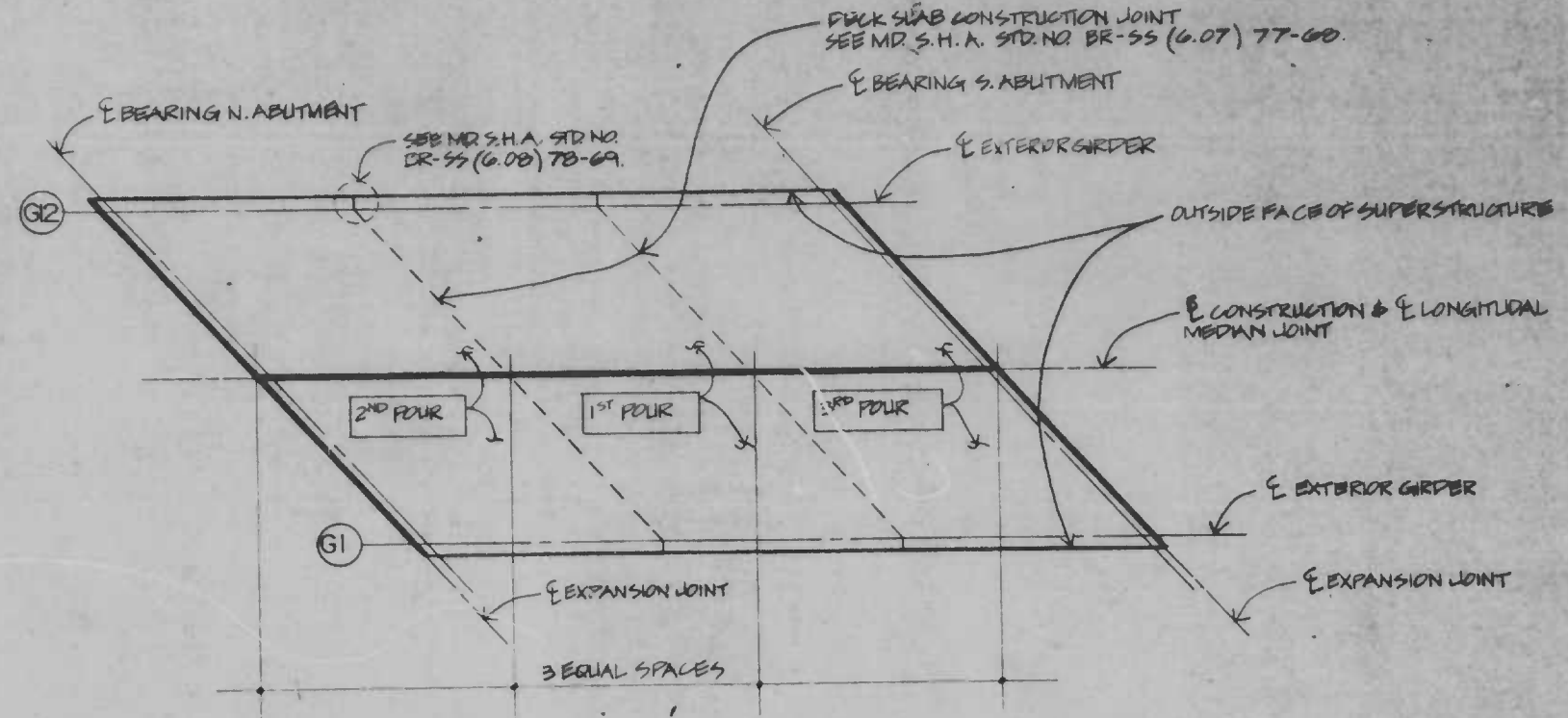
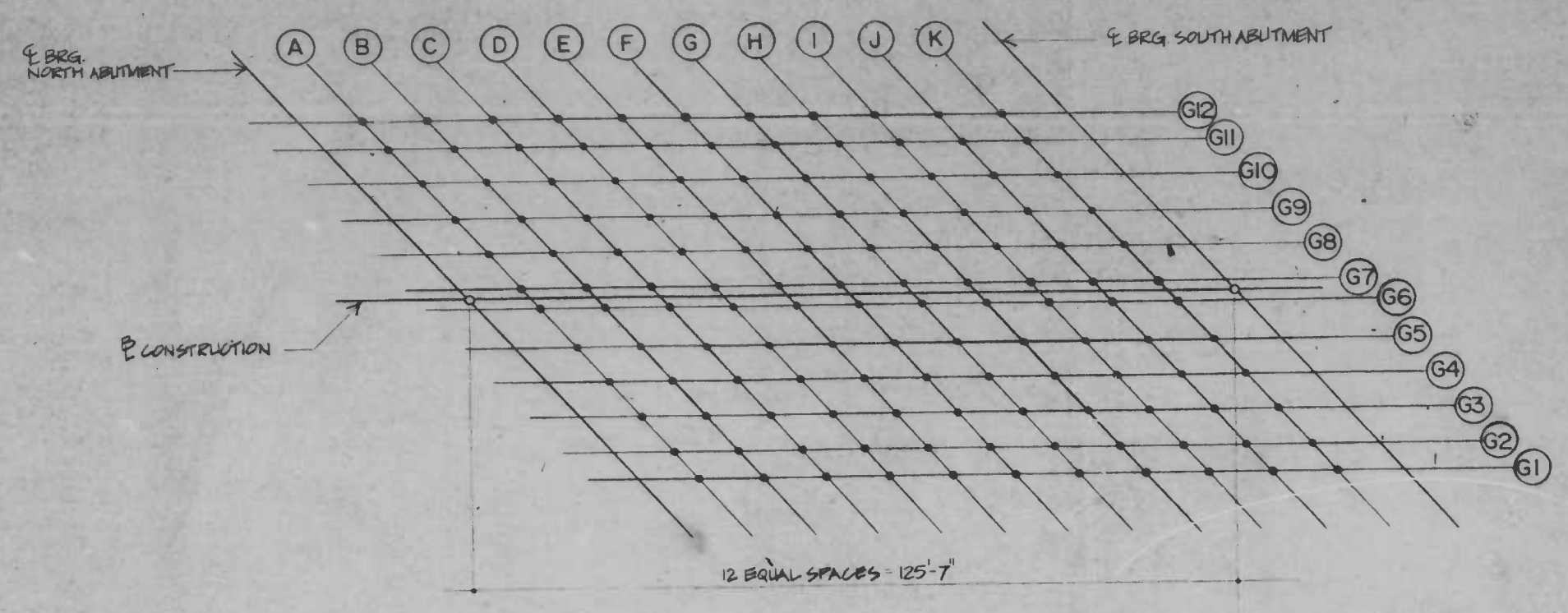


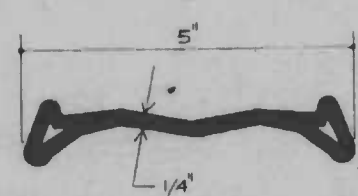
REVISIONS		
NO.	DESCRIPTION	DATE



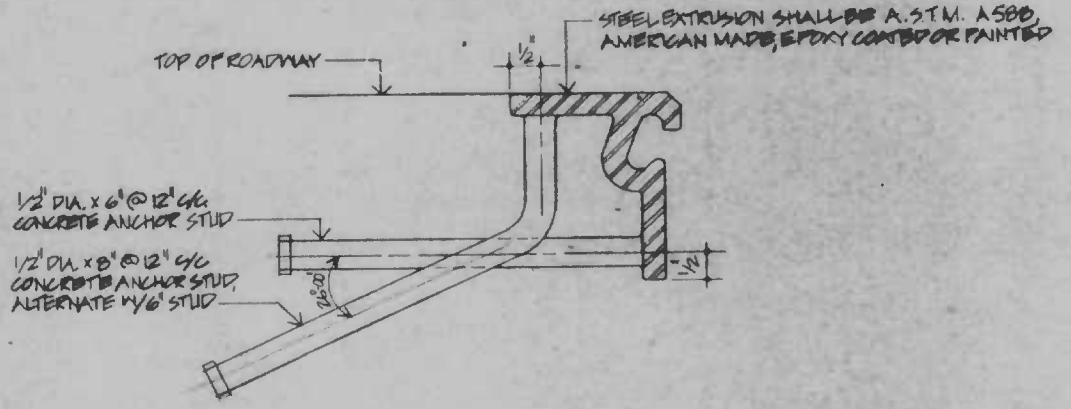
DECK JOINT PLAN & SLAB POURING SEQUENCE
NOT TO SCALE



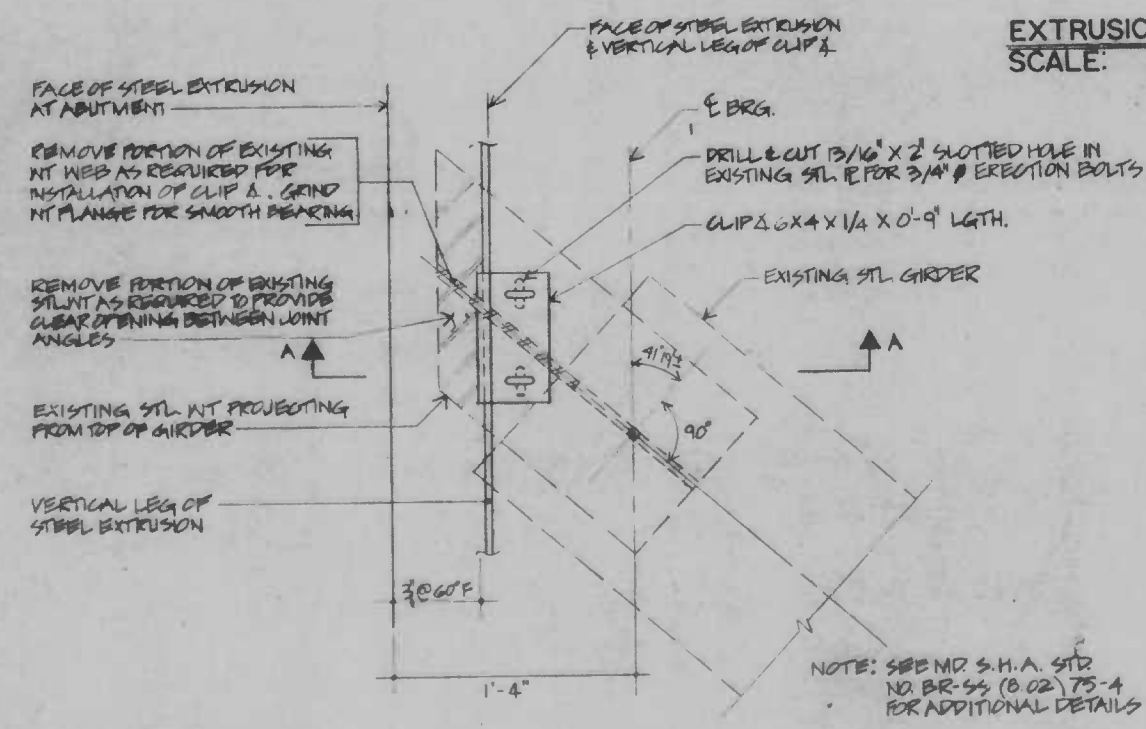
DEFLECTION LOCATION PLAN
SCALE: 1/16" = 1'-0"



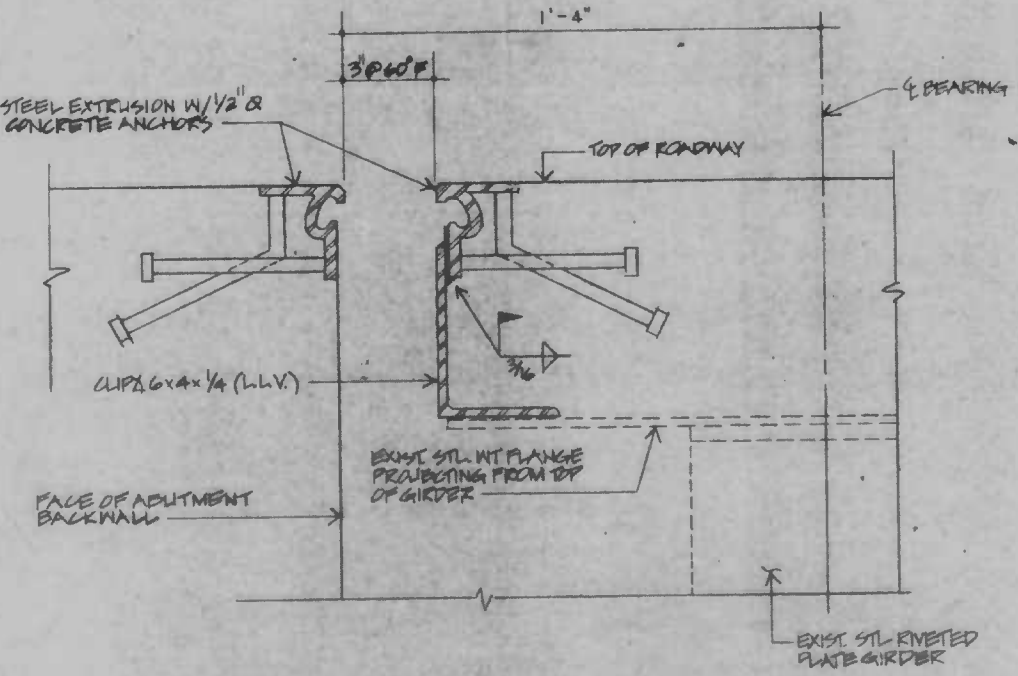
NEOPRENE STRIP SEAL
NOT TO SCALE



EXTRUSION DETAIL
SCALE: HALF SIZE



PLAN: CLIP ANGLE CONNECTION DETAIL
NOT TO SCALE



SECTION A A
SCALE 3" = 1'-0"

DEFLECTION SCHEDULE													
POINT	BEAM	DEFLECTION	A	B	C	D	E	F	G	H	I	J	K
G1	△ SLAB	7/16	3/4	1-1/16	1-1/4	1-7/16	1-7/16	1-7/16	1-1/4	1-1/16	3/4	7/16	
	△ S.D.L.	3/16	3/8	1/2	5/8	11/16	3/4	11/16	5/8	1/2	3/8	3/16	
G2	△ SLAB	9/16	1-1/16	1-1/2	1-13/16	2-1/16	2-3/16	2-1/16	1-13/16	1-1/2	1-1/16	9/16	
	△ S.D.L.	3/16	3/8	1/2	5/8	11/16	11/16	11/16	5/8	1/2	3/8	3/16	
G3	△ SLAB	5/8	1-3/16	1-11/16	2-1/16	2-5/16	2-7/16	2-5/16	2-1/16	1-11/16	1-3/16	5/8	
	△ S.D.L.	3/16	5/16	1/2	9/16	5/8	11/16	5/8	9/16	1/2	5/16	3/16	
G4	△ SLAB	5/8	1-3/16	1-11/16	2-1/16	2-5/16	2-7/16	2-5/16	2-1/16	1-11/16	1-3/16	5/8	
	△ S.D.L.	3/16	5/16	1/2	9/16	5/8	11/16	5/8	9/16	1/2	5/16	3/16	
G5	△ SLAB	5/8	1-3/16	1-11/16	2-1/16	2-5/16	2-7/16	2-5/16	2-1/16	1-11/16	1-3/16	5/8	
	△ S.D.L.	3/16	5/16	1/2	9/16	5/8	11/16	5/8	9/16	1/2	5/16	3/16	
G6	△ SLAB	1/2	1	1-7/16	1-11/16	1-15/16	2-1/16	1-15/16	1-11/16	1-7/16	1	1/2	
	△ S.D.L.	3/16	3/8	1/2	5/8	11/16	3/4	11/16	5/8	1/2	3/8	3/16	
G7	△ SLAB	1/2	1	1-7/16	1-11/16	1-15/16	2-1/16	1-15/16	1-11/16	1-7/16	1	1/2	
	△ S.D.L.	3/16	3/8	1/2	5/8	11/16	3/4	11/16	5/8	1/2	3/8	3/16	
G8	△ SLAB	5/8	1-3/16	1-11/16	2-1/16	2-5/16	2-7/16	2-5/16	2-1/16	1-11/16	1-3/16	5/8	
	△ S.D.L.	3/16	5/16	1/2	9/16	5/8	11/16	5/8	9/16	1/2	5/16	3/16	
G9	△ SLAB	5/8	1-3/16	1-11/16	2-1/16	2-5/16	2-7/16	2-5/16	2-1/16	1-11/16	1-3/16	5/8	
	△ S.D.L.	3/16	5/16	1/2	9/16	5/8	11/16	5/8	9/16	1/2	5/16	3/16	
G10	△ SLAB	1/2	15/16	1-5/16	1-5/8	1-13/16	1-7/8	1-13/16	1-5/8	1-5/16	15/16	1/2	
	△ S.D.L.	1/8	1/4	3/8	1/2	9/16	9/16	9/16	1/2	3/8	1/4	1/8	
G11	△ SLAB	7/16	13/16	1-3/16	1-7/16	1-5/8	1-11/16	1-5/8	1-7/16	1-3/16	13/16	7/16	
	△ S.D.L.	1/8	5/16	3/8	1/2	9/16	9/16	9/16	1/2	3/8	5/16	1/8	
G12	△ SLAB	7/16	3/4	1-1/16	1-1/4	1-7/16	1-7/16	1-7/16	1-1/4	1-1/16	3/4	7/16	
	△ S.D.L.	3/16	3/8	1/2	5/8	11/16	3/4	11/16	5/8	1/2	3/8	3/16	

△ SLAB = DEFLECTION OF EXISTING GIRDER DUE TO WEIGHT OF NEW DECK SLAB ONLY.
 △ S.D.L. = DEFLECTION OF EXISTING GIRDER DUE TO SUPERIMPOSED DEAD LOADS OF NEW PARAPETS, PROTECTIVE BARRIERS, AND MEDIAN.

CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
 CONTRACT NO. 3205
 REHABILITATION OF THE
 HILTON STREET BRIDGE
 OVER
 AMTRAK & CONRAIL
 EXPANSION JOINT DETAILS
 AND DEFLECTION SCHEDULE
 SCALE: _____ DATE: _____ SHEET 11 OF _____

1-18-88
 12-A-87

DRAWN BY _____
 EXAMINED BY _____

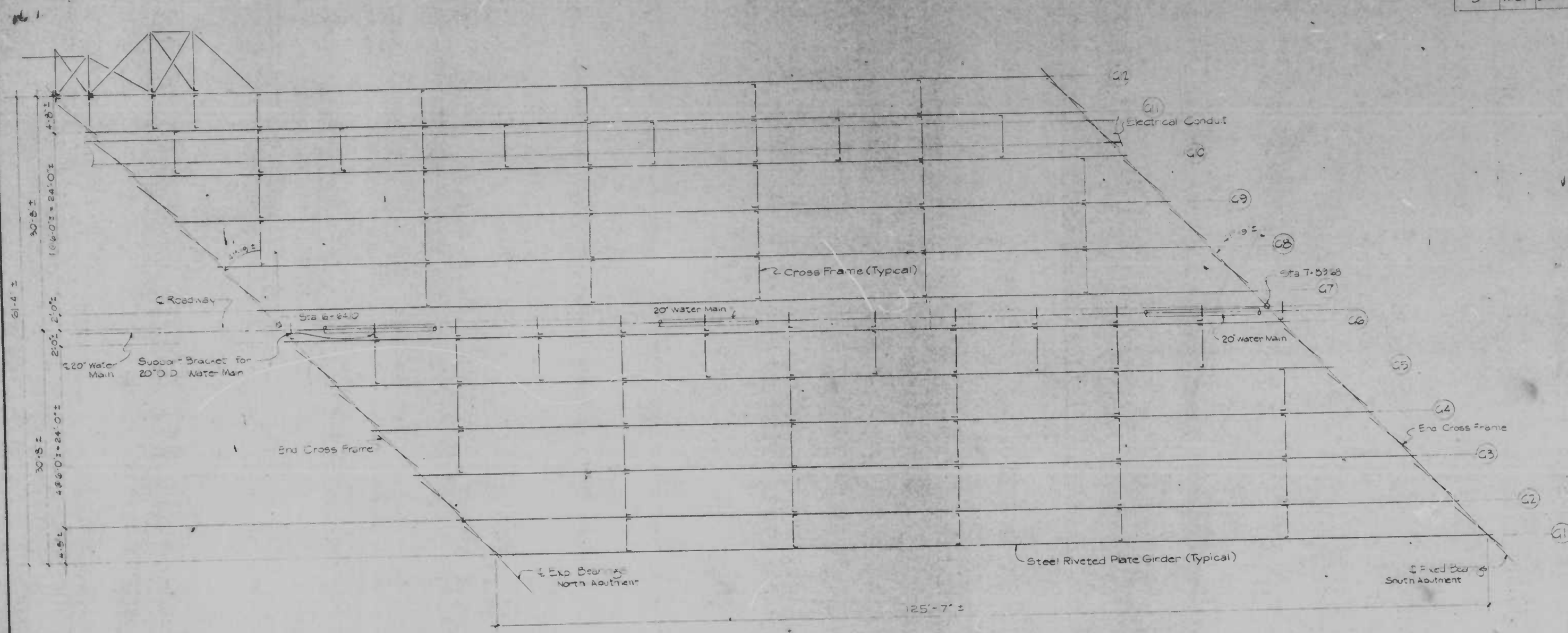
EXPANSION JOINT DETAILS AT ABUTMENT

FILE REF.

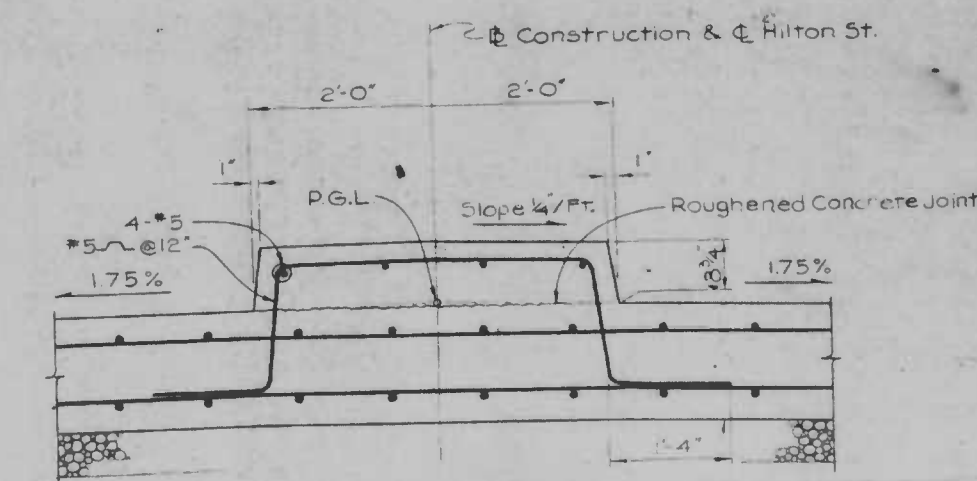
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F.H.W.A. REGION	STATE	FED. AID PROJ. NO.
3	MD.	BH-M

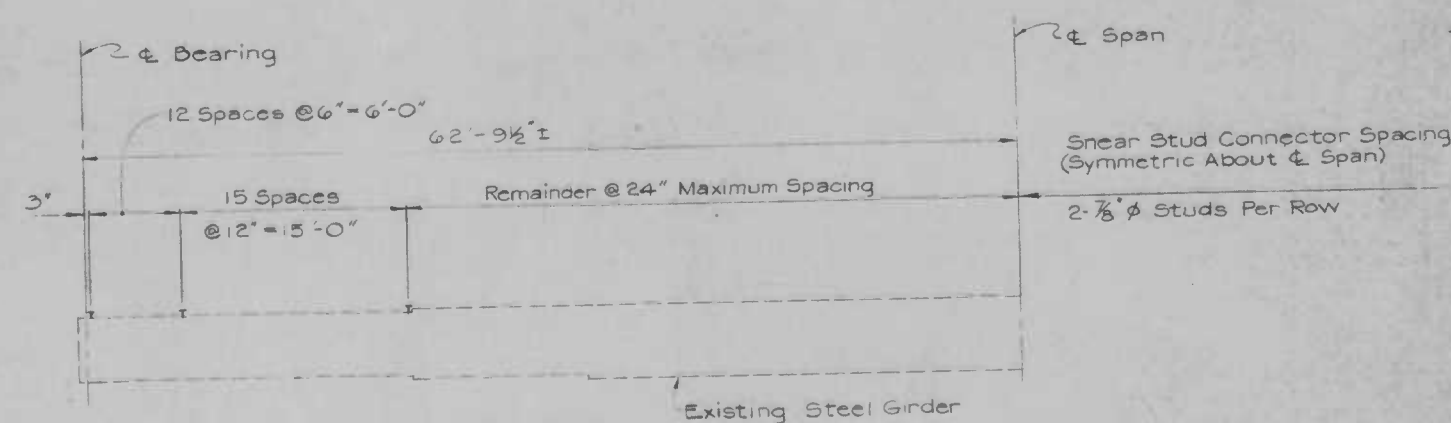
REVISIONS		
NO.	DESCRIPTION	DATE



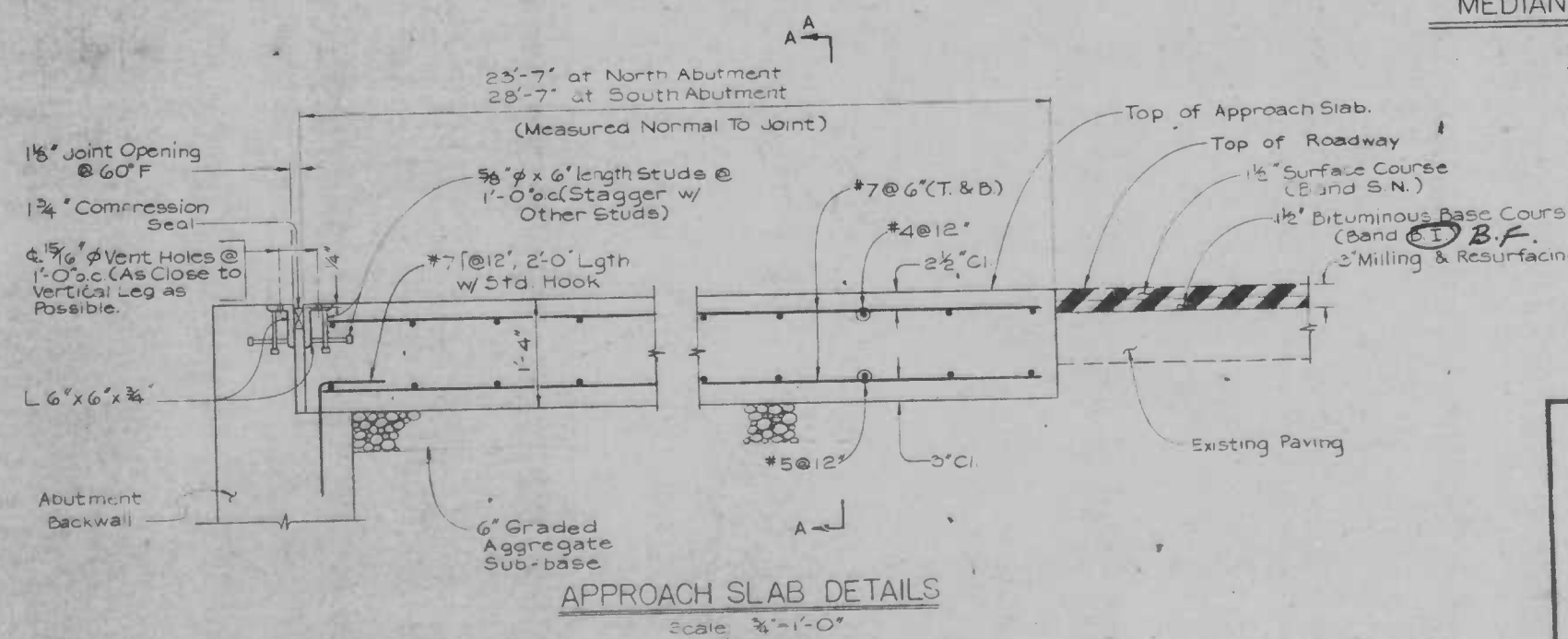
FRAMING PLAN (EXISTING)
Scale: 1/8" = 1'-0"



SECTION A-A
TYPICAL SECTION THRU CONCRETE
MEDIAN ON APPROACH SLABS
Scale: 3/4" = 1'-0"



SHEAR STUD CONNECTOR SPACING
Scale: 1/8" = 1'-0"



NOTE: Taper bottom of approach slab @ 8:1 slope at edge of roadway to bear on existing wall slab seat. See Typical Sidewalk & Wall Section Detail, Sht No. 6

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL
FRAMING PLAN (EXISTING), SHEAR
STUD SPACING DIAGRAM, ETC.
SCALE: _____ DATE: _____ SHEET: 12


1-18-88
7-4-87
11-3-87
0-3-87

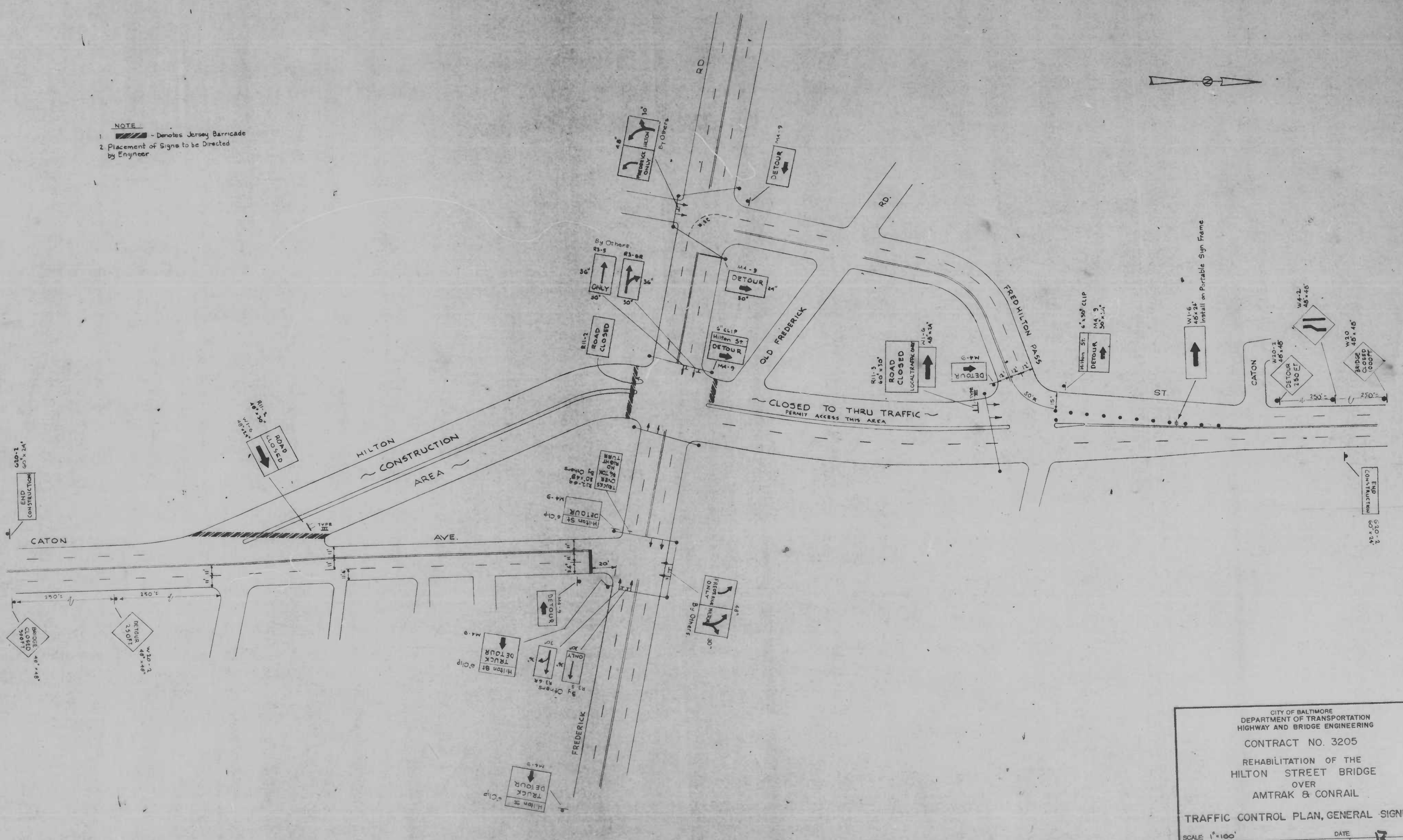
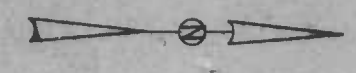
DRAWN BY
EXAMINED BY

FILE REF.

