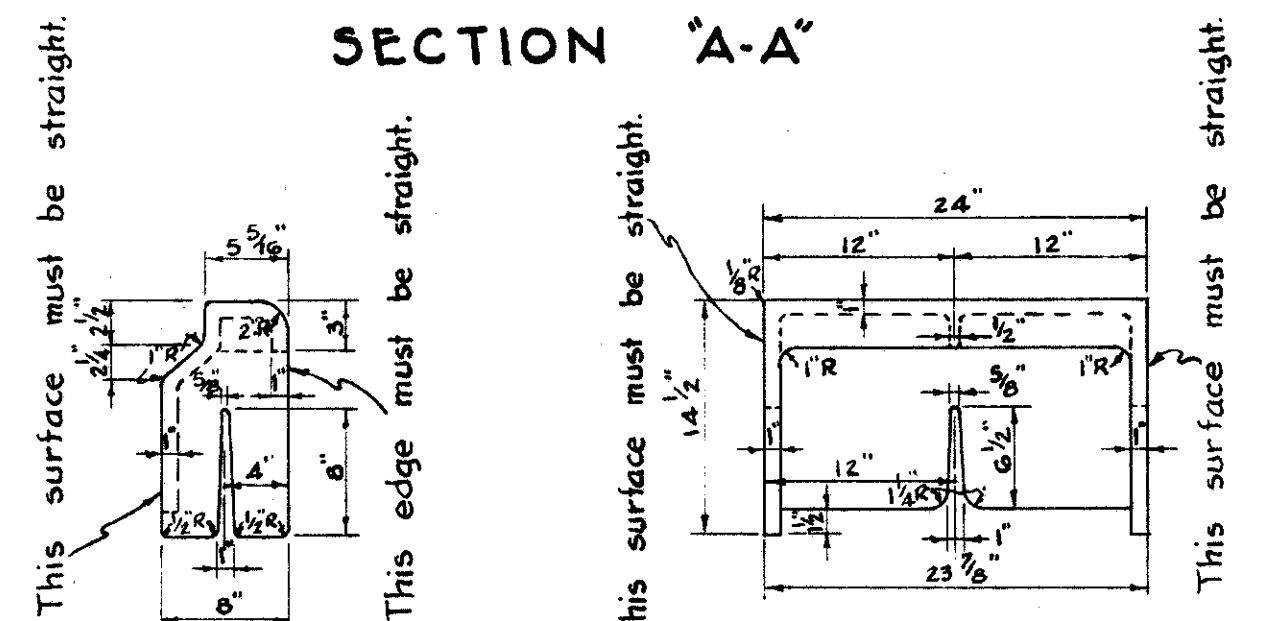
VIEW 'A-A'

Scale: 1"=1'-0"

Position of casting shown in dashed lines.



SECTION 'B-B'

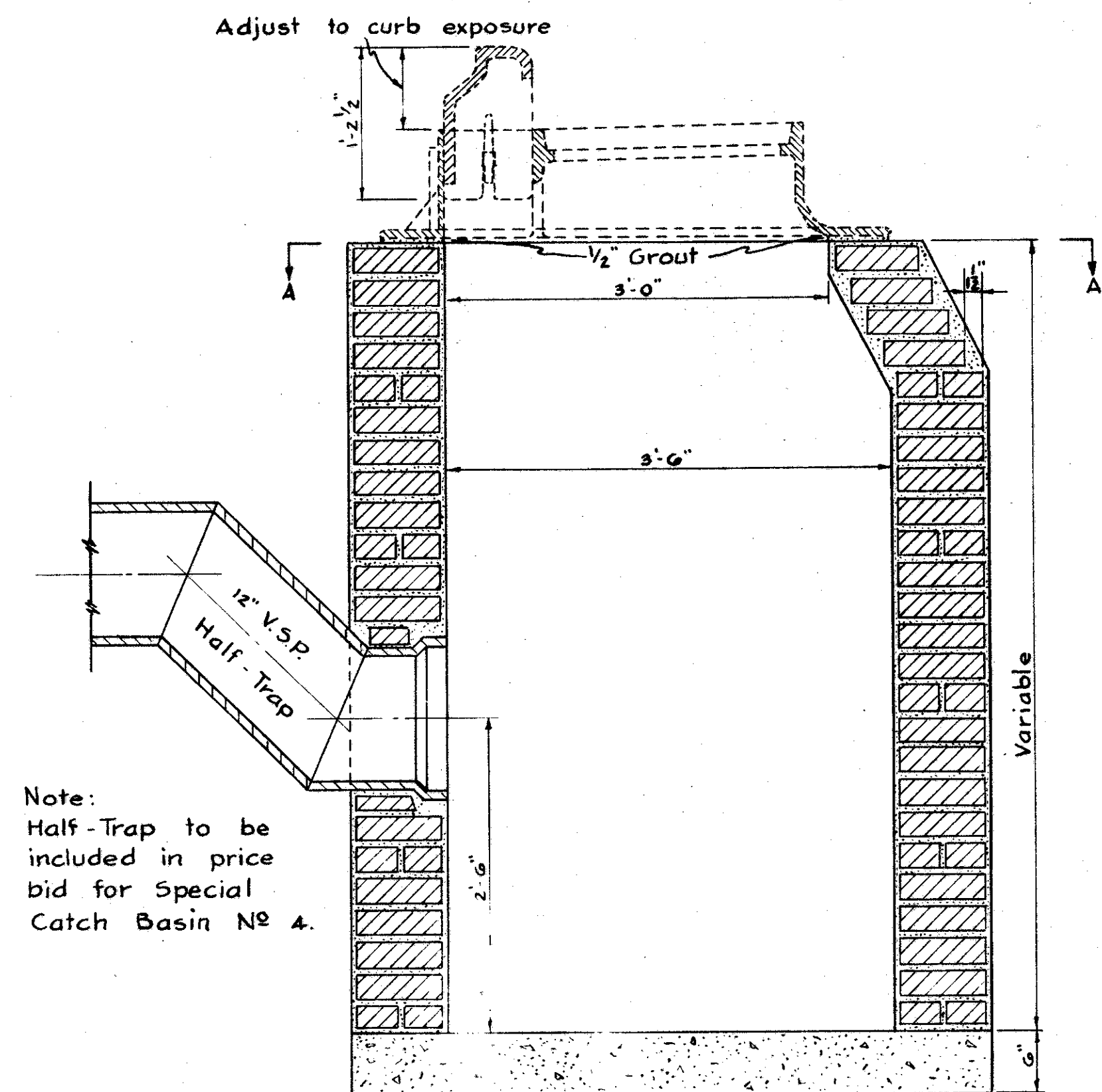


END VIEW FRONT ELEVATION

CURB BOX

CITY STANDARD CATCH BASIN FRAME
AND CAST IRON CURB BOX

Scale: 1"=1'-0"



SECTION 'B-B'

Note:
Half-Trap to be included in price bid for Special Catch Basin No 4.

NOTES:

BRICK WALLS:

Brick walls shall be 8" thick and plastered on the inside and outside with 1:2 cement mortar 1/2" thick. Concrete sidewalls, where used in place of brick, shall be made 6" thick of Class "C" concrete.

OUTLET:

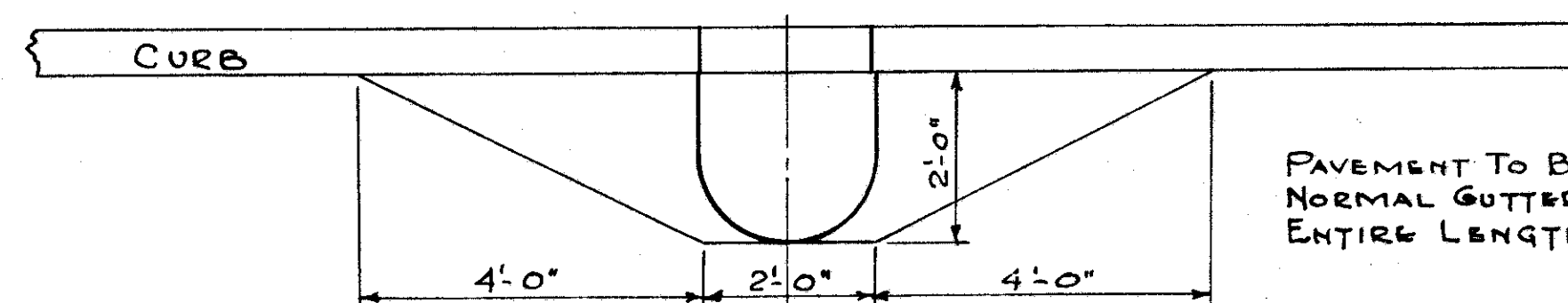
The outlet shall be of the size shown on the Plans and may be constructed in any side.

BOTTOM:

The bottom shall be built as per Plan, of Class "C" concrete, or of 2 courses of brick, set in mortar.

CASTING:

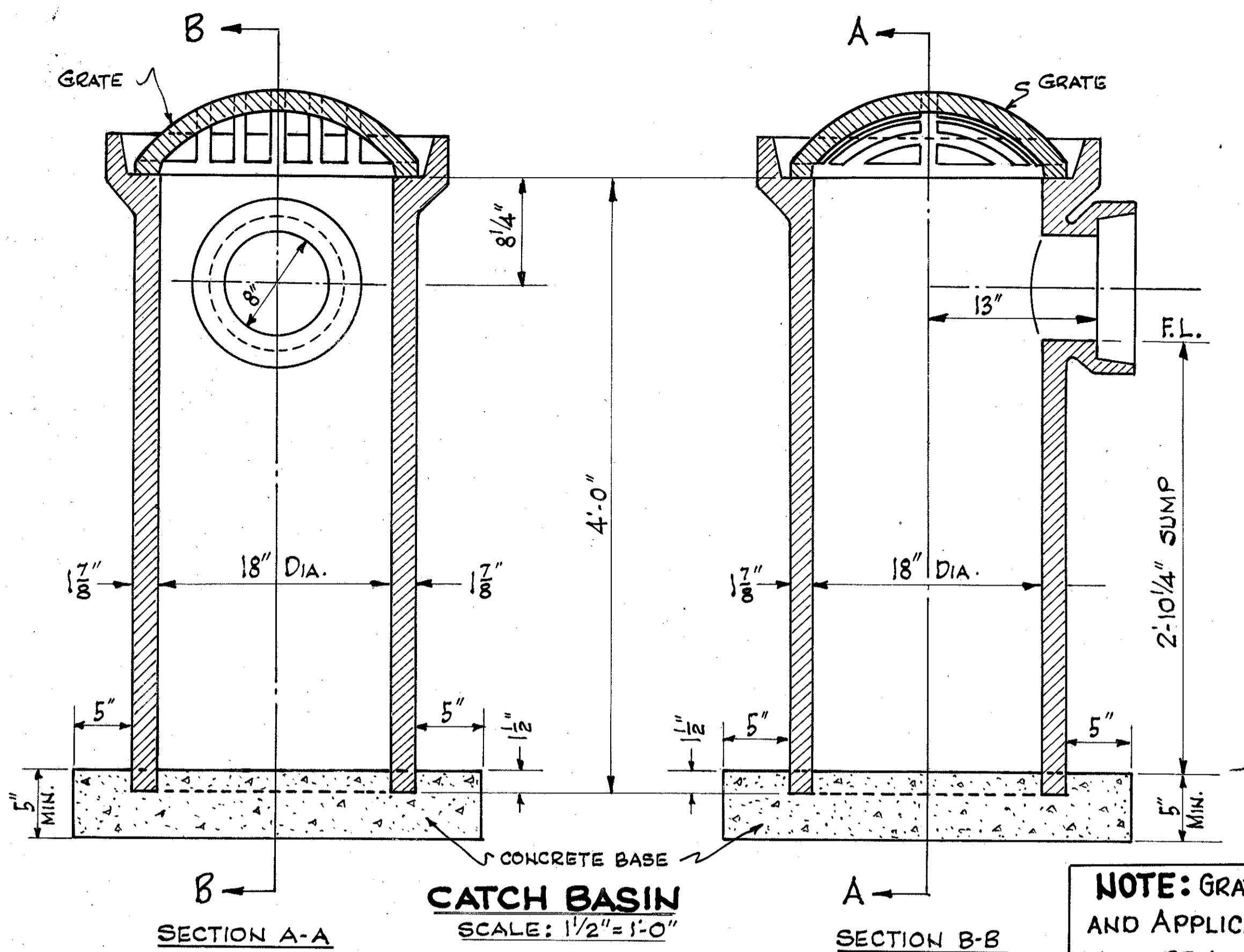
Casting to be in accordance with Section M-78 of the Material Details.



DETAIL FOR DEPRESSING PAVEMENT
FOR ABOVE STRUCTURES

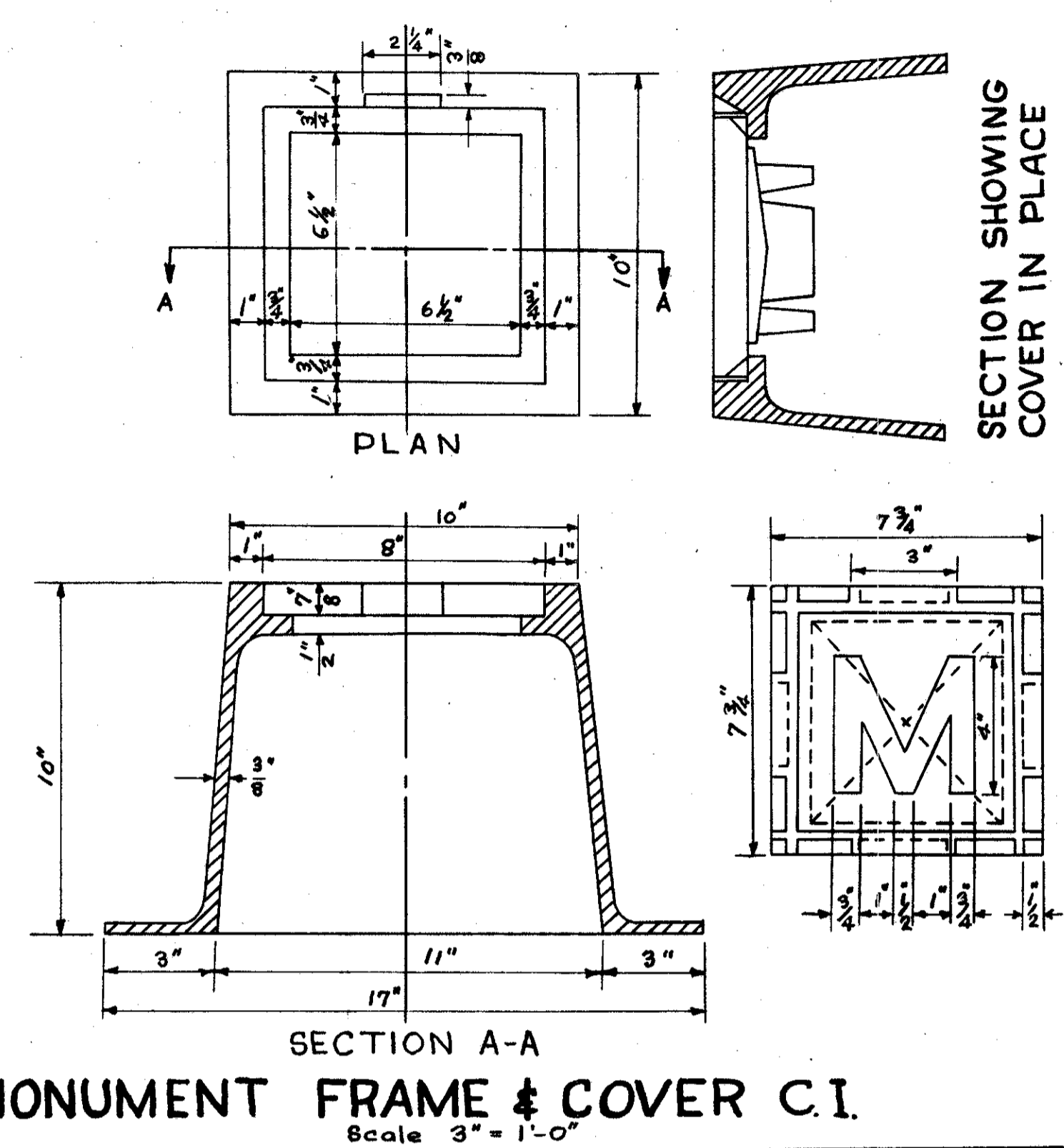
PAVEMENT TO BE DEPRESSED 2" BELOW NORMAL GUTTER ALONG CURB LINE FOR ENTIRE LENGTH OF CURB OPENING.

MODIFIED STD. C.B. No 7



NOTE: GRATE DETAIL AND APPLICABLE NOTES SHALL BE AS SHOWN ON STD. DRWG. I-8, C.B. No 7

MONUMENT BOX TYPE A UNPAVED AREAS

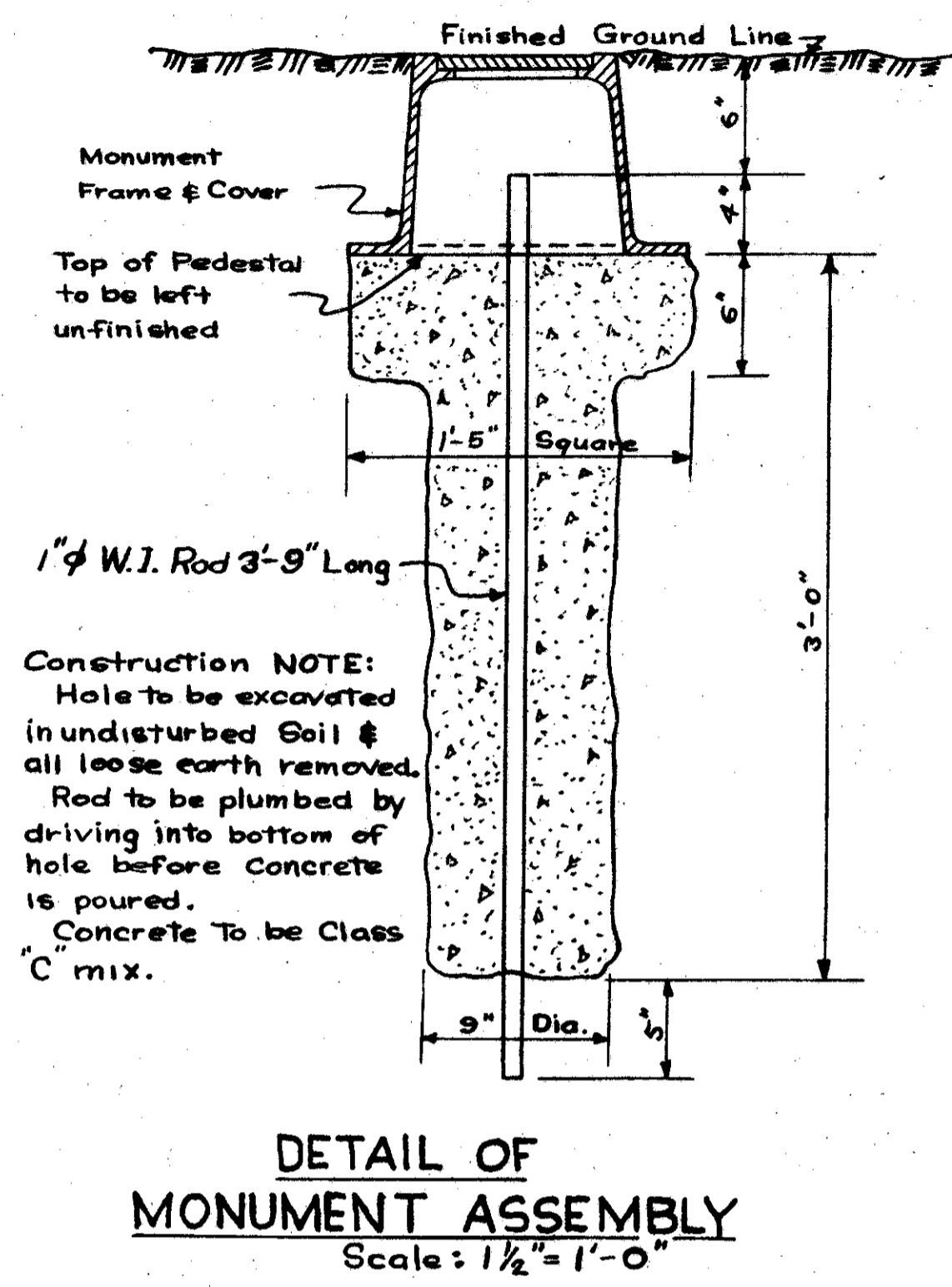


MONUMENT FRAME & COVER C.I. Scale 3" = 1'-0"

FED. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

CUYAHOGA COUNTY
SEC. CUY-42-18.77

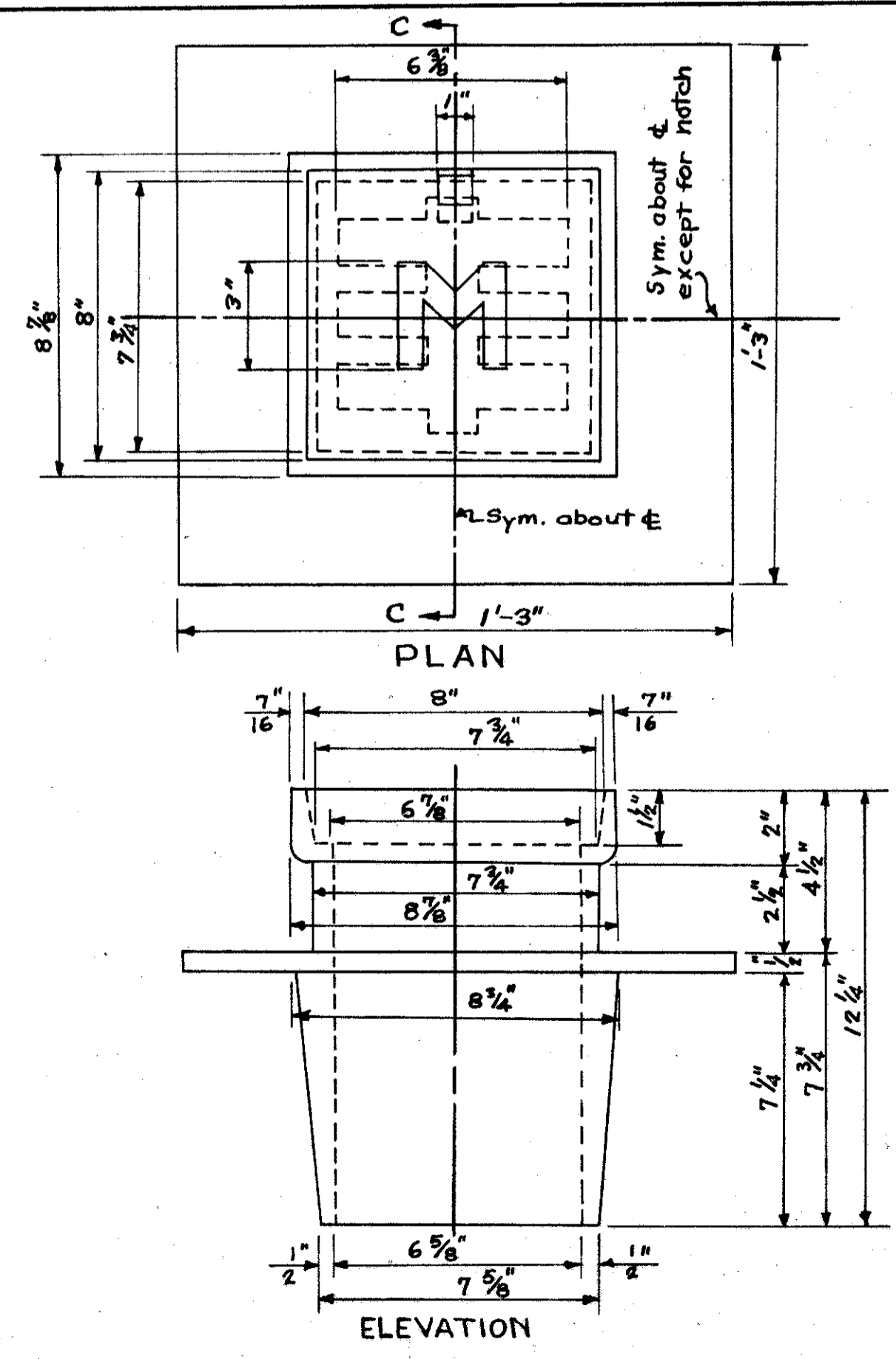
43A
129



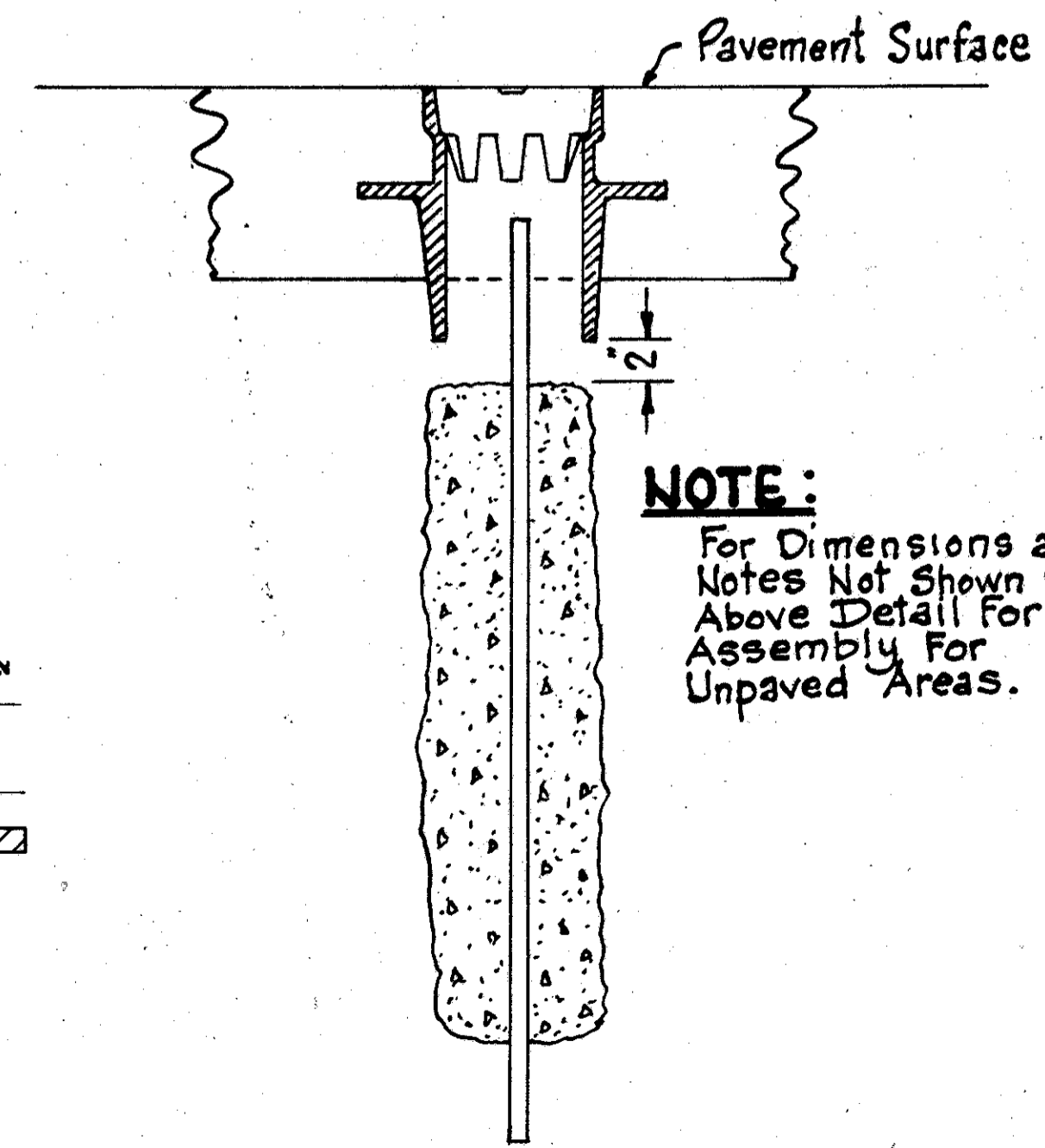
Construction NOTE:
Hole to be excavated in undisturbed soil & all loose earth removed. Rod to be plumbed by driving into bottom of hole before concrete is poured. Concrete to be Class 'C' mix.

DETAIL OF MONUMENT ASSEMBLY Scale: 1 1/2" = 1'-0"

MONUMENT BOX TYPE B PAVED AREAS



MONUMENT FRAME & COVER C.I. Scale 3" = 1'-0"



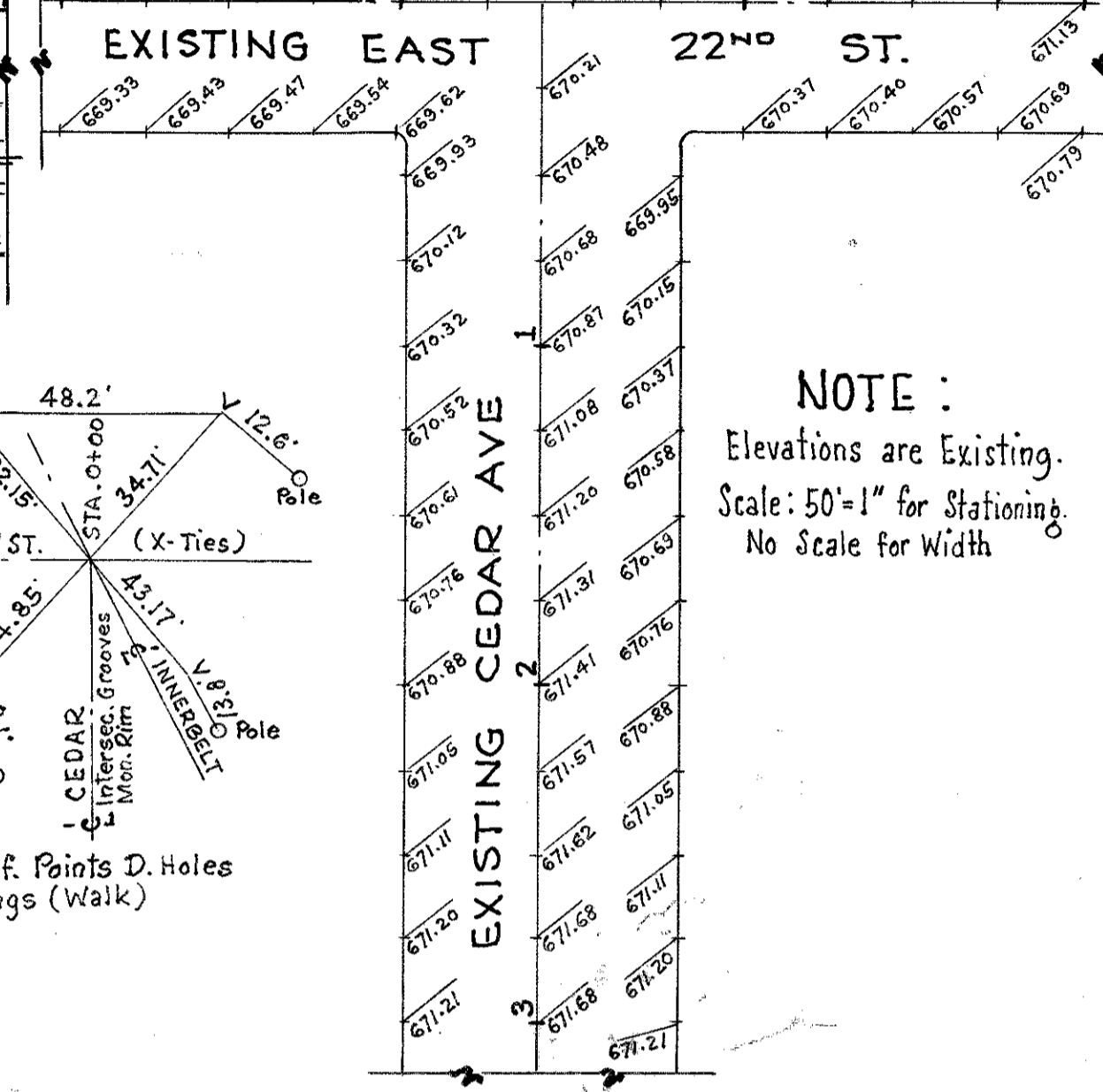
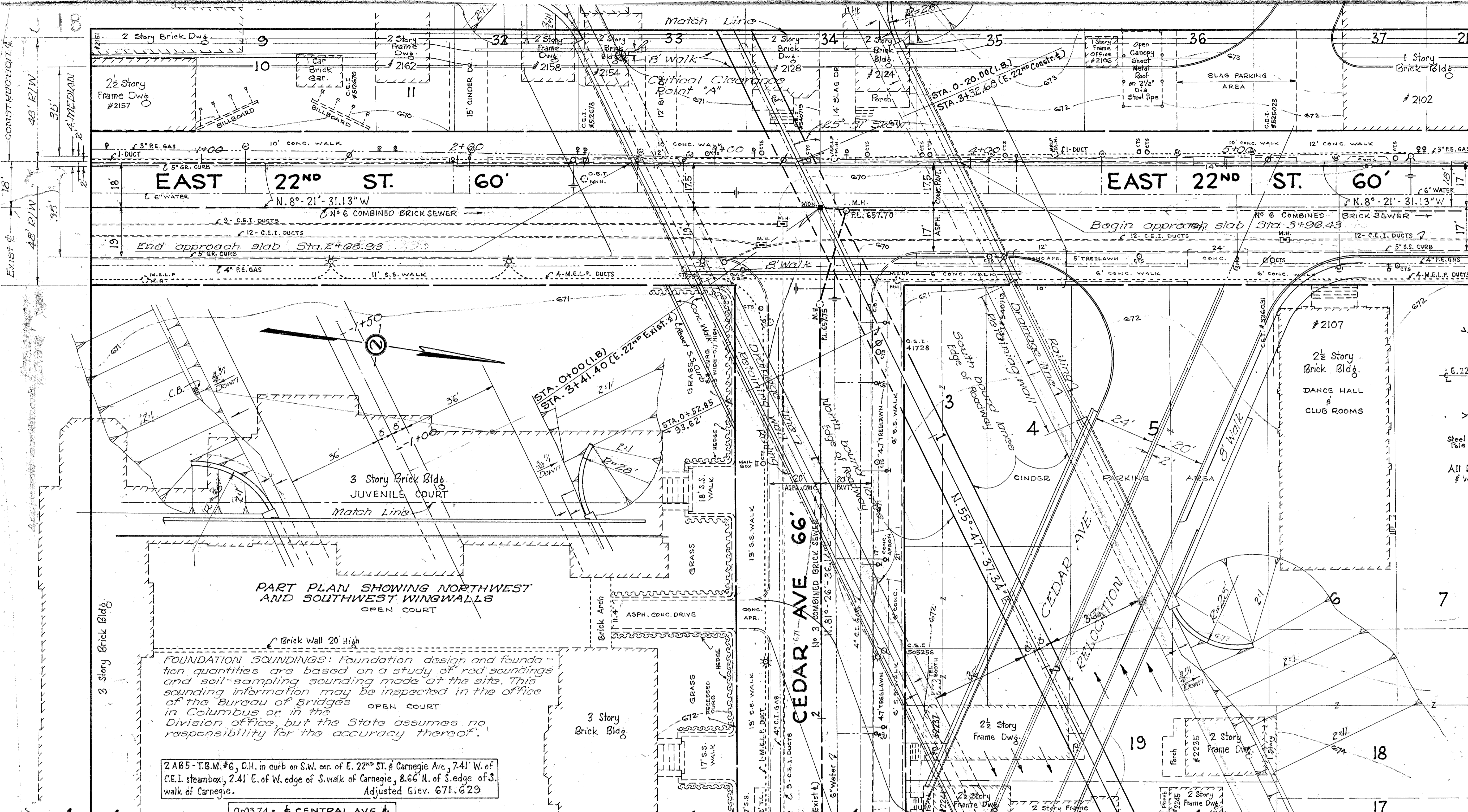
NOTE:
For Dimensions and Notes Not Shown See Above Detail For Assembly For Unpaved Areas.

DETAIL OF PAVEMENT ASSEMBLY

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		44 129

CUYAHOGA COUNTY
 Sec. CUY-42 -18.77
 In Cleveland

MICROFILMED
 JUL 2 1955

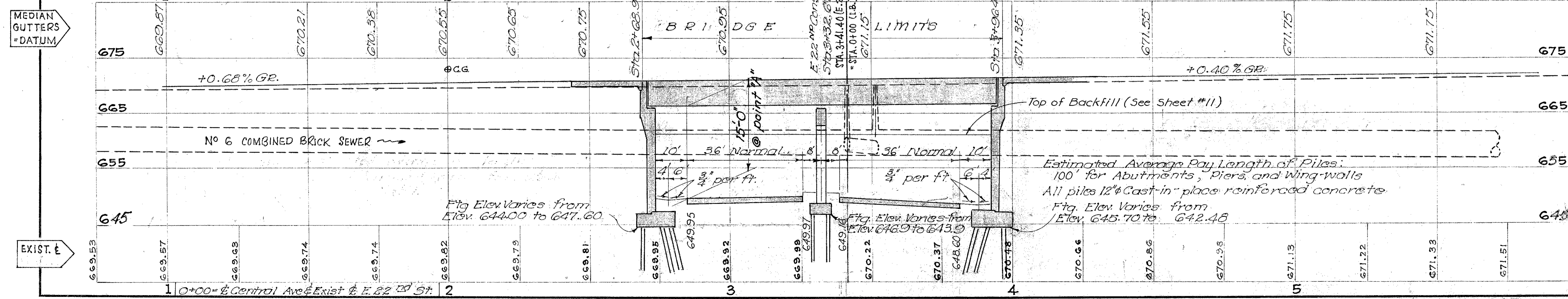


PROPOSED STRUCTURE
 TYPE: Continuous steel beams with hair-
 conc. deck and substructure.
 SPANS: 61.25'-61.25' 9c brgs.
 ROADWAY: 14'-0" T&E curbs with two 8'-w
 LOAD FREQUENCY: CF=2000 (51)
 SKEW: 25°-51' R/F
 WEARING SURF: Bituminous
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent.

FOUNDATION SOUNDINGS: Foundation design and founda-
 tion quantities are based on a study of rod soundings
 and soil-sampling sounding made at the site. This
 sounding information may be inspected in the office
 of the Bureau of Bridges OPEN COURT
 in Columbus or in the
 Division office, but the State assumes no
 responsibility for the accuracy thereof.

2 AB5-T.B.M. #6, D.H. in curb on S.W. cor. of E. 22nd St. & Carnegie Ave, 7.41' W. of
 C.E.I. steambox, 2.41' E. of W. edge of S. walk of Carnegie, 8.66' N. of S. edge of S.
 walk of Carnegie. Adjusted Elev. 671.629

0+03.74 = $\frac{1}{2}$ CENTRAL AVE $\frac{1}{2}$
 CONSTR. $\frac{1}{2}$ E. 22ND ST.



STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES			
SITE PLAN			
Bridge No. CUY-42-1881			
SECTION CUY-42-18.77			
E. 22ND INNERBELT BRIDGE			
Cuyahoga County			
Scale 1"=20'			
TOPOGRAPHY	PROPOSED WORK		
SURVEY DR. BY	DESIGN	DR. BY	CH'K'D. REVIEWED DATE
	J.N.B.	J.H.B.	J.P.S.

E 22ND ST & INNERBELT BRIDGE - SITE PLAN

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification 5-114, revised 8-1-57.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

TEMPORARY RUN-AROUND STREET shall be provided. Width face to face of curbs 40 ft. Width out to out of shoulders 58 ft. 5 ft wide sidewalk on west side. Pavement 9" of T-70 with type 2-A concrete curbs (Std. Dwg. I-12). Sidewalk shall be 4" thick and shall be according to Item I-13 except concrete may be same as pavement concrete. See Sheet No. 12 for additional details.

PILES shall be driven to a minimum bearing capacity of 40 tons.

PILE TEST LOADS: A "First Pile Test Load" and "Subsequent Pile Test Loads" shall be applied if and where directed by the Engineer.

WELDING of structural steel shall be Class "A" except as otherwise shown. Class "B" welds are indicated thus: $\overline{\text{B}}$. All welds shown as field welds may, at the option of the Contractor, be made in the shop.

WELDED STEEL: The steel for the 36 WF-230 and 33 WF-220 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-74(a) of the Construction and Material Specifications) or to A-373.

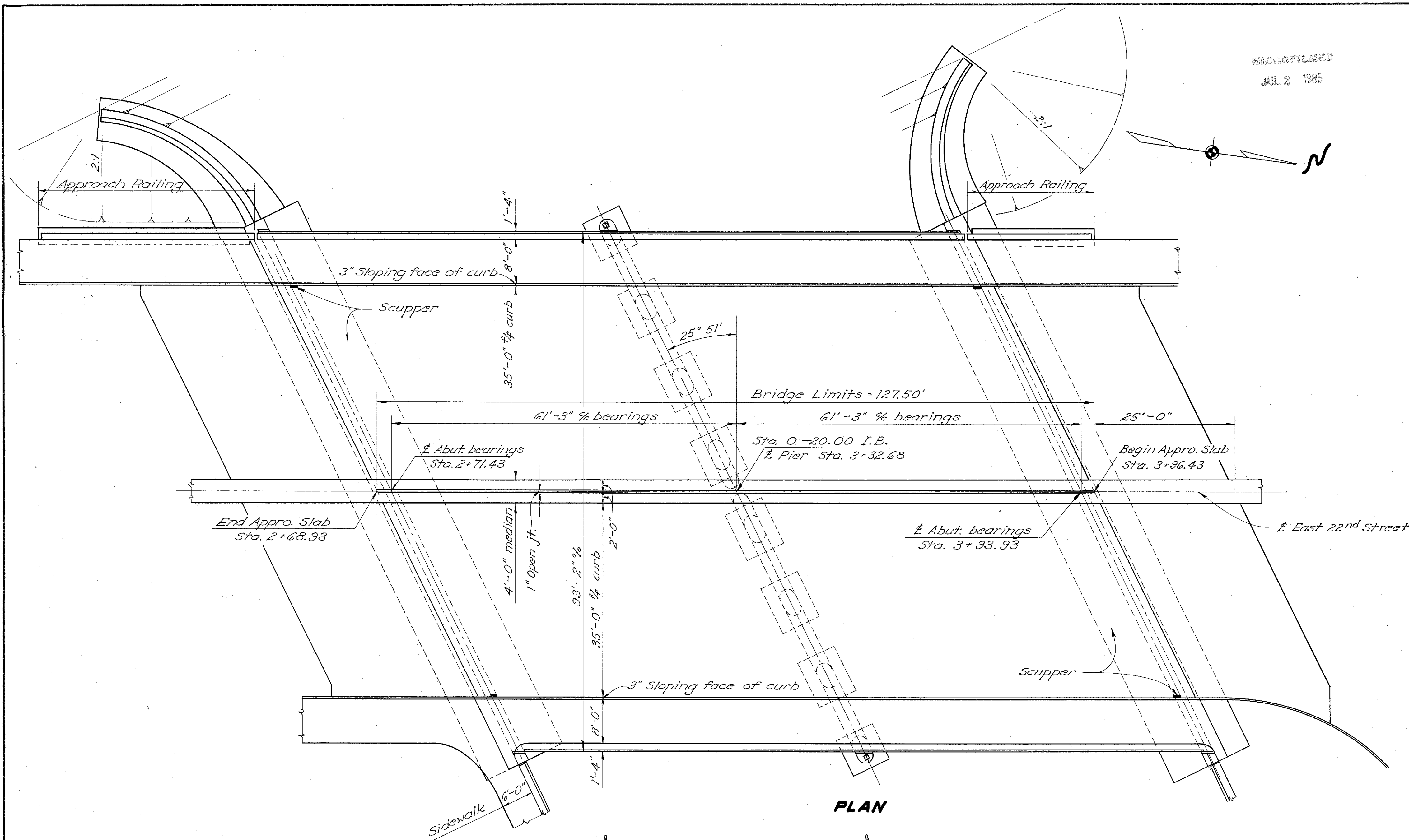
SURFACE FINISH OF CONCRETE: Railing parapet, curb faces, fascias of deck and exposed surfaces of piers, abutments and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

DECK CONSTRUCTION PROCEDURE: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

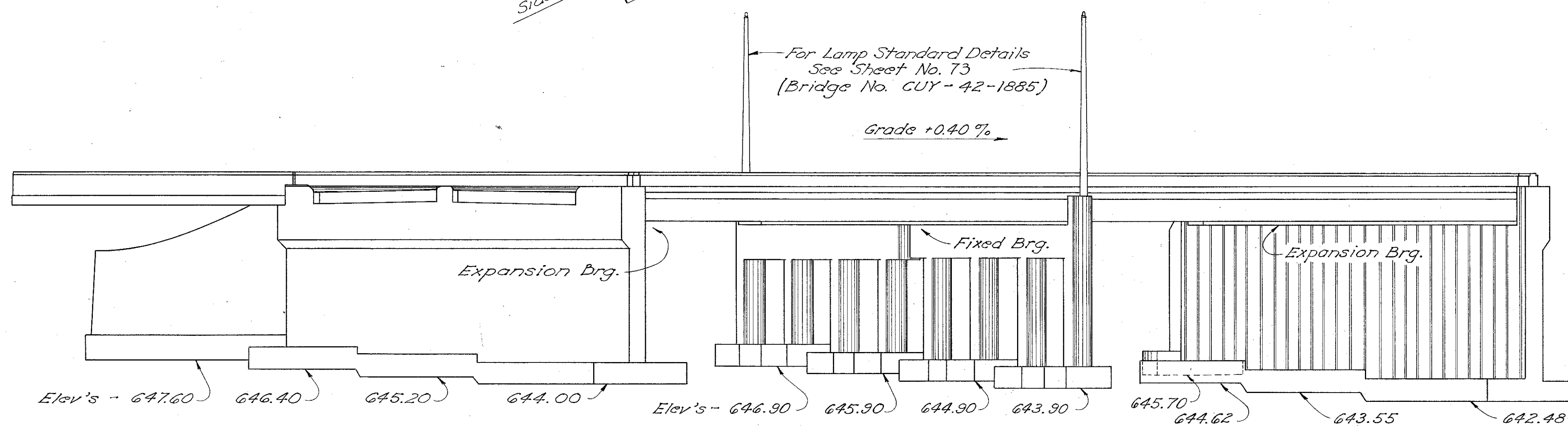
UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

SHEETING AND BRACING will be required to protect the Juvenile Court Building during construction of adjacent Retaining Wall and Abutment. The Contractor shall submit three copies of plans for such protection to the Director for written approval before beginning excavation for the affected wall and abutment.

Sheeting and bracing required to protect temporary runaround street will be handled in the same manner.



PLAN



ELEVATION
Piling not shown.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION
GENERAL NOTES
Bridge No. CUY-42-1881
Innerbelt Freeway
Under East 22nd Street
Cuyahoga County Sta. 0-20.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.C.K.	D.C.K.	pr ^o	NEY	BFG	8-19-57	

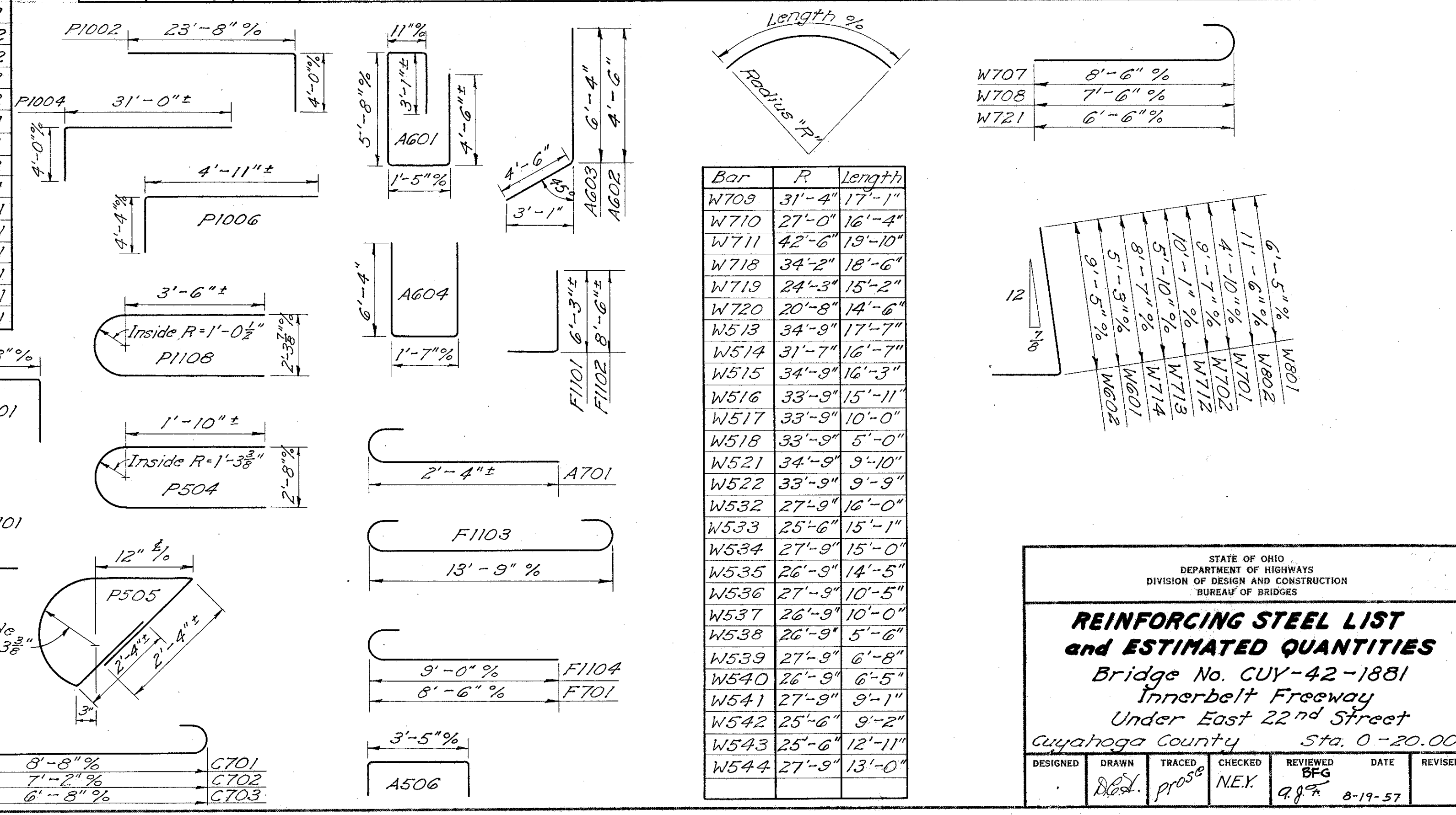
REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp	Mark	No.	Length	Weight	Shp	Mark	No.	Length	Weight	Shp	Mark	No.	Length	Weight	Shp					
Superstructure					Pier					Abutments (continued)					Wing Wall Steel (continued)									
S701	314	38'-0"	24,389	S	P1101	3	20'-1"	320	S	A501	14	20'-10"	304	S	W601	13	5'-11"	116	B	8	5			
S702	354	12'-6"	9,045	B	P1102	25	16'-2"	2,147	S	A502	96	25'-8"	2,570	S	W602	13	10'-1"	197	B	8	5			
S703	374	9'-3"	7,071	S	P1103	28	17'-5"	2,591	S	A503	96	27'-8"	2,770	S	W603	2	14'-3"	43	S	2	-			
					P1104	28	18'-6"	2,752	S	A504	20	20'-1"	419	S	W604	2	15'-0"	45	S	2	-			
S704*	Four series of 21	10'-5" to 37'-11"	4,149	S	P1105	25	19'-2"	2,546	S	A505	13	18'-9"	254	S	W605	2	16'-0"	48	S	2	-			
					P1106	3	23'-2"	369	S	A506	144	4'-5"	663	B	W606	2	16'-9"	50	S	2	-			
S705	20	9'-0"	368	S	P1107	10	8'-0"	425	S	A507	2	17'-0"	35	S	W607	2	11'-9"	35	S	1	2			
					P1108	10	10'-7"	562	B	A508	2	15'-8"	33	S	W608	2	13'-9"	41	S	1	2			
S601	314	39'-2"	18,472	B	P1001	26	23'-5"	2,620	S	A509	4	14'-6"	61	S	W609	2	15'-6"	47	S	1	2			
S602	720	32'-5"	35,057	S	P1002	2	27'-5"	236	B	A510	4	12'-4"	51	S	W610	2	16'-9"	50	S	1	2			
S603	72	32'-0"	3,461	S	P1003	10	29'-9"	1,280	S	A511	1	23'-6"	25	S	W611	2	18'-2"	55	S	1	2			
S604	374	12'-0"	6,741	B	P1004	6	34'-9"	897	B	A512	2	25'-9"	54	S	W501	2	11'-3"	23	S	2	-			
					P1005	12	30'-2"	1,558	S	A513	4	11'-6"	48	S	W502	2	11'-0"	23	S	2	-			
S605*	Two series of 21	10'-5" to 37'-11"	1,525	S	P1006	10	9'-0"	387	B	A514	12	16'-5"	205	S	W503	3	11'-4"	35	S	3	-			
					P501	136	8'-3"	1,170	B	A515	16	18'-1"	302	S	W504	2	11'-7"	24	S	2	-			
S606	20	9'-0"	270	S	P502	4	23'-5"	98	S	A516	15	18'-11"	236	S	W505	1	12'-9"	13	S	1	-			
					P503	4	28'-7"	119	S	A517	1	23'-9"	25	S	W506	1	13'-7"	14	S	1	-			
S607*	Two series of 21	11'-7" to 39'-1"	1,598	B	P504	208	7'-9"	1,681	B	A518	2	21'-2"	44	S	W507	1	14'-5"	15	S	1	-			
					P505	8	9'-3"	77	B	A519	2	10'-2"	21	S	W508	3	15'-4"	48	S	2	1			
S501	732	2'-4"	1,781	B	Footings					A520	6	5'-5"	34	B	W509	1	16'-6"	17	S	1	-			
S502	190	5'-5"	1,703	B	Footings					F1101	259	7'-5"	10,206	B	W510	1	17'-8"	18	S	1	-			
					C1101	112	7'-5"	4,413	B	F1102	47	9'-8"	2,414	B	W511	2	18'-11"	39	S	1	1			
					C701	54	10'-4"	1,141	B	F1103	96	16'-11"	8,628	B	W512	2	18'-11"	42	S	1	1			
					C702	102	8'-10"	1,842	B	F1104	176	10'-7"	3,896	B	W513	13	17'-7"	238	B	13	-			
					C703	8	8'-4"	136	B	F701	216	9'-4"	4,121	B	W514	13	16'-7"	225	B	13	-			
										F702	14	8'-0"	229	S	W515	1	16'-3"	17	B	1	-			
										F601	48	8'-0"	577	S	W516	1	15'-11"	17	B	1	-			
										F501	16	36'-0"	601	S	W517	2	10'-0"	21	B	2	-			
										F502	6	38'-6"	241	S	W518	2	5'-0"	10	B	2	-			
										F503	22	39'-7"	908	S	W519	3	12'-2"	38	S	3	-			
										F504	16	35'-6"	592	S	W520	3	13'-0"	41	S	3	-			
										F505	6	33'-0"	207	S	W521	1	9'-10"	10	B	1	-			
															W522	1	9'-9"	10	B	1	-			
															W523	1	9'-0"	9	S	1	-			
															W524	2	9'-10"	21	S	2	-			
															W525	2	10'-1"	21	S	2	-			
															W526	1	12'-1"	13	S	1	-			
															W527	2	13'-6"	28	S	2	-			
															W528	1	16'-6"	17	S	1	-			
															W529	1	17'-10"	19	S	1	-			
															W530	1	21'-3"	22	S	1	-			
															W531	1	22'-3"	23	S	1	-			
															W532	12	16'-0"	200	B	12	-			
															W533	12	15'-1"	189	B	12	-			
															W534	2	15'-0"	31	B	2	-			
															W535	2	14'-5"	30	B	2	-			
															W536	1	10'-5"	11	B	1	-			
															W537	1	10'-0"	10	B	1	-			
															W538	2	5'-6"	11	B	2	-			
															W539	1	6'-8"	7	B	1	-			
															W540	1	6'-5"	7	B	1	-			
															W541	1	9'-1"	9	B	1	-			
															W542	1	9'-2"	10	B	1	-			
															W543	1	12'-11"	13	B	1	-			
															W544	1	13'-0"	14	B	1	-			
															W545	1	8'-8"	9	S	1	-			

CUYAHOGA COUNTY CUY-42-18.77

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts.	Pier	Superstr.	Wingwalls	Gen.
E-2	lump	sum	Excavation for Structures, as per plan					lump
S-1	357	cu.yd.	Class "C" concrete, superstructure			357		
S-1	110	cu.yd.	Class "C" concrete, pier caps and columns		110			
S-1	57	cu.yd.	Class "E" concrete, pier footings		57			
S-1	550	cu.yd.	Class "C" concrete, abutments and wing walls above footings	472			78	
S-1	403	cu.yd.	Class "E" concrete, abutment and wing wall footings	325			78	
S-3	975	sq.yd.	Type "C" waterproofing			975		
S-3	91	lin.ft.	Waterproofing, preformed sealing strip	91				
S-3	16	sq.yd.	Type "B" waterproofing	16				
S-4	221,042	lb.	Reinforcing steel	67,619	29,367	115,000	9,056	
S-7	409,500	lb.	Structural steel			409,500		
S-8	409,500	lb.	Field painting of structural steel			409,500		
S-9	209	sq.ft.	1" Gray sponge rubber preformed expansion joint filler	209				
S-14	254.14	lin.ft.	Railing (aluminum railing and supports and concrete parapet on structure)			254.14		
S-14	58.42	lin.ft.	Railing (aluminum railing and supports and concrete parapet on approaches)			58.42		
S-15	lump	sum	Temporary run-around street					lump
S-16	lump	sum	First test pile					lump
S-17	lump	sum	First pile test load					lump
S-17	1	each	Subsequent pile test load					1
S-18	18,400	lin.ft.	12" cast-in-place reinforced concrete piles	11,600	4,400		2,400	
S-25	lump	sum	Electric lighting system (as per plan.)					Lump
S-25	349	lin.ft.	2" electric conduit (fiber)	8	92	249		
S-29	248	lin.ft.	Subdrainage for wearing surface course			248		
S-29	84	lin.ft.	6" W.I. or galvanized steel pipe, including specials	84				
S-29	275	lin.ft.	8" Perforated bituminous coated corrugated metal pipe	216			59	
S-29	423	cu.yd.	Porous backfill	354			69	
T-35	67	cu.yd.	Asphaltic concrete surface course, Type "C" (60-70)				67	



* Lengths of S704, S605 and S607 bars vary by 1'-4 1/2" increments.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, F701 is a No. 7 size bar and F1104 is a No. 11 size.

If reinforcing bars are fabricated from stock which has been previously tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

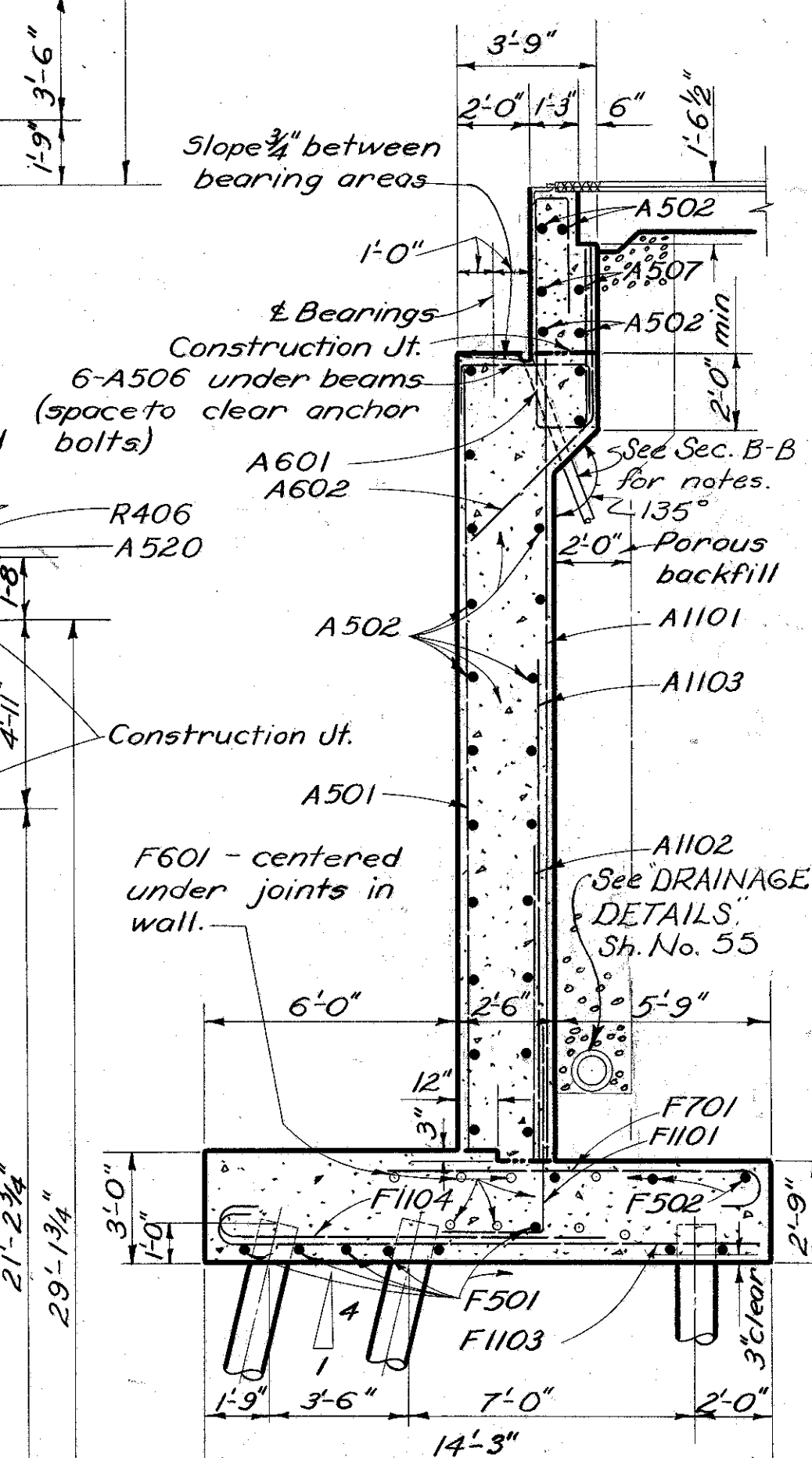
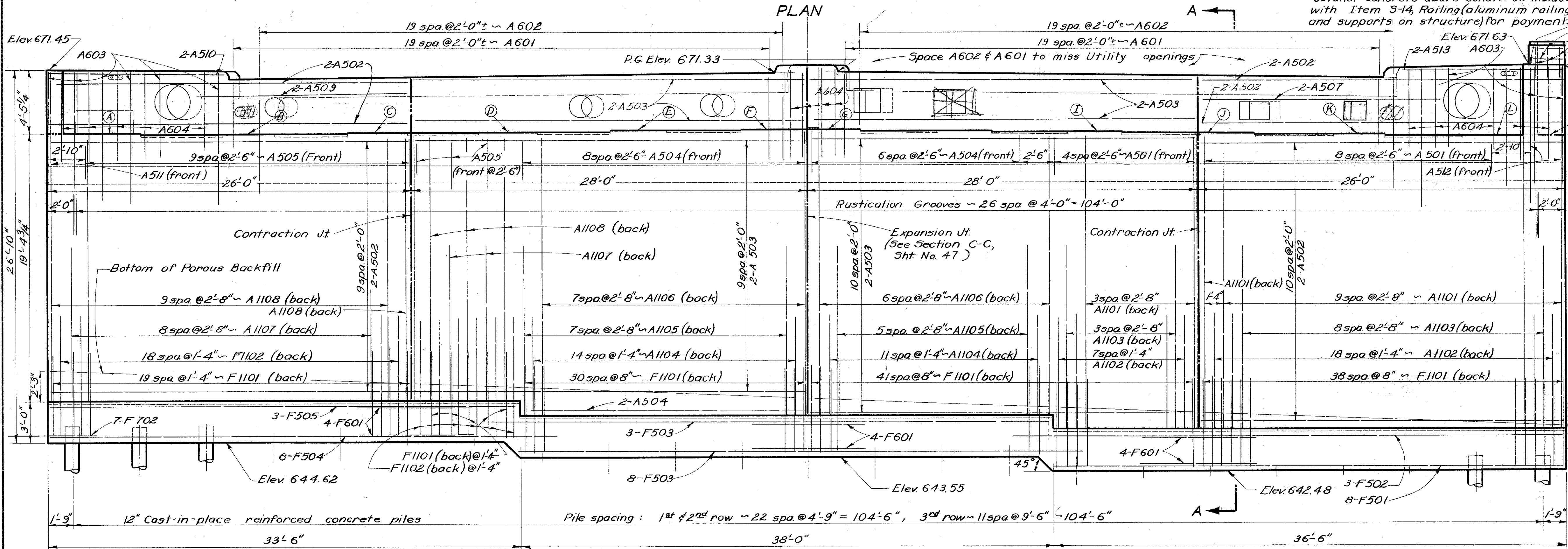
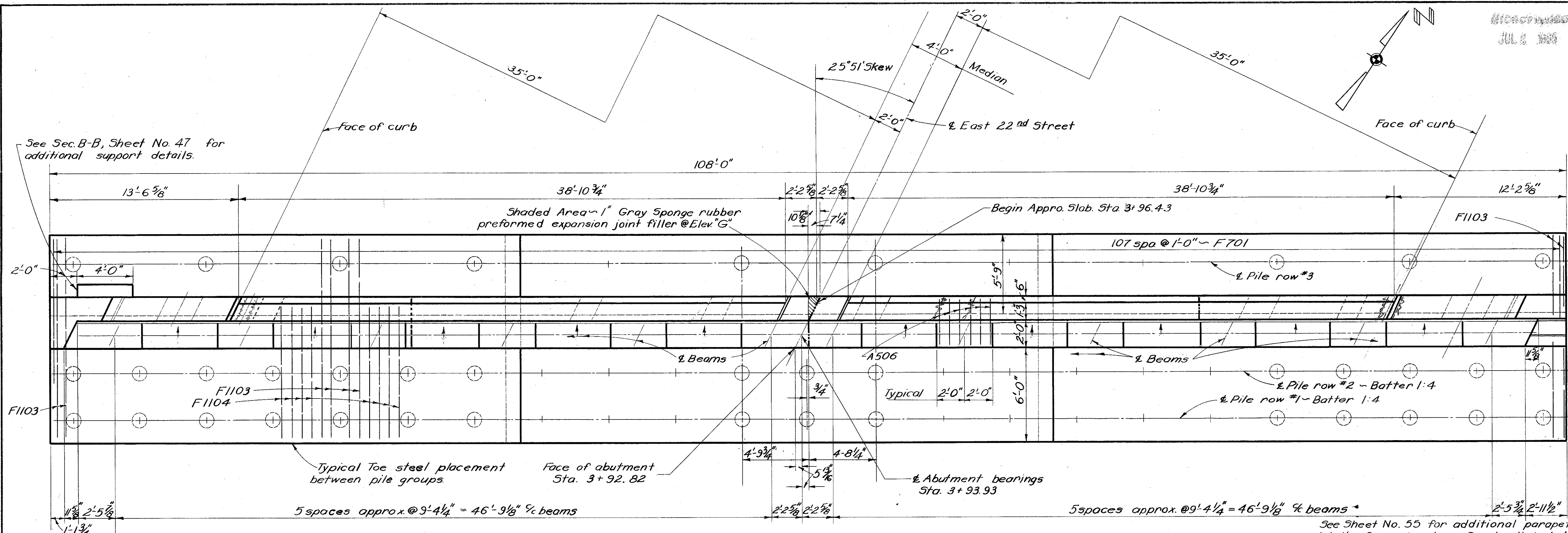
STATE OF OHIO
DEPARTMENT OF

CUYAHOGA COUNTY
CUY-42-18.77

NOTES:
Porous backfill, as shown, shall extend full length of abutment and wings.

Backwall concrete shall not be placed until all utility ducts carried on superstructure are installed. The duct Owners shall provide suitable, protective expansive material around ducts thru backwall. This material may be sponge rubber, cork, or any commercial joint filler equivalent to 1" preformed expansion joint filler described in Sec. M-10.02.

See Sheet No. 47 for additional abutment details.



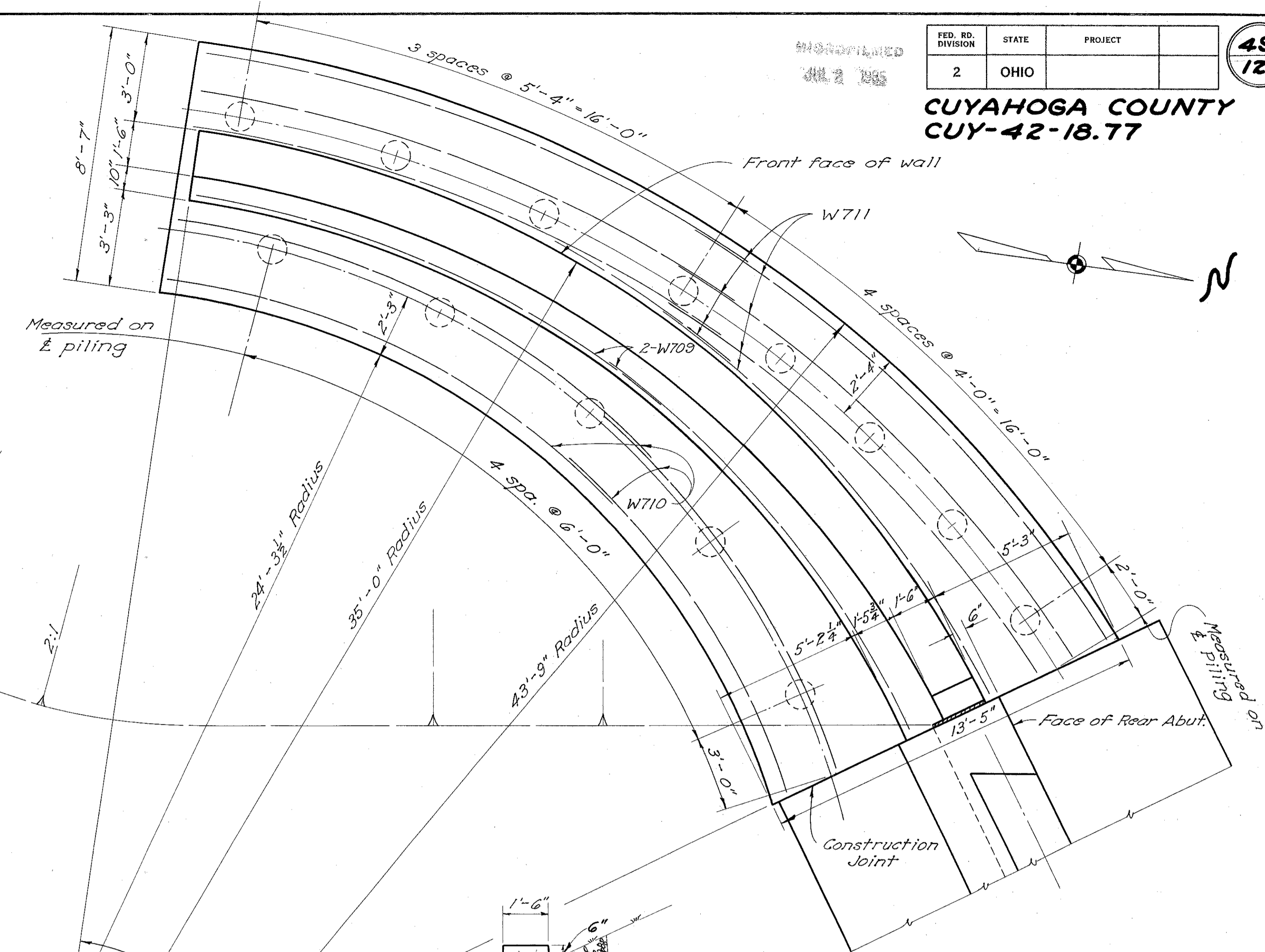
BRIDGE SEAT ELEVATIONS											
A	B	C	D	E	F	G	H	I	J	K	L
667.01		666.84		667.13		667.29		667.06		666.83	
	666.69		666.98		667.28		667.16		666.94		666.71

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

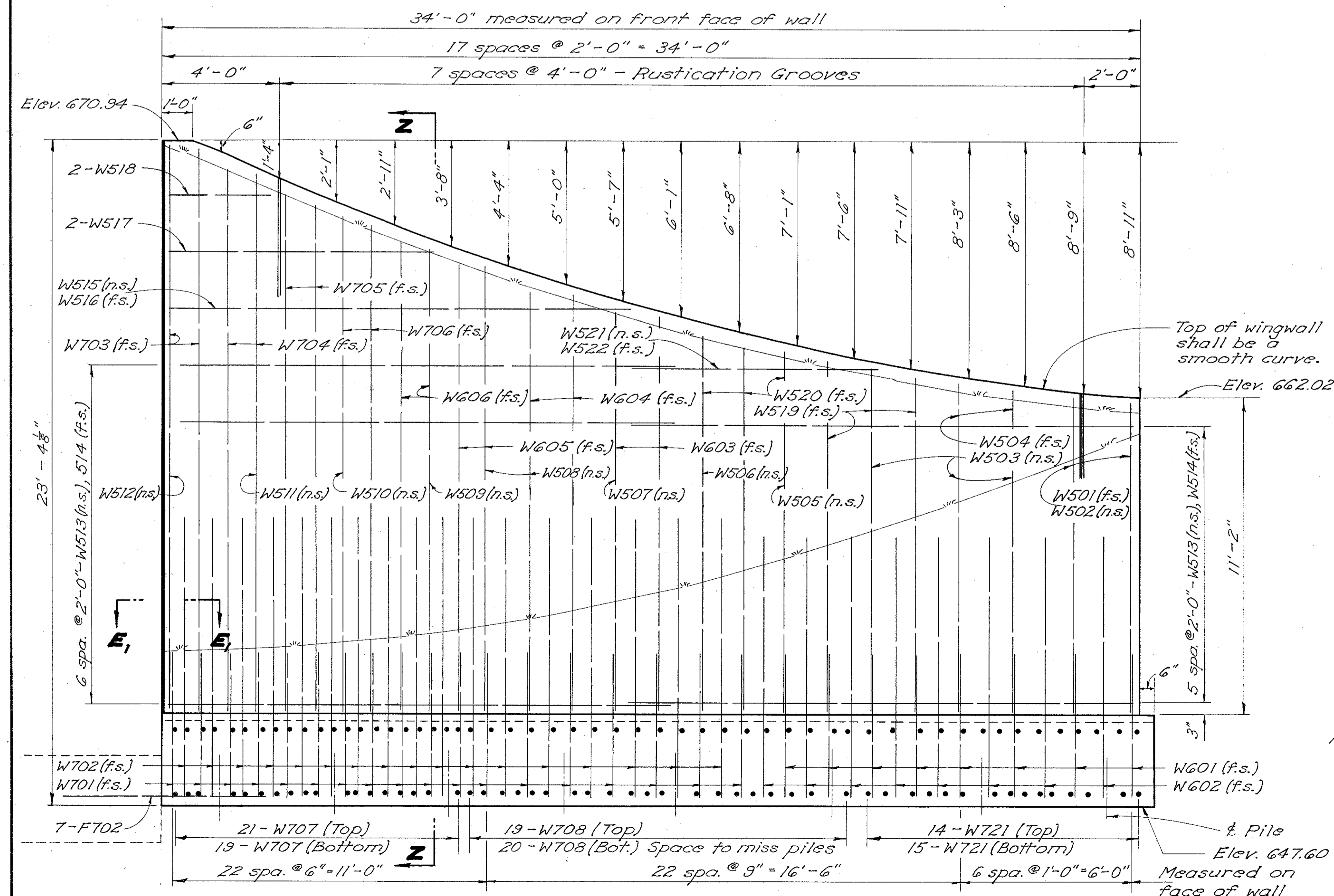
FORWARD ABUTMENT DETAILS
BRIDGE NO. CUY-42-1881
INNERBELT FREEWAY
under EAST 22ND STREET
Cuyahoga County Sta. 0+20.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		L.O.C.	C.P.A.	B.F.G.	8-19-57	

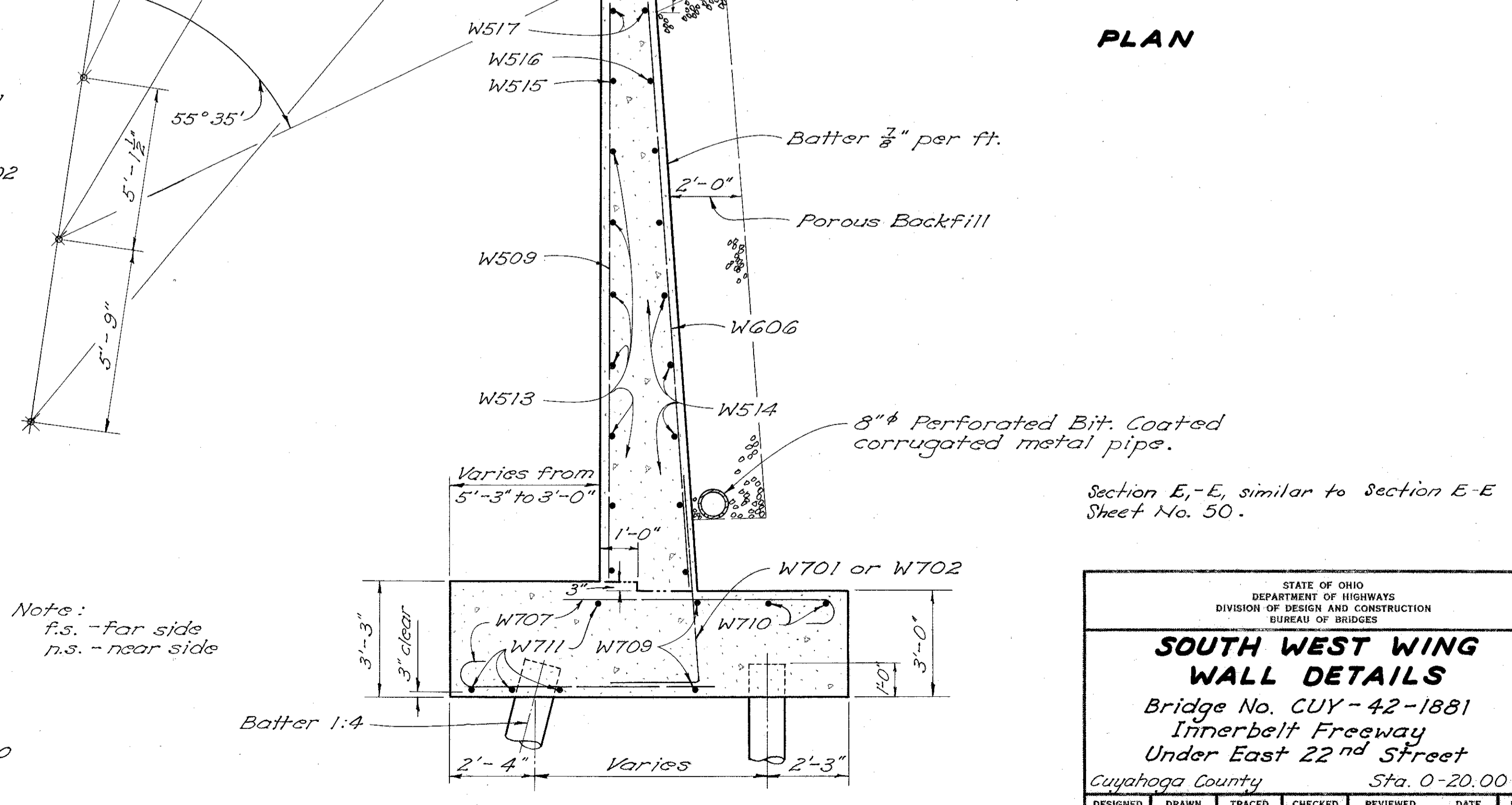
CUYAHOGA COUNTY
CUY-42-18.77



PLAN



DEVELOPED ELEVATION ALONG FRONT FACE OF WALL



SECTION Z-Z

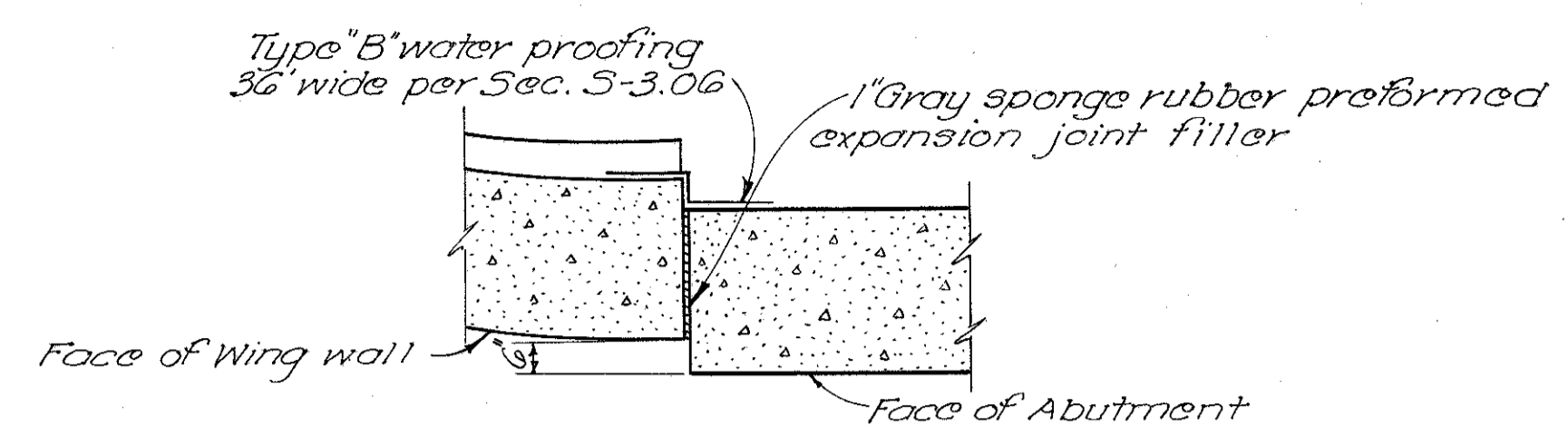
Note:
f.s. - far side
n.s. - near side

Section E-E, similar to Section E-E Sheet No. 50.

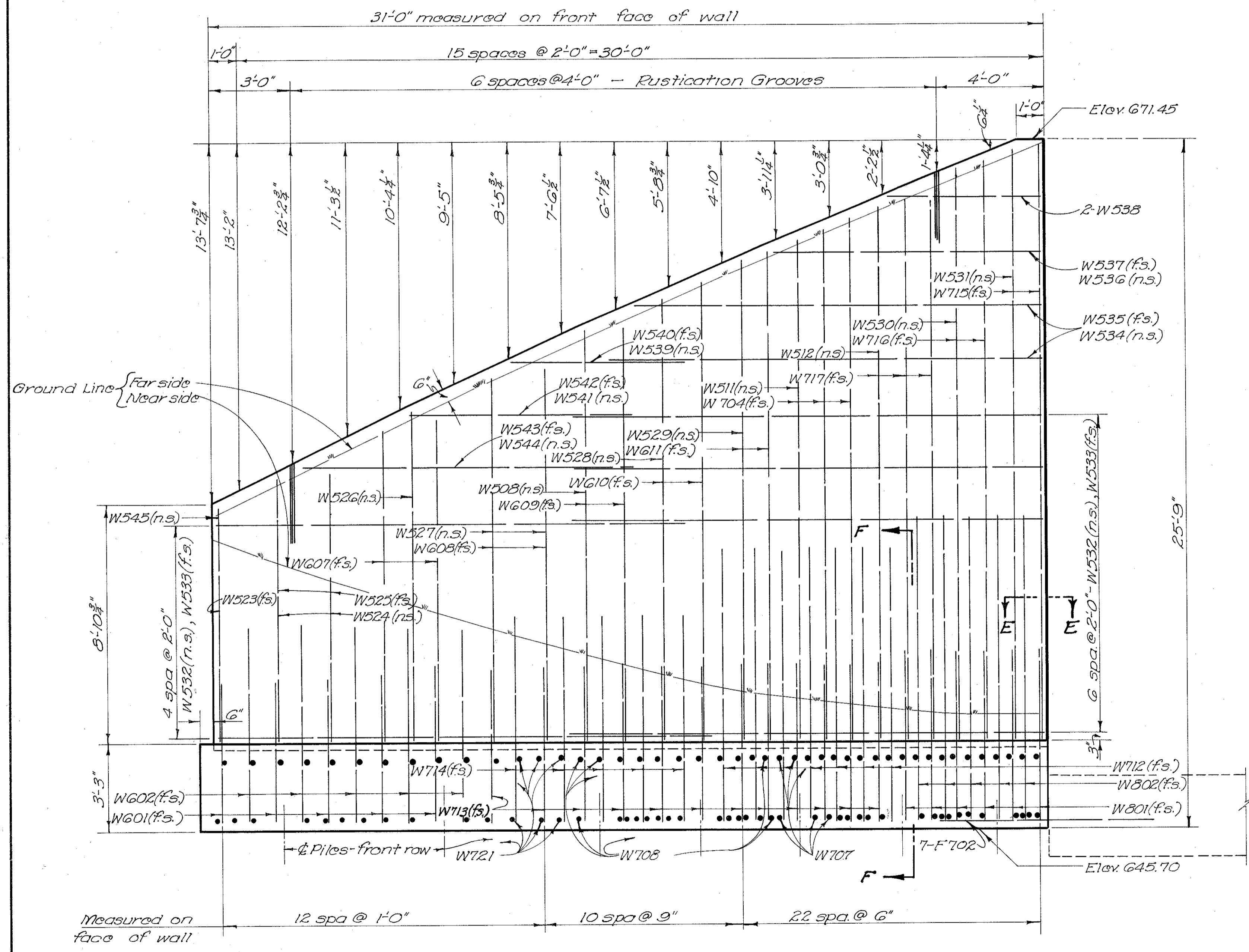
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SOUTH WEST WING WALL DETAILS						
Bridge No. CUY-42-1881 Innerbelt Freeway Under East 22nd Street Cuyahoga County Sta. 0-20.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Blair	Blair	pro	CPD	AK	8-19-57	

RECORDED
JUL 2 1955

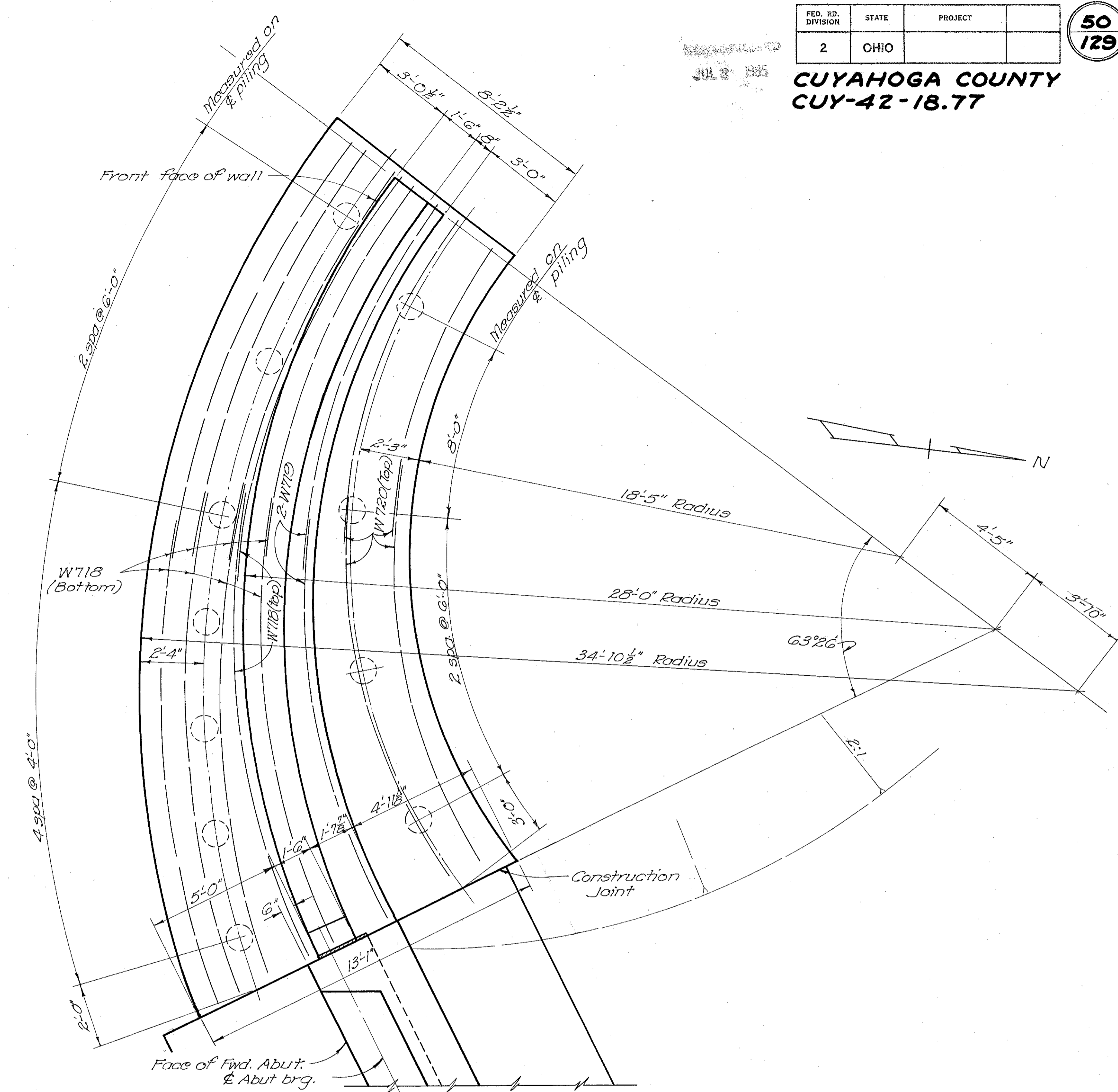
CUYAHOGA COUNTY
CUY-42-18.77



SECTION E-E

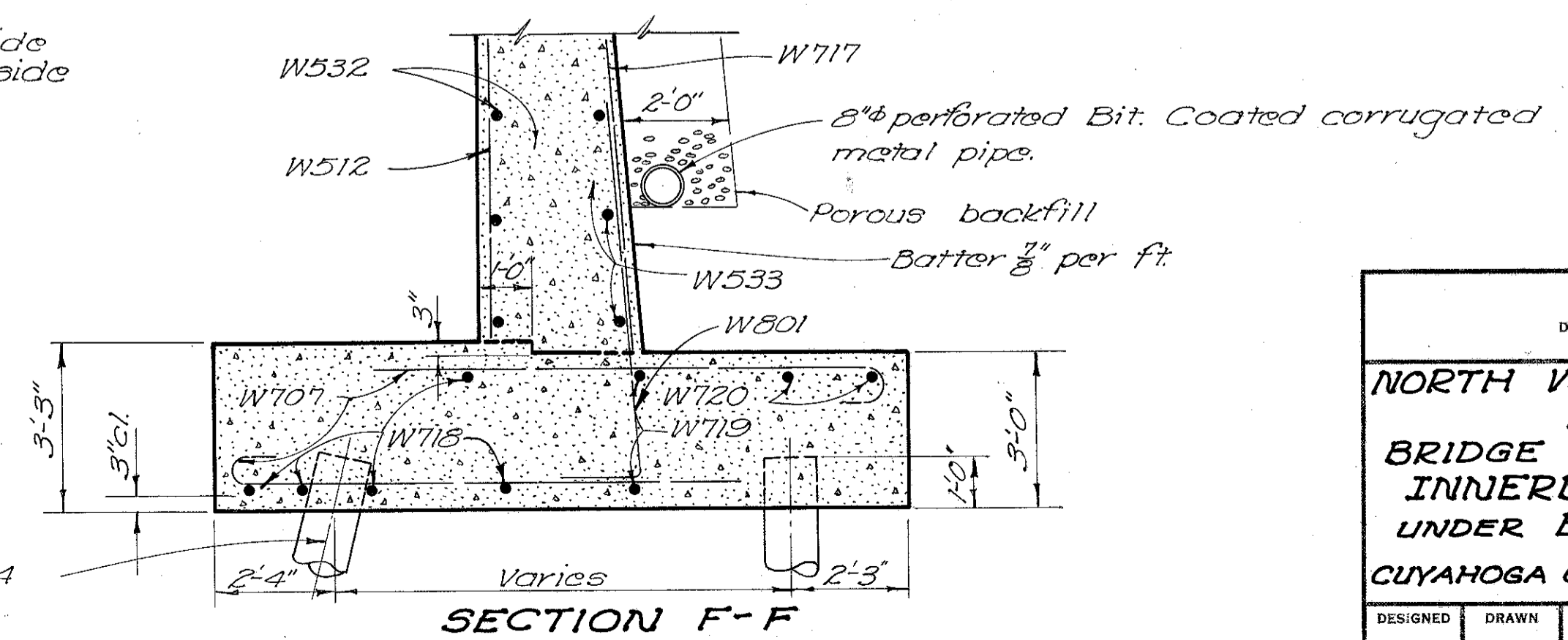


ELEVATION DEVELOPED ALONG FRONT FACE OF WALL



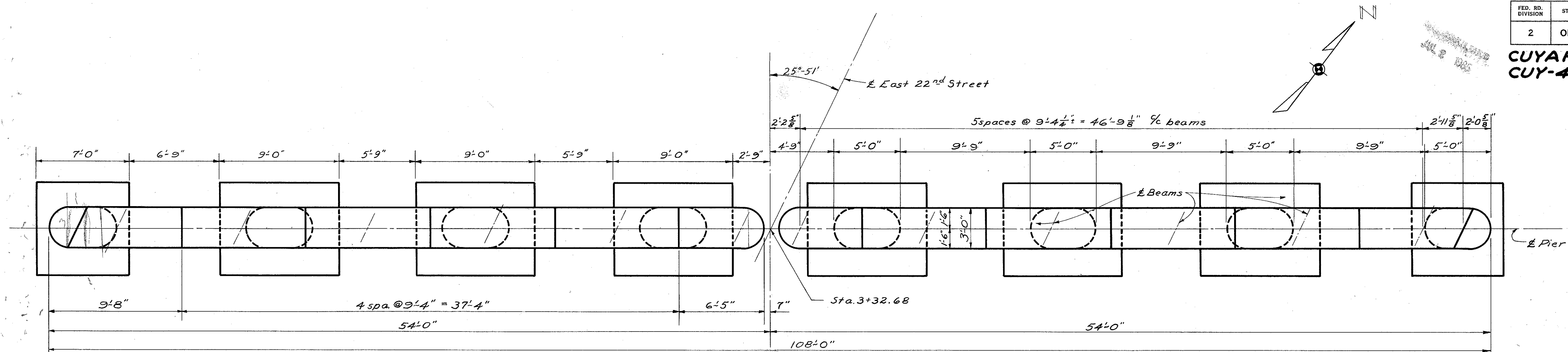
PLAN

Note:
fa. - far side
n.s. - near side

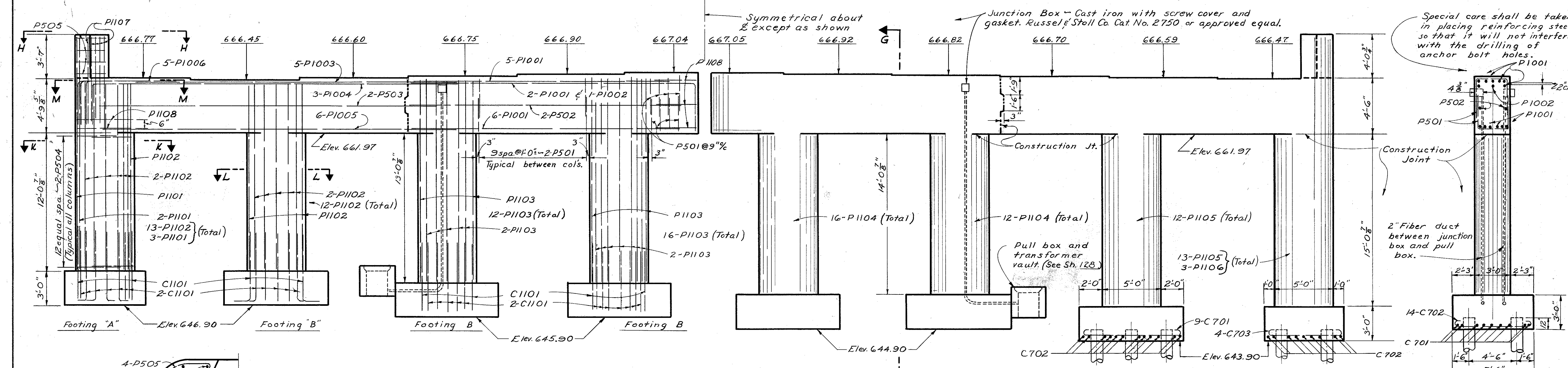


SECTION F-F

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
NORTH WEST WING WALL DETAILS						
BRIDGE No. CUY-42-1881						
INNERBELT FREEWAY						
UNDER EAST 22 ND STREET						
CUYAHOGA COUNTY STA. 0-20.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
867	867	RHP	NEY	BFG	8-19-57	

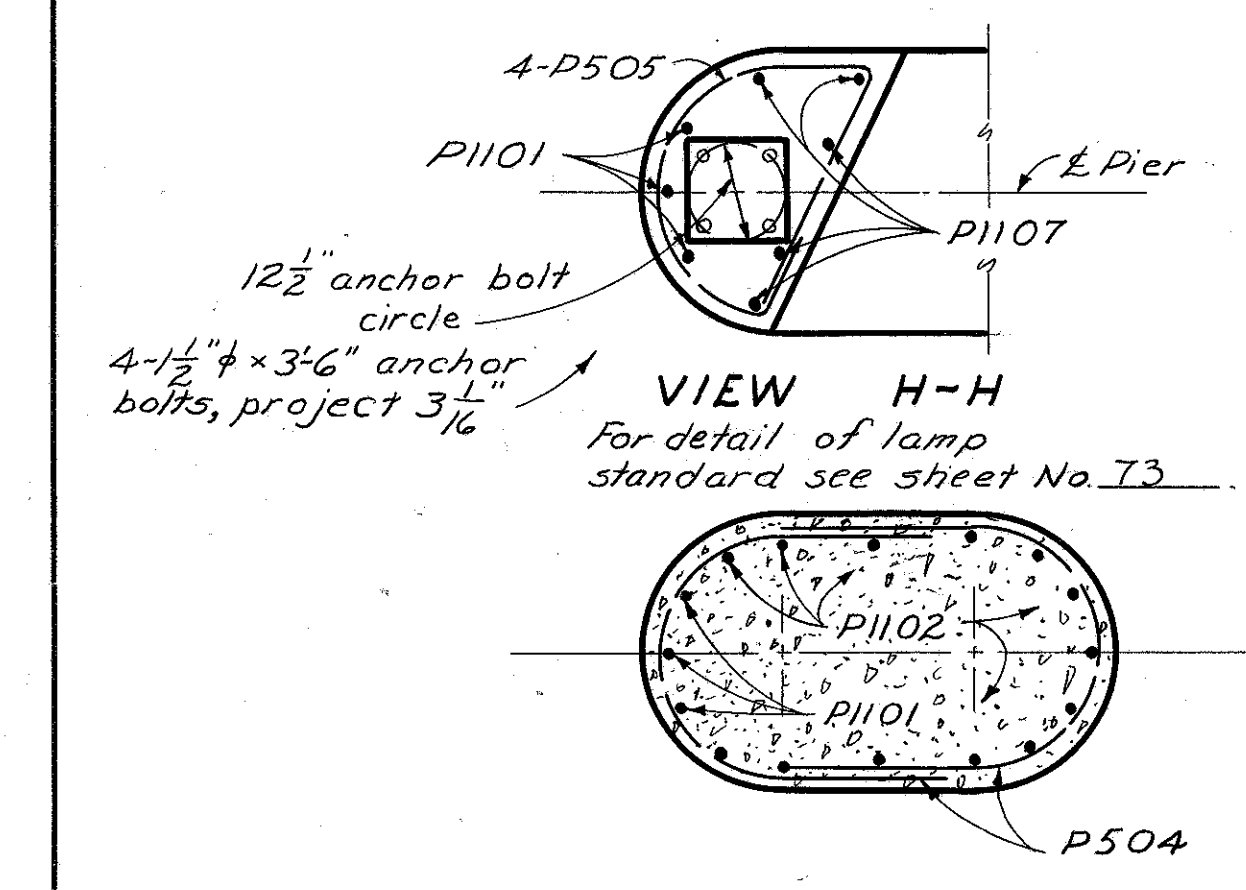


PLAN

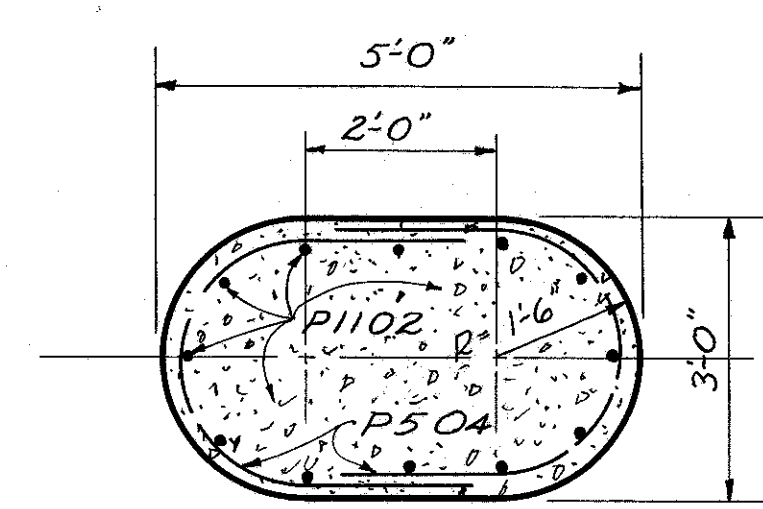


ELEVATION

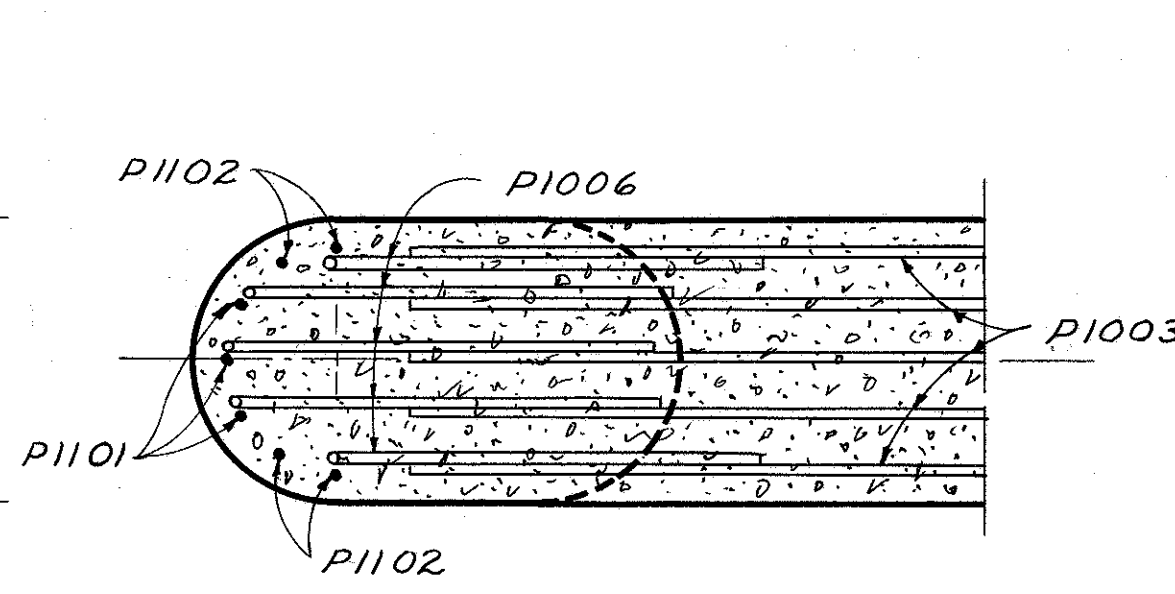
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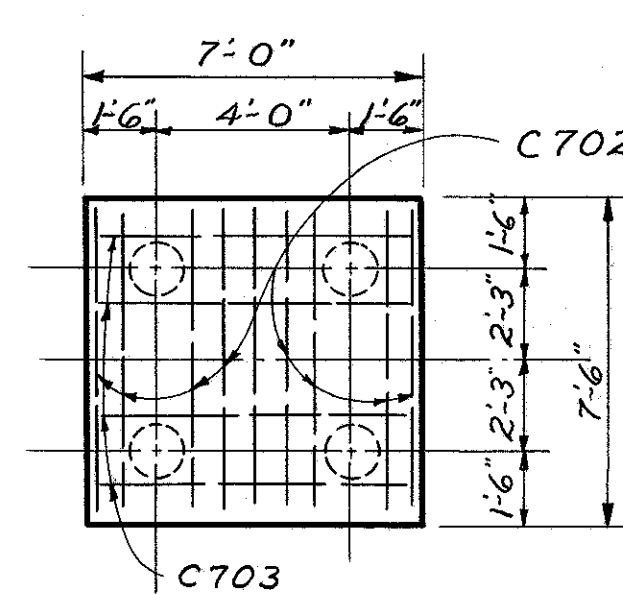
SECTION K-K



