

MICHIGAN
STATE HIGHWAY DEPARTMENT
MURRAY D. VAN WAGONER
STATE HIGHWAY COMMISSIONER

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. 180 SEC. K (1)
DETROIT - PORT HURON ROAD
WAYNE COUNTY
CITY OF DETROIT

SCALE
TITLE SHEET 1" = 2000 FT.
PLAN 1" = 40 FT.
PROFILE HOR. 1" = 40 FT.
PROFILE VERT. 1" = 4 FT.
CROSS SECTIONS 1" = 5 FT.

INDEX OF SHEETS

GRADING - DRAINAGE - BASE COURSE CONTRACT	Sheet 1	Title	Typical Cross Section
"	2	Notes & Summary	"
"	3-4	Plan & Profile	"
"	10-12	Public Utility Plans	"
"	13	Special Details	"
"	14	Quantity	"

SHEET ASPHALT
CONTRACT
Sheet 1

2 Typical Cross Section
3-4 Notes & Summary
5-9 Plan & Profile
13 Special Details
15 Quantity

STANDARD PLANS

GRADING - DRAINAGE - BASE COURSE CONTRACT	E-4-A-21C
"	E-4-A-27R-A1
"	E-4-A-27-B1
"	E-4-A-27-F1
"	E-4-A-27-T1
"	E-4-A-29-A
"	E-4-A-35
"	E-4-A-10A
"	E-6-A-55B

SHEET ASPHALT
CONTRACT
E-6-A-55B

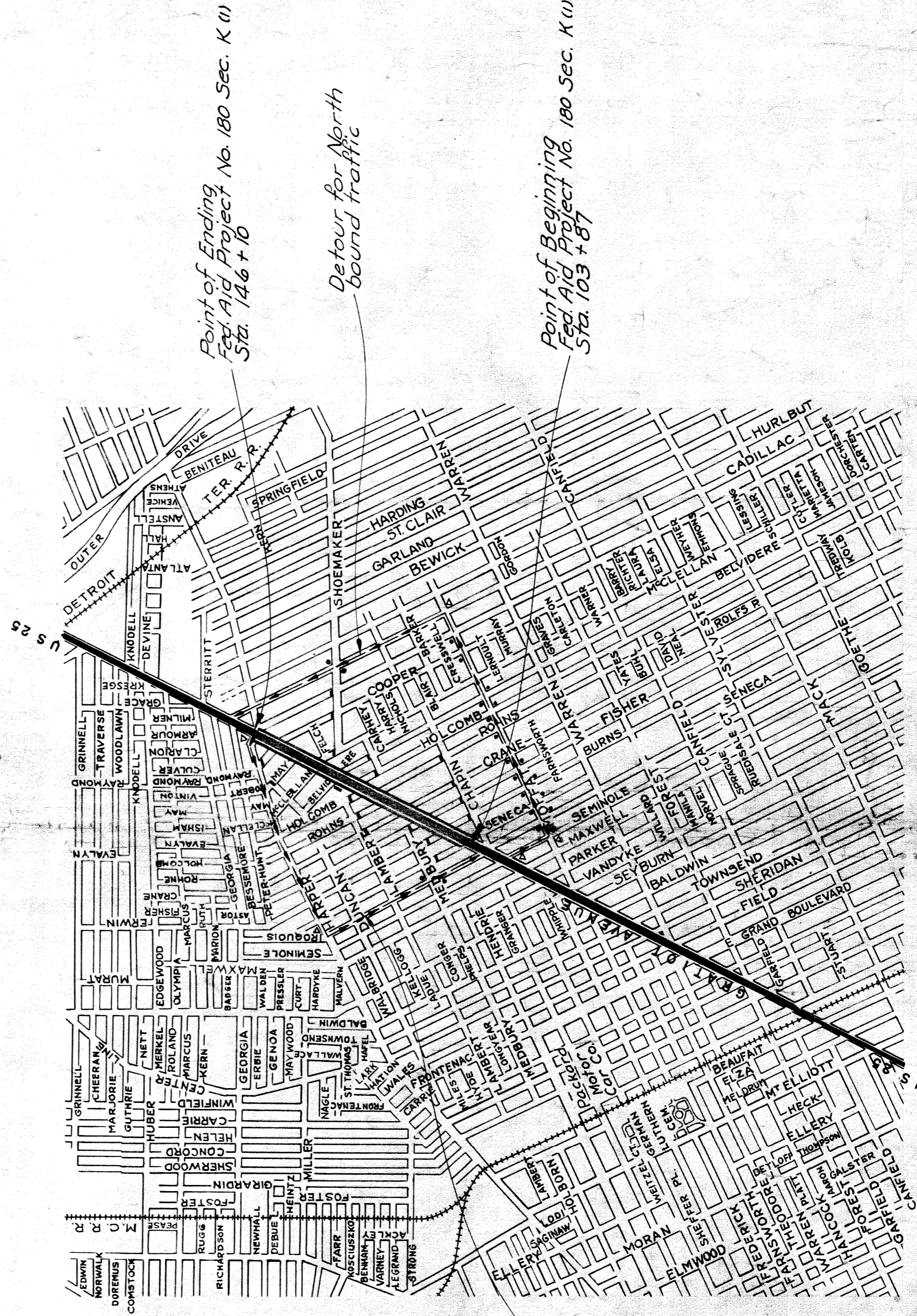
SIGN LEGEND FOR
MAINTENANCE DIVISION
PROPOSED STOP SIGNS
PROPOSED "DETOUR" SIGNS