FILE REF.

F.M.W.A. REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	REVISIONS			
					NO.	DESCRIPTION	DATE	BY
3	MD	DH M3008(1)						

NOTE
 1.  - Denotes Jersey Barricade
 2. Placement of Signs to be Directed by Engineer



CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
 CONTRACT NO. 3205
 REHABILITATION OF THE
 HILTON STREET BRIDGE
 OVER
 AMTRAK & CONRAIL
 TRAFFIC CONTROL PLAN, GENERAL SIGNING
 SCALE 1"=100' DATE _____ SHEET 8 OF _____

11-28-88
 12-4-87
 DRAWN BY
 EXAMINED BY
 KEUFFEL & ESSER 8-952
 9-8-87

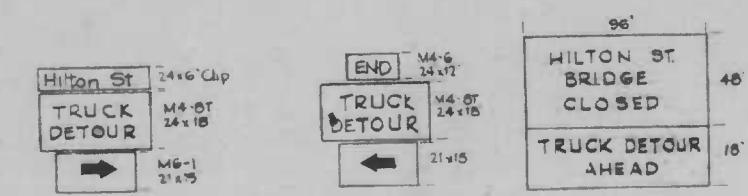
FILE REF.

FILE REF.

F.H.W.A. REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	REVISIONS		
					NO.	DESCRIPTION	DATE BY
3	MD	BH-M3009(1)					



LEGEND
 ————— Indicates Direction of Travel
 ————— Southbound Hilton St Detour to Caton
 ————— Eastbound Frederick Ave Detour to Caton



TYPICAL SIGN DIMENSIONS
1/32" Scale

TRUCK DETOUR ROUTES
1" = 500'

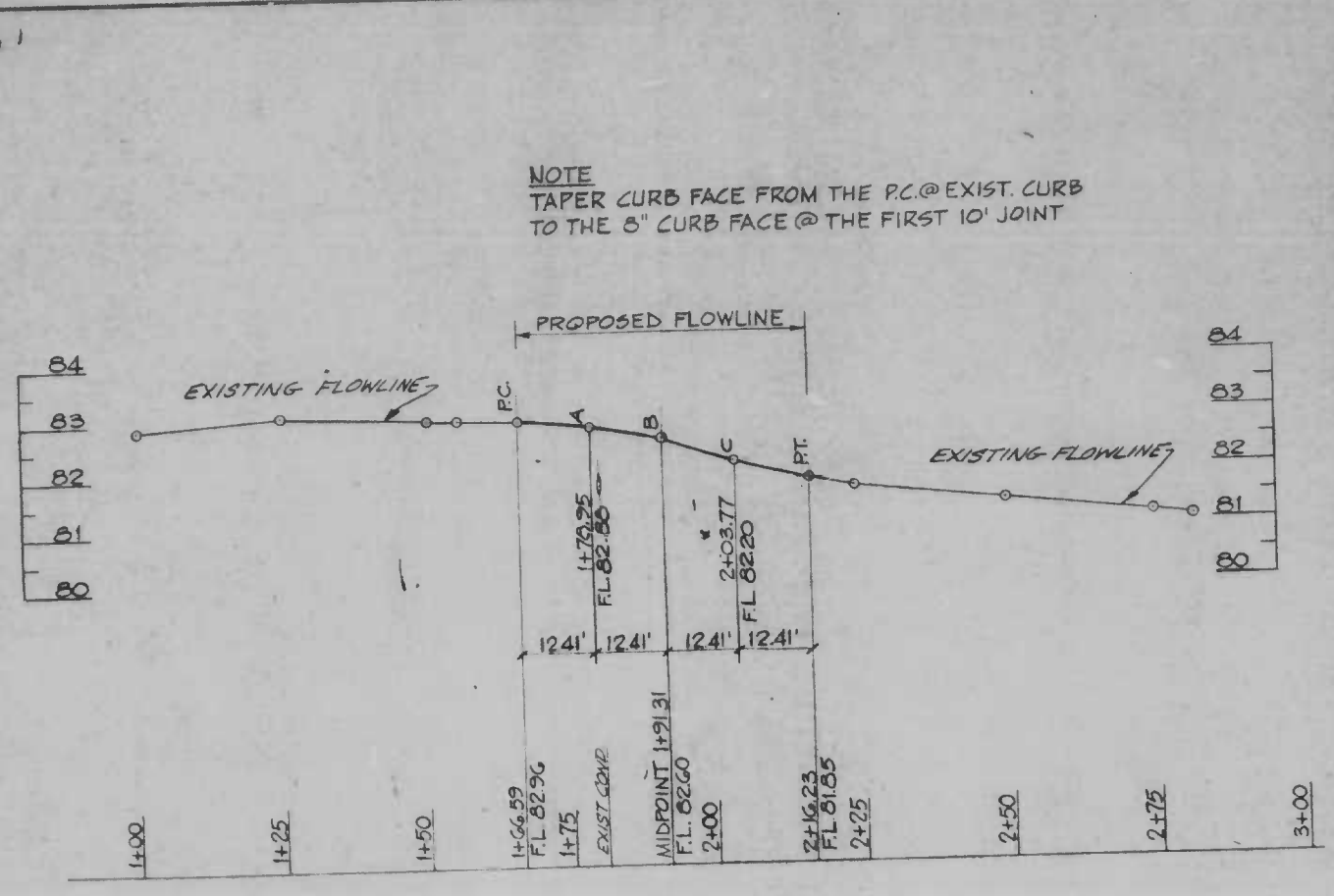
CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
 CONTRACT NO. 3205
 REHABILITATION OF THE
 HILTON STREET BRIDGE
 OVER
 AMTRAK & CONRAIL
 TRUCK DETOUR ROUTES
 SCALE 1"=500' DATE: 1/4/87 SHEET: 14

FILE REF.

1-18-87
 12-1-87
 DRAWN BY
 EXAMINED BY
 9-8-87

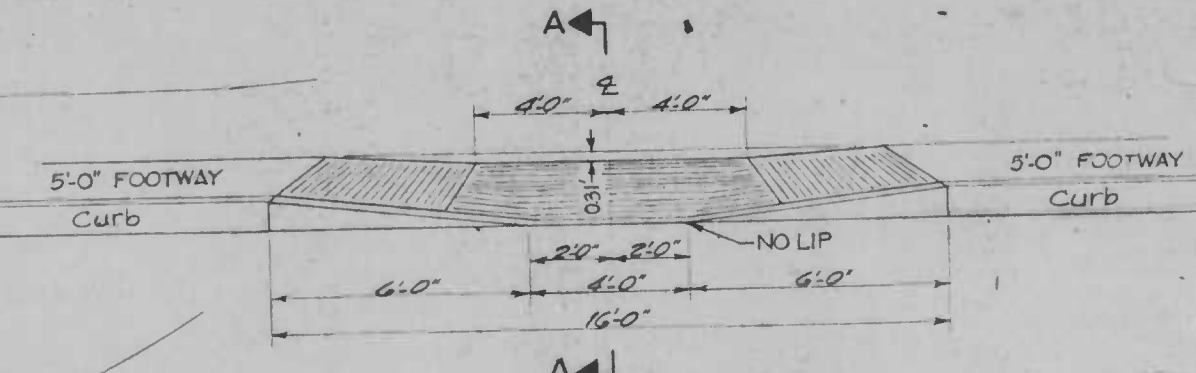
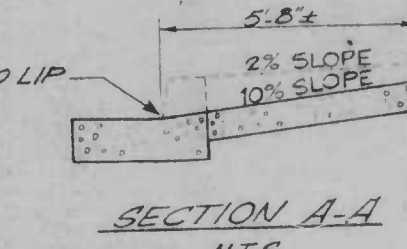
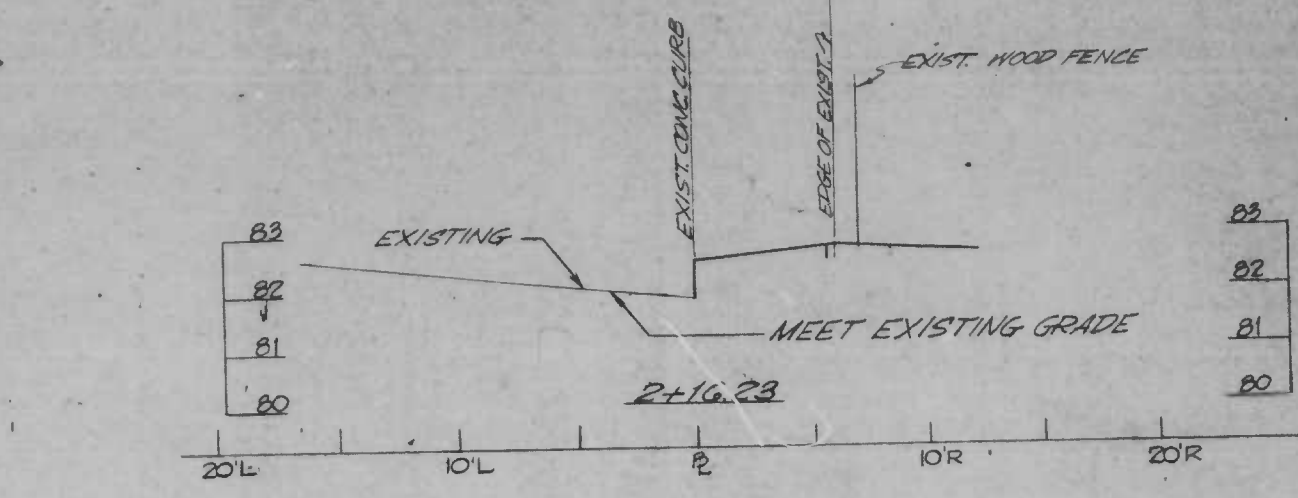
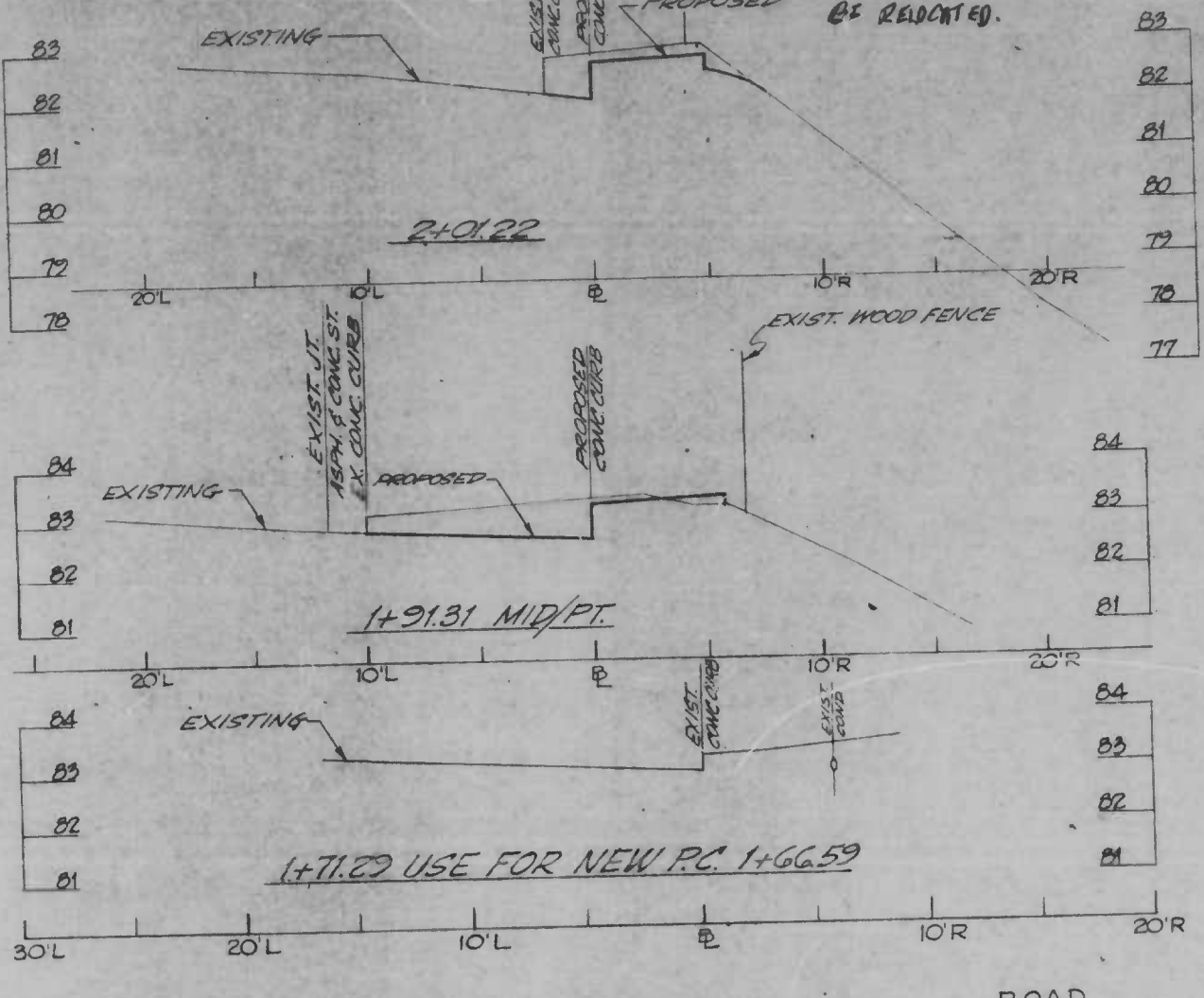
FILE REF.

FHWA REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	REVISIONS	
					NO.	DESCRIPTION
3	MD	SH MS009(1)				

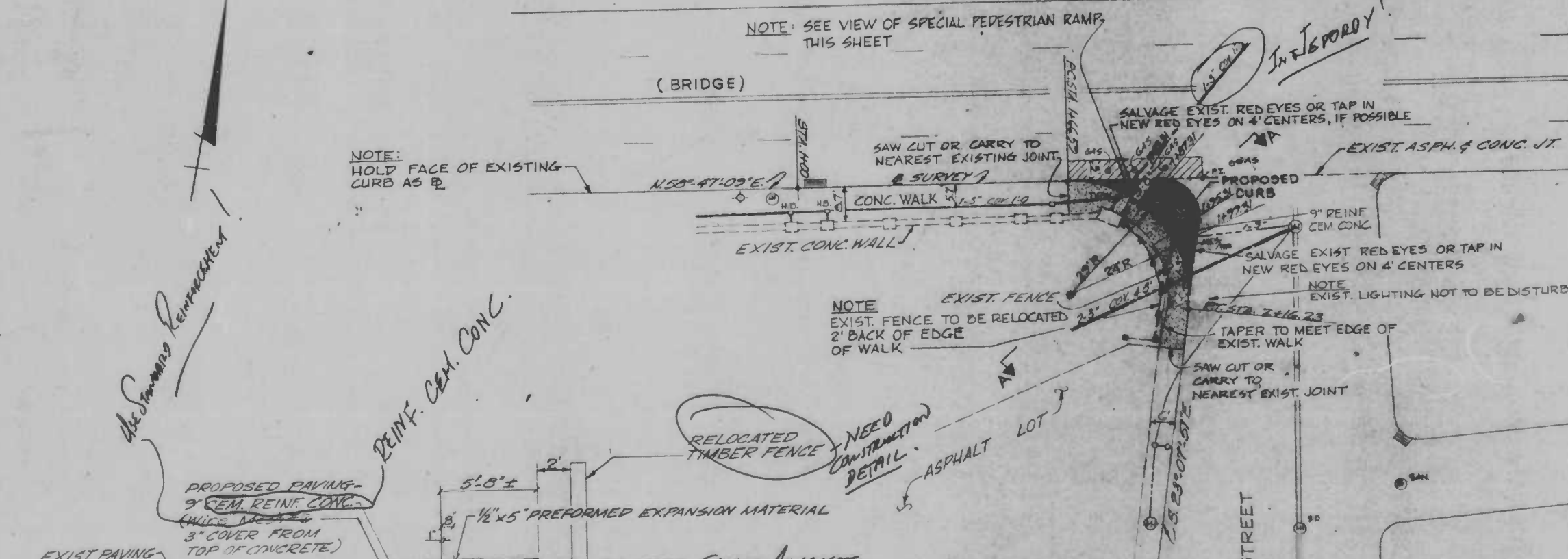


FLOWLINE PROFILE

SCALE: HORIZ. 1"=20'
VERT. 1"=2'



VIEW OF SPECIAL PEDESTRIAN RAMP
S.W. CORNER OF FREDERICK RD & BRUNSWICK ST.
N.T.S.



TYP DETAIL SECTION @ MID/PT 1+31.31

SCALE: HORIZ. 1"=5'
VERT. 1"=2'

CURVE DATA

$\Delta = 98^{\circ}05'00''$
 $D_2 = 49^{\circ}08'50''$
 $R = 29'$
 $L = 49.64'$
 $C = 43.80'$
 $T = 33.41'$
 $d = 67.271495068$

PLAN

SCALE: 1"=20'

- INDICATES APPROXIMATE LIMIT OF PROPOSED PAVING.
- INDICATES APPROX. LIMIT OF PROPOSED CONCRETE WALK.
- INDICATES AREAS TO BE STRIPPED TO THE EXISTING BASE AND RESURFACED WITH 1/2" BIT. CONC. BINDER (BR) AND 1 1/2" BIT. CONC. SURFACE (SN).

CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
 CONTRACT NO. 3205
 REHABILITATION OF THE
 HILTON STREET BRIDGE
 OVER
 AMTRAK & CONRAIL
 CORNER CUT-BACK
 (FREDERICK & BRUNSWICK)
 SCALE AS SHOWN DATE SHEET 5

FILE REF.

NOTE: ALL THE WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM NO. 108.

DRAWN BY A. SHAPIRO
 EXAMINED BY
 9-8-87

UNIT PRICES!

FILE REF.

SUMMARY OF QUANTITIES

REVISIONS			
NO.	DESCRIPTION	DATE	BY

ITEM NO.	DESCRIPTION	UNIT	QUANTITIES			
			ESTIMATE	CONTINGENCY	PROPOSAL	FINAL
PRELIMINARY ITEMS						
1001	CLEARING AND GRUBBING	LS	LUMP SUM			
1002	ENGINEERS OFFICE NO. 2	LS	LUMP SUM			
1003	MAINTENANCE OF TRAFFIC	LS	LUMP SUM			
1004	CONSTRUCTION STAKEOUT	LS	LUMP SUM			
1005	MOBILIZATION	LS	LUMP SUM			
1006	ON-THE-JOB TRAINING	HR				
1007	AFRON BOARD	UP				
1008	TYPE III BARRICADE	EA				
1009	TEMPORARY PRECAST CONCRETE BARRIER	LF				
1010	PLASTIC DRUMS	EA				
1011	TEMPORARY TRAFFIC SIGNS	SF				
1012	PAVEMENT MARKINGS	HR				
1013	WATCH PERSON SERVICES	HR				
1014	TEMPORARY PAINTED STRIPE MARKINGS	LF				
1015	REMOVAL OF TEMPORARY PAINTED STRIPE MARKINGS	LF				
GRADING ITEMS						
2001	CLASS 1 EXCAVATION	CY				
2002	CLASS 1A EXCAVATION	CY				
2003	CLASS 2 EXCAVATION	CY				
2004	SELECT BORROW EXCAVATION (TYPE II)	CY				
2005	CONTINGENT BORROW EXCAVATION (TYPE II)	CY				
2006	TEST PIT EXCAVATION	CY				
2007	EROSION & SEDIMENT CONTROL	LS	LUMP SUM			
2008	REMOVAL OF EXISTING PAVEMENT	SY				
2009	REMOVAL OF EXISTING SIDEWALK	SY				
2010	REMOVAL OF EXISTING MEDIAN	LF				
2011	CONCRETE SAW CUTTING	LF				
2012	REMOVAL OF EXISTING CURB	LF				
DRAINAGE ITEMS						
3001	UNDER DRAINS	LF				
STRUCTURE ITEMS						
4001	PROTECTIVE SHIELDS	LS	LUMP SUM			
4002	REMOVAL OF PORTIONS OF EXISTING BRIDGE SUPERSTRUCTURE	LS	LUMP SUM			
4003	CLASS 3 EXCAVATION	CY				
4004	REMOVAL OF PORTIONS OF EXISTING BRIDGE SUBSTRUCTURE	LS	LUMP SUM			
4005	SUBSTRUCTURE CONCRETE	LS	LUMP SUM			
4006	SUPERSTRUCTURE CONCRETE	LS	LUMP SUM			
4007	CONTINGENT SUBSTRUCTURE CONCRETE	CY				
4008	CONTINGENT SUPERSTRUCTURE CONCRETE	CY				
4009	CEMENT CONCRETE SIDEWALKS FOR APPROACHES	CY				
4010	CEMENT CONCRETE MEDIAN ON BRIDGE	CY				
4011	ALUMINUM PROTECTIVE BARRIER ON BRIDGE PARAPET	LS	LUMP SUM			
4012	HAND RAILING FOR APPROACHES - REMOVAL OF EXISTING	LF				
4013	NEW HAND RAILING FOR APPROACHES	LF				
4014	EPOXY COATED REINFORCING STEEL	LS	LUMP SUM			
4015	CONTINGENT EPOXY COATED REINFORCING STEEL	LS	LUMP SUM			
4016	FABRICATED STRUCTURAL STEEL	LS	LUMP SUM			
4017	CONTINGENT STRUCTURAL STEEL	LS	LUMP SUM			
4018	STEEL STUD SHEAR CONNECTORS	EA				
4019	CONTINGENT STEEL STUD SHEAR CONNECTORS	EA				
4020	STRUCTURAL BEARINGS	LS	LUMP SUM			
4021	BRIDGE EXPANSION JOINTS	LF				
4022	CLEANING AND PAINTING EXISTING STRUCTURAL STEEL	LS	LUMP SUM			
4023	EPOXY PROTECTIVE COATING ON ABUTMENTS	SY				
4024	EPOXY PROTECTIVE COATING ON PARAPETS	LS	LUMP SUM			

ITEM NO.	DESCRIPTION	UNIT	QUANTITIES			
			ESTIMATE	CONTINGENCY	PROPOSAL	FINAL
STRUCTURE ITEMS (CONT.)						
4025	PREPARING CONCRETE SURFACE DEFECTS	CF				
4026	SEALING CRACKS IN CONCRETE	LF				
4027	CONTINGENT DRILLING AND GROUTING	LF				
4028	TEMPORARY SUPPORT & JACKING OF EXISTING STEEL SUPERSTRUCTURE	LS	LUMP SUM			
4029						
4030						
4031	POROUS BACKFILL	LS	LUMP SUM			
PAVING ITEMS						
5001	6 INCH SUBBASE USING GRADED AGGREGATE	SY				
5002	CONTINGENT CALCIUM CHLORIDE ADDITION TO SUBBASE	DN				
5003	16 INCH REINFORCED CONCRETE APPROACH SLABS (MIX NO. 6)	SY				
5004	STRIPPING OF BITUMINOUS PAVING MATERIAL - 3 INCH DEPTH	SY				
5005	BITUMINOUS CONCRETE BASE USING SANDS DBE	DN				
5006	BITUMINOUS CONCRETE/SURFACE USING SAND SN/STONE	DN				
5007	BITUMINOUS MATERIALS FOR TACK COAT	SY				
	2 INCH SUBBASE USING GRADED AGGREGATE					
	BINDER					
SHOULDER ITEMS						
6001	BC TYPE A CURB 8 IN X 20 IN.	LF				
6002	MONOLITHIC CONCRETE MEDIAN TYPE A	LF				
6003	4 INCH CONCRETE SIDEWALK	SF				
6004	MODIFIED PEDESTRIAN RAMP-TYPE 2	EA				
6005	TEMPORARY 4'-6" CHAIN LINK FENCE	LF				
6006	12 FOOT GATE FOR CHAIN LINK FENCE	EA				
ROADSIDE ITEMS						
7001	TOP SOIL FURNISHED AND PLACED 2 IN. DEPTH	CY				
7002	TEMPORARY SEEDING	LF				
7003	SEEDING & MULCHING	LF				
7004	SOLID SODDING	SY				
UTILITY ITEMS						
8001	CONTRACTOR PORTION, DIVISION OF LABOR AND MATERIALS, ELECTRIFIED GATEWAY MODIFICATIONS	LS	LUMP SUM			

QUANTITY UNIT ABBREVIATIONS
 CF = CUBIC FEET
 CY = CUBIC YARDS
 EA = EACH
 HR = HOURS
 LB = POUNDS
 LF = LINEAR FEET
 LS = LUMP SUM
 SF = SQUARE FEET
 SY = SQUARE YARDS
 UD = UNIT DAY

CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
 REHABILITATION OF THE
HILTON STREET BRIDGE
 OVER
AMTRAK & CONRAIL
SUMMARY OF QUANTITIES

SCALE _____ DATE 16
 SHEET 16

1-18-88
 12-4-87
 DRAWN BY _____
 EXAMINED BY _____

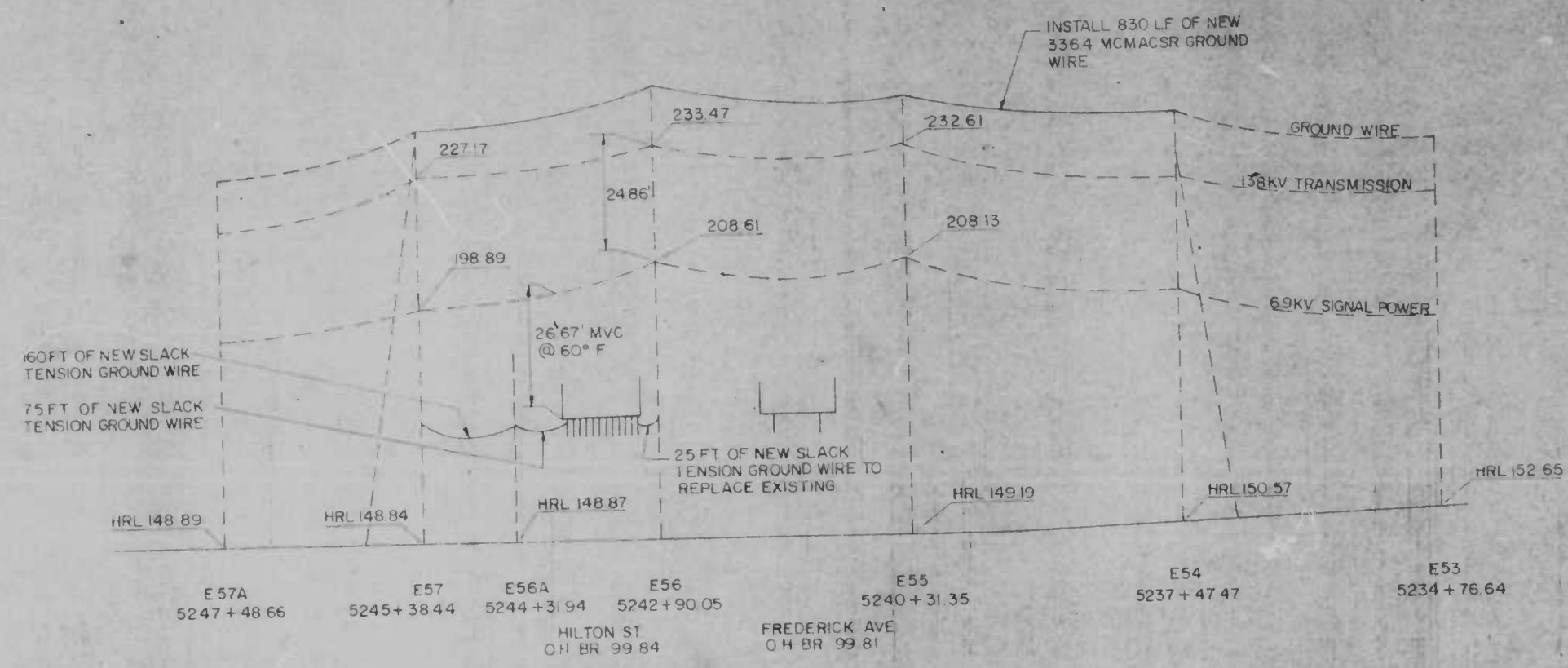
FILE REF.