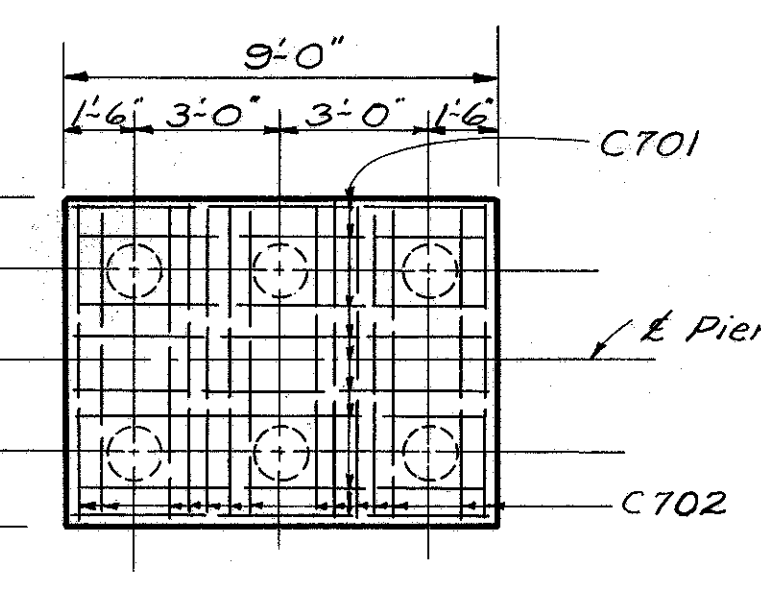
SECTION L-L



SECTION M-M



FOOTING "A"

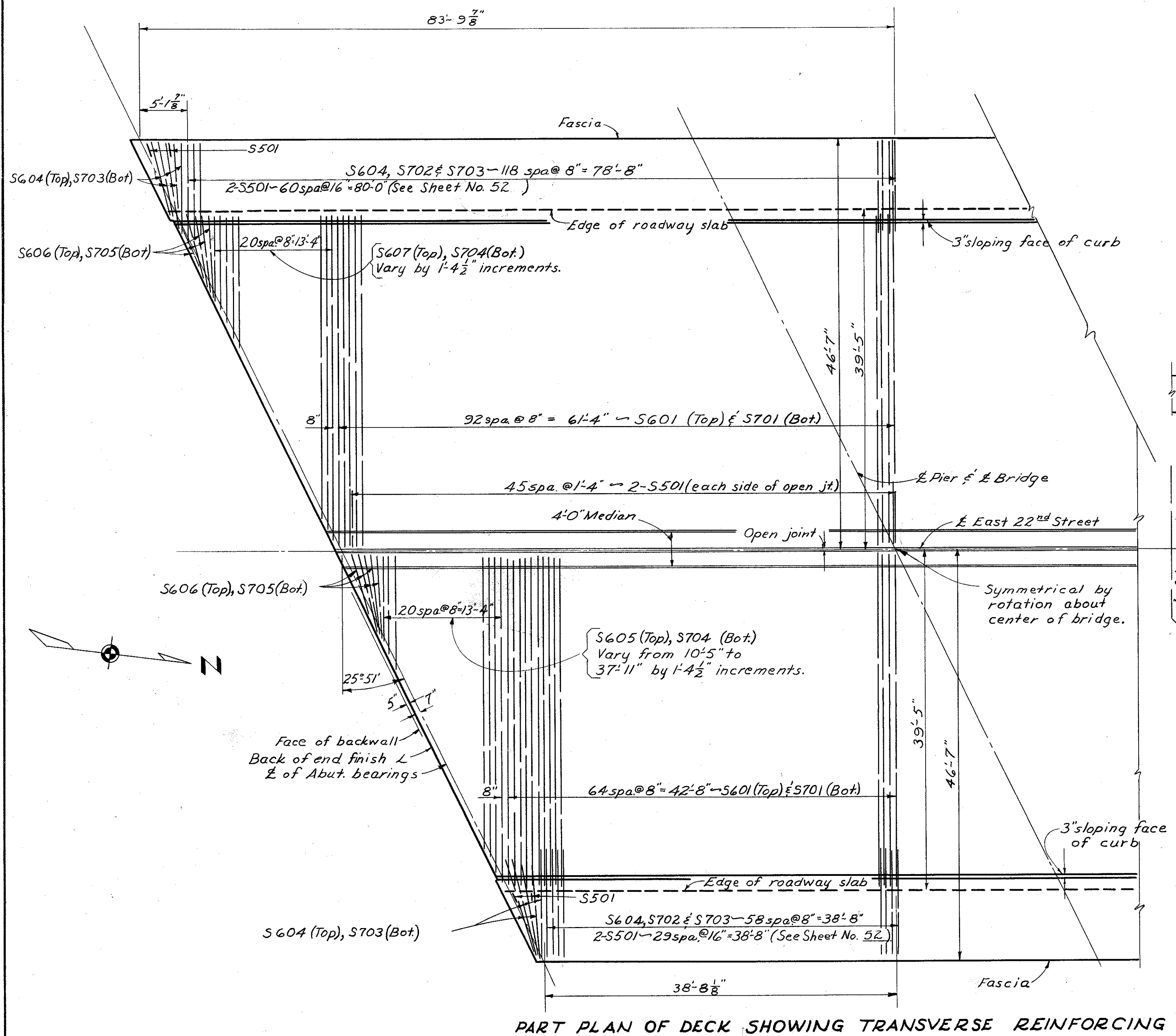


FOOTING "B"

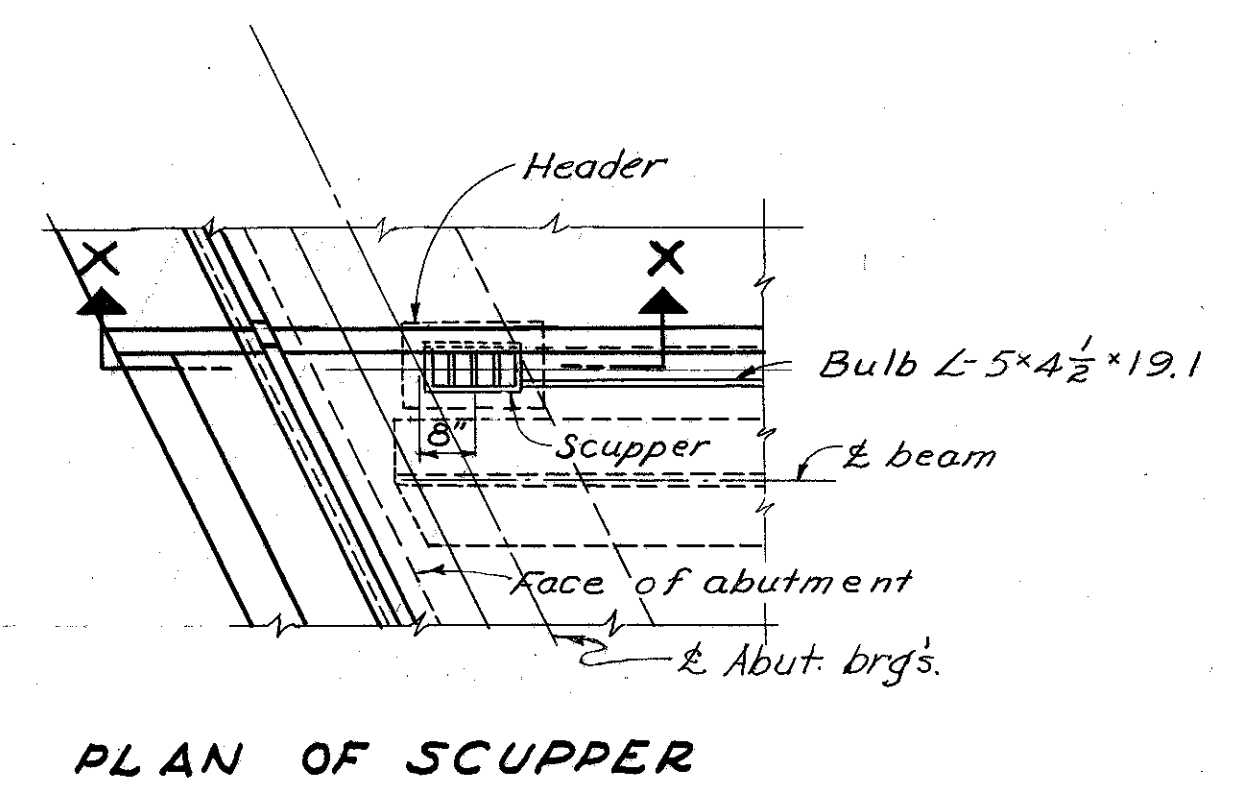
NOTE:
 See SHEET No. 10 for ELECTRICAL GROUND note.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
PIER DETAILS					
BRIDGE No. CUY-42-1881 INNERBELT FREEWAY under EAST 22 ND STREET Cuyahoga County Sta. 0-20.00					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
867	867	J.E.P.	NEK	D.F.G.	8-19-57

DATE SUBMITTED
JUL 2 1965



PART PLAN OF DECK SHOWING TRANSVERSE REINFORCING

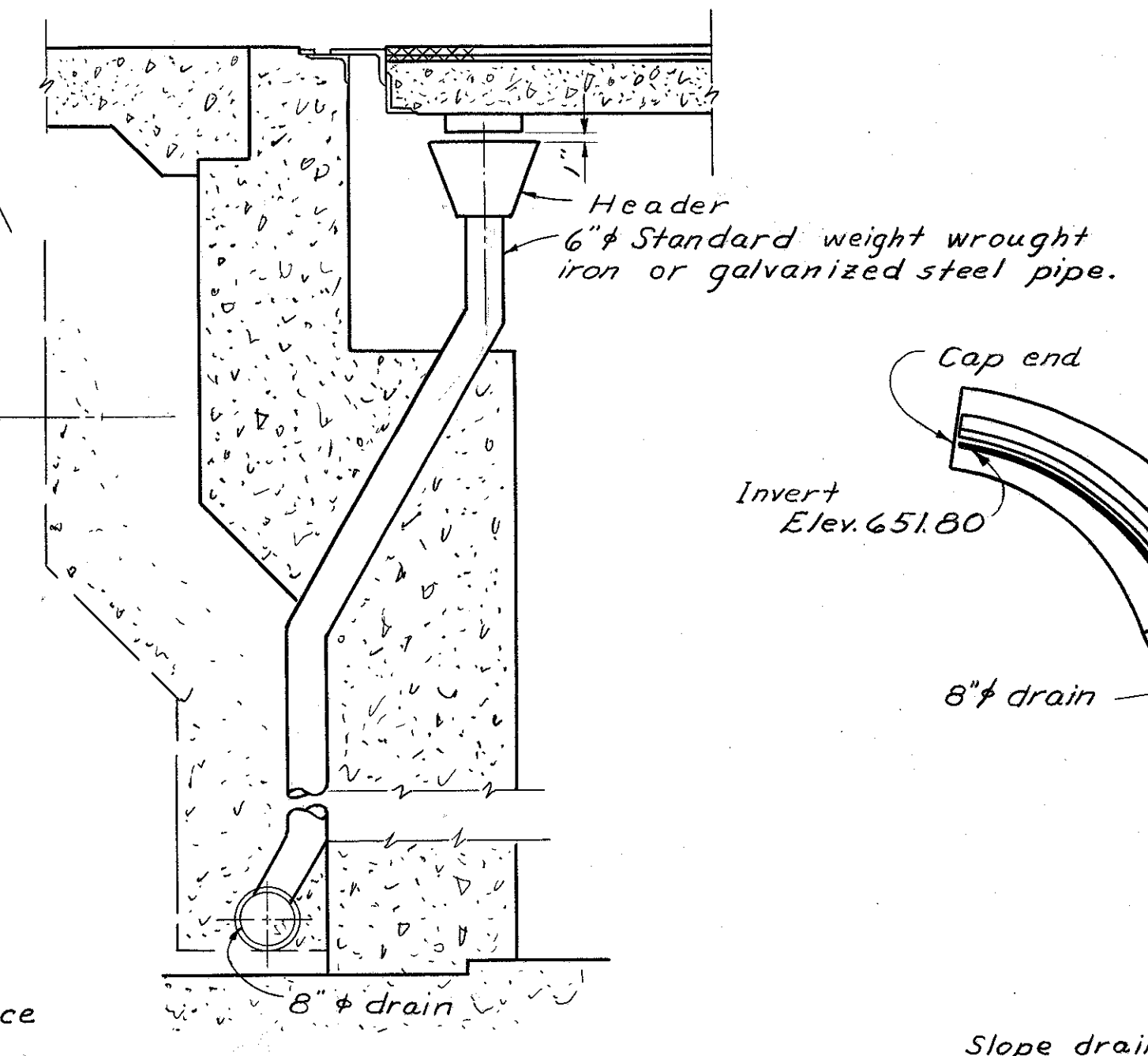


PLAN OF SCUPPER

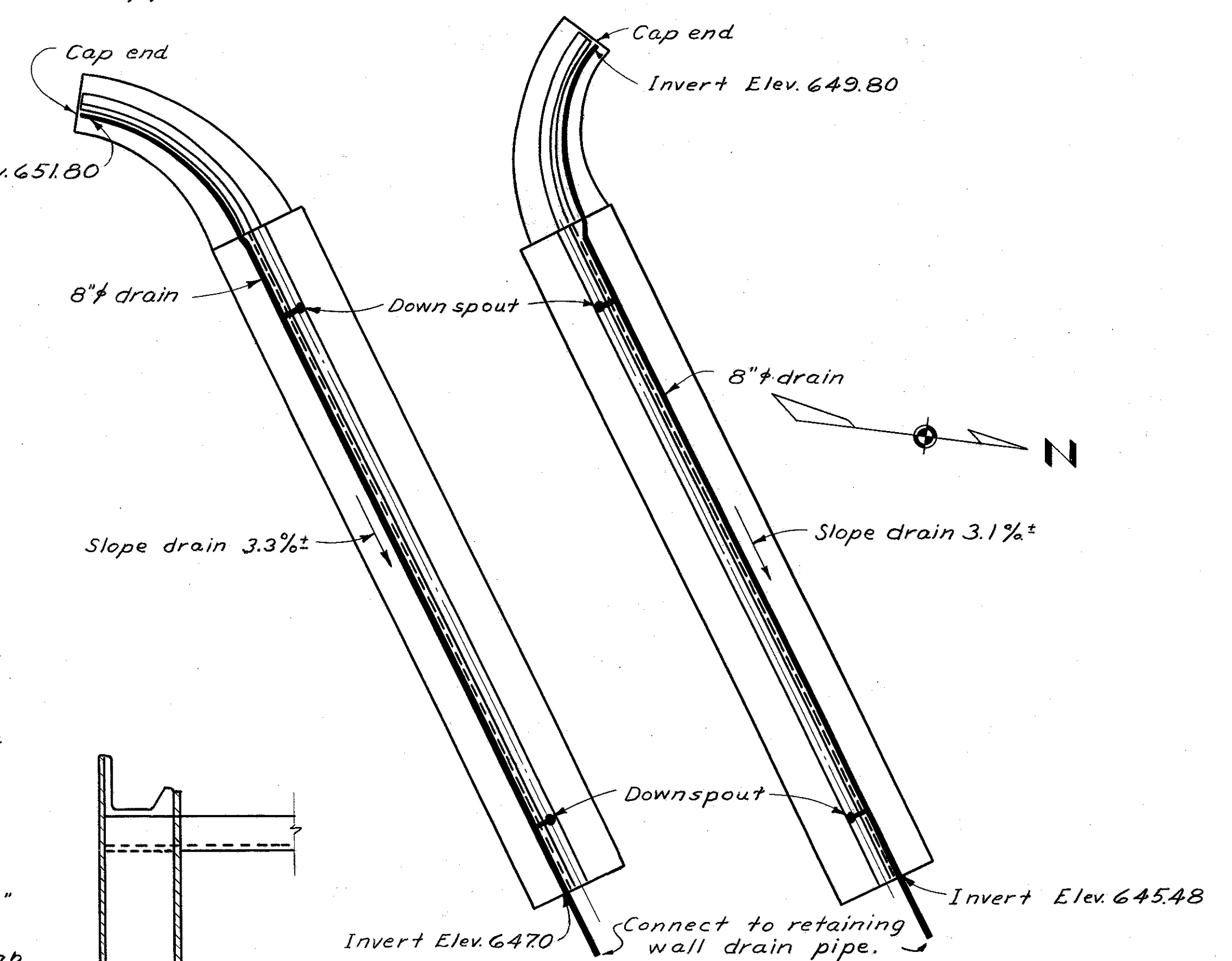
Note:
Downspouts shall be 6" Dia. standard wrought iron pipe or hot dip galvanized steel pipe. Header shall be wrought iron or hot dip galvanized steel. Joints in pipe shall be made by welding or by Victaulic couplings or by an approved equivalent. Any welding shall be done before galvanizing. Pipe supports and bolts for mounting the downspouts shall be galvanized steel.

Pipe Supports shall be placed at not more than 5'-0" ctrs. For pipe support details see Sheet No. 125, of Bridge No. CUY-42-1918.

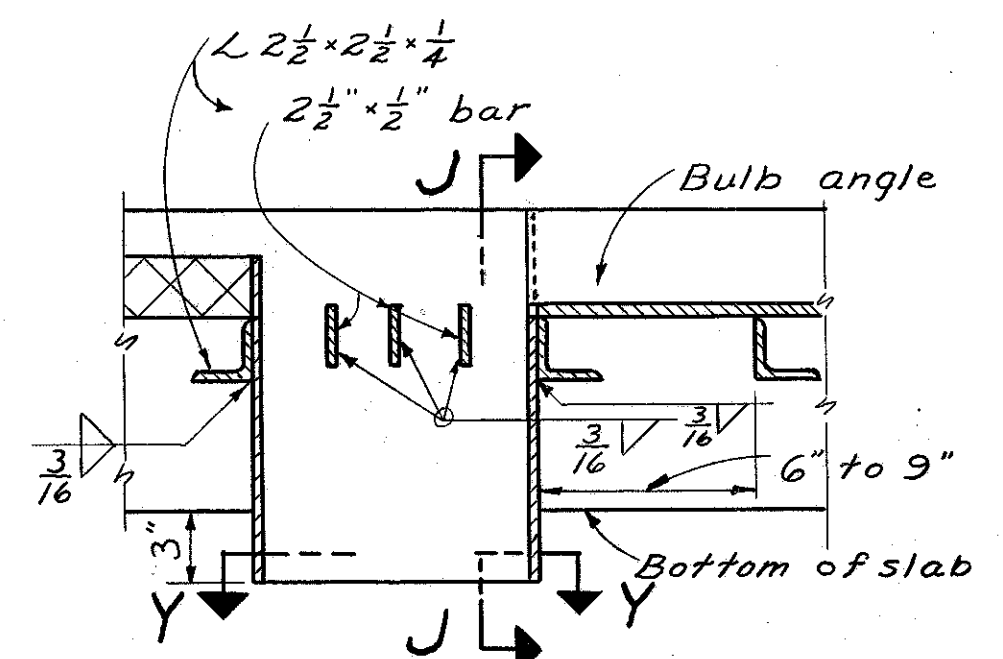
DRAIN PIPE shall be 8" dia. Perforated Bit Coated Corrugated Metal.



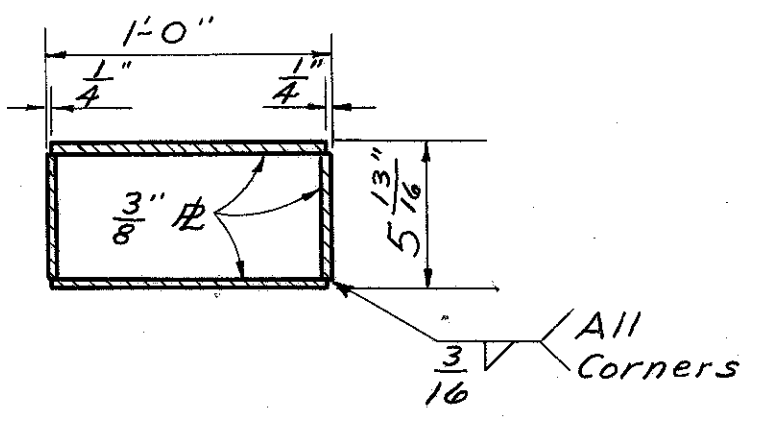
ELEVATION OF DOWN SPOUT



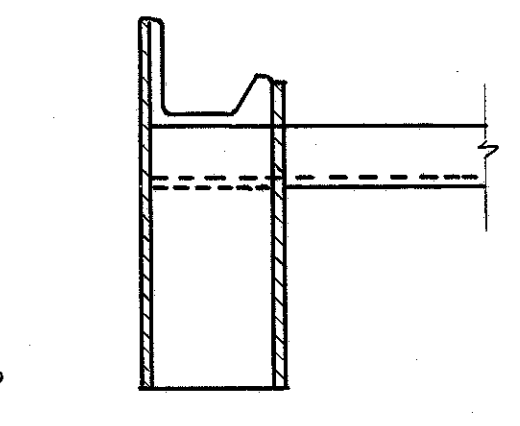
DRAINAGE PLAN



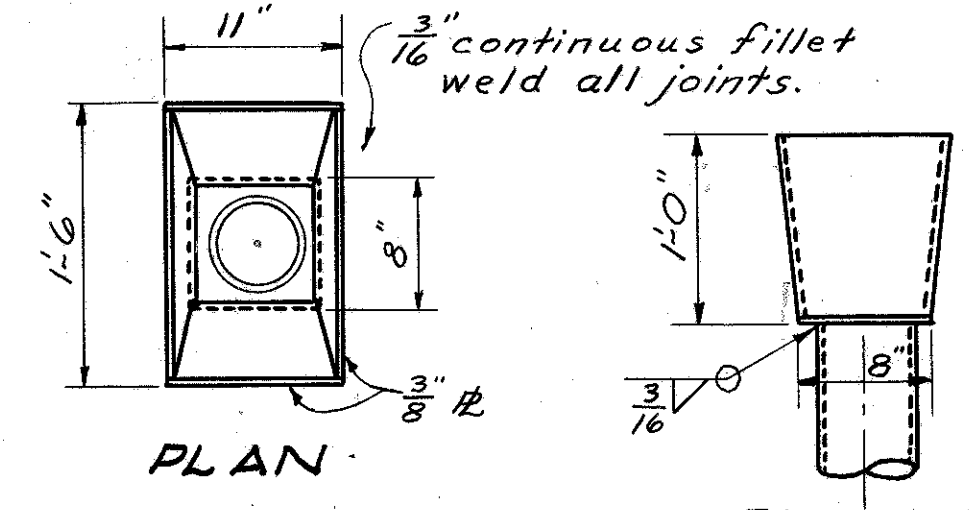
SECTION X-X



SECTION Y-Y

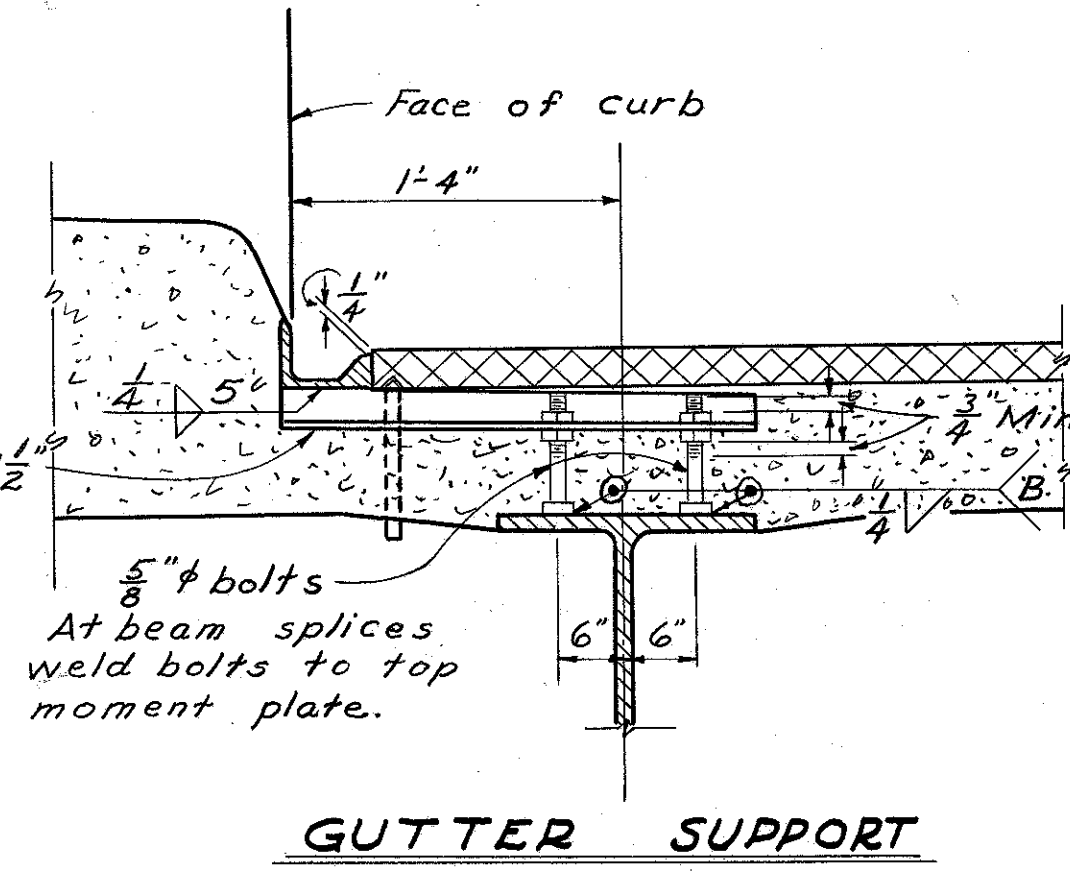


SECTION J-J



DETAIL OF HEADER

PIPE SPECIAL



GUTTER SUPPORT

Note:
JOINTS IN BULB ANGLE GUTTER will be permitted at not less than 25 ft. intervals. Abutting surfaces shall be milled.

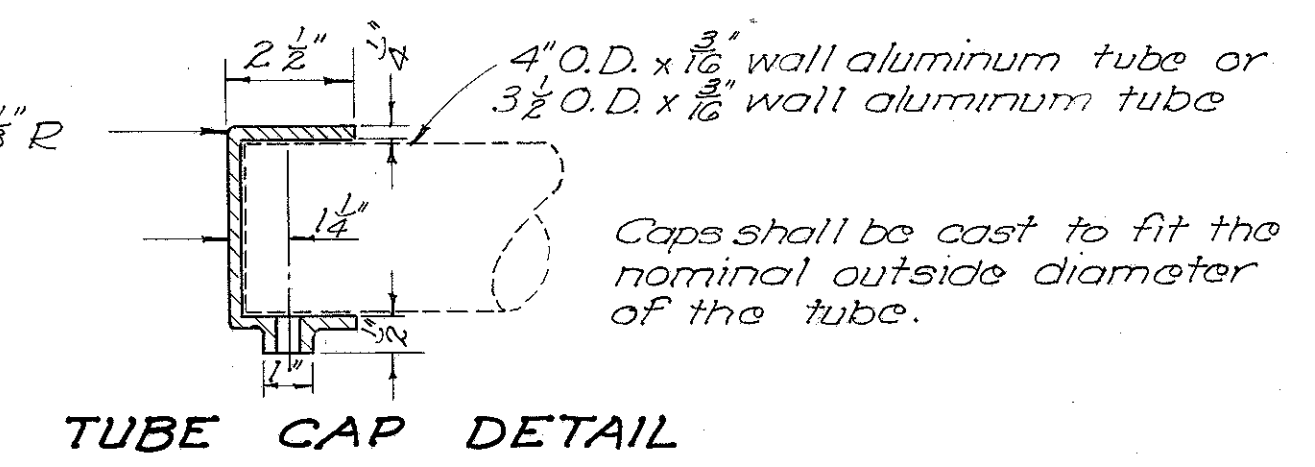
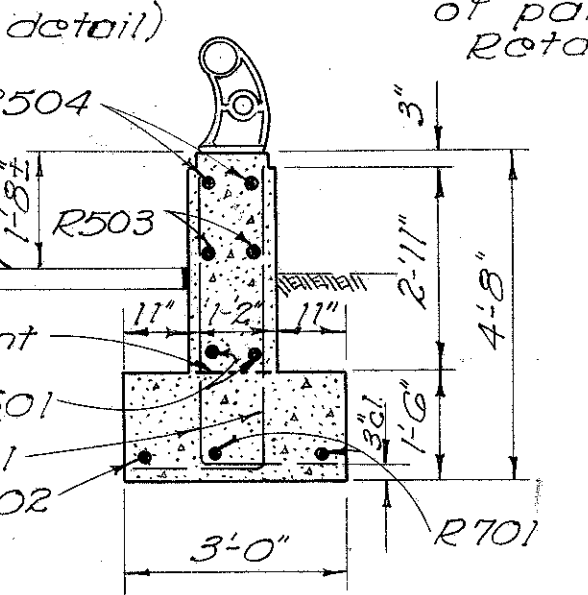
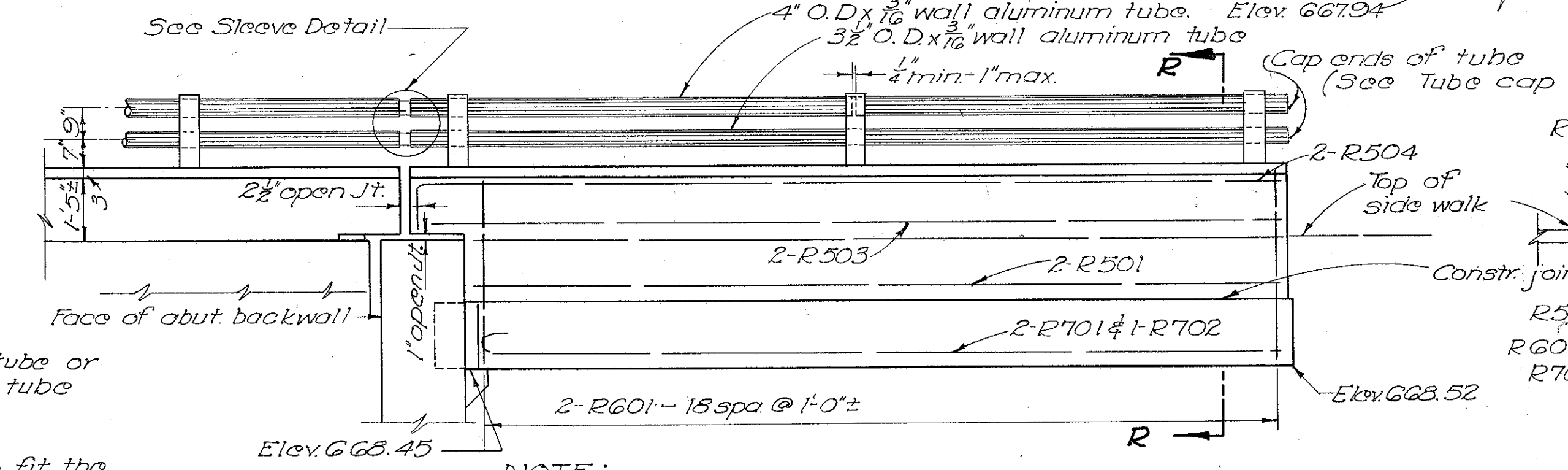
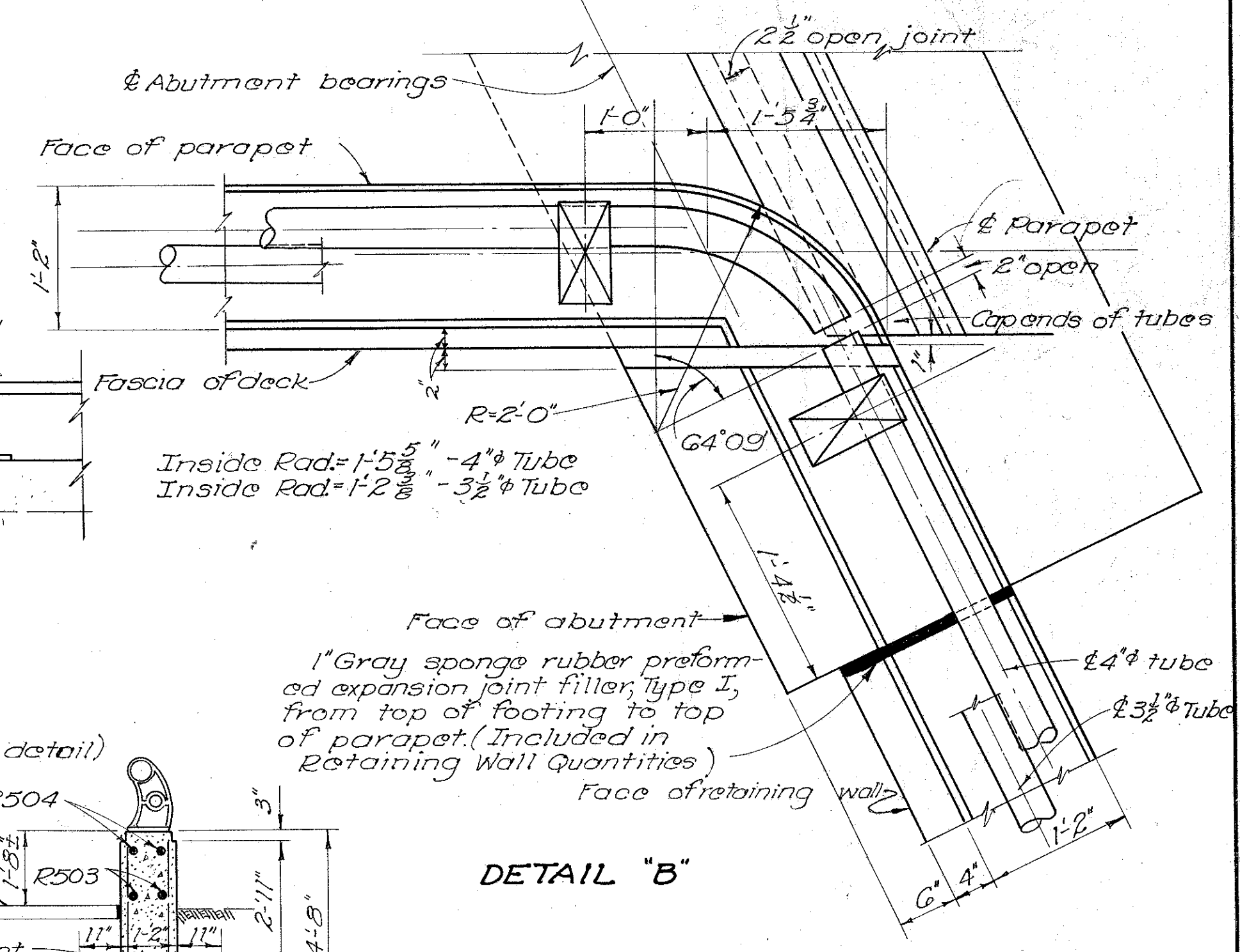
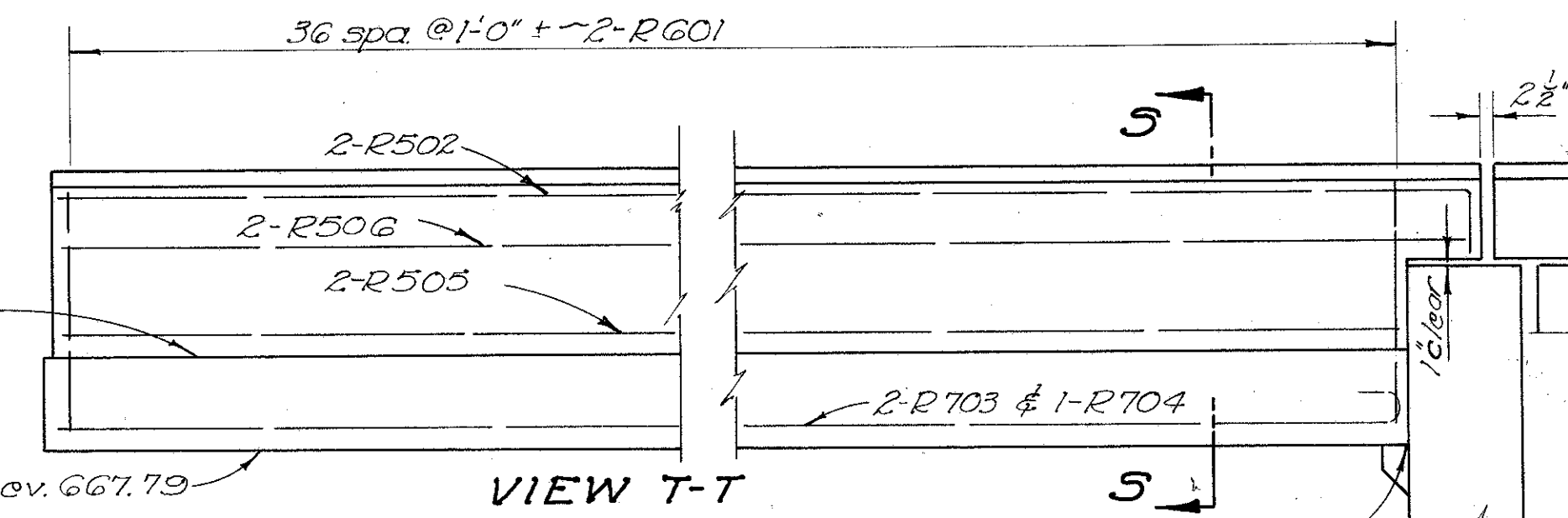
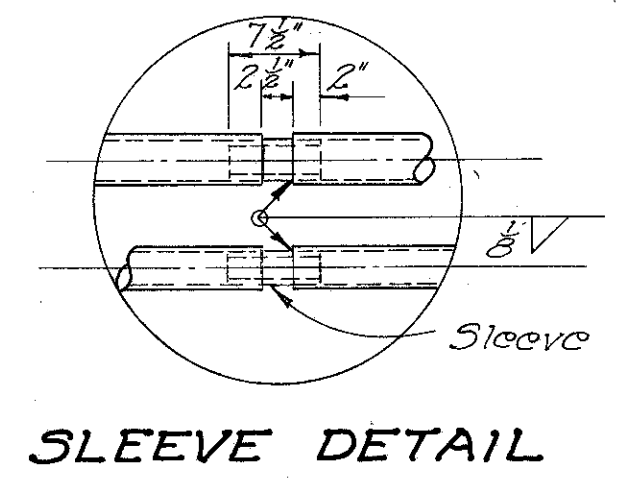
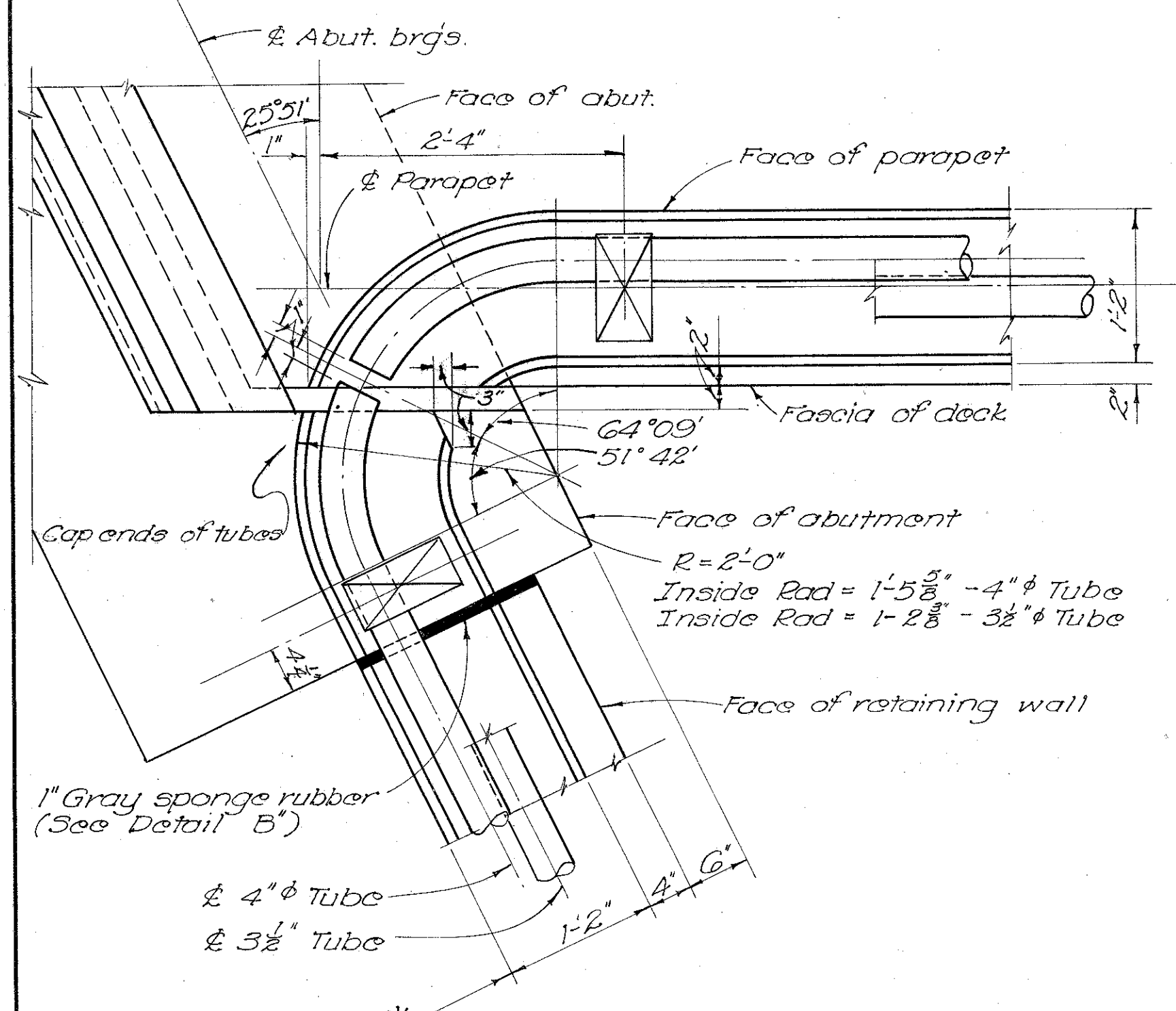
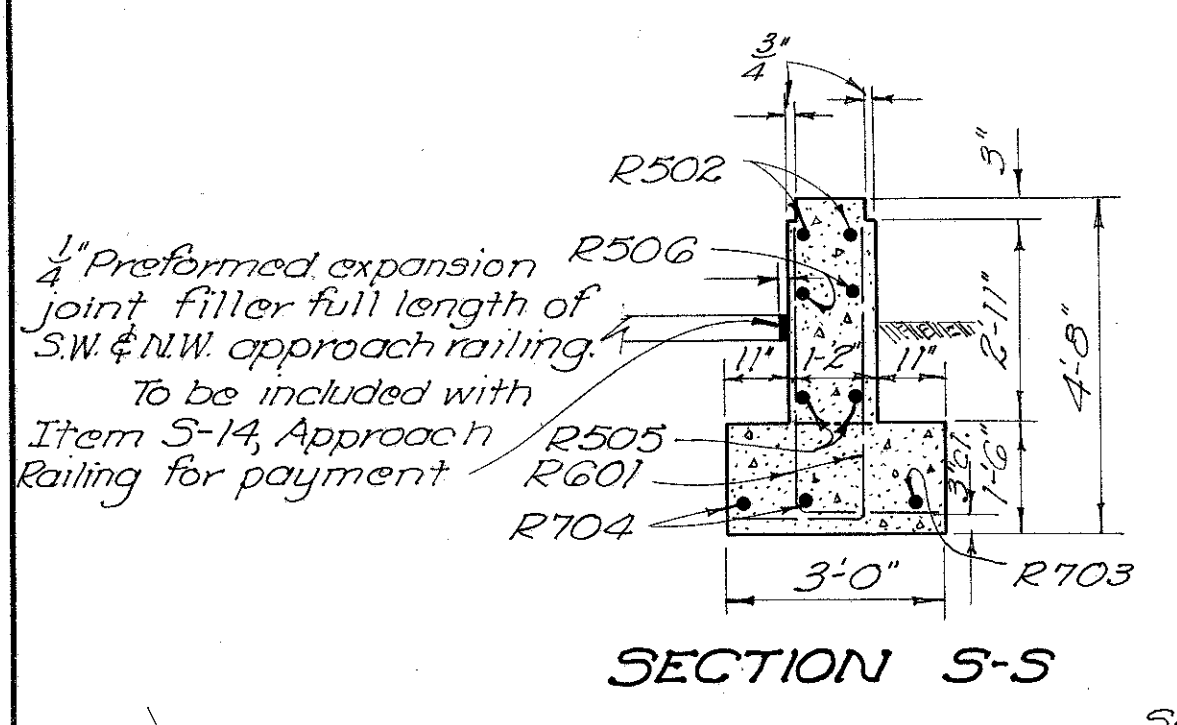
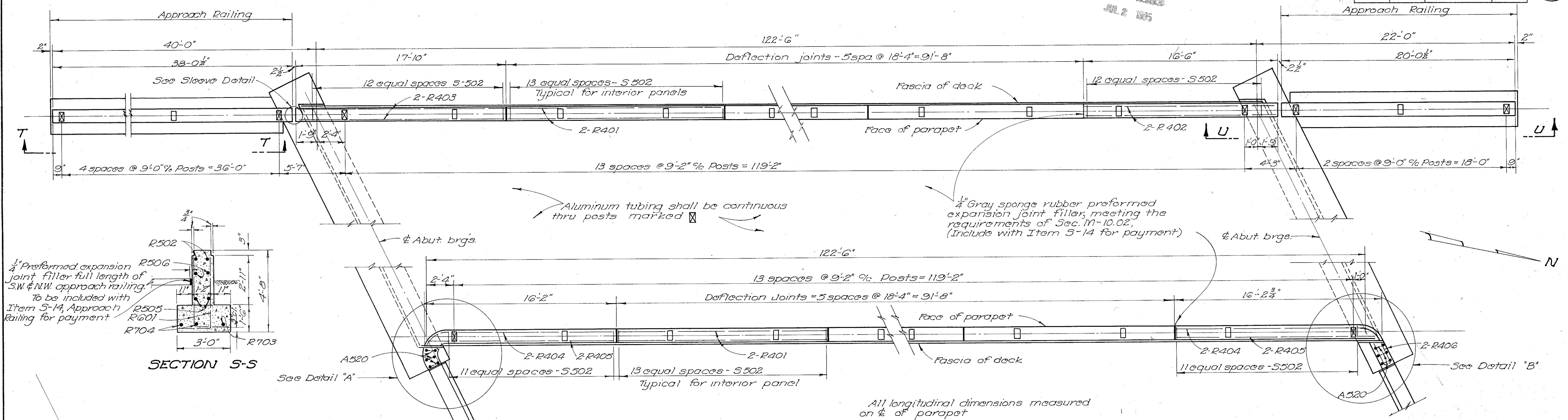
SUPPORTS shall be placed 6" to 9" on each side of joints.

ADJUSTMENT: Gutters shall be accurately adjusted to alignment and grade, with allowance for dead load deflection before concrete is placed.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES							
DRAINAGE AND SUPERSTRUCTURE DETAILS							
BRIDGE No. CUY-42-1881							
INNERBELT FREEWAY							
under EAST 22 nd STREET							
Cuyahoga County Sta. 0+20.00							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
D.G.M.	D.G.M.	J.E.P.	NEY	A.J.F.	8-19-57		

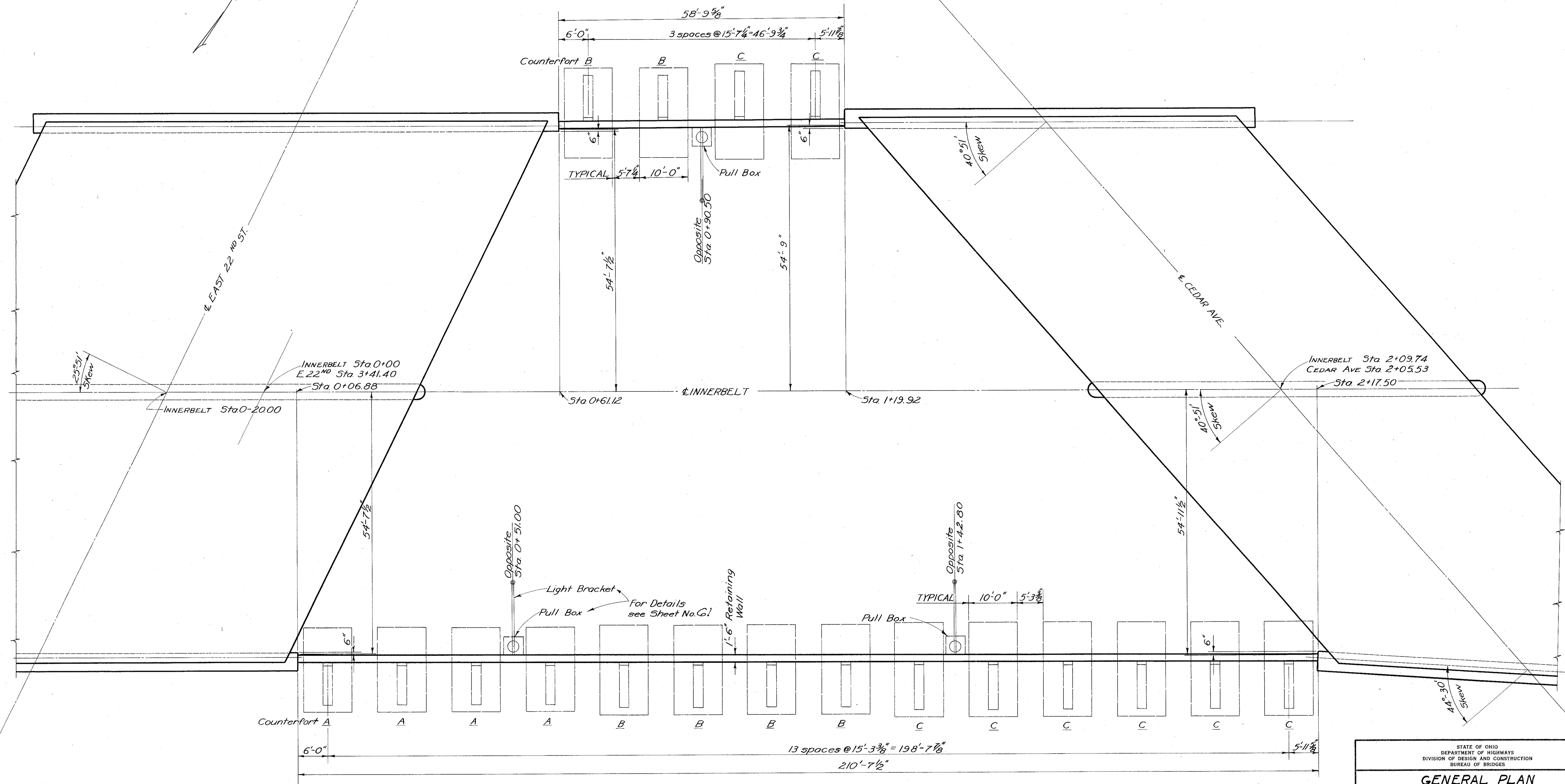
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MICROFILMED
JUL 2 1985



NOTE:
Railing tubes shall be continuous thru one or two posts. Joints in upper and lower rails to be staggered.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
RAILING DETAILS						
BRIDGE No CUY-42-1881						
INNERBELT FREEWAY						
UNDER EAST 22 ND STREET						
CUYAHOGA COUNTY STA. 0+20.00						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SCW	SCW	RHD	NEY	BFG	8-19-57	



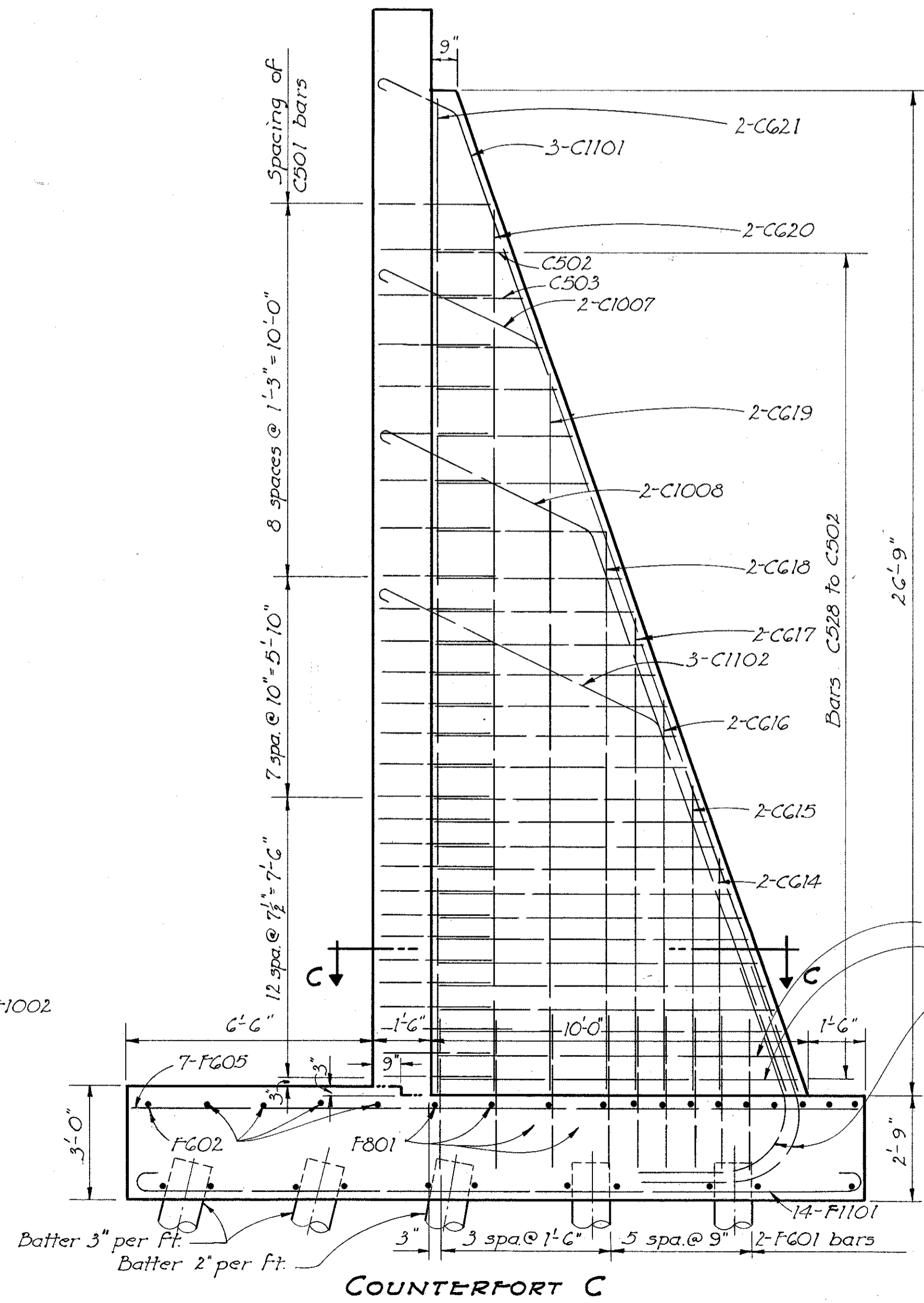
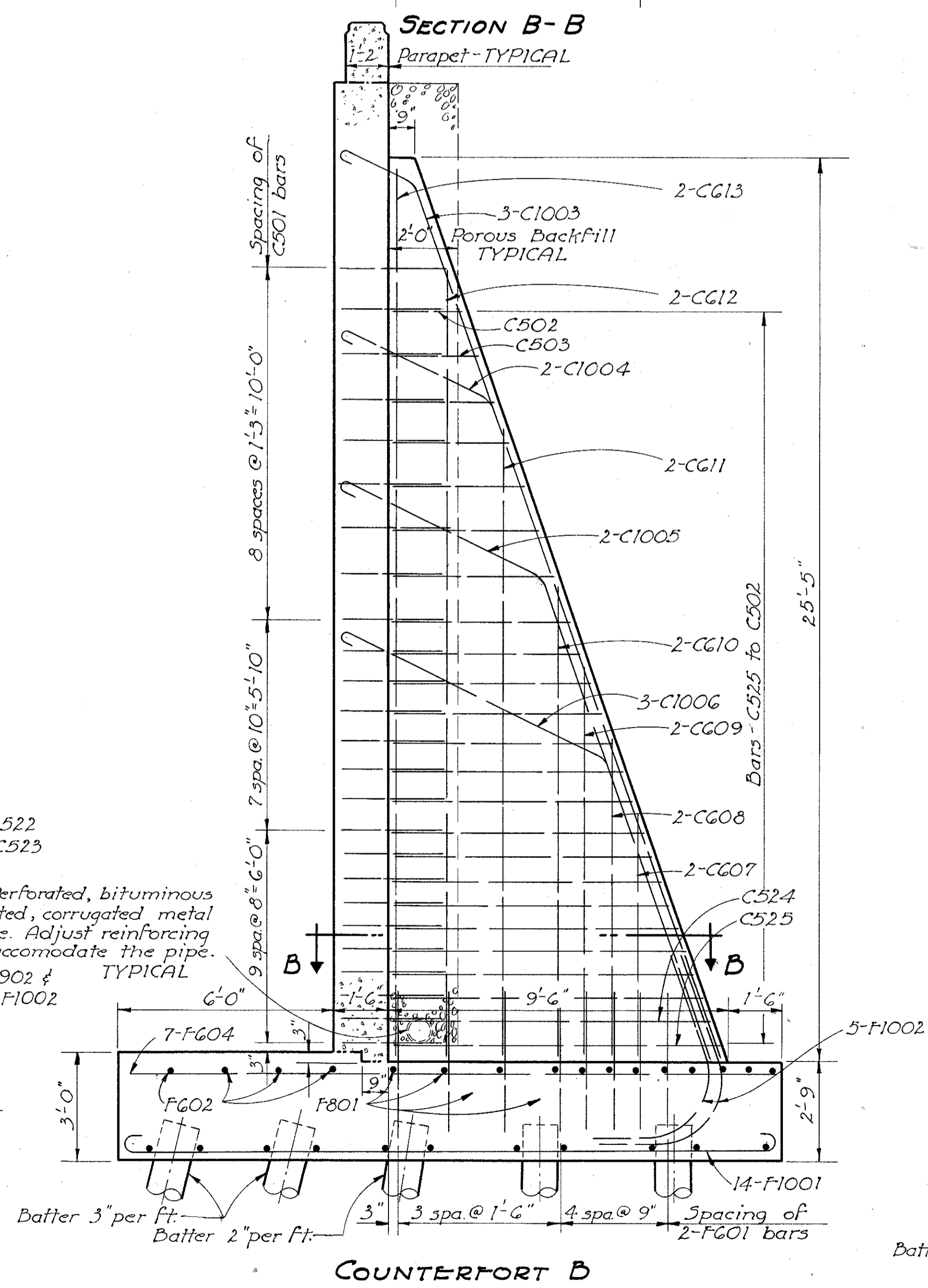
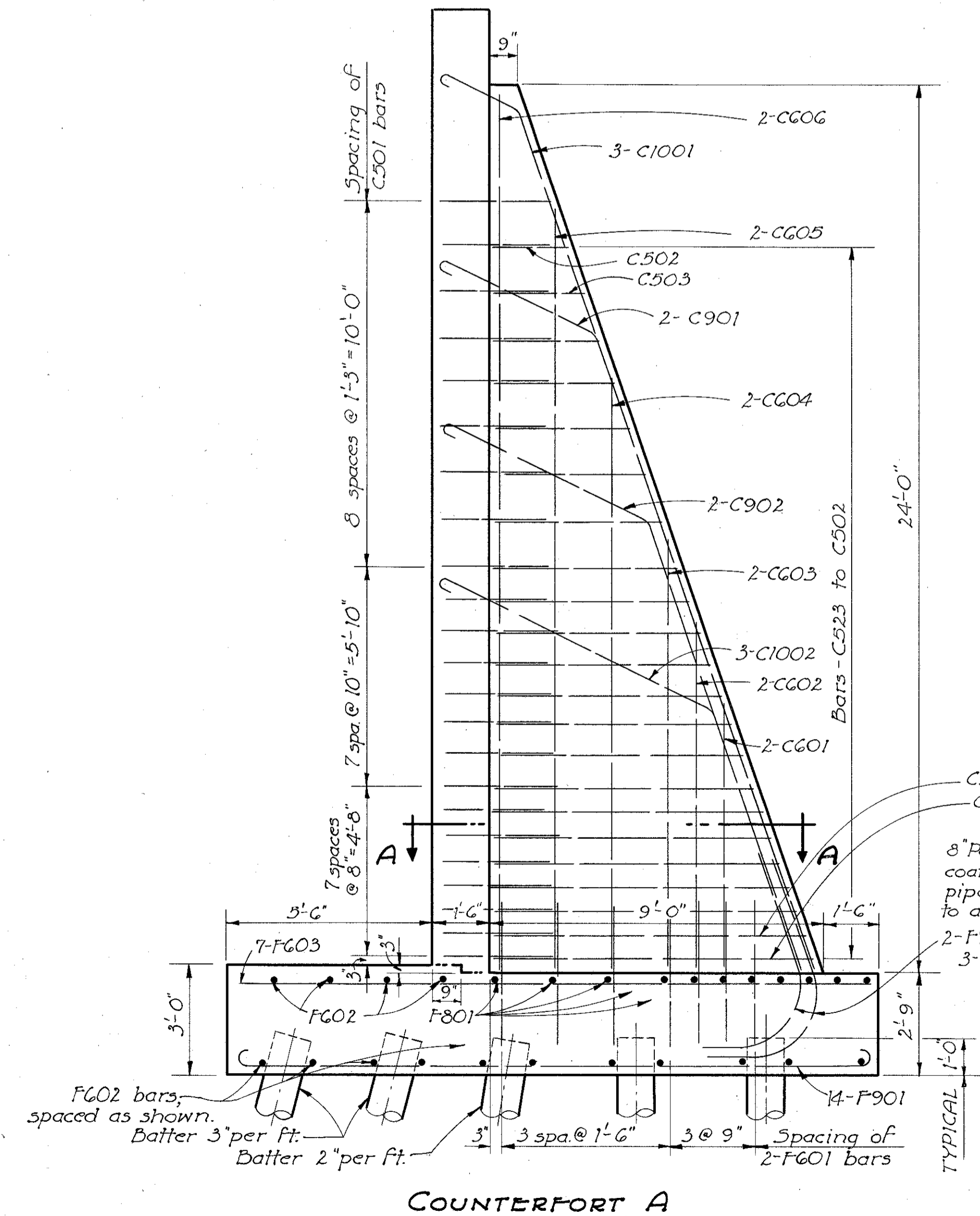
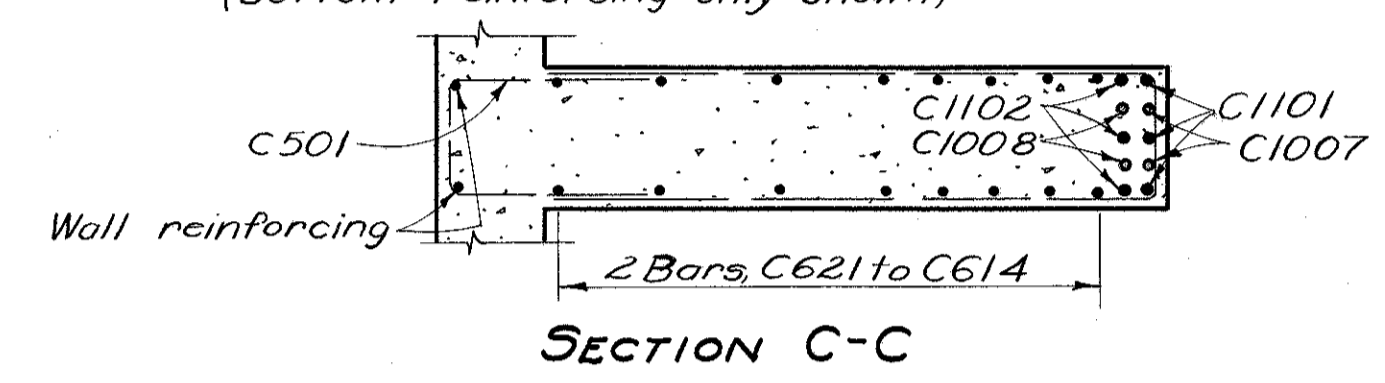
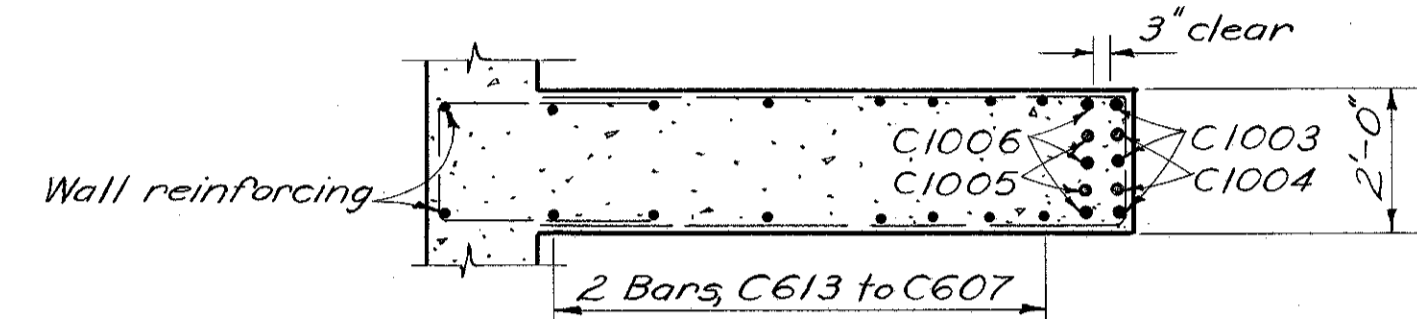
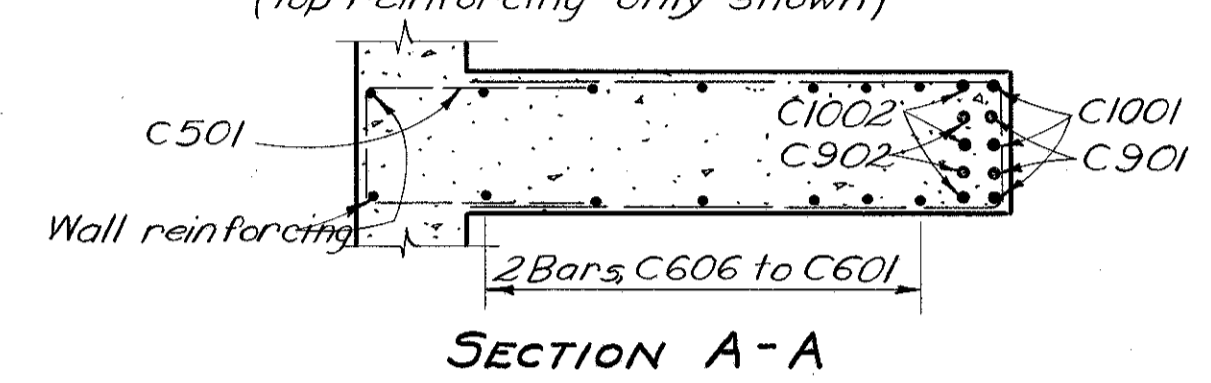
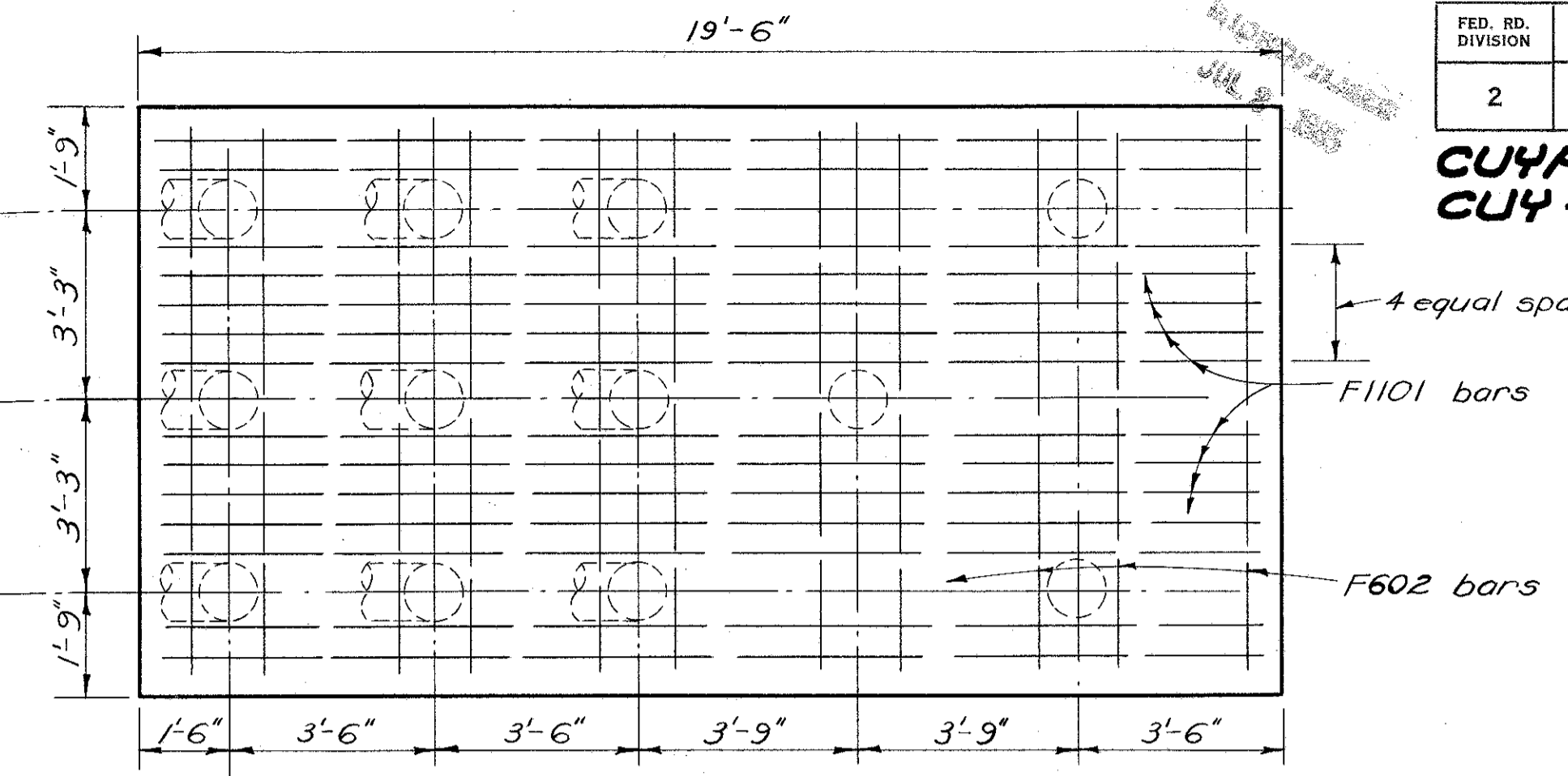
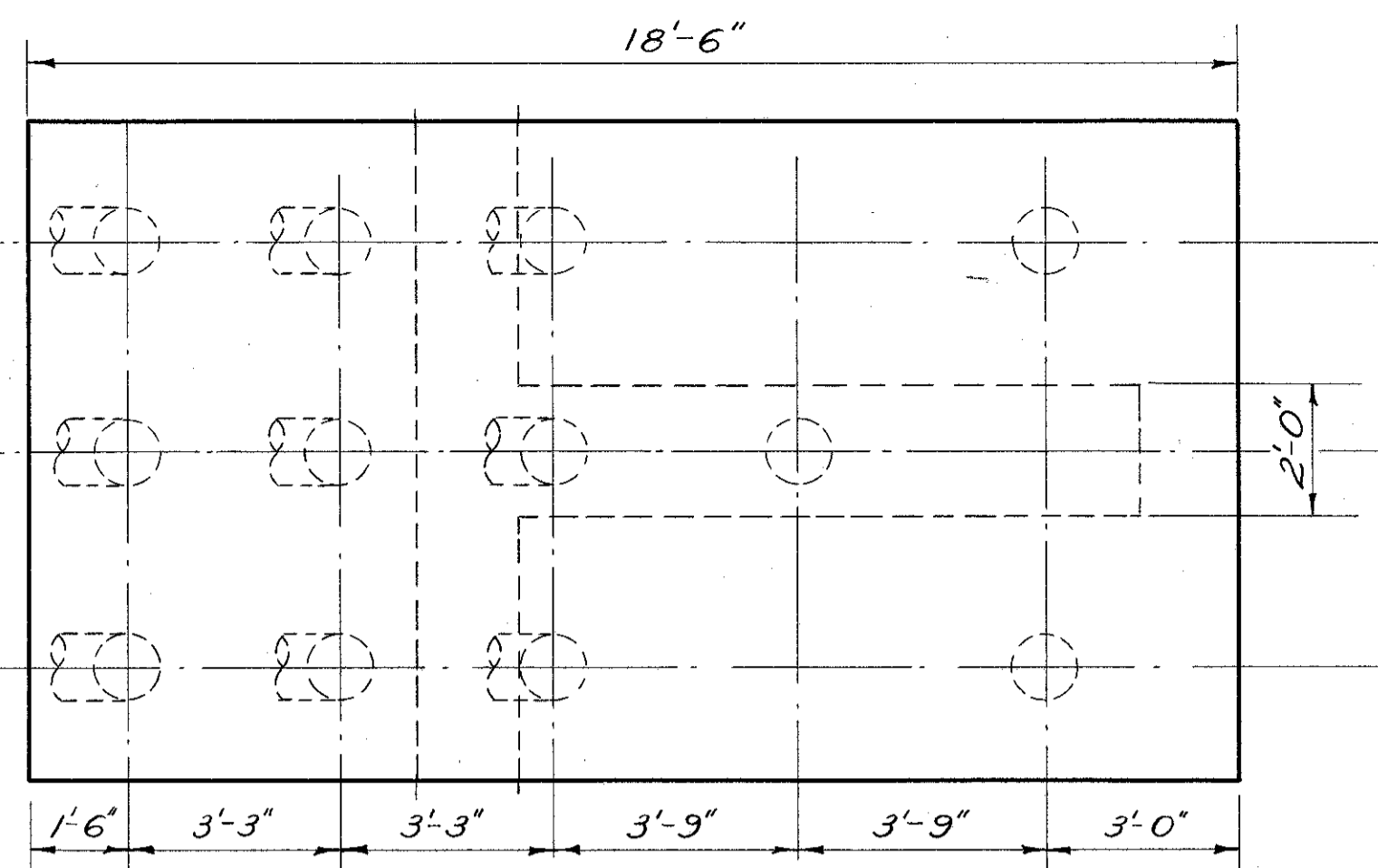
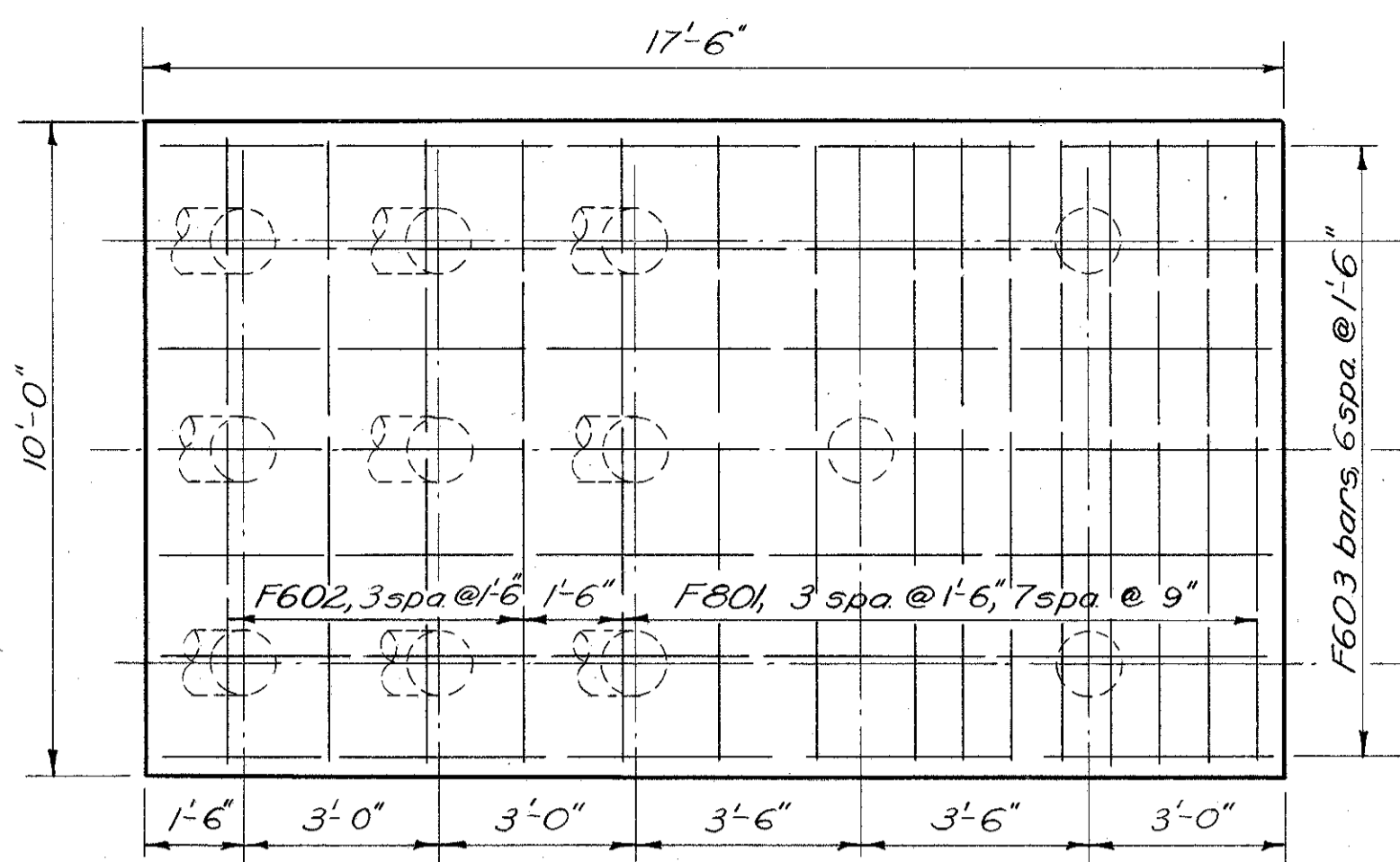
GENERAL PLAN of RETAINING WALLS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN
WALLS BETWEEN BRIDGES NO.
CUY-42-1881 & CUY-42-1885
INNERBELT FREEWAY
Cuyahoga County

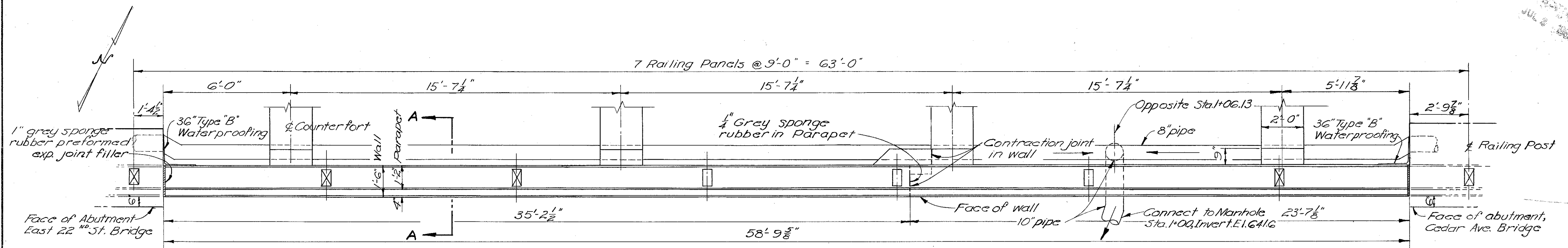
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CPD	CPD	LDC	TAO	BFG	8-26-57	

CUYAHOGA COUNTY
CUY-42-18.77

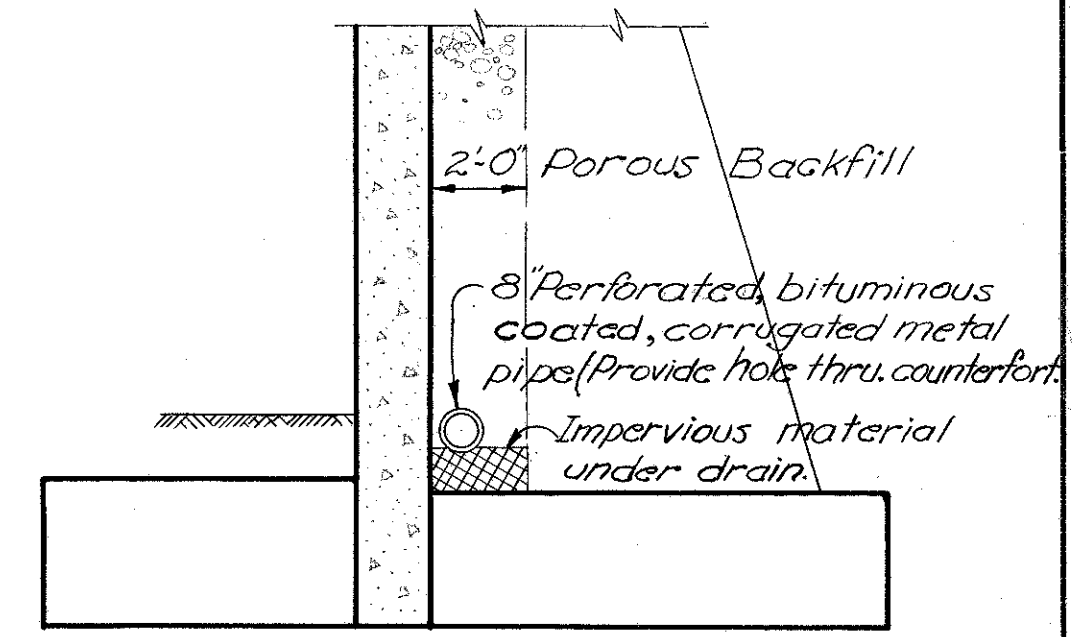


NOTE:
Place bars F902, F1002 and F1102 in the footing with their 2'-0" sections horizontal.

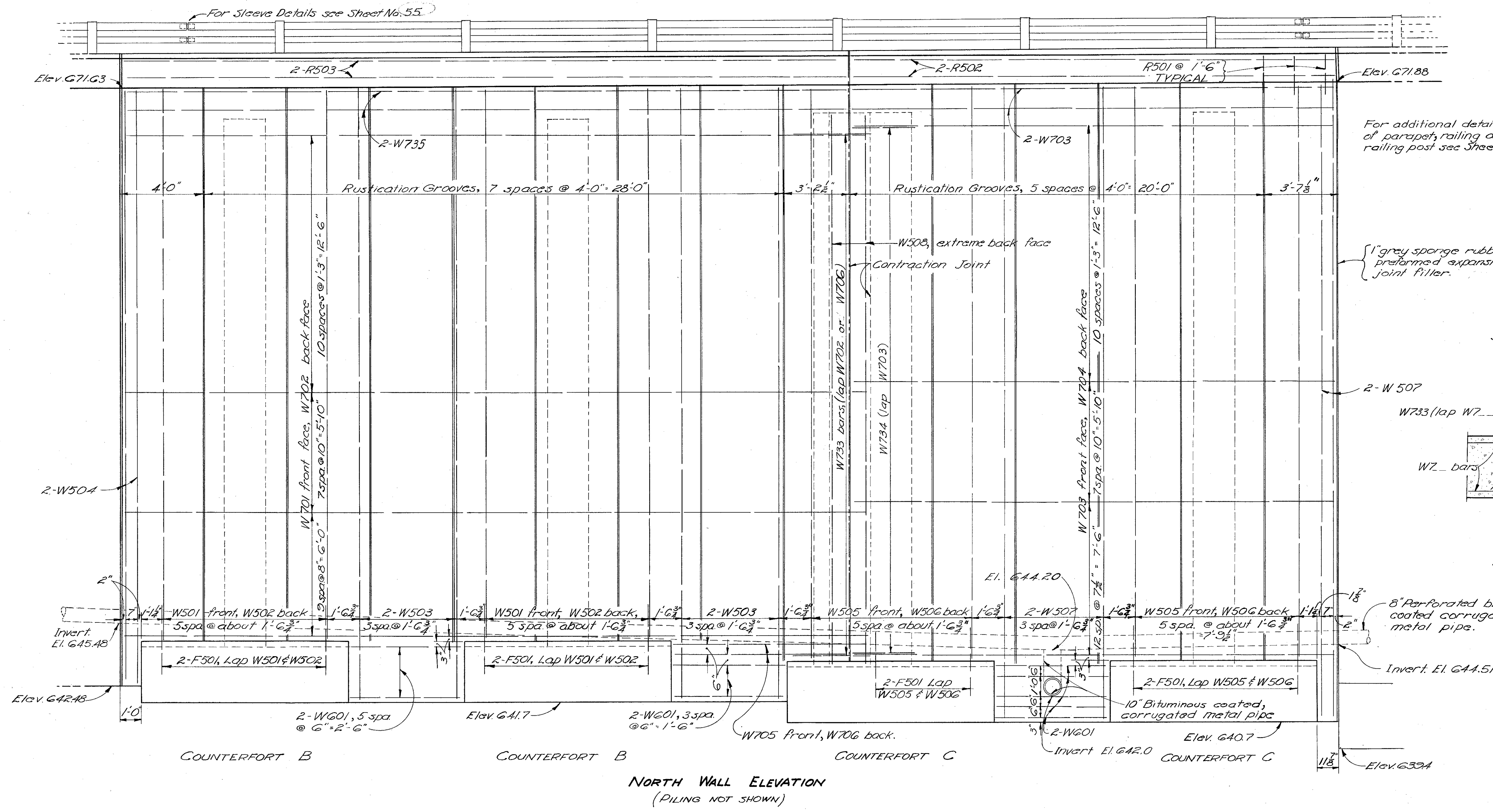
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COUNTERFORT DETAILS WALLS BETWEEN BRIDGES No. CUY-42-1881 & CUY-42-1885					
INNERBELT FREEWAY					
CUYAHOGA COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
CPD	CPD	Grasselli	TRO	BFG	8-26-57



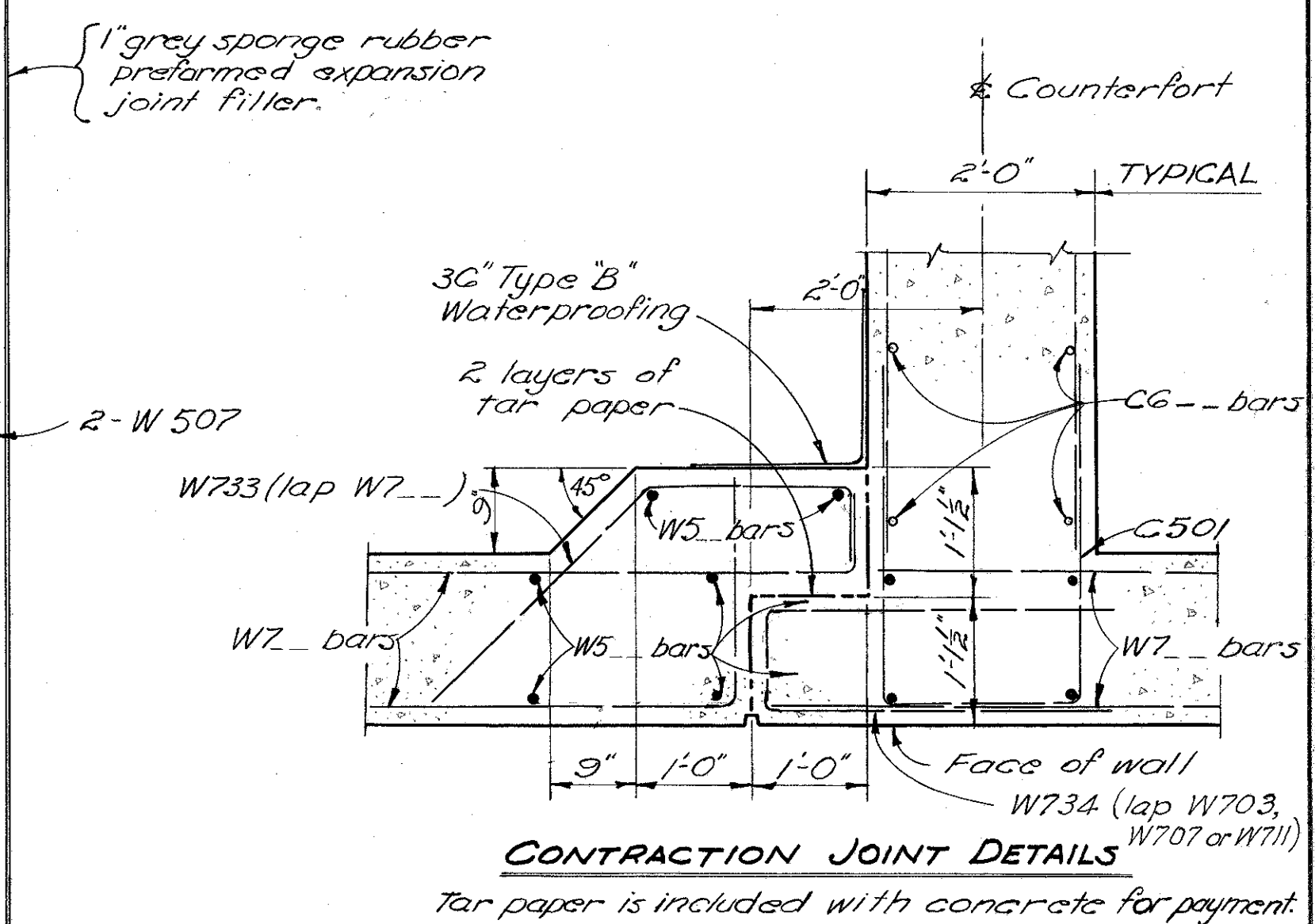
PART PLAN



SECTION A-A



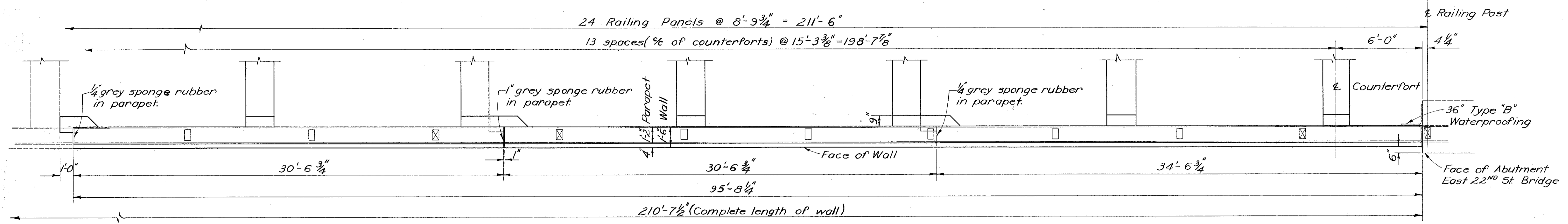
NORTH WALL ELEVATION
(PILING NOT SHOWN)



CONTRACTION JOINT DETAILS

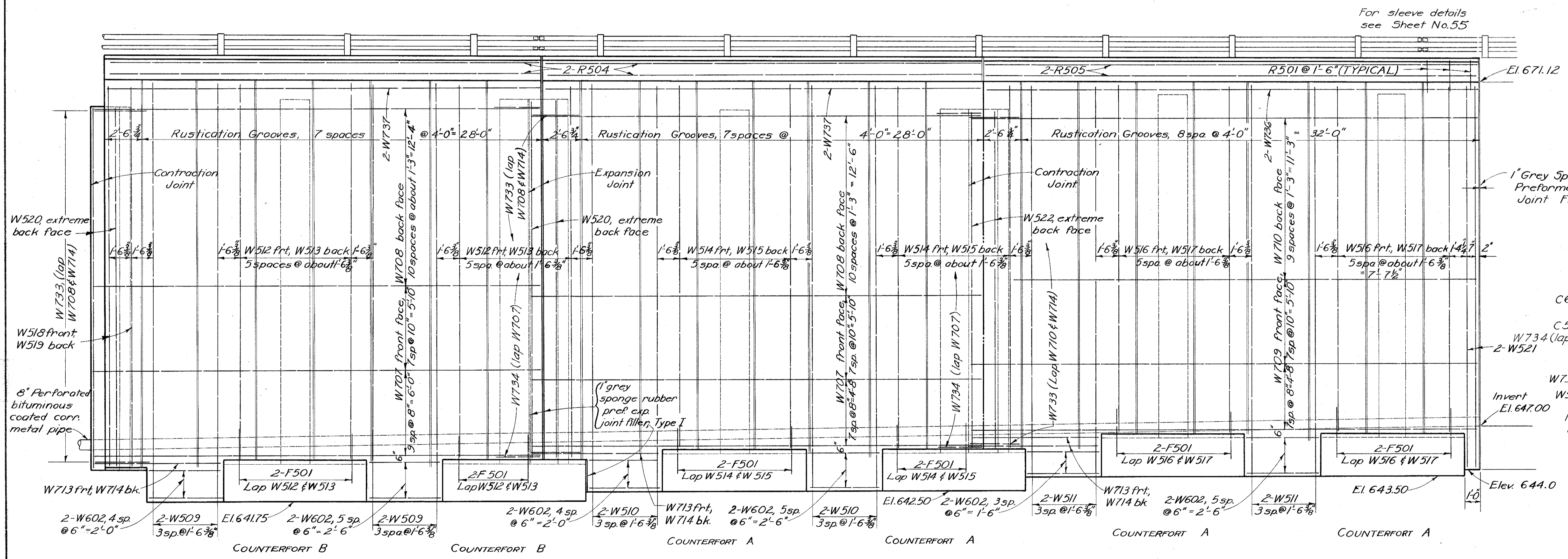
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RETAINING WALL DETAILS						
WALLS BETWEEN BRIDGES No. CUY-42-1881 & CUY-42-1885						
INNERBELT FREEWAY						
CUYAHOGA COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	R.S.M.	RO	BFG	8-26-57	

CUYAHOGA COUNTY
CUY-42-18.77

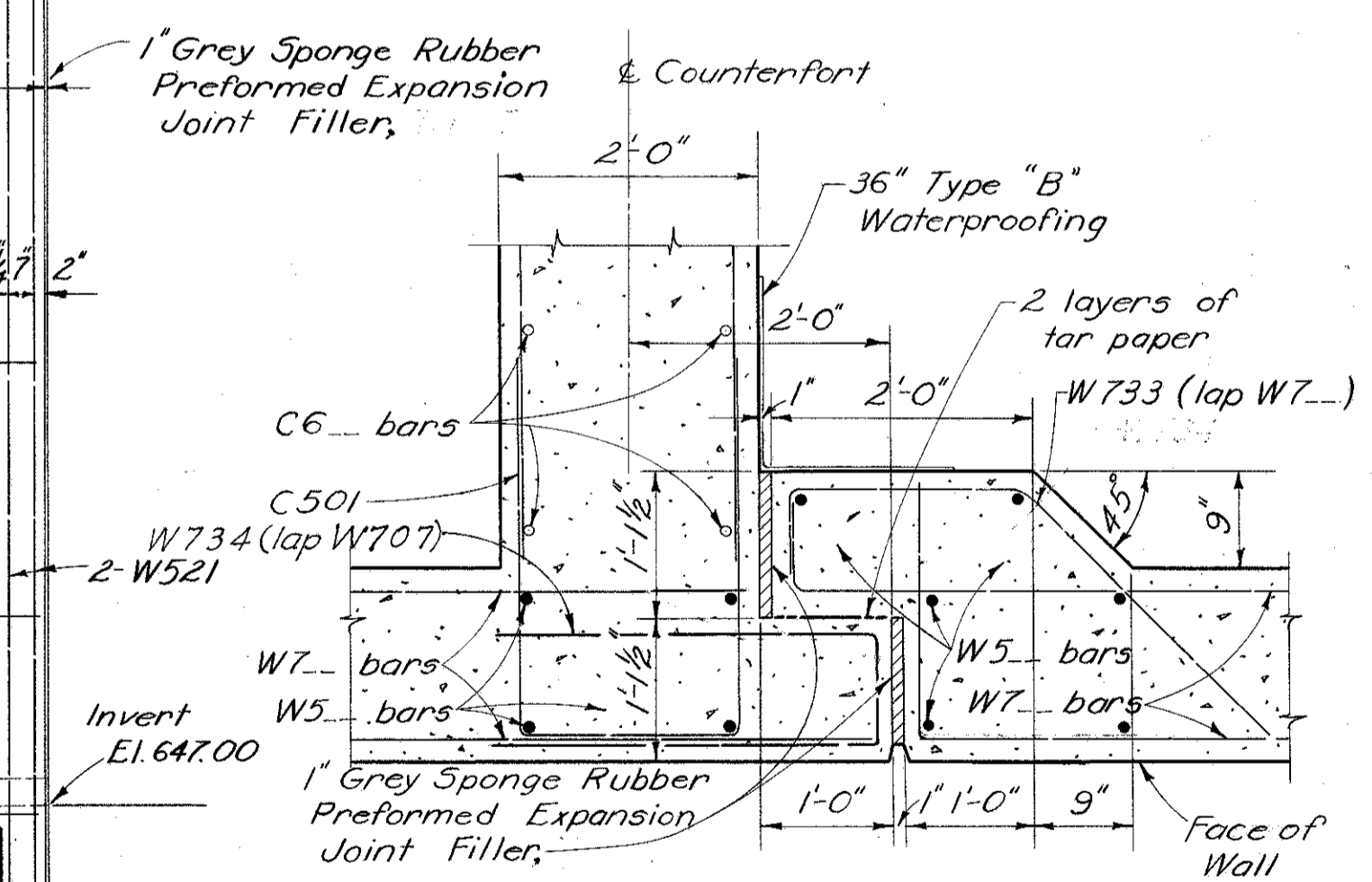


PART PLAN

Parapet Joints: 1" or 1/4" grey sponge rubber preformed expansion joint filler meeting the requirements of Sec. M-10.02. Includes with Item 5-14 for payment.



