MICROFILMED
APR 17 1980

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BEL-70-18.87
WEIGH STATION
BELMONT COUNTY
RICHLAND TOWNSHIP

I-70-8(24)223

FHWA REGION	STATE	PROJECT	
5	OHIO	I-70 8(24)223	

1/81

BELMONT COUNTY
BEL-70-18.87

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line
Trees, Stumps, (to be removed)
Utility Poles Telephone, Power, Light

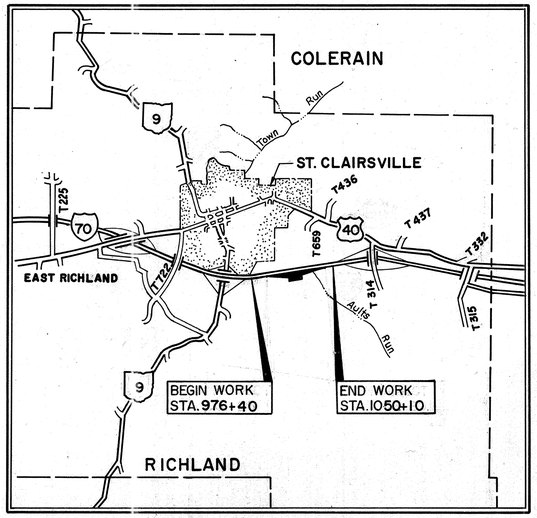
Limited Access (only) ——LA——
Existing LA / RW
Property Line ——PL—— (in existing fence) -x-PL-x-
Guardrail (existing) (proposed)

INDEX OF SHEETS

Title Sheet	1
Schematic Plan	2
Typical Sections	3-4
General Notes	5-6
General Summary	7-8
Calculations	9
Plan and Profile	10-14
Cross Sections	15-48
Roadway Details	49-50
Drainage Details	51-55
Traffic Control Plans	56-72
Lighting Plans	73-76
Right of Way Plans	77-81

LINE DATA

Begin Work	Sta. 976+40.00
End Work	Sta. 1050+10.00
Gross Length of Work	7,370.00 Lin. Ft.
Deduct for Station Equation (1013+84.42 Bk. = 1013+94.92 Ahd.)	10.50 Lin. Ft.
Net Length of Work	7,359.50 Lin. Ft. or 1.393 Miles
Net Length of Project	0.00 Lin. Ft. or 0.000 Miles



LOCATION MAP

SCALE OF MILES
0 1 2 3 4

Portion to be improved
State Roads
Other Roads

SCALE IN FEET

Plan 0 50' 100'
Profile Horizontal 0 50' 100'
Profile: Vertical
Cross Section: Horiz. & Vert. 0 10' 20'

LIMITED ACCESS

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

1973 SPECIFICATIONS

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

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

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.

Approved _____
Date 10-9-73 District Deputy Director of Transportation

Approved _____
Date _____ Engineer, Bureau of Bridges

Approved _____
Date 10-12-73 Engineer, Bureau of Roadway Design

Approved _____
Date 10-29-73 Assistant Deputy Director for Highway Design

Approved _____
Date 10-29-73 Assistant Deputy Director for Real Estate

Approved _____
Date 10-29-73 Assistant Deputy Director for Program Development

Approved _____
Date _____ Chief Engineer, Division of Highways

Approved _____
Date 10-29-73 Deputy Director, Division of Highways

Approved _____
Date 10-29-73 Assistant Director, Department of Transportation

Approved _____
Date 10/29/73 Director, Department of Transportation

Plan Prepared By: Plan Preparation
Bureau Of Roadway Design
Ohio Dept. Of Transportation
25 S. Front Street, Columbus, Ohio

Project: BELMONT - 70 - 18.87
Date of Letting _____ 19__ Contract No. _____

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-1	6-1-65	CB-5	9-1-69	MC-4	6-13-69	HL-1	9-6-73
BP-2	12-1-68			MC-5	6-1-65	HL-2	7-27-73
BP-3	1-1-71					HL-3	7-27-73
BP-4	1-1-71	HW-4	1-1-70	MH-1	10-1-68	HL-8	9-6-73
BP-5	6-1-72			MH-1A	10-1-68	HL-9	9-6-73
		I-2	6-6-69			HL-10	9-6-73
BP-7	1-1-66	I-2A	6-6-69	GR-2A	1-1-71	HL-11	4-6-73
BP-9	1-1-71			GR-2B	11-9-71	HL-12	4-6-73
						HL-15	4-6-73
		MC-1	6-13-69				
F-2	1-1-71					L-1	6-1-73
		MC-3	6-1-73				

SUPPLEMENTAL SPECIFICATIONS

815	9-20-72
816	9-20-72
839	11-25-70
941	11-25-70
1001	9-20-72

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

_____ _____
DIVISION ENGINEER DATE

Calc: C.C.C. 9-12-73
Chkd: L.J.P. 9-12-73

Rev. 12-27-73

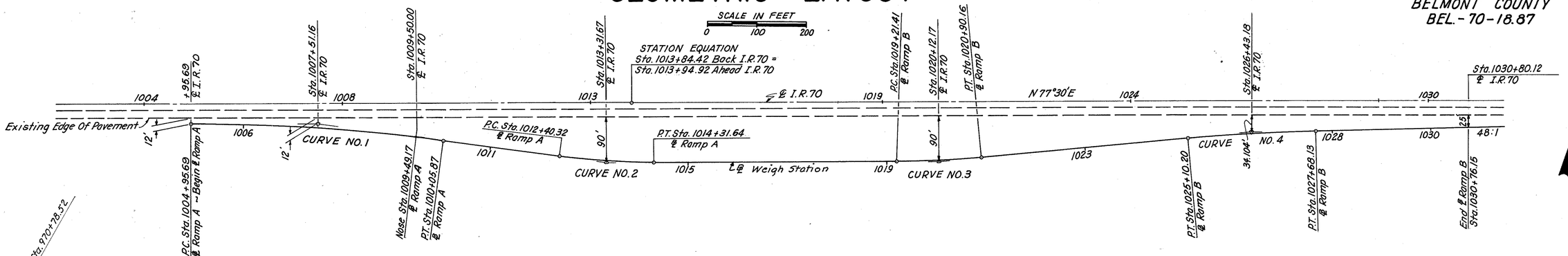
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2
81

BELMONT COUNTY
BEL.-70-18.87

GEOMETRIC LAYOUT

SCALE IN FEET
0 100 200

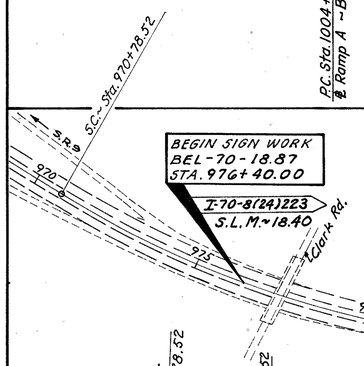


CURVE NO.1 DATA
P.I. Sta.1007+51.16 ℄ Ramp A
48'Rt. Sta.1007+51.16 I.R.70
Δ = 7°39'10"
D_c = 1°30'00"
R = 3819.72'
L_c = 510.19'
T = 255.47'
E = 8.53'

CURVE NO.2 DATA
P.I. Sta.1013+36.12 ℄ Ramp A
126'Rt. Sta.1013+31.67 I.R.70
Δ = 7°39'10"
D_c = 4°00'00"
R = 1432.39'
L_c = 191.32'
T = 95.80'
E = 3.20'

CURVE NO.3 DATA
P.I. Sta.1020+05.84 ℄ Ramp B
126'Rt. Sta.1020+12.17 I.R.70
Δ = 5°03'45"
D_c = 3°00'00"
R = 1909.86'
L_c = 168.75'
T = 84.43'
E = 1.87'

CURVE NO.4 DATA
P.I. Sta.1026+39.21 ℄ Ramp B
70.10'Rt. Sta.1026+43.18 I.R.70
Δ = 3°52'08"
D_c = 1°30'00"
R = 3819.72'
L_c = 257.93'
T = 129.01'
E = 2.18'



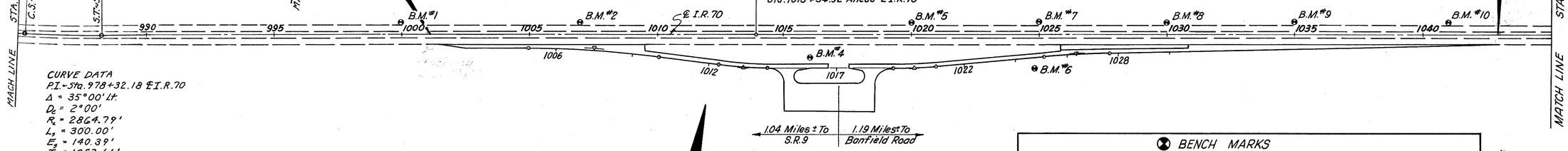
SCHEMATIC PLAN

SCALE IN FEET
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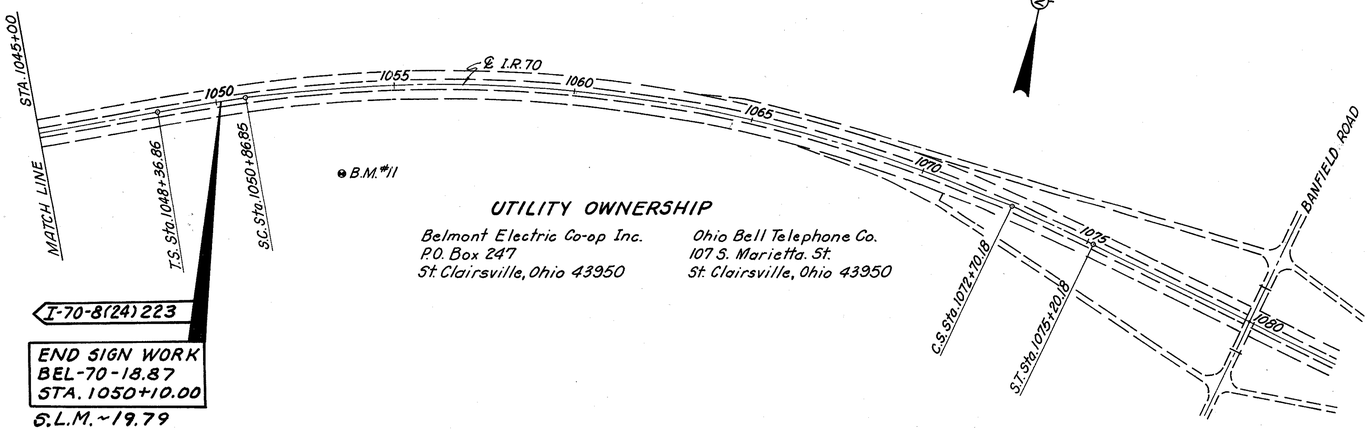
BEGIN EARTHWORK
BEL-70-18.87
℄ STA.1001+10.00
S.L.M.~18.87

END EARTHWORK
BEL-70-18.87
℄ STA.1042+92.00
S.L.M.~19.41

STATION EQUATION
Sta.1013+84.42 Back ℄ I.R.70=
Sta.1013+94.92 Ahead ℄ I.R.70



CURVE DATA
P.I.~Sta.978+32.18 ℄ I.R.70
Δ = 35°00' Lt.
D_c = 2°00'
R_a = 2864.79'
L_a = 300.00'
E_a = 140.39'
T_a = 1053.66'



UTILITY OWNERSHIP

Belmont Electric Co-op Inc.
P.O. Box 247
St. Clairsville, Ohio 43950

Ohio Bell Telephone Co.
107 S. Marietta St.
St. Clairsville, Ohio 43950

BENCH MARKS

NUMBER	DESCRIPTION	ELEV.
1	Top I.P. Conc. Mon., Sta. 1000+00 Lt. 48' ℄ I.R.70	1202.76
2	Top I.P. Conc. Mon., Sta. 1007+00 Lt. 48' ℄ I.R.70	1168.41
3	Top I.P. Conc. Mon. Sta. 1013+84.42 Back = Sta. 1013+94.42 Ahead STATION EQUATION	1133.96
4	R.R. Spike in 6", Sta. 1016+00 Rt. 90.5' ℄ I.R.70	1127.57
5	Top I.P. Conc. Mon., Sta. 1020+00 Lt. 48' ℄ I.R.70	1118.78
6	Spike in W.Ch., Sta. 1024+81 Rt. 132' ℄ I.R.70	1122.87
7	Top I.P. Conc. Mon., Sta. 1025+00 Lt. 48' ℄ I.R.70	1123.25
8	Top I.P. Conc. Mon., Sta. 1030+00 Lt. 48' ℄ I.R.70	1127.51
9	Top I.P., Sta. 1035+00 Lt. 48' ℄ I.R.70	1131.35
10	Top I.P., Sta. 1041+00 Lt. 48' ℄ I.R.70	1136.21
11	M.S. in Power Pole, Sta. 1053+45 Rt. 155' ℄ I.R.70	1186.58

Calc. C.C.C. 9-21-72
Chkd. L.U.P. 9-21-72

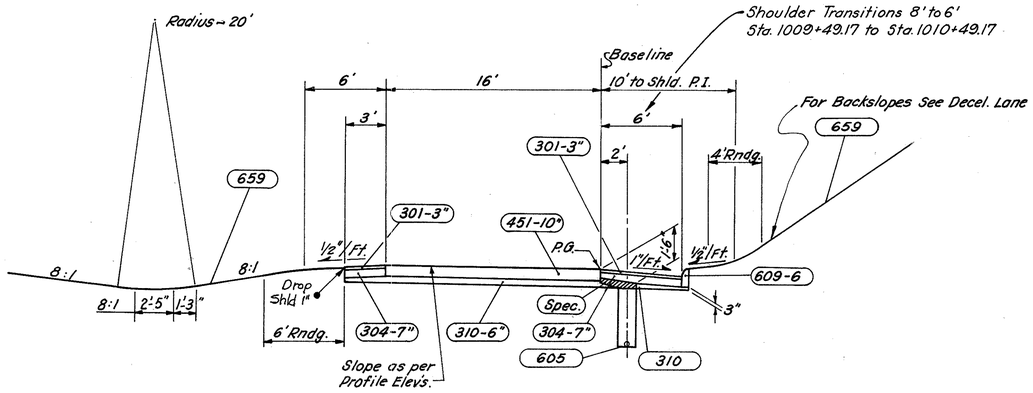
SCHEMATIC PLAN & GEOMETRIC LAYOUT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

3
81

BELMONT COUNTY
BEL-70-18.87

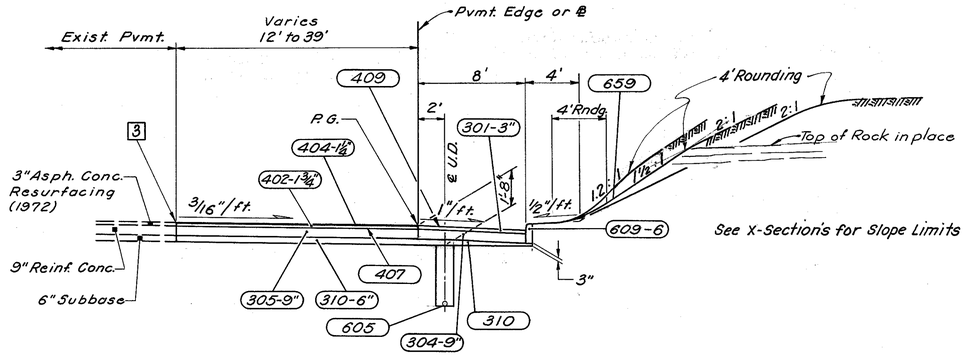
TYPE 451



CURBED RAMP A

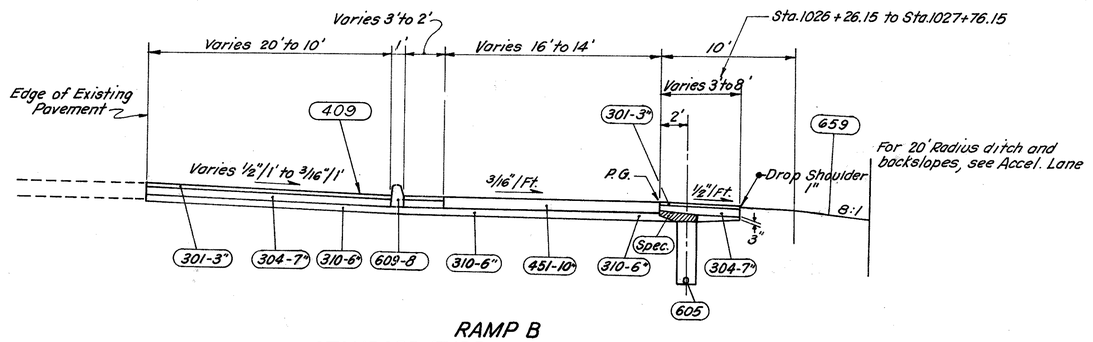
Sta. 1009+49.17 to Sta. 1014+24.00 = 474.83 Lin. Ft.

TYPE 404 ON 305



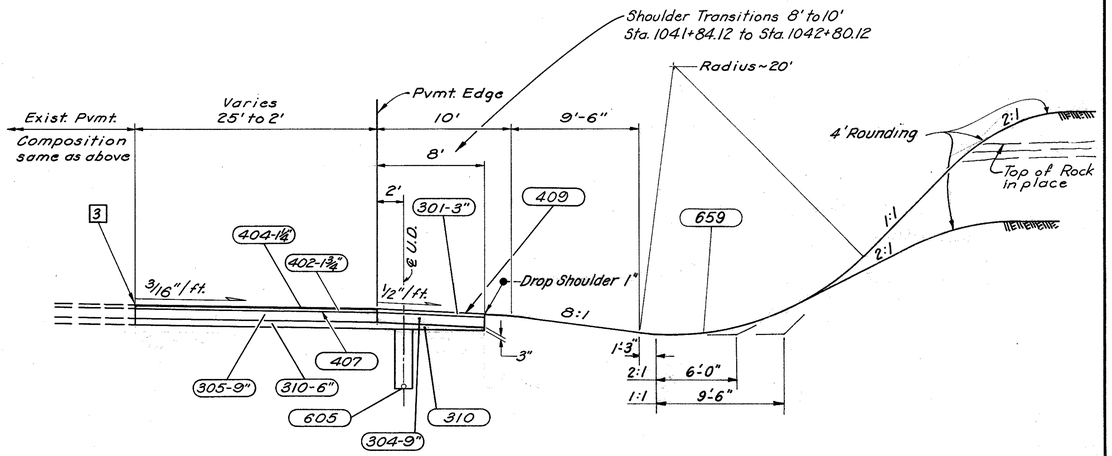
DECELERATION LANE

Sta. 1001+50.00 ℄ I.R.70 to Sta. 1009+49.17 ℄ Ramp A = 999.17 Lin. Ft.



RAMP B
STANDARD TYPE B CURB SECTION

Sta. 1025+80 ℄ Ramp B to Sta. 1030+76.15 ℄ Ramp B = 496.15 Lin. Ft.
= Sta. 1030+80.12 ℄ I.R.70



ACCELERATION LANE

Sta. 1030+80.12 ℄ I.R.70 to Sta. 1042+80.12 ℄ I.R.70 = 1200.00 Lin. Ft.

CONCRETE TYPICAL

451 10" Reinforced Portland Cement Concrete Pavement.

310 Subbase, Grading A, 6" thick except as indicated.

301 3" Bituminous Aggregate Base: 702.01 (85-100 or AC20) or 702.09 RT-11 or RT-12, as per plan. (See note in proposal.)

304 7" Aggregate Base.

605 6" Pipe Underdrains.

606 Guard rail, type 5.

609-6 Curb, type 6.

609-8 Curb, type 8.

659 Seeding and Mulching.

Spec. Drainage Connection using No.8 aggregate. (see note in proposal.)

409 Seal Coat, using 0.008 Cu.Yds. No.8 Cover Aggregate per Sq.Yd. and 0.3 Gal. Bituminous Material per Sq.Yd. (See note in proposal.)

ASPHALT TYPICAL

404 1 1/4" Asphalt Concrete (70-85 or AC 20).

402 1 3/4" Asphalt Concrete (70-85 or AC 20).

407 Tack Coat: 702.04, MS-2 or RS-1: 702.02, RC-70 or RC-250 Applied at the rate of 0.10 Gal. Per Sq. Yd.

407 Cover Aggregate

305 9" Portland Cement Concrete Base.

310 Subbase, Grading A, 6" thick except as indicated.

301 3" Bituminous Aggregate Base: 702.01 (85-100 or AC20) or 702.09 RT-11 or RT-12, as per plan. (See note in proposal.)

304 9" Aggregate Base.

605 6" Pipe Underdrains.

609 Curb, Type 6.

659 Seeding and Mulching.

JOINT LEGEND

3 Standard Expansion Bolt Joint, spaced at 5' centers as per Std. Drwg. BP-3. Cost of joint to be included in unit price bid for Item 305.

409 Seal Coat, using 0.008 Cu.Yds. No.8 Cover Aggregate per Sq.Yd. and 0.3 Gal. Bituminous Material per Sq.Yd. (See note in proposal.)

Calc. C.C.C. 9-12-73
Chkd. L.J.P. 9-12-73

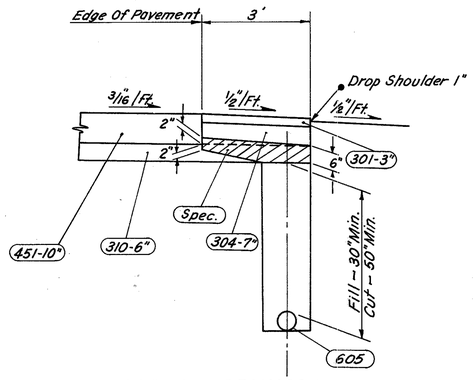
TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

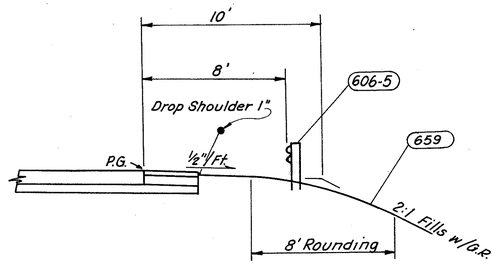
4
81

BELMONT COUNTY
BEL.-70-18.87

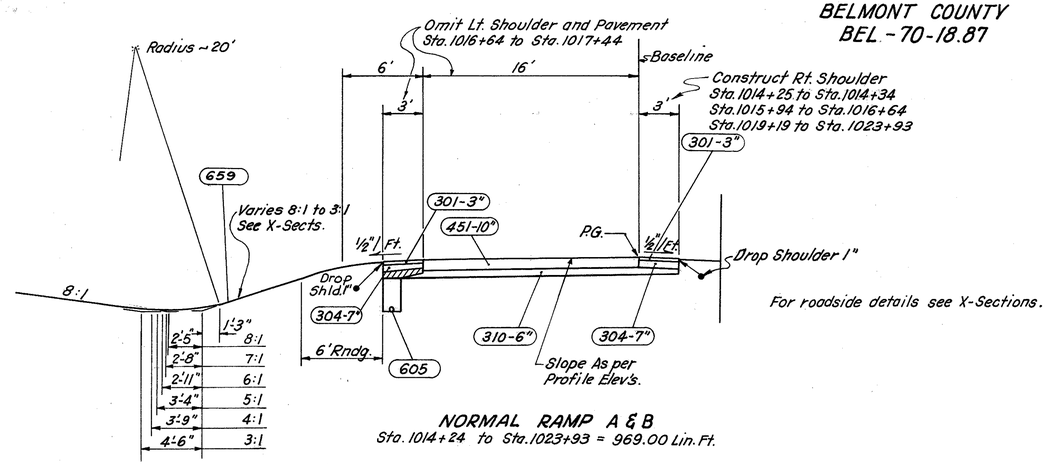
TYPE 451



SPECIAL DRAINAGE CONNECTOR DETAIL

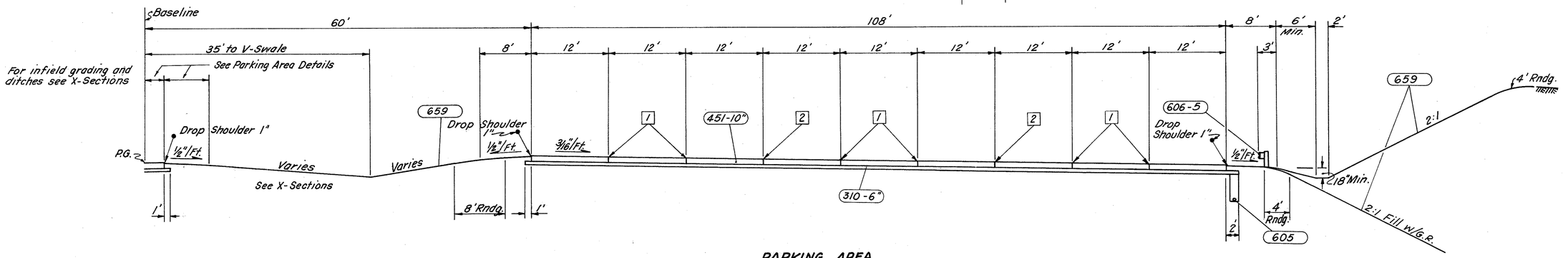


GUARD RAIL DETAIL

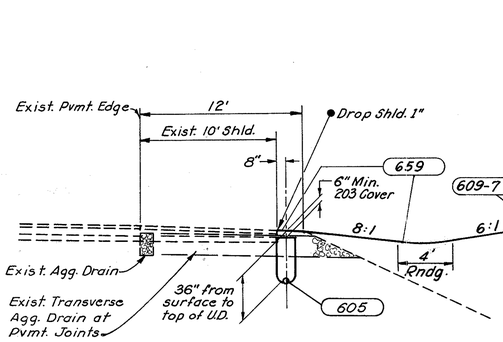


For roadside details see X-Sections.

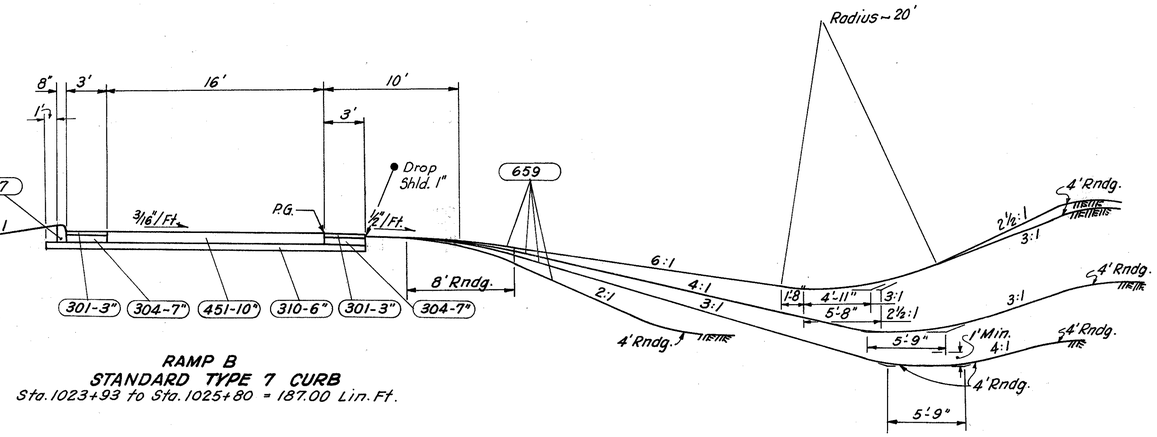
NORMAL RAMP A & B
Sta. 1014+24 to Sta. 1023+93 = 969.00 Lin. Ft.



PARKING AREA
Sta. 1014+94 to Sta. 1018+44.00 = 350.00 Lin. Ft.



PIPE UNDERDRAIN I.R. 70
Sta. 1009+55 I.R. 70 to Sta. 1025+77 I.R. 70
1622 Lin. Ft.



RAMP B
STANDARD TYPE 7 CURB
Sta. 1023+93 to Sta. 1025+80 = 187.00 Lin. Ft.

451 10" Reinforced Portland Cement Concrete Pavement.

310 Subbase, Grading A,

301 3" Bituminous Aggregate Base: 702.01 (85-100 or AC20) or 702.09 RT-11 or RT-12, As Per Plan (See Note in Proposal)

304 7" Aggregate Base

605 6" Pipe Underdrains

606 Guard Rail, Type 5

609-6 Curb, Type 6

609-7 Curb, Type 7

659 Seeding and Mulching

Spec. Drainage Connection using No.8 Aggregate. (See Note in Proposal.)

JOINT LEGEND

[1] Standard Longitudinal Joint

[2] Longitudinal Key Joint without Tie Bars.

Calc. C.C.C. 9-12-73
Chkd. L.J.R. 9-12-73

TYPICAL SECTIONS

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

5/81

BELMONT COUNTY
BEL-70-18.87

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE AND IN ADDITION TO THE REQUIREMENTS OF ITEM 619, HE SHALL PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

[illegible] REMOVE FEDERAL [illegible]

[illegible] M-55 [illegible] -

[illegible]TION-

MINE AREA TREATMENT

THE HATCHED AREA SHOWN ON THE PLANS RIGHT OF BASELINE STA.1017+85 TO STA.1018+70 OUTLINES THE APPROXIMATE LIMITS FOR MINE EXCAVATION AND BACKFILLING.

EXCAVATE FROM THE MINE ENTRANCE INTO THE HILLSIDE UNTIL 20± OF ROCK REMAINS ABOVE THE CEILING ELEVATION OF THE MINED COMPLEX.

AVOID DRAINING ACCUMULATED MINE WATER BY MAINTAINING A LIP OF UNDISTURBED MATERIAL AT THE OUTER EDGE OF THE EXCAVATION.

FORCE EXCAVATED ROCK INTO THE EXPOSED MINE OPENING AS FAR AS POSSIBLE WITH A DOZER. BACKFILL THE EXCAVATION WITH EXCAVATED ROCK TO ELEVATION 1090+.

ESTIMATED QUANTITIES FOR EXCAVATION AND EMBANKMENT HAVE BEEN ADDED TO THE CROSS SECTIONS FOR THIS TREATMENT.

A DETAILED SYSTEM OF "SPRING DRAINS" HAS BEEN INCORPORATED INTO THE PLANS TO FACILITATE ADEQUATE DRAINAGE OF THIS AREA. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY, FOR USE AS DIRECTED BY THE ENGINEER, IN EVENT ANY ADDITIONAL SEEP AREAS ARE ENCOUNTERED.

ITEM 605	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.01 TYPE III OR 707.12, AS PER PLAN	100 LIN. FT.
ITEM 605	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN	15 LIN. FT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REMOVAL OF EXISTING PIPE

THE REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS
18"	118	
30"	2	
48"	2	
60"		

LOCATIONS OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS AS SHOWN IN THESE PLANS ARE SUBJECT TO ADJUSTMENT TO ASSURE THAT THE PLANNED INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN(10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN TEN(10) FEET FROM THE WORK LIMITS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS SECTIONS ON THIS PLAN INDICATE SPECIFIC WIDTHS AND DEPTHS OF PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION IN CERTAIN AREAS, NO WAVER OF THE SPECIFICATIONS IS INTENDED AND ALL OTHER SLOPED FOUNDATION AREAS SHALL BE BENCHED AS SET FORTH IN 203.09. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED BY THE PROVISIONS OF 203.09.

GUARDRAIL REMOVAL FOR STORAGE AS PER PLAN

ALTHOUGH THE GUARD RAIL REMOVAL ITEM READS, ITEM 202, GUARD RAIL REMOVED AND STORED, PRECAUTION SHOULD BE TAKEN ONLY IN REMOVING THE RAIL ELEMENTS AND STORE THEM. THE HARDWARE AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE RAIL ELEMENTS WILL BE STORED AT THE SR 9, STATE HIGHWAY OUTPOST.

GUARD RAIL TERMINAL SECTION

WHERE INDICATED ON THE PLAN, GUARD RAIL SHALL BE TERMINATED BY USING A TERMINAL SECTION. THIS SHALL CONSIST OF BOLTING A STANDARD AS DETAILED ON STANDARD DRAWING GR-2A TO THE RAIL ELEMENT AT THE LAST POST. ALSO, THE THREE END POSTS OF EACH TERMINAL SECTION SHALL BE ENCASED IN A MINIMUM 4-INCH THICKNESS OF CLASS C CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND LINE. PAYMENT FOR THE TERMINAL SECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606 GUARD RAIL TYPE 5.

CONNECTIONS TO EXISTING PIPE

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON STANDARD DRAWING MC-1 SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLAN OR ENCOUNTERED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.01 TYPE III OR 707.12, AS PER PLAN 50 L.F.

ITEM 605 - AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN 6 L.F.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE COMPLETED AND PLACED IN USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE ITEMS OF 603 CONDUIT.

PIPE ENDS

ALL CULVERTS, WHETHER TERMINATING IN HEADWALLS OR ENDWALLS, SHALL BEGIN AND END WITH PIPE ENDS AS NORMALLY FABRICATED BY THE MANUFACTURER. ENDS SHALL NOT BE CUT TO FIT EITHER SKEW OR SLOPE. IF FIELD CUTTING IS FOUND TO BE NECESSARY TO FIT AN EXACT LENGTH CONTROL, THE CUT END SHALL BE LOCATED AT AN INTERIOR JOINT AND CRADLE, COLLAR OR BAND SHALL BE PROVIDED TO ASSURE A STABLE JOINT. PAYMENT FOR THE JOINT SHALL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT 603 CONDUIT ITEM.

EROSION CONTROL

ITEMS 601, 660 AND 667 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

BITUMINOUS COATED CORRUGATED METAL STRUCTURE

THE METAL PLATES THAT ARE INCORPORATED INTO THE CIRCUMFERENCE OF THIS SECTIONAL PLATE STRUCTURE, AT STA 1019+89.67 AND STA 1022+90, SHALL BE SHOP COATED IN ACCORDANCE WITH 707.04.

AFTER INSTALLATION OF THE STRUCTURE, DAMAGED OR WORN SPOTS IN THE BITUMINOUS COATING ON THE INSIDE OF THE STRUCTURE SHALL BE RE-COATED USING MATERIALS AND METHODS RECOMMENDED BY THE MANUFACTURER AND AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM 603 CONDUIT AS PER PLAN.

Calc. C.C.C. 9-12-73
Chkd. L.J.P. 9-12-73

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

6
81

BELMONT COUNTY
BEL-70-18.87

GENERAL NOTES

CONTRACTION AND EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN PAVEMENT WIDENING

WHERE NEW PAVEMENT IS PLACED ADJACENT TO EXISTING PAVEMENT, CONTRACTION JOINTS SHALL BE PROVIDED IN THE NEW PAVEMENT SO AS TO FORM A CONTINUOUS JOINT WITH THAT IN THE EXISTING PAVEMENT.

ADDITIONAL CONTRACTION JOINTS WILL BE REQUIRED IN THE NEW PAVEMENT AT MIDPOINTS BETWEEN EXISTING JOINTS TO PROVIDE CONTRACTION JOINTS AT INTERVALS OF APPROXIMATELY 30 FEET.

ITEM 310 SUBBASE, GRADING A, AS PER PLAN

MATERIAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OF 310.02 EXCEPT THAT NO MORE THAN 10% OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

TRAFFIC MAINTENANCE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OPERATIONS ADJACENT TO THE EXISTING PAVEMENT; ONE-LANE TRAFFIC WILL BE MAINTAINED AND THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC IN THIS AREA. ONE-LANE TRAFFIC AREAS SHALL BE CONTROLLED WITH TEMPORARY TRAFFIC CONTROL DEVICES ARRANGED AS INDICATED ON PAGE 436 OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS": CURRENT EDITION, LATEST REVISION, LENGTH OF ONE-LANE TRAFFIC ZONES SHALL BE FROM STA. 995+00 TO 1045+00 EXCLUSIVE OF TAPERS AND ADVANCED SIGNING. ALL SIGNS THAT ARE TO CONVEY MESSAGES DURING HOURS OF DARKNESS SHALL BE REFLECTORIZED OR ILLUMINATED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN BERMS DAMAGED BY ONE-LANE TRAFFIC OPPOSITE THE CONSTRUCTION AREAS.

NO WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 3:00 P.M. FRIDAY OR THE DAY PRECEEDING A NATIONAL HOLIDAY AND 6:00 A.M. MONDAY OR THE DAY FOLLOWING A NATIONAL HOLIDAY. DURING THIS NO WORK PERIOD, THERE SHALL BE NO LANE RESTRICTIONS WHAT SO-EVER.

THE CONTRACTOR SHALL PROVIDE THE SERVICES OF ONE SPECIAL DUTY STATE HIGHWAY PATROLMAN FOR THE EXCLUSIVE PURPOSE OF CONTROLLING ONE-LANE TRAFFIC, EXCEPT THAT A PATROLMAN WILL NOT BE REQUIRED WHEN THE CONTRACTOR IS NOT AT WORK. CONTACT THE LOCAL POST OF THE HIGHWAY PATROL FOR INFORMATION REGARDING ARRANGEMENTS AND PAYMENT BY THE CONTRACTOR FOR THE SERVICES OF A SPECIAL DUTY HIGHWAY PATROLMAN.

EQUIPMENT AND MATERIALS SHALL NOT BE STORED WITHIN THE MEDIAN OR WITHIN THIRTY (30) FEET OF THE OUTSIDE EDGE OF THE EXISTING I.R.70 PAVEMENT.

PAYMENT FOR ALL THE ABOVE OPERATIONS SHALL BE PAID IN ACCORDANCE WITH THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR RAMP PAVEMENT ADJACENT TO THE EASTBOUND LANE SHALL BE PERFORMED WITH UTMOST CAUTION. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH TEMPORARY GUIDE MARKERS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

TEMPORARY WATER POLLUTION, SOIL EROSION AND SILTATION CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY CONTROL MEASURES. FOR DETAILS SEE THE NOTES IN THE PROPOSAL:

ITEM 207	TEMPORARY SEEDING AND MULCHING	=	11.161 SQ. YDS.
ITEM 659	COMMERCIAL FERTILIZER (12-12-12)	=	2.57 TONS
ITEM 207	WATER		24 M GALS.
ITEM 207	TEMPORARY SLOPE DRAINS		320 LIN. FT.
ITEM 207	TEMPORARY BENCHES, DIKES, DAMS AND SEDIMENT BASINS		164 CU. YDS.
ITEM 659	REPAIR SEEDING AND MULCHING		2.790 SQ. YDS.
ITEM 207	MOWING		126 M SQ. FT.

Calc. C.C.C. 9-12-73
Chkd. L.J.P. 9-12-73

Rev. 12-27-73

GENERAL NOTES

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

7/81

BELMONT COUNTY
BEL-70-18.87

TYPE CODE Y021

ITEM	SHEET NUMBER 5	6	9	10	11	12	13	14	77
ROADWAY									
201	Lump								
202					Lump	Lump			
202					548	226			
202							1		
202					550	412.5			
203			165,328						
203			163,546						
203			16,058						
606					493	407			
607									1,160
EROSION CONTROL									
207		24							
207		126							
207		11,161							
207		320							
207		164							
601					11				
601					78				
601					174	162			
601					30				
659		2,790							
659			55,801						
659		2.57	5.12						
659			25.57						
660					1007				
667					78	47			
DRAINAGE									
602					6.9	1.8			
603						104			
603					150				
603				40					
603							30		
603					80				
603					288				
603				362	100				
603					172				
603					150				
603					204	20			
603					120				
603					144				
604				1	2		1		
604					2				
604				2					
604					1				
604				2	2				
605				145	1002	577			
605				950	1,419	1,045	1,000	180	
605					94				
605	150			20	591			28	
605	21				15				

ITEM	QUANT.	UNIT	DESCRIPTION
ROADWAY			
201	Lump	Lump	Clearing and Grubbing
202	Lump	Lump	Portions of Structures Removed
202	774	Lin.Ft.	6" Concrete Gutter Removed
202	1	Each	Catch Basin Abandoned
202	962.5	Lin.Ft.	Guardrail removed for Storage As per Plan
203	165,328	Cu.Yds.	Excavation not including Embankment Construction
203	163,546	Cu.Yds.	Embankment
203	16,058	Sq.Yds.	Subgrade Compaction
606	900	Lin.Ft.	Guardrail, Type 5
607	1,160	Lin.Ft.	Fence, Type 47
EROSION CONTROL			
207	24	M.Gals.	Water
207	126	M.Sq.Ft.	Mowing
207	11,161	Sq.Yds.	Temporary Seeding and Mulching
207	320	Lin.Ft.	Temporary Slope Drains
207	164	Cu.Yds.	Temporary Benches, Dikes, Dams and Sediment Basins
601	11	Sq.Yds.	Riprap, using 6" Reinforced Concrete Slab
601	78	Cu.Yds.	Rock Channel Protection, Type A
601	336	Cu.Yds.	Rock Channel Protection, Type B
601	30	Lin.Ft.	Paved Gutter, As per Plan
659	2,790	Sq.Yds.	Repair Seeding and Mulching
659	55,801	Sq.Yds.	Seeding and Mulching
659	7.69	Tons	Commercial Fertilizer (12-12-12)
659	25.57	Tons	Agricultural Liming
660	1,007	Sq.Yds.	Sodding
667	125	Sq.Yds.	Seeding and Jute Matting
DRAINAGE			
602	8.7	Cu.Yds.	Concrete Masonry
603	104	Lin.Ft.	60" Conduit, Type A, 707.03 (0.109-0.138) As per Plan
603	150	Lin.Ft.	108" Conduit, Type A, 707.03 (0.218-0.249) As per Plan
603	40	Lin.Ft.	14"x 23" Conduit, Type B, 706.04, HE-II
603	30	Lin.Ft.	15" Conduit, Type B
603	80	Lin.Ft.	18" Conduit, Type B, 706.02, Class IV
603	288	Lin.Ft.	21" Conduit, Type B
603	462	Lin.Ft.	15" Conduit, Type C
603	172	Lin.Ft.	18" Conduit, Type C
603	150	Lin.Ft.	21" Conduit, Type C
603	224	Lin.Ft.	6" Conduit, Type F
603	120	Lin.Ft.	18" Conduit, Type F
603	144	Lin.Ft.	21" Conduit, Type F
604	4	Each	Std. No. 5 Catch Basin
604	2	Each	Std. No. 5 Catch Basin, Modified As per Plan
604	2	Each	Std. No. 1 Manhole
604	1	Each	Std. 2-A-14 Paved Shoulder Inlet
604	4	Each	Std. 2-A-20 Paved Shoulder Inlet
605	1,724	Lin.Ft.	6" Shallow Pipe Underdrains
605	4,594	Lin.Ft.	6" Deep Pipe Underdrains
605	94	Lin.Ft.	6" Unclassified Pipe Underdrains
605	789	Lin.Ft.	6" Unclassified Pipe Underdrains, 707.01 Type III or 707.12 As per Plan
605	36	Lin.Ft.	Aggregate Drains for Springs As per Plan

Rev. 12-27-73

CALC. C.C.C. 9-25-73
CHKD. L.J.P. 9-25-73

LD0303
12-28-67

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

8/81

BELMONT COUNTY
BEL-70-18.87

TYPE CODE Y021

ITEM	SHEET NUMBER 5	6	9	10	11	12	13	14	58	73	74	100% STATE	ITEM	PROJECT GRAND TOTAL	UNIT	DESCRIPTION
																PAVEMENT
301			342										301	342	Cu.Yds.	Bituminous Aggregate Base, 702.01 (85-100 or AC-20) or 702.09 RT-11 or RT-12, As per Plan
304			765										304	765	Cu.Yds.	Aggregate Base
305			3,210										305	3,210	Sq.Yds.	9" Portland Cement Concrete Base
310			2,544										310	2,544	Cu.Yds.	Subbase, Grading A, As per Plan
402			156										402	156	Cu.Yds.	Asphalt Concrete (70-85 or AC-20)
404			112										404	112	Cu.Yds.	Asphalt Concrete (70-85 or AC-20)
407			321										407	321	Gals.	Tack Coat, 702.04, MS-2 or RS-1 or 702.02, RC-70 or RC-250
407			11.3										407	11.3	Tons	Cover Aggregate
409			764										409	764	Gals.	Seal Coat, Bituminous Material, As per Plan
409			21										409	21	Cu.Yds.	Seal Coat, Cover Aggregate No. 8
451			8,746										451	8,746	Sq.Yds.	10" Reinforced Portland Cement Concrete Pavement
609			1,158										609	1,158	Lin.Ft.	Curb, Std. Type 6
609			187										609	187	Lin.Ft.	Curb, Std Type 7
609			496										609	496	Lin.Ft.	Curb, Std. Type 8
Special			109										Special	109	Cu.Yds.	Drainage Connection using No. 8 Aggregate
																TRAFFIC CONTROL
202									2				202	2	Each	Removal of Existing Support and Foundation, Type A, As per Plan
202									4				202	4	Each	Removal of Existing Support and Foundation, Type B, As per Plan
620									9				620	9	Each	Delineator, Type C-1, Post Mounted.
620									38				620	38	Each	Delineator, Type C-2, Post Mounted
621									1.02				621	1.02	Miles	4" Edge Lines
621									0.08				621	0.08	Miles	4" Lane Lines
621									1,079				621	1079	Lin.Ft.	Channalizing Lines
621									515				621	515	Lin.Ft.	24" Broad Transverse Lines
621									683				621	683	Lin.Ft.	Curb Marking
621									2,700				621	2,700	Lin.Ft.	Parking Lot Stall Marking
815									260				815	260	Sq.Ft.	Signs, Extru Sheet Type, As per Plan
815									45				815	45	Sq.Ft.	Signs, Flat Sheet Type, As per Plan
815									1				815	1	Each	Variable Sign Message Unit, As per Plan
815									192				815	192	Sq.Ft.	Remove and Re-erect Existing Ground Mounted Signs
816									13				816	13	Lin.Ft.	Structural Support, 4 lb. Post, Driven
816									75				816	75	Lin.Ft.	Structural Support, 6 lb. Beam, Driven
816									16				816	16	Lin.Ft.	Structural Support, 6 lb. Beam, As per Plan, Driven
816									207				816	207	Lin.Ft.	Structural Support, 8 WF 17
816									35				816	35	Lin.Ft.	Structural Support, 10 WF 21
816									14				816	14	Cu.Yds.	Concrete for Ground Mounted Sign Support Foundations
816									6				816	6	Each	Breakaway Sign Support Connection
																LIGHTING
605										700			605	700	Lin.Ft.	4" Shallow Pipe Underdrains
606											4		606	4	Each	Guard Post, As per Plan
625											13		625	13	Each	Light Pole Foundation, 24" x 6' Deep
625											6		625	6	Each	Light Pole, Design AT 15B 34.2
625											1		625	1	Each	Light Pole, Design AT 10B 34.2
625											3		625	3	Each	Light Pole, Design A 10B 32.5
625											3		625	3	Each	Light Pole, Design A 15B 32.5
625											10		625	10	Each	Luminaire, Type III, 400 Watt, 713.11
625											3		625	3	Each	Luminaire, Type III, 400 Watt, 713.11 with Integral Photoelectric Control
625											13		625	13	Each	Lamp, 400 Watt Mercury, 713.14
625									1		13		625	14	Each	Ground Rod
625											8	5	625	8	Each	Pull Box 18" Circular, 713.09, As per Plan
625											12		625	12	Each	Pull Box 24" Circular, 713.09, As per Plan
625											4,967		625	4,967	Lin.Ft.	Trench, 24" Deep
625													625	4	Each	Marker
625											487	487	625	487	Lin.Ft.	Conduit, 1½", 713.04
625											652		625	652	Lin.Ft.	Conduit, 3", 713.04
625											5,777		625	5,777	Lin.Ft.	1½" Duct-Cable with three No.4 AWG 600 Volt Cables
625											1,101		625	1,101	Lin.Ft.	No.4 AWG 600 Volt Distribution Cable
625											1,185		625	1,185	Lin.Ft.	No. 1/0 AWG 600 Volt Secondary Feeder Cable
625											1,223		625	1,223	Lin.Ft.	No. 10 AWG, Pole and Bracket Cable, Type RHH/RHW
625											75		625	75	Each	Connector Kit, Type I, As per Plan
625											26		625	26	Each	Connector Kit, Type II, As per Plan
625											13		625	13	Each	Connector Kit, Type III, As per Plan
625											3		625	3	Each	Connector Kit, Type VII B, As per Plan
625											Lump		625	Lump	Lump	Service Pole, As per Plan
614		Lump											614	Lump	Lump	Maintaining Traffic
619	Lump												619	Lump	Lump	Field Office
623													623	Lump	Lump	Construction Layout Stakes

Calc. C.C.C. 9-25-73
Ck'd L.J.P. 9-25-73

LD 0303
12-29-67

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

9/81

BELMONT COUNTY
BEL-70-18.87

ITEM 310 SUBBASE GRADING A.

I.R. 70
VOLUME = 539.36 CU. YDS.
RAMP A
VOLUME = 508.07 CU. YDS.
RAMP B
VOLUME = 609.71 CU. YDS.
PARKING AREA
VOLUME = 886.42 CU. YDS.

TOTAL ITEM 310 = 2,543.56 CU. YDS.
TO SUMMARY USE = 2,544 CU. YDS.

ITEM 305 9" PORTLAND CEMENT CONCRETE BASE

I.R. 70
AREA = 2,060.92 SQ. YDS.
RAMP A
AREA = 1,148.31 SQ. YDS.

TOTAL ITEM 305 = 3,209.23 SQ. YDS.
TO SUMMARY USE = 3,210 SQ. YDS.

ITEM 304 AGGREGATE BASE

I.R. 70
VOLUME = 269.30 CU. YDS.
RAMP A
VOLUME = 180.38 CU. YDS.
RAMP B
VOLUME = 315.01 CU. YDS.

TOTAL ITEM 304 = 764.69 CU. YDS.
TO SUMMARY USE = 765 CU. YDS.