FILE REF.

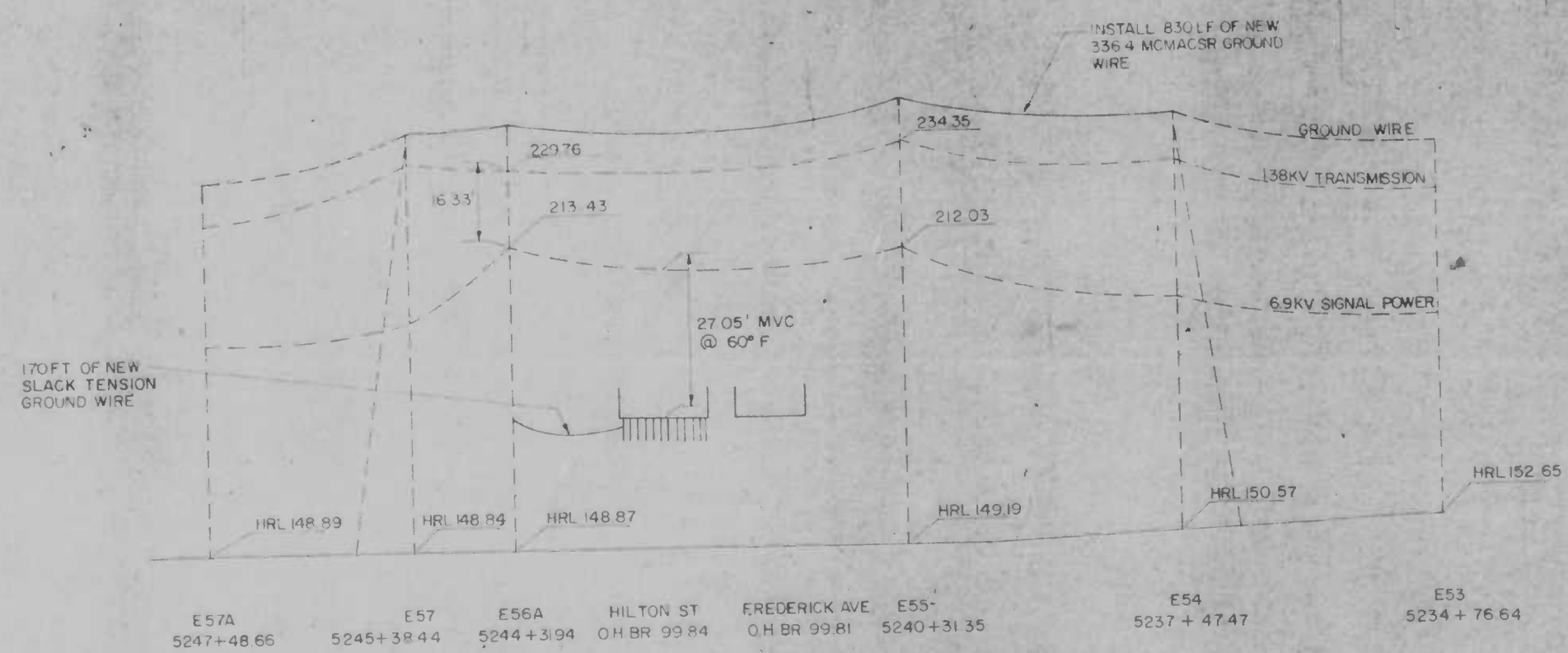
REVISIONS			
NO.	DESCRIPTION	DATE	BY

TO WASHINGTON

TO PHILADELPHIA



PROFILE
NEAR SIDE



PROFILE
FAR SIDE

PROGRESS PRINT

JAN 13 1988

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
HILTON STREET BRIDGE REPAIRS

OVERBUILD PROFILES

EMJ/ELECTRACK INC.
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

1"=100' HORIZ
SCALE 1"=20' VERT

DATE JULY 30 1987

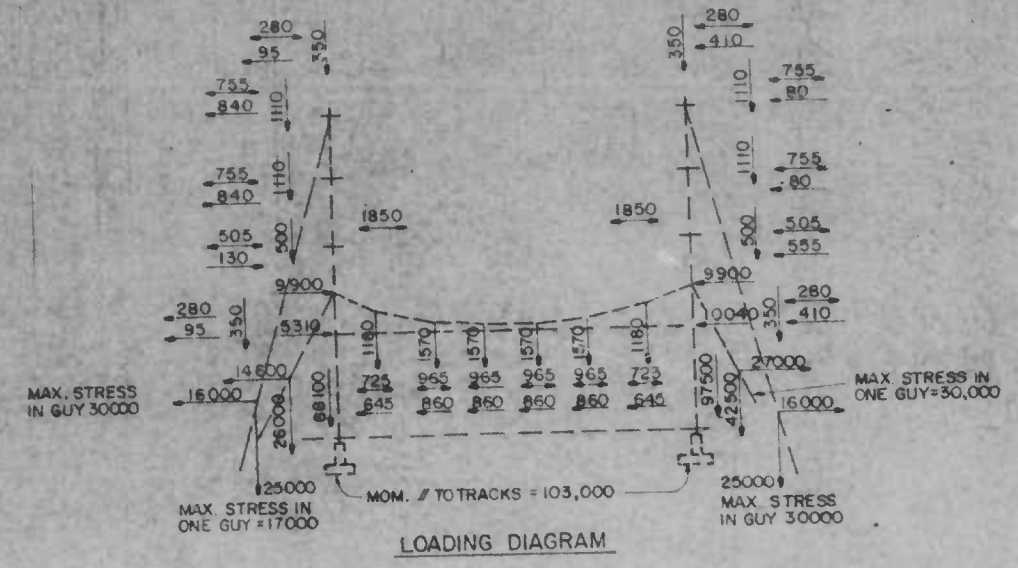
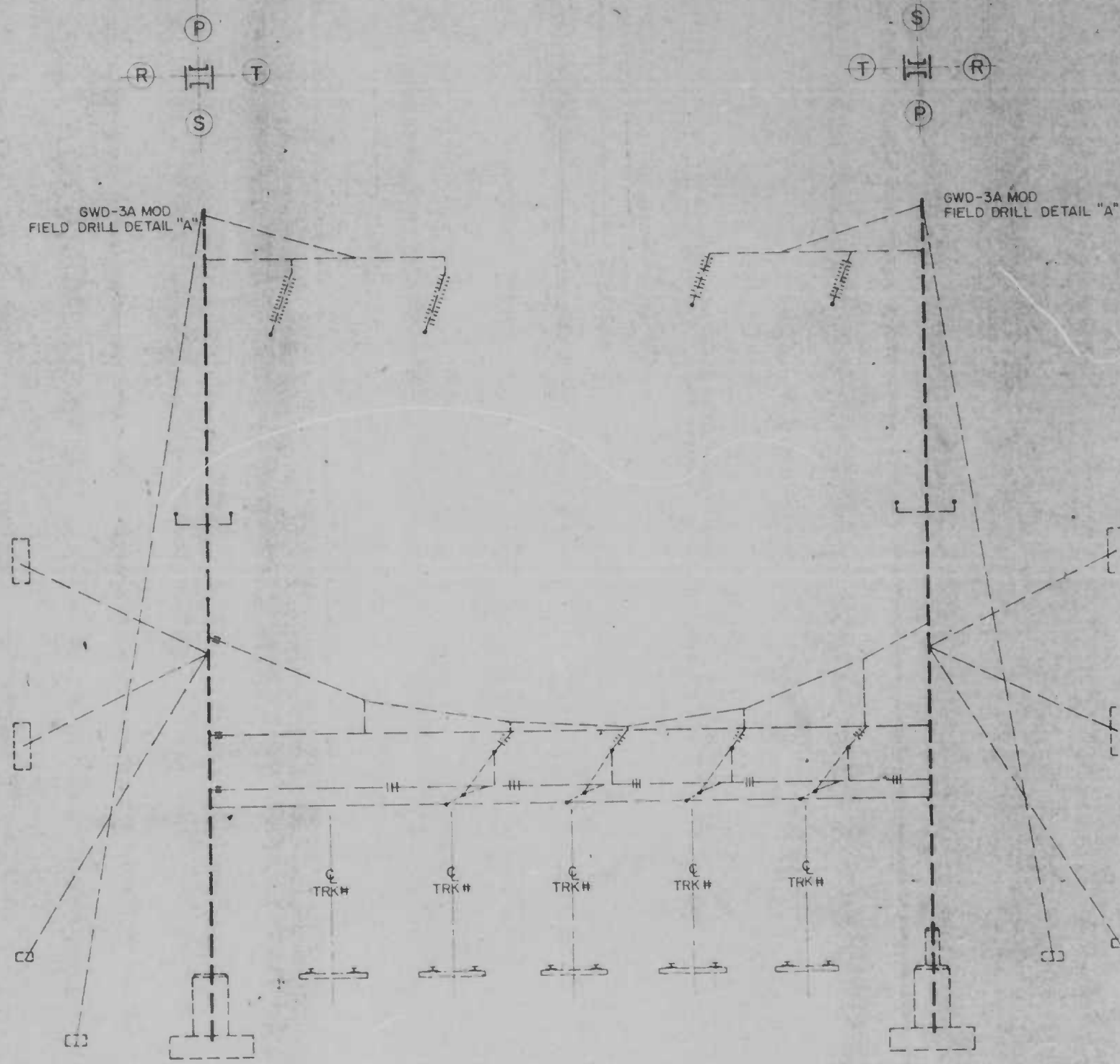
SHEET 11

FILE REF.

DRAWN BY P. WILLOUGHBY
EXAMINED BY K. B. FLEMING

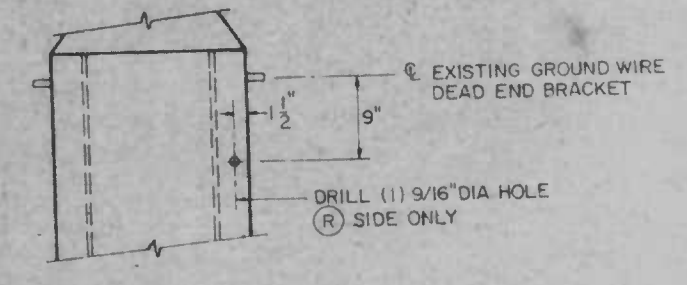
FILE REF.

REVISIONS		DATE	BY
NO.	DESCRIPTION		



BILL OF MATERIALS

ASSEMBLY NO.	DWG. NO.	DESCRIPTION	UNIT	QTY	INSTALLED BY
GWD-3A MOD		GROUND WIRE ASSEMBLY	EA	2	R



DETAIL "A"
(FIELD DRILLED)

BRIDGE NO. E-54
LOOKING TOWARD WASHINGTON

'PROGRESS PRINT'

JAN 1 1966

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

STRUCTURE ERECTION DIAGRAM
E-54

SCALE _____ DATE _____ SHEET **18**

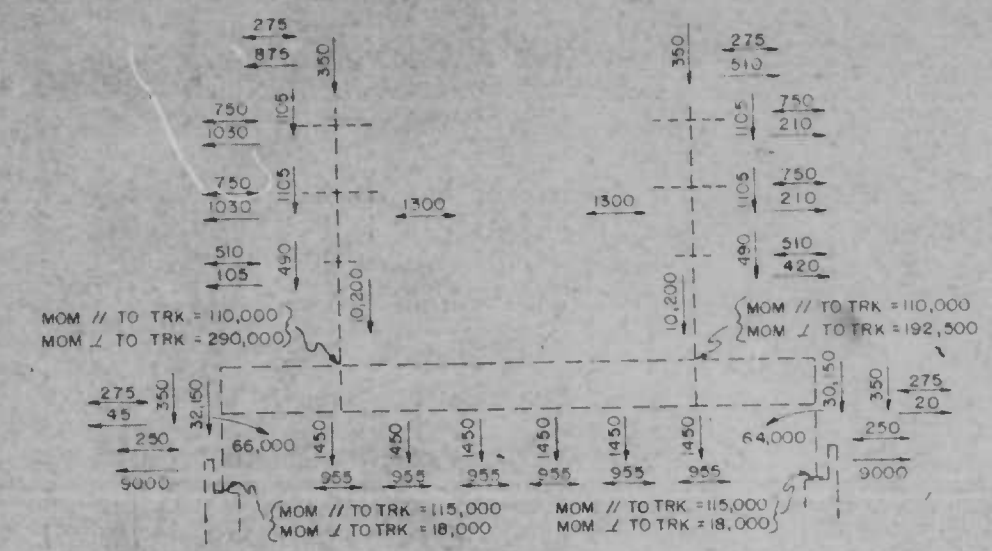
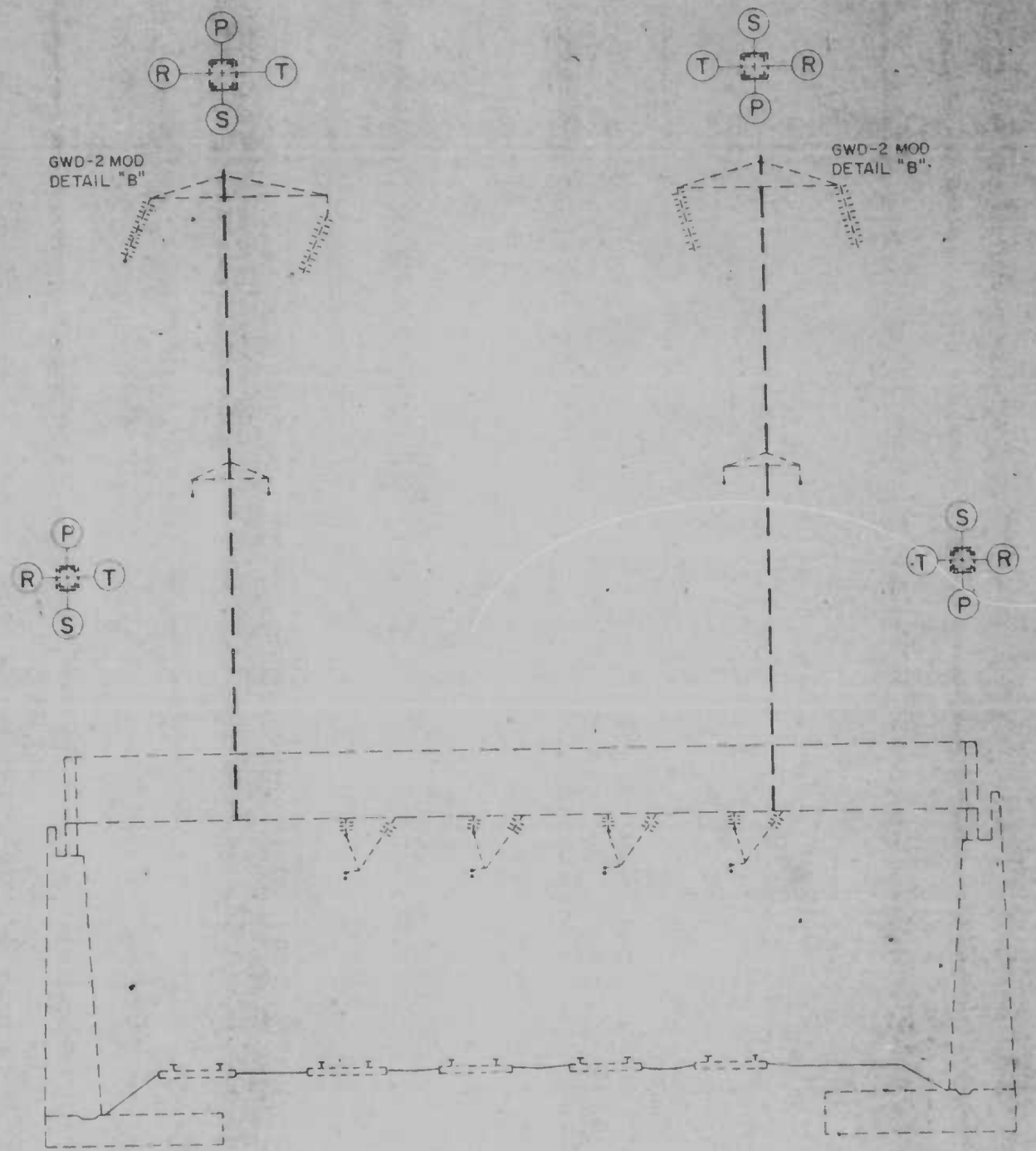
EMJ/ELECTRACK INC.
6525 BELCREST ROAD
HVATTVILLE, MARYLAND 20782

FILE REF.

DRAWN BY R Z P
EXAMINED BY

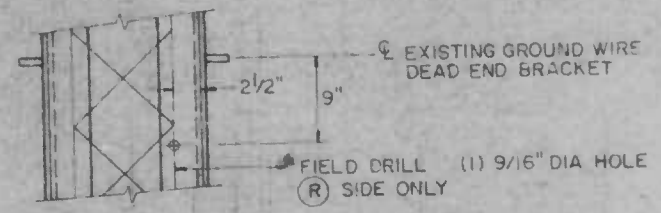
FILE REF.

REVISIONS		
NO.	DESCRIPTION	DATE BY



LOADING DIAGRAM

BRIDGE NO. E-55
LOOKING TOWARD WASHINGTON



DETAIL "B"
(FIELD DRILLED)

BILL OF MATERIALS					
ASSEMBLY NO	DWG NO	DESCRIPTION	UNIT	QTY	INSTALLED BY
GWD-2 MOD		GROUND WIRE ASSEMBLY	EA	2	R

'PROGRESS PRINT'

JAN 11 1968

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

STRUCTURE ERECTION DIAGRAM
E-55

SCALE _____ DATE _____ SHEET 19 OF _____

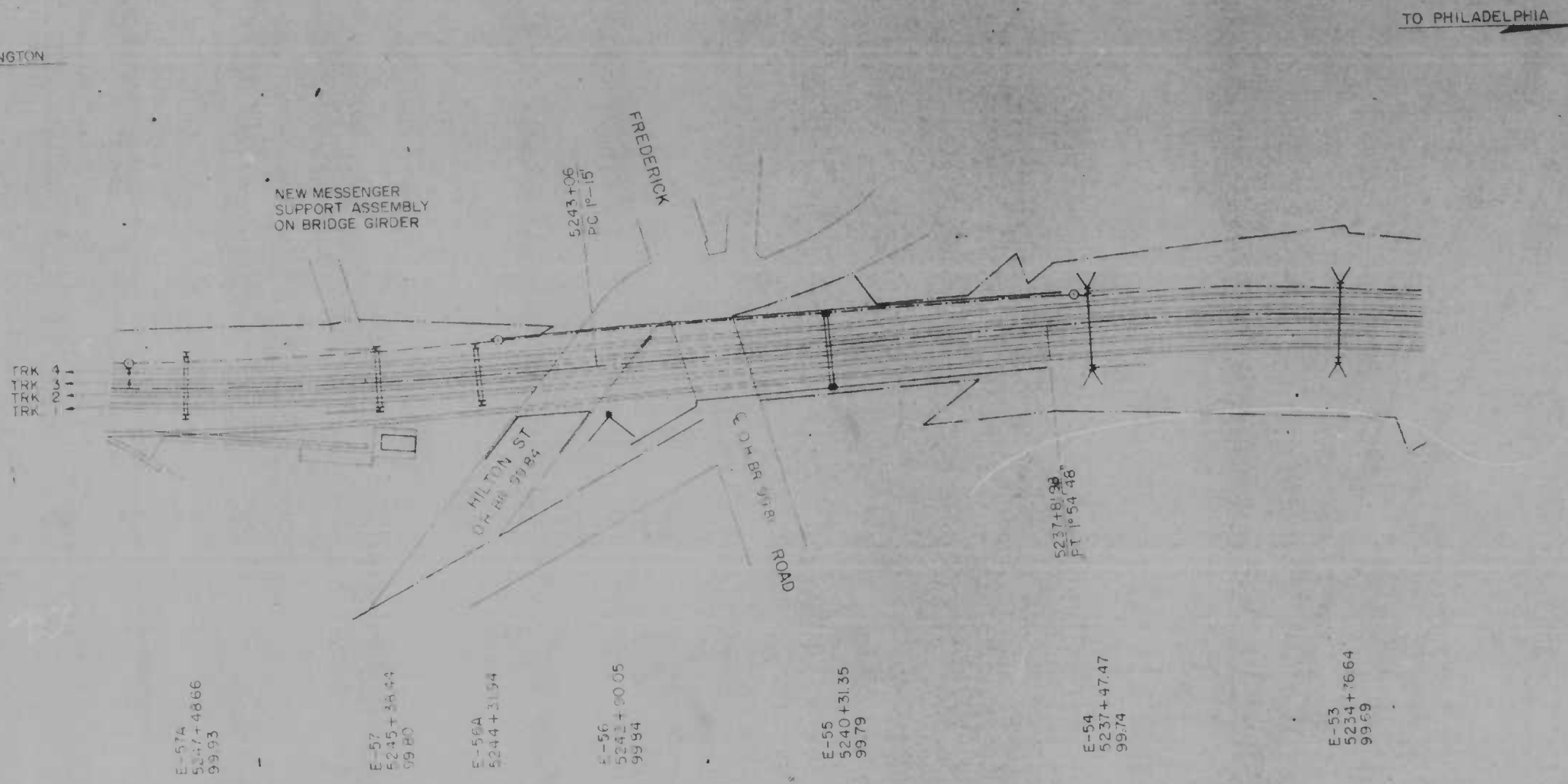
EMJ/ELECTRACK INC
6825 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

FILE REF.

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EXAMINED BY

FILE REF.

REVISIONS			
NO	DESCRIPTION	DATE	BY



LOCATION PLAN
SCALE 1"=100'

DIVISION OF WORK & MATERIAL SUPPLY					
PROJECT HILTON STREET BRIDGE OVER AMTRAK O.H. BR. 99.84					
LEGEND R - RAILROAD FORCES C - CONTRACTOR					
ITEM NO	DESCRIPTION	MATERIAL	FABRICATION	ERECTOR	LABOR
1	MODIFY EXISTING CATENARY STRUCTURES	R	R	R	R
2	INSTALL NEW BRIDGE CATENARY SUPPORTS	R	R	R	R
3	INSTALL TEMPORARY SHIELDS AND BARRIERS	C	C	C	C
4	INSTALL PERMANENT BARRIERS	C	C	C	C
5	GROUNDING AND BONDING OF TEMPORARY SHIELDS & BARRIERS	R	R	R	R
6	GROUNDING AND BONDING OF PERMANENT BARRIERS	R	R	R	R
7	INSTALL SLACK TENSION GROUND WIRE	R	R	R	R
8	PAINT MODIFIED STRUCTURES	R	R	R	R
9	INSTALL INSERTS IN CONCRETE FOR BONDING AND GROUNDING	C	C	C	C
10	RELOCATE OHGW (TEMPORARY)	R	R	R	R
11	REPLACE OHGW WITH 336.4 MCM ACSR	R	R	R	R
12	REPROFILE CATENARY (PERMANENT)	R	R	R	R

TITLE	SHEET NO.
LOCATION PLAN, INDEX AND DIVISION OF WORK	1
GENERAL NOTES, CONSTRUCTION SEQUENCE AND ABBREVIATIONS	2
OVERBUILD PROFILES	3
STRUCTURE ERECTION DIAGRAM E54	4
STRUCTURE ERECTION DIAGRAM E55	5
STRUCTURE ERECTION DIAGRAM E56	6
STRUCTURE ERECTION DIAGRAM O.H. BR. 99.84	7
STRUCTURE ERECTION DIAGRAM E56A	8
STRUCTURE ERECTION DIAGRAM E57	9
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BRIDGE GROUNDING AND BONDING PLAN	12
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REVISE INDEX ACCORDING TO SHEET DESCRIPTION (LOCATION PLAN, ETC)

SUGGESTED CONSTRUCTION SEQUENCE

1. MODIFY CATENARY STRUCTURES.
2. REPLACE OVERHEAD GROUND WIRE.
3. PAINT MODIFIED STRUCTURES.
4. INSTALL TEMPORARY PROTECTION SHIELDS AND BARRIERS.
5. BOND AND GROUND TEMPORARY SHIELDS AND BARRIERS.
6. REHABILITATE BRIDGE.
7. INSTALL NEW MESSANGER SUPPORT GRACKET ON GIRDER NO. 12 ABOVE TRACK NO. 4.
8. BOND AND GROUND REHABILITATED BRIDGE.
9. REMOVE TEMPORARY SHIELDS AND BARRIERS.
10. INSTALL NEW SLACK TENSION GROUND WIRES.
11. REPLACE MESSANGER SUPPORT INSULATORS.
12. REPROFILE CATENARY.

FREDERICK COUNTY

JAN 15 1988

TYPICAL - ALL SHEETS

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS - TRANSPORTATION
BUREAU OF HIGHWAY
HIGHWAY AND BRIDGE ENGINEERING
HILTON STREET BRIDGE REPAIRS

EMJ/ELECTRACK INC
6525 BELCROFT ROAD
HIAWATTSVILLE, MARYLAND 20822
CONTRACT ENGINEERS

SCALE 1"=100' DATE [] SHEET 2 OF 2

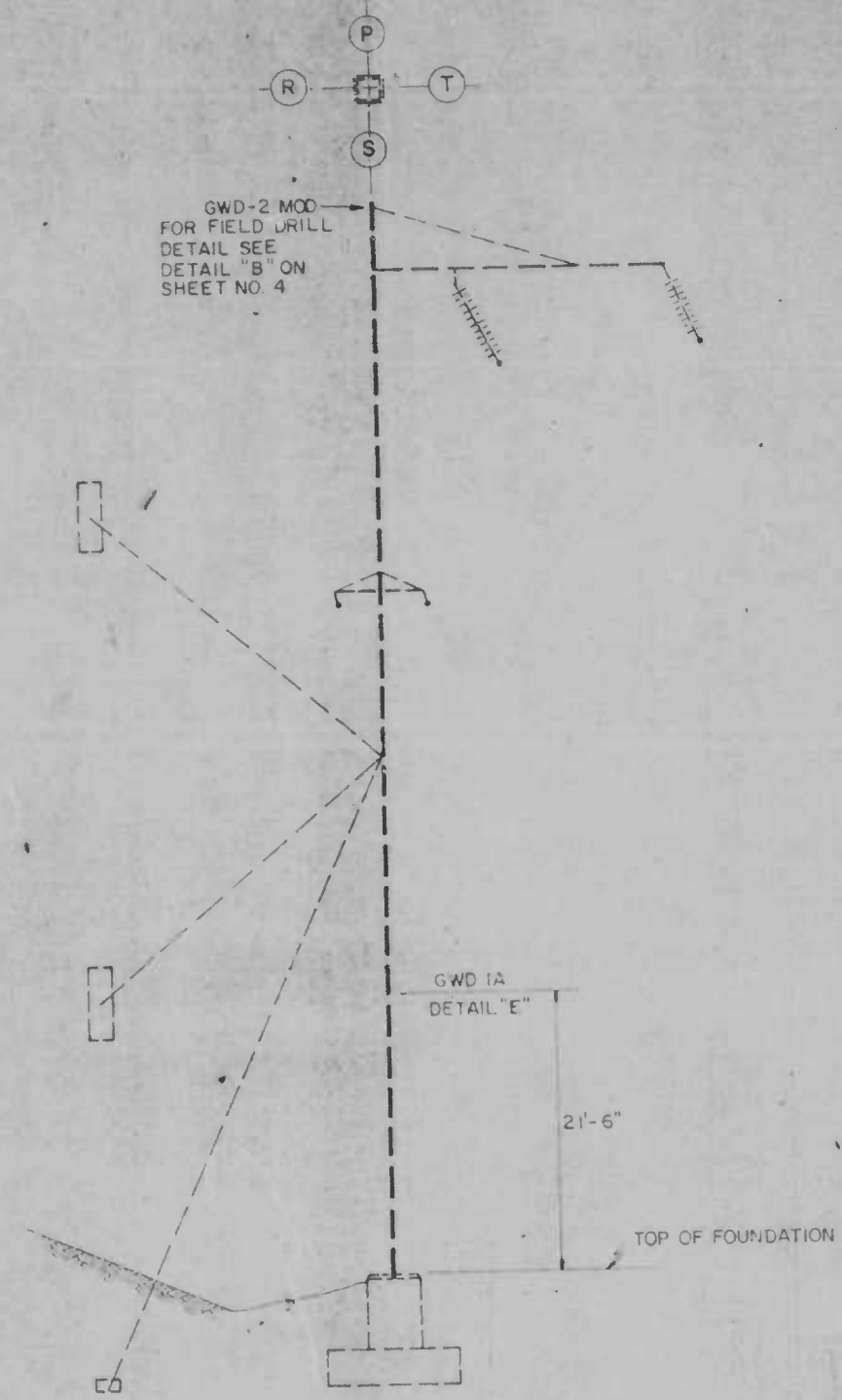
BRIDGE ENGR. CERT. NO. 3205

DRAWN BY H. D. HAM
EXAMINED BY W. R. FLEMING

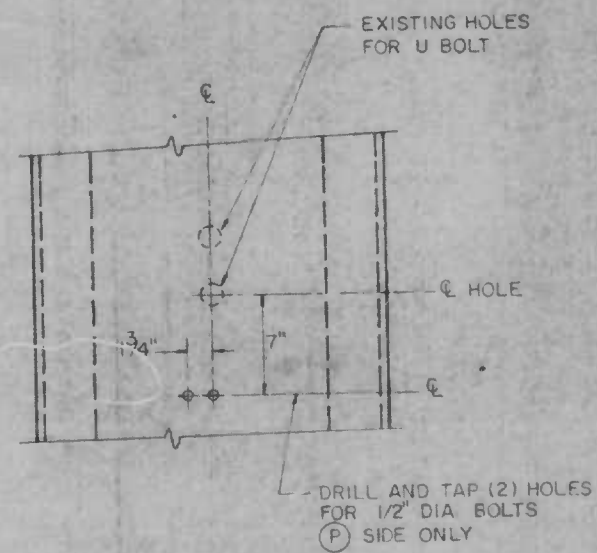
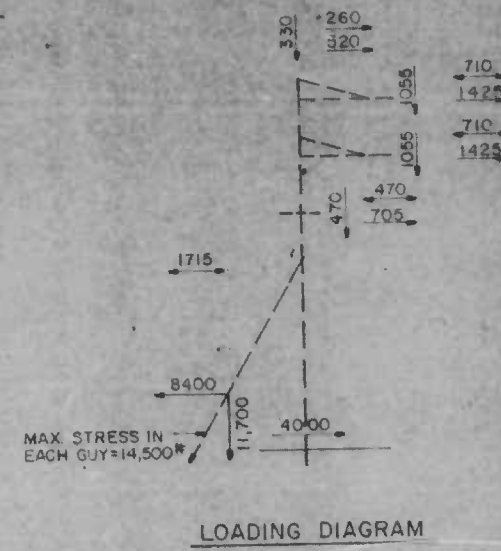
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



