CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
RECONSTRUCTION OF
BARBARA AVENUE
FROM FRANKFORD AVENUE TO DEAD END

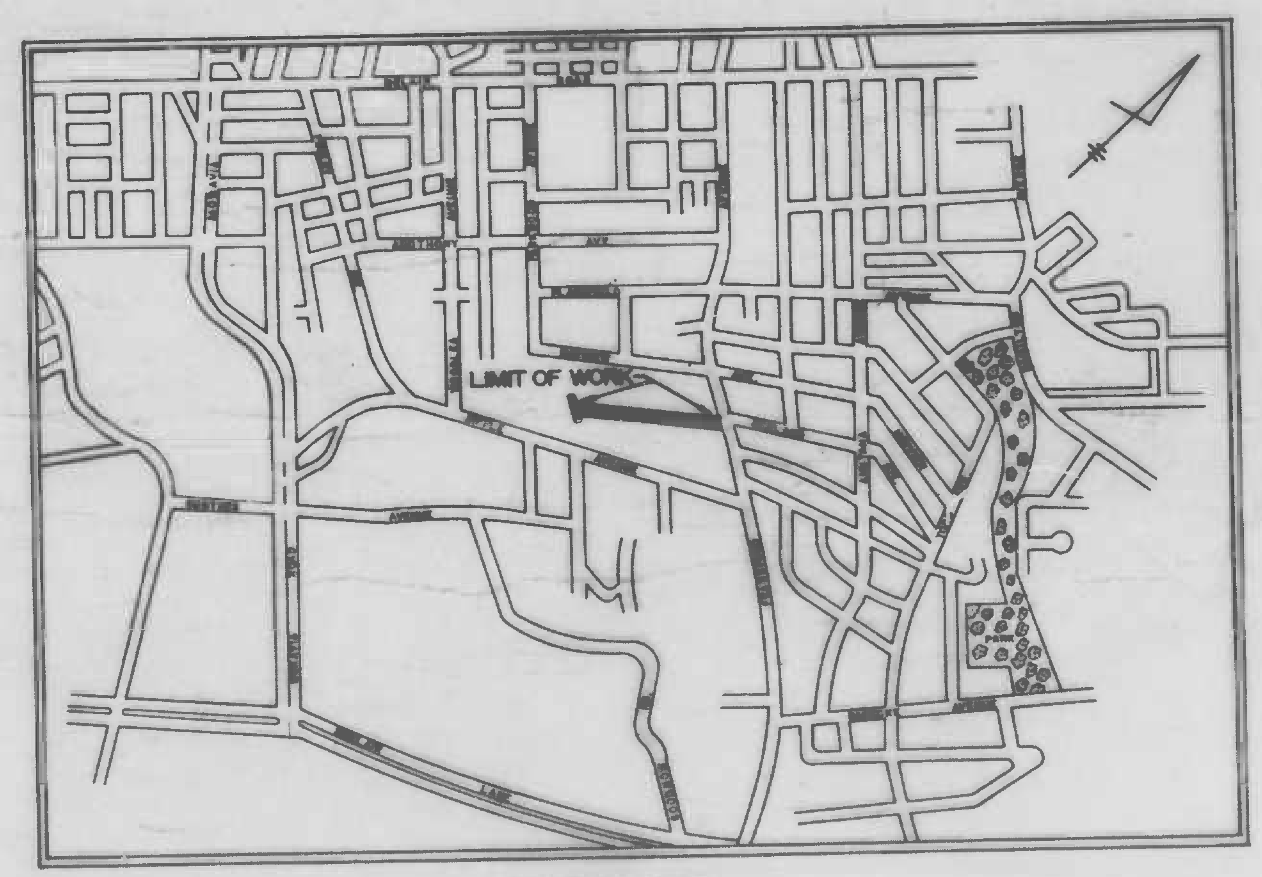
INDEX OF SHEETS

CITY OF BALTIMORE 1797

CITY OF BALTIMORE BUREAU OF HIGHWAYS
CONTRACT NO. 3060

FIELD SURVEY BOOKS	
NO.	DESCRIPTION
L-1149	TOPO & X-SECT. — BARBARA AVENUE
L-1162	TOPO — BARBARA AVENUE

CONT 3060



LOCATION MAP
SCALE: 1"=500'

DEPARTMENT OF PUBLIC WORKS

BUREAU OF HIGHWAYS
APPROVED [signature]
CHIEF, HIGHWAY ENGINEERING DIVISION
APPROVED [signature]
CHIEF, ENVIRONMENTAL SERVICES DIVISION

OFFICE OF TRANSPORTATION
APPROVED [signature]
DIRECTOR OF OFFICE OF TRANSPORTATION

APPROVED [signature]
DIRECTOR OF PUBLIC WORKS

APPROVED [signature]
HEAD, BUREAU OF HIGHWAYS

HURST-ROSCHE ENGINEERS, INC.
CONSULTING ENGINEERS
50 SCOTT ADAM ROAD
SUITE 103
COCKEYSVILLE, MD.

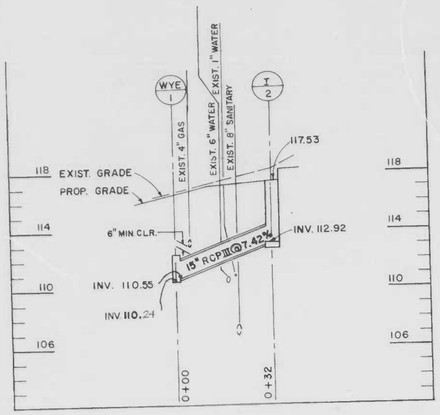
STATE OF MARYLAND PROFESSIONAL ENGINEER
[signature]
WILLIAM K. SMITH P.E. 9414

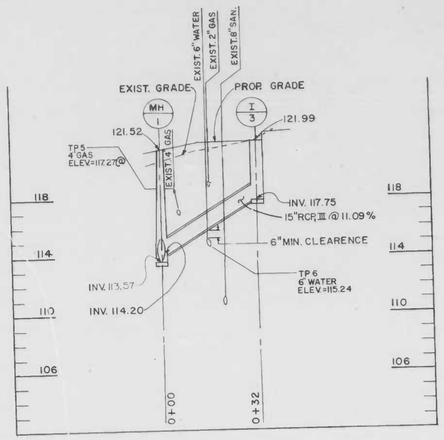
B. OF H. REVIEW	R W RELEASE	GRADE EST.	HIGHWAY DESIGN	STRUCTURAL	DRAINAGE	LIGHTING	CONDUIT	SEDIMENTATION AND EROSION CONTROL	OFFICE OF TRANSPORTATION	WASTE WATER ENGINEERING	WATER ENGINEERING
	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]	[signature]
	4/3/86	4/3/86	4/3/86	4/7/86	4-16-86	4/7/86	4/7/86	4/7/86	4/7/86	4/14/86 4/14/86	4/9/86

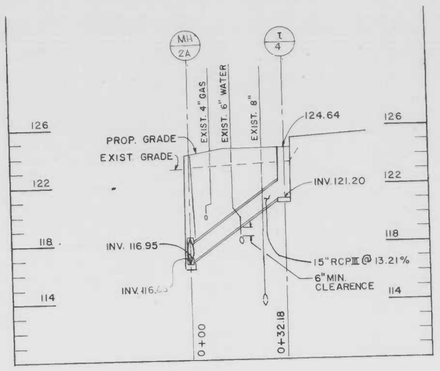
RATIO - 24

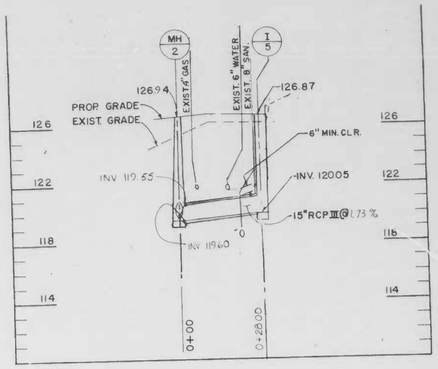
FILE REF. ESD 80-156

REVISIONS			
NO.	DESCRIPTION	DATE	BY









CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
STORM DRAIN - PROFILES

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SCALE: HORIZ. 1"=20', VERT. 1"=4 | DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 | SHEET 10 OF 17

DRAWN BY

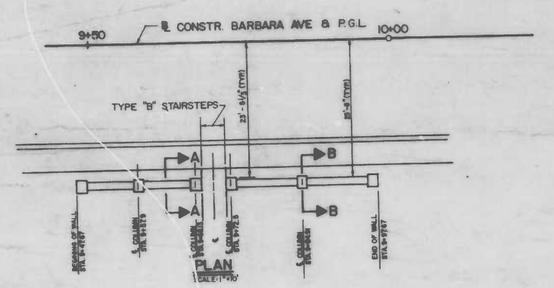
EXAMINED BY

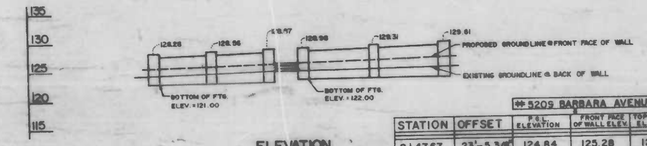
KEUFFEL & ESSER CO.

FILE REF. ESD 80-156

RATIO - 24

FILE REF.





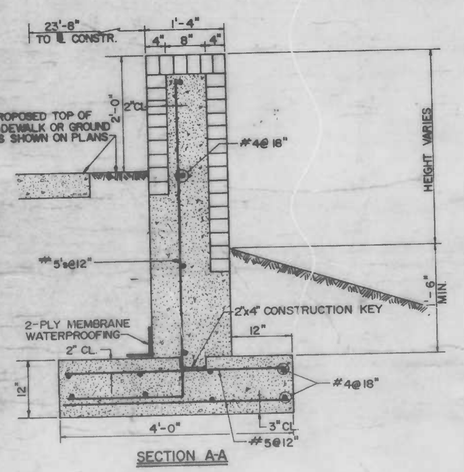
ELEVATION
SCALE: 1"=10'

* ELEVATIONS TAKEN AT GROUND LINE

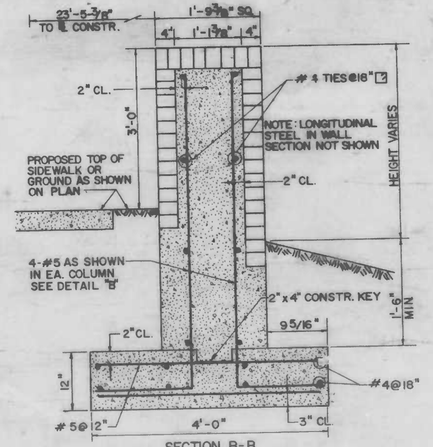
NOTE: CONTRACTOR IS TO MATCH EXISTING WALL IN APPEARANCE AND QUALITY INCLUDING RECESSED AREAS IN BRICK BEFORE EXISTING WALL IS DEMOLISHED. CONTRACTOR SHOULD OBTAIN ALL NECESSARY DIMENSIONS FOR RE-HANGING EXISTING STEEL CHAIN, MATCHING RECESSED AREAS, ETC.

\# 5209 BARBARA AVENUE

STATION	OFFSET	P.G.L. ELEVATION	FRONT FACE OF WALL ELEV.	TOP OF WALL ELEVATION	BACK OF WALL ELEV. (EXIST.)	BOTTOM OF FTG ELEVATION
9+47.67	23'-5 3/8"	124.84	125.28	128.28	123.88	121.00
9+50	23'-8"	124.91	125.35	127.35	124.10	121.00
9+60	23'-8"	125.20	125.64	127.64	124.53	121.00
9+68	23'-5 3/8"	125.42	125.86	128.86	124.65	121.00
9+72	23'-5 3/8"	125.53	125.97	128.97	124.65	122.00
9+80	23'-8"	125.74	126.18	128.18	124.80	122.00
9+90	23'-8"	125.99	126.43	128.43	125.00	122.00
9+95.2	23'-5 3/8"	126.12	126.56	129.56	125.10	122.00



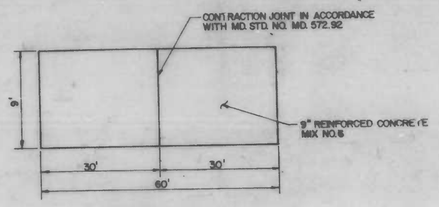
SECTION A-A



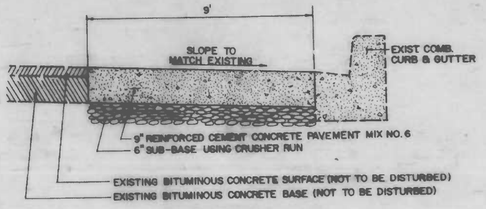
SECTION B-B

NOTE: ALL FOUR FACES OF COLUMN SHALL BE BRICK.

RETAINING WALL DETAILS
SCALE: 1"=1'-0"
\# 5209 BARBARA AVENUE

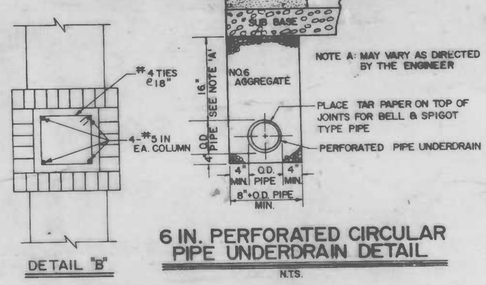


PLAN VIEW



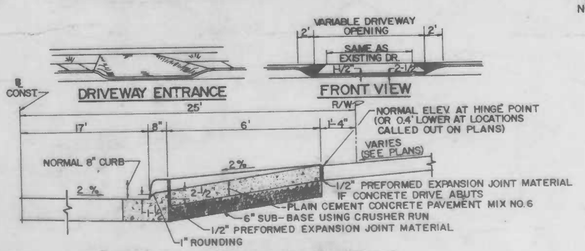
CROSS SECTION

BUS PAD DETAIL
N.T.S.



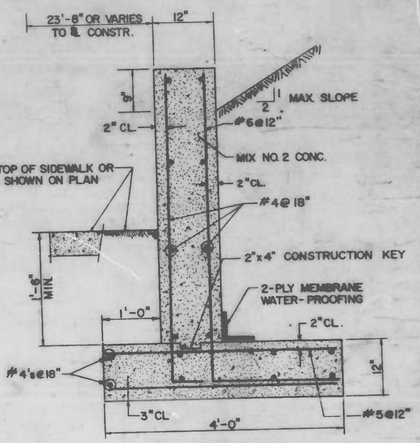
DETAIL "B"

6 IN. PERFORATED CIRCULAR PIPE UNDERDRAIN DETAIL
N.T.S.

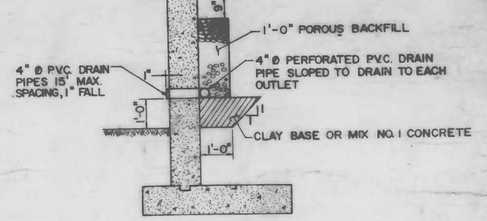


TYPICAL DRIVEWAY DETAILS
N.T.S.

REVISIONS			
NO.	DESCRIPTION	DATE	BY



RETAINING WALL DETAIL
SCALE: 1"=1'-0"
\#'S 5212 & 5300 BARBARA AVENUE, 4801 FRANKFORD AVENUE
SEE SHEET 4 FOR RETAINING WALL PLAN AND ELEVATION



RETAINING WALL DRAINAGE SYSTEM
SCALE: 1/2" = 1'-0"

NOTE: THIS DETAIL APPLIES FOR WALL HEIGHTS EXCEEDING 3.5'.

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

MISCELLANEOUS DETAILS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SCALE: AS SHOWN | DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 | SHEET 3 OF 17

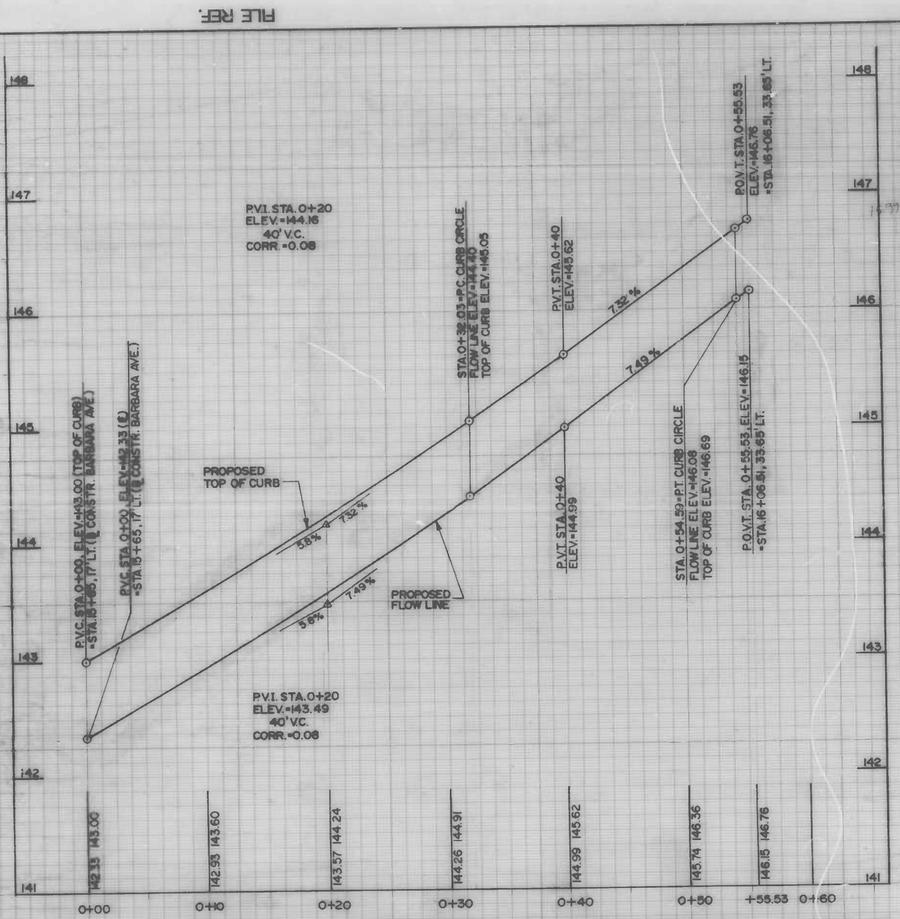
DRAWN BY
EXAMINED BY

KEUFFEL & ESSER 8-0-82

FILE REF.