SOUTH WALL ELEVATION - WEST PORTION
(Piling not shown)

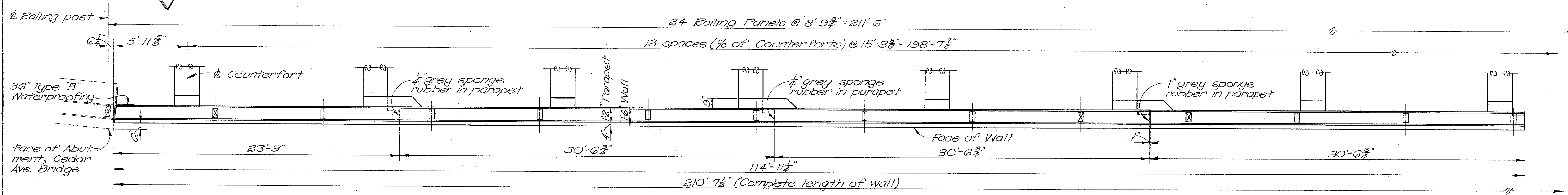


EXPANSION JOINT DETAILS

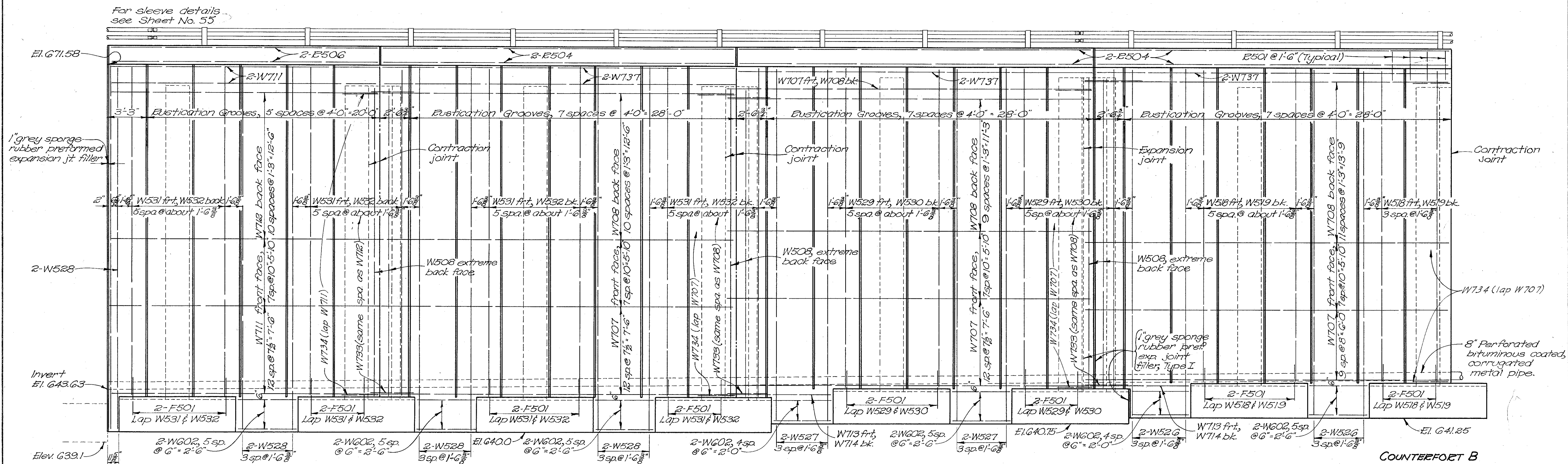
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RETAINING WALL DETAILS						
WALLS BETWEEN BRIDGES No. CUY-42-1881 & CUY-42-1885 INNERBELT FREEWAY						
CUYAHOGA COUNTY						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	LDC	TRO	G. J. G.	8-26-57	

E1-0

60
129



PART PLAN



SOUTH WALL ELEVATION - EAST PORTION
(Piling not shown)

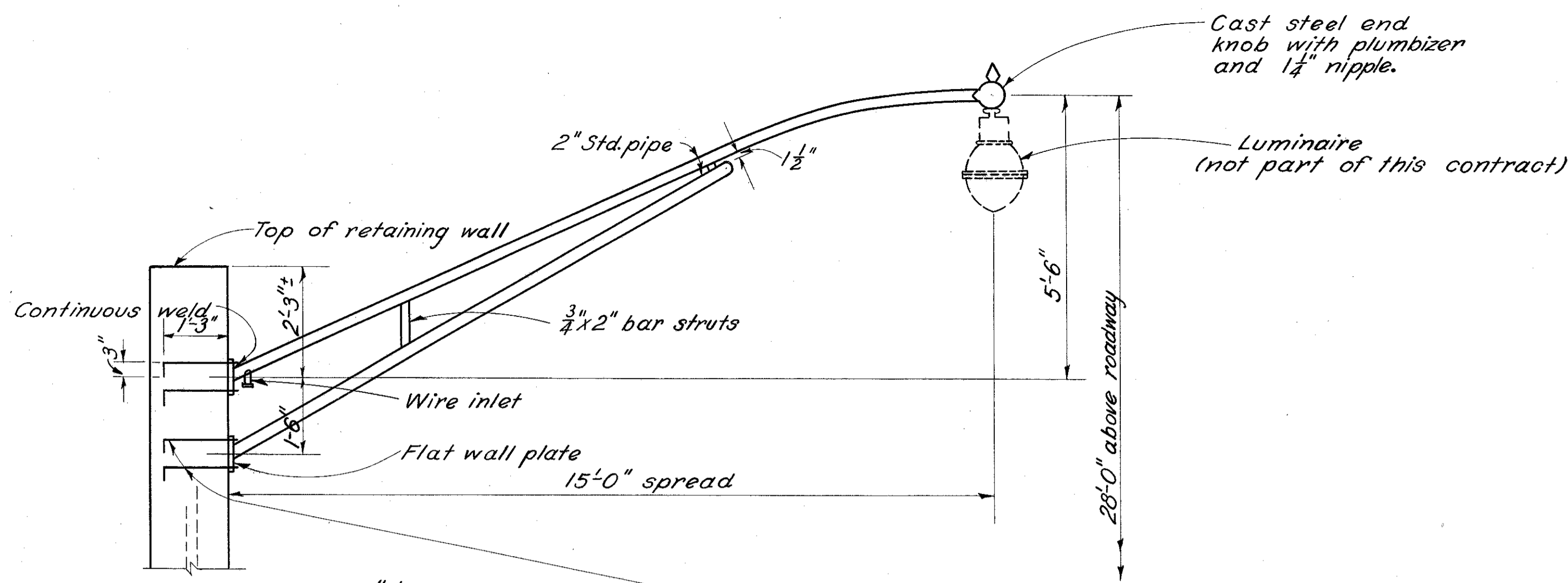
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

RETAINING WALL DETAILS
WALLS BETWEEN BRIDGES
No. CUY-42-1881 & CUY-42-1885
INNERBELT FREEWAY
CUYAHOGA COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	DGM	RB	TRO	BFG	8-26-57	

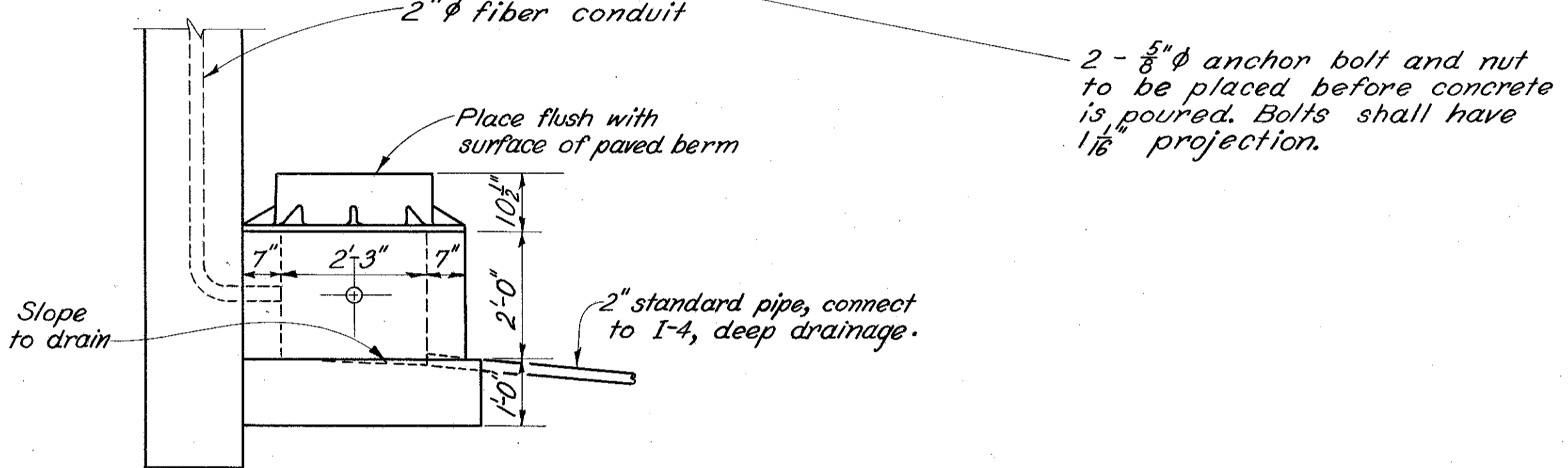
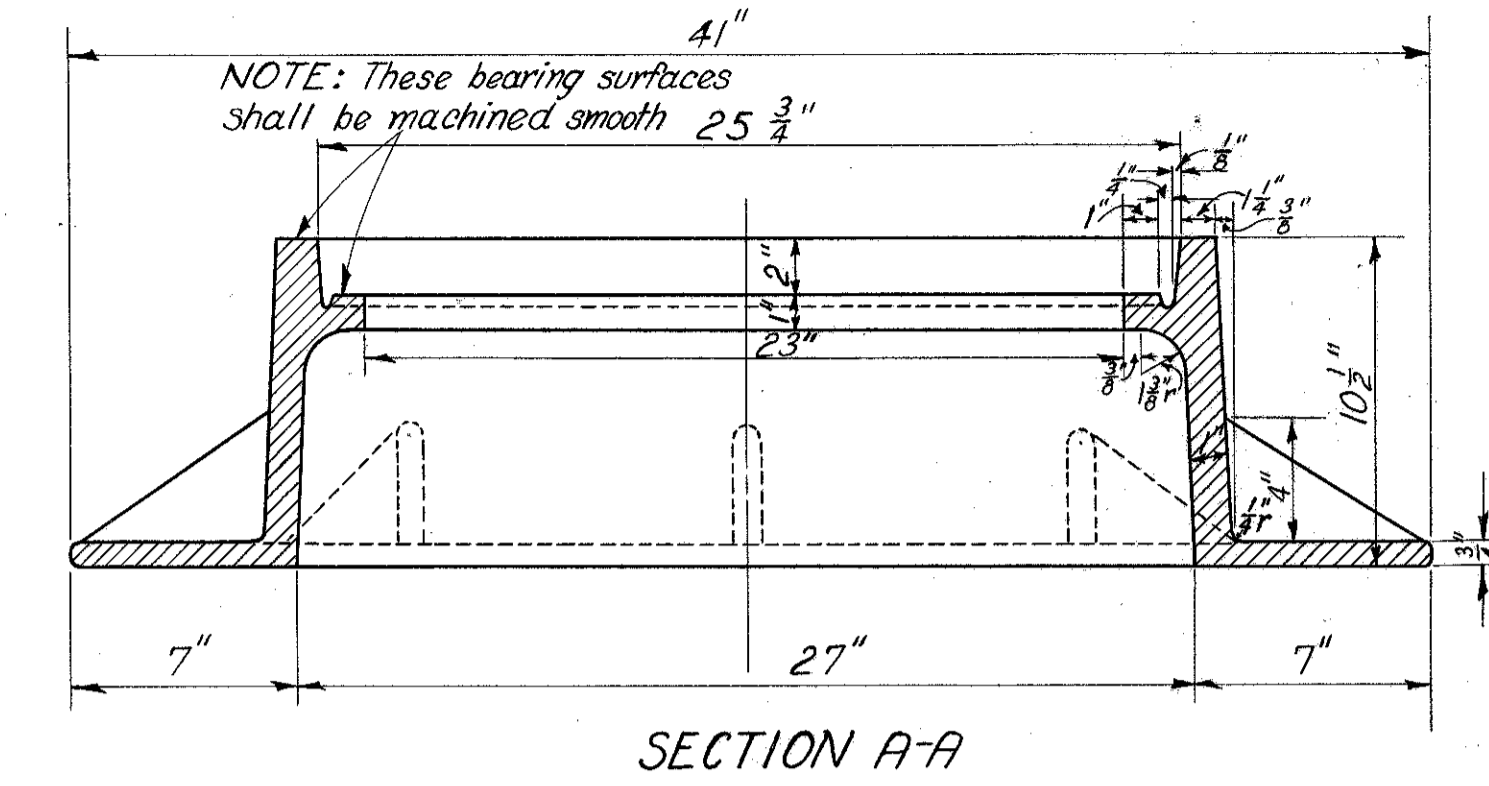
RECORDED
JUL 2 1955

CUYAHOGA COUNTY
CUY-42-18.77



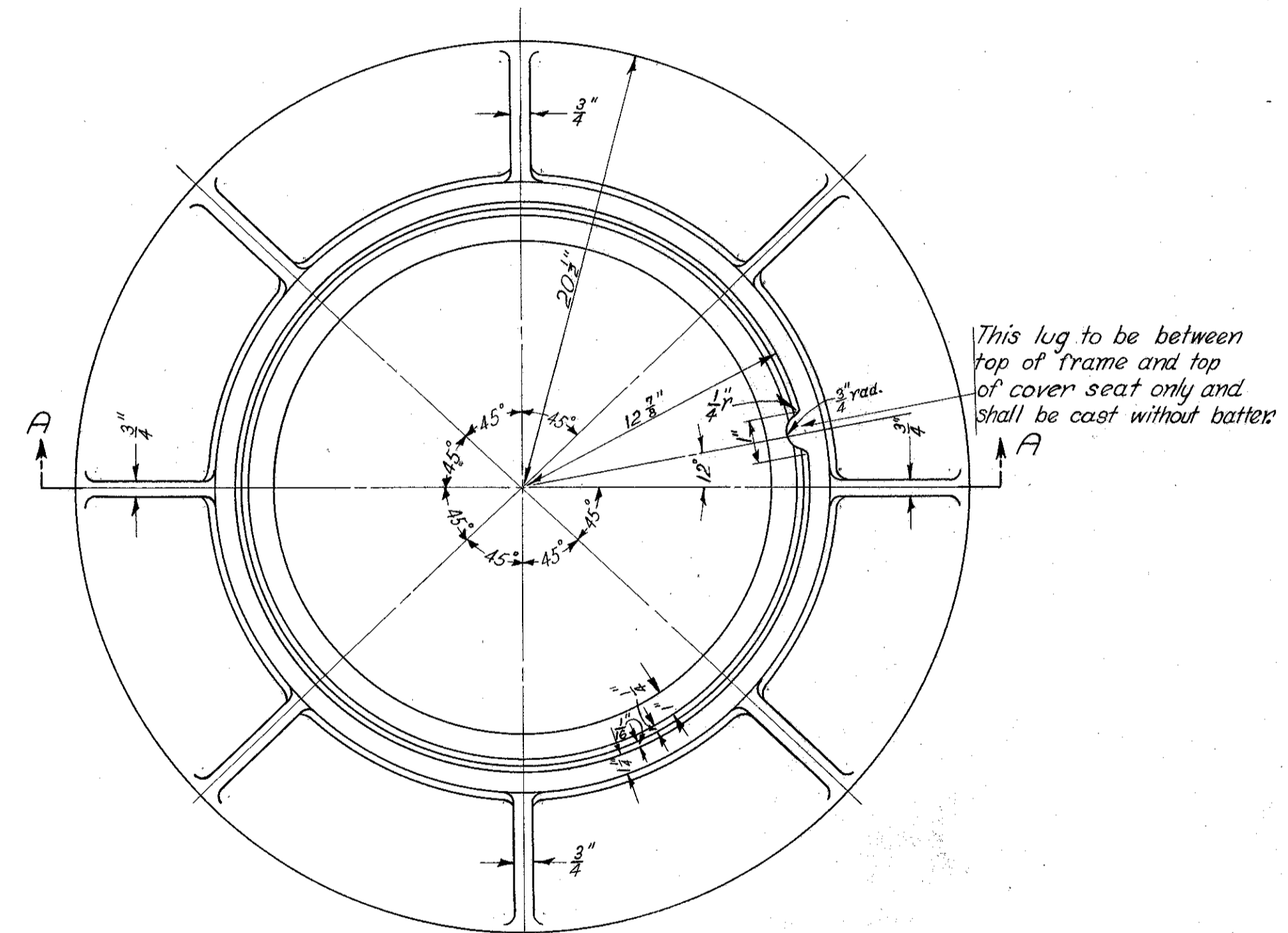
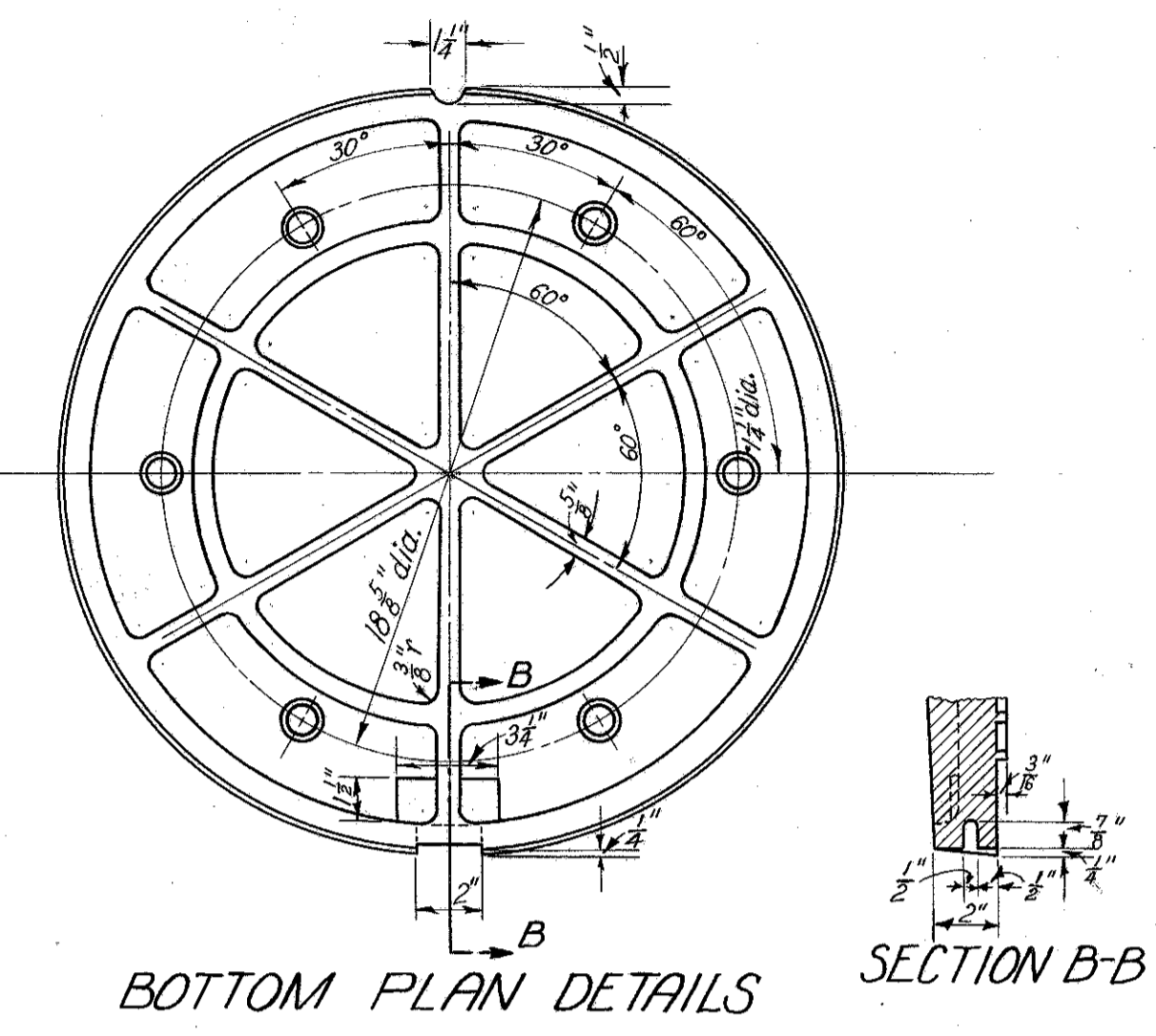
Cast steel end knob with plumbizer and 1/4" nipple.

Luminaire (not part of this contract)

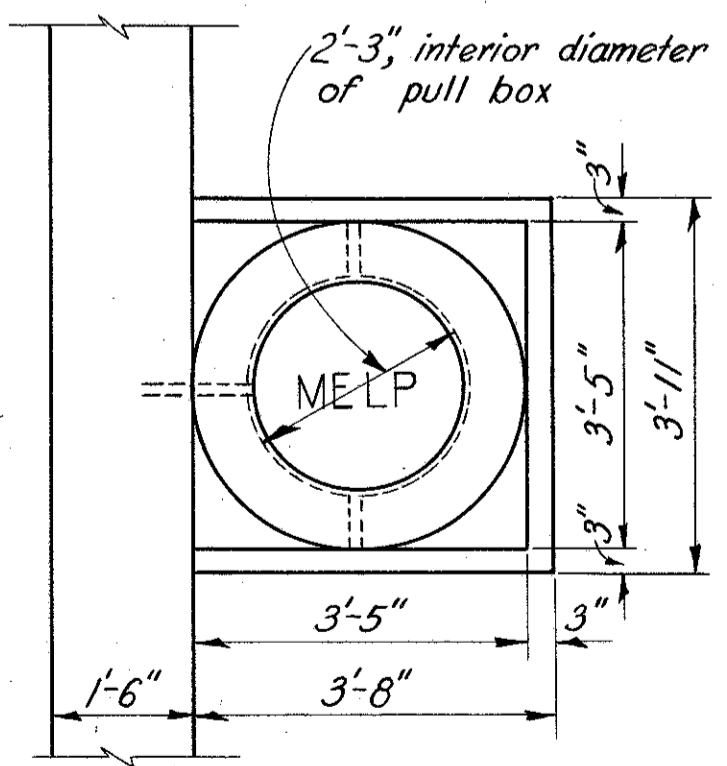
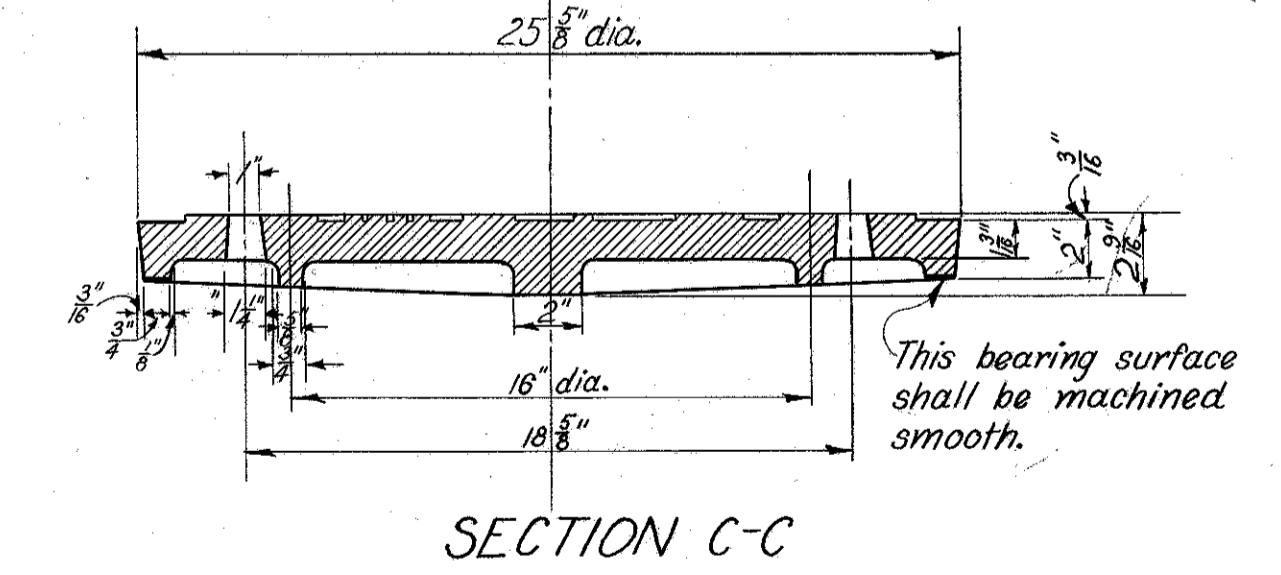
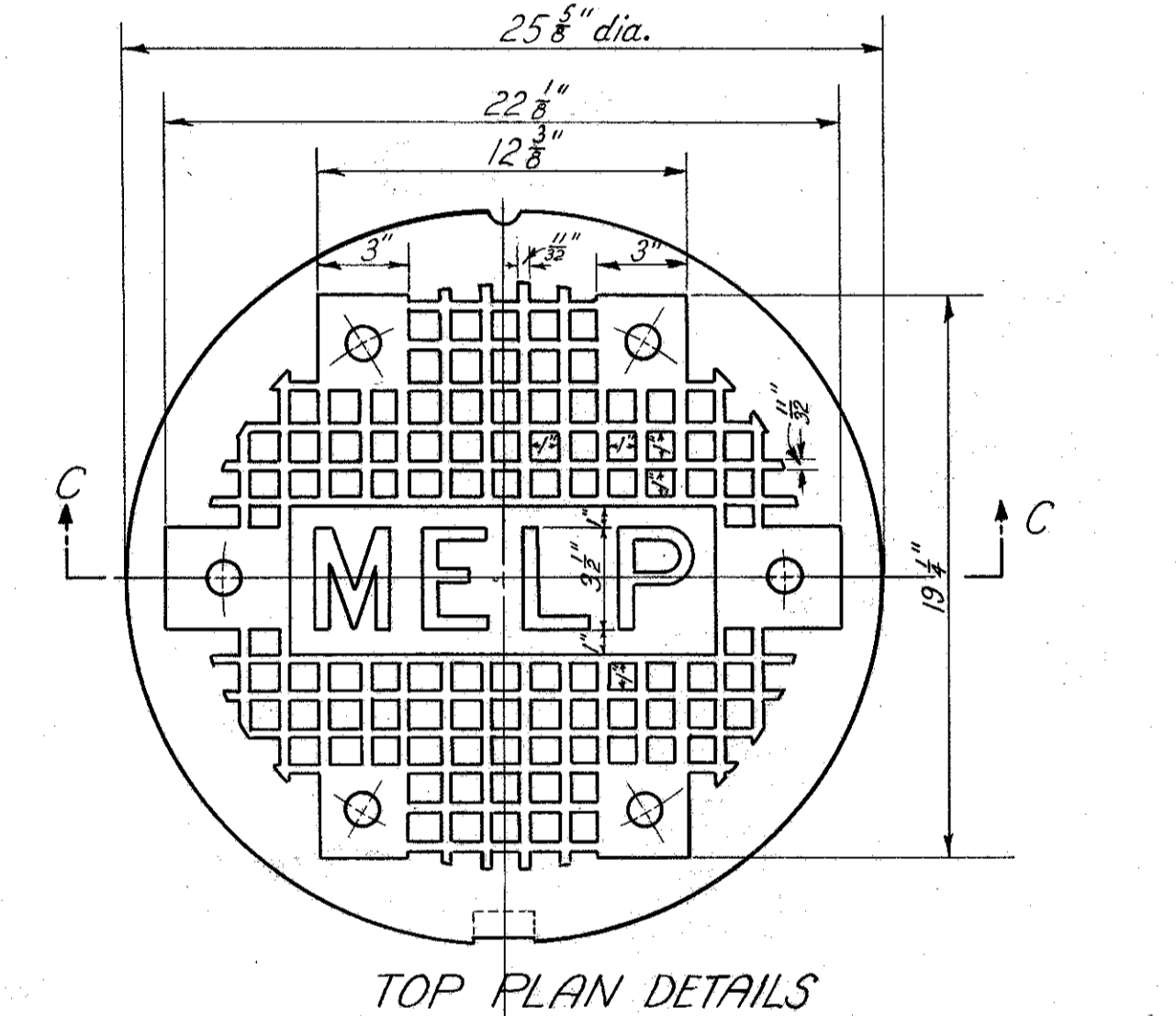


ELEVATION OF PULL BOX AND LIGHT BRACKET

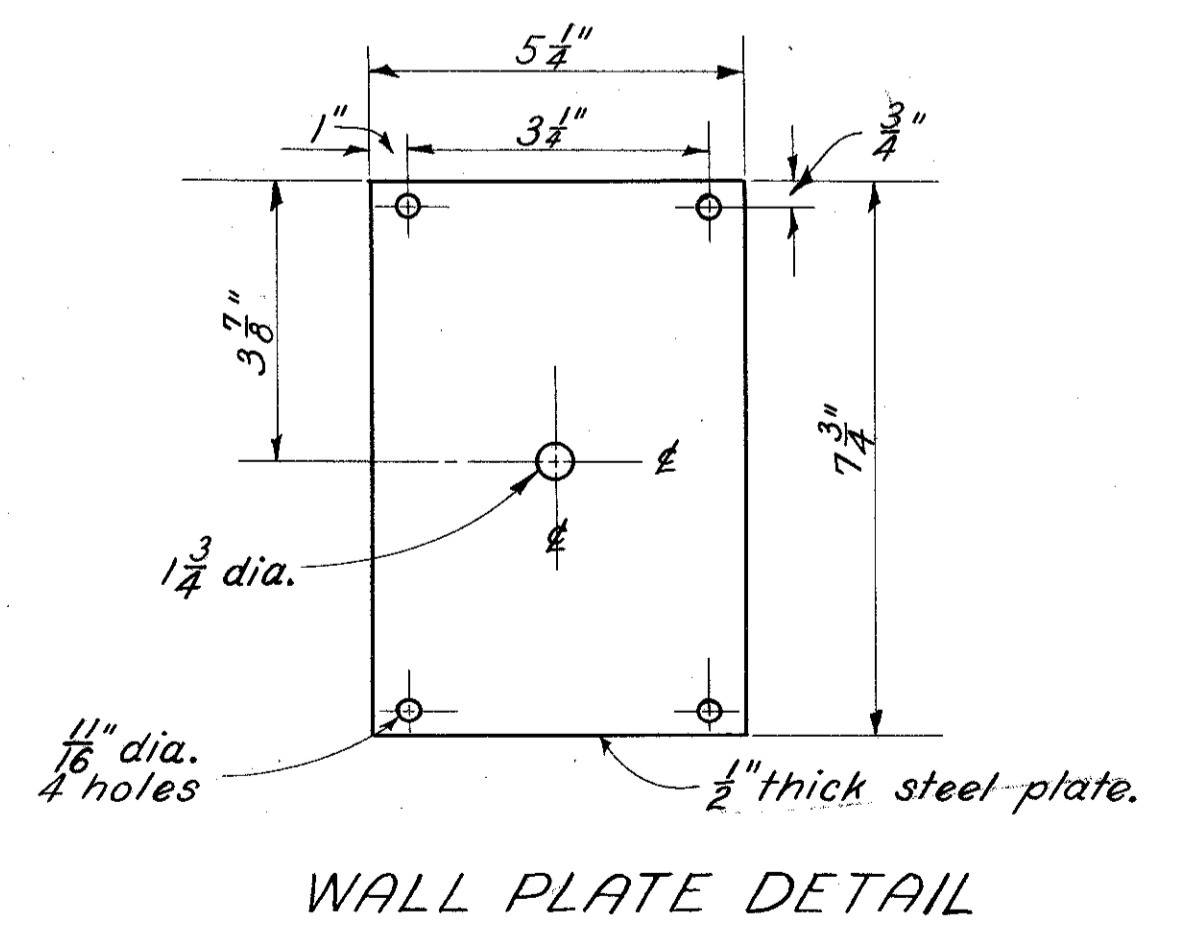
For location of Pull Boxes and Light Brackets, see Sheet No. 5G



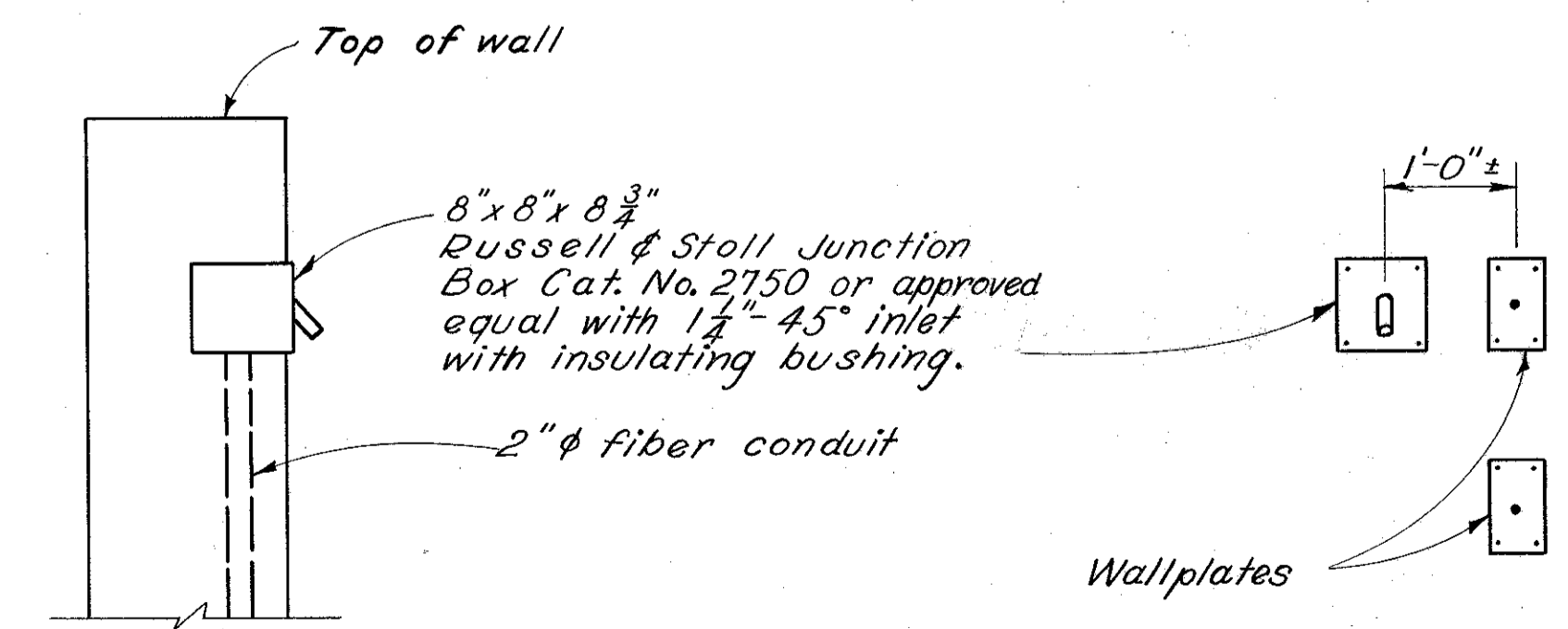
This lug to be between top of frame and top of cover seat only and shall be cast without batter.



PLAN OF PULL BOX
Place between Wall Footings - 3 Required -



WALL PLATE DETAIL



JUNCTION BOX
LOCATION DETAIL

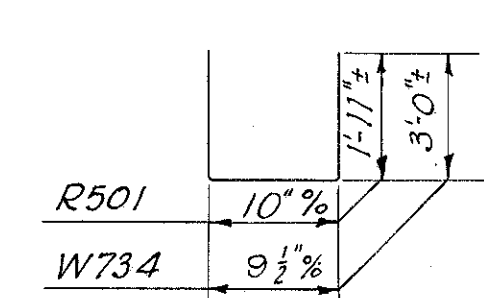
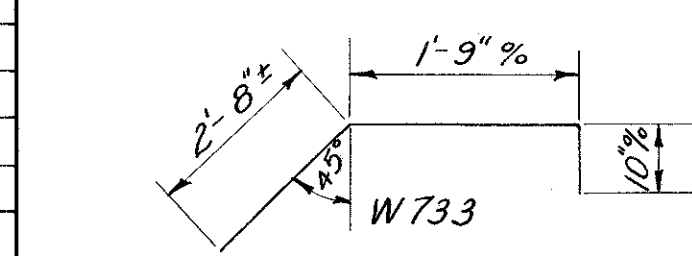
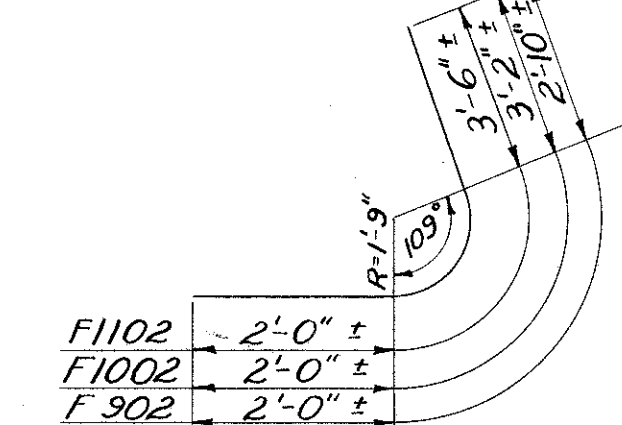
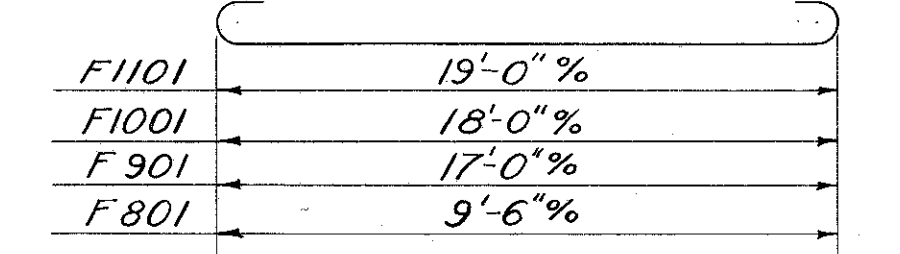
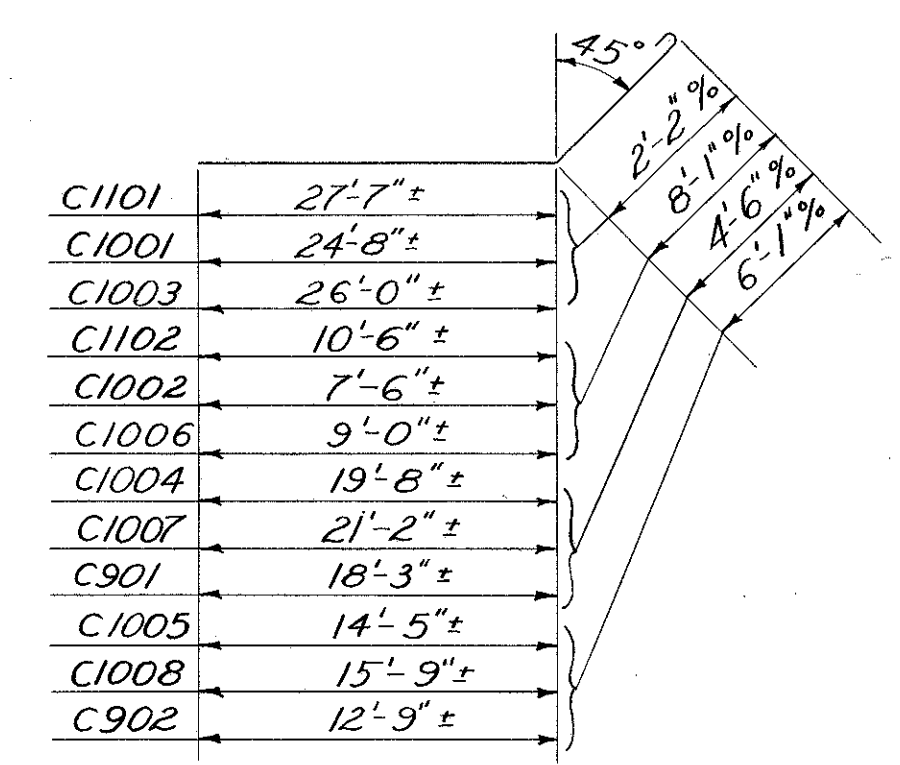
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
PULL BOX AND LIGHTING DETAILS						
Walls Between Bridges No. CUY-42-1881 & CUY-42-1885 Innerbelt Freeway						
Cuyahoga County						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	RTM	TRO	BFG	8-26-57	

REVISIONS
JUL 2 1955

CUYAHOGA COUNTY
CUY-42-18.77

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.	Bending Diagram	Mark	No.	Length	Weight	Shp.	Bending Diagram
C1101	24	31'-4"	3995	B		F601	296	4'-0"	1,778	S	
C1102	24	20'-2"	2572	B		F602	80	9'-6"	1,142	S	
C1001	12	28'-3"	1459	B		F603	28	17'-0"	715	S	
C1002	12	17'-0"	818	B		F604	42	18'-0"	1,136	S	
C1003	18	29'-7"	2291	B		F605	56	19'-0"	1,598	S	
C1004	12	25'-7"	1321	B		W736	2	34'-2"	140	S	
C1005	12	21'-11"	1132	B		W737	12	30'-2"	740	S	
C1006	18	18'-6"	1433	B		W701	27	36'-6"	2,014	B	
C1007	16	27'-1"	1865	B		W702	27	36'-5"	2,010	B	
C1008	16	23'-3"	1601	B		W703	34	23'-2"	1,610	S	
C901	8	24'-0"	653	B	W704	30	22'-2"	1,359	S		
C902	8	20'-1"	546	B	W705	2	10'-0"	41	B		
C601	8	7'-2"	86	S	W706	2	9'-11"	41	B		
C602	8	9'-5"	113	S	W707	139	31'-11"	9,068	B		
C603	8	11'-6"	138	S	W708	139	30'-10"	8,760	B		
C604	8	16'-0"	192	S	W709	24	35'-11"	1,762	B		
C605	8	20'-6"	246	S	W710	24	35'-10"	1,758	B		
C606	8	23'-9"	285	S	W711	34	22'-10"	1,587	S		
C607	12	6'-8"	120	S	W712	30	21'-10"	1,339	S		
C608	12	8'-10"	159	S	W713	6	9'-7"	118	B		
C609	12	11'-0"	198	S	W714	6	9'-6"	117	B		
C610	12	13'-2"	237	S	W733	198	5'-0"	2,024	B		
C611	12	17'-8"	318	S	W734	189	6'-6"	2,511	B		
C612	12	22'-2"	400	S	W735	4	34'-9"	284	S		
C613	12	25'-2"	454	S	W601	30	5'-3"	237	S		
C614	16	6'-2"	148	S	W602	144	4'-11"	1,064	S		
C615	16	8'-3"	198	S	W501	12	26'-9"	335	S		
C616	16	10'-5"	250	S	W502	12	27'-0"	338	S		
C617	16	12'-6"	300	S	W503	16	29'-6"	492	S		
C618	16	14'-7"	350	S	W504	4	28'-9"	120	S		
C619	16	19'-0"	457	S	W505	12	27'-11"	349	S		
C620	16	23'-3"	559	S	W506	12	28'-2"	353	S		
C621	16	26'-6"	637	S	W507	12	30'-8"	384	S		
C501	466	7'-3"	3524	B	W508	8	26'-6"	221	S		
C502	18	5'-7"	105	B	W509	16	29'-1"	485	S		
C503	18	6'-7"	124	B	W510	16	28'-3"	471	S		
C504	18	7'-1"	133	B	W511	16	27'-2"	453	S		
C505	18	7'-11"	149	B	W512	12	26'-4"	330	S		
C506	18	8'-11"	167	B	W513	12	26'-7"	333	S		
C507	18	9'-9"	183	B	W514	12	25'-6"	319	S		
C508	18	10'-7"	199	B	W515	12	25'-9"	322	S		
C509	18	11'-5"	214	B	W516	12	24'-5"	306	S		
C510	18	12'-1"	227	B	W517	12	24'-8"	309	S		
C511	18	12'-7"	236	B	W518	12	26'-11"	337	S		
C512	18	13'-1"	246	B	W519	12	27'-2"	340	S		
C513	18	13'-9"	258	B	W520	4	25'-2"	105	S		
C514	18	14'-3"	268	B	W521	4	26'-8"	111	S		
C515	18	14'-11"	280	B	W522	2	23'-9"	50	S		
C516	18	15'-5"	289	B	W526	16	29'-8"	495	S		
C517	18	15'-11"	299	B	W527	16	30'-3"	505	S		
C518	18	16'-5"	308	B	W528	28	31'-1"	908	S		
C519	18	16'-9"	314	B	W529	12	27'-6"	344	S		
C520	18	17'-3"	324	B	W530	12	27'-9"	347	S		
C521	18	17'-9"	333	B	W531	24	28'-3"	707	S		
C522	18	18'-1"	339	B	W532	24	28'-6"	713	S		
C523	18	18'-7"	349	B							
C524	14	19'-1"	279	B							
C525	14	19'-5"	284	B							
C526	8	19'-11"	166	B							
C527	8	20'-3"	169	B							
C528	8	20'-9"	173	B							
F1101	112	22'-2"	13,190	B							
F1102	48	8'-10"	2,252	B							
F1001	84	20'-10"	7,529	B							
F1002	116	8'-6"	4,243	B							
F901	56	19'-6"	3,713	B							
F902	16	8'-2"	444	B							
F801	220	11'-8"	6,853	B							
F501	188	3'-4"	653	S							



ESTIMATED QUANTITIES

Item	Description	Unit	Retaining Wall	General
E-2	Excavation for structures, as per plan	Lump Sum		Lump
5-1	Class E Concrete, Retaining Walls and Counterforts	Cu Yds	621	
5-1	Class E Concrete, Retaining Wall Footings	Cu Yds	350	
5-3	Type B Waterproofing	Sq Yds	112	
5-4	Reinforcing Steel	Lbs.	132,181	
5-9	1" Preformed Gray Sponge Rubber Expansion Joint Filler	Sq Ft	310	
5-14	Railing (Aluminum rails and posts, and concrete parapet)	Lin. Ft	26,342	
5-16	First Test Pile	Lump Sum		Lump
5-18	12" Cast-In-Place Reinforced Concrete Piles	Lin. Ft.	16,200	
5-25	Electric lighting system, as per plan	Lump Sum		Lump
5-25	2" Electrical Conduit (fiber)	Lin. Ft.	85	
5-29	Porous Backfill	Cu Yds.	454	
5-29	8" Perforated, bituminous coated, corrugated metal pipe.	Lin. Ft.	270	
5-29	10" Bituminous coated corrugated metal pipe.	Lin. Ft.	5	

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated October 1, 1951, together with revisions thereof dated July 15, 1952, April 1, 1954 and February 1, 1955.

PILING: 12" cast-in-place reinforced concrete piling shall be driven to a minimum bearing capacity of 30 tons. The length of penetration of every pile shall be at least 80% of the estimated average length of penetration of the piles, unless a lesser penetration is approved by the Director. The estimated average penetration length is 75 feet.

COMMON DETAILS: For details of the rustication groove, aluminum hand railing and parapet see Sheet No. 128 "Common Detail Sheet."

REFERENCE shall be made to Supplemental Specification No. S-114, Aluminum for Bridge Railing, revised 8-1-57.

SURFACE FINISH OF CONCRETE: Exposed surface of Retaining Wall shall receive a rubbed surface finish.

SHEETING AND BRACING: Refer to note on Sheet No. 45

NOTES:
BAR SIZE indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, 5701 is a No. 7 size bar and P1101 is a No. 11 size bar.
REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

Railing			
R501	180	4'-5"	830
R502	4	23'-2"	97
R503	4	34'-9"	145
R504	20	30'-2"	629
R505	4	34'-2"	143
R506	4	22'-10"	95

Replacement Bars			
RE1101	2	7'-6"	5
RE1001	2	7'-2"	5
RE901	1	6'-10"	5
RE801	1	6'-6"	5
RE701	3	6'-2"	5
RE601	1	5'-11"	5
RE501	3	5'-7"	5

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ESTIMATED QUANTITIES, GENERAL NOTES
REINFORCING STEEL LIST
RETAINING WALL BETWEEN
BRIDGES No. CUY-42-1881 & 1885
INNERBELT FREEWAY
CUYAHOGA COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	LDC	TRO	BFG	8-26-57	

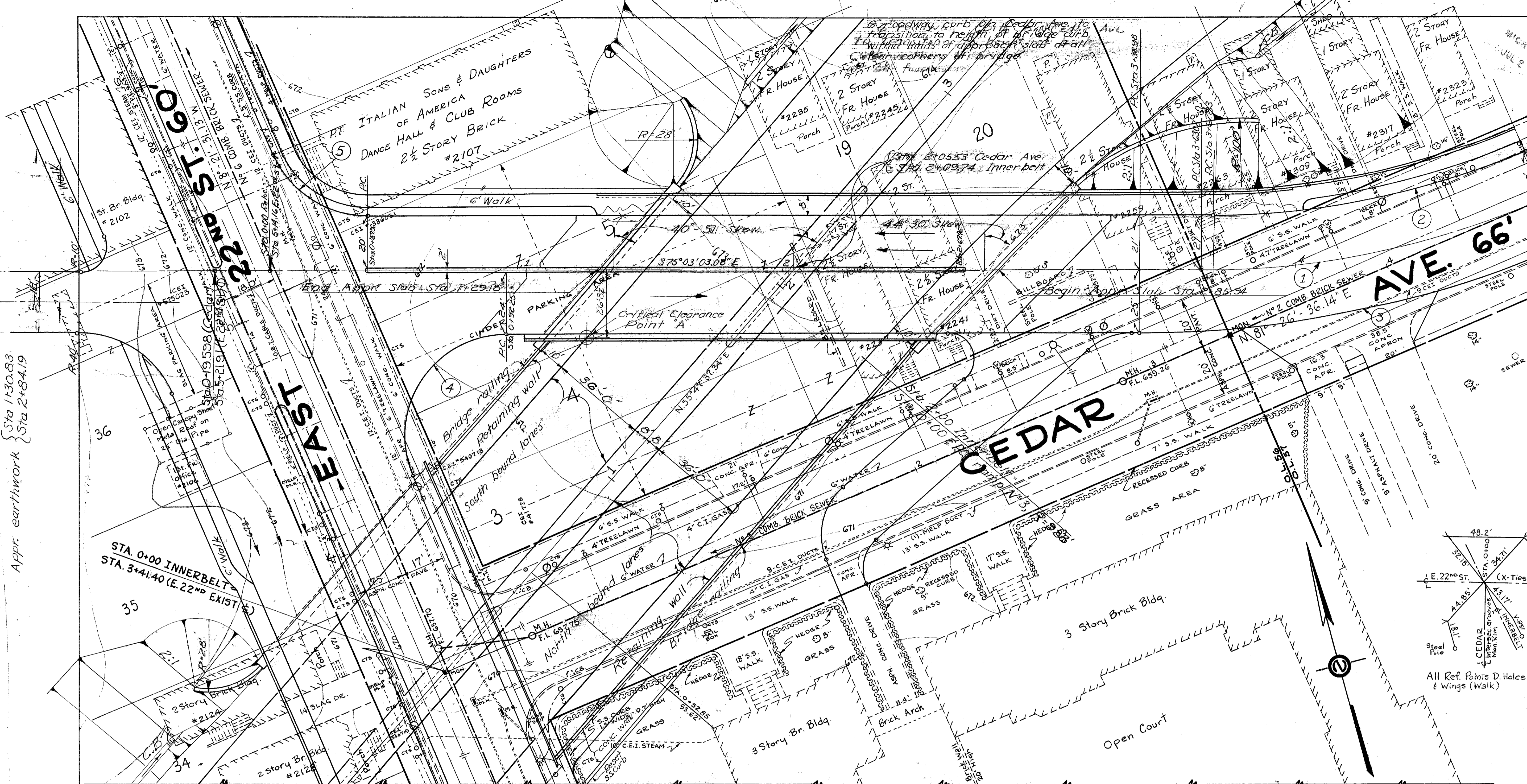
CUYAHOGA COUNTY
SEC. CUY. - 42 - 18.77
In Cleveland

2 AB5-T.B.M.*6, D.H. in curb on S.W. cor. of E. 22nd St. & Carnegie Ave., 7.41' W. of C.E.I. Steambox, 2.41ft. E. of W. edge of S. walk of Carnegie, 8.66' N. of S. edge of S. walk of Carnegie
 Adjusted Elev. = 671.629

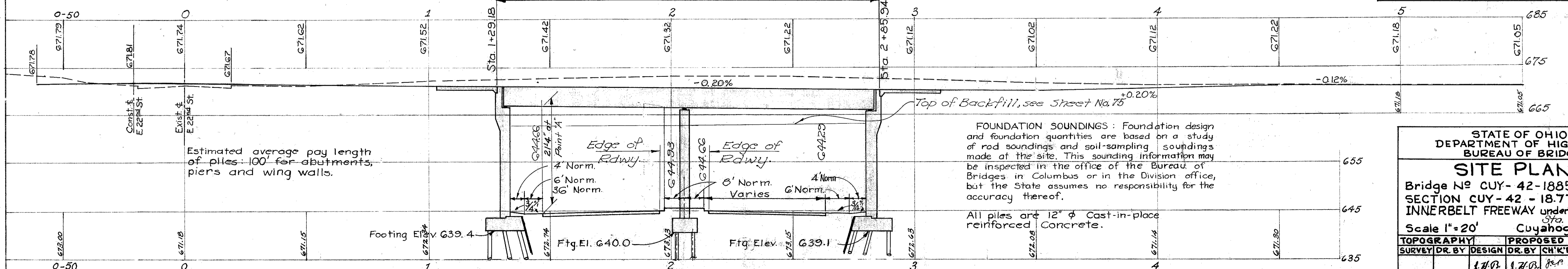
① R=33703 Δ=23°30'-21" T=70.120 L=138.268 C=137.300 D=17°	② R=304.978 Δ=23°30'-21" D=18.787° T=63.451 L=125.119 C=124.243	③ R=417.290 Δ=23°30'-21" D=13.730° T=86.828 L=171.195 C=163.397	④ R=40' Δ=113°18'-28" T=60.788 L=79.104 C=66.829	⑤ R=40' Δ=66°41'-32" T=26.321 L=46.560 C=43.976
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Appr. earthwork { Sta 1+30.83
Sta 2+84.19

Approach pavement



PROPOSED STRUCTURE
 TYPE: Cont. steel beams with reinf. conc. deck and reinforced conc. substr.
 SPANS: 73.37' and variable (74.18' to 80.57')
 ROADWAY: 46' 1/2 curbs with 8' S.W. on North & 2' safety curb on South
 LOAD FREQUENCY: CF = 2000 (51)
 SKEW: 40°-51' & 44°-30'
 WEARING SURFACE: Bituminous
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.

All piles are 12" Ø Cast-in-place reinforced Concrete.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

SITE PLAN
 Bridge No CUY- 42-1885
 SECTION CUY- 42 - 18.77
 INNERBELT FREEWAY under CEDAR AVE.
 Scale 1"=20'

TOPOGRAPHY	PROPOSED WORK
SURVEY DR. BY	DESIGN DR. BY
J.N.P.	J.N.P.
J.P.S.	J.P.S.

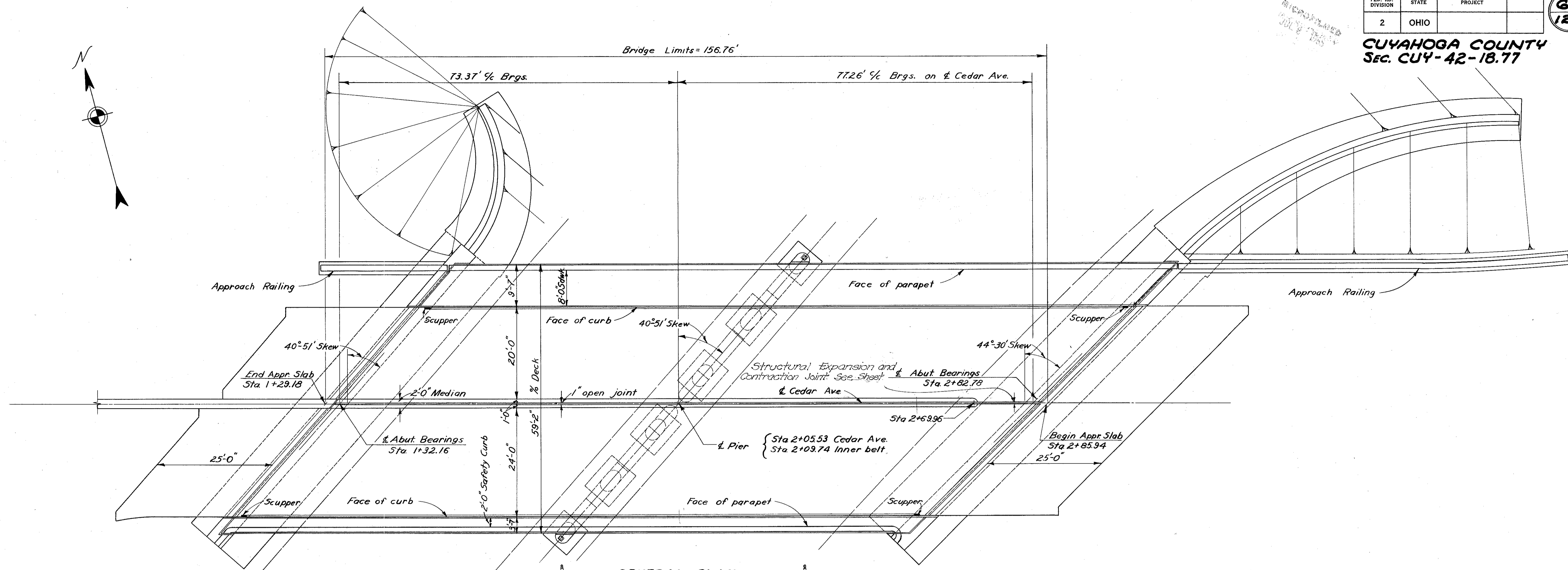
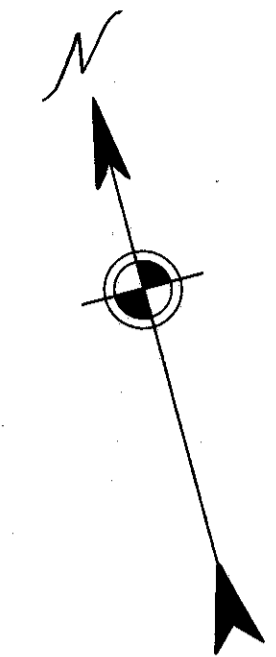
CEDAR AVE - INNERBELT BRIDGE SITE PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

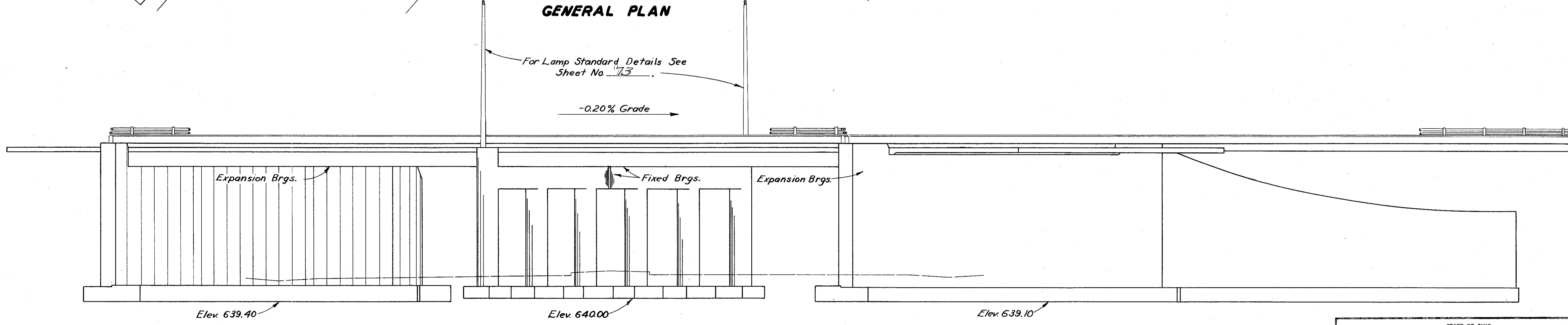
64
129

CUYAHOGA COUNTY
SEC. CUY-42-18.77

MICROFILMED
JULY 1985



GENERAL PLAN



ELEVATION
(Piling not shown)

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN & ELEVATION						
BRIDGE NO. CUY-42-1885						
INNERBELT FREEWAY						
UNDER CEDAR AVE.						
CUYAHOGA COUNTY						STA. 2+09.74
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.E.Y.	R.L.D.	L.D.C.	B.F.G.	B.F.G.	8-17-57	

APPROVED
JUL 2 1957

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification 5-114, revised 8-1-57.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

PILES shall be driven to a minimum bearing capacity of 40 tons.

PILE TEST LOADS: A "First Pile Test Load" and "Subsequent Pile Test Loads" shall be applied if and where needed as directed by the Engineer.

WELDING shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus: $\overline{\text{B}}$

WELDED STEEL: The steel for the 3C W-24.5, 3C W-26.0, and the 3C W-30.0 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4(a) of the Construction and Material Specifications) or to A-373.

SURFACE FINISH OF CONCRETE: Railing parapets, fascias of deck, curb faces, exposed surfaces of piers, wingwalls and abutments shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

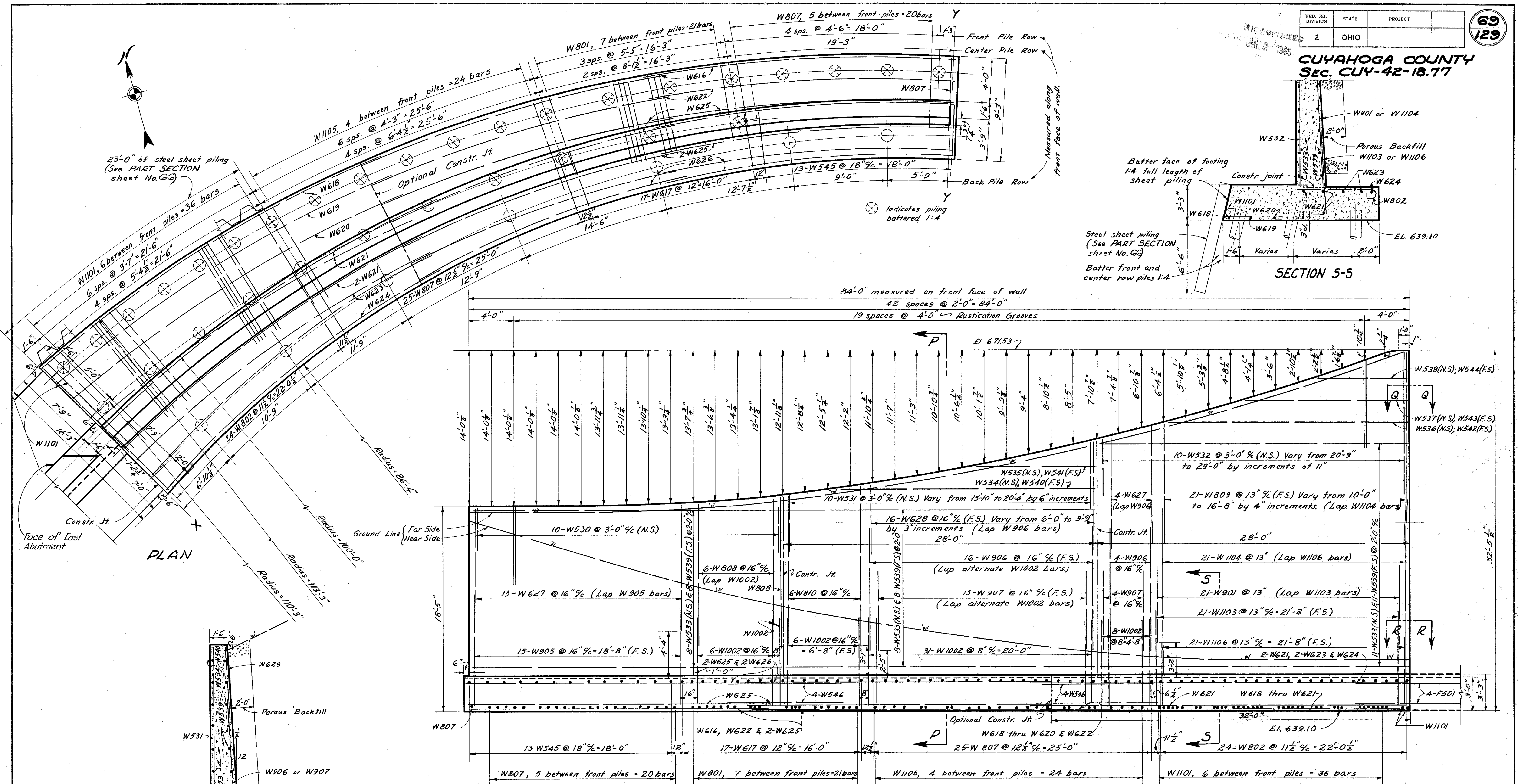
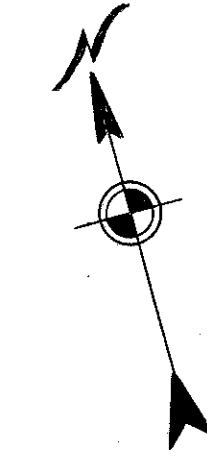
DECK CONSTRUCTION PROCEDURE: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections, between transverse construction joints which are normal to the centerline of bridge and are located near the center of any span.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines, shall be borne by the respective owners of the lines. The Contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Abuts.	Piers	Super.	Wingwalls	Gen'l.	
E-2	Lump	Sum	Excavation for structures, as per plan					Lump	
E-2	1981	Sq. Ft.	Steel sheet piling left in place	1750			231		
5-1	305	Cu. Yds.	Class "C" concrete, superstructure			305			
5-1	100	Cu. Yds.	Class "C" concrete, pier caps & columns		100				
5-1	533	Cu. Yds.	Class "E" concrete, footings	308	49		176		
5-1	683	Cu. Yds.	Class "E" concrete, abutment and wingwalls	511			172		
5-3	731	Sq. Yds.	Type "C" waterproofing			731			
5-3	99	Lin. Ft.	Waterproofing, premolded sealing strip			99			
5-3	20	Sq. Yds.	Type "B" waterproofing				20		
5-4	209,892	Lbs.	Reinforcing steel	75,120	25,660	80,136	28,976		
5-7	399,400	Lbs.	Structural steel			399,400			
5-8	399,400	Lbs.	Field painting of structural steel			399,400			
5-9	119	Sq. Ft.	1 gray sponge rubber preformed expansion joint filler				119		
5-14	310.66	Lin. Ft.	Bridge railing (aluminum railing and supports and concrete parapet)			310.66			
5-14	113.58	Lin. Ft.	Approach railing (aluminum railing and supports, concrete footing & parapet)					113.58	
5-16	Lump	Sum	First test pile					Lump	
5-17	Lump	Sum	First pile test load					Lump	
5-17	1	Each	Subsequent pile test load					1	
5-18	19,700	Lin. Ft.	12" # Cast-in-place reinforced concrete piles	11,000	3,200		5,500		
5-25	Lump	Sum	Electric lighting system (as per plan)					Lump	
5-25	317	Lin. Ft.	2" # electric conduit (fiber)	10		307			
5-29	304	Lin. Ft.	Subdrainage for wearing surface course			304			
5-29	100	Lin. Ft.	6" # W.I. or galvanized steel pipe, including specials	100					
5-29	200	Lin. Ft.	8" # perforated bituminous coated corrugated metal pipe	85			115		
5-29	87	Lin. Ft.	10" # perforated bituminous coated corrugated metal pipe	87					
5-29	8	Lin. Ft.	10" # bituminous coated corrugated metal pipe, including specials	8					
5-29	513	Cu. Yds.	Porous backfill	339			174		
T-35	51	Cu. Yds.	Asphaltic concrete surface course, Type "C" (60-70)			51			
5-9	Lump	Sum	Structural Expansion and Contraction Joint					Lump	

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
GENERAL NOTES AND ESTIMATED QUANTITIES BRIDGE No. CUY-42-1885 INNERBELT FREEWAY UNDER CEDAR AVE					
CUYAHOGA COUNTY				STA. 2+09.74	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
NEV.	Grasselli	B.G.P.	BFG	9.8.57	8-19-57

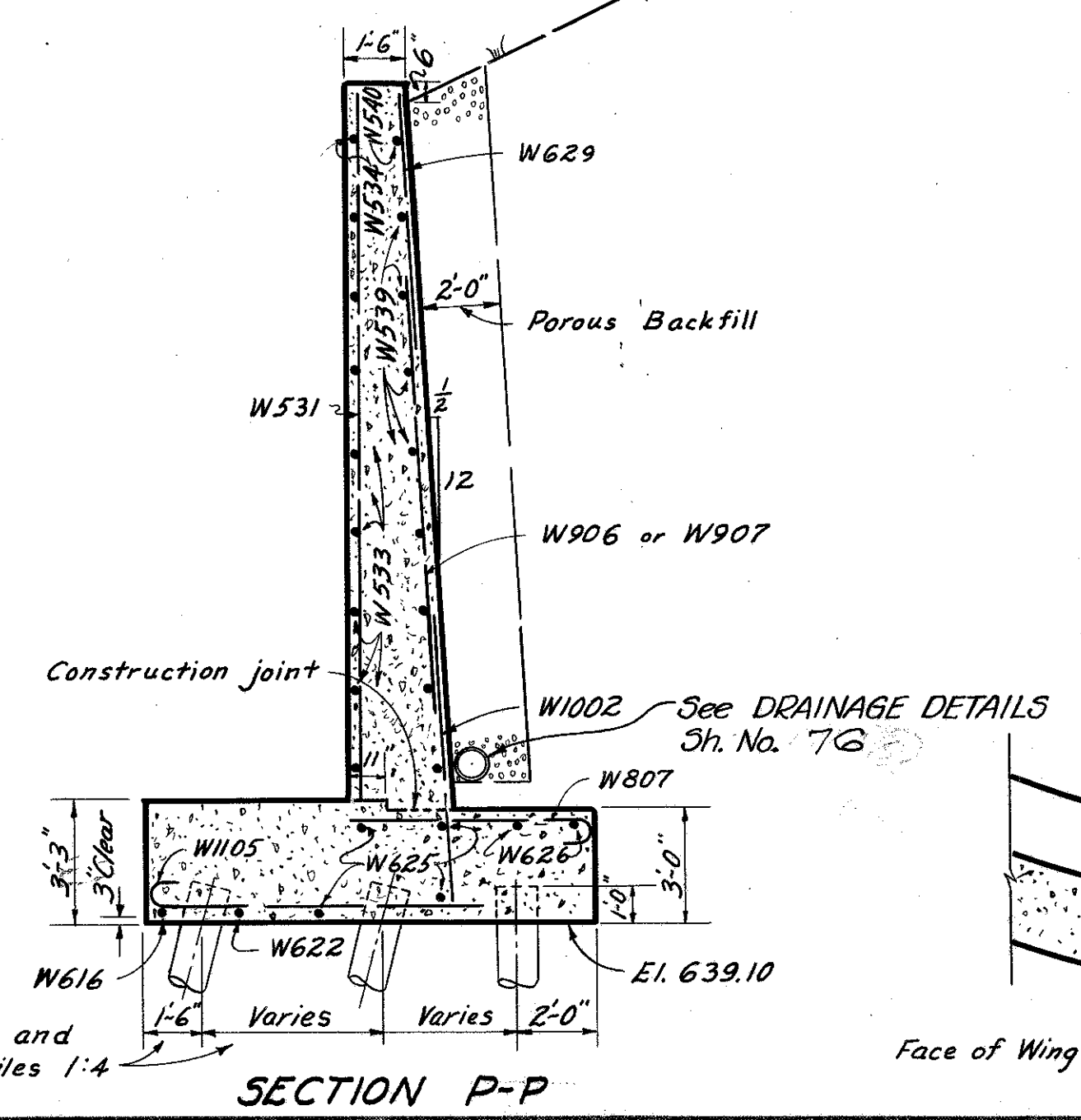
CUYAHOGA COUNTY
SEC. CUY-42-18.77



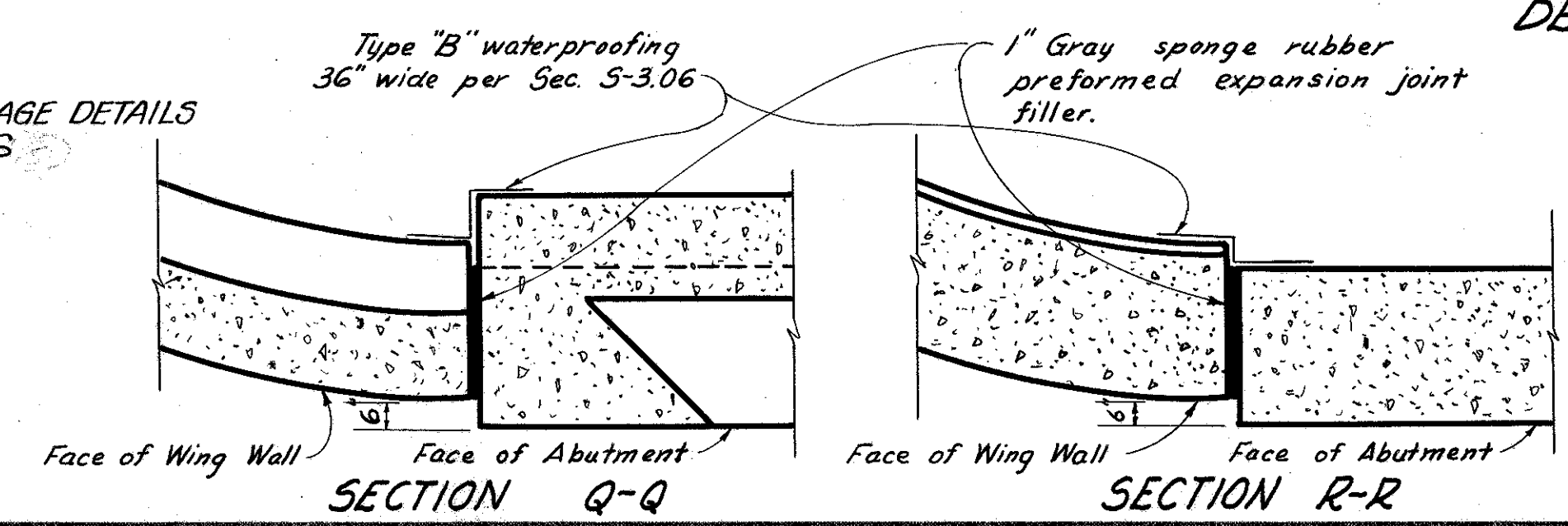
PLAN

DEVELOPED ELEVATION ALONG FRONT FACE OF WALL

SECTION 5-5

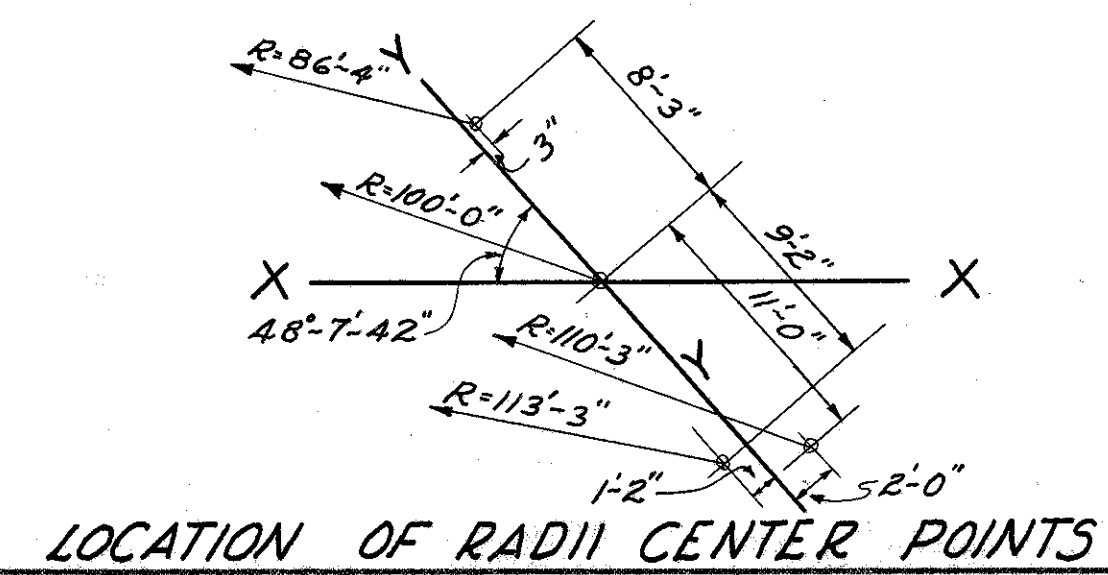


SECTION P-P



SECTION Q-Q

SECTION R-R

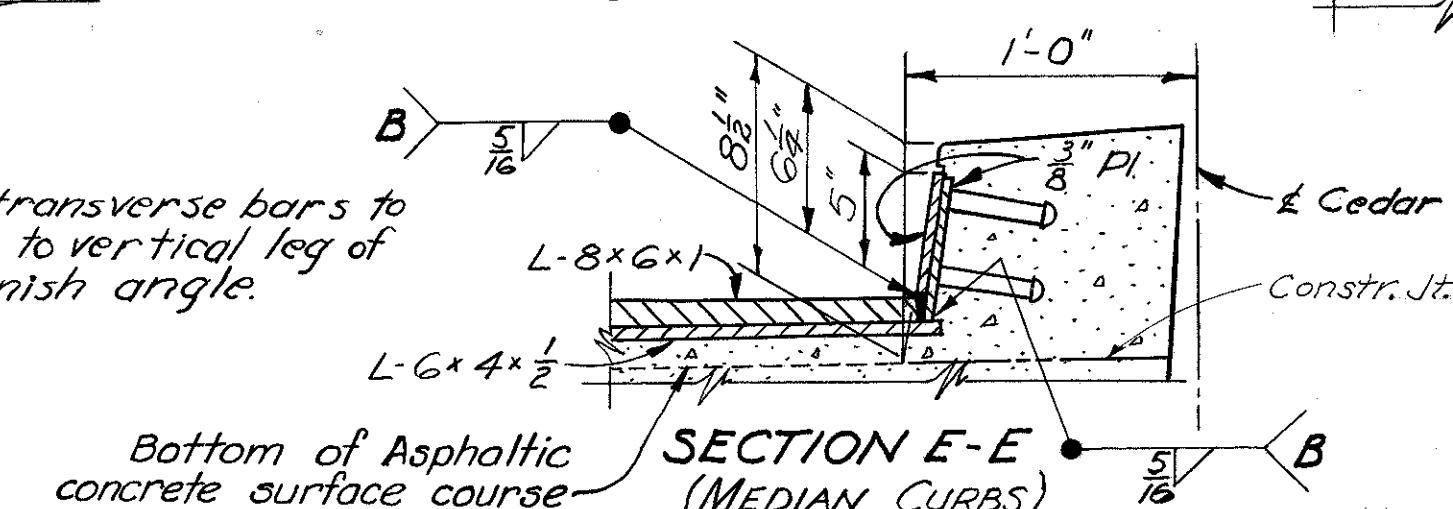
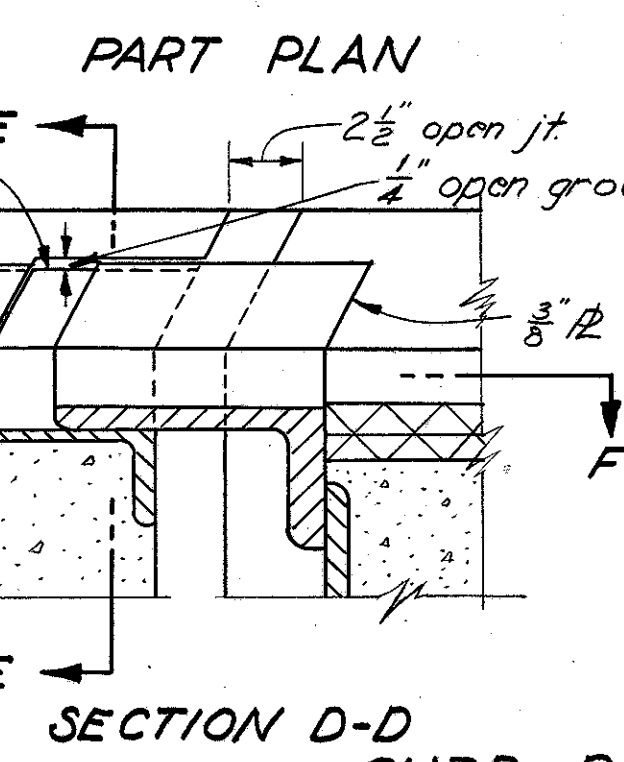
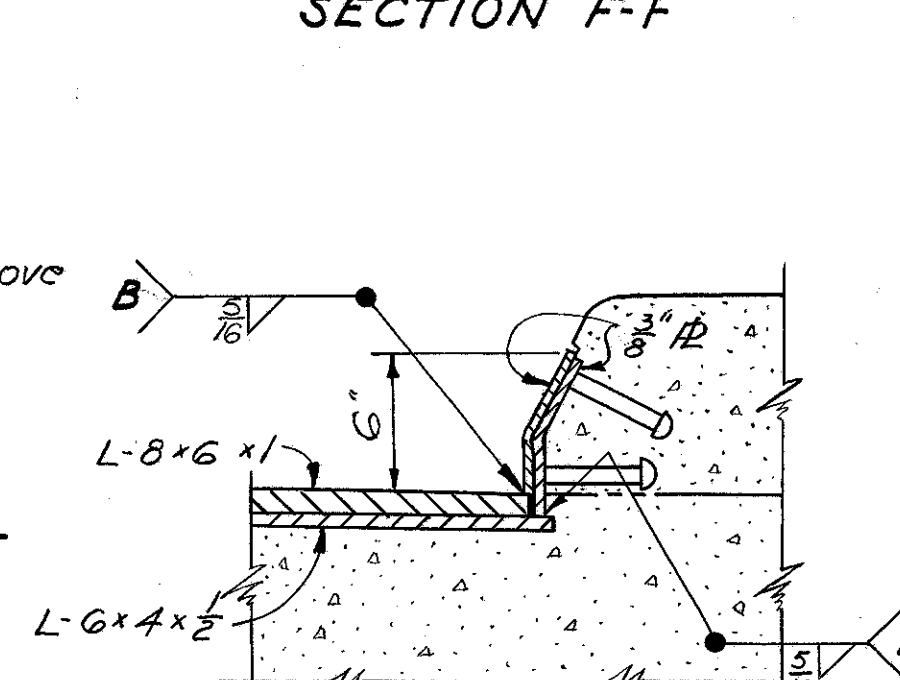
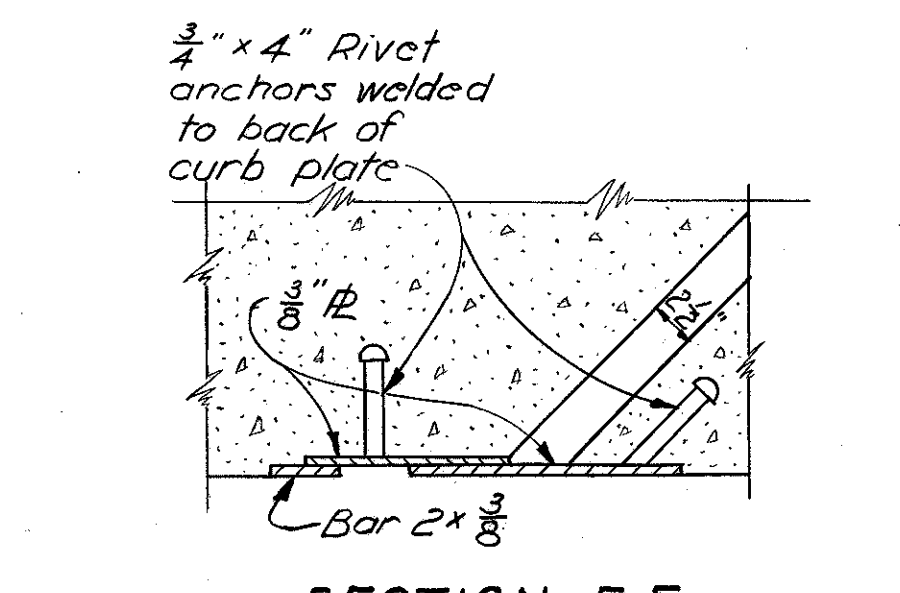
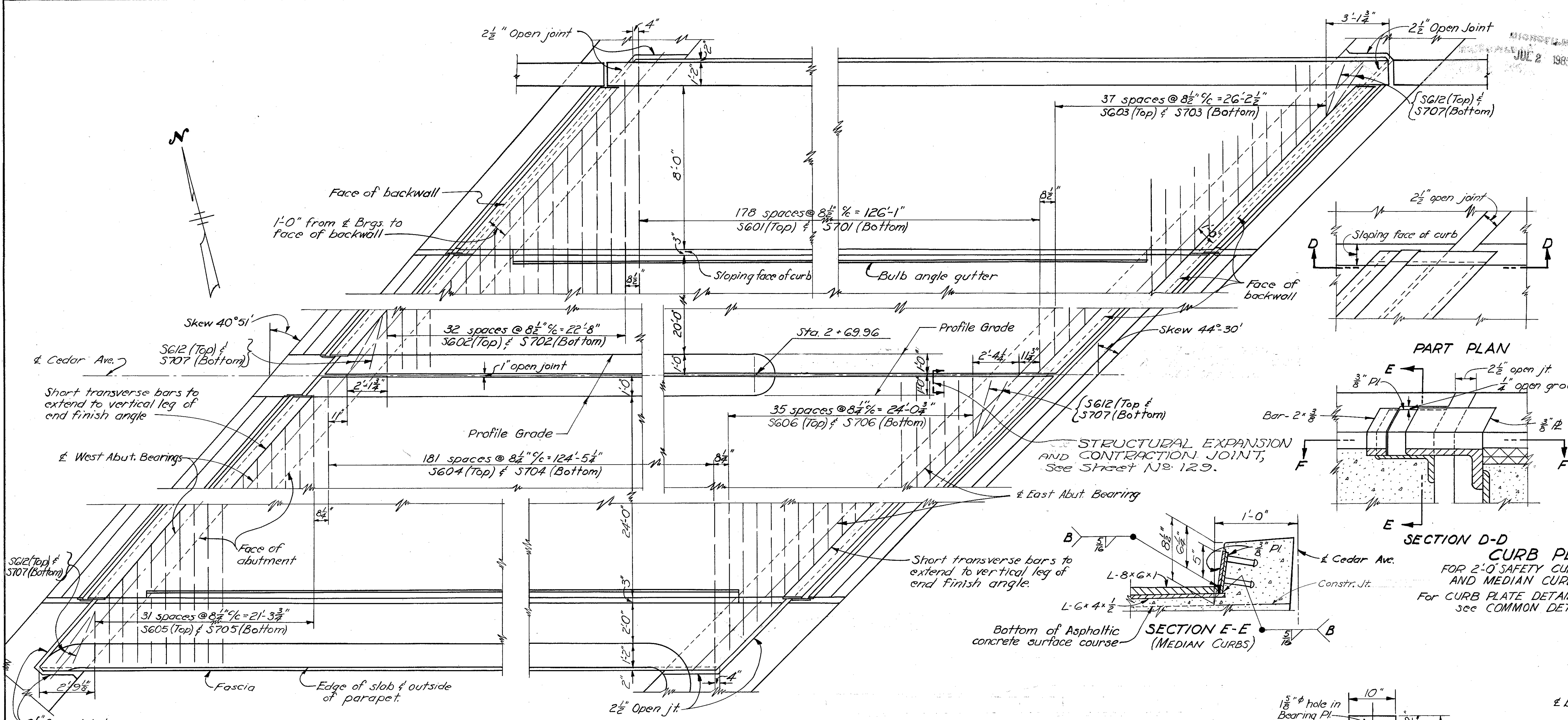


LOCATION OF RADII CENTER POINTS

See Sheet No. 66 for detail of Contraction Joint.
See Common Detail Sheet for Rustication Groove Details.

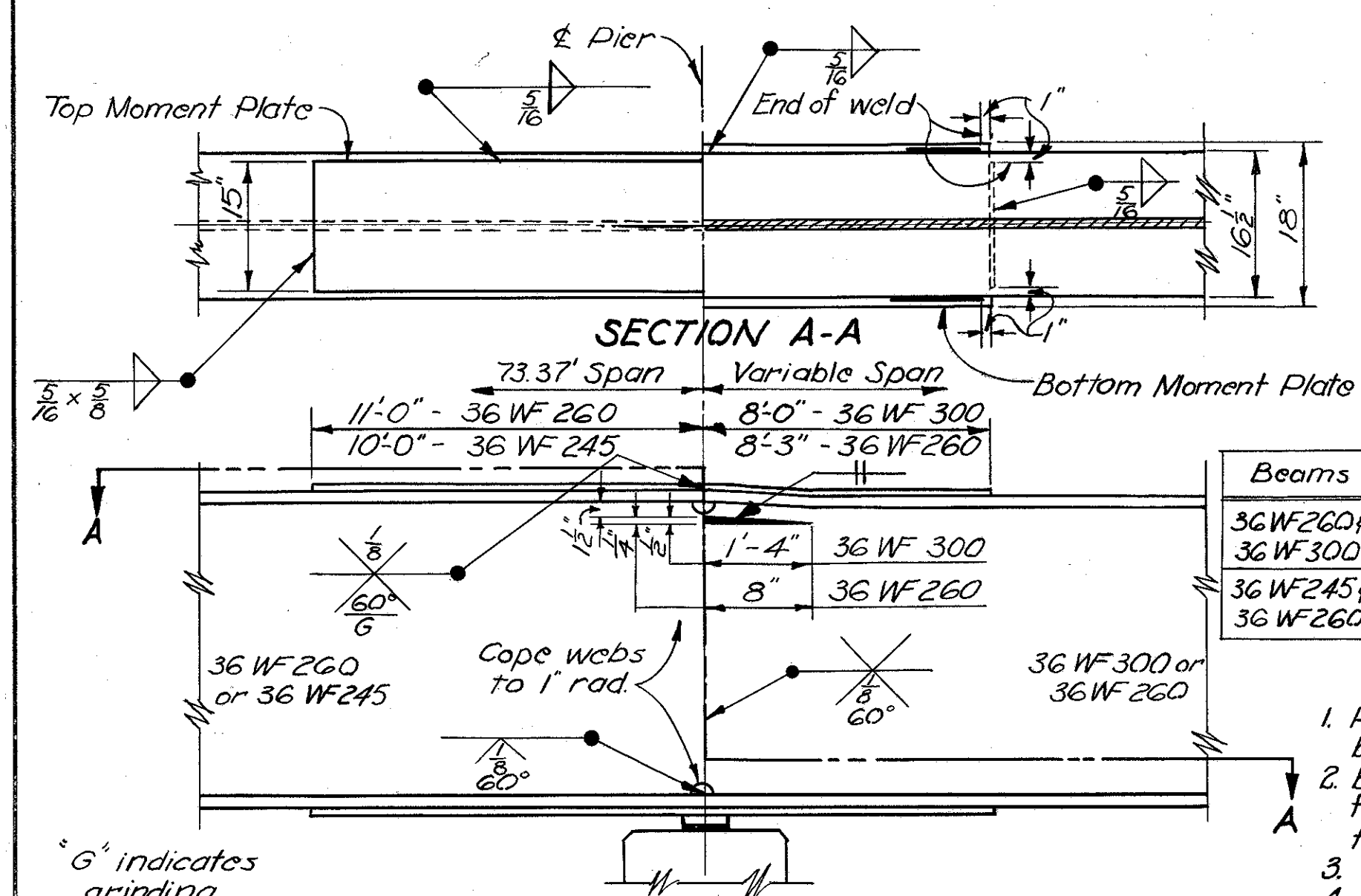
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
NORTH EAST WING WALL DETAILS BRIDGE NO CUY-42-1885 INNERBELT FREEWAY UNDER CEDAR AVE. CUYAHOGA COUNTY STA 2+09.74						
DESIGNED NEY	DRAWN RLD	TRACED J.E.P.	CHECKED B.G.	REVIEWED B.F.G.	DATE 8-19-57	REVISED

JUL 2 1985



CURB PLATE DETAILS
FOR 2'-0" SAFETY CURBS (SOUTH SIDE OF BRIDGE)
AND MEDIAN CURBS AT WEST ABUTMENT
For CURB PLATE DETAILS for sidewalk (north side of bridge)
see COMMON DETAILS; Sheet No 128

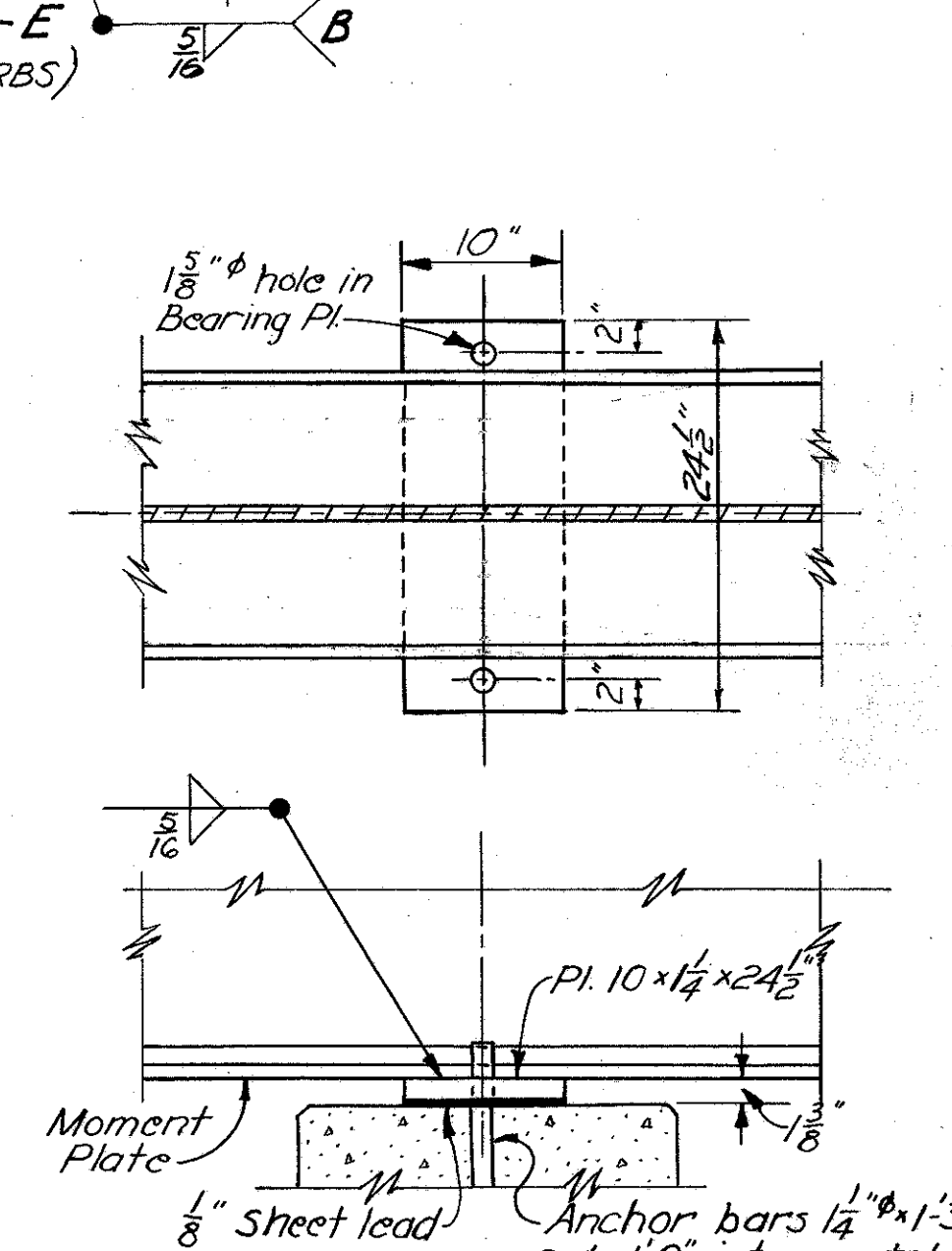
PART PLAN OF SUPERSTRUCTURE SHOWING SHORTENED TRANSVERSE STEEL



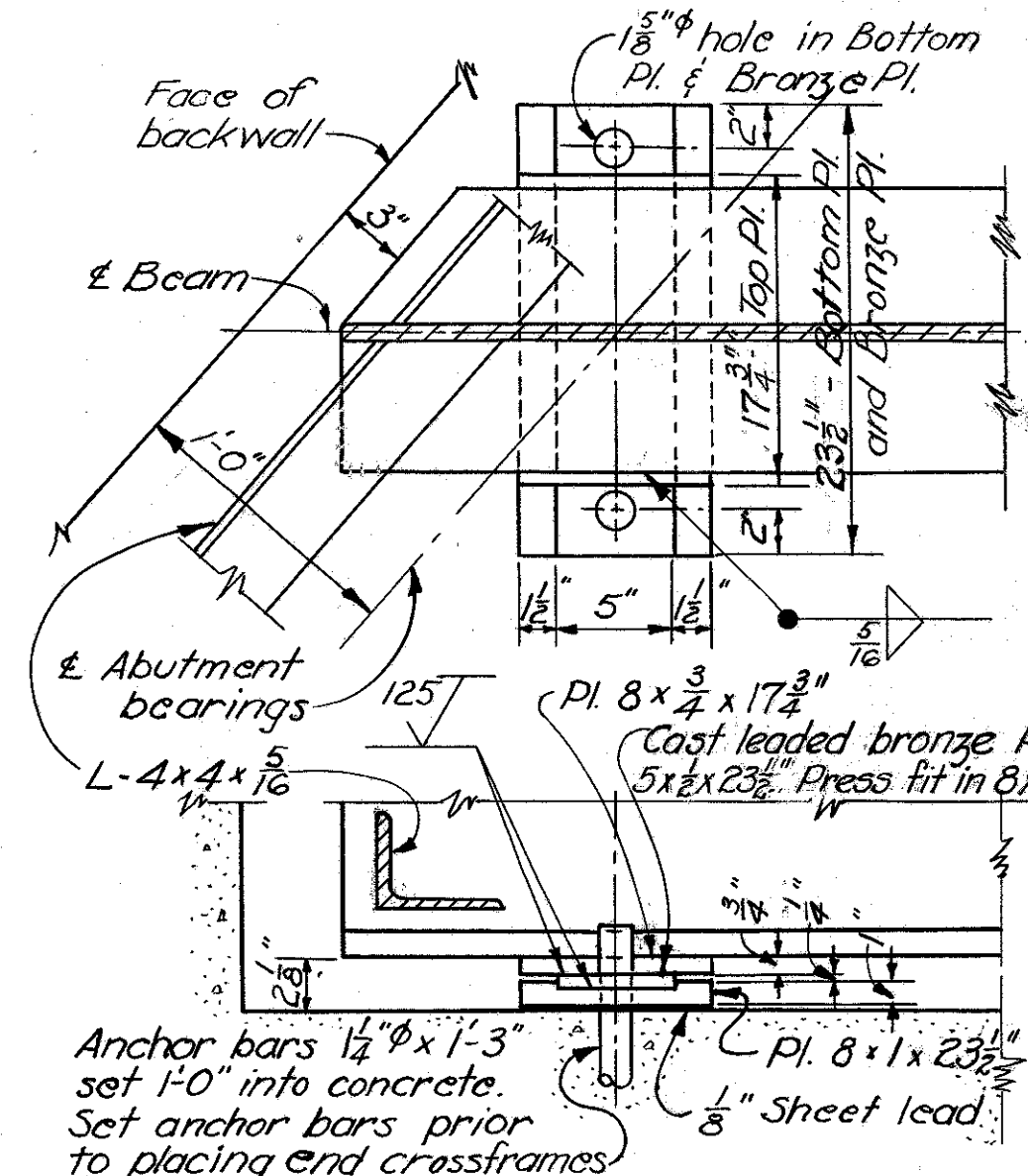
Beams	Top Mom. #	Bot. Mom. #
36 WF 260 & 36 WF 300	15 x 3/4 x 19'-0"	18 x 1/16 x 19'-0"
36 WF 245 & 36 WF 260	15 x 5/8 x 18'-3"	18 x 1/16 x 18'-3"

- BEAM SPLICE WELDING PROCEDURE:**
1. Raise the west abutment end of the 36 WF 260 beams 2 3/8" and the 36 WF 245 beams 2 1/4".
 2. Butt-weld the beam flanges and web, using the following sequence: make one pass on each flange, then one on the web; repeat until welds are completed.
 3. Weld the bottom and top moment plates.
 4. Lower end of beam to final position.