BRIDGE NO. E-56
LOOKING TOWARD WASHINGTON



DETAIL "E"
(FIELD DRILLED)

BILL OF MATERIALS					
ASSEMBLY NO.	DWG NO.	DESCRIPTION	UNIT	QTY.	INSTALLED BY
GWD-2 MOD		GROUND WIRE ASSEMBLY	EA	1	
GWD-1A		GROUND WIRE ASSEMBLY	EA	1	

'PROGRESS PRINT'

JAN 1, 1969

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
HILTON STREET BRIDGE REPAIRS
ERECTION DIAGRAM
OF CATENARY BRIDGE
NO. E-56

EMJ/ELECTRACK INC
6825 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

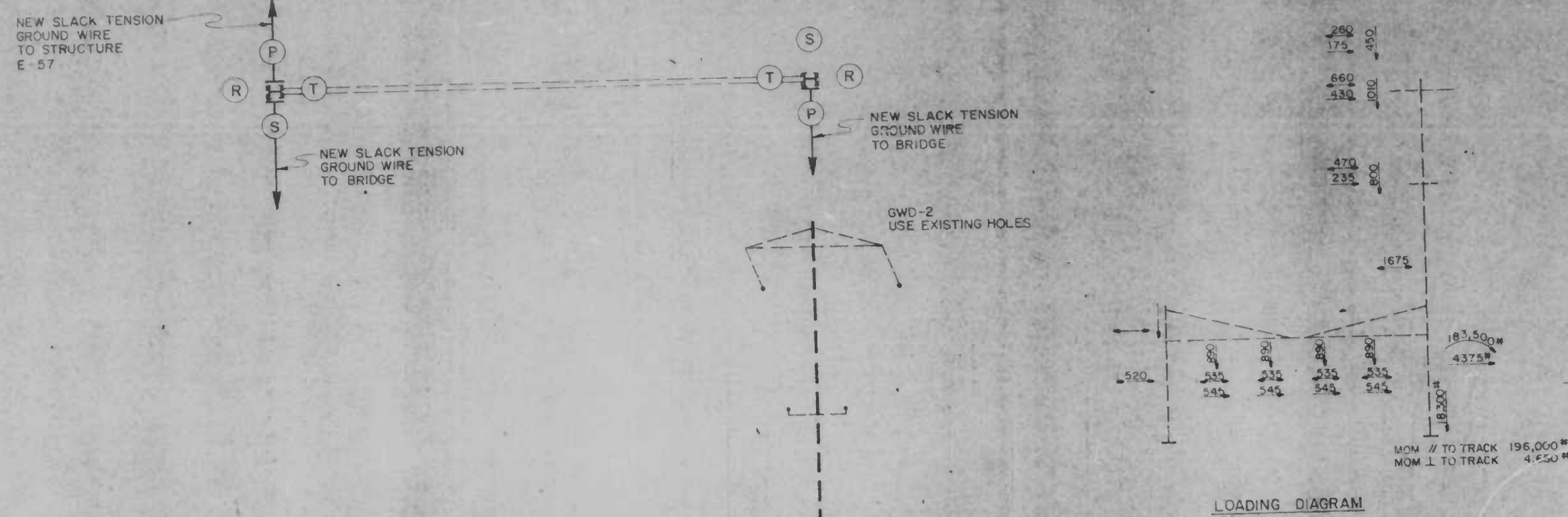
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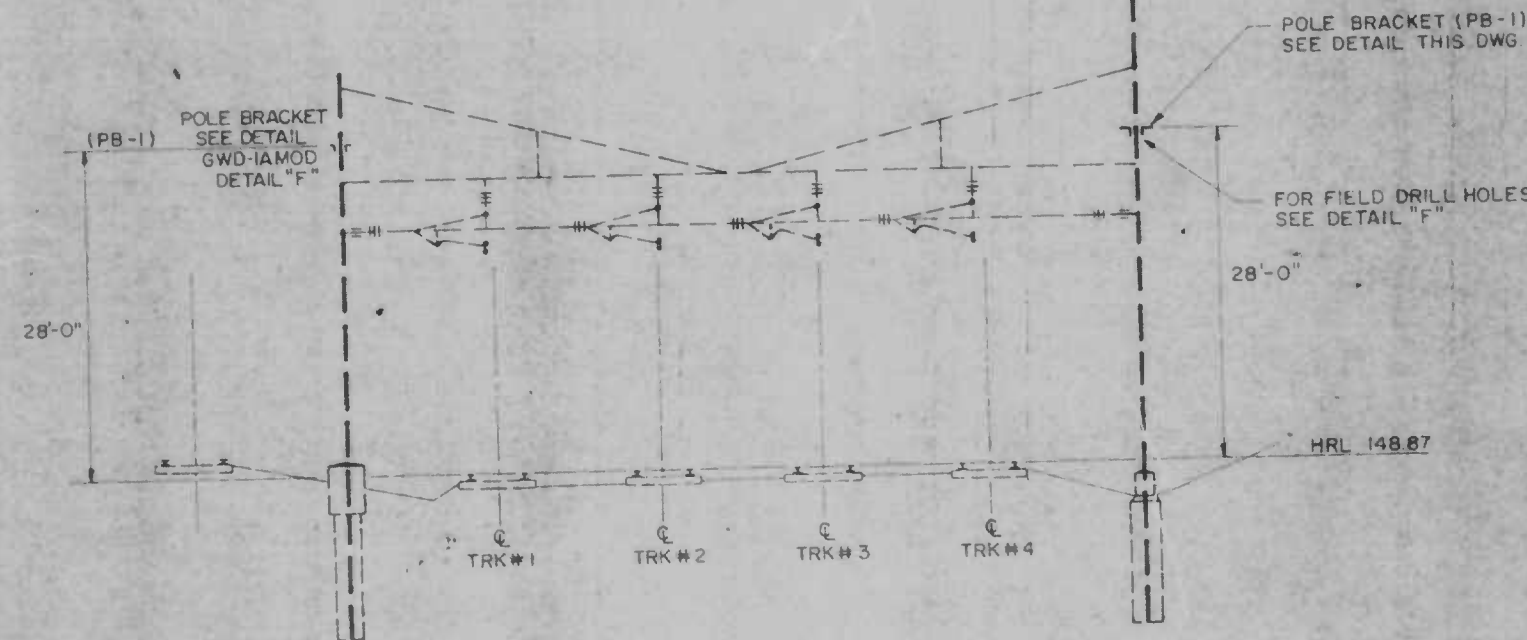
DRAWN BY: R.Z.F.
EXAMINED BY: _____

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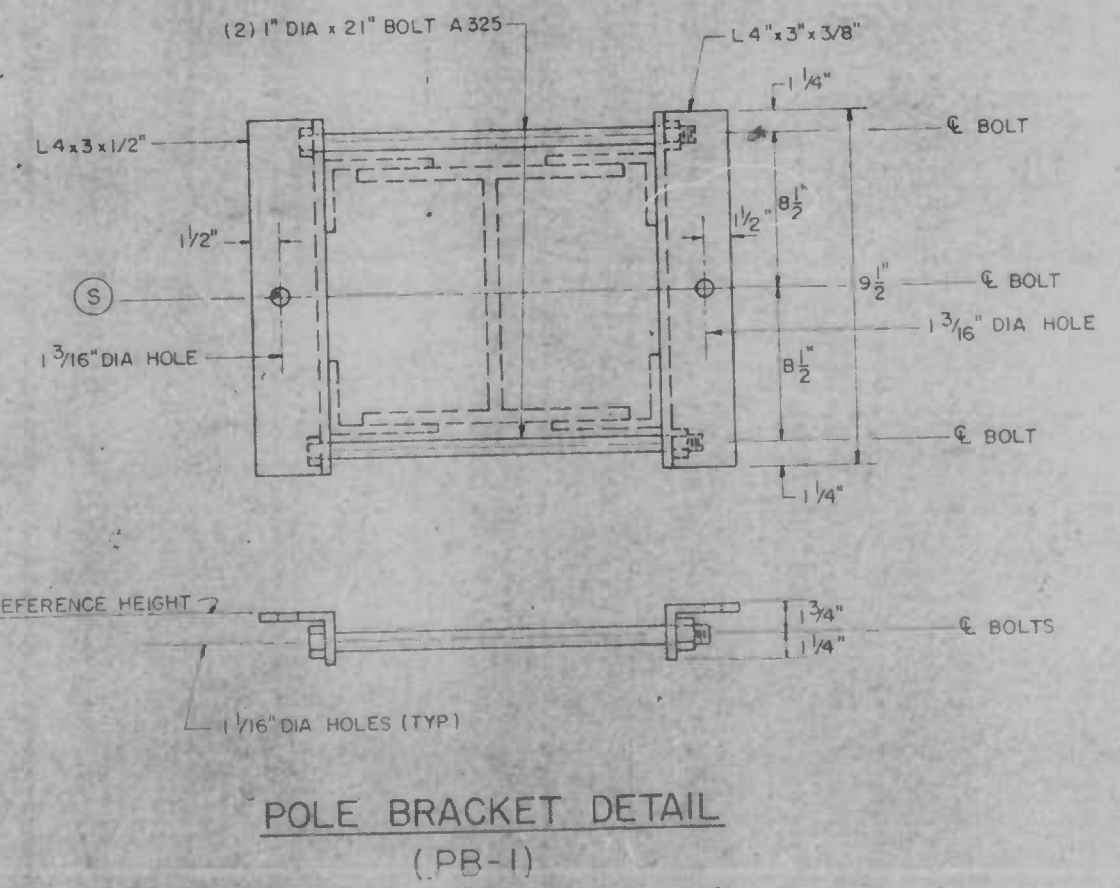
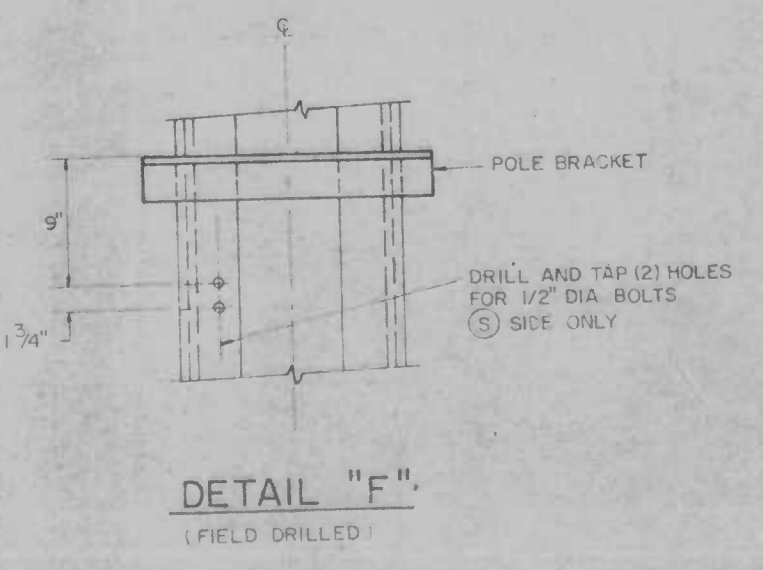
REVISIONS		
NO.	DESCRIPTION	DATE BY



BILL OF MATERIALS					
ASSY. NO.	DRAWING NO.	DESCRIPTION	UNIT	QTY.	INSTALLED BY
GWD-2		GROUND WIRE ASSY	EA	1	R
GWD-1A MOD		GROUND WIRE ASSY	EA	1	R
PB-1		POLE BRACKET	EA	2	R



BRIDGE NO. E-56A
LOOKING TOWARD WASHINGTON



'PROGRESS PRINT'

JAN 15 1972

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

ERECTION DIAGRAM
OF CATENARY BRIDGE
NO E-56A

SCALE _____ DATE _____ SHEET **21**

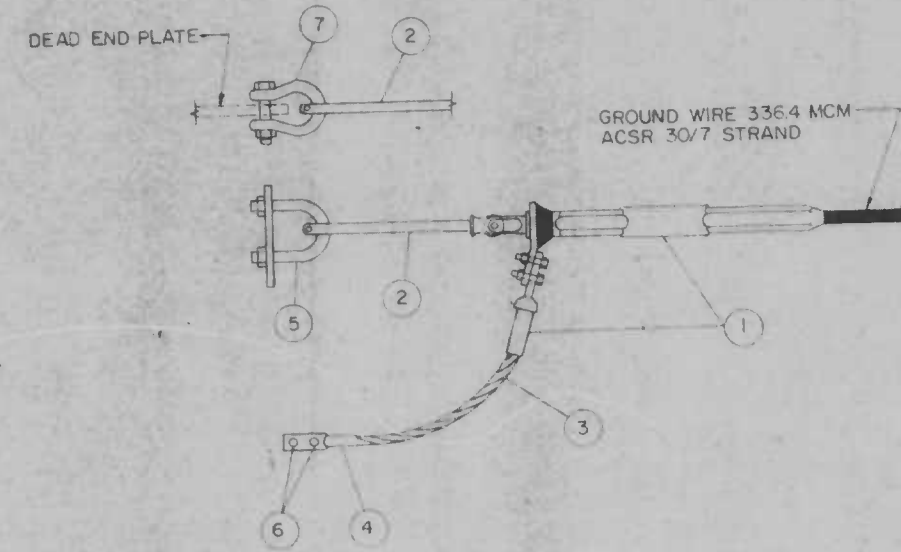
EMJ/ELECTRACK INC.
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

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EXAMINED BY

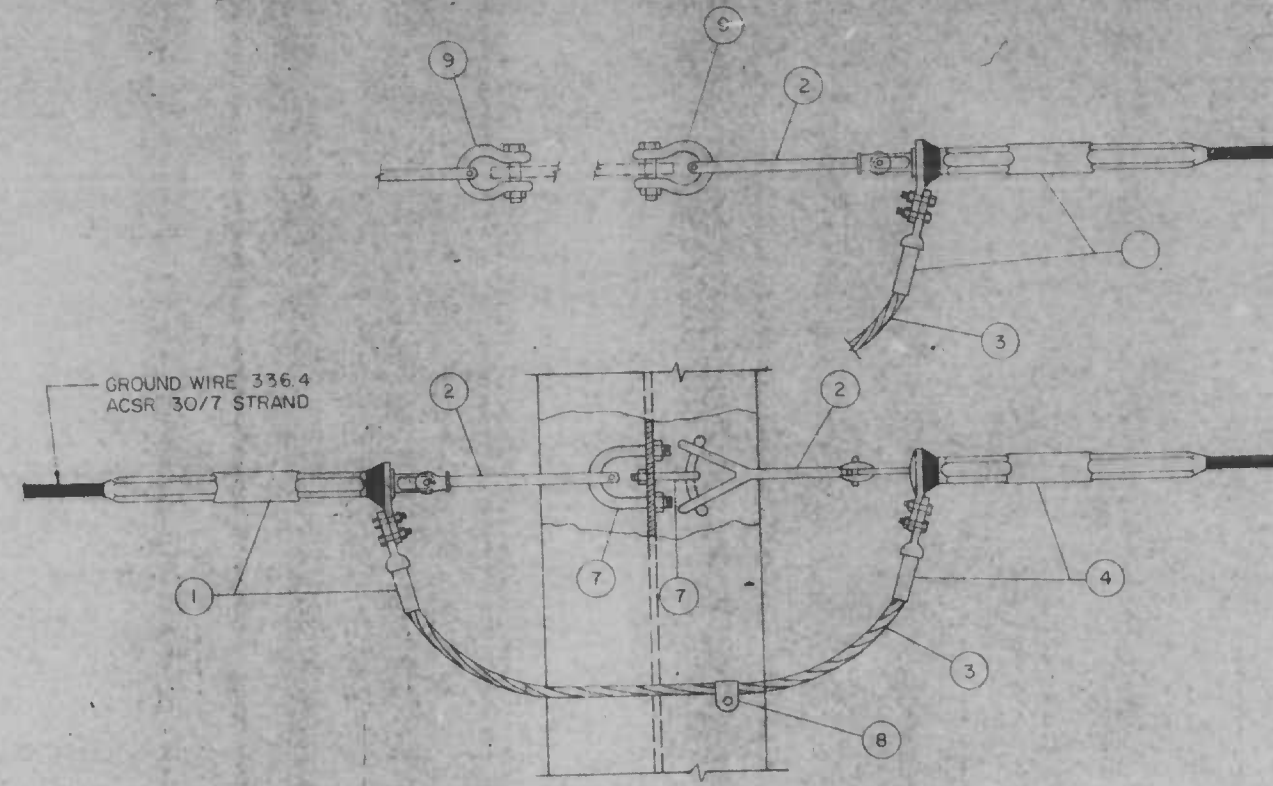
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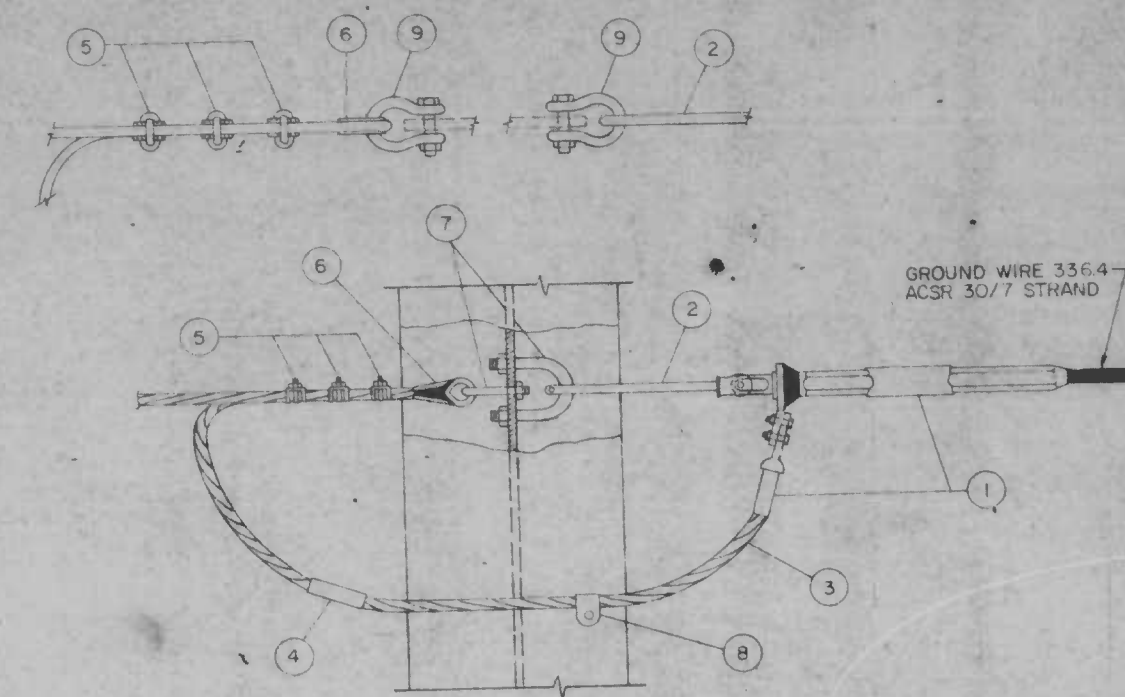
REVISIONS		
NO.	DESCRIPTION	DATE BY



GROUND WIRE ASSEMBLY GWD-1A & GWD-1A MOD



GROUND WIRE ASSEMBLY GWD-2 & GWD-2 MOD



GROUND WIRE ASSEMBLY GWD-3A & GWD-3A MOD

ASSEMBLY NO. GWD-1A AND GWD-1A MOD						
ITEM	MARK NO	AMTRAK DWG. NO	AMMS NO	DESCRIPTION	QUANTITY ASSY GWD-1A	QUANTITY ASSY GWD-1A MOD
1				COMPRESSION CLAMP, COMPLETE ALCOA # VES 096	1	
2				Y-CLEVIS - CLEVIS, 10 7/8" LG COMPLETE WITH BOLT, NUT & COTTER LAPP # 3063B2 HN	1	
3				336.4 MCM ACSR 30/7 STRAND WIRE	2FT	2FT
4				TERMINAL FOR 336.4 MCM ACSR CONDUCTOR TO FLAT, BURNDY CORP CAT NO YCA 321R-2N	1	1
5	UB-34	ET145E	4456207104	BOLT "U" STEEL GALVANIZED SPEC P-119, 1 1/4" x 4" x 5 7/8"	1	
6				BOLT HEX HEAD, 1/2" DIA x 1 1/2" LG THREADED, STAINLESS STEEL WITH LOCK WASHER, BURNDY CORP	2	2
7				ANCHOR SHACKLE, COMPLETE WITH BOLT NUT AND COTTER KEY, OHIO BRASS CAT NO 94669-3001	1	

ASSEMBLY NO. GWD-2 AND GWD-2 MOD						
ITEM	MARK NO	AMTRAK DWG. NO	AMMS NO	DESCRIPTION	QUANTITY ASSY GWD-2	QUANTITY ASSY GWD-2 MOD
1				COMPRESSION CLAMP, COMPLETE ALCOA # VES 096	1	2
2				Y-CLEVIS - CLEVIS, 10 7/8" LG COMPLETE WITH BOLT, NUT & COTTER LAPP # 3063B2 HN	2	2
3				336.4 MCM ACSR 30/7 STRAND WIRE	4FT	6FT
4				COMPRESSION CLAMP, COMPLETE ALCOA # VES 096	1	
7	UB-34	ET145E	4456207104	BOLT "U" STEEL GALVANIZED SPEC P-119, 1 1/4" x 4" x 5 7/8"	2	
8				CONNECTOR, GROUND, COPPER ALLOY, TIN PLATED FOR CABLE TO FLAT BAR GBM 34W W/ 1/2" O x 3 1/2" LG BOLT ANCHOR SHACKLE, COMPLETE WITH BOLT, NUT AND COTTER KEY, OHIO BRASS CAT NO 94669-3001	1	1
9						2

ASSEMBLY NO. GWD-3A AND GWD-3A MOD						
ITEM	MARK NO	AMTRAK DWG. NO	AMMS NO	DESCRIPTION	QUANTITY ASSY GWD-3A	QUANTITY ASSY GWD-3A MOD
1				COMPRESSION CLAMP, COMPLETE ALCOA # VES 096	1	1
2				Y-CLEVIS - CLEVIS, 10 7/8" LG COMPLETE WITH BOLT, NUT & COTTER LAPP # 3063B2 HN	1	1
3				336.4 MCM ACSR 30/7 STRAND WIRE	5FT	5FT
4				JUMPER SLEEVE REDUCER FOR 4/O TO 336.4 BURNDY YCR 341 RG 4	1	1
5		ET556E	4404509709	CLAMP, CABLE COMPLETE 9/16" SIZE	3	3
6	TH-1	1181241	4456233302	THIMBLE, BRONZE SPEC P-117	1	1
7	UB-34	ET145E	4456207104	BOLT "U" STEEL GALVANIZED, SPEC P-119, 1 1/4" x 4" x 5 7/8"	2	
8				CONNECTOR, GROUND, COPPER ALLOY, TIN PLATED FOR CABLE TO FLAT BAR GBM 34W W/ 1/2" O x 3 1/2" LG BOLT ANCHOR SHACKLE, COMPLETE WITH BOLT, NUT AND COTTER KEY, OHIO BRASS CAT NO 94669-3001	1	1
9						2

'PROCESS PRINT'

JAN 1 1988

DRAWN BY: R. Z. PHAM
EXAMINED BY:

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

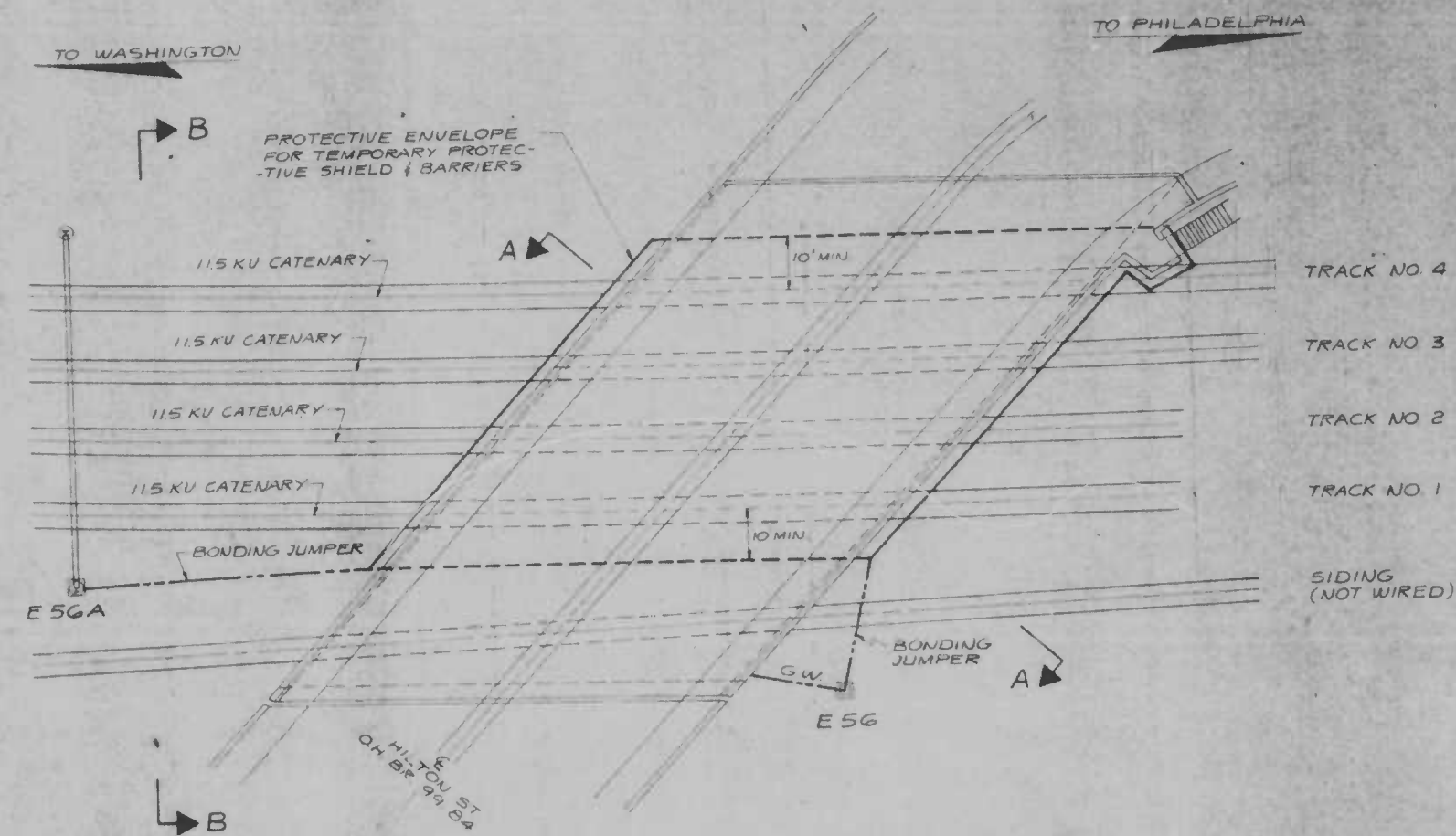
HILTON STREET BRIDGE REPAIRS
GROUND WIRE ASSEMBLIES