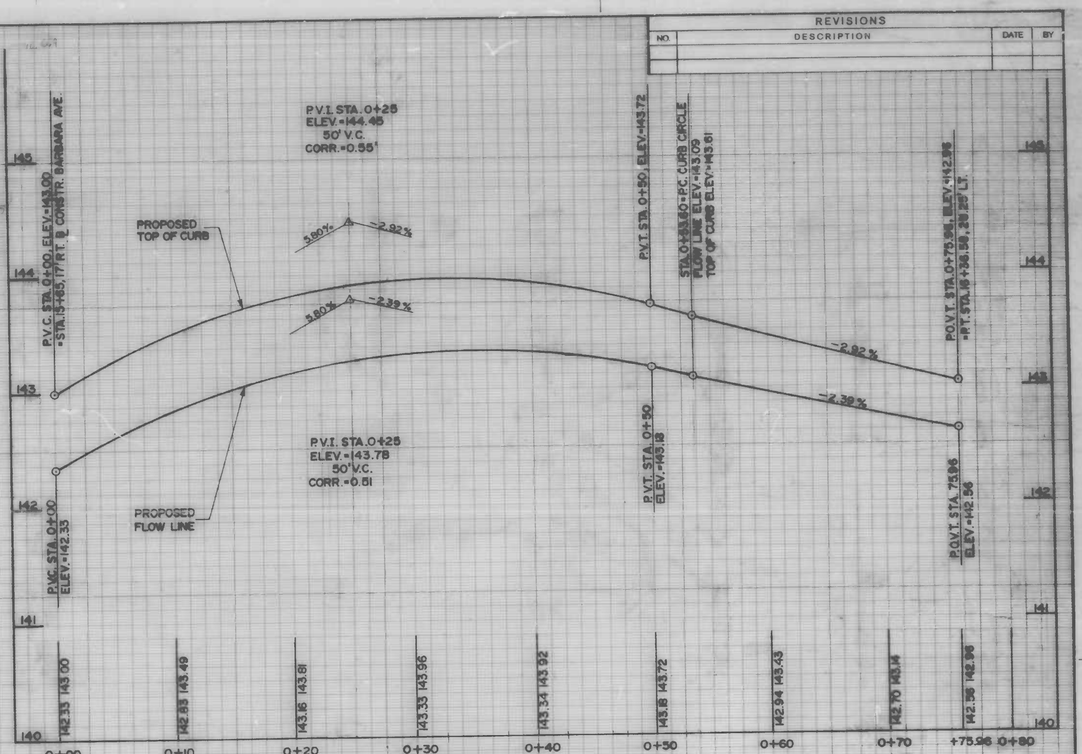
RATIO - 24

FILE REF.



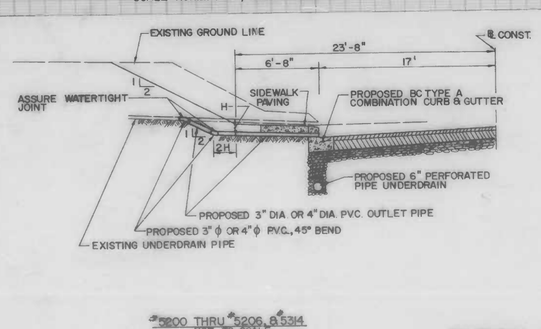
S.W. QUADRANT BARBARA AVENUE & FRANKFORD AVENUE

SCALE: HORIZ.: 1"=5'; VERT.: 1"=0.5'

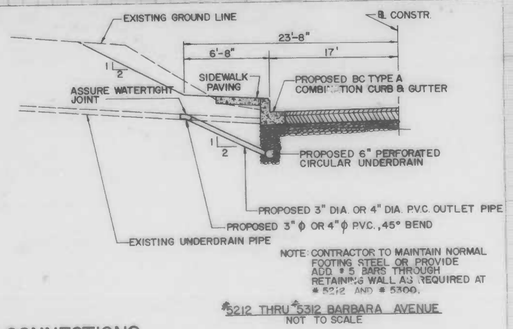


S.E. QUADRANT BARBARA AVENUE & FRANKFORD AVENUE

SCALE: HORIZ.: 1"=5'; VERT.: 1"=0.5'



#5200 THRU #5206 & #5314
NOT TO SCALE



#5212 THRU #5312 BARBARA AVENUE
NOT TO SCALE

TYPICAL UNDERDRAIN OUTLET CONNECTIONS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

CURB CIRCLE PROFILES
& MISCELLANEOUS DETAILS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SCALE: AS SHOWN — DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 — SHEET 5 OF 17

RATIO - 24

FILE REF.

BARBARA AVENUE

REVISIONS			
NO.	DESCRIPTION	DATE	BY

STA. 6+66.92, 18.93' LT.
P.C. STA. 6+80.42, 25.47' LT.
P.T. STA. 6+93.93, 17.00' LT.

INSTALL COMPACTED CR-6 TO LIMITS SHOWN IN STONE DRIVE
DEPRESS CURB FOR LOCAL ACCESS
CONTRATOR SHALL ADJ. INLET TO PROPOSED GRADE.
GUARD RAIL W BEAM END ANCHORAGE.
EXIST. GUARD RAIL TO BE REMOVED
E. 19097.481
N. 12198.836
INSTALL 86 L.F. OF W-BEAM GUARDRAIL FROM STA. 6+63.19' LT. TO STA. 7+09, 35' RT.
GUARD RAIL W-BEAM END ANCHORAGE
STA. 6+94.42, 37.89' RT.
CONSTR. LIMITS
DEPRESS DRIVE BACK OF RAMP 0.4' AT
RESET EXISTING FENCE & GATE TO TOP OF SLOPE
P.T. STA. 7+16.92, 17.00' RT.
P.C. STA. 7+07.96, 31.36' RT.
CONSTRUCT 7" P.C.C. DRIVEWAY APRON STA. 7+31 RT. (DRIVEWAY TO BE CONSTRUCTED BY OWNER @ 18% ±)
PROP R/W LINE
INSTALL TOPSOIL & SOD BETWEEN NEW CONCRETE RIBBONS TO LIMITS SHOWN
INSTALL BIT. CONC BAND B1 FROM BACK OF NEW CONC. RAMP TO LIMITS SHOWN
PROP. RETAINING WALL STA. 9+65.82, 23.67' LT. TO STA. 10+35.54, 23.67' LT. SEE SHT. 3 & 4 FOR DETAILS
RESET EXISTING FENCES & GATES TO BOTTOM OF SLOPE
CONTRACTOR TO CAREFULLY REMOVE, SALVAGE AND RESET EXISTING WOODRAIL FENCE TO THE TOP OF SLOPE.
RESET EXISTING FENCES & GATES TO TOP OF SLOPE
PROPOSED RETAING WALL STA. 9+47.67, 23'-5 3/8" RT. TO STA. 9+97.73, 23'-5 3/8" RT. SEE SHT. 3 FOR DETAILS.
MATCH LINE STA. 11+50 SEE SHEET 7

CROSS REFERENCES	
ITEM	SHEET NO.
MISCELLANEOUS DETAILS	2-4
STORM DRAIN PLAN-PROF.	7-9
UTILITY PLAN	10
EROS. & SED. CONTROL	12,14,15

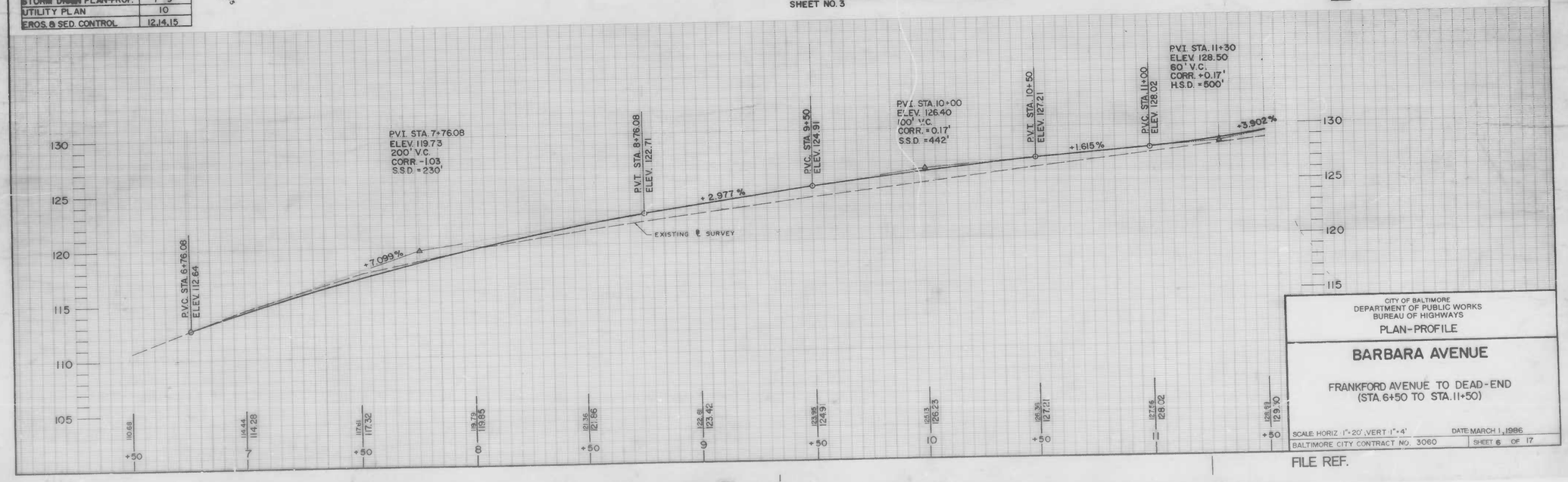
PROPOSED DRIVEWAYS		
LOCATION	WIDTH	GRADE (%)
6+72.5 LT.	8'	15%
8+75.5 LT.	6'	15%
9+02.5 RT.	8'	20%

NOTE: FOR DRIVEWAY CONSTRUCTION SEE DETAIL, SHEET NO. 3

TYPE "B" STAIR-STEPS					
HOUSE NO.	NO. OF RISERS	WIDTH	HOUSE NO.	NO. OF RISERS	WIDTH
5200	10 @ 6"	4.5'	5209	3 @ 6"	4.0'
5201	5 @ 6"	3.0'	5211	5 @ 6"	3.0'
5202	8 @ 6"	4.0'	5212	8 @ 6"	3.5'
5203	9 @ 6"	3.0'	5300	10 @ 6"	3.0'
5204	8 @ 6"	4.5'	5301	5 @ 6"	3.0'
5205	6 @ 6"	3.0'	5302	9 @ 6"	3.5'
5206	6 @ 6"	4.0'	5303	5 @ 6"	3.0'
5207	5 @ 6"	3.0'	5304	7 @ 6"	3.0'
5208	8 @ 6"	4.0'			

LEGEND

- SHRUBBERY TO BE REMOVED
- DENOTES 'CUT'
- DENOTES 'FILL'
- PROP. COMBINATION CURB & GUTTER
- PROP. 7" P.C.C. PAVEMENT, MIX NO. 6
- PROP. 5" SIDEWALK
- PROP. AREA OF 3" BITUMINOUS REMOVAL
- PROP. TYPE "B" STAIR-STEPS WITH COPING & HANDRAIL
- PROP. EXPOSED AGGREGATE PEDESTRIAN RAMP (SEE SHT. 2 FOR DETAILS)
- PROP. DRIVEWAY PAVEMENT (TO BE REPLACED AS NOTED)



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

PLAN-PROFILE

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END
(STA. 6+50 TO STA. 11+50)

SCALE: HORIZ. 1"=20', VERT. 1"=4' | DATE: MARCH 1, 1986
BALTIMORE CITY CONTRACT NO. 3060 | SHEET 6 OF 17

FILE REF.

RATIO - 24

FILE REF.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

EXISTING WALL TO BE REMOVED AND PROPERTY SLOPED AS PER TYPICAL SECTION, EXISTING FENCE TO BE SALVAGED FOR USE BY OWNER

BARBARA AVENUE

ALLEY

FRANKFORD AVENUE

MATCH LINE STA 11+50 SEE SHEET 6

#5305 #5306 #5307 #5308 #5309 #5310 #5311 #5312 #5313 #5314

#4709 #4801

GARAGE

CONSTR. LIMITS

PROP. R/W LINE

EXISTING R/W LINE

℄ CONSTR. ℄ SURVEY & PGL N 58°-24'-10" E

END CURB STA. 16+06.51, 33.65' LT. (@ EXISTING INLET)

PT STA 16+06.92 32.81' LT.

PC STA. 15+97.03 17.00' LT.

END REMOVAL @ CORNER OF EXIST. INLET

END REMOVAL @ P.T.

PT STA 16+36.58, 28.25' RT.

PC STA 16+18.61 17.00' RT.

DEPRESS DRIVE-0.4' AT BACK OF RAMP

PROP. RETAINING WALL STA. 15+29.30 50' RT. TO ℄ STA. 15+22, 23.67' RT. SEE SHT. 3&4 FOR DETAILS

RESET EXISTING FENCE & GATE TO TOP OF SLOPE.

INSTALL COMPACTED CR-6 FROM BACK OF NEW CONC. RAMP TO LIMITS SHOWN

CROSS REFERENCES	
ITEM	SHEET NO.
MISCELLANEOUS DETAILS	2-4
STORM DRAIN PLAN-PROF.	8,9
UTILITY PLAN	11
EROS.& SED. CONTROL	13-15

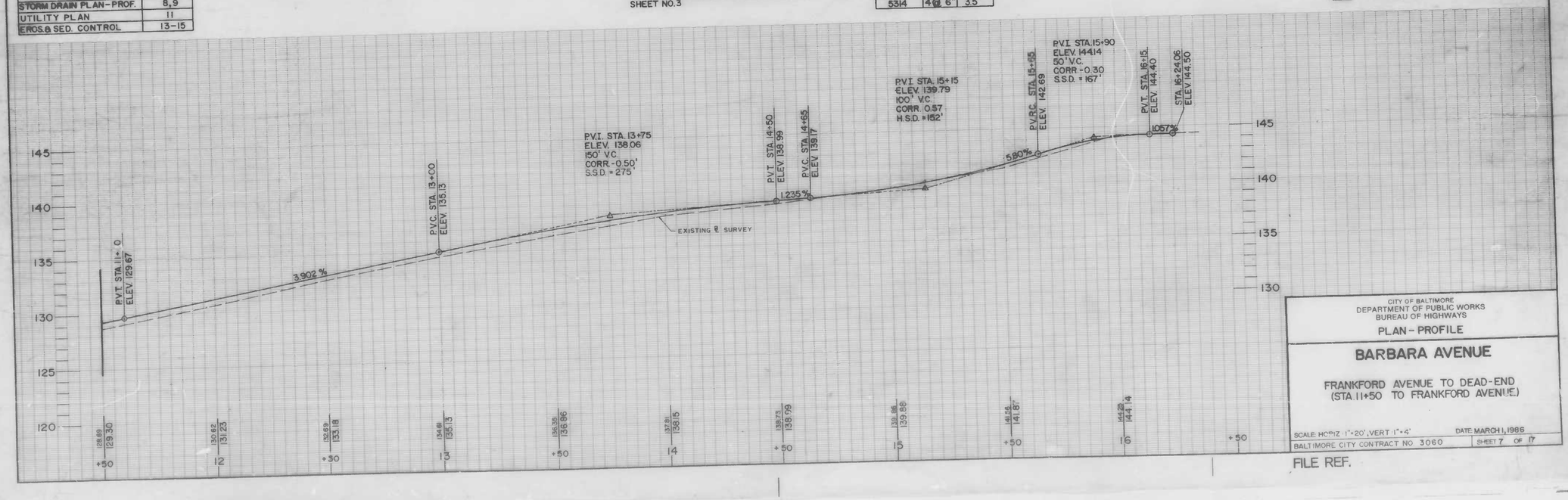
PROPOSED DRIVEWAYS		
LOCATION	WIDTH	GRADE (%)
14+74.5 LT.	24'	10%
15+66 RT.	12'	20%

NOTE: FOR DRIVEWAY CONSTRUCTION SEE DETAIL, SHEET NO.3

TYPE "B" STAIR-STEPS		
HOUSE NO.	NO. OF RISERS	WIDTH
5305	7 @ 6"	3.0'
5306	5 @ 6½"	3.5'
5307	9 @ 6"	3.0'
5308	5 @ 6"	3.0'
5309	11 @ 6"	3.0'
5310	6 @ 6"	3.0'
5311	7 @ 6"	3.0'
5312	4 @ 6"	3.5'
5313	5 @ 6"	3.0'
5314	4 @ 6"	3.5'