TITLE SHEET LEGEND

PROPOSED PROJECT	-----
T.L. OR F.A. PAVED	=====
T.L. OR F.A. IMPROVED NOT PAVED	-----
T.L. OR F.A. UNIMPROVED	-----
NON T.L. OR F.A. PAVED	-----
NON T.L. OR F.A. IMPROVED NOT PAVED	-----
NON T.L. OR F.A. UNIMPROVED	-----
COUNTY LINE	-----
CITY OR VILLAGE	-----
TOWNSHIP LINE	-----
SECTION LINE	-----
RAILROADS	+++++

PLAN LEGEND

COMBINED SAN. & STORM SEWER	○
PUBLIC W.L. & SAND INLET	○
PUBLIC M.H. AND HAND-HOLE	○
MICH. E. CO. M.H. & CABLE	○
DET. EDISON CO. M.H. & CABLE	○
DET. CITY GAS CO. LINE & M.H.	○
GAS DRIP, CAP OR STOP	○
WATER LINE, M.H. OR VALVE	○
FIRE HYDRANT, WATER CAP, METER	○
LIGHT OR FLOOD LIGHT POLES	○
POWER AND TELEPHONE POLES	○
TELEPHONE POLES	○
FIRE ALARM	○
MAIL BOX	○
POLICE CALL	○
SURVEY LINE AND TRANSIT POINT	○
CENTER LINE, STAS., TRANSIT POINT	○



Note: The Improvements covered by these plans shall be done in accordance with the Michigan State Highway Department 1934 Standard Specifications as amended by Errata and changes, dated June 10, 1936.

FED. ROAD DIST. NO.	7	FISCAL YEAR	1939	FISCAL YEAR	1939	TOTAL SHEETS	7
FED. ROAD STATE	MICH.	PROJECT	103+87	CITY	WAYNE	TOTAL SHEETS	7
ROUTE	82-37	COUNTY	WAYNE	CITY	DETROIT	TOTAL SHEETS	7

CONTRACT NO.	8	DATE	4-12-39
FED. NO.	180 K (1)	STA.	103+87 TO 146+10
TYPE	Conc. Base	LENGTH	0.800

CONTRACTOR	The Thomas E. Carrie & Co.		
CONTRACT NO.	9	DATE	4-12-39
FED. NO.	180 K (1)	STA.	103+87 TO 146+10
TYPE	77 5th Asphalt	LENGTH	0.800
CONTRACTOR	Detroit Asphalt Pav. Co.		

FED. ROAD STATE	MICH.	PROJECT	103+87	CITY	WAYNE	TOTAL SHEETS	7
ROUTE	82-37	COUNTY	WAYNE	CITY	DETROIT	TOTAL SHEETS	7

GRATIOT AVENUE
SENECA TO HARPER
DETROIT

CONTRACT FOR	Grading - Drainage - Surfacing	FA 180 Sec. K (1)
CHECKED	A. H. Leonard	3-1-39
RECOMMENDED FOR APPROVAL	CHIEF ROAD DRAFTSMAN	MUNICIPAL ENGINEER
APPROVED	ENGINEER OF ROAD DESIGN	DATE 3-1-39
APPROVED	ROAD ENGINEER	DATE 3-1-39
APPROVED	BRIDGE ENGINEER	DATE 3-6-39
APPROVED	DEPUTY COMMISSIONER IN CHARGE OF CONSTRUCTION & OPERATION	DATE 3-3-39
APPROVED	DEPUTY COMMISSIONER - CHIEF ENGINEER	DATE 3-3-39
APPROVED	MURRAY D. VAN WAGONER	STATE HIGHWAY COMMISSIONER