SCALE: _____ DATE: **23**

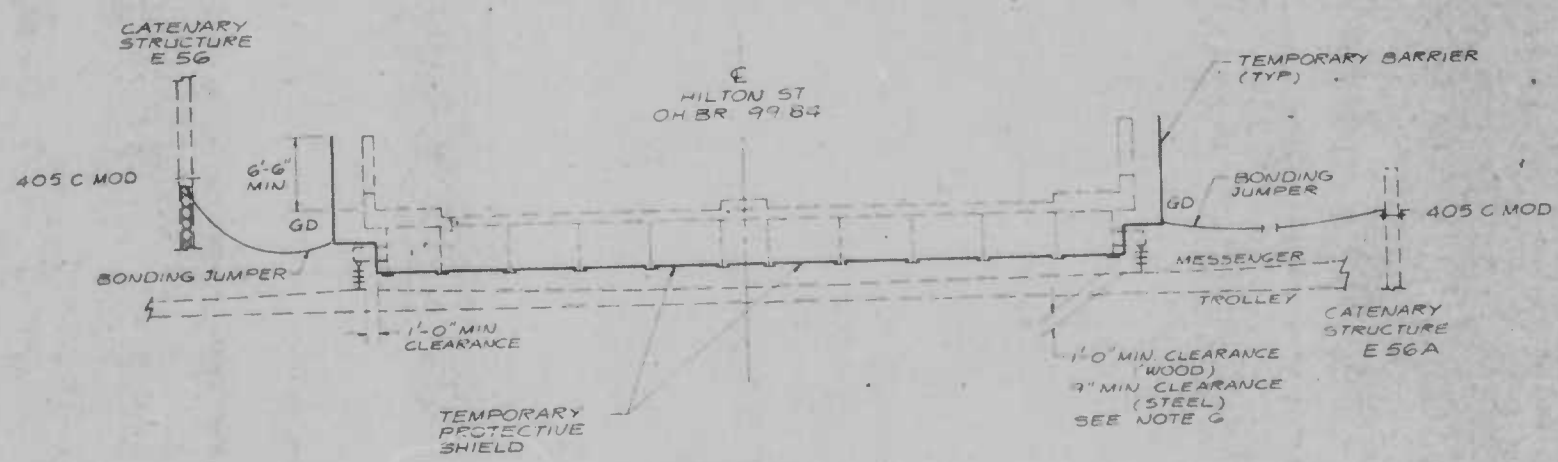
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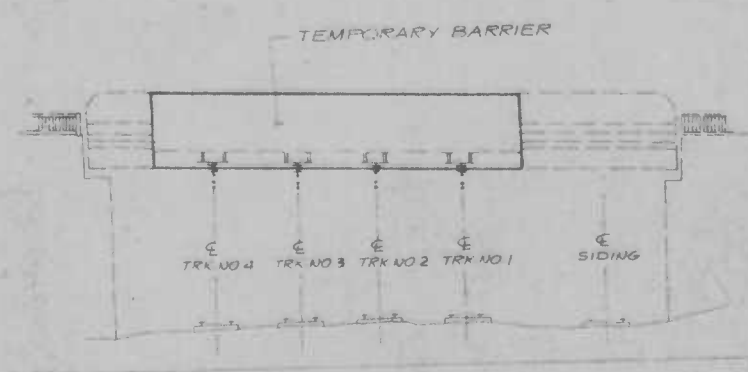
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NO	DESCRIPTION	DATE	BY



PLAN
SCALE 1" = 20'



SECTION A-A
SCALE 1" = 10'



SECTION B-B
SCALE 1" = 20'

NOTES

- TEMPORARY PROTECTION SHIELDS SHALL BE USED DURING DEMOLITION OF EXISTING BRIDGES OR ERECTION OF NEW BRIDGES IN ORDER THAT WORK ON THE BRIDGE STRUCTURE CAN PROCEED OVER THE ELECTRIFICATION FACILITIES WITHOUT REQUIRING DEENERGIZATION OF THE WIRES. ELECTRIFICATION FACILITIES SHALL BE DEENERGIZED DURING THE TIME THE STRUCTURE FRAME AND OTHERWISE NEAR WIRES. THE ABOVE WORK SHALL BE DONE UNDER THE DIRECTION OF A QUALIFIED RAILROAD EMPLOYEE. IN CASES WHERE THERE IS INSUFFICIENT ELECTRICAL CLEARANCE BETWEEN THE WIRES AND THE BRIDGE STRUCTURE FOR ERECTION OF A SHIELD, ALL WORK OVER THE WIRES SHALL BE PERFORMED WITH THE WIRES DEENERGIZED AND UNDER THE PROTECTION OF A QUALIFIED RAILROAD EMPLOYEE. IN CASES WHERE PRESTRESSED BEAMS ARE USED OR WHERE METALLIC FORMS BECOME A PART OF THE PERMANENT BRIDGE STRUCTURE, IT MAY BE THAT ERECTION CAN BE ACCOMPLISHED WITHOUT A SHIELD. IN WHICH CASES ALL WORK OVER THE WIRES DURING THE ERECTION SHALL BE DONE WITH WIRES DEENERGIZED AND UNDER THE PROTECTION OF A QUALIFIED RAILROAD EMPLOYEE. THE TEMPORARY BARRIER SHALL BE INSTALLED WHETHER OR NOT A TEMPORARY SHIELD IS USED.
- DETAILS OF ANY PROPOSED SHIELD AND BARRIER SHALL BE SUBMITTED TO THE RAILROAD FOR APPROVAL, AND WORK ON ANY SHIELD OR BARRIER SHALL NOT BE STARTED BEFORE SUCH APPROVAL IS OBTAINED.
- THE TEMPORARY PROTECTION SHIELD SHALL BE OF SOLID CONSTRUCTION (TONGUE AND GROOVE OR EQUAL) AND SHALL BE PROVIDED WITH A SOLID PROTECTION BARRIER HAVING A MINIMUM HEIGHT OF 6'-6" ABOVE THE SURFACE OF THE SIDEWALK OR CURB OF THE BRIDGE TO PROTECT WORKMEN AGAINST CONTACT WITH THE ENERGIZED WIRES PASSING UNDER THE BRIDGE AND TO PREVENT DAMAGE TO THE WIRES.
- TEMPORARY PROTECTION SHIELD AND BARRIER SHALL EXTEND NO LESS THAN 10 FEET BEYOND OUTER RAILROAD WIRE PASSING UNDER THE BRIDGE MEASURED IN HORIZONTAL PLANE EXTENDED TO THE WIRE AND SHALL PREVENT MATERIALS, DEBRIS, ETC., FROM FALLING ON OR CONTACTING THE WIRES.
- THE PROTECTION SHIELD AND BARRIERS SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 100 POUNDS PER SQUARE FOOT AND A WIND LOAD OF 30 POUNDS SQUARE FOOT IF THE SHIELD IS TO SERVE AS A FORM OR IS TO CARRY ANY PART OF THE OVERHEAD STRUCTURE DURING ERECTION. IF THE SHIELD IS TO BE USED FOR THE PROTECTION DURING DEMOLITION OF AN OVERHEAD STRUCTURE, IT SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 100 POUNDS PER SQUARE FOOT, OR A CONCENTRATED LIVE LOAD AT ANY POINT OF NOT LESS THAN 2,000 POUNDS.

- TEMPORARY PROTECTION SHIELDS OF TIMBER CONSTRUCTION SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12 INCHES TO RAILROAD WIRES AND 9 INCHES MINIMUM VERTICAL CLEARANCE FOR STEEL CONSTRUCTION.
- WHERE STRINGERS TRANSVERSE TO THE BRIDGE ARE USED, THE MINIMUM HORIZONTAL CLEARANCE BETWEEN STRINGERS AND RAILROAD WIRES SHALL BE 4 FEET.
- TEMPORARY PROTECTION BARRIERS SHALL REMAIN IN PLACE AT LEAST UNTIL PERMANENT PROTECTION BARRIERS AND GROUNDING ARE COMPLETED.
- WHERE REQUIRED BY LOCAL CONDITIONS, THE ELECTRICAL CLEARANCES SHOWN ON THIS SHEET WILL BE INCREASED BY AMTRAK.
- ANY MODIFICATION OF THE ELECTRICAL REQUIREMENTS SHOWN ON THIS DRAWING SHALL BE SUBMITTED TO AMTRAK FOR APPROVAL.
- THE TEMPORARY PROTECTION BARRIER SHALL BE PROVIDED WITH 4/0 AWG BARE COPPER GROUND CABLE CONNECTED TO THE RAILROAD GROUNDING SYSTEM. THE GROUNDING METHOD SHALL BE APPROVED BY THE RAILROAD. THE RAILROAD SHALL INSTALL AND GROUNDING MATERIALS.
- THE TEMPORARY PROTECTION BARRIER AND SHIELDS SHOWN ARE PROVIDED ONLY AS A POSSIBLE APPROACH. ACTUAL DIMENSIONS, SIZE, PLACEMENT OF TIMBER AND BOLTS CAN ONLY BE ESTABLISHED AFTER EVALUATION OF FIELD CONDITIONS, CONSTRUCTION TECHNIQUES AND ANTICIPATED LOADS. ANY BARRIER DESIGN MUST COMPLY WITH THE CLEARANCE REQUIREMENTS SHOWN HERE. THE CONTRACTOR SHALL SUBMIT THE PROPOSED BARRIER DESIGN TO AMTRAK FOR APPROVAL. THE DESIGN SHALL INCORPORATE RAILROAD PROTECTION STANDARDS FOR HIGHWAY/BRIDGE CONSTRUCTION, DEMOLITION REQUIREMENTS AND PRACTICES. CONSULT THE PROJECT SPECIFICATIONS FOR FURTHER INFORMATION REGARDING ACCEPTABLE CONSTRUCTION PROCEDURES DURING DEMOLITION AND CONSTRUCTION OF RAILROAD AND HIGHWAY FACILITIES. THE BARRIER SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
- CONTRACTOR SHALL PROVIDE SUITABLE FENCING AND BARRIERS TO PROHIBIT PEDESTRIAN ACCESS DURING CONSTRUCTION OF TEMPORARY PROTECTION SHIELD AND BARRIERS.
- THE TEMPORARY SHIELD SHALL BE COVERED WITH ROOFING PAPER TO PREVENT MATERIALS OR DEBRIS FROM FALLING BETWEEN GAPS TO RAILROAD WIRES.
- CONTRACTOR SHALL PREVENT ANY STEADY FLOW OF WATER FROM CONTACTING RAILROAD WIRES, DURING CURING OF CONCRETE OR ANY OTHER TIME.
- EXISTING GROUND CONNECTIONS FROM BRIDGE STEEL TO THE GROUND WIRE SHALL REMAIN.
- EXISTING GROUNDING CONNECTIONS TO ELECTRICAL CONDUIT AND WATER UTILITY PIPE SHALL REMAIN.

BILL OF MATERIALS					
ASSY NO	DWG NO	DESCRIPTION	UNIT	QTY	INST BY
GD		TEMPORARY SHIELD AND BARRIER	EA	2	R
		BONDING AND GROUNDING ASSY			
		CONDUCTOR, 4/0 AWG, 7 STRAND	LF	430	R
		COPPER			
405C MOD		GROUND WIRE ASSEMBLY	EA	2	R

JAN 15 1983

'PROGRESS PRINT'

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS
TEMPORARY PROTECTION SHIELD
AND BARRIER REQUIREMENTS

EMJ/ELECTRACK INC
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

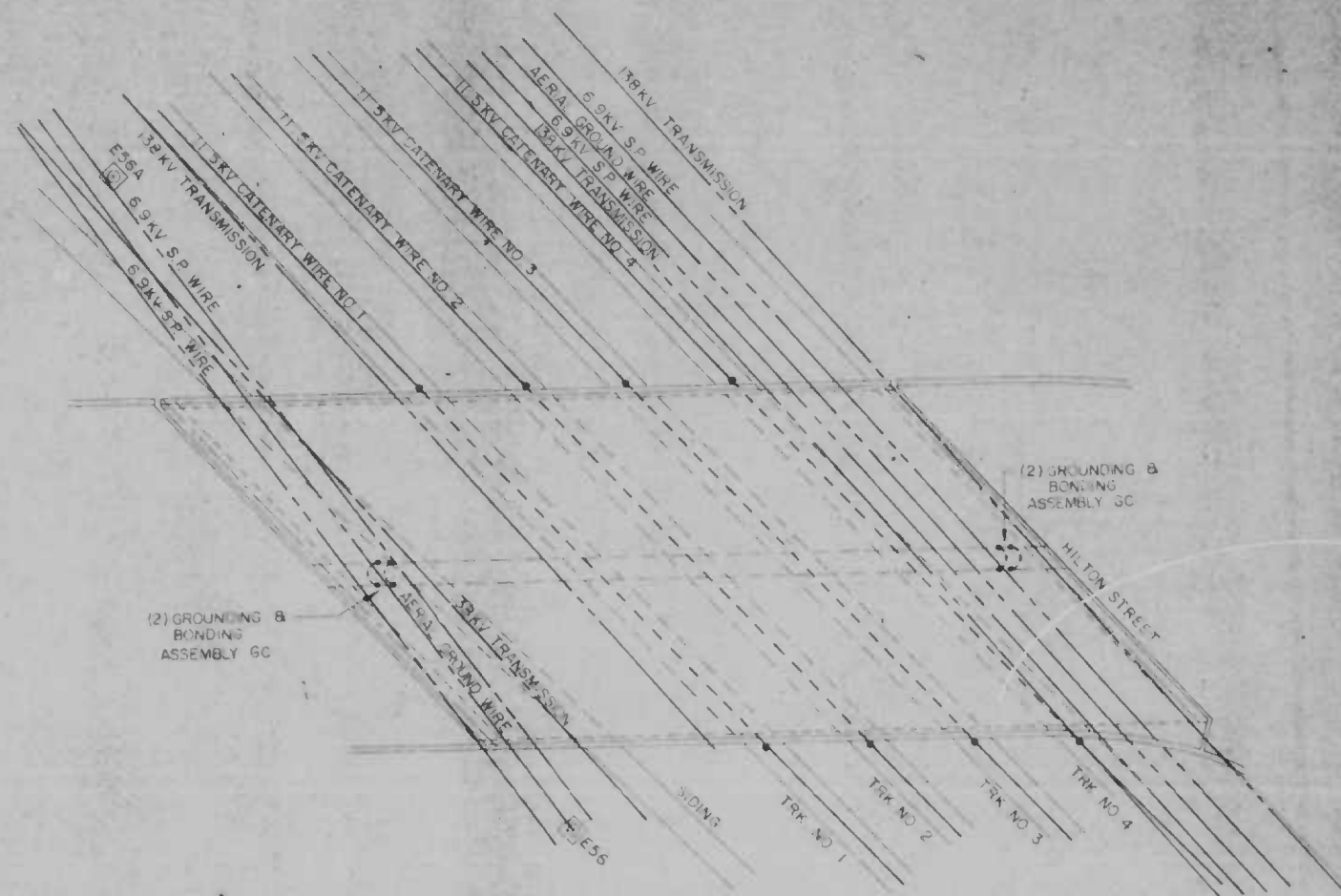
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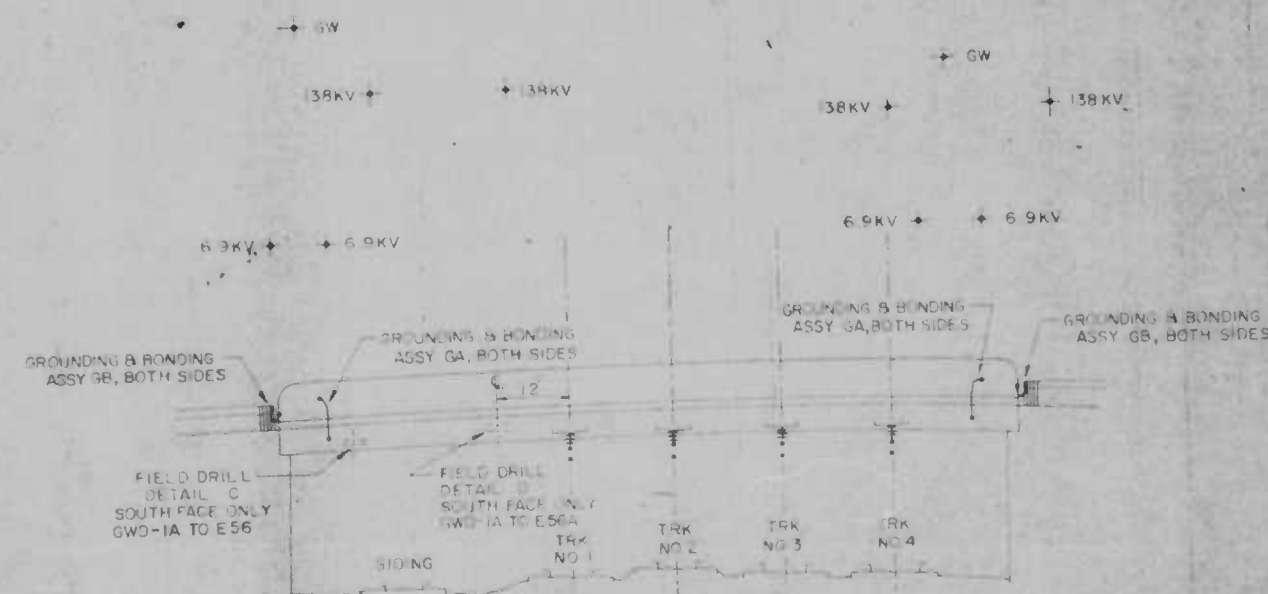
DRAWN BY R. J. PHAM
EXAMINED BY X. B. FLEMING

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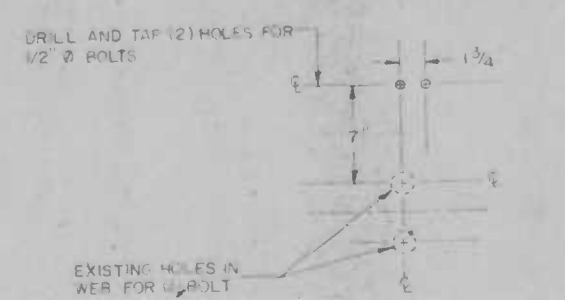
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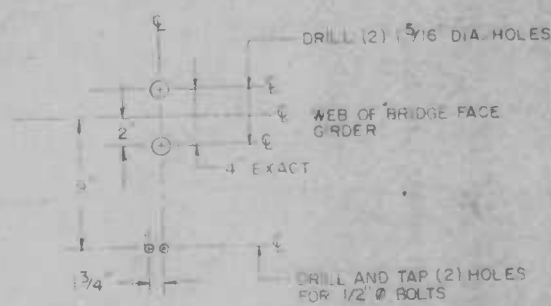
PLAN
SCALE 1"=20'



ELEVATION
LOOKING TOWARD WASHINGTON
SCALE 1"=20'

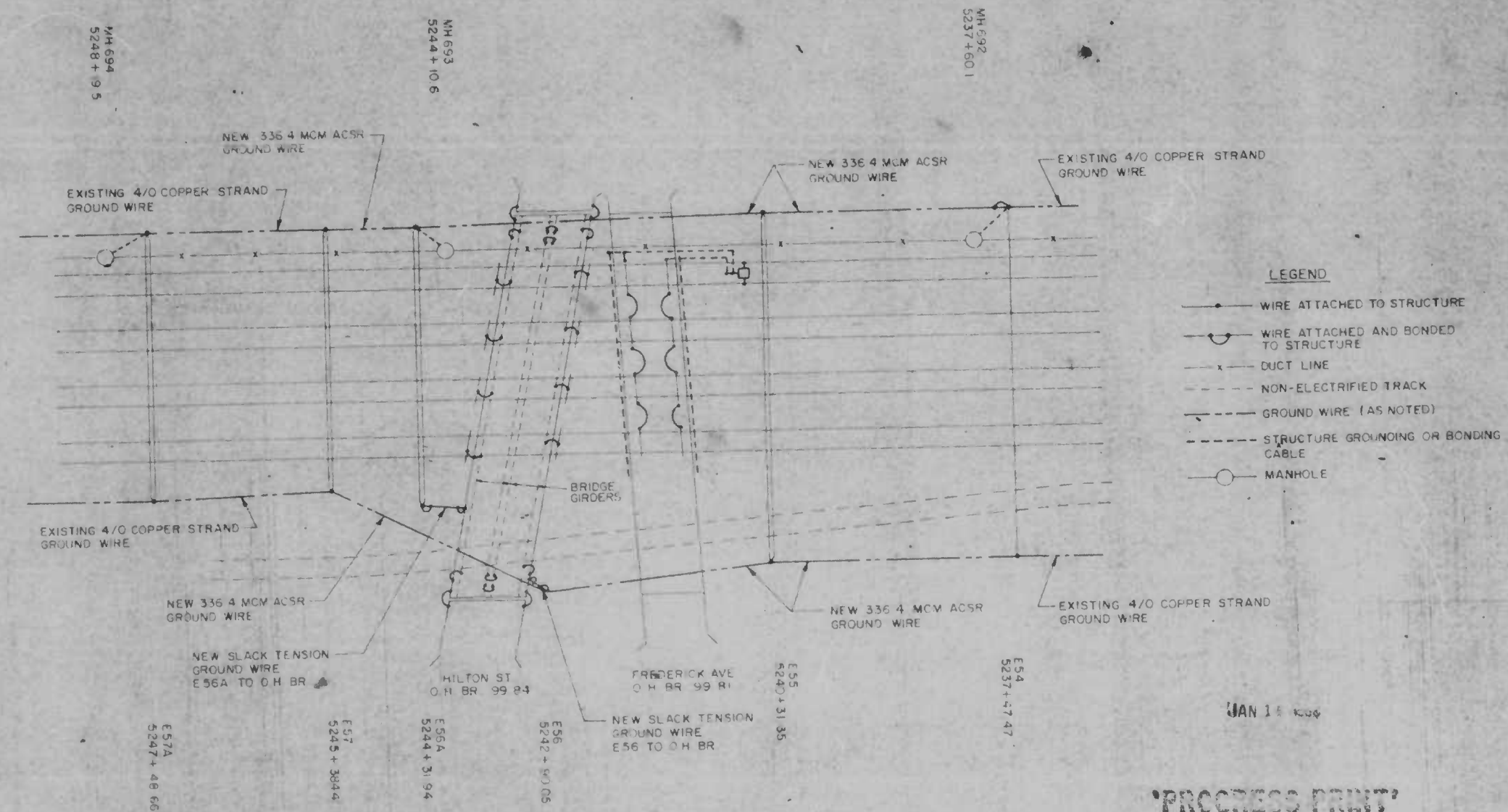


ELEVATION
FIELD DRILL DETAIL "C"



ELEVATION
FIELD DRILL DETAIL "D"

BILL OF MATERIALS					
ASSY NO.	DWG NO.	DESCRIPTION	UNIT	QTY	INST BY
GWD-1A		GROUND WIRE ASSY	EA	2	R
GA		GROUNDING & BONDING DETAIL	EA	4	R
GB		GROUNDING & BONDING DETAIL	EA	4	R
GC		GROUNDING & BONDING DETAIL	EA	4	R



GROUNDING AND BONDING PLAN
NTS

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BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS
BRIDGE GROUNDING AND BONDING PLAN

EMJ/ELECTRACK INC.
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

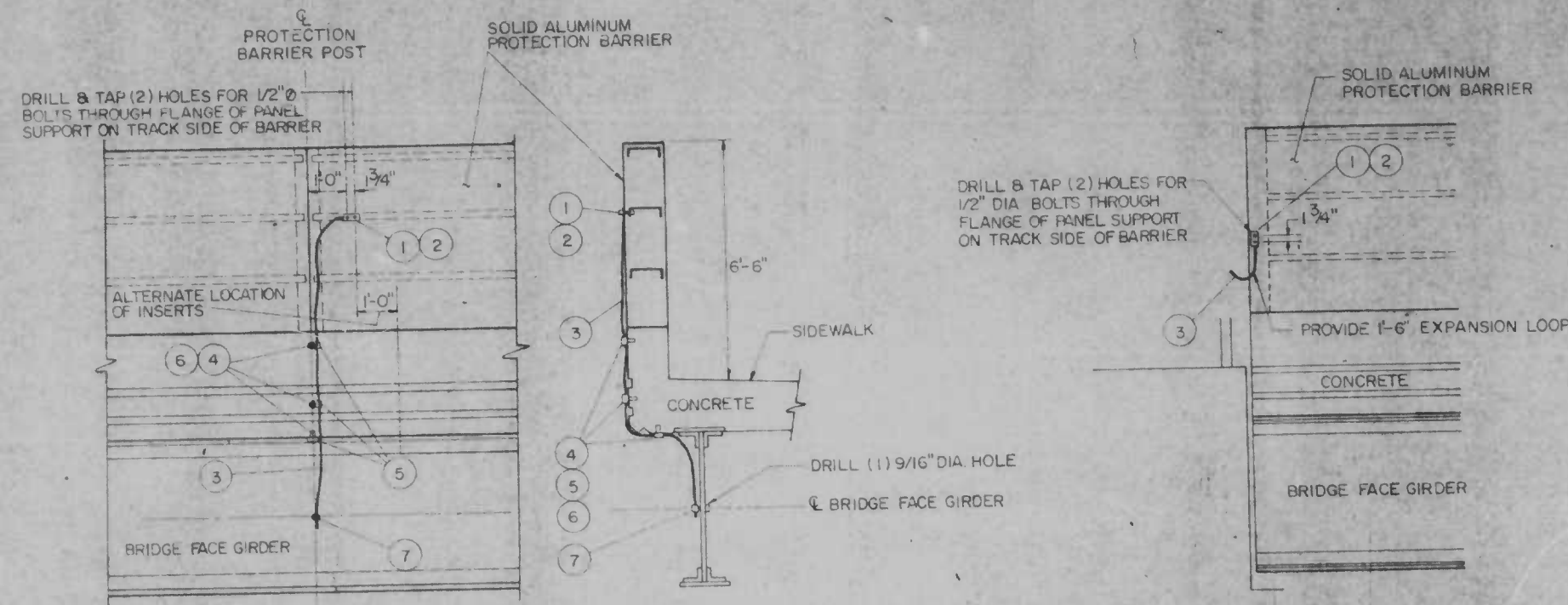
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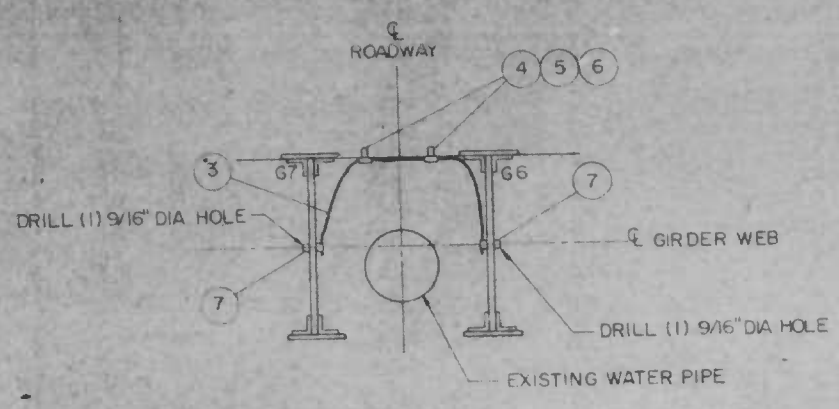
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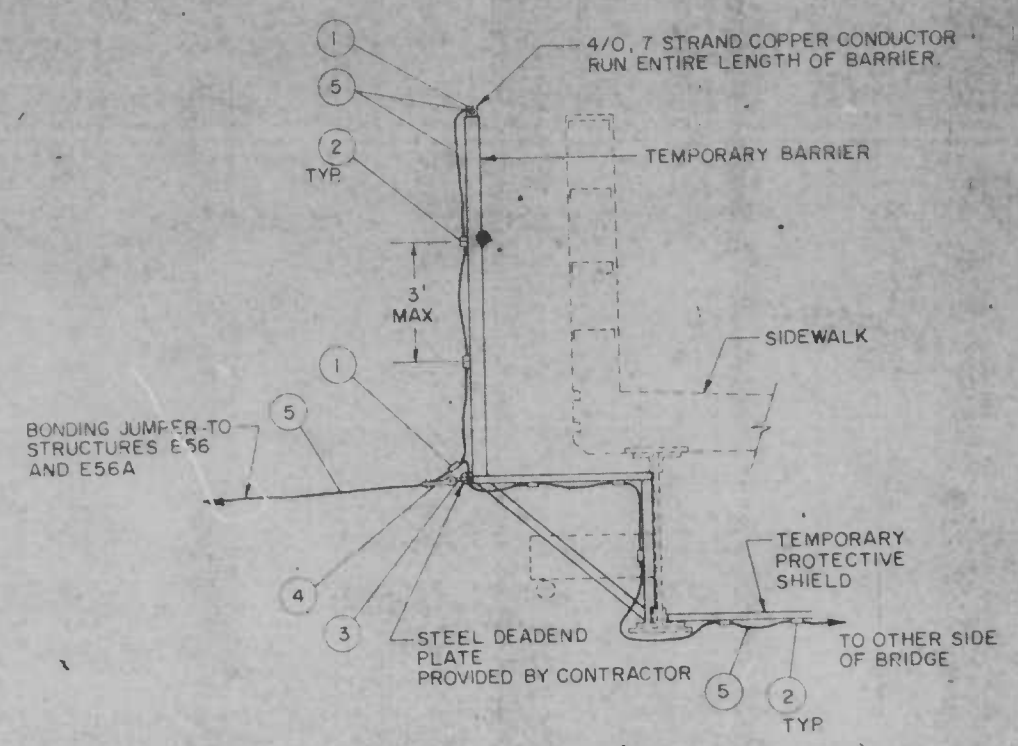


TYPICAL ELEVATION
ASSEMBLY GA

TYPICAL ELEVATION
ASSEMBLY GB



ELEVATION
ASSEMBLY GC

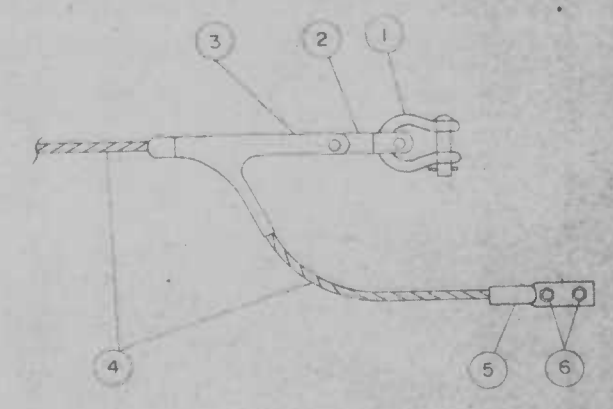


ELEVATION
ASSEMBLY GD

ITEM	DESCRIPTION	UNIT	QUANTITY		
			ASSY GA	ASSY GB	ASSY GC
1	TERMINAL, FOR # 4/0 AWG ALUMINUM CABLE, 7 STRAND, TO FLAT, BURNDY CORP CAT NO YCA28R-2N	EA	1	1	—
2	BOLT, HEX HEAD, 1/2" DIA x 1 1/2" LONG, THREADED, STAINLESS STEEL WITH LOCK WASHER, BURNDY CORP	EA	2	2	—
3	CABLE, # 4/0 AWG, 7 STRAND, ALUMINUM, WEATHER-RESISTANT, POLYETHYLENE TYPE, CODE WORD "OLIVE", ALCOA	FT	20	10	10
4	INSERT, THREADED, GRAY IRON, CAT NO HD, FOR 1/2" DIA BOLT, HOFMANN & BARNARD INC	EA	3	—	2
5	STRAP, FOR # 4/0 AWG CABLE, THOMAS & BETTS CORP CAT NO 1347	EA	3	—	2
6	CAP SCREW, HEX HEAD 1/2-13 NC x 2 1/2" LONG, GALVANIZED STEEL & LOCKWASHER, BURNDY CORP	EA	3	—	2
7	CONNECTOR, GROUND, COPPER ALLOY, TIN PLATED, FOR CABLE TO BAR WITH 1/2" DIA x 4" LONG BOLT, BURNDY CORP CAT NO GB 29T12-W	EA	1	—	2

BILL OF MATERIAL				
ITEM	DESCRIPTION	UNIT	QTY	
			ASSY GA	ASSY GB
1	PARALLEL CLAMP, 4/0 CU-4/0 CU, BURNDY CORP # UC2834	EA	2	—
2	CABLE STAPLE, GALV STEEL, 1/2" x 2", COMMERCIALLY AVAILABLE	EA	—	AS REQ'D
3	Y CLEVIS EYE, GALV, M.I. BETHEA/NATIONAL YCE-65-625	EA	1	—
4	DEAD END CLAMP, 4/0 COPPER, BURNDY CORP DUW-28	EA	1	—
5	CONDUCTOR, 4/0 AWG, 7 STRAND, COPPER	LF	—	NOTE 1

NOTES
1. FOR QUANTITY OF CONDUCTOR, REFER TO THE TEMPORARY PROTECTION SHIELDS AND BARRIERS DRAWING, SHEET NUMBER



GROUND WIRE ASSEMBLY 405C MOD

ASSEMBLY NO. 405C MOD					
ITEM	MARK NO	AMTRAK DWG NO	AMMS NO	DESCRIPTION	QTY
1	—	—	—	ANCHOR SHACKLE, COMPLETE WITH BOLT, NUT AND COTTER KEY, OHIO BRASS CAT NO 94669-3001	1
2	ND	11B1212-1	—	CLEVIS ADAPTER, OB CAT NO. B3832	1
3	NC-3	11B1211	—	STRAIN CLAMP W/ COPPER LINER (OB#80442)	1
4	—	—	—	CONDUCTOR, 4/0 AWG 7 STRAND COPPER	NOTE 1
5	—	—	—	TERMINAL FOR 4/0 AWG 7 STRAND COPPER CONDUCTOR TO FLAT, BURNDY CORP CAT NO YCA 28-2N	1
6	—	—	—	BOLT, HEX HEAD, 1/2" DIA x 1 1/2" LONG, THREADED, STAINLESS STEEL WITH LOCKWASHER, BURNDY CORP	2

NOTE
1. LENGTH OF CONDUCTOR ALLOCATED ON TEMPORARY SHIELD AND BARRIER REQUIREMENT DRAWING, SHEET NO

JAN 18 1993

'PROCESS PRINT'

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

GROUNDING AND BONDING DETAILS

SCALE: _____ DATE: 2/6

EMJ/ELECTRACK INC
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

FILE REF.