LEGEND

- PROPOSED 9" REINF. CONC. BUS PAD MIX NO. 6 (SIZE = 9' x 60')
- SHRUBBERY TO BE REMOVED
- DENOTES 'CUT'
- DENOTES 'FILL'
- PROP. COMBINATION CURB & GUTTER
- PROP. 7" P.C.C. PAVEMENT, MIX NO.6
- PROP. 5" SIDEWALK
- PROP. AREA OF 3" BITUMINOUS REMOVAL
- PROP. TYPE "B" STAIR-STEPS WITH COPING & HANDRAIL
- PROP. EXPOSED AGGREGATE PEDESTRIAN RAMP (SEE SHT. 2 FOR DETAILS)
- PROP. DRIVEWAY PAVEMENT (TO BE REPLACED AS NOTED)



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

PLAN - PROFILE

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END (STA. 11+50 TO FRANKFORD AVENUE)

SCALE: HORIZ. 1"=20', VERT. 1"=4' DATE: MARCH 1, 1986

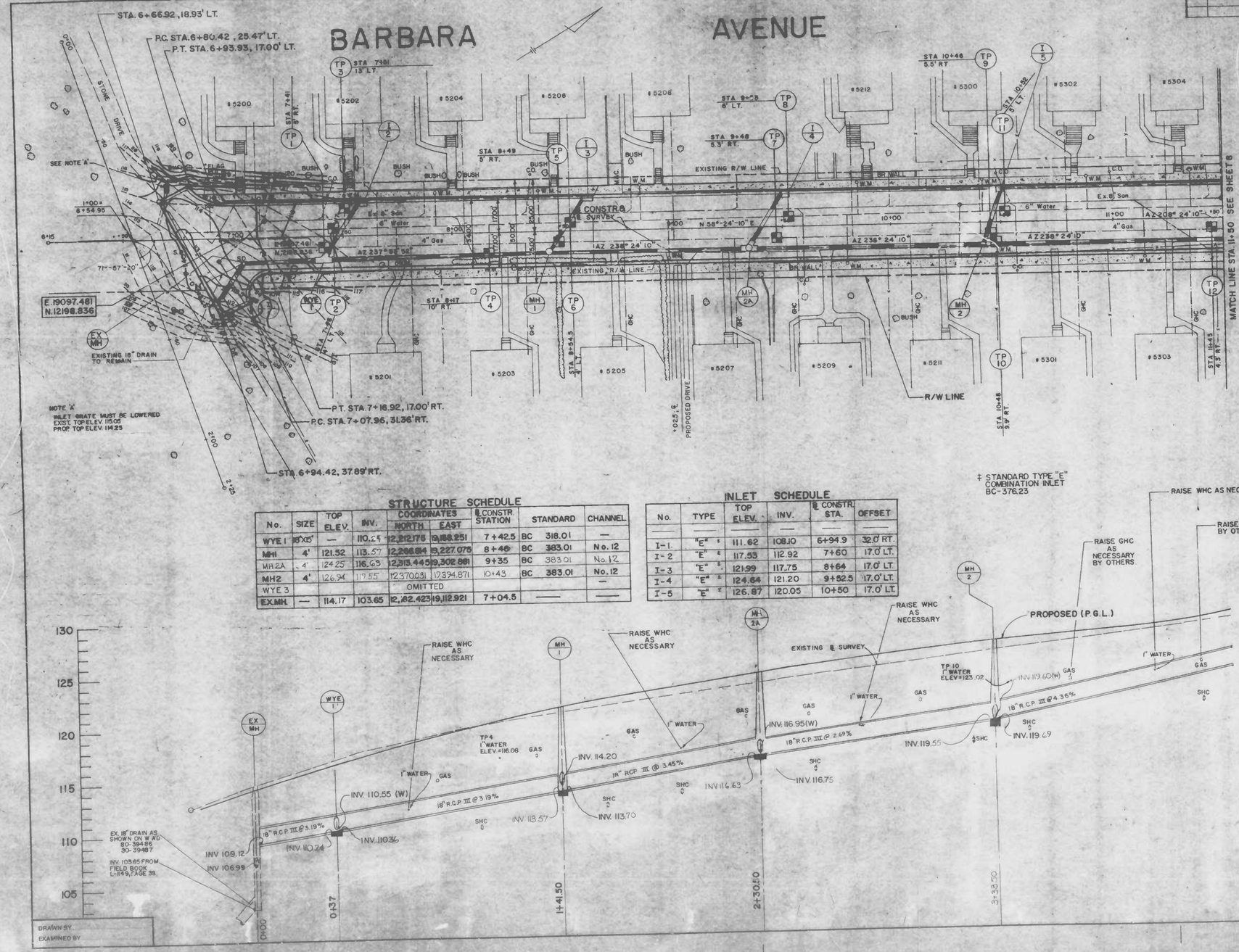
BALTIMORE CITY CONTRACT NO. 3060 SHEET 7 OF 17

FILE REF.

RATIO - 24

FILE REF. ESD 80-154

REVISIONS			
NO.	DESCRIPTION	DATE	BY



STRUCTURE SCHEDULE

No.	SIZE	TOP ELEV.	INV.	COORDINATES NORTH	COORDINATES EAST	℄ CONSTR. STATION	STANDARD	CHANNEL
WYE 1	18"X15"	—	110.24	12,212.175	19,188.251	7+42.5	BC 318.01	—
MH1	4'	121.32	113.57	12,266.84	19,227.076	8+46	BC 383.01	No. 12
MH2A	4'	124.25	116.63	12,313.445	19,302.881	9+35	BC 383.01	No. 12
MH2	4'	126.94	117.55	12,370.031	19,394.871	10+43	BC 383.01	No. 12
WYE 3				OMITTED				—
EX.MH.	—	114.17	103.65	12,162.423	19,112.921	7+04.5	——	——

INLET SCHEDULE

No.	TYPE	TOP ELEV.	INV.	℄ CONSTR. STA.	OFFSET
I-1.	"E" ‡	111.62	108.10	6+94.9	32.0' RT.
I-2	"E" ‡	117.53	112.92	7+60	17.0' LT.
I-3	"E" ‡	121.99	117.75	8+64	17.0' LT.
I-4	"E" ‡	124.64	121.20	9+52.5	17.0' LT.
I-5	"E" ‡	126.87	120.05	10+50	17.0' LT.

‡ STANDARD TYPE "E" COMBINATION INLET BC-376.23

DRAWN BY
EXAMINED BY

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

STORM DRAIN - PLAN PROFILE

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END
(STA. 6+50 TO STA. 11+50)

SCALE: HORZ.: 1"=20', VERT.: 1"=4' | DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 | SHEET 8 OF 17

FILE REF. ESD 80-154

RATIO - 24

FILE REF.

BARBARA AVENUE

CONSTRUCT NEW FIRE HYDRANT IN 2' GRASS AREA BEHIND SIDEWALK. SEE B.C. STANDARD 835.01

STA 6+99.20' LT. INSTALL HAND BOX (HAND BOX SUPPLIED BY CITY)

PROP WOOD POWER POLE & LIGHT TO BE INSTALLED BY OTHERS

EXIST. POWER POLE TO BE RELOCATED BY OTHERS

EXIST. POWER POLE TO BE RELOCATED BY OTHERS - BUSH

EXIST. POWER POLE TO BE RELOCATED BY OTHERS

EXISTING R/W LINE

NEW 3/4" CORP

Ex. 8" San.

8" Water

4" Gas

N 58°-24'-10" E

E 190,974.81
N 12,194.816

INSTALL 43 L.F. OF 2-4" P.V.C. DUCT

STA. 7+17.20' RT. INSTALL HAND BOX (HAND BOX SUPPLIED BY CITY)

PROP R/W LINE

MATCH LINE STA 11+50 SEE SHEET 12

REVISIONS			
NO.	DESCRIPTION	DATE	BY

WATER NOTES

1. NOTIFY BUREAU OF WATER AND WASTE WATER AT 396-3243 ONE (1) WEEK IN ADVANCE OF STARTING WORK.
2. EXISTING VALVES SHALL BE OPERATED BY MAINTENANCE DIVISION FORCES ONLY.
3. WATER SERVICE RELOCATION AND/OR RENEWALS, AND FIRE HYDRANT RELOCATIONS SHALL BE DONE IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS AND BOOK OF STANDARDS.
4. EXISTING WATER SERVICE AND/OR METERS TO BE RELOCATED IN BARBARA AVENUE.

A. RELOCATION OF ONE (1) SINGLE SETTING, 5/8" METER. ITEM 602

B. RELOCATION OF ONE (1) TWIN SETTING, 5/8" METER. ITEM 603

C. RENEWAL OF ONE (1) 3/4" WATER SERVICE, 5/8" METER. ITEM 804

D. RENEWAL OF ONE (1) TWIN SETTING, 1" WATER SERVICE, 5/8" METER. ITEM 805

WATER SERVICE RENEWALS*

ITEM NO.	HOUSE NO.	SIZE SERVICE	METER SIZE
804	5201 **	3/4 IN.	5/8 IN.
805 (TWIN)	5205/5207	1 IN.	5/8 IN.
804	5209 **	3/4 IN.	5/8 IN.
804	5303 **	3/4 IN.	5/8 IN.

**CONTINGENT ITEM

WATER METER RELOCATIONS*

ITEM NO.	HOUSE NO.	SIZE SERVICE	METER SIZE
602	5203	3/4 IN.	5/8 IN.
603(TWIN)	5211/5301	1" IN.	5/8 IN.

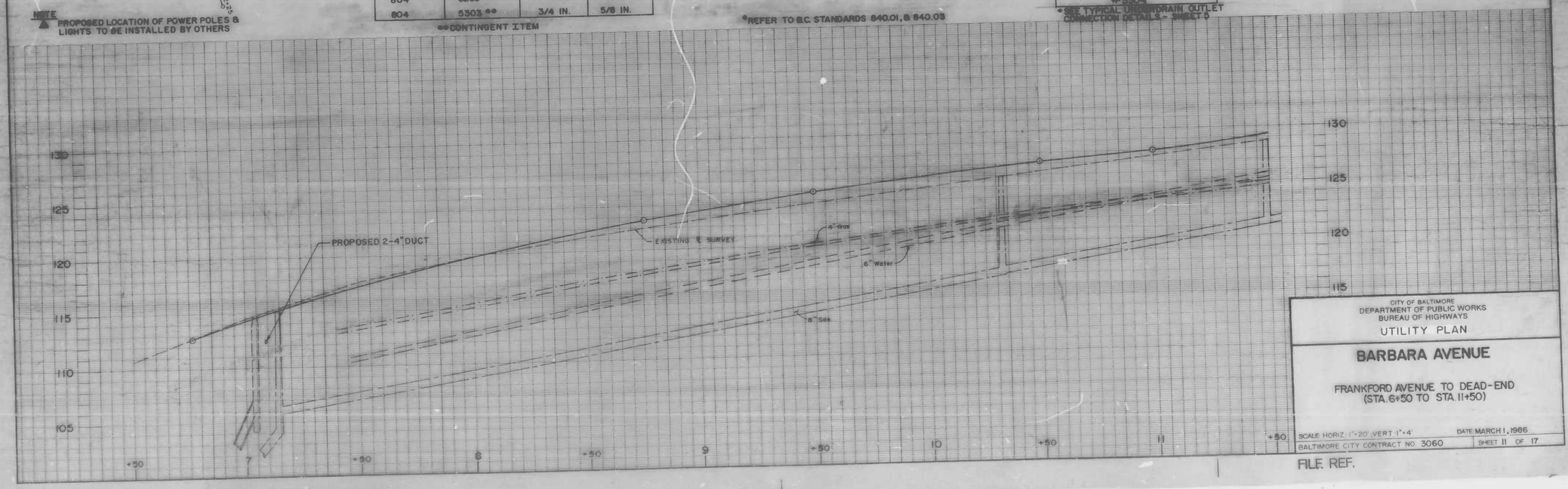
*REFER TO B.C. STANDARDS 840.01, & 840.03

ROOF LEADER CONNECTION USING 3" P.V.C. *

- #5200
- #5202
- #5206
- #5212
- #5300
- #5302
- #5304

* SEE TYPICAL UNDERDRAIN OUTLET CONNECTION DETAILS - SHEET 9

NOTE
▲ PROPOSED LOCATION OF POWER POLES & LIGHTS TO BE INSTALLED BY OTHERS



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

UTILITY PLAN

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END
(STA. 6+50 TO STA. 11+50)

SCALE HORIZ. 1"=20' VERT 1"=4' | DATE MARCH 1, 1986
BALTIMORE CITY CONTRACT NO. 3060 | SHEET 11 OF 17

FILE REF.

FILE REF.

BARBARA AVENUE

FRANKFORD AVENUE

ALLEY

MATCH LINE STA.11+50 SEE SHEET 11

#5306 #5308 #5310 #5312 #5314 #5305 #5307 #5309 #5311 #5313 #4709 #4701

SHOT POWER POLE TO BE RELOCATED BY OTHERS

FROM WOOD POWER POLE 8 LIGHT TO BE INSTALLED BY OTHERS

LAMP POST

EXISTING R/W LINE

PROP. R/W LINE

GARAGE

CONC. DR.

BUSH

BUSHES

SURVEY

NEW 3/4" CORP.

Ex. 8" San.

6" Water

4" Gas

10" Water

8" San.

STA. 15+84.20' LT. INSTALL HAND BOX (HAND BOX SUPPLIED BY CITY)

JST. POWER POLES TO BE RELOCATED BY OTHERS

STA. 16+18, 20' RT. INSTALL HAND BOX (HAND BOX SUPPLIED BY CITY)

INSTALL 46 L.F. OF 2-4" P.V.C. DUCT

CONSTRUCT NEW 6" FIRE HYDRANT BEHIND SIDEWALK IN GRASS AREA SEE B.C. STANDARD 835.01

CONC. WALL

SHRUBS

STONE

DRIVE

GAS

N 19895.051
N 12689.456

W.V. 16+36.39

SHUT OFF DIAGRAM
NO SCALE
NORMAL OPERATING PRESSURE 104
TEST PRESSURE 156

NOTE
▲ PROPOSED LOCATION OF POWER POLES & LIGHTS TO BE INSTALLED BY OTHERS

*REFER TO B.C. STANDARD B.C. 840.01

**CONTINGENT ITEM

REVISIONS

NO.	DESCRIPTION	DATE	BY

WATER NOTES

1. NOTIFY BUREAU OF WATER AND WASTE WATER AT 396-3340 ONE(1) WEEK IN ADVANCE OF STARTING WORK.
2. CONNECTIONS SHALL BE OPERATED BY MAINTENANCE DIVISION FORCES ONLY.
3. WATER SERVICE RELOCATION AND/OR RENEWAL, AND FIRE HYDRANT RELOCATIONS SHALL BE DONE IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS AND BOOK OF STANDARDS.
4. EXISTING WATER SERVICE AND/OR METERS TO BE RELOCATED IN BARBARA AVENUE.
   A. RELOCATION OF TWO (2) DOUBLE SETTINGS, 5/8" METER. ITEM 802
   B. RELOCATION OF ONE (1) TWIN SETTINGS, 5/8" METER. ITEM 803
   C. RENEWAL OF TEN (10) 3/4" WATER SERVICE, 5/8" METER. ITEM 804
   D. RENEWAL OF ONE (1) TWIN SETTING, 1" WATER SERVICE, 5/8" METER. ITEM 805

WATER METER RELOCATIONS*

ITEM NO.	HOUSE NO.	3/4" IN.	5/8" IN.
802	5305	3/4" IN.	5/8" IN.
802	5307	3/4" IN.	5/8" IN.
803	5309	3/4" IN.	5/8" IN.
803	5311	3/4" IN.	5/8" IN.

WATER SERVICE RENEWALS*

ITEM NO.	HOUSE NO.	3/4" IN.	5/8" IN.
804	5310	3/4" IN.	5/8" IN.
804	5314	3/4" IN.	5/8" IN.
804	4709 (FRANKFORD)	3/4" IN.	5/8" IN.
804	5305 **	3/4" IN.	5/8" IN.
804	5307 **	3/4" IN.	5/8" IN.
804	5309 **	3/4" IN.	5/8" IN.
804	5311 **	3/4" IN.	5/8" IN.

ROOF LEADER CONNECTION USING 4" P.V.C.*

#5305
#5309
#5310
#5312
#5314

*SEE TYPICAL UNDERDRAIN OUTLET CONNECTION DETAILS - SHEET 8

145 140 135 130 125 120

+50 12 +50 13 +50 14 +50 15 +50 16 +50

EXISTING ℄ SURVEY

4" Gas

6" Water

PROPOSED 2-4" P.V.C. DUCT

6" San.