ITEM 301 3" BITUMINOUS AGGREGATE BASE; 702.01(85-100 OR AC 20) OR 702.09 RT-11 OR RT-12, AS PER PLAN

I.R. 70
VOLUME = 115.42 CU. YDS.
RAMP A
VOLUME = 83.25 CU. YDS.
RAMP B
VOLUME = 143.24 CU. YDS.

TOTAL ITEM 301 = 341.91 CU. YDS.
TO SUMMARY USE = 342 CU. YDS.

ITEM 451 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

RAMP A
AREA = 1,270.81 SQ. YDS.
RAMP B
AREA = 2,346.05 SQ. YDS.
PARKING AREA
AREA = 5,128.47 SQ. YDS.

TOTAL ITEM 451 = 8,745.33 SQ. YDS.
TO SUMMARY USE = 8,746 SQ. YDS.

ITEM 407 TACK COAT: 702.04, MS-2 OR RS-1; 702.02, RC-70 OR RC-250, APPLIED AT THE RATE OF 0.10 GAL.PER SQ. YDS.

I.R. 70
VOLUME = 206.09 GALS.
RAMP A
VOLUME = 114.83 GALS.

TOTAL ITEM 407 = 320.92 GALS.
TO SUMMARY USE = 321 GALS.

407 COVER AGGREGATE
TO SUMMARY USE = 11.3 TONS

ITEM 409 SEAL COAT USING 0.008 CU.YDS. NO.8 AGGREGATE PER SQ.YD. AND 0.3 GAL. BITUMINOUS MATERIAL PER SQ.YD.

I.R. 70
BITUMINOUS MATERIAL = 415.52 GALS.
COVER AGGREGATE = 11.08 CU.YDS.

RAMP A
BITUMINOUS MATERIAL = 120.93 GALS.
COVER AGGREGATE = 3.22 CU.YDS.

RAMP B
BITUMINOUS MATERIAL = 227.57 GALS.
COVER AGGREGATE = 6.07 CU.YDS.

TOTAL BITUMINOUS MATERIAL = 764.02 GALS.
TO SUMMARY USE 764 GALS.

TOTAL COVER AGGREGATE = 20.37 CU.YDS.
TO SUMMARY USE 21 CU.YDS.

ITEM 609 CURB, TYPE 6

I.R. 70
LENGTH = 345.69 LIN. FT.
RAMP A
LENGTH = 812.33 LIN. FT.

TOTAL ITEM 609 TYPE 6 = 1,158.02 LIN. FT.
TO SUMMARY USE = 1,158 LIN. FT.

ITEM 609 CURB, TYPE 7

RAMP B
LENGTH = 187.00 LIN. FT.

TOTAL ITEM 609 TYPE 7 = 187.00 LIN. FT.
TO SUMMARY USE = 187 LIN. FT.

ITEM 609 CURB, TYPE 8

RAMP B
LENGTH = 496.15 LIN. FT.

TOTAL ITEM 609,TYPE 8 = 496.15 LIN. FT.
TO SUMMARY USE = 496 LIN. FT.

SPECIAL SPECIAL DRAINAGE CONNECTION USING NO. 8 AGGREGATE

RAMP A
VOLUME = 36.03 CU. YDS.
RAMP B
VOLUME = 72.22 CU. YDS.

TOTAL ITEM DRAINAGE CONN. = 108.25 CU. YDS.
TO SUMMARY USE = 109 CU. YDS.

ITEM 404 1-1/4" ASPHALT CONCRETE (70-85 OR AC 20) (SEE NOTE IN PROPOSAL)

I.R. 70
VOLUME = 71.59 CU. YDS.
RAMP A
VOLUME = 39.88 CU. YDS.

TOTAL ITEM 404 = 111.47 CU. YDS.
TO SUMMARY USE = 112 CU. YDS.

ITEM 402 1-3/4" ASPHALT CONCRETE(70-85 OR AC 20)

I.R. 70
VOLUME = 100.16 CU. YDS.
RAMP A
VOLUME = 55.81 CU. YDS.

TOTAL ITEM 402 = 155.97 CU. YDS.
TO SUMMARY USE = 156 CU. YDS.

ITEM 203 SUBGRADE COMPACTION

I.R.70 3,445.98 SQ. YDS.
RAMP A 3,418.15 SQ. YDS.
PARKING AREA 5,128.47 SQ. YDS.
RAMP B 4,064.93 SQ. YDS.

TOTAL 16,057.53 SQ. YDS.
TO SUMMARY USE 16,058 SQ. YDS.

EARTHWORK AND SEEDING QUANTITIES

LOCATION STA.	TO STA.	EXCAVATION CU.YDS.	EMBANKMENT CU.YDS.	SEED & MULCH SQ.YDS.
1001+00	1011+00	13,675	149	6,297
1011+00	1021+00	99,850	102,136	26,686
1021+00	1031+00	24,706	60,964	13,699
1031+00	1041+00	25,973	244	9,615
1041+00	1044+00	1,124	53	1,105
TOTALS		165,328	163,546	57,402

TOTAL 203 EXC. NOT INCLUDING EMB. CONSTR. TO SUMMARY 165,328 CU.YDS.
TOTAL 203 EMBANKMENT TO SUMMARY 163,546 CU.YDS.
TOTAL 659 SEEDING AND MULCHING 57,402 SQ.YDS.
DEDUCT 660 SODDING - 1,007 SQ.YDS.
DEDUCT 601 RIPRAP, DUMPED ROCK, & PAVED GUTTER - 594 SQ.YDS.
659 SEEDING AND MULCHING TO SUMMARY 55,801 SQ.YDS.

ITEM 659 COMMERCIAL FERTILIZER (12-12-12)

TOTAL AREA OF SEEDING AND MULCHING AND SODDING 56,808 SQ.YDS.
QUANTITY = 56,808 X 9 ÷ 1000 (20 ÷ 2000) = 5.12 TONS

TO SUMMARY USE 5.12 TONS ITEM 659 COMMERCIAL FERTLIZER

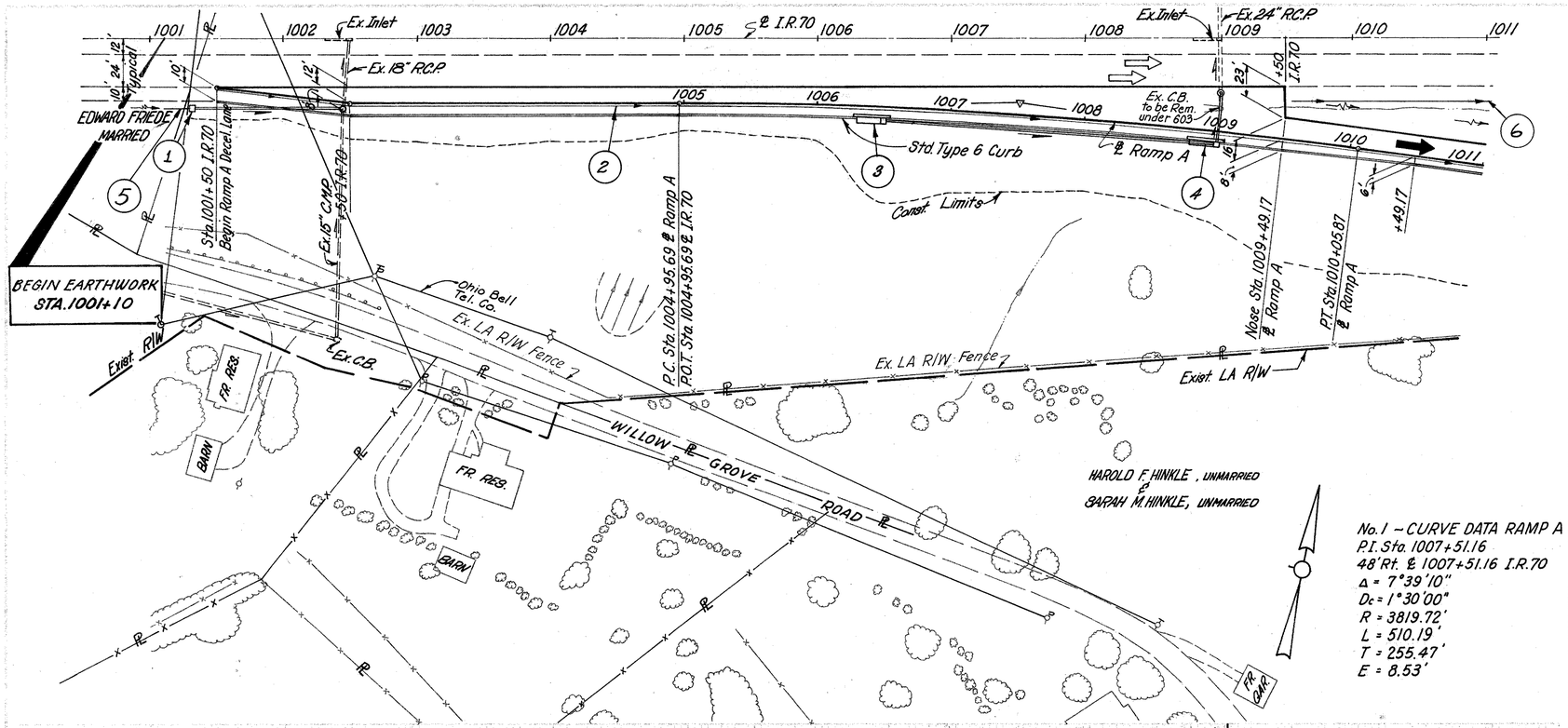
ITEM 659 AGRICULTURAL LIMING

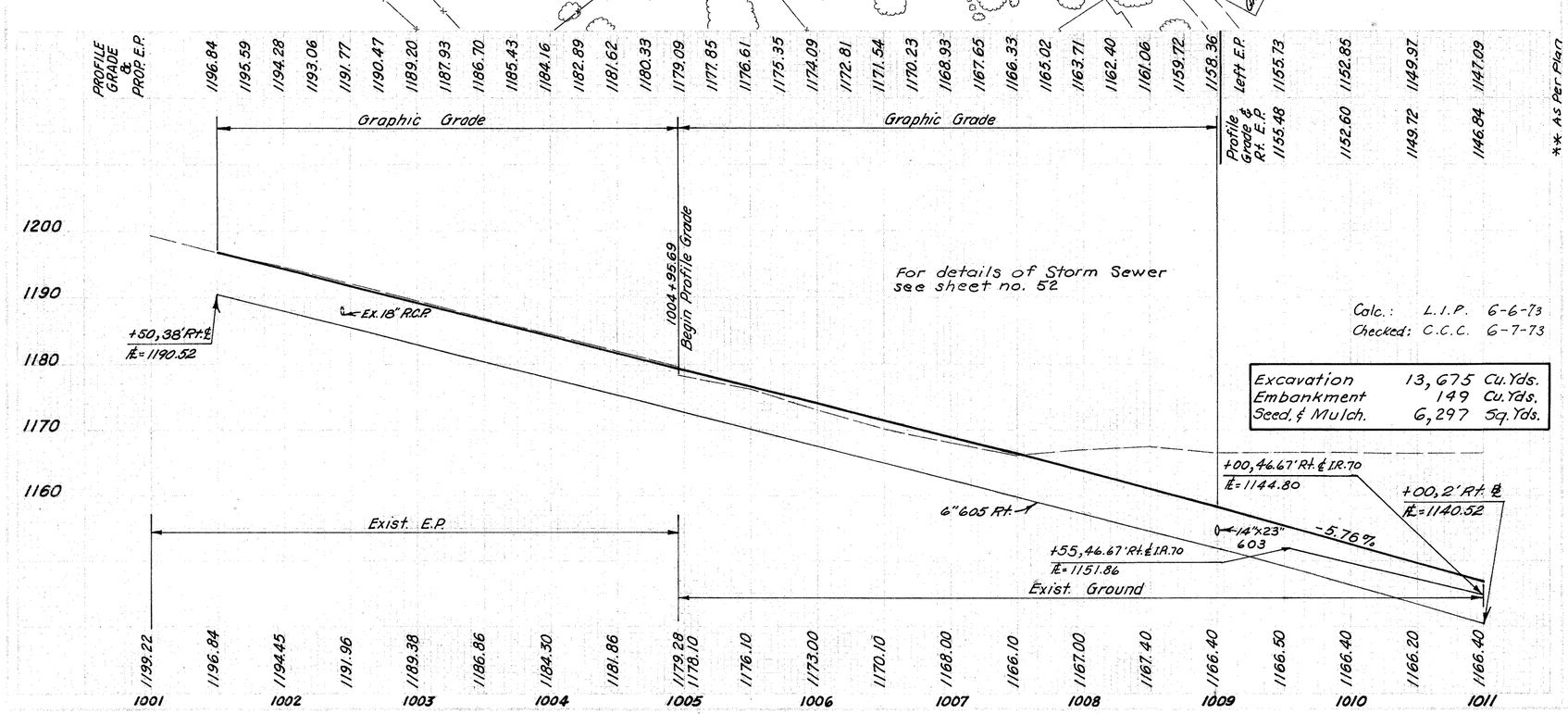
TOTAL AREA OF SEEDING AND MULCHING AND SODDING 56,808 SQ.YDS.
QUANTITY = 56,808 X 9 ÷ 1000 (100 ÷ 2000) = 25.57 TONS

TO SUMMARY USE 25.57 TONS ITEM 659 AGRICULTURAL LIMING

Calc. LJP 9-12-73
Chkd. CCC 9-12-73

BELMONT COUNTY
BEL-70-18.87





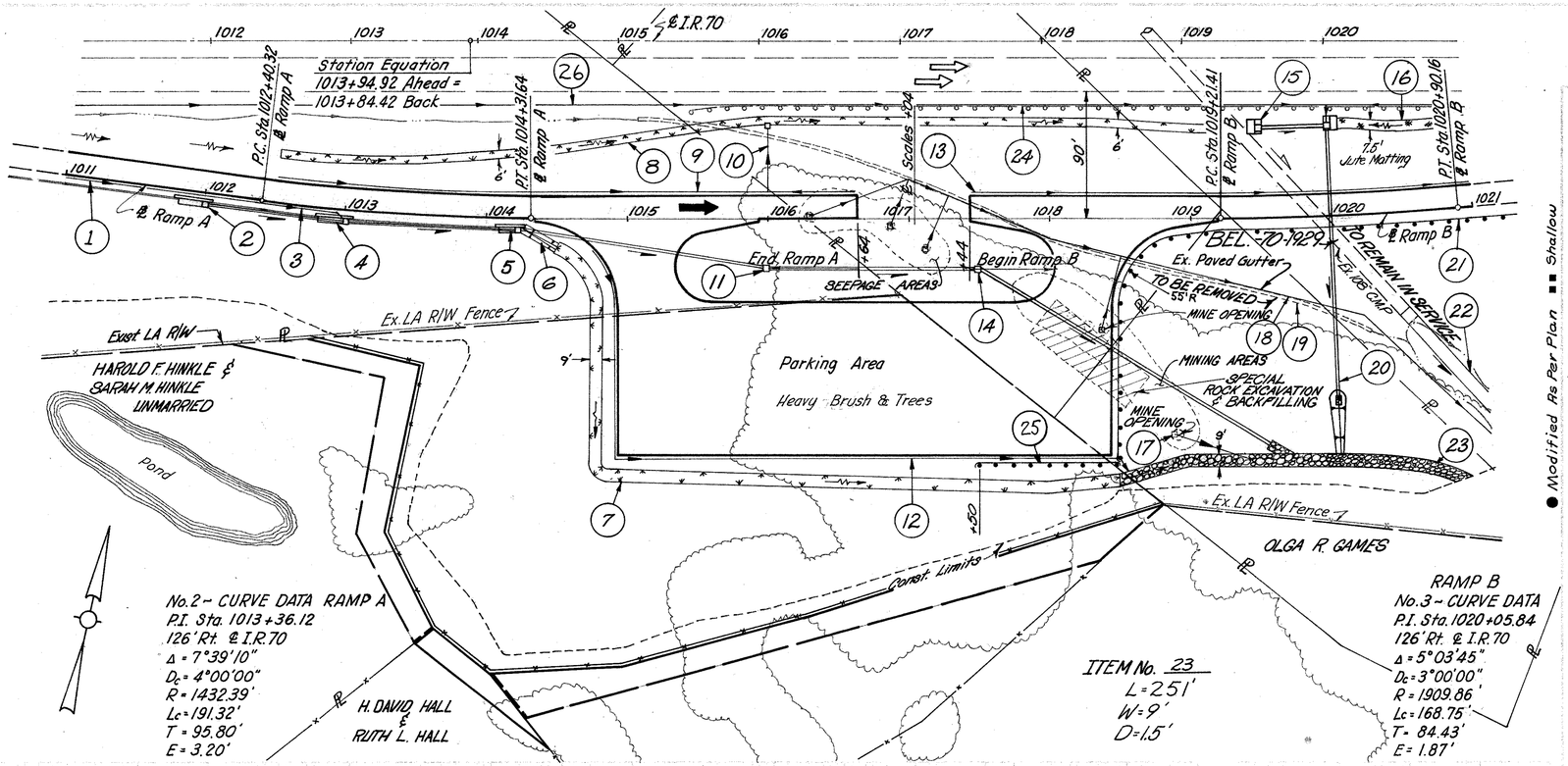
605 Pipe Underdrains				
	Deep	6"	Lin. Ft.	920
	Shallow	6"	Lin. Ft.	145
603 Conduit	Type B	15"	Lin. Ft.	112
		14"x23"	Lin. Ft.	250
** 605 6" Pipe Underdrains	Type III	707.12	Lin. Ft.	40
604 Manhole	Std. No.			
	1	2-1-80	Each	1
	5		Each	1
615 Inlet	Std. No.			
	606.04 HE-4		Lin. Ft.	20

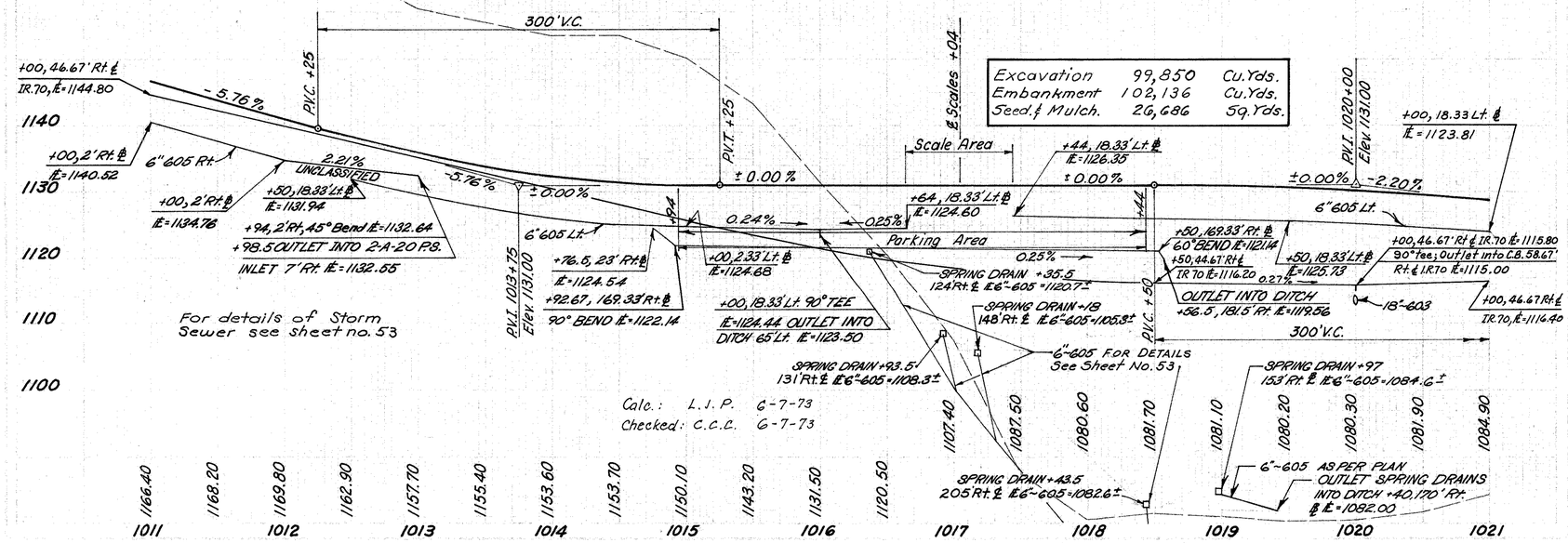
1	1001+32	1002+44	Rt.
2	1001+50	1011+00	Rt.
3	1006+50	1009+00	Rt.
4	1009+20	1009+20	℄
5	1001+11	1001+31	Rt.
6	1009+55	1011+00	Rt.

STA. 1001+00 TO STA. 1011+00

| | | | |

BELMONT COUNTY
BEL-70-18.87





● Modified As Per Plan ■■ Shallow

■ 707.01 Type III or 707.12 As per plan. ▲ Drains per springs as per plan.

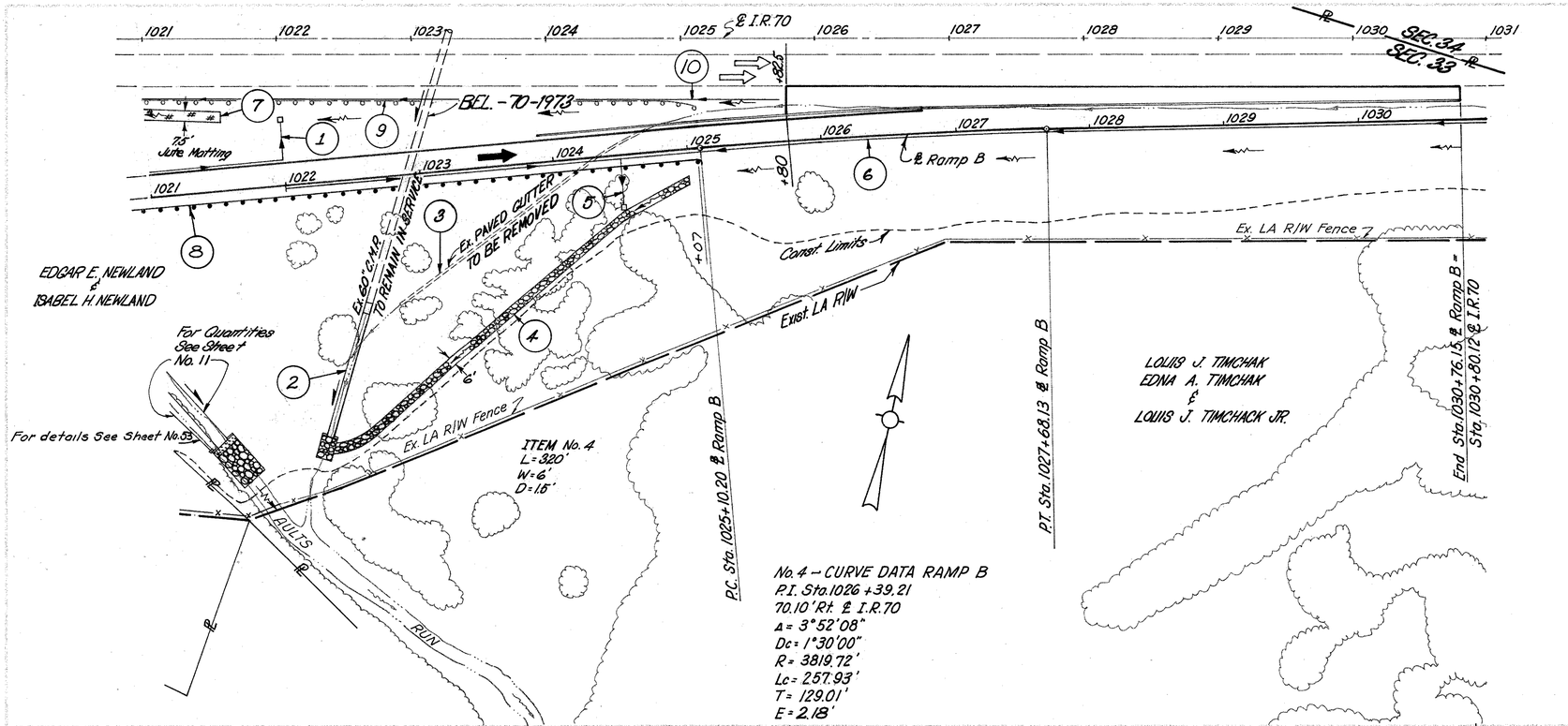
* 707.03 (0228-0249) As Per Plan

** 706.02 Class II - ## As Per Plan

| | | |

BELMONT COUNTY
BEL-70-18.87

FED. DIV.	STATE	FEDERAL PROJECT		12
5	OHIO			81



Excavation	24,706	Cu. Yds.
Embankment	60,964	Cu. Yds.
Seed. & Mulch.	13,699	Sq. Yds.

Calc.: L.I.P. 6-8-73
Checked: C.C.C. 6-11-73

ESTIMATED QUANTITIES

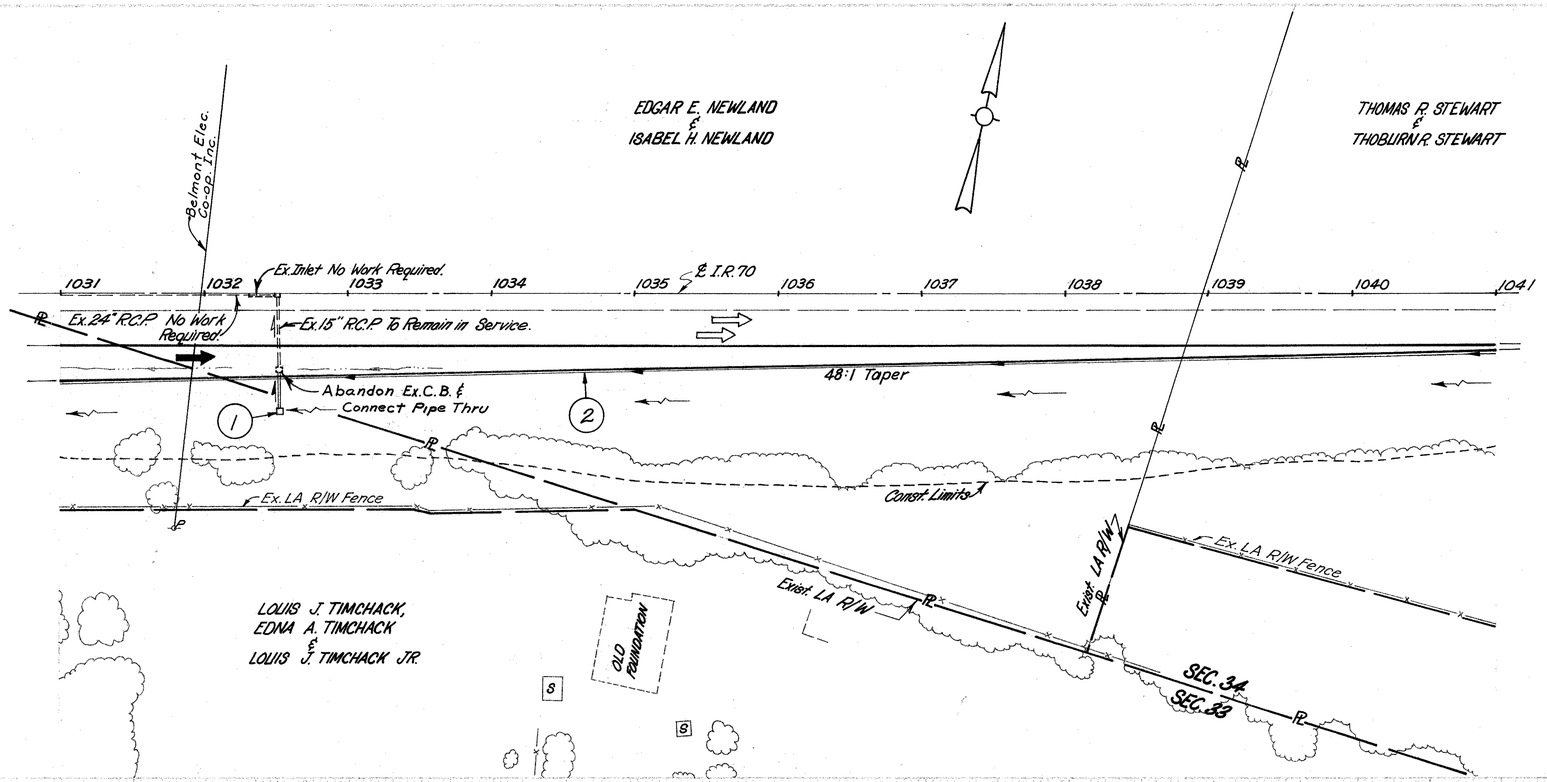
	STATION TO STATION	SEE SHEET NO.	659 Bents 6"	667 Jute Matting Sq. Yds.	606 Guard Rail Type Steel Posts Lin. Ft.	605 Pipe Underdrains Shallow 6" Lin. Ft.	605 Pipe Underdrains Deep 6" Lin. Ft.	605 Pipe Underdrains Type F 6" Lin. Ft.	603 Conduit * Type 1 * 60" Lin. Ft.
1	1024+00 to 1022+00	Lt. ℄	1	51			119	10	104
2	1022+00 to 1022+90			55					
3	1022+77 to 1024+71	15' Rt.		51					
4	1024+71 to 1025+00	Rt.		51					
5	1024+50 to 1024+00	Rt.	1	51			26	10	
6	1022+00 to 1021+00	Rt.					240		
7	1021+00 to 1021+57	Lt.		47		407			
8	1021+00 to 1025+04.94	Rt.							
9	1021+00 to 1025+12.50	Rt.				577			
10	1021+00 to 1025+77	Rt. ℄ Ramp B							
			2	357		984	1045	20	104

	STATION TO STATION	SEE SHEET NO.	601 Rock Channel Protection Type B Cu. Yds.	602 Concrete Paving Masonry Cu. Yds.	** Rs Per Plan 202 6" Concrete Pavement Removed Lin. Ft.	** Rs Per Plan 202 Portions of Guard Rail Removed for Storage Stockpiled Retained * * Lin. Ft.	* 207.08 (0.109-0.138) As Per Plan 202 Lump
1	1024+00 to 1022+00	Lt. ℄					
2	1022+00 to 1022+90						
3	1022+77 to 1024+71	15' Rt.					
4	1024+71 to 1025+00	Rt.					
5	1024+50 to 1024+00	Rt.					
6	1022+00 to 1021+00	Rt.					
7	1021+00 to 1021+57	Lt.					
8	1021+00 to 1025+04.94	Rt.					
9	1021+00 to 1025+12.50	Rt.	4.12.5	4.12.5			
10	1021+00 to 1025+77	Rt. ℄ Ramp B					
			4.12.5	4.12.5	226	20	Lump

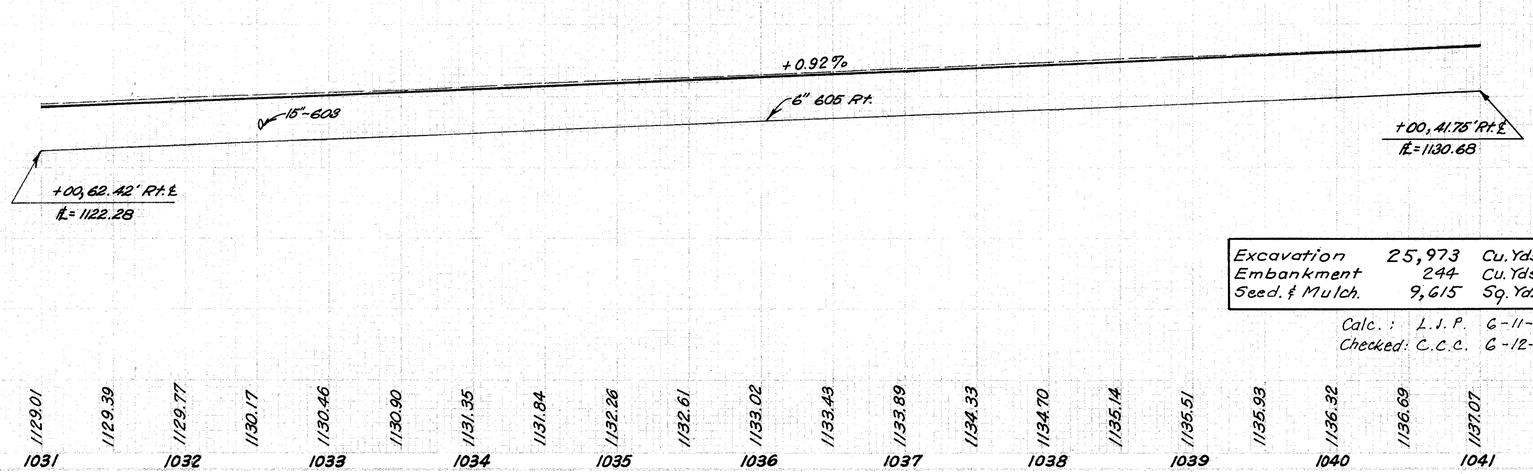
1021+00 TO 1031+00

BELMONT COUNTY
BEL-70-18.87

PROJECT DIVISION	STATE	PROJECT		SHEET NO.	TOTAL SHEETS
9	OHIO			13	81



PROFILE GRADE & Prop. E.P.	1128.60	1128.81	1129.02	1129.23	1129.44	1129.65	1129.86	1130.07	1130.28	1130.49	1130.70	1130.91	1131.12	1131.33	1131.54	1131.75	1131.96	1132.17	1132.38	1132.59	1132.80	1133.01	1133.22	1133.43	1133.64	1133.85	1134.06	1134.27	1134.48	1134.69	1134.90	1135.11	1135.32	1135.53	1135.74	1135.95	1136.16	1136.37	1136.58	1136.79	1137.00
	1031				1032				1033				1034				1035				1036				1037				1038				1039				1040				1041



Excavation	25,973	Cu. Yds.
Embankment	244	Cu. Yds.
Seed. & Mulch.	9,615	Sq. Yds.

Calc.: L.J.P. 6-11-73
Checked: C.C.C. 6-12-73

ESTIMATED QUANTITIES

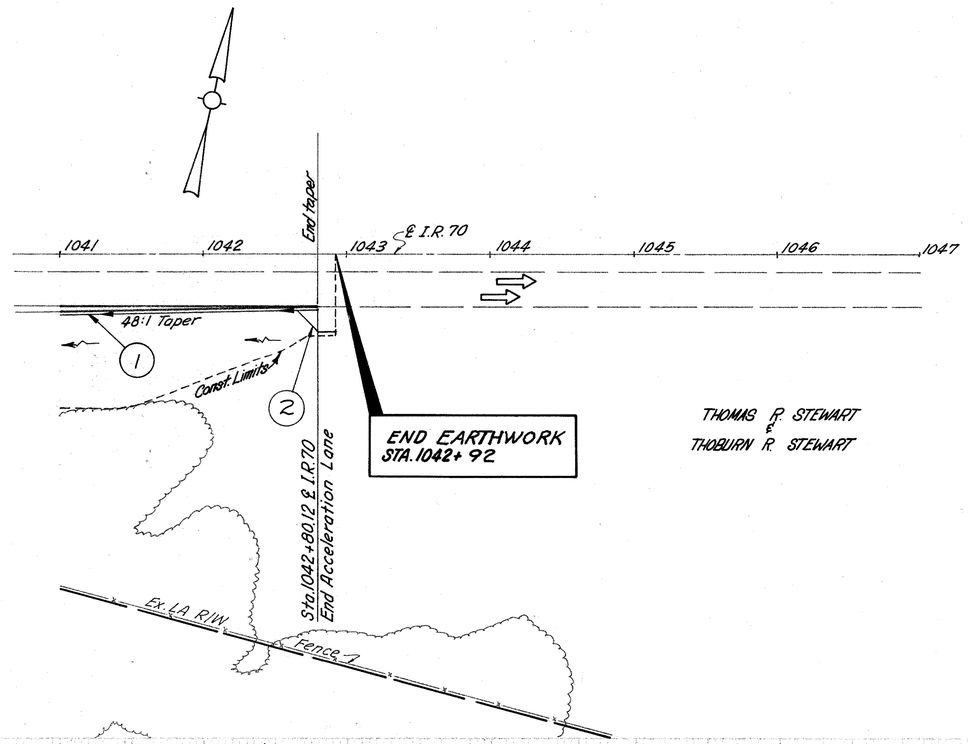
SEE SHEET NO.				
			40	
605	Pipe Underdrains			
	Deep	6" Lin. Ft.	1000	1000
603	Conduit			
	Type B	15" Lin. Ft.	30	30
604	C.B. Std. No. 5	Each	1	1
202	C.B. Abandoned	Each	1	1

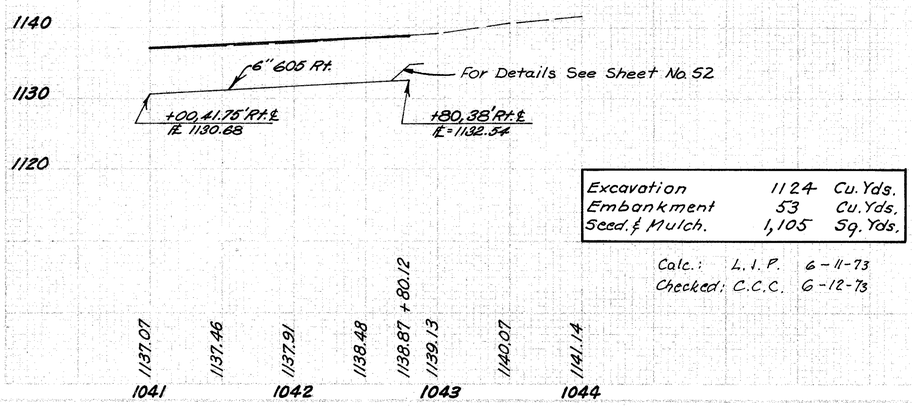
SEE STATION TO STATION LINE			
1	1031+00	1032+50	Rt.
2	1031+00	1041+00	Rt.

STA. 1031+00 TO STA. 1041+00

BELMONT COUNTY
BEL-70-18.87

14
81





Excavation	1124	Cu. Yds.
Embankment	53	Cu. Yds.
Seed. & Mulch.	1,105	Sq. Yds.

Calc.: L. I. P. 6-11-73
Checked: C.C.C. 6-12-73

QUANTITIES

	605 Pipe Underdrains			Bend's
	6" 707.01 Type III or 707.12 As Per Plan Lin. Ft.	Deep 6" Lin. Ft.		6"
1	28	180		2
2			180	
	28			52

	STATIONS TO STATIONS	USE
1	1041+00 to 1042+80	Rt.
2	1042+68 to 1042+90	Rt.

STA. 1041+00 TO STA. 1047+00

SECTIONS

STA.	OFF.

ENG. DIV. DIVISION	STATE	PROJECT	
2	OHIO		

15
81

BELMONT COUNTY
BEL.-70-18.87

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	12		
21	29		
16	19		
12	14		
0	0		

1260
1250
1240
1260
1250
1240
1260
1250
1240

1200
1190
1194.28 Prop. E.P.
15"~603
1002+00
1194.45

EX. R/W

1200
1190
EX. I.R. 70
1196.84 Ex&Prop. E.P.
15"~603
1001+50
1196.84

For Details Of Storm Sewer
See Sheet No. 52.

BEGIN EARTHWORK
STA. 1001+10

1200
1190
1199.22 Ex. E.P.
1001+00
1199.22

1001+10

℄ I.R. 70

0 20 40 60 80 100 120 140 160 180 200 220

X~ Sec's Sta. 1001+00 to Sta. 1002+00

Calc.: D. C. M. 6-11-73
Checked: L. I. P. 6-19-73

18
114
23
51
0
1001+10

ITEM	QUANTITY
39	
194	
31	
175	
32	
139	
18	

SEEDING

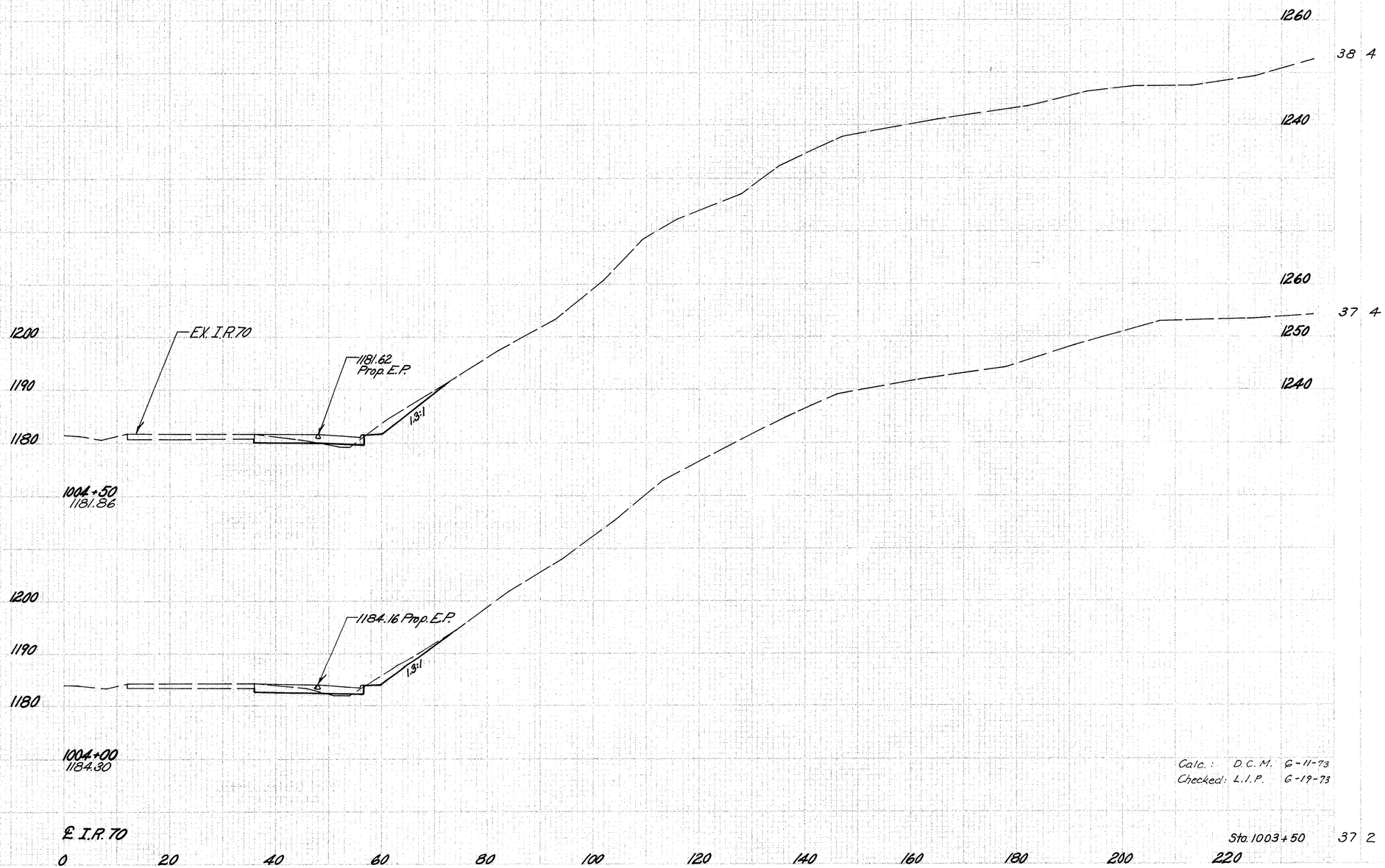
ECO SURV'Y	DIS TRS.