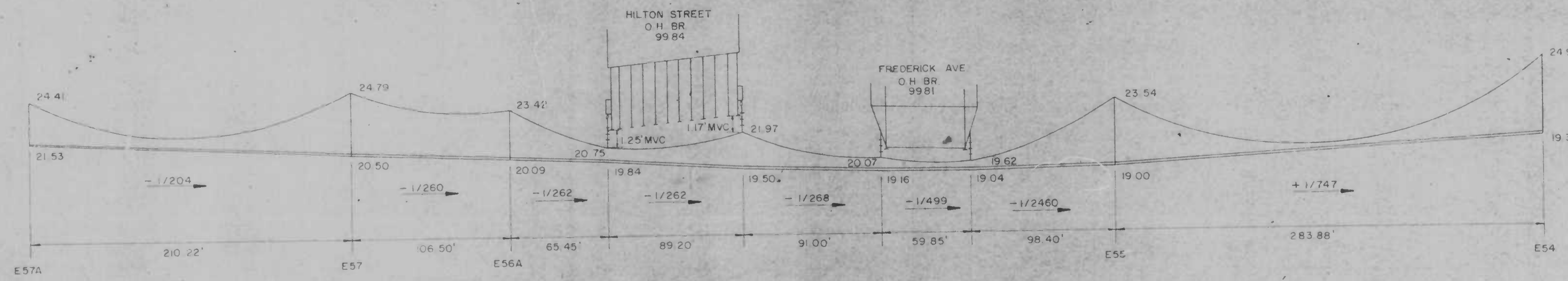
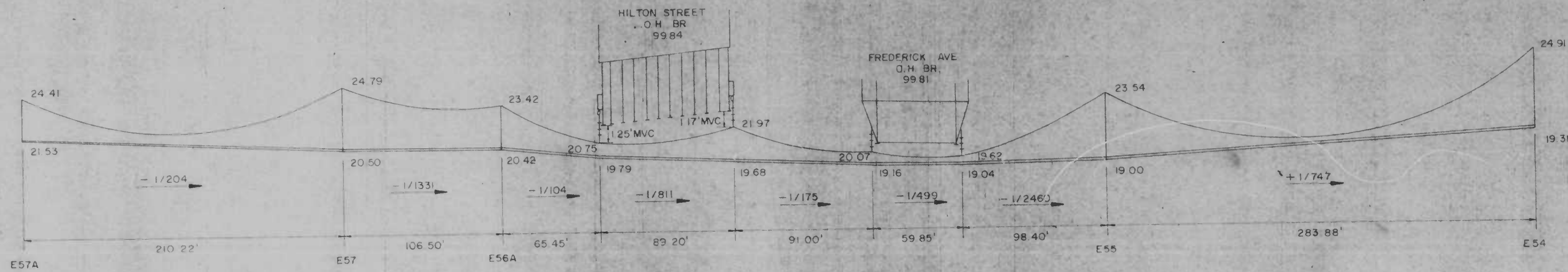
DRAWN BY: R.Z.P.
EXAMINED BY:

FILE REF.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

TO WASHINGTON

TO PHILADELPHIA



JAN 15 1933
 'PROGRESS PRINT'

CITY OF BALTIMORE
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

CATENARY PROFILE, WIRE 1

EMJ/ELECTRACK INC.
 6525 BELCREST ROAD
 HYATTSVILLE, MARYLAND 20762

SCALE _____ DATE _____ SHEET **27**

DRAWN BY P. WILLOUGHBY
 EXAMINED BY _____

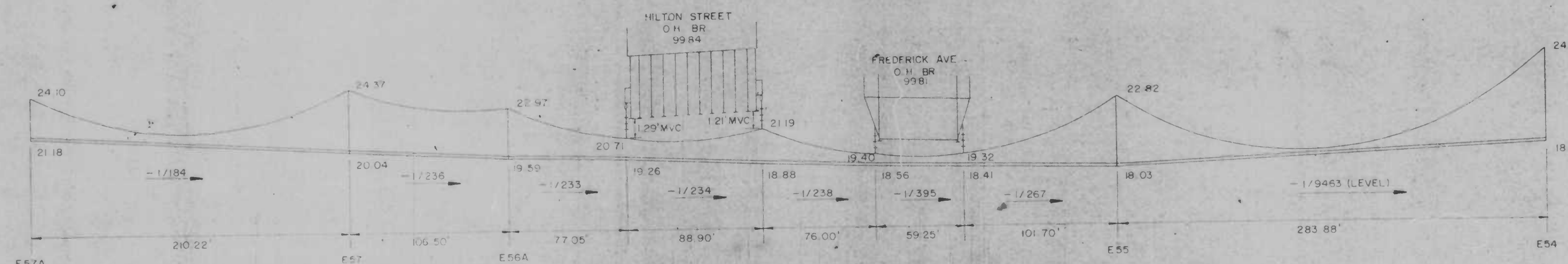
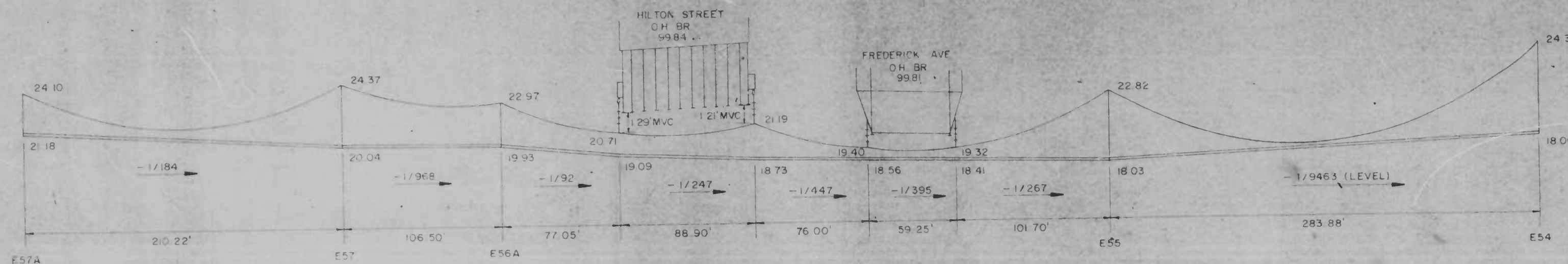
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NO.	DESCRIPTION	DATE	BY

TO WASHINGTON

TO PHILADELPHIA



JAN 15 1968

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DRAWN BY P. WILLOUGHBY
EXAMINED BY

EMJ/ELECTRACK INC
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
HILTON STREET BRIDGE REPAIRS
CATENARY PROFILE, WIRE 2

SCALE _____ DATE **28**

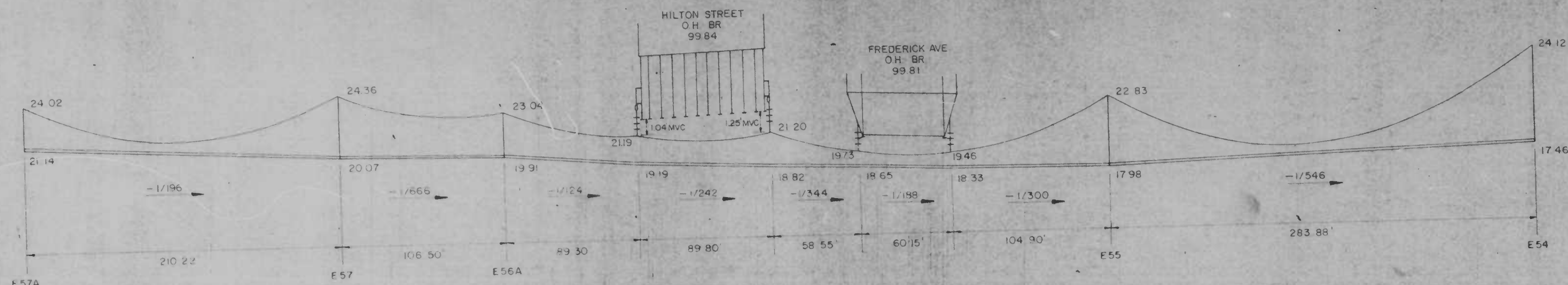
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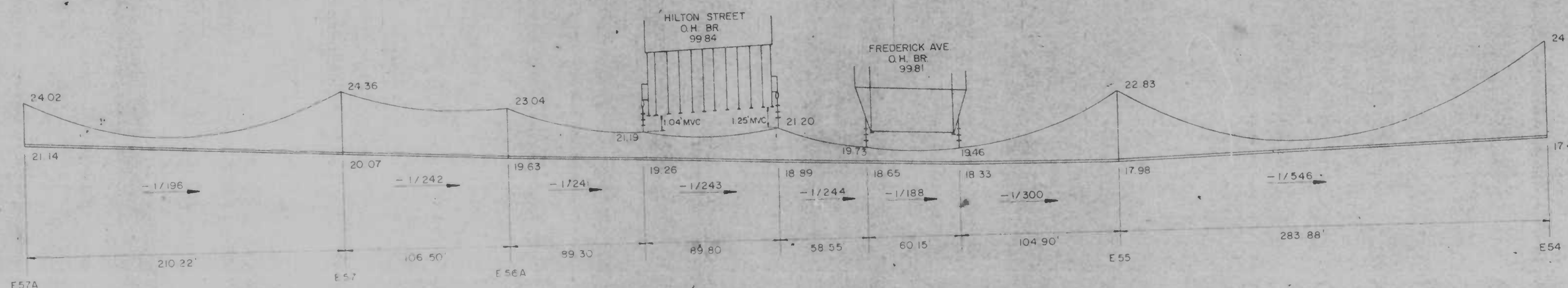
REVISIONS			
NO.	DESCRIPTION	DATE	BY

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TO PHILADELPHIA



EXISTING



FINAL

JAN 1 1958

PROGRESS PRINT

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS
CATENARY PROFILE, WIRE 3

EM/ELCTRACK INC
6525 BELCREST ROAD
HYATTSVILLE, MARYLAND 20782

SCALE _____ DATE **29** SHEET _____

FILE REF.

DRAWN BY P. WILLOUGHBY
EXAMINED BY _____

FILE REF.

F.H.W.A. REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	REVISIONS		
					NO.	DESCRIPTION	DATE
3	MD	BH-M3(00X1)	2				

DWG. NO.	TITLE
1	TITLE SHEET
2	INDEX OF DRAWINGS, LEGENDS, ETC.
3	GENERAL PLAN & ELEVATION
4	TYPICAL CROSS SECTIONS
5	FINISHED BRIDGE DECK ELEVATIONS
6	NORTH ABUTMENT ELEVATIONS
7	NORTH ABUTMENT PLAN
8	SOUTH ABUTMENT ELEVATIONS
9	SOUTH ABUTMENT PLAN & DETAILS
10	EXPANSION JOINT DETAILS AND DEFLECTION SCHEDULE
11	FRAMING PLAN (EXISTING), SHEAR STUD SPACING DIAGRAM, ETC.
12	TRAFFIC CONTROL PLAN, GENERAL SIGNING
13	TRUCK DETOUR ROUTES
14	CORNER CUT-BACK (FREDERICK & BRUNSWICK)
15	
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ABBREVIATIONS	
E	CENTER LINE
P.G.L.	PROFILE GRADE LINE
P/G.E.	PROFILE GRADE ELEVATION
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
R.T.	POINT OF TANGENCY
P.V.C.	POINT OF VERTICAL CURVE
P.V.I.	POINT OF VERTICAL INTERSECTION
R.V.T.	POINT OF VERTICAL TANGENCY
P.V.C.C.	POINT OF VERTICAL COMPOUND CURVE
R.C.P.	REINFORCED CONCRETE PIPE
S.D.	STORM DRAIN
M.H.	MANHOLE
STD.	STANDARD
W.M.	WATER METER
W.V.	WATER VALVE
G.V.	GAS VALVE

CONVENTIONAL SYMBOLS	
GENERAL	
BASE OR SURVEY LINE	
CENTERLINE OF CONSTRUCTION	
BENCH MARKS	
PLAN LOCATION OF SOIL BORINGS	
EXISTING	
POLES	
WATER MAIN	
STORM DRAIN	
GAS MAIN	
TELEPHONE CONDUIT	
ELECTRIC CONDUIT	
HEDGE	
FENCE LINE	
STREET WITH CURB & GUTTER	
PROPERTY LINE	
RIGHT OF WAY LINE	
FIRE HYDRANT	
STREET LIGHT	
PROPOSED	
RIGHT OF WAY LINE	
CONCRETE SIDEWALK	
COMB. CONC. CURB & GUTTER	
STORM DRAIN STRUCTURES	
LIGHT POLE PEDESTAL, BRIDGE	
LIGHT POLE PEDESTAL, ROADWAY	
HANDBOX FOR TRAFFIC SIGNAL DEVICES	
SENSOR ELEMENT FOR TRAFFIC SIGNALS	
TRAFFIC SIGNAL POLE	
3" METALLIC CONDUIT	
GUARD RAIL	
WATER MAIN	
DITCH, SOLID SODDING	
DITCH, CONCRETE	
DITCH, PLACED RIPRAP	
NEW ROADWAY PAVEMENT	
STRIPPING EXISTING PAVEMENT	
REMOVAL OF EXISTING PAVEMENT	
WATER METER	

CITY OF BALTIMORE
 DEPARTMENT OF TRANSPORTATION
 HIGHWAY AND BRIDGE ENGINEERING
 CONTRACT NO. 3205
 REHABILITATION OF THE
 HILTON STREET BRIDGE
 OVER
 AMTRAK & CONRAIL
 INDEX OF DRAWINGS, LEGENDS, ETC.
 SCALE _____ DATE _____ SHEET 3 OF _____

1-18-87
 12-4-87
 11-4-87
 10-13-87
 DRAWN BY
 EXAMINED BY
 REVISIONS 8-8550
 8-87

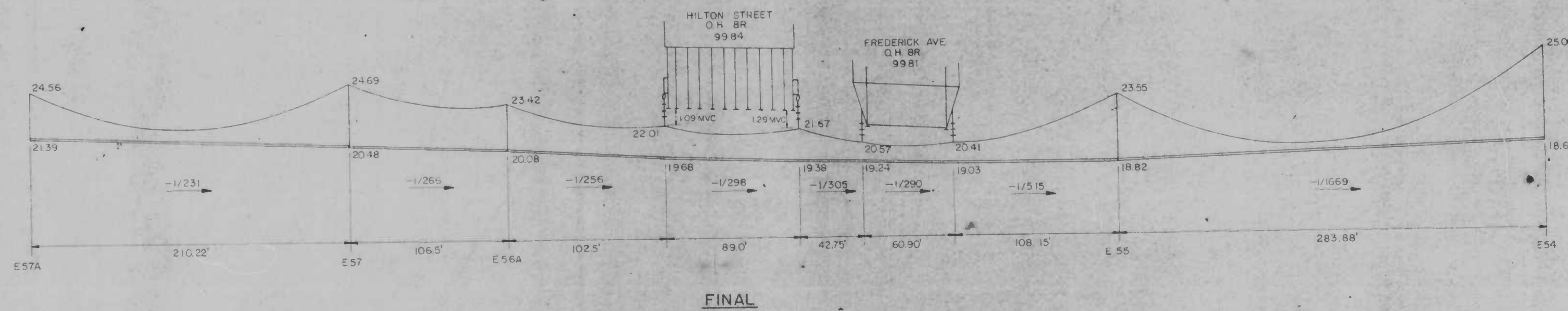
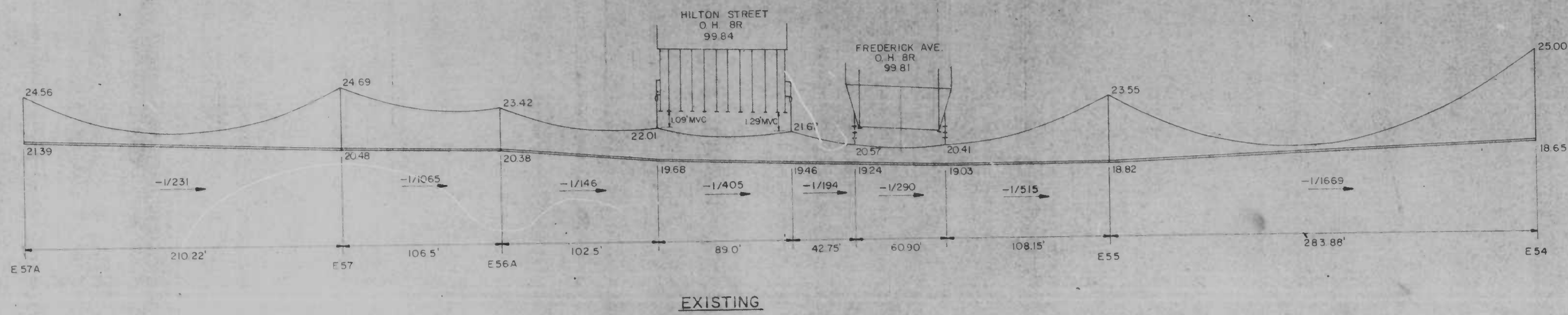
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REVISIONS		
NO.	DESCRIPTION	DATE

TO WASHINGTON

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'PROGRESS PRINT'

CITY OF BALTIMORE
 DEPARTMENT OF PUBLIC WORKS
 BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS

CATENARY PROFILE, WIRE 4

EMJ/ELECTRACK INC
 6525 BELCREST ROAD
 HYATTSVILLE, MARYLAND 20782

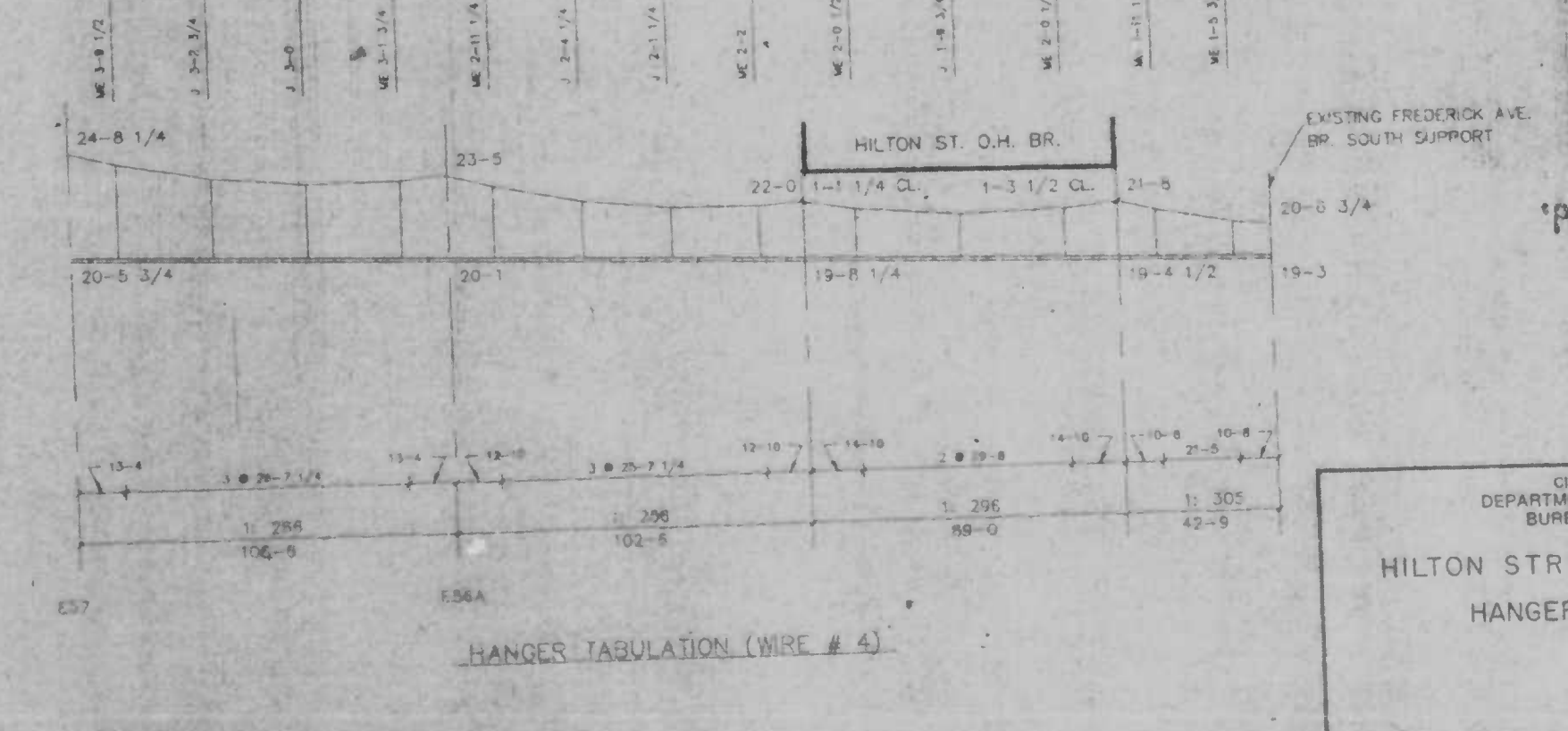
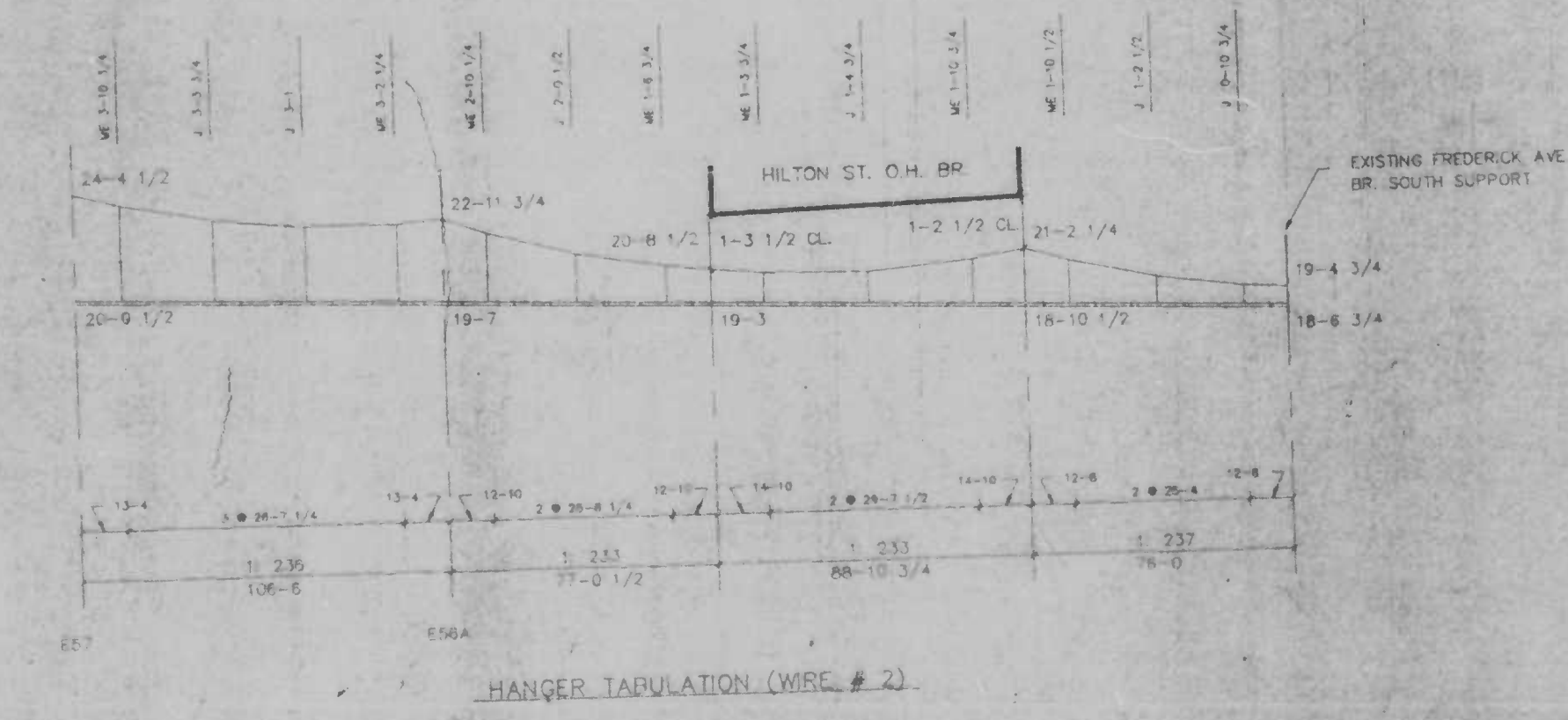
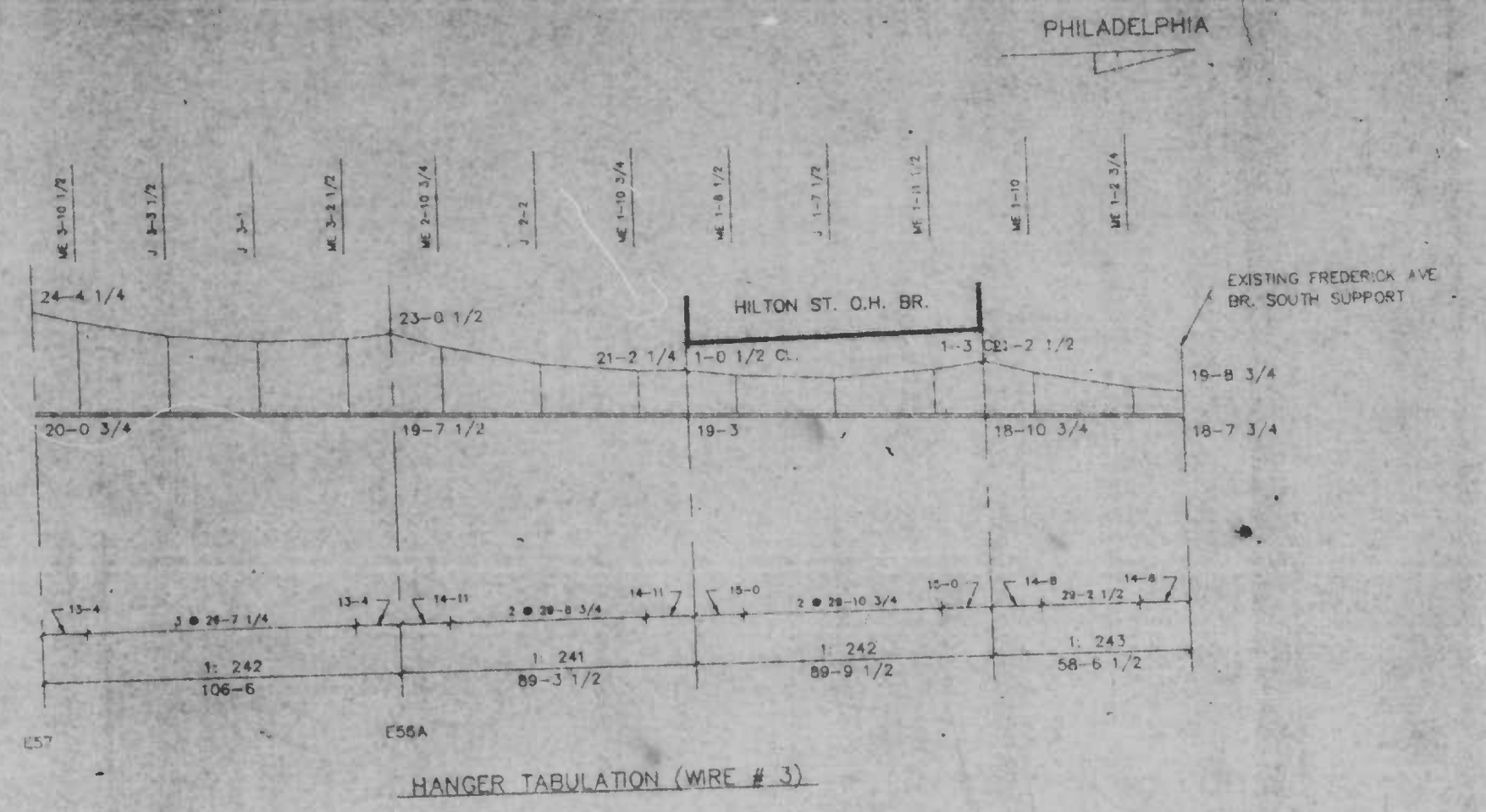
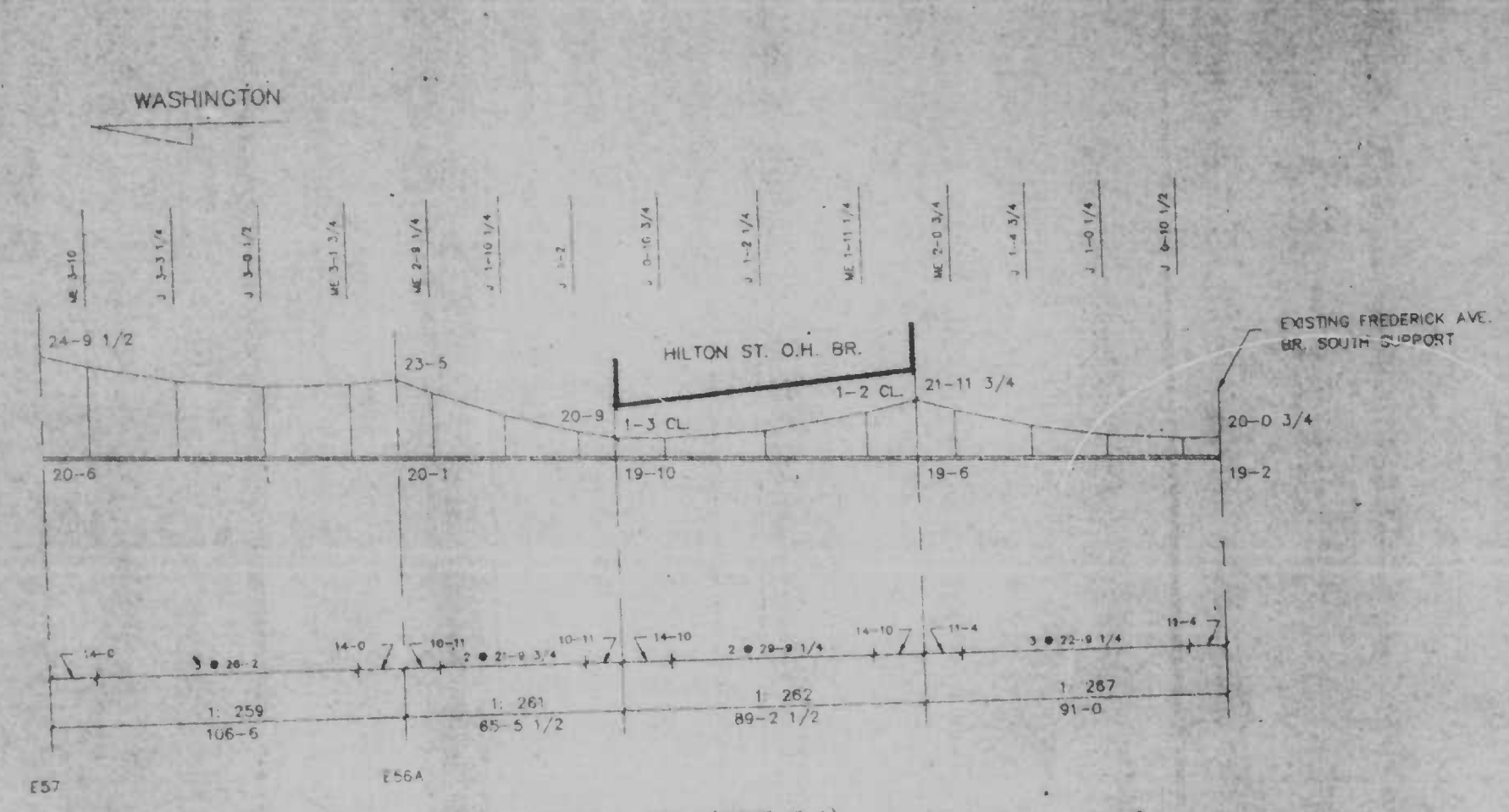
SCALE _____ DATE _____ SHEET **30**