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

UTILITY PLAN

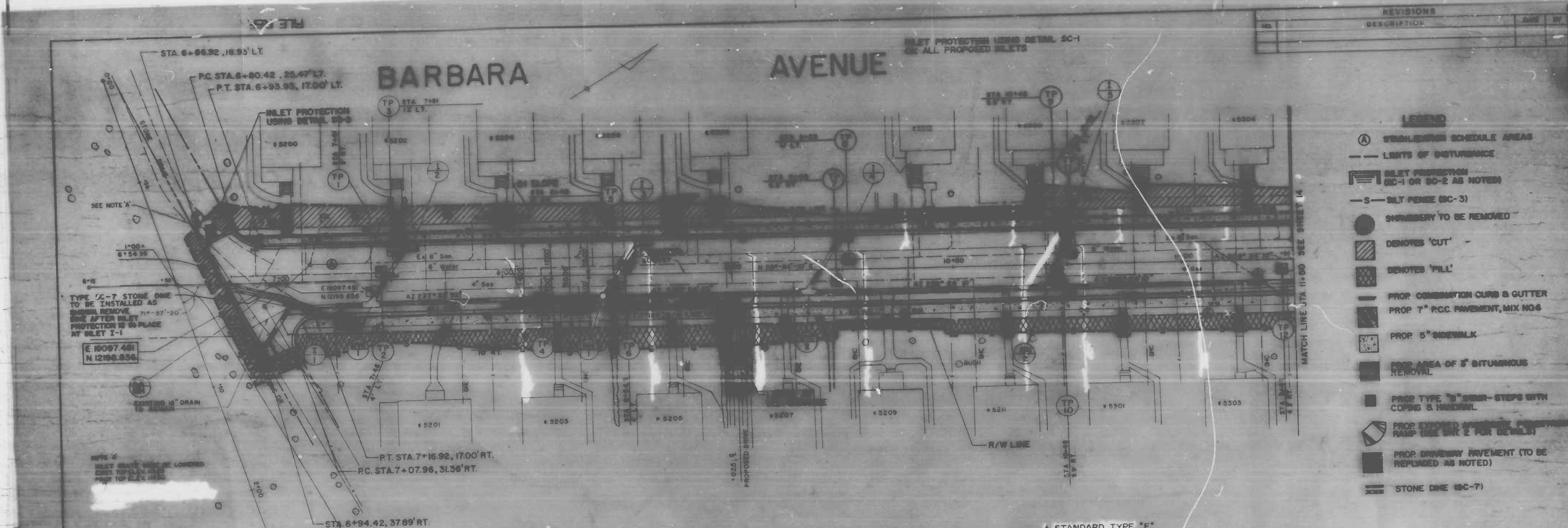
BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END
STA. 11+50 TO FRANKFORD AVENUE)

SCALE HORIZ. 1"=20' VERT 1"=4' DATE MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 SHEET 12 OF 17

FILE REF.



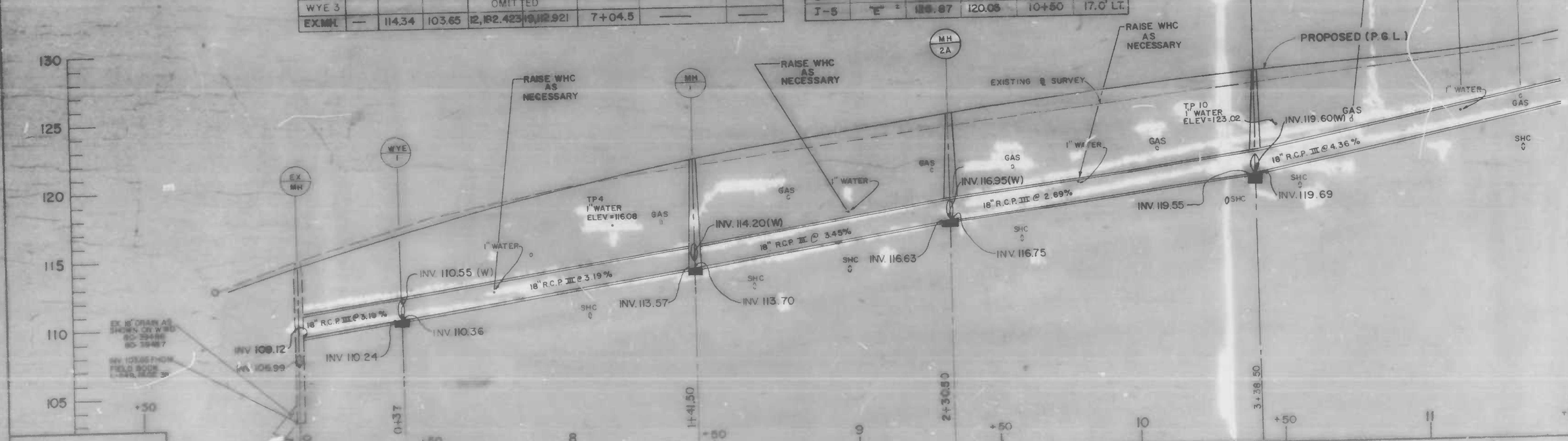
‡ STANDARD TYPE "E" COMBINATION INLET BC-37623

STRUCTURE SCHEDULE

No.	SIZE	TOP ELEV.	INV.	COORDINATES NORTH	COORDINATES EAST	STATION	STANDARD	CHANNEL
WYE I	15"X15"	—	110.24	12,212.175	[illegible]	7+42.5	BC 318.01	—
MH1	4'	121.52	113.57	12,266.84	19,227.075	8+46	BC 383.01	No. 12
MH 2A	4'	124.25	116.63	12,313.445	19,302.881	9+35	BC 383.01	No. 12
MH2	4'	126.94	119.55	12,370.031	19,394.871	10+43	BC 383.01	No. 12
WYE 3				OMITTED				—
EX.MH.	—	114.34	103.65	12,182.423	19,112.921	7+04.5	—	—

INLET SCHEDULE

No.	TYPE	TOP ELEV.	INV.	STA	OFFSET
—	—	—	—	—	—
I-1	"E" ‡	111.62	108.10	6+94.9	32.0' LT
I-2	"E" ‡	117.53	112.92	7+60	17.0' LT.
I-3	"E" ‡	121.99	117.75	8+64	17.0' LT.
I-4	"E" ‡	124.64	116.30	9+52.5	17.0' LT.
I-5	"E" ‡	126.87	120.08	10+50	17.0' LT.



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

EROSION & SEDIMENT CONTROL PLAN

BARBARA AVENUE

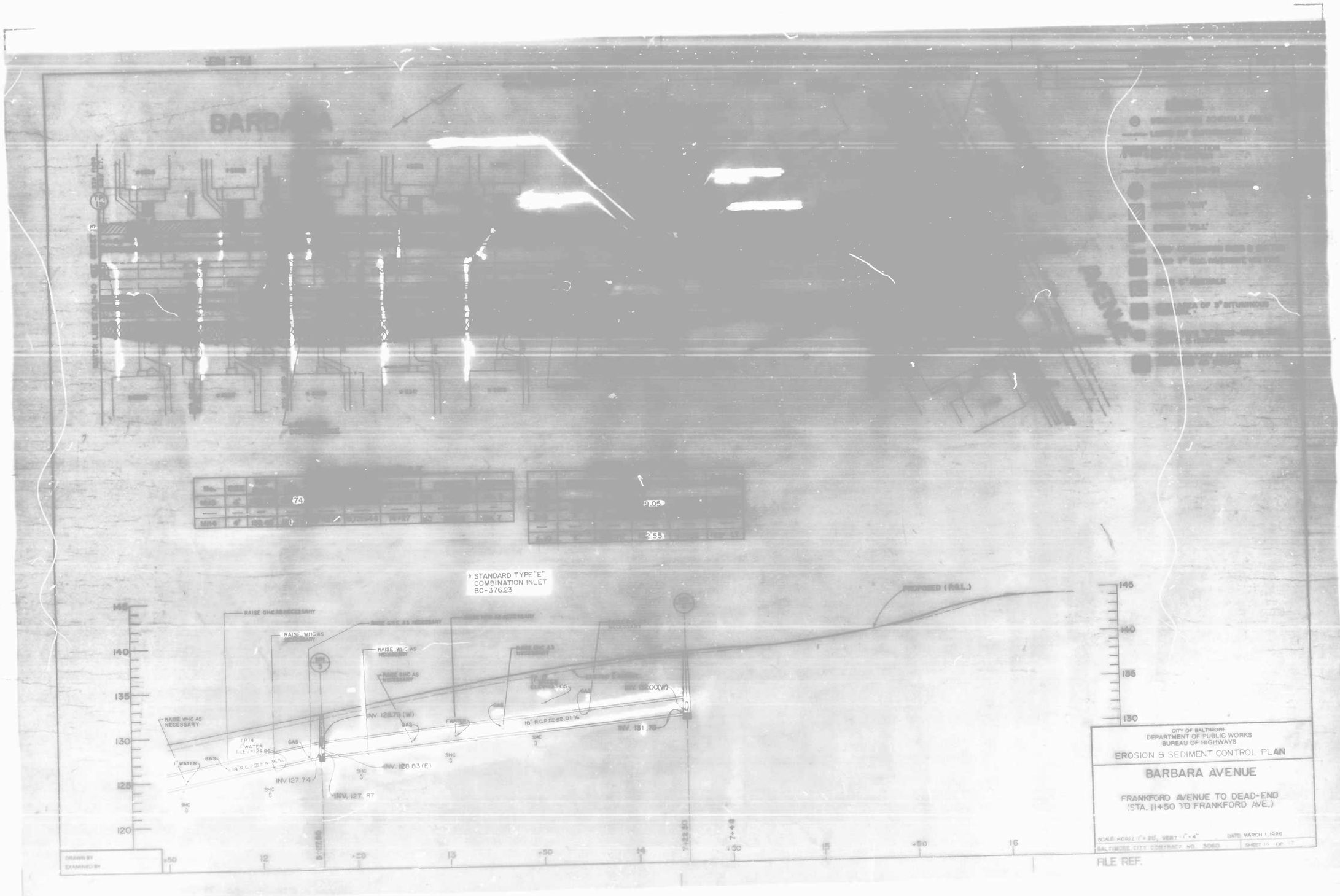
FRANKFORD AVENUE TO DEAD-END
(STA. 6+50 TO STA. 11+50)

SCALE: HORZ. 1"=20', VERT. 1"=4' | DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 | SHEET 13 OF 17

DRAWN BY
EXAMINED BY

FILE REF.


BARBARA
74
49.05
2.55
* STANDARD TYPE "E" COMBINATION INLET BC-376.23
PROPOSED (R&L)
RAISE GHC AS NECESSARY
RAISE WHC AS NECESSARY
RAISE SHC AS NECESSARY
INV. 129.73 (W)
INV. 128.83 (E)
INV. 127.74
INV. 127.87
INV. 131.76
INV. 132.00 (W)
18" R.C.P. III @ 2.01%
18" R.C.P. III @ 4.35%
TP 14
WATER ELEV. = 126.86
1" WATER
GAS
SHC
145
140
135
130
125
120
11+50
12
12+50
13
13+50
14
14+50
15
15+50
16
CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS
EROSION & SEDIMENT CONTROL PLAN
BARBARA AVENUE
FRANKFORD AVENUE TO DEAD-END
(STA. 11+50 TO FRANKFORD AVE.)
SCALE HORIZ. 1"=50', VERT. 1"=4'
DATE: MARCH 1, 1986
BALTIMORE CITY CONTRACT NO. 3060
SHEET 10 OF 17
DRAWN BY
EXAMINED BY
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RATIO - 24

FILE REF.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

STABILIZATION SPECIFICATIONS

TEMPORARY STABILIZATION - ARTICLE [illegible]

Planting Season: Temporary seeding can be done anytime of the year except when the ground is frozen. [illegible] fertilizer, temporary seed and mulch on areas disturbed for more than [illegible]

Schedule of Procedure: The contractor shall provide temporary stabilization as specified in the approved sediment [illegible]

Seedbed Preparation: When the area to be seeded is packed and hard, the top layer of topsoil shall be loosened by [illegible] before seed is applied.

Lime: No lime shall be required for temporary [illegible]

Fertilizer: Commercial fertilizer of an analysis 5-10-5 applied at a rate of 30 pounds per 1000 square feet.

Seeding: (Section 20.20-1) Seed mixture, Annual [illegible] applied at the rate of 3 pounds per 1000 square feet.

Mulching: Applied at the rate of 100 pounds per 1000 square feet. Mulch [illegible] at the rate of 10 gallons per 1000 square feet. The mulch shall be applied by blowing and the asphalt binder material shall be sprayed into the mulch.

PERMANENT STABILIZATION - ARTICLE 36.06

Planting Season: No sod shall be placed between the dates of June 1 and August 15 inclusive nor at anytime when the temperature is below thirty-two (32) degrees fahrenheit. No frozen sod shall be used and no sod shall be placed upon frozen soil.

Sodbed Preparation: Before placing or depositing sod upon any surfaces, all shaping and dressing of such surfaces shall have been completed. The completed areas to be sodded shall present a smooth, uniform, well tilled surface true to line and cross section and any raking required to accomplish this will be done immediately prior to the placing of the sod at no additional cost.

Fertilizers: All areas to be sodded shall be fertilized with a commercial fertilizer of an analysis 10-10-10 and Ureaform fertilizer 38-0-0 applied at the rate of 20 and 5 pounds respectively per 1000 square feet.
NOTE: After sod is in place, topdress the sod with Ureaform fertilizer 38-0-0 at the rate of 5 pounds per 1000 sq.ft.

Lime: Limed at the rate of 100 pounds of ground limestone per 1000 square feet. The lime and the 10-10-10 and 38-0-0 fertilizers shall be worked into the top two (2) inches of soil prior to placing sod.

Seedmixture Grass Sod: (Section 20.[illegible])

TYPE A - Bluegrass Sod

not less than 60% Kentucky Bluegrass
not more than 35% Creeping Red Fescue
not more than 10% other grasses and legumes

TYPE B - Tall Fescue Sod

not less than 80% Tall Fescue
not more than 20% other grasses and legumes

STABILIZATION SCHEDULE					
AREA*	ACTIVE OR INACTIVE	S.F.	TYPE OF STABILIZATION		SEQUENCE**
A	ACTIVE	30,000	TEMP. PERM.	[illegible] BIT. CONCRETE	[illegible] 7
B	ACTIVE	1,800	TEMP. PERM.	CRUSHER RUN BIT. CONCRETE	2 6
C	ACTIVE	12,000	TEMP. PERM.	ANNUAL RYEGRASS CEM. CONCRETE	4 6 & 7
D	ACTIVE	600	TEMP. PERM.	CRUSHER RUN CEM. CONCRETE	4 6
E	ACTIVE/INACTIVE	20,500	TEMP. PERM.	ANNUAL RYEGRASS SOD	4 8

* SEE EROSION AND SEDIMENT CONTROL PLAN, SHEETS 13 & 14 FOR AREA DESIGNATIONS

** SEE SPECIAL PROVISIONS FOR STABILIZATION SEQUENCE

SITE DATA

1. TOTAL DISTURBED AREA = 65,000 S.F.
2. TOTAL CUT = 1,600 C.Y.
3. TOTAL FILL = 800 C.Y.
4. TOTAL CUT/FILL BALANCE RATIO = 800 C.Y.

BALTIMORE CITY SEDIMENT CONTROL

Title [illegible], Code of Maryland and Baltimore City Ordinance [illegible], require that provisions to control erosion and sediment [illegible] As required by State Law, construction cannot be started until such erosion and sediment control provisions are [illegible].

The Contractor [illegible] all requirements of the "Baltimore City [illegible] Standards And Specifications For Soil Erosion and Sediment Control", as distributed and modified by the Baltimore City Sediment Control Section.

Nothing herein relieves the Contractor from complying with any and all other Federal, State or Municipal Regulations.

[illegible]

1. All utilities to be constructed first, prior to any construction on the site.
2. No pumping from foundation excavations will be allowed directly into City system unless it is filtered by way of Sediment Traps or Filter.
3. All excavated material shall be placed on the high side [illegible] in an area where it will not obstruct the natural flow of drainage courses.
4. Continuous inspection and maintenance of all Sediment Control devices will be required.

INSTRUCTIONS

For land disturbing activities it is understood that the following conditions will be met:

A. Grading

1. All disturbed areas shall be protected to control erosion and to prevent sedimentation of adjacent properties, storm sewers and/or streams.
2. Sediment control devices such as: diversion berms, sediment traps, silt fences, vegetative stabilization, etc., shall be used to prevent off-site sedimentation at all times, at every location throughout the site where natural or existing conditions would cause sediment to [illegible] off the site.
3. No proposed cut or fill will exceed three feet in depth (cut) or height (fill) without erosion and sediment controls. Exclusive of excavation for foundations.
4. No fill will be placed on any existing slope steeper than 5:1 without erosion and sediment controls.
5. There will be no final graded slope steeper than 2:1.
6. Borrow and/or spoil material shall not be stockpiled within the limits of this project.
7. All fills will be free of any organic or other deleterious materials and will be compacted. All areas to receive fill will have the ground surface prepared by removing all existing vegetation and root mat.
8. The proposed grading will not impair existing surface drainage, constitute a potential erosion hazard, or source of sedimentation to any adjacent property, drainage way or right-of-way.
9. All points of ingress and egress shall be protected to prevent tracking of mud onto public ways.

B. Stabilization

1. As soon as final grading is completed, all disturbed areas will be stabilized with temporary or permanent mulch, including stone, blacktop, conc. surfacing, etc.
2. For [illegible] adequate mulch, fertilizer and type of seed will be placed to ensure a [illegible] until such growth is established.
3. Timing - Following initial soil disturbances or redisturbances, permanent or temporary stabilization shall be completed within:
   a. Seven calendar days for the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes greater than three horizontal to one vertical (3:1) including all critical areas, and,
   b. Twenty-four (24) hours for disturbed areas such as base repairs, alley returns, curb repairs, bus pads, pedestrian ramps, sidewalks and backfilled utility trenches. Stabilization shall consist of a minimum of 4 inch Graded Aggregate Sub-base and,
   c. Fourteen calendar days for all other disturbed or graded areas.
4. For Details regarding temporary and permanent stabilization practices, reference the "1983 Maryland Standards And Specifications For Soil Erosion And Sediment Control", or contact the Baltimore City Sediment Control Representative.
5. Sediment control devices are to be removed only when prior written approval has been received from the Baltimore City's Sediment Inspector.