SPLICE OF 36 WF 260 & 36 WF 300 BEAMS
AND 36 WF 245 & 36 WF 260 BEAMS
BEAM SPLICE DETAILS



PIER BEARING PLATES



ABUTMENT BEARING PLATES

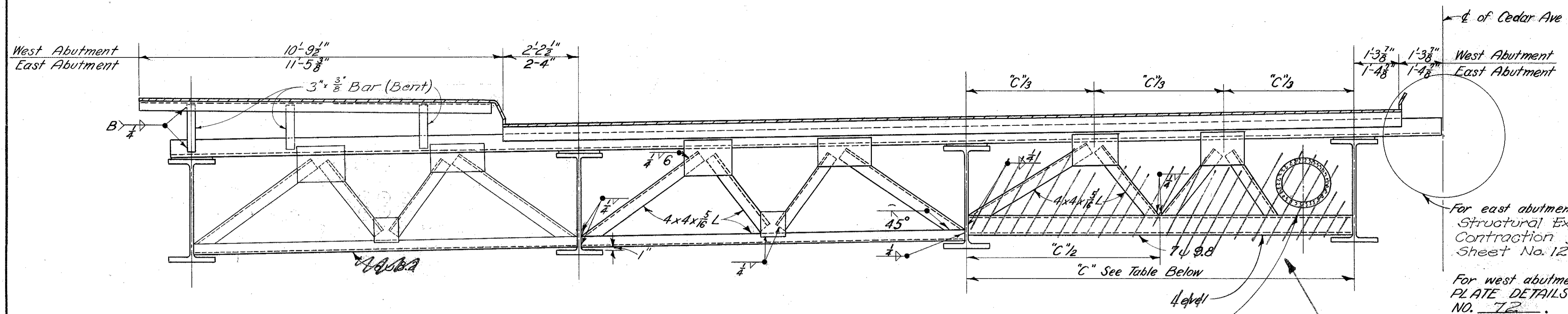
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
BRIDGE No. CUY-42-1885
INNERBELT FREEWAY
under CEDAR AVE.
CUYAHOGA COUNTY STA. 2+09.74

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.E.Y.	N.E.Y.	REM.	REY.	BFG	8-19-57	

RECORDED
JUL 2 1965

CUYAHOGA COUNTY
Sec. CUY - 42 - 18.77



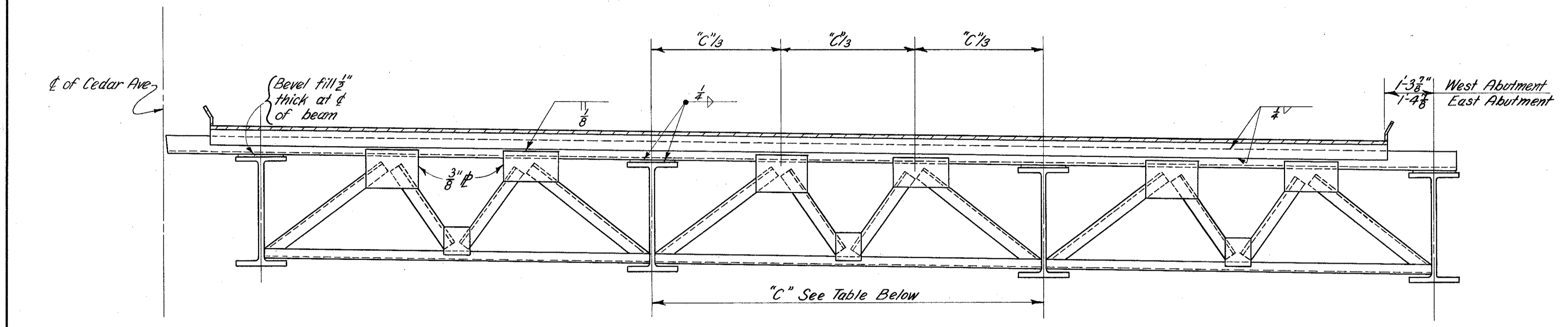
NORTH SIDE

For "Detail of Water Aperture Support" See Sheet No. 52
Bridge No. CUY-42-18.77

For east abutment see:
Structural Expansion and
Contraction joint. See
Sheet No. 129.

For west abutment see "CURB
PLATE DETAILS", SHEET
NO. 72.

Crossframes same as
other bays

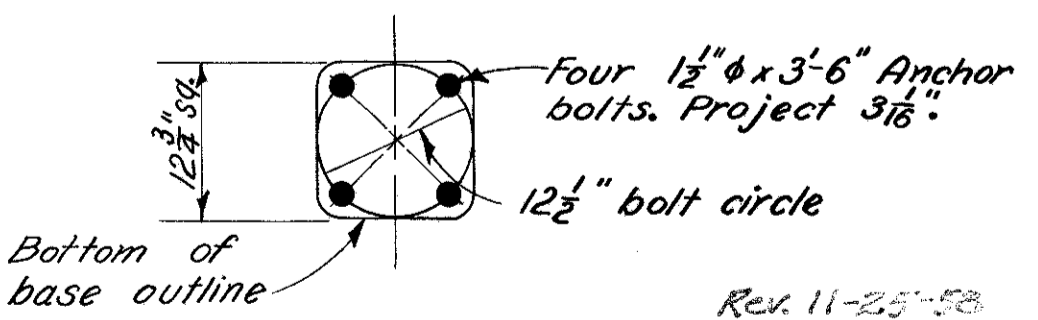
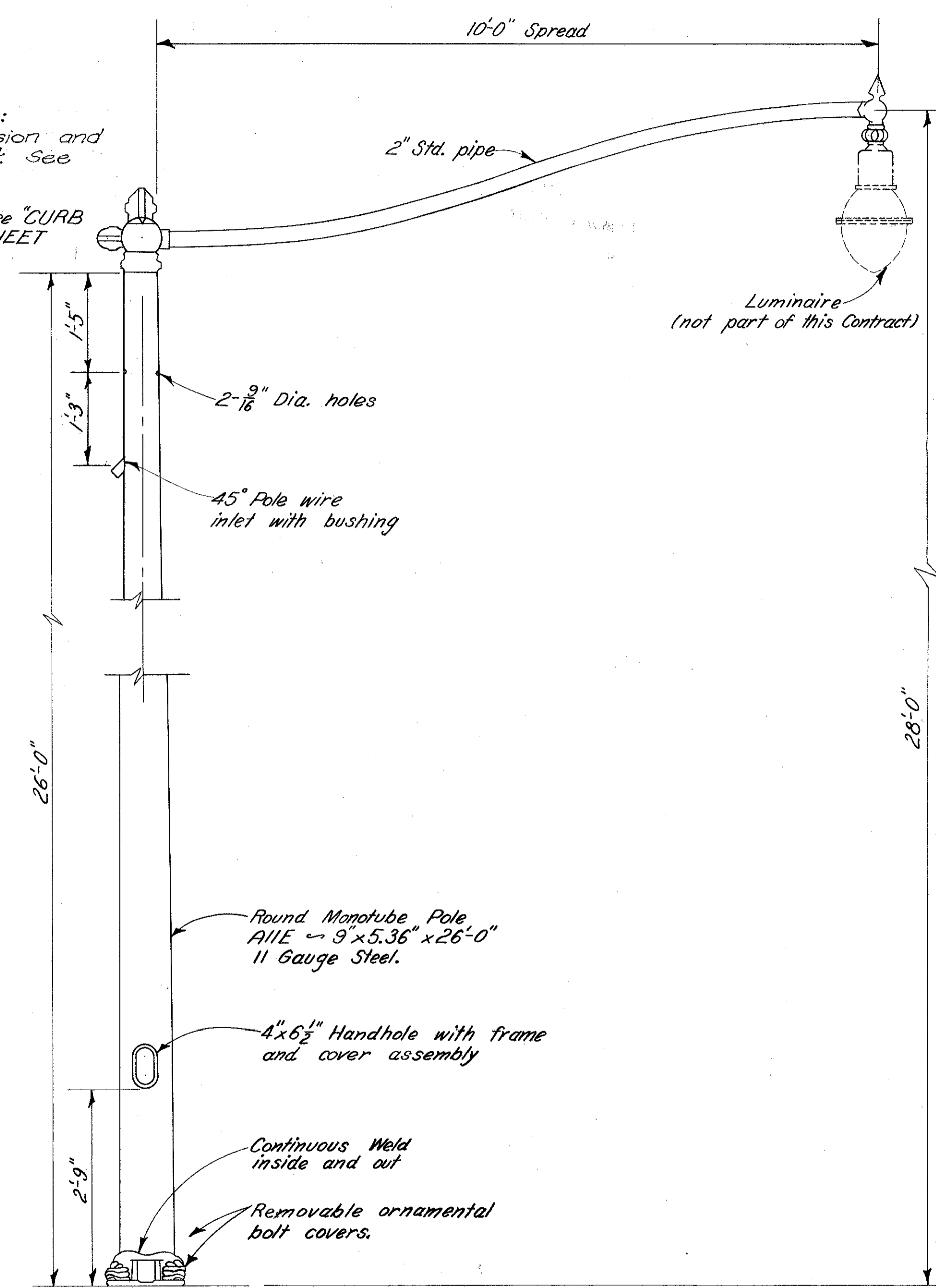


SOUTH SIDE

SECTIONS SHOWING END FINISH DETAILS AT WEST ABUTMENT (Looking East)

EAST ABUTMENT (Looking East) similar except as shown.

Location	Beam Spcg.	"C"
West Abut.	8'-8"	11'-5 1/2"
West Abut.	8'-0"	10'-6 3/4"
East Abut.	8'-8"	12'-1 3/4"
East Abut.	8'-0"	11'-2 3/8"



**DETAIL OF
LAMP STANDARD**

SEE COMMON DETAILS SHEET NO. 128 FOR:
1- SIDEWALK END FINISH DETAILS
2- ROADWAY END FINISH DETAILS
3- CURB PLATE DETAILS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

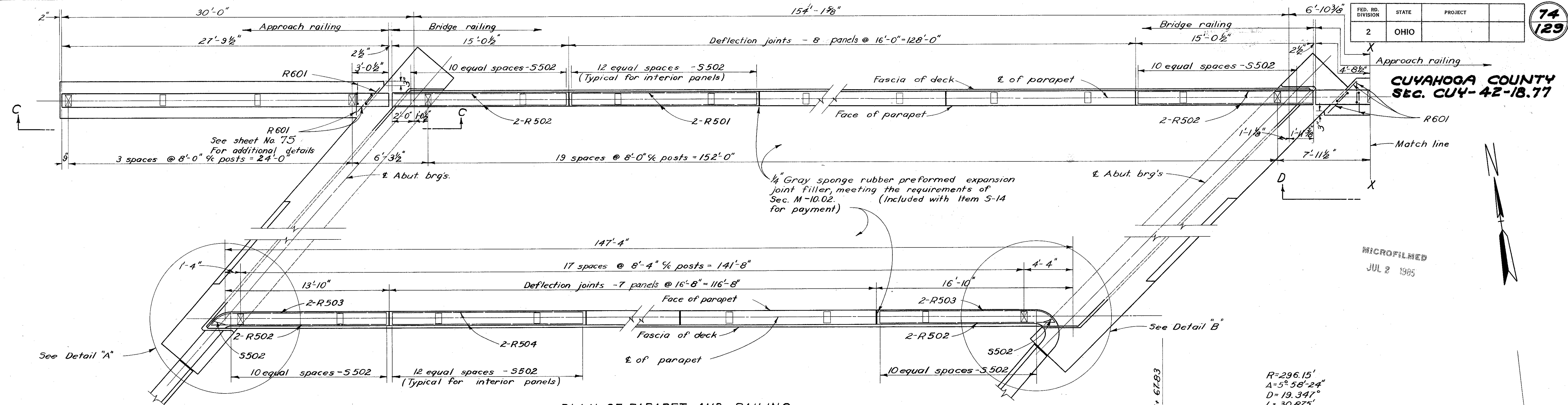
**SUPERSTRUCTURE AND
LIGHTING DETAILS
BRIDGE NO CUY-42-1885
under CEDAR AVE.**

Cuyahoga County Sta. 2 + 09.74

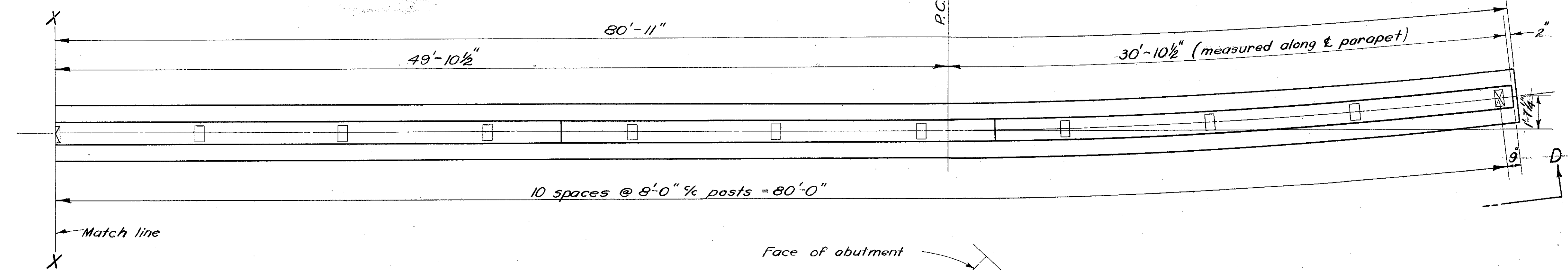
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NEY	R.L.D.	P.T.M.	BFG	A.G.	8-19-57	

CUYAHOGA COUNTY
SEC. CUY-42-18.77

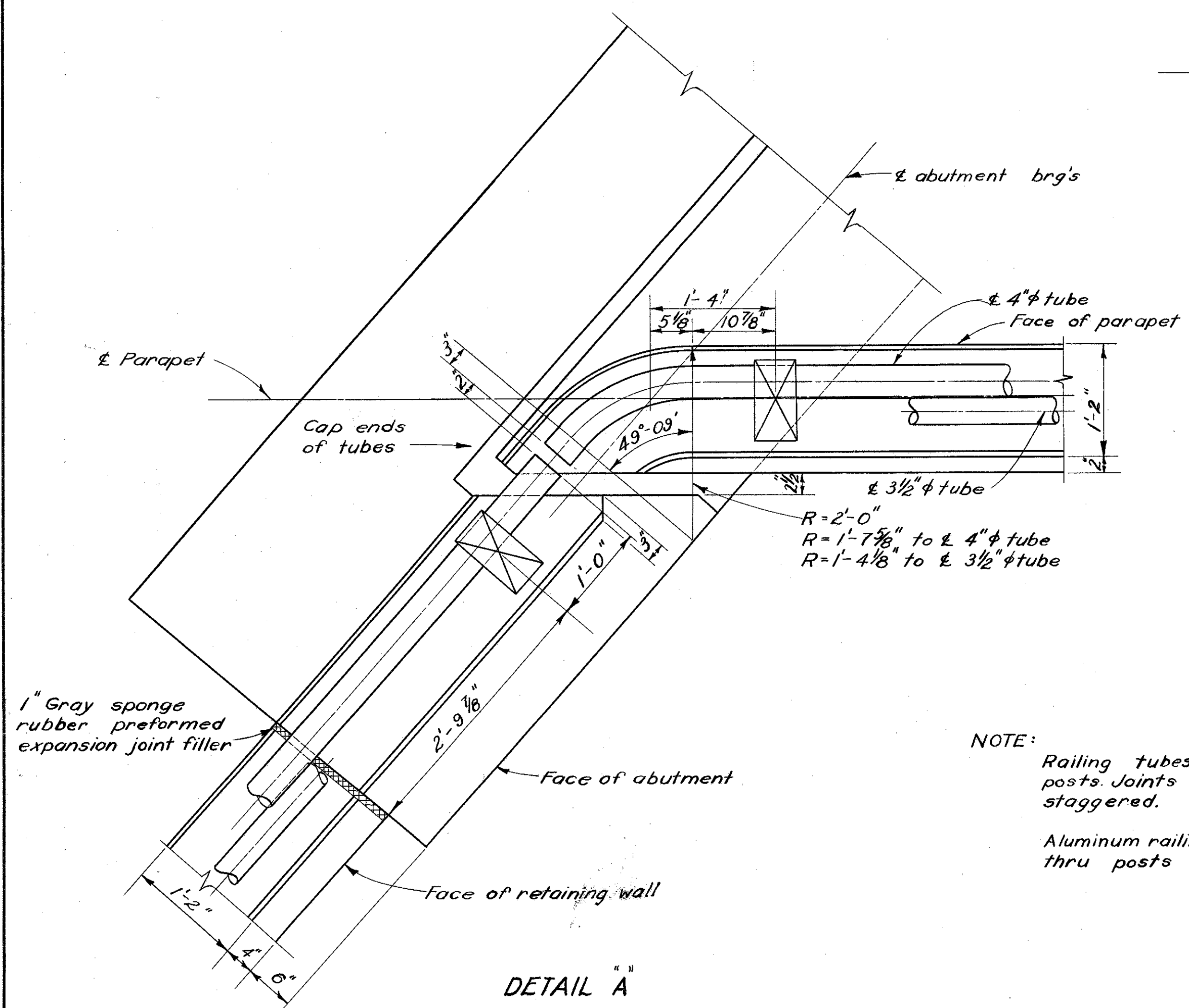
MICROFILMED
JUL 2 1985



PLAN OF PARAPET AND RAILING
All longitudinal dimensions measured along ϵ of parapet
For views C-C and D-D see Sheet No. 75.

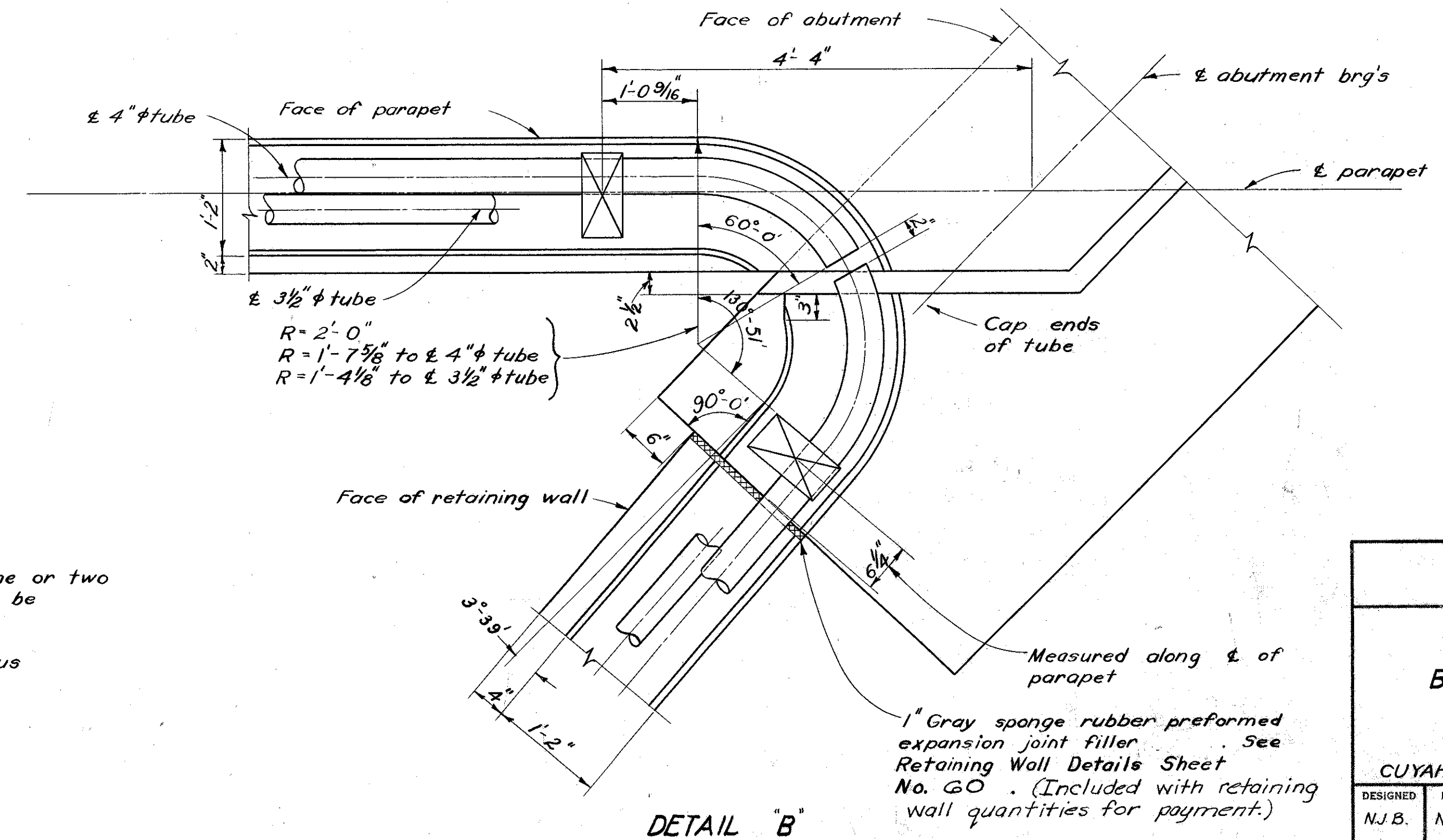


R=296.15'
A=5° 58'-24"
D=19.347'
L=30.875'
T=15.451'



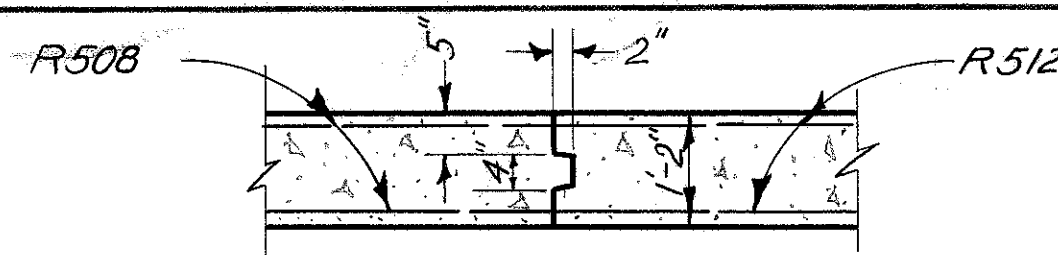
DETAIL A

NOTE:
Railing tubes shall be continuous thru one or two posts. Joints in upper and lower rails to be staggered.
Aluminum railing tubes shall be continuous thru posts marked \boxtimes .

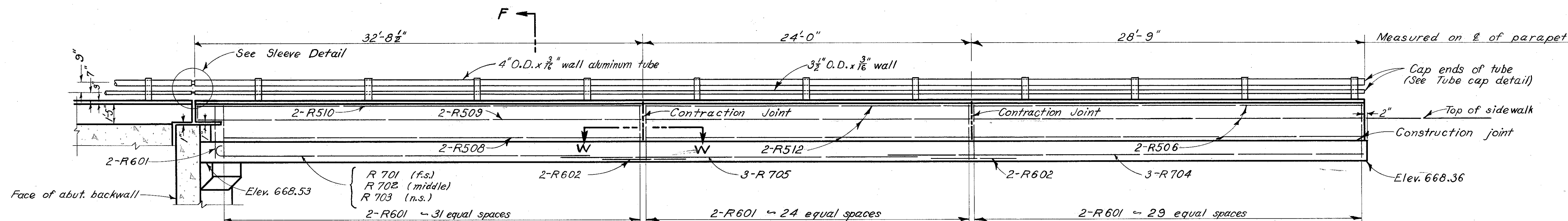


DETAIL B

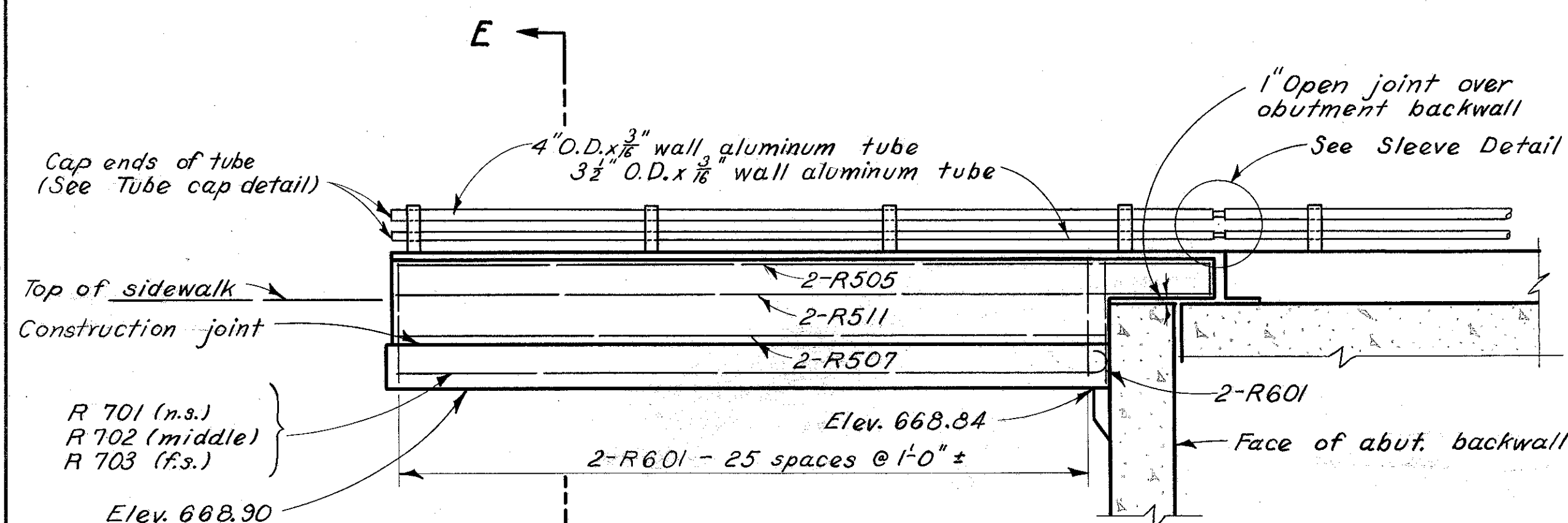
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
RAILING DETAILS						
BRIDGE NO. CUY-42-1885 INNEBELT FREEWAY UNDER CEDAR AVE.						
CUYAHOGA COUNTY STA. 2+09.74						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.J.B.	N.J.B.	L.D.C.	D.S.H.	B.F.G.	8-19-74	



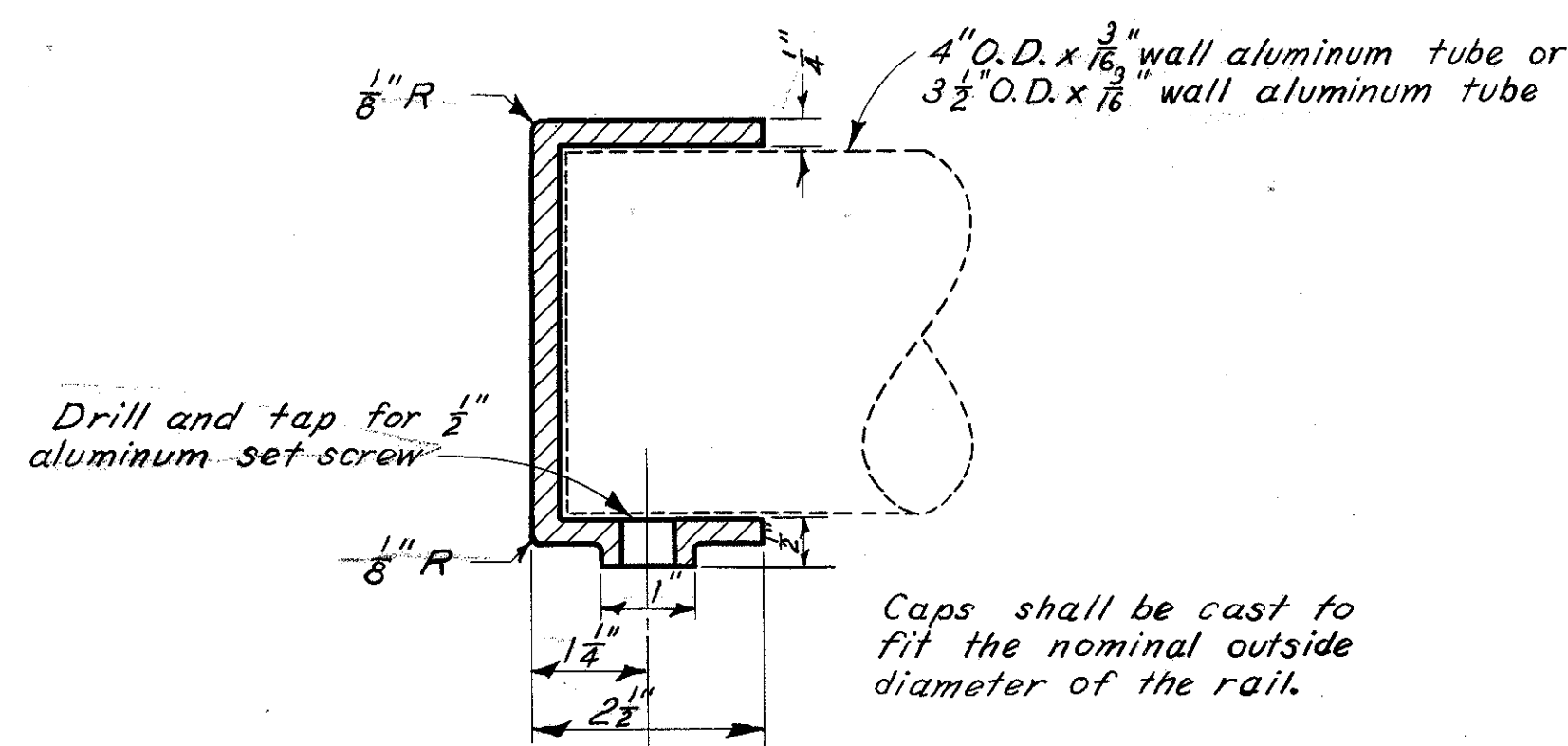
SECTION W-W



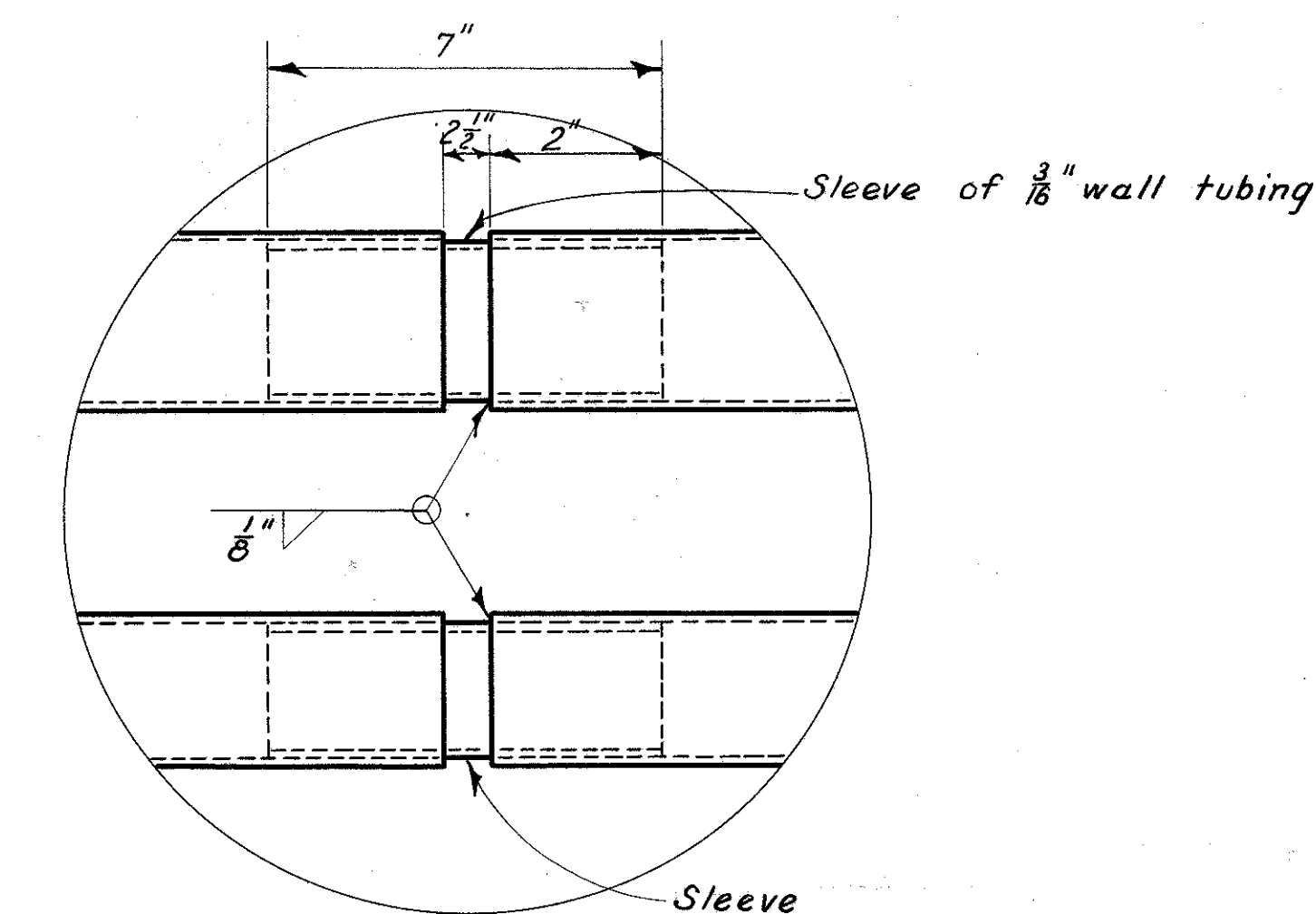
VIEW D-D



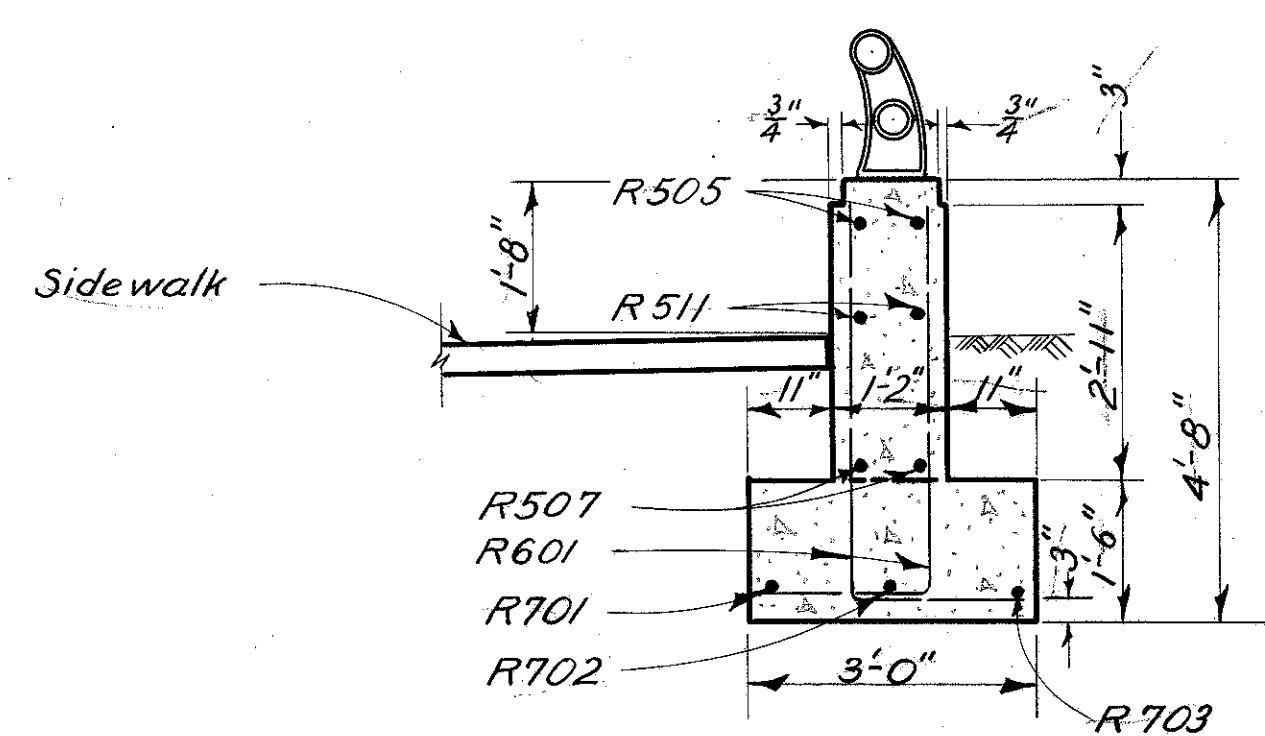
VIEW C-C



TUBE CAP DETAIL

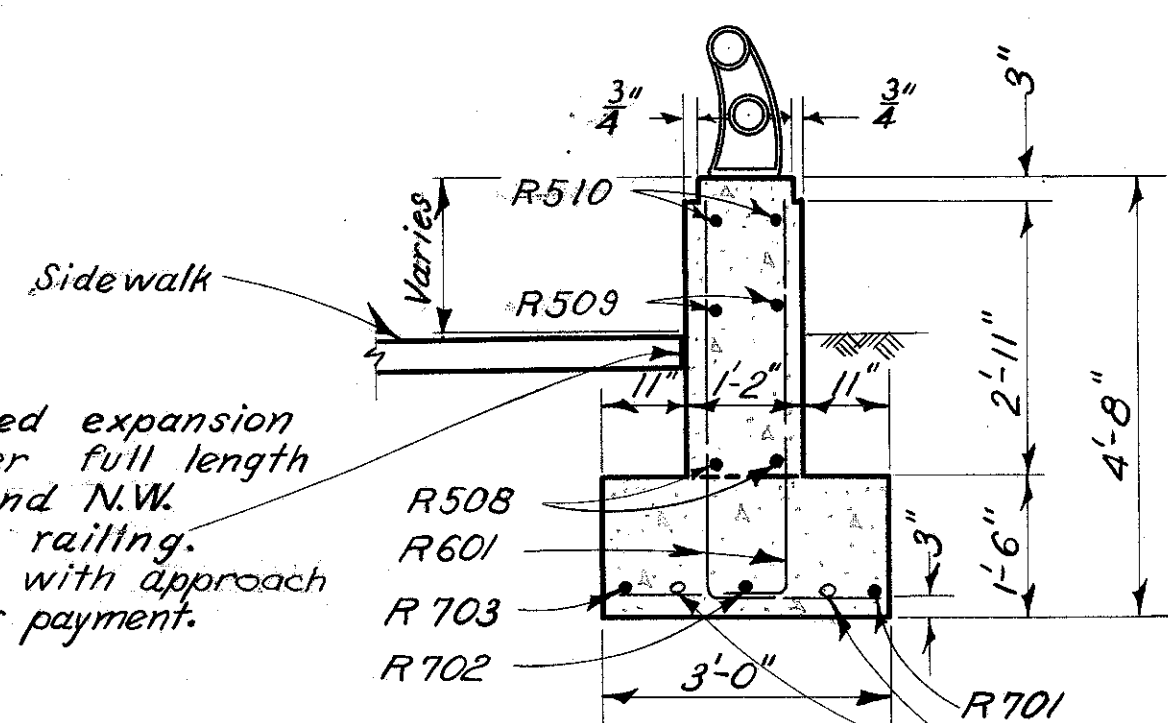


SLEEVE DETAIL



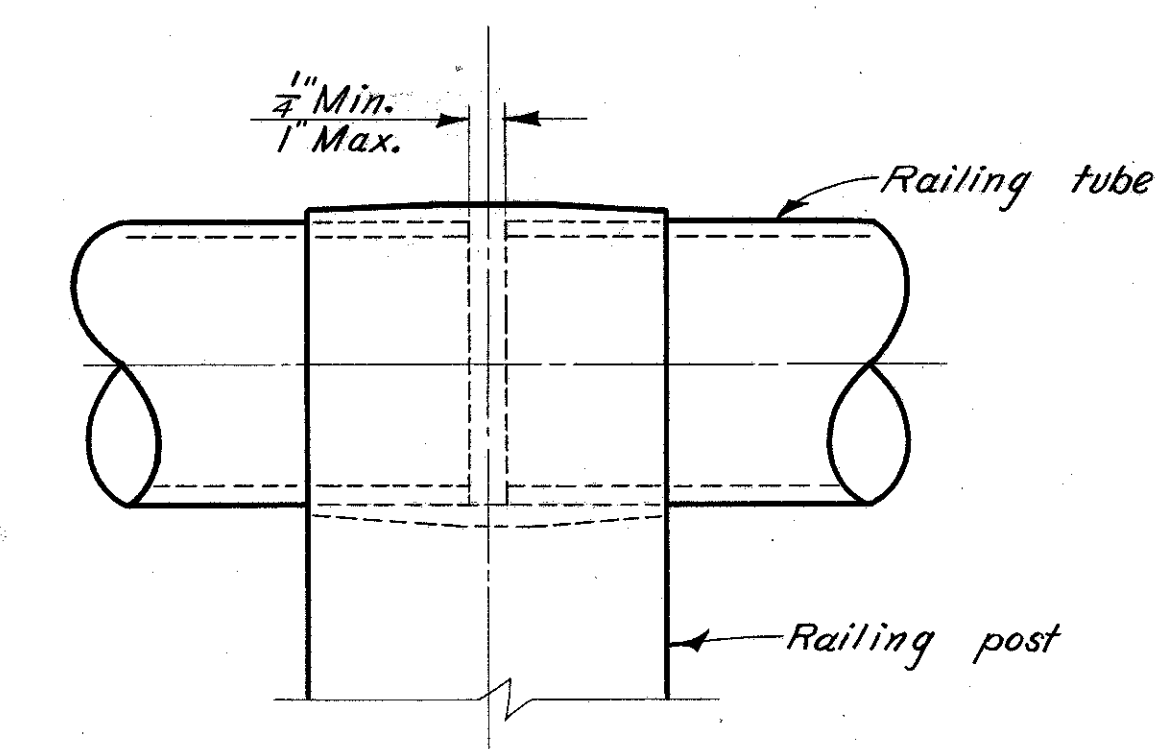
SECTION E-E

1" Preformed expansion joint filler full length of N.E. and N.W. approach railing. Included with approach railing for payment.



SECTION F-F

R602 Centered under contraction joints



TYPICAL TUBE RAILING JOINT

Note: For additional approach railing details see Sheet No. 74.

For Railing Post Details see Common Details sheet No. 128.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
RAILING DETAILS BRIDGE No. CUY-42-1885						
INNERBELT FREEWAY UNDER CEDAR AVE. Cuyahoga County Sta. 2+09.74						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
N.J.B.	N.J.B.	P.T.M.	BFG	BFG	8-19-57	

REINFORCING STEEL LIST

MICROFILMED
JUL 2 1985

FED. RD. DIVISION	STATE	PROJECT	77 129
2	OHIO		

MARK	NO.	LENGTH	WEIGHT	SHA	NO.	MARK	NO.	LENGTH	WEIGHT	SHA	NO.
ABUTMENTS											
F 1101	172	11'-7"	10,585	B	80	92					
F 1102	180	9'-5"	9,006	B	88	92					
F 1103	182	7'-5"	7,172	B	89	93					
F 1104	88	17'-11"	8,377	B	44	44					
F 701	174	8'-6"	3,023	B	85	89					
F 601	30	29'-8"	1,337	S	30	-					
F 602	30	30'-5"	1,371	S	-	30					
F 501	48	10'-0"	501	S	24	24					
A 1101	182	16'-3"	15,713	S	89	93					
A 901	180	6'-0"	3,672	S	88	92					
A 601	182	10'-0"	2,734	S	89	93					
A 602	125	14'-7"	2,738	B	59	66					
A 603	36	13'-7"	734	B	19	17					
A 604	9	3'-7"	48	B	5	4					
A 501	64	24'-1"	1,608	S	31	33					
A 502	50	23'-8"	1,234	S	50	-					
A 503	50	36'-8"	1,912	S	25	25					
A 504	15	29'-5"	460	S	15	-					
A 505	3	7'-7"	24	B	3	-					
A 506	4	6'-0"	25	S	4	-					
A 507	18	6'-3"	117	S	9	9					
A 508	3	4'-6"	14	B	3	-					
A 509	2	15'-10"	33	S	2	-					
A 510	2	17'-1"	36	S	2	-					
A 511	138	4'-8"	672	B	69	69					
A 513	50	25'-8"	1,339	S	-	50					
A 514	15	30'-8"	480	S	-	15					
A 515	3	6'-11"	22	B	-	3					
A 516	4	13'-6"	56	S	-	4					
A 517	3	4'-6"	14	B	-	3					
A 518	2	8'-4"	17	S	-	2					
A 519	2	9'-9"	20	S	-	2					
A 520	5	4'-11"	26	B	3	2					
WING WALL											
W 1101	58	12'-8"	3,903	B	20	38					
W 1102	12	11'-4"	723	B	12	-					
W 1103	32	9'-11"	1,686	B	11	21					
W 1104	33	15'-3"	2,674	S	12	21					
W 1105	24	11'-1"	1,413	B	-	24					
W 1106	33	7'-5"	1,300	B	12	21					
W 1001	29	9'-9"	1,217	B	29	-					
W 1002	52	9'-5"	2,107	B	-	52					
W 901	32	7'-0"	762	S	11	21					
W 902	10	7'-3"	247	S	10	-					
W 903	10	11'-6"	391	S	10	-					
W 904	9	6'-9"	207	S	9	-					
W 905	15	10'-0"	510	B	-	15					
W 906	20	11'-1"	754	S	-	20					
W 907	19	7'-2"	463	S	-	19					
W 801	43	8'-4"	957	B	22	21					
W 802	37	9'-3"	914	B	13	24					
W 803	3	16'-7"	133	S	3	-					
W 804	3	15'-0"	120	S	3	-					
W 805	3	13'-8"	109	S	3	-					
W 806	3	12'-3"	98	S	3	-					
W 807	46	7'-11"	972	B	-	46					
W 808	7	13'-2"	246	S	-	7					
W 809	one series of 21	10'-0"	748	S	-	21	Vary by 4" increments				
W 810	6	14'-2"	227	S	-	6					

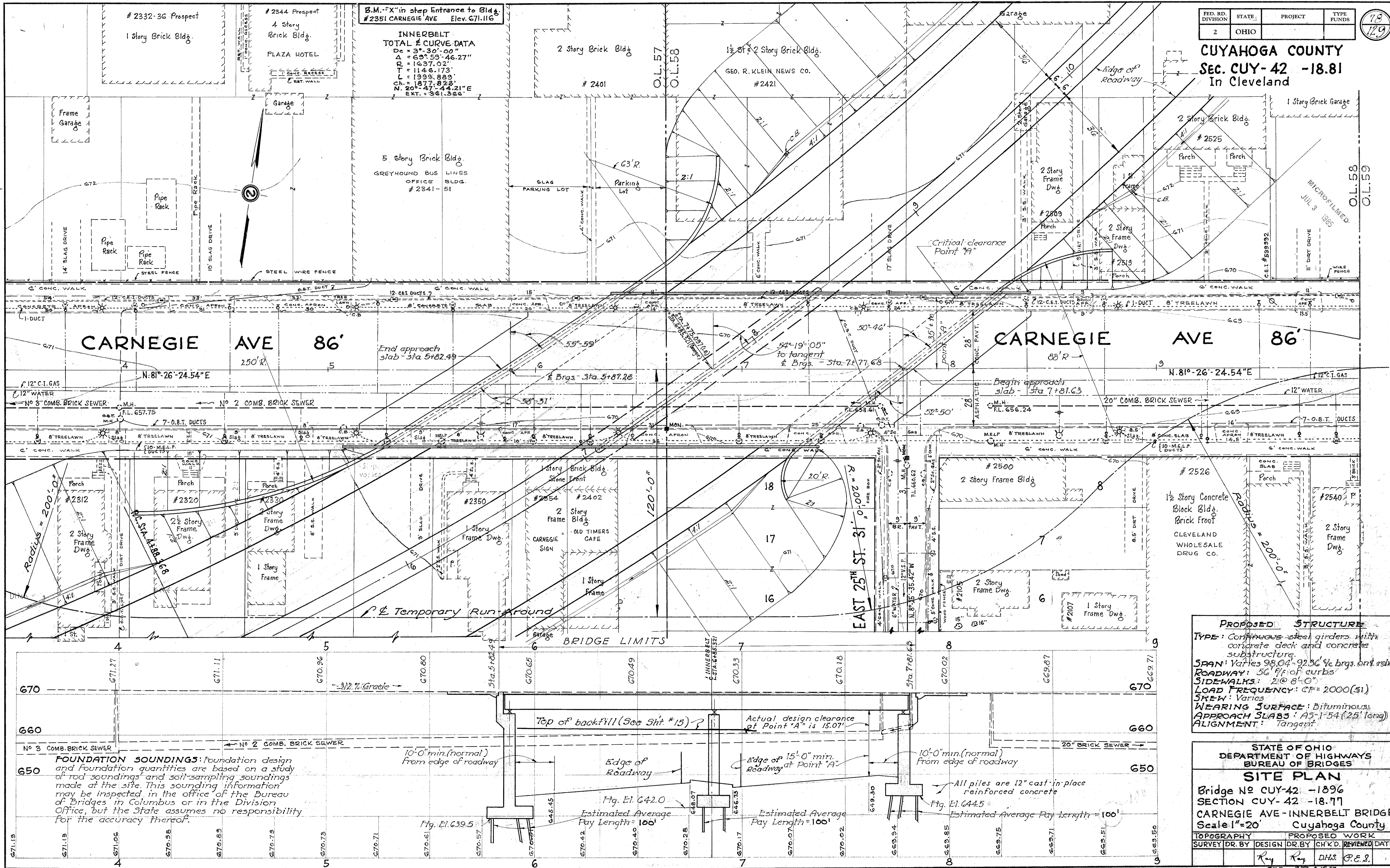
MARK	NO.	LENGTH	WEIGHT	SHA	NO.	MARK	NO.	LENGTH	WEIGHT	SHA	NO.	RADIUS
WING WALL (CONT.)												
W 601	2	22'-5"	67	B	2	-	32'-9"					
W 602	2	21'-2"	64	B	2	-	30'-9"					
W 603	2	19'-10"	60	B	2	-	28'-9"					
W 604	1	26'-0"	39	B	1	-	27'-6"					
W 605	2	17'-4"	52	B	2	-	25'-5"					
W 606	2	17'-6"	53	B	2	-	26'-2"					
W 607	2	16'-2"	49	B	2	-	24'-0"					
W 608	2	14'-8"	44	B	2	-	21'-8"					
W 609	3	11'-2"	50	S	3	-						
W 610	3	9'-6"	43	S	3	-						
W 611	3	7'-10"	35	S	3	-						
W 612	1	6'-1"	9	S	1	-						
W 613	3	9'-11"	45	S	3	-						
W 614	3	8'-2"	37	S	3	-						
W 615	3	6'-5"	29	S	3	-						
W 616	2	28'-4"	85	B*	-	2	13'-0"					
W 617	24	6'-6"	234	B	7	17						
W 618	1	36'-7"	55	B*	-	1	113'-0"					
W 619	1	36'-0"	54	B*	-	1	111'-0"					
W 620	1	35'-6"	53	B*	-	1	109'-0"					
W 621	4	34'-0"	204	B*	-	4	99'-8"					
W 622	2	27'-9"	83	B*	-	2	111'-0"					
W 623	2	33'-0"	99	B*	-	2	95'-8"					
W 624	1	32'-6"	49	B*	-	1	86'-7"					
W 625	6	27'-4"	246	B*	-	6	100'-0"					
W 626	4	26'-6"	159	B*	-	4	86'-7"					
W 627	19	11'-0"	314	S	-	19						
W 628	one series of 16	6'-0"	189	S	-	16	Vary by 3" increments					
W 501	7	35'-3"	257	B	7	-	27'-9"					
W 502	1	31'-2"	33	B	1	-	27'-9"					
W 503	1	27'-0"	28	B	1	-	27'-9"					
W 504	1	22'-9"	24	B	1	-	27'-9"					
W 505	1	18'-5"	19	B	1	-	27'-9"					
W 506	1	14'-0"	15	B	1	-	27'-9"					
W 507	1	9'-6"	10	B	1	-	27'-9"					
W 508	1	4'-11"	5	B	1	-	27'-9"					
W 509	7	33'-2"	242	B	7	-	26'-2"					
W 510	1	29'-8"	31	B	1	-	26'-5"					
W 511	1	25'-8"	27	B	1	-	26'-5"					
W 512	1	21'-8"	23	B	1	-	26'-5"					
W 513	1	17'-7"	18	B	1	-	26'-7"					
W 514	1	13'-4"	14	B	1	-	26'-7"					
W 515	1	9'-1"	9	B	1	-	26'-7"					
W 516	1	4'-8"	5	B	1	-	26'-7"					
W 517	1	28'-9"	30	S	1	-						
W 518	1	27'-6"	29	S	1	-						
W 519	1	26'-3"	27	S	1	-						
W 520	1	25'-0"	26	S	1	-						
W 521	1	23'-8"	25	S	1	-						
W 522	1	22'-5"	23	S	1	-						
W 523	1	21'-1"	22	S	1	-						
W 524	1	19'-8"	21	S	1	-						
W 525	1	18'-3"	19	S	1	-						
W 526	1	16'-10"	18	S	1	-						
W 527	1	15'-6"	16	S	1	-						
W 528	1	14'-1"	15	S	1	-						
W 529	1	12'-11"	13	S	1	-						
W 530	10	15'-0"	156	S	-	10						
W 531	one series of 10	15'-10"	189	S	-	10	Vary by 6" increments					
W 532	one series of 10	20'-4"	259	S	-	10	Vary by 11" increments					
W 533	27	27'-7"	777	B*	-	27	99'-10"					
W 534	1	23'-0"	24	B*	-	1	99'-10"					
W 535	1	10'-6"	11	B*	-	1	99'-10"					
W 536	1	21'-6"	22	B*	-	1	99'-10"					
W 537	1	14'-6"	15	B*	-	1	99'-10"					
W 538	1	8'-0"	8	B*	-	1	99'-10"					
W 539	27	27'-3"	767	B*	-	27	98'-8"					

MARK	NO.	LENGTH	WEIGHT	SHA	NO.	MARK	NO.	LENGTH	WEIGHT	SHA	NO.	RADIUS
WING WALL (CONT.)												
W 540	1	22'-8"	24	B*	-	1	98'-8"					
W 541	1	10'-2"	11	B*	-	1	98'-8"					
W 542	1	21'-2"	22	B*	-	1	98'-8"					
W 543	1	14'-2"	15	B*	-	1	98'-8"					
W 544	1	7'-8"	8	B*	-	1	98'-8"					
W 545	13	5'-7"	76	B	-	13						
W 546	16	10'-0"	167	S	-	16						
BRIDGE RAILING												
R 501	32	15'-8"		S								
R 502	12	14'-8"		S								
R 503	4	15'-3"		B								
R 504	28	16'-4"		S								
B 502	2	2'-10"		S								
B 503	2	3'-6"		S								
B 504	2	1'-6"		S								
B 505	2	2'-2"		B								
APPROACH RAILING												
R 701	2	25'-10"		B								
R 702	2	24'-10"		B								
R 703	2	27'-10"		B								
R 704	3	32'-10"		B*								
R 705	3	28'-0"		S								
R 601	230	5'-7"		B								
R 602	4	6'-0"		S								
R 505	2	28'-4"		B								
R 506	6	28'-5"		B*								
R 507	2	25'-6"		S								
R 508	2	30'-5"		S								
R 509	2	32'-4"		S								

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUYAHOGA COUNTY
Sec. CUY-42 -18.81
In Cleveland

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PROPOSED STRUCTURE
TYPE: Continuous steel girders with concrete deck and concrete substructure.
SPAN: Varies 98.04'-92.36' brgs. and rslwy.
ROADWAY: 56' w/ 4' of curbs
SIDEWALKS: 2 @ 8'-0"
LOAD FREQUENCY: CF = 2000 (SI)
SPREAD: Varies
WEARING SURFACE: Bituminous
APPROACH SLABS: A5-1-54 (25' long)
ALIGNMENT: Tangent

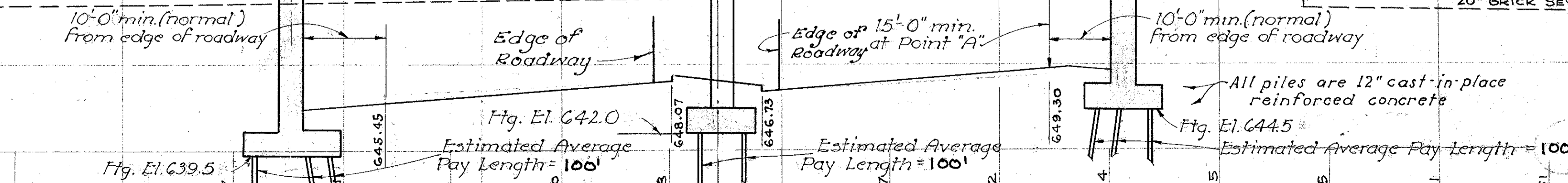
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
SITE PLAN
Bridge No CUY-42 -1896
SECTION CUY-42 -18.77
CARNEGIE AVE - INNERBELT BRIDGE
Scale 1"=20' Cuyahoga County

TOPOGRAPHY	PROPOSED WORK
SURVEY DR. BY	DESIGN DR. BY
CHK'D.	REVIEWED DATE

Ray Ray D.H.S. P.E.S.

CARNEGIE AVE - INNERBELT BRIDGE - SITE PLAN

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division Office, but the State assumes no responsibility for the accuracy thereof.



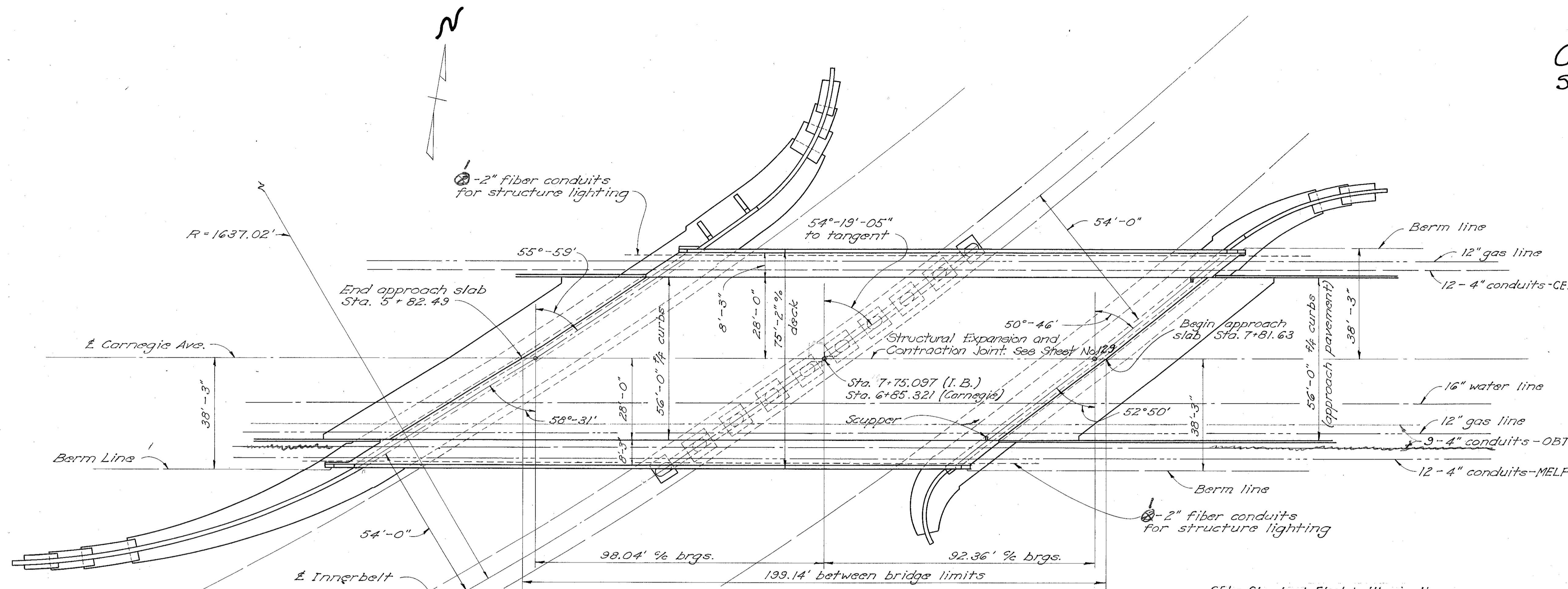
Estimated Average Pay Length = 100'

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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129

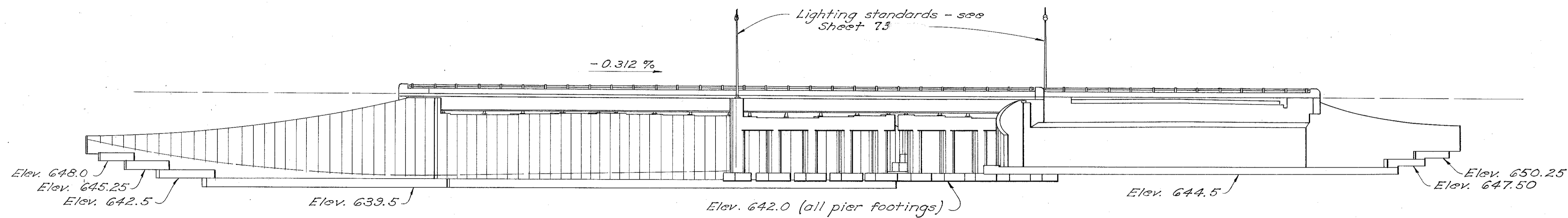
CUYAHOGA COUNTY
SEC. CUY-42-18.77

MICROFILMED
JUL 3 1985



GENERAL PLAN

CEI - Cleveland Electric Illuminating
OBT - Ohio Bell Telephone
MELP - Municipal Electric Light and Power



SOUTH ELEVATION
(Piles are not shown)

For GENERAL NOTES see sheet no. 80
For ESTIMATED QUANTITIES see sheet no. 81

Rev. 11-25-58

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN and ELEVATION						
Bridge No. CUY-42-1896 Innerbelt Freeway under Carnegie Ave.						
Cuyahoga County Sta. 7+75.097						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Key	Key	prose	WCK	BFG	8-15-57	12-3-56

CUYAHOGA COUNTY
Sec. CUY-42-1877

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification S-114 revised 8-1-57 and to Standard Drawing EB-1-55 dated 3-1-55.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

TEMPORARY RUN-AROUND STREET shall be provided. Width face to face of curbs shall be 56 ft., width out to out of shoulders 74 ft., 5 ft. wide sidewalk on south side. Pavement 9" of T-70... with Type B-A concrete curbs (Std. Dwg. I-12). Concrete sidewalk shall be 4" thick and shall be according to Item I-13 except concrete may be same as pavement concrete. See Sheet 16 for additional details.

DECK CONSTRUCTION PROCEDURE: In order to facilitate water curing of the concrete in the deck slab, concrete placing shall proceed in the up-grade direction. The slab may be placed in sections between transverse construction joints near the center of any span and normal to the centerline of roadway.

PILES shall be driven to a minimum bearing capacity of 35 tons.

PILE TEST LOAD and subsequent pile test loads shall be applied if and where directed by the Engineer.

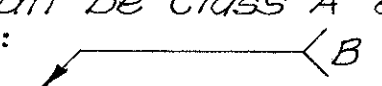
WELDED STEEL: The steel used for the flanges and webs of all girders shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 [As per Sec. M-14(a) of the Construction and Material Specifications] or to A-313.

SHEETING AND BRACING: Southwest wing foundation work adjacent to temporary run-around street (Carnegie Ave.) shall be protected by sheeting and bracing. The Contractor shall submit three copies of plans for such protection to the Director for written approval before beginning excavation for the affected wing.

SURFACE FINISH OF CONCRETE: Exposed surfaces of piers, abutments and wingwalls shall receive a rubbed surface finish. The remainder of the exposed surfaces shall be governed by the provisions of Item S-1.

POROUS BACKFILL 2 ft. thick full length of abutment and wings shall extend up to the underside of the approach slab and sidewalks and to within 2 ft. of the surface of the finished ground in other areas. The lower limit shall be as called for on plans.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either shall be held to a minimum.

WELDING OF STRUCTURAL STEEL: All welds shall be Class "A" except as shown. Class "B" welds are shown thus:  Any weld indicated on plan as a field weld may, at the option of the Contractor, be made in the shop. The shop plans submitted for approval shall show in detail the procedure to be used for each type and size of weld. Welds that connect the flanges to the webs shall be made by the submerged arc automatic weld process.

FABRICATION OF GIRDERS
The plates that comprise each flange and those that comprise each web of shop welded girder segments shall be completely welded into a single plate before these flanges and webs are welded together to form the individual girder segment. Extension bars as per Articles 505(k) or 506(k) of AWS Specifications shall be used at all butt welds except at field splices of web plates. Special care shall be taken at field splices of webs to assure a butt weld to the edge of the web plate.

RADIOGRAPHIC EXAMINATION OF WELDS
DESCRIPTION OF PROCESS
This work shall consist of the performance and interpretation of a radiographic examination of welds as required by these specifications. It shall include the preparation and positioning of welds for examination, the radiographing of welds, the processing and examination of radiographs, and the interpretation of radiographs for compliance with these specifications. This work shall also include performance and interpretation of any retakes of radiographs required for welds made to replace those proven unsatisfactory.

APPROVAL OF DIRECTOR
The Contractor shall supply evidence, acceptable to the Director, of the adequacy of the equipment to be used and the competence of the personnel performing the work. The interpretation of radiographs and correction of defective welds shall be subject to the approval of the Director.

SCOPE OF EXAMINATION
By means of radiographic examination, the Contractor shall furnish evidence of the acceptable quality of complete butt welds in the tension flanges of each girder. The welds that shall be radiographed are marked by the letter "B" on the plans of "girder A." Welds in all other girders are to be similarly radiographed. Butt welds of the flange plates made in the shop shall be determined to be acceptable before these flange and web plates are assembled and welded together to form the girder segments.

WELD CONDITION
All welded joints which are to be radiographed shall be free of paint, scale and grease, and shall be ground free of all weld ripples and surface irregularities on both sides. The direction of grinding shall be perpendicular to the length of the weld. The welds shall be ground so that the weld surface will merge smoothly with the plate surface and that the resulting radiographic contrast, due to remaining irregularities, cannot obscure or be confused with a defect that would make the weld unsatisfactory. The finished surface of the reinforcement may have a crown of an approximately uniform amount not to exceed the following:

Plate Thickness	Thickness of Reinforcement (Crown)
Up to 3/8 inch, inclusive	1/16 inch
Over 3/8 to 1 inch, inclusive	3/32 inch
Over 1 inch	1/8 inch

RADIOGRAPHIC TECHNIQUE
The weld shall be radiographed with a technique which will determine quantitatively the size of defects with thicknesses equal to or greater than 2 per cent of the thickness of the base metal. Where a weld joins plates of unequal thickness, both plates shall be radiographed at 2 per cent sensitivity together or singly; the weld junction shall be evident in both views. To determine whether the radiographic technique employed is detecting defects of a thickness equal to or greater than 2 per cent of the thickness of the base material, thickness gages or penetrameters of the type hereinafter specified shall be placed on the side of the welded plate nearest the source of radiation at an extreme edge of the radiographic plate or film. The material of the penetrometer shall be substantially the same as that of the welded plate. The thickness of the penetrometer shall be not more than 2 per cent of the thickness of the plate exclusive of any weld reinforcement. Penetrameters designed for increments of 3/8" of plate thickness are acceptable. In each penetrometer there shall be three holes with diameters equal respectively to two, three and four times the penetrometer thickness, but in no case shall less than 1/16" diameter be used. Each penetrometer shall carry an identifying number representing in two significant figures the minimum thickness in inches of the plate for which it may be used. Penetrameters may be established for differences in thickness not to exceed 3/8" so that a set of penetrameters varying for increments of plate thickness of 3/8" will be adequate to serve plates having thicknesses between these 3/8" dimensions. The images of identifying numbers and the holes of each penetrometer must appear clearly on the radiograph to establish the 2 per cent sensitivity.

For plates up to and including 3/8" in thickness, each penetrometer shall be 1 1/2" long and 3/8" wide, for plates thicker than 3/8" each penetrometer shall be 2 1/2" long and 1" wide. The film shall be as close to the weld as practicable during exposure. If possible, this distance shall be not greater than 1 inch, but in no case shall D/d be less than 7; where D is the distance from the source of radiation to surface of weld nearer source, and d is distance from surface of weld nearer source to the film. All radiographs shall be free from processing defects which would interfere with proper interpretation of the radiograph.

Identification markers, the images of which will appear on the film, shall be placed adjacent to each weld and their locations shall be accurately and permanently marked on the weldment so that a defect appearing in the radiograph may be accurately located. The size of film to be used shall be 4" wide x 15" long unless permission to use a different size is obtained in writing from the Director.

- STANDAEDS OF ACCEPTABILITY**
The acceptability of the welds examined by radiography shall be judged by the following standards:
- (1) CRACKS:**
DEFINITION-A discontinuity resulting from a very narrow separation of metal.
STANDAED-No weld containing cracks regardless of length, size or location shall be considered acceptable.
 - (2) INCOMPLETE FUSION:**
DEFINITION-Failure of the weld metal to fuse completely with the base metal or preceding beads.
STANDAED-No weld containing incomplete fusion regardless of length size or location shall be considered acceptable.
 - (3) INCOMPLETE PENETRATION:**
DEFINITION-Root penetration which is less than complete or failure of a root pass and a backing pass to fuse with each other.
STANDAED-No weld containing incomplete penetration regardless of length size or location shall be considered acceptable.
 - (4) GAS POROSITY:**
DEFINITION-Gas pockets or voids in metal.
STANDAED-The maximum dimension of any individual gas pocket shall not exceed 3/16 inch. Maximum accumulation of gas pockets shall not exceed that shown in the "Porosity Standards" of the American Society of Mechanical Engineers.
 - (5) SLAG INCLUSIONS:**
DEFINITION-Non-metallic, solid material entrapped in weld metal or between weld metal and base metal.
STANDAED-(a) Elongated slag inclusions: No elongated slag inclusion shall exceed two-thirds of the thickness of the thinner plate of the joint in length and 1/16" in width, except that regardless of the plate thickness no such inclusion shall be longer than 1 3/4" and except that no such inclusion which is shorter than 1/4" shall be cause for rejection.
(b) Isolated slag inclusions: In any 12 inch length of weld, the maximum width of any isolated slag inclusion shall not exceed 3/8 inch, the summation lengths of isolated slag inclusions shall not exceed 1 inch, and there shall be no more than four isolated slag inclusions of the maximum width of 3/8 inch. Any two such inclusions shall be separated by at least 2 inches of sound metal weld.

REPAIR OF DEFECTIVE WELDS
Defective welds shall be repaired by chipping or melting out such defects from one or both sides of the joint as required to remove the defect; the joint shall then be rewelded and again radiographed.

CUSTODY OF RADIOGRAPHS & NOTATIONS ON RADIOGRAPHS
As soon as radiographing of the welds on the full length of each flange between field splices has been completed and processed, the Contractor shall send to the State the contact film (that film closest to the source of radiation) of all original and retake radiographs. These radiographs shall be accompanied by a certification from the Contractor that the radiographic examination was performed in conformance with these specifications. These contact films shall become the property of the State. Each radiograph shall be clearly identified to show the location on the structure at which it was taken. Unacceptable defects shall be identified in each radiograph in which they occur and the repair or replacement of each unacceptable weld defect shall be noted and identified.

REPORT OF COSTS
After the completion of the radiographic inspection of welds, the Contractor shall furnish the state a complete report of the cost of performing this work, separated into the items mentioned in the following paragraph.

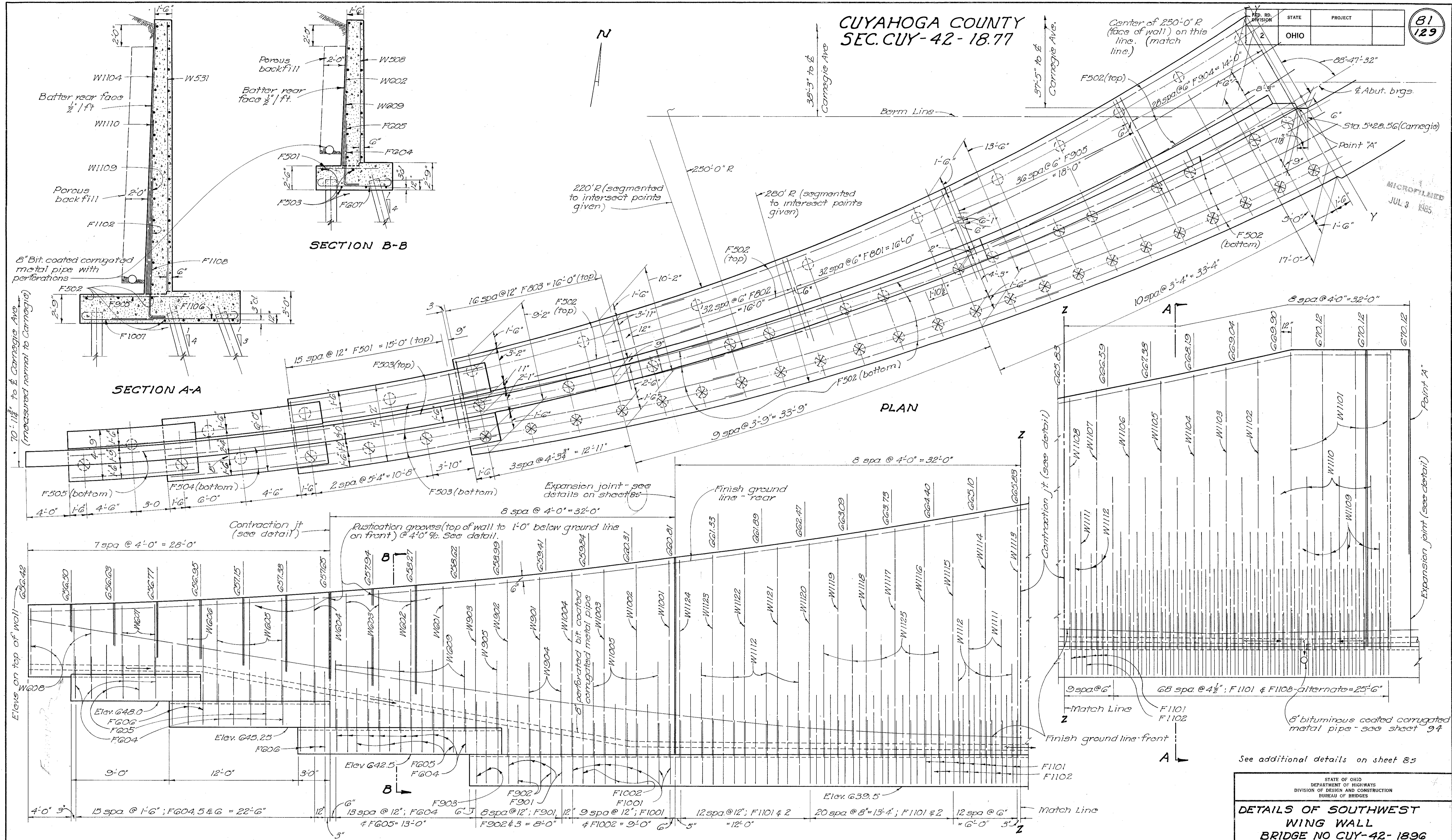
BASIS OF PAYMENT
Payment for this work, including all labor, equipment, materials and incidentals, shall be included in the unit price bid for S-7, Structural Steel.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES							
GENERAL NOTES							
BRIDGE No. CUY-42-1896							
INNERBELT FREEWAY							
UNDER CARNEGIE AVE.							
CUYAHOGA COUNTY				STA. 7+75.097			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
Key	Key	RL	WCK	Key	8-15-57		

CUYAHOGA COUNTY
SEC. CUY-42-18.77

STATE	PROJECT
OHIO	

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LEGEND
Vertical pile
Battered pile 1:4
Battered pile 1:3

DEVELOPED ELEVATION
This legend applies (vert. reinf. steel in rear face of wall shown - piles are not shown.) to all succeeding sheets showing piles

DIMENSIONS: All dimensions along wall are measured at face of wall (250'-0" R); all dimensions normal to wall are measured normal to face of wall.

See additional details on sheet 85

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

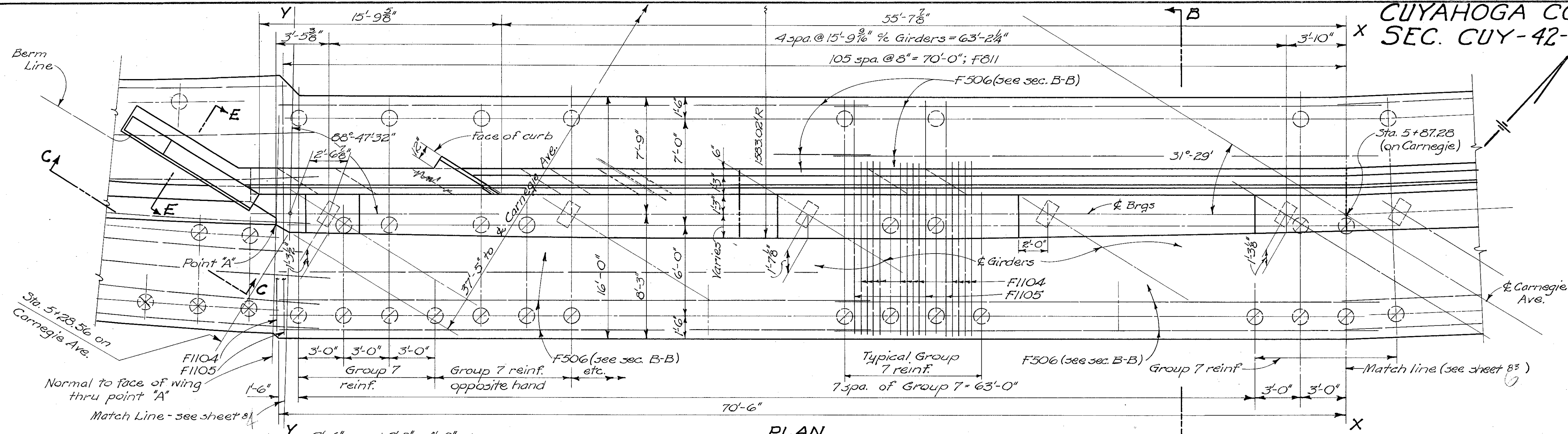
DETAILS OF SOUTHWEST WING WALL
BRIDGE NO CUY-42-1896
INNERBELT FREEWAY UNDER CARNEGIE AVE.

CUYAHOGA COUNTY STA. 7+75.097

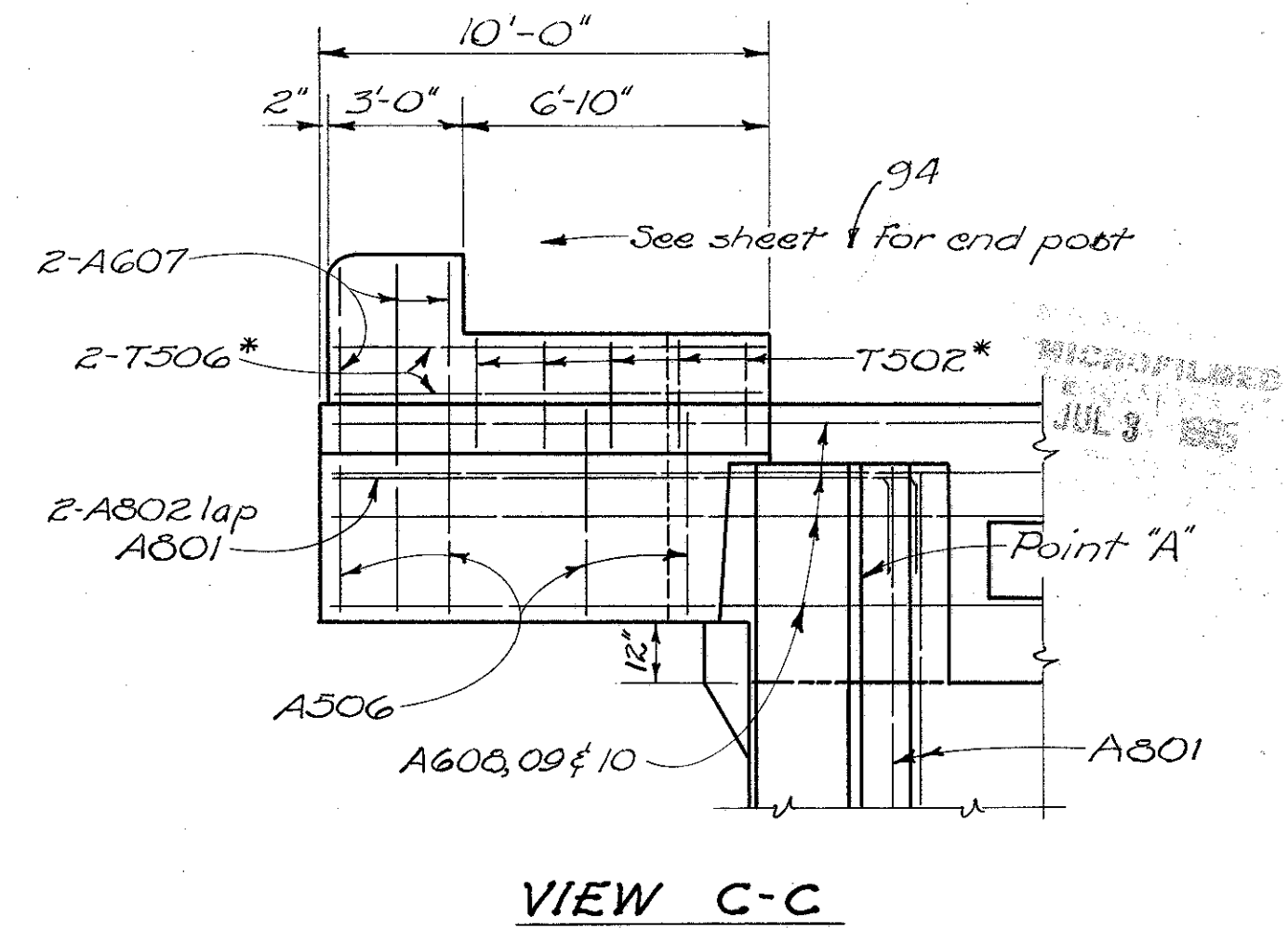
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Roy	Roy	RHD	WCK	BFG	8-15-57	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

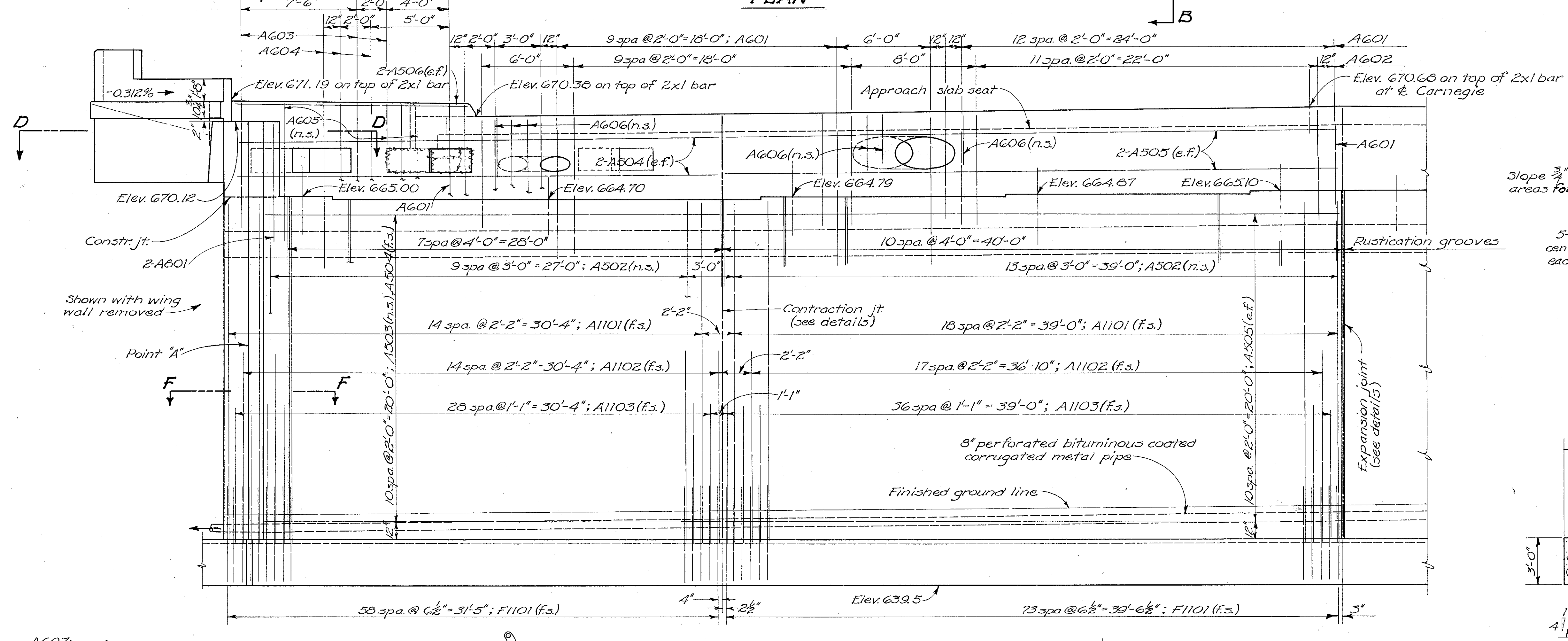
82
129



PLAN

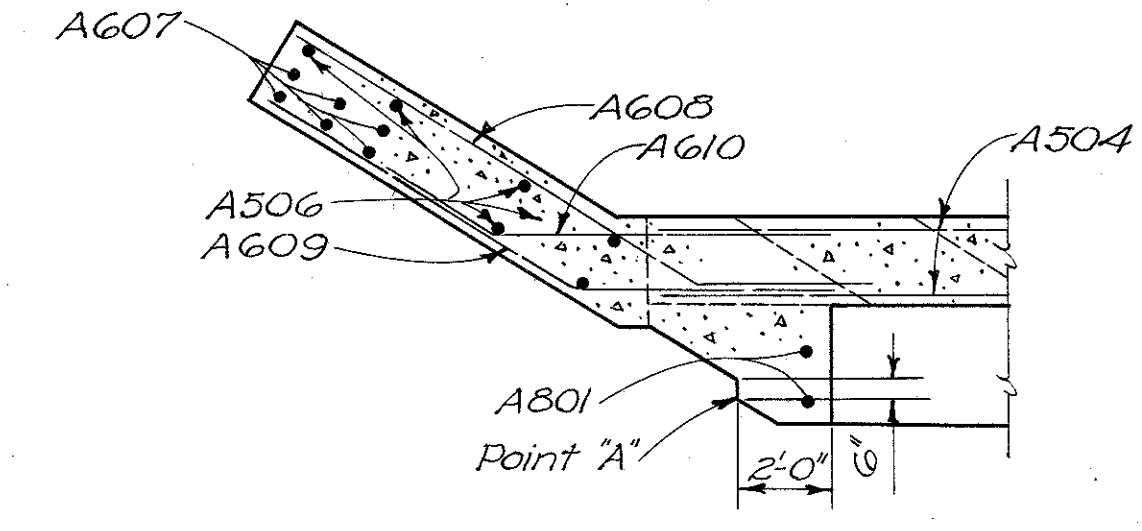


VIEW C-C

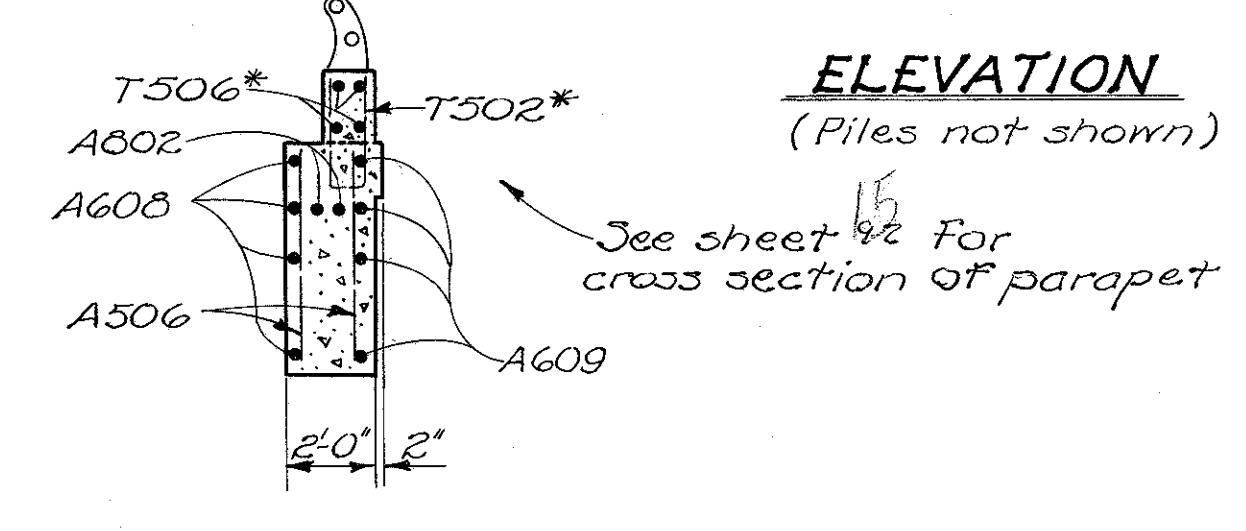


ELEVATION

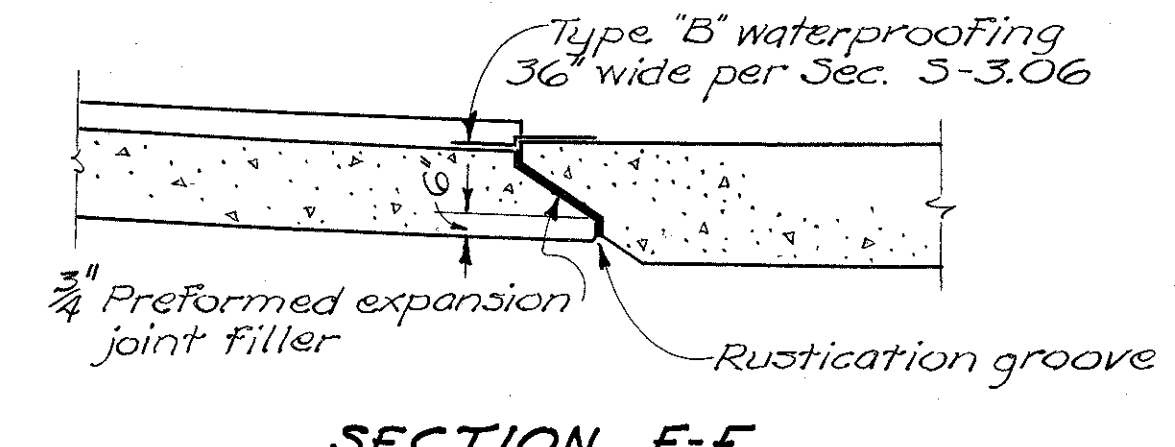
(Piles not shown)



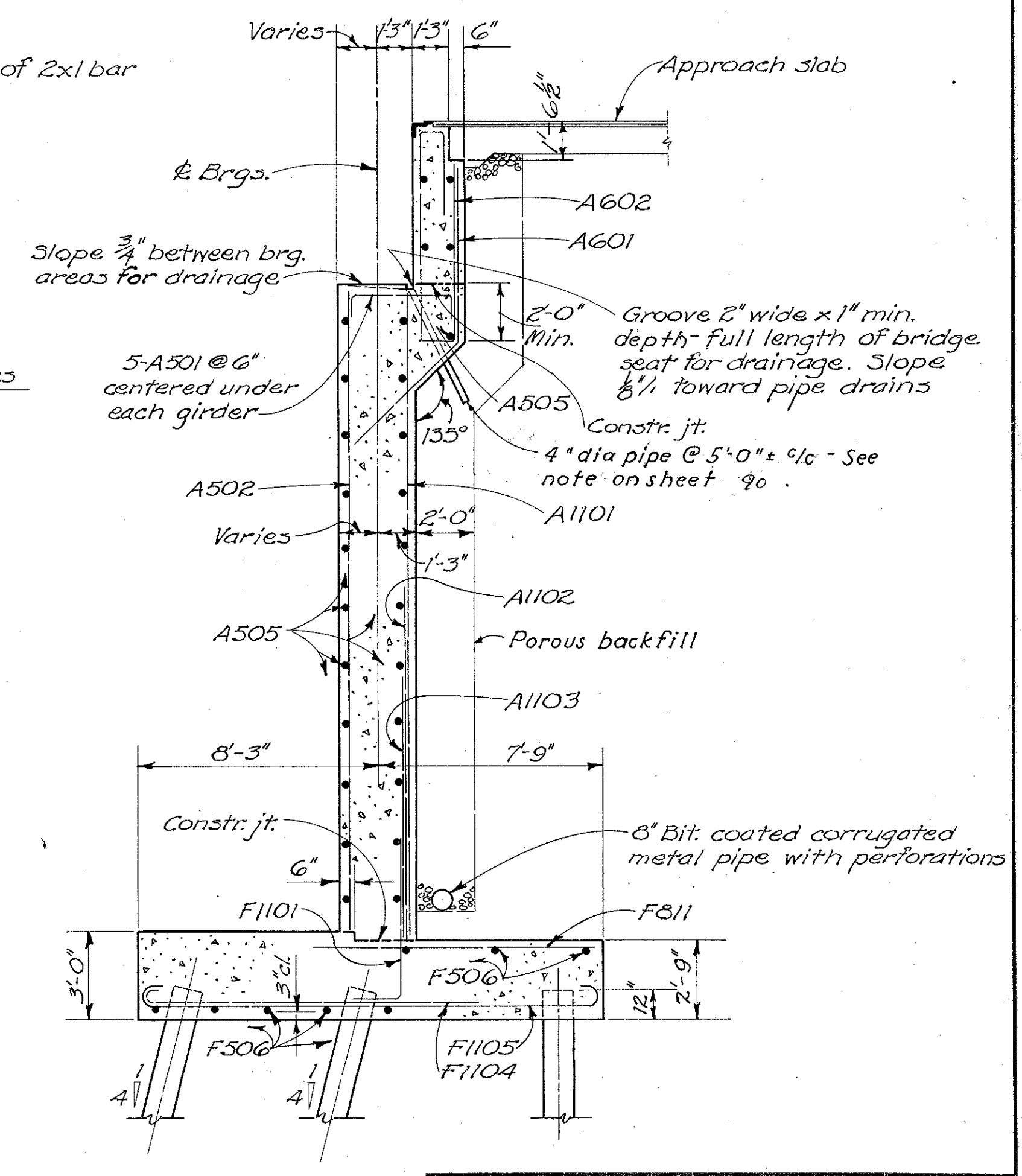
SECTION D-D



SECTION E-E



SECTION F-F



SECTION B-B

Rev. 11-25-58

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

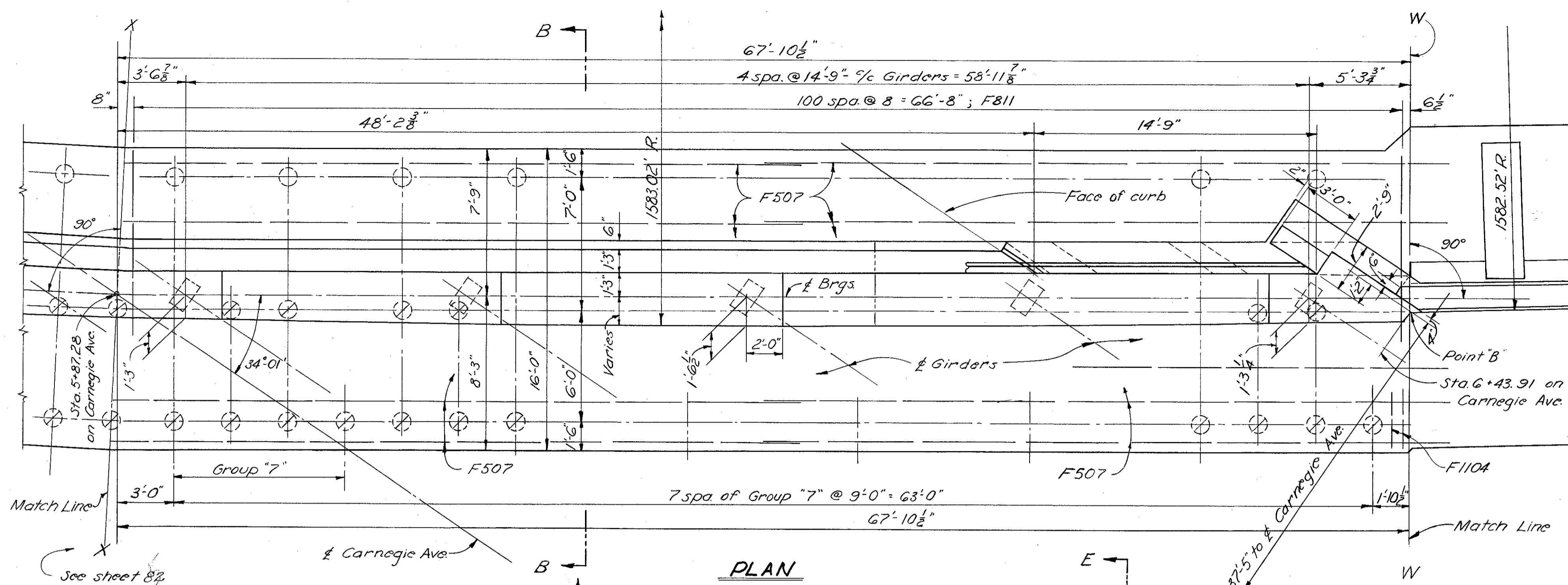
**DETAILS OF
WEST ABUTMENT
BRIDGE NO CUY-42-1896
INNERBELT FREEWAY UNDER CARNEGIE AVE.
CUYAHOGA COUNTY STA 7+75.097**

* Include with Item 3-14 for payment

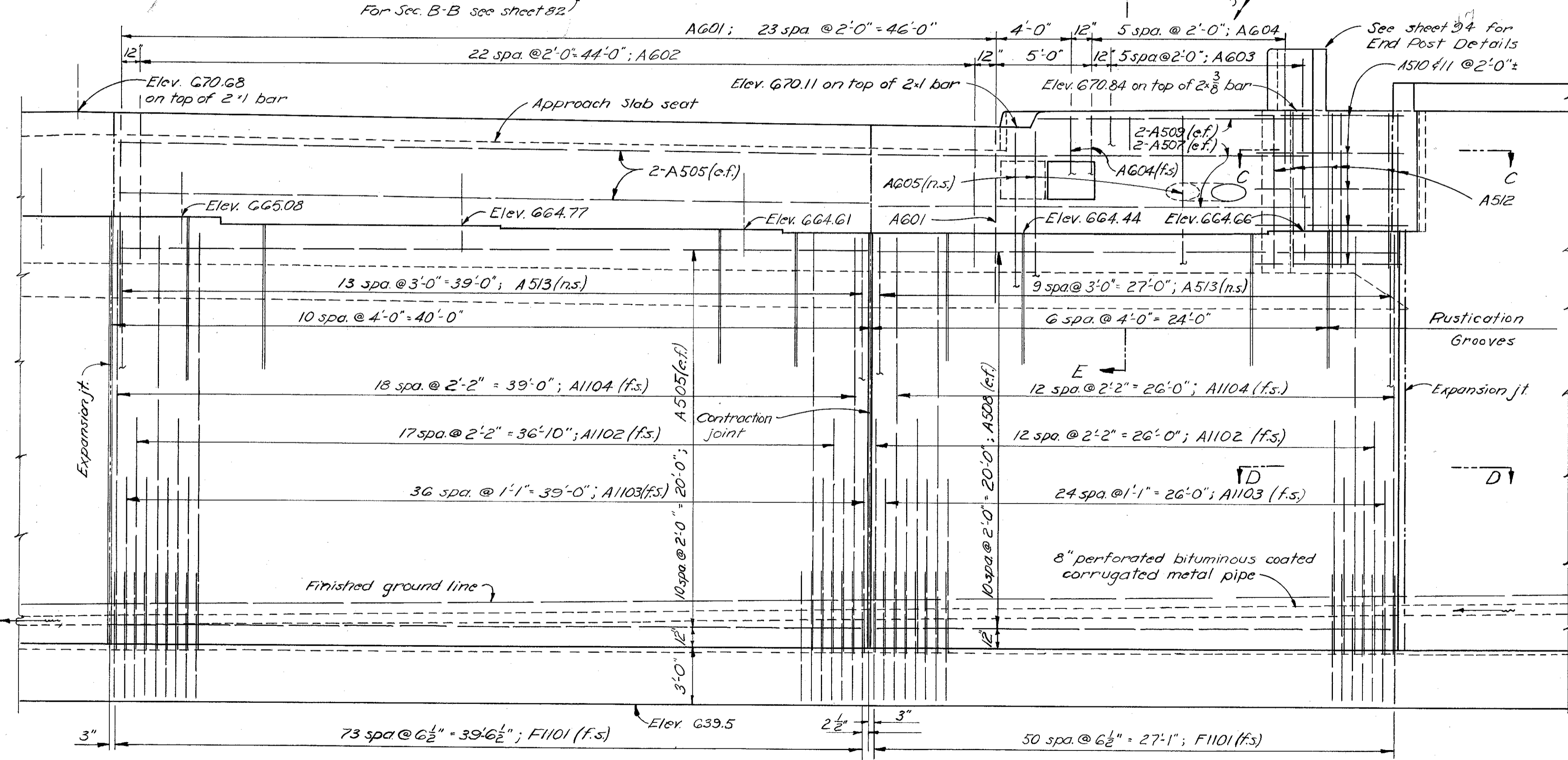
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ray	Ray	PER	WOL	BFG	8-15-57	

CUYAHOGA COUNTY
SEC. CUY-42-18.77

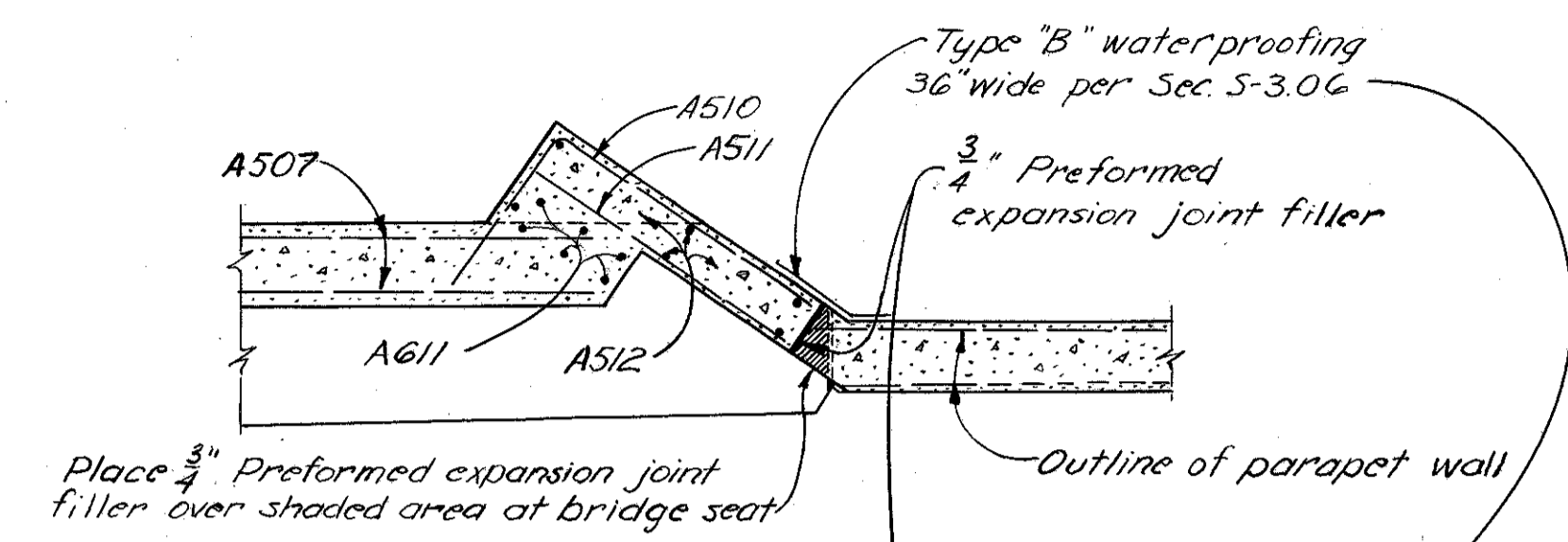
For details of Northwest wing see sheet 84



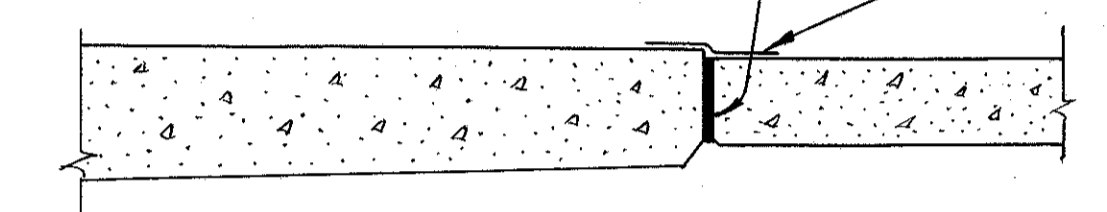
PLAN



ELEVATION
(Piles not shown)



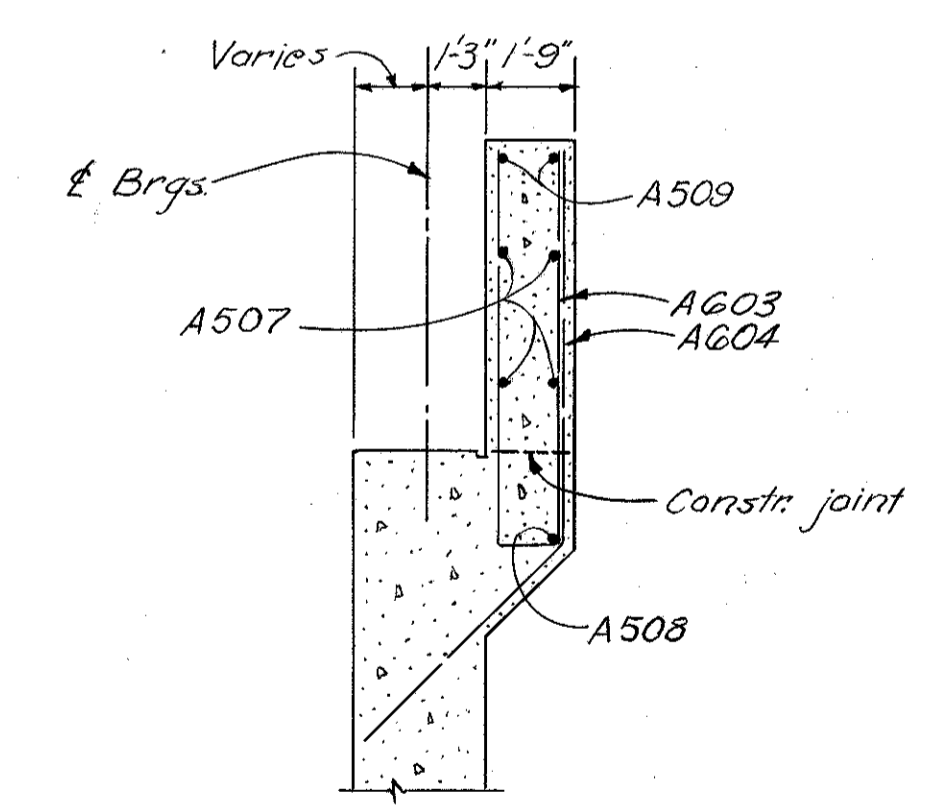
SECTION C-C



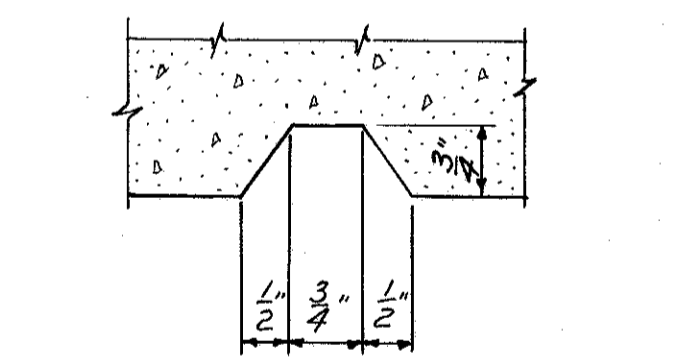
SECTION D-D

Group No.	TOE GROUPS		HEEL GROUPS	
	Bar Mark	Bars per pile	Bar Mark	Bars per pile
1	F1004	6	F1006	2
2	F1106	4	F1007	2
3	F1005	4	F1008	2
4	F807	4	F808	2
5	FG07	6	None	0
6	FG03	4	None	0
7	See PLAN on sheet 82			

See sheets 85 & 91 for position of groups.