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FILE REF.

NO.	DESCRIPTION	DATE	BY



JAN 26 1938

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CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

HILTON STREET BRIDGE REPAIRS
HANGER TABULATIONS

SCALE _____ DATE **31** _____

DRAWN BY _____
EXAMINED BY _____

FILE REF.

FILE REF.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

GENERAL NOTES

SPECIFICATIONS: S.H.A. Specifications dated January, 1982 and I.D.C. Standard Provisions dated November, 1983, revisions thereof and additions thereto and Special Provisions for Materials and Construction.

A.A.S.H.T.O. Standard Specifications for Highway Bridges, thirteenth edition, dated 1983 for design including Interim Specifications thru 1986.

Concrete Design: Service Load Design Method $f_c = 1,200$ p.s.i. except that in bridge deck slabs supported by stringers it shall be 1,550 p.s.i.

Reinforcing Steel Design: $f_s = 24,000$ p.s.i.

Structural Steel Design: Elastic Design Method.

LOADING: HS 20-44

CONCRETE: All superstructure concrete shall be Mix No. 6 having a minimum compressive strength of 4,500 p.s.i. All other structure concrete shall be Mix No. 3 having a minimum compressive strength of 3,500 p.s.i.

CHAMFER: All exposed corners of concrete shall be chamfered with $\frac{3}{4} \times \frac{3}{4}$ milled chamfer strips, unless noted otherwise.

REINFORCING STEEL: Reinforcing steel shall conform to A.S.T.M. Designation A-615 Grade 60. All splices not shown shall be lapped as per bar lap charts. Minimum cover for any bar shall be 2" unless noted otherwise.

ONLY GRADE 60 CAN BE USED ON THIS PROJECT.

All reinforcing steel for superstructure, including median, sidewalks and parapets, abutment backwalls, bridge seat pads and approach slabs shall be epoxy coated.

STRUCTURAL STEEL: All new structural steel shall conform to A.S.T.M. Designation A-36 unless noted otherwise. See Special Provisions.

UTILITIES: The Contractor shall verify the location of all existing utilities in the vicinity of construction before proceeding with the work. If the location and/or dimensions of any affected utilities vary from information shown on the plans, the Contractor shall immediately notify the Engineer, who will determine if any changes in design are needed.

COORDINATE SYSTEM: All bearings and coordinates are referred to the true meridian and coordinate system of the Baltimore City Survey Control System.

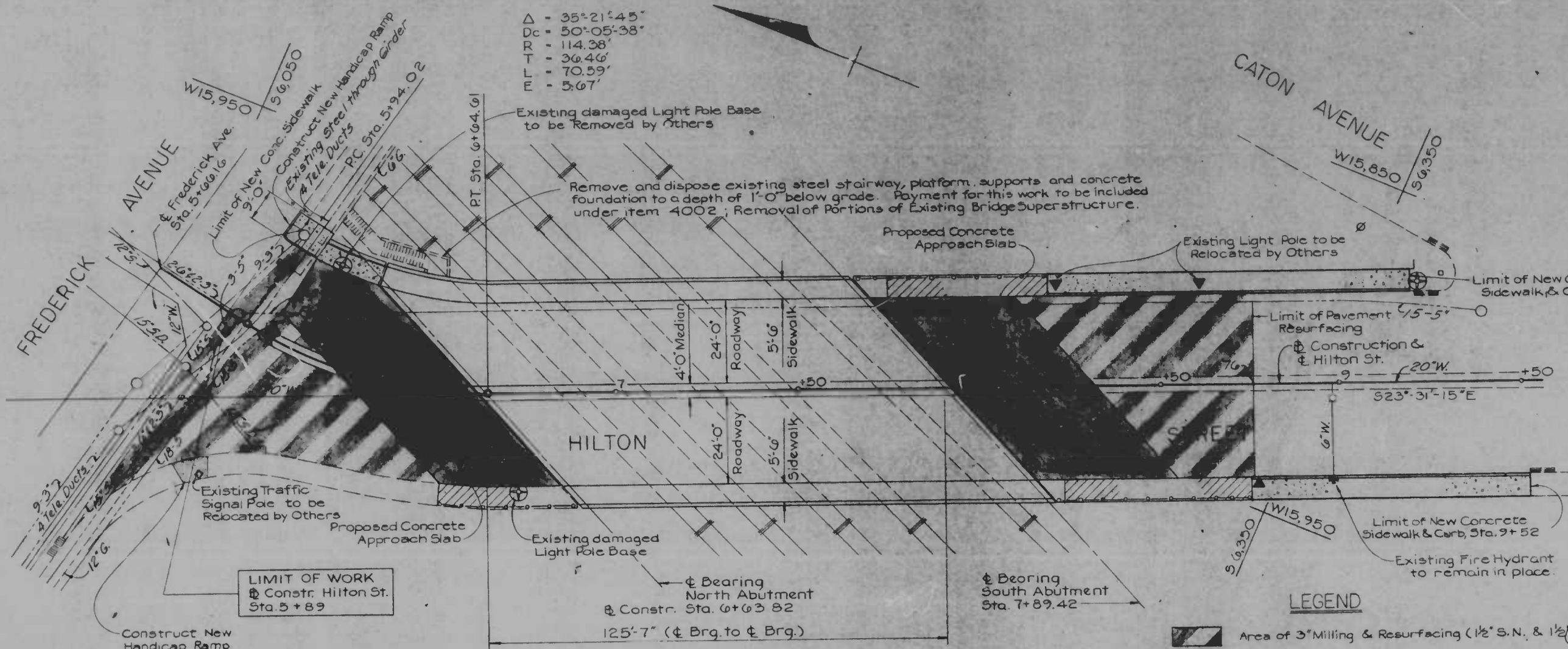
DATUM: All elevations are referred to the Baltimore City Datum.

EPOXY BONDING COMPOUND: All existing concrete that will be in contact with new concrete shall be coated with an epoxy bonding compound. See Special Provisions.

EXISTING STRUCTURES: All dimensions affected by the geometrics and/or location of the existing structure are checked in the field by the Contractor before any construction is done and before any reinforcing steel, etc. is ordered or fabricated. It shall be the responsibility of the Contractor to supply the Engineer with all field dimensions required to check detail drawings.

PROTECTIVE SHIELDS: Protective shields shall be installed and maintained in place throughout the duration of the project in order to protect persons and property from falling construction materials and other objects. See Special Provisions.

INFORMATIONAL DRAWINGS: Informational drawings of the existing bridge are available upon request, at no additional cost to the Contractor, in the office of the Bureau of Highways. The City disclaims any responsibility for the accuracy of such drawings compared to actual field conditions. Dimensions, details, etc. as shown thereon may not be as built.

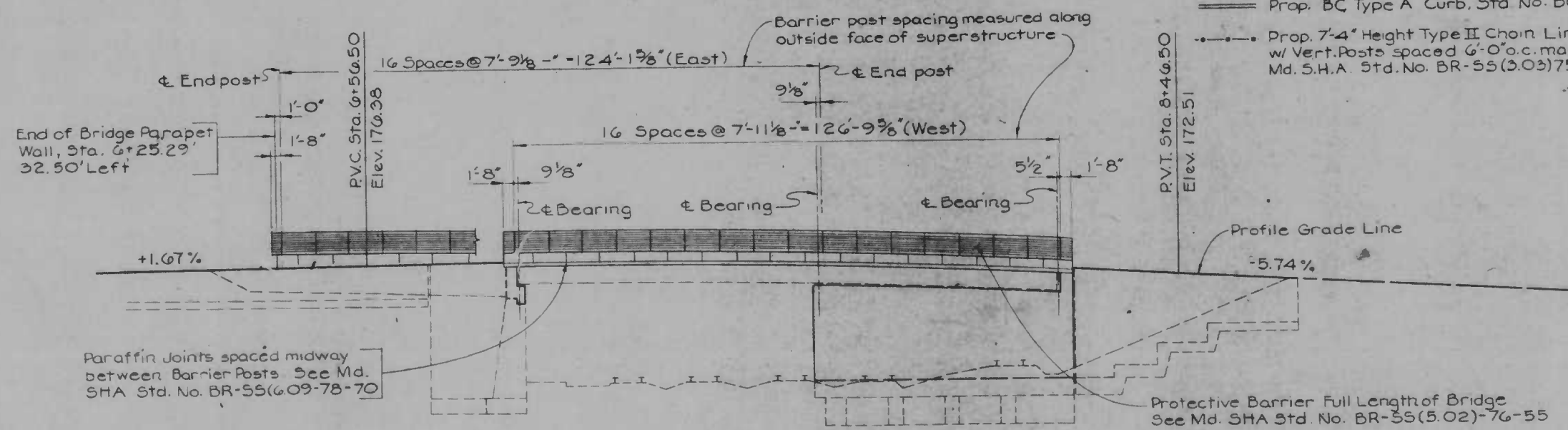


PLAN

Scale: 1" = 20'-0"

P.V.I. = 7+51.50
Elev. = 177.96
V.C. = 190.00
CORN = -1.76%

- LEGEND**
- Area of 3" Milling & Resurfacing (1/2" S.N. & 1/2" B.I.)
 - Prop. 16" Concrete Approach Slab (Mix No. 6)
 - Prop. Concrete Sidewalk
 - Prop. Cantilevered Structural Concrete Sidewalk Slab on Existing Wingwall Foundation
 - Prop. Modified Pedestrian Ramp, Type 2, Std. No. BC-655.21
 - Prop. BC Type 'A' Curb, Std. No. BC-620.02
 - Prop. 7'-4" Height Type II Chain Link Safety Fence w/ Vert. Posts spaced 6'-0" c.c. maximum. See Md. S.H.A. Std. No. BR-55(3.03)75-25



ELEVATION

Scale: Horizontal, 1" = 20'-0"
Vertical, 1" = 20'-0"

CONSTRUCTION COORDINATES			
Station	South	West	Location
5+66.16	-6042.67	-16003.07	Frederick Ave
5+94.02	-6069.94	-16008.79	P.C. Curve
6+63.82	-6138.34	-16002.03	Brig. N. Abutment
6+64.61	-6139.06	-16001.72	P.T. Curve
7+89.42	-6253.49	-15951.31	Brig. S. Abutment
10+00.12	-6446.69	-15867.82	Brig. Hilton St.

BENCHMARKS

- 7375** Elev. 165.952
Cut in west end of bottom granite step at entrance to #221 Frederick Ave., 250' east of Caton Ave.
- 8466** Elev. 171.172
Brass screw set in west concrete curb at south end of Hilton Street Bridge over Amtrak R.R. (Note: This benchmark will be destroyed during construction. Contractor to establish new benchmark if required for construction surveys.)

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL
GENERAL PLAN & ELEVATION
SCALE 1" = 20' DATE SHEET 4 OF 4

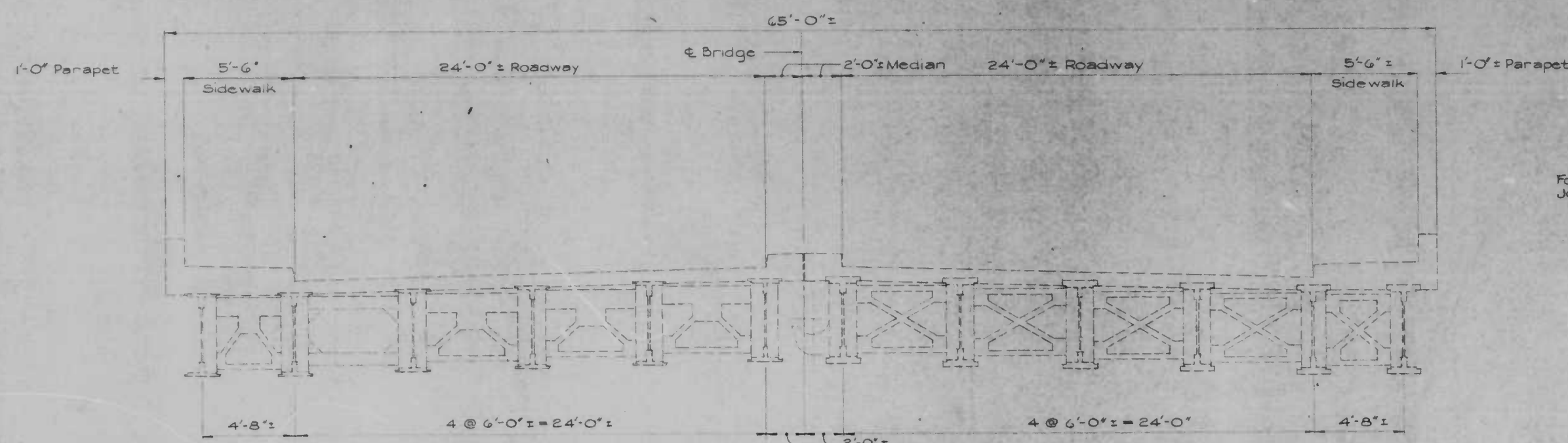
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1-10-84
12-4-87
11-19-87
11-9-87
9-23-87
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EXAMINED BY

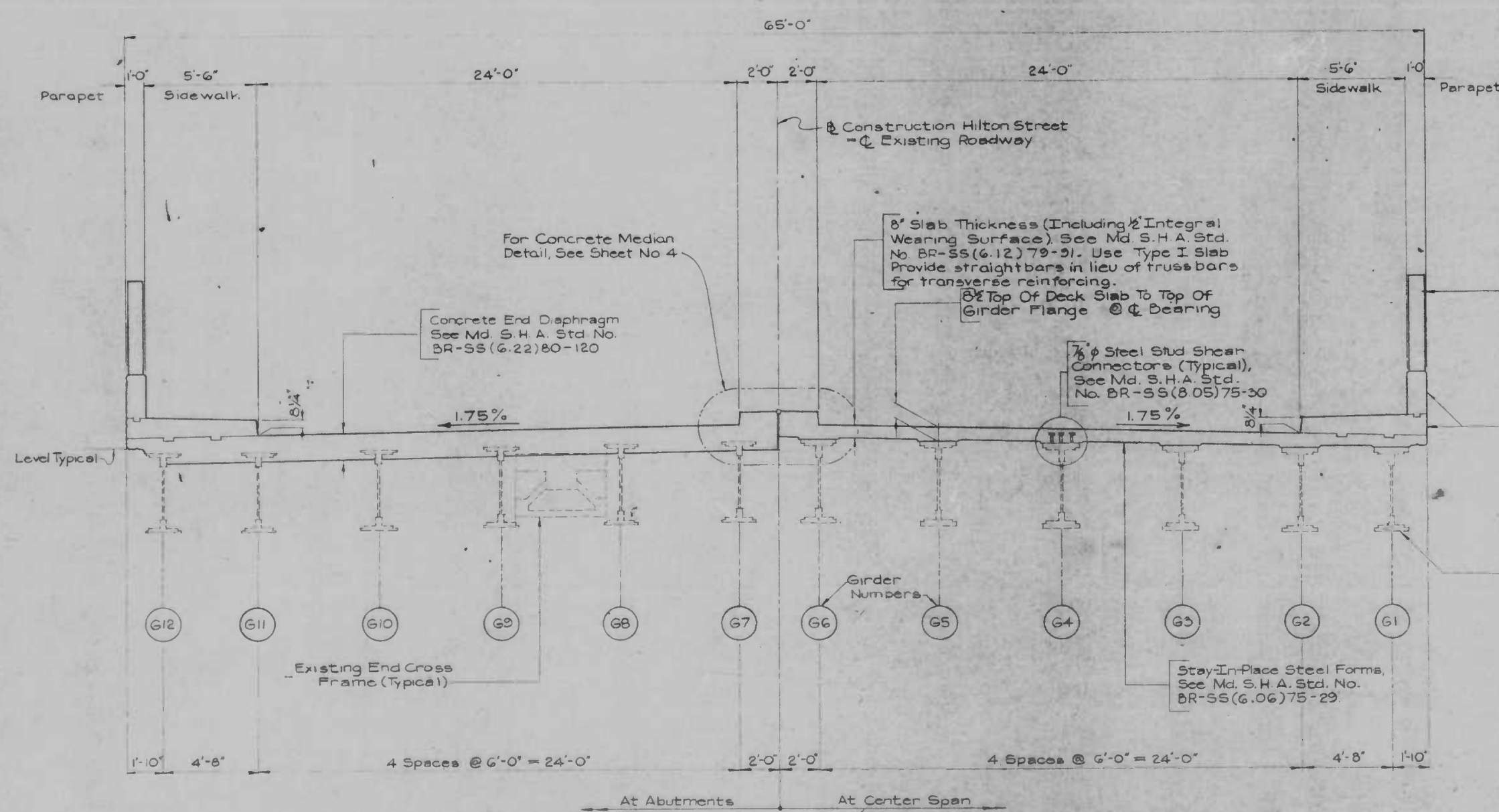
KUEPPEL DESIGN, INC.

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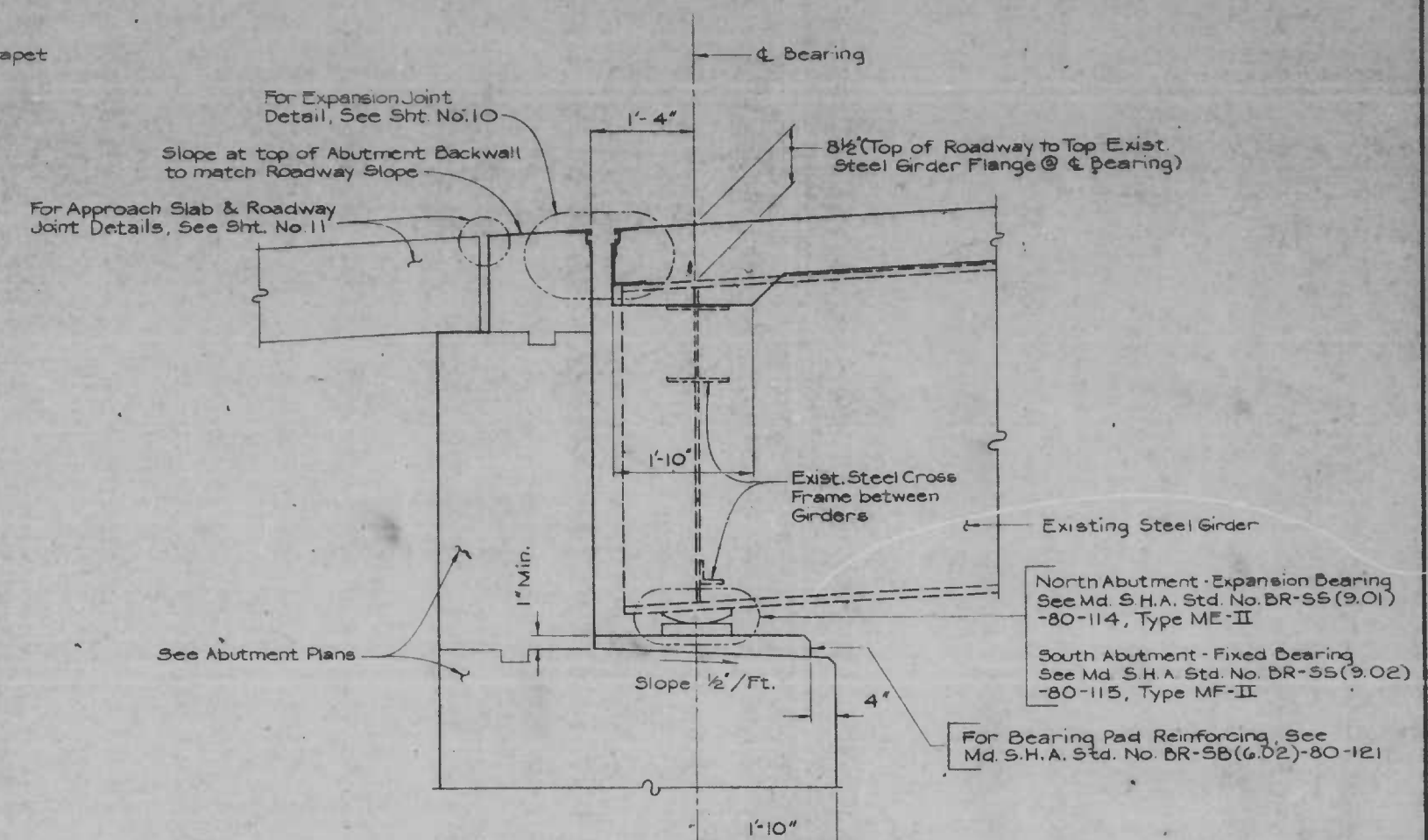
F.H. WA. REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	REVISIONS			
					NO.	DESCRIPTION	DATE	BY
3	MD	DR-14300X(1)						



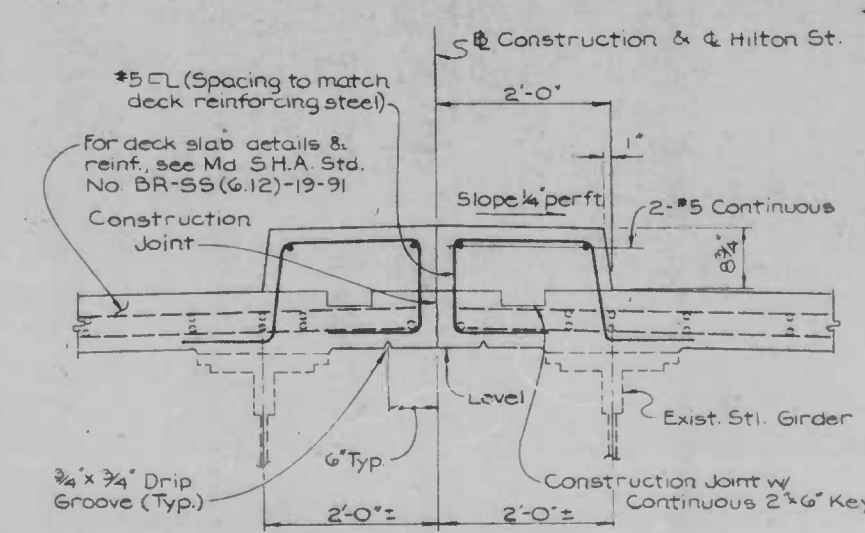
EXISTING TYPICAL SECTION
Scale: 1/4" = 1'-0"



TYPICAL SECTION - BRIDGE DECK REPLACEMENT
Scale: 1/4" = 1'-0"



TYPICAL SECTION THRU BEAM BEARING AND END DIAPHRAGM
Scale: 3/4" = 1'-0"



TYPICAL SECTION THRU CONCRETE MEDIAN ON BRIDGE DECK
Scale: 3/4" = 1'-0"

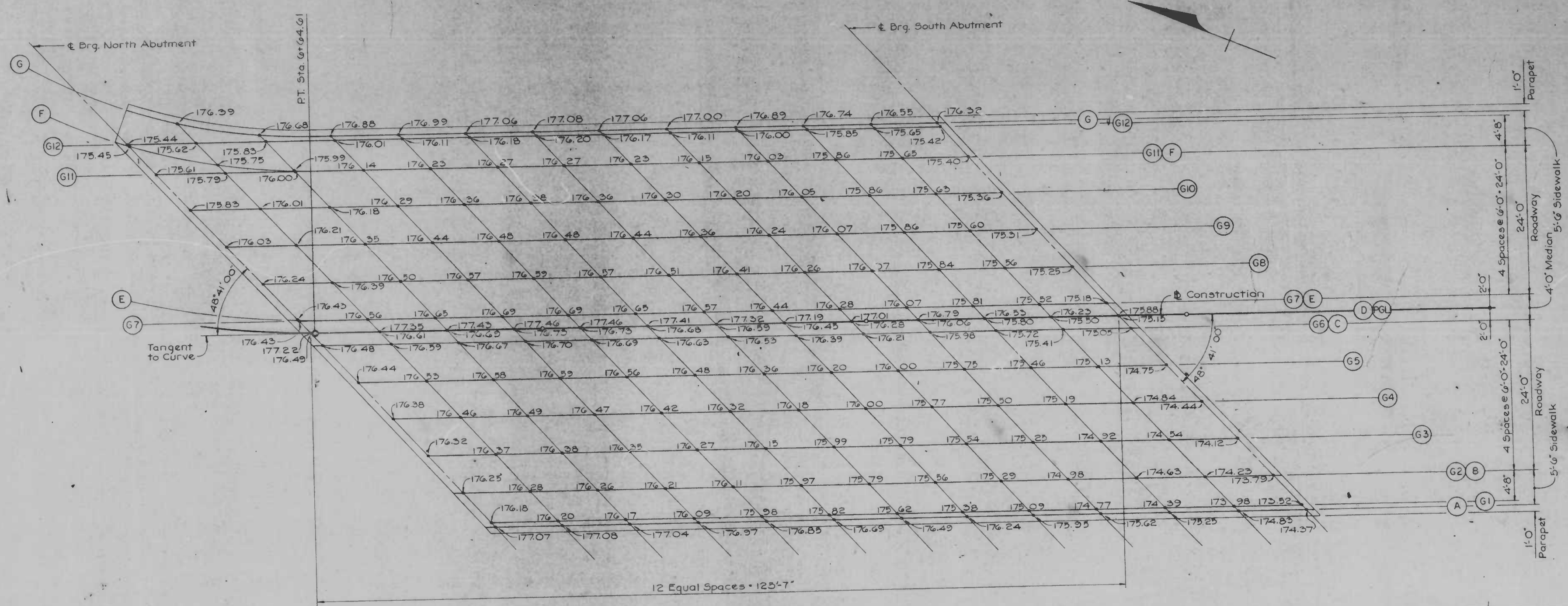
CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL
TYPICAL CROSS SECTIONS
SCALE: _____ DATE: _____ SHEET 5 OF _____