CONDITIONS

The Contractor will submit written notification to the Baltimore City Sediment Control Representative at least three working days before starting any grading activities, stating the following:

1. The day he intends to start work
2. The source of all borrow material
3. The designated stockpile area
4. The Contractor's staging area
5. The disposal site for all excess material
6. The construction sequence. If the contractor wishes to change the construction sequence from that on the plans or the specifications*, he will have to submit a set of plans to the City of Baltimore Sediment & Erosion Control Representative for written approval.
7. The completition day of the work

Department of Public Works, Bureau of Highways
Environmental Services Division, Erosion and Sediment Control Section
309 Municipal Building, Baltimore, MD 21202
Phone - (301) 396-3693

* Refer to sheet 17 on the plans or the special conditions in the specifications for the construction sequence

Owners/Developers Certification

"I/We hereby certify that any clearing, grading, construction and/or development will be done pursuant to this plan and that all responsible personnel involved in the construction project will have a certification of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project."

[signature] — Signature Owner/Developer

JAMES A. ZITO — Print Name — 4-3-86 — Date

204 Municipal Bldg — Address

396-4600 — Phone

Engineer's Certification

I certify that this plan for Erosion and Sediment Control represents a practical, workable plan based on personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Baltimore City Erosion and Sediment Control Section.

William K. Smith — Signature — 3/14/86 — Date

William K Smith — Print Name

Cockeysville, Md 21030 — Address

301-683-1683 — Phone

APPROVED BY: ______ EROSION & SEDIMENT CONTROL REPRESENTATIVE

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SOIL EROSION / SEDIMENT CONTROL NOTES

SCALE: NONE — DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 — SHEET 16 OF 17

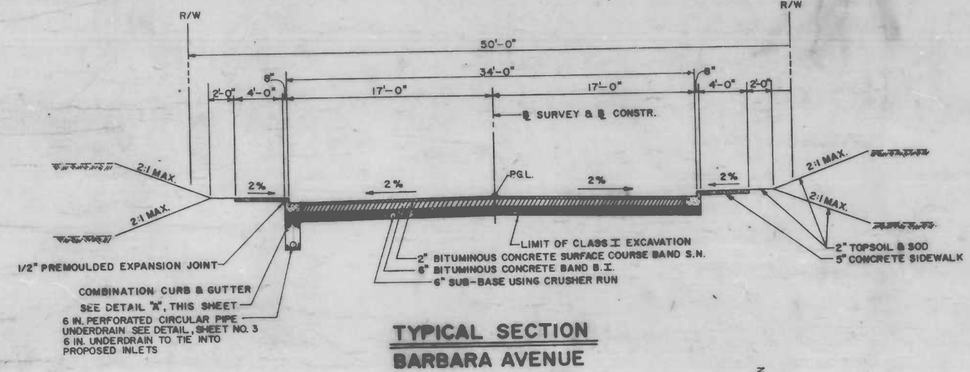
DRAWN BY
EXAMINED BY

FILE REF.

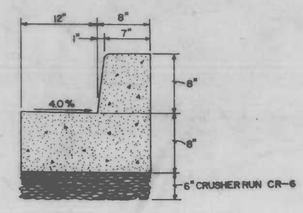
RATIO - 24

FILE REF.

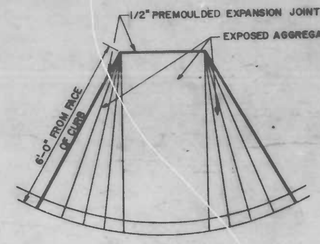
REVISIONS			
NO.	DESCRIPTION	DATE	BY



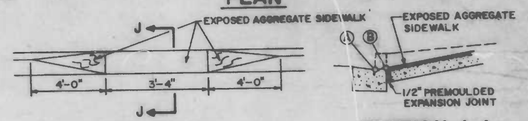
TYPICAL SECTION
BARBARA AVENUE



DETAIL "A"
BC TYPE A COMBINATION CURB & GUTTER-8" CURB, 12" GUTTER PAN



PLAN

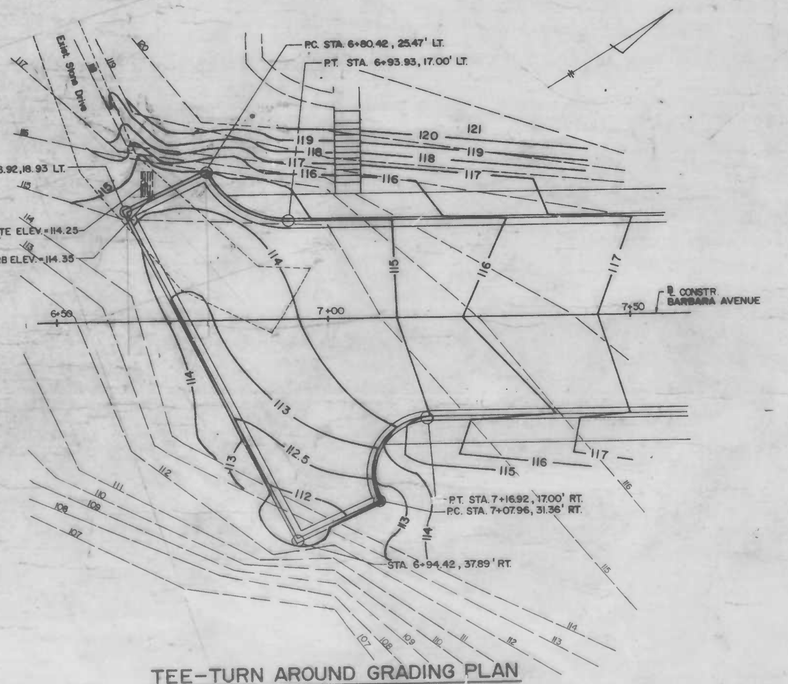


ELEVATION

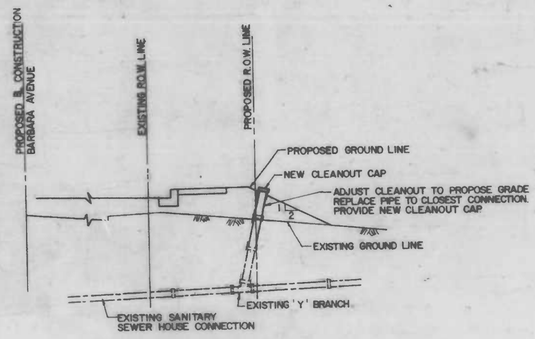
SECTION J-J

PEDESTRIAN RAMP DETAILS

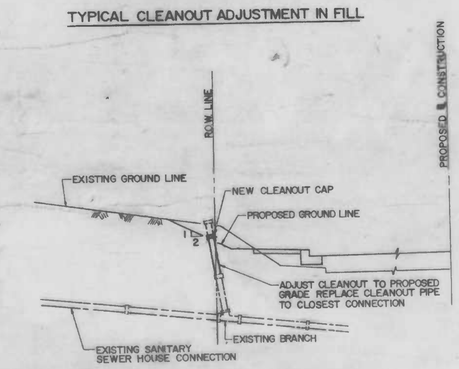
NOTE: WHEN CONSTRUCTING THE CURB CIRCLE IN CONNECTION WITH THE INSTALLATION OF ALL PEDESTRIAN RAMPS; BE SURE TO HAVE THE ELEVATION AT Ⓑ 1" HIGHER THAN Ⓐ.



TEE-TURN AROUND GRADING PLAN
SCALE: 1" = 10'

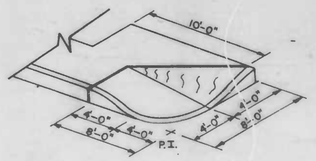


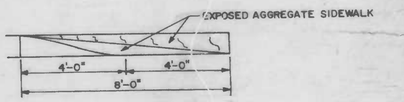
TYPICAL CLEANOUT ADJUSTMENT IN FILL



TYPICAL CLEANOUT ADJUSTMENT IN CUT

SANITARY SEWER CLEANOUT ADJUSTMENT DETAILS





SPECIAL PEDESTRIAN RAMP DETAILS

DRAWN BY
EXAMINED BY

KEUFFEL & ESSER CO.

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

MISCELLANEOUS DETAILS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SCALE NOT TO SCALE — DATE: MARCH 1, 1986

BALTIMORE CITY CONTRACT NO. 3060 — SHEET 2 OF 17

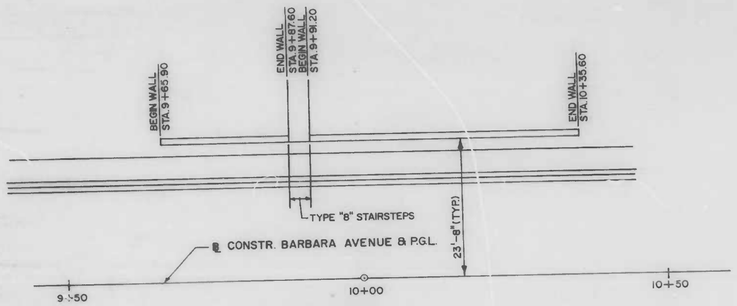
FILE REF.

RATIO - 24

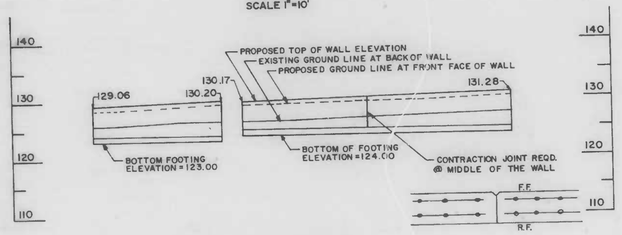
FILE REF.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

5212 / # 5300 BARBARA AVENUE



PLAN
SCALE 1"=10'



ELEVATION
SCALE 1"=10'

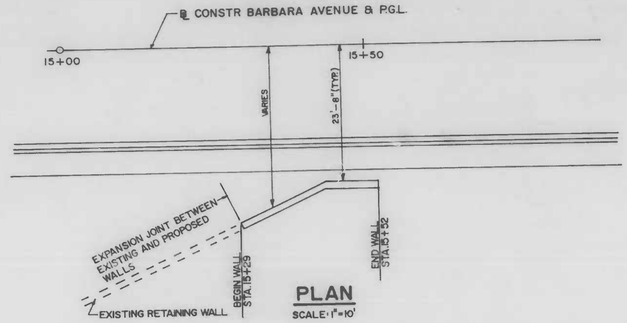
5212 / # 5300 BARBARA AVENUE

* ELEVATIONS TAKEN AT GROUND LINE

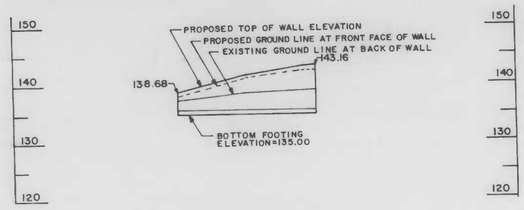
STATION	OFFSET	P.G.L. ELEVATION	* FRONT FACE OF WALL ELEV.	TOP OF WALL ELEVATION	* BACK OF WALL ELEV. EXIST.	BOTTOM OF FTG ELEVATION
9+65.90	23'-8"	125.37	125.81	129.06	128.31	123.00
9+70	23'-8"	125.48	125.92	129.08	128.33	123.00
9+80	23'-8"	125.74	126.18	129.47	128.72	123.00
9+87.60	23'-8"	125.93	126.37	130.20	129.45	123.00
9+91.20	23'-8"	126.02	126.46	130.17	129.42	124.00
10+00	23'-8"	126.23	126.67	130.32	129.57	124.00
10+13	23'-8"	126.48	126.92	130.52	129.77	124.00
10+20	23'-8"	126.66	127.10	130.67	129.92	124.00
10+35.60	23'-8"	126.96	127.40	131.28	130.53	124.00

NOTE: SEE SHEET 3 FOR RETAINING WALL DETAILS.

4801 FRANKFORD AVENUE



PLAN
SCALE: 1"=10'



ELEVATION
SCALE: 1"=10'

4801 FRANKFORD AVENUE

* ELEVATIONS TAKEN AT GROUND LINE

STATION	OFFSET	P.G.L. ELEVATION	* FRONT FACE OF WALL ELEV.	TOP OF WALL ELEVATION	* BACK OF WALL ELEV. (EXIST.)	BOTTOM OF FTG ELEVATION
15+29	30.50' RT.	140.90	137.93	138.68	137.40	135.00
15+40	25.13' RT.	141.38	141.09	141.84	133.7	135.00
15+50	23.67' RT.	141.87	142.31	143.06	138.97	135.00
15+52	23.67' RT.	141.97	142.41	143.16	139.01	135.00

NOTE: SEE SHEET 3 FOR RETAINING WALL DETAILS.

RETAINING WALL DETAILS

DRAWN BY
EXAMINED BY

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

MISCELLANEOUS DETAILS

BARBARA AVENUE

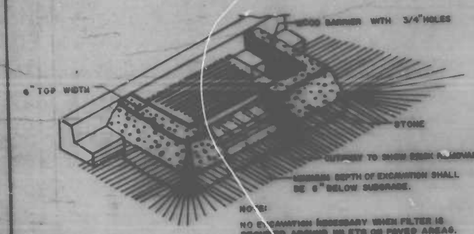
FRANKFORD AVENUE TO DEAD-END

SCALE: AS SHOWN
DATE: MARCH 1, 1986
BALTIMORE CITY CONTRACT NO. 3060
SHEET 4 OF 17

FILE REF.

RATIO - 24

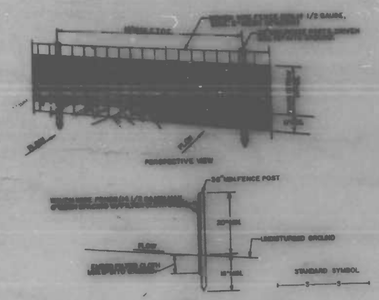
FILE REF.



CONSTRUCTION SPECIFICATIONS

1. Subgrade shall be suspended after each storm and repairs made as needed.
2. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
3. The structure shall be removed when drainage area has been properly stabilized.
4. The crushed stone used in the outlet shall meet AASHTO Designation M80 size no. 1 or 24 or the combined mix such as MSHA no. 2. Gravel meeting the above gradation may be used if crushed stone is not available. Concrete shall be non-reinforced.

INLET PROTECTION
DETAIL SC-1

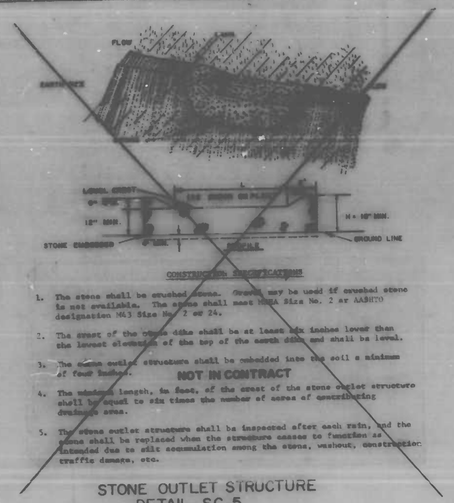


SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven Wire Fence to be fastened securely to fence posts with wire ties or staple. — POSTS: Steel either T or U Type or 2" Hardwood
2. Filter Cloth to be fastened securely to Woven Wire Fence with ties spaced every 24" at top and mid section — FENCE: Woven Wire, 14½ Ga. 6" Max Mesh opening
3. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded. — FILTER CLOTH: Filter X, Mirafi 100X, stabilinka T140N or Approved equal
4. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence. — PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR Equal

SILT FENCE
DETAIL SC-3

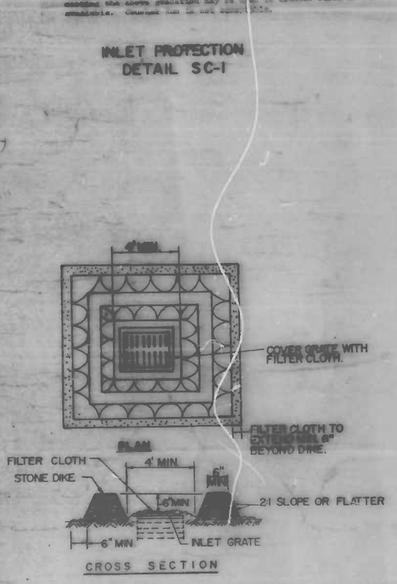


CONSTRUCTION SPECIFICATIONS

1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA Size No. 2 or AASHTO designation M43 Size No. 2 or 24.
2. The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of four inches.
4. The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
5. The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.

NOT IN CONTRACT

STONE OUTLET STRUCTURE
DETAIL SC-5

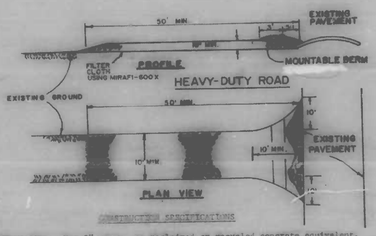


CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. Stone for the Dike shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA size no. 1 or AASHTO designation M-43 size no. 2 or 24. Crusher Run is not acceptable.
2. Filter Cloth Shall be Poly-Filter X or approved equal.
3. The structure shall be inspected after each rain and repairs made as needed.