SECTION E-E



DETAILS OF RUSTICATION GROOVES

BACKWALL CONCRETE shall not be placed until all utility ducts carried on superstructure are installed. The duct Owners will provide suitable protective expansive material around ducts thru backwall. This material may be sponge rubber, cork or any filler judged by the Engineer to be at least the equivalent of 1" of preformed expansion joint filler described in Sec. 5-9.02.

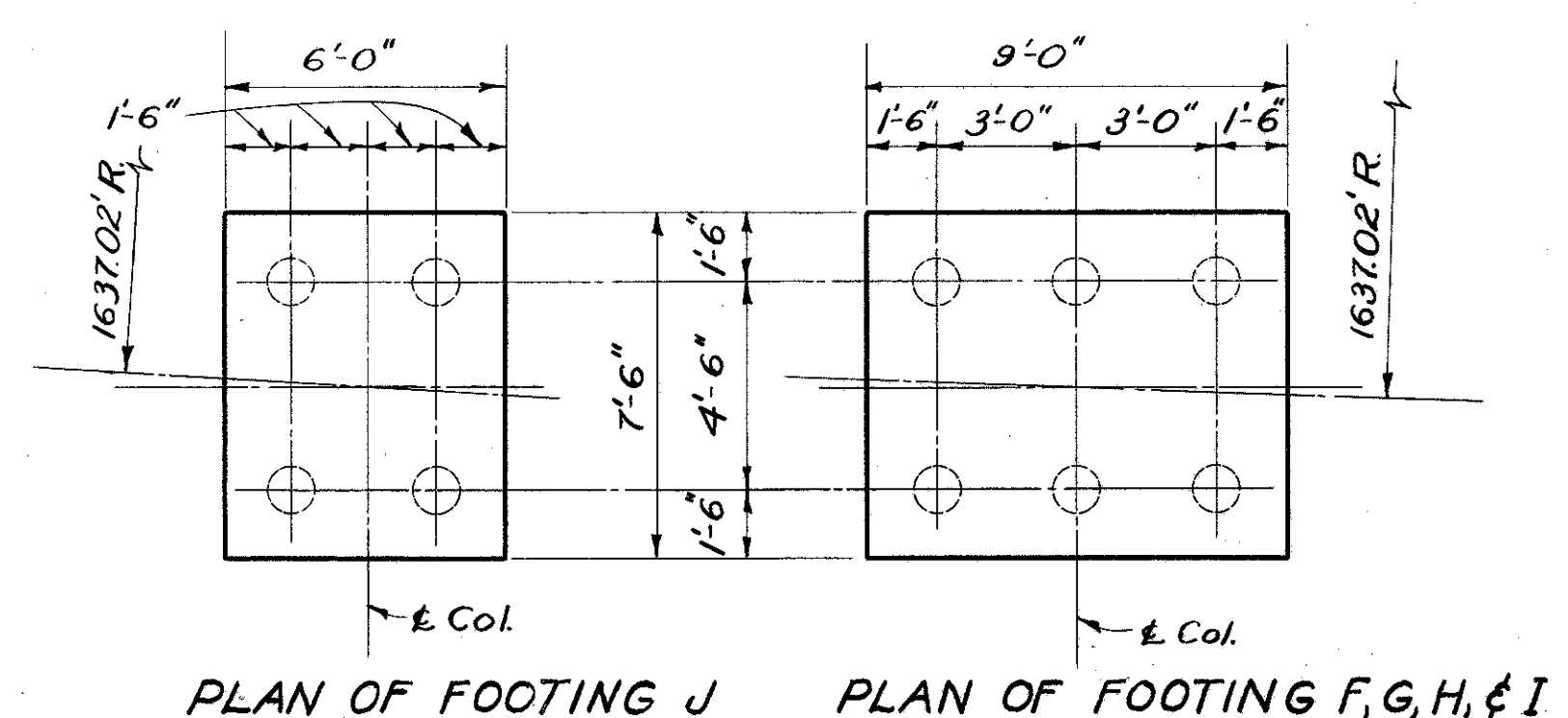
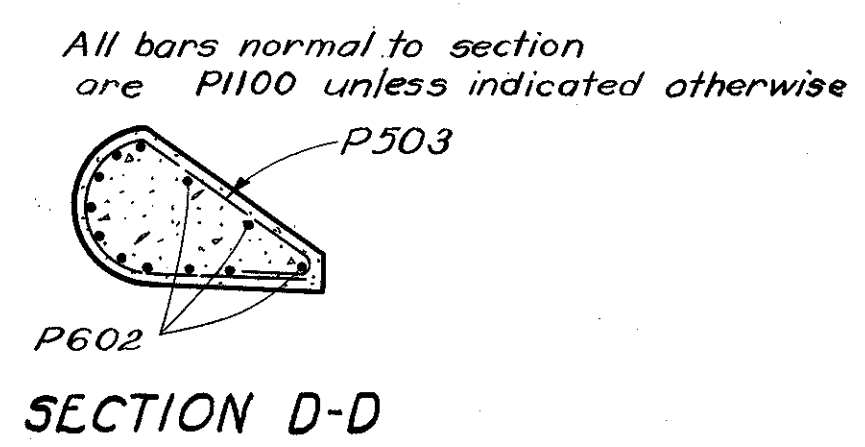
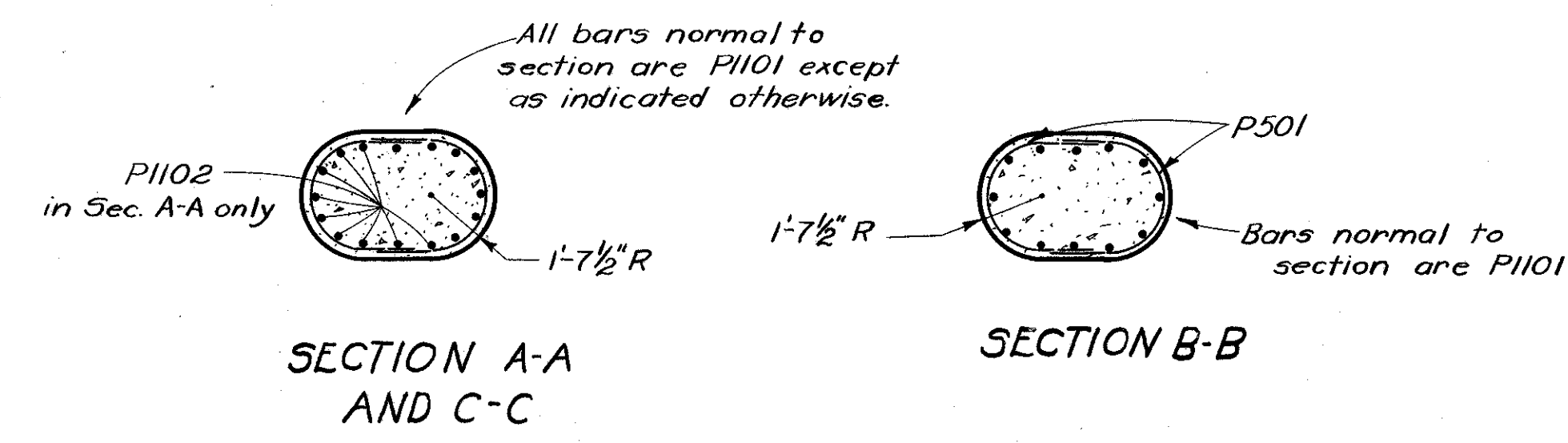
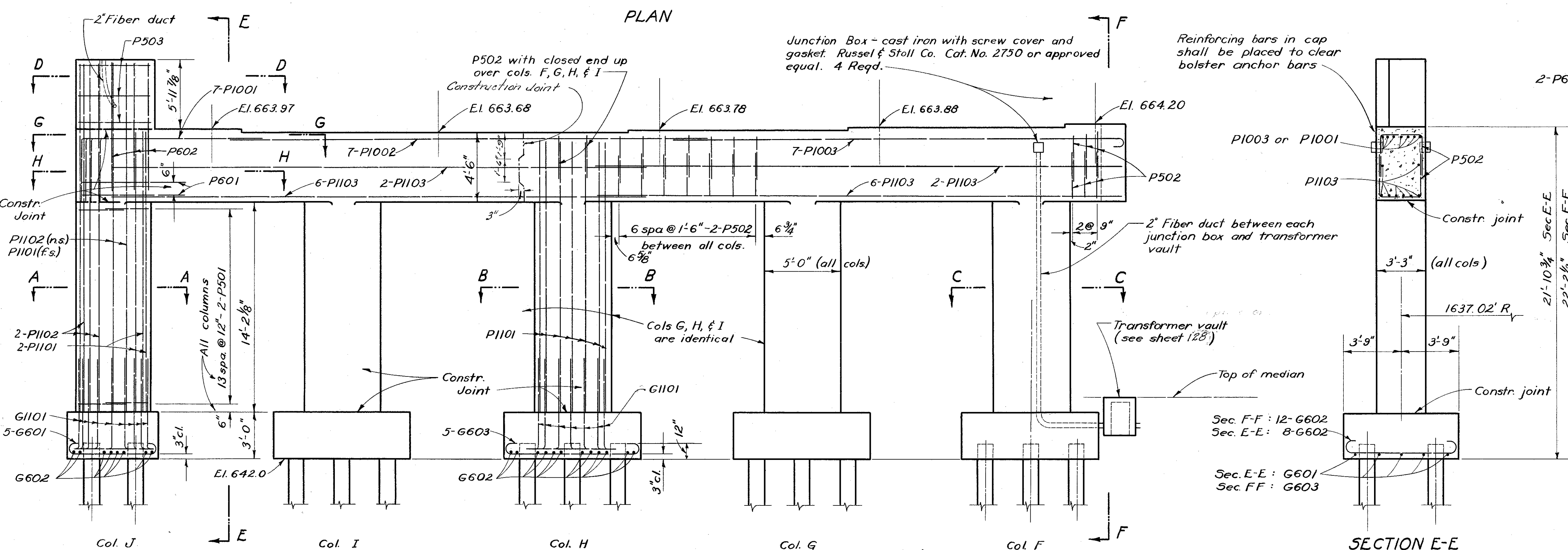
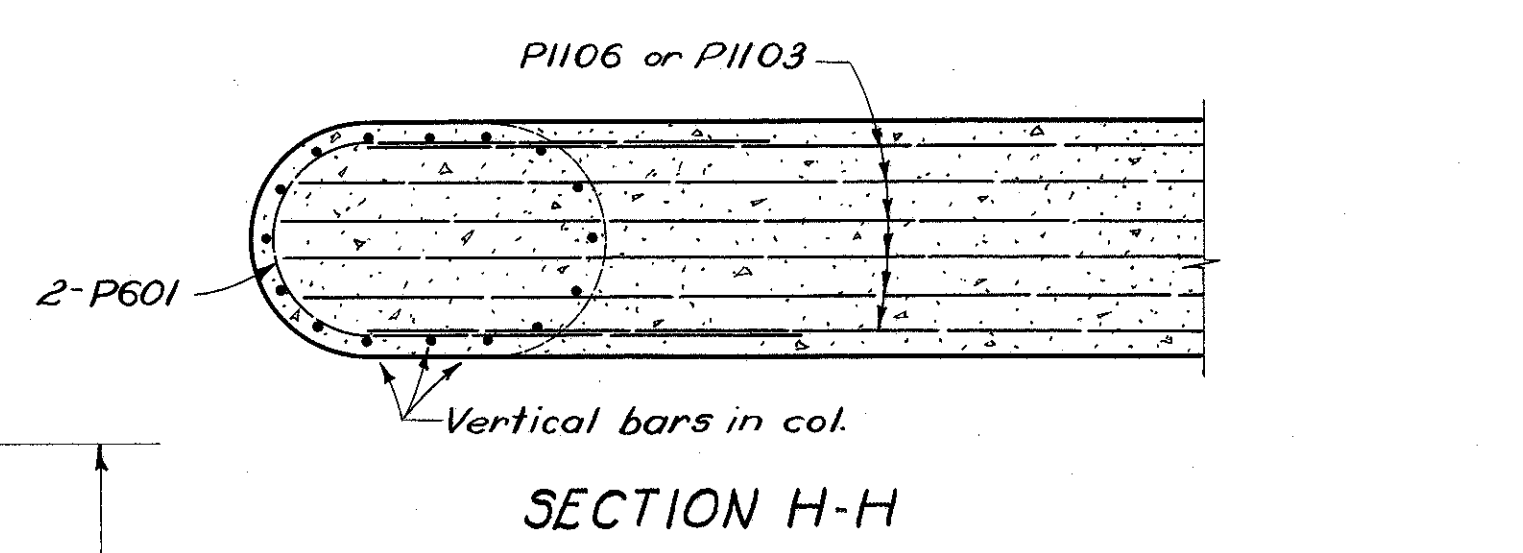
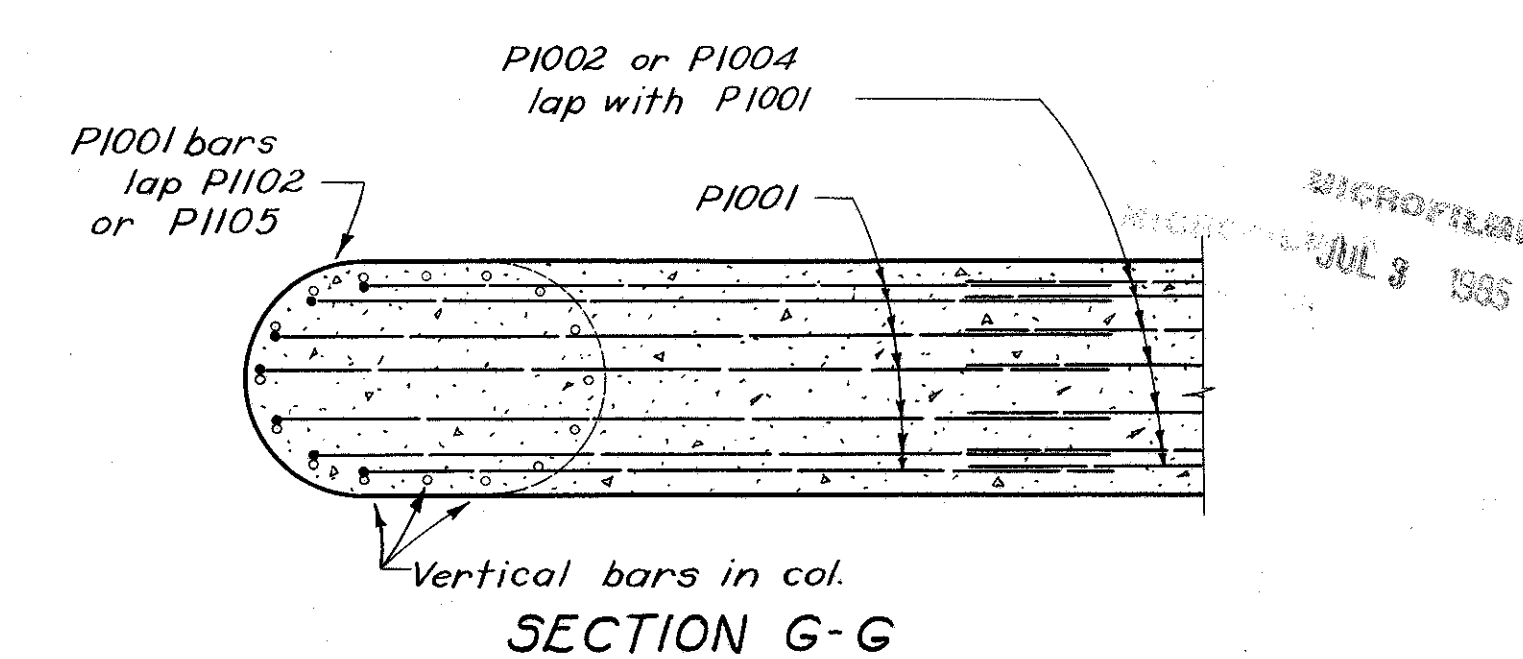
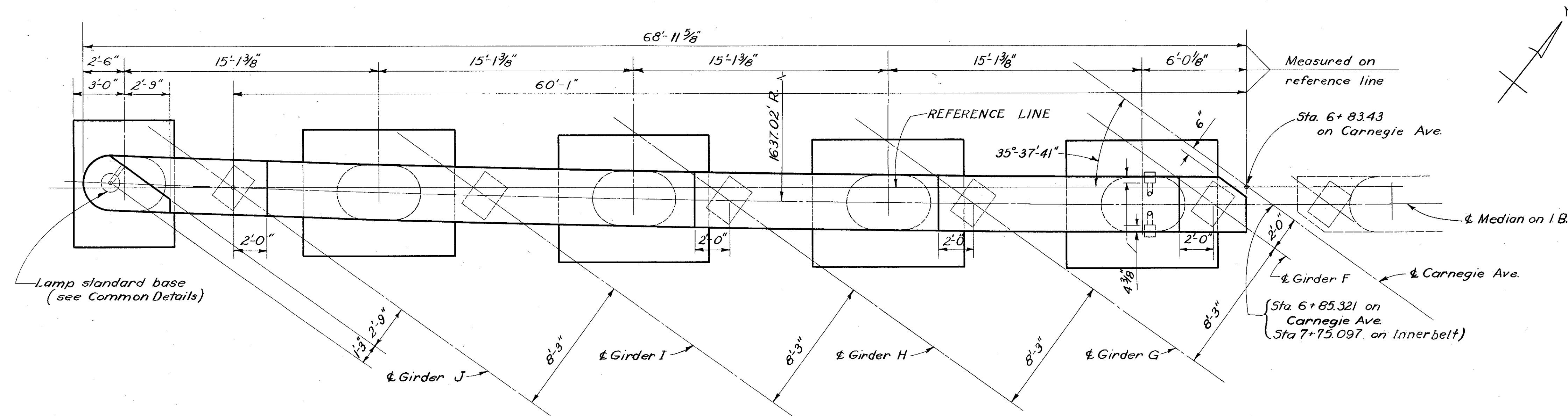
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

DETAILS OF
WEST ABUTMENT
BRIDGE NO. CUY-42-1896
INNERBELT FREEWAY UNDER CARNEGIE AVE
CUYAHOGA COUNTY STA. 7+75.097

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Roy	Roy	P.E.M.	W.C.K.	G.B.F.	8-15-57	

MICROFILMED
JUL 3 1985

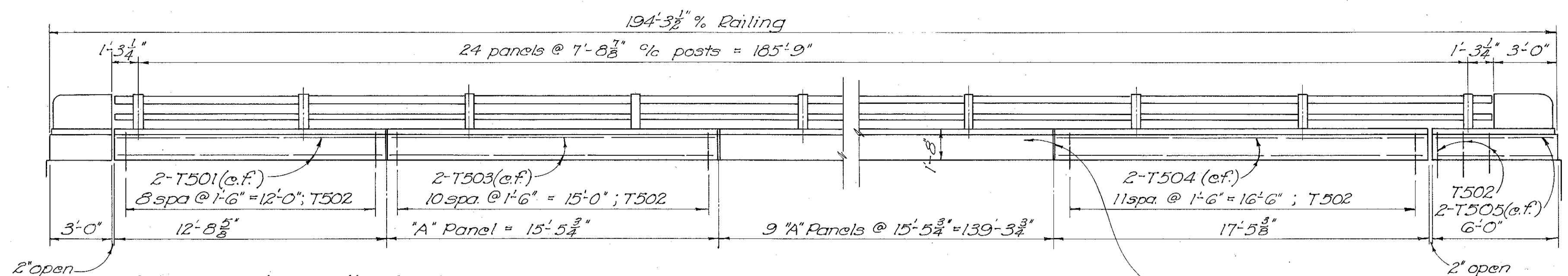
CUYAHOGA COUNTY
SEC. CUY-42-18.77



STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
DETAILS OF SOUTH SECTION OF PIER						
BRIDGE NO. CUY-42-1896 INNERBELT FREEWAY UNDER CARNEGIE AVE. CUYAHOGA COUNTY STA. 7+75.097						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ray	Ray	LDC	W.C.K.	BFG	8-15-57	

CUYAHOGA COUNTY
SEC. CUY-42-18.77

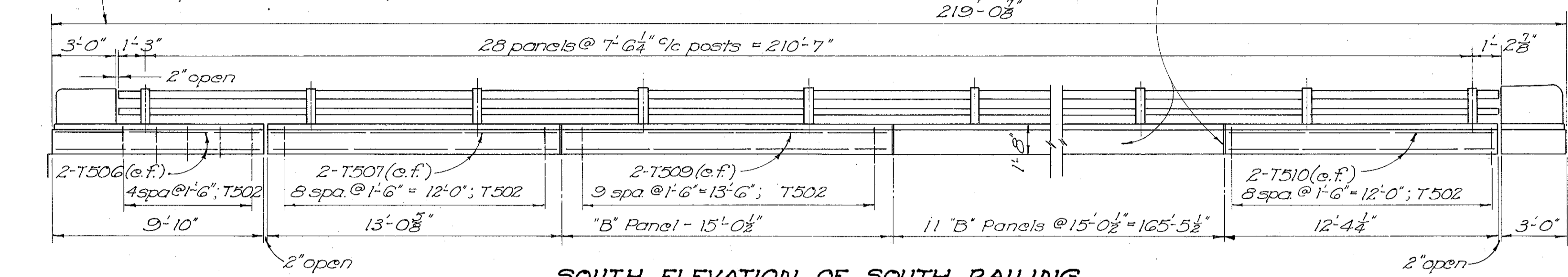
MICROFILMED
JUL 3 1985



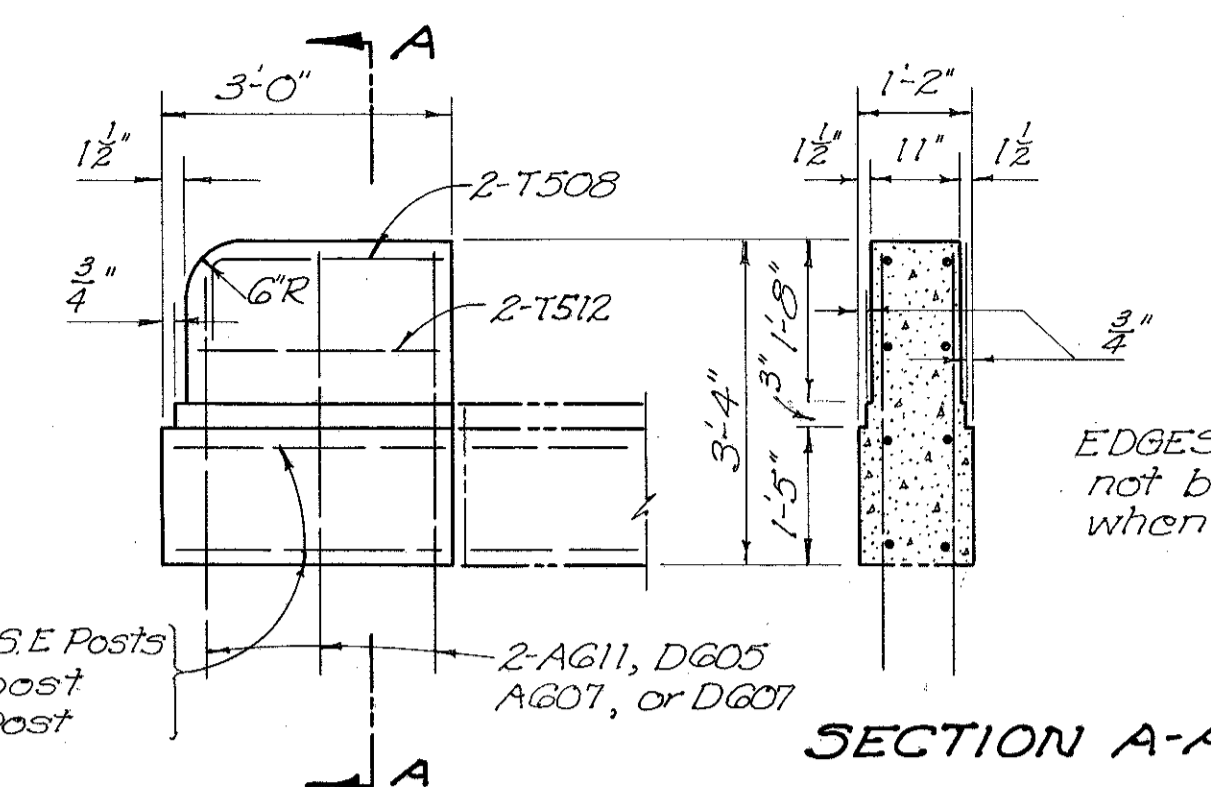
SOUTH ELEVATION OF NORTH RAILING

2" open
Setscrews in extreme northeast and southwest posts shall be tightened to prevent rattling of rails, but not tight enough to prevent them sliding thru post to accommodate expansion.

1/4" grey sponge rubber preformed expansion joint filler meeting the requirements of Sec. 17-10.02, Type I. (Include with Item 5-14 for payment)

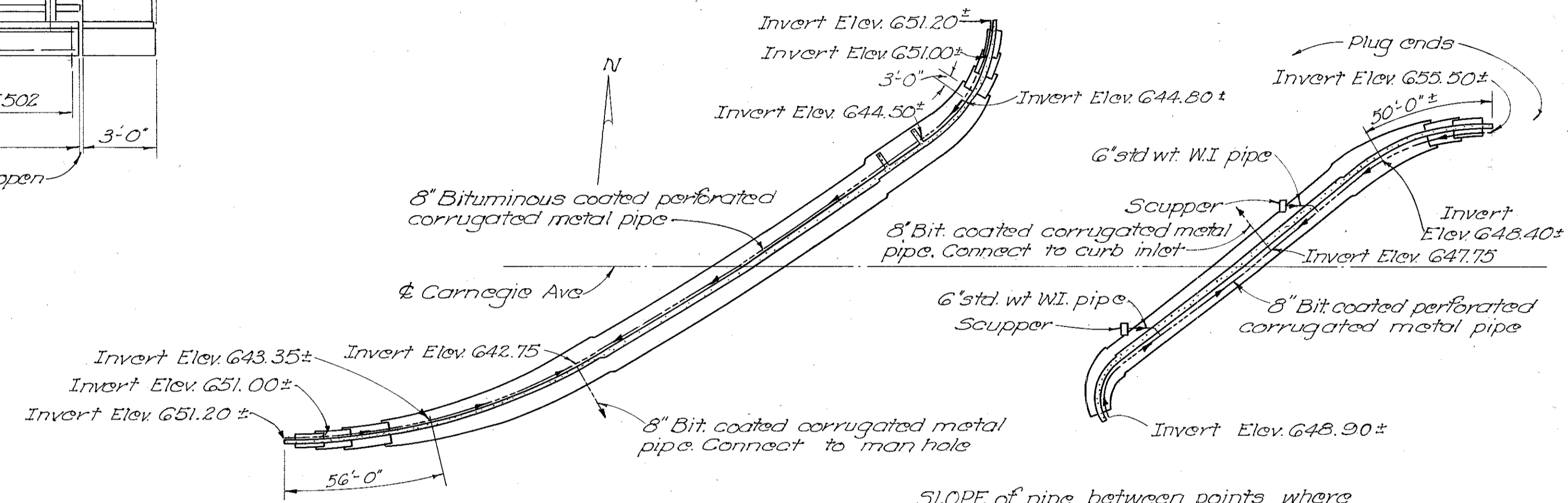


SOUTH ELEVATION OF SOUTH RAILING



DETAILS OF END POST

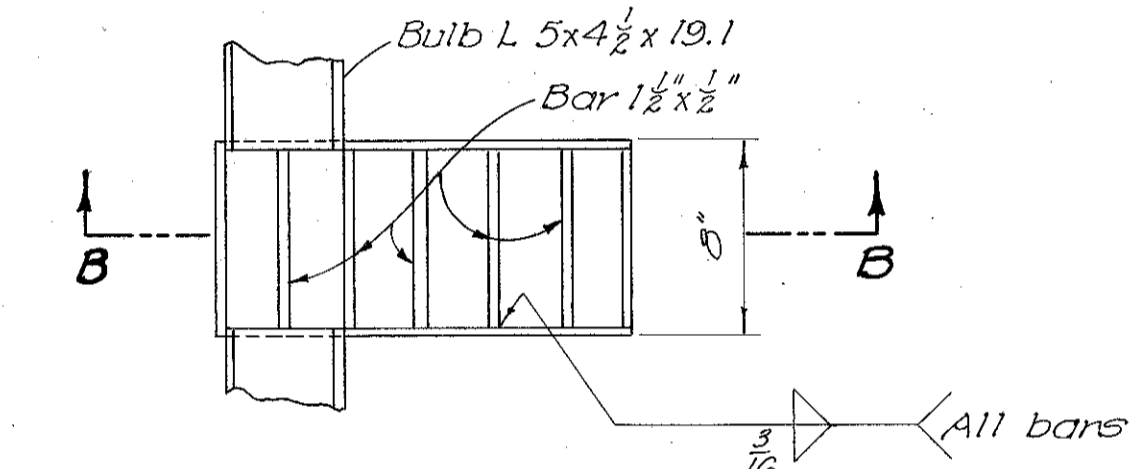
EDGES of end posts and parapet shall not be chamfered; round slightly when finishing.



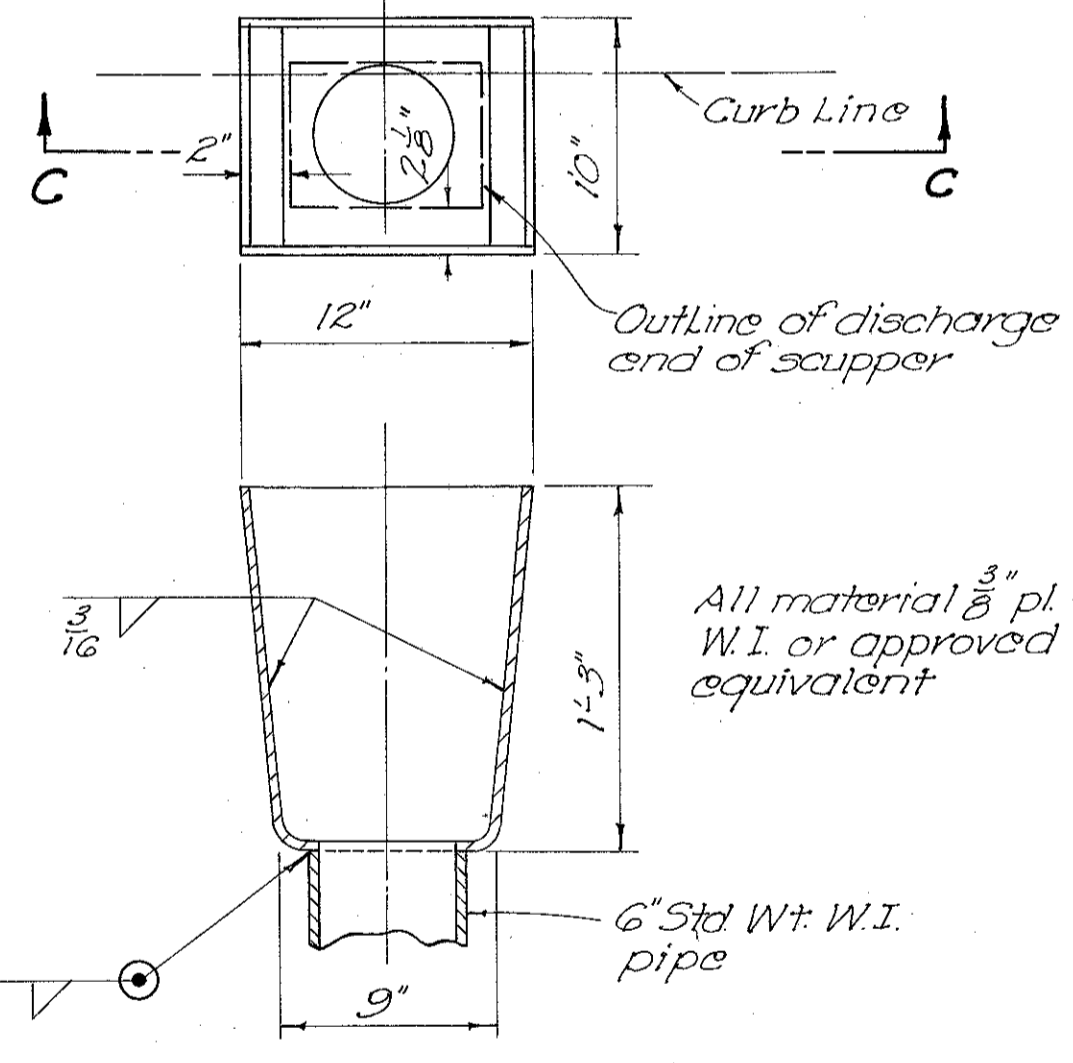
PLAN OF STRUCTURE DRAINAGE

SLOPE of pipe between points where elevations are given shall be constant.

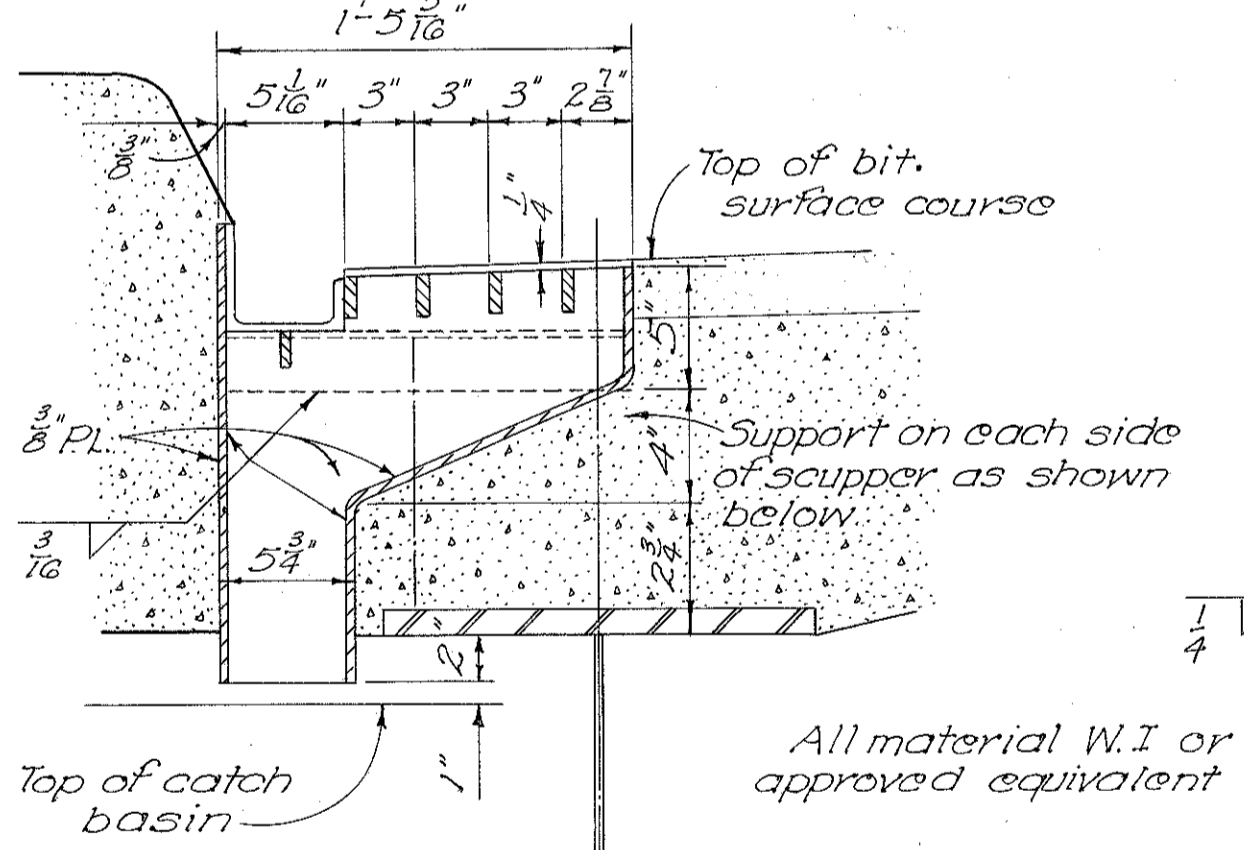
THE LOWER LIMIT OF THE POROUS BACKFILL is to be at approximately the same elev. as the invert of the perforated pipe.



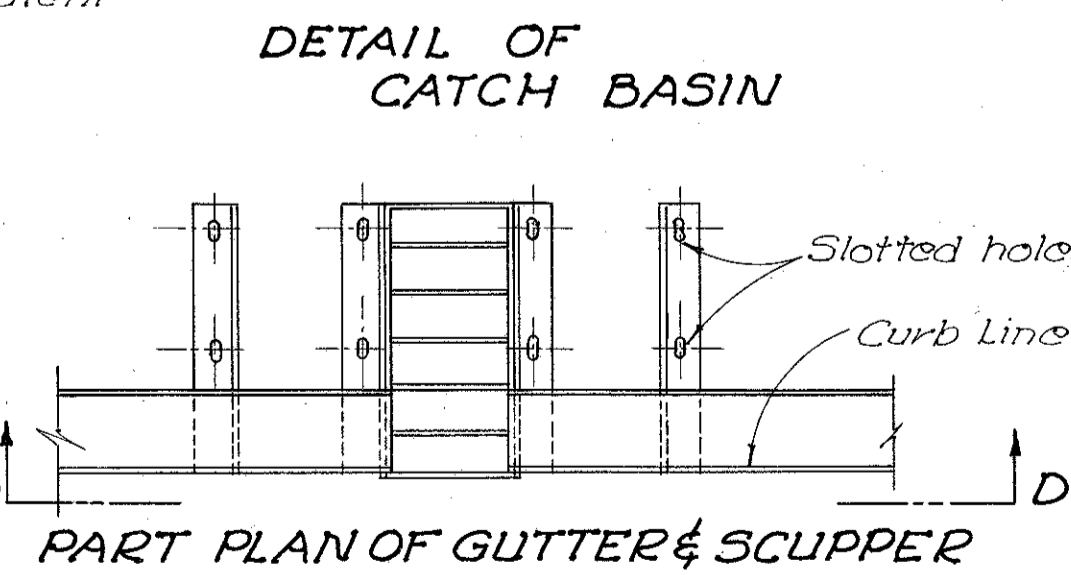
SECTION B-B DETAIL OF SCUPPER



SECTION C-C DETAIL OF CATCH BASIN



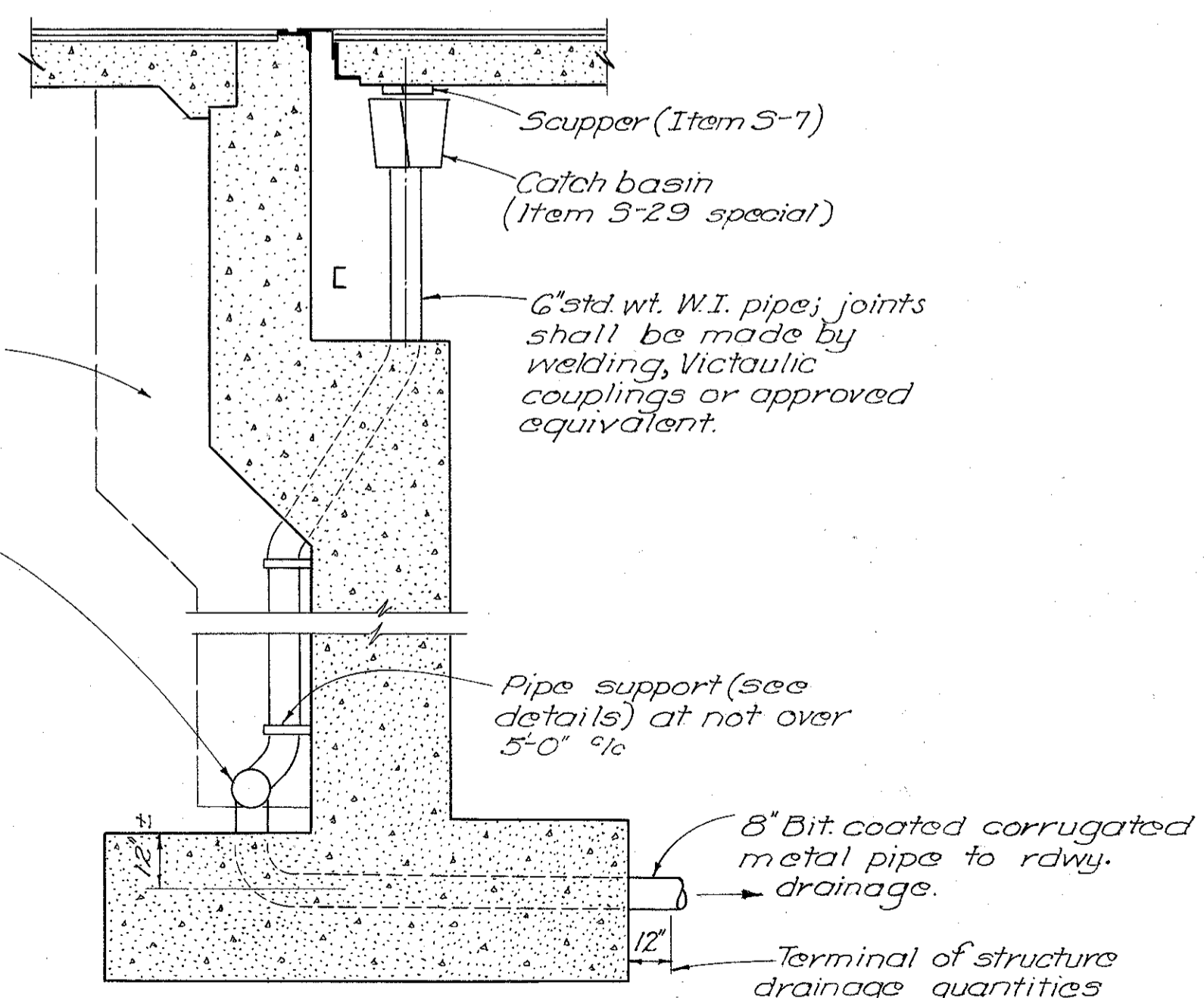
SECTION B-B DETAIL OF SCUPPER



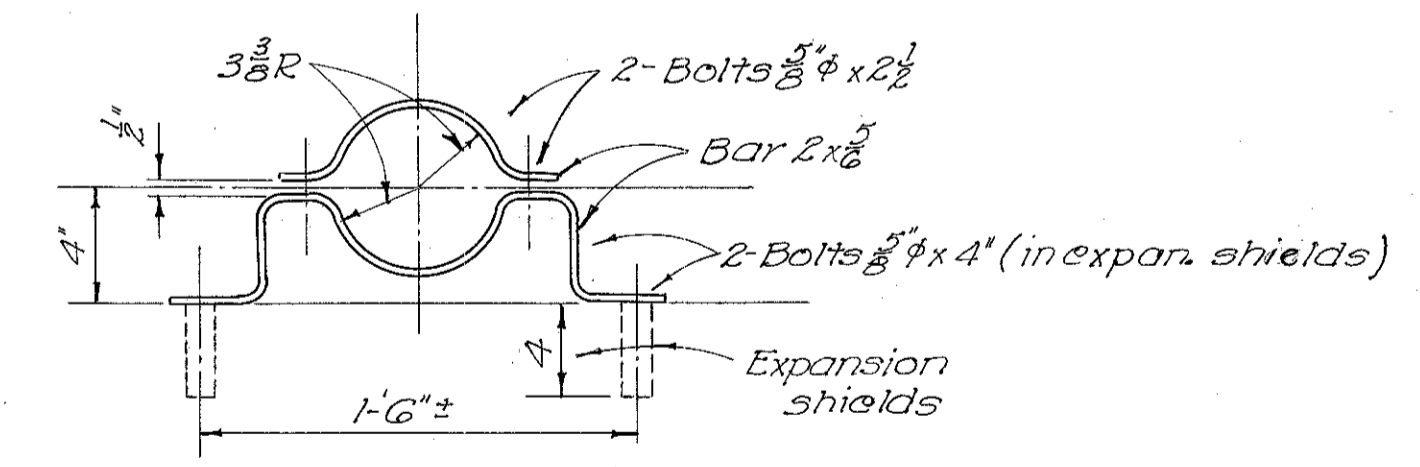
PART PLAN OF GUTTER & SCUPPER

BULB L GUTTERS shall be made up of individual lengths as long as possible; abutting ends at joint shall be milled.

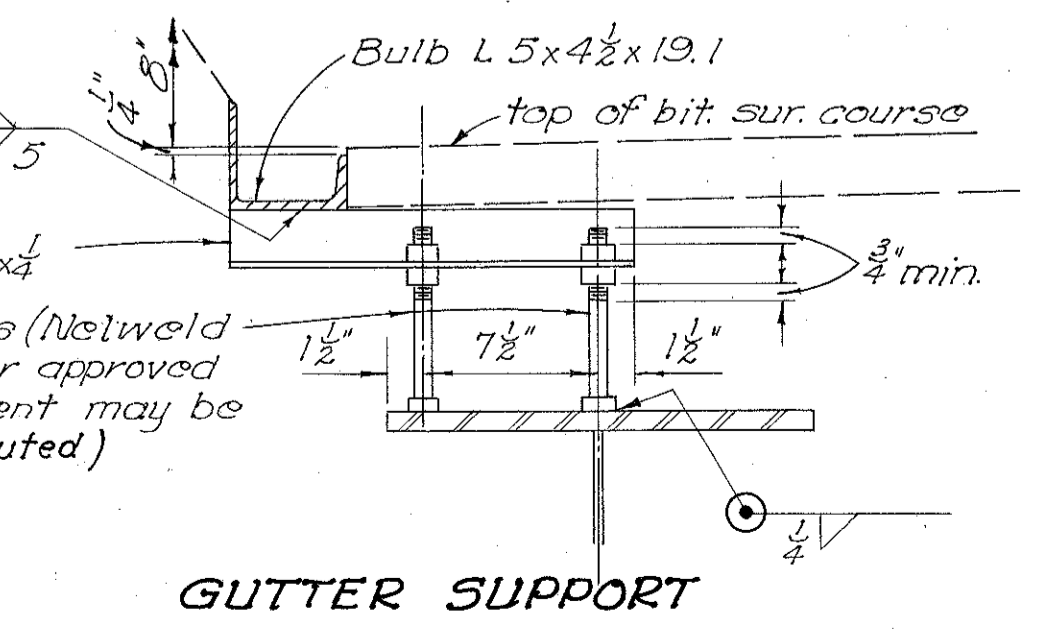
GUTTERS shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed.



SECTION THRU ABUTMENT WALL & WING FOOTING SHOWING DRAINAGE DETAILS



PIPE SUPPORT (Item 5-29 special)



GUTTER SUPPORT

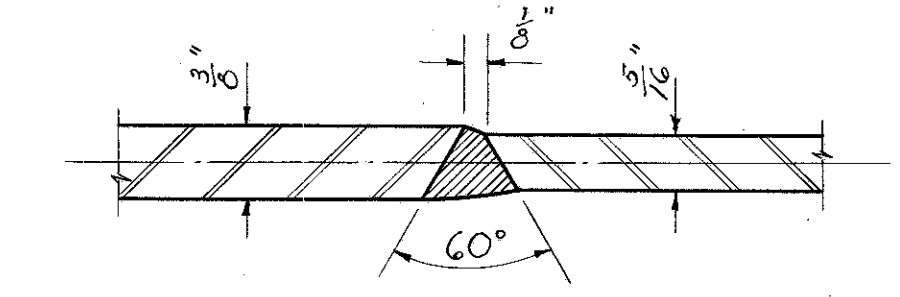
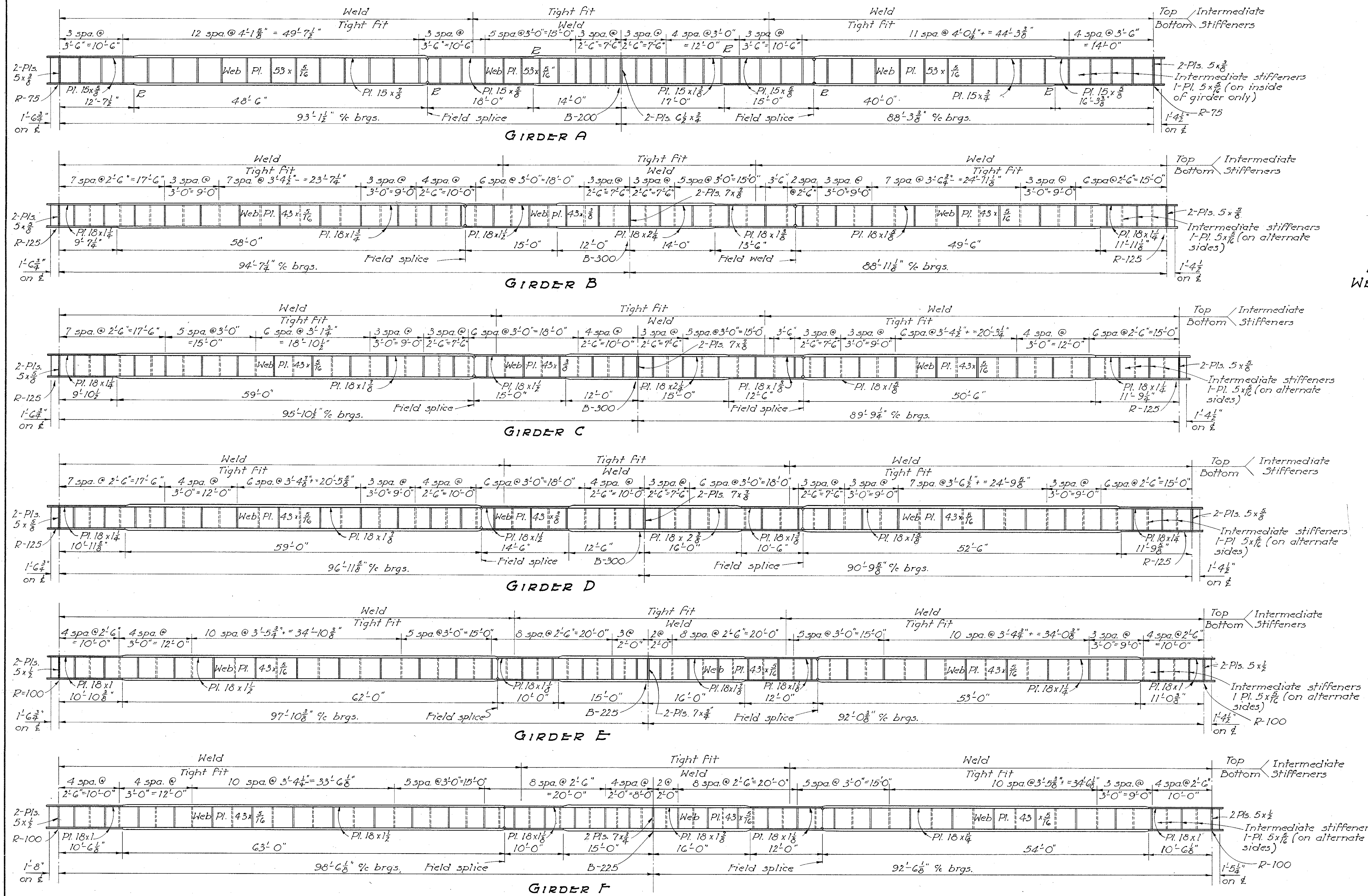
GUTTER AND SCUPPER DETAILS

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
RAILING & DRAINAGE DETAILS BRIDGE NO. CUY-42-1896						
INNERBELT FREEWAY UNDER CARNegie AVE. CUYAHOGA COUNTY STA. 7+75.097						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Kay	Kay	RHD	WCK	DFG	8-15-57	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

CUYAHOGA COUNTY
SEC. CUY-42-18.77

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JUL 8 1965



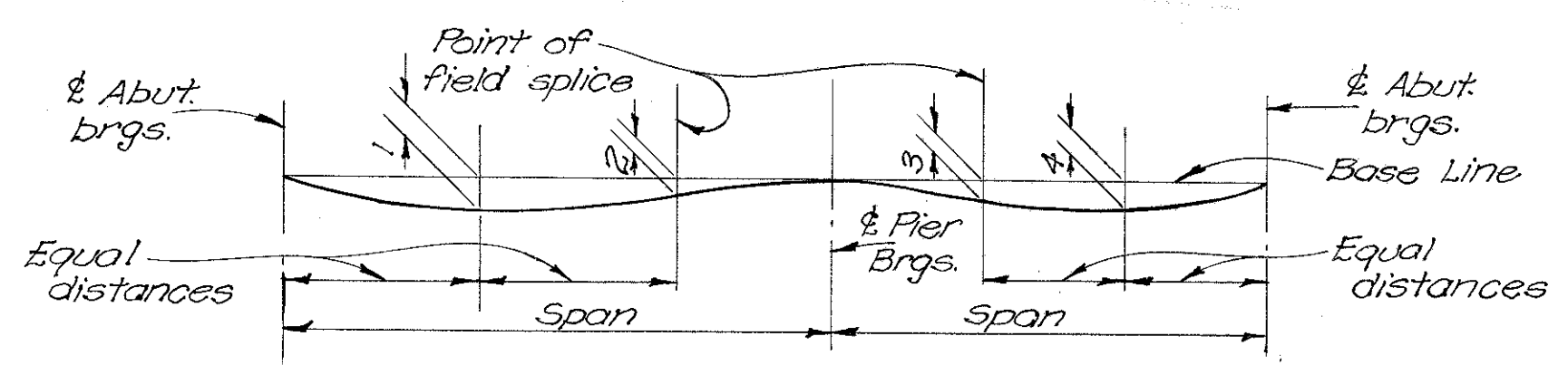
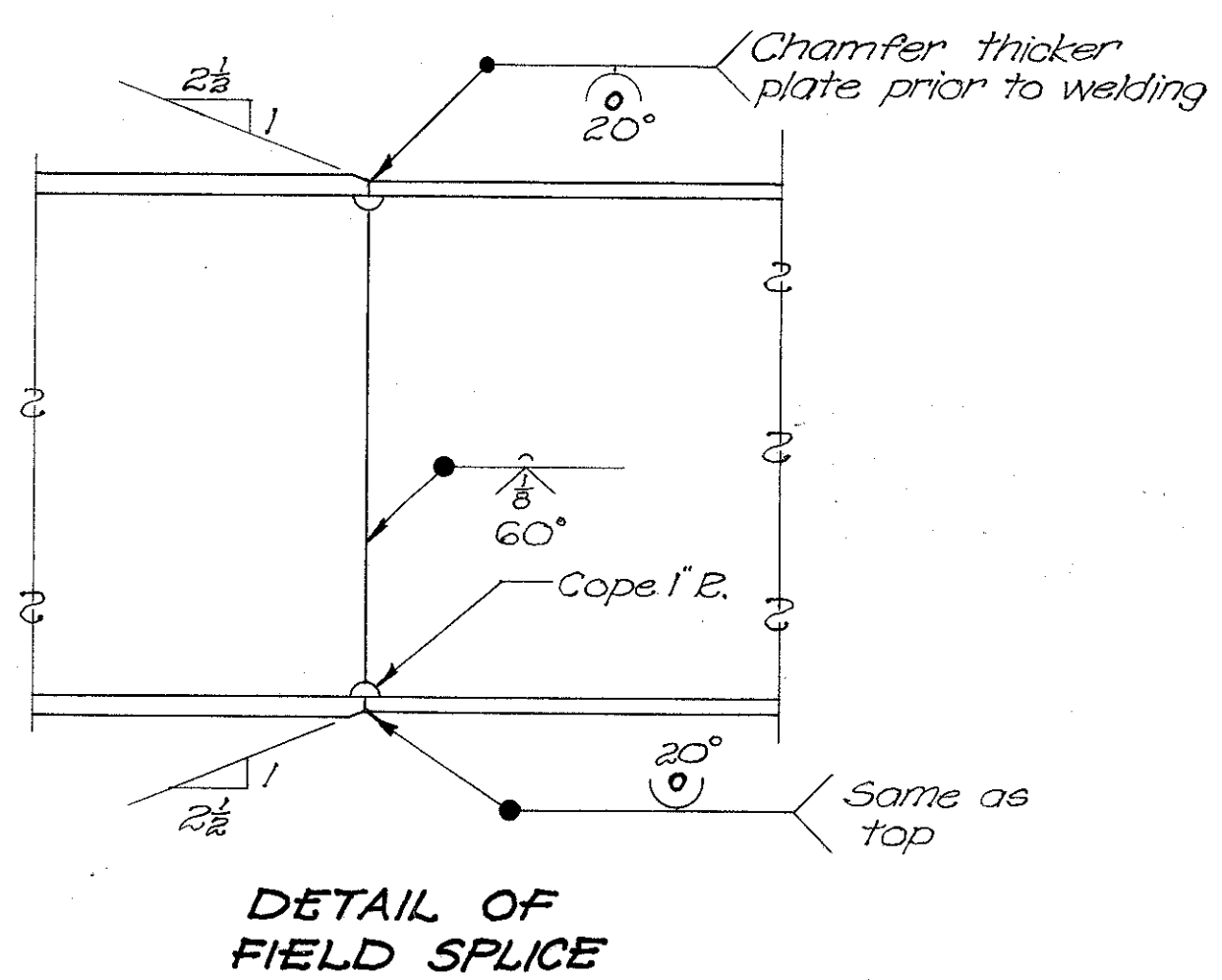
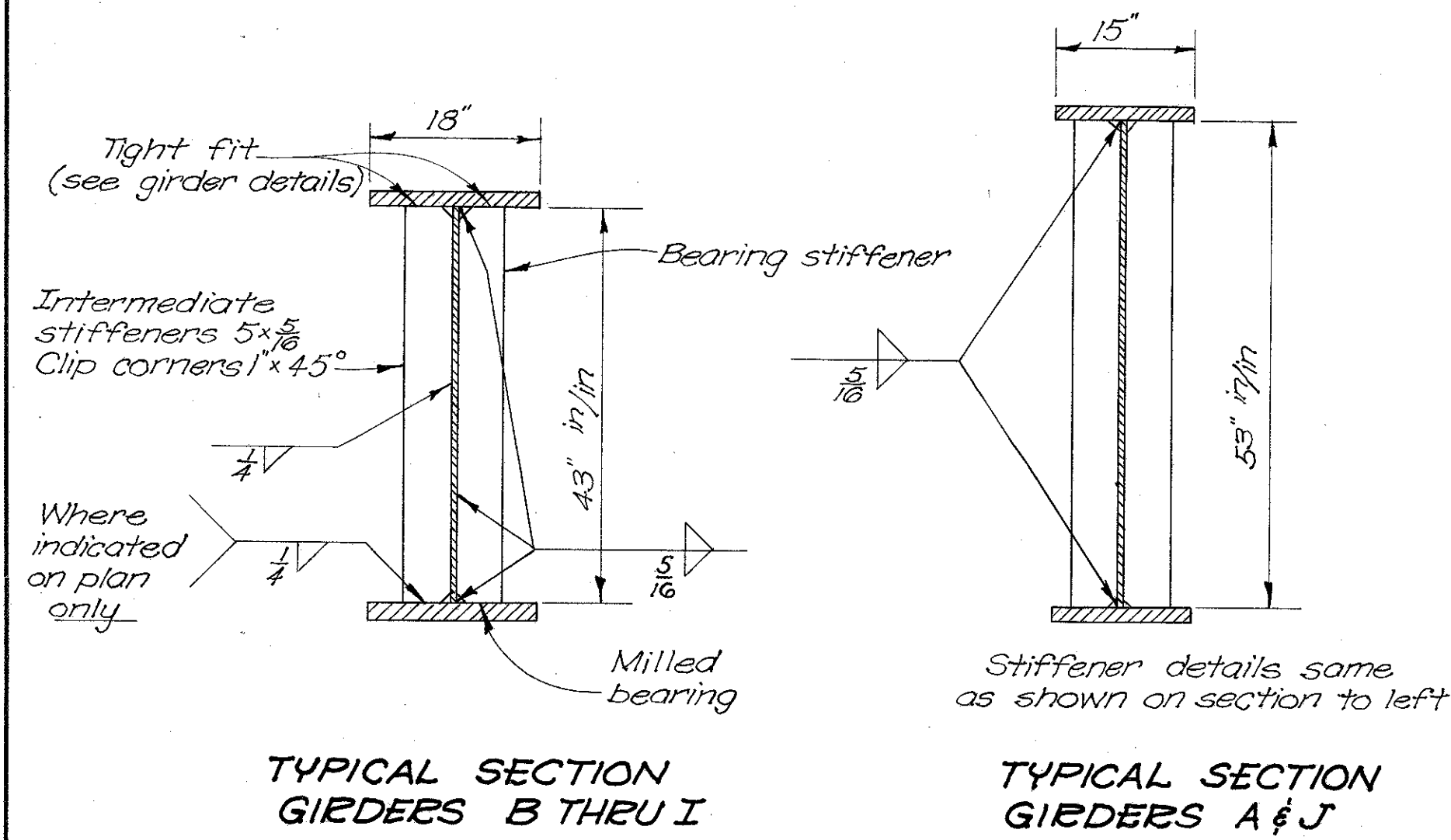
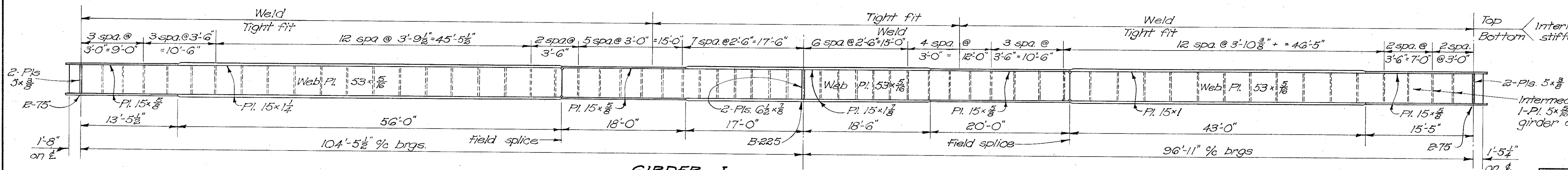
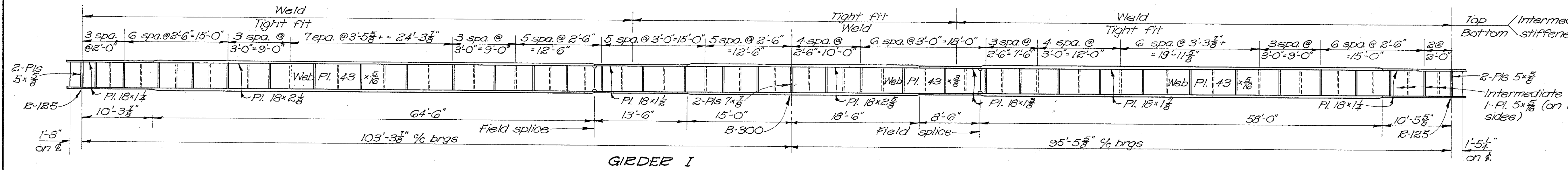
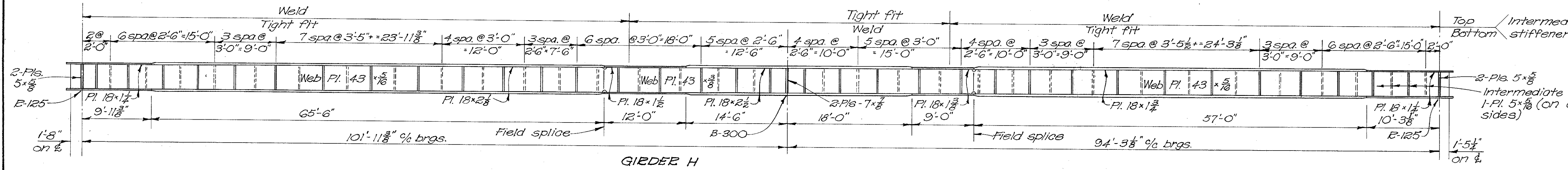
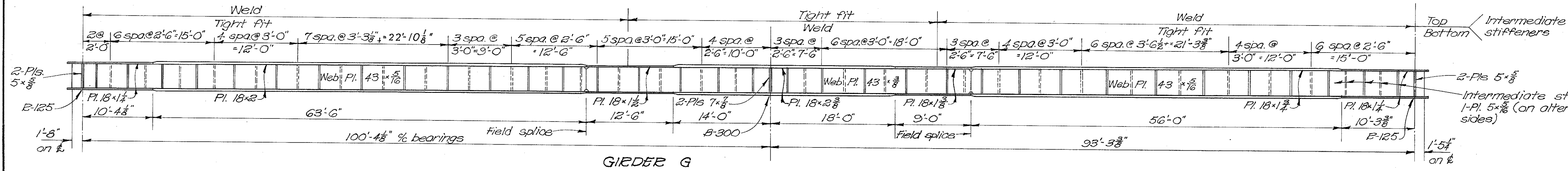
DETAIL OF SPICE FOR WEBS OF UNEQUAL THICKNESS

ADDITIONAL DETAILS are shown on sheet 96

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
GIRDER DETAILS					
BRIDGE No. CUY-42-1896					
INNERBELT FREEWAY UNDER CARNEGIE AV.					
CUYAHOGA COUNTY STA. 7+75.097					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
Kay	Kay	Grasselli	WCK	BFG	8-15-57

CUYAHOGA COUNTY
SEC. CUY-42-18.77

MICROFILMED
JUL 3 1965



Deflections are listed from left to right in each block of table as deflection caused by weight of structural steel and utility lines, deflection caused by remaining dead load and total deflection.

CAMBERING of girders is required in accordance with the table to right.

GIRDER	POINT			
	1	2	3	4
A	1/8" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
B	3/8" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	3/8" - 1" - 3/8"
C	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
D	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
E	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
F	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
G	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
H	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
I	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"
J	1/4" - 1" - 1/8"	1/4" - 1" - 1/4"	1/4" - 1" - 1/4"	1/4" - 1" - 1/8"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GIRDER DETAILS

BRIDGE No. CUY-42-1896
INNERBELT FREEWAY UNDER CARNEGIE AVE.

CUYAHOGA COUNTY Sta. 7+75.097

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Roy	Roy	RBI	WCK	BRG	9/8/54	8-15-57

REINFORCING STEEL LIST

MICROFILMED
JUN 8 1985

FED. RD. DIVISION	STATE	PROJECT	97 129
2	OHIO		

**CUYAHOGA COUNTY
SEC. CUY-42-18.77**

Mark	No.	Length	Weight	Shp.
Superstructure				
S701	463	28'-3"	26,735	S
	1	27'-11"		Vary
S702	Series	to	1,749	S by 5/8" +
	of 52	5'-0"		Incr.
	1	27'-10"		Vary
S703	Series	to	1,473	S by 6/8" +
	of 47	3'-10"		Incr.
	1	27'-10"		Vary
S704	Series	to	1,943	S by 1/2" +
	of 61	3'-4"		Incr.
	1	27'-8"		Vary
S705	Series	to	1,532	S by 6/8" +
	of 46	4'-11"		Incr.
S601	204	34'-5"	10,546	S
S602	463	28'-6"	19,820	S
S603	538	12'-9"	10,303	B
S604	538	10'-2"	8,215	B
S605	579	5'-1"	4,421	B
S606	52	40'-0"	3,124	S
	1	27'-11"		Vary
S607	Series	to	1,286	S by 5/8" +
	of 52	5'-0"		Incr.
	1	28'-1"		Vary
S608	Series	to	1,100	S by 6/8" +
	of 47	3'-1"		Incr.
	1	28'-1"		Vary
S609	Series	to	1,451	S by 1/2" +
	of 61	3'-7"		Incr.
	1	27'-8"		Vary
S610	Series	to	1,126	S by 6/8" +
	of 46	4'-11"		Incr.
S611	8	9'-0"	108	S
S612	8	9'-6"	114	S
S613	8	10'-3"	123	S
S614	8	11'-3"	135	S
S615	8	12'-8"	152	S
S616	4	14'-3"	86	S
S617	6	15'-8"	141	S
	1	10'-7"		Vary
S618	Series	to	133	B by 6/8" +
	of 11	5'-6"		Incr.
	1	8'-4"		Vary
S619	Series	to	96	B by 6/8" +
	of 11	3'-3"		Incr.
S620	12	5'-3"	95	S
S621	12	4'-11"	89	S
	1	10'-9"		Vary
S622	Series	to	149	B by 5/8" +
	of 12	5'-10"		Incr.
	1	8'-6"		Vary
S623	Series	to	109	B by 5/8" +
	of 12	3'-7"		Incr.
S624	6	4'-7"	41	B
S625	6	7'-0"	63	B
S626	10	9'-4"	140	B
S627	6	2'-6"	23	S
S628	186	35'-8"	9,984	S
S629	186	33'-0"	9,219	S
S630	204	34'-9"	10,648	S

Mark	Number	Length	Weight	Shp.	
Abutment Footings Including					
Wing Footings					
		Abutment	Wing	Total	
F1101	357	357	7'-2"	13,593	
F1102	20	20	9'-5"	1,001	
F1103	22	22	10'-2"	1,188	
F1104	183	183	13'-7"	13,207	
F1105	46	46	18'-8"	4,562	
F1106	32	32	12'-7"	2,199	
F1107	20	20	10'-0"	1,063	
F1108	34	34	11'-2"	2,017	
F1001	24	7	31	6'-9"	900
F1002	3	3	8'-7"	111	
F1003	24	24	7'-1"	732	
F1004	114	114	13'-5"	6,581	
F1005	32	28	60	10'-7"	2,732
F1006	16	16	8'-8"	597	
F1007	8	8	8'-2"	281	
F1008	2	6	8	8'-5"	290
F1009	19	19	9'-5"	770	
F901	96	4	100	6'-4"	2,153
F902	4	2	6	8'-3"	168
F903	3	3	6	9'-1"	185
F904	64	64	10'-10"	2,357	
F905	54	54	10'-0"	1,836	
F906	7	7	18'-0"	428	
F907	85	85	9'-6"	2,746	
F801	58	51	109	8'-6"	2,474
F802	22	33	55	7'-9"	1,138
F803	20	17	37	7'-0"	692
F804	8	8	7'-4"	157	
F805	4	2	6	5'-11"	95
F806	2	5	7	8'-5"	157
F807	26	32	58	9'-4"	1,445
F808	4	4	8	5'-4"	114
F809	137	137	11'-4"	4,146	
F810	40	40	14'-8"	1,566	
F811	207	207	9'-0"	4,974	
F701	9	9	7'-10"	144	
F702	4	4	8'-10"	72	
F703	2	2	5'-6"	22	
F601	6	6	5'-7"	50	
F602	182	182	7'-9"	2,119	
F603	12	22	34	6'-10"	349
F604	5	21	26	5'-1"	199
F605	6	11	17	6'-8"	170
F606	6	12	18	8'-2"	221
F607	18	39	57	8'-0"	685
F501	11	24	35	4'-7"	167
F502	20	20	29'-0"	605	
F503	5	5	18'-6"	96	
F504	2	2	14'-6"	30	
F505	2	2	11'-6"	24	
F506	16	16	37'-6"	626	
F507	16	16	36'-0"	601	
F508	4	4	8'-8"	36	
F509	2	2	4	11'-6"	43
F510	8	8	25'-6"	213	
F511	4	4	34'-0"	142	
F512	3	3	30'-0"	94	
F513	15	15	10'-6"	164	
F514	3	3	13'-6"	42	
F515	2	2	13'-0"	27	
F516	6	6	38'-0"	298	
F517	1	1	16'-0"	17	
F518	14	14	30'-8"	448	
F519	3	3	20'-0"	63	
F520	14	14	32'-6"	475	
F521	2	2	28'-0"	58	
F522	2	2	18'-0"	38	

Mark	No.	Length	Weight	Shp.
Northwest Wing Wall				
E1101	1	27'-3"	145	S
E1102	1	26'-4"	140	S
E1103	1	25'-5"	135	S
E1104	1	24'-7"	131	S
E1105	1	23'-10"	127	S
E1106	1	22'-11"	122	S
E1107	1	22'-1"	117	S
E1108	1	21'-4"	113	S
E1109	1	20'-8"	110	S
E1110	1	17'-4"	92	S
E1111	1	16'-9"	89	S
E1112	4	13'-6"	287	S
E1113	11	10'-3"	599	S
E1114	2	11'-0"	117	S
E1115	5	8'-6"	226	S
E1001	10	30'-7"	1,316	B
E1002	14	15'-0"	904	S
E801	1	16'-1"	43	S
E802	1	12'-10"	34	S
E803	2	7'-6"	40	S
E701	13	27'-6"	731	S
E601	1	12'-4"	19	S
E602	1	12'-0"	18	S
E603	1	8'-11"	13	S
E604	1	8'-7"	13	S
E605	1	8'-5"	13	S
E606	1	8'-2"	12	S
E607	2	8'-1"	24	S
E608	12	9'-0"	162	B
E609	16	10'-2"	244	B
E610	20	12'-8"	381	B
E611	10	27'-6"	413	S
E501	22	27'-6"	631	S
E502	16	6'-11"	115	B
E503	4	11'-6"	48	B
E504	9	28'-7"	268	S
E505	1	27'-7"	29	S
E506	2	27'-0"	56	B
E507	9	28'-4"	266	S
E508	1	27'-4"	29	S
E509	1	27'-0"	28	S
E510	1	25'-10"	27	S
E511	1	24'-10"	26	S
E512	1	23'-10"	25	S
E513	1	22'-10"	24	S
E514	1	21'-10"	23	S
E515	1	21'-3"	22	S
E516	1	20'-6"	21	S
E517	1	17'-0"	18	S
E518	1	16'-3"	17	S
E519	1	16'-1"	17	S
E520	1	15'-8"	16	S
E521	1	12'-5"	13	S
E522	1	12'-0"	13	S
E523	1	9'-11"	10	S
E524	1	8'-7"	9	S
E525	1	8'-3"	9	S
E526	3	8'-1"	25	S
E527	2	6'-0"	13	B
E528	2	18'-0"	25	B
E529	2	19'-6"	41	B
E530	26	27'-0"	732	B
E531	2	23'-0"	48	B
E532	2	8'-6"	18	B
E533	2	3'-6"	7	B
E534	2	28'-2"	59	B
E535	2	27'-2"	57	B

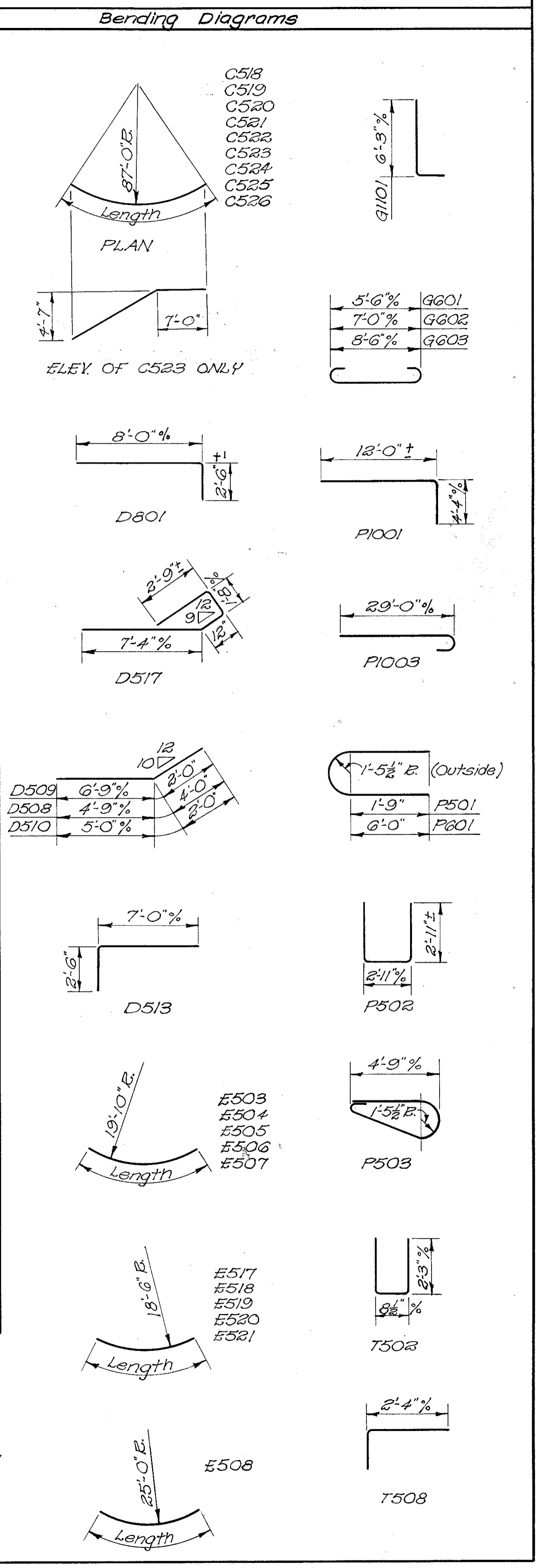
Mark	No.	Length	Weight	Shp.
West Abutment				
A1101	34	22'-2"	4,004	S
A1102	64	12'-6"	4,250	S
A1103	128	9'-0"	6,121	S
A1104	32	21'-11"	3,726	S
A801	2	7'-9"	42	S
A802	2	14'-3"	76	B
A601	53	10'-9"	856	B
A602	46	16'-8"	1,152	B
A603	9	17'-1"	231	B
A604	10	12'-11"	194	B
A605	6	8'-0"	72	B
A606	6	7'-3"	65	S
A607	6	8'-3"	74	S
A608	4	8'-8"	52	B
A609	4	12'-5"	75	B
A610	4	8'-11"	54	B
A611	6	5'-3"	47	S
A501	50	4'-11"	256	B
A502	24	22'-0"	551	S
A503	11	29'-3"	336	S
A504	16	31'-6"	526	S
A505	54	39'-7"	2,229	S
A506	6	4'-11"	31	S
A507	4	22'-9"	95	S
A508	23	27'-3"	654	S
A509	2	14'-0"	29	S
A510	5	10'-8"	56	B
A511	5	6'-8"	35	S
A512	6	8'-0"	50	S
A513	24	21'-9"	544	S
Southwest Wing Wall				
W1101	4	27'-8"	588	S
W1102	1	27'-0"	143	S
W1103	1	26'-4"	140	S
W1104	1	25'-9"	137	S
W1105	1	25'-1"	133	S
W1106	1	24'-6"	130	S
W1107	1	23'-11"	127	S
W1108	1	23'-4"	124	S
W1109	17	11'-0"	994	S
W1110	9	16'-0"	765	S
W1111	3	13'-0"	207	S
W1112	11	9'-0"	526	

REINFORCING STEEL LIST CONT'D

Mark	No.	Length	Weight	Shp.
Northeast Wing Wall				
C1001	1	18'-1"	78	S
C1002	2	7'-6"	65	S
C1003	1	18'-8"	80	S
C1004	1	19'-5"	84	S
C1005	1	20'-7"	86	S
C1006	1	20'-9"	89	S
C1007	1	21'-6"	93	S
C1008	6	10'-0"	258	S
C1009	3	21'-9"	281	S
C901	1	13'-0"	44	S
C902	4	7'-6"	102	S
C903	1	16'-5"	56	S
C904	1	16'-11"	58	S
C905	1	17'-5"	59	S
C601	2	8'-4"	25	S
C602	2	8'-7"	26	S
C603	2	8'-11"	27	S
C604	1	9'-4"	14	S
C605	1	12'-5"	19	S
C606	1	12'-9"	19	S
C501	2	8'-4"	17	S
C502	2	8'-6"	18	S
C503	1	8'-11"	9	S
C504	1	11'-11"	12	S
C505	1	12'-3"	13	S
C506	1	12'-7"	13	S
C507	1	13'-0"	14	S
C508	1	16'-3"	17	S
C509	1	16'-9"	17	S
C510	1	17'-0"	18	S
C511	1	17'-7"	18	S
C512	1	18'-0"	19	S
C513	1	18'-11"	20	S
C514	1	19'-7"	20	S
C515	1	20'-4"	21	S
C516	1	21'-3"	22	S
C517	3	21'-6"	67	S
C518	2	22'-0"	67	B
C519	2	14'-0"	29	B
C520	8	31'-0"	259	B
C521	2	15'-3"	32	B
C522	4	4'-5"	18	B
C523	2	26'-6"	55	B
C524	2	14'-6"	30	B
C525	2	23'-6"	49	B
C526	16	26'-2"	437	B
East Abutment				
D901	22	16'-4"	1,222	S
D902	43	10'-0"	1,462	S
D903	23	16'-7"	1,297	S
D801	2	10'-3"	55	B
D802	2	7'-8"	41	S
D601	46	10'-9"	743	B
D602	41	16'-8"	1,026	B
D603	3	17'-1"	77	B
D604	9	12'-11"	175	B
D605	14	8'-2"	172	S
D606	4	7'-6"	45	S
D607	6	8'-0"	72	S
D608	4	7'-2"	43	S

Mark	No.	Length	Weight	Shp.
East Abutment (cont.)				
D501	14	26'-10"	392	S
D502	2	13'-0"	27	S
D503	20	16'-2"	337	S
D504	23	35'-6"	852	S
D505	21	16'-4"	358	S
D506	9	25'-0"	235	S
D507	19	26'-10"	532	S
D508	3	8'-8"	27	B
D509	3	8'-8"	27	B
D510	3	6'-11"	22	B
D511	4	4'-10"	20	S
D512	23	31'-6"	756	S
D513	3	9'-5"	29	B
D514	2	13'-9"	29	S
D515	2	23'-4"	49	S
D516	2	21'-9"	45	S
D517	3	12'-5"	39	B
D518	50	4'-11"	256	B
Southeast Wing Wall				
E1001	1	21'-10"	94	S
E1002	1	20'-7"	89	S
E1003	1	19'-3"	83	S
E1004	1	17'-11"	77	S
E1005	3	10'-0"	129	S
E901	1	7'-6"	26	S
E902	1	16'-3"	55	S
E801	1	15'-4"	41	S
E802	1	14'-2"	38	S
E803	2	7'-6"	40	S
E701	1	13'-1"	27	S
E702	1	12'-1"	25	S
E501	2	11'-4"	24	S
E502	2	10'-8"	22	S
E503	6	27'-5"	172	B
E504	1	21'-6"	22	B
E505	1	16'-0"	17	B
E506	1	11'-0"	11	B
E507	1	6'-3"	7	B
E508	2	29'-0"	60	B
E509	1	12'-5"	13	S
E510	1	13'-7"	14	S
E511	1	14'-7"	15	S
E512	1	15'-11"	17	S
E513	1	17'-2"	18	S
E514	1	18'-8"	19	S
E515	1	20'-7"	21	S
E516	1	21'-7"	23	S
E517	6	25'-6"	160	B
E518	1	20'-0"	21	B
E519	1	15'-0"	16	B
E520	1	10'-3"	11	B
E521	1	5'-10"	6	B
Pier Footings				
Q1101	128	7'-5"	5,044	B
G601	10	6'-10"	103	B
G602	112	8'-4"	1,402	B
G603	40	9'-10"	591	B

Mark	No.	Length	Weight	Shp.
Pier				
P1101	59	18'-6"	5,799	S
P1102	9	24'-9"	1,183	S
P1103	16	34'-11"	2,968	S
P1104	59	18'-3"	5,721	S
P1105	9	24'-6"	1,172	S
P1106	16	33'-1"	2,812	S
P1001	14	16'-0"	964	B
P1002	7	34'-8"	1,044	B
P1003	14	30'-5"	1,832	B
P1004	7	30'-11"	931	S
P601	4	16'-7"	100	B
P602	6	7'-9"	70	S
P501	280	8'-1"	2,361	B
P502	140	8'-6"	1,241	B
P503	6	12'-9"	80	B
Bailing				
T501	4	12'-4"		S
T502	294	4'-11"		B
T503	40	15'-1"		S
T504	4	17'-1"		S
T505	4	5'-10"		S
T506	4	9'-8"		S
T507	4	12'-8"		S
T508	8	2'-10"		B
T509	48	14'-8"		S
T510	4	12'-0"		S
T511	4	24'-6"		S
T512	8	2'-6"		S
T513	8	2'-8"		S
Replacement Steel				
EE1101	5	7'-6"		S
EE1001	2	7'-2"		S
EE901	1	6'-10"		S
EE801	1	6'-6"		S
EE701	2	6'-2"		S
EE601	6	5'-11"		S
EE501	2	5'-7"		S
For Bar Size see note on Sheet 91				
REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-408 need not be furnished and replacement bars will not be required.				



ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Superstr.	Pier	W. Abut.	E. Abut.	General	
E-2	Lump	Sum	Excavation for Structures, as per plan					Lump	
S-1	375	Cu. Yd.	Class "C" concrete, superstructure	375					
S-4	152	Cu. Yd.	Class "C" concrete, pier caps and columns		152				
S-1	1,060	Cu. Yd.	Class "C" concrete, abutments and wing walls			690	370		
S-1	749	Cu. Yd.	Class "E" concrete, footings		68	432	249		
S-3	34	Sq. Yd.	Type "B" waterproofing (3/8" wide)			19	15		
S-3	1,188	Sq. Yd.	Type "C" waterproofing	1,188					
S-3	262	lin. ft.	Waterproofing, premolded sealing strip			179	83		
S-4	309,457	lbs.	Reinforcing steel	126,452	35,418	11,803	35,784		
S-7	547,500	lbs.	Structural steel	547,500					
S-8	547,500	lbs.	Field painting of structural steel	547,500					
S-9	Lump	Sum	Structural expansion and contraction joint	Lump					
S-9	400	Sq. ft.	3/8" gray sponge rubber preformed expansion joint filler			242	158		
S-14	438.36	lin. ft.	Bailing, (aluminum rails and supports, concrete parapet walls and end posts)	438.36		2500			
S-15	Lump	Sum	Temporary run-around street					Lump	
S-16	Lump	Sum	First test pile					Lump	
S-17	Lump	Sum	First pile test load					Lump	
S-17	1	Each	Subsequent pile test load					Each	
S-18	35,500	lin. ft.	12" cast-in-place reinforced concrete piles		5,600	20,300	2,600		
S-25	Lump	Sum	Electric lighting system, as per plan					Lump	
S-25	499,804	lin. ft.	2" electric conduit (fiber)	405	810	94			
S-29	735	Cu. Yd.	Porous backfill			485	250		
S-29	387	lin. ft.	Subdrainage for wearing surface course	387					
S-29	40	lin. ft.	6" W.I. or galvanized steel pipe with specials				40		
S-29	560	lin. ft.	8" Perforated, bituminous coated corrugated metal pipe, including specials			350	210		
S-29	22	lin. ft.	8" Bituminous coated corrugated metal pipe, including specials			12	10		
T-35	83	Cu. Yd.	Asphaltic concrete surface course, Type "C" (60-70)	83					

Rev. 11-25-58

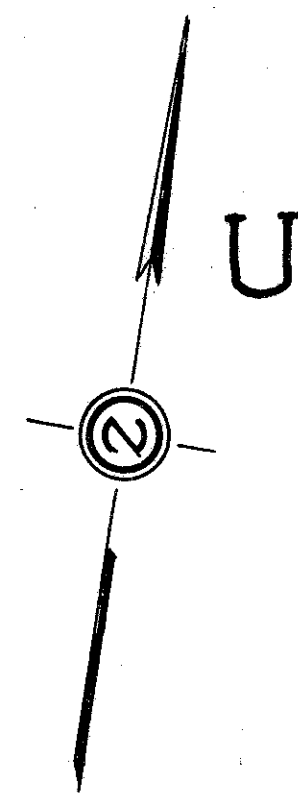
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REINFORCING STEEL LIST & ESTIMATED QUANTITIES
BRIDGE No. CUY-42-1896
INNERBELT FREEWAY UNDER CAENEGIE AVE.
CUYAHOGA COUNTY STA. 7+75.097

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ray	Ray	R.B.	W.C.K.	B.F.G.	8-15-57	12-2-57

B.M. Cross N.E. Cor. Semi-circle stone step entrance to Lutheran High School # 2468 Prospect Ave. Elev. 672.394

INNERBELT
TOTAL CURVE DATA
 Dc. = 3°-30'-00"
 Δ = 69°-59'-46.27"
 R = 1637.02'
 T = 1146.173'
 L = 1999.889'
 Ch = 1877.823'
 N. 20°-47'-44.21"E
 EXT. = 361.366'



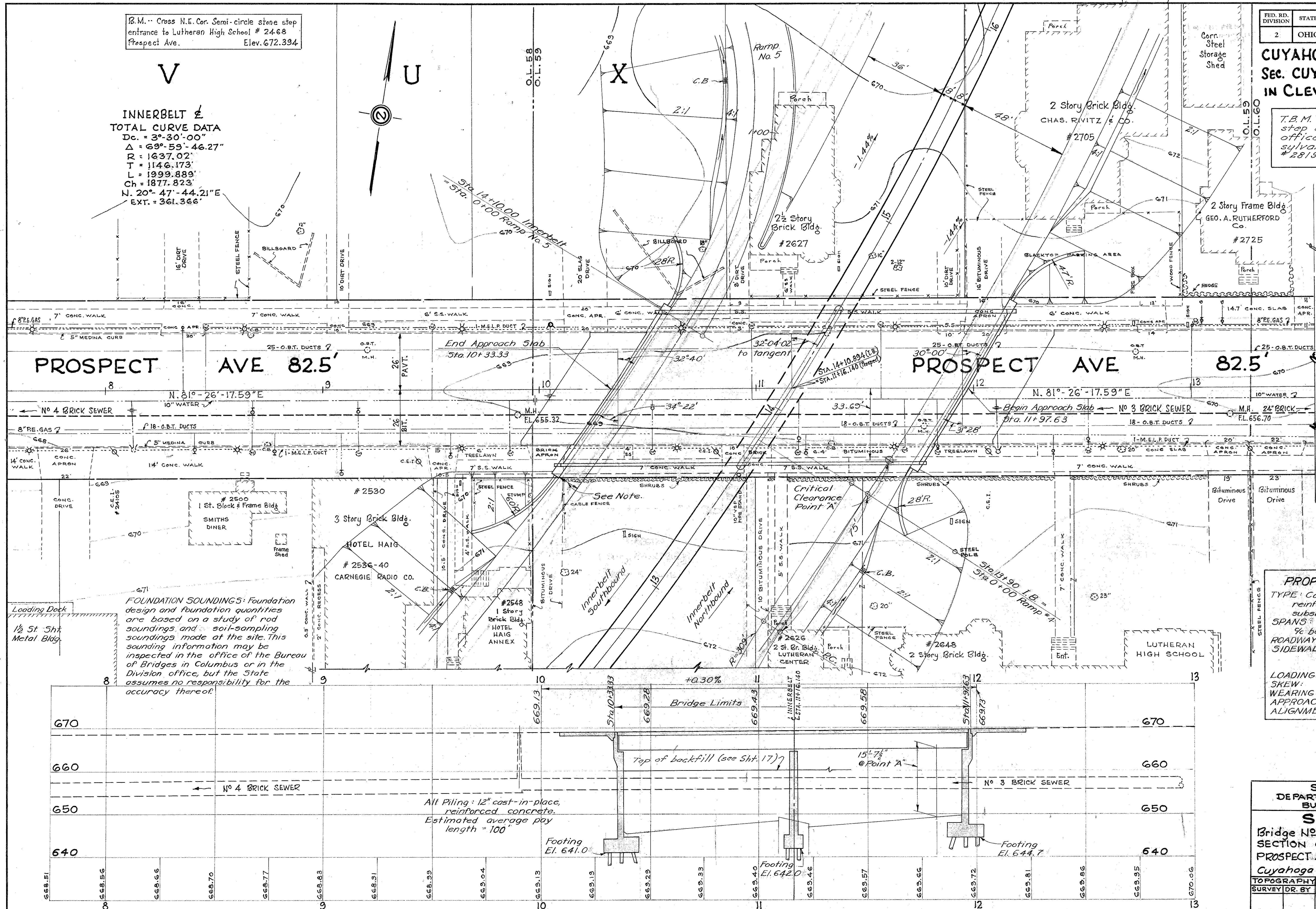
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

99
129

CUYAHOGA COUNTY
Sec. CUY-42 -18.77
IN CLEVELAND

T.B.M.: "X" on S.E. Cor. of step at W. entrance to offices upstairs of Pennsylvania Rubber Co. # 2819 Prospect. Elev. 670.557

MICROFILMED
 JUL 3 1965



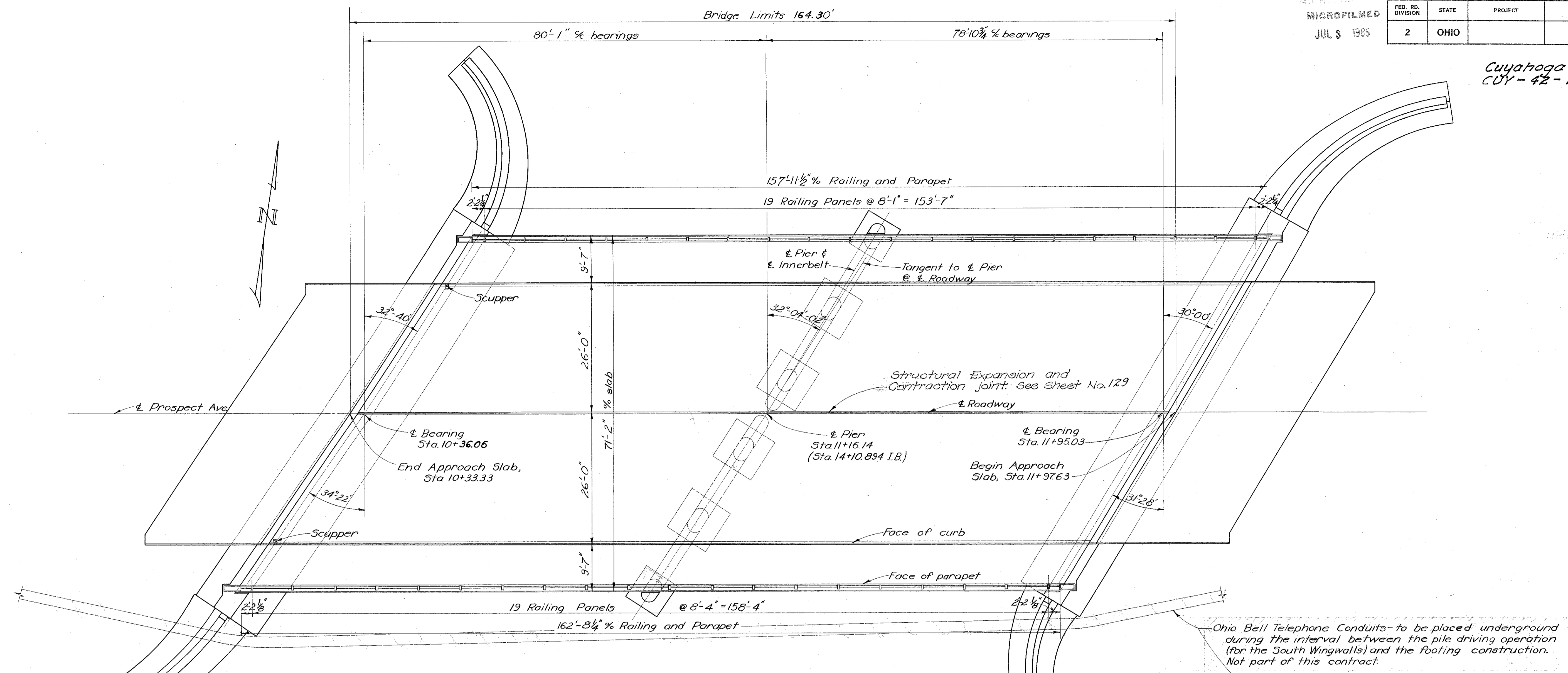
NOTES:
 MINIMUM HORIZONTAL CLEARANCE from edge of acceleration and/or deceleration lanes to face of abutment walls is maintained at 10'-0"

PROPOSED STRUCTURE
 TYPE: Continuous steel beam with reinforced concrete deck and substructure.
 SPANS: Vary from 80.08' to 78.89'
 % bearings @ 2
 ROADWAY: 52'-0" 1/2 of curbs.
 SIDEWALKS: 2 @ 8'-0"
 LOADING FREQUENCY: CF-2000(5)
 SKEW: Varies Left forward
 WEARING SURFACE: Bituminous
 APPROACH SLABS: A5-1-54(25' long)
 ALIGNMENT: Tangent

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES	
SITE PLAN	
Bridge No CUY-42-1908	
SECTION CUY-42-18.77	
PROSPECT AVE - INNERBELT BRIDGE	
Cuyahoga County Sta 14+10.894(I.B.)	
TOPOGRAPHY	PROPOSED WORK
SURVEY DR. BY	DESIGN DR. BY
Innes, Innes	J.P. P.E.S.