DIV. OF HIGHWAYS	STATE	PROJECT	
2	OHIO		

17
81

BELMONT COUNTY
BEL.-70-18.87

EXCAVATION		EMBANKMENT	
CUT	ADJ	FILL	ADJ



38 4
69 7
37 4
69 6
37 2

32
181
33
200
39

Calc.: D.C.M. 6-11-73
Checked: L.I.P. 6-19-73

X-Sec's Sta. 1004+00 to Sta. 1004+50

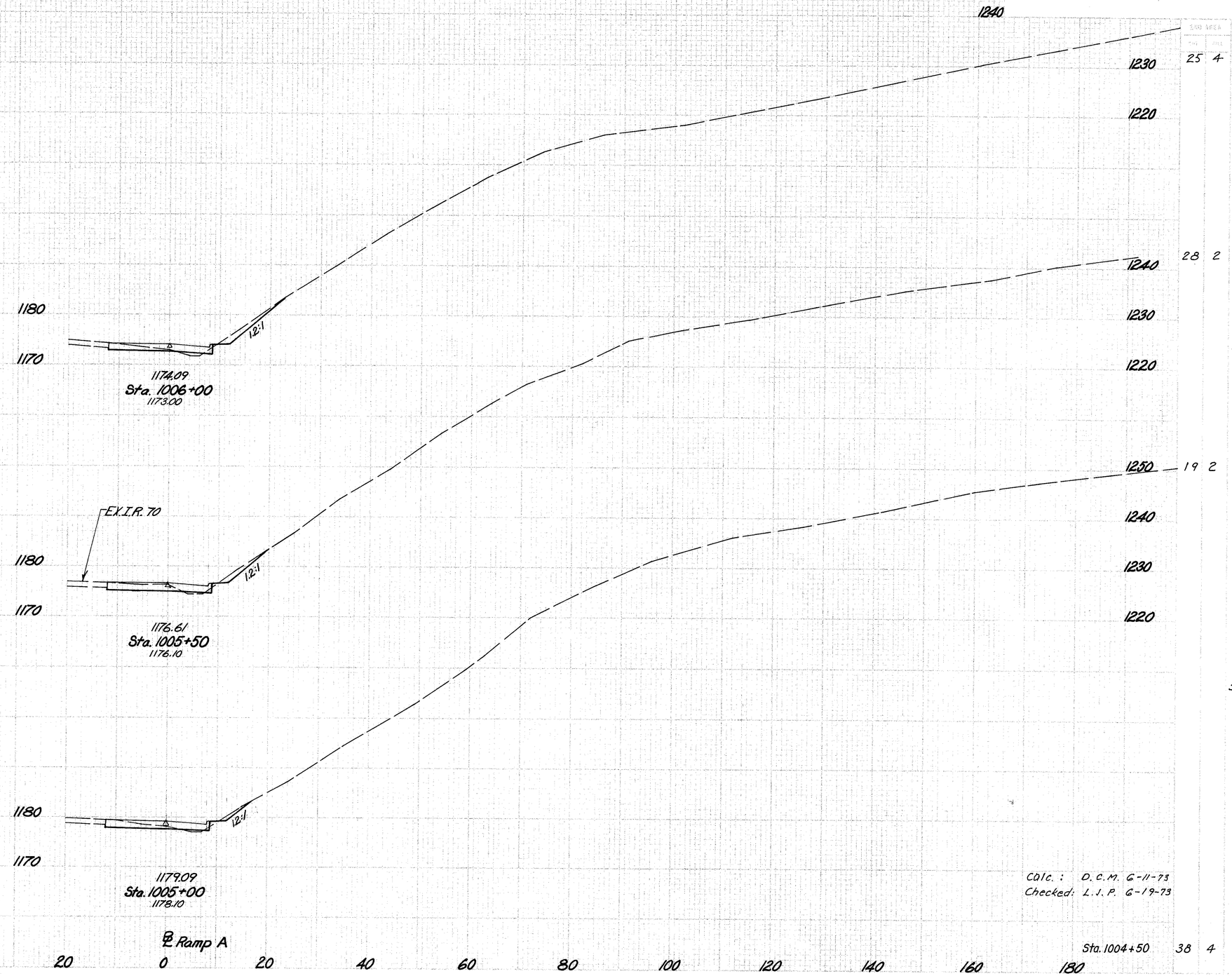
FED. RD. DIV. NO.	STATE	PROJECT	
2	OHIO		

18
81

BELMONT COUNTY
BEL.-70-18.87

SEEDING

EQM. (MDEX)	SQ. (CM)
30	
156	
26	
133	
22	
150	
32	

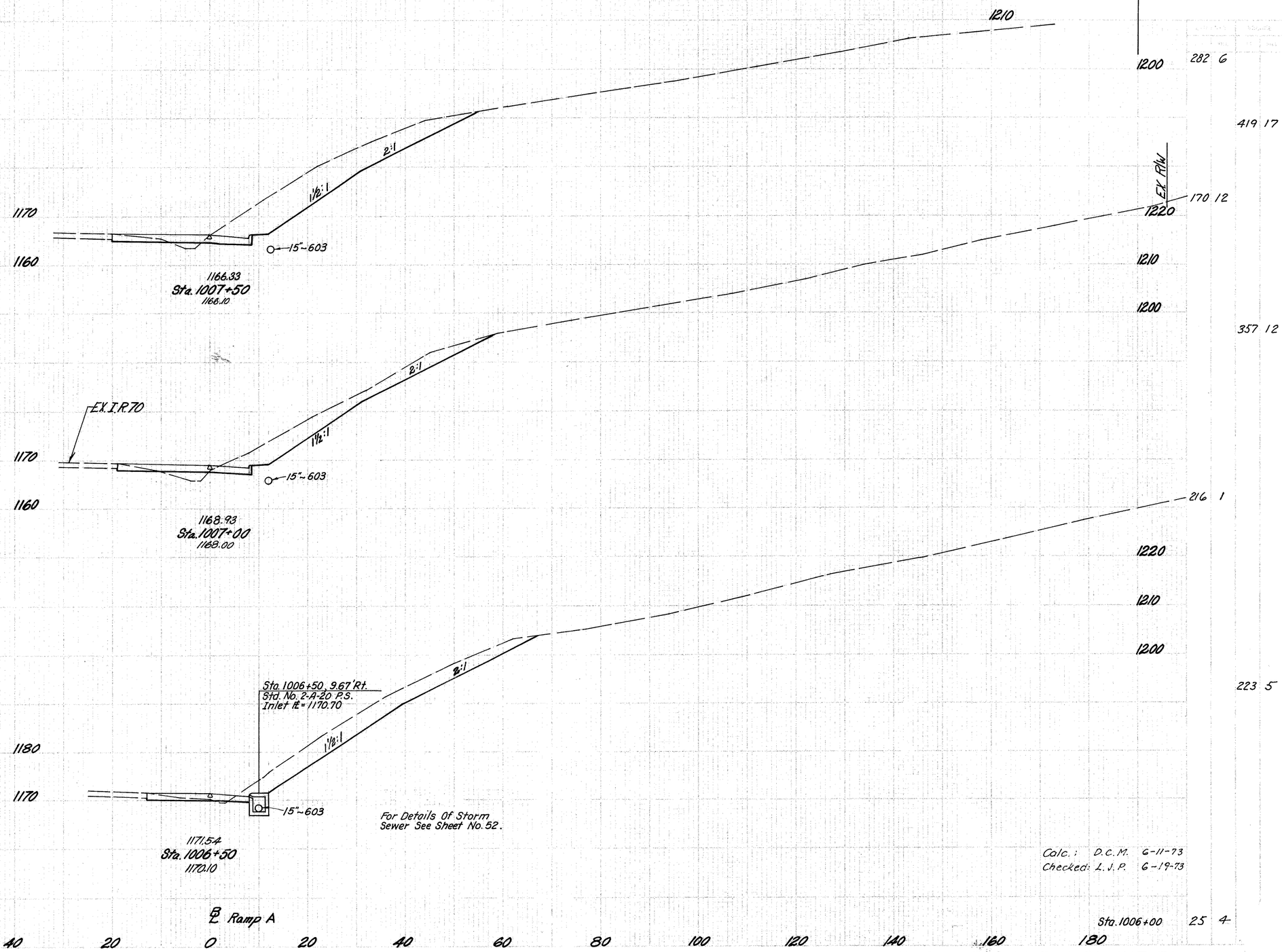


SAND AREA		VOLUMES	
CUT	FILL	CUT	FILL
25	4		
		49	6
28	2		
		44	4
19	2		
		53	6
38	4		

Calc. : D. C. M. 6-11-73
Checked: L. J. P. 6-19-73

X-Sec's Sta. 1005+00 to Sta. 1006+00

BELMONT COUNTY
BEL.-70-18.87



Calc.: D.C.M. 6-11-73
Checked: L.J.P. 6-19-73

SEEDING

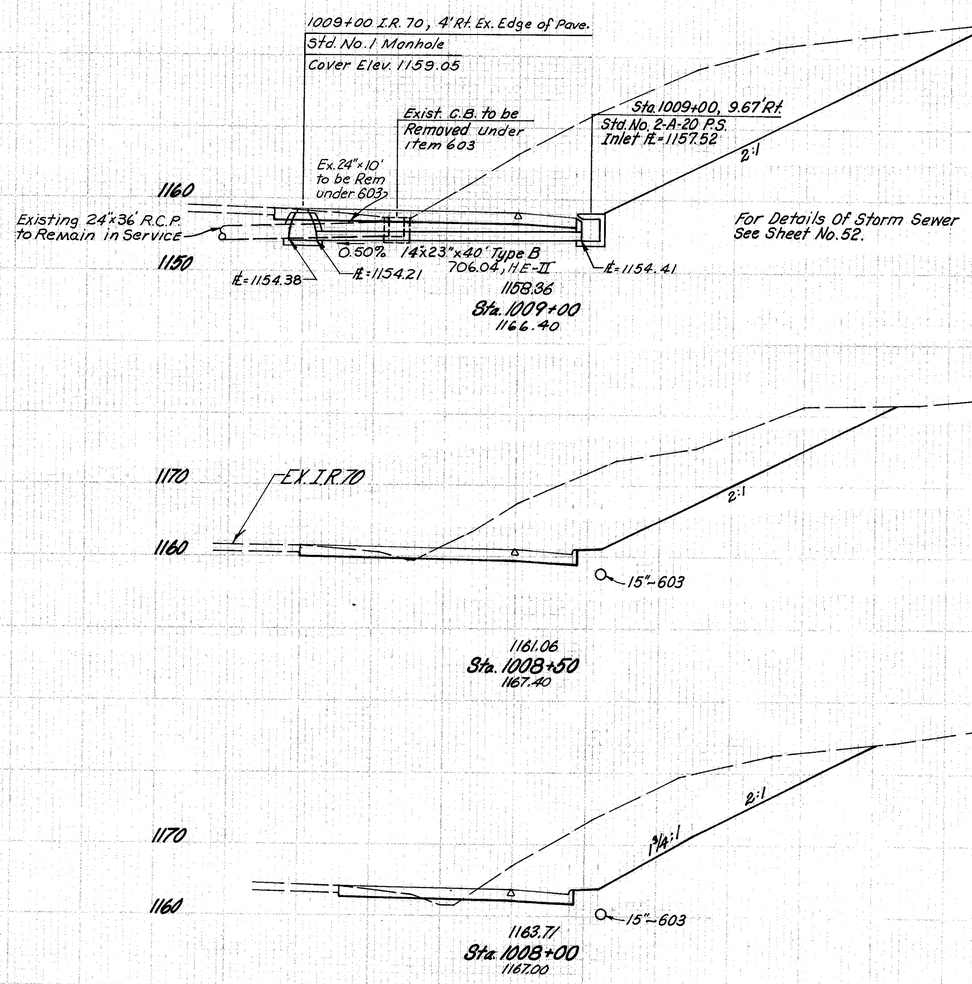
EYD WIDTH	SQ. YDS.
72	
372	
62	
336	
59	
347	
66	

CONST. DIV.	STATE	PROJECT	
9	OHIO		

20
81

BELMONT COUNTY
BEL.-70-18.87

END AREA		VOLUME	
CUT	FILL	CUT	FILL
737	0		
1117	1		
469	1		
774	4		
367	3		
601	8		
282	6		



Calc.: D.C.M. 6-11-73
Checked: L.I.P. 6-19-73

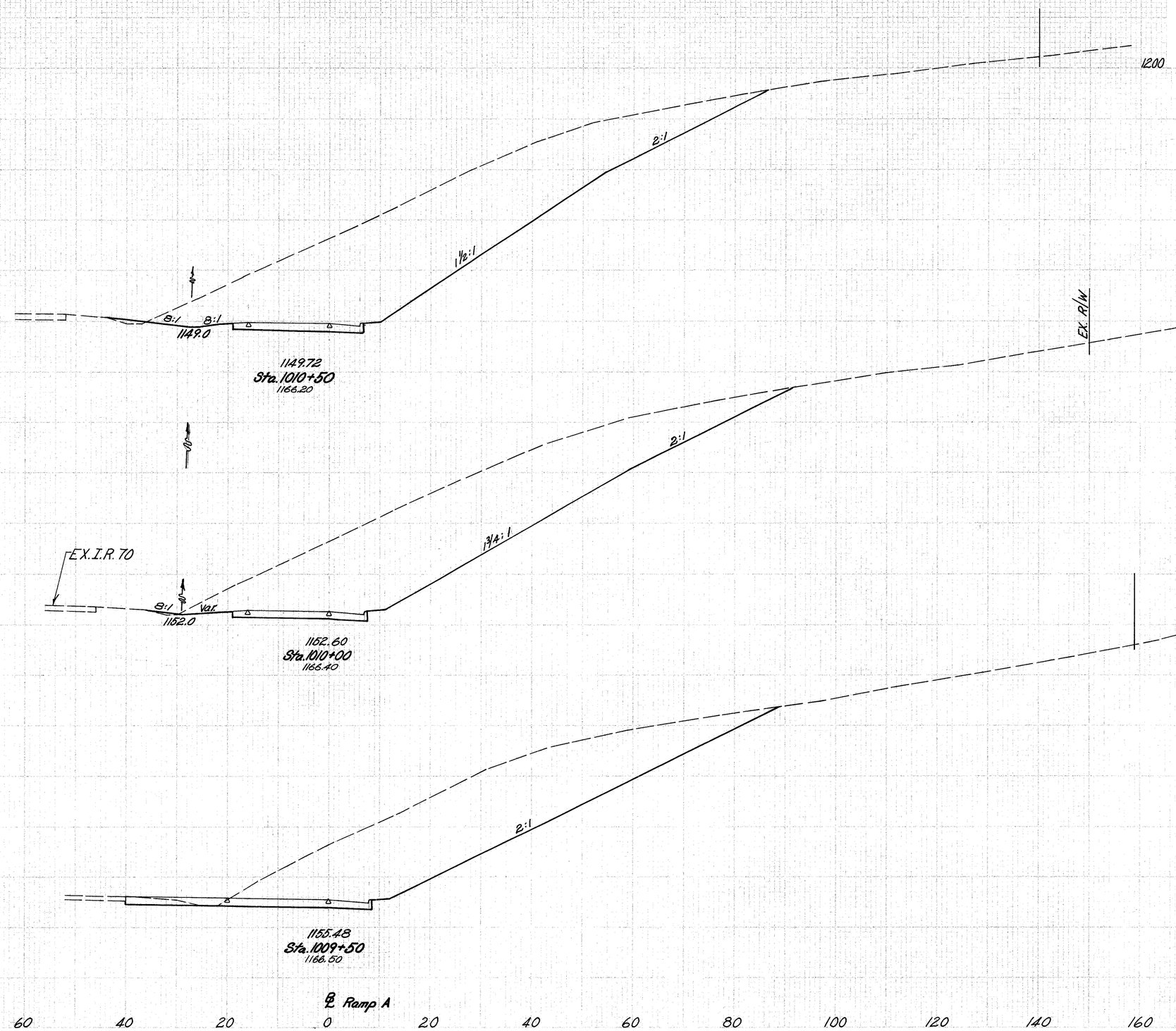
SHEET NO.	STATE	PROJECT	
2	OHIO		

21
81

BELMONT COUNTY
BEL.-70-18.87

GEEDING

CUT WIDTH	CUT VOL.
140	758
133	653
102	483
72	



CUT	FILL	CUT	FILL
		1494 5	
			2581 6
		1344 2	
			2352 2
		1196 0	
			1790 0
		Sta. 1009+00	737 0

Calc.: D.C.M. 6-11-73
Checked: L.J.P. 6-19-73

X~Sec's Sta. 1009+50 to Sta. 1010+50

FED. ROAD DIV. NO.	STATE	PROJECT	
2	OHIO		

22
81

BELMONT COUNTY
BEL.-70-18.87

EXCAVATION		EMBANKMENT	
CUBIC YARDS	STA.	CUBIC YARDS	STA.
2009	1		
3670	3		
1955	2		
3431	3		
1750	1		
2957	5		
1444	5		

1180
1170
1160
1200
1190
1180
1170
1160
1150
1140

Sta. 1012+00, 7.67' Rt
Std. No. 2-A-20 P.S.
Inlet Rim = 1140.41

1½:1
2:1
8:1
8:1
1139.4
1141.08
15"-603
Sta. 1012+00
1169.80

For Details Of Storm Sewer
See Sheet No. 53.

EX. R/W

POND

EX I.R. 70

8:1
8:1
1142.6
1143.96
Sta. 1011+50
1168.20

8:1
8:1
1145.9
1146.84
Sta. 1011+00
1166.40

℄ Ramp A

Sta. 1010+50

80 60 40 20 0 20 40 60 80 100 120 140 160 180

X-Sec's Sta. 1011+00 to Sta. 1012+00

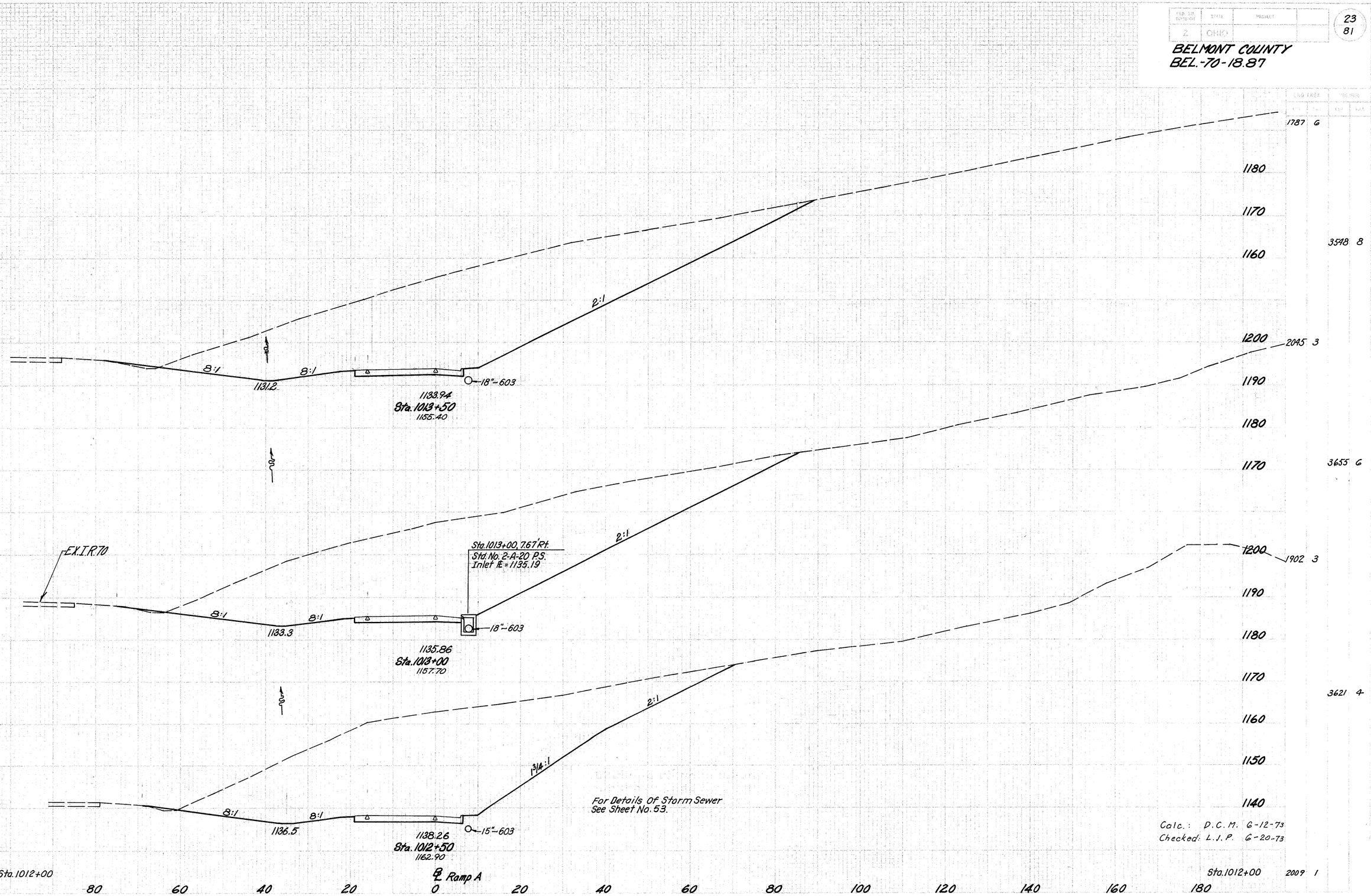
Calc.: D.C.M. 6-12-73
Checked: L.I.P. 6-20-73

FED. SUB DIVISION	STATE	PROJECT		23
2	OHIO			81

BELMONT COUNTY
BEL.-70-18.87

SEEDING	
SQ. YARDS	
175	
944	
165	
867	
147	
797	
140	

LOG FACE		TRIBUTARY	
		X=Y	SUM
1787	6		
3548	8		
2045	3		
3655	6		
1902	3		
3621	4		
2009	1		



Calc.: D.C.M. 6-12-73
Checked: L.J.P. 6-20-73

X ~ Secs Sta.1012+50 to Sta.1013+50

SEEDING

SEED MIXTURE	QUANTITY

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

24
81

BELMONT COUNTY
BEL.-70-18.87

END SECT. | VOLUME

8573 10

12284 13

4694 4

6001 9

419

2247

390

1569

175

EXIR.70

8:1 8:1

1127.5

1131.54
Sta. 1014+50
1153.70

4:1

1129.4

Var.

21"~603

B
1190
1180
1170
1160
1150
180 200 220 240 260 280 300 320
B
Var.
B
1190
1180
1170
1160
1150
1140
1130

A
1190
1180
1170
1160
180 200 220 240 260 280 300
A
Var.
320
A
1190
1180
1170
1160
1150
1140
1130

Sta. 1014+22, 7.67' Rt.
Std. No. 2-A-14 P.S.
Inlet FE = 1131.35

℄ 21"~603

8:1 8:1

1129.1

1132.50
Sta. 1014+00
1153.60

18"~603

2:1

Var.

For Storm Sewer Details
See Sheet No. 53.

Calc.: D.C.M. 6-12-73
Checked: L.J.P. 6-20-73

Sta. 1013+50 — ℄ Ramp A — Sta. 1013+50

100 80 60 40 20 0 20 40 60 80 100 120 140 160 180

1787 G

X-Sec's Sta. 1014+00 to Sta. 1014+50

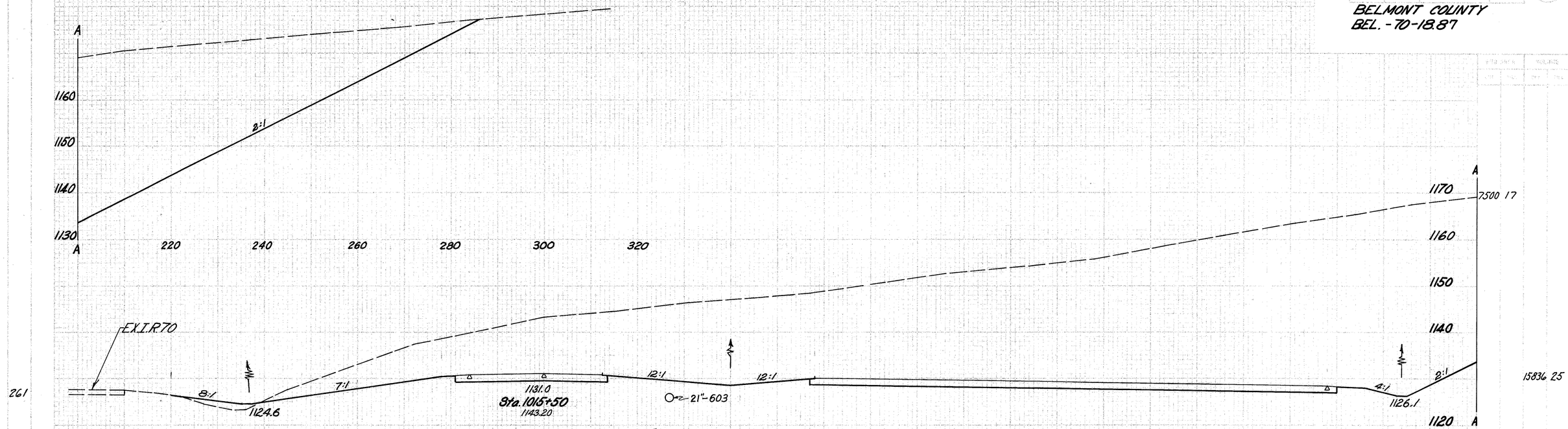
SEEDING

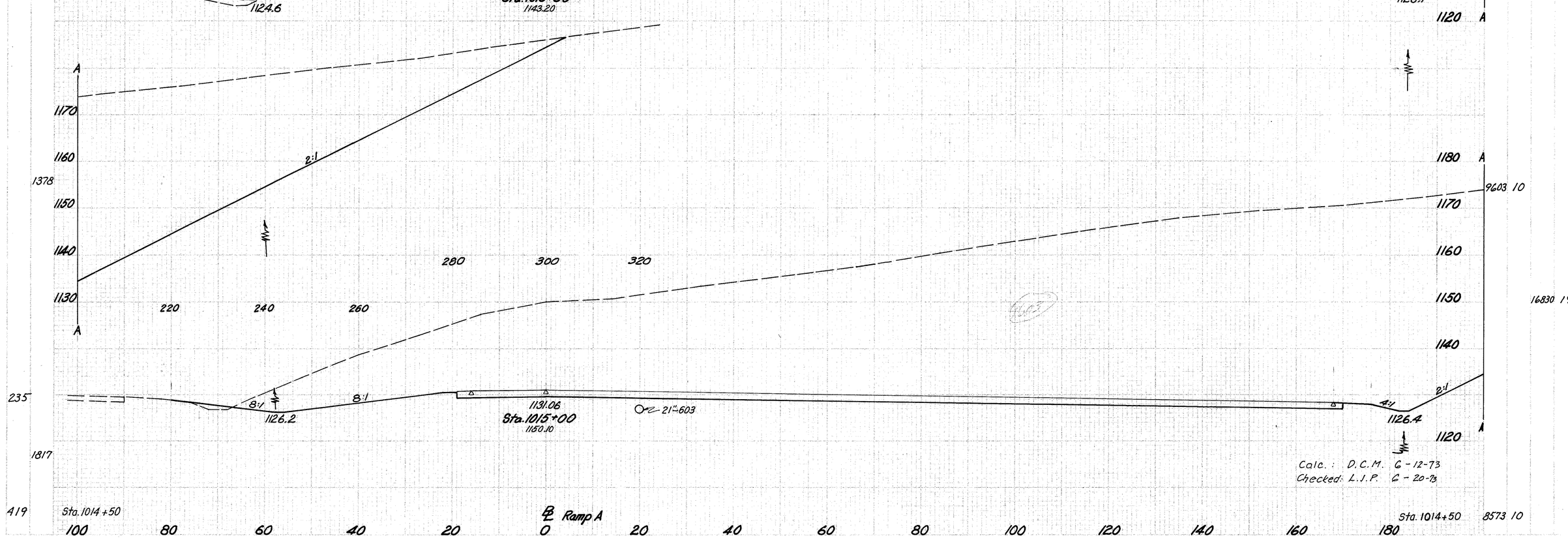
ESD DISTRICT	CO.	ROUTE	SECTION

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

25
81

BELMONT COUNTY
BEL.-70-18.87





X-Secs Sta. 1015+00 to Sta. 1015+50

SEEDING

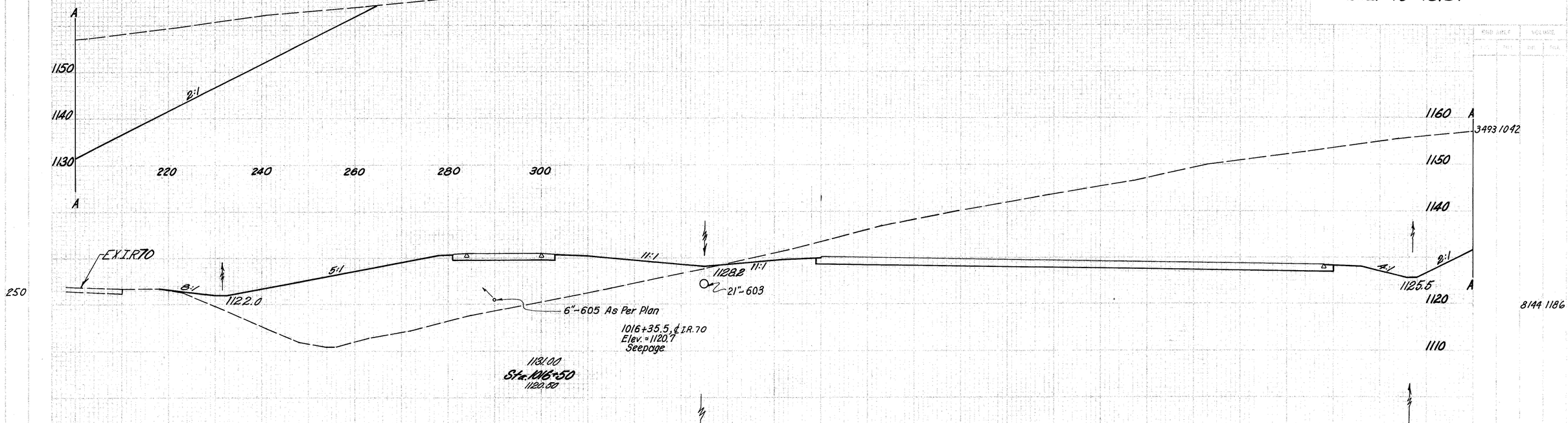
END WIDTH	SIN. RATE

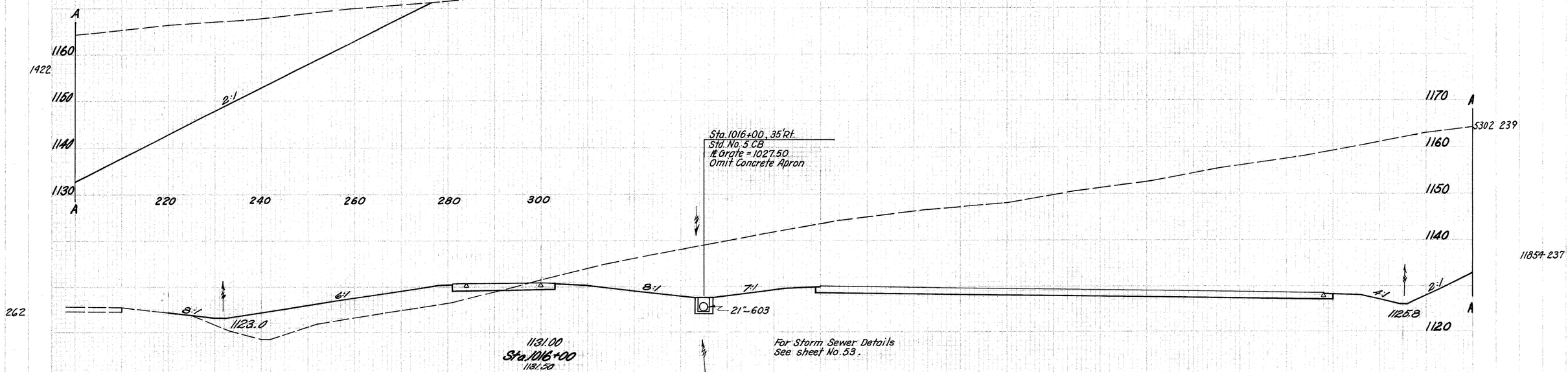
ACC. DOC. SHEET NO.	STATE	PROJECT	
2	OHIO		

26
81

BELMONT COUNTY
BEL. -70-18.87

END ANGLE		VOLUME	
RT.	LT.	RT.	LT.





Calc.: D.C.M. 6-12-73
Checked: L.I.P. 6-20-73

X-Sec's Sta. 1016+00 to Sta. 1016+50

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

27
81

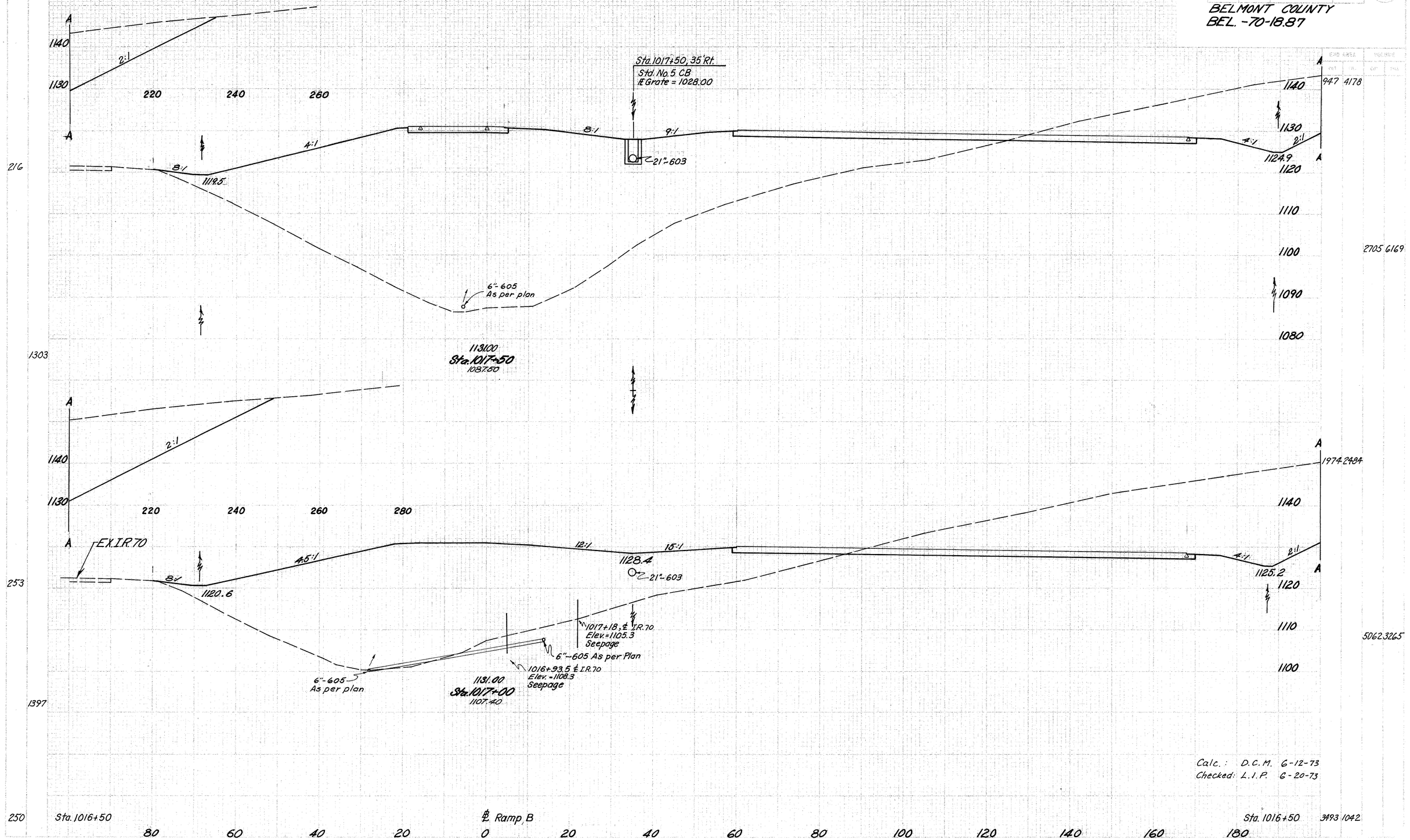
BELMONT COUNTY
BEL. -70-18.87

END AREA

FILL		CUT	
SQ. FT.	CU. YDS.	SQ. FT.	CU. YDS.
947	4178		
2705	6169		
5062	3265		
3493	1042		

GRADES

END VALUES		CU. YDS.
216		
1303		
253		
1397		
250		



Calc.: D.C.M. 6-12-73
Checked: L.I.P. 6-20-73

X-Sec's Sta. 1017+00 to Sta. 1017+50

SEEDING

STD. DWGS.	SPL. PROV.

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

28
81

BELMONT COUNTY
BEL.-70-18.87

CURB TYPES		SIDEWALKS	
CUT	FILL	CUT	FILL

4 8789

1130
3:1
2:1
1120
1121.7
1110
1100
1090
1080
1070
1060

Add For Mine Excavation →
Add For Mine Refilling →
1543
1543

214-10985

243

8:1
1117.8
3.3:1

21"-603

1018+48.8
Face Of
Rock Wall

1018+43.5 ℄ I.R.70
Elev. Mine
Floor = 1082.6
Elev. Mine
Roof = 1087.9

1142

1131.00
Sta. 1018+50
1081.70

6"-605
As per plan

1140
227 3075
1130
3:1
2:1
1123.4
1110
1100
1090
1080
1070

168

EX.I.R.70
8:1
1118.0
3.5:1

21"-603, See sheet no. 53

1087 6716

1067

6"-605
As per plan

1131.00
Sta. 1018+00
1080.60

Calc.: D.C.M. 6-12-73
Checked: L.I.P. 6-20-73

216 Sta. 1017+50

℄ Ramp B

80 60 40 20 0 20 40 60 80 100 120 140 160 180

Sta. 1017+50 947 4178

X-Sec's Sta. 1018+00 to Sta. 1018+50

SECTION

AREA WIDTH	AREA YDS.
283	
1536	
270	
1425	
243	

CO. RTE. VERSION	STATE	PROJECT	
2	OHIO		

29
81

BELMONT COUNTY
BEL.-70-18.87

CUM. AREA CUT	CUM. AREA FILL	CUM. VOLUME CUT	CUM. VOLUME FILL

+50.64 'Lt. ℄ Std. No.5 C.B.
℄ Grate=1117.50

8:1

3.2:1

℄=1114.50

2:1

1130.63
Sta. 1019+50
1080.20

6"-605
As per plan

21"603

2:1 0:1 48:1

1077.0

Ex.108"C.M.P.

EX.I.R.70

8:1

3.1:1

1117.6

2:1

21"603

21"603

2:1 0:1 48:1

1101.4

1130.91
Sta. 1019+00
1081.10

6"-605
As per plan

1018+97.2, I.R.70
℄ Water = 1084.7
Bottom of mine
elev. 1084.6

Ex. 108 C.M.P.

Sta. 1018+50

℄ Ramp B

100 80 60 40 20 0 20 40 60 80 100 120 140 160 180

Sta. 1018+50

X-Sec's Sta. 1019+00 to Sta. 1019+50

1130 1120 1110 1100 1090 1080 1070 1060 1050

0 6844

0 13698

0 7950

4 15499

4 8789

Calc.: D.C.M. 6-12-73
Checked: L.I.P. 6-20-73

BEARING

HOLD LENGTH	SQ. YDS.
300	
1592	
273	
1544	
283	

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

30
81

BELMONT COUNTY
BEL.-70-18.87

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL

SEEDING

ACRES WIDTH	SQ YDS
261	1494
277	1603
300	

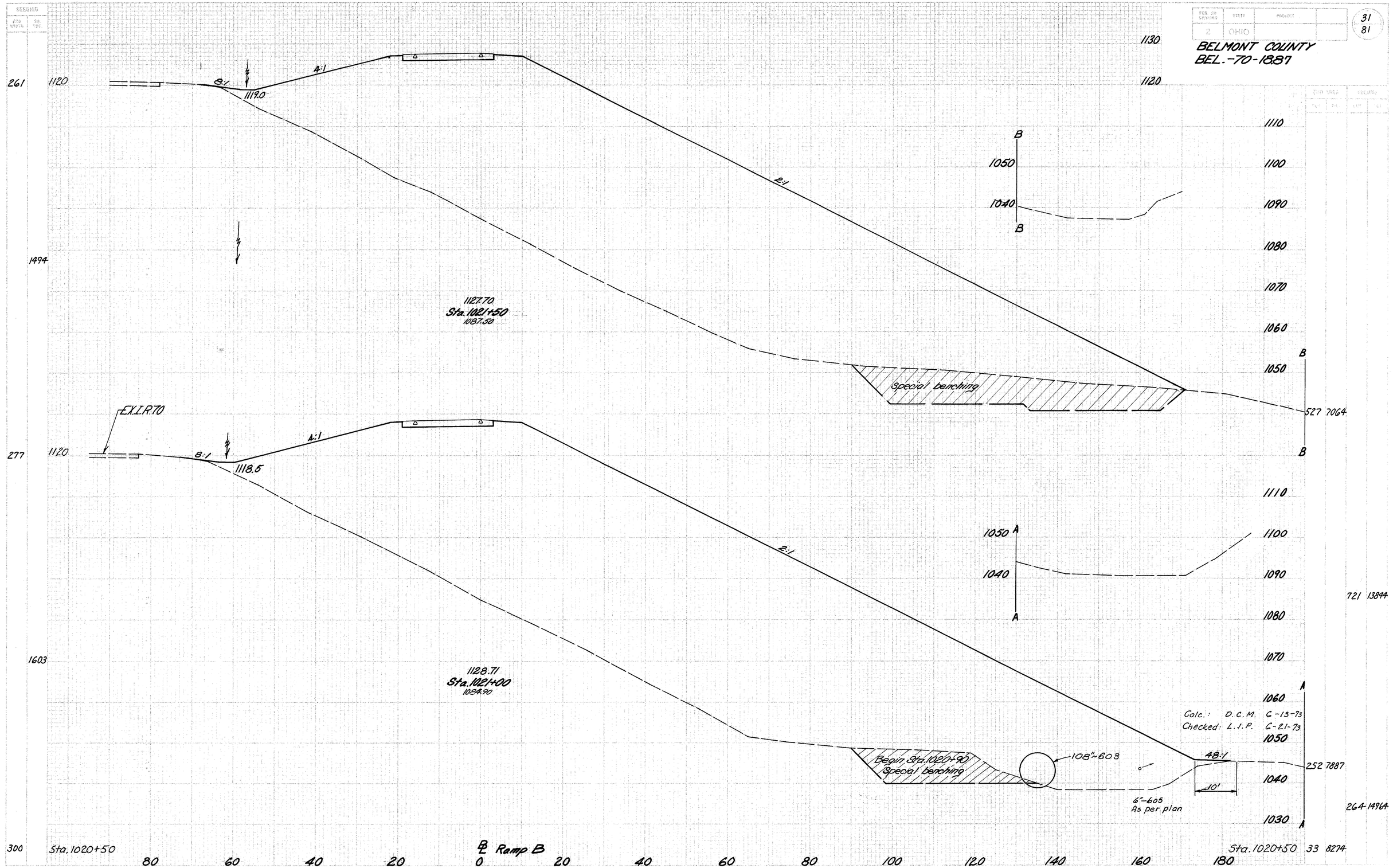
FED. OR CONTROL	STATE	PROJECT	
2	OHIO		

31
81

BELMONT COUNTY
BEL.-70-18.87

EARTHWORK

CUT	FILL
721	13844
264	14964
252	7887
527	7064
33	8274



SEEDING

ACRES	LBS.
WATER	PER ACRE

FED. AID PROJECT	STATE	PROJECT	
2	OHIO		

32
81

BELMONT COUNTY
BEL.-70-18.87

PRE AREA		RESERVE	
CU. YDS.	TONS	CU. YDS.	TONS

275 1120 — 8:1 — 1119.8 — 4.5:1 — 2:1 — 1120

1983

1125.50
Sta. 1022+50
1093.60

60"~603

End Sta. 1022+60 Special benching

448 6194

1041.0

Rock Chann. Prot. See Sheet No. 12

E.X.I.R.70

259 1120 — 8:1 — 1119.4 — 4:1 — 2:1

1444

1126.60
Sta. 1022+00
1091.80

Special benching

565 6623

938 11821

1011 12673

Calc.: D.C.M. 6-13-73
Checked: L.J.P. 6-21-73

1110 1100 1090 1080 1070 1060 1050 1120

261 Sta. 1021+50

℄ Ramp B

Sta. 1021+50 527 7064

80 60 40 20 0 20 40 60 80 100 120 140 160 180

X~Sec's Sta. 1022+00 to Sta. 1022+50

SECTIONS

STEP COUNTS	SQ. YDS.

STATE	PROJECT
OHIO	

33
81

BELMONT COUNTY
BEL.-70-18.87

CUT AREA		WIDENING	
FILL		FILL	

185
875

8:1
6:1
1120.7
2:1
1123.50
Sta. 1023+50
1097.50
1075.0
Ex. R/W
1120
1110
1100
1090
1080
1070
1060
21 2760

EX.I.R.70
130
1125
8:1
5:1
1120.2
2:1
1124.40
Sta. 1023+00
1096.60
Ex. 60" CMP
1056.0
Rock Channel Protection see sheet no. 12
Calc.: D.C.M. 6-13-73
Checked: L.J.P. 6-21-73
1120
1110
1100
1090
1080
1070
1060
1050
1040
29 4186
46 6431
442 9565
448 6194

275
Sta. 1022+50
℄ Ramp B
100 80 60 40 20 0 20 40 60 80 100 120 140 160 180
Sta. 1022+50

X-Sec's Sta. 1023+00 to Sta. 1023+50

SECTIONS

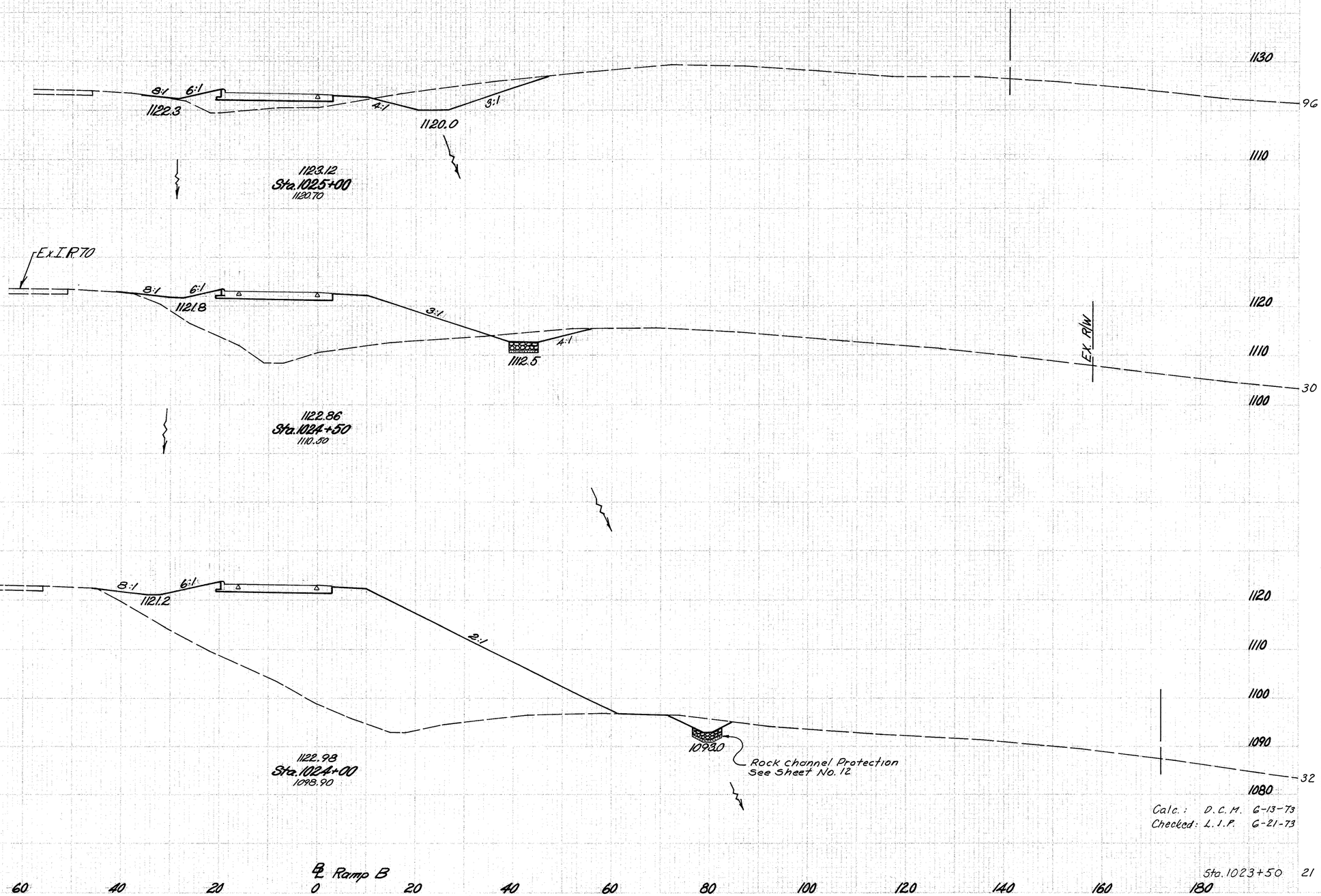
EACH STRUCTURE	SO FOR
85	1120
511	
99	1120
661	
139	1120
900	
185	Sta. 1023+50

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

34
81

BELMONT COUNTY
BEL.-70-18.87

FED AREA		VOLUME	
CUT	FILL	CUT	FILL
96	76		
		117	573
30	593		
57	1902		
49	3955		
32	1511		
21	2760		



Calc.: D.C.M. 6-13-73
Checked: L.I.P. 6-21-73

X-Sec's Sta. 1024+00 to Sta. 1025+00

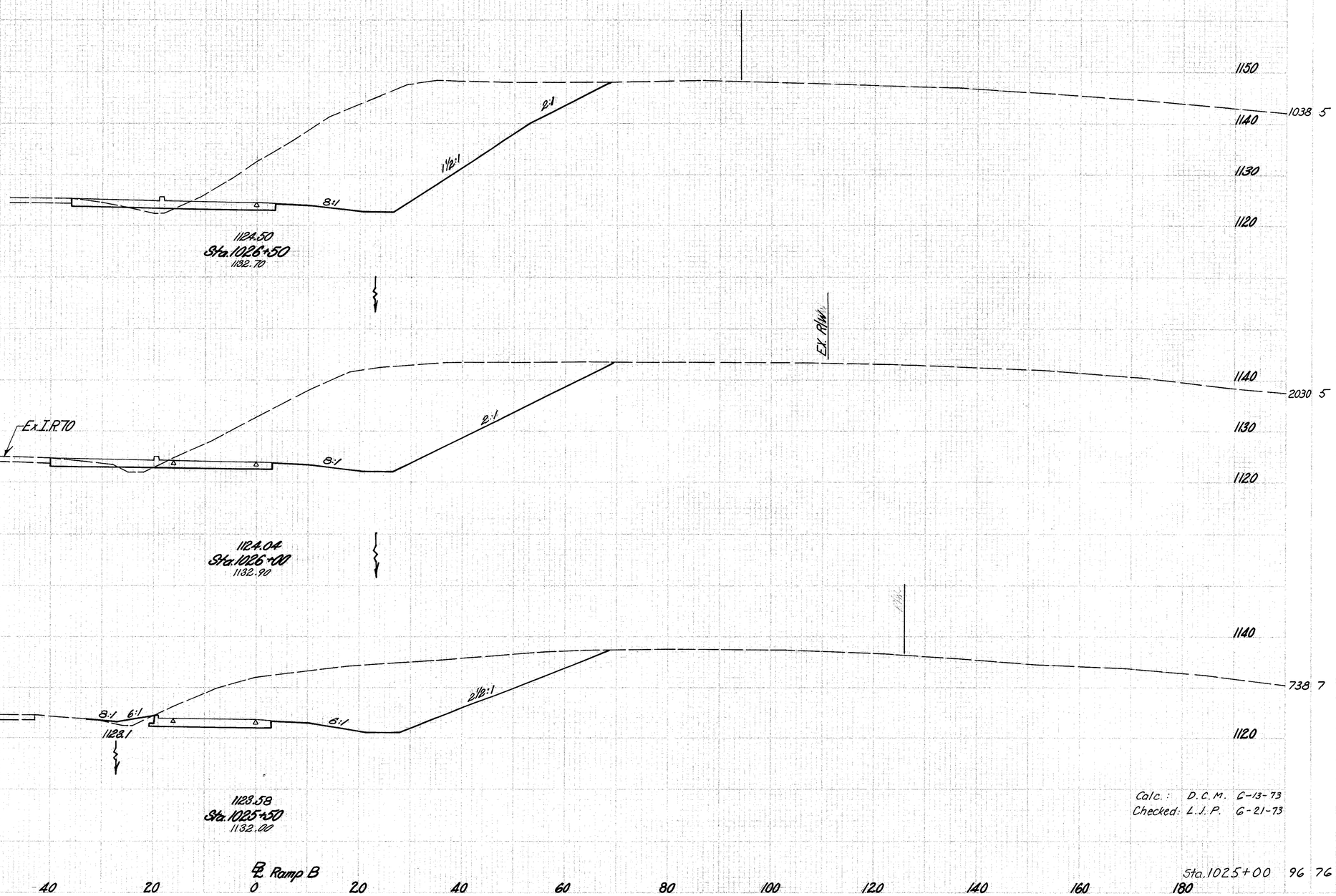
FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

35
81

BELMONT COUNTY
BEL.-70-18.87

WIDTH	CU. YDS.

EXC. AREA		FILLING	
CUT	FILL	CUT	FILL



85
469
84
528
106
531
85
Sta. 1025+00

FED. RD. DIV. REGION	STATE	PROJECT	
2	OHIO		

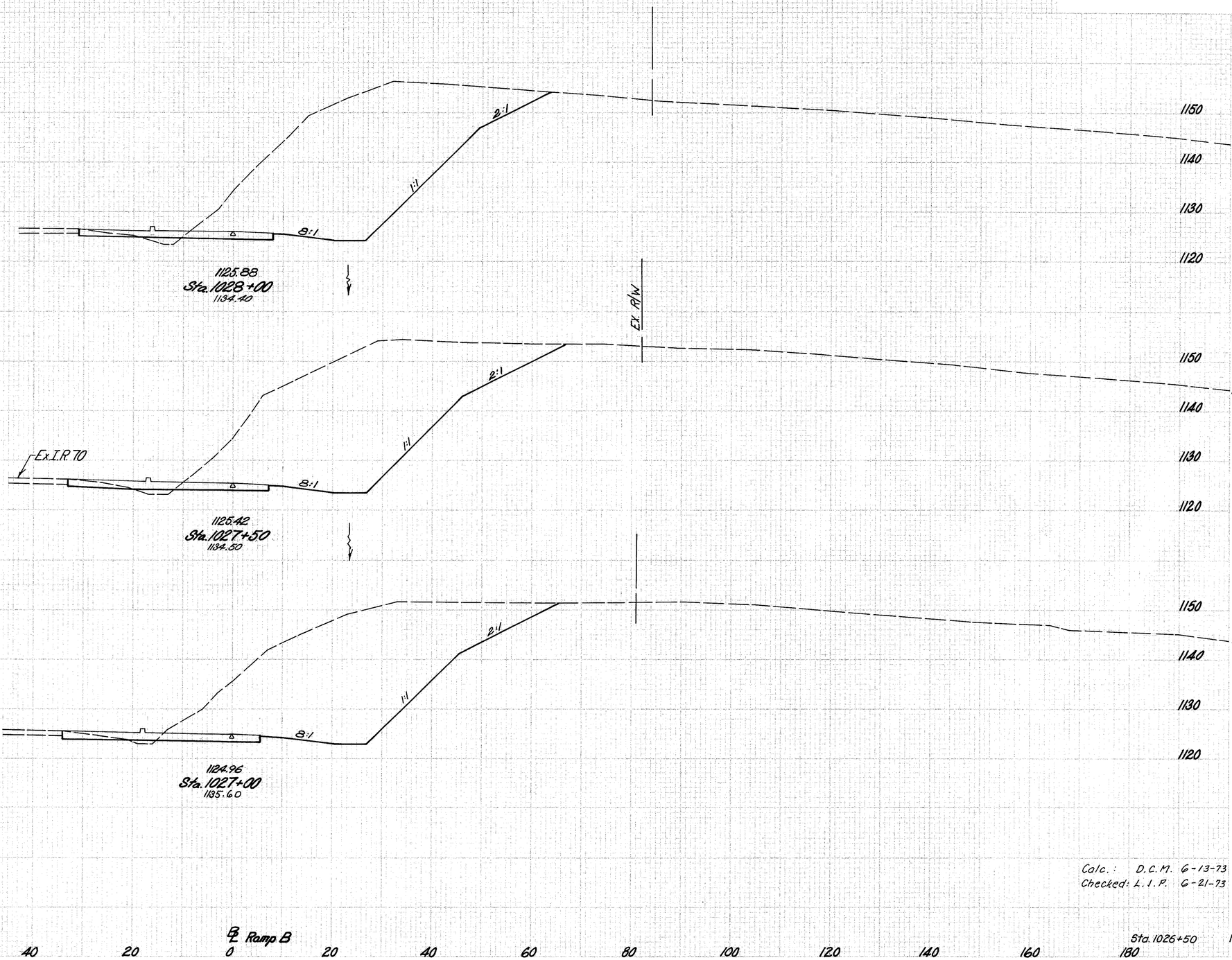
36
81

BELMONT COUNTY
BEL.-70-18.87

SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SEED MIXTURE	NO. LBS.