1-18-87
12-4-87
11-9-87
10-23-87
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EXAMINED BY
KOPPELSENER & ASSOCIATES

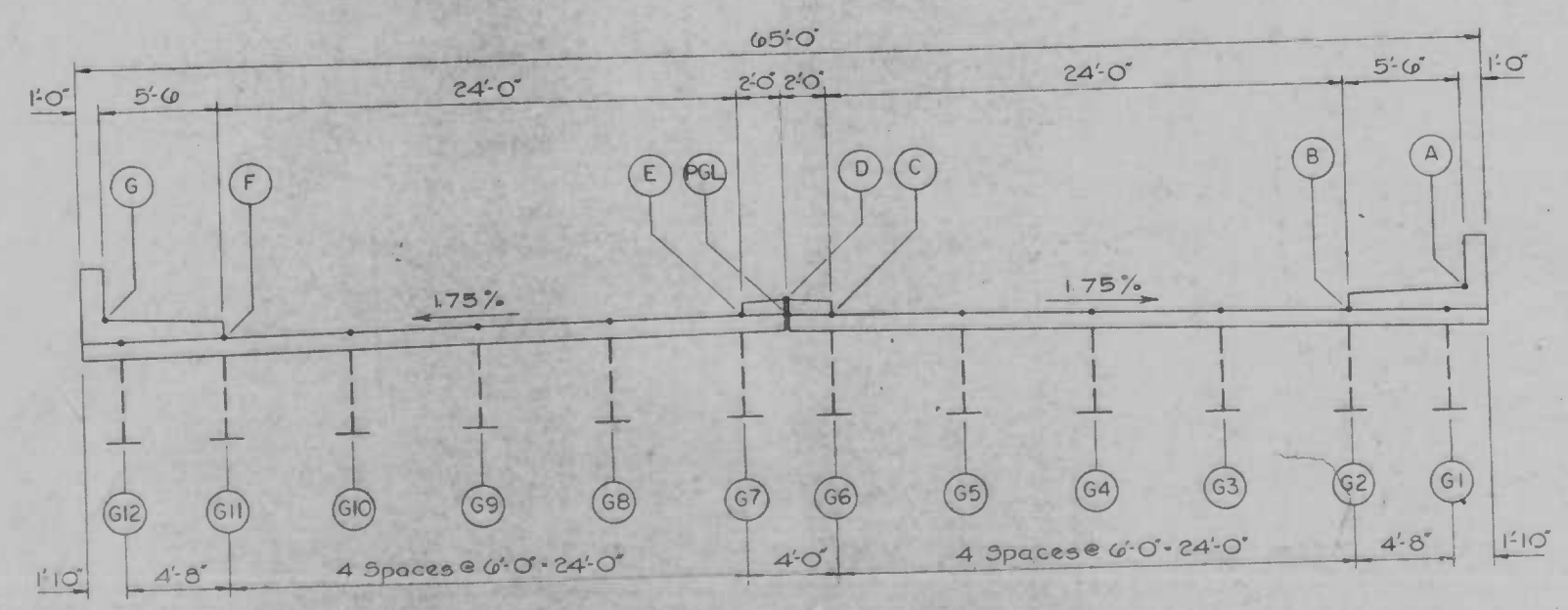
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REVISIONS		
NO.	DESCRIPTION	DATE



PLAN
Scale: 1/8" = 1'-0"



TYPICAL SECTION
Scale: 3/16" = 1'-0"

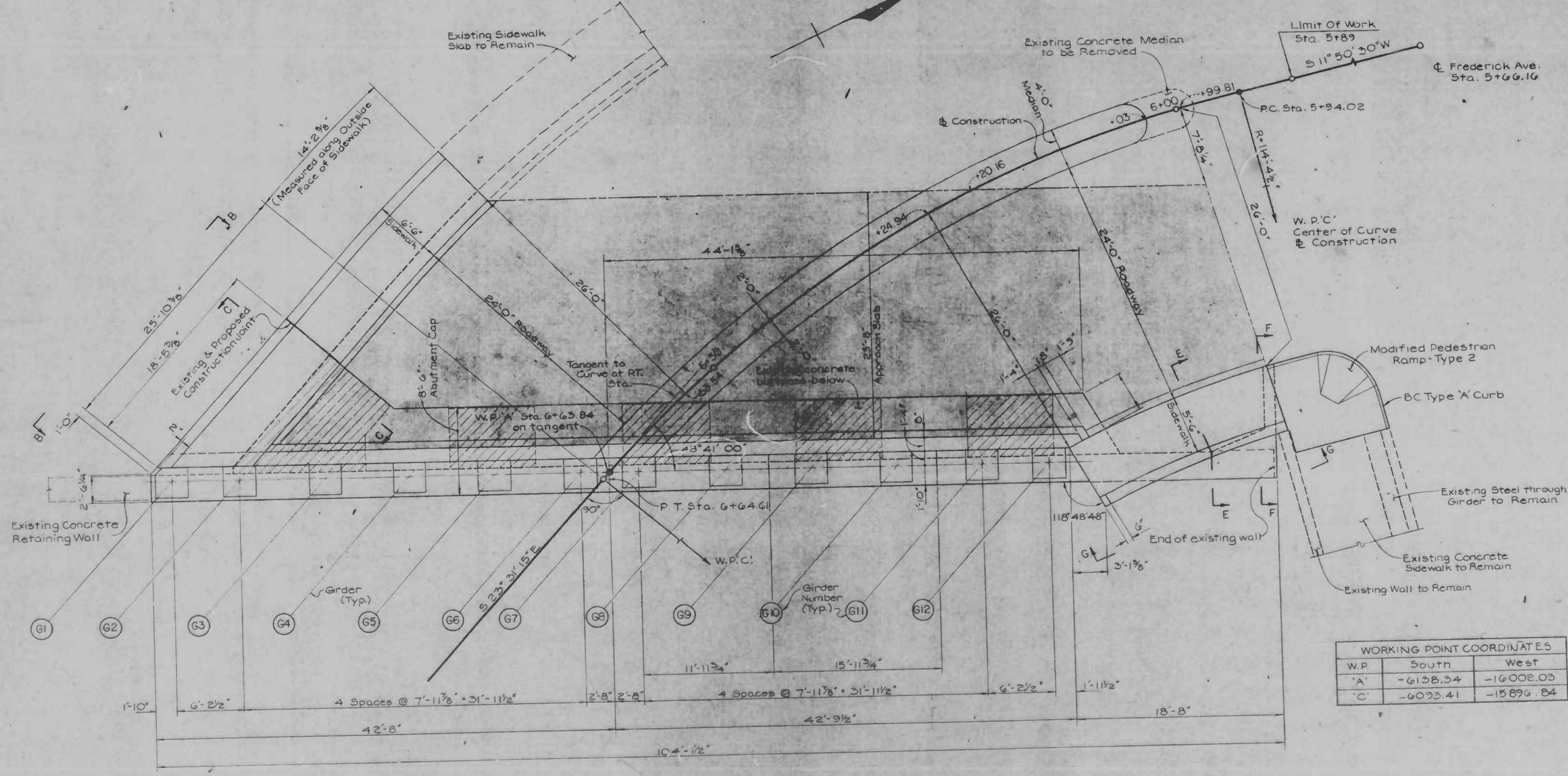
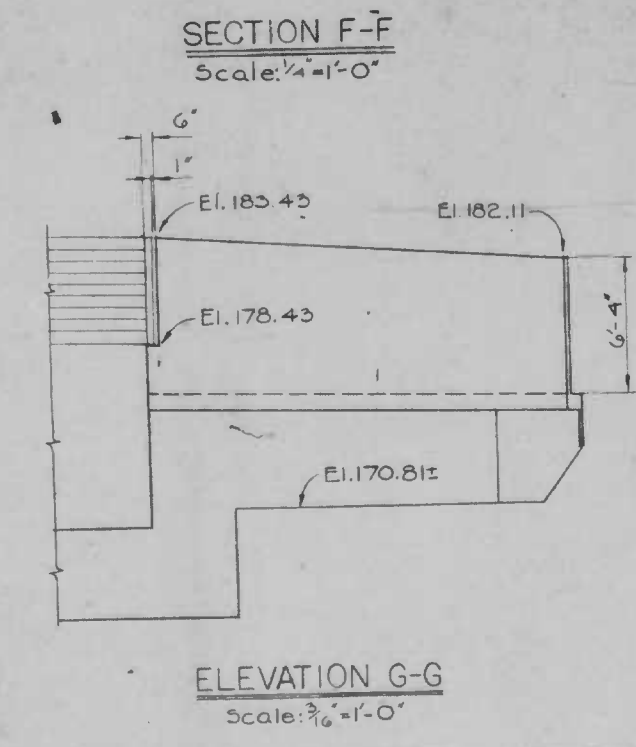
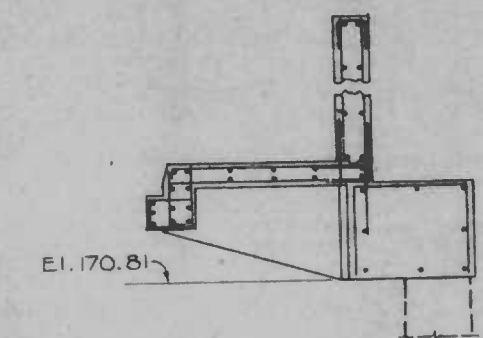
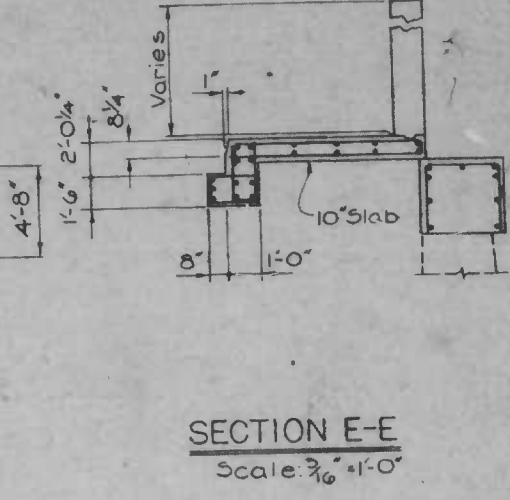
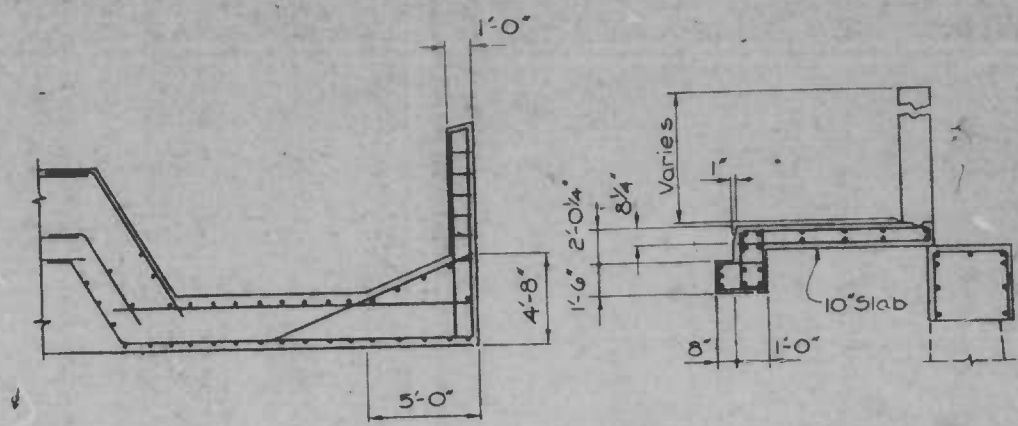
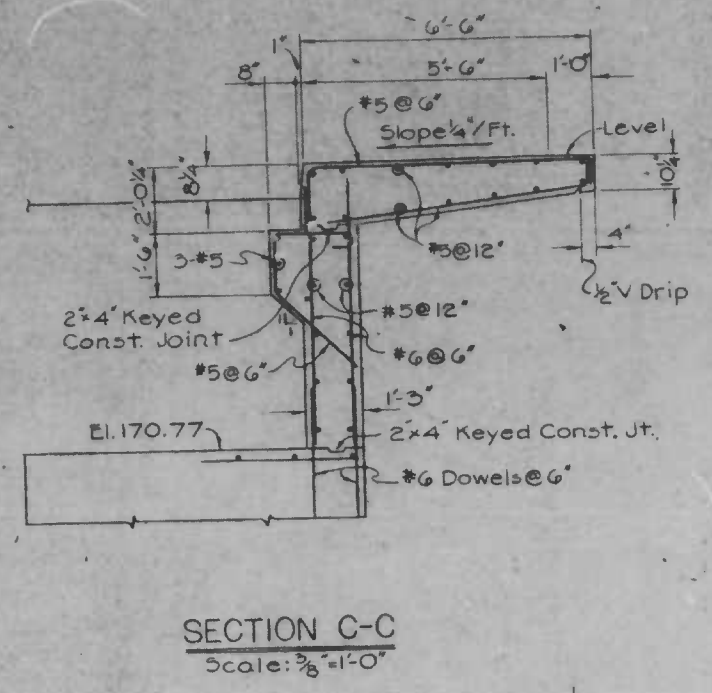
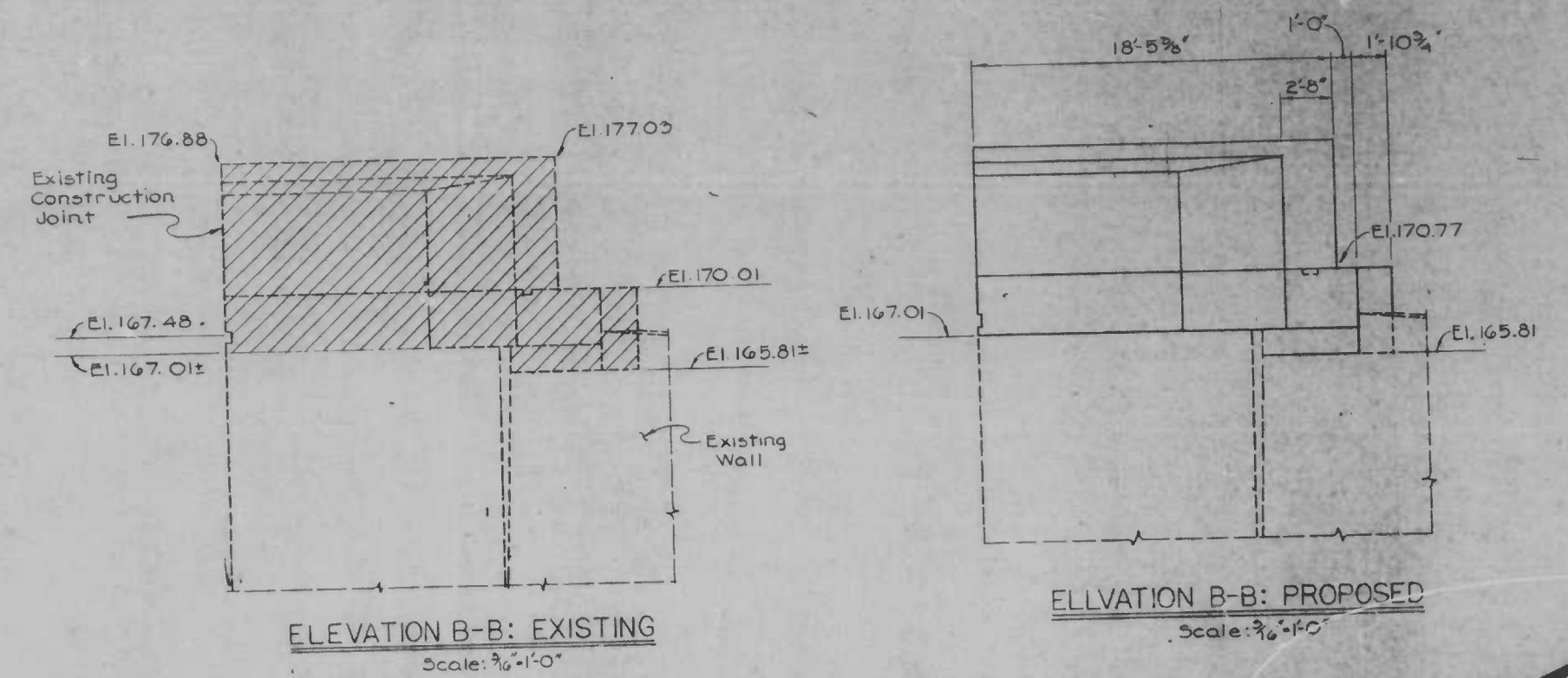
CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL
FINISHED BRIDGE DECK & ELEVATIONS
SCALE As Shown DATE _____
SHEET 6 OF _____

1-15-86
12-4-87
11-9-87
10-23-87
DRAWN BY W.C.P. Jr.
EXAMINED BY _____
KUPFFER & BROWN 8-400

FILE REF.

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REVISIONS		
NO.	DESCRIPTION	DATE BY



WORKING POINT COORDINATES		
W.P.	South	West
'A'	-6158.54	-16002.03
'C'	-6023.41	-15896.84

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING

CONTRACT NO. 3205

REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL

NORTH ABUTMENT PLAN

SCALE: _____ DATE: _____ SHEET 8 OF _____

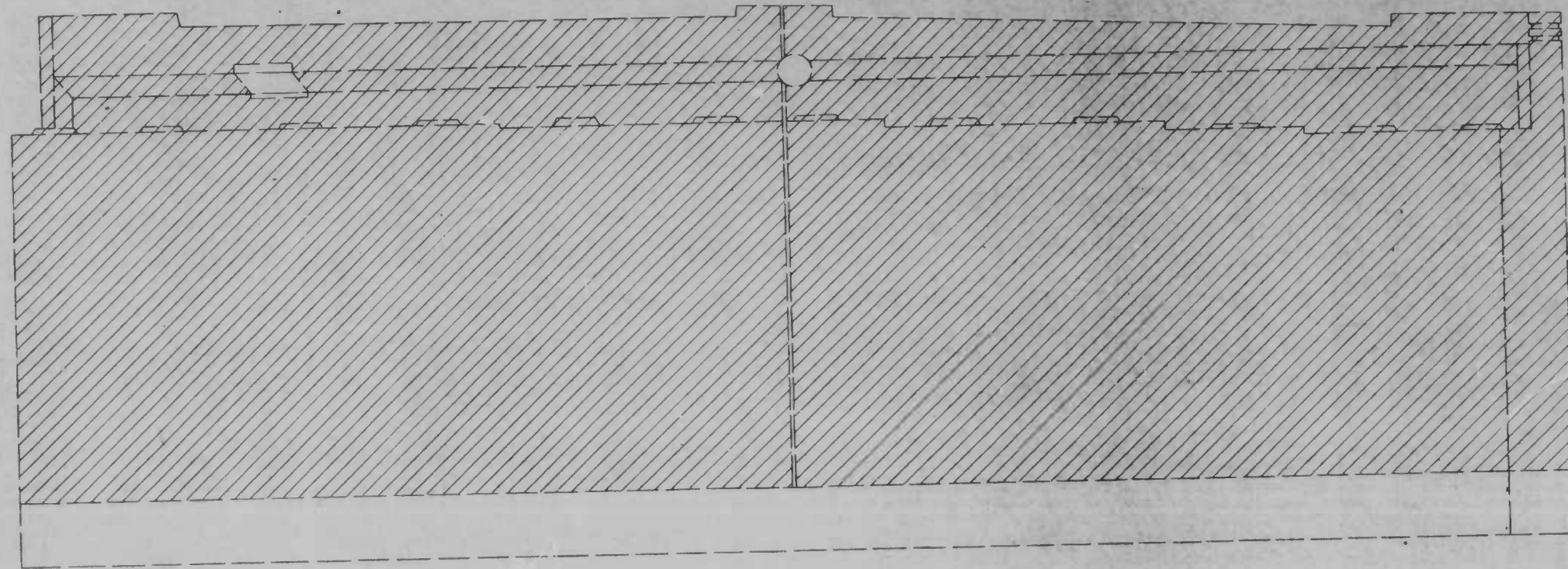
1-18-88
12-4-87

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EXAMINED BY

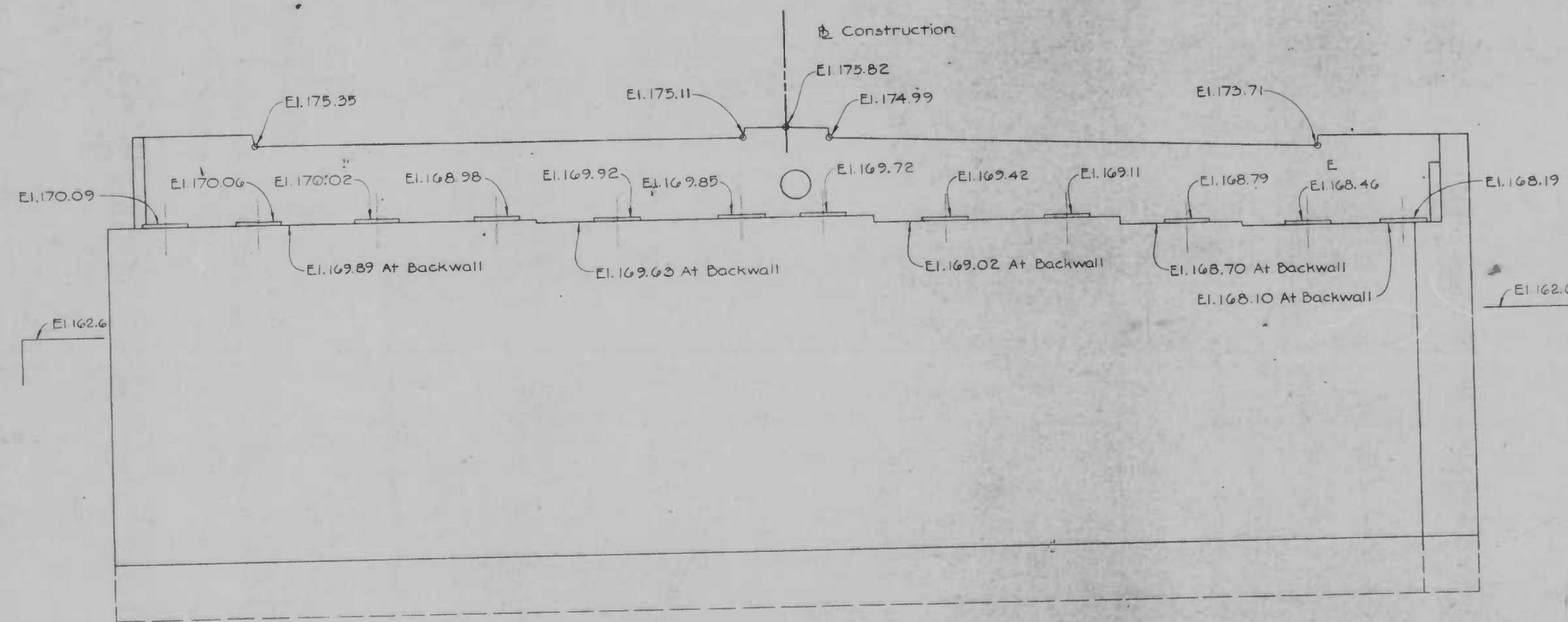
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



ELEVATION - EXISTING SOUTH ABUTMENT
Scale: 3/16" = 1'-0"



ELEVATION - PROPOSED SOUTH ABUTMENT
Scale: 3/16" = 1'-0"

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
HIGHWAY AND BRIDGE ENGINEERING
CONTRACT NO. 3205
REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK & CONRAIL
SOUTH ABUTMENT ELEVATIONS
SCALE: _____ DATE: _____ SHEET 9 OF _____

1-18-88
12-4-87
11-9-87
10-13-87
DRAWN BY
EXAMINED BY
KEUFFEL & ESSER 8-8552

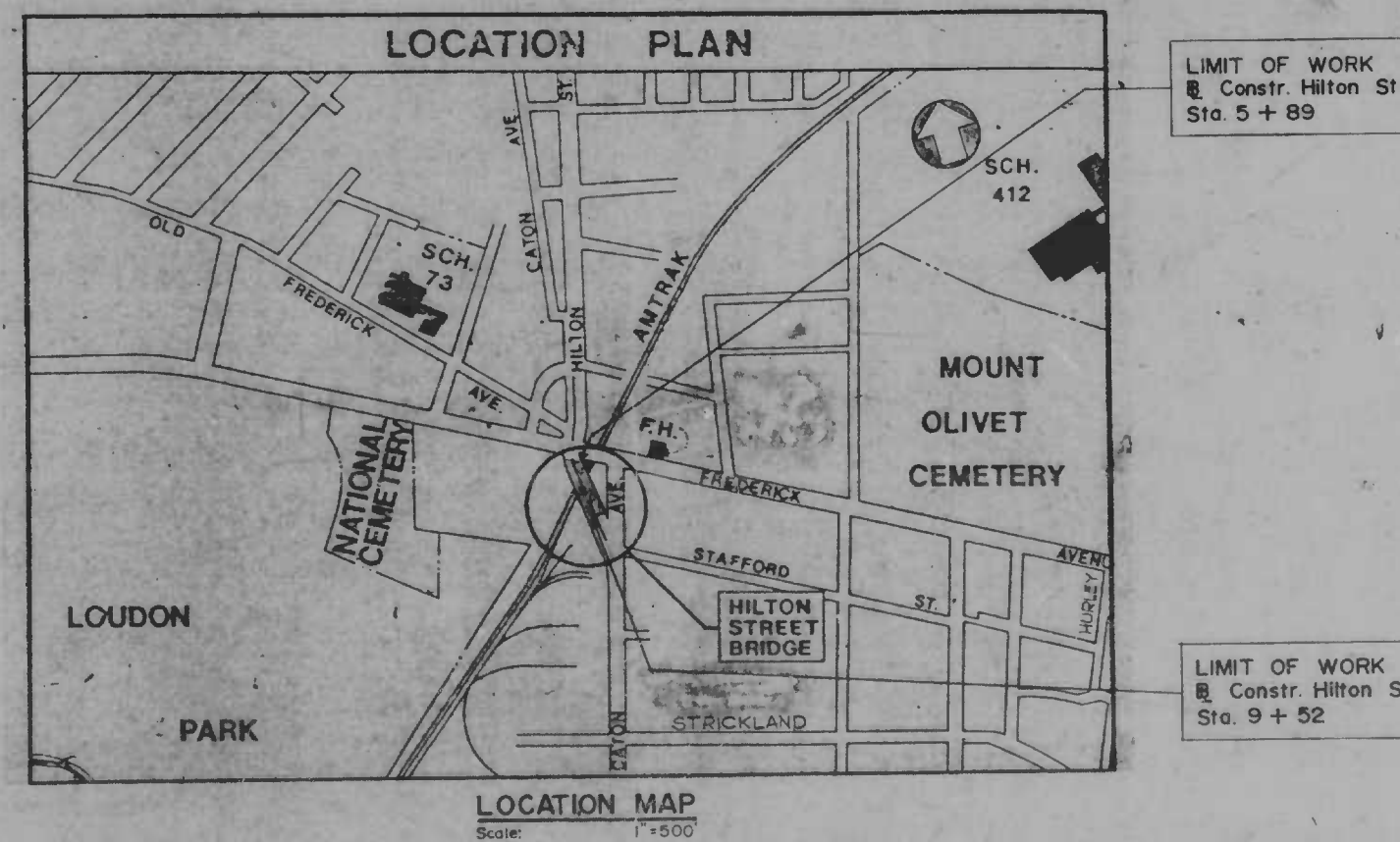
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FED. REGION	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	MD			

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION
AND
STATE HIGHWAY ADMINISTRATION OF MARYLAND
INTERSTATE DIVISION FOR BALTIMORE CITY

REHABILITATION OF THE
HILTON STREET BRIDGE
OVER
AMTRAK AND CONRAIL

FEDERAL AID PROJECT NO. BH-M3009(I)
THE STATE HIGHWAY ADMINISTRATION PROJECT NO. BC 269-7-815
CITY OF BALTIMORE BRIDGE ENGINEERING CONTRACT NO. 3205



SEE COMMENTS DATED 2/3/88
[Signature]

CHECKED BY: DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTE WATER WATER ENGINEERING DIVISION WASTE WATER ENGINEERING DIVISION BUREAU OF CONSTRUCTION MANAGEMENT SURVEY AND RECORDS DIVISION DEPARTMENT OF TRANSPORTATION HIGHWAY AND BRIDGE ENGINEERING BRIDGE ENGINEERING DIVISION HIGHWAY ENGINEERING DIVISION UTILITIES I D B C TRAFFIC AND UTILITY ENGINEERING CONDUIT SEDIMENTATION & EROSION CONTROL STORM DRAINS TRAFFIC ENGINEERING	INITIALS	DATE	PREPARED BY MICHAEL J. WALKLEY Professional Engineer 2 East Wheeling Street, Suite 400 Baltimore, Maryland 21230	CITY OF BALTIMORE DEPARTMENT OF TRANSPORTATION HIGHWAY AND BRIDGE ENGINEERING APPROVAL RECOMMENDED ASSISTANT COMMISSIONER _____ DATE _____ APPROVED _____ DATE _____ COMMISSIONER _____ DATE _____	STATE HIGHWAY ADMINISTRATION OF MARYLAND APPROVAL RECOMMENDED CHIEF, INTERSTATE DIVISION FOR BALTIMORE CITY _____ DATE _____ APPROVED _____ DATE _____ CHIEF ENGINEER _____ DATE _____	U. S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION DIVISION ADMINISTRATOR _____ DATE _____
	_____	_____				

1-19-88
12-4-87
11-9-87
10-11-87