PROSPECT AVE - INNERBELT BRIDGE ... SITE PLAN

Cuyahoga County
CUY-42-18.77

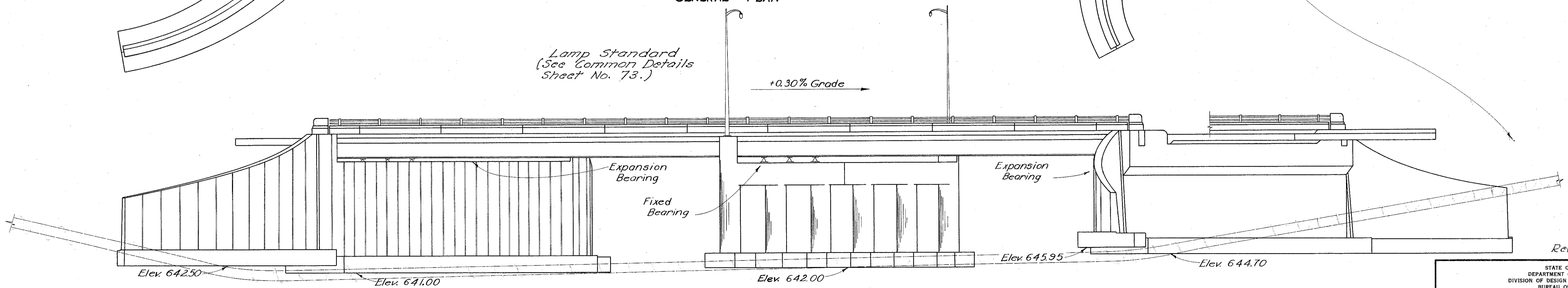


Ohio Bell Telephone Conduits - to be placed underground during the interval between the pile driving operation (for the South Wingwalls) and the footing construction. Not part of this contract.

GENERAL PLAN

Lamp Standard
(See Common Details Sheet No. 73.)

+0.30% Grade



ELEVATION
(Piling not shown)

Revised 11-25-58

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN AND ELEVATION						
BRIDGE No. CUY-42-1908 INNERBELT FREEWAY UNDER PROSPECT AVE.						
CUYAHOGA COUNTY						Sta. 14+10.89
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	LDC	INNES	BFG	8-26-57	12-3-57

Cuyahoga County
CUY-42-18.77

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

REFERENCE shall be made to Standard Drawing RB-1-55, dated 3-1-55 and to Supplemental Specification No. 5-114, Aluminum for Bridge Railing, revised 8-1-57.

PILES shall be driven to a minimum bearing capacity of 40 tons for the piers, abutments and wingwalls.

WELDING OF STRUCTURAL STEEL shall be Class "A" except as otherwise shown. Class "B" welds shall be shown thus: B

FIRST PILE TEST LOAD and any subsequent pile test loads shall be applied only if directed by the Engineer. All test loads shall be applied where the Engineer shall direct.

RUSTICATION GROOVE details shall be as shown in the common details.

WELDED STEEL: The steel for the 36 WF-280 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec M-7.4(a) of the Construction and Materials Specifications) or to A-373.

UTILITY LINES: All labor and expenses involved in relocating the affected utility lines shall be borne by the respective Owners of the lines. The Contractor and the Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

TEMPORARY RUN-AROUND STREET shall be provided. Width face-to-face curbs 36'-0". Width out-to-out shoulders 54'-0". 5 ft wide sidewalk on North side. Pavement 9" of T-70 with Type 2-A curbs (Std. Dwg. T-12). Sidewalk shall be 4" thick and shall be according to T-13, except that concrete may be Class "D" at the option of the Contractor. See Sheet No. 18 for additional details.

DECK SLAB CONCRETE PLACING: In order to facilitate water curing of the deck slab concrete, the placing of concrete shall progress up grade. The slab may be placed in sections between transverse construction joints. These joints shall be normal to the centerline of bridge and located near the center of either span.

SURFACE FINISH OF CONCRETE: Exposed surfaces of pier, abutments, and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

INSTALLATION OF OHIO BELL TELEPHONE CONDUITS: After the Temporary Run-around is completed and before the Contractor does any excavation in the immediate vicinity of the Prospect Ave. Bridge, the O.B.T. Co. will erect a suspension bridge to carry their lines over the site on a temporary basis. After the excavation for the roadway and for the south wingwall footings is complete, the Contractor shall drive piles for the south wingwall footings adjacent to the final location of the O.B.T. Co. Conduits. Then the O.B.T. Co. will place the conduits so that they will be under the roadway and footings as shown on the General Plan. While the O.B.T. Co. is at work the Contractor shall not perform any operations in the immediate area of the Conduits, that would jeopardize the conduit placing procedure.

At an opportune time during construction of the superstructure the O.B.T. lines shall be lowered into their final position.

Revised 11-25-58

SHEETING and BRACING: Protection of the temporary run-around street will be required during construction of the North Wingwalls. The Contractor shall submit three copies of plans for such protection to the Director for written approval before beginning excavation for the affected wings.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abuts.	Pier	Wingwall	Gen'l.
E-2	Lump	Sum	Excavation for structures, as per plan					Lump
E-2	765	Sq.Ft.	Steel sheet piling, left-in-place		765			
5-1	384	Cu.Yds.	Class "C" concrete, superstructure	384				
5-1	88	Cu.Yds.	Class "C" concrete, pier caps and columns			88		
5-1	47	Cu.Yds.	Class "E" concrete, pier footings			47		
5-1	576	Cu.Yds.	Class "E" concrete, abutments and wingwalls		386		190	
5-1	490	Cu.Yds.	Class "E" concrete, abutment and wingwall footings		315		175	
5-3	919	Sq.Yds.	Type "C" waterproofing	919				
5-3	32	Sq.Yds.	Type "B" waterproofing		32			
5-3	73	Lin.Ft.	Waterproofing, premolded sealing strip		45		28	
5-4	197,691	Lb.	Reinforcing steel	99,805	48,188	27,989	21,709	
5-8	519,100	Lb.	Field painting of structural steel	519,100				
5-9	206	Sq.Ft.	1 grey sponge rubber preformed expansion joint filler				206	
5-14	333.48	Lin.Ft.	Railing (Aluminum rails and supports, concrete parapet & end posts.)	333.48				
5-16	Lump	Sum	First test pile					Lump
5-17	Lump	Sum	First pile test load					Lump
5-17	1	Each	Subsequent pile test load					1
5-18	19,400	Lin.Ft.	12" cast-in-place reinforced concrete piles		9,700	4,200	5,500	
5-25	Lump	Sum	Electric lighting system, as per plan.					Lump
5-25	430	Lin.Ft.	2" electric conduit (fiber)					430
5-29	435	Cu.Yds.	Porous backfill		275		160	
5-29	317	Lin.Ft.	Subdrainage for wearing surface course	317				
5-29	44	Lin.Ft.	6" wrought iron or galvanized steel pipe and specials		44			
5-29	340	Lin.Ft.	10" perforated, bituminous coated, corrugated metal pipe					340
T-35	63	Cu.Yds.	Asphaltic concrete surface course, Type "C" (60-70)	63				
5-15	Lump	Sum	Temporary run-around street (except sewer work items as per plan)					Lump
5-7	519,100	Lbs.	Structural steel	519,100				
5-9	Lump	Sum	Structural expansion and contraction joint	Lump				

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

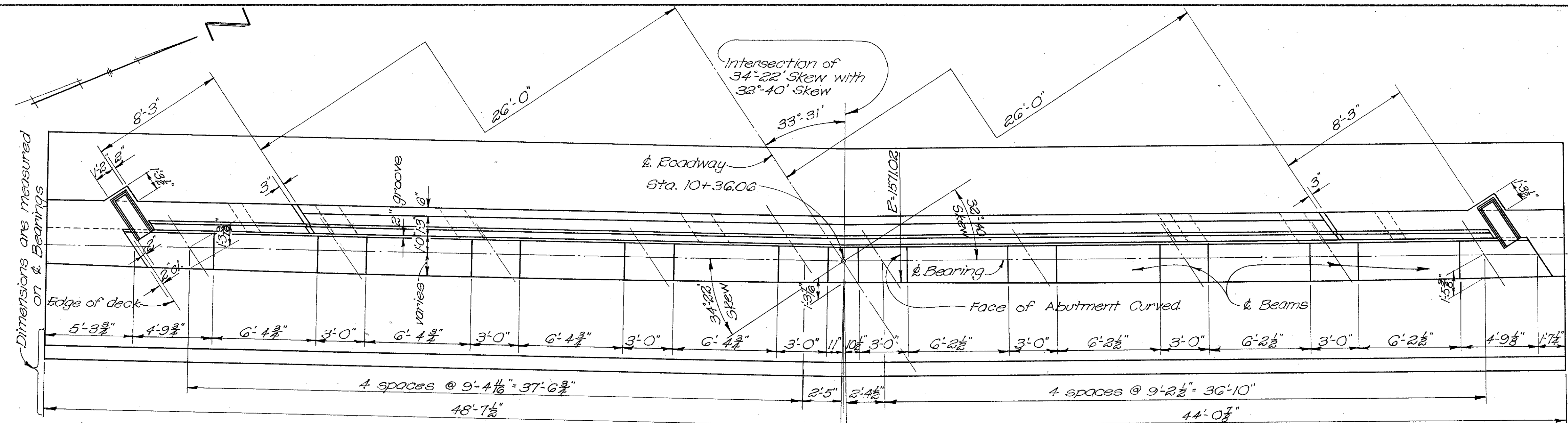
GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE No. CUY-42-1908
INNERBELT FREEWAY UNDER PROSPECT AVE

CUYAHOGA COUNTY STA. 14+10.89

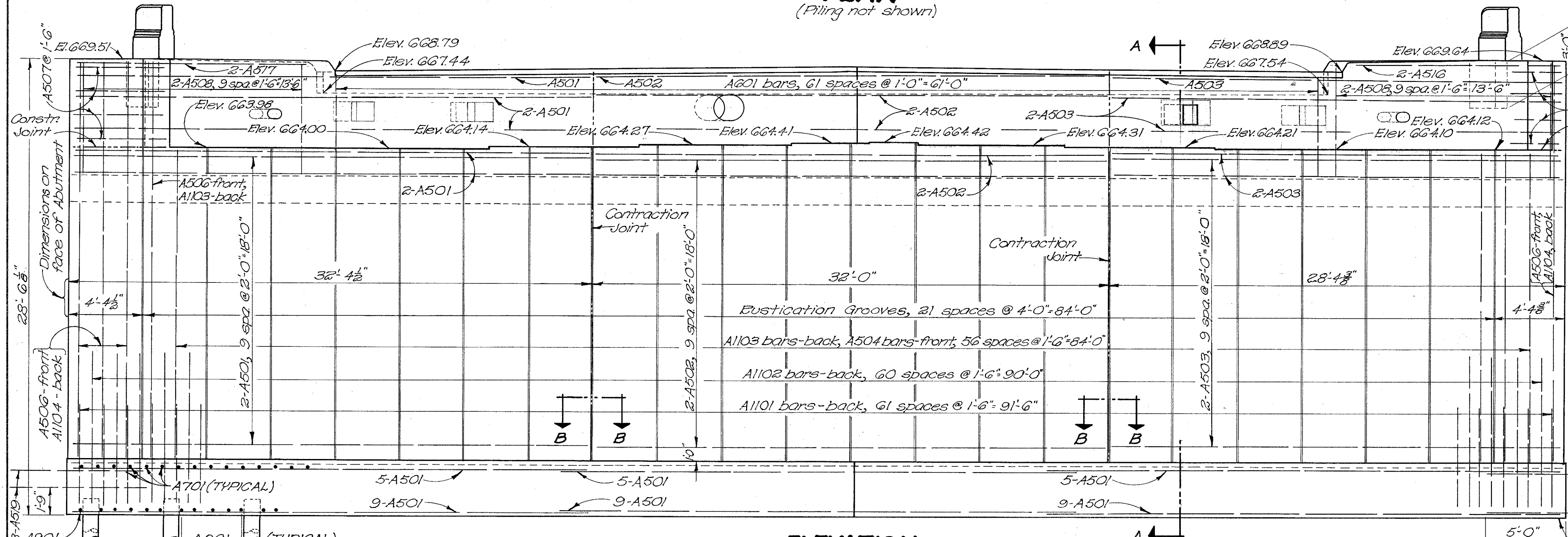
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.P.D.	C.P.D.	Grasselli	INNES	BFG	8-26-57	12-2-57

Cuyahoga County
CUY-42-18.77

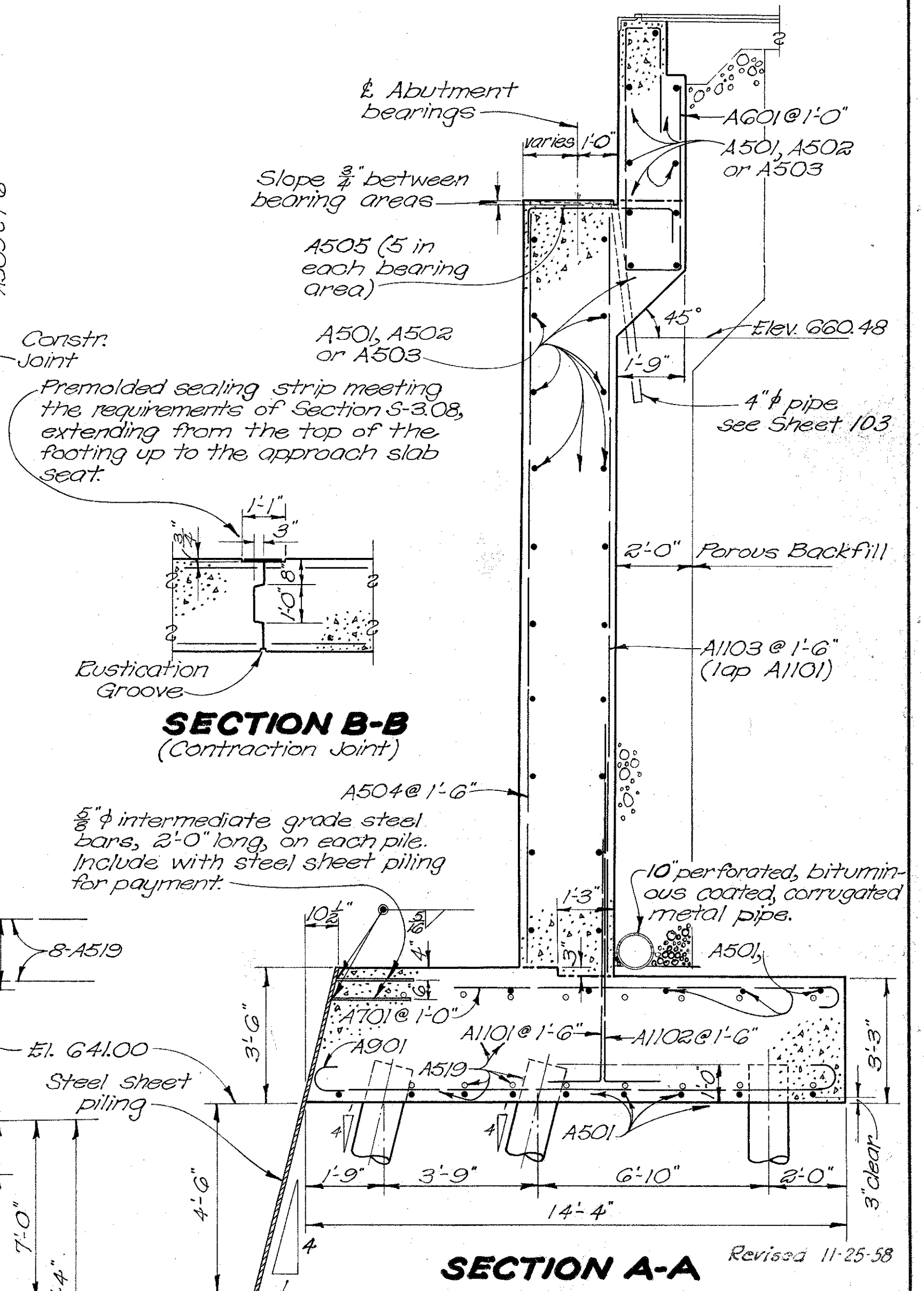
NOTES
 Porous backfill shall extend full length of abutment and wings. Reinforcing steel in the backwall shall be placed to clear the openings for the utilities.
 Backwall concrete shall not be placed until all utility ducts carried on superstructure are installed. The duct owners shall provide suitable protective material around ducts thru backwall. This material may be sponge rubber, cork, or any commercial joint filler equivalent to 1" preformed expansion joint filler described in Section M-10.02.
 Steel sheet piling shall be used for the Rear Abutment only. The piling shall have a section modulus of 10 in.³ per foot of wall (minimum). Used sheet piling in good condition may be used.
 Eustication grooves, see Sheet No. 128.



PLAN
(Piling not shown)

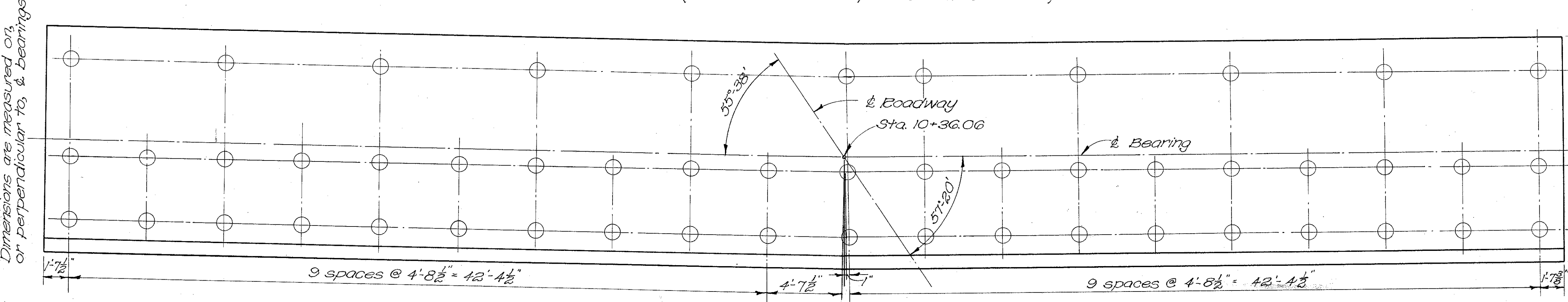


ELEVATION
(For details of downspout see Sheet No. 111)



SECTION B-B
(Contraction Joint)

SECTION A-A



PILING PLAN
(Sheet piling not shown)

Batter the piles in these two rows.
 All piles are 12" cast-in-place, reinforced concrete.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

REAR ABUTMENT DETAILS
BRIDGE No. CUY-42-1908
INNERBELT FREEWAY
UNDER PROSPECT AVE.
 CUYAHOGA COUNTY STA. 14+10.89

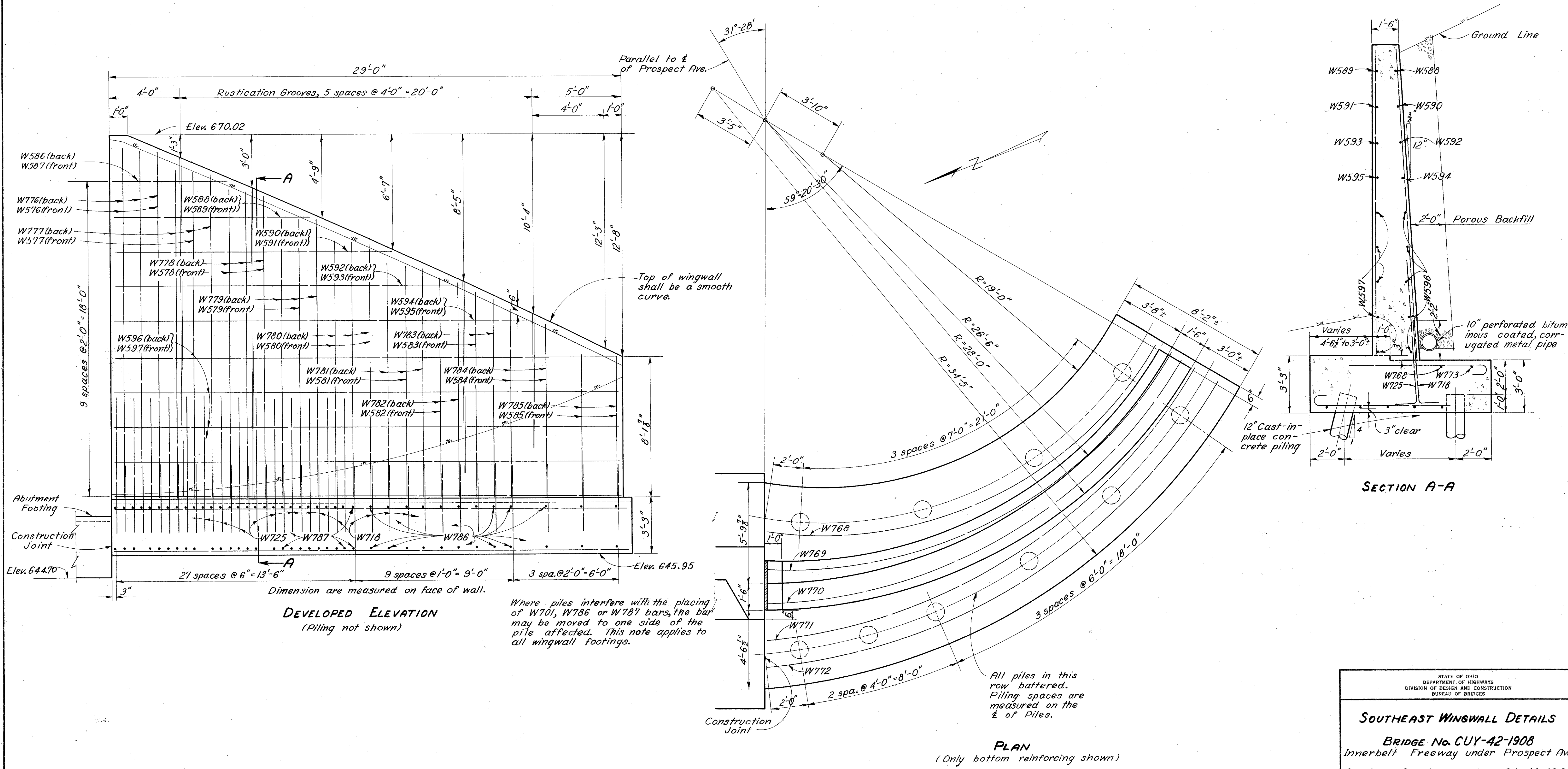
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	RA	INNES	BFG	8-26-57	

MICROFILMED
JUL 8 1985

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

104
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Cuyahoga County
CUY-42-18.77



DEVELOPED ELEVATION
(Piling not shown)

Where piles interfere with the placing of W701, W786 or W787 bars, the bar may be moved to one side of the pile affected. This note applies to all wingwall footings.

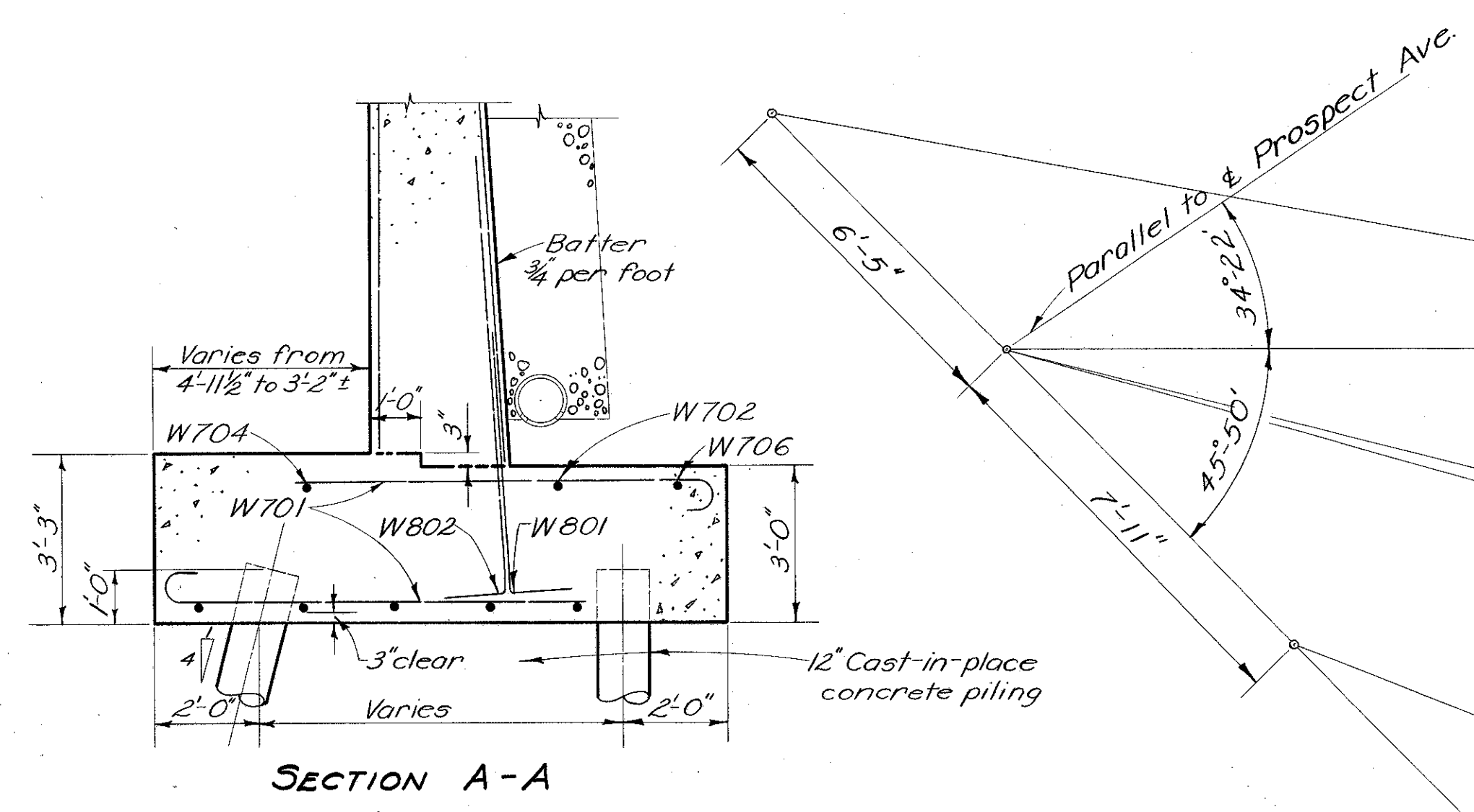
All piles in this row battered. Piling spaces are measured on the E of Piles.

PLAN
(Only bottom reinforcing shown)

SECTION A-A

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SOUTHEAST WINGWALL DETAILS						
BRIDGE No. CUY-42-1908						
Innerbelt Freeway under Prospect Ave						
Cuyahoga County Sta. 14+10.89						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	RT.M.	JNHES	BFG	8-26-57	

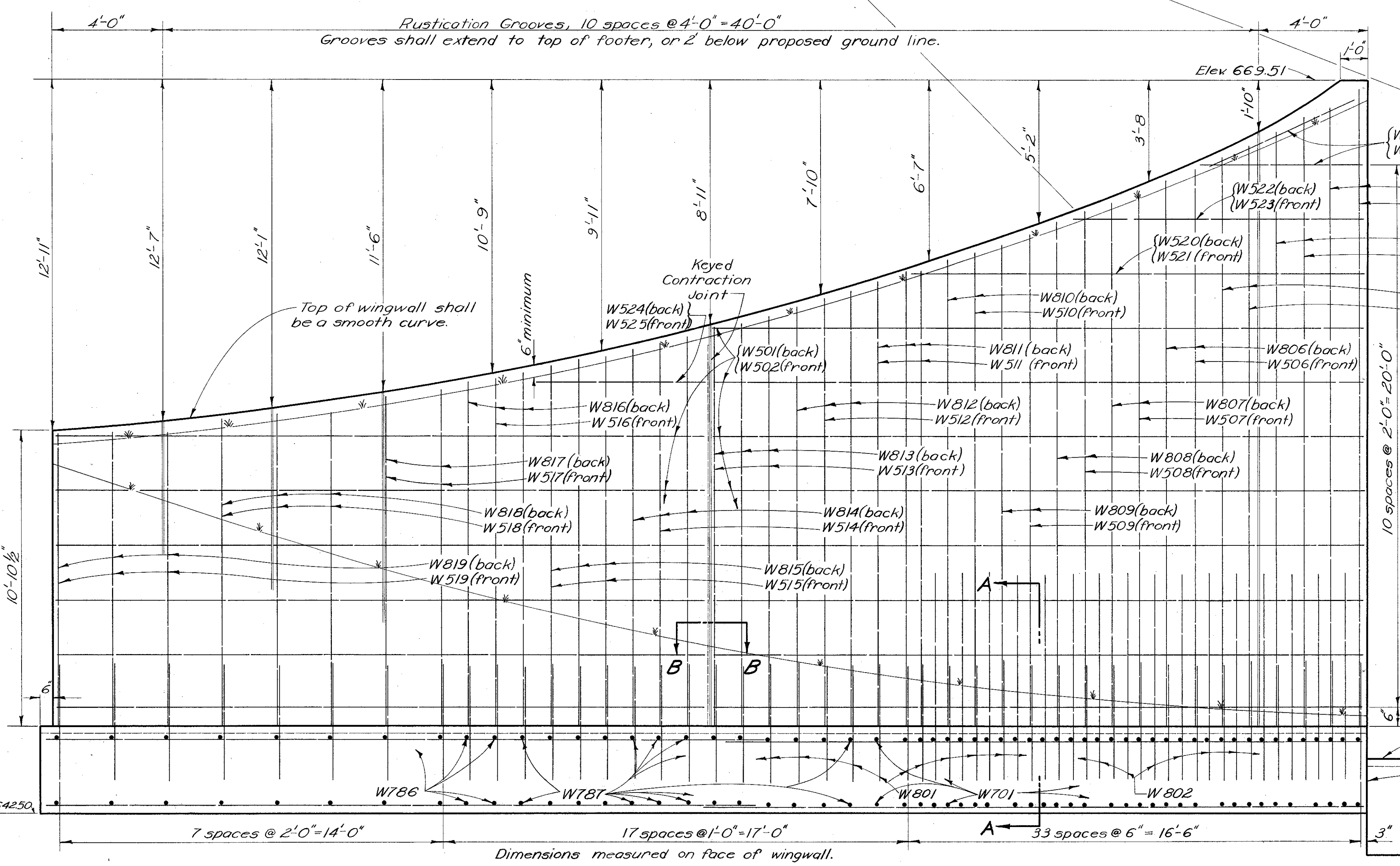
Cuyahoga County
CUY-42-18.77



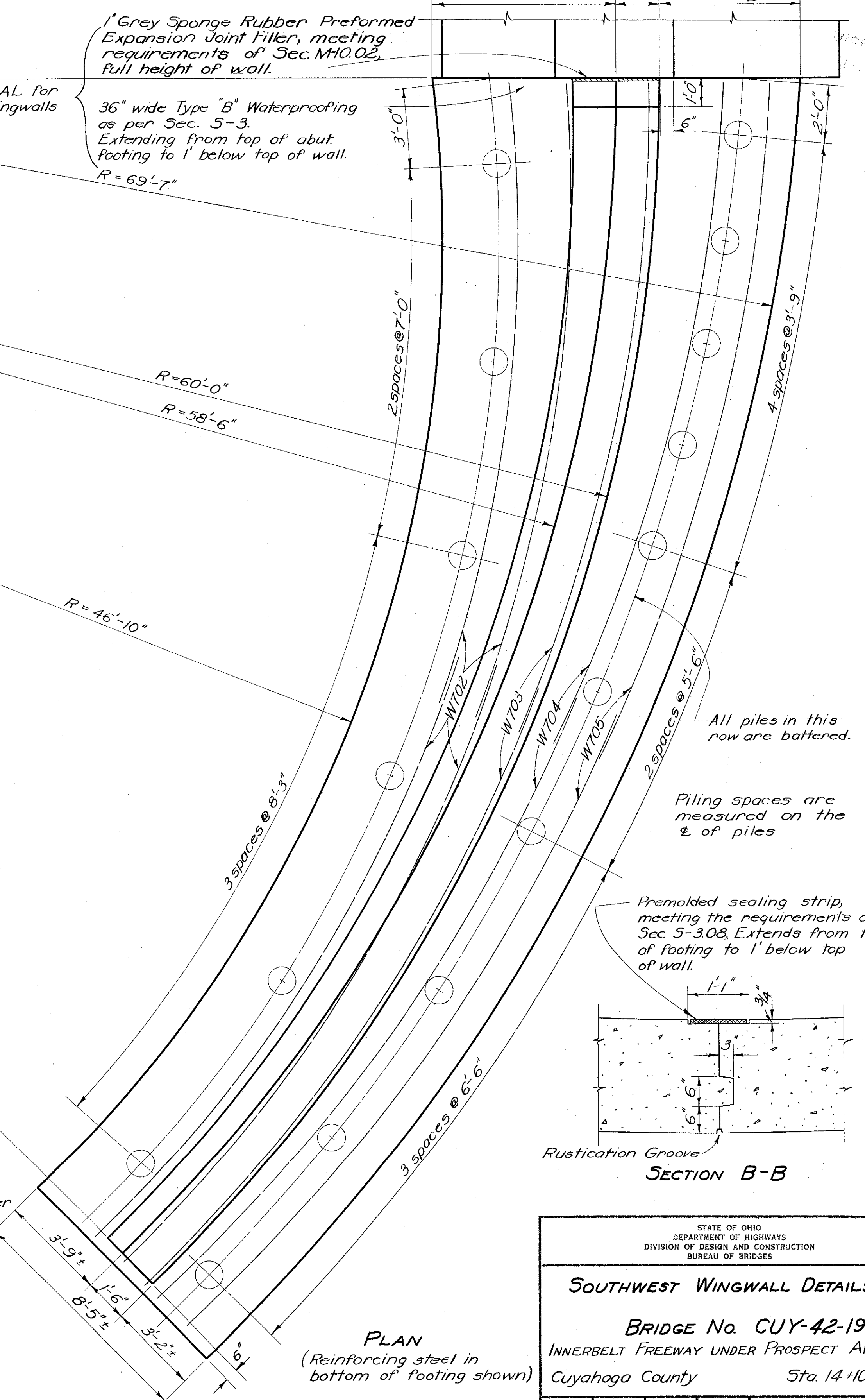
1" Grey Sponge Rubber Preformed Expansion Joint Filler, meeting requirements of Sec. M10.02, full height of wall.

TYPICAL for all Wingwalls

36" wide Type "B" Waterproofing as per Sec. 5-3. Extending from top of abut. Footing to 1' below top of wall.
R=69'-7"



DEVELOPED ELEVATION
(Piling not shown)



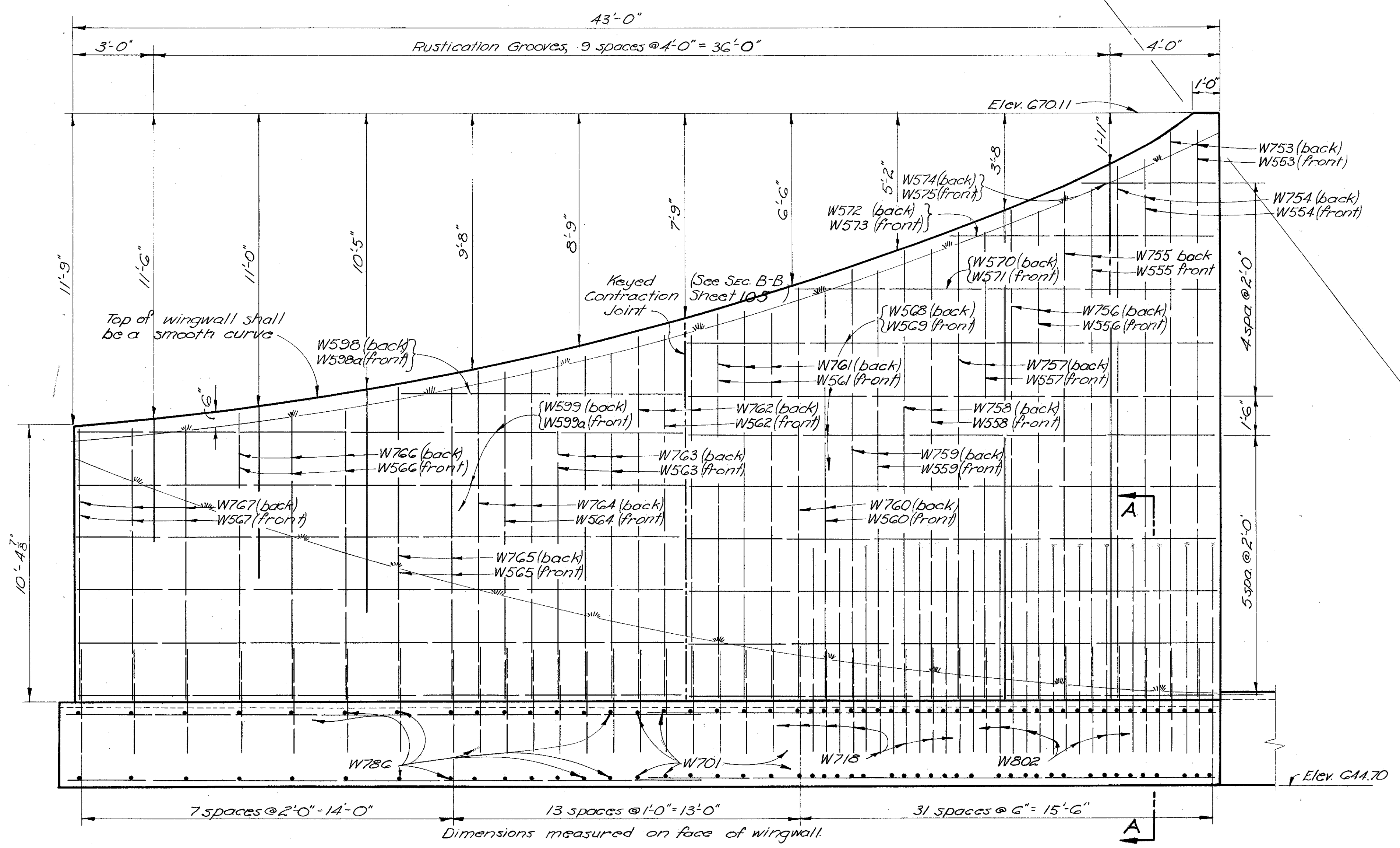
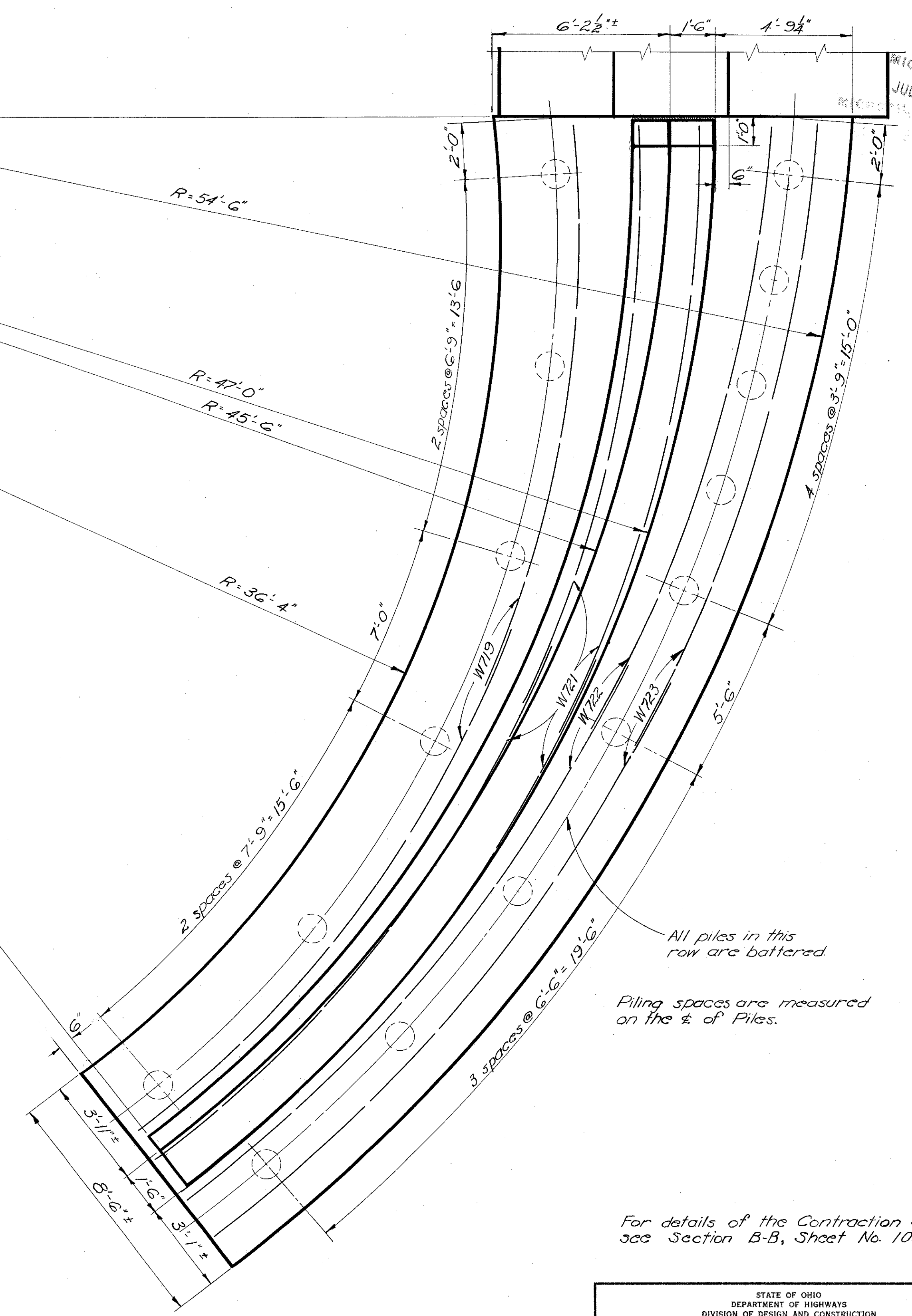
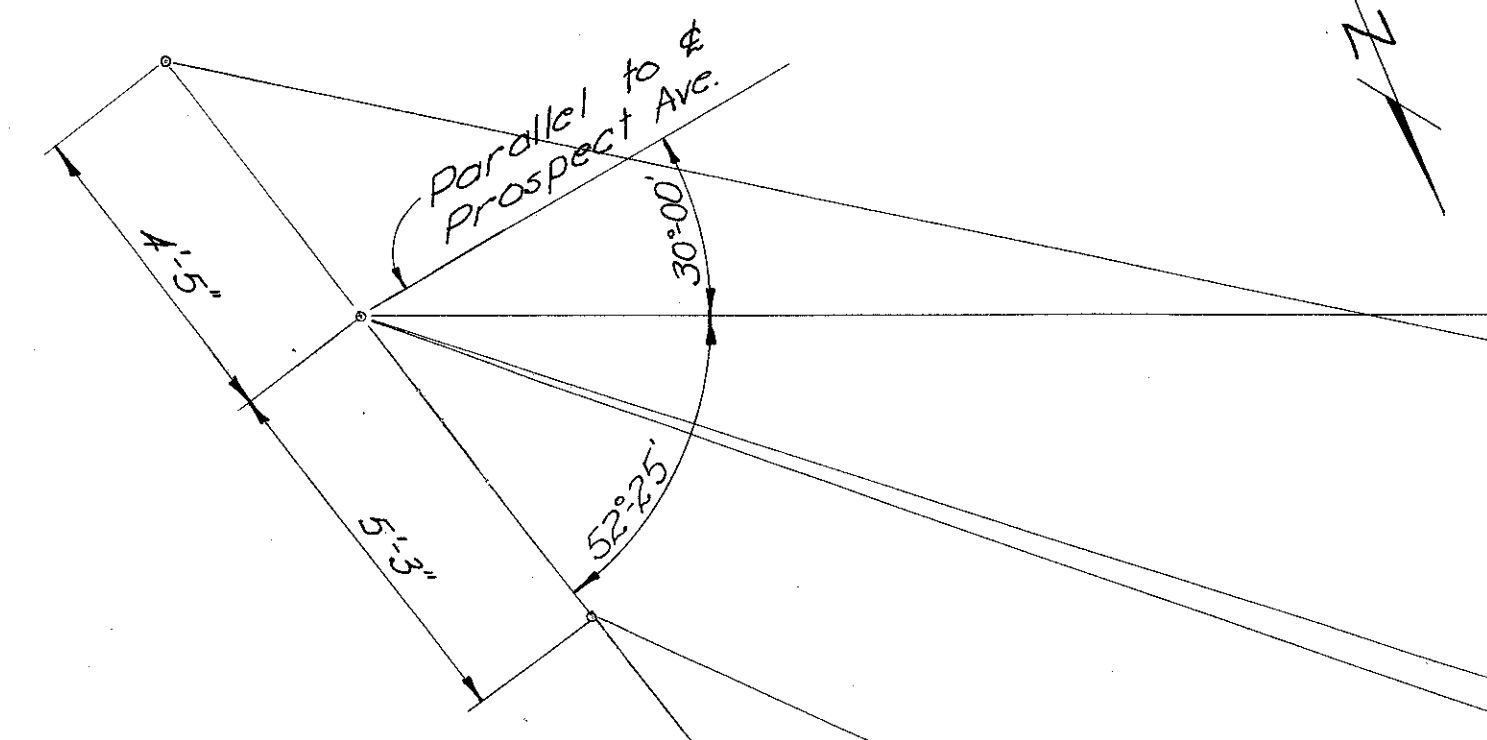
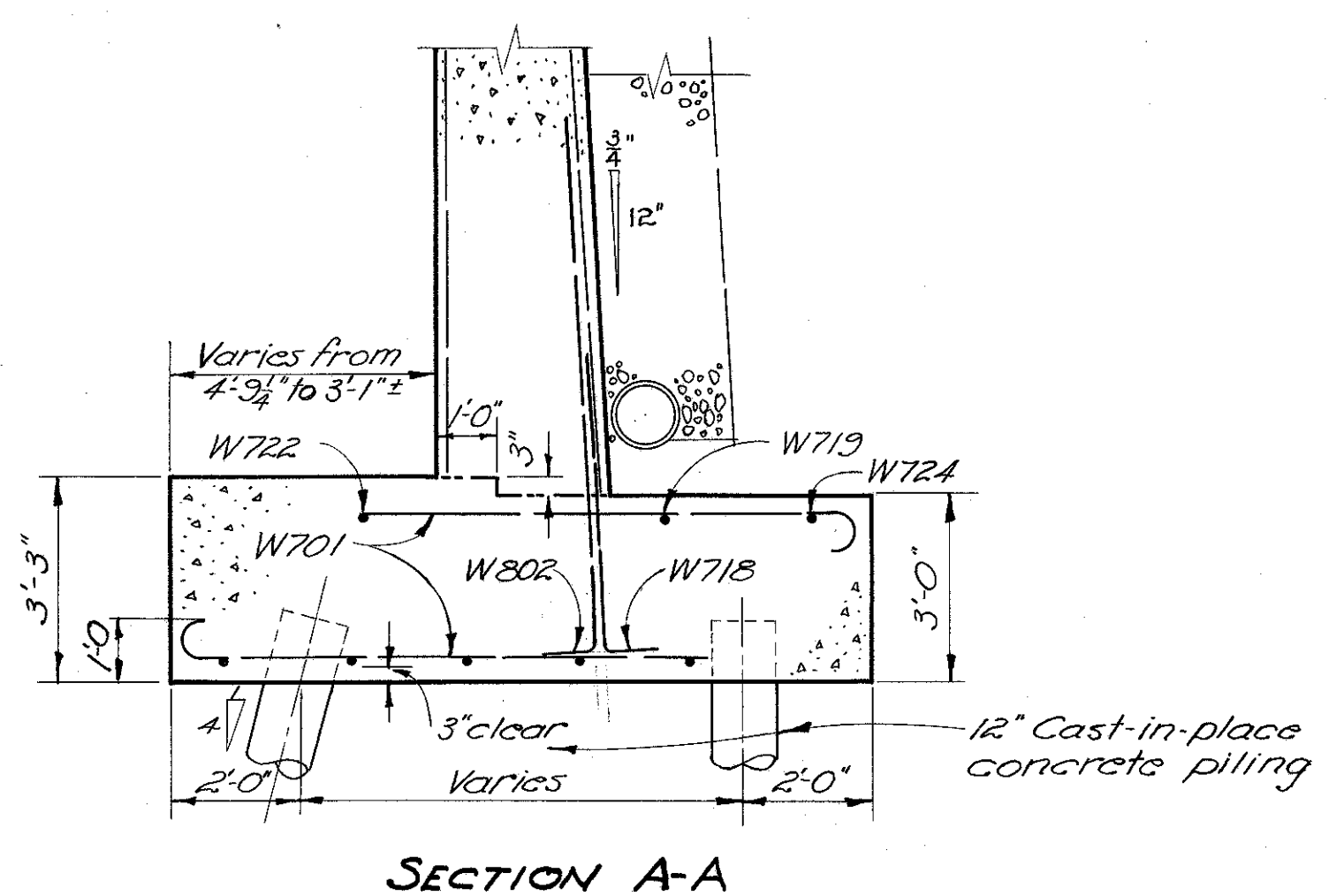
PLAN
(Reinforcing steel in bottom of footing shown)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SOUTHWEST WINGWALL DETAILS

BRIDGE No. CUY-42-1908
INNERBELT FREEWAY UNDER PROSPECT AVE.
Cuyahoga County Sta. 14+10.89

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	LDC	INNES	BFG		



All piles in this row are battered.
 Piling spaces are measured on the 1/2 of Piles.

For details of the Contraction Joint see Section B-B, Sheet No. 105

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

NORTHEAST WINGWALL DETAILS

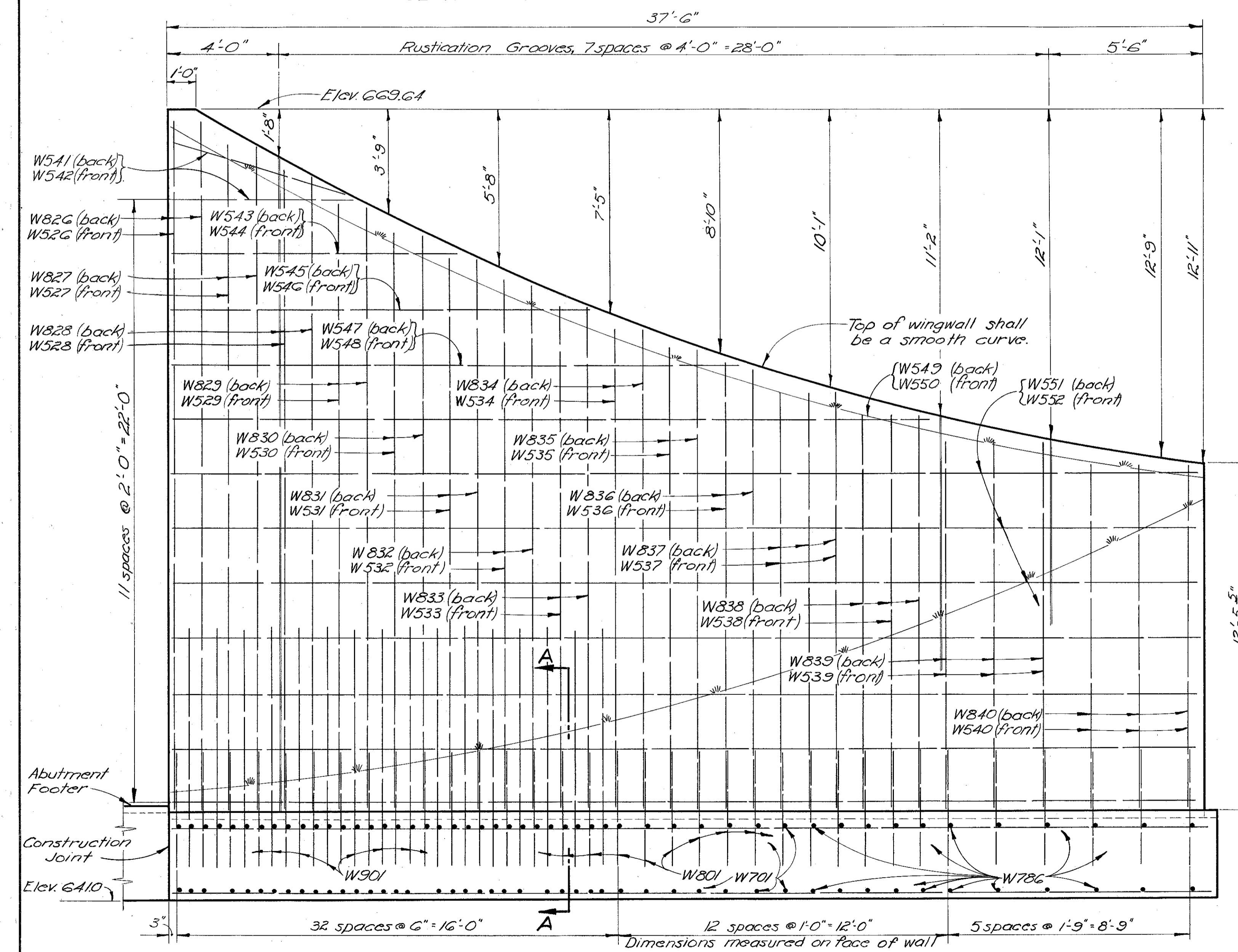
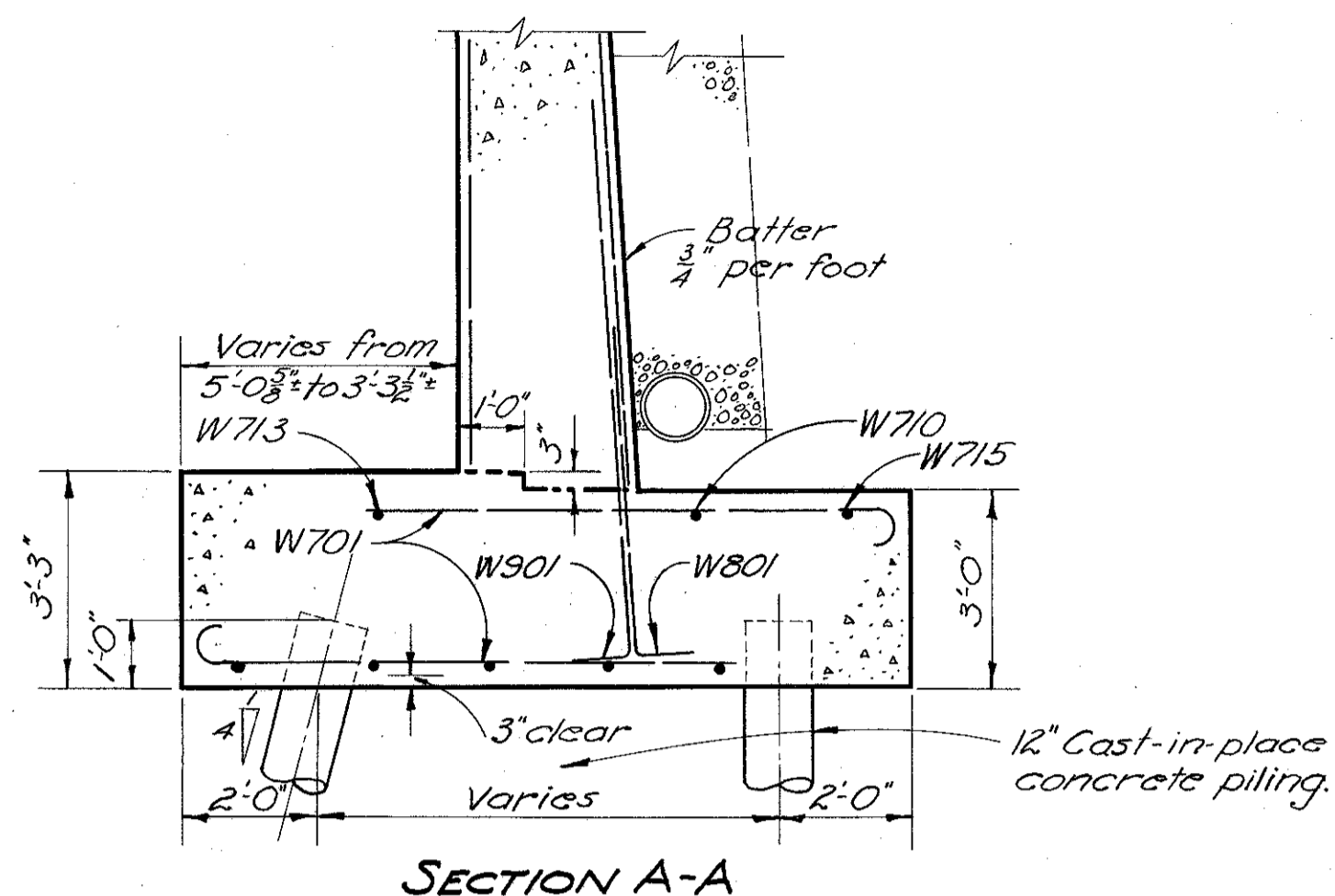
BRIDGE No. CUY-42-1908
 INNERBELT FREEWAY UNDER PROSPECT AVE.

CUYAHOGA COUNTY STA. 14+10.89

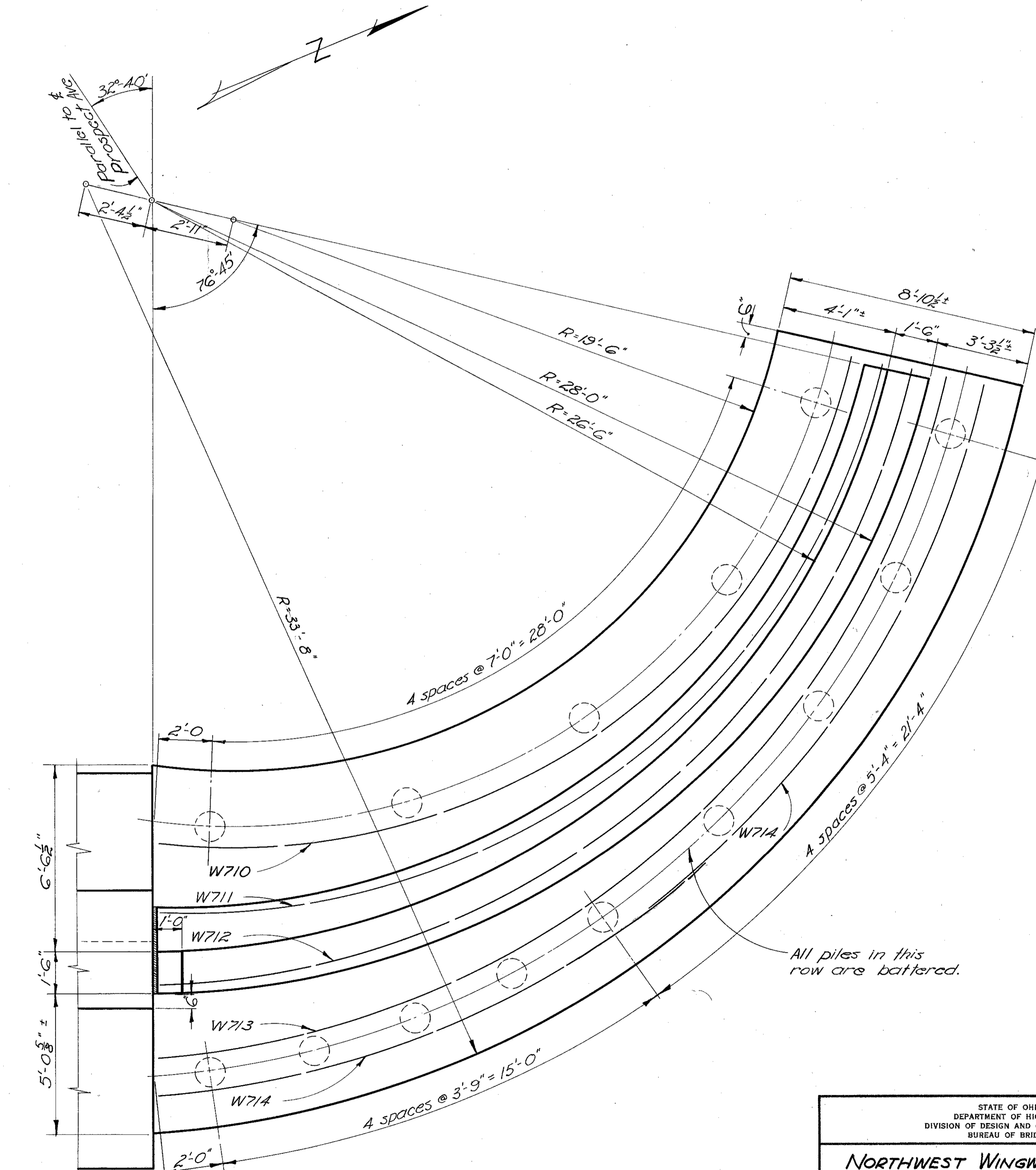
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	R. SM	INNES	BFG	8-26-57	

Cuyahoga County
CUY-42-18.77

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JUL 8 1985



DEVELOPED ELEVATION
(Piling not shown)

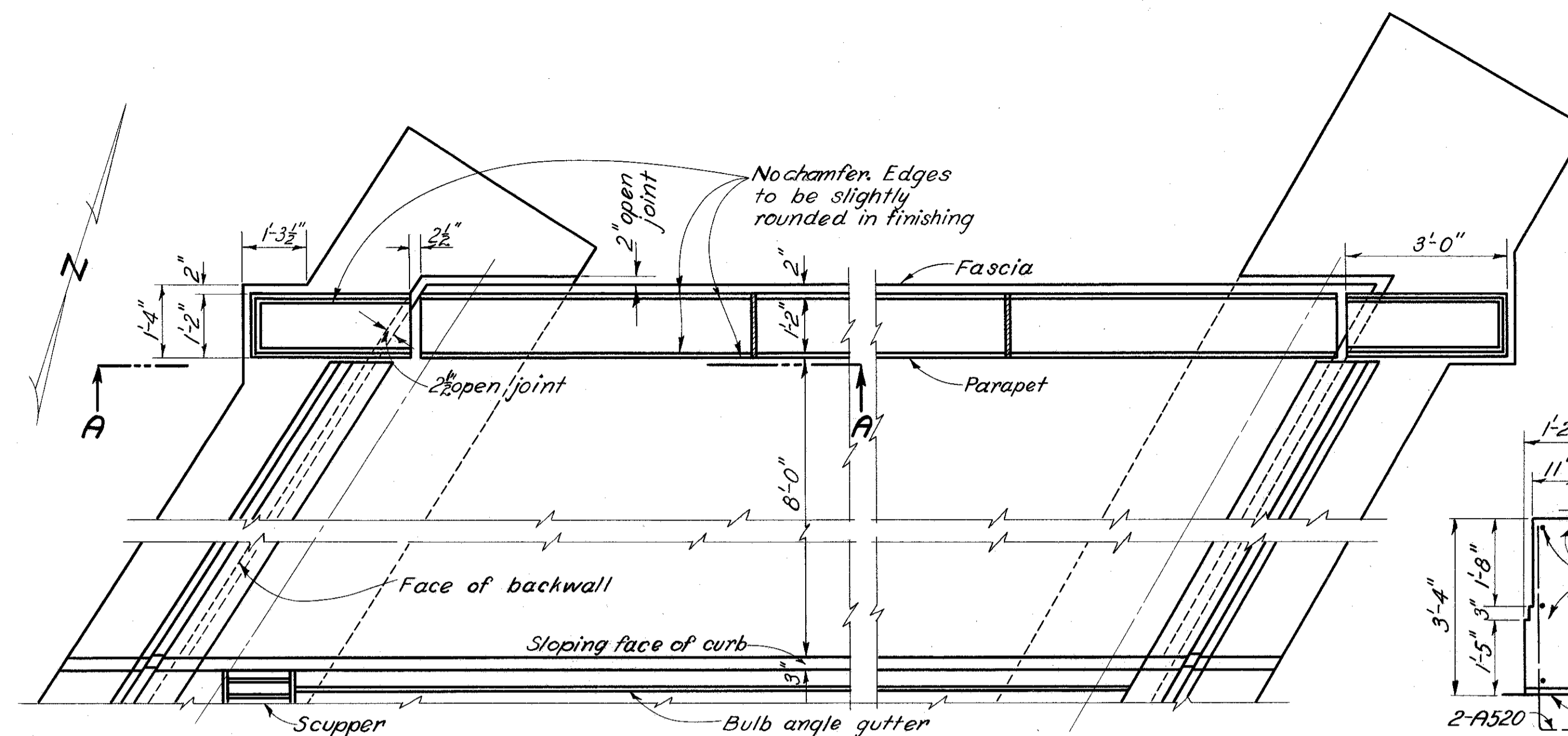


Piling spaces are measured on the E of Piles.

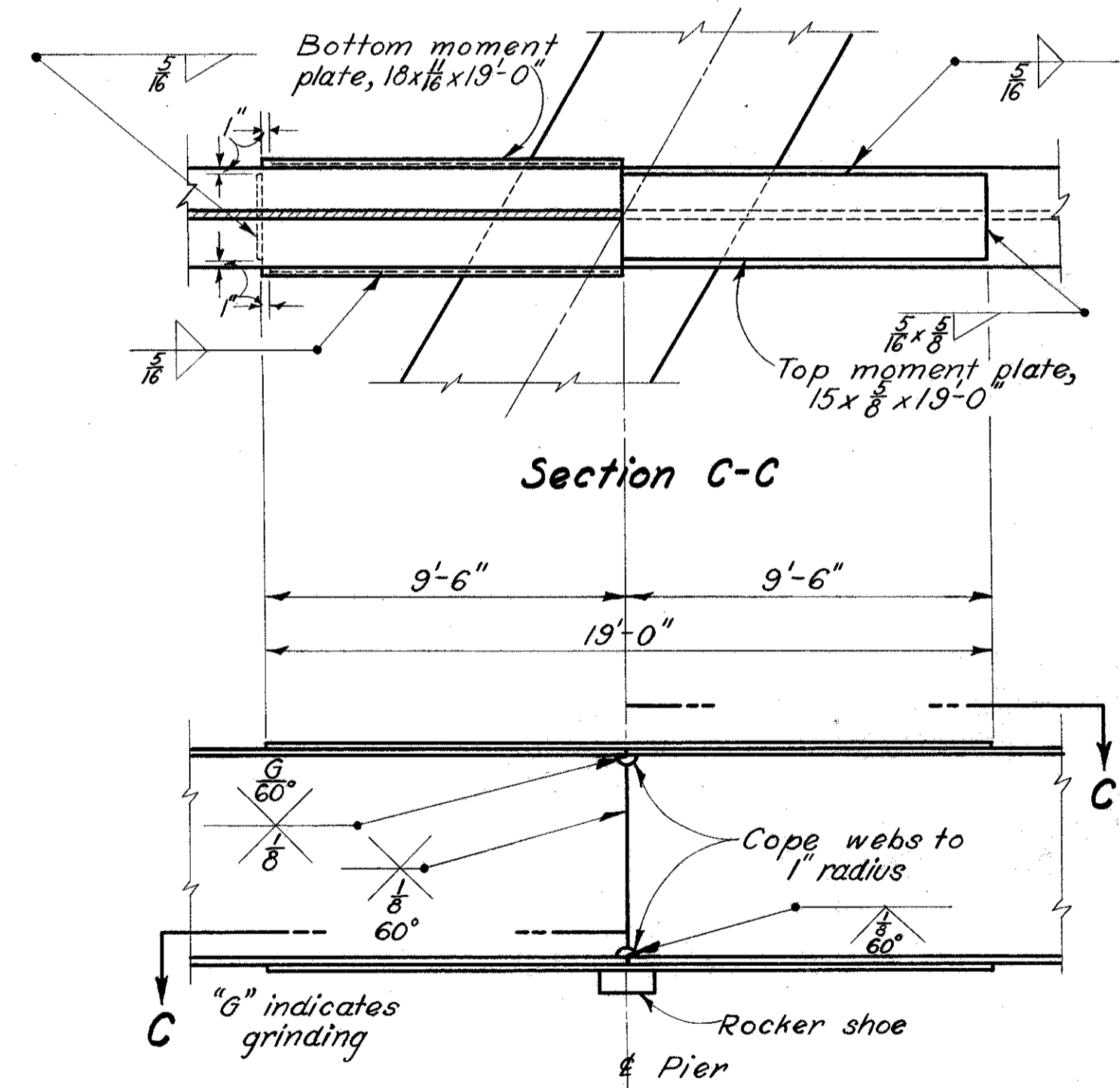
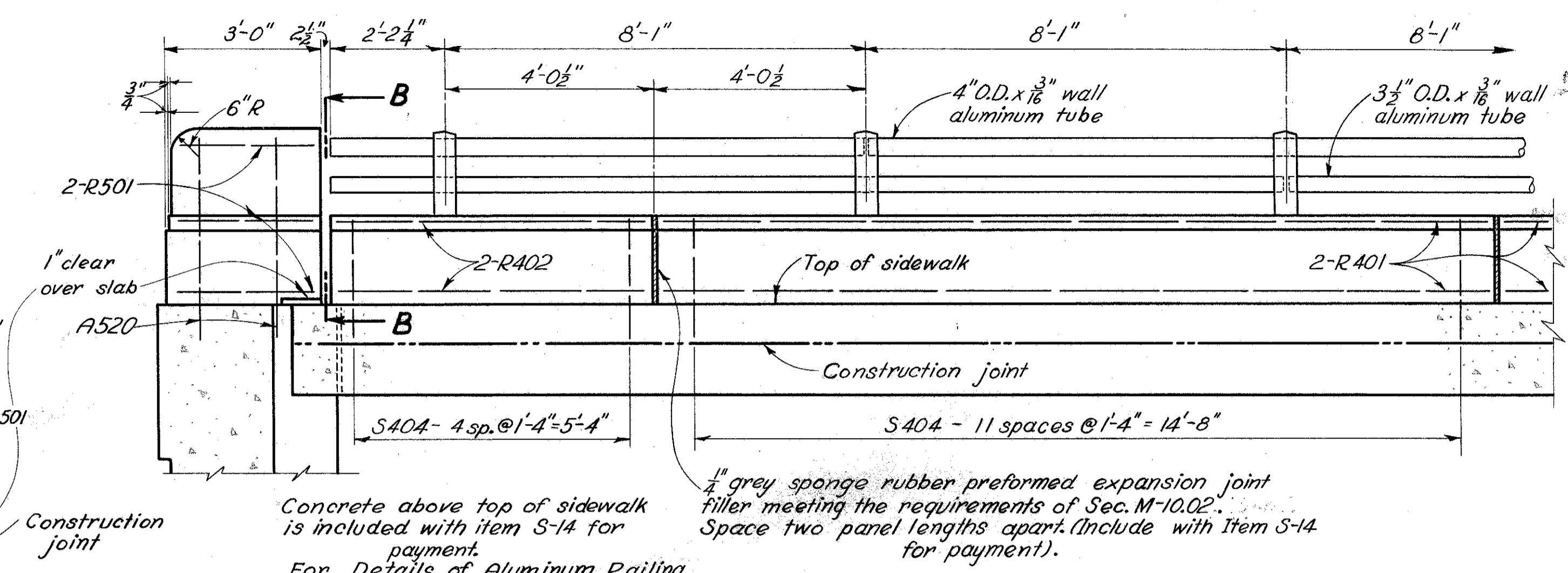
PLAN

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
NORTHWEST WINGWALL DETAILS						
BRIDGE No. CUY-42-1908 INNERBELT FREEWAY UNDER PROSPECT AVE.						
CUYAHOGA COUNTY STA. 14+10.89						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	R. SM.	INNES	BFG	8-26-57	

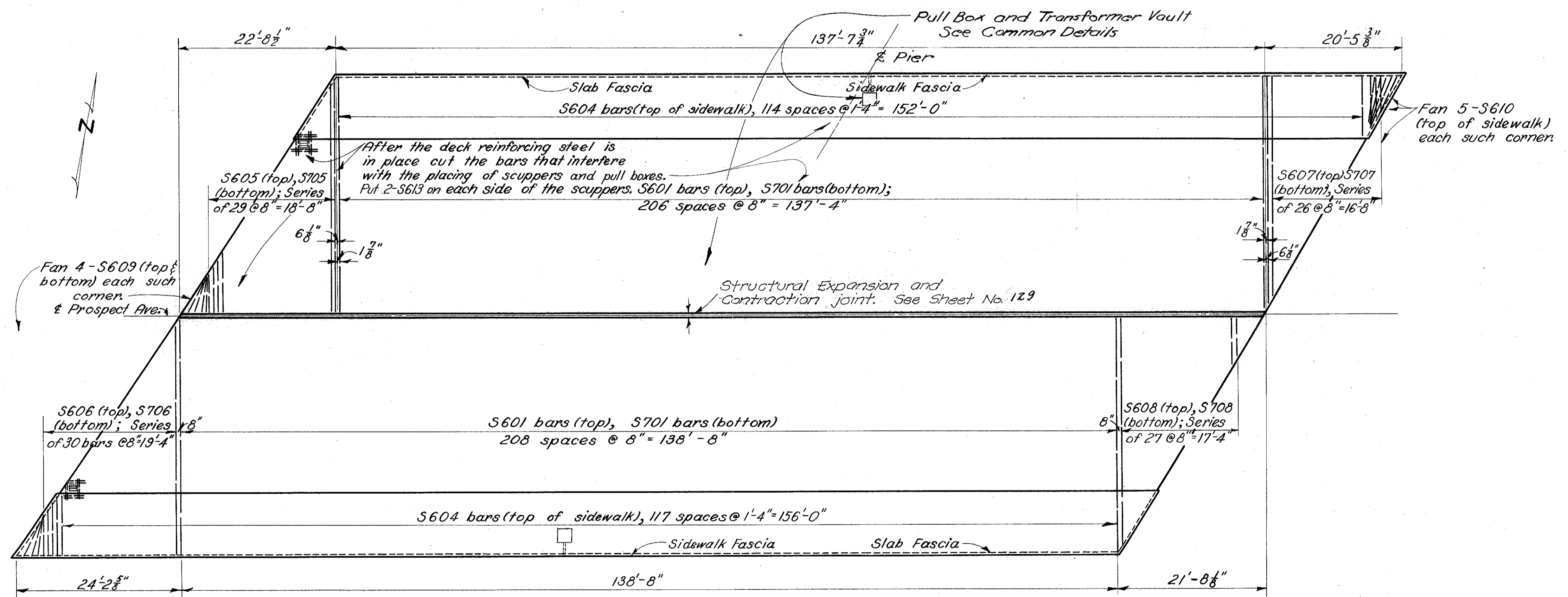
Cuyahoga County
CUY-42-18.77



Section B-B

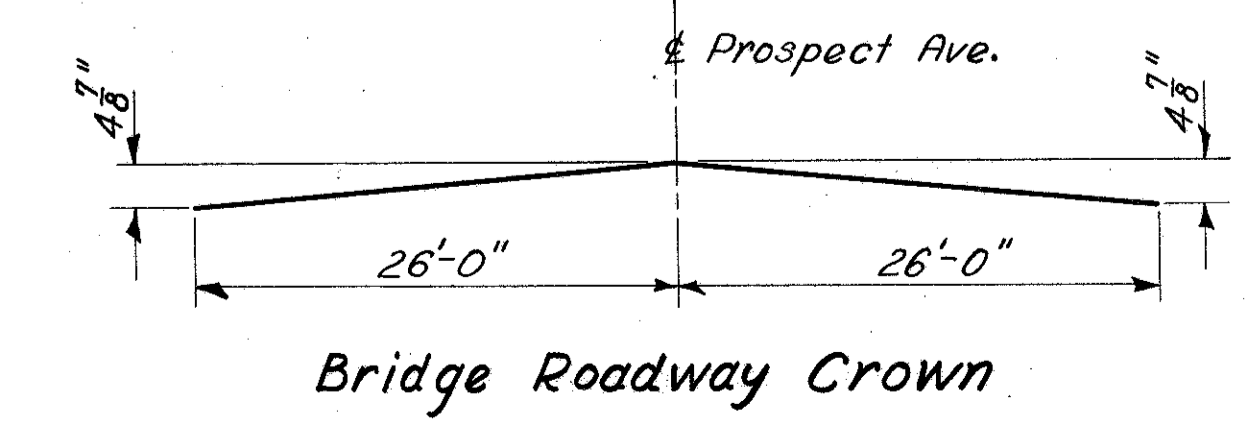


Beam Splice Details



Beam Splice Welding Procedure:
 1. Raise the abutment end of beam 3" (fwd. abut).
 2. Butt weld the beam flanges and web, using the following sequence: make one pass on each flange, then one on the web; repeat until the welds are completed.
 3. Weld the bottom and top moment plates.
 4. Lower the end of the beam to its final position.

DEFLECTION & CAMBER			
LOCATION	Outside Beams	Inside Beams adjacent to &	Remaining Inside Beams
Deflection due to weight of steel	3/16	3/16	3/16
Deflection due to remaining dead load	1 1/4	1/2	3/4
Total deflection	1 7/16	11/16	15/16
Required camber (in inches)	3/16	0	1

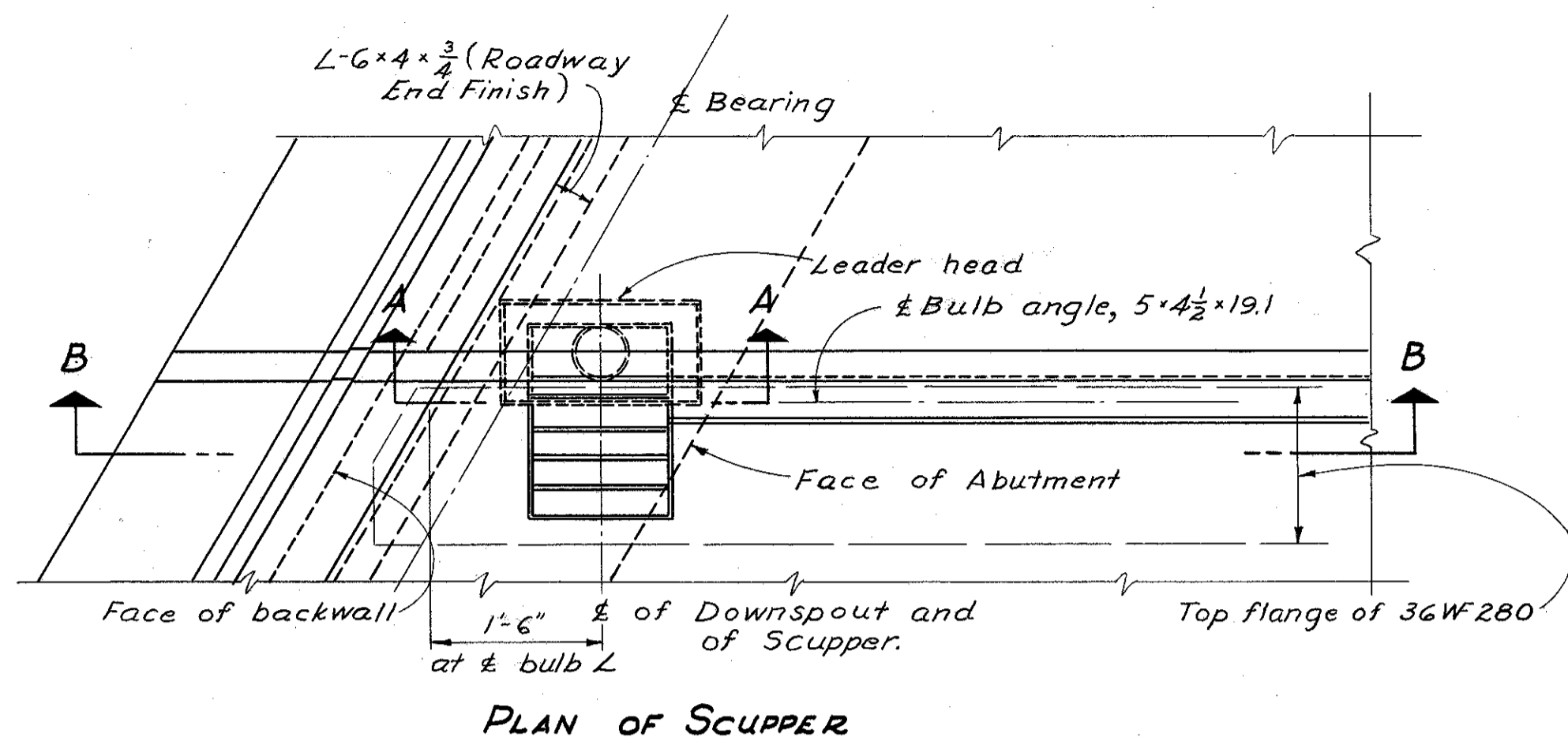


STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

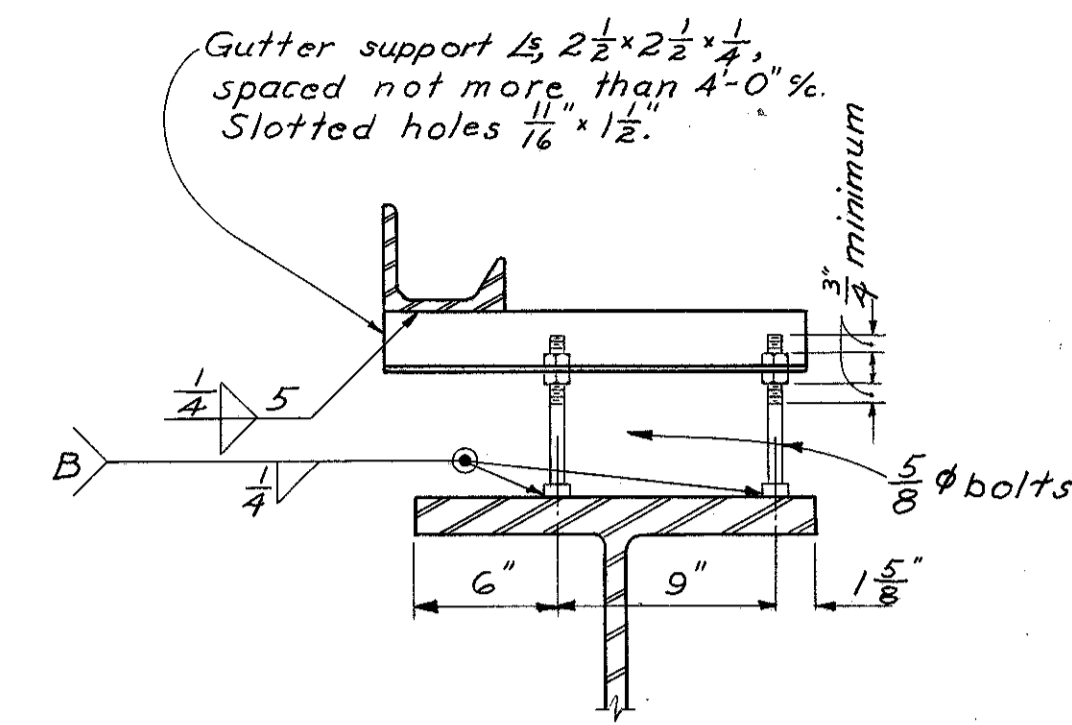
SUPERSTRUCTURE AND RAILING DETAILS
 Bridge No. CUY-42-1908
 Innerbelt Freeway under Prospect Ave.
 Cuyahoga County Sta. 14+10.89

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	PTM	INNES	BFG	8-26-57	12-5-57

Cuyahoga County
CUY-42-18.77

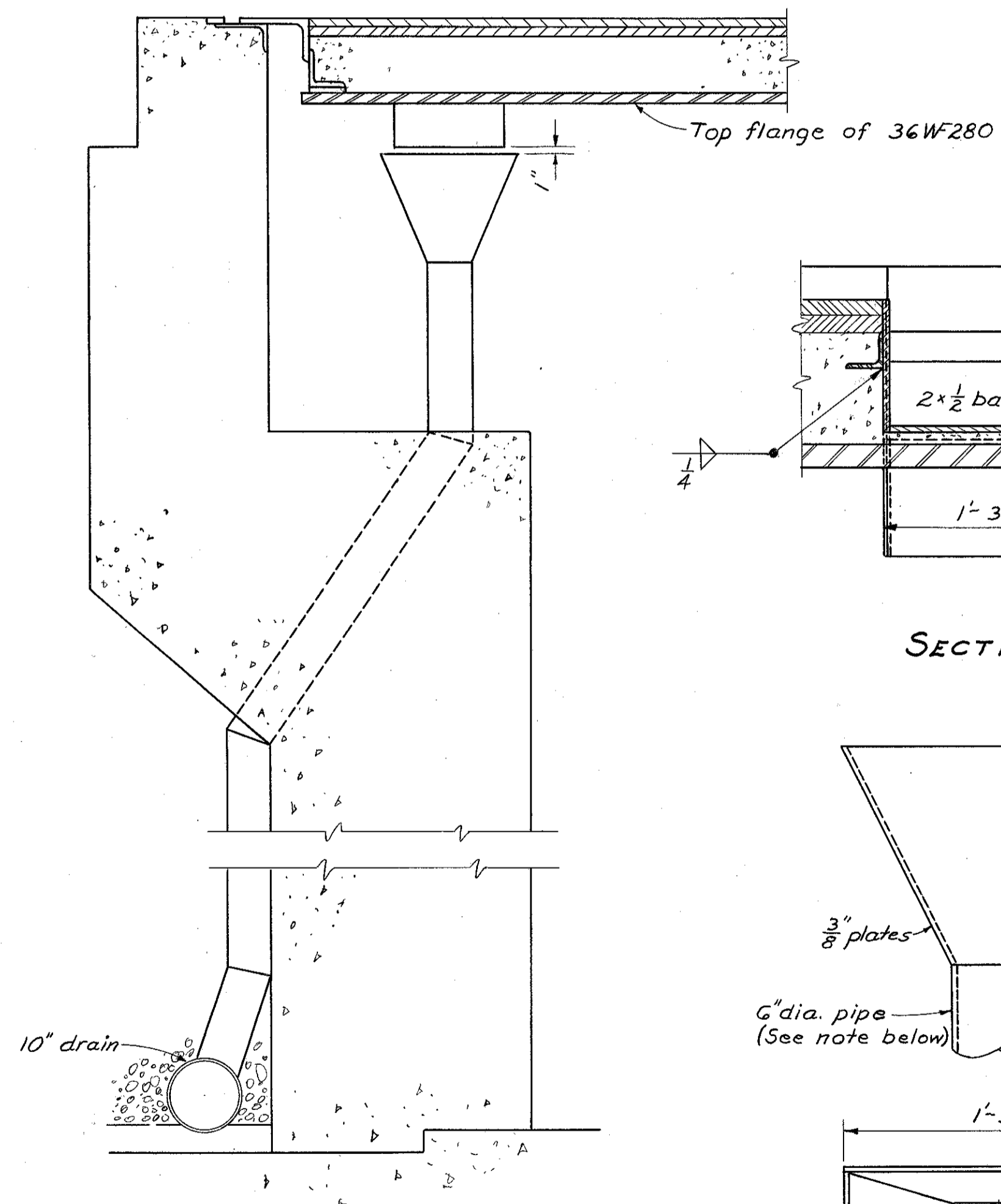


PLAN OF SCUPPER

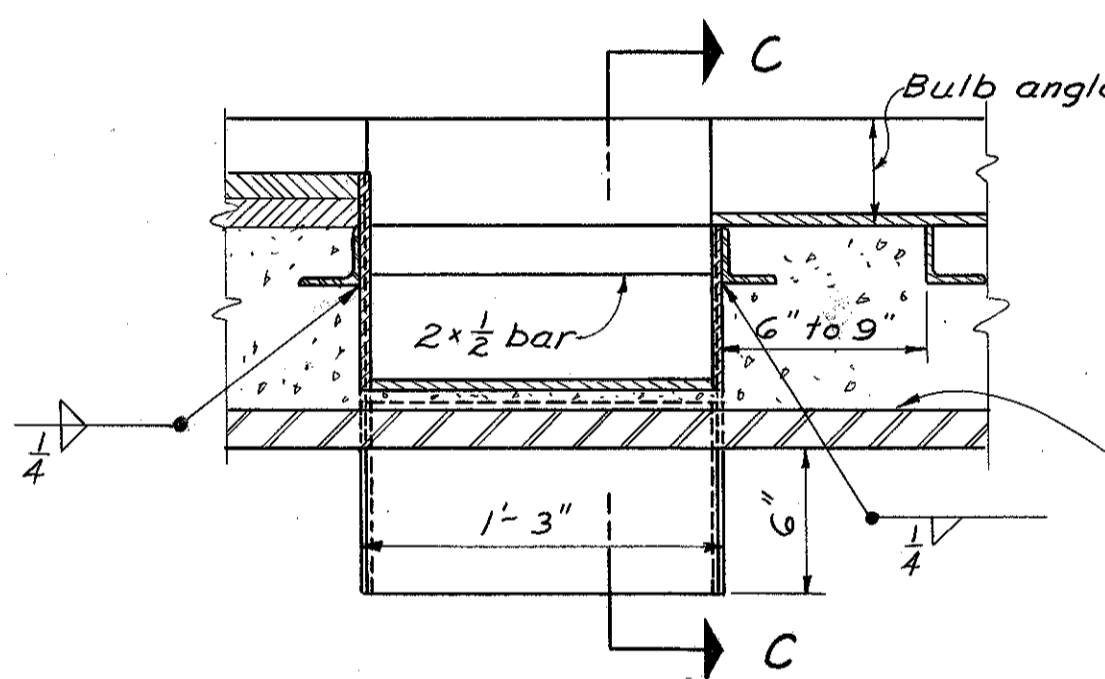


GUTTER SUPPORT DETAILS

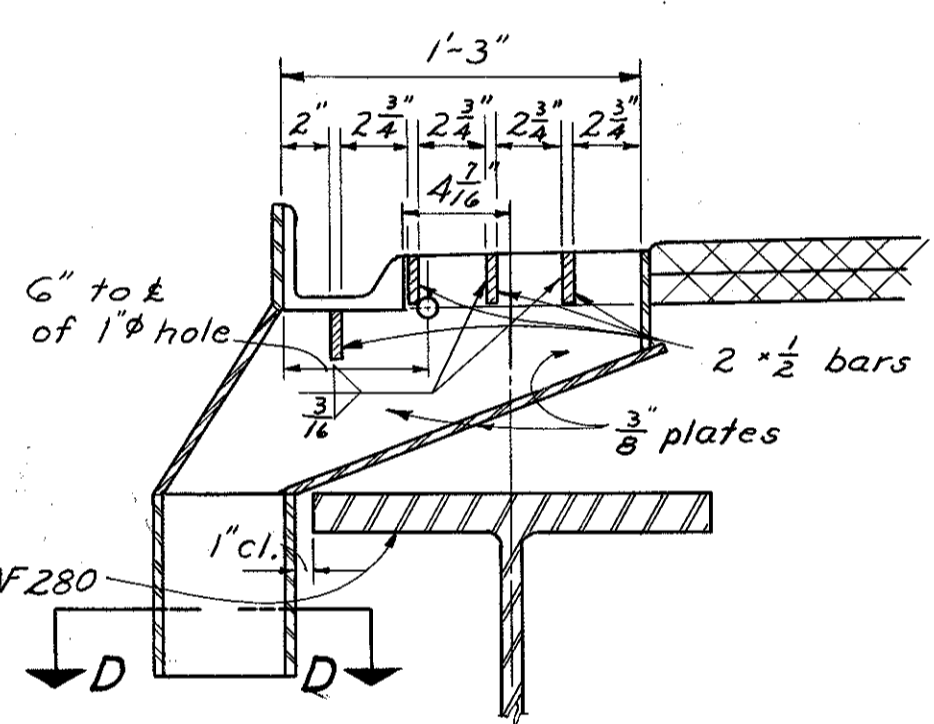
At beam splices, weld bolts to top splice plate. Supports shall be placed 6" to 9" on each side of joints. Milled joints will be permitted in bulb angles, but individual lengths shall be as long as practicable. Gutters shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed.