Calc.: D.C.M. 6-13-73
Checked: L.I.P. 6-21-73

X-Sec's Sta. 1027+00 to Sta. 1028+00

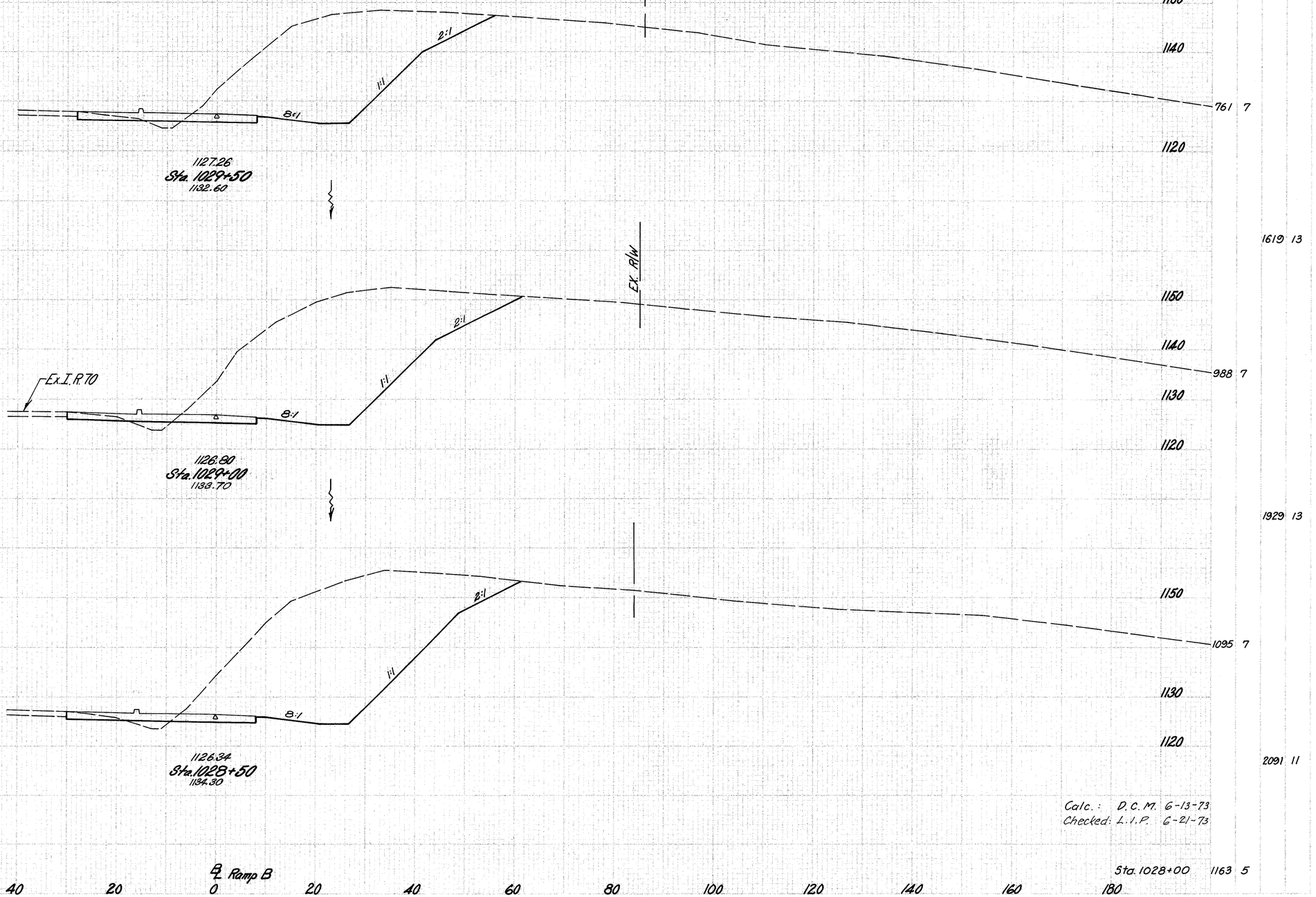
SEEDING	
SQ. YDS.	YDS.
69	
400	
75	
422	
77	
436	
80	

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

37
81

BELMONT COUNTY
BEL.-70-18.87

EARTHWORK		SEEDING	
CUT	FILL	CUT	FILL
1619	13	761	7
1929	13	988	7
2091	11	1095	7
1163	5		



Calc.: D.C.M. 6-13-73
Checked: L.I.P. 6-21-73

X-Sec's Sta. 1028+50 to Sta. 1029+50

SEEDING

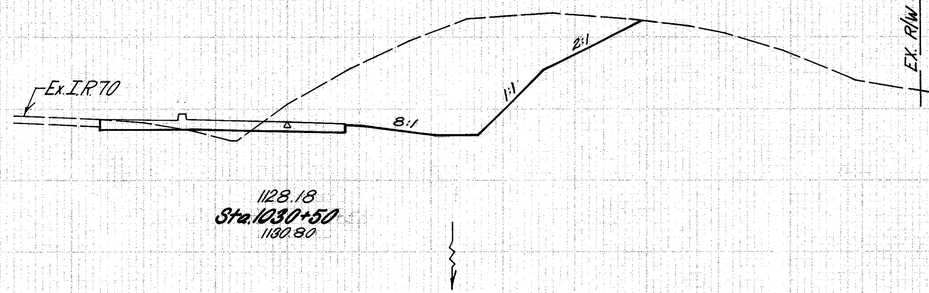
ECO CHECK	TOU

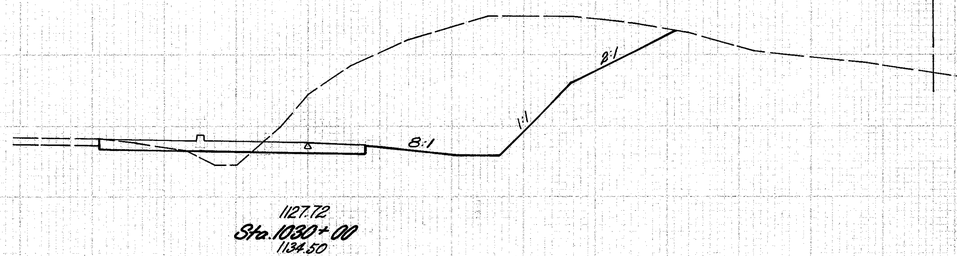
FED. NO. DIVISION	STATE	PROJECT	
2	OHIO		

38
81

BELMONT COUNTY
BEL.-70-18.87

END AREA		VOLUME	
CUT	FILL	CUT	FILL





60 339 62 364 69

1120 1120 1120

1140 1130 1120 1110

471 6 1043 13 655 8 1311 14 761 7

Sta. 1029+50 Sta. 1029+50

℄ Ramp B

40 20 0 20 40 60 80 100 120 140 160 180

Calc.: D.C.M. 6-13-73
Checked: L.J.P. 6-21-73

X-Sec's Sta. 1030+00 to Sta. 1030+50

SHEETING

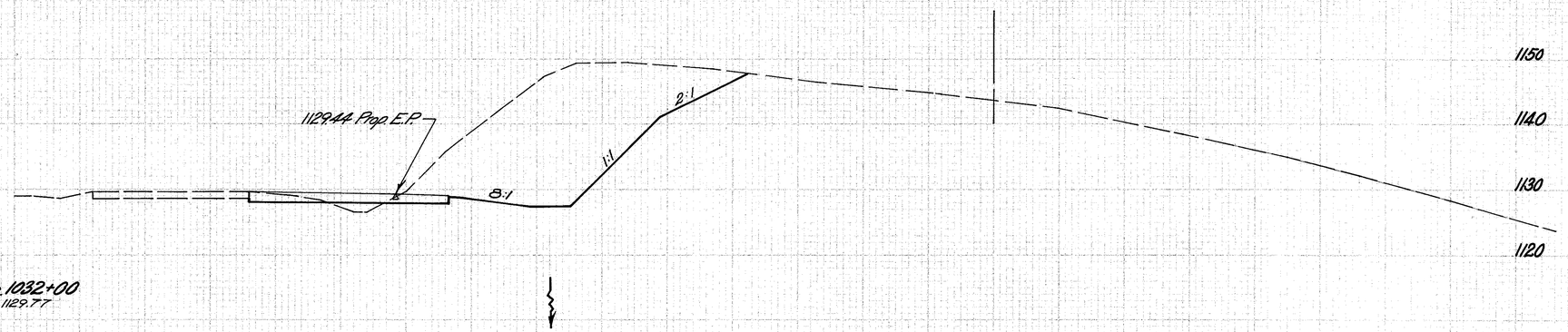
END WIDTH	SQ. FEET
66	
361	
64	
347	
61	
336	
60	

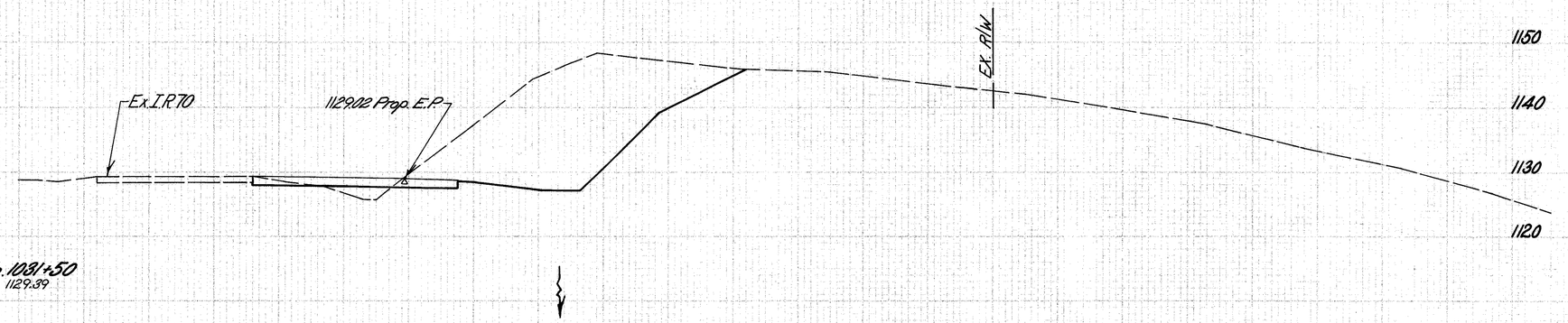
CO. OR DIVISION	STATE	PROJECT	
2	OHIO		

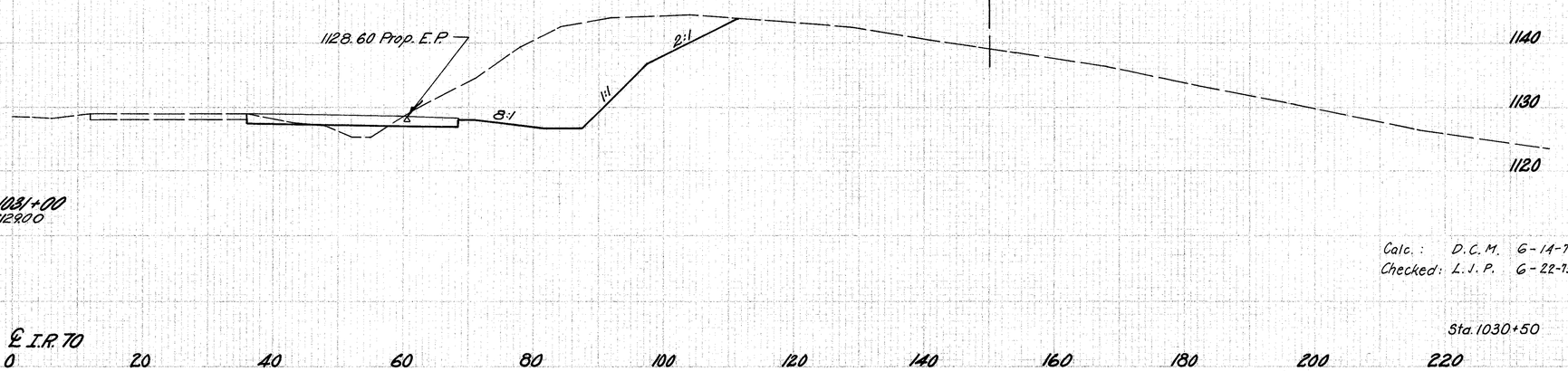
39
81

BELMONT COUNTY
BEL. -70-18.87

CROSS AREAS		SHEETING	
CUT	FILL	END	SQ. FT.
594	7		
1066	15		
557	9		
921	17		
438	9		
842	14		
471	6		







Calc.: D.C.M. 6-14-73
Checked: L.J.P. 6-22-13

Sta. 1030+50

℄ I.R. 70

0 20 40 60 80 100 120 140 160 180 200 220

X-Sec's Sta. 1031+00 to Sta. 1032+00

SEEDING

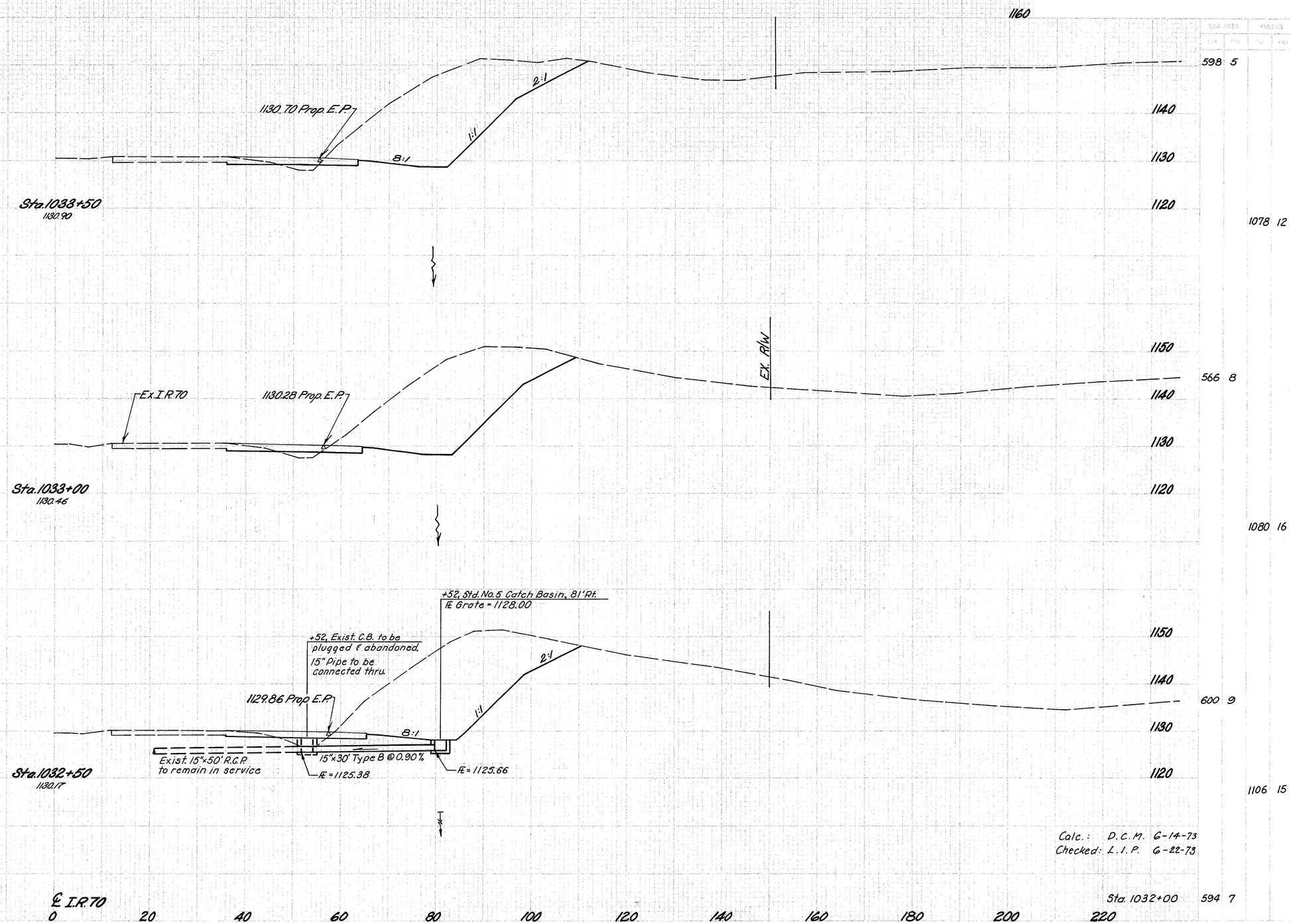
END STATION	SQ. YDS.
69	
	372
65	
	361
65	
	364
66	

SEQ. NO. DIVISION	STATE	PROJECT	
2	OHIO		

40
81

BELMONT COUNTY
BEL.-70-18.87

END AREA		VOLUMES	
CUT	FILL	CUT	FILL
598	5		
			1078 12
566	8		
			1080 16
600	9		
			1106 15
594	7		



SEEDING	
STD. MIXT.	LB. 100

FED. DIV.	STATE	PROJECT	
2	OHIO		

41
81

BELMONT COUNTY
BEL.-70-18.87

END AREA		VOLUMES	
CUT	FILL	CUT	FILL
957	3		
		1583	5
753	2		
		1258	5
606	3		
		1115	7
Sta. 1033+50		598	5

95
1130
1131.96 Prop. E.P.
2:1
1:1
8:1
1170
1160
1150
1140
1130
1120

Sta. 1035+00
1132.26

497
1130
Ex. I.R.70
1131.54 Prop. E.P.
EX. R/W
1160
1150
1140
1130
1120

Sta. 1034+50
1131.84

439
1130
1131.12 Prop. E.P.
2:1
1:1
8:1
1160
1150
1140
1130
1120

74

Sta. 1034+00
1131.35

397

69
Sta. 1033+50

℄ I.R.70
0 20 40 60 80 100 120 140 160 180 200 220

Calc.: D.C.M. 6-14-73
Checked: L.J.P. 6-22-73

X-Sec's Sta. 1034+00 to Sta. 1035+00

SEEDING

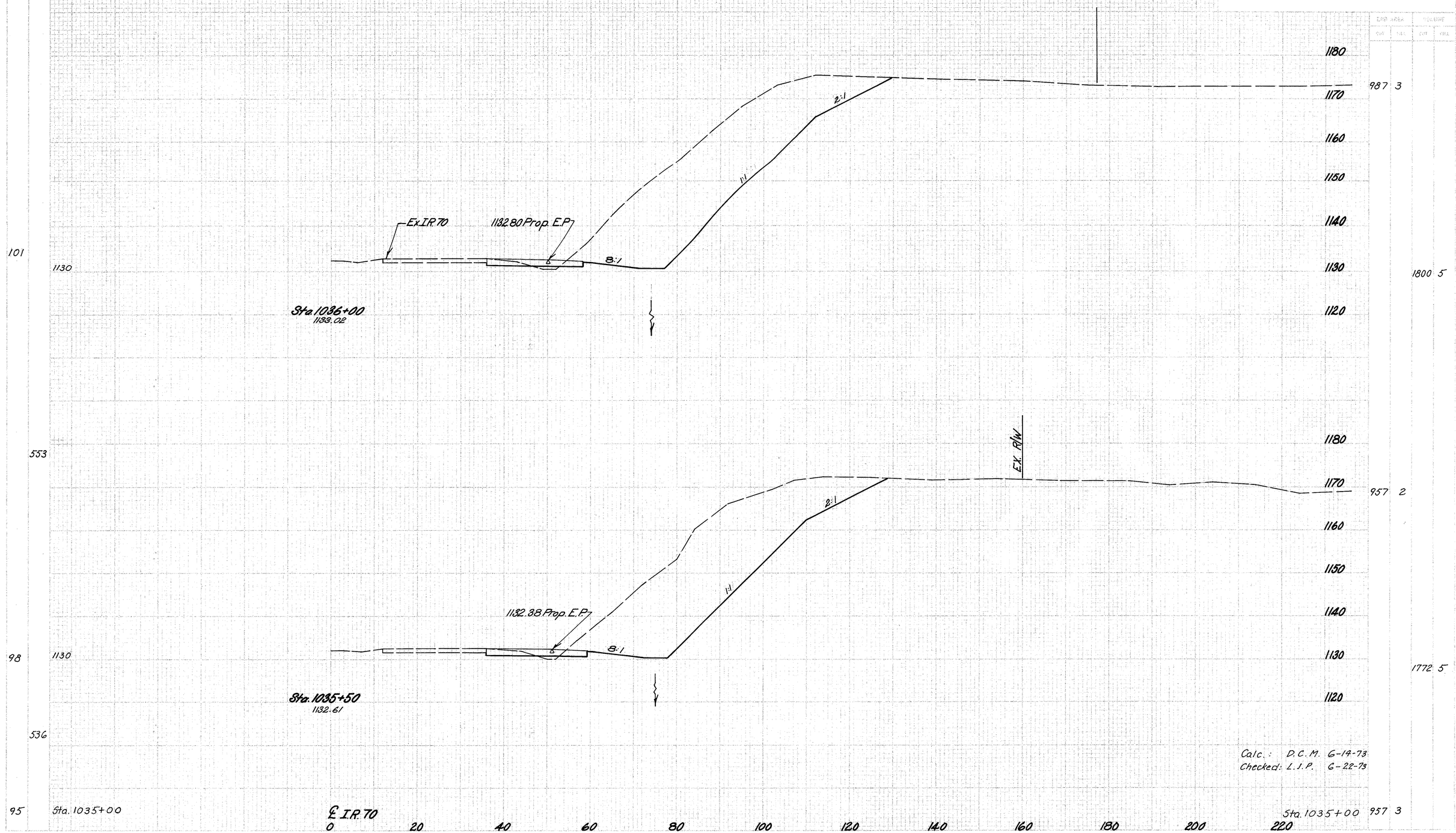
ACRES	LBS.
WIDEN	YDS.

SEQ. NO.	STATE	PROJECT	
2	OHIO		

42
81

BELMONT COUNTY
BEL.-70-18.87

EXIST. AREA		VOLUMES	
CUT	FILL	CUT	FILL
987 3			
		1800 5	
957 2			
		1772 5	
957 3			



Calc.: D.C.M. 6-14-73
Checked: L.J.P. 6-22-73

X-Sec's Sta. 1035+50 to Sta. 1036+00

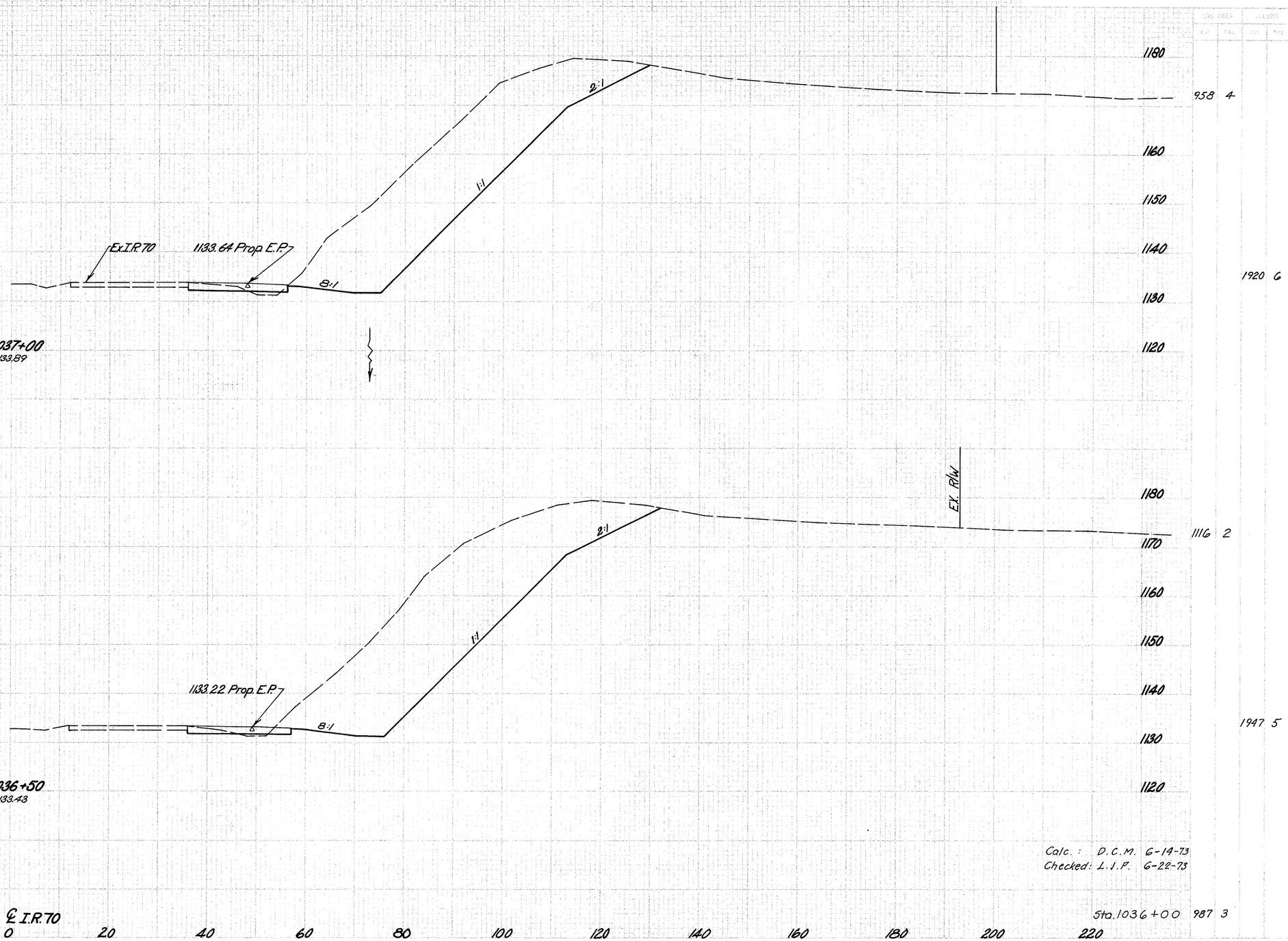
SHEET NO. 43 / 81

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	

BELMONT COUNTY
BEL.-70-18.87

CSD AREA — VOLUMES

CUT	FILL	CUT	FILL



Calc. : D.C.M. 6-14-73
Checked: L.J.F. 6-22-73

X-Sec's Sta. 1036+50 to Sta. 1037+00

SEEDING

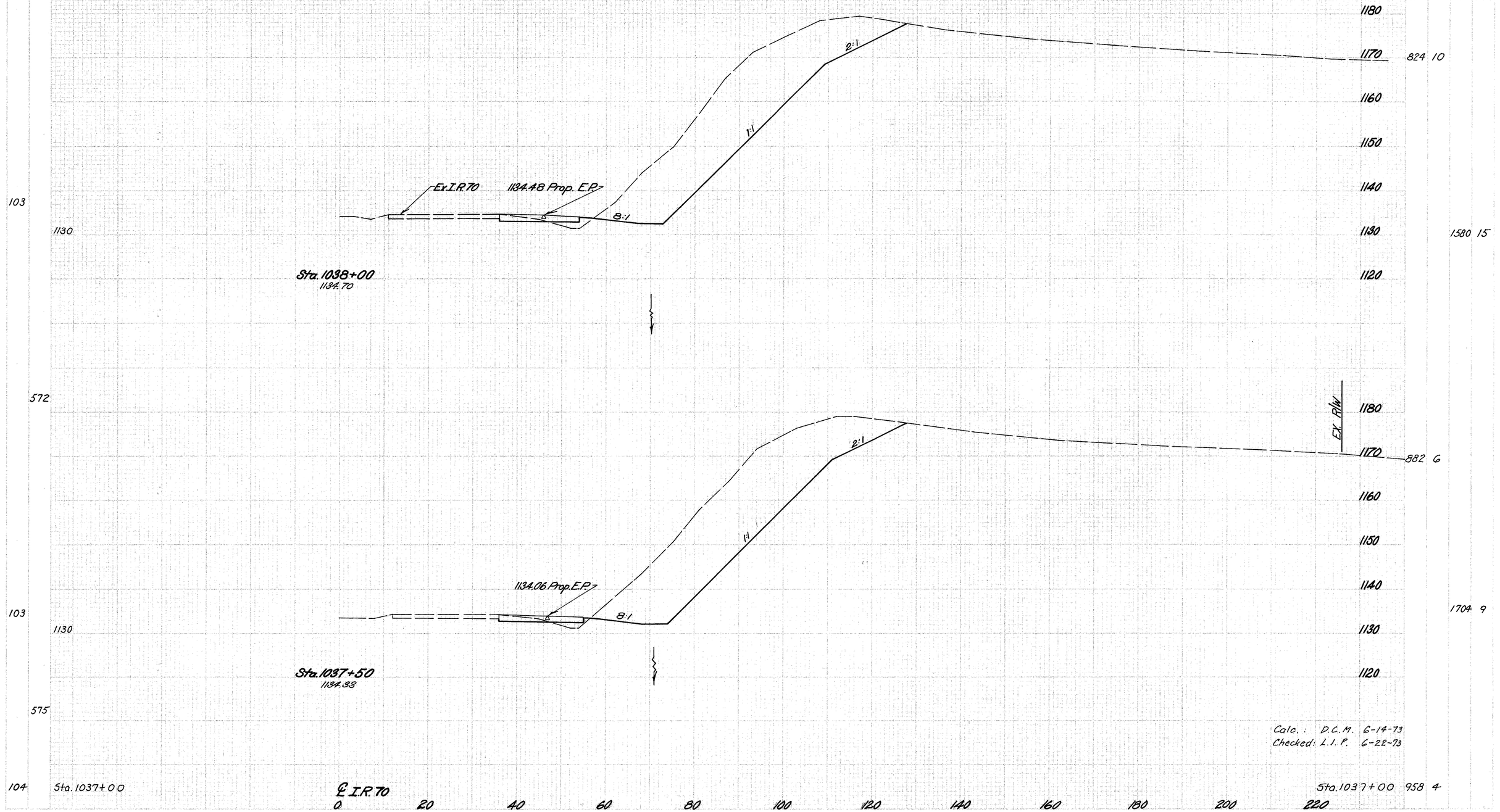
0.35 YIELD	SQ. YDS.

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

44
81

BELMONT COUNTY
BEL.-70-18.87

EMB. AREA		WASTE	
CUT	FILL	CUT	FILL
	824	10	
	1580	15	
	882	6	
	1704	9	
	958	4	



Calc.: D.C.M. 6-14-73
Checked: L.I.P. 6-22-73

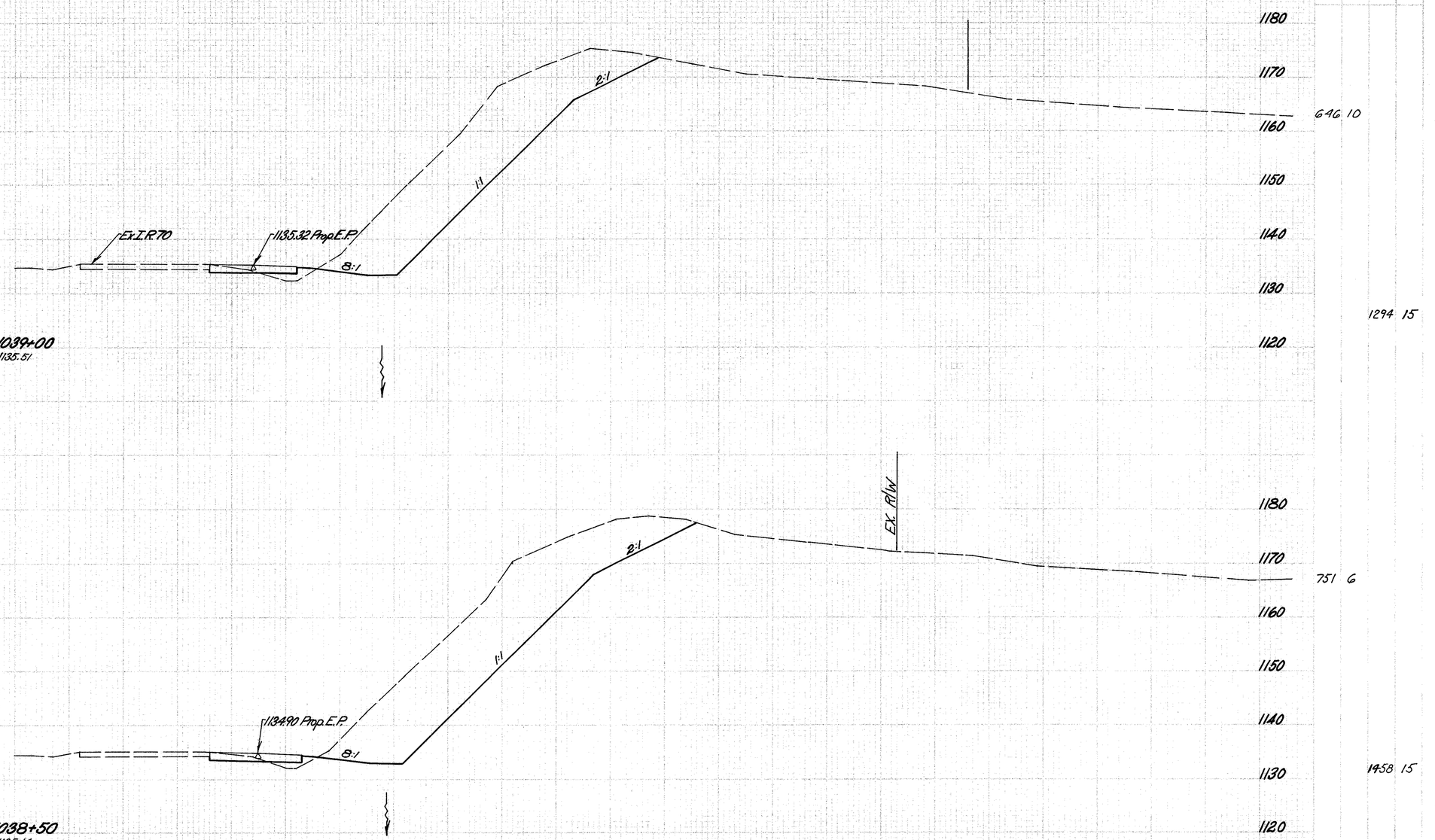
X-Secs Sta. 1037+50 to Sta. 1038+00

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

45
81

BELMONT COUNTY
BEL.-70-18.87

EXCAVATION		ENCLOSED	
CUT	FILL	CUT	FILL



Calc.: D.C.M. 6-14-73
Checked: L.J.P. 6-22-73

X-Sec's Sta. 1038+50 to Sta. 1039+00

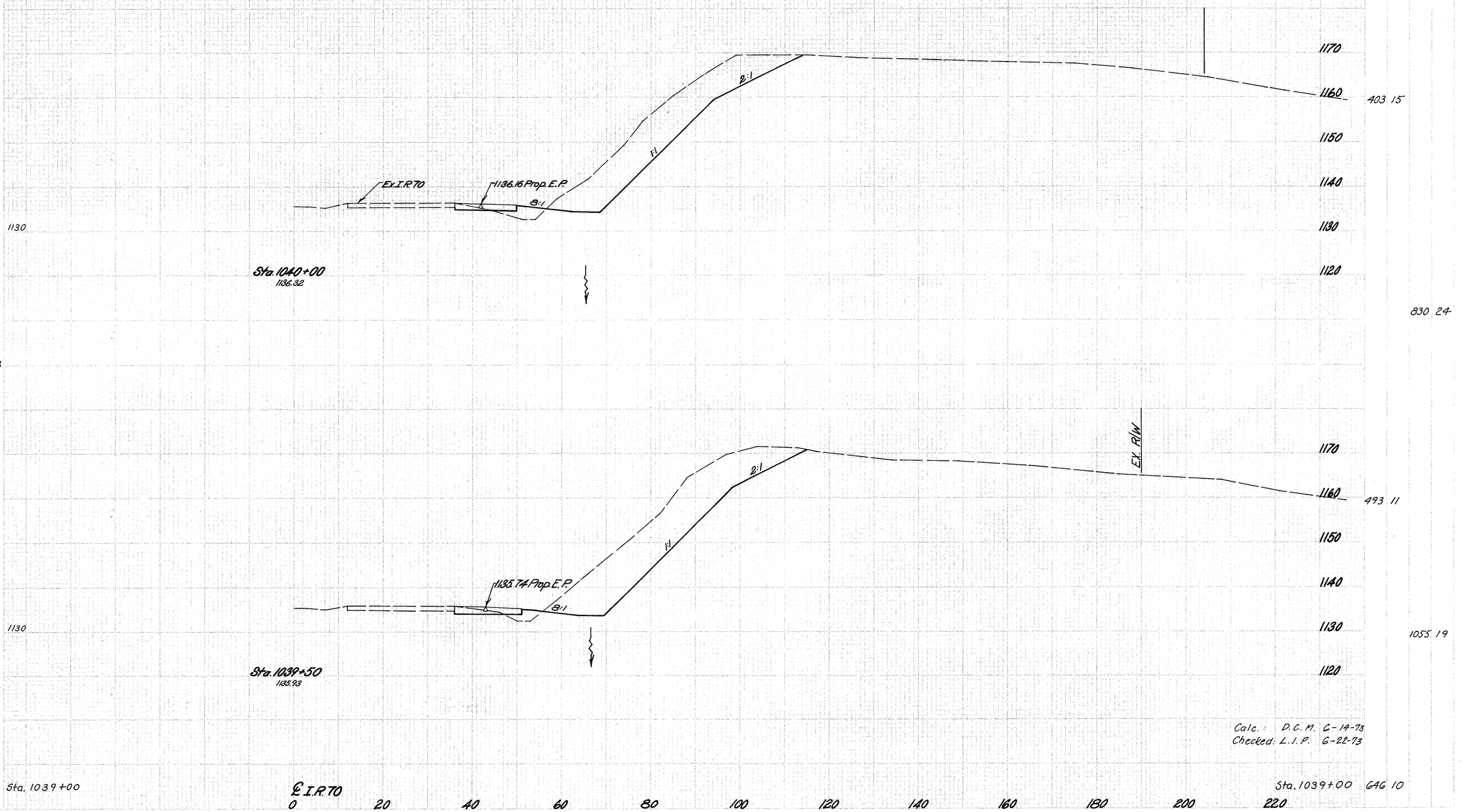
SEEDING	
SEED WIDTH	SQ. YDS.

ENG. DIST.	STATE	PROJECT	
2	OHIO		

46
81

BELMONT COUNTY
BEL.-70-18.87

EXCAVATION AREA		EMBANKMENT AREA	
CUT	CUM.	FILL	CUM.



Calc.: D.C.M. 6-14-73
Checked: L.I.P. 6-22-73

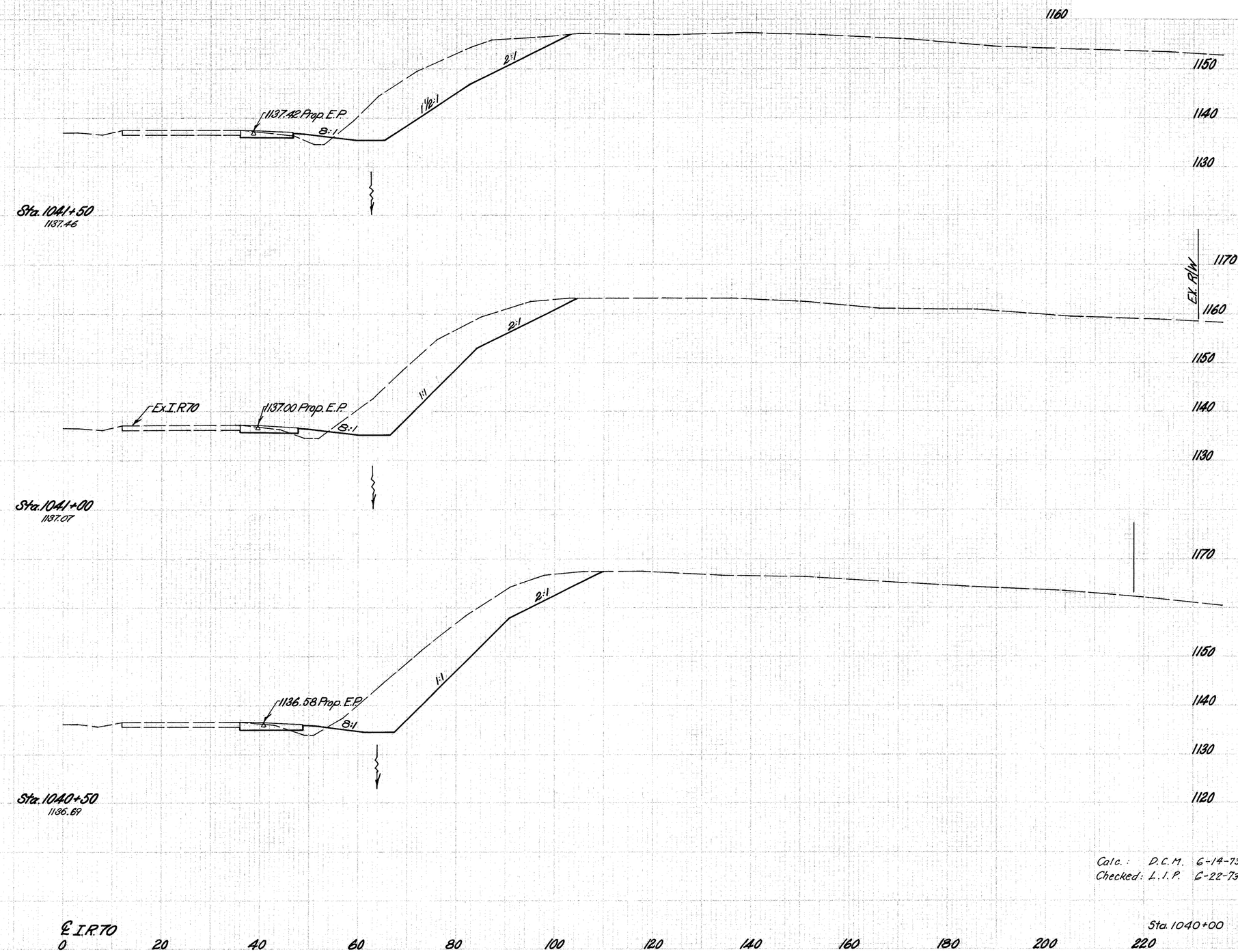
X-Secs Sta. 1039+50 to Sta. 1040+00

SEE DIMS	
STR. WIDTH	CU. YDS.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

47
81

BELMONT COUNTY
BEL.-70-18.87



	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
75	304	9		
			577	16
428	319	8		
			664	14
79				
458	398	7		
			742	20
86				
489				
90	403	15		

Calc.: D.C.M. 6-14-73
Checked: L.I.P. 6-22-73

SLEIGHNS

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO		

48
81

BELMONT COUNTY
BEL.-70-18.87

CUMM. AREA		VOLUME	
CUT	FILL	CUT	FILL

EQU. STA. NORTH	EQU. STA. SOUTH			
		1140		1140
				1130
		Sta. 1043+00 1139.18		1120
0		End Sta. 1042+92	END EARTHWORK Sta. 1042+92	End Sta. 1042+92 0 0
	77			
		Ex. I.R.70	1138.47 Prop. E.P.	
33		1140	8:1 2:1	14 5
				18 7
				1130
		Sta. 1042+50 1138.48		1120
	242			134 15
			1137.87 Prop. E.P.	
54		1140	8:1 3:1 2:1	127 9
				1140
				1130
		Sta. 1042+00 1137.91		1120 399 17
	358			

Calc.: D.C.M. 6-14-73
Checked: L.J.P. 6-22-73

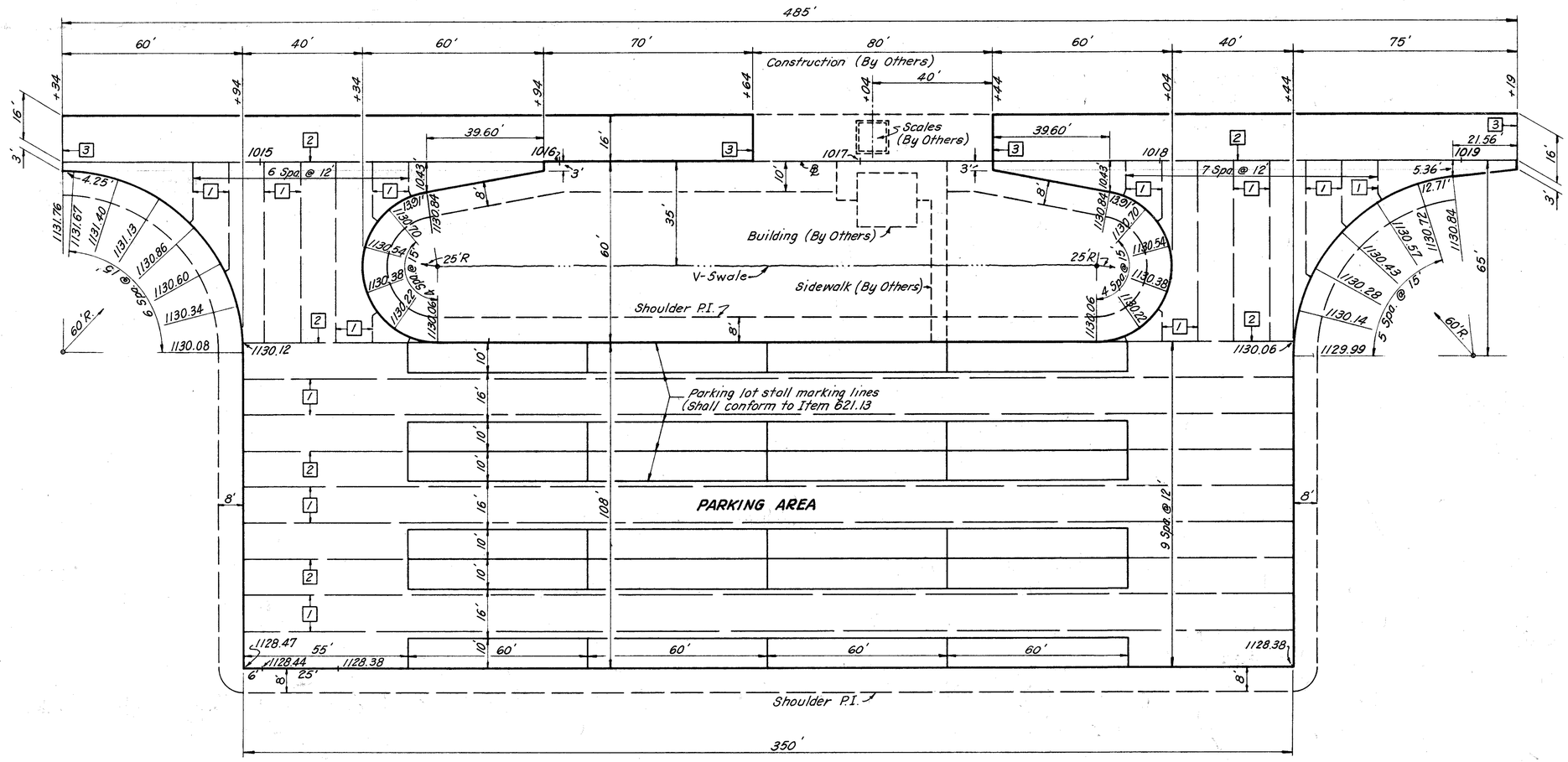
75	Sta. 1041+50	℄ I.R.70										Sta. 1041+50	304 9
		0	20	40	60	80	100	120	140	160	180	200	220

X-Sec's Sta. 1042+00 to Sta. 1043+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

49
81

BELMONT COUNTY
BEL-70-18.87



Scale in Feet
0 20 40

JOINT LEGEND

[1] Standard Longitudinal Joint.
[2] Longitudinal Key Joint without Tie Bars.
[3] Standard Expansion Joint.