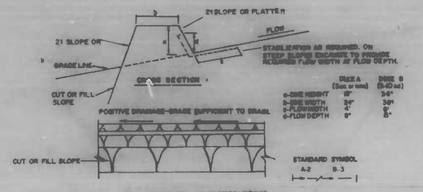
INLET PROTECTION
DETAIL SC-2



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than ten (10) inches.
4. Width - Ten (10) feet minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - MIRAFI-600X will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be required.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE
DETAIL SC-4



CONSTRUCTION SPECIFICATIONS

1. All Earth Dikes shall be compacted by earth moving equipment.
2. All Dikes shall have positive drainage to an outlet.
3. Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
4. Field location should be adjusted as needed to utilize a stabilized, safe outlet.
5. Dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment basin where either the Dike channel or the drainage area above the Dike are not adequately stabilized.
6. Stabilization shall be: (a) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season. (b) Flow channel as per the chart below. Stone Dike need not be stabilized.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5-3.0%	Seed and Straw Mulch	Seed and Straw Mulch
2	3.1-5.0%	Seed and Straw Mulch	Seed using Jute, or Excelsior. Sod: 2" Stone
3	5.1-8.0%	Seed with Jute, or Sod: 2" Stone	Lined Rip-Rap 4-8"
4	8.1-20%	Lined Rip-Rap 4-8"	Engineering Design

A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.
B. Rip-Rap to be 4-8 inches in a layer at least 8 inches thickness and pressed into the soil.
C. Approved equivalents can be substituted for any of the above materials.
D. Periodic inspection and required maintenance must be provided after each rain event.

EARTH / STONE DIKE
DETAIL SC-6/DETAIL SC-7

REVISIONS			
NO.	DESCRIPTION	DATE	BY

LEGEND

- LIMITS OF DISTURBANCE
- INLET PROTECTION (SC-1 OR SC-2 AS NOTED)
- SILT FENCE (SC-3)
- STABILIZED CONSTRUCTION ENTRANCE (SC-4)
- ~~STONE OUTLET STRUCTURE (SC-5)~~ N.I.C.
- EARTH/STONE DIKE (SC-6 OR SC-7 AS NOTED)
- ~~STOCKPILE AREA~~ N.I.C.
- ~~SUMP PIT (SP-1)~~ N.I.C.
- ~~SEDIMENT TRAP (CT II)~~ N.I.C.
- ~~CHECK DAM~~ N.I.C.
- ~~CONTRACTOR STAGING AREA~~ N.I.C.
- ~~INSTREAM SEDIMENT TRAP (SC-8)~~ N.I.C.

NO STAGING AREAS OR STOCKPILING OF MATERIALS WILL BE PERMITTED ON THIS PROJECT.

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SOIL EROSION / SEDIMENT CONTROL DETAILS

SCALE: NO SCALE — DATE: MARCH 1, 1986

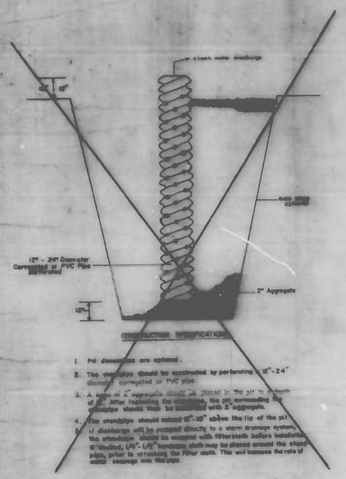
BALTIMORE CITY CONTRACT NO 3060 — SHEET 15 OF 17

DRAWN BY A. MOSCATO
EXAMINED BY

KEUFFEL & ESSER, D-5500

FILE REF.

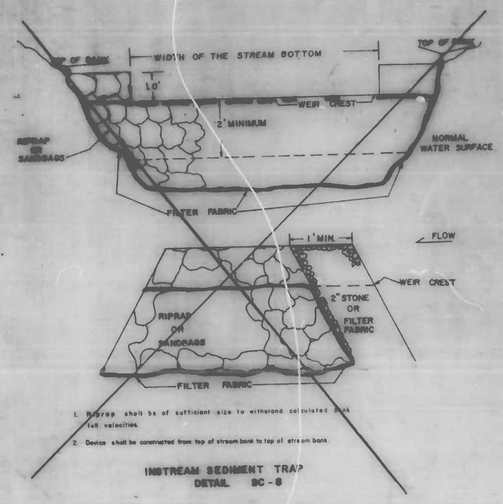
RATIO - 24



1. Pit dimensions are optional.
2. The standpipe should be constructed by perforating 12"-24" diameter corrugated or PVC pipe.
3. A layer of 2" aggregate should be placed in the pit to a depth of 12". After backfilling the excavation, the pit surrounding the standpipe should then be backfilled with 2" aggregate.
4. The standpipe should extend 12"-18" above the top of the pit.
5. If discharge will be pumped directly to a storm drainage system, the standpipe should be wrapped with filtercloth before backfilling. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe, prior to attaching the filter cloth. This will increase the rate of water seepage into the pipe.

SUMP PIT
DETAIL SP-1

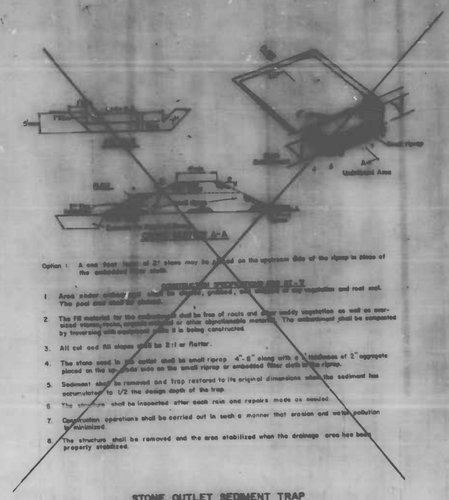
NOT IN CONTRACT



1. Riprap shall be of sufficient size to withstand calculated stream velocities.
2. Device shall be constructed from top of stream bank to top of stream bank.

INSTREAM SEDIMENT TRAP
DETAIL SC-6

NOT IN CONTRACT



Option 1: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

1. Area under embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a mixture of 2" aggregate placed on the upside and on the small riprap or embedded filter cloth on the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP
DETAIL ST X

NOT IN CONTRACT

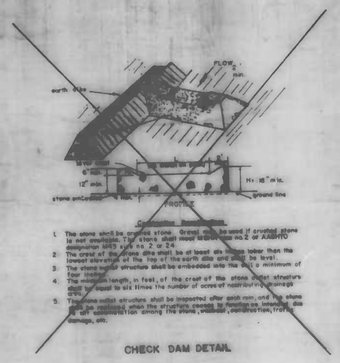
X	Y (MAX)
2	20'
3	30'
4	40'

SLOPE EXTRA WIDTH SECTION

Seeding Specifications

1. All graded or disturbed areas including slopes shall be protected during seeding and construction in accordance with this approved sediment control plan until they are permanently stabilized.
2. All sediment control practices and measures shall be constructed, applied and maintained in accordance with the approved sediment control plan etc. the 1973 Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas.
3. Topsoil specified for the establishment of vegetation shall be applied to an amount necessary to complete finished grading of all exposed areas.
4. Areas to be seeded shall be scarified, seedbed and stripped of topsoil to remove trash, vegetation, roots or other objectionable material.
5. Areas which are to be topsoiled shall be scarified to a minimum depth of three inches prior to placement of topsoil.
6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, etc., shall be compacted in accordance with local requirements or codes.
7. All fill to be placed and compacted in layers not to exceed 9 inches in thickness.
8. Except for approved conditions, fill material shall be free of trash, rubbish, debris, logs, stumps, building debris and other objectionable materials that would interfere with or prevent construction of satisfactory fills.
9. Frozen materials or soft, mucky or highly compressible materials shall not be incorporated into fills.
10. Fill shall not be placed on a frozen foundation.
11. All benches shall be kept free of sediment during all phases of development.
12. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specifications for Subsurface Drain or other approved method.
13. All graded areas shall be permanently stabilized immediately following finished grading.
14. Stockpiles, borrow areas and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

LAND GRADING
DETAIL LG-1



Construction Specifications

1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet specifications no. 2 or AASHTO designation M43 size no. 2 or 24.
2. The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of four inches.
4. The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
5. The stone outlet structure shall be inspected after each rain, and any stone that are displaced when the structure ceases to function are immediately due to soil undermining among the stone, improper construction, traffic damage, etc.

CHECK DAM DETAIL

NOT IN CONTRACT

SEQUENCE OF OPERATIONS

1. Contractor must submit written notification 72 hours prior to any construction activity to the Baltimore City sediment control section indicating:
   a. When Contractor intends to begin construction.
   b. Source of borrow material.
   c. Disposal site area.
   d. Contractor tentative closing date.
   e. Stock pile area.
   f. Contractor's staging area.
2. Install all sediment control devices (except silt fence on north side of Barbara Avenue) silt fence, diversion rikes, stabilized construction entrances, existing inlet protection, etc.
3. Install proposed utilities. Provide inlet protection for all new inlets. For details see sheet 15 of 17 on plans.
4. Project site, excavate areas for permanent structures such as: Roadway, curb and gutter, sidewalk, retaining wall, and concrete stair-steps. Contractor shall begin grading operations at Frankford Avenue and work towards the Dead-End. The grading operations shall be limited to an area that can be temporary or permanently stabilized within 24 hours. The temporary stabilization for the roadway shall be the 6-inch sub-base course as required per the typical section.
5. Install silt fence on north side of Barbara Avenue and provide temporary or permanent stabilization to disturbed areas which remain inactive 14 days after excavation and 7 days in critical areas.
6. Remove stabilized construction entrance, construct combination curb and gutters, retaining walls, and roadway base course. Inlet protection shall be removed as base course is installed.
7. Construct sidewalks, driveways, entrances, concrete stair-steps, and roadway surface course.
8. Install guard rail, fine grade all remaining disturbed areas, and provide permanent stabilization as specified by the approved Sediment Control Plan for this project site.
9. Silt fence to be removed after all areas have been permanently stabilized and written approval from the Sediment Control Inspector has been given.

REVISIONS		
NO.	DESCRIPTION	DATE

CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END

SOIL EROSION / SEDIMENT CONTROL DETAILS

SCALE NO SCALE | DATE MARCH 1, 1986
BALTIMORE CITY CONTRACT NO. 3060 | SHEET 17 OF 17

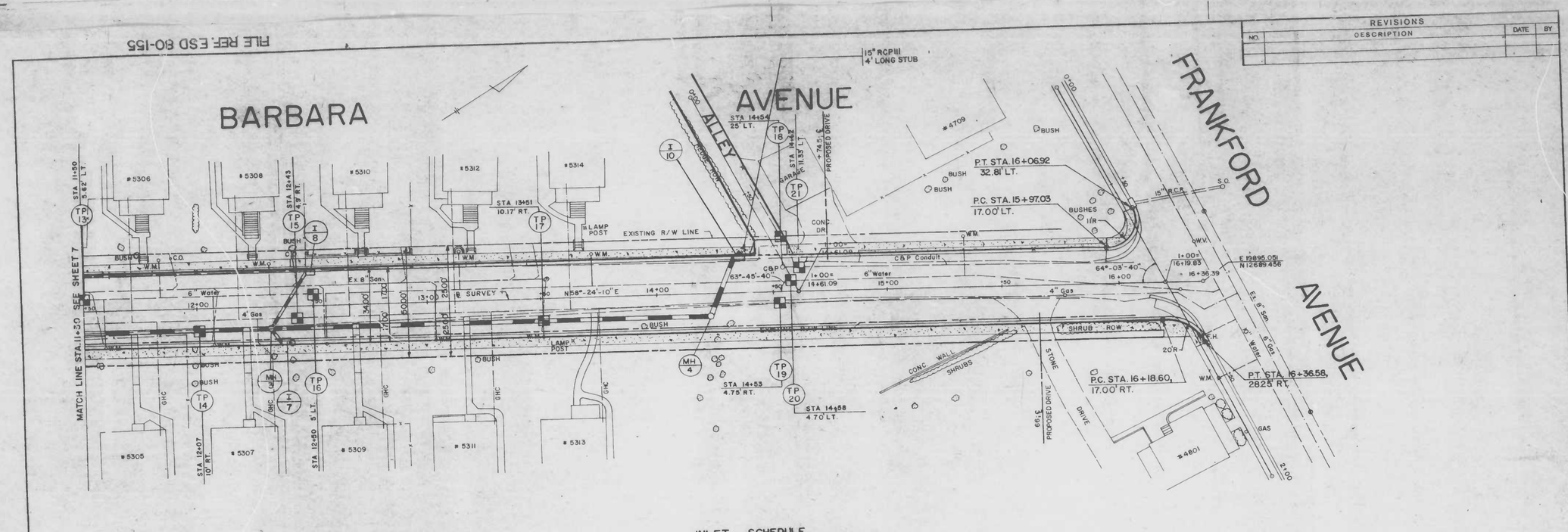
DRAWN BY A. MOSCATO
EXAMINED BY

FILE REF.

RATIO - 24

FILE REF. ESD 80-155

REVISIONS			
NO.	DESCRIPTION	DATE	BY



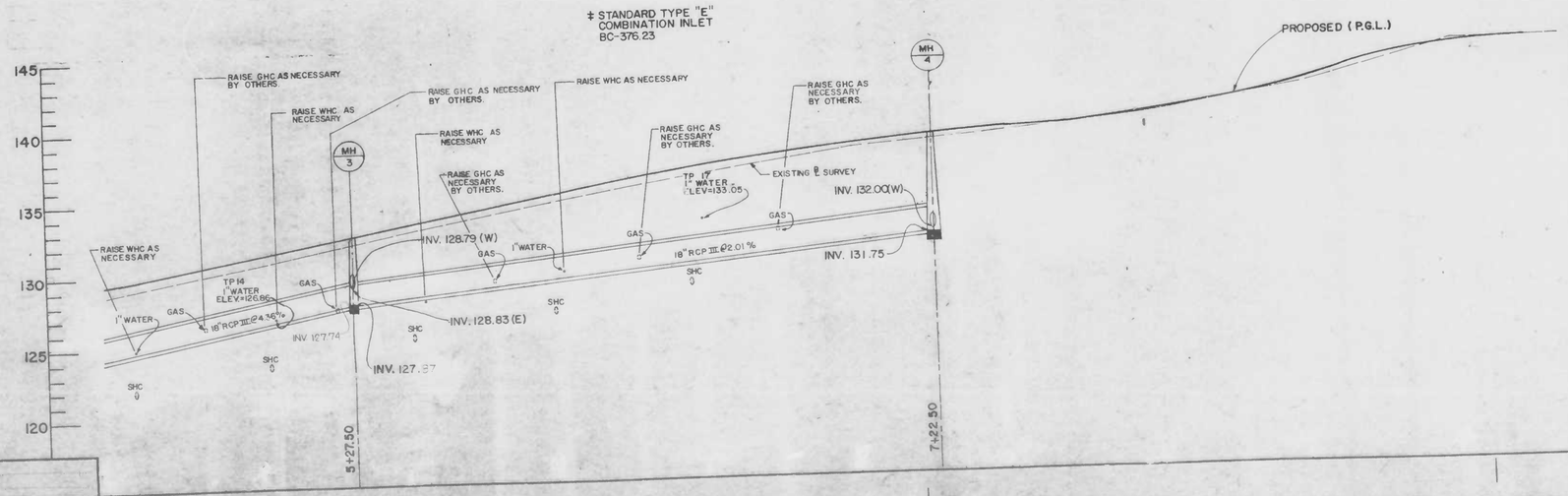
STRUCTURE SCHEDULE

No.	SIZE	TOP ELEV.	INV.	COORDINATES NORTH	COORDINATES EAST	℄ CONSTR. STATION	STANDARD	CHANNEL
MH3	4'	132.28'	127.74	12,469.057	19,555.852	12+32	BC 383.02	No. 3
—	—	—	—	—	—	—	—	—
MH4	4'	138.45'	131.75	12,571.226	19,721.944	14+27	BC 383.01	No. 7

INLET SCHEDULE

No.	TYPE	TOP ELEV.	INV.	℄ CONSTR. STA.	OFFSET
I-6	OMITTED				
I-7	"E" ‡	132.37'	129.05	12+38	17.0' RT.
I-8	"E" ‡	132.78'	129.39	12+48.5	17.0' LT.
—	—	—	—	—	—
I-10	"E" ‡	138.45'	132.55	14+36	17.0' LT.

‡ STANDARD TYPE "E" COMBINATION INLET BC-376.23



CITY OF BALTIMORE
DEPARTMENT OF PUBLIC WORKS
BUREAU OF HIGHWAYS

STORM DRAIN PLAN— PROFILE

BARBARA AVENUE

FRANKFORD AVENUE TO DEAD-END
(STA. 11+50 TO FRANKFORD AVE.)

SCALE HORIZ. 1" = 20', VERT. 1" = 4" DATE: MARCH 1, 1986

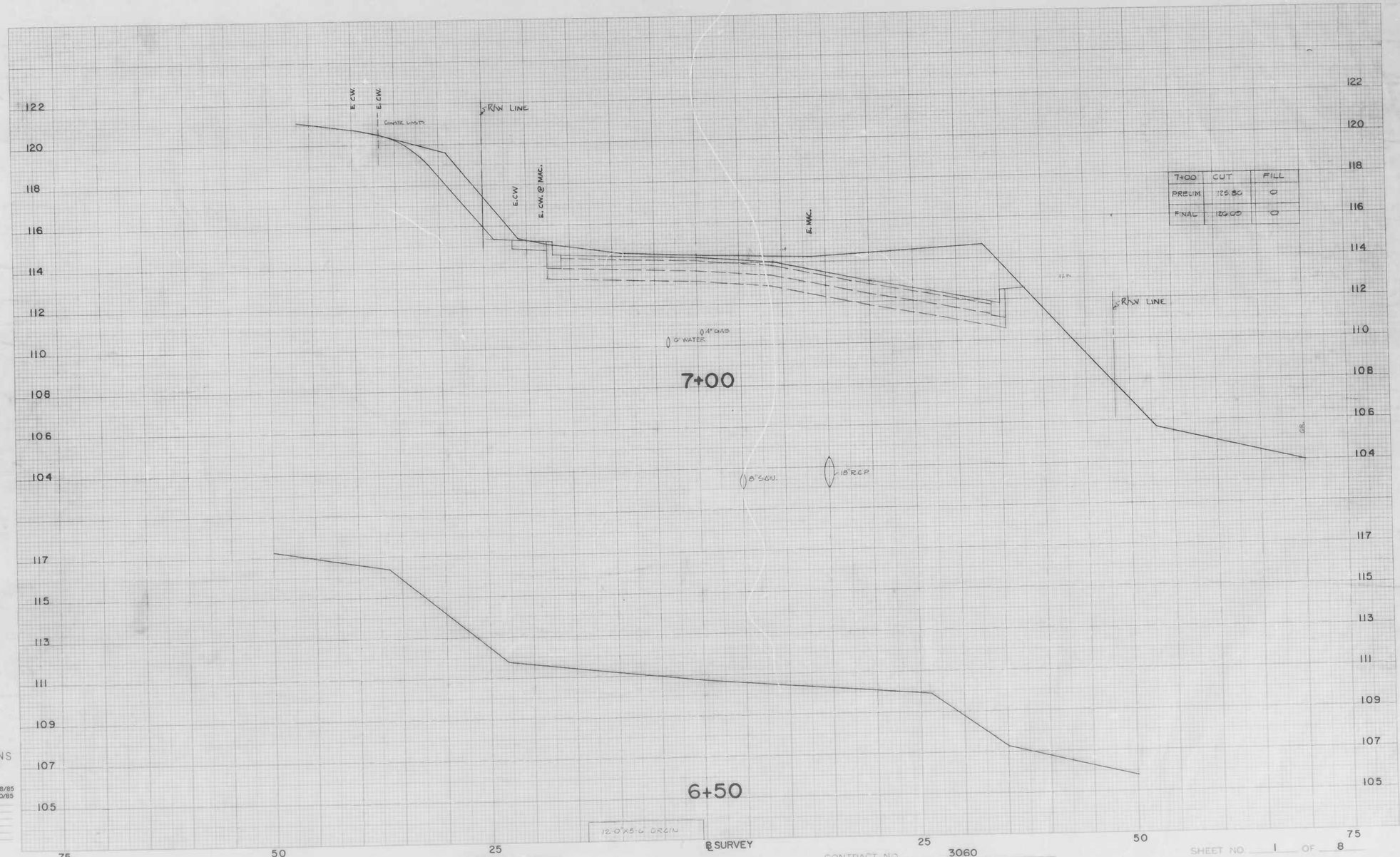
BALTIMORE CITY CONTRACT NO. 3060 SHEET 9 OF 17

DRAWN BY

EXAMINED BY

FILE REF. ESD 80-155

RATIO - 24



7+00	CUT	FILL
PREVIM.	125.80	0
FINAL	126.00	0

CROSS SECTIONS
Scale 1 inch = 5' HORIZ
2' VERT

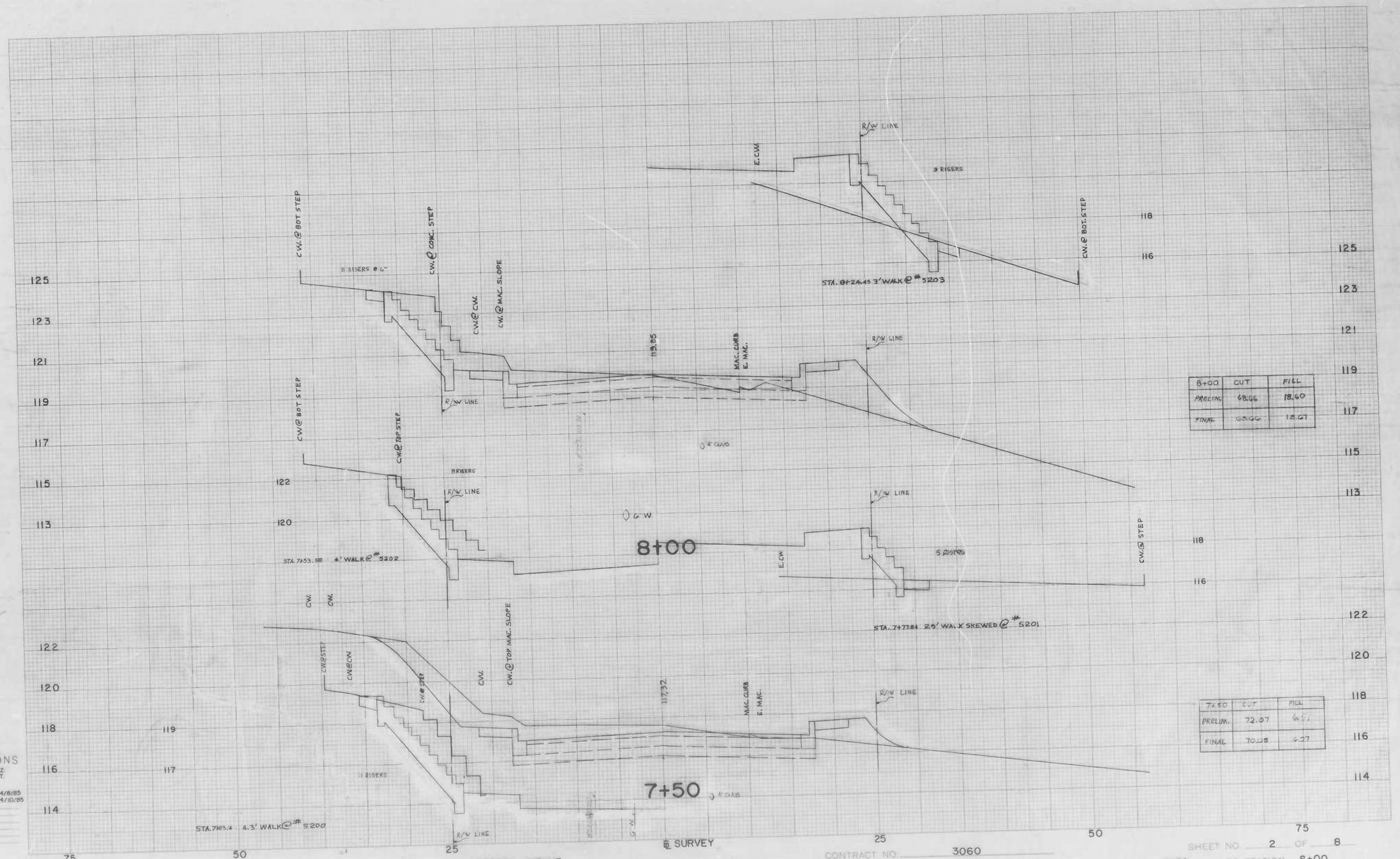
Original Plotted by	P.R.F.	Date 4/8/85
Original Checked by	E.A.S.	Date 4/10/85
Template by		Date
Area by		Date
Finals Plotted by		Date
Finals Checked by		Date
Area by		Date
Area Checked by		Date

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 1 OF 8

DESCRIPTION BARBARA AVENUE (FROM FRANKFORD AVE. TO DEAD END)

STATION 6+50 TO STATION 7+00

RATIO - 24



8+00	CUT	FILL
PRELIM.	68.66	18.60
FINAL	66.66	18.67

7+50	CUT	FILL
PRELIM.	72.07	6.51
FINAL	70.03	6.27

CROSS SECTIONS
Scale 1 inch = 5' HORIZ
2' VERT

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by _____ Date _____
Area by _____ Date _____
Finals Plotted by _____ Date _____
Finals Checked by _____ Date _____
Area By _____ Date _____
Area Checked by _____ Date _____

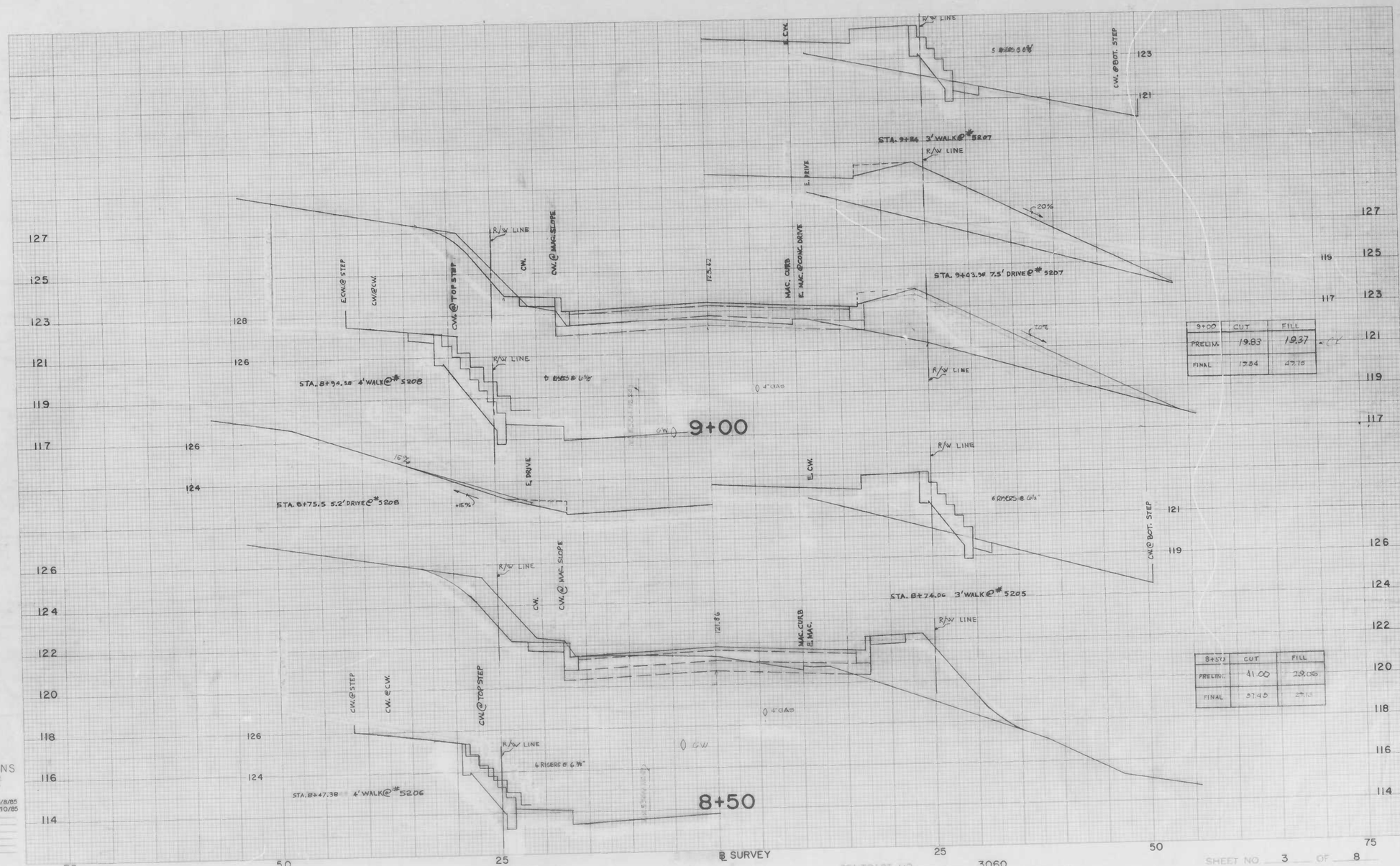
SHEET NO. 2 OF 8

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060

STATION 7+50 TO STATION 8+00

DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END)

RATIO - 24



9+00	CUT	FILL
PRELIM.	19.83	19.37
FINAL	17.84	17.76

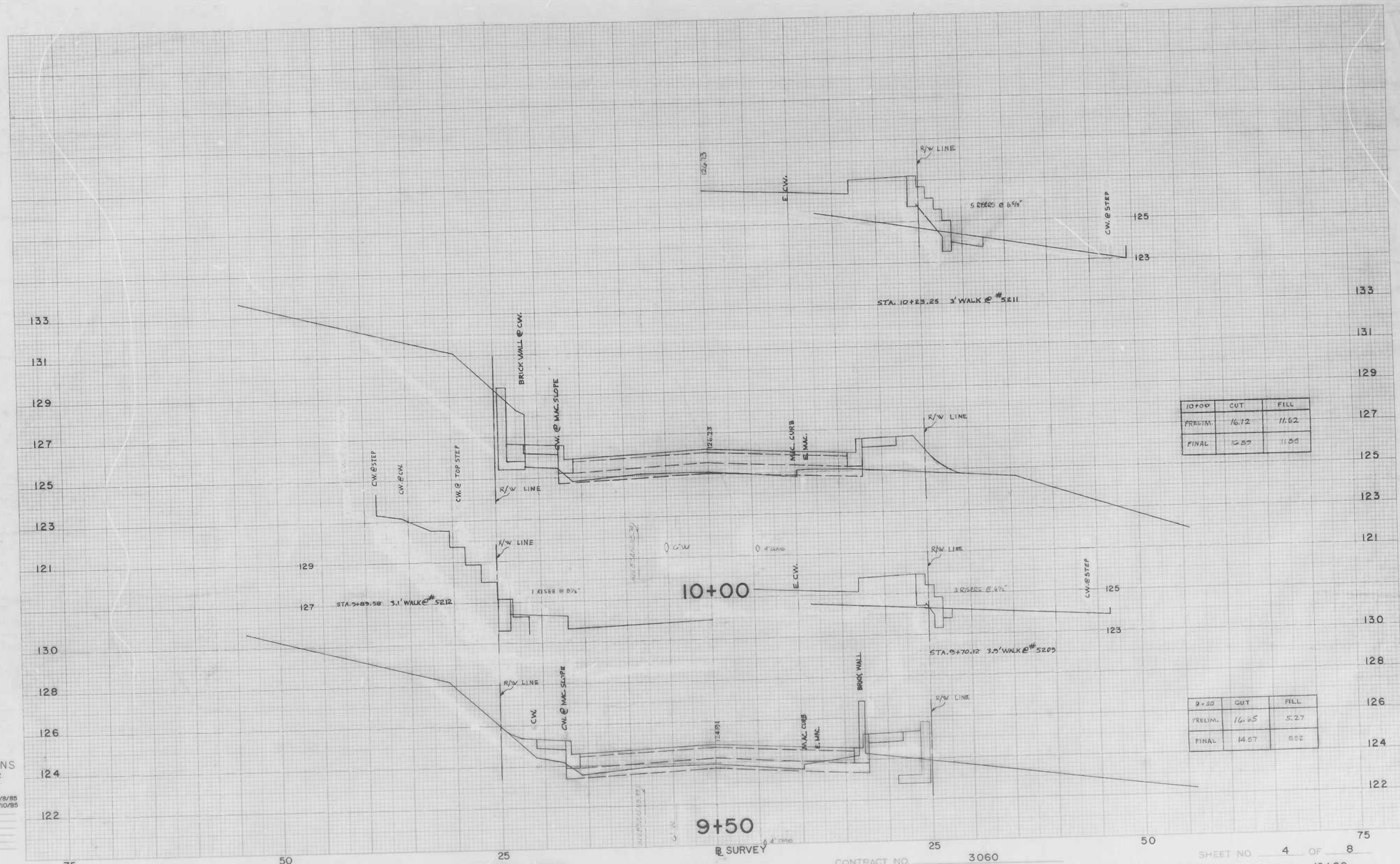
8+50	CUT	FILL
PRELIM.	41.00	29.06
FINAL	37.45	27.13

CROSS SECTIONS
Scale 1 inch = 5' HORIZ
2' VERT.