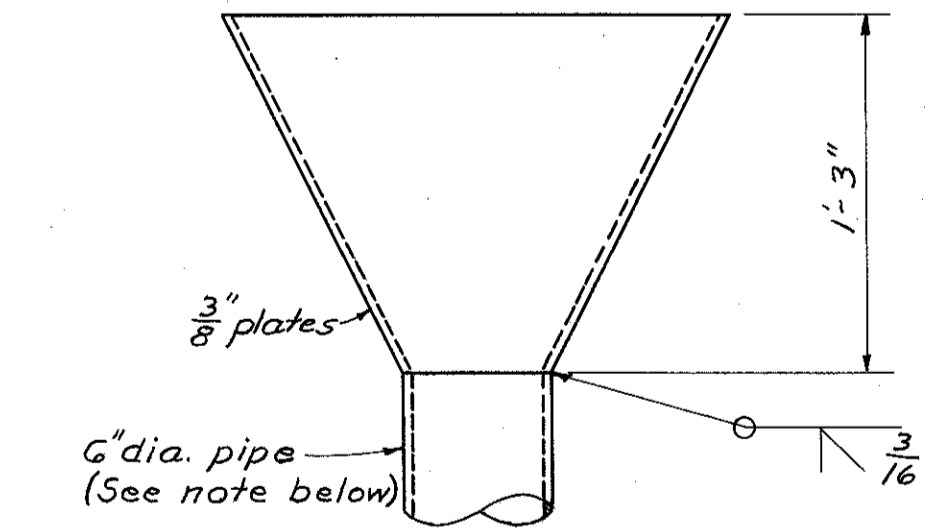
SECTION B-B
(Rear Abutment only)



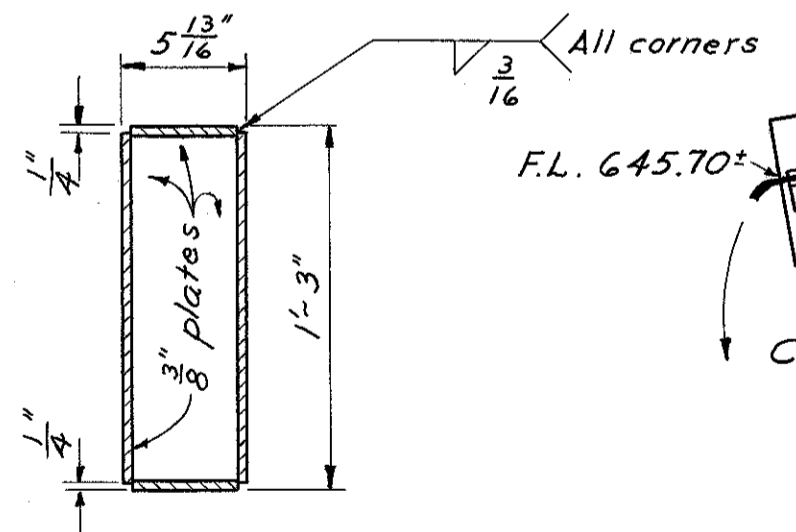
SECTION A-A



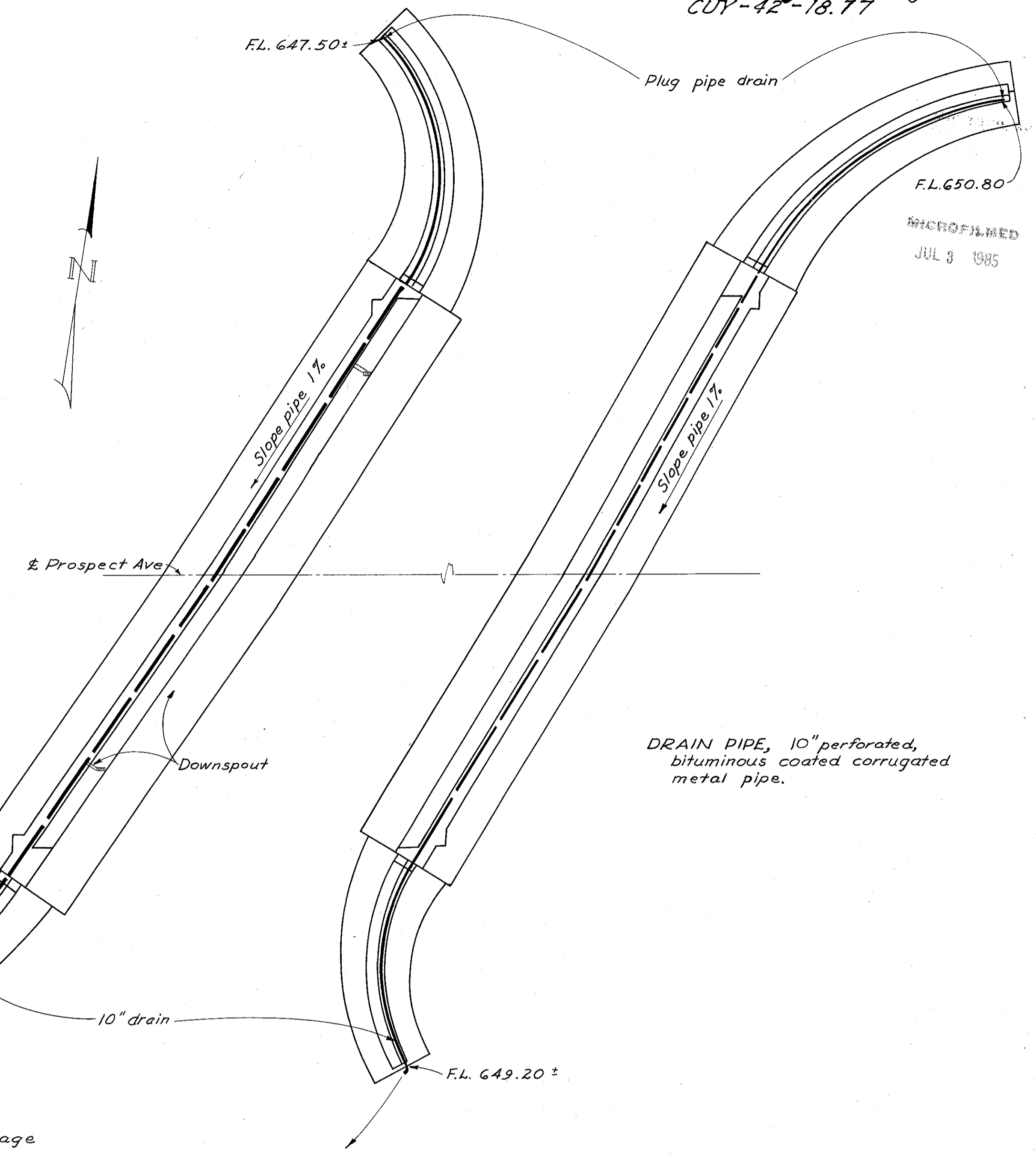
SECTION C-C



DETAIL OF LEADER HEAD



SECTION D-D



PLAN OF SUBSTRUCTURE DRAINAGE

DOWNSPOUTS shall be 6" diameter standard wrought iron pipe or hot dip galvanized steel pipe. Pipe specials shall be wrought iron or hot dipped galvanized steel. Joints shall be made by welding or by Victaulic couplings or by an approved equivalent. All welding shall be done before galvanizing. Straps and bolts for mounting the downspouts shall be galvanized steel, but such galvanizing called for in Sec. M-10.30 will be considered sufficient.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
DRAINAGE DETAILS						
BRIDGE No. CUY-42-1908 INNERBELT FREEWAY UNDER PROSPECT AVE. CUYAHOGA COUNTY						
						STA. 14+10.89
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CPD	CPD	J.E.P.	INNES	DFG	8-26-57	

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JUL 3 1985

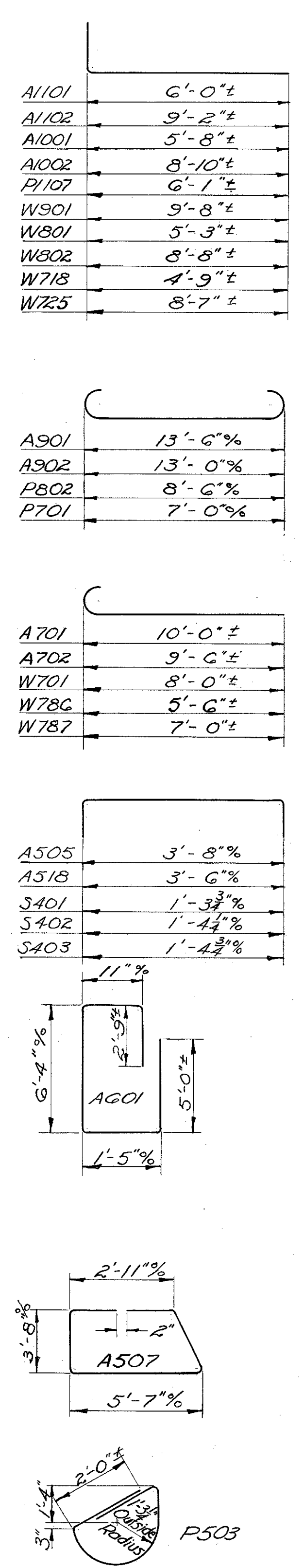
REINFORCING STEEL LIST

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JUL 8 1985

Cuyahoga County
CUY-42-18.77

FED. RD. DIVISION	STATE	PROJECT	112
2	OHIO		129

Mark	No.	Length	Weight	Shp.	Bending Diagrams
Rear Abutment					
A101	62	7'-2"	2361	B	
A102	61	10'-4"	3349	B	
A103	58	19'-6"	6009	S	
A104	4	24'-10"	528	S	
A901	97	16'-0"	5277	B	
A701	93	10'-10"	2059	B	
AG01	62	15'-10"	1474	B	
A501	71	32'-0"	2370	S	
A502	29	31'-8"	958	S	
A503	29	28'-0"	847	S	
A504	57	19'-3"	1144	S	
A505	50	4'-8"	243	B	
A506	5	24'-7"	128	S	
A507	4	16'-0"	67	B	
A508	40	7'-0"	292	S	
A509	4	10'-4"	43	B	
A516	2	13'-0"	27	S	
A517	2	14'-6"	30	S	
A519	32	10'-0"	334	S	
A520	4	8'-9"	37	B	
Forward Abutment					
A1001	49	6'-9"	1423	B	
A1002	48	9'-11"	2048	B	
A1003	46	16'-4"	3233	S	
A1004	3	21'-10"	282	S	
A902	87	15'-6"	4585	B	
S401					
S402					
S403					
A702	90	10'-4"	1901	B	
AG01	60	15'-10"	1427	B	
A502	27	31'-8"	892	S	
A508	40	7'-0"	292	S	
A509	4	10'-4"	43	B	
A510	42	30'-10"	1351	S	
A511	54	28'-6"	1605	S	
A512	4	15'-4"	64	B	
A513	4	21'-7"	90	S	
A514	45	16'-1"	755	S	
A515	2	13'-9"	29	S	
A516	2	13'-0"	27	S	
A518	50	4'-6"	235	B	
A519	28	10'-0"	292	S	
A520	4	8'-9"	37	B	
Pier					
P1101	74	17'-7"	6913	S	
P1102	14	23'-8"	1760	S	
P1103	10	41'-0"	2178	S	
P1104	10	36'-0"	1913	S	
P1105	12	14'-3"	909	B	



Mark	No.	Length	Weight	Shp.	Radius	Bending Diagrams
Pier (Cont)						
P1106	8	13'-0"	553	B		
P1107	88	7'-3"	3390	B		
P1113	10	40'-4"	2143	S		
P1114	10	35'-3"	1879	S		
P1115	12	11'-0"	701	B		
P801	6	7'-9"	124	S		
P802	96	10'-8"	2734	B		
P701	32	8'-8"	567	B		
P501	168	7'-5"	1300	B		
P502	96	8'-7"	859	B		
P503	8	8'-8"	72	B		
Southeast Wingwall						
W718	26	5'-7"	297	B		
W725	14	9'-5"	269	B		
W768	2	26'-0"	106	B	21'-9"	
W769	1	27'-4"	56	B	25'-0"	
W770	1	28'-6"	58	B	28'-0"	
W771	1	30'-0"	61	B	31'-8"	
W772	1	31'-6"	64	B	33'-2"	
W773	1	23'-9"	49	B	20'-0"	
W776	3	20'-3"	124	S		
W777	3	18'-9"	115	S		
W778	3	17'-7"	108	S		
W779	3	16'-2"	99	S		
W780	3	14'-9"	90	S		
W781	3	13'-5"	82	S		
W782	2	12'-6"	51	S		
W783	2	11'-6"	47	S		
W784	2	10'-2"	42	S		
W785	2	8'-3"	34	S		
W786	24	6'-4"	311	B		
W787	53	7'-10"	849	B		
W576	2	20'-0"	42	S		
W577	1	18'-6"	19	S		
W578	2	17'-4"	36	S		
W579	1	15'-11"	17	S		
W580	2	14'-6"	30	S		
W581	1	13'-2"	14	S		
W582	1	12'-3"	13	S		
W583	1	11'-3"	12	S		
W584	2	9'-11"	21	S		
W585	2	8'-0"	17	S		
W586	1	6'-3"	7	B	26'-9"	
W587	1	6'-6"	7	B	27'-9"	
W588	1	10'-6"	11	B	26'-9"	
W589	1	11'-0"	11	B	27'-9"	
W590	1	15'-0"	16	B	26'-9"	
W591	1	15'-9"	16	B	27'-9"	
W592	1	18'-9"	20	B	26'-9"	
W593	1	19'-9"	21	B	27'-9"	
W594	1	22'-10"	24	B	26'-9"	
W595	1	24'-0"	25	B	27'-9"	
W596	5	27'-3"	142	B	26'-9"	
W597	5	28'-6"	149	B	27'-9"	
Southwest Wingwall						
W701	66	8'-10"	1192	B		
W702	6	24'-6"	300	B	49'-7"	
W703	2	24'-9"	101	B	58'-8"	
W704	4	25'-9"	211	B	66'-10"	
W705	2	26'-6"	108	B	68'-4"	
W706	2	23'-4"	95	B	48'-0"	
W786	20	6'-4"	259	B		
W787	26	7'-10"	416	B		
W501	14	23'-2"	338	B	58'-9"	
W502	14	23'-7"	344	B	59'-9"	
W503	1	23'-3"	24	S		
W504	1	22'-9"	24	S		
W505	1	21'-6"	22	S		
W506	1	20'-6"	21	S		
W507	1	19'-9"	21	S		
W508	1	19'-0"	20	S		
W509	1	18'-3"	19	S		
W510	1	17'-6"	18	S		
W511	2	16'-4"	34	S		
W512	1	15'-6"	16	S		
W513	2	14'-8"	31	S		
W514	1	13'-11"	15	S		
W515	2	13'-3"	28	S		
W516	1	12'-7"	13	S		
W517	2	12'-1"	25	S		
W518	3	11'-3"	35	S		
W519	3	10'-7"	33	S		
W520	1	16'-6"	17	B	58'-9"	
W521	1	16'-6"	17	B	59'-9"	
W522	1	10'-6"	11	B	58'-9"	
W523	1	10'-6"	11	B	59'-9"	
W524	3	6'-0"	19	B	58'-9"	
W525	3	6'-0"	19	B	59'-9"	
Northeast Wingwall						
W802	16	9'-7"	409	B		
W701	72	8'-10"	1300	B		
W718	36	5'-7"	411	B		
W719	4	21'-3"	174	B	39'-11"	
W721	4	22'-7"	185	B	46'-8"	
W722	4	23'-1"	189	B	51'-9"	
Northwest Wingwall						
W723	2	23'-10"	97	B	53'-3"	
W724	2	20'-4"	83	B	37'-4"	
W753	2	21'-6"	88	S		
W754	2	20'-5"	83	S		
W755	2	19'-6"	80	S		
W756	2	18'-8"	76	S		
W757	2	17'-11"	73	S		
W758	2	17'-3"	71	S		
W759	2	16'-6"	67	S		
W760	2	15'-10"	65	S		
W761	3	14'-11"	91	S		
W762	3	14'-1"	86	S		
W763	3	13'-4"	82	S		
W764	3	12'-8"	78	S		
W765	2	12'-1"	49	S		
W766	3	11'-2"	68	S		
W767	3	10'-6"	64	S		
W768	28	6'-4"	362	B		
W553	1	21'-3"	22	S		
W554	1	20'-2"	21	S		
W555	1	19'-3"	20	S		
W556	1	18'-5"	19	S		
W557	1	17'-8"	18	S		
W558	1	17'-0"	18	S		
W559	1	16'-3"	17	S		
W560	1	15'-7"	16	S		
W561	2	14'-8"	30	S		
W562	1	13'-10"	14	S		
W563	2	13'-1"	27	S		
W564	1	12'-5"	13	S		
W565	2	11'-10"	25	S		
W566	3	10'-11"	34	S		
W567	3	10'-3"	32	S		
W568	8	18'-6"	154	B	45'-9"	
W569	8	19'-6"	163	B	46'-9"	
W570	1	14'-8"	15	B	45'-9"	
W571	1	15'-6"	16	B	46'-9"	
W572	1	9'-3"	10	B	45'-9"	
W573	1	9'-9"	10	B	46'-9"	
W574	1	4'-0"	4	B	45'-9"	
W575	1	4'-6"	5	B	46'-9"	
W598	1	9'-10"	10	B	45'-9"	
W598a	1	10'-6"	11	B	46'-9"	
W599	6	22'-3"	139	B	46'-9"	
W599a	6	22'-3"	139	B	46'-9"	
Superstructure						
W801	16	10'-8"	580	B		
W801	34	6'-2"	560	B		
W826	2	25'-3"	135	S		
W827	2	24'-3"	129	S		
W828	2	23'-2"	124	S		
W829	2	22'-0"	117	S		
W830	2	21'-0"	112	S		
W831	2	20'-1"	107	S		
W832	2	19'-3"	103	S		
W833	2	18'-5"</				

INNERBELT & CURVE DATA
 Dc = 3° 30' 00"
 Δ = 69° 53' 46.27"
 R = 1637.02'
 T = 1146.17'

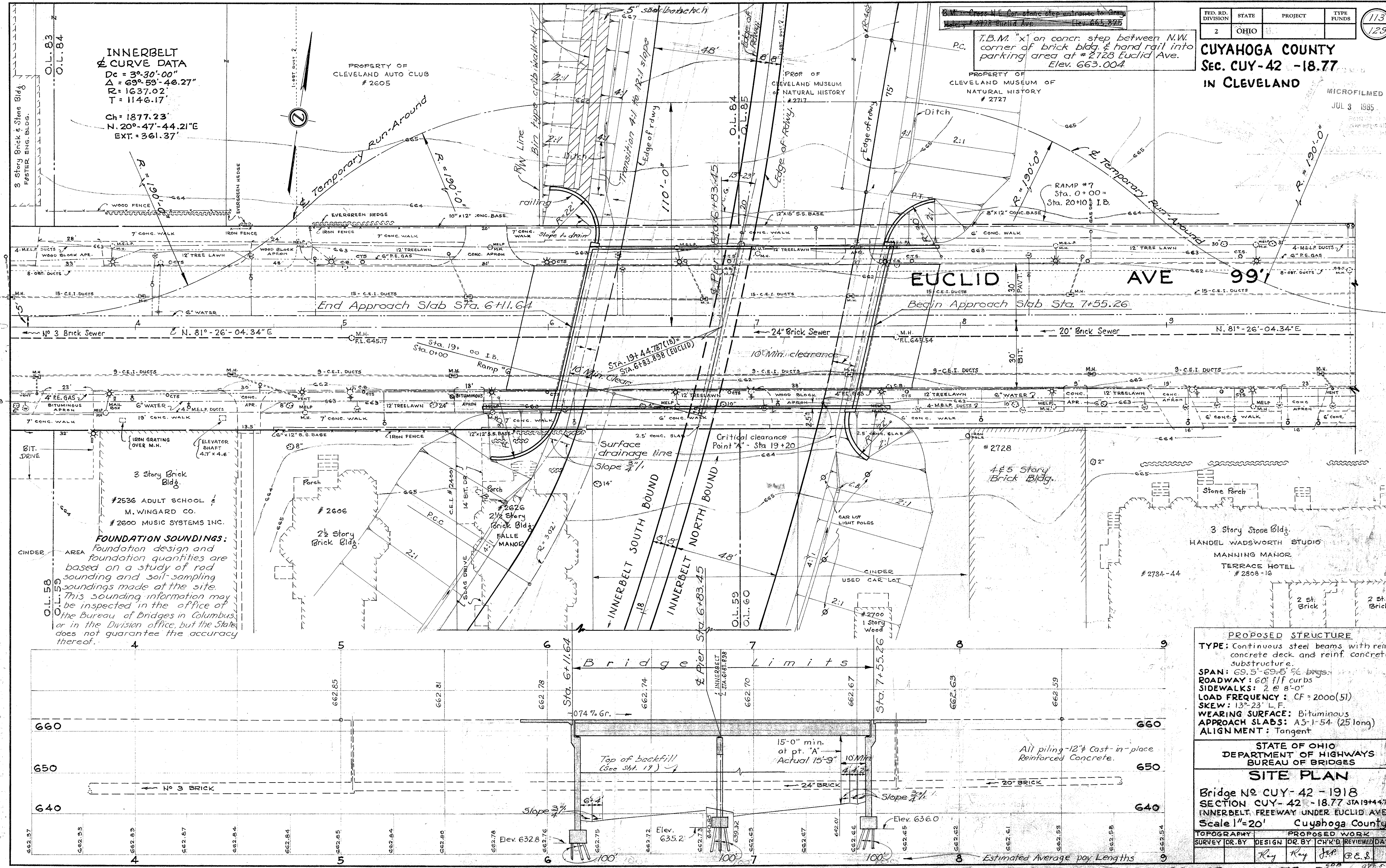
Ch = 1877.23'
 N. 20° 47' 44.21" E
 EXT. = 361.37'

PROPERTY OF
 CLEVELAND AUTO CLUB
 # 2605

PROP. OF
 CLEVELAND MUSEUM
 OF NATURAL HISTORY
 # 2717

PROPERTY OF
 CLEVELAND MUSEUM OF
 NATURAL HISTORY
 # 2727

P.C. T.B.M. "x" on conc. step between N.W. corner of brick bldg. & hand rail into parking area at # 2728 Euclid Ave. Elev. 663.004



FOUNDATION SOUNDINGS:
 Foundation design and foundation quantities are based on a study of rod sounding and soil sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State does not guarantee the accuracy thereof.

PROPOSED STRUCTURE
 TYPE: Continuous steel beams with reinf. concrete deck and reinf. concrete substructure.
 SPAN: 69.5' - 69.5' @ brgs.
 ROADWAY: 60' f/f curbs
 SIDEWALKS: 2 @ 8'-0"
 LOAD FREQUENCY: CF = 2000(51)
 SKEW: 13° 23' L.F.
 WEARING SURFACE: Bituminous
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES

SITE PLAN
 Bridge No CUY-42 -1918
 SECTION CUY-42 -18.77 STA 19+44.787
 INNERBELT, FREEWAY UNDER EUCLID AVE.
 Scale 1" = 20' Cuyahoga County

TOPOGRAPHY	DESIGN	PROPOSED WORK
SURVEY DR. BY	DR. BY	CHK'D REVIEWED DATE
	Ray	Ray J.P. P.E. & S.

Cuyahoga County
CUY-42-18.77

MICROFILMED

JUL 9 1985

GENERAL NOTES

REFERENCE shall be made to Supplemental Specification S-114, revised 8-1-57.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, revised 2-21-58.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress up grade. The slab may be placed in sections between construction joints that are parallel to the transverse reinforcing steel and that are located near the center of any span.

SURFACE FINISH OF CONCRETE: Pier caps and columns and abutment walls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

PILES shall be driven to a minimum bearing capacity of 40 tons each.

FIRST PILE TEST LOAD and any subsequent pile test load shall be applied only if directed by the engineer. All test loads shall be applied where the Engineer shall direct.

WELDED STEEL: The steel for the 36WF260 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4(a) of the Construction and Material Specifications) or to A-373.

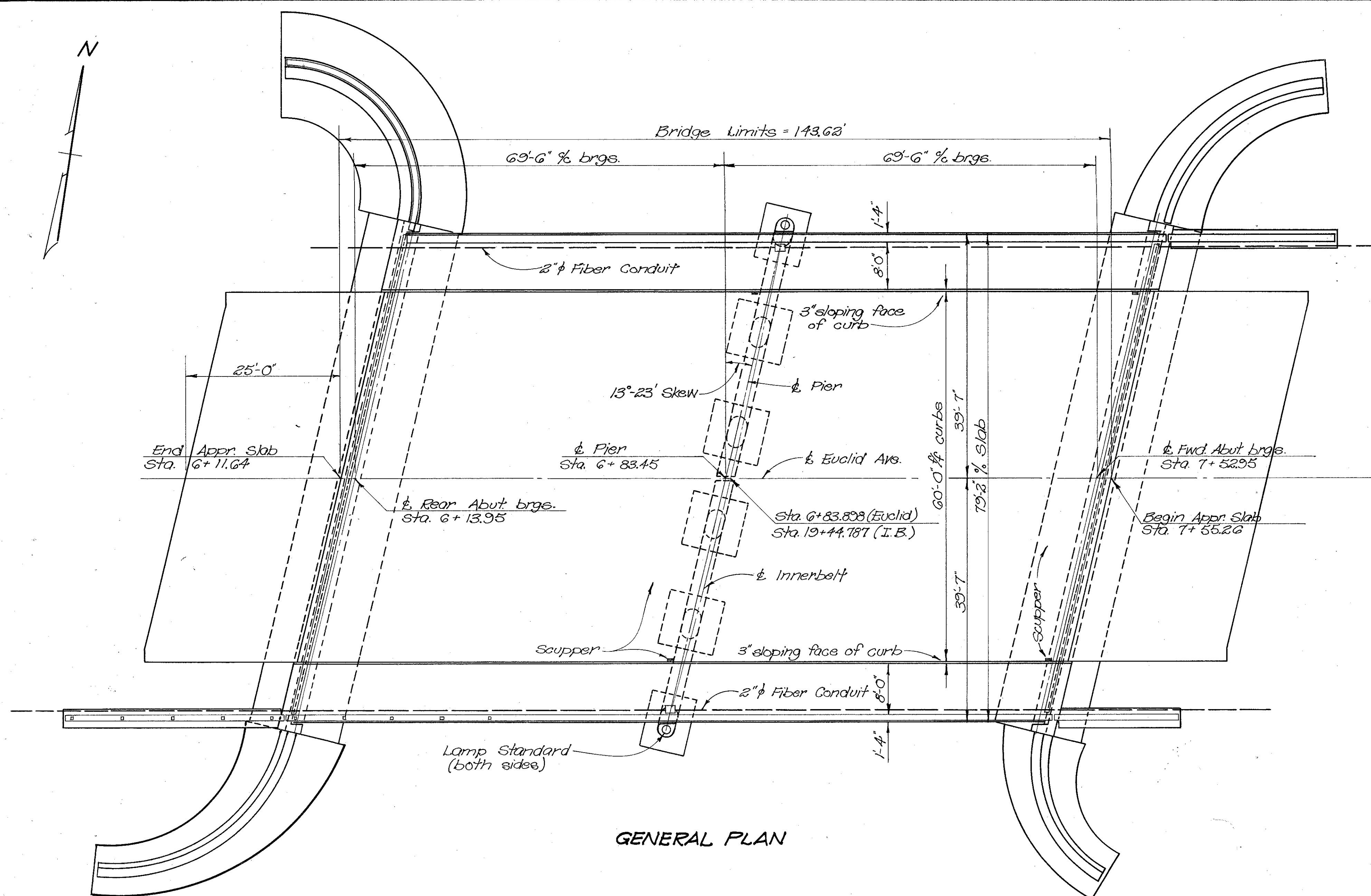
WELDING of structural steel shall be Class "A" except as otherwise shown. Welds shown as field welds may, at the option of the Contractor, be made in the shop.

IN PLACING Item B-33 and T-30 adjacent to the structure, special care shall be taken to protect the exposed concrete surfaces from being marred or defaced by the operation.

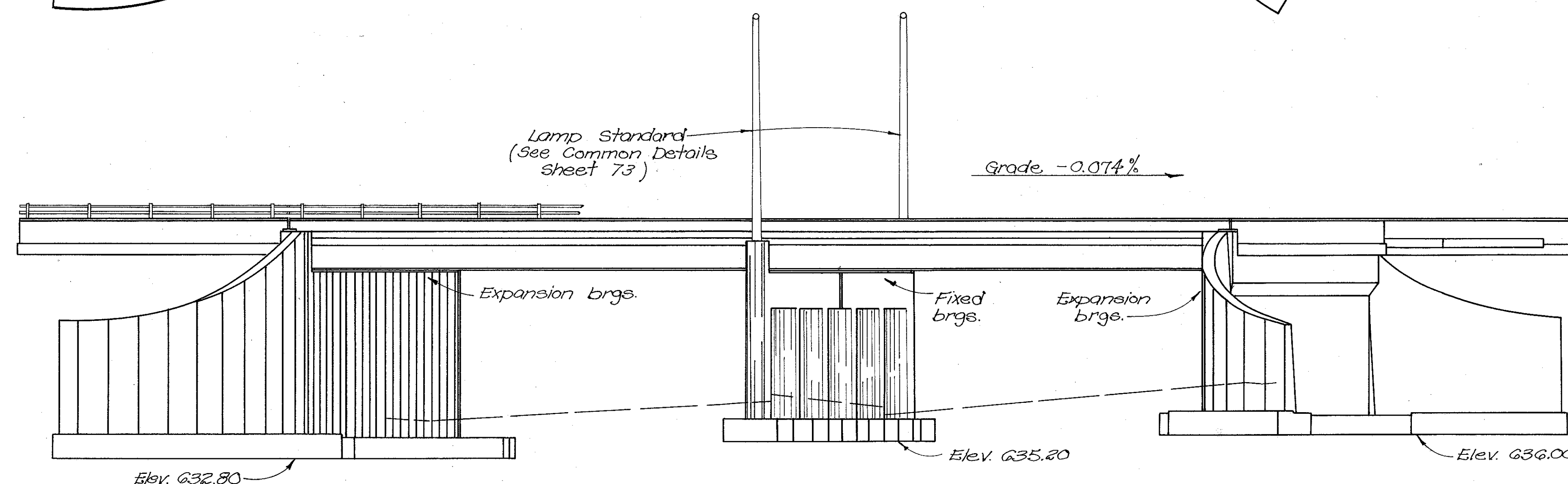
UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the respective owners of the lines. The Contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

TEMPORARY RUN-AROUND STREET shall be provided with face-to-face of curbs 50'; width out-to-out shoulders 68'-0". 5' ft. wide sidewalk on North side. Pavement 9" of T-70 with Type 2-A curbs (Std. Dwg I-12). Sidewalk shall be 4" thick and shall be according to I-13 except that concrete may be Class "D" at the option of the Contractor. See Sheet No. 20 for additional details.

SHEETING AND BRACING: Refer to note on Sheet No. 101.



GENERAL PLAN



ELEVATION
(Piling not shown)

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
GENERAL PLAN & ELEVATION						
GENERAL NOTES						
BRIDGE No. CUY-42-1918						
INNERBELT FREEWAY						
UNDER EUCLID AVE.						
Cuyahoga County Sta. 19+44.787						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.L.D.	R.L.D.	R.D.M.	WCK	A.P.B.	9.8.78	8-6-58

REINFORCING STEEL LIST

SUPERSTRUCTURE					ABUTMENTS					SOUTH EAST & NORTH EAST WINGWALLS					SOUTH EAST & NORTH EAST WINGWALLS					SOUTH WEST WINGWALL				
Mark	No.	Length	Weight	Sh.	Mark	No.	Length	Weight	Sh.	Mark	No.	Length	Weight	Sh.	Mark	No.	Length	Weight	Sh.	Mark	No.	Length	Weight	Sh.
S701	422	40'-1"	34,575	S	F1100	40	16'-5"	3,490	B	F803	15	13'-5"	537	B	W510	2	10'-4"	22	B	F1109	7	7'-8"	285	B
S601	416	40'-1"	25,045	S	F1101	236	8'-6"	10,658	B	F804	21	8'-4"	467	B	W511	1	6'-0"	6	B	F1110	6	10'-2"	324	B
S602	600	36'-6"	32,894	S	F1102	44	11'-2"	4,013	B	F701	20	11'-11"	487	B	W512	1	6'-6"	7	B	F1003	40	10'-1"	1,736	B
S603	58	36'-0"	3,136	S	F1103	152	13'-7"	10,967	B	F702	10	10'-5"	213	B	W513	1	7'-10"	8	B	F1004	30	12'-11"	1,667	B
S604	6	37'-2"	335	S	F1104	62	10'-6"	3,459	B	F703	37	7'-8"	580	B	W514	1	8'-8"	9	B	F802	11	7'-10"	230	B
S605	210	9'-2"	2,891	S	F801	226	8'-0"	4,827	S	F704	10	13'-3"	271	B	W515	15	14'-7"	228	B	F805	13	9'-10"	315	B
S606	2	6'-2"	19	S	F601	24	8'-0"	288	S	F705	7	11'-8"	167	B	W516	15	12'-8"	198	B	F802	11	7'-10"	230	B
S501	848	2'-4"	2,064	B	F501	66	29'-2"	2,008	S	F706	8	10'-8"	174	B	W517	2	12'-8"	26	S	F805	13	9'-10"	315	B
S401	212	4'-9"	673	B	A1101	44	22'-5"	5,240	S	F707	6	9'-8"	119	B	W518	15	18'-6"	289	S	F602	2	25'-0"	75	B
R701	3	19'-8"		B	A1102	74	11'-0"	4,325	S	F708	4	6'-3"	51	B	W519	2	5'-6"	11	B	F603	2	21'-1"	63	B
R702	3	26'-8"		B	A1103	84	8'-0"	3,570	S	F709	50	6'-10"	698	B	W520	1	16'-6"	17	B	F604	4	24'-0"	144	B
R703	3	34'-8"		B	A1104	34	19'-1"	3,447	S	F710	54	8'-1"	892	B	W521	1	11'-0"	11	B	F605	3	22'-0"	99	B
R601	164	5'-9"		B	A701	12	3'-3"	80	B	F711	5	8'-10"	90	B	W522	1	6'-0"	6	B	F606	2	18'-7"	56	B
R501	2	18'-11"		S	A601	62	8'-9"	815	B	F712	60	9'-4"	1,145	B	W523	1	3'-0"	3	S	F607	2	26'-6"	80	B
R502	2	19'-8"		S	A602	60	13'-9"	1,239	B	F713	4	16'-4"	134	B	W524	2	3'-0"	6	S	F608	12	6'-5"	116	B
R503	2	20'-7"		B	A501	208	21'-10"	4,737	S	F714	8	15'-6"	253	B	W525	1	15'-8"	16	B	B1101	one series of 7	21'-0"	725	S
R504	2	27'-7"		B	A502	30	22'-2"	694	S	F715	6	13'-2"	161	B	W526	1	10'-4"	11	B	B901	16	7'-0"	381	S
R505	2	26'-8"		S	A503	100	4'-5"	461	B	F716	12	10'-2"	249	B	W527	1	5'-8"	6	B	B902	one series of 10	14'-2"	405	S
R506	2	25'-11"		S	A504	8	6'-8"	56	S	F717	4	21'-6"	176	B	W528	one series of 5	23'-5"		S	B903	one series of 12	9'-4"	325	S
R507	2	35'-7"		B	A505	14	14'-2"	207	B	F718	8	19'-9"	323	B	W529	one series of 5	16'-10"		S	B904	8	6'-6"	177	S
R508	2	34'-8"		S	A506	15	10'-9"	168	B	F719	6	17'-6"	215	B	W530	4	12'-9"	53	S	B801	7	8'-6"	159	S
R509	2	33'-11"		S	A507	8	9'-0"	75	S	W701	one series of 12	23'-6"			T1001	14	27'-1"	1,632	S	B601	30	8'-6"	383	S
R402	8	15'-2"		S	A508	30	18'-10"	589	S	W702	1	23'-9"	49	S	T1002	13	18'-5"	1,030	S	B501	one series of 11	26'-6"	247	S
R403	48	18'-2"		S	P1101	88	7'-5"	3,468	B	W703	one series to	17'-9"			T1003	26	14'-5"	1,613	S	B502	16	22'-1"	369	B
R404	2	20'-8"		B	P1102	74	19'-8"	7,732	S	W704	one series to	17'-10 1/2"			T501	14	26'-10"	392	S	B503	16	21'-7"	360	B
R405	2	19'-11"		B	P1103	14	23'-8"	1,760	S	W705	one series to	13'-0"			T502	28	20'-3"	591	B	B504	1	28'-0"	29	B
R406	2	20'-8"		B	P1104	6	7'-4"	234	S	W706	one series to	14'-4"			T503	28	19'-4"	565	B	B505	1	27'-0"	28	B
R407	2	19'-11"		B	P1105	14	19'-9"	1,469	B	W707	one series to	17'-3"			T401	27	4'-9"	86	B	B506	1	19'-6"	20	B
R408	8	15'-0"		S	P1106	14	30'-0"	2,231	S	W708	one series to	17'-3"			F1001	53	11'-3"	2,566	B	B507	1	18'-6"	19	B
R409	2	1'-4"		S	P1107	14	40'-8"	3,025	S	W709	one series to	17'-3"			F1002	26	7'-0"	783	B	B508	1	13'-4"	14	B
RE11	4	7'-6"		S	P1108	6	11'-2"	356	B	W710	one series to	17'-3"			F901	40	9'-2"	1,247	S	B509	1	12'-4"	13	B
RE10	1	7'-2"		S	P801	104	10'-10"	3,008	B	W711	one series to	17'-3"			F902	78	13'-7"	3,602	B	B510	1	8'-0"	8	B
RE9	1	6'-10"		S	P802	24	9'-5"	603	B	W712	one series to	17'-3"			F903	10	19'-2"	652	B	B511	1	7'-4"	8	B
RE8	1	6'-6"		S	P501	124	8'-5"	1,089	B	W713	one series to	17'-3"			F502	6	13'-3"	83	B	B512	4	16'-2"	67	S
RE7	3	6'-2"		S	P502	4	40'-8"	170	S	W714	one series to	17'-3"			F503	2	18'-0"	38	B	B513	2	6'-6"	14	S
RE6	4	5'-11"		S	P401	360	7'-5"	1,784	B	W715	one series to	17'-3"			F504	6	21'-4"	134	B					
RE5	1	5'-7"		S	P402	8	8'-6"	45	B	W716	one series to	17'-3"			F505	4	25'-11"	108	B					
RE4	1	5'-3"		S						W717	one series to	17'-3"			F506	2	14'-10"	31	B					

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, S701 is a No. 7 size bar and A1101 is a No. 11 size.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abuts.	Pier	Superst.	Wingwalls	General
E-2	Lump	Sum	Excavation for structures, as per plan					Lump
S-1	363	Cu. Yd.	Class "C" concrete, superstructure			363		
S-1	399	Cu. Yd.	Class "C" concrete, abutment walls	399				
S-1	91	Cu. Yd.	Class "C" concrete, pier caps and columns		91			
S-1	242	Cu. Yd.	Class "C" concrete, wing walls above footings				242	
S-1	508	Cu. Yd.	Class "E" concrete, footings	252	50			206
S-3	34	Sq. Yd.	Type "B" waterproofing					34
S-3	920	Sq. Yd.	Type "C" waterproofing			920		
S-3	48	Lin. Ft.	Waterproofing, premolded sealing strip	48				
S-4	230,447	Lbs.	Reinforcing steel	63,413	26,974	101,632	36,428	
S-7	426,000	Lbs.	Structural steel			426,000		
S-8	426,000	Lbs.	Field painting of structural steel			426,000		
S-9	Lump	Sum	Structural expansion and contraction joint					Lump
S-9	200	Sq. Ft.	1" Gray sponge rubber expansion joint filler				200	
S-14	285.25	Lin. Ft.	Railing (Aluminum rails and supports and concrete parapet) on structure			285.25		
S-14	82.38	Lin. Ft.	Railing (Aluminum rails and supports and concrete wall and footing) on approaches				82.38	
S-14	40.56	Lin. Ft.	Railing (Aluminum rails and supports and concrete parapet) on N.W. wingwall				40.56	
S-15	Lump	Sum	Temporary run-around street					Lump
S-16	Lump	Sum	First test pile					Lump
S-17	Lump	Sum	First pile test load					Lump
S-17	1	Each	Subsequent pile test load					1
S-18	21,400	Lin. Ft.	12" cast-in-place reinforced concrete piles	10,100	4,200		7,100	
S-25	Lump	Sum	Electric lighting system (lamp standards, junction, pull boxes and electrical grounds)					Lump
S-25	384	Lin. Ft.	2" Electric conduit (fiber)		95	289		
S-29	280	Lin. Ft.	Subdrainage for wearing surface course			280		
S-29	96	Lin. Ft.	6" W.I. or galvanized steel pipe, including specials	34	62			
S-29	305	Lin. Ft.	8" Bituminous coated corrugated metal pipe (perforated)	169			136	
S-29	389	Cu. Yd.	Porous backfill	240			149	
T-35	64	Cu. Yd.	Asphaltic concrete surface course, Type "C" (60-70)			64		

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

REINFORCING STEEL LIST & ESTIMATED QUANTITIES

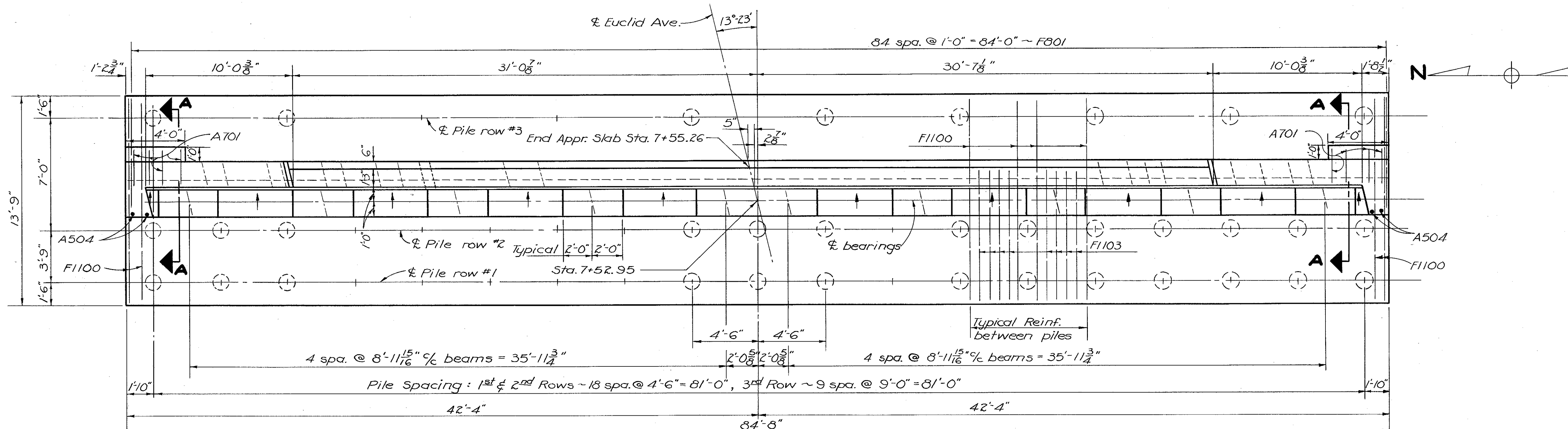
BRIDGE NO. CUY-42-1918
 INNERBELT FREEWAY
 UNDER EUCLID AVE.

CUYAHOGA COUNTY STA. 19+44.787

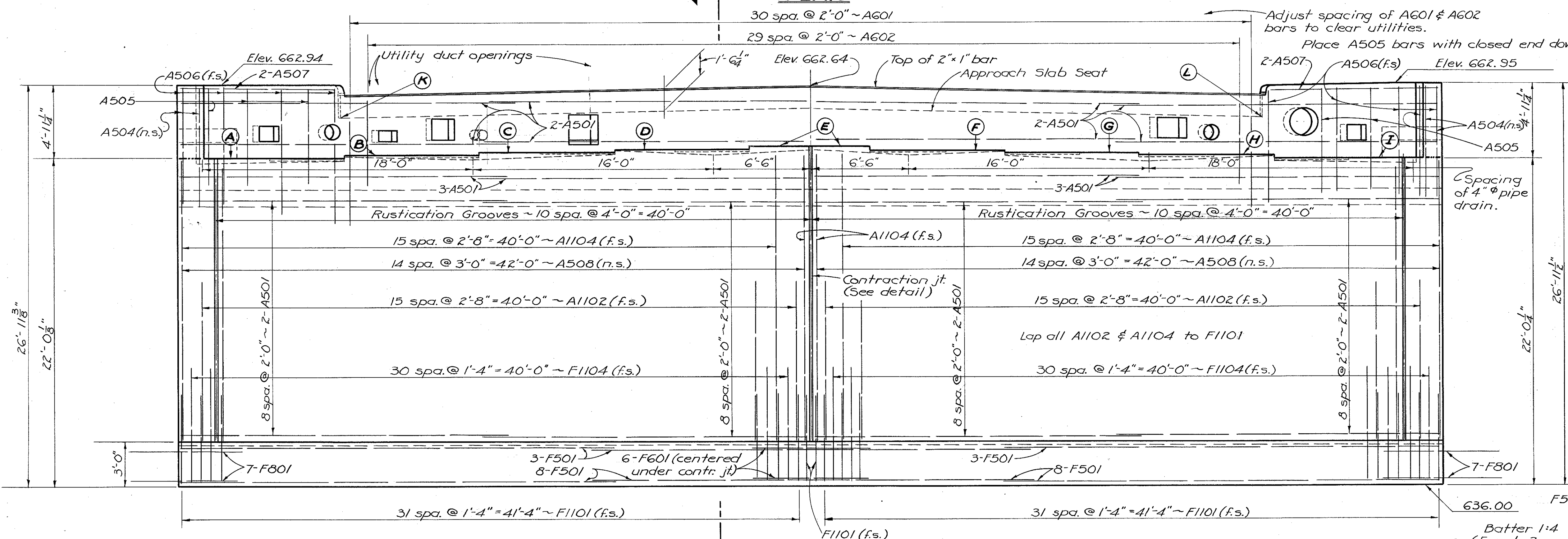
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.L.D.	R.L.D.	J.G.W.	W.C.K.	C.D.P.	9-8-58	

Cuyahoga County
CUY-42-18.77

MICROFILMED
JUL 8 1985



PLAN



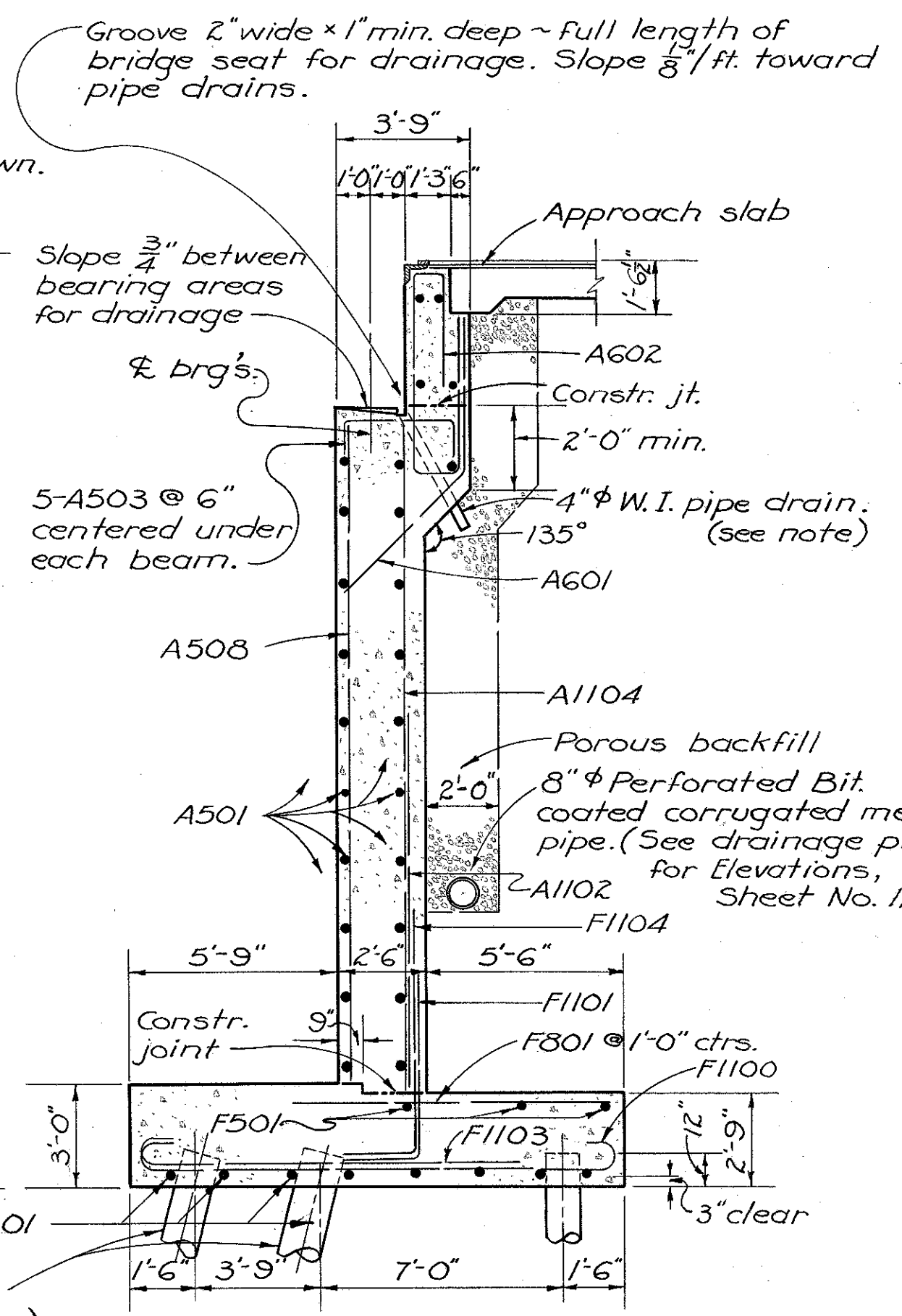
ELEVATION
(Piles not shown)

ELEVATIONS										
A	B	C	D	E	F	G	H	I	K	L
658.01	658.15	658.29	658.42	658.56	658.43	658.29	658.16	658.02	660.65	660.66

NOTE:
4" WROUGHT IRON PIPE shall extend approximately 3 feet into porous backfill. The portion of the pipe 3" which is in the backfill shall be perforated with 3/8" holes at about 3/8" centers around the circumference and 4" along the length of pipe. Include with Item 5-1 for payment.

FOR SECTION A-A see Rear Abutment Details Sheet 116.

POROUS BACKFILL, as shown, shall extend full length of abutment and wings.



SECTION C-C

FOR ADDITIONAL NOTES and DETAILS see Sheet No. 116.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FORWARD ABUTMENT DETAILS

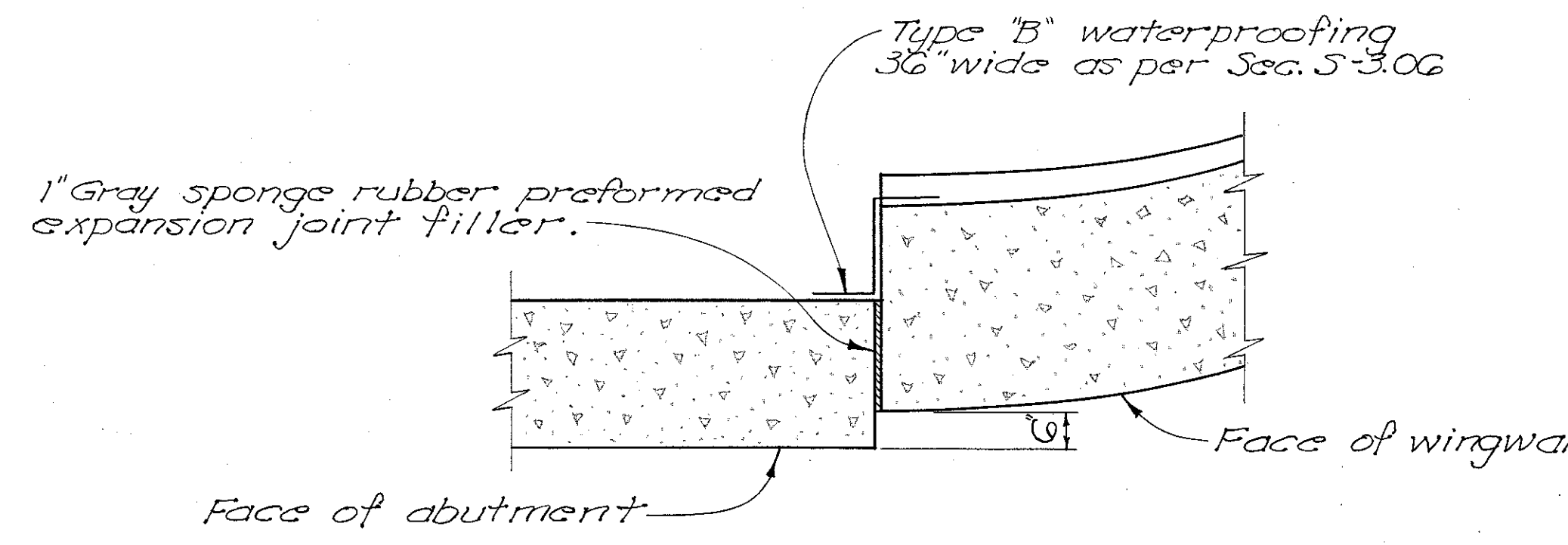
BRIDGE No. CUY-42-1918
INNERBELT FREEWAY
UNDER EUCLID AVE.

CUYAHOGA COUNTY STA. 19+44.787

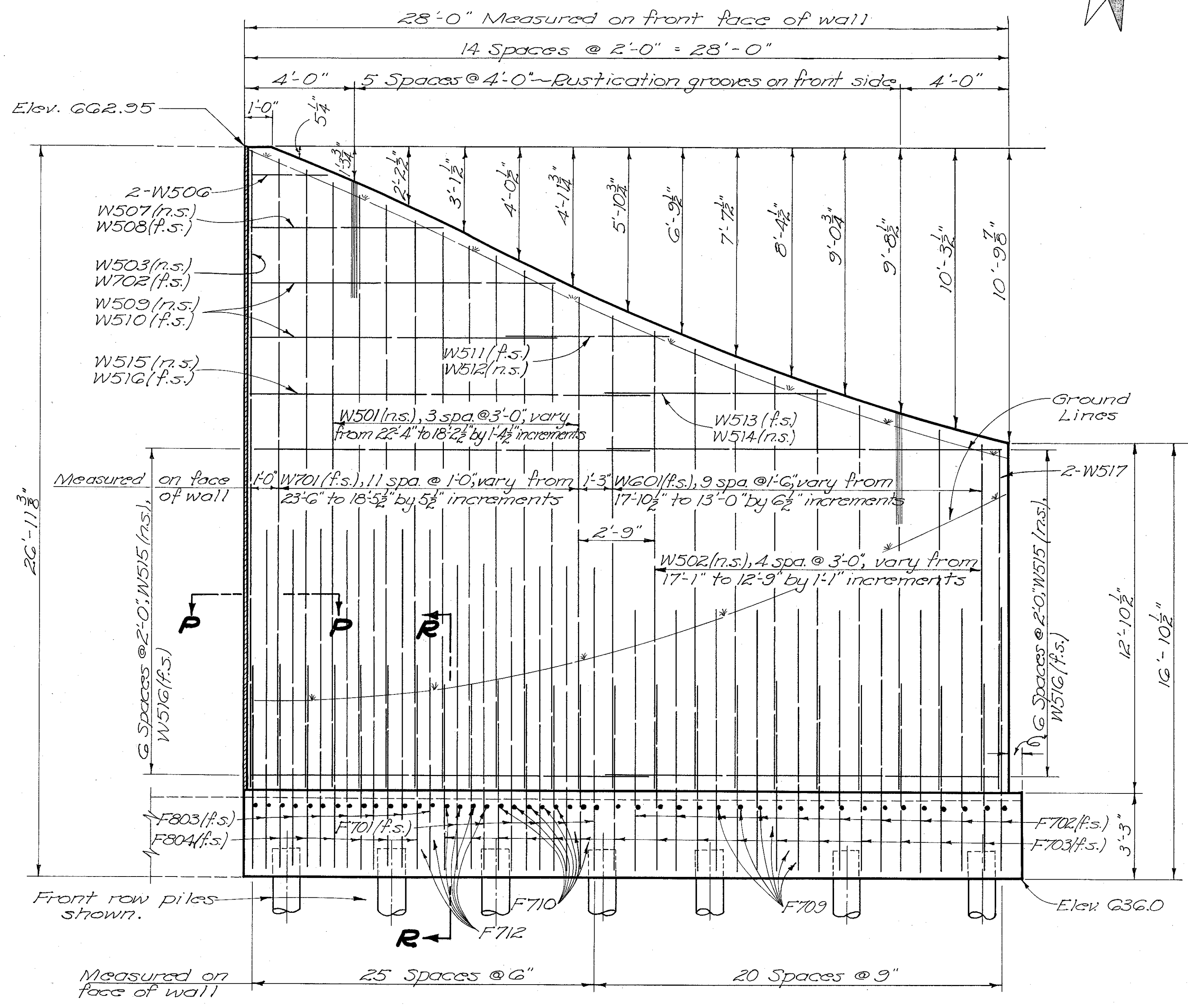
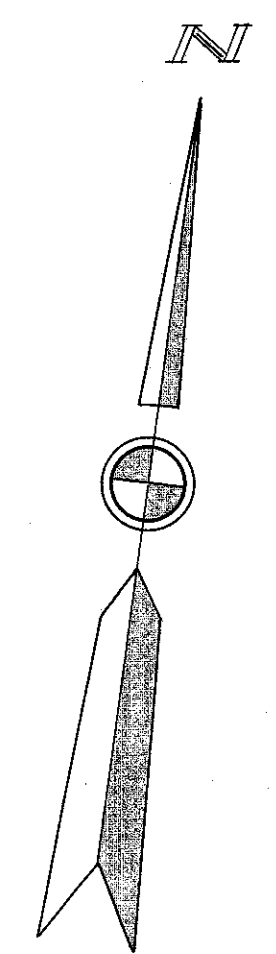
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
		JGW	WCK	CPB	8-6-58	

Cuyahoga County
 CUY-42-18-77

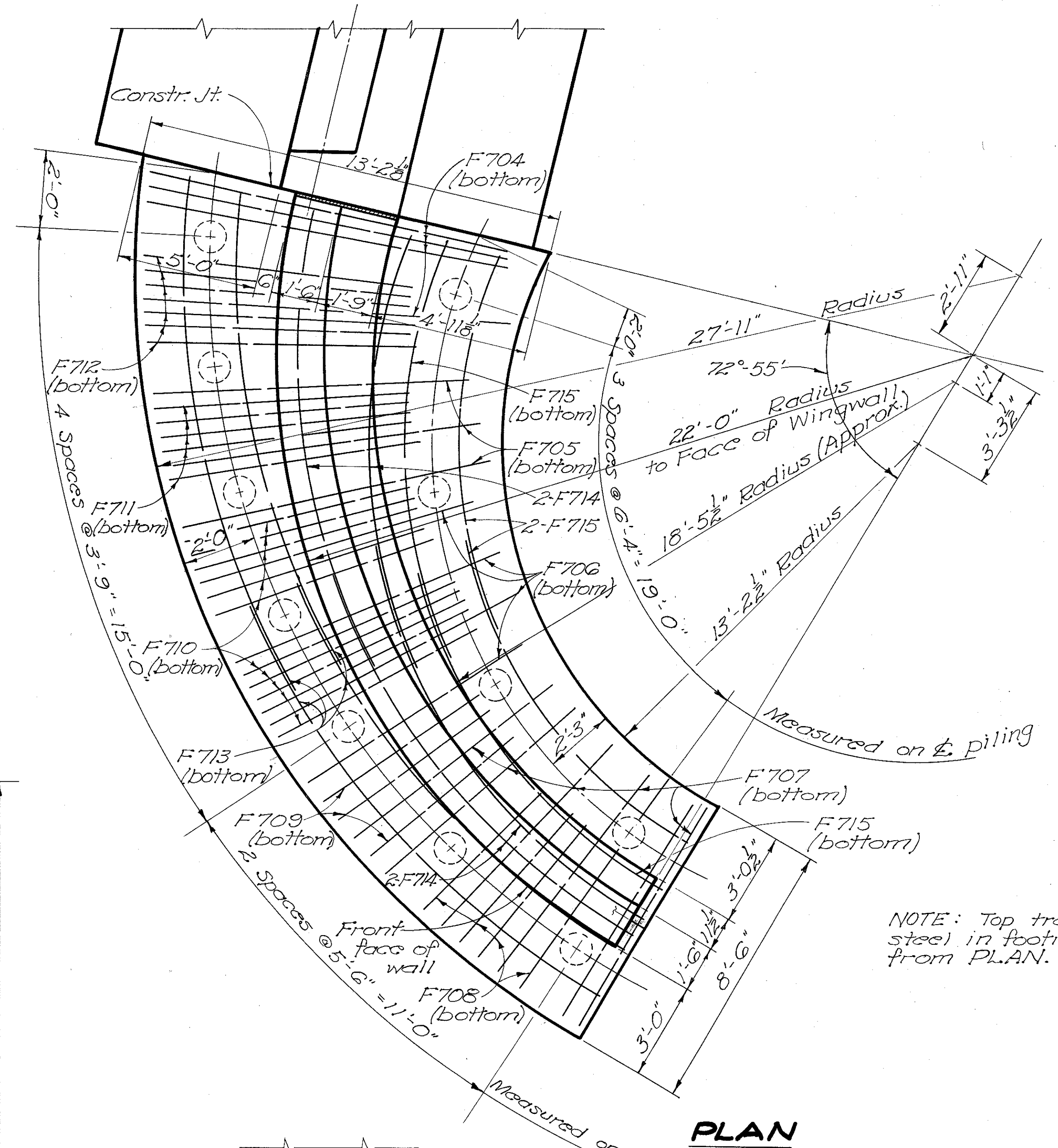
MICROFILMED
 JUL 3 1965



SECTION P-P

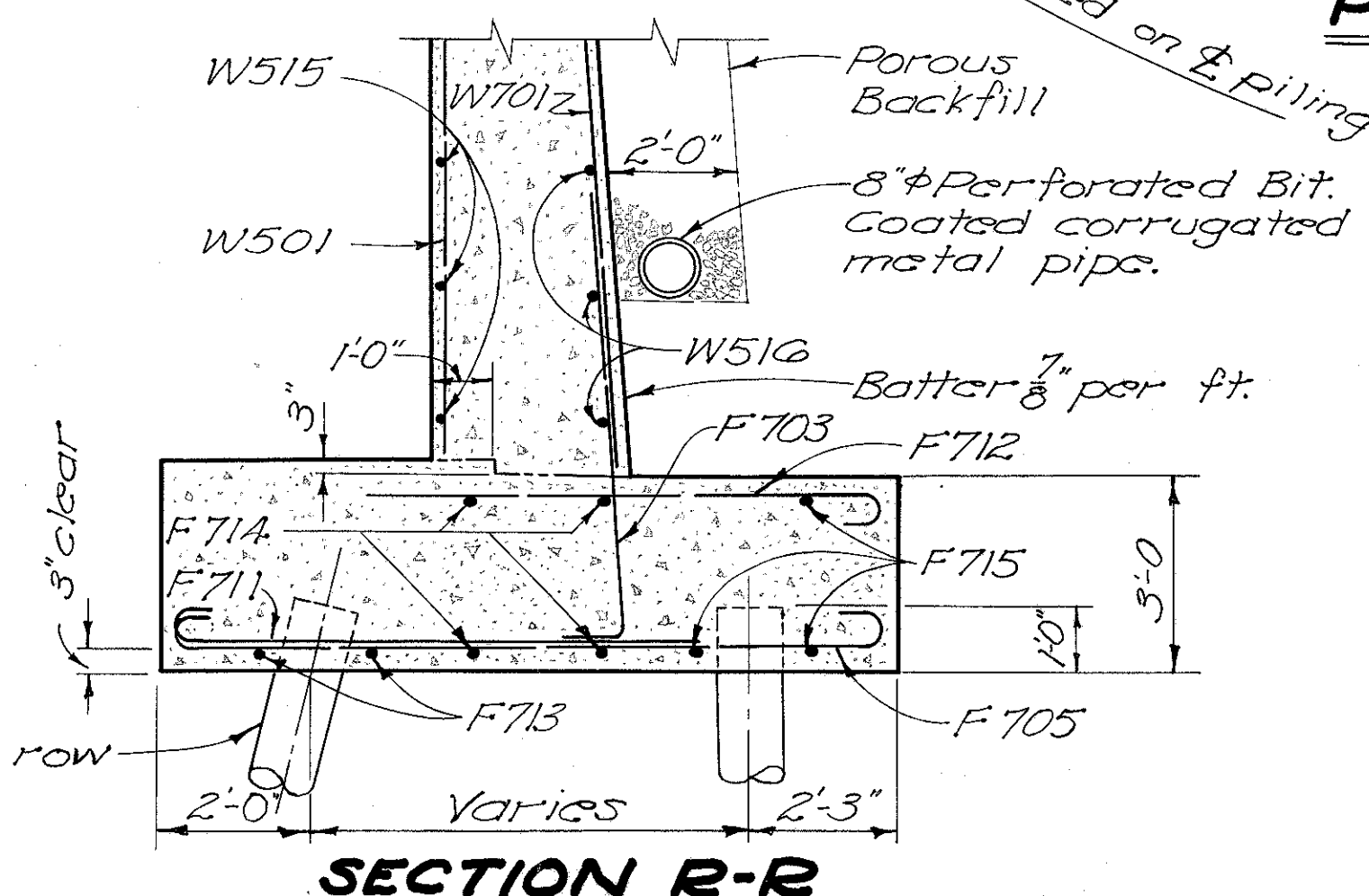


ELEVATION
 DEVELOPED ALONG FACE OF WALL



PLAN

NOTE: Top transverse reinforcing steel in footing has been omitted from PLAN. See ELEVATION.



SECTION R-R

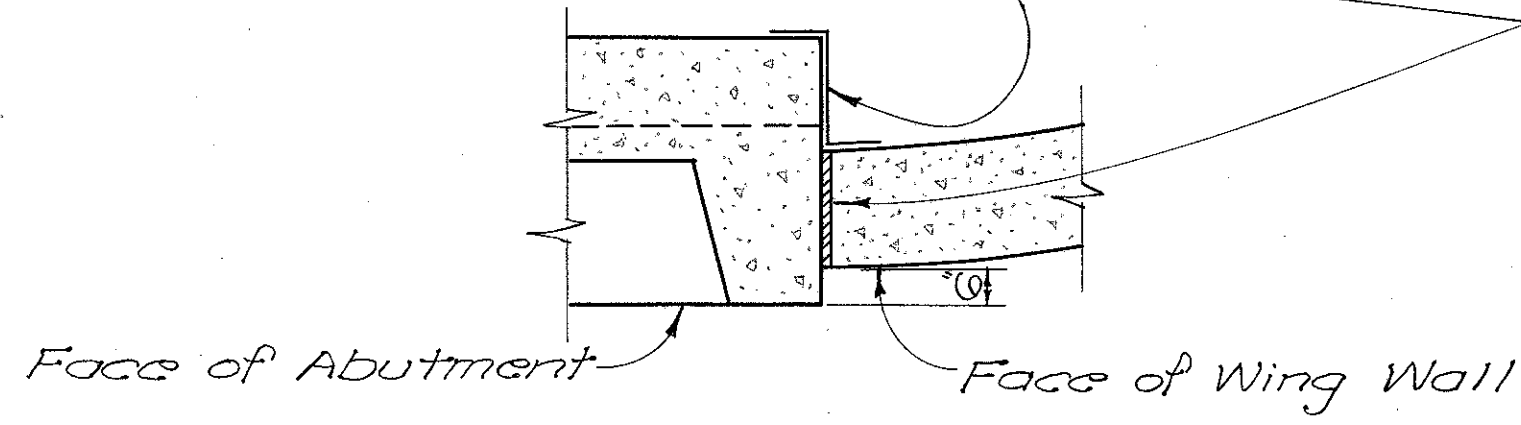
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SOUTHEAST WING WALL DETAILS						
BRIDGE NO. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE. CUYAHOGA COUNTY STA. 19+44.787						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
OPM	OPM	RAM	WCK	ADB	9.8.78	8-6-58

Cuyahoga County
 CUY -42-18.77

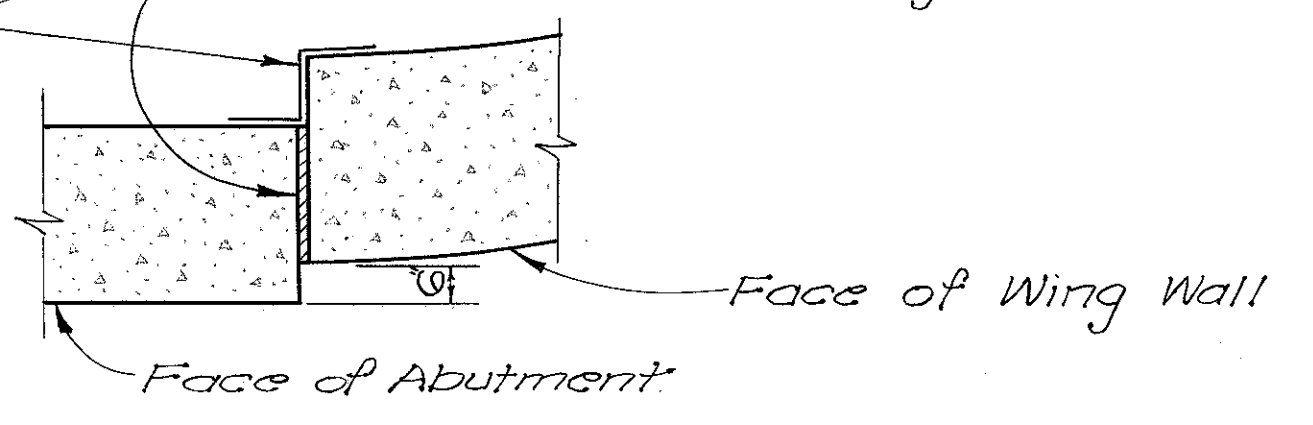
REPRODUCED
 MICROFILMED
 JUL 3 1965

Type "B" waterproofing
 3/6" wide per Sec. 5-3.03

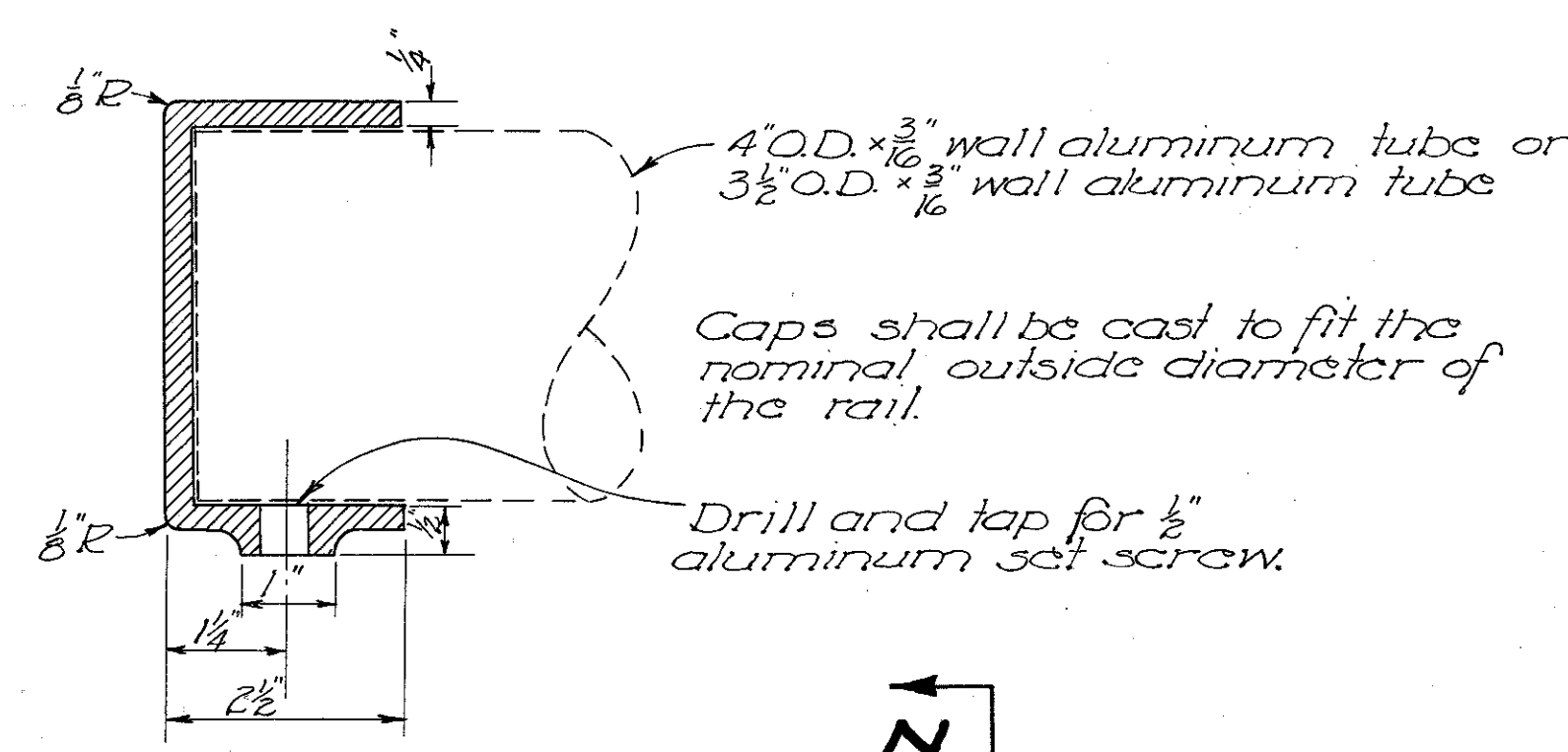
1" Gray sponge rubber expansion joint
 filler,
 full height of wall.



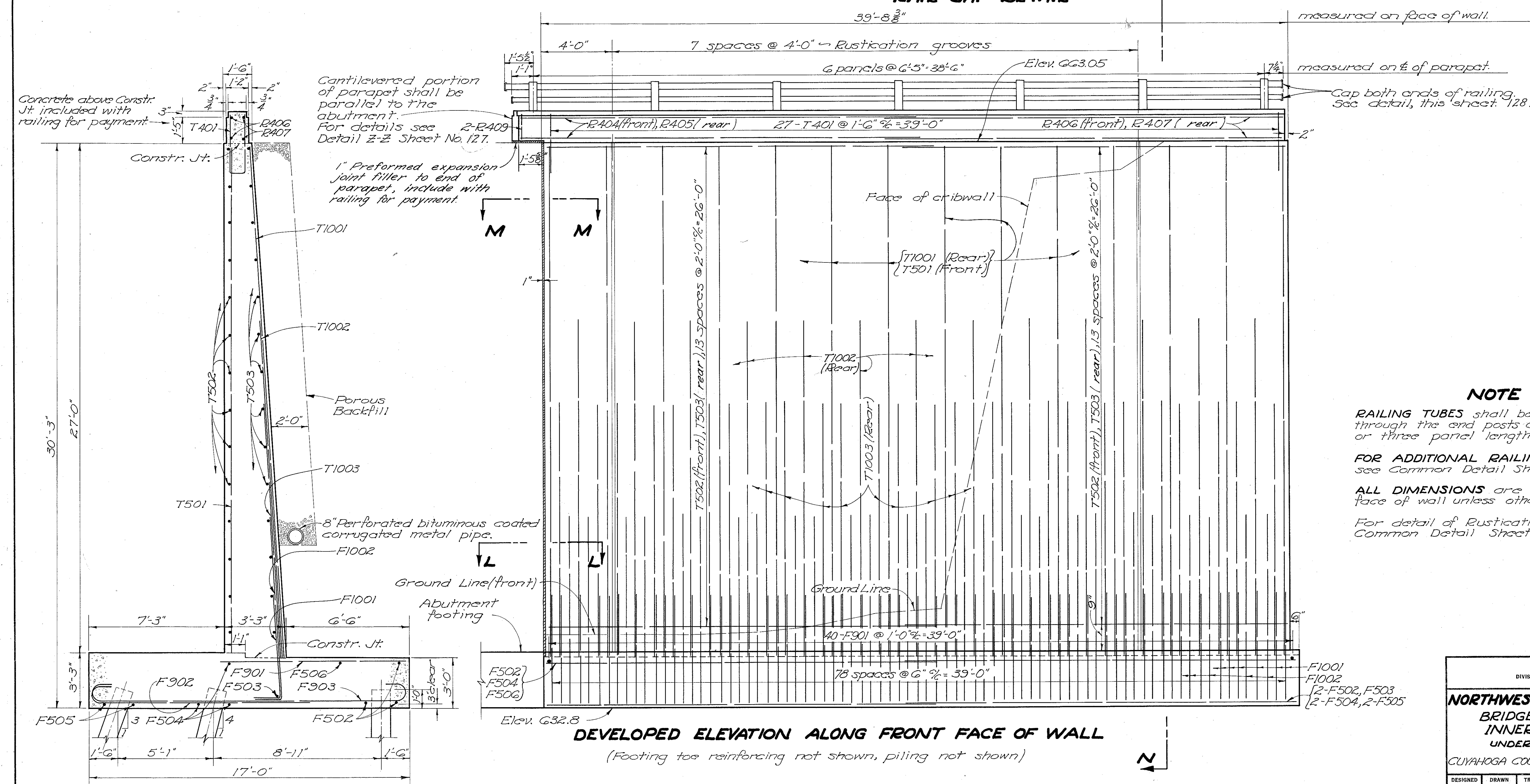
SECTION M-M



SECTION L-L



RAIL CAP DETAIL



DEVELOPED ELEVATION ALONG FRONT FACE OF WALL

(Footing toe reinforcing not shown, piling not shown)

SECTION N-N

measured on face of wall.
 measured on E of parapet.
 Cap both ends of railing. See detail, this sheet, 128.

Cantilevered portion of parapet shall be parallel to the abutment. For details see 2-R409 Detail Z-Z Sheet No. 127.

1" Preformed expansion joint filler to end of parapet, include with railing for payment.

Concrete above Constr. Jt. included with railing for payment.

NOTE

RAILING TUBES shall be continuous through the end posts and for two or three panel lengths.
 FOR ADDITIONAL RAILING DETAILS see Common Detail Sheet.
 ALL DIMENSIONS are along front face of wall unless otherwise indicated.
 For detail of Rustication groove see Common Detail Sheet. 128

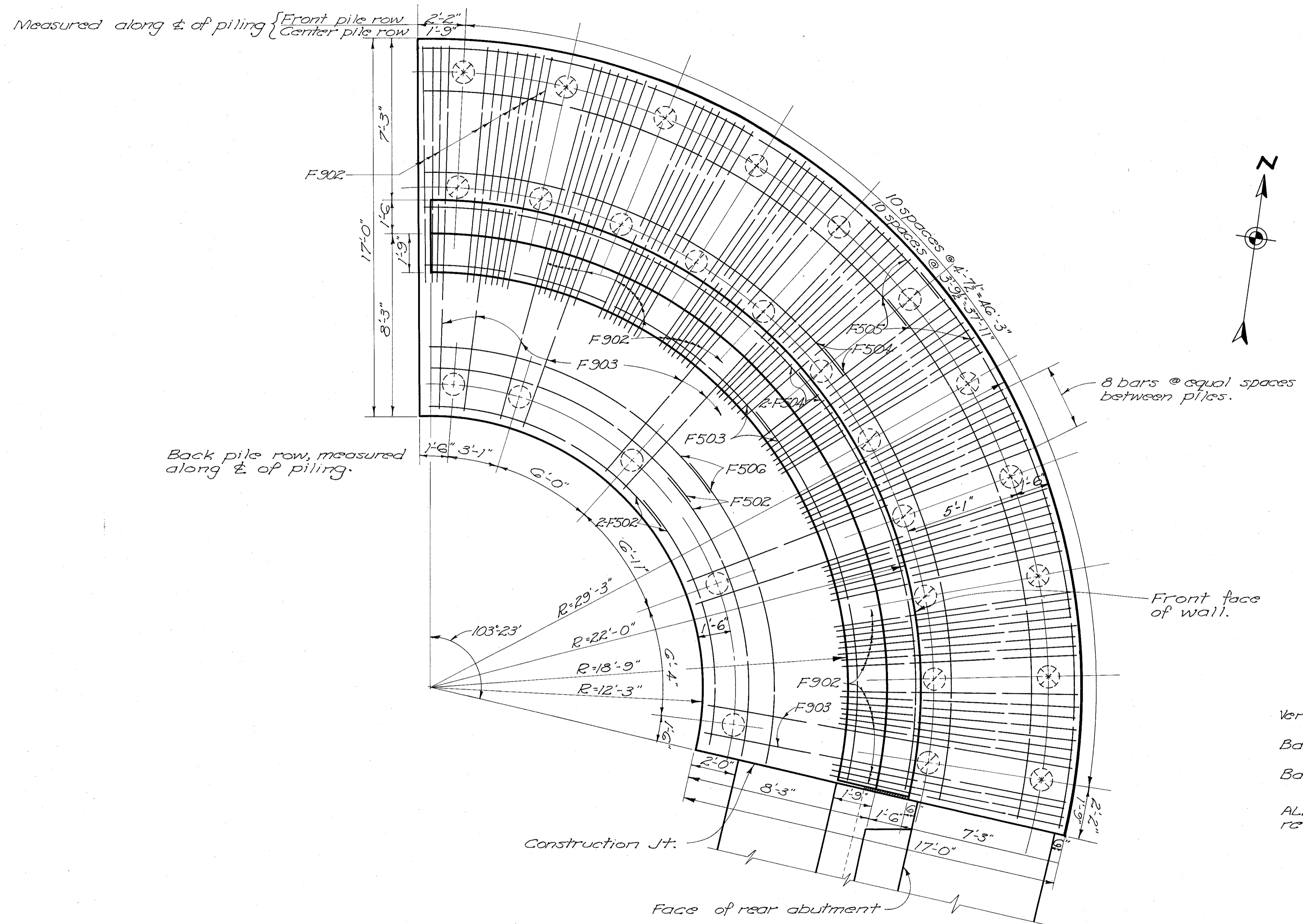
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
NORTHWEST WINGWALL DETAILS						
BRIDGE NO. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE.						
CUYAHOGA COUNTY STA. 13+44.787						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RLD	RLD	RSM	WCK	QJF	8-6-58	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

120
129

Cuyahoga County
CUY-42-18.77

MICROFILMED
JUL 8 1985



LEGEND

Vertical pile ———— ⊙

Battered pile 1:4 ———— ⊙

Battered pile 1:3 ———— ⊗

ALL PILES 12" cast-in-place reinforced concrete.

PLAN

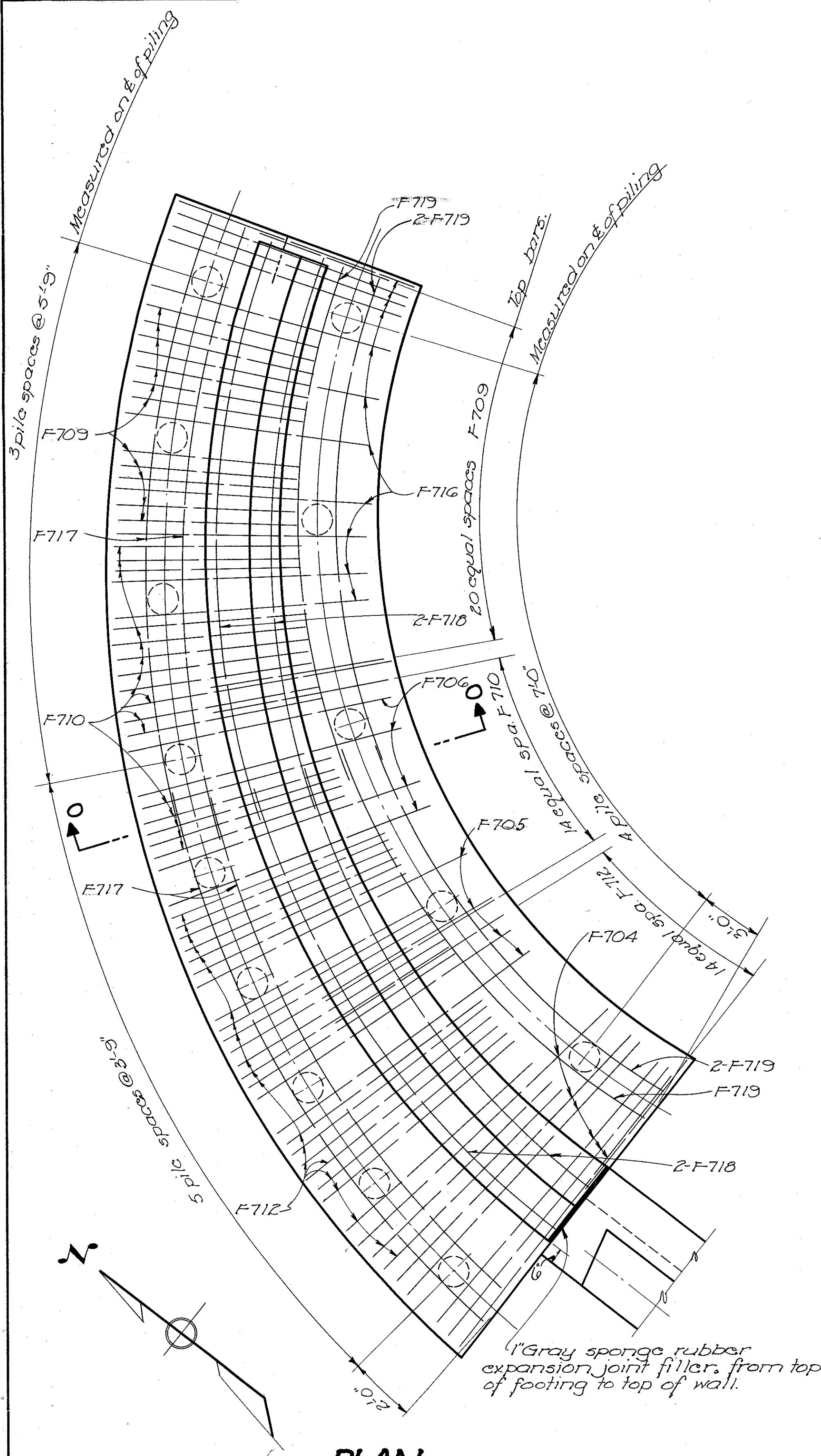
(All reinforcing not shown. For additional details see Sheet No. 119.)

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
NORTHWEST WINGWALL DETAILS						
BRIDGE NO. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE.						
CUYAHOGA COUNTY STA. 19+44.787						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RLD	RLD	WCK	WCK	CDB	8-6-58	

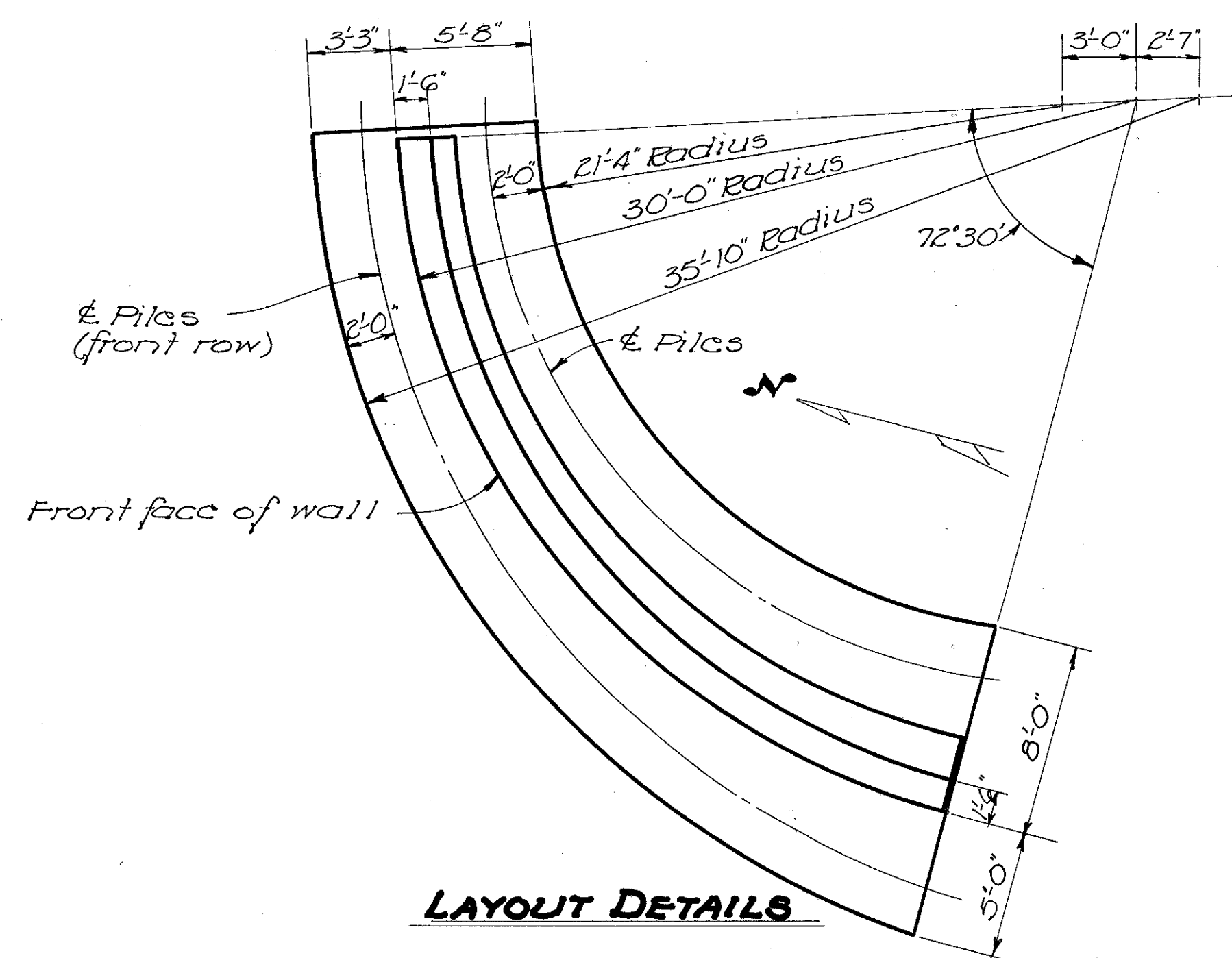
FED. RD. DIVISION	STATE	PROJECT	121
2	OHIO		129

Cuyahoga County
CUY-42-18.77

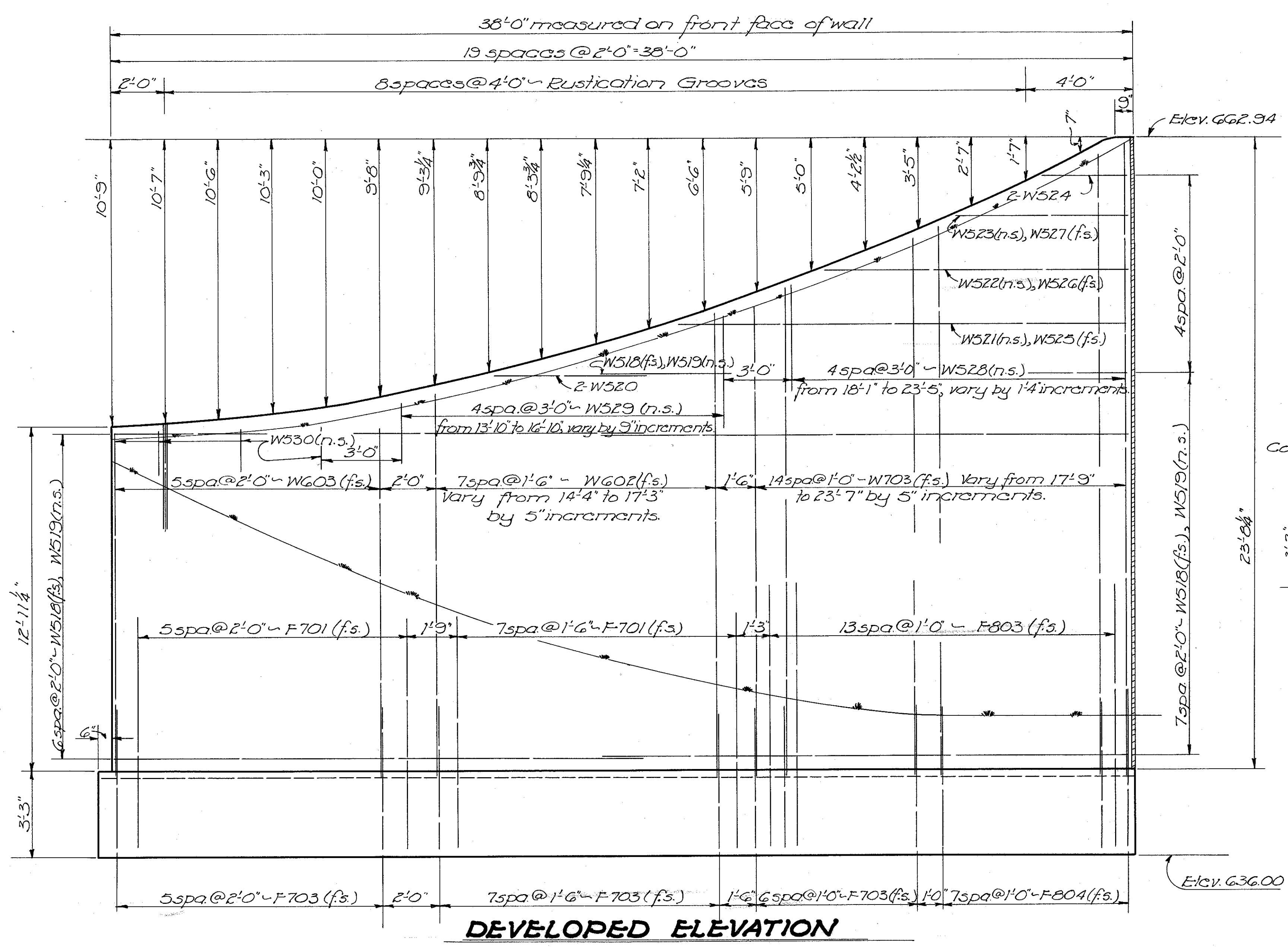
MICROFILMED
JUL 9 1985



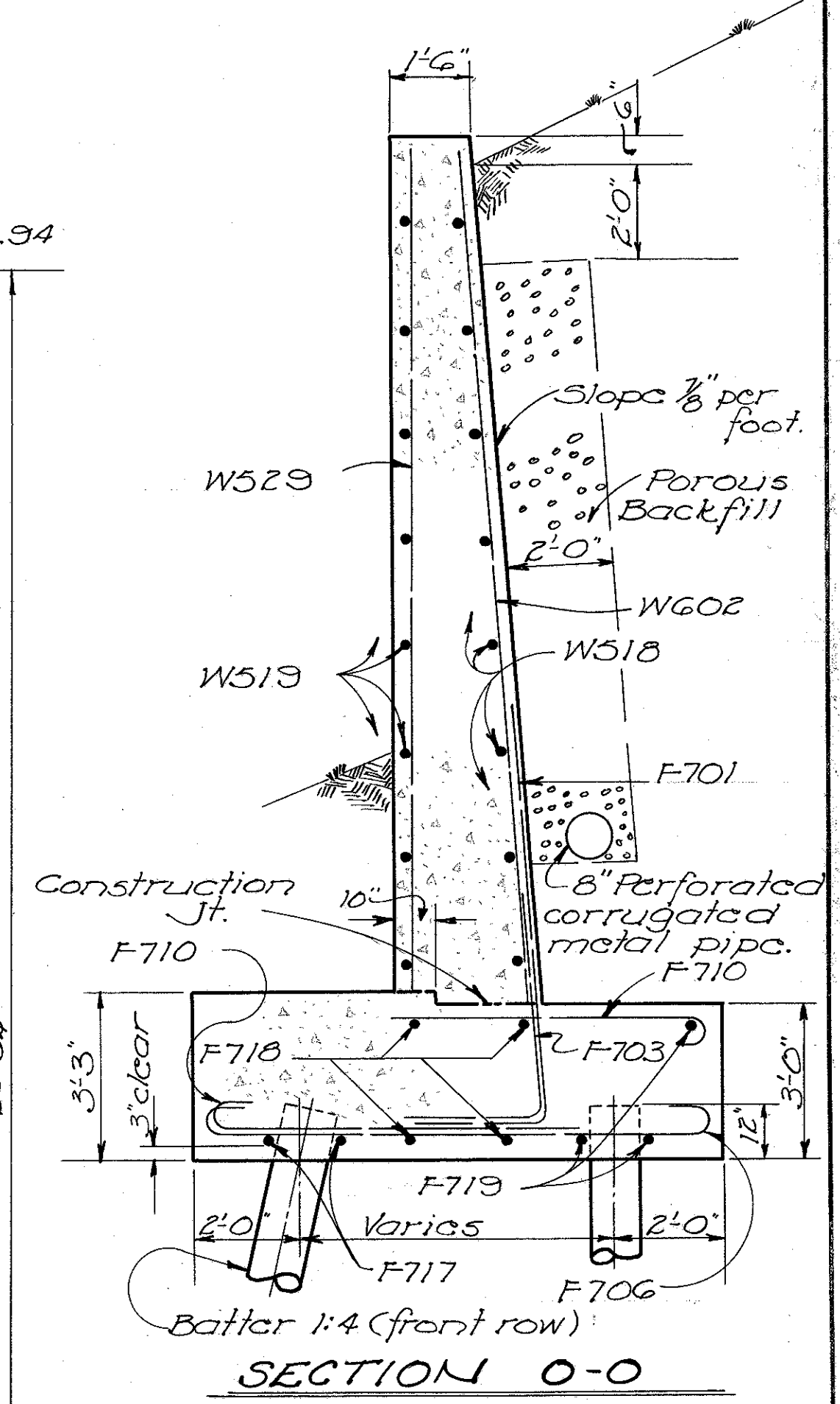
PLAN



LAYOUT DETAILS



DEVELOPED ELEVATION

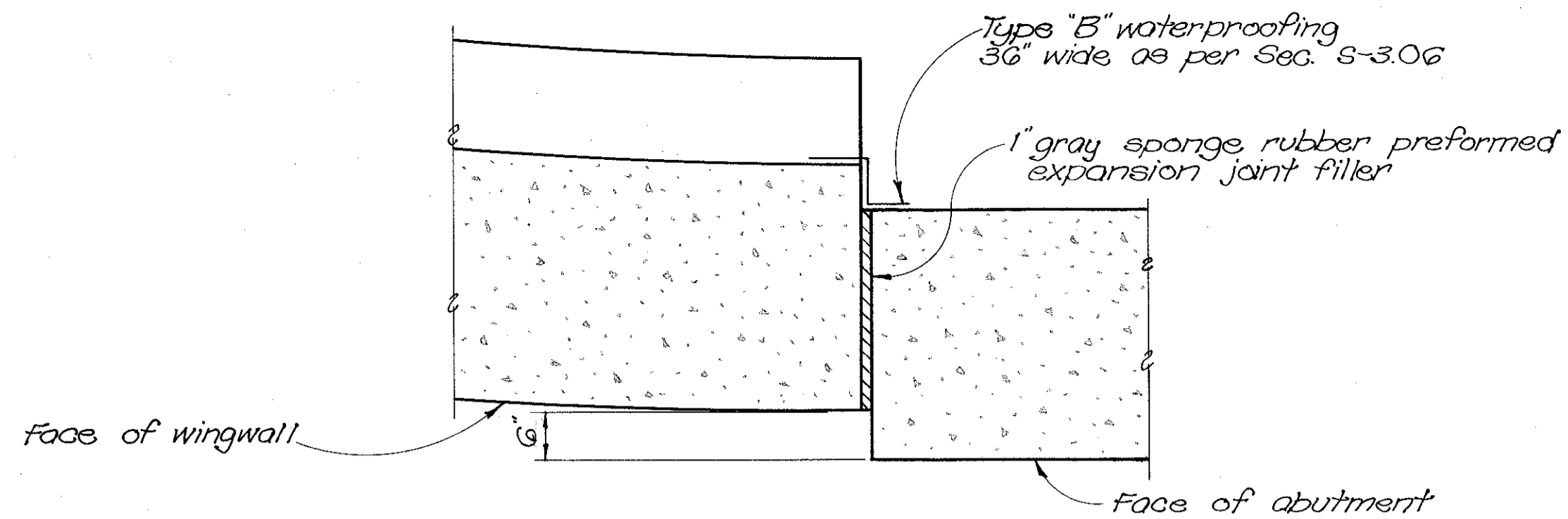


SECTION 0-0

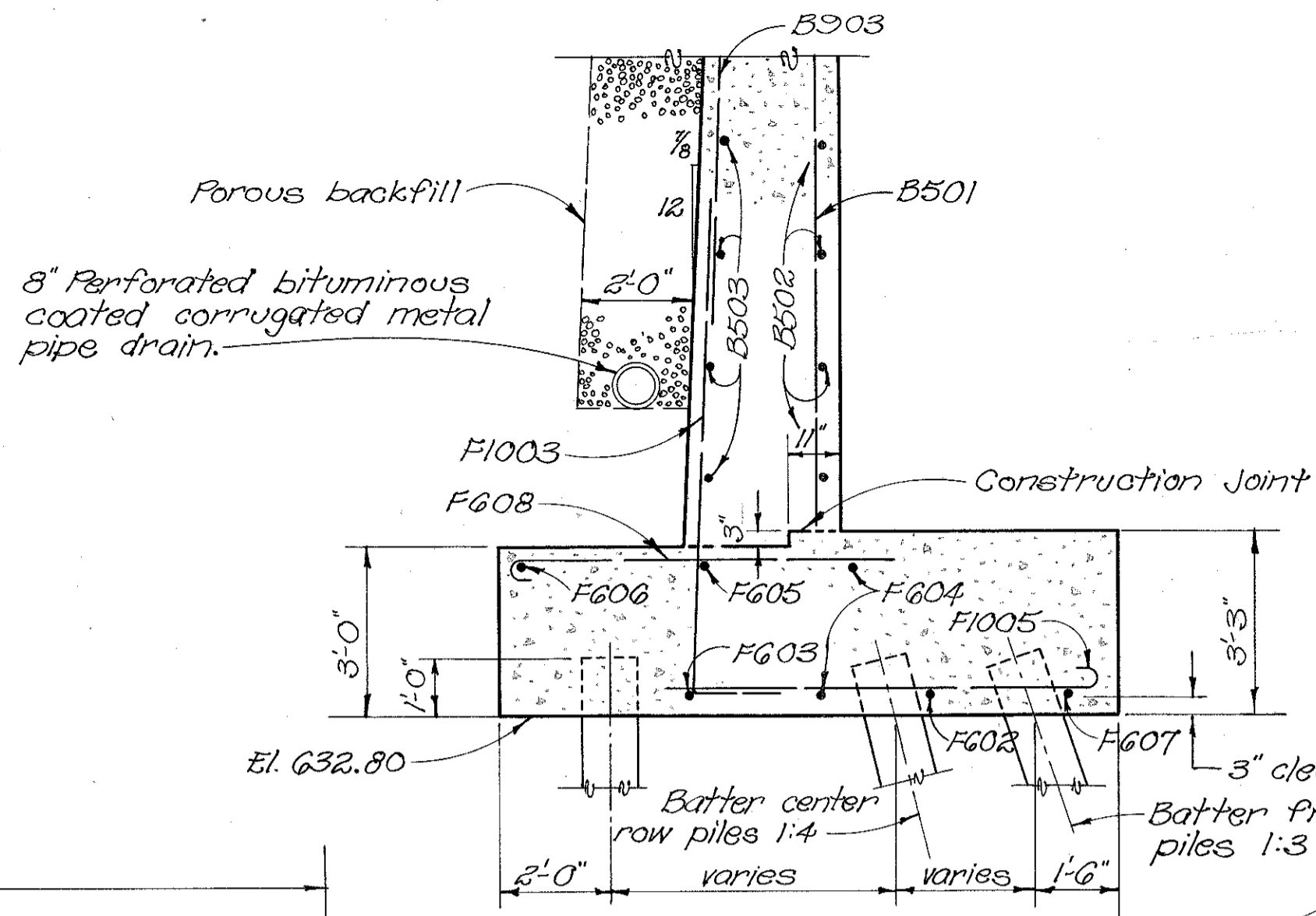
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
NORTH EAST WING WALL DETAILS BRIDGE NO. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE. CUYAHOGA COUNTY STA. 19+24.787					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
DEA	DEA	BECC	WCK	AGB	8-6-58

Cuyahoga County
CUY-42-18.77

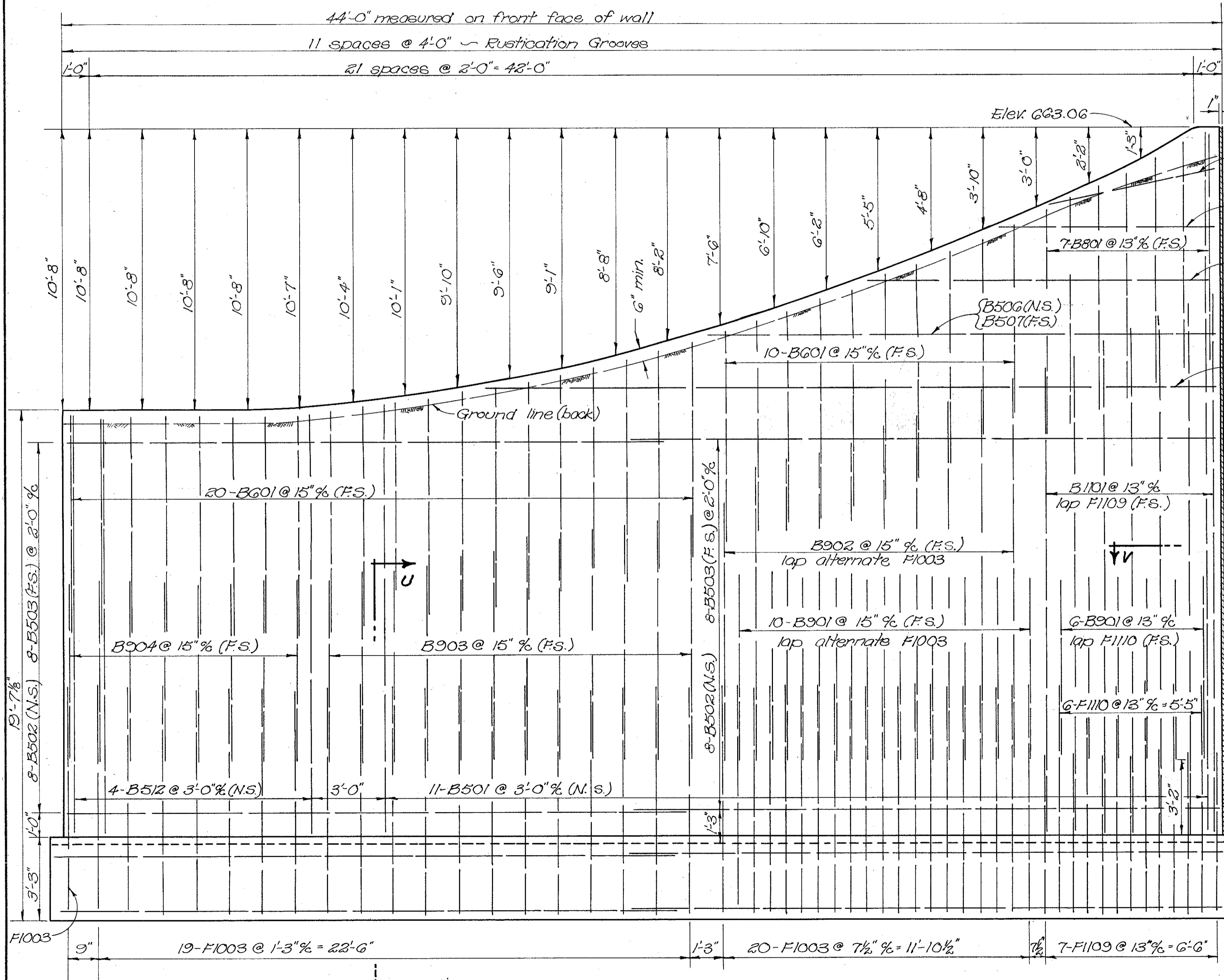
MICROFILMED
JUL 8 1985



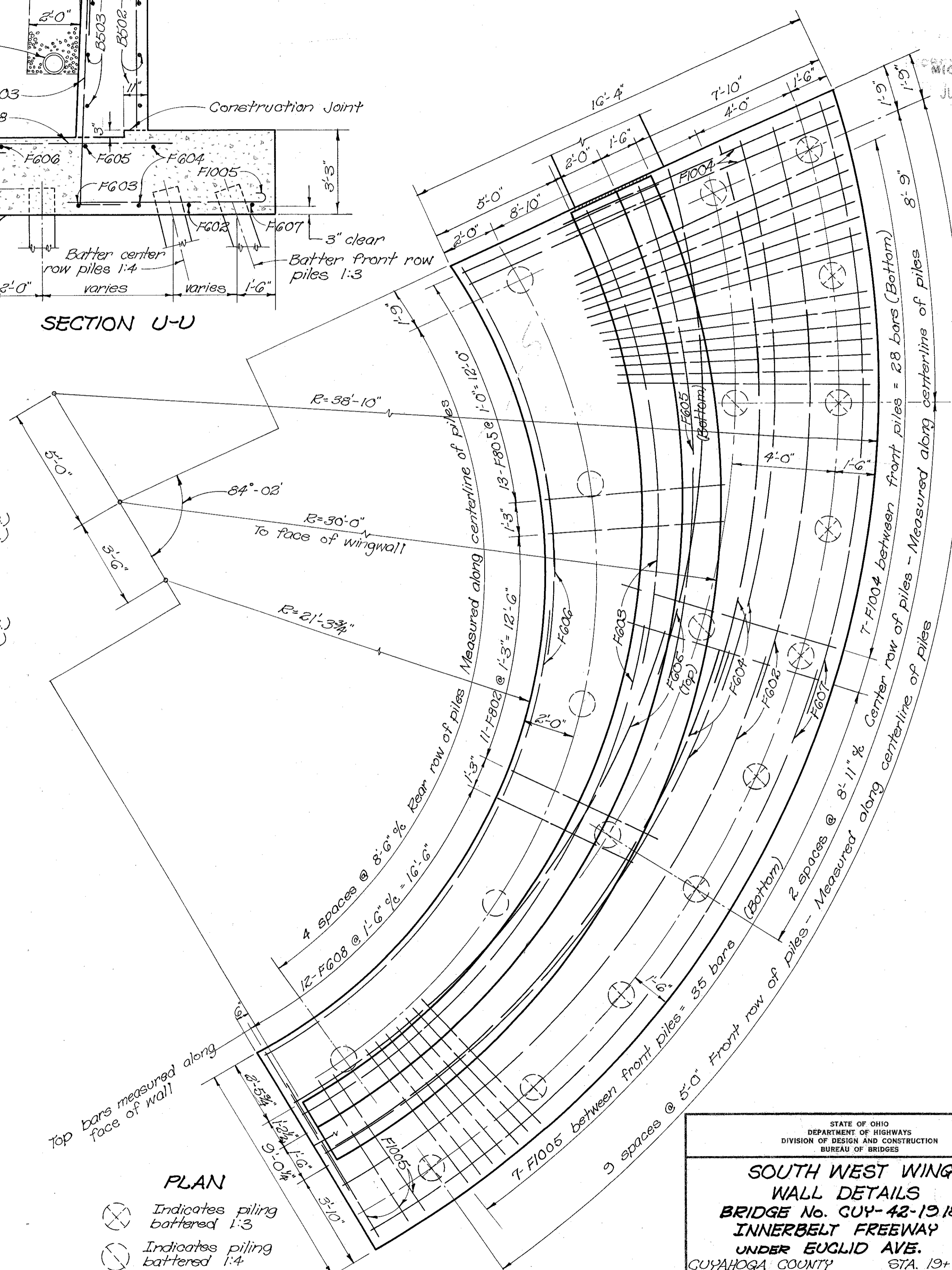
SECTION V-V



SECTION U-U



ELEVATION
DEVELOPED ALONG FRONT FACE OF WINGWALL



PLAN

- ⊗ Indicates piling battered 1:3
- ⊙ Indicates piling battered 1:4

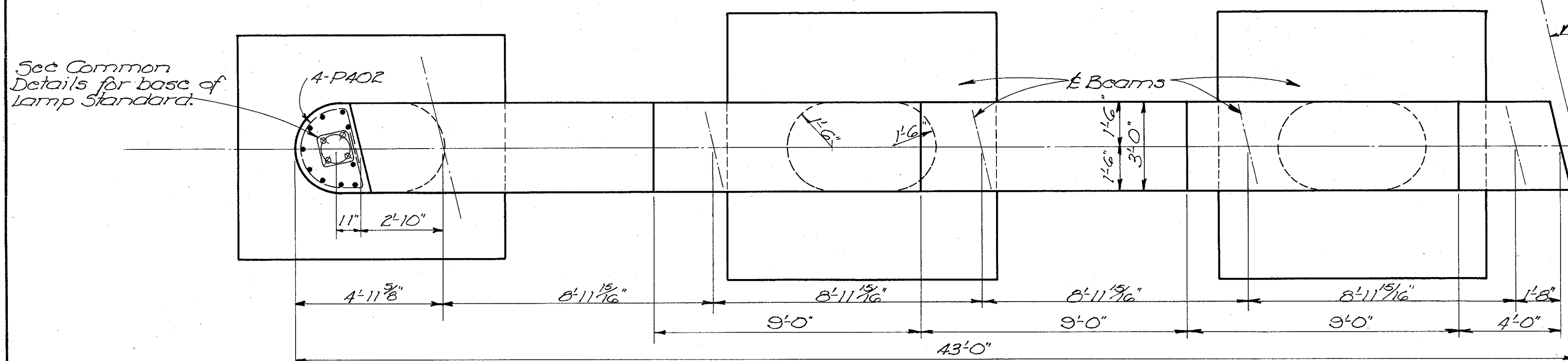
All piles shown are 12" cast-in-place reinforced concrete.

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
SOUTH WEST WING WALL DETAILS					
BRIDGE No. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE.					
CUYAHOGA COUNTY				STA. 19+44.787	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JDJ	JDJ	MOBIER	WCK	CDR	8-6-58

Cuyahoga County
CUY-42-18.77

RECORDED
MICROFILMED
JUL 3 1985

See Common Details for base of Lamp Standard.



PLAN
Left bent shown.

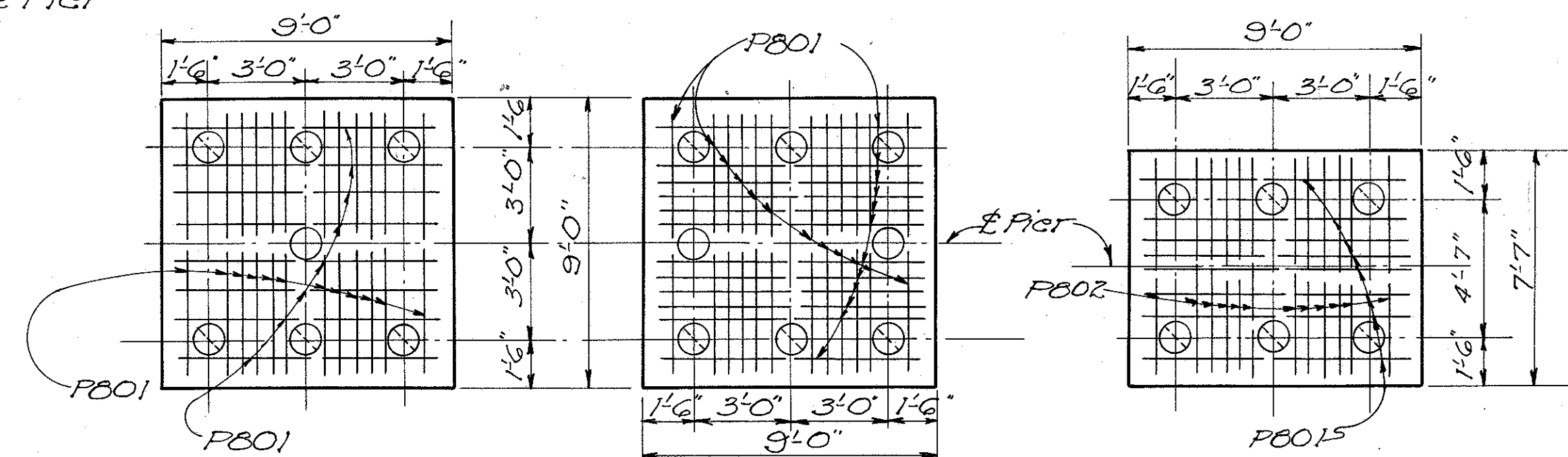
Euclid Ave.
13'-23'

Pier symmetrical by rotation

Sta G+83.45

Euclid Ave.

⊙ Indicates battered piles.



FOOTING "C"

FOOTING "B"

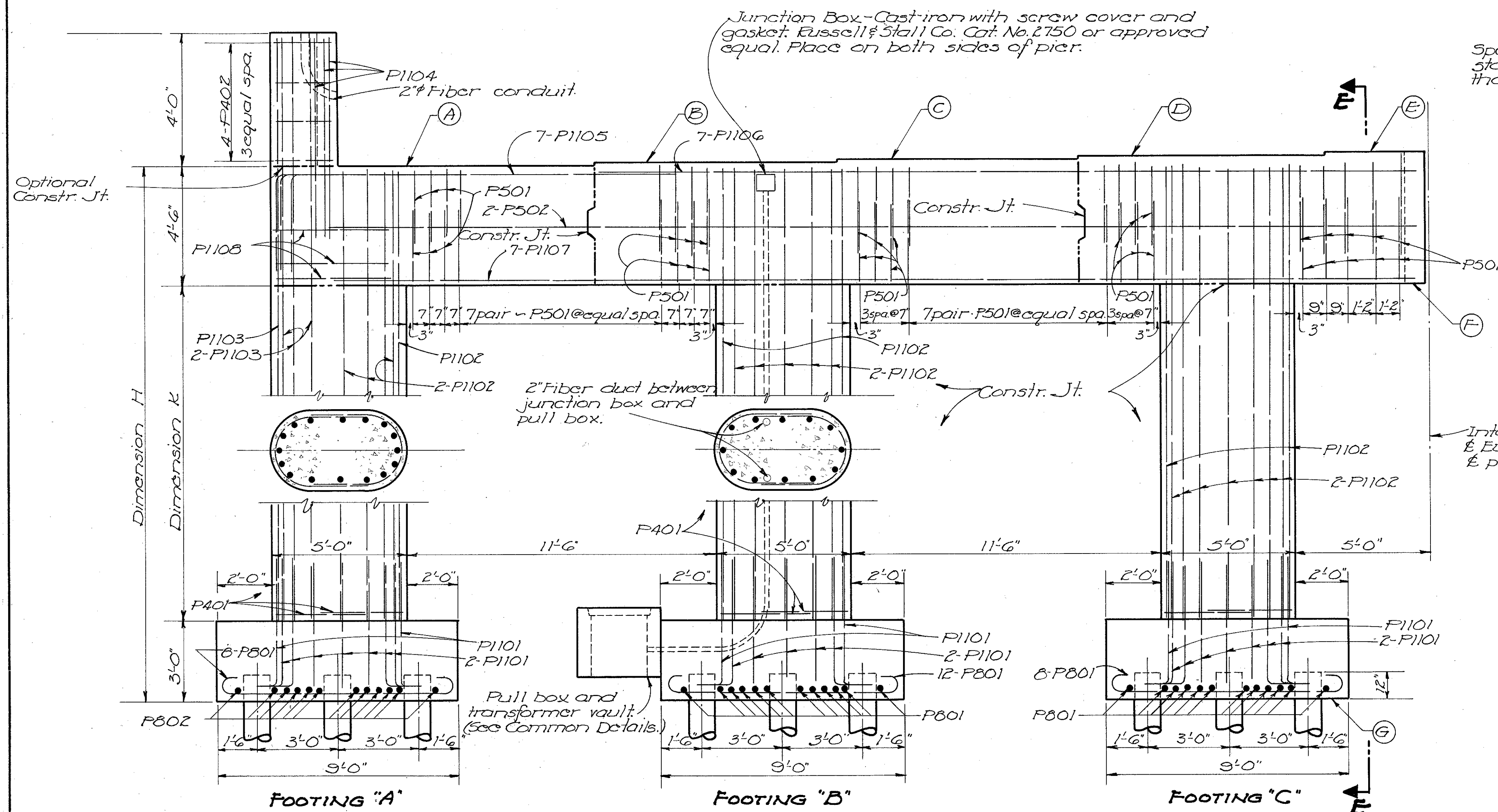
FOOTING "A"

FOOTING DETAILS.

ELECTRICAL GROUNDS

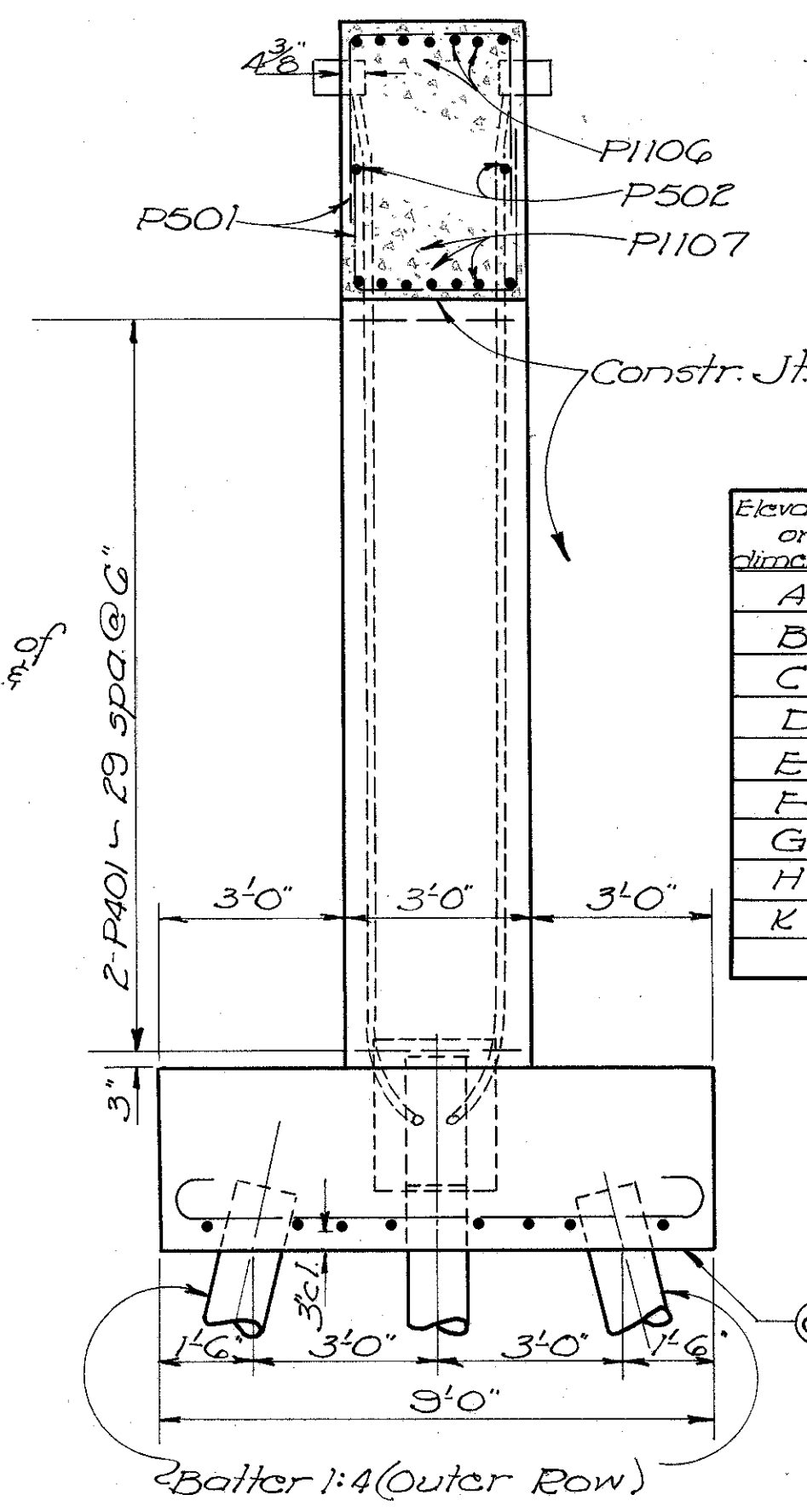
Special care shall be taken in placing reinforcing steel in cap so that it will not interfere with the drilling of anchor bolt holes.

A solid No. 0 bare copper wire electrical ground shall be embedded in the outside concrete column on each side of the structure at the pier. The lower end of the wire shall be brazed to the steel shell of one of the 12" cast-in-place reinforced concrete piles and the upper end shall extend sufficiently above the top of the concrete to provide for a suitable splice and extension for connection to superstructure structural steel. Connection to superstructure shall be a No. 0 bare standard tinned copper wire brazed or bolted to a beam or girder flange and to the solid copper wire in the pier column. All electrical equipment shall be grounded to superstructure beams or girders with No. 6 bare copper wire. Payment for electrical grounds is included in the unit price bid for item 5.25 Electric lighting system.



ELEVATION

Left bent shown.
All piling 12" cast-in-place reinforced concrete.



SECTION E-E

Elevation or dimension	Left Bent	Right Bent
A	658.07	658.08
B	658.21	658.21
C	658.34	658.35
D	658.48	658.49
E	658.62	658.62
F	653.57	653.58
G	635.20	635.20
H	22'-10 1/2"	22'-10 1/2"
K	15'-4 1/2"	15'-4 1/2"

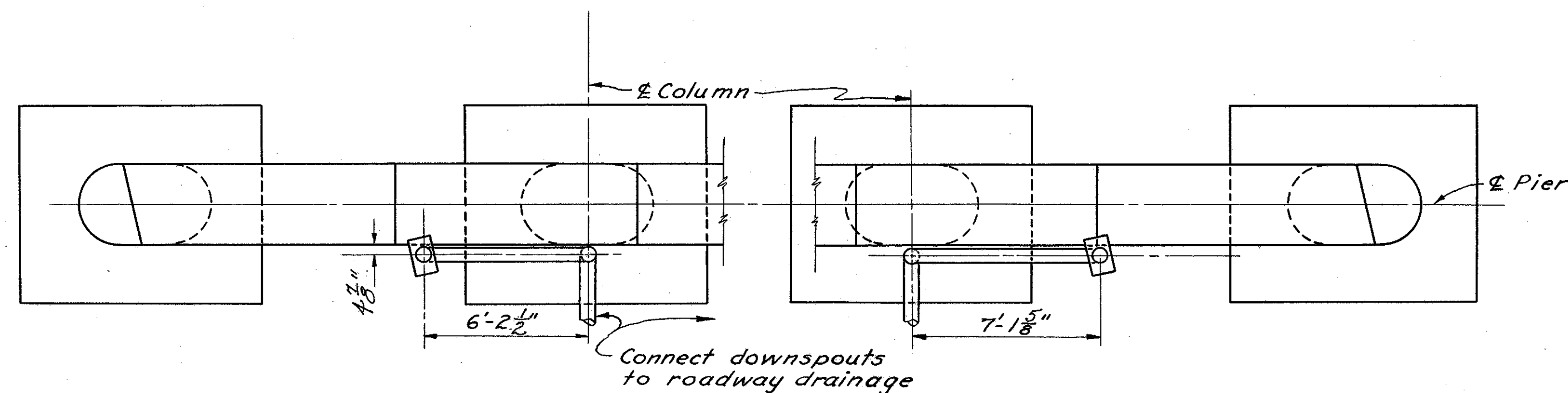
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS
BRIDGE NO. CUY-42-1918
INNERBELT FREEWAY
UNDER EUCLID AVE.

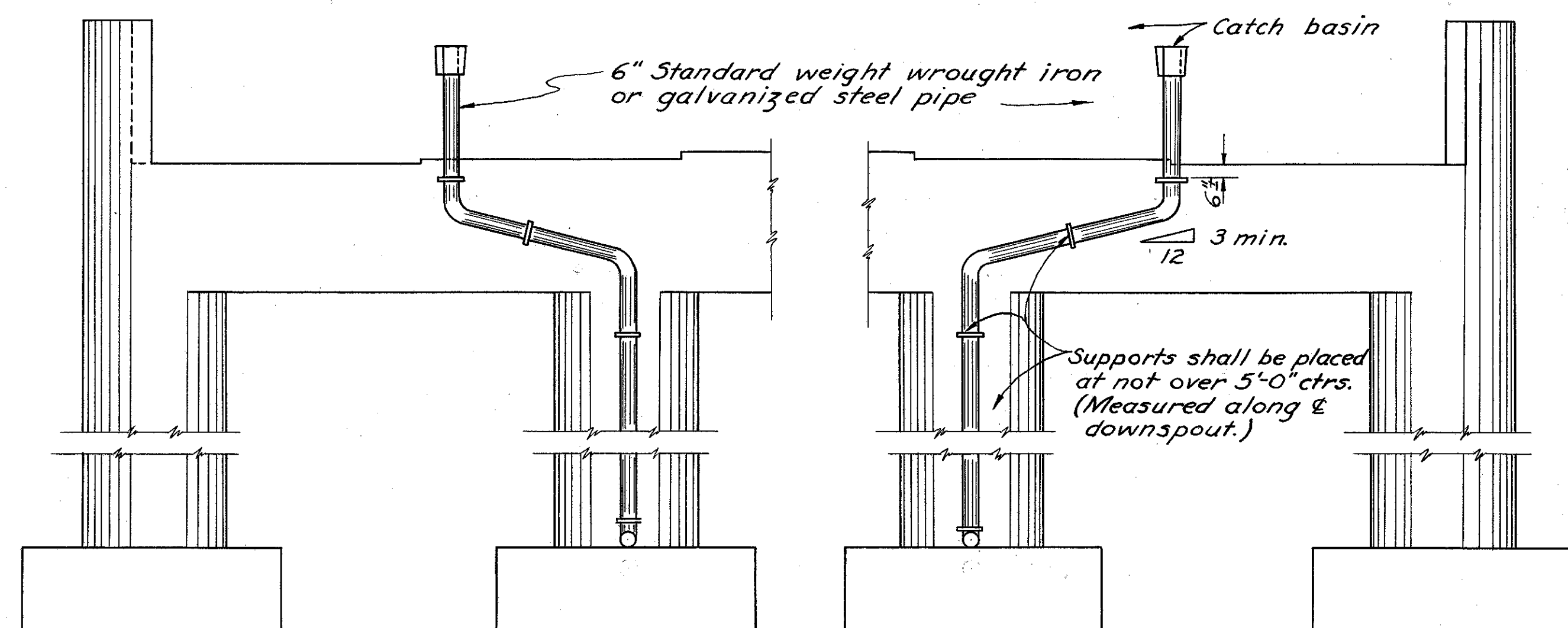
CUYAHOGA COUNTY STA. 13+44.787

DESIGNED RLD	DRAWN RLD	TRACED BGC	CHECKED WCK	REVIEWED GDB	DATE 9/7 8-6-58	REVISED
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Cuyahoga County
CUY-42-18.77



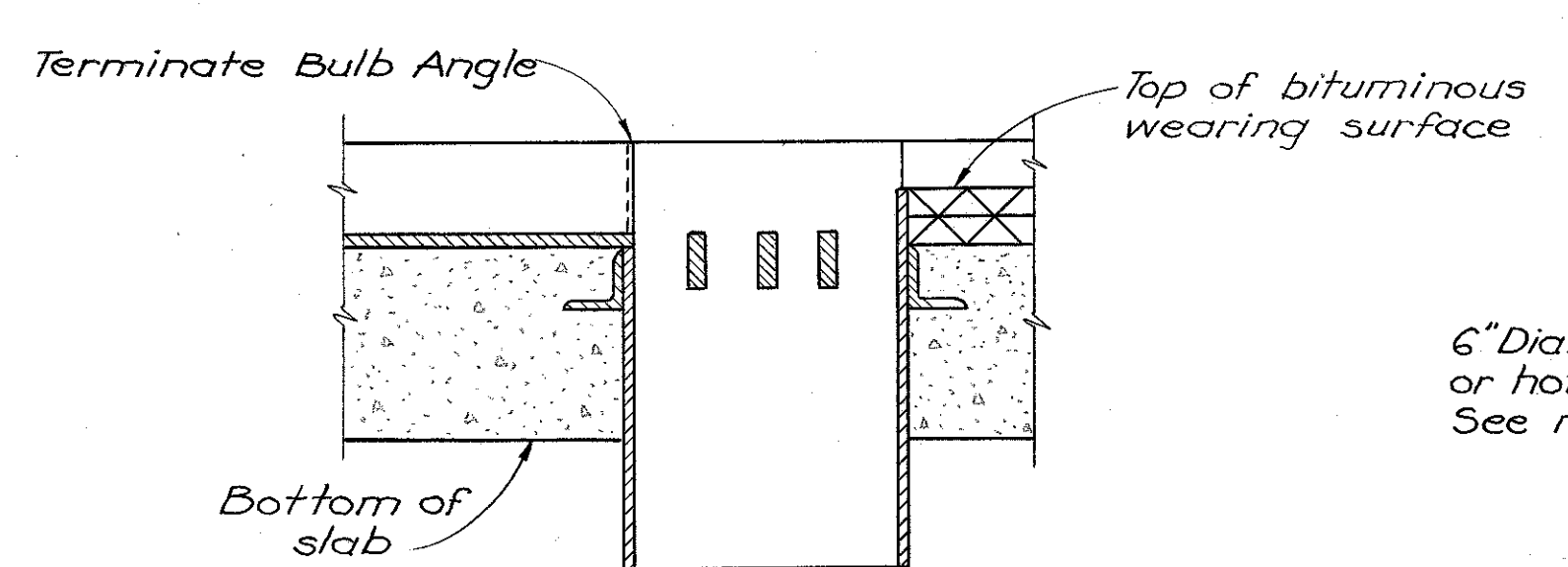
PLAN



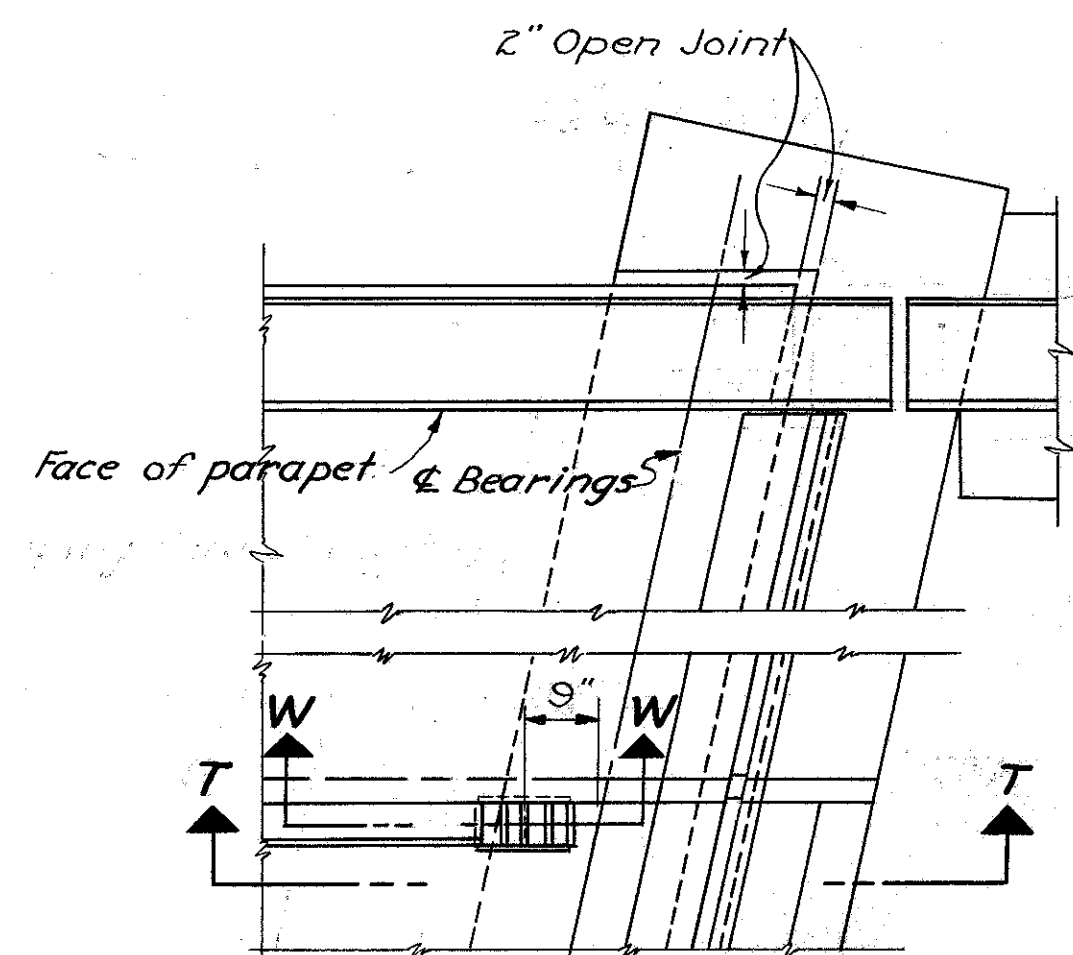
ELEVATION
(Looking East)

DETAIL OF DOWNSPOUTS AT PIER

NOTE:
Downspouts shall be 6" Dia. standard wrought iron pipe or hot dip galvanized steel pipe. Catch basin shall be wrought iron or hot dip galvanized steel. Joints in pipe shall be made by welding or by Victaulic couplings or by an approved equivalent. Any welding shall be done before galvanizing. Pipe supports and bolts for mounting the downspouts shall be galvanized steel. Estimated quantity includes pipe to edge of pier footing.

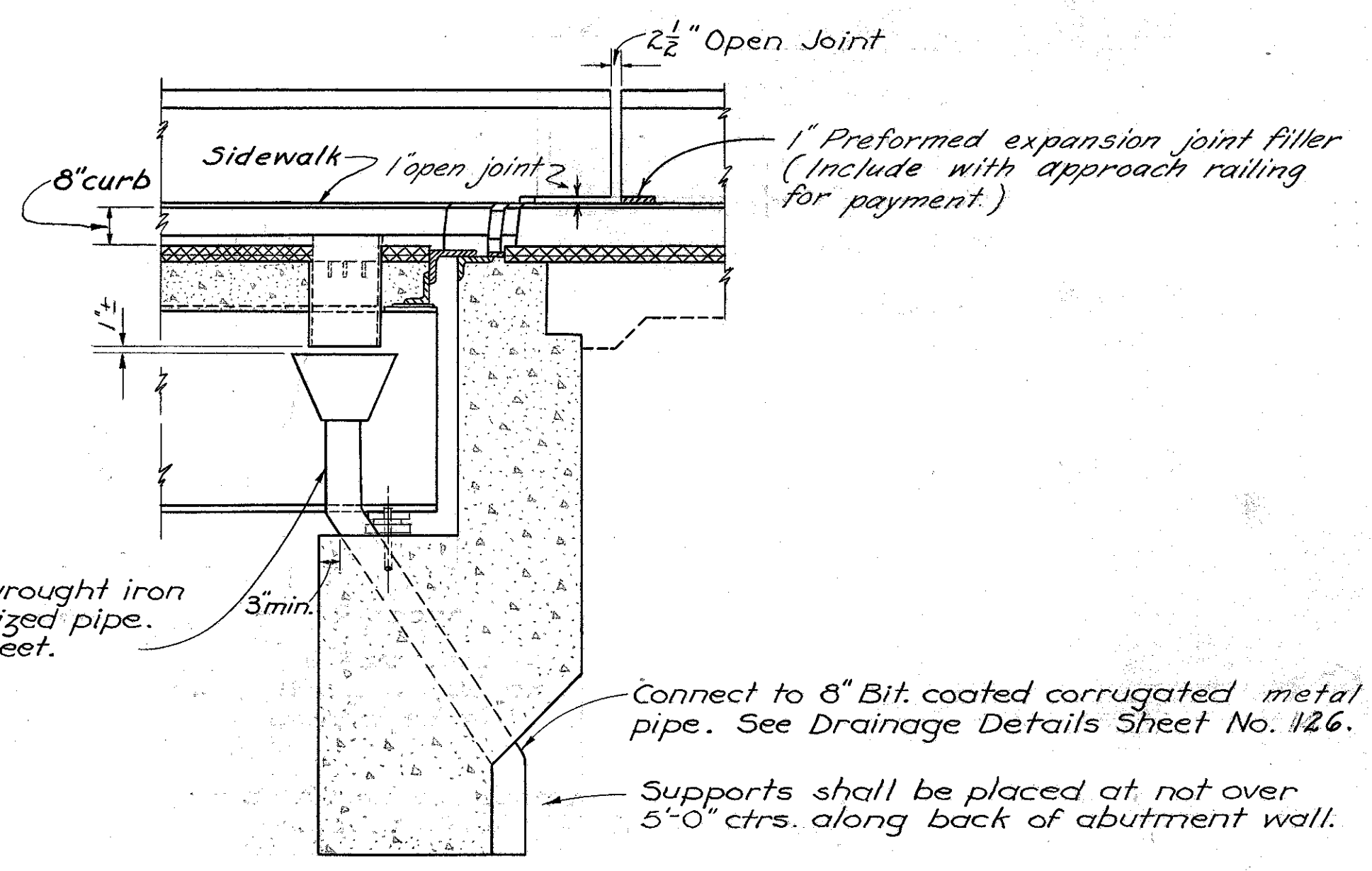


SECTION W-W
(Abutment scuppers only)

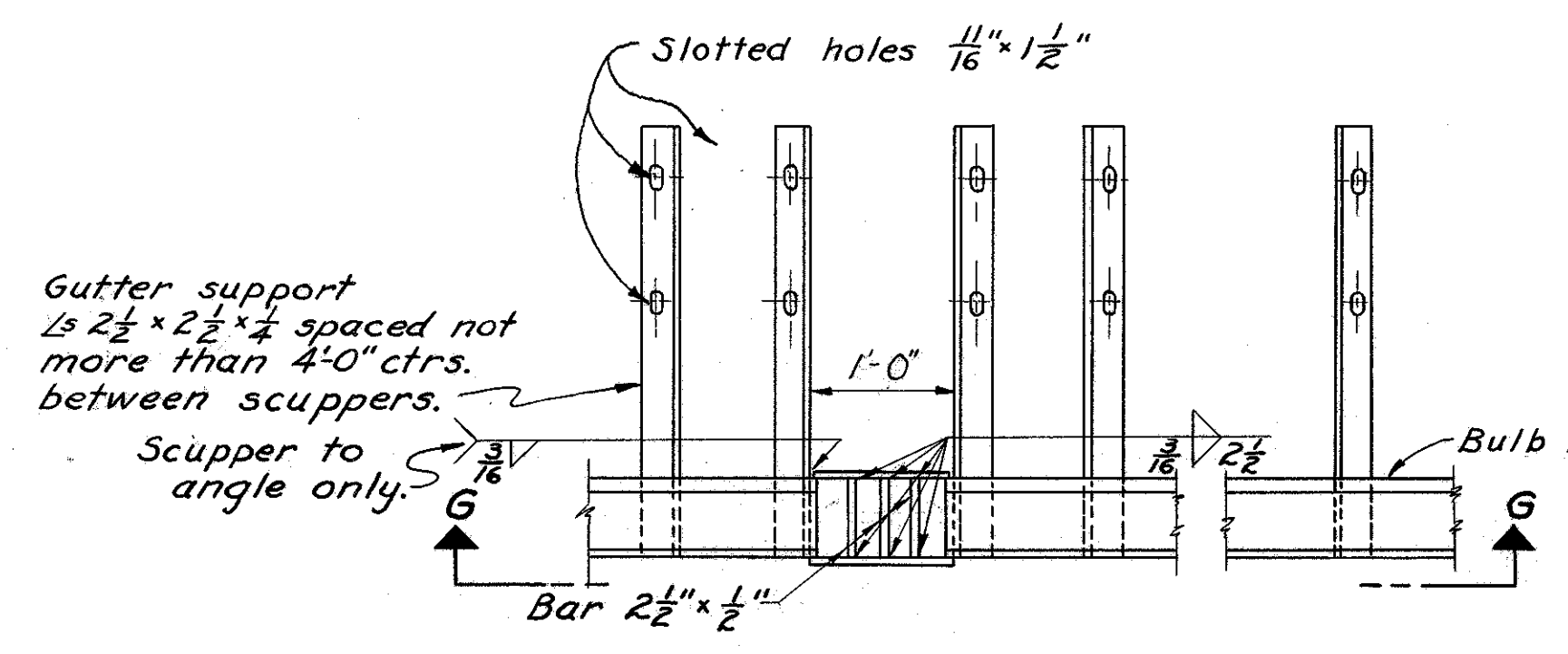


PART PLAN AT ABUTMENT

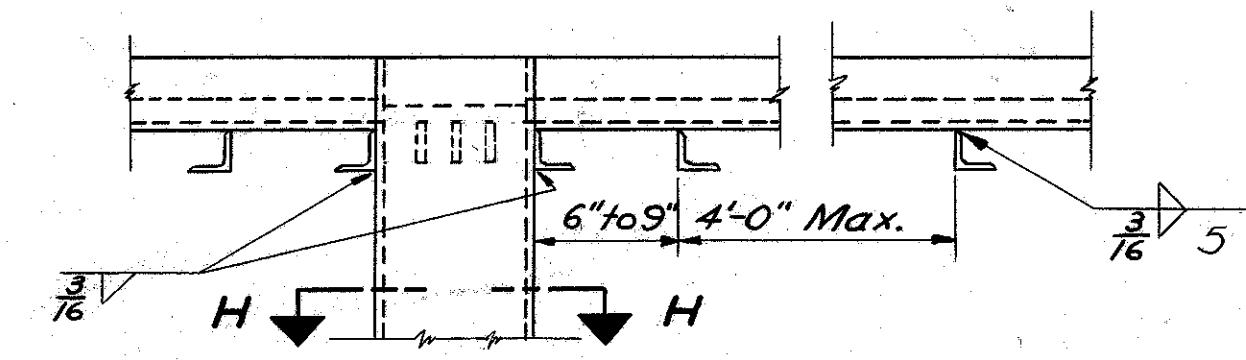
NE. Corner shown
S.E. Corner similar



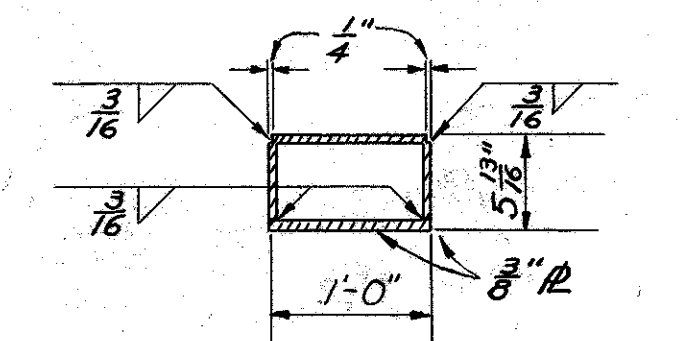
SECTION T-T



PART PLAN OF GUTTER & SCUPPER



VIEW G-G
(Pier scuppers only)



SECTION H-H

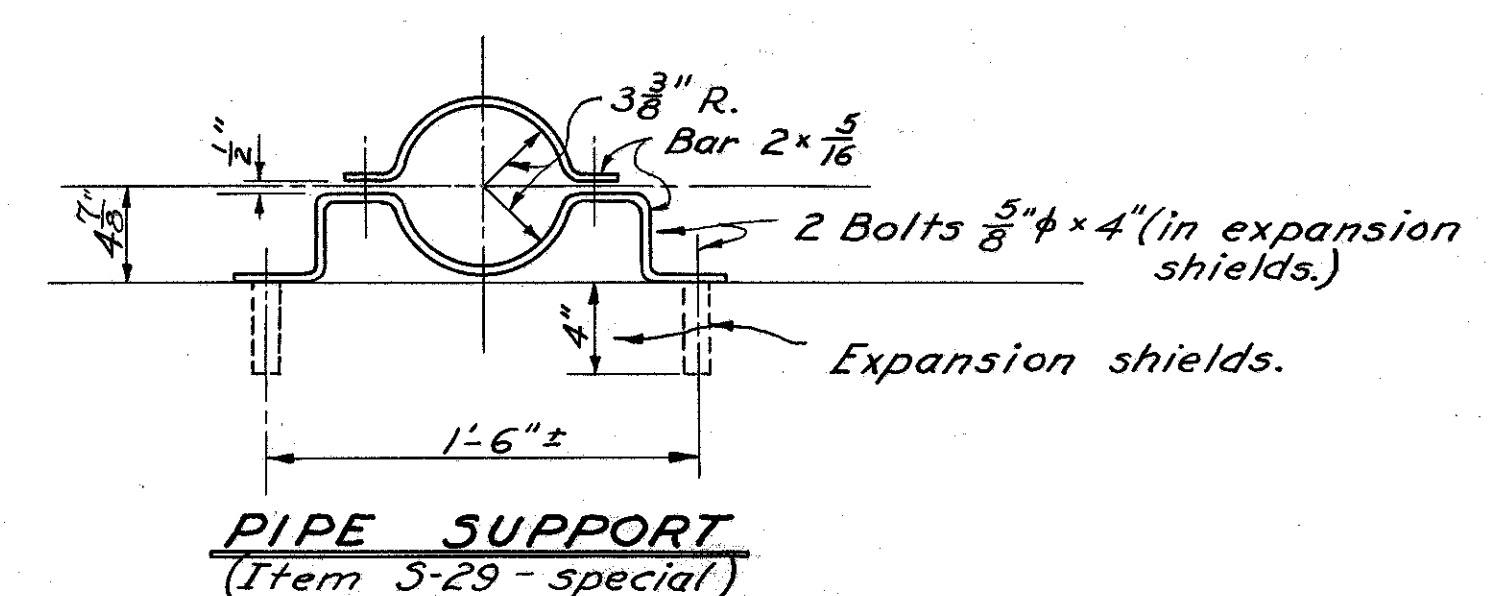
NOTES:

JOINTS IN BULB ANGLE GUTTER will be permitted at not less than 25 ft. intervals. Abutting surfaces shall be milled.

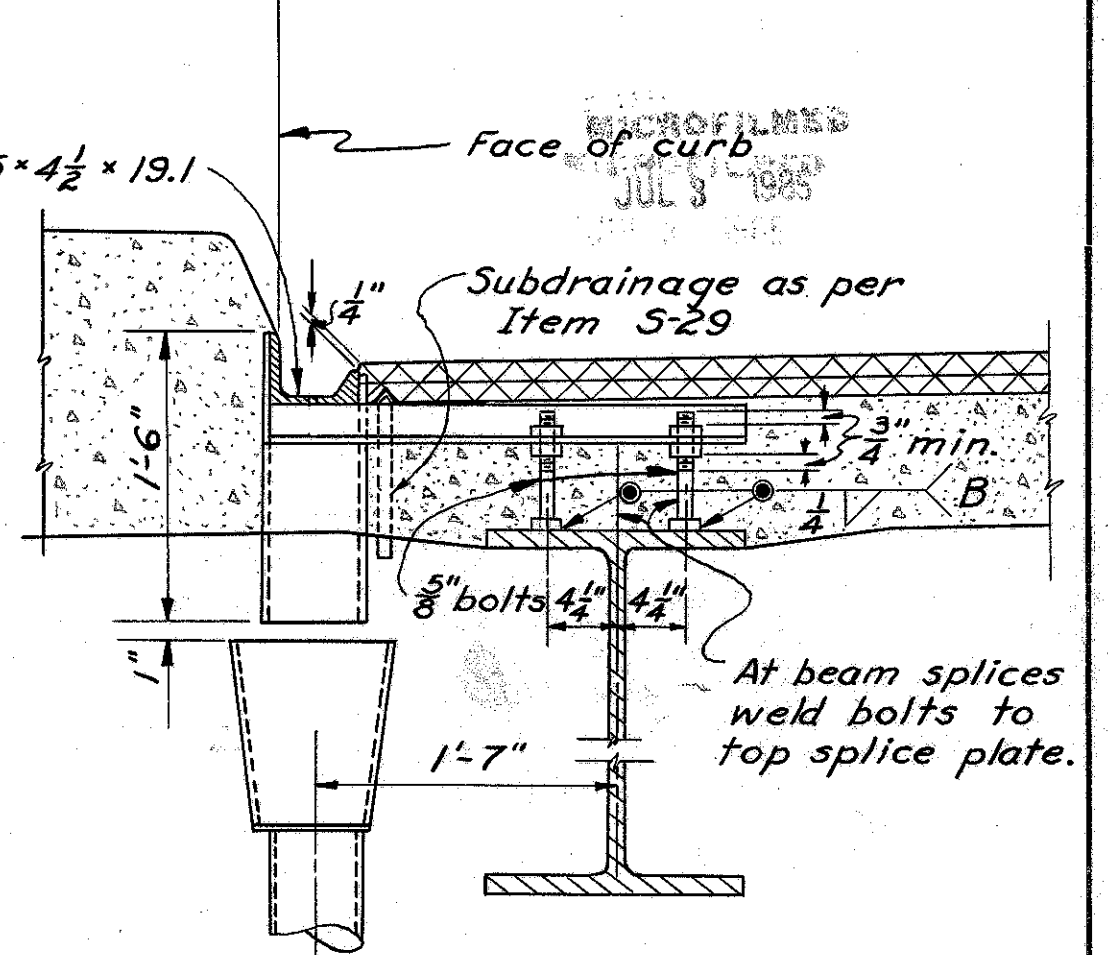
SUPPORTS shall be placed 6" to 9" on each side of joints.

ADJUSTMENT: Gutters shall be accurately adjusted to alignment and grade, with allowance for dead load deflection, before concrete is placed.

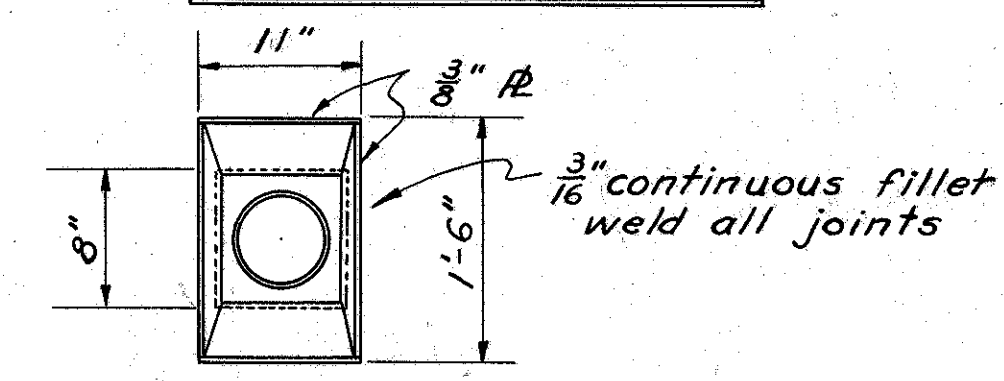
GUTTER - SCUPPER AND CATCH BASIN DETAILS



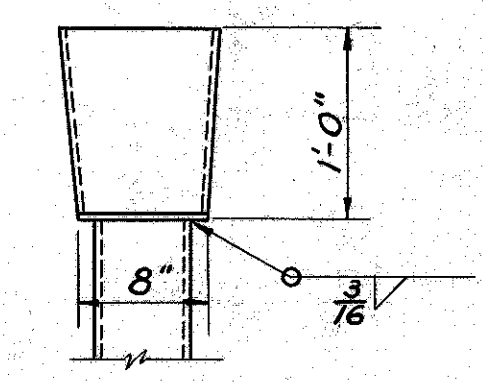
PIPE SUPPORT
(Item 5-29 - special)



GUTTER SUPPORT



PLAN



ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

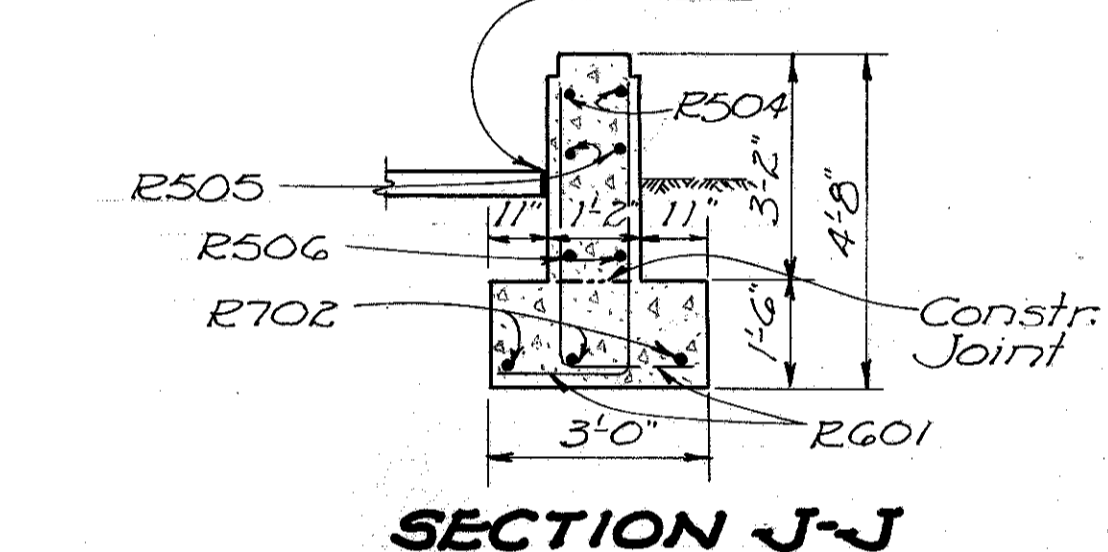
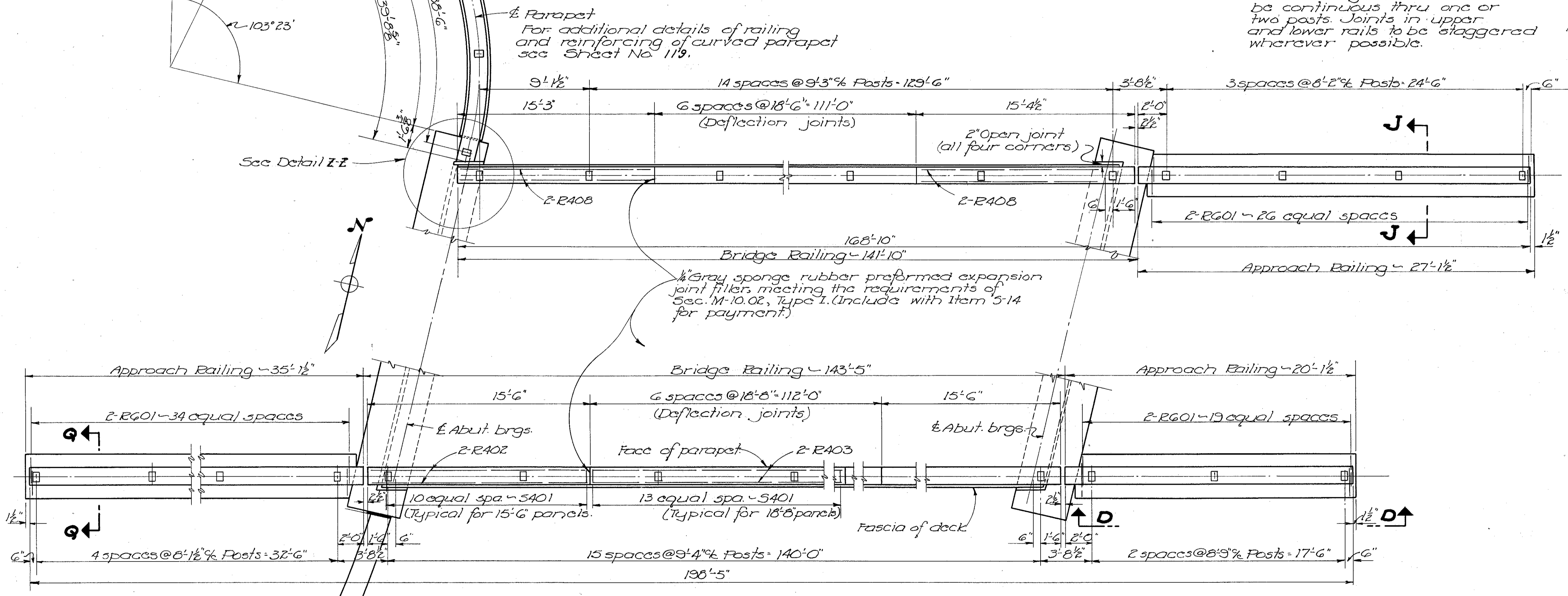
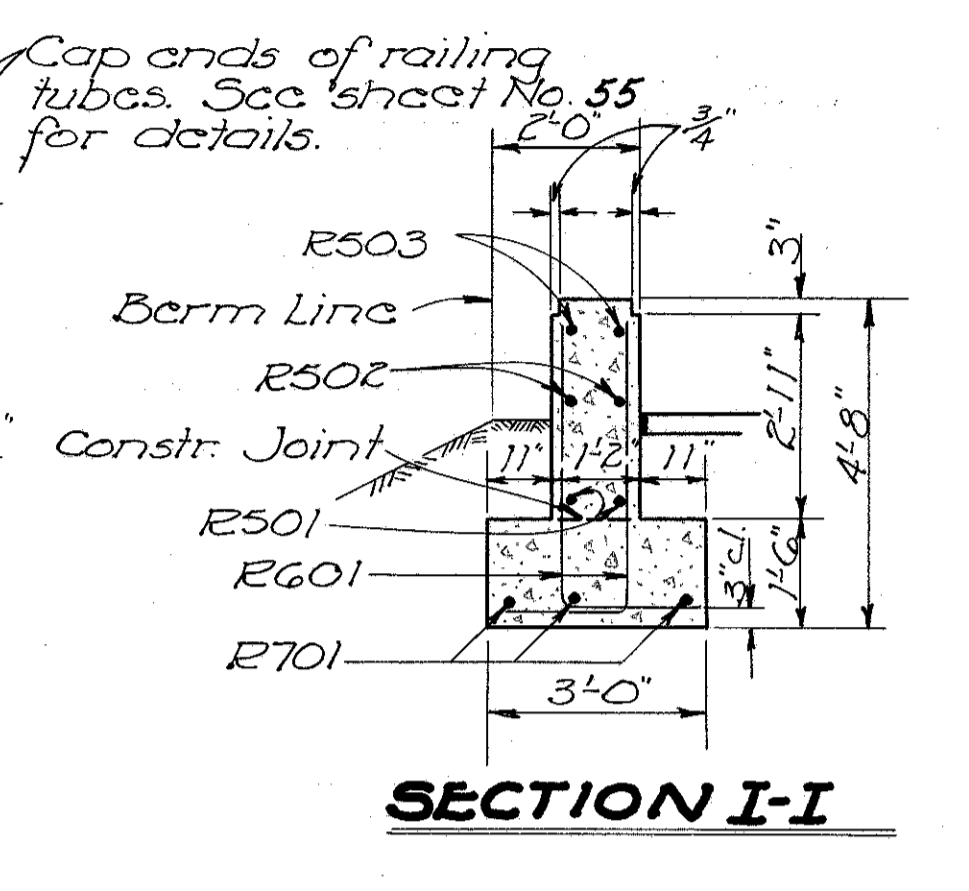
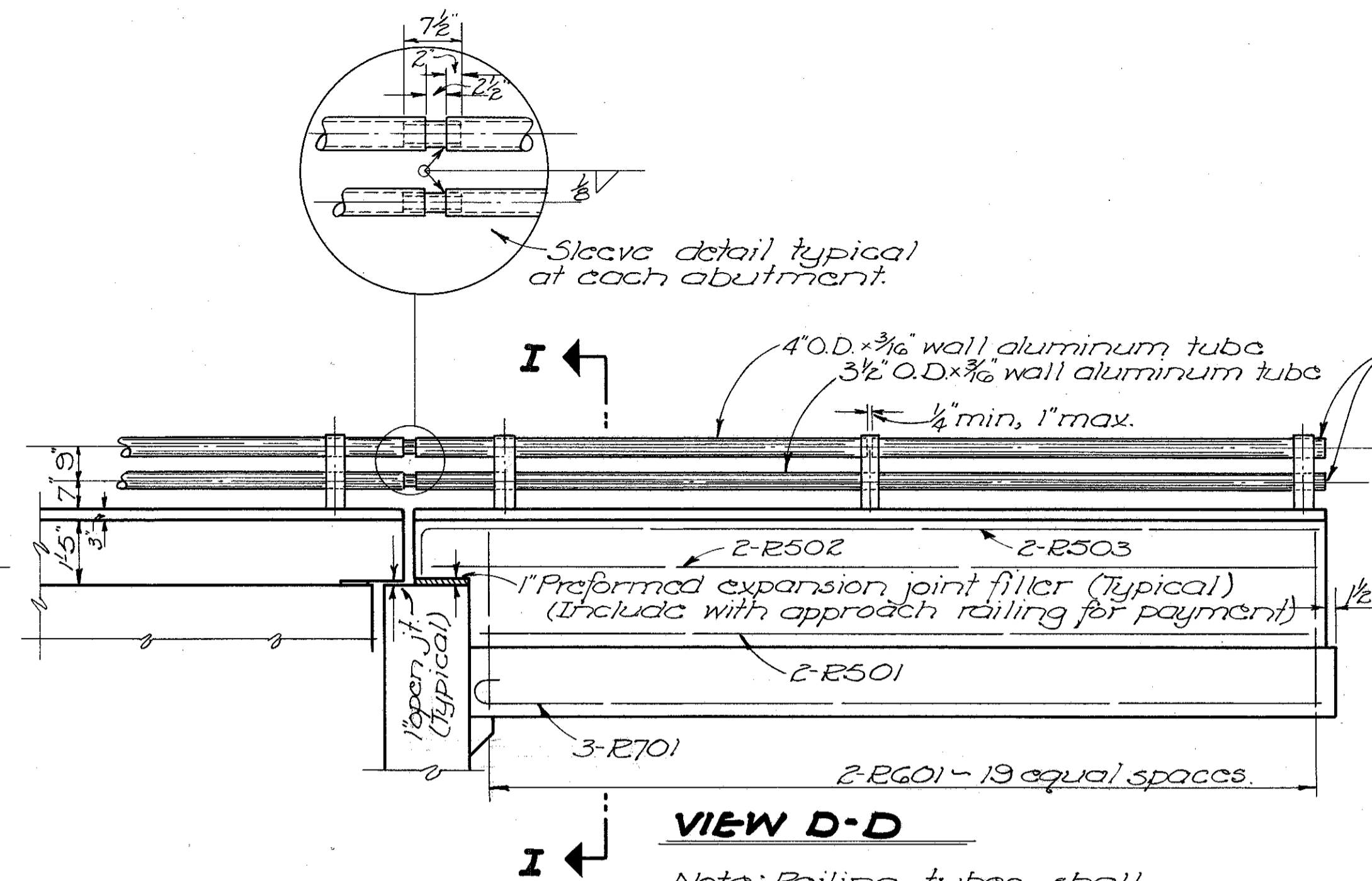
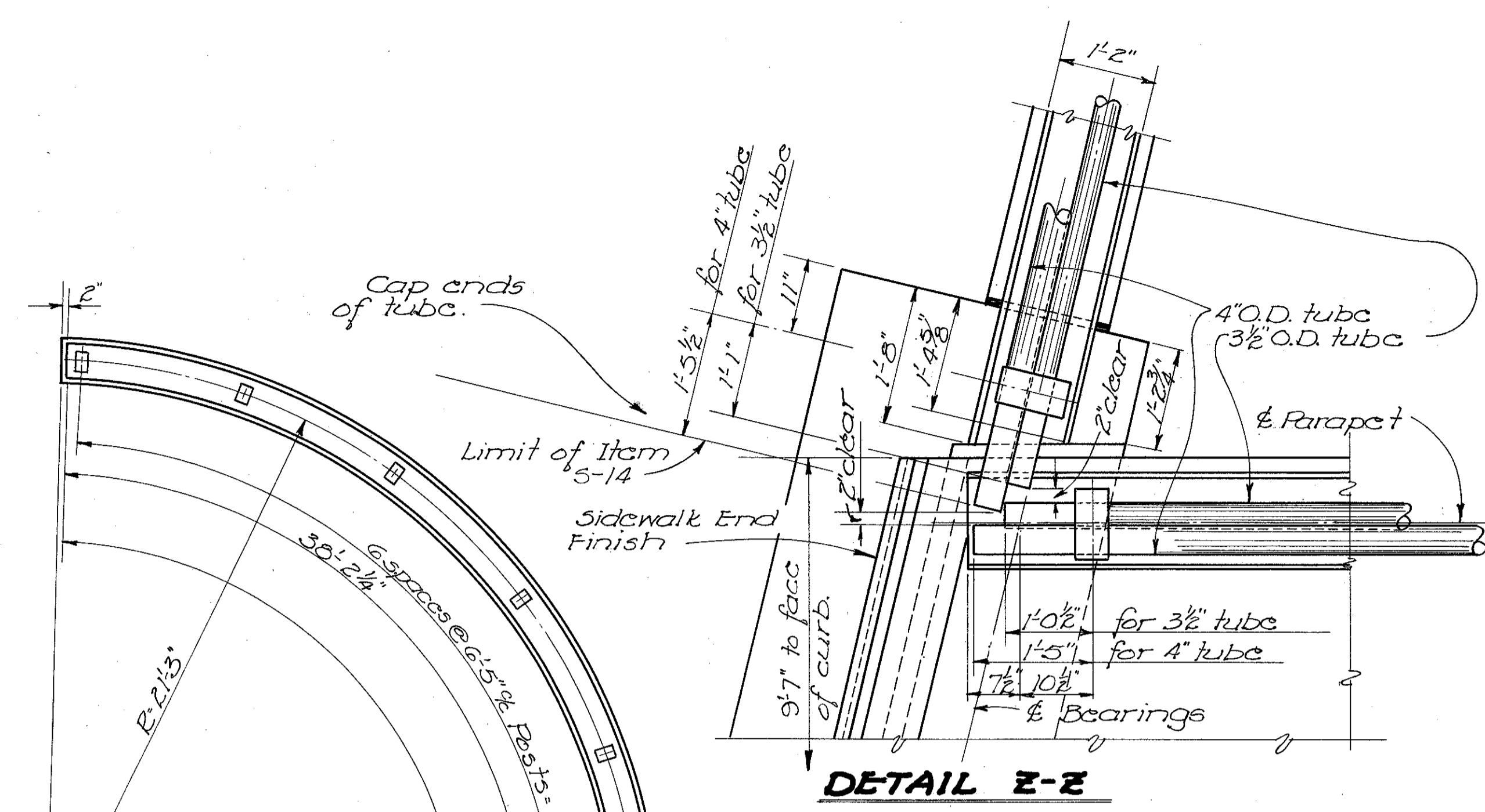
GUTTER & SCUPPER AND DRAINAGE DETAILS
BRIDGE No. CUY-42-1918
INNERBELT FREEWAY
under EUCLID AVE.
CUYAHOGA COUNTY STA. 19+44.787

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.G.H.	D.G.H.	J.G.W.	R.W.	C.B.	5-22-57	

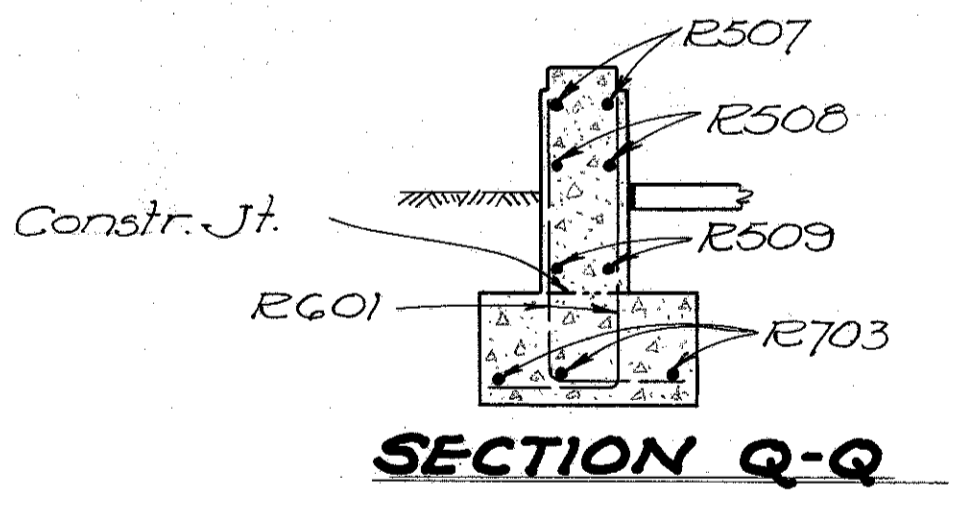
8-6-58

Cuyahoga County
CUY-42-18.77

DESIGNED BY
DRAWN BY
TRACED BY
CHECKED BY
REVIEWED BY
DATE
REVISED



The 1/2" P.E.J.F., concrete wall and footing, and reinforcing steel to be included in price per lin. ft. of approach railing for payment.



Note: Sections I-I, J-J, & Q-Q, are all typical except for bar numbers.

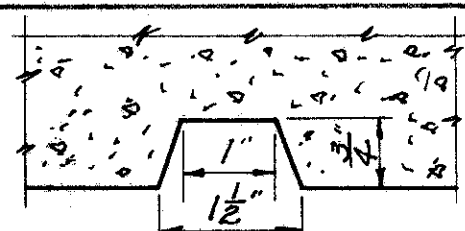
PLAN OF RAILING

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
RAILING DETAILS BRIDGE No. CUY-42-1918 INNERBELT FREEWAY UNDER EUCLID AVE.					
CUYAHOGA COUNTY STA. 13+44.787					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
DR	BLA	RCC	WCK	QJF	8-6-58

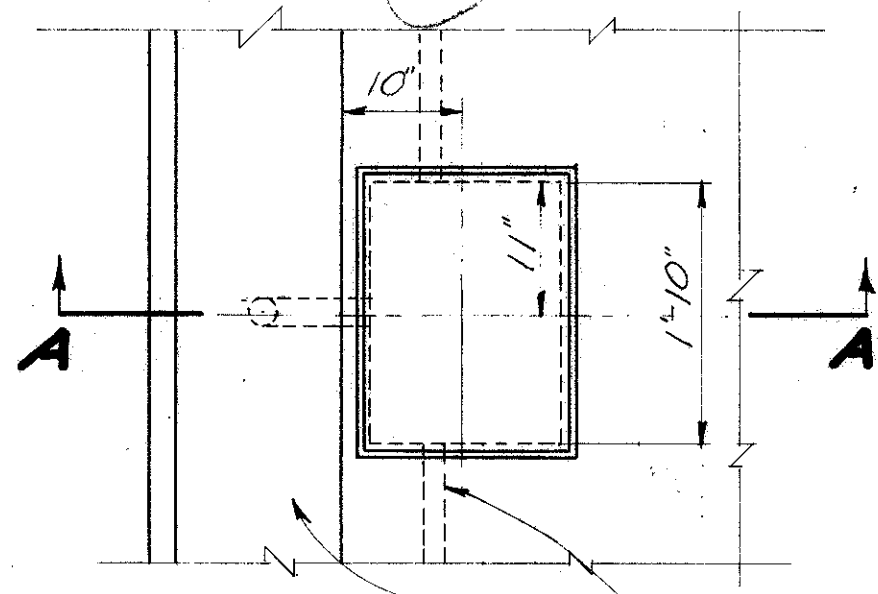
Cuyahoga County
CUY-42-18.77

MICROFILMED
JUL 3 1965

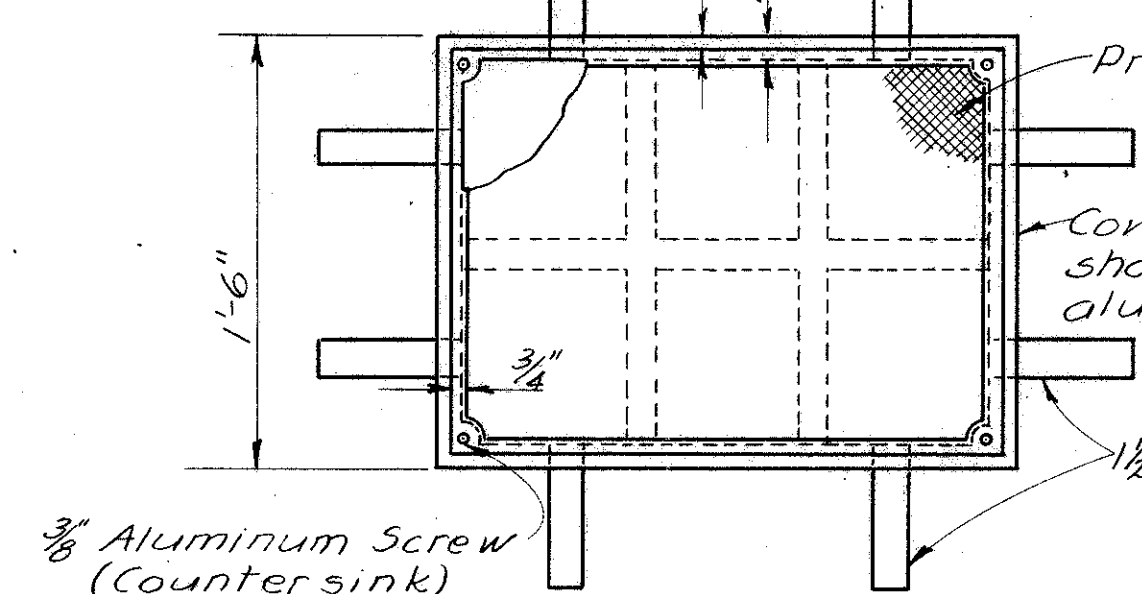
DETAIL OF RUSTICATION GROOVE



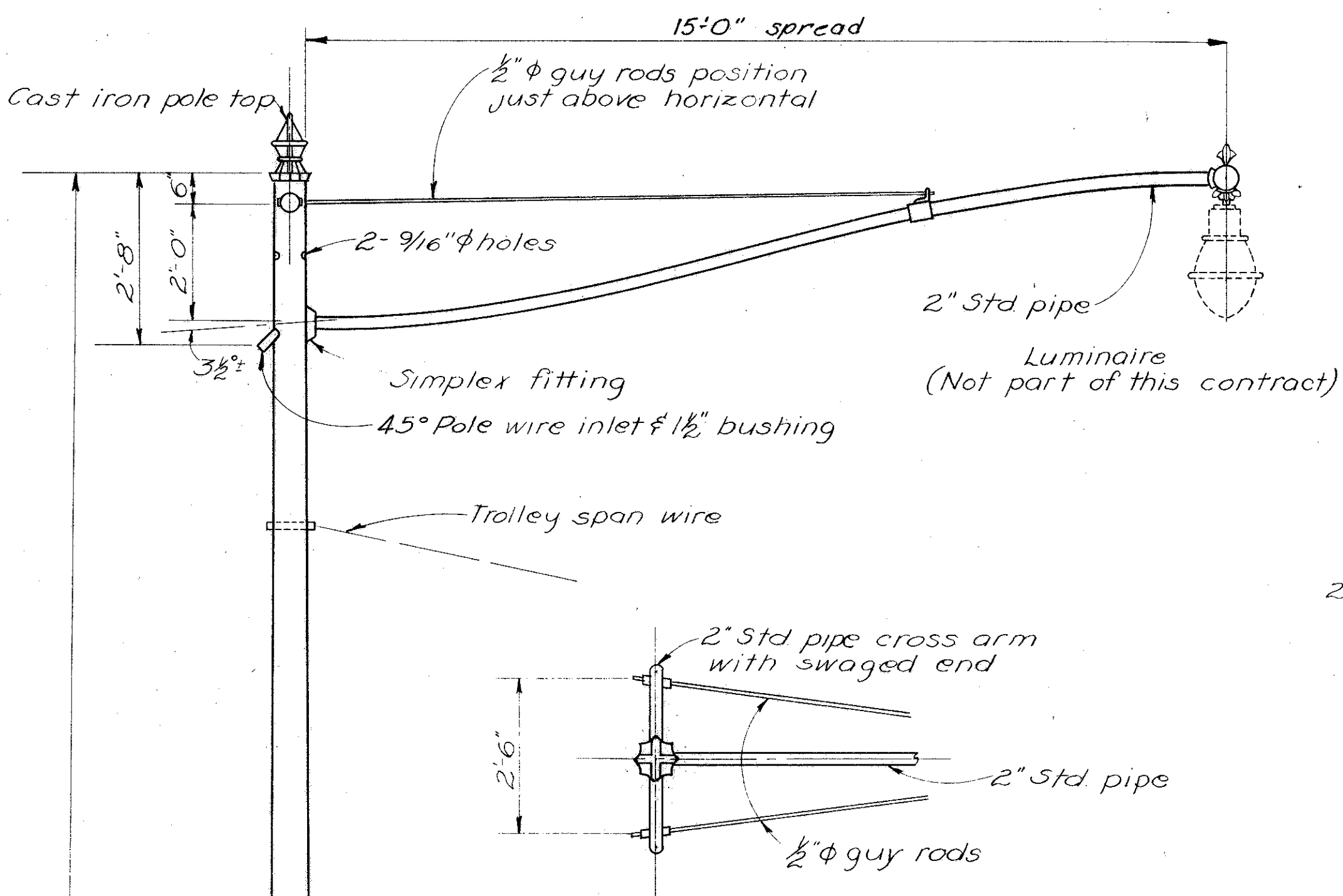
Box details do not apply to Carnegie Ave. Bridge. See Sheet 89 for details.



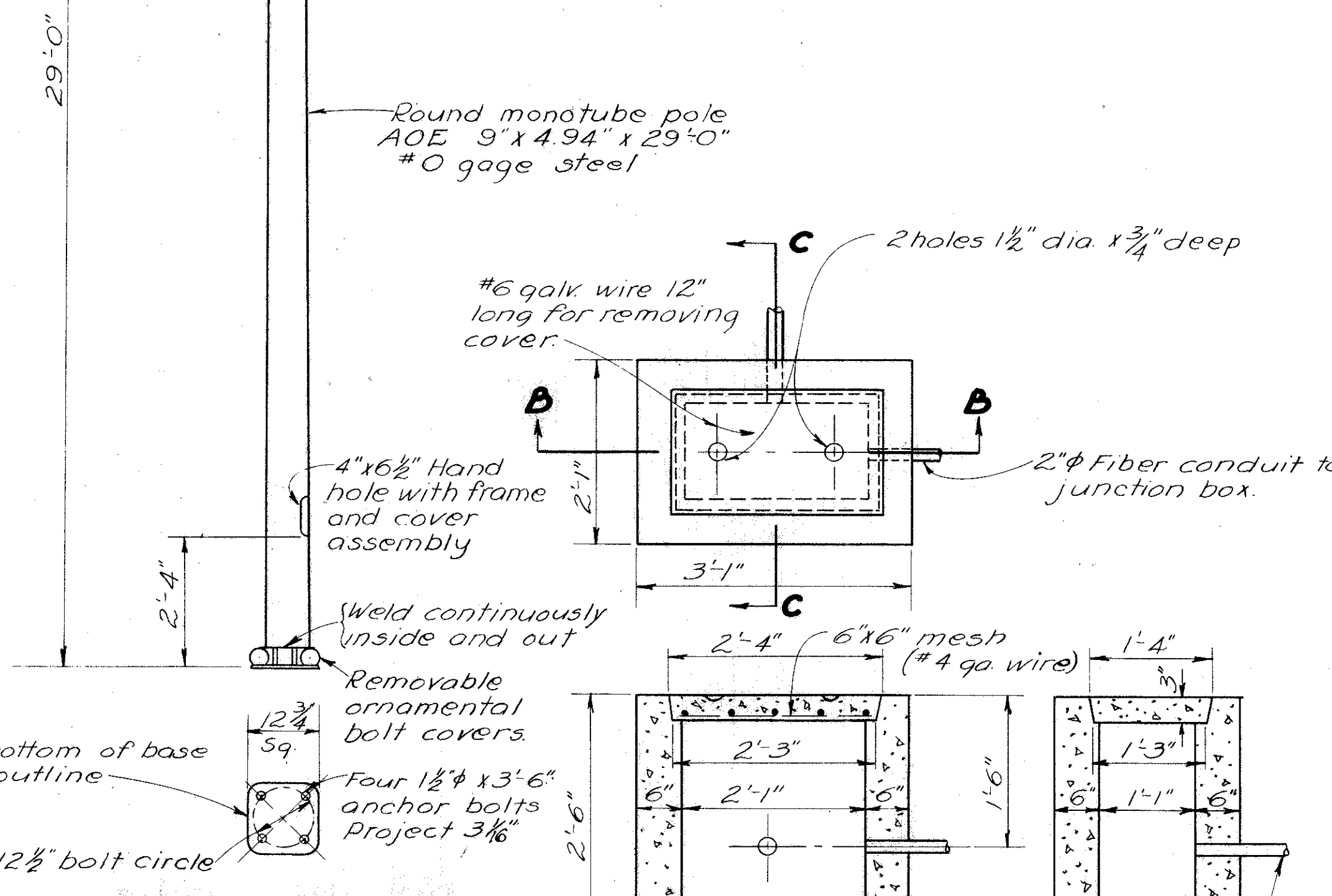
SECTION A-A
DETAILS OF PULL BOX & TRANSFORMER VAULT IN DECK



DETAIL OF PULL BOX FRAME & COVER
(One adjacent to each lamp standard)

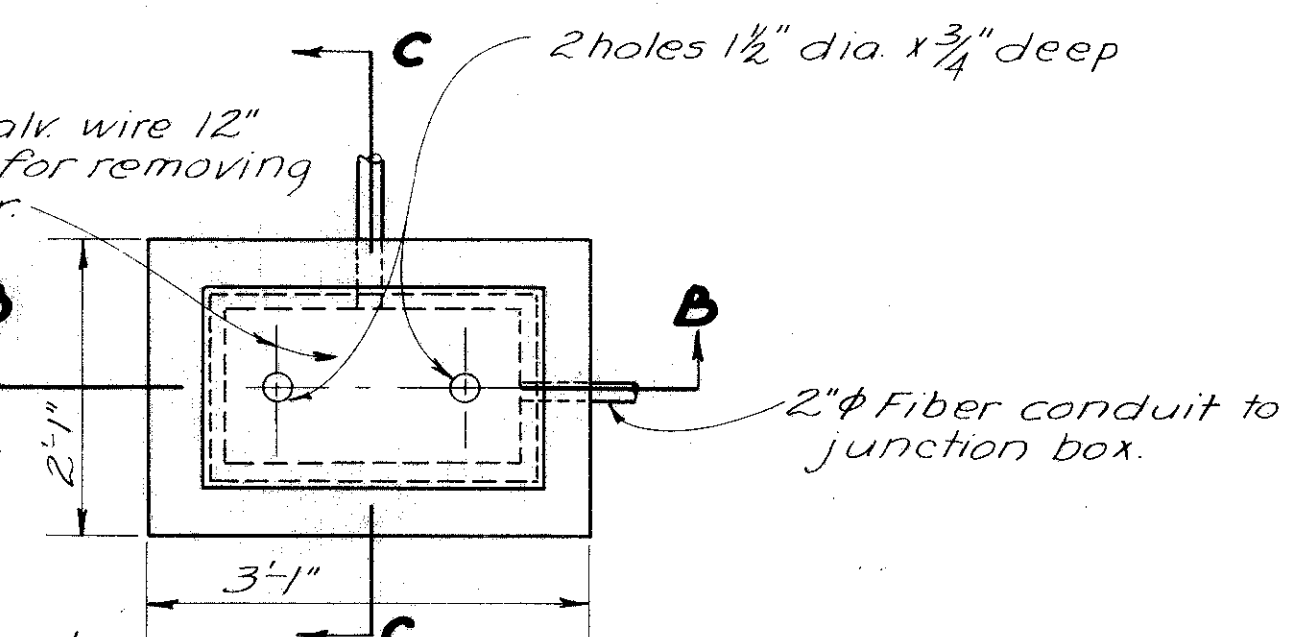


PART PLAN OF LAMP STANDARD

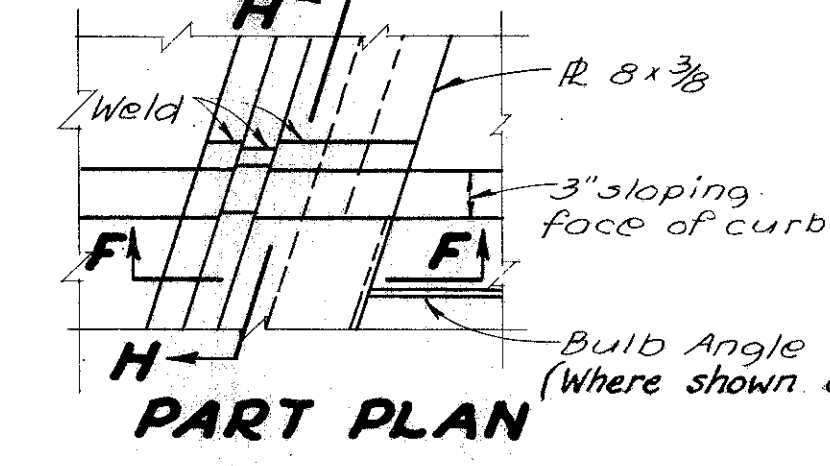


DETAIL OF LAMP STANDARD

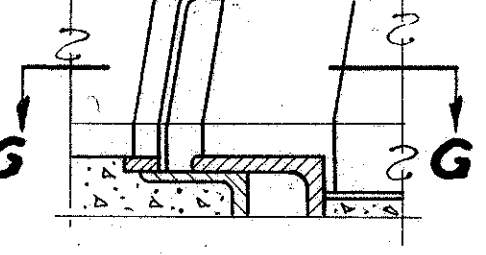
NOTE: This lamp standard shall be used on Euclid Ave. For details of lamp standards on other structures see Sheet No. 73



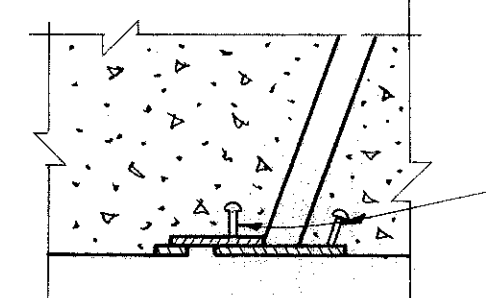
SECTION B-B
DETAILS OF PULL BOX & TRANSFORMER VAULTS
(Precast concrete)



PART PLAN



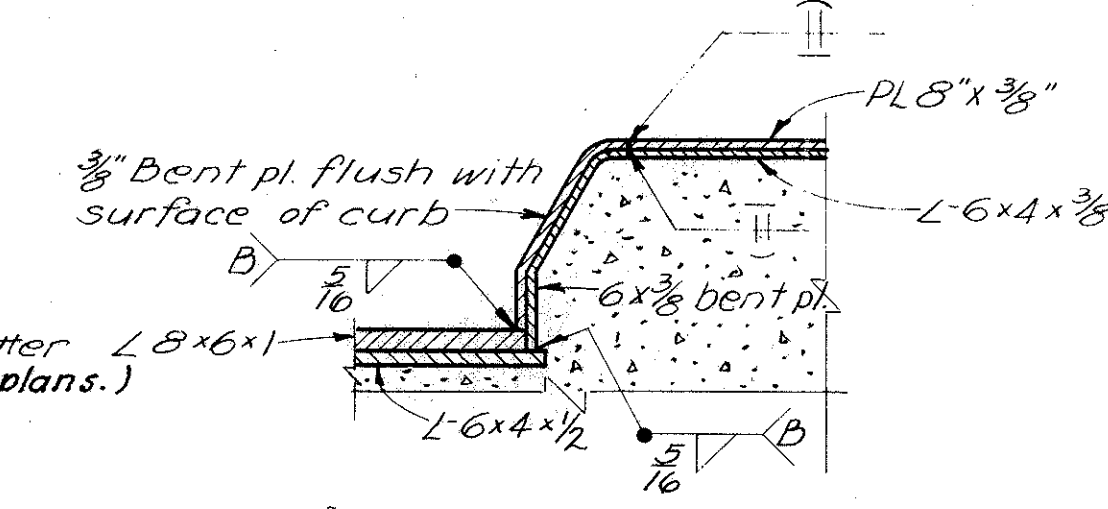
SECTION F-F



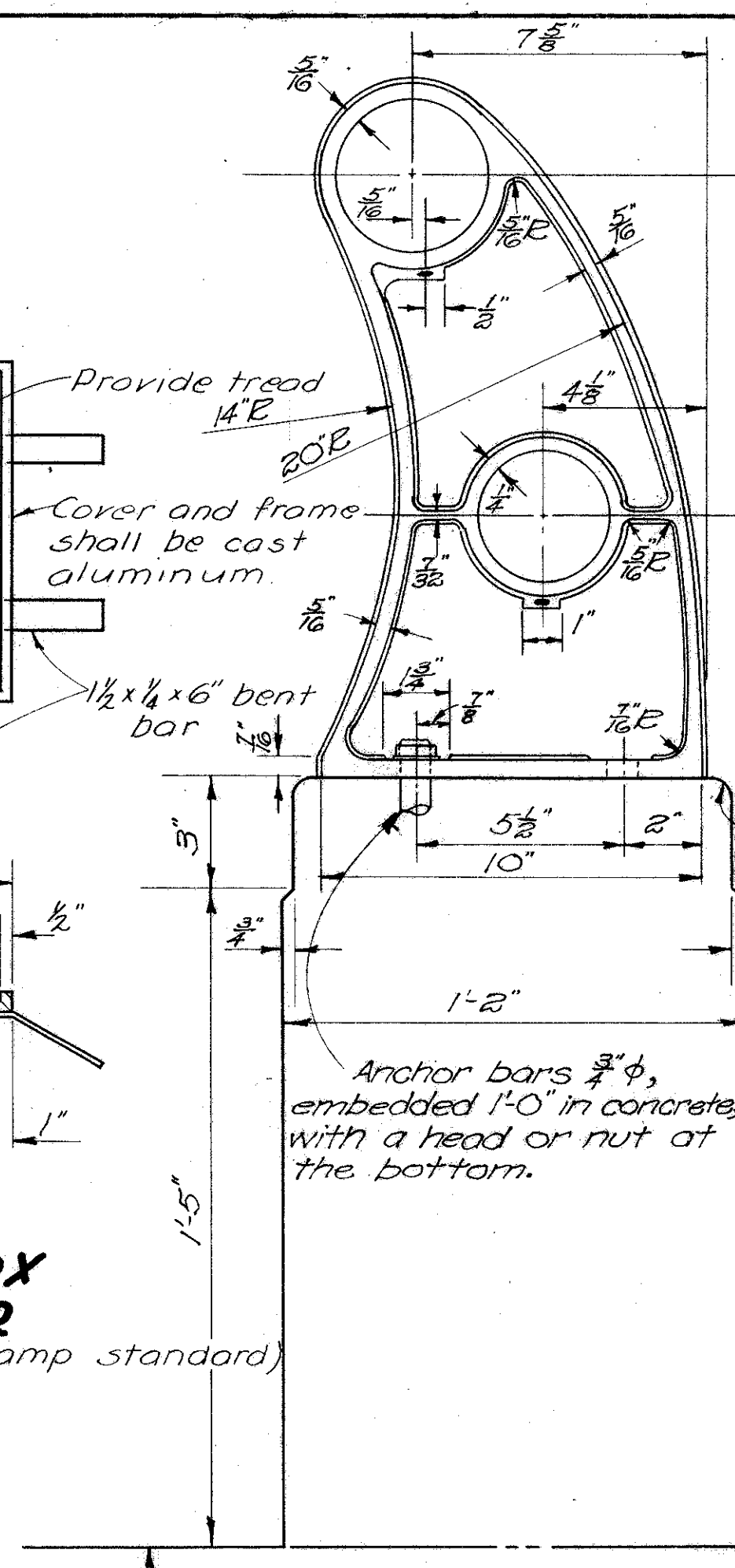
SECTION G-G

SKREW ANGLE is shown on the project plans but these details are typical of all the Innerbelt structures, except as otherwise shown.

CURB PLATE DETAILS



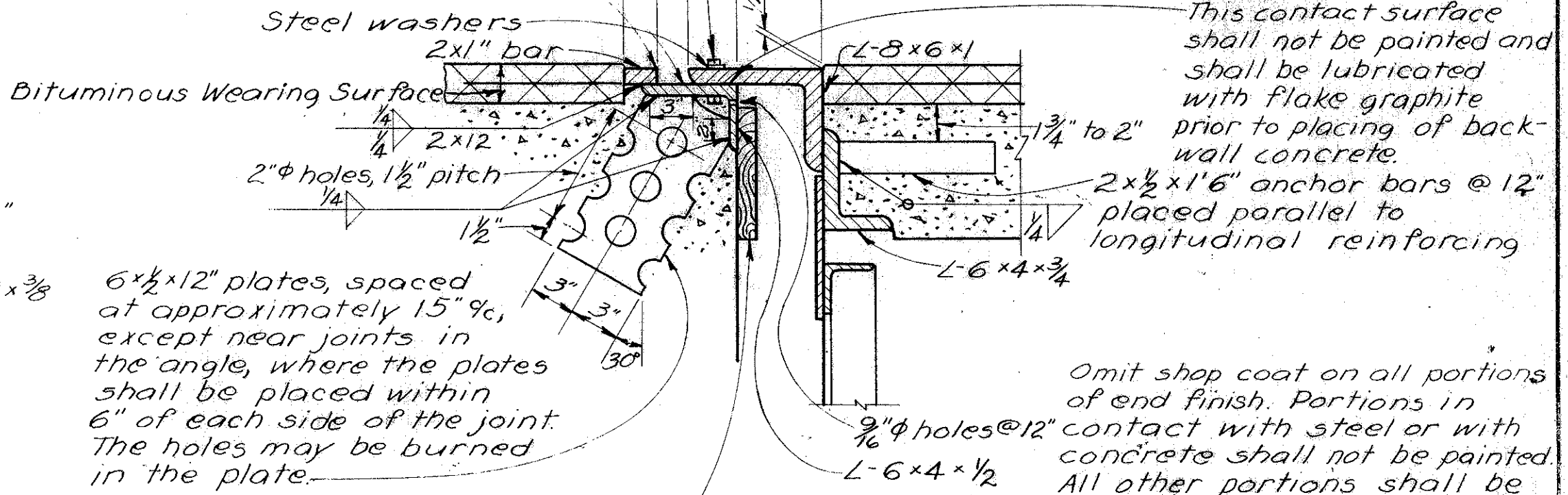
SECTION H-H



RAILING DETAILS

NOTE A: 3/8 x 2 bolts at not more than 2'-0", with nuts tack welded to under side of lower angle. 1/4 holes in upper angle. Center 3/8 bolts in 1/2 holes. Apply flake graphite between washers and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has reasonably set, preferably within two hours to avoid effect of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

NOTE B: This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing of back-wall concrete. 2 x 2 x 1/2 anchor bars @ 12" placed parallel to longitudinal reinforcing.

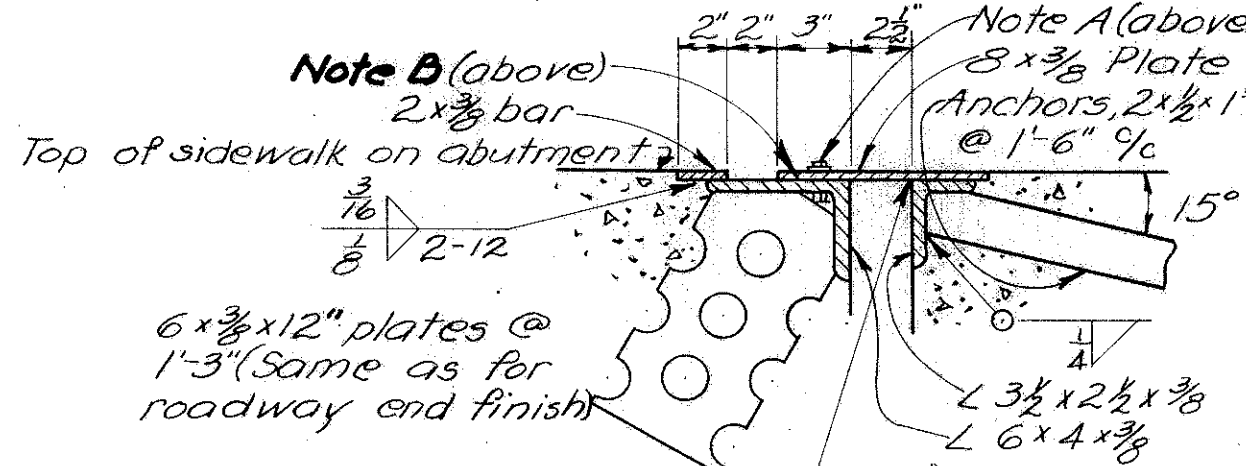


ROADWAY END FINISH DETAILS

Provide a joint in the edge bar and in the angle on the centerline of roadway. Additional joints may be provided in them at a minimum spacing of 6'-0" (Joints shall not be welded).

6 x 1/2 x 12 plates, spaced at approximately 15" c/c, except near joints in the angle, where the plates shall be placed within 6" of each side of the joint. The holes may be burned in the plate.

Top of backwall form shall be below 3/8 holes in L-6 x 4 x 1/2



SIDEWALK END FINISH DETAILS

COMMON DETAILS FOR STRUCTURES OVER INNERBELT 22ND STREET TO EUCLID AVE. SECTION CUY-42-18.77

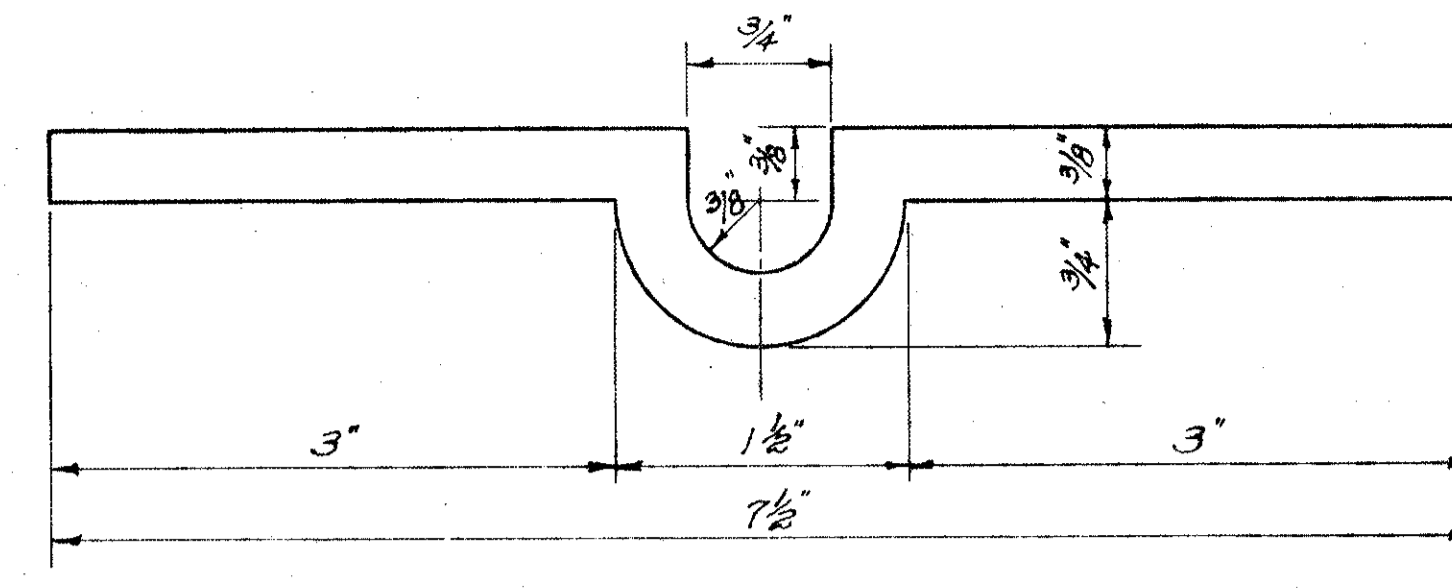
DESIGNED	DRAWN	TRACED	CHECKED	DATE	REVISED

CUYAHOGA COUNTY

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DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

Cuyahoga County
 CUY-42-18.77

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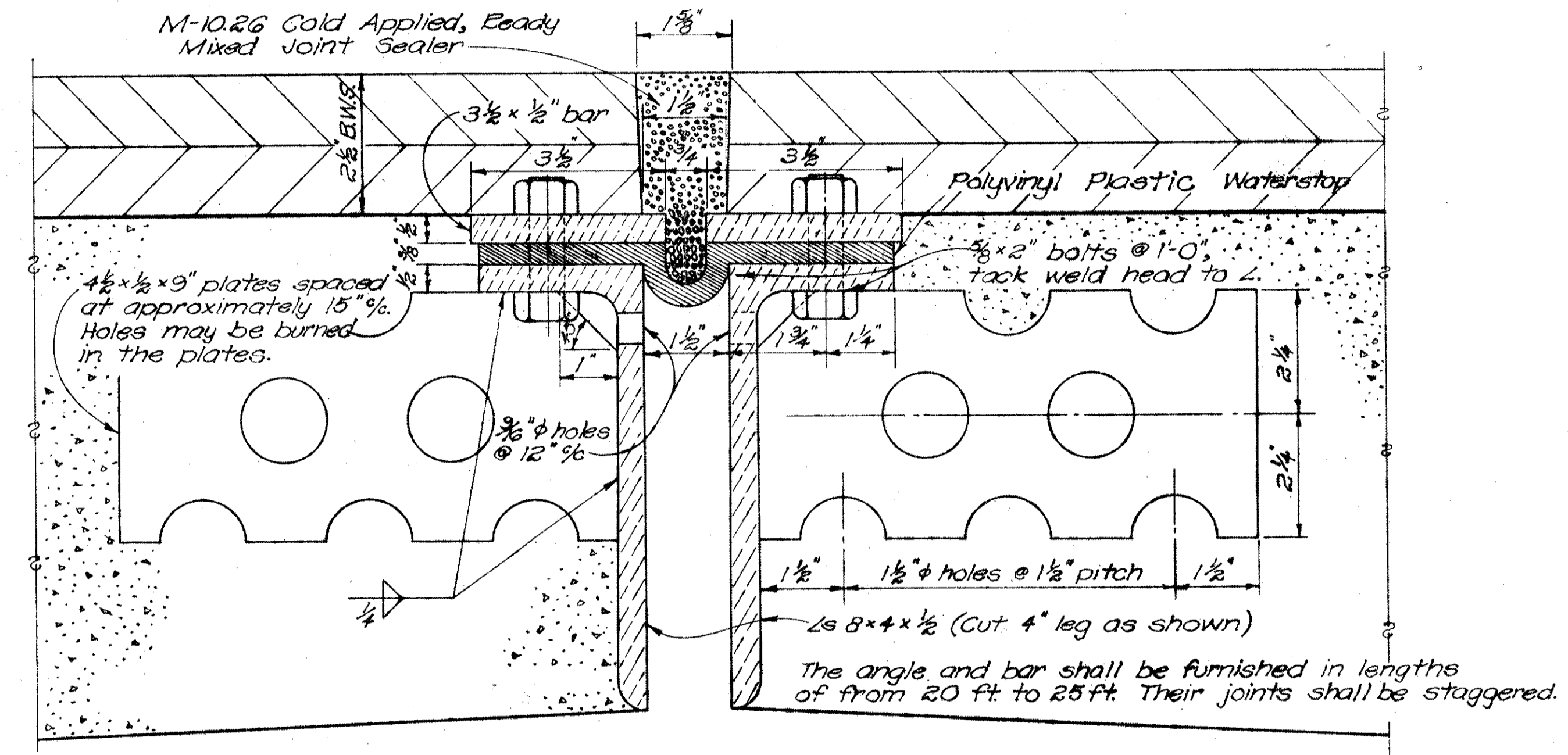


POLYVINYL PLASTIC WATERSTOP

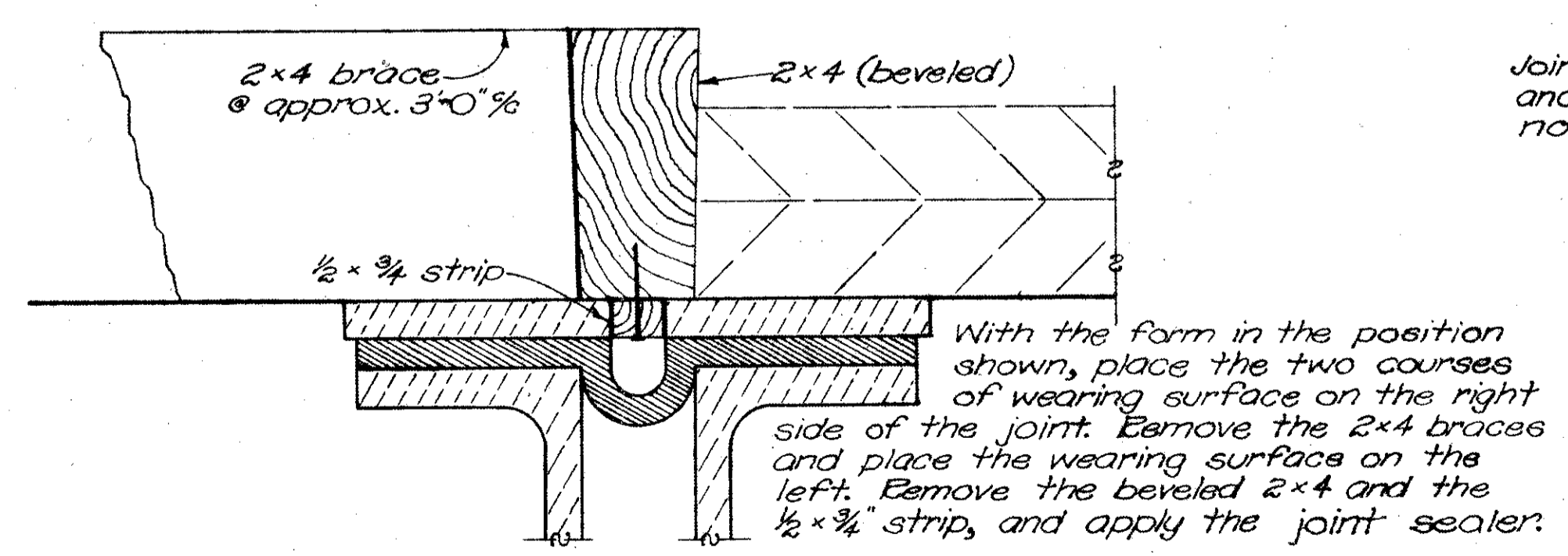
POLYVINYL PLASTIC SPECIFICATIONS

Specific Gravity	1.45 ± .05
Hardness Durometer A	65 ± 3
Ultimate Tensile Strength p.s.i.	1200
Modulus p.s.i. (a) 100% Elongation	400
Ultimate Elongation	300
Brittle Temperature ASTM D-746°	-30
Stock Extrusion Temperature °F	350

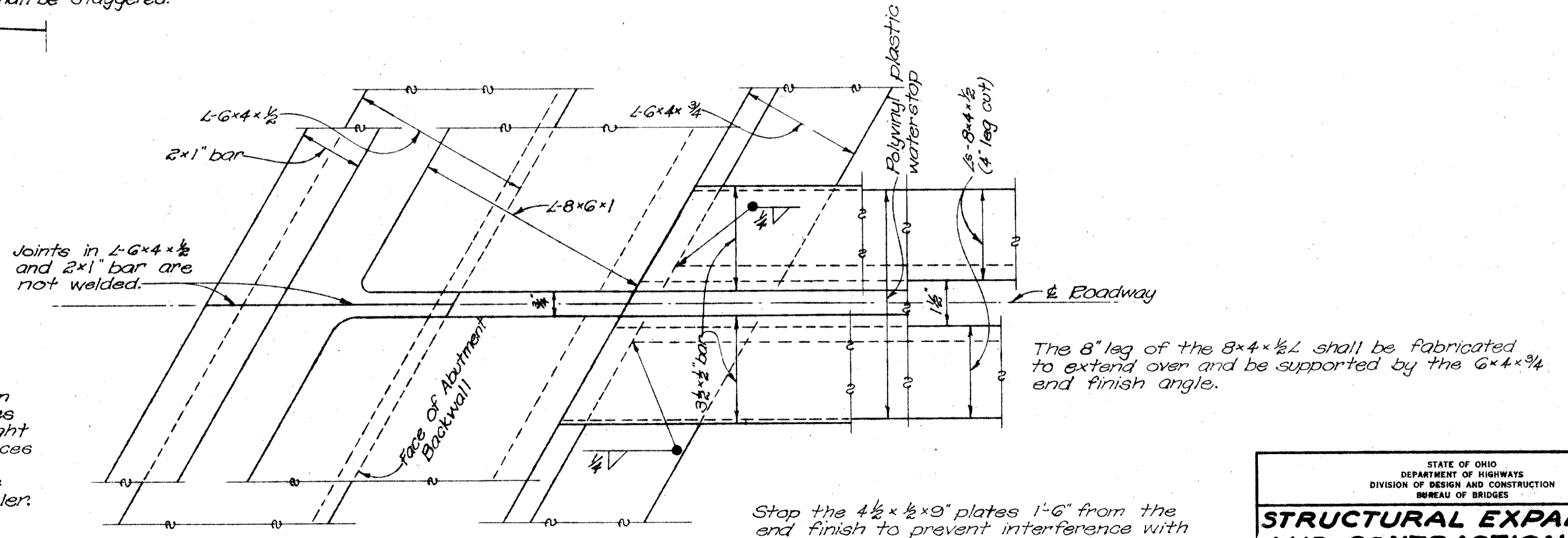
Butt splices in the waterstop, when necessary, shall be made in the manner recommended by the manufacturer.



SEAL FOR LONGITUDINAL JOINT IN DECK
 (To form joint in Bituminous Wearing Surface see Detail A.)



DETAIL "A"
 SUGGESTED JOINT FORMING METHOD



PLAN OF JOINT AT END FINISH
 See the plans for each bridge for the actual direction and amount of skew.

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 DIVISION OF DESIGN AND CONSTRUCTION
 BUREAU OF BRIDGES

STRUCTURAL EXPANSION AND CONTRACTION JOINT
 BRIDGES NO. CUY-42-1885, 1896, 1908 & 1918
 INNERBELT FREEWAY
 CUYAHOGA COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	CPD	REI		AJF	1-20-58	