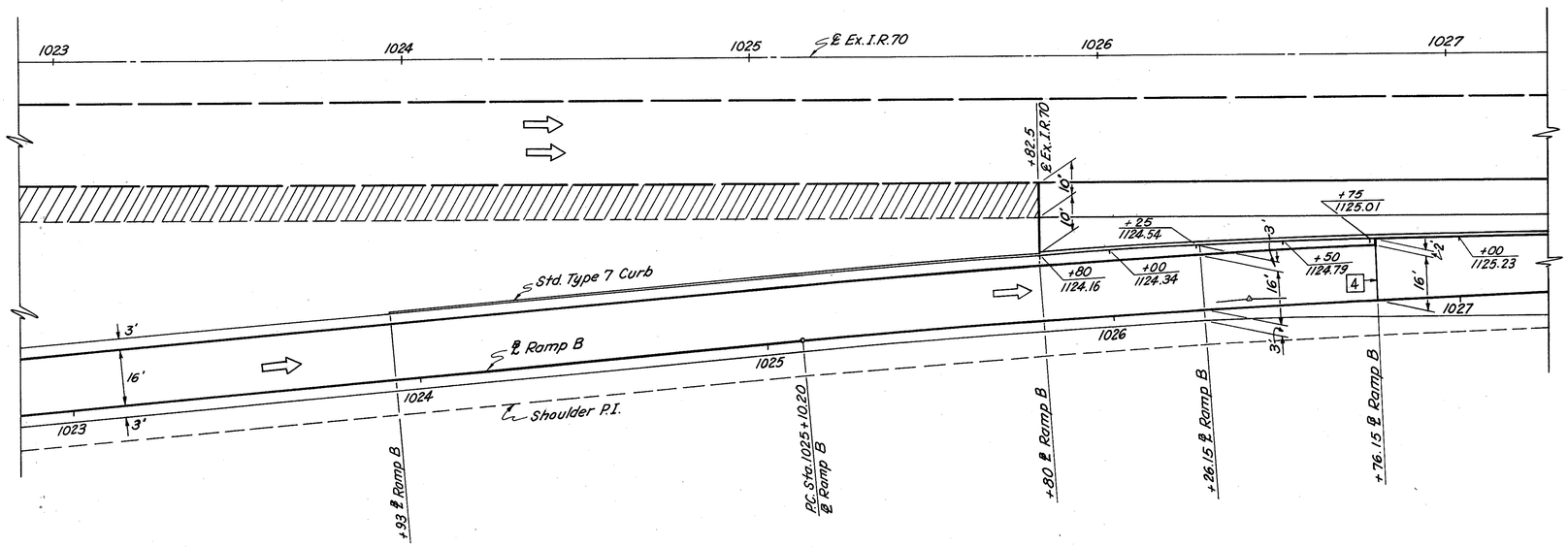
Calc. C.C.C. 6-14-73
Chkd. L.J.P. 6-14-73

PARKING AREA DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

50
81

BELMONT COUNTY
BEL-70-18.87



JOINT LEGEND:

1 Standard Longitudinal Joint.

2 Standard Expansion Bolt Joint, spaced at 5 Ft. centers, as per standards Drawing BP-3. Cost of Joint included in price bid for Item 305.

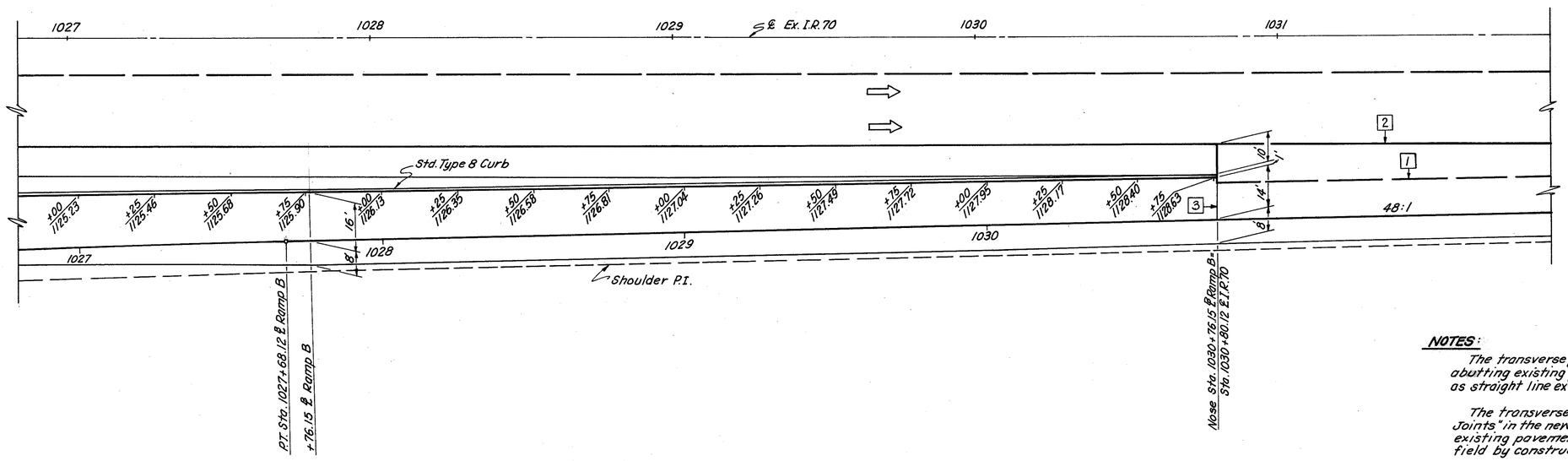
3 Standard Expansion Joint.

4 Standard Contraction Joint.

LEGEND:

Existing Stabilized Shoulder

Proposed Stabilized Shoulder



NOTES:

The transverse joints in the new pavement, abutting existing pavement, will be located as straight line extensions of existing joints.

The transverse joints between the "Control Joints" in the new pavement, not abutting existing pavement, will be located in the field by construction forces.

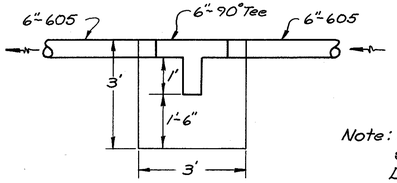
Calc. C.C.C. 6-14-73
Chkd. L.J.P. 6-14-73

RAMP B — NOSE DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

51
81

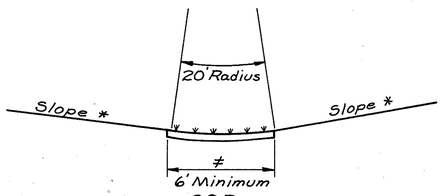
BELMONT COUNTY
BEL-70-18.87



Note: For details not shown see Std. Drwg. MC-1

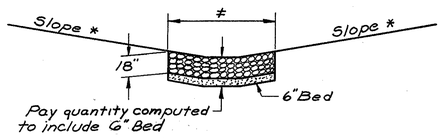
Note: Drainage of the seep areas and the mine openings have been provided for in the plan by Item 605. If it is determined during construction that the mines are interconnected then only one drain shall be necessary for the mine openings, and portions of the work shown on the plan shall be non-performed as directed by the engineer. All seep areas shall be drained and quantities for any additional areas have been provided for in the General Notes.

MODIFIED SPRING DRAIN DETAIL

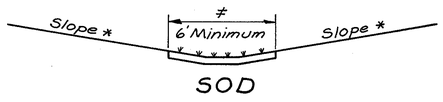


SOD

Note: Protect to same elevations of slope on both sides of ditch



ROCK CHANNEL PROTECTION

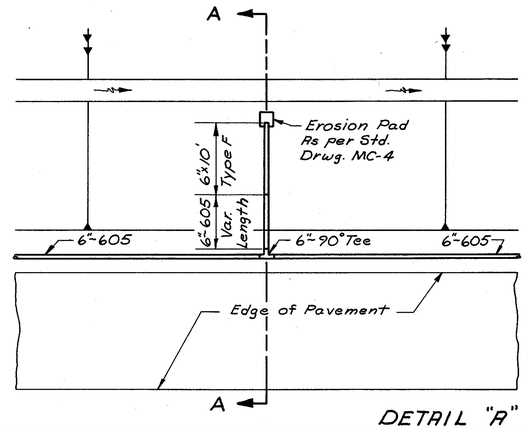


SOD

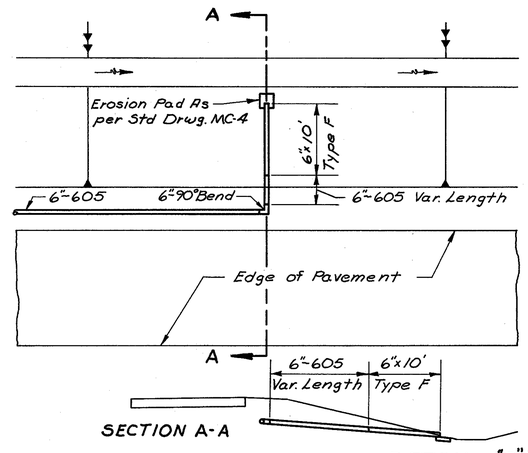
* See Cross Sections for slopes

≠ See Plan and Profile Sheets for widths See Typical Section for ditch widths

DITCH PROTECTION DETAILS

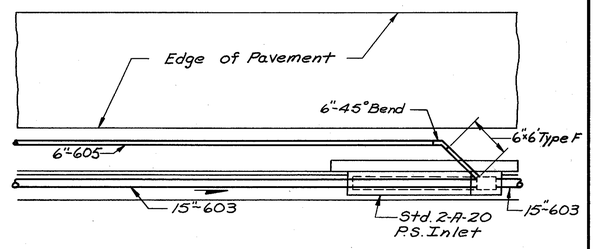


DETAIL "A"



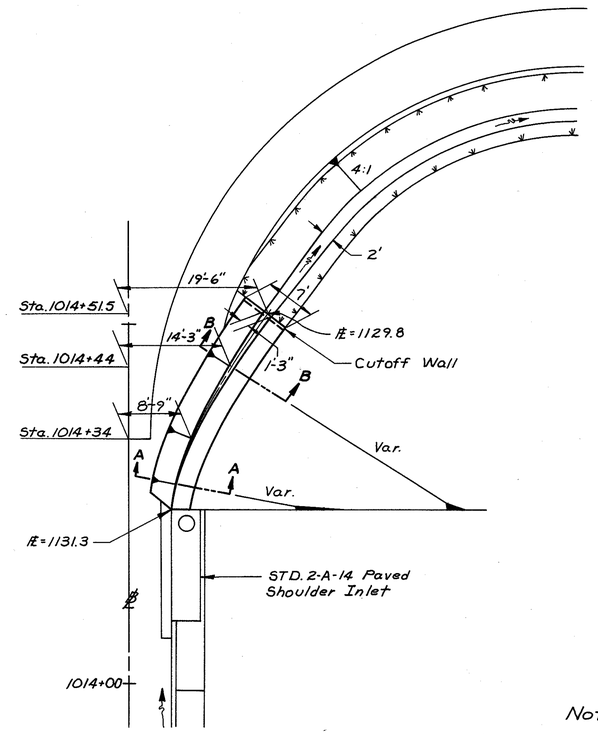
SECTION A-A

DETAIL "B"



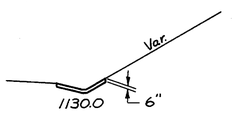
DETAIL "C"

UNDERDRAIN DETAILS

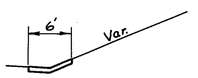


PLAN

Note: Cut-off wall for Paved Gutter shall confrom to Std. Drwg. MC-5. Gutter shall conform to construction and material specification 601.09. Payment will be made under Item 601 Paved Gutter, as per plan.



SECTION B-B



SECTION A-A

SCALE
0 10 20

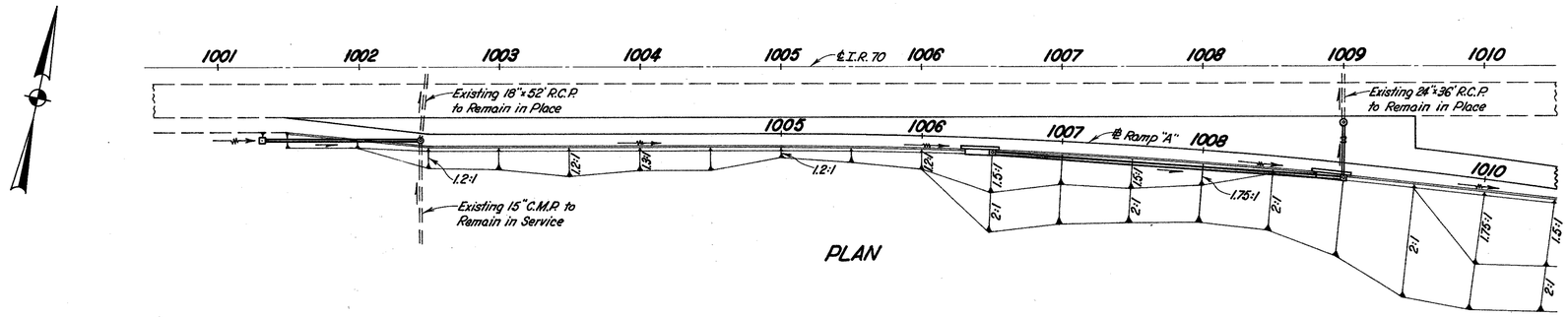
PAVED GUTTER DETAIL Sta. 1014+24 to 1014+51.5

DRAINAGE DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

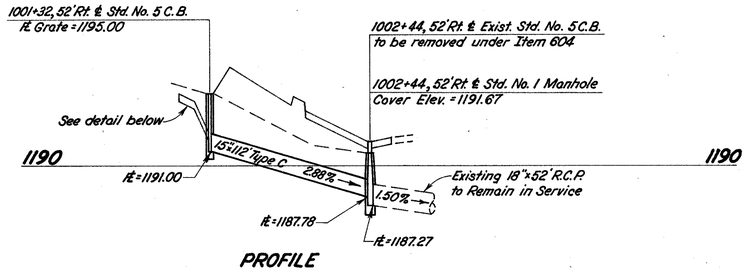
52
81

BELMONT COUNTY
BEL-70-18.87

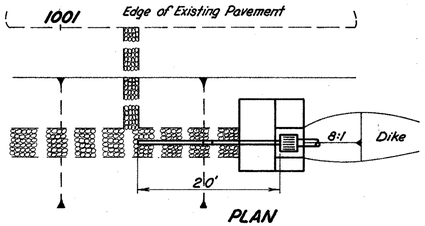


PLAN

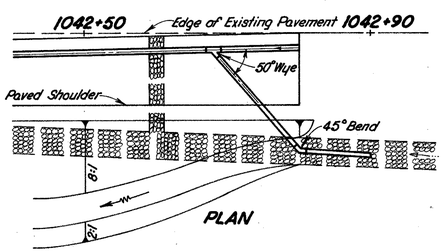
*Note: The concrete apron used on the Paved Shoulder Inlet shall be as provided on Std. Drwg's. I-2 in lieu of the depressed shoulder as shown on Std. Drwg. I-2A.



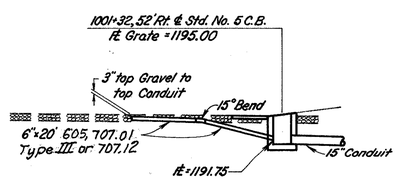
PROFILE



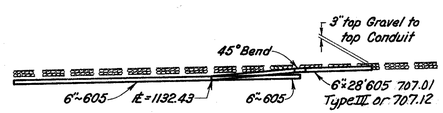
PLAN



PLAN



SECTION

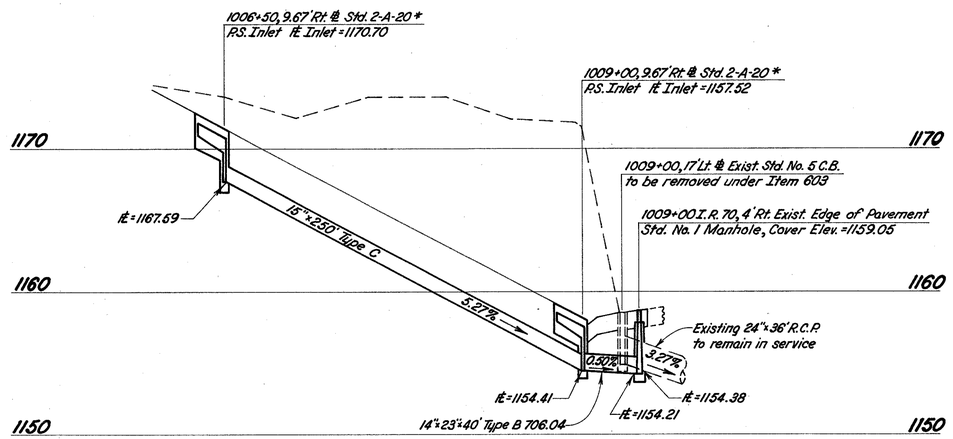


SECTION

Note: Cost of installing conduit and replacing gravel in ditch to be included with unit price bid for Item 605 "6" Unclassified Pipe Underdrains, 707.01 Type III or 707.12 As Per Plan

Scale
0 10 20

DRAIN of AGGREGATE DITCH



PROFILE

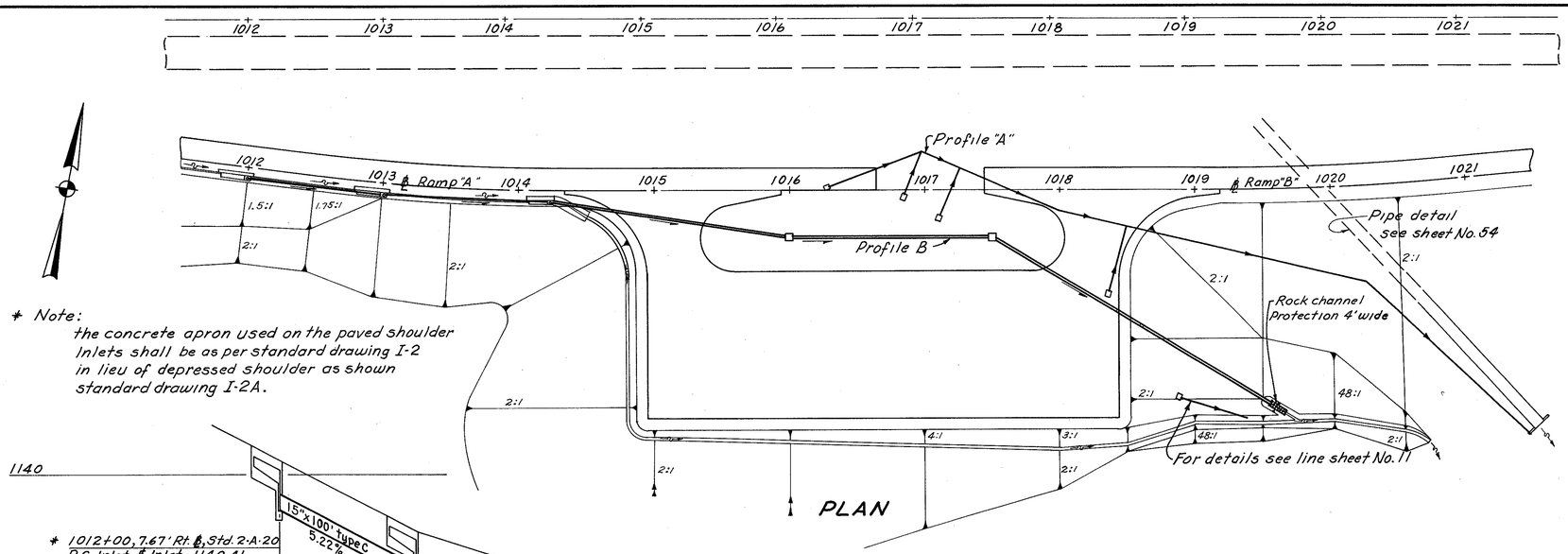
Scales
Horizontal & Plan View 0 50 100
Vertical 0 5 10

STORM SEWER DETAILS ~ Sta. 1001+32 to 1002+44 & Sta. 1006+50 to 1009+00

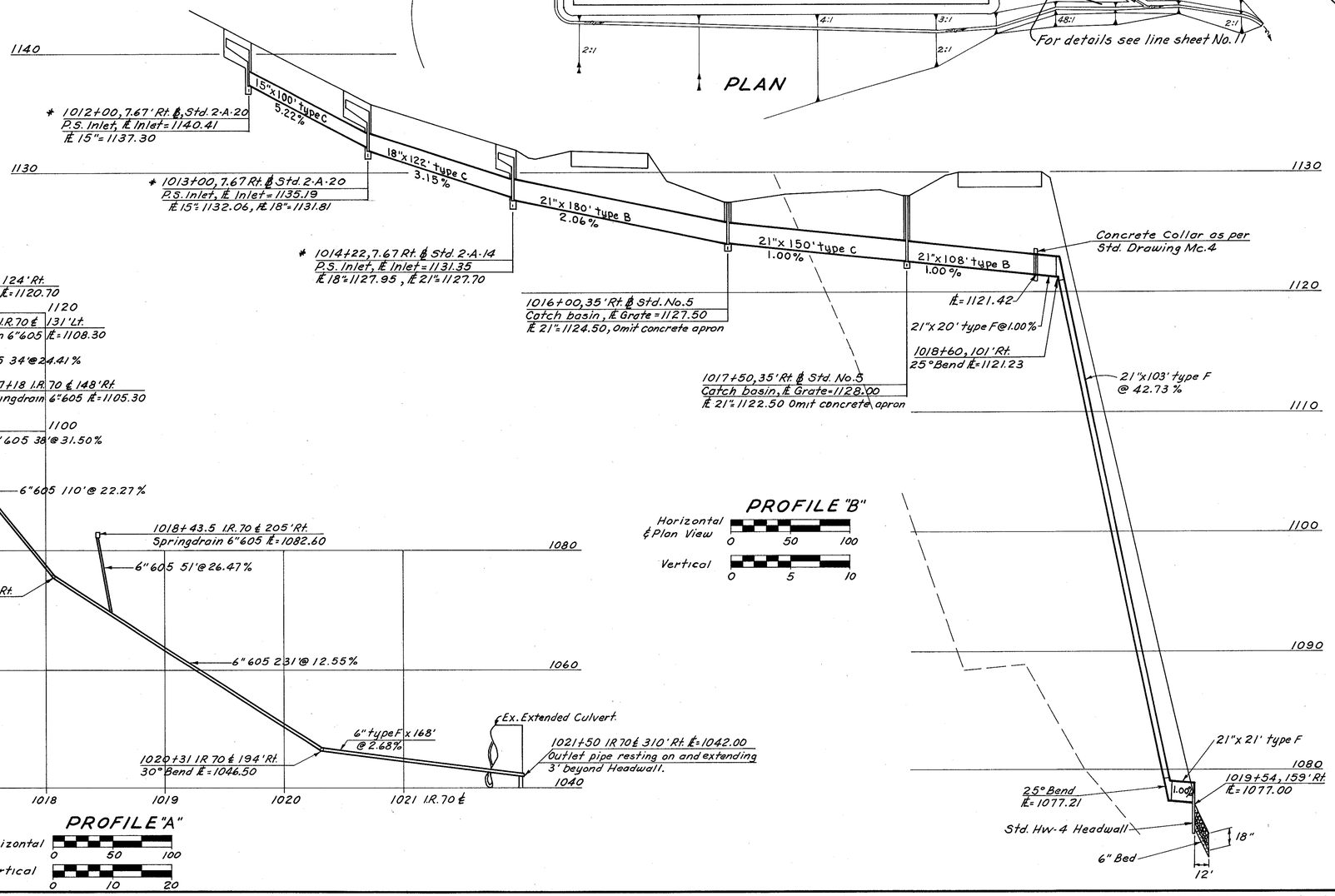
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

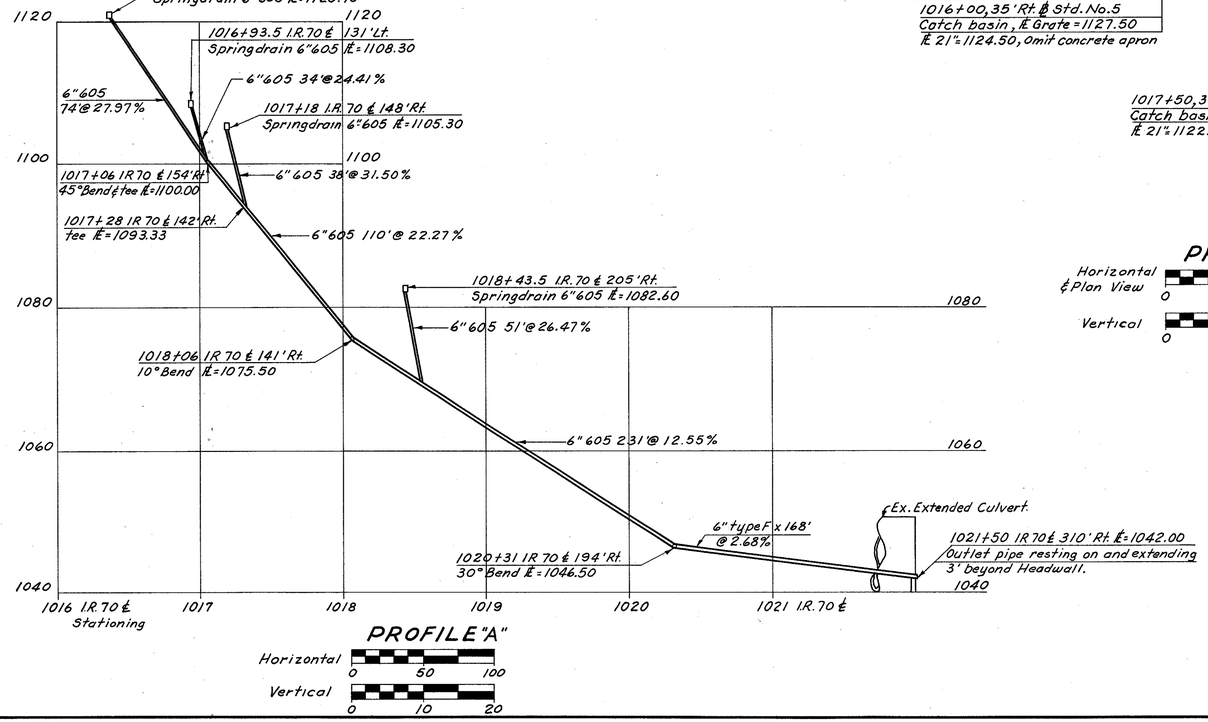
53
81

BELMONT COUNTY
BEL-70-18.87



* Note:
the concrete apron used on the paved shoulder inlets shall be as per standard drawing I-2 in lieu of depressed shoulder as shown standard drawing I-2A.





PROFILE "A"
Horizontal 0 50 100
Vertical 0 10 20

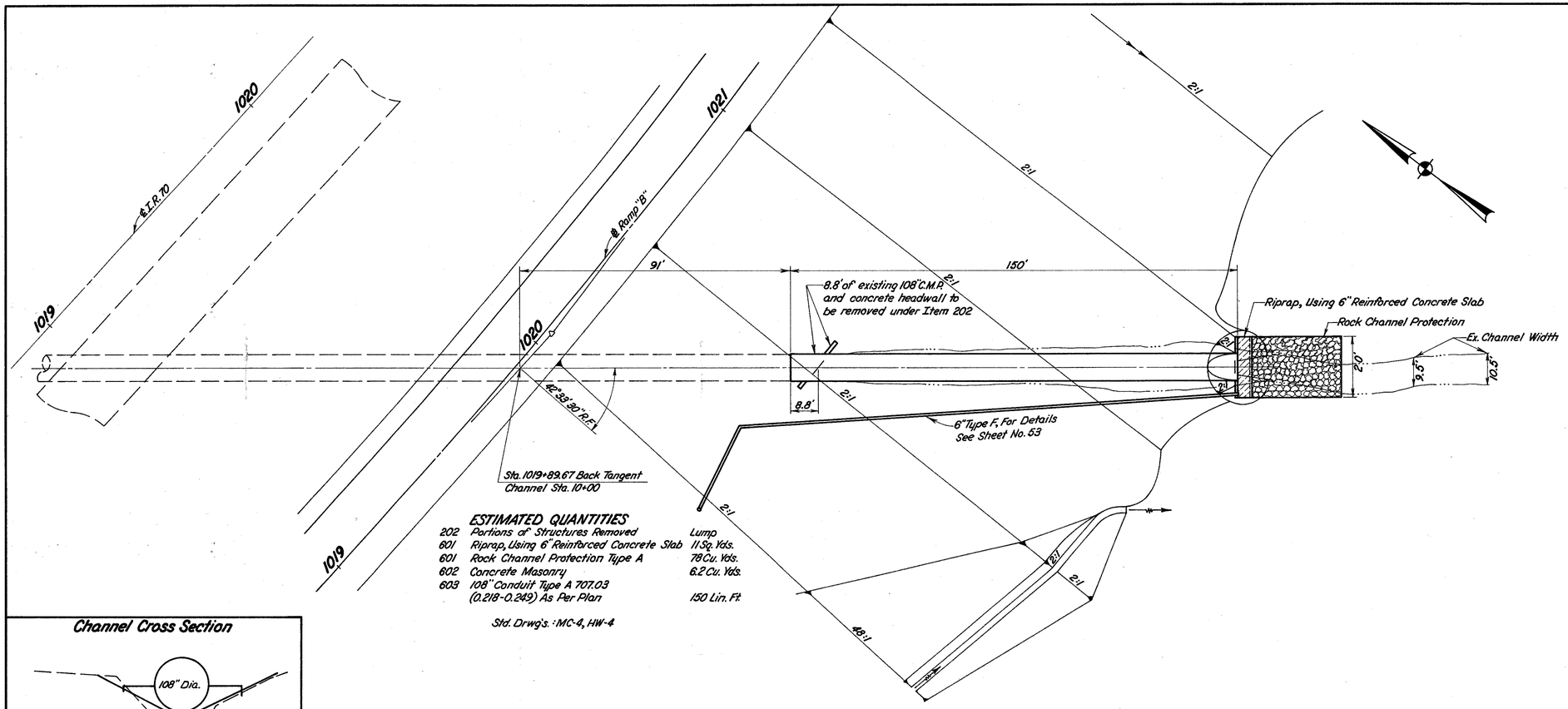
PROFILE "B"
Horizontal & Plan View 0 50 100
Vertical 0 5 10

STORM SEWER DETAIL STA. 1012+00 to STA. 1019+54

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

54
81

BELMONT COUNTY
BEL-70-18.87

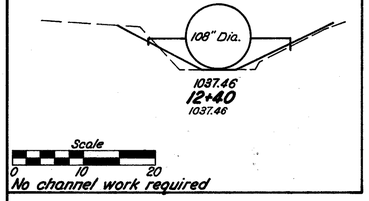


ESTIMATED QUANTITIES

202	Portions of Structures Removed	Lump
601	Riprap, Using 6" Reinforced Concrete Slab	11 Sq. Yds.
601	Rock Channel Protection Type A	78 Cu. Yds.
602	Concrete Masonry	6.2 Cu. Yds.
603	108" Conduit Type A 707.03 (0.218-0.249) As Per Plan	150 Lin. Ft.

Std. Drwg's.: MC-4, HW-4

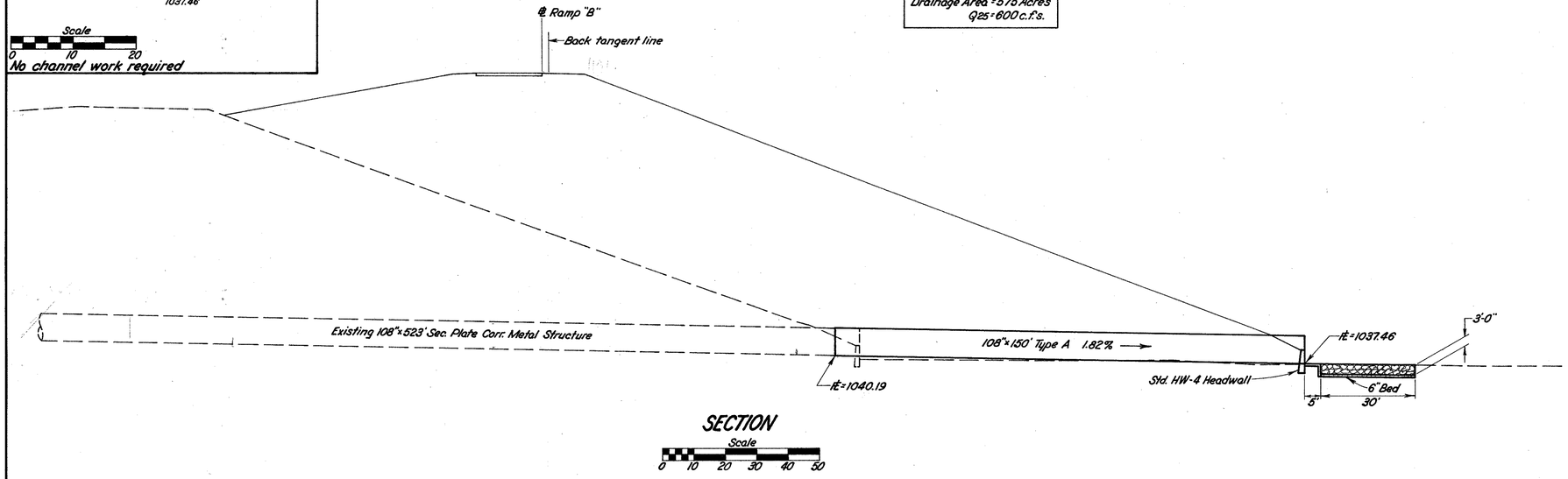
Channel Cross Section



No channel work required

PLAN

Drainage Area = 575 Acres
Q25 = 600 c.f.s.



SECTION

Scale
0 10 20 30 40 50

Designed	Checked	Inked
D.F.H.	R.D.E.	R.J.M.
4-11-73	5-17-73	9-25-73

BEL-70-1929

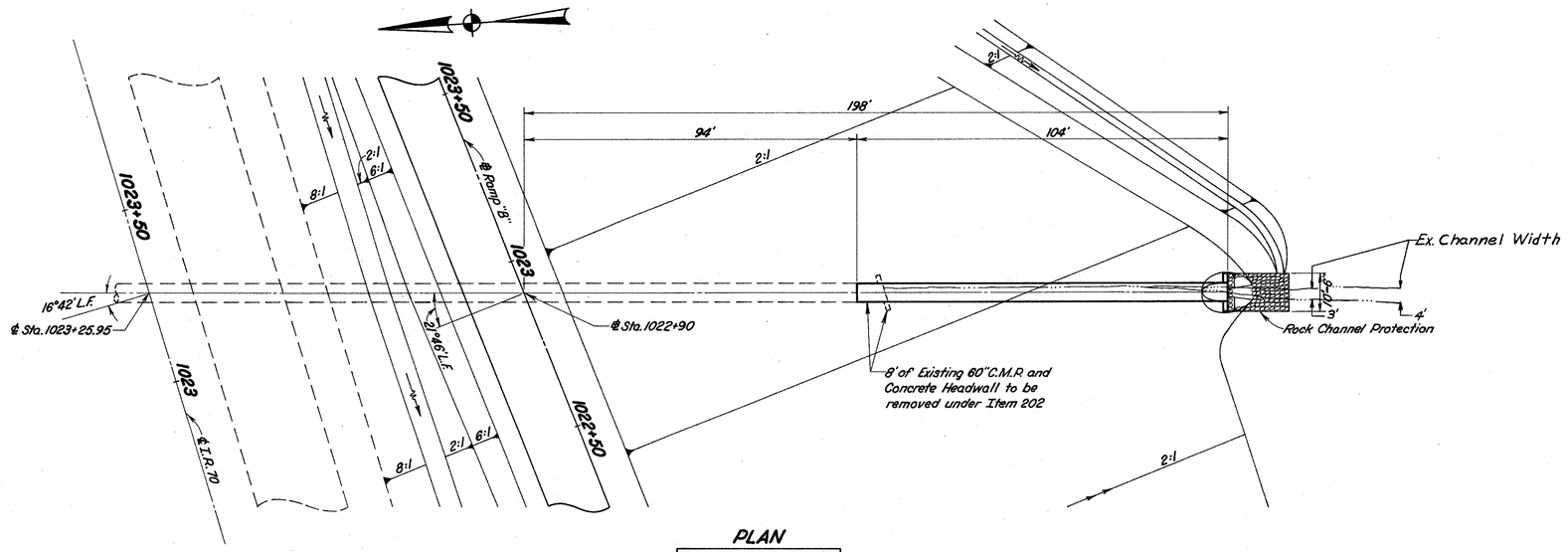
Rev. 12-27-73

PIPE DETAIL ~ STA. 1019+89.67 RAMP "B"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

55
81

BELMONT COUNTY
BEL-70-18.87



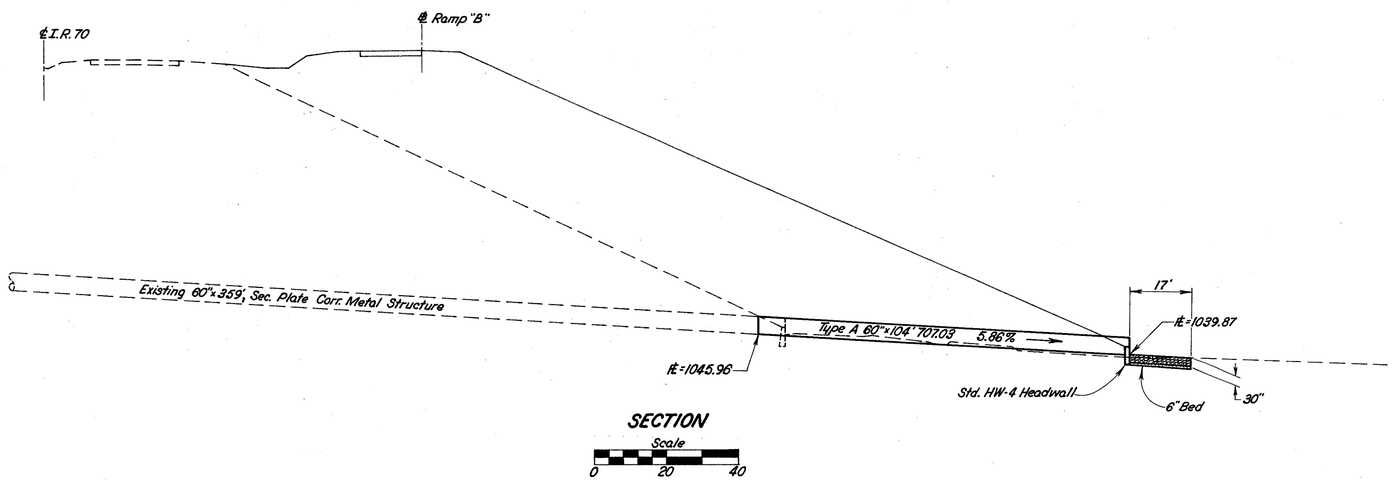
PLAN

Drainage Area = 52 Acres
Q25 = 95 c.f.s.

ESTIMATED QUANTITIES

202	Portions of Structures Removed	Lump
601	Rock Channel Protection Type B	20 Cu. Yds.
602	Concrete Masonry	1.8 Cu. Yds.
603	60" Conduit Type A, 707.03 (0.109-0.138) As Per Plan	104 Lin. Ft.

Std. Drwg's.: MC-4, HW-4



SECTION

Scale
0 20 40

Designed	Checked	Inked
R.D.E. 4-11-73	D.F.H. 5-16-73	R.J.M. 9-13-73

BEL-70-1937
PIPE DETAIL STA. 1022+90 RAMP "B"

815 SIGNING NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

56
81

BELMONT COUNTY
BEL-70-18.87

815 Signs, Extrusheet Type, as per plan

The extrusheet panels shall be fabricated in accordance with Shts. 65 & 66 (Dwg. ECD-1, and ECD-2). Mounting clips shall be included as part of the signs, in the quantity specified on the above mentioned drawings.

Sign face background material shall be Type F reflective sheeting. The proposed background color and legend type shall be indicated on each sign layout shop drawing submitted for review. The following code shall be used:

CODE	COLOR DESCRIPTION
RSG	Green
RSB	Blue
RSW-B	Silver-White, Grade 1
RSY	Yellow
RSBR	Brown
RSO	Orange

The sign legend shall include letters, digits, route shields, symbols, borders, and outlines coded and described in accordance with the following schedule and indicated on each shop drawing submitted for review.

CODE	DESCRIPTION	COLOR
DCW	Demountable Reflective Unit Type	White
DCBK	Demountable Non-reflective Type	Black
DAW	Direct Applied Reflective Sheeting, Silver-White, Grade 2	White
DAB	Direct Applied Non-reflective Sheeting	Black

Interstate route shields mounted on signs shall be of reflective sheeting type, mounted as separate and complete units using Silver-White Grade 2 reflective sheeting, Type F, with reverse screen transparent red and blue overlay. Numerals and borders shall be white demountable reflective unit type copy.

Ohio and US route shields shall be mounted as separate and complete units, using Silver-White Grade 1 reflective sheeting, Type F, with black silk screen paste numerals.

Exit number panels, where required, shall include 4-pound drive post bracing (6-foot lengths) and mounting clips in accordance with Sht. 62 (Drawing TPS-1). The same method shall be used for supplementary signs such as NEXT EXIT____ MILES signs.

Extrusheet panel signs shall have a glare shield included as part of the signs, if the signs are to be illuminated. The glare shield shall be of the same material as the sign panels and shall be interlocked or bolted to the sign. The face material of the glare shield shall be non-reflective sheeting such as Scotchcal, Tedlar, or an approved equal. Notches shall be cut in the glare shields to the dimensions shown on the approved shop drawings. The area of the glare shield shall be measured in the same manner as extrusheet panel signs and shall be paid for at the unit price bid for extrusheet panel signs.

The unit price bid per square foot for Item 815 Signs, Extrusheet Type, as per plan, shall include payment for all required legend, hardware and all necessary equipment, labor, and materials necessary to furnish and erect the completed signs including packaging, delivery and storage when needed.

815 Signs, Flat Sheet Overlay Type

If specified in the plans, overlay signs shall consist of aluminum flat sheet (.063 inch thick) with reflective sheeting of a color compatible with the color used on the underlying sign unless otherwise noted. Sign legend shall be similar to that specified for Aluminum Extrusheet Type signs. Shop drawings submitted for review shall be coded similar to requirements for Aluminum Extrusheet Type signs.

Overlay signs are to be shop mounted onto extrusheet signs. Method of attachment shall be by rivets of adequate length at one foot maximum spacing on the periphery of sections and complete overlay sheeting and at two feet (2'-0") maximum spacing over the entire surface area of the overlay sheeting. Overlay signs over 8 feet by 4 feet in size may be furnished in two sections rather than one.

The unit price bid per square foot for Item 815 Signs, Flat Sheet Overlay Type, as per plan shall include payment for all required legend, hardware, equipment, labor and tools necessary to furnish and mount the overlays as specified.

815 Signs, Flat Sheet Type, as per plan

The aluminum flat sheet sign blanks shall be fabricated in accordance with Sheet 64 (Drawing SBD).

Mounting hardware, i.e., bolts, washers, bearing plates, and nuts shall be included as part of the signs. The number and sizes furnished of each of these items shall conform with that shown on Sheets 63, 64 & 72 (Drawings SBD, SOW, and GMSS, and ~~MST~~).

Sign face background material shall be reflective sheeting, Type F.

The typical sign legend shall be silk screened and include letters, digits, symbols, borders and outlines. The following color coding shall be shown on shop drawing submitted for review and approval:

CODE	COLOR
RSTR	Silver-White, Grade 2, with reverse screen transparent red
RSY	Yellow
RSW-B	Silver-White, Grade 1
RSTRB	Silver-White, Grade 2, with reverse screen transparent blue and red
RSTB	Silver-White, Grade 2, with reverse screen transparent blue
RSTG	Silver-White, Grade 2, with reverse screen transparent green
RSG	Green

For Type Code _____ Signs, direct applied sheeting shall be used for legend including letters, digits, symbols, borders and outlines. The following color coding shall be shown on shop drawings submitted for review and approval:

CODE	DESCRIPTION
RSW-A	Reflective Sheeting, Type F (Silver-White, Grade 2)
SPBK	Silk Screen Paste (Black)
DAW	Reflective Sheeting, Direct Applied (Silver-White, Grade 2)
DAB	Non-reflective Sheeting, Direct Applied (Black)

The unit price bid per square foot 815 Signs, Flat Sheet Type, as per plan, shall include payment for all required legend, hardware, plus all necessary equipment, labor and tools to furnish and erect the signs including packaging, delivery and storage when needed.

Sign Legends

Sign legend shall be in accordance with the American Association of State Highway Officials "Manual for Signing and Pavement Marking of the National System of Interstate and Defense Highways" 1970 edition. Sign lettering when indicated as a series type such as C, D, etc., shall be designed in accordance with the "Standard Alphabets for Highway Signs" published by the Federal Highway Administration. Copies of the above references are on file in the Division of Highways, Bureau of Highway Design Services, 25 South Front Street, Columbus, Ohio 43215.

Clear Coating of Reflective Sheeting:

The provisions of Section 815.10 apply except where pressure sensitive reflective sheeting is used. Pressure sensitive reflective sheeting shall not be clear coated and only the edge sealer is required for this type of sheeting.

Colors:

Colors proposed and shown on each sign layout shop drawing submitted for review shall conform to those shown in the Ohio Manual of Uniform Traffic Control Devices for Streets and Highway, current edition, latest revision, or, in special circumstances, as may be indicated in the plans.

In addition to the requirements of Supplemental Specification 815, colors for reflective sheeting shall conform to the latest edition of Color Tolerance charts produced by the Federal Highway Administration.

Processing of Sign Shop Drawings

1. The State will furnish the following information to the contractor upon award of the contract:
   a. Sign Design Layout Standards for Directional Guide Signs.
   b. Traffic Standard Drawings for regulatory, warning, and route marker signs.
   c. Special design layout criteria as applicable.
2. The contractor shall submit 8 copies of individual shop drawings as follows:
   a. Each separate sign message layout including legend size and spacing with reference and/or code number. Shop drawings for standard warning, regulatory, and route marker signs are not required unless specifically requested by the State in information furnished under Item 1 above.
   b. Sign backing material designs showing overall dimensions, extrusheet panel widths, overlay panel widths, notches in glare shields, and number of mounting clips.
   c. Proposed sign face colors including legend, border, and background of sign.

815 Packaging, Shipment, and Storage of Signs

In addition to the requirements of Supplemental Specification 815, the following requirements shall be adhered to:

Extrusheet Signs:

1. Signs shall be protected by crating or by temporary vertical backbracing attached to signs to assure that the sign is rigid and protected during packaging, loading, shipment, and handling or storage of signs at the job site prior to erection.

   Vertical bracing (if signs are not crated) shall be at a minimum spacing of 6 feet and maximum of 8 feet on each sign with temporary mounting devices attaching signs to backbracing at a maximum of 2 feet intervals. Bracing shall extend a minimum of 3 inches below bottom of signs to assure that the bottom of sign is kept above ground during shipment or storage.

2. Sign faces shall be protected by a plastic coated paper with the plastic surface adjacent to the sign face and heavy corrugated cardboard, blankets or equivalent covering over the plastic material attached to the sign.

3. Signs shall be shipped completely assembled in 1 piece, except for signs over 8 feet in height which may be shipped in 2 pieces for assembly at the project site.

   Sign identification shall also be provided on the back of each extrusheet sign. This identification shall be inconspicuously located or in a detachable form.

   Signs or sign components which are shipped with aluminum overlays mounted on the extrusheet panels shall have adequate identification to permit assembly and erection at the proper location without detaching the overlay.

Flat Sheet Signs:

1. Flat sheet signs of like size may be packaged together.
2. Sign faces shall be protected by slip sheets which have plastic coated finish on the side adjacent to each sign face. Oily or waxy paper slip sheets are not acceptable.

Storage of Signs:

Sign faces shall not become wet during shipment or storage. If it is necessary to store signs on or near the project site prior to erection, adequate protection by approved shelter or protective covering is required at all times to assure that signs are not exposed to weather elements.

Extrusheet signs shall be stored in a vertical position in crates or supported by temporary bracing above natural ground, with the top edge of sign up. Under no circumstances shall extrusheet signs be stored in a horizontal position.

TRAFFIC CONTROL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

57
81

BELMONT COUNTY
BEL-70-18.87

IDENTIFICATION OF TRAFFIC SIGNS

SIGN LEGENDS ARE SHOWN OPPOSITE EACH SIGN LOCATION ON THE PLAN SHEET(S). HORIZONTAL AND VERTICAL DIMENSIONS AND SIGN DESIGN NUMBERS ARE SHOWN ABOVE PROPOSED SIGN LEGENDS. SIGN LOCATION AND CLEARANCE BETWEEN EDGE OF PAVEMENT AND NEAR EDGE OF SIGN ARE SHOWN BELOW PROPOSED SIGN LEGEND. THE NUMBER OF GROUND MOUNTED SIGN SUPPORTS ARE INDICATED AS FOLLOWS:

SIGNS ON ONE SUPPORT
SIGNS ON TWO SUPPORTS
SIGNS ON THREE SUPPORTS

620 DELINEATORS, AS PER PLAN

THE CONTRACTOR SHALL HAVE THE OPTION OF DRIVING OR CONCRETE EMBEDDING THE DELINEATOR POST IN ACCORDANCE WITH DETAILS OF SHEET 60.

POSTS MAY BE TRIMMED ON THE EMBEDDED ENDS TO ADJUST FOR GRADE AND REQUIRED DELINEATOR MOUNTING HEIGHT. CONCRETE SHALL BE CLASS "C"

IN EITHER CASE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UNDERGROUND UTILITIES OR CABLE DURING PERFORMANCE OF THIS ITEM OF WORK.

THE QUANTITY FURNISHED AND INSTALLED SHALL BE PAID FOR AT THE PRICE BID PER EACH WHICH PRICE SHALL BE FULL COMPENSATION FOR EITHER TYPE OF INSTALLATION.