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ____ Date ____
Area by ____ Date ____
Finals Plotted by ____ Date ____
Finals Checked by ____ Date ____
Area by ____ Date ____
Area Checked by ____ Date ____

BOOK NO L-1149 PROJECT BARBARA AVENUE CONTRACT NO 3060 SHEET NO 3 OF 8
DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END) STATION 8+50 TO STATION 9+00

RATIO - 2.4



10+00	CUT	FILL
PRELIM.	16.72	11.62
FINAL	16.89	11.86

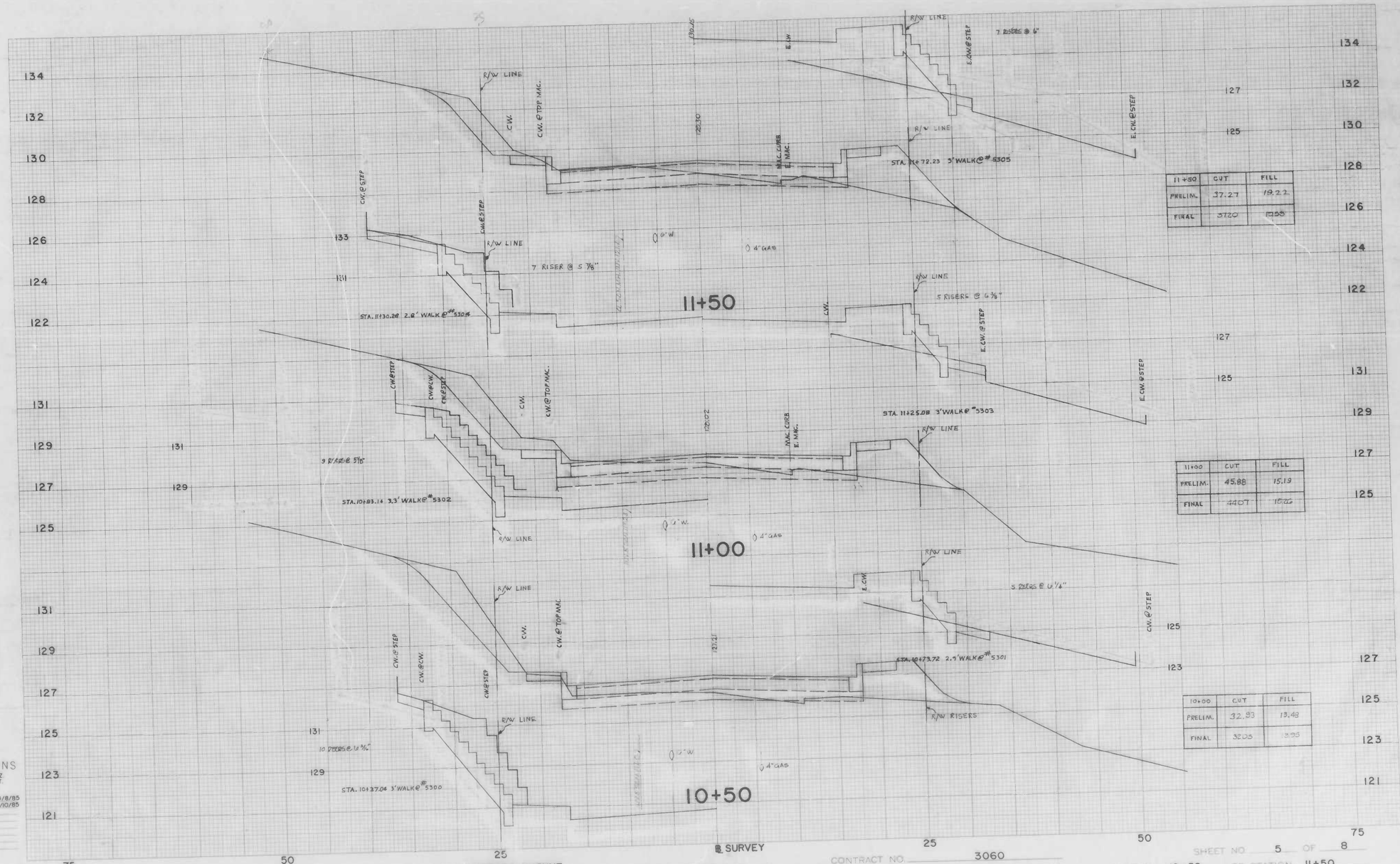
9+50	CUT	FILL
PRELIM.	16.65	5.27
FINAL	14.87	5.62

CROSS SECTIONS
Scale 1 inch = 5 HORIZ
2 VERT

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ____ Date ____
Area by ____ Date ____
Finals Plotted by ____ Date ____
Finals Checked by ____ Date ____
Area by ____ Date ____
Area Checked by ____ Date ____

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 4 OF 8
DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END) STATION 9+50 TO STATION 10+00

RATIO - 24



11+50	CUT	FILL
PRELIM.	37.27	19.22
FINAL	37.20	19.55

11+00	CUT	FILL
PRELIM.	45.88	15.19
FINAL	44.07	15.06

10+00	CUT	FILL
PRELIM.	32.83	13.48
FINAL	32.05	13.93

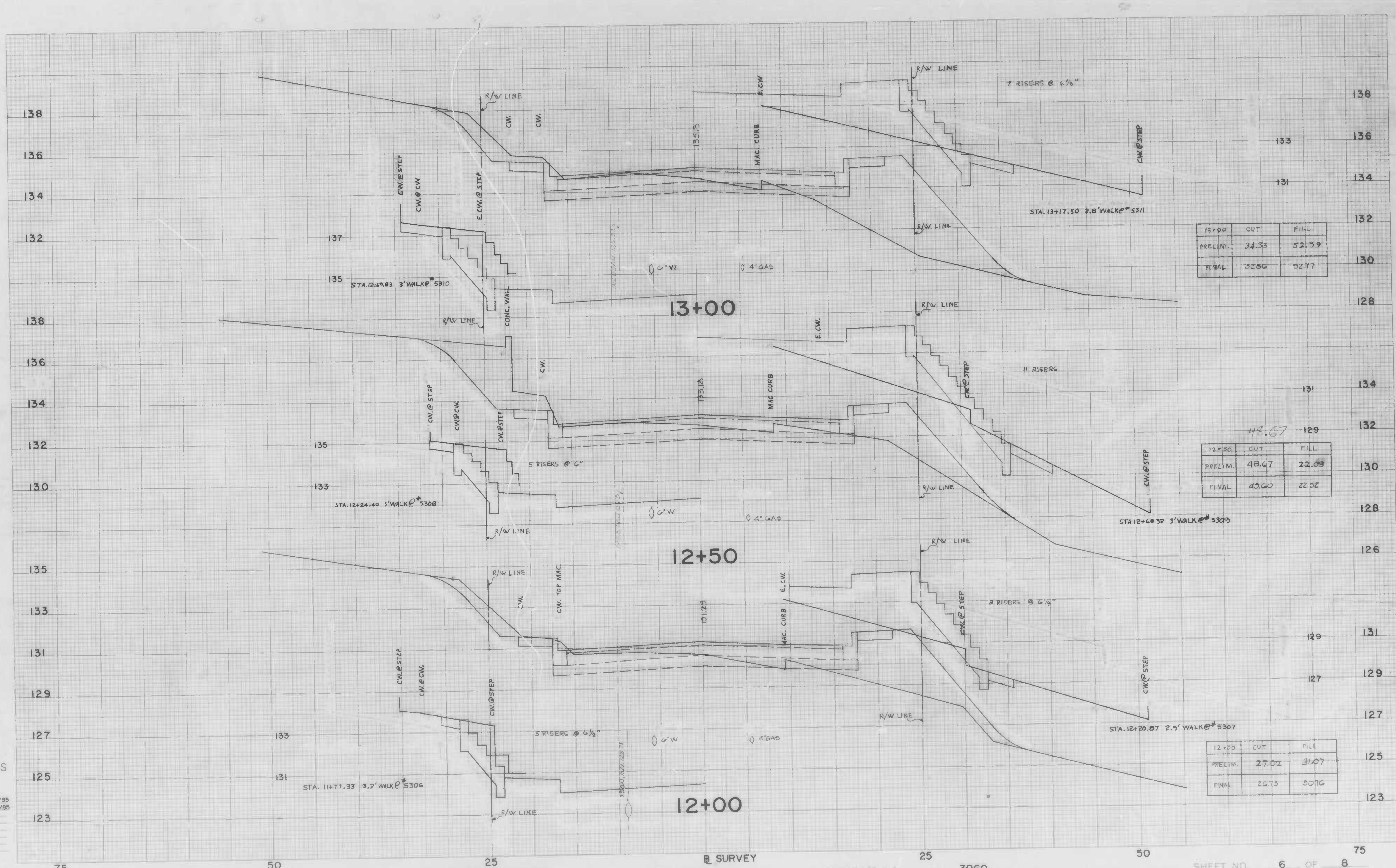
CROSS SECTIONS
Scale 1 inch = 5' HORIZ.
2 VERT.

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ____ Date ____
Area by ____ Date ____
Finals Plotted by ____ Date ____
Finals Checked by ____ Date ____
Area by ____ Date ____
Area Checked by ____ Date ____

℄ SURVEY

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 5 OF 8

DESCRIPTION BARBARA AVE. (FRANKFORD AVE. TO DEAD END) STATION 10+50 TO STATION 11+50



13+00	CUT	FILL
PRELIM.	34.33	52.39
FINAL	32.36	52.77

43.67

12+50	CUT	FILL
PRELIM.	48.67	22.09
FINAL	45.60	22.02

12+00	CUT	FILL
PRELIM.	27.02	31.07
FINAL	26.73	30.76

CROSS SECTIONS

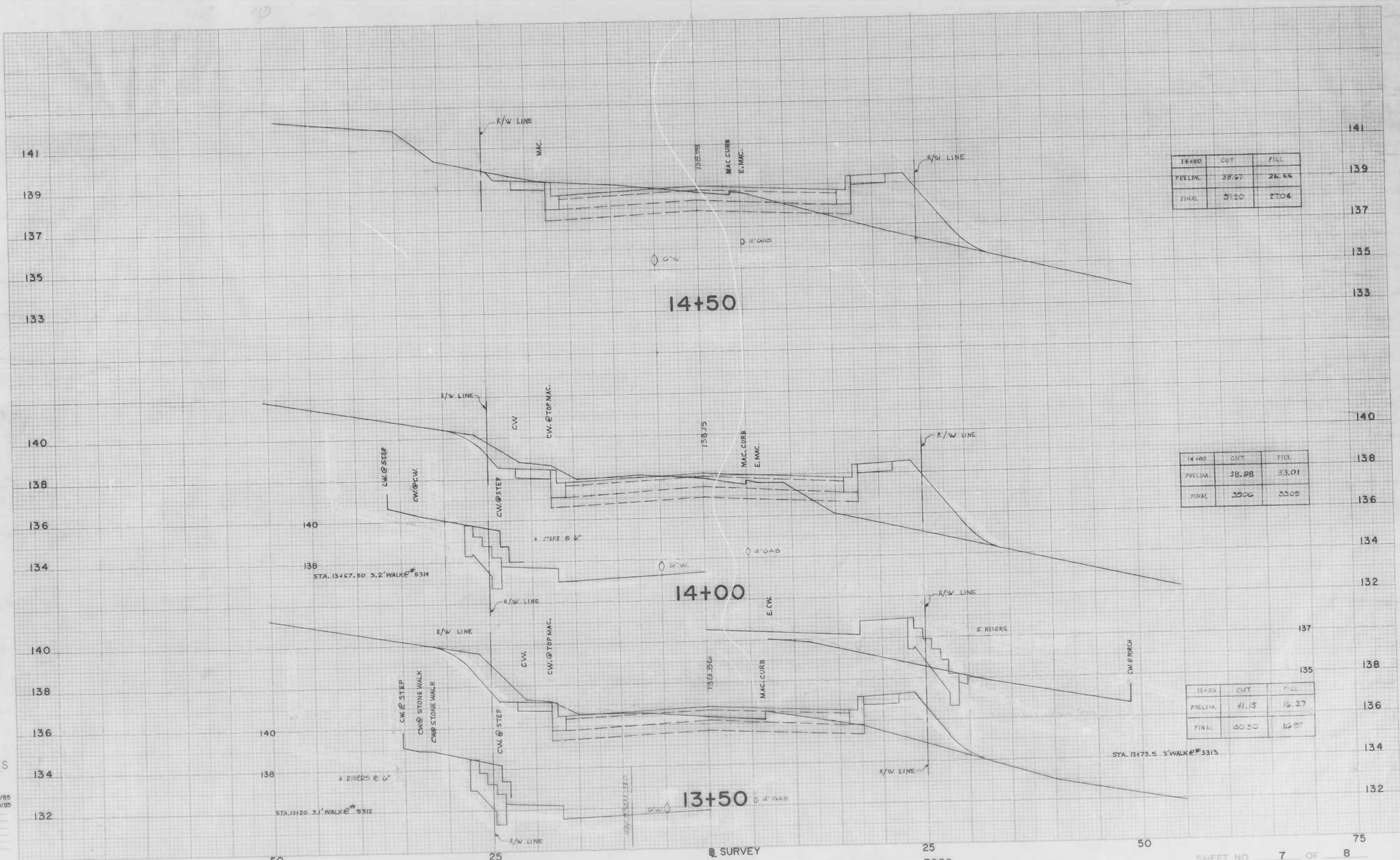
Scale 1 inch = 5' HORIZ.
2' VERT.

Original Platted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ______ Date ______
Area by ______ Date ______
Finals Platted by ______ Date ______
Finals Checked by ______ Date ______
Area by ______ Date ______
Area Checked by ______ Date ______

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 6 OF 8

DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END) STATION 12+00 TO STATION 13+00

RATIO - 24



14+50	CUT	FILL
PRELIM.	38.67	26.66
FINAL	5120	2704

14+00	CUT	FILL
PRELIM.	38.98	33.01
FINAL	3006	3308

13+50	CUT	FILL
PRELIM.	41.15	16.27
FINAL	4050	1697

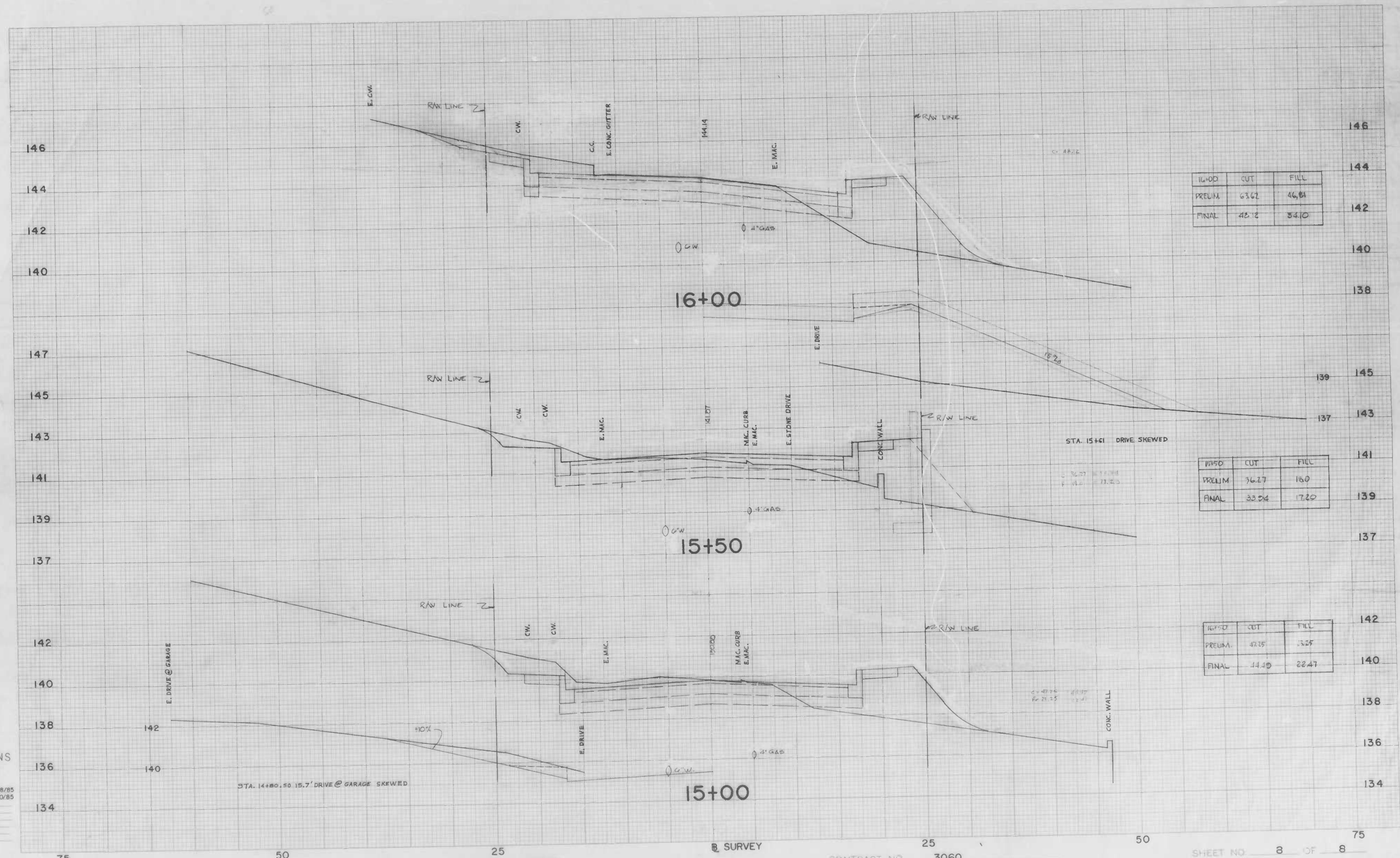
CROSS SECTIONS
Scale 1 inch = 5' HORIZ
2 VERT.

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ____ Date ____
Area by ____ Date ____
Finals Plotted by ____ Date ____
Finals Checked by ____ Date ____
Area by ____ Date ____
Area Checked by ____ Date ____

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 7 OF 8

DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END) STATION 13+50 TO STATION 14+50

RATIO - 24



16+00	CUT	FILL
PRELIM.	63.62	46.81
FINAL	48.12	34.10

15+50	CUT	FILL
PRELIM	36.27	18.0
FINAL	33.54	17.20

15+00	CUT	FILL
PRELIM.	42.35	13.25
FINAL	44.10	22.47

CROSS SECTIONS
Scale 1 inch = 5' HORIZ.
2' VERT.

Original Plotted by P.R.F. Date 4/8/85
Original Checked by E.A.S. Date 4/10/85
Template by ____ Date ____
Area by ____ Date ____
Finals Plotted by ____ Date ____
Finals Checked by ____ Date ____
Area by ____ Date ____
Area Checked by ____ Date ____

B. SURVEY

BOOK NO. L-1149 PROJECT BARBARA AVENUE CONTRACT NO. 3060 SHEET NO. 8 OF 8

DESCRIPTION BARBARA AVE. (FROM FRANKFORD AVE. TO DEAD END) STATION 15+00 TO STATION 16+00