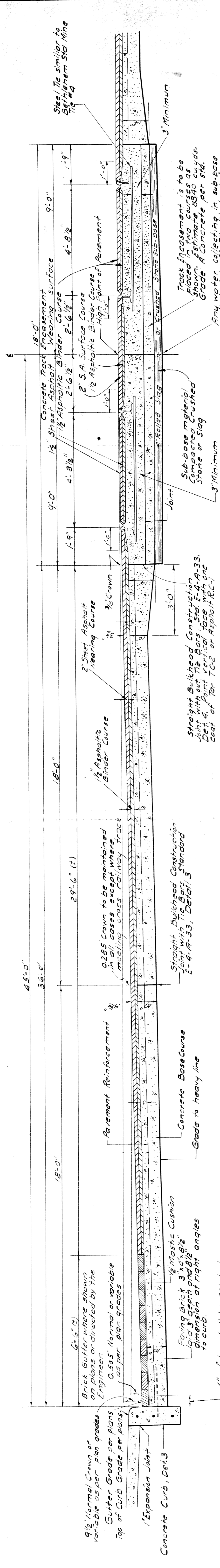
RECOMMENDED FOR APPROVAL	DISTRICT ENGINEER
RECOMMENDED FOR APPROVAL	CHIEF ENGINEER
APPROVED	CHIEF

BUREAU OF PUBLIC ROADS APPROVAL



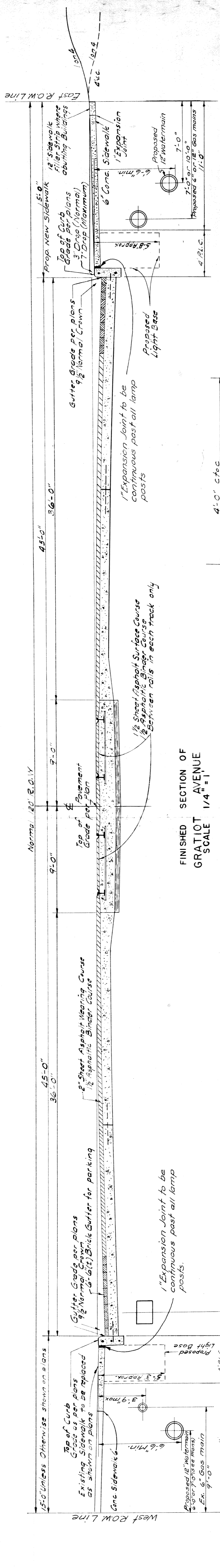
TYPICAL CROSS-SECTIONS

FED. ROAD DIST. NO.	STATE	FED. ROAD PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MICH.	100-A(1)			



3.5" SHEET ASPHALT SURFACE COURSE AND VITRIFIED BRICK SURFACE COURSE ON CONCRETE BASE COURSE 10-14-10

TO APPLY STATION 103+87 TO 146+10
SHEET ASPHALT B.P.R. CLASS J
SCALE 1/2" = 1'



FINISHED SECTION OF GRATIOT AVENUE SCALE 1/4" = 1'

DETAIL SHOWING SIDEWALK CONCRETE SCALE 1/4" = 1'

Width shown on plans

Thickness called for on plans

All sidewalk is to be 6" thick except that all sidewalk across driveway is to be 4" thick. See sheet 15. Material is to be placed on strike, and expansion joints are to be placed at approximately 60' intervals in sidewalk with expansion joints placed in curb.

Inside of rail

Rounded

2" Sheet Asphalt Wearing Surface

1/2" Asphalt Binder Course

Concrete Track Encasement

1/2" Sheet Asphalt Wearing Surface

1/2" Asphalt Binder Course

3" Minimum

Sub-base material compacted crushed stone or slag

Track Encasement is to be placed in two courses as shown. Estimate 9640 Cu. Yds. Grade A Concrete per station.

3' Minimum

Sub-base material compacted crushed stone or slag

Scale 1/2" = 1'

DETAIL SHOWING ASPHALT