816 STRUCTURAL SUPPORTS, STEEL BEAM (TYPE)

THE STRUCTURAL STEEL BEAM SUPPORTS INCLUDING BRACING AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AND A-153 RESPECTIVELY. ALL FABRICATION SHALL BE COMPLETED PRIOR TO GALVANIZING.

QUANTITIES FOR ITEM 816 "STRUCTURAL SUPPORTS, STEEL BEAM (TYPE)", APPEARING IN THE QUANTITY TABLES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVANIZING OF SUPPORTS. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER LIN. FT. WHICH PRICE AND PAYMENT SHALL INCLUDE ALL COSTS IN CONNECTION WITH THE EMBEDMENT OF THE SUPPORTS.

THE COST OF THE CONCRETE USED FOR EMBEDMENT WILL BE SEPARATE PAY ITEM.

RESTORATION OF DISTURBED AREAS

THE CONTRACTOR SHALL REPLACE ALL MEDIAN PAVEMENT, SEEDED AND SODDED AREAS, PAVED SHOULDERS, AND ALL OTHER DISTURBED SURFACES TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE WORK WAS STARTED. ALL REPLACEMENTS SHALL BE DONE IN ACCORDANCE WITH THE PERTINENT SPECIFICATION ITEMS AND AS DIRECTED BY THE ENGINEER. PAYMENT FOR ALL RESTORATION WORK, INCLUDING MATERIALS, EQUIPMENT, LABOR, INCIDENTALS AND DISPOSAL OF ALL SURPLUS MATERIALS, SHALL BE INCLUDED IN THE UNIT PRICES BID FOR ITEMS 816.

816 BREAKAWAY SIGN SUPPORT CONNECTION

THIS ITEM CONSISTS OF CUTTING AND DRILLING THE STRUCTURAL SUPPORT: FURNISHING AND ATTACHING THE FUSE PLATE: AND FURNISHING AND ATTACHING THE BASE PLATES FOR EACH STRUCTURAL SIGN SUPPORT AS INDICATED ON THE PLANS.

ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO FABRICATE AND INSTALL THIS ITEM FOR EACH SIGN SUPPORT (EXCLUSIVE OF THE STRUCTURAL SIGN SUPPORT) WILL BE MEASURED AND PAID FOR AT THE UNIT PRICE BID FOR ITEM 816 EACH BREADAWAY SIGN SUPPORT CONNECTION.

815 VARIABLE SIGN MESSAGE UNIT, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLATION OF THE COMPLETE VARIABLE SIGN MESSAGE UNIT IN A WS-3 SIGN FURNISHED BY OTHERS AND ERECTED UNDER THIS CONTRACT BY SEPARATE PAY ITEM.

THE VARIABLE SIGN MESSAGE UNIT SHALL BE FABRICATED IN ACCORDANCE WITH SPECIFICATIONS AND DETAILS SHOWN ON SHEETS 69 AND 70.

THE WORK SHALL ALSO INCLUDE FURNISHING AND INSTALLATION OF ALL CABLE AND 2" CONDUIT FROM THE ADJACENT PULL BOX TO THE SIGN, AND TO AND INCLUDING THE PHOTOELECTRIC CELL.

DETAIL SHOP DRAWINGS OF CABINET AND ELECTRICAL DETAILS INCLUDING ATTACHMENT HARDWARE MUST BE SUBMITTED A MINIMUM OF 90 DAYS PRIOR TO SCHEDULED DELIVERY OF SIGNS.

THE BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH UNIT WHICH SHALL INCLUDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS TO PROVIDE A COMPLETE AND ACCEPTED ITEM OF WORK.

625 GROUND RODS

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING GROUND ROD AND CABLE SPECIFIED ON STD. HL-1.

BASIS OF PAYMENT FOR THIS ITEM SHALL BE AT CONTRACT UNIT PRICE PER EACH, WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

816 CONSTRUCTION LAYOUT STAKES FOR SIGNS

THE CONTRACTOR SHALL STAKE OUT ALL SIGN SUPPORTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 PRIOR TO INSTALLATION OF ANY FOUNDATIONS OR SUPPORTS. AFTER STAKEOUT THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF SEVEN (7) DAYS IN ADVANCE OF SCHEDULED WORK. SUPPORT LOCATIONS FOR EACH SUPPORT WILL BE FIELD CHECKED AND APPROVED BY THE ENGINEER WHO SHALL COORDINATE WITH THE DIVISION AND/OR CITY TRAFFIC ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION WORK REQUIRED.

IF BOTH MAJOR AND MINOR TYPE SUPPORTS ARE INCLUDED WITHIN THE PROJECT IT WILL BE PERMISSIBLE TO PERFORM THE CONSTRUCTION STAKE-OUT AND FIELD INSPECTION IN TWO (2) STAGES, ONE FOR MAJOR SUPPORTS AND ONE FOR MINOR SUPPORTS.

COST FOR THIS ITEM OF WORK WILL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 623 CONSTRUCTION LAYOUT STAKES.

816 CONCRETE FOUNDATIONS, FOR SIGN SUPPORTS

PAYMENT FOR THIS ITEM SHALL BE BASED ON PLAN DIMENSIONS (OR DIMENSIONS AS MODIFIED BY THE ENGINEER IN LIEU OF PLAN QUANTITIES) AS REQUIRED IN SUPPLEMENTAL SPECIFICATION 816. BASIS OF PAYMENT SHALL BE AS FOLLOWS: CONCRETE FOR GROUND MOUNTED SIGN SUPPORT FOUNDATIONS, PER CUBIC YARD.

SIGN LOCATIONS

ALL SIGNS SHALL BE PLACED NORMAL TO THE ROADWAY ON WHICH THEY ARE STATIONED UNLESS OTHERWISE NOTED ON THE PLANS.

816 ROCK EXCAVATION

WHERE SOLID ROCK IS ENCOUNTERED IN EXCAVATION FOR SIGN SUPPORT FOUNDATIONS, THE DEPTH TO BE EXCAVATED BELOW ROCK SURFACE MAY BE DECREASED AS DIRECTED BY THE ENGINEER TO A MAXIMUM OF THIRTY FIVE (35) PERCENT OF DEPTH SPECIFIED IN THE PLANS.

EXISTING SIGNS

EXISTING SIGNS LOCATED WITHIN THE ROADWORK AREAS WHICH ARE NECESSARY FOR INTERIM OR PERMANENT TRAFFIC CONTROL, SHALL BE REMOVED AND RE-ERECTED IN LOCATIONS INDICATED BY THE PLANS OR AS APPROVED BY THE ENGINEER. STOP SIGNS WILL BE MAINTAINED AT ALL TIMES WHILE TRAFFIC IS MAINTAINED. THE COST OF REMOVAL, RE-ERECTION AND SUBSEQUENT REMOVAL IF REQUIRED SHALL BE CONSIDERED A SUBSIDIARY WORK ITEM, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID FOR THE ROADWAY WORK ITEMS. THE SIGNS WHICH ARE TO BE RE-ERECTED ON THE BERMS SHALL BE LOCATED WITH THE CENTER LINE OF SUPPORT ON THE P.I. OF THE SHOULDER.

816 STRUCTURAL SUPPORTS, 6 LB. BEAM, AS PER PLAN

THIS ITEM SHALL CONSIST OF THE FURNISHING, ASSEMBLY AND INSTALLATION OF TWO (2) 3 LB. PER FOOT DRIVE POSTS (6 LB. BEAM) IN COMBINATION WITH A SQUARE SEAMLESS TUBULAR POST EXTENSION SPLICED TO THE TOP OF THE 6 LB. BEAM. DETAILS ARE SHOWN ON SHEET NO. 72.

SQUARE TUBULAR POST MATERIAL SHALL CONFORM TO ASTM A-570 GRADE "B" AFTER FABRICATION.

WORK SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND HARDWARE NECESSARY TO PERFORM THE REQUIRED ITEM OF WORK.

BASIS OF PAYMENT SHALL BE FOR STRUCTURAL SUPPORTS, 6 LB. BEAM, AS PER PLAN PER LINEAR FOOT MEASURED BY TOTAL LENGTH OF COMBINATION BEAM FROM END TO END.

816 STRUCTURAL SUPPORTS DRIVEN TYPE

DRIVEN TYPE STRUCTURAL SUPPORTS WILL BE DRIVEN TO A DEPTH OF FIVE FEET (5'0") MINIMUM BELOW GROUND LINE IN SUCH A MANNER THAT NO DEFORMATION WITHIN THE LENGTH OF THE SUPPORT, OR DAMAGE TO THE SUPPORT, WILL OCCUR.

PRIOR TO INSTALLATION EACH SUPPORT SHALL BE SIGNIFICANTLY MARKED WITH PAINT AT A LOCATION ON THE SUPPORT 5'6" FROM THE EMBEDDED END, AND APPROVED BY THE ENGINEER.

"STRUCTURAL SUPPORTS 6 LB. BEAM, DRIVEN AND 6 LB. BEAM, AS PER PLAN DRIVEN" WILL INCLUDE THE 10" X 12" X 1/4" SOIL PLATE DETAILED IN THE PLANS.

PAYMENT FOR INSTALLATION OF SIGN SUPPORTS BY THE ABOVE METHOD SHALL BE INCLUDED IN THE COST OF VARIOUS SUPPORT TYPES SPECIFIED INCLUDING ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED.

202 REMOVAL OF EXISTING SUPPORTS AND FOUNDATIONS AS PER PLAN

THIS WORK SHALL CONSIST OF THE REMOVAL OF EXISTING SIGN SUPPORTS AND FOUNDATIONS AS INDICATED IN THE PLANS. IN ADDITION TO ITEM 202 THE FOLLOWING PROVISIONS SHALL APPLY:

THE FOUNDATION SHALL BE REMOVED TO A MINIMUM OF ONE FOOT BELOW THE GROUND SURFACE AND THE HOLE SHALL BE BACKFILLED. ALL SUPPORTS AND ACCESSORIES SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THIS WORK SHALL INCLUDE DISPOSAL OF ALL WASTE MATERIAL.

THIS ITEM SHALL BE PAID AT THE UNIT PRICE BID PER EACH FOR REMOVAL AND DISPOSAL OF EXISTING SUPPORTS AND FOUNDATIONS BY TYPE STRUCTURAL SUPPORT.

TYPE A:	8 LB. BEAMS OR SMALLER
TYPE B:	BEAMS LARGER THAN 8 LBS.

815 REMOVE AND RE-ERECT EXISTING GROUND MOUNTED SIGNS ON NEW SUPPORTS:

THIS WORK ITEM SHALL CONSIST OF THE CAREFUL REMOVAL OF EXISTING GROUND MOUNTED SIGNS AND THEIR RE-ERECTION ON NEW SUPPORTS AT A LOCATION SPECIFIED IN THE PLANS IN A MANNER SATISFACTORY TO THE ENGINEER.

THIS WORK SHALL BE PAID AT THE UNIT PRICE PER SQUARE FOOT FOR, 815 REMOVE AND RE-ERECT EXISTING GROUND MOUNTED SIGNS.

TRAFFIC CONTROL QUANTITIES

FED. RD. DIVISION	STATE	PROJECT		58
2	OHIO			81

BELMONT COUNTY
BEL-70-18.87

TYPE CODE Y021

621~TRAFFIC ZONE PAINT MARKING

Ref.	Station		Side	4" Edge Line	4" Lane Line		8" Channel Line	Broad Transverse Stripes	Curb Marking	Parking Lot Stall Marking		
				Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		
I.R.70	1001+50	1004+95.69	Rt.	346								
	1003+90	1005+31	Rt.		141							
	1033+20	1036+08	Rt.		288							
	1030+80	1033+20	Rt.				240					
	1030+80.12	1042+80.12	Rt.	1200								
	1005+31	1009+50	Rt.				419	515				
	1005+31	1009+50	Rt.									
RAMP A	1004+95.69	1014+34	℄	939								
	1015+94	1016+64	℄	70								
	1009+49.17	1016+64	Lt.	715								
	1005+29.17	1009+49.17	Lt.				420					
RAMP B	1019+19	1030+76.15	℄	1158								
	1017+44	1026+76.15	Lt.	933								
	1023+93	1030+76	Lt.						683			
	Parking Lot									2700		
Totals ~ Lin. Ft.				5361	429		1079	515	683	2700		
Totals ~ Miles				1.015	0.081							

620~DELINEATORS

Ref.	Station		Side	Spacing	Post Mounted Type C-2		Post Mounted Type C-1
					Each		Each
I.R.70	1001+50	1004+50	Rt.	100	4		
RAMP A	1004+50	1012+50	Rt.	100	8		
RAMP A	1013+30	1014+10	Rt.	80	2		
RAMP B	1019+76	1030+76	Rt.	100	12		
I.R.70	1031+80	1042+80	Rt.	100	12		
I.R.70	1009+50	1025+50	Rt.				9
Totals					38		9

* As per Plan

815~SIGN ERECTION

Ref.	Station	Side	Design No.	Actual Sign Size	Extru-Sheet Type	Flat Sheet Type	Variable Sign Message Unit as per Plan		Remove & Re-erect Existing Ground Mounted Signs
				Feet	Sq. Ft.	Sq. Ft.	Each	Sq. Ft.	Sq. Ft.
1	976+50	Rt.	M-5-24, M-39-24	2'x2', 2'x1'		6			
2	984+00	Rt.	WS-2-144	12'x8'	96				
3	988+00	Rt.	R-10-48, R-16-48	4'x5', 4'x4'					36
4	992+00	Rt.	R-103-96	8'x4'	32				
5	1001+50	Rt.	WS-3-156	13'x6'	78		1		
6	1010+00	Rt.	WS-4-108	9'x6'	54				
7	1014+30	Rt.	R-41B-36, R-43R-48	3'x3', 15'x4'		15			
8	1019+00	Rt.	R-43R-48	15'x4'		6			
9	1025+00	Rt.	W-49R-48, WP-49-24	4'x4', 1'x2'		18			
10	1017+85	Rt.	G.B.	16'x6'					96
11	1050+00	Rt.	N-29-120	10'x6'					60
Totals					4	4	1		3
Totals ~ Sq. Ft.					260	45			192

816~SIGN SUPPORTS

Ref.	4 lb Post Driven	6 lb Beam Driven		8 WF 17		10 WF 21		6" Beam as per Plan, Driven	Concrete for Ground Mounted Signs	Break-away Sign Support Connection	
	Lin. Ft.	Lin. Ft.		Lin. Ft.		Lin. Ft.		Lin. Ft.	Cu. Yds.	Each	
1	12.93										
2						15.68	19.04		2.5		
3		20.75	21.25								
4				18.5	20.0				2.3	2	
5				20.6	21.8				2.3		
6				19.6	20.8				2.3	2	
7								15.94			
8		14.44									
9		18.5									
10				20.72	20.88				2.3	2	
11				20.9	23.5				2.3		
Totals	12.93	74.94		206.80		34.72		15.94	14.0	6	

G25

Ground Rod Unit	
Each	
1	

202

Removal of Ex. Supports & Found, Type A*	Removal of Ex. Supports & Found, Type B*
Each	Each
2	
	2
2	
	2

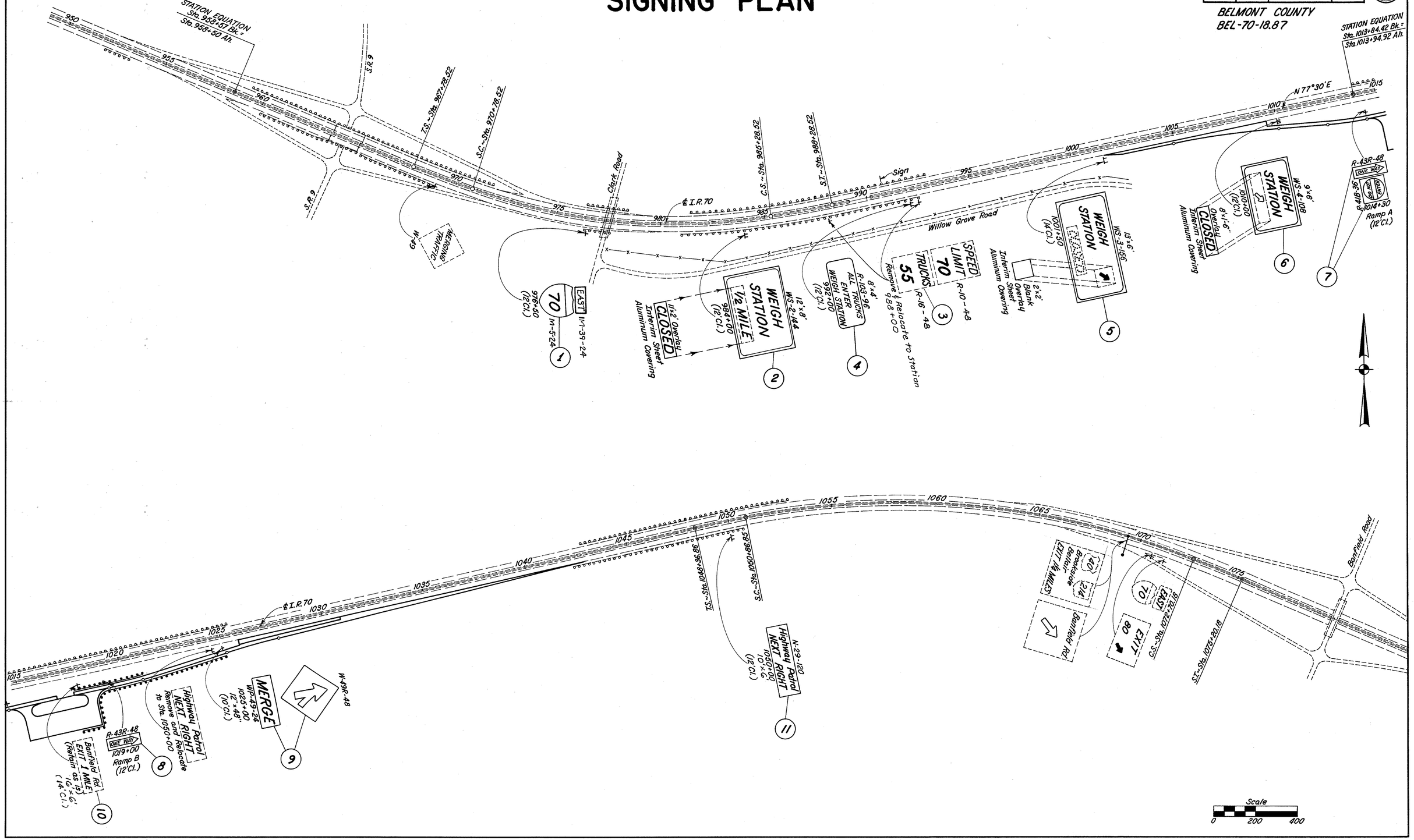
Cdg. LJP 9-21-73
Chkd. CCC 9-21-73

SIGNING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

59
81

BELMONT COUNTY
BEL-70-18.87

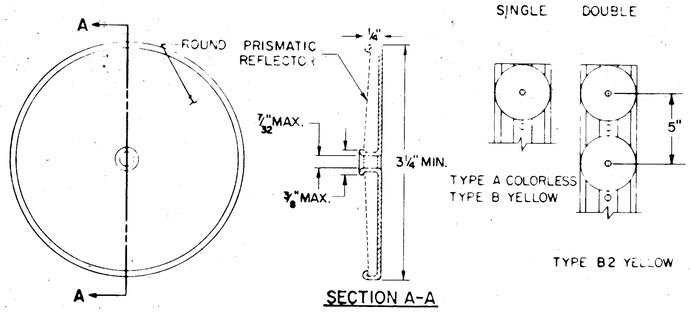


SIGNING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

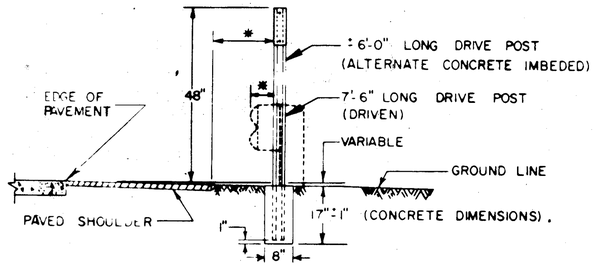
60
81

ROUND DELINEATORS



SECTION A-A

RECTANGULAR SHEET DELINEATORS



LATERAL PLACEMENT OF DELINEATORS

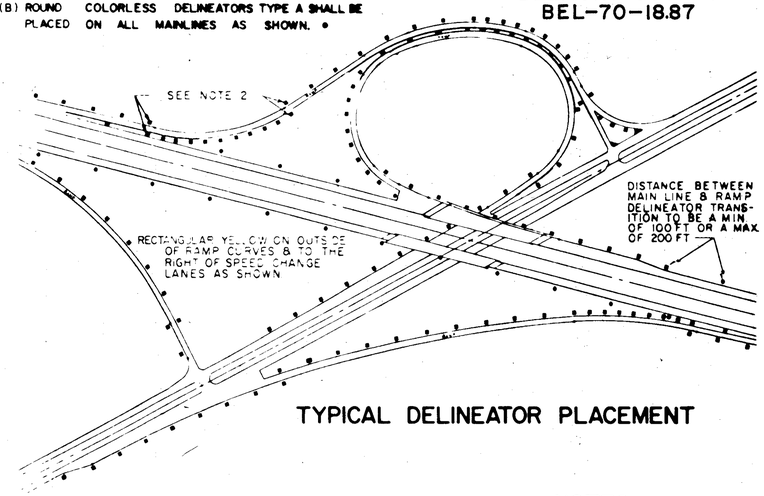
* DELINEATORS SHALL BE 6" BEHIND FACE OF TYPICAL GUARDRAIL LOCATION BUT WITH A MINIMUM DISTANCE OF 2'6" FROM EDGE OF PAVED SHOULDER WHERE GUARDRAIL IS NOT PRESENT.

NOTE

(A.) RECTANGULAR YELLOW DELINEATORS TYPE D SHALL BE PLACED ON ALL RAMPS AS SHOWN. *

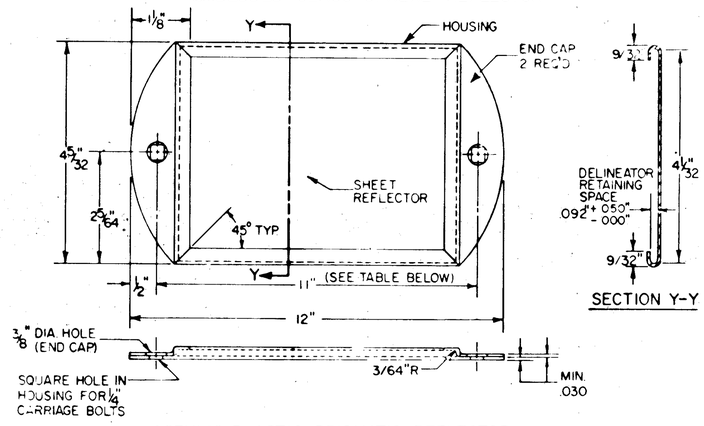
(B) ROUND COLORLESS DELINEATORS TYPE A SHALL BE PLACED ON ALL MAINLINES AS SHOWN. *

BELMONT COUNTY
BEL-70-18.87



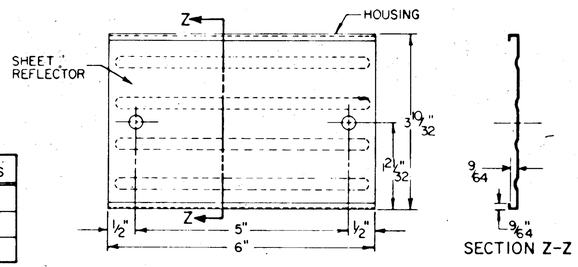
TYPICAL DELINEATOR PLACEMENT

EMBEDDED GLASS SPHERE REFLECTOR



SECTION Y-Y

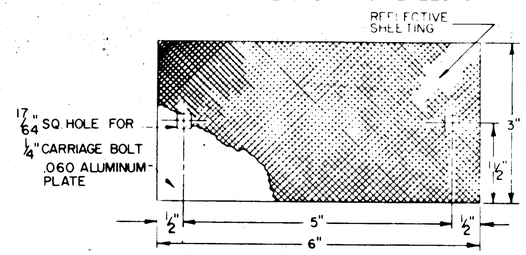
ACRYLIC PLASTIC PRISMATIC REFLECTOR

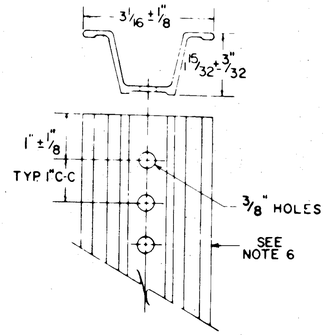


SECTION Z-Z

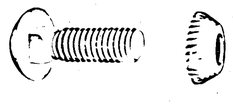
RECTANGULAR TYPES
C - COLORLESS
D - YELLOW
E - RED

REFLECTIVE SHEETING REFLECTOR





2 LB./FT. DELINEATOR DRIVE POST



TAMPER RESISTANT FASTENERS SHALL BE USED TO FASTEN DELINEATORS TO POST AS/OR SIMILAR TO ONE SHOWN ABOVE.

TAMPER RESISTANT FASTNERS

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	*TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	———	30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

NOTES

1. TYPE A DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES.

2. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.

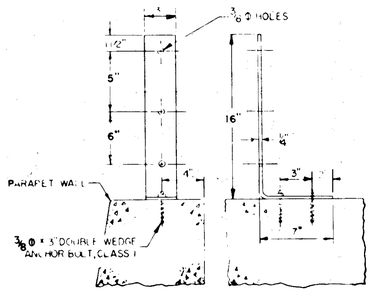
3. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM

4. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.

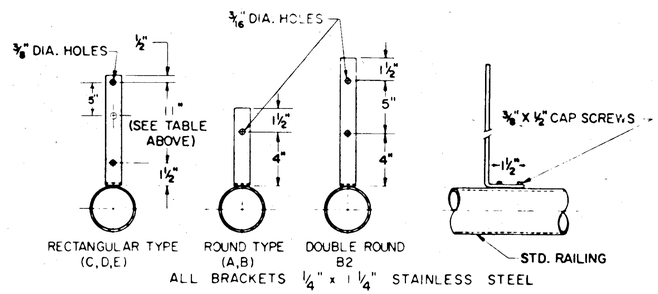
5. IN ADDITION TO MATERIALS LISTED IN 620.02, RECTANGULAR SHEET REFLECTORS MAY CONSIST OF REFLECTIVE SHEETING COMPOSED OF GLASS SPHERES IMBEDDED IN A WEATHER PROOF SYNTHETIC RESIN SHEET, THE REFLECTIVE FACE OF WHICH SHALL BE PLACED BEHIND AND SEALED TO A WEATHERPROOF RIGID PLASTIC FACE OF METHYL METHACRYLATE OF 0.060 INCHES MINIMUM THICKNESS.

6. SUPPLEMENTING THE DRIVE POST DETAILS SHOWN, ALTERNATE POST SECTIONS MAY BE FURNISHED. ANY ALTERNATE SECTION FURNISHED SHALL MEET ALL THE MATERIAL REQUIREMENTS OF 620, HAVE A SHAPE APPROXIMATELY AS DETAILED, AND HAVE A MOMENT OF INERTIA EQUAL TO OR GREATER THAN THE SECTION DETAILED. THE REQUIREMENTS OF 712.20 REALTIVE TO MAXIMUM WEIGHT TOLERANCE ARE HEREBY WAIVED. NO ALTERNATE SECTION FURNISHED SHALL EXCEED THE WEIGHT OF THE CORRESPONDING SECTION BY MORE THAN 10 PERCENT.

BRIDGE PARAPET BRACKET



BRIDGE RAIL BRACKET



ALL BRACKETS 1/4" x 1 1/4" STAINLESS STEEL

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

DELINEATOR DETAILS

DATE 1/1/73 3/12/73

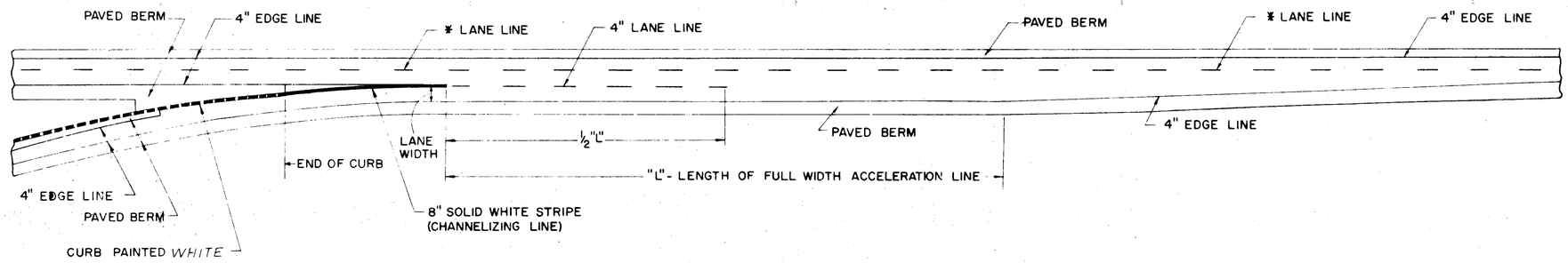
APPROVED _____
ENGINEER OF DESIGN SERVICES

FED RD DIVISION	STATE	PROJECT	
2	OHIO		

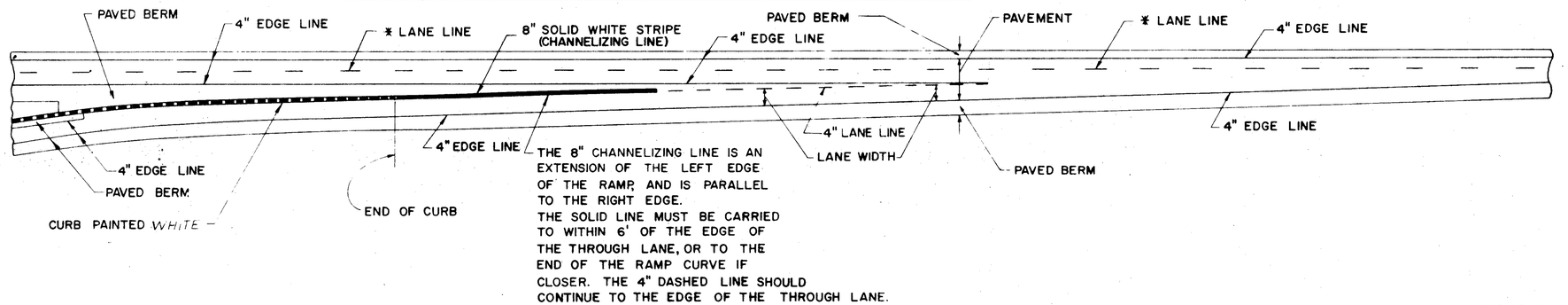
61
81

BELMONT COUNTY
BEL-70-18.87

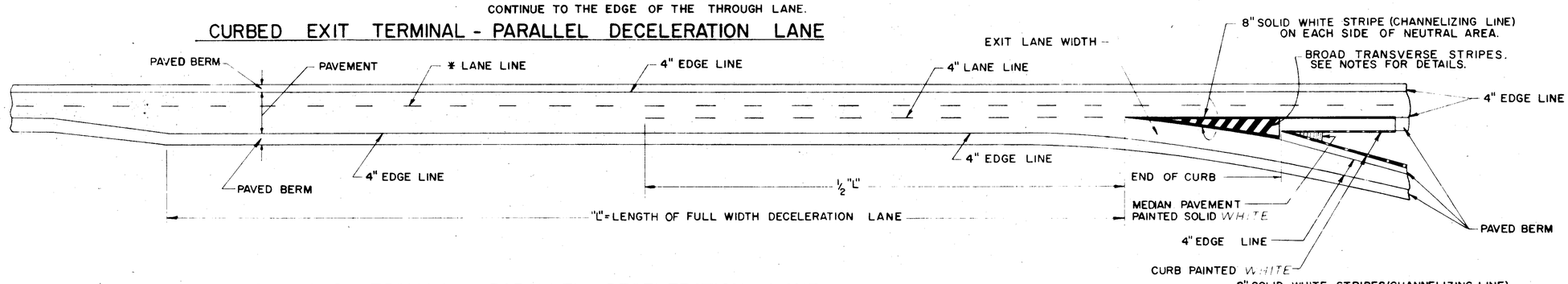
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



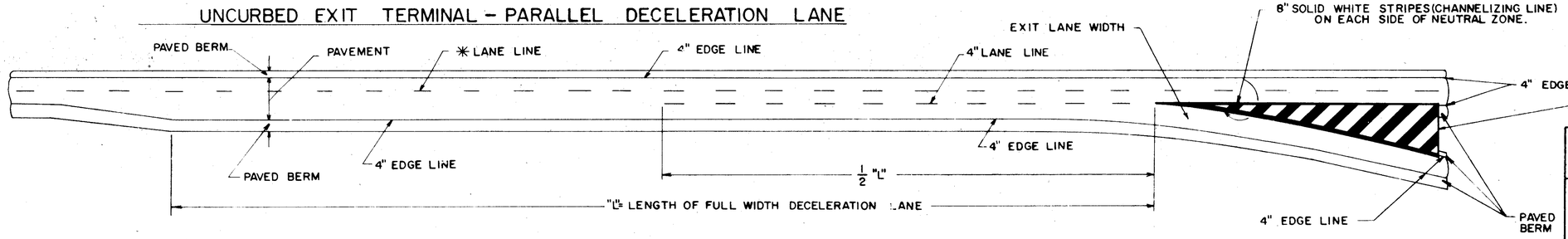
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



CURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



UNCURBED EXIT TERMINAL - PARALLEL DECELERATION LANE



NOTES

DIAGONAL STRIPES AT EXIT RAMPS SHALL BE 24" BROAD TRANSVERSE STRIPES, 62ft, WITH A 6' SPACE BETWEEN STRIPES.

* 6" LANE LINE ON INTERSTATE HIGHWAYS ONLY.
4" LANE LINE ON ALL OTHER HIGHWAYS.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING | 621

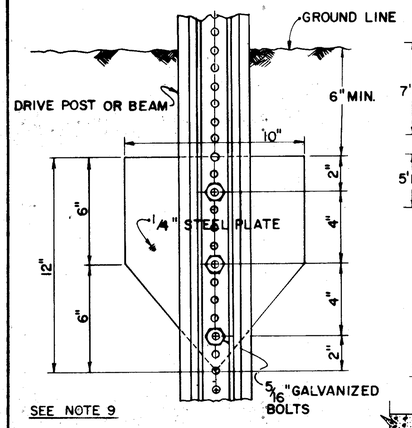
DATE
7-17-61
4-6-62
5-24-65
9-1-67
4-17-68
1-11-72

APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

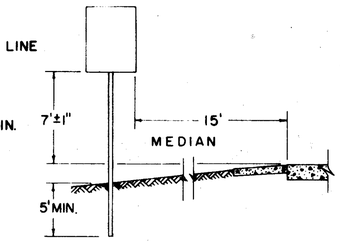
FED. RD. DIVISION	STATE	PROJ.	
2	OHIO		

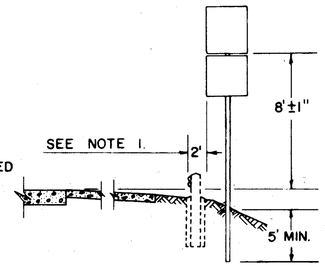
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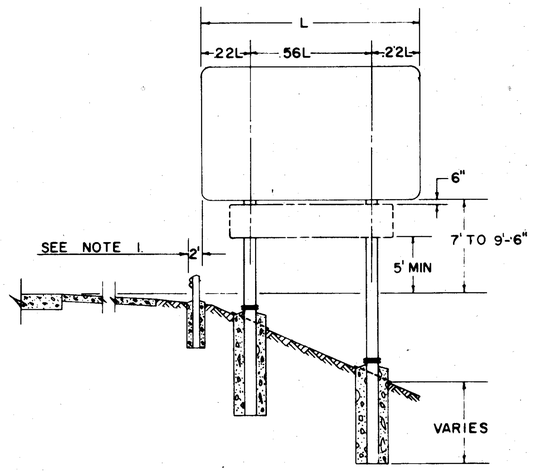
BELMONT COUNTY
BEL-70-18.87

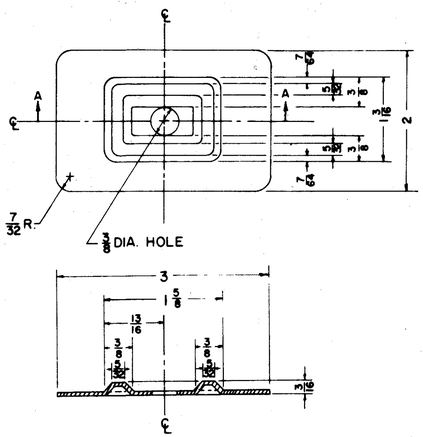


SOIL PLATE DETAIL





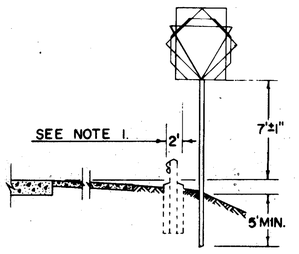


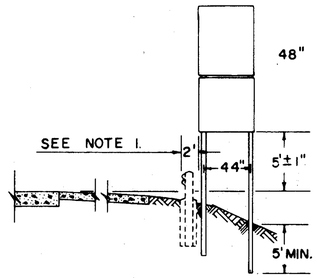


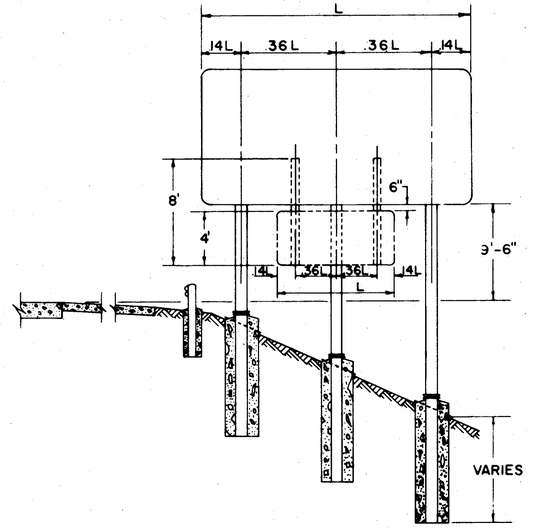
SECTION AA

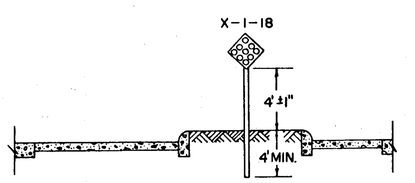
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



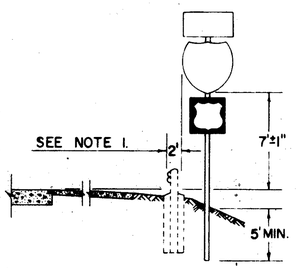


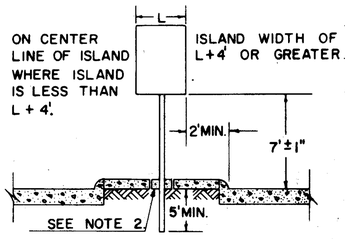


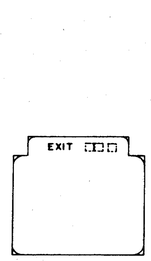


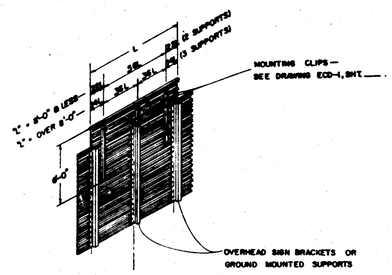
SIGN SUPPORT SPACING

L=FT	2 SUPPORTS .22	2 SUPPORTS .56	3 SUPPORTS .14	3 SUPPORTS .36	L=FT	2 SUPPORTS .22	2 SUPPORTS .56	3 SUPPORTS .14	3 SUPPORTS .36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	19.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	20.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	21.0			2.94	7.56
10.0	2.20	5.60	1.40	3.60	22.0			3.08	7.92
11.0	2.42	6.16	1.54	3.96	23.0			3.22	8.28
12.0	2.64	6.72	1.68	4.32	24.0			3.36	8.64
13.0	2.86	7.28	1.82	4.68	25.0			3.50	9.00
14.0	3.08	7.84	1.96	5.04	26.0			3.64	9.36
15.0	3.30	8.40	2.10	5.40	27.0			3.78	9.72
16.0	3.52	8.96	2.24	5.76	28.0			3.92	10.08

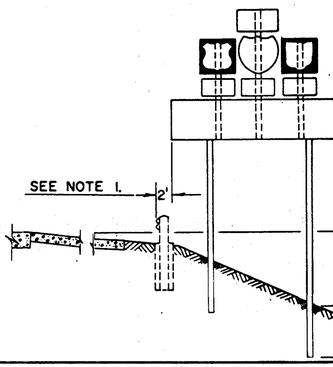


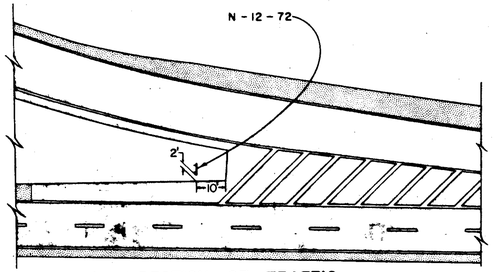






"EXIT" SIGN ATTACHMENT DETAIL





DIRECTION OF TRAFFIC

NOTES

1. THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION & USED WHETHER OR NOT GUARD RAIL IS PRESENT.
   ON RAMPS THE NEAR EDGE OF SIGNS SHALL BE LOCATED TWO FEET (2') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.
   ON APPROACHES THE NEAR EDGE OF SIGNS SHALL BE
   (A) TWO FOOT (2') BEHIND EXISTING GUARD RAIL
   (B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

2. POSTS PLACED IN CONCRETE MEDIANS SHALL BE INSTALLED BY DRIVING THROUGH A 6" SLEEVE OR CORE DRILLED HOLE. THE HOLE SHALL BE FILLED WITH ASPHALTIC CONCRETE AFTER THE POST IS IN THE PROPER POSITION.

3. HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO BACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.

4. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" WIDE", USED ON SIGN FACE ONLY

5. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.

6. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

7. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".

8. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION.

9. SOIL PLATES SHALL BE ATTACHED TO ALL 6 LB. BEAMS BETWEEN POSTS AS DETAILED ON THIS SHEET, EXCEPT WHERE BEAMS ARE PLACED IN CONCRETE MEDIANS AS COVERED IN NOTE 2.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

TYPICAL PLACEMENT OF SIGNS

TPS-1

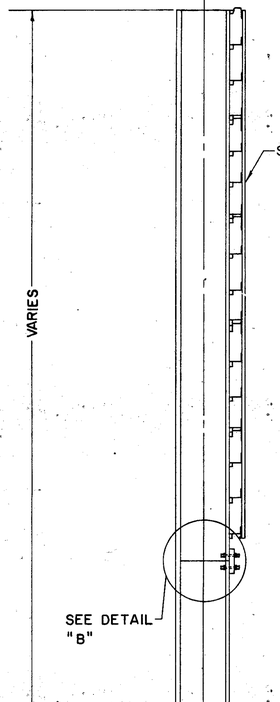
DATE
9-27-67
7-12-68
5-13-69
3-5-71
12-21-71
3-7-72

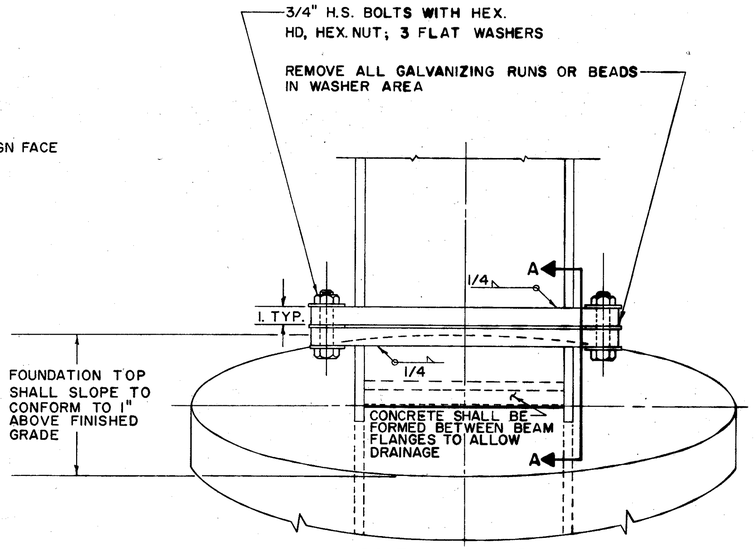
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63
81

BELMONT COUNTY
BEL-70-18.87



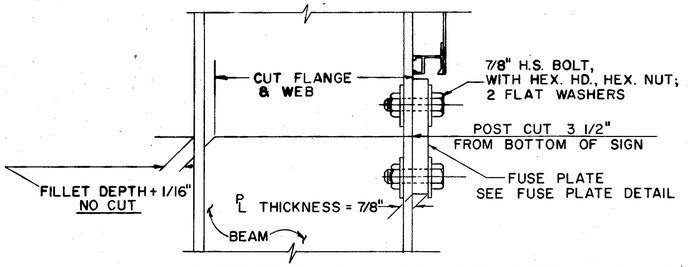


BOLTING PROCEDURE

1. ASSEMBLE POST TO STUB W/BOLTS & ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE W/12" TO 15" WRENCH TO BED & TO CLEAN BOLT THREADS. LOOSEN EACH BOLT IN TURN & RETIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE OF 750 IN. LBS.
3. BURR THREADS AT JUNCTION W/NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE: TIGHTEN THE H.S. BOLTS IN THE BASE CONNECTION ONLY TO GIVEN TORQUE DO NOT OVER TIGHTEN

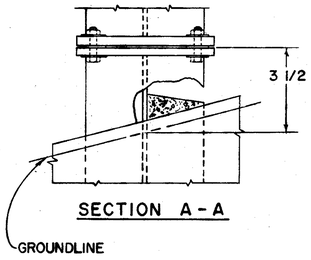
VIEW "A" ROTATED 180°



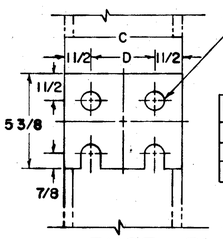
FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

DETAIL "B"

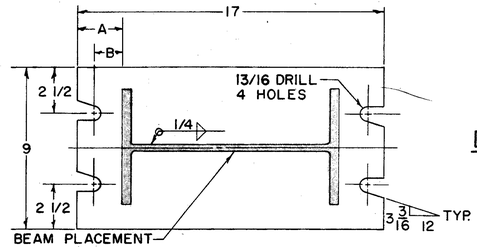


SECTION A-A



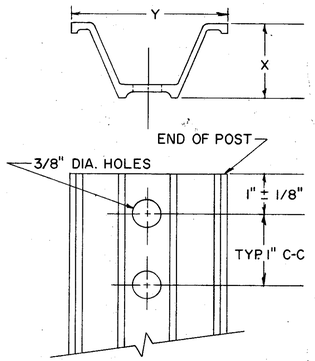
BEAM SIZE	C	D
W 8 X 17	5 1/4"	2 1/4"
W 10 X 21	5 3/4"	2 3/4"
W 12 X 31	6 1/2"	3 1/2"

FUSE PLATE DETAIL



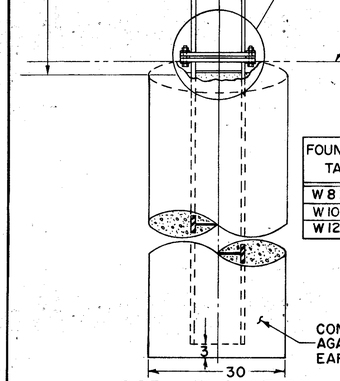
BEAM SIZE	A	B
W 8 X 17	4 1/2"	3 5/8"
W 10 X 21	3 1/2"	2 5/8"
W 12 X 31	2 1/2"	1 5/8"

BASE PLATE DETAIL
(TOP VIEW)

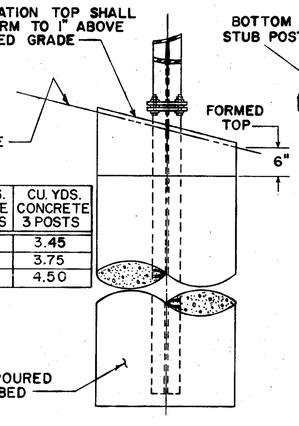


WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

DRIVE POST DETAIL



SIDE ELEVATION

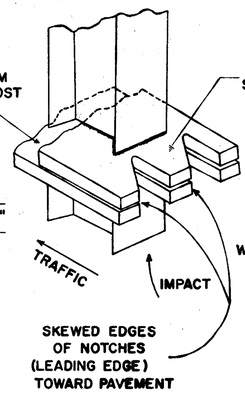


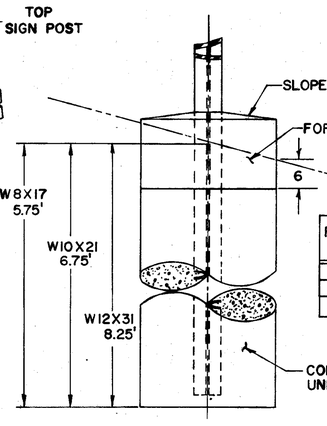
FRONT ELEVATION

BREAK-AWAY SUPPORT

FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
W 8 X 17	2.30	3.45
W 10 X 21	2.50	3.75
W 12 X 31	3.00	4.50

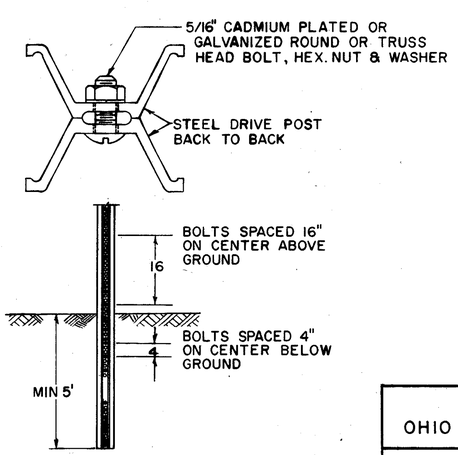
BREAKAWAY SIGN SUPPORT
BASE PLATE ORIENTATION





FRONT ELEVATION
STANDARD SUPPORT

FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
W 8 X 17	2.30	3.45
W 10 X 21	2.50	3.75
W 12 X 31	3.00	4.50



6# BEAM DETAIL

NOTES: ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTION & MATERIALS SPECIFICATIONS OR AS OTHERWISE SPECIFIED

1) 511 FOUNDATIONS
2) 711.01 STRUCTURAL STEEL SHAPES & PLATES
3) 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

ALL DIMENSIONS IN INCHES UNLESS OTERWISE SHOWN

STRUCTURAL SUPPORTS

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GROUND MOUNTED SIGN SUPPORTS

GMSS

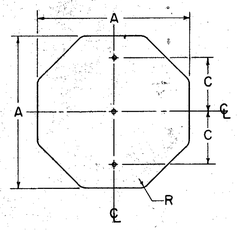
APPROVED _____ ENGINEER OF TRAFFIC

DATE
5-10-68
7-12-68
5-23-69
9-16-69
12-20-71

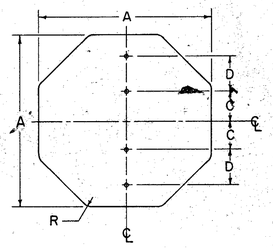
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

64
81

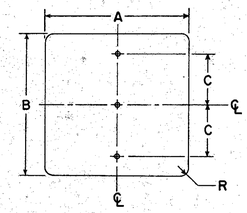
BELMONT COUNTY
BEL-70-18.87



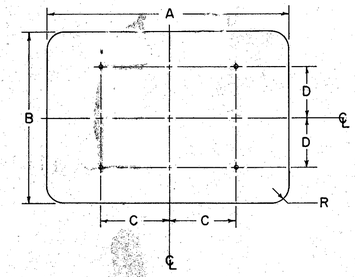
A	C	R	GAUGE
30	8	1 1/2	.080
36	8	1 1/2	.080



A	C	D	R	GAUGE
48	8	10	1 1/2	.100

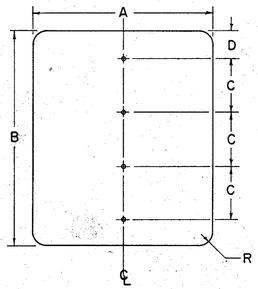


A	B	C	R	GAUGE
24	30	8	1 1/2	.063
24	48	15	1 1/2	.100
30	36	11	1 1/2	.080
30	42	12	1 1/2	.080
36	36	11	1 1/2	.080
36	42	15	1 1/2	.080
36	48	15	1 1/2	.080
48	24	10	3	.100
48	36	13	3	.100

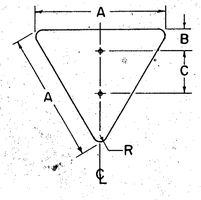


A	B	C	D	R	GAUGE
48	48	22	16	3	.100
48	60	22	22	3	.100

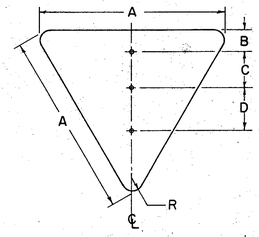
SPEED LIMIT SIGNS ON TWO SUPPORTS



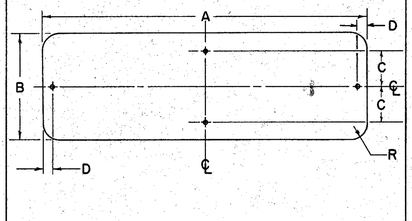
A	B	C	D	R	GAUGE
48	48	12	6	3	.100
48	60	15	7 1/2	3	.100



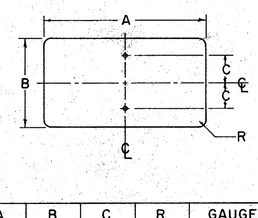
A	B	C	R	GAUGE
36	3	16	2 1/2	.080



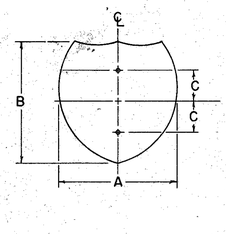
A	B	C	D	R	GAUGE
48	4	10	15	3	.100
60	5	10	15	4	.100



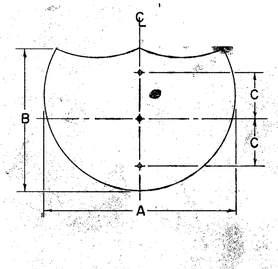
A	B	C	D	R	GAUGE
36	12	4	1	1 1/2	.080
72	12	—	16	1 1/2	.100
60	[illegible]	—	13	1 1/2	.100



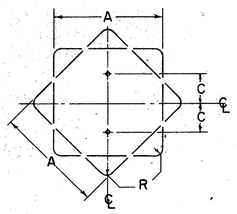
A	B	C	R	GAUGE
12	6	1 1/2	1 1/2	.063
20	15	6	1 1/2	.063
24	12	4 1/2	1 1/2	.063
24	18	7 1/2	1 1/2	.063
8	26	8	1	.063
36	18	7 1/2	1 1/2	.080



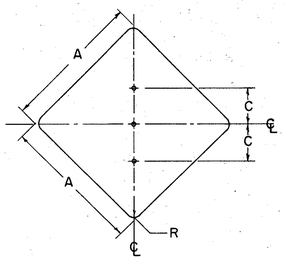
A	B	C	GAUGE
24	24	8	.063
30	24	8	.080



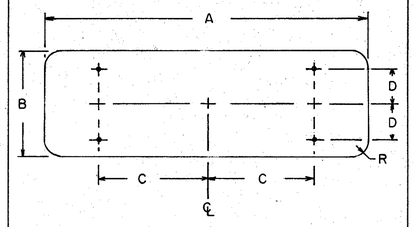
A	B	C	GAUGE
36	36	11	.080
48	36	11	.100



A	C	R	GAUGE
18	7 1/2	1 1/2	.063
24	8	1 1/2	.063
30	8	1 1/2	.080

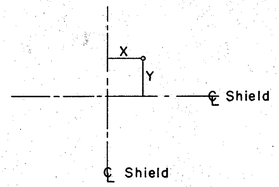


A	C	R	GAUGE
36	12	1 1/2	.080
48	14	3	.100



A	B	C	D	R	GAUGE
72	18	20	6	1 1/2	.100
72	24	20	8	1 1/2	.100
60	30	17	10	1 1/2	.100
96	18	27	6	1 1/2	.100

Location of holes on "Demountable Shields" (attached to guide signs)



SIZE	NO. HOLES	X	Y
(26) 24X24	4	7	7
30X24	4	8	8
(39) 36X36	4	10	10
		0	10
48X36	6	15	10

For notes on fastening see drawing for miscellaneous "Signing Items" sheet.

NOTES:

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

MATERIAL

FLAT SIGN BLANKS SHALL BE FURNISHED IN ALUMINUM ALLOY 6061-T6, (ASTM-B209, GSIIA-T6) WITH MILL FINISH.

BOLT HOLES

THE BOLT HOLES SHALL BE 3/8" IN DIAMETER, AND MAY BE DRILLED, BLANKED OR PUNCHED TO FINISHED SIZE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SIGN BLANK DETAILS

SBD

DATE
4-14-67
5-10-68
10-1-68
5-27-69
6-18-69

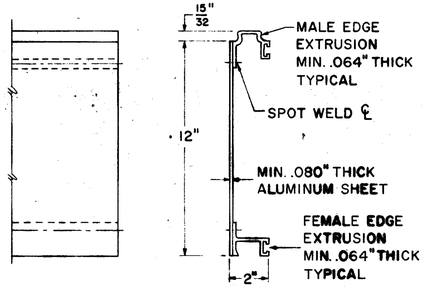
APPROVED _____
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

65
81

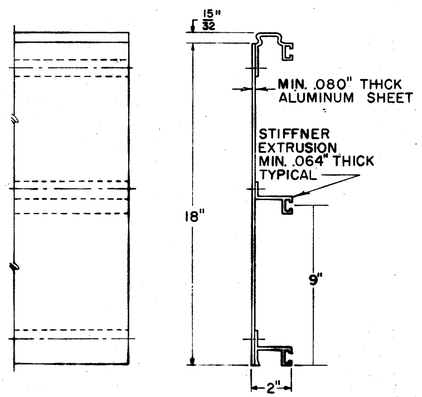
BELMONT COUNTY
BEL-70-18.87

12" EXTRUSHEET PANEL



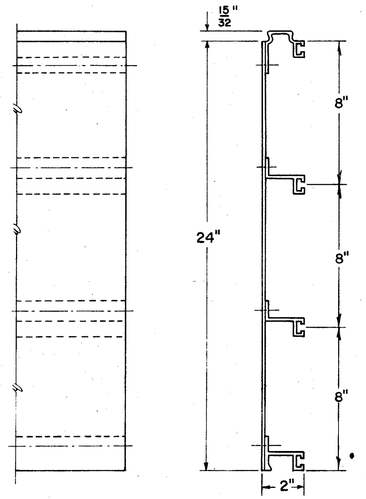
FRONT VIEW SIDE VIEW

18" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

24" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

NOTES:

EXTRUSHEET PANELS SHALL BE ALUMINUM; SPOT WELDING AND ALL MATERIALS SHALL CONFORM WITH SUPPLEMENTAL SPECIFICATION NO. 815

COMBINATIONS OF 12", 18", AND 24" PANELS ARE USED TO ATTAIN REQUIRED SIGN HEIGHT.

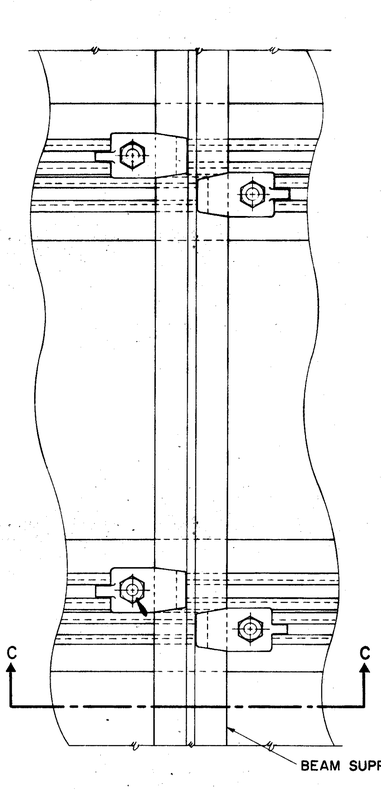
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN WITH NO SPLICES.

PANELS SHALL BE INTERLOCKED AND ERECTED WITH THE MALE EXTRUSION LOCATED AT THE TOP EDGE OF THE SIGN.

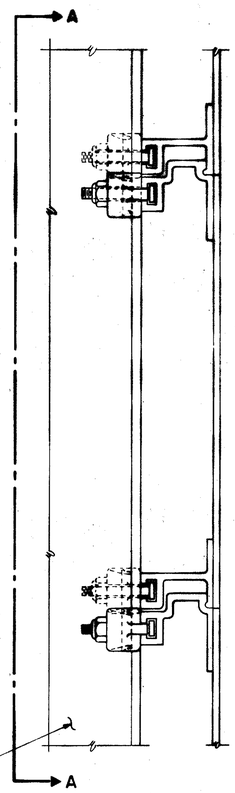
EXTRUSHEET PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT; AND ON BOTH SIDES AT TOP AND BOTTOM EDGE OF SIGN.

THE PANELS SHALL BE DESIGNED TO WITHSTAND A WIND LOAD OF 35 POUNDS PER SQUARE FOOT, IN ACCORDANCE WITH THE A.A.S.H.O. SPECIFICATION FOR DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS.

THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0".
THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".

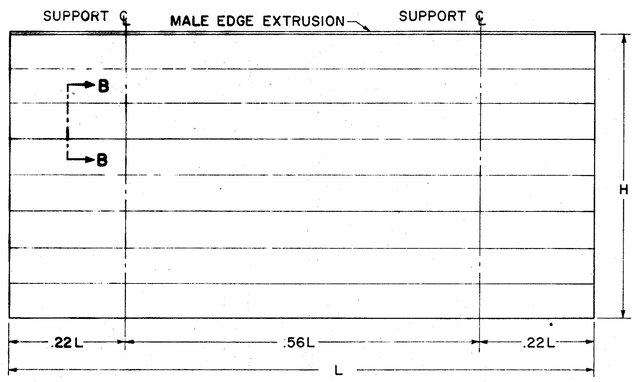


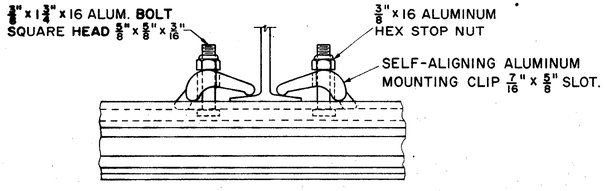
SECTION A-A



SECTION B-B

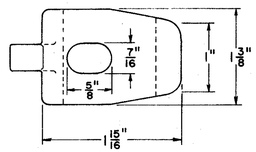
GENERAL ARRANGEMENT

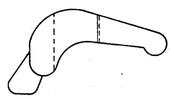




SECTION C-C

CLIP DETAIL





SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING	
	CENTER TO CENTER	BETWN ROWS
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ALUMINUM EXTRUSHEET PANEL SIGN

ECD 1

DATE
9-25-63
5-19-64
10-21-65
5-24-67

APPROVED Fred C Barber
ENGINEER OF TRAFFIC

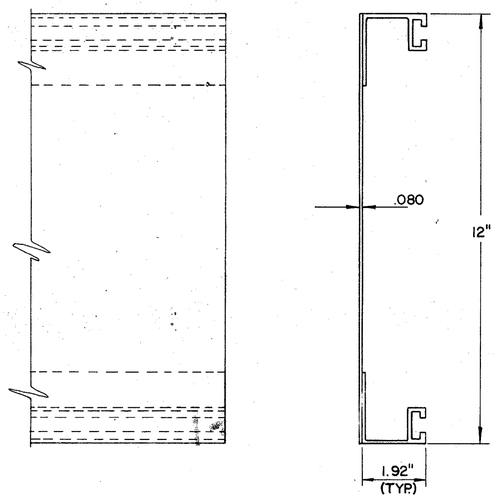
ALUMINUM EXTRUSHEET PANEL SIGN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

66
81

BELMONT COUNTY
BEL-70-18.87

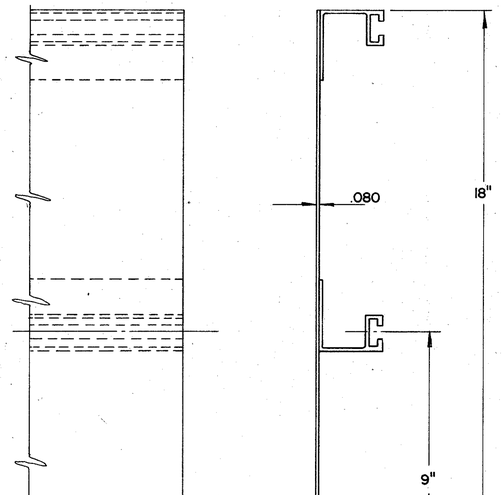
12" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

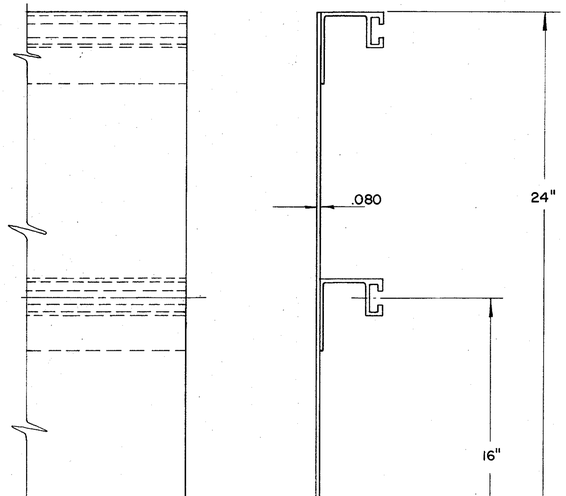
18" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

24" BOLTED-EXTRUSHEET PANEL



FRONT VIEW

SIDE VIEW

NOTES

EXTRU-SHEET PANELS SHALL BE ALUMINUM; SPOT WELDING, MATERIALS AND HARDWARE SHALL CONFORM WITH SPECIFICATION NO. 815

COMBINATIONS OF 12", 18" AND 24" PANELS ARE TO BE USED TO ATTAIN REQUIRED SIGN HEIGHT.

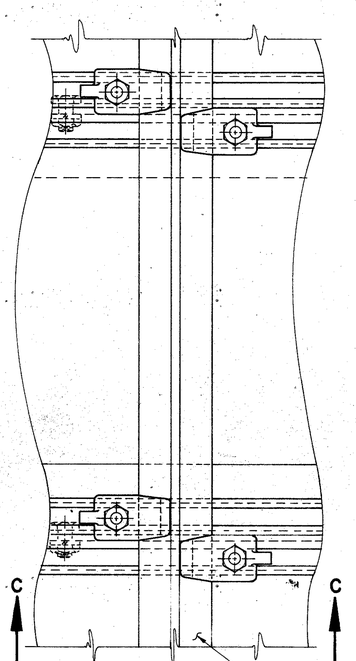
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN, WITH NO SPLICES.

THE PANELS SHALL BE ERECTED HORIZONTALLY AND BOLTED ON 24" CENTERS.

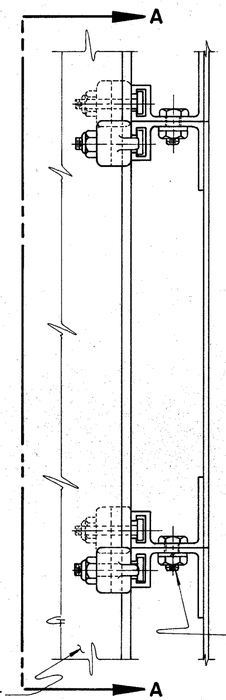
THE PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND BOTH SIDES AT TOP AND BOTTOM EDGES OF SIGN.

THE PANELS SHALL BE DESIGNED IN ACCORDANCE WITH THE A.A.S.H.O SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, BASE ON A WIND LOAD OF 35#/SQ.FT.

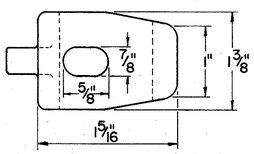
THE MAXIMUM SIGN LENGTH FOR TWO SUPPORTS IS 19'-0". THE MAXIMUM SIGN LENGTH FOR THREE SUPPORTS IS 29'-0".

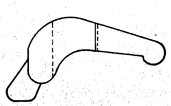


SECTION A-A

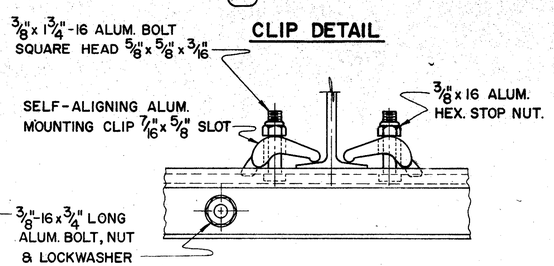


SECTION B-B

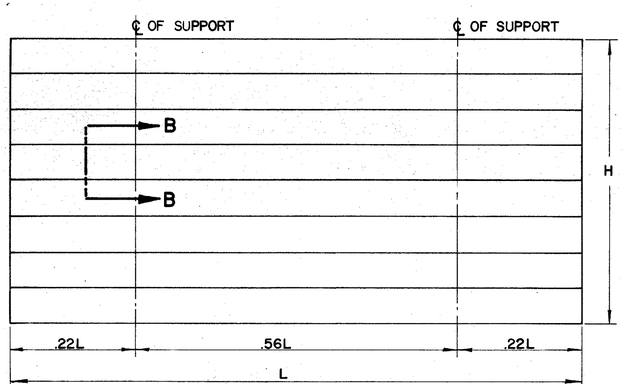




CLIP DETAIL



SECTION C-C



GENERAL ARRANGEMENT

SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING	
	CENTER TO CENTER	BETWN ROWS
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

ALUMINUM BOLTED EXTRUSHEET PANEL SIGN

ECD 2

DATE 10-14-65

APPROVED Fred C. Talbot
ENGINEER OF TRAFFIC

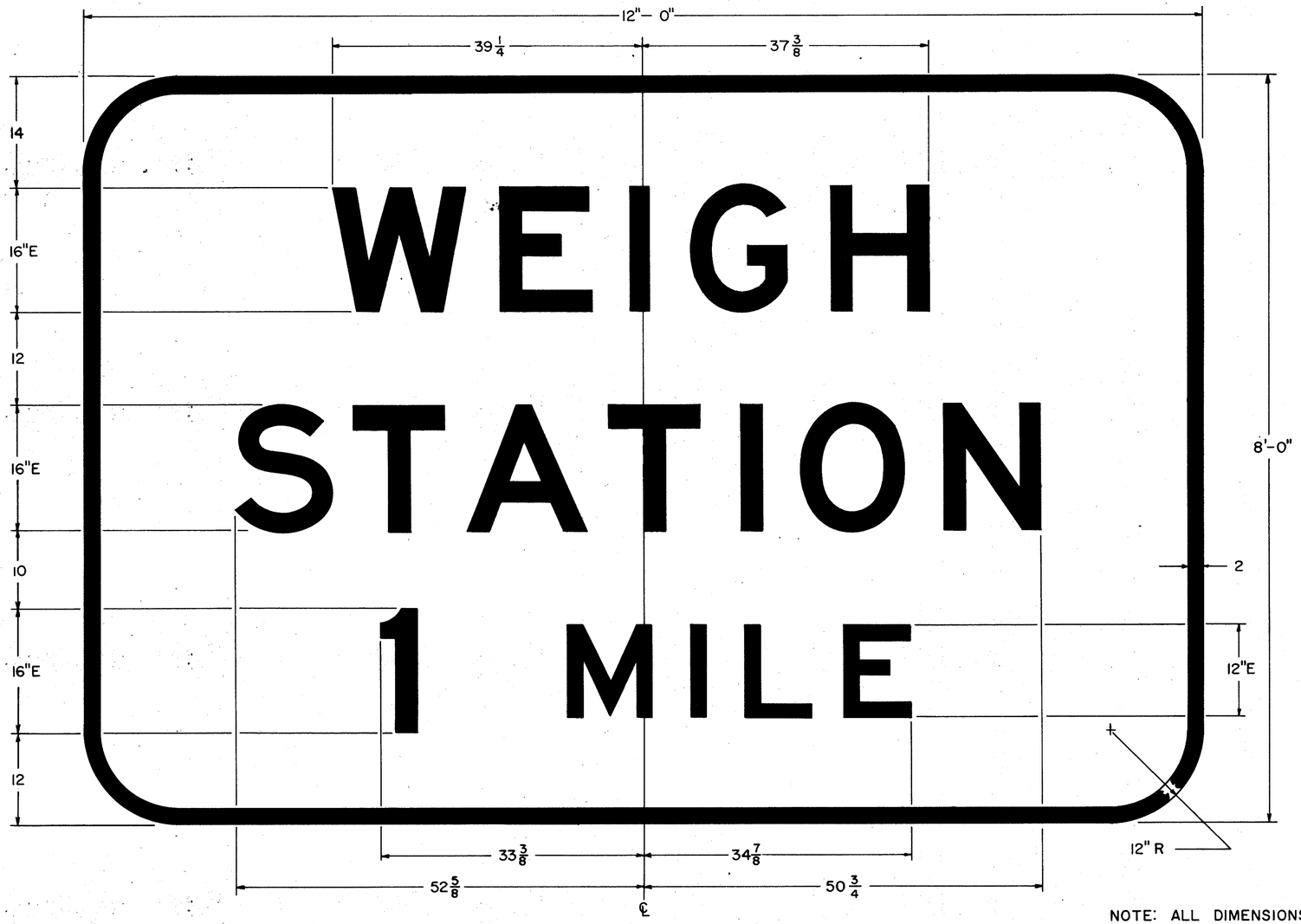
ALUMINUM BOLTED-EXTRUSHEET PANEL SIGN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

67
81

BELMONT COUNTY
BEL-70-18.87

WS-1-144



	W		E		I		G		H	TOTAL
16"E	15.50	5.50	11.25	5.75	3.25	5.62	12.00	5.75	12.00	76 5/8

	S		T		A		T		I		O		N	TOTAL
16"E	12.00	3.25	11.25	3.38	14.50	3.37	11.25	5.13	3.25	5.62	12.75	5.62	12.00	103 3/8

	I		M		I		L		E		TOTAL
16"E	5.00	19.00	10.50	5.37	2.50	5.37	8.38	3.75	8.37	12"E	68 1/4

NOTE: ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

WEIGH STATION

DATE: 2-28-68

WS-1-144

APPROVED _____
ENGINEER OF TRAFFIC

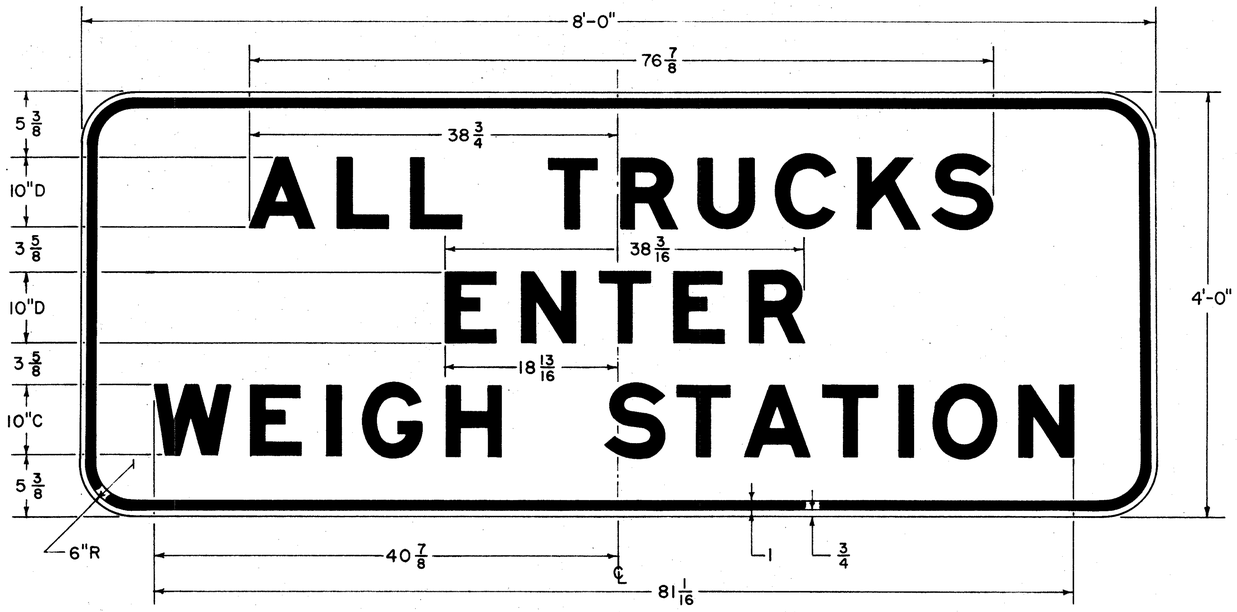
WS-1-144

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

68
81

BELMONT COUNTY
BEL-70-18.87

R-103-96



	A		L		L		T		R		U		C		K		S	TOTAL
10"D	8.38	1.25	6.10	1.00	6.10	6.62		6.10	1.40	6.72	1.82	6.72	1.87	6.72	1.60	6.88	.87	6.72	76 7/8

	E		N		T		E		R	TOTAL
10"D	6.08	1.87	6.70	1.40	6.08	1.40	6.08	1.87	6.70	38 3/16

	W		E		I		G		H		S		T		A		T		I		O		N	TOTAL
10"C	7.50	1.80	5.00	1.87	1.40	2.00	5.46	1.87	5.46	7.21	5.46	.70	5.00	.52	6.24	.52	5.00	1.40	1.40	2.00	5.78	2.00	5.46	81 1/16

NOTE:
ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SHOWN.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

MISCELLANIOUS SERIES
R-103
96
STANDARD CONSTRUCTION DRAWING

DATE
1-12-65
3-15-66

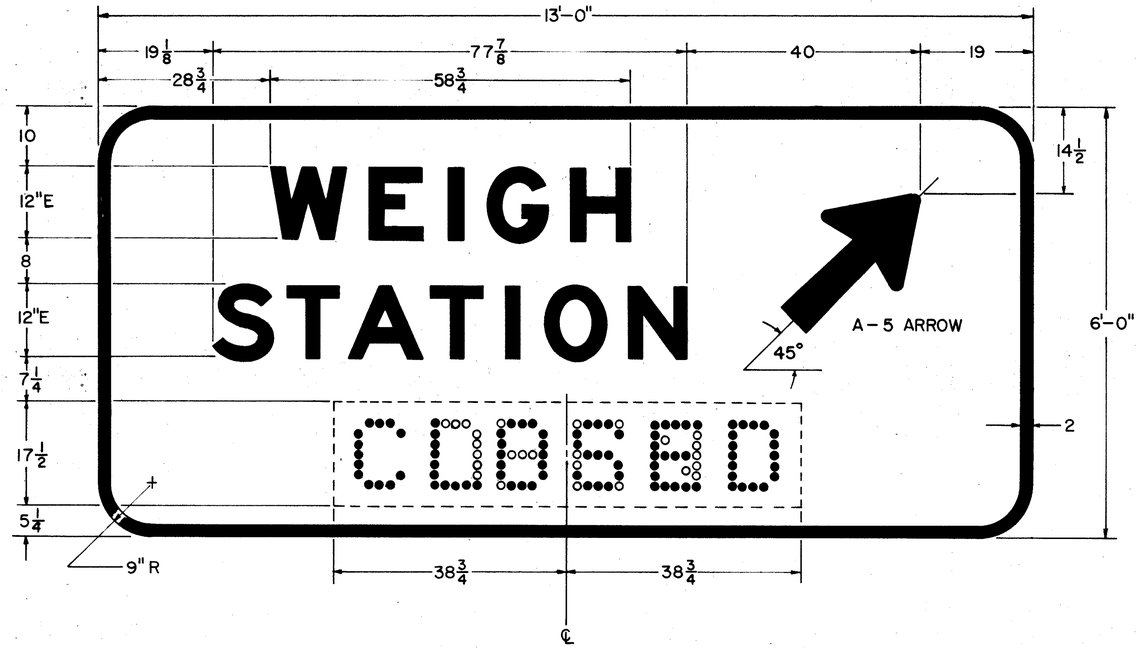
DRAWN BY:
APP. BY:

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

69/81

BELMONT COUNTY
BEL-70-18.87

WS-3-156



			W		E		I		G		H	TOTAL		
		12"E	12.25	4.12	8.38	4.38	2.50	4.25	9.25	4.37	9.25	58 3/4		
	S		T		A		T		I		O		N	TOTAL
12"E	9.12	2.38	8.38	2.50	10.50	2.50	8.37	3.88	2.50	4.25	10.00	4.25	9.25	77 7/8

GENERAL:

THIS DRAWING INDICATES THE DESIRED SIGN SIZE AND LEGEND LAYOUT. SEE DRAWING WS-3A FOR DETAILS OF THE ILLUMINATED SECTION.

MATERIALS:

THE SIGN SHALL BE FABRICATED FROM MATERIALS SPECIFIED IN SUPPLEMENTAL SPECIFICATION 815, AND WILL BE DESIGNED FROM ALUMINUM EXTRUSHEETS.

THE BACKGROUND OF THE NON-ILLUMINATED SECTION SHALL BE TYPE F GREEN REFLECTIVE SHEETING.

THE COPY OF THE NON-ILLUMINATED SECTION SHALL BE WHITE DEMOUNTABLE REFLECTIVE UNIT TYPE.

NOTE:

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN. SEE SHEET WS-3A FOR DETAILS OF "OPEN"-"CLOSED" UNIT.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

WEIGH STATION

DATE 2-21-68

WS-3-156

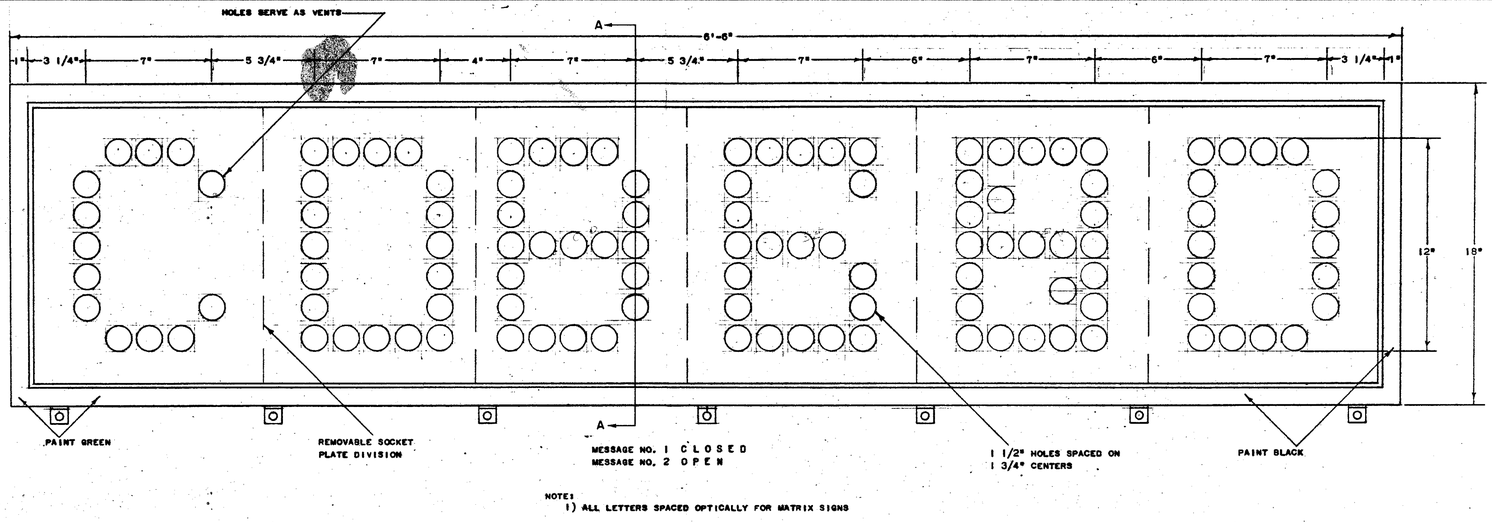
APPROVED _____
ENGINEER OF TRAFFIC

WS-3-156

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

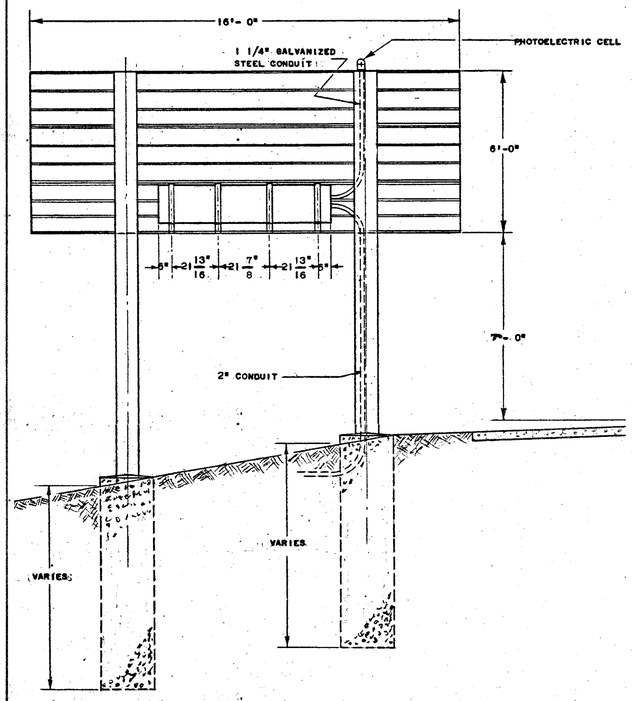
70
81

BELMONT COUNTY
BEL-70-18.87

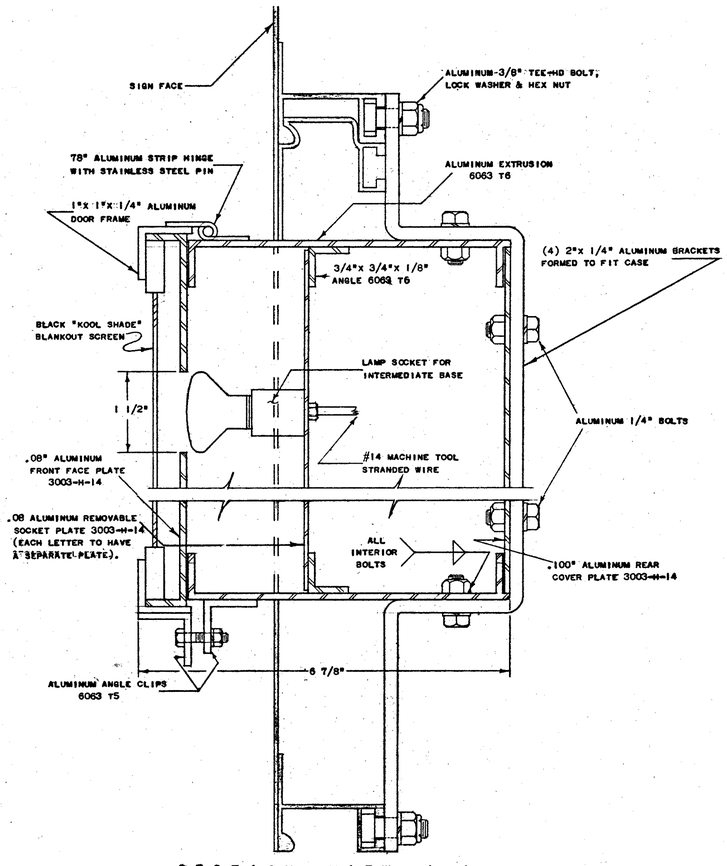


NOTE:
1) ALL LETTERS SPACED OPTICALLY FOR MATRIX SIGNS

FRONT PANEL



REAR ELEVATION



SECTION VIEW A-A

NOTES

FINISH

GREEN PAINT USED FOR EXTERIOR FRAME FINISH SHALL BE IN ACCORDANCE WITH THE OHIO HIGHWAY DEPARTMENT CONSTRUCTION AND MATERIAL SPECIFICATION 708.10. BLACK PAINT USED FOR THE FRAME FINISH SHALL BE IN ACCORDANCE WITH CONSTRUCTION AND MATERIAL SPECIFICATION 708.11.

ELECTRICAL

BURIED CABLE FROM THE SCALE HOUSE TO THE SIGN SITE WILL BE INSTALLED BY OTHERS AND WILL TERMINATE IN A PULL BOX NEAR THE SIGN. THE PRICE BID FOR THIS SIGN SHALL INCLUDE THE CONDUIT ENCLOSED EXTENSION OF THE 3C-AWG6 WIRE FROM THE PULL BOX TO THE ELECTRICAL UNIT HOUSING ON THE SIGN. CONDUIT SHALL BE 2" GALVANIZED STEEL AND IS TO BE SECURELY FASTENED TO THE SIGN SUPPORT.

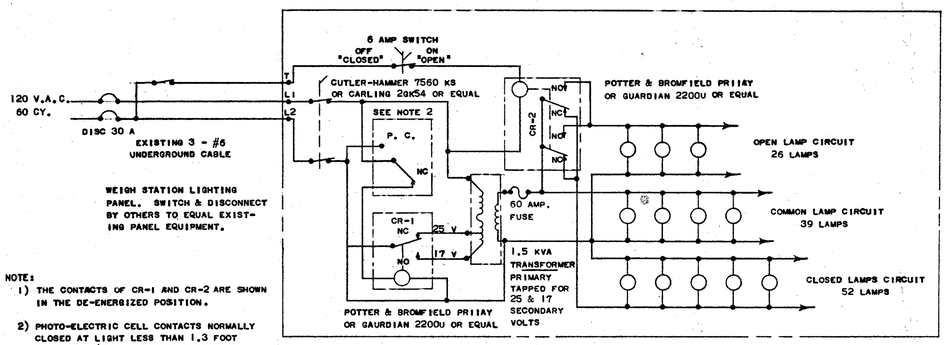
THE PHOTOELECTRIC CONTROL CIRCUIT WILL BE WIRED SO THAT LAMP INTENSITY IS MAXIMUM DURING DAYLIGHT, AND MINIMUM AT NIGHT.

LAMPS

THE LAMPS USED SHALL BE 24V, 20R12N AS MANUFACTURED BY GENERAL ELECTRIC, WESTINGHOUSE, OR AN APPROVED EQUAL.

ACCEPTANCE

THE ELECTRICAL CIRCUITS SHALL BE ENERGIZED AND THE SIGN SHALL BE TESTED FOR PROPER ILLUMINATION OF THE "OPEN" AND "CLOSED" MESSAGES, AND ALSO FOR PROPER SWITCHING OF THE INTENSITY FOR DAY OR NIGHT OPERATION BEFORE ACCEPTANCE IS MADE.



NOTE:
1) THE CONTACTS OF CR-1 AND CR-2 ARE SHOWN IN THE DE-ENERGIZED POSITION.
2) PHOTO-ELECTRIC CELL CONTACTS NORMALLY CLOSED AT LIGHT LESS THAN 1.3 FOOT CANDLES. (P. C.; FISHER-PIERCE CO. MODEL 6520 OR TORK MODEL 2000 OR EQUAL).

WIRING DIAGRAM

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

WEIGH STATION	WS-3A	DATE 10-27-66

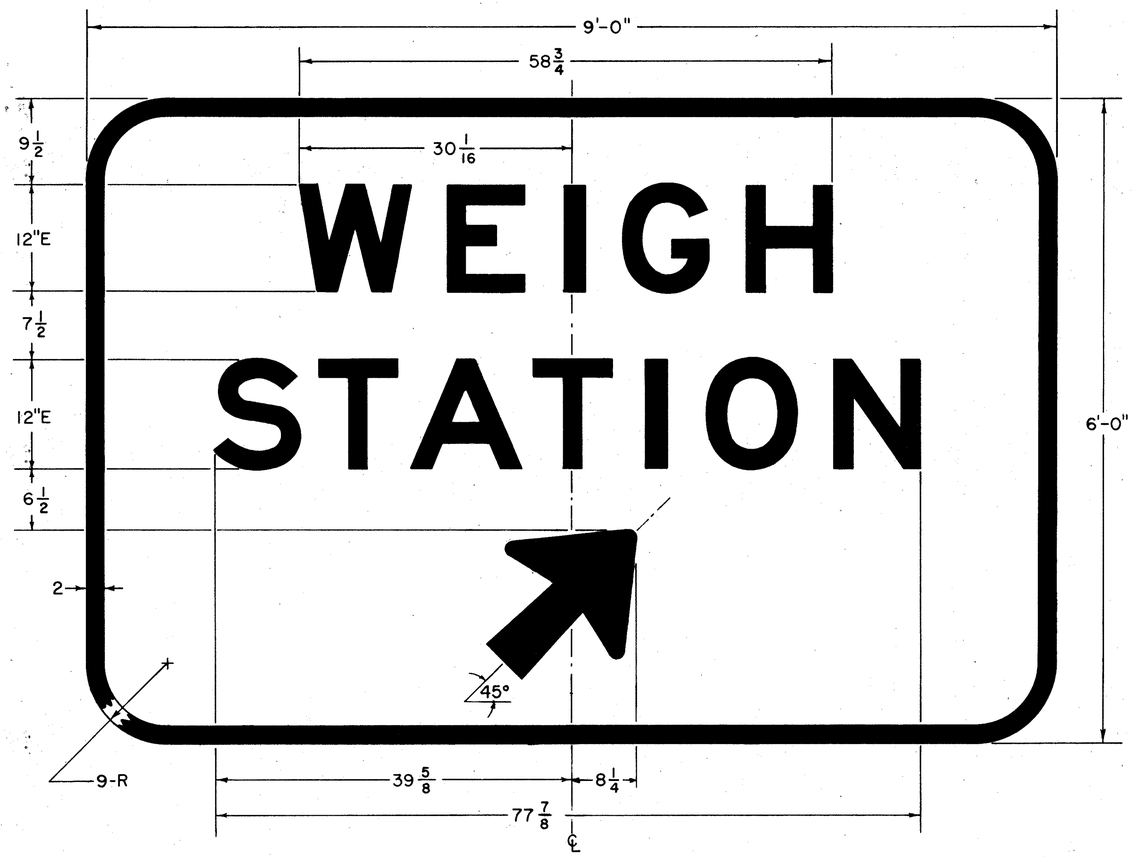
APPROVED Fred C. Garbow
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

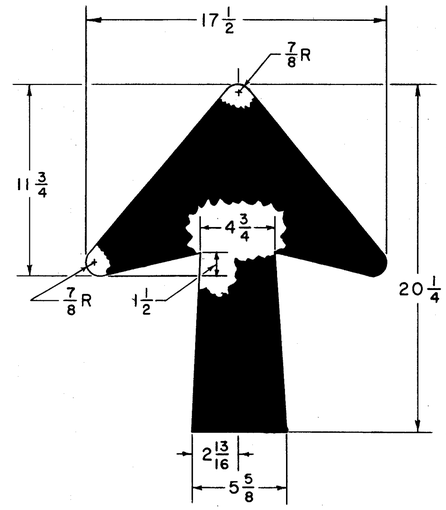
71
81

BELMONT COUNTY
BEL-70-18.87

WS-4-108



ARROW DETAIL



NOTE:
ALL DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SHOWN.

			W		E		I		G		H		
		12"E	12.25	4.12	8.37	4.37	2.50	4.25	9.25	4.38	9.25		
	S		T		A		T		I		O		N
12"E	9.12	2.38	8.37	2.50	10.50	2.50	8.37	3.87	2.50	4.25	10.00	4.25	9.25

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

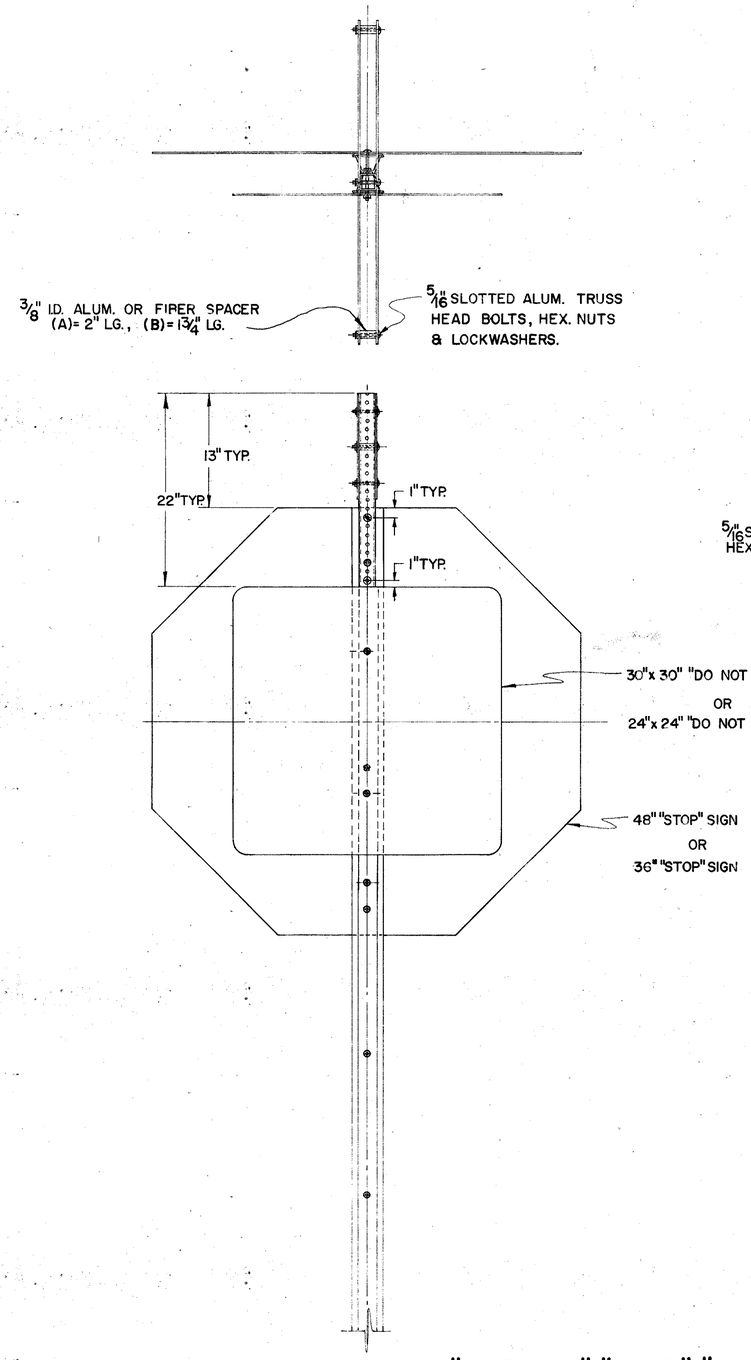
TRAFFIC SIGNS	WS-4	DATE 4-21-65 4-6-67

APPROVED _____ ENGINEER OF TRAFFIC

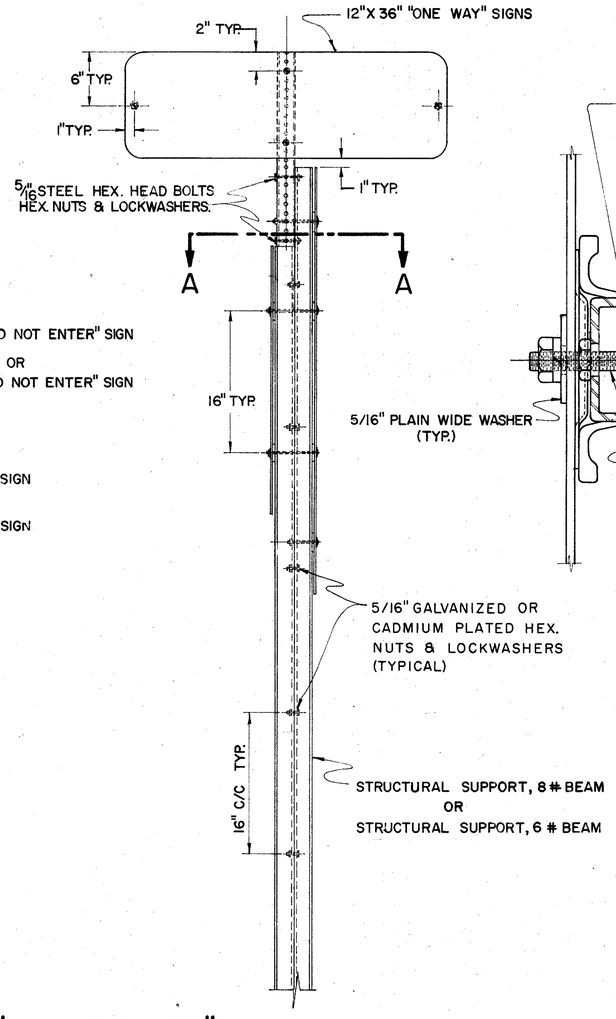
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

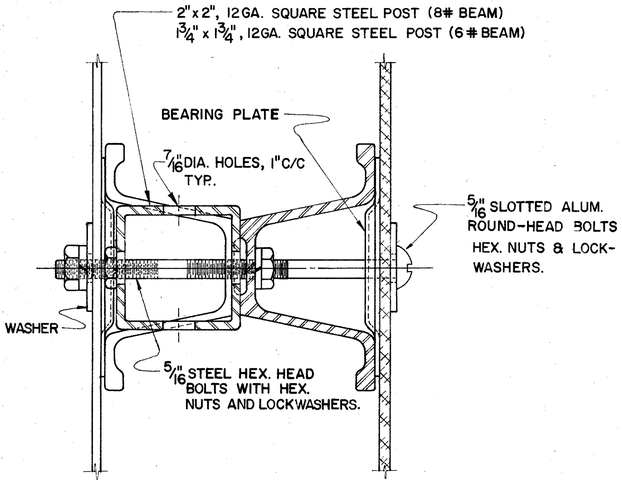
72
81

BELMONT COUNTY
BEL-70-18.87

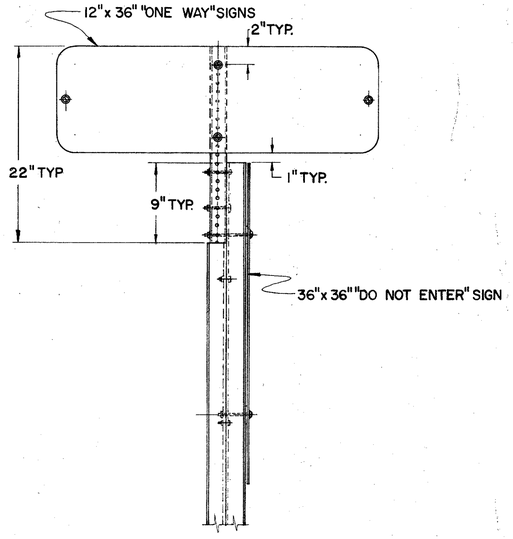


"ONE WAY", "STOP", "DO NOT ENTER",
SIGN INSTALLATION.





SECTION A-A



"ONE WAY", "DO NOT ENTER"
SIGN INSTALLATION

NOTES

MATERIALS

ALL SIGN MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 815.

ALL STRUCTURAL MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 816.

FOR SPECIFICATIONS FOR THE 2" & 1 3/4" SQUARE STEEL POST SEE GENERAL NOTES, SHEET NO.____.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

SPECIAL "ONE WAY" SIGN SUPPORT DETAILS	SOW	DATE 2-7-66 4-18-67
APPROVED_____ ENGINEER OF TRAFFIC		

SPECIAL "ONE WAY" SIGN SUPPORT DETAILS

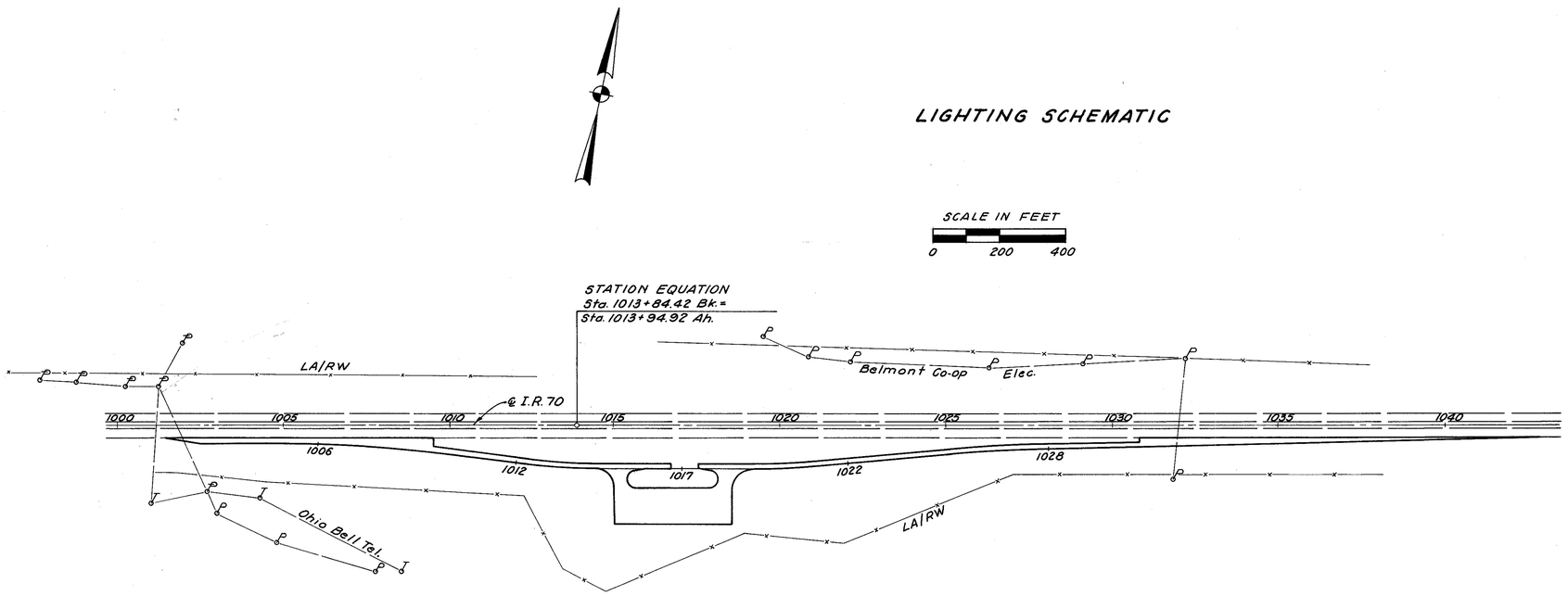
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

73
81

BELMONT COUNTY
BEL-70-18.87

LIGHTING NOTES

LIGHTING SCHEMATIC



ESTIMATED QUANTITIES

An estimated quantity of 700 Lin.Ft. of 605, 4-inch shallow pipe underdrains is provided in the lighting general summary for use as directed by the Engineer in providing positive drainage for pull boxes in fill areas. It is intended that all pull boxes in these areas be provided with such drainage, provided the length of underdrain necessary to obtain a satisfactory outfall does not exceed 20 feet approximately. A perforated PVC pipe or conduit material approved by the Engineer may be used in the construction of this item.

An estimated quantity of 4 each of 625 Markers is provided in the lighting general summary for use as directed by the Engineer in providing ground surface indication of the location of underground circuits. The markers shall be located directly over the centerline of the cable or duct. It is intended that a marker shall be provided at a point midway between adjacent side-mounted light units where the distance between units exceeds 300 feet but does not exceed 450 feet, and at intervals of approximately 200 feet on all other circuit sections located outside of paved areas.

STANDARD CONSTRUCTION DRAWING HL-3

Pole base details shown on this drawing are essentially for galvanized steel poles. For aluminum designs, or other permitted steel material designs, variations from these details will be acceptable, as approved by the Engineer.

STANDARD CONSTRUCTION DRAWING HL-15

Weephole diameters of 1/8 inch shown on this drawing shall be increased to 1/4 inch.

SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 713 OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

625.03 - GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

BELMONT ELECTRIC CO-OP INC.
P.O. BOX 247
ST. CLAIRSVILLE, OHIO 43950

VOLTAGE AND SERVICE TO BE PROVIDED SHALL BE:
120-240 VOLTS, SINGLE PHASE, THREE WIRE, *GROUNDED NEUTRAL.*

TELEPHONE SERVICE FOR THE WEIGH STATION WILL BE PROVIDED BY:

OHIO BELL TELEPHONE COMPANY
107 S. MARIETTA STREET
ST. CLAIRSVILLE, OHIO 43950

625.07 - 713.11 LUMINAIRES

400-WATT LUMINAIRES SHALL HAVE DUAL RATED 240/480 VOLT INTEGRAL REGULATOR BALLASTS AND SHALL BE GENERAL ELECTRIC M400, WESTINGHOUSE OV-25, MC GRAW-EDISON "UNISTYLE", OR EQUAL APPROVED BY THE ENGINEER.

625.08 - 713.14 LAMPS

MERCURY LAMPS SHALL BE GENERAL ELECTRIC "BONUS LINE", WESTINGHOUSE "LIFEGUARD", SYLVANIA "ROUGH SERVICE", OR EQUAL APPROVED BY THE ENGINEER.

ELECTRICAL SERVICE FOR ILLUMINATED SIGNS

THE PAY ITEMS IN THE LIGHTING GENERAL SUMMARY INCLUDE THE PULL BOX OR JUNCTION BOX ADJACENT TO EACH LIGHTED SIGN AND THE ELECTRICAL SERVICE CONNECTIONS LEADING INTO THE BOX, INCLUDING CONNECTOR KITS IN THE PULL BOX OR JUNCTION BOX. QUANTITIES FOR ELECTRICAL SERVICE FROM THE CONNECTOR KITS IN THE PULL BOX OR JUNCTION BOX TO THE SIGN ARE INCLUDED IN THE TRAFFIC CONTROL GENERAL SUMMARY.

HIGH VOLTAGE DIRECT CURRENT TEST

A HIGH VOLTAGE DIRECT CURRENT TEST, AS DESCRIBED IN SUPPLEMENTAL SPECIFICATION 839, SHALL BE PERFORMED ON ALL SECONDARY FEEDER CABLE , DISTRIBUTION CABLE , AND DUCT CABLE SYSTEMS TO BE INSTALLED ON THIS PROJECT. THE TEST SHALL NOT BE PERFORMED UNTIL AFTER ALL NEW CONSTRUCTION SUCH AS GUARD RAIL, FENCE, DELINEATOR POSTS, SIGN SUPPORTS, ETC., IN THE IMMEDIATE VICINITY OF THE LOCATION OF THE CABLE RUN BEING TESTED, HAS BEEN COMPLETED.

ALTERNATE LIGHT POLE DESIGNS

On this project, pole shafts shall be tapered but may be of an oval, square, multi-sided or fluted cross section, provided the section is closed. Bracket arms may be either straight or tapered but shall be of a section compatible with that of the pole. In addition, plan requirements for bracket arm styles and rise are hereby waived and any arrangement of pole shaft and bracket arm rise and style which provides the specified mounting height is acceptable. However, all poles furnished for the project shall be of the same cross section and of the same style or family of styles.

LIGHT POLE DATA

REF.	DESIGN NUMBER	FOUNDATION ANCHOR BOLTS: SIZE DIAMETER X LENGTH	FOUNDATION ANCHOR BOLTS: BOLT CIRCLE DIAMETER		TRANSFORMER BASE STYLE
R	AT 15B 34.2	1" X 40"	15"		AT-A
S	AT 10B 34.2	1" X 40"	15"		AT-A
P	A 10B 32.5	1" X 40"	11"		
W	A 15B 32.5	1" X 40"	12.5"		

Rev. 12-27-73

LIGHTING SCHEMATIC AND LIGHTING NOTES

LIGHTING QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

74
81

BELMONT COUNTY
BEL-70-18.87

TYPE CODE Y021

Circuit	Circuit Run	625 Trench 24" deep (Lin. Ft.)	1/2" Conduit 713.04 Type III (Lin. Ft.)	3" Conduit 713.04 Type III (Lin. Ft.)	3-1/C No.1/0 Feeder Cable (Lin. Ft.)	Distribution Cable No.4 AWG 600V (Lin. Ft.)	1-3/C No.4 Dwt cable (Lin. Ft.)			Service Pole (Lump)		
Feeder Circuit	E1-E2	67		67	231							
	E2-E3	35		35	135							
	E3-E4	205		205	645							
	E4-E5	48		48	174							
Sign Circuit	E6-E7	43		43		159						
	E7-E8	300					310					
	E8-E9	40		40		150						
	E9-E10	380					390					
	E10-E11	435					445					
	E11-E12	455					465					
Circuit A	E1-E15	146					156					
	E15-A1	48					58					
	A1-A2	135					145					
	A2-A3	135					145					
Circuit B	E5-E4			48		174						
	E4-B1						35					
	B1-E3						158					
	E3-E2			35		135						
	E2-E13	308					318					
	E13-E14	525					535					
	E14-B10	457					467					
	B10-B12	325					336					
	B12-B14	345					355					
Circuit C	E6-E7			43		159						
	E7-C10						87					
	C10-C9						90					
	C9-E8						53					
	E8-E9			40		150						
	E9-C7						347					
	C7-E10						52					
	E10-C6	48		48		174						
	E10-C5						148					
	C5-E11						307					
	E11-C1						375					
Telephone Circuit	T1-T2	75	75									
	T2-T3	50	50									
	T3-T4	297	297									
	T4-T5	65	65									
TOTALS		4,967	487	652	1,185	1,101	5,777			Lump		

Pull Boxes	625 Pull Box 18" Circular 713.09 (Each)	Pull Box 24" Circular 713.09 (Each)		Connector Kit Type I (Each)	Connector Kit Type III-B (Each)		
E1		1		6			
E2		1		6			
E3		1		6			
E4		1		6			
E5		1		6			
E6		1		6			
E7		1		6			
E8		1		6			
E9		1		6			
E10	1			3	3		
E11	1			6			
E12	1			3			
T1	1						
T2	1						
T3	1						
T4	1						
T5	1						
E13		1		3			
E14		1		3			
E15		1		3			
TOTALS	8	12		75	3		

Light Poles	606 Guard Post as per plan (Each)	625 Light Pole Foundations 2'x2'x6' Deep (Each)	Des. No. AT15B34.2 (Each)	Des. No. AT10B34.2 (Each)	Pole & Bracket Cable No.10 AWG (Lin.Ft.)	Des. No. A10B32.5 (Each)	Luminaire Type III 400W, 713.11 (Each)	Luminaire Type III, 400W, 713.11 with mtg. P.E. Cont. (Each)	Lamp 400W, Mercury 713.14 (Each)	Ground Rod (Each)	Connector Kit Type II (Each)	Connector Kit Type III (Each)	Des. No. A15B32.5 (Each)	Luminaire Type II 400W, 713.11 (Each)
A1	2	1			95			1	1	1	2	1	1	
A2	2	1			95			1	1	1	2	1	1	
A3	2	1			95			1	1	1	2	1	1	
B1		1			85	1	1		1	1	2	1		
B10		1	1		99		1		1	1	2	1		
B12		1	1		99		1		1	1	2	1		
B14		1	1		99		1		1	1	2	1		
C1		1	1		99		1		1	1	2	1		
C5		1	1		99		1		1	1	2	1		
C6		1	1		99		1		1	1	2	1		
C7		1		1	89		1		1	1	2	1		1
C9		1			85	1	1		1	1	2	1		
C10		1			85	1	1		1	1	2	1		
TOTALS	6	13	6	1	1223	3	10	3	13	13	26	13	3	1

Calc.: L.J.P. 6-5-73
Checked: C.C.C. 6-11-73

WEIGH STATION LIGHTING QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

75
81

BELMONT COUNTY
BEL - 70 - 18.87

Lighted Sign for Weigh Station See Bureau of Traffic Dwg. WS-3A Sht. No 70

Ohio Bell

Ex. R/W Fence

Prop. R/W Fence

MATCHLINE STA. 1013+00 I.R.70

MATCHLINE ~ STA. 1028+00 I.R.70

Station Equation
1013+94.92 Ah. =
1013+84.42 Bk

End Ramp A

Begin Ramp B

Ramp B

Parking Area

Service Pole

Edge of Prop. Pvmt.

30'±

Ex. R/W Fence

Prop. R/W Fence

Belmont Co-op

48:1 Taper

Sta. 1018+70

Sta. 1042+80

SECTION A-A

LEGEND

- CROSSOVER CONDUIT
- 3-1/C NO 1/0 FEEDER CABLE
- 1-3/C NO 4 DUCT CABLE
- T — 1 1/2" TELEPHONE CONDUIT
- O PULL BOX
- LIGHT POLE W/ALUM. TRANF'R BASE
- LIGHT POLE WITH ANCHOR BASE
- FUTURE LIGHT
- 683 + 15 STATION NUMBER
- A1 (P) CIRCUIT & POLE NO. (LIGHT POLE DESIGN NO. REF. LETTER)

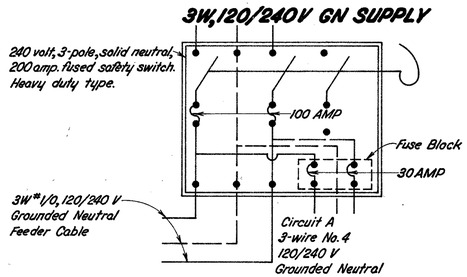
ALL TELEPHONE PULL BOXES SHALL BE 18" Ø. PULL BOXES E10, E11 AND E12 SHALL BE 18" Ø. ALL OTHER PULL BOXES SHALL BE 24" Ø.

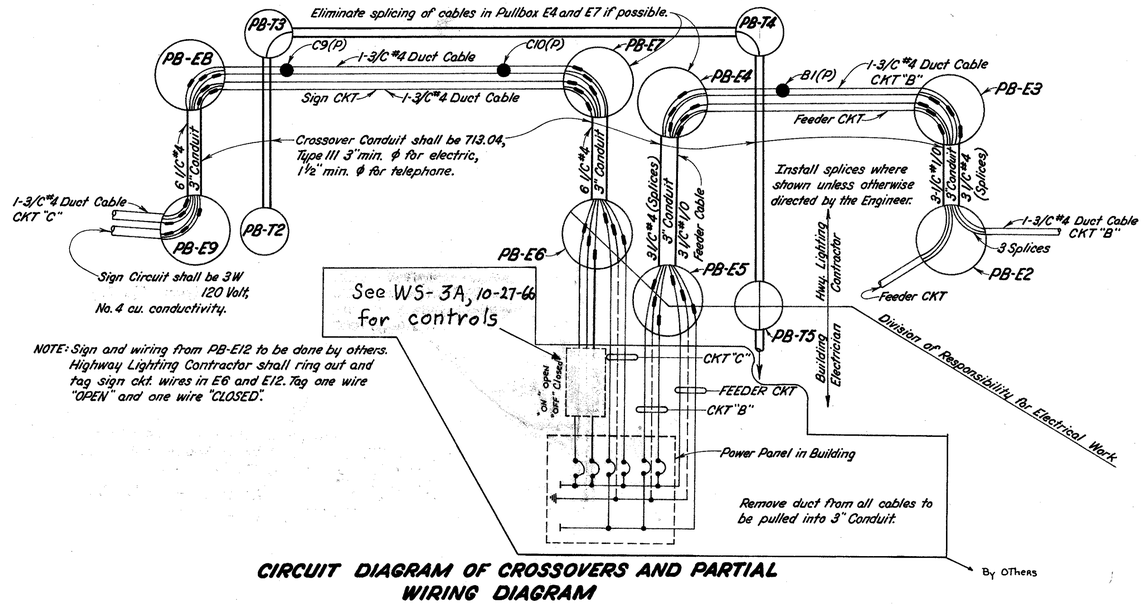
LIGHTING PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

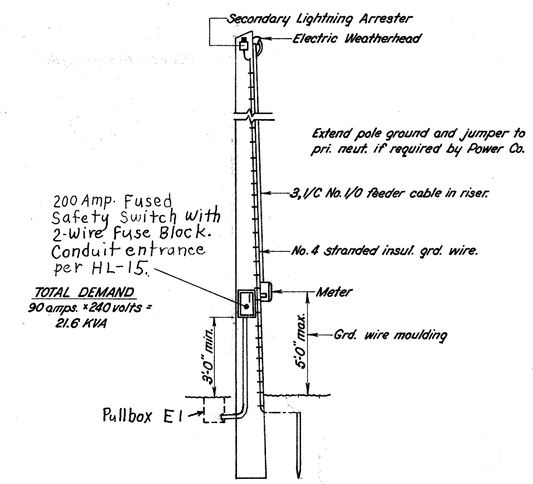
76
81

BELMONT COUNTY
BEL-70-18.87

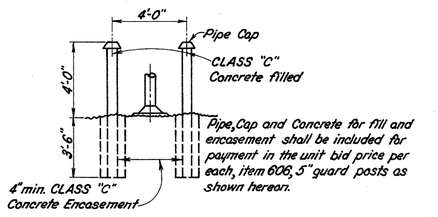


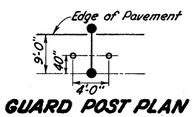


CIRCUIT DIAGRAM OF CROSSOVERS AND PARTIAL WIRING DIAGRAM

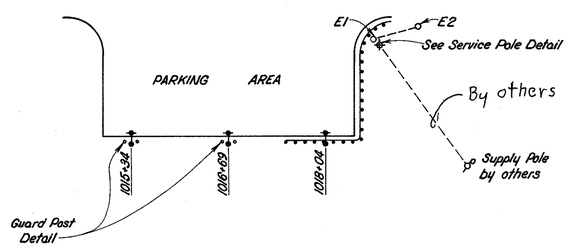


SERVICE POLE DETAILS





GUARD POST PLAN



LIGHTING DETAILS

R/W JOB NO.	F HWA	STATE	PROJECT	
11056	REG 5	OHIO		

77
81

1
5

PROPERTY MAP

BEL-70 SECTION 18.87

RICHLAND TOWNSHIP

SEC 27, 28, 33, 34

T-6-N R-3-W

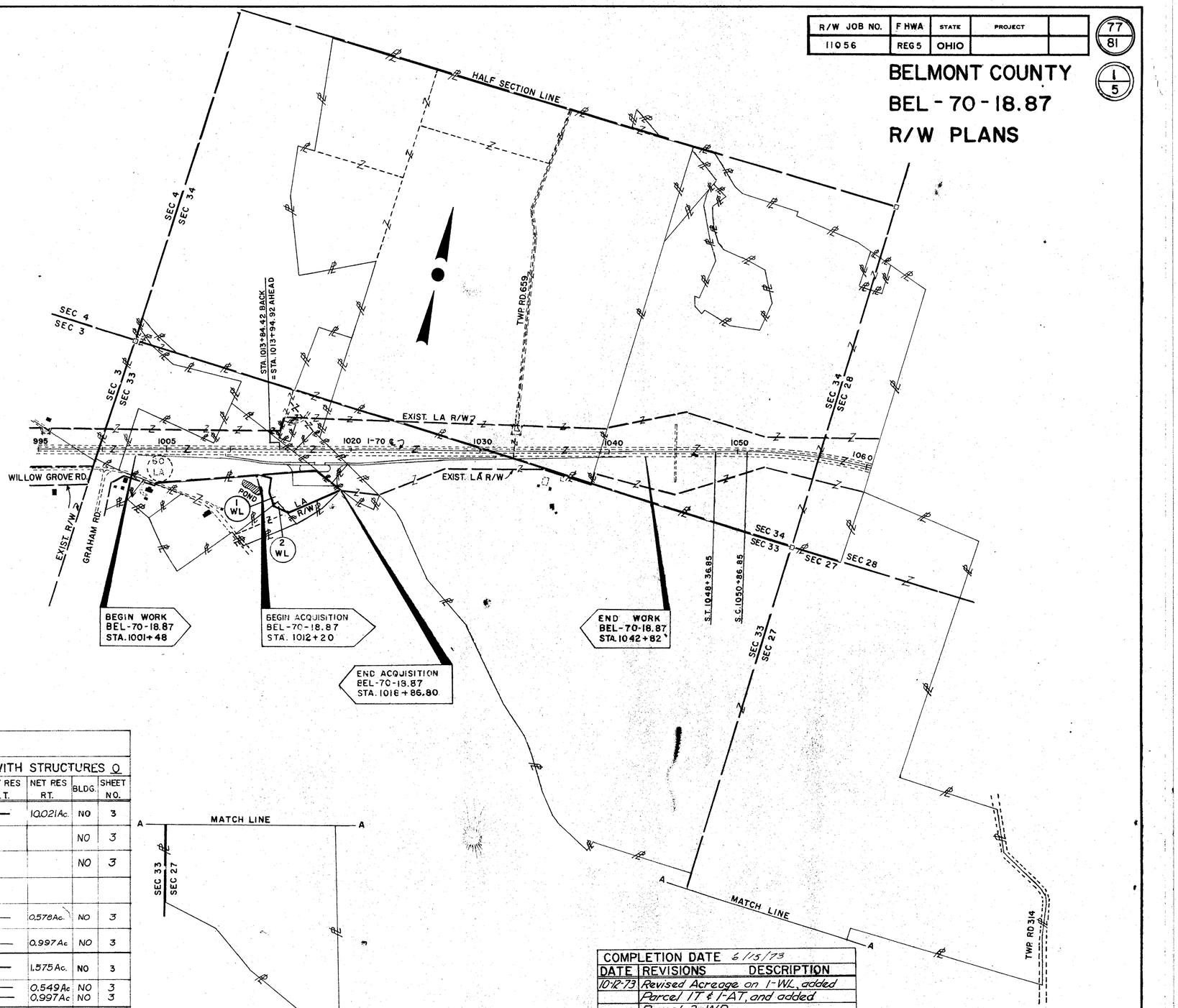
0 400 800

SCALE

BELMONT COUNTY

BEL-70-18.87

R/W PLANS



NOTE:
EXISTING R/W ACQUIRED ON THE BEL-40-16.80 PROJECT.
EXISTING PARCEL NO.S SHOWN IN DASHED CIRCLES.

FENCE QUANTITIES
826 LIN. FT. TYPE 47 FENCE
4 I.A.P.A.
4 C.P.A.

NOTE: THE ℄ SURVEY PLAT FOR PREVIOUS PROJECT BEL-40-16.80 IS RECORDED IN THE SAID COUNTY PLAT RECORDS VOL. II, Pgs. 50, 51 & 52.

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

TOTAL NO. OWNERS 2 TOTAL NO. COMPLETE TAKES 0 TOTAL NO. OWNERS WITH STRUCTURES 0

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DATE	RECORD AREA	TOTAL P.R.O.	TOTAL TAKE	NET TAKE	NET RES LT.	NET RES RT.	BLDG.	SHEET NO.
1 WL	HAROLD F. HINKLE, UNMARRIED AND SARAH M. HINKLE, UNMARRIED	529	299	2-19-72	13.226 AC.	0.86 AC	2.345 Ac	2.345 Ac.	—	10.021 Ac.	NO	3
1 T	HAROLD F. HINKLE, UNMARRIED AND SARAH M. HINKLE, UNMARRIED	529	299	2-19-72	13.226 Ac.	——	0.123 Ac				NO	3
1-AT	HAROLD F. HINKLE, UNMARRIED AND SARAH M. HINKLE, UNMARRIED	529	299	2-19-72	13.226 Ac.	——	0.210 Ac				NO	3
2 WL	H. DAVID HALL & RUTH L. HALL	520	243	10-16-70	0.585 Ac.	——	0.007 Ac	0.007 Ac.	—	0.578 Ac.	NO	3
		511	656	6-26-69	1.073 Ac.	0.076 Ac	—	—	—	0.997 Ac	NO	3
				TOTAL	1.658 Ac.	0.076 Ac	0.007 Ac	0.007 Ac.	—	1.575 Ac.	NO	3
2 WD	H. DAVID HALL & RUTH L. HALL	520 511	243 656	10-16-70 6-26-69	0.585 Ac 1.073 Ac	—— 0.076 Ac	0.029 Ac ——	0.029 Ac ——	— —	0.549 Ac 0.997 Ac	NO NO	3 3
				TOTAL	1.658 Ac	0.076 Ac	0.029 Ac	0.029 Ac		1.546 Ac		

COMPLETION DATE 6/15/73		
DATE	REVISIONS	DESCRIPTION
10-12-73	Revised Acreage on 1-WL, added	
	Parcel 1T & 1-AT, and added	
	Parcel 2-WD	

TYPE FUND	SURVEYED	DRAWN BY	DESIGN	CHECKED	SUPERVISED	
I		L.E.W.	L.E.W.	T.TRACEY HESS	TRACEY HESS	1 / 5

PROPERTY MAP

R/W JOB NO.	FHWA	STATE	PROJECT	
11056	REG 5	OHIO		

78
81

2
5

BELMONT COUNTY
BEL-70-18.87
R/W PLANS

RICHLAND TWP.
SEC 3 T 7N R 4W

RICHLAND TWP.
SEC 33 T 6N R 3W

EDWARD FRIEDE, MARRIED

995+57.74
160.26' LT.

995+25.89
162.44' LT.

995+50.48
147.13' LT.

EXIST. LA R/W

1000+05.91
156.97' LT.

SEC 3
SEC 33

1001+93.58
155.59' LT.

S 79°42' E
1010+15.08

1006+53.08
152.22' LT.

1008+86.60
150.51' LT.

N 12°30' E
1008+16.40

1008+48.98
69.85' LT.

N 5°44' E
999+34.20

N 5°58' E
1001+41.62

995 996 997 998 999 1000 N 77°30' E 1001 1002 EXIST. ℄ I-70 1003 1004 1005 1006 1007 1008

STA. 1009+00

MATCH LINE

×86.85

999+31.83
67.90' RT.

999+25.72
86.44' RT.

999+09.73
135.00' RT.

1000+88.11
160.20' RT.

RAMP 'A'

℄ CONST. LIMITS

BEGIN WORK
BEL-70-18.87
STA. 1001+48.00

P.C. STA. 1004+95.69 ℄ RAMP 'A'
P.O.T. STA. 1004+95.69 ℄ I R 70

EXIST. LA R/W

WILLOW GROVE ROAD

1001+40.18
217.19' RT.

1003+14
236.88' RT.

1004+07.55
272.18' RT.

1000+56.01
266.68' RT.

FR. RES.

BARN

1002+95.71
259.79' RT.

1002+33.24
246.65' RT.

CO. RD. No. 4

1003+97.47
298.61' RT.

EXIST. LA R/W

EXIST. R/W

998+63.61
275.00' RT.

SEC 3
SEC 33

EXIST. R/W

GRAHAM ROAD

N 26°06' E
1005+03.10

FR. RES.

BARN

HAROLD F. HINKLE, UNMARRIED
&
SARAH M. HINKLE, UNMARRIED

N 40°41' E
1010+83.82

2-STY. FRAME RES.

No. 1-CURVE DATA RAMP 'A'
P.I. - STA. 1007+51.16
48' RT. ℄ 1007+51.16 I R 70
Δ - 7°39'10" RT.
D - 1°30'
R - 3819.72'
L - 510.19'
T - 255.47'
E - 8.53'

SCALE
0 50 100

NOTE: LAND ACQUIRED ON THE EXISTING BEL-40-16.80 PROJECT WAS ACQUIRED BY EASEMENT AND LIMITATION OF ACCESS.

RICHLAND TWP.
SEC 3 T 7N R 4W

RICHLAND TWP.
SEC 33 T 6N R 3W

COMPLETION DATE 6/15/73

DATE	REVISIONS	DESCRIPTION

TYPE FUND	SURVEYED	DRAWN BY	DESIGN	CHECKED	SUPERVISED	
I		L.E.W.	L.E.W.	T.D.H.	T.D.H.	2 / 5

R/W PLANS STA. 995+00 TO STA. 1009+00

R/W JOB NO.	FHWA	STATE	PROJECT	
11056	REG 5	OHIO	-	

79/81

3/5

BELMONT COUNTY
BEL-70-18.87
R/W PLANS

RICHLAND TWP.
SEC 33 T6N R3W

RICHLAND TWP.
SEC 34 T6N R3W

No.2 - CURVE DATA RAMP 'A'
P.I. - STA. 1013+36.12
126' RT. ℄ I R 70
Δ - 7°39'10" LT.
D - 4°00'
R - 1432.39'
L - 191.32'
T - 95.80'
E - 3.20'

No.3 - CURVE DATA RAMP 'B'
P.I. - STA. 1020+05.84
126' RT. ℄ I R 70
Δ - 5°03'45" LT.
D - 3°00'
R - 1909.86'
L - 168.75'
T - 84.43'
E - 1.87'

No.1 - CURVE DATA RAMP 'A'
P.I. - STA. 1007+51.16
48' RT. L 1007+51.16 I R 70
Δ - 7°39'10" RT.
D - 1°30'
R - 3819.72'
L - 510.19'
T - 255.47'
E - 8.53'

FRANK FADOR JR. & ARLENE FADOR

EDGAR E. NEWLIN & ISABEL H. NEWLIN

HAROLD F. HINKLE, UNMARRIED
&
SARAH M. HINKLE, UNMARRIED

H. DAVID HALL
&
RUTH L. HALL

OLGA R. GAMES

LOUIS J. TIMCHAK, EDNA A. TIMCHAK & LOUIS J. TIMCHAK

STA. 1009+00

STA. 1024+00

MATCH LINE

EXIST. LA R/W

EXIST. ℄ I-70

RAMP 'A'

RAMP 'B'

BEGIN ACQUISITION
BEL-70-18.87
STA. 1012+20.00

END ACQUISITION
BEL-70-18.87
STA. 1018+86.80

EQUATION: STA. 1013+84.42 BACK = STA. 1013+94.92 AHEAD

1013+84.42 BACK = 1013+94.92 AHEAD
146.85' LT.

P.C. - STA. 1012+40.32 - ℄ RAMP 'A'

P.T. - STA. 1014+31.64 - ℄ RAMP 'A'

P.C. - STA. 1019+21.41 - ℄ RAMP 'B'

P.T. - STA. 1020+90.16 - ℄ RAMP 'B'

P.T. - STA. 1010+05.88 ℄ RAMP 'A'

CONST. LIMITS

POND

CONNECT TO EXIST. FENCE

60'x104'(TYPE 'A')

150'x80'

1 WL 2.345 Ac

1-T 0.123 Ac

1-A T 0.210 Ac

2 WL 0.007 Ac

2 WD 0.029 Ac

Res. 0.946 Ac

NOTE: LAND ACQUIRED ON THE EXISTING BEL-40-16.80 PROJECT WAS ACQUIRED BY EASEMENT AND LIMITATION OF ACCESS.

SCALE
0 50 100

COMPLETION DATE 6/15/73		
DATE	REVISIONS	DESCRIPTION
10-12-73	Revised Parcels 1WL & 2WL	
	Added Parcels 1-T, 1A-T & 2WD	

TYPE FUND	SURVEYED	DRAWN BY	DESIGN	CHECKED	SUPERVISED	
I		L.E.W.	L.E.W.	T.D.H.	T.D.H.	3/5

R/W PLANS STA. 1009+00 TO STA. 1024+00

R/W JOB NO.	FHWA	STATE	PROJECT	
11056	REG 5	OHIO		

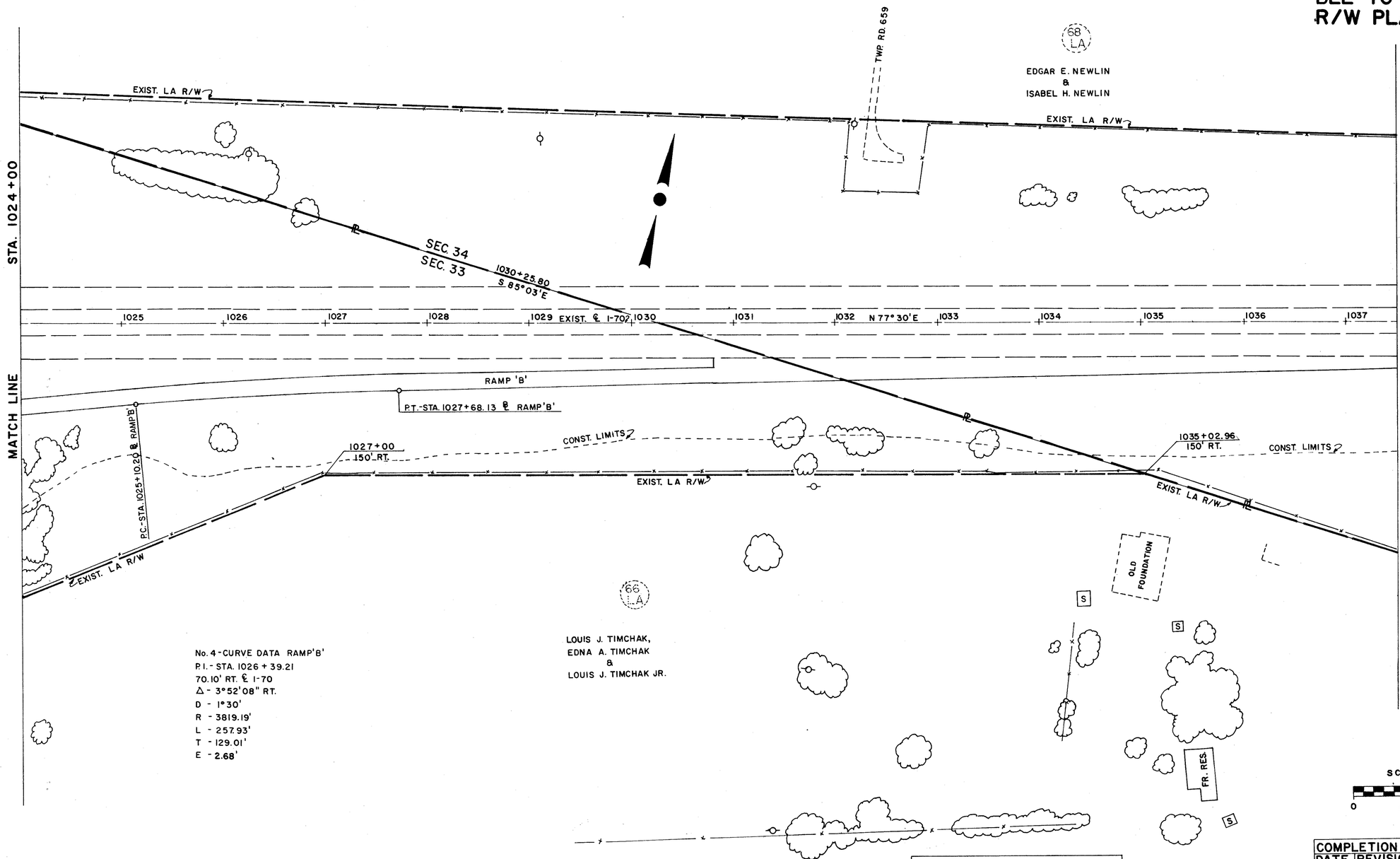
80
81

4
5

BELMONT COUNTY
BEL-70-18.87
R/W PLANS

RICHLAND TWP.

SEC 34 T6N R3W



No. 4 - CURVE DATA RAMP 'B'
P.I. - STA. 1026 + 39.21
70.10' RT. ℄ I-70
Δ - 3°52'08" RT.
D - 1°30'
R - 3819.19'
L - 257.93'
T - 129.01'
E - 2.68'

RICHLAND TWP.

SEC 33 T6N R3W

NOTE: LAND ACQUIRED ON THE EXISTING BEL-40-16.80 PROJECT WAS ACQUIRED BY EASEMENT AND LIMITATION OF ACCESS.

SCALE
0 50 100

COMPLETION DATE 6/15/73

DATE	REVISIONS	DESCRIPTION

TYPE FUND	SURVEYED	DRAWN BY	DESIGN	CHECKED	SUPERVISED
I		L.E.W.	L.E.W.	T.D.H.	T.D.H.

4
5

R/W PLANS STA. 1024+00 TO STA. 1037+50

R/W JOB NO.	FHWA	STATE	PROJECT	
11056	REG 5	OHIO		

81
81

5
5

BELMONT COUNTY
BEL-70-18.87
R/W PLANS

RICHLAND TWP.
SEC. 34 T6N R3W

EDGAR E. NEWLIN
&
ISABEL H. NEWLIN
68 LA

THOMAS R. STEWART
&
THOBURN R. STEWART
70 LA

1046+00
310' LT.

EXIST. LA R/W

1039+52.48
175' LT.

1052+00
125' LT.

STA. 1037+50

N 5°23' E
1038+96.00

1038 1039 1040 1041 1042 1043 N 77°30' E 1044 1045 1046 EXIST ℄ I-70 1047 1048 1049 1050 1051 1052

MATCH LINE

RAMP 'B'

CONST. LIMITS

END WORK
BEL-70-18.87
STA. 1042+82.00

T.S. 1049+36.85

S.C. 1050+86.85

1038+44.37
160' RT.

EX. LA R/W

EXIST. LA R/W

1052+00
125.88' RT.

P.I. STA. 1062+21.62
Δ 36°30' RT.
Dc 1°30'
Ls 250.00'
Ts 1384.77'
Es 203.03'
Rc 3819.72'
Lc 2183.33'
θ 1°52'30"

1038+15.86
248.36' RT.

THOMAS R. STEWART
&
THOBURN R. STEWART
70 LA

EXIST. LA R/W

1045+00
340' RT.

SEC. 34
SEC. 33

1030+25.80
S 85°03' E

SCALE
0 50 100

66 LA
LOUIS J. TIMCHAK
EDNA A. TIMCHAK
&
LOUIS J. TIMCHAK JR.

NOTE: LAND ACQUIRED ON THE EXISTING BEL-40-16.80 PROJECT WAS ACQUIRED BY EASEMENT AND LIMITATION OF ACCESS.

RICHLAND TWP.
SEC. 33 T6N R3W

COMPLETION DATE 6/15/73

DATE	REVISIONS	DESCRIPTION

TYPE FUND	SURVEYED	DRAWN BY	DESIGN	CHECKED	SUPERVISED
I		L.E.W	LEW	TDH	TDH

5

5

R/W PLANS STA. 1037+50 TO STA. 1052+00

TE - 122
400 - 12 - 72

BEL - 70 - 18.87

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 3-22-73 Sampler:Type SS Dia. 1 3/8" Water Elev. 1039.1'
Date Completed 3-22-73 Casing:Length 8.0' Dia. 3 1/2"

Boring No. 1 Station & Offset 1020+50, 120'Rt. Surface Elev. 1046.1'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1046.1	0															
	2															
1043.6	4	9/12			BROWN GRAVEL WITH SAND	1	63503	39	19	17	14	11	NP	NP	30	A-1-b
1041.1	6	2/4			GRAY GRAVEL	2	63504	-	-	-	-	-	-	-	14	M.O*
1038.6	8															
1037.6		2/10			BROWN GRAVEL WITH SAND AND SILT	3	63505	38	9	18	22	13	NP	NP	L7	A-2-4
1035.7	10		1.3	0.2	TOP OF ROCK LIMESTONE, GRAY, HARD, DENSE WITH CLAY SEAMS. CORE LOSS 10%											
	12															
			4.5	0.5	SANDY SHALE, HARD, DENSE, MICACEOUS, FIRM. CORE LOSS 11%											
1031.1	14															

BOTTOM OF BORING

*M.O = MOISTURE ONLY

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 3-21-73 Sampler:Type SS Dia. 1 3/8" Water Elev.
Date Completed 3-22-73 Casing:Length Dia.

Boring No. 2 Station & Offset 1021+00, 90'Rt. Surface Elev. 1049.0'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1049.0	0															
1046.5	2	8/9			BROWN SANDY CLAYEY SILT	1	63542	4	5	24	33	34	28	8	21	A-4a
1044.0	4															
1043.0	6	50 (0.2)			BROWN GRAVEL	2	63543	-	-	-	-	-	-	-	17	WEIGHT
	8				TOP OF ROCK											
			3.5	0.5	CLAY STONE, GRAY, SOFT WITH CLAY SEAMS. CORE LOSS 15%											
1037.8	12															
			4.7	0.3	SILT SHALE, HARD, GRAY, MICACEOUS, SANDY WITH TWO THIN LIMESTONE STRINGERS. NO CORE LOSS.											
1034.0	14															

BOTTOM OF BORING

State of Ohio
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LOG OF BORING

Date Started 3-22-73 Sampler:Type SS Dia. 1 3/8" Water Elev.
Date Completed 3-22-73 Casing:Length Dia.

Boring No. 3 Station & Offset 1021+50, 110'Rt. Surface Elev. 1050.0'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1050.0	0															
1047.5	2	4/8			BROWN SANDY SILTY CLAY	1	63546	3	5	12	32	48	37	16	27	A-6b
1045.0	4				TOP OF ROCK											
1044.0	6	50 (0.9)			BROWN SANDY CLAY WITH SHALE FRAGMENTS	2	63547	30	6	14	27	23	33	12	26	A-6a
1041.0	8		0.9	2.1	CLAY SHALE, WEATHERED, WITH CLAY SEAMS, CALCAREOUS, SOFT. CORE LOSS 70%											
1039.0	10		2.0	0.0	LIMESTONE, IMPURE, GRAY, ARGILLACEOUS. NO CORE LOSS.											

BOTTOM OF BORING

State of Ohio
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Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 3-22-73 Sampler:Type SS Dia. 1 3/8" Water Elev. 1045.6'
Date Completed 3-22-73 Casing:Length Dia.

Boring No. 4 Station & Offset 1021+50, 170'Rt. Surface Elev. 1045.6'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1045.6	0															
1043.1	2	10/20			BROWN SILTY CLAY	1	63544	0	1	4	32	63	42	16	38	A-7-6
1040.6	4				TOP OF ROCK											
1039.6	6	50 (0.5)			GRAY CLAY SHALE	2	63545	0	2	4	55	39	31	12	16	M.O*
	8															
			3.9	0.1	CLAY SHALE, BLUE-GRAY, MEDIUM-SOFT GRADING TO SILTY MICACEOUS SHALE IN BOTTOM ONE HALF WITH A HARD 6" LIMESTONE STRINGER FROM 1037.6' TO 1037.1'. CORE LOSS 22%											
1034.6	10															

BOTTOM OF BORING

State of Ohio
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Testing Laboratory

LOG OF BORING

Date Started 3-22-73 Sampler:Type SS Dia. 1 3/8" Water Elev. 1039.6'
Date Completed 3-22-73 Casing:Length 7.0' Dia. 3 1/2"

Boring No. 5 Station & Offset 1022+00, 130'Rt. Surface Elev. 1045.6'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1045.6	0															
1043.1	2	4/5			BROWN SILTY CLAY	1	63501	3	3	5	31	58	45	23	47	A-7-6
1040.6	4															
1038.6	6	6/11			BROWN SILT AND CLAY AND STONE FRAGMENTS TOP OF ROCK	2	63502	37	10	9	18	26	33	14	31	A-6a
1036.8	8															
			2.4	0.6	CLAYSTONE, GRAY, SOFT, CALCAREOUS. CORE LOSS 33%											
	10															
	12		5.0	0.0	SANDY SHALE, GRAY, MICACEOUS, CALCAREOUS, MEDIUM-FIRM WITH A 6 INCH LIMESTONE STRINGER FROM ELEV. 1035.6' TO 1035.1'. NO CORE LOSS.											
1030.6	14															

BOTTOM OF BORING

State of Ohio
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Testing Laboratory

LOG OF BORING

Date Started 3-22-73 Sampler:Type SS Dia. 1 3/8" Water Elev.
Date Completed 3-22-73 Casing:Length Dia.

Boring No. 6 Station & Offset 1022+50, 152'Rt. Surface Elev. 1043.0'

Elev.	Depth	Std.Pen. (N)	Rec. ft.	Loss ft.	Description	Field No.	Lab. Nos.Sa	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
1043.0	0															
1040.5	2	4/4			BROWN SILTY GRAVELLY SAND	1	63533	24	12	24	25	15	29	10	18	A-4a
1038.0	4															
1036.0	6	50 (0.5)			BROWNISH-GRAY SANDY CLAYEY SILT TOP OF ROCK	2	63534	9	6	10	39	36	27	7	16	A-4a
1034.5	8				CLAY SHALE, FIRM, GRAY, MICACEOUS WITH CLAY SEAMS. NO CORE LOSS.											
1033.0	10		3.5	0.5	LIMESTONE, HARD, GRAY, DENSE, FIRM IN UPPER IN 6", ARGILLACEOUS IN BASAL 6 FOOT. NO CORE LOSS.											
1032.0					CLAY SHALE WITH CLAY SEAMS. CORE LOSS 50%											

BOTTOM OF BORING

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1600 WEST BROAD STREET COLUMBUS, OHIO 43223

SUBSURFACE FOUNDATION INVESTIGATION
BELMONT COUNTY
WEIGH STATION
BEL - 70 - 18.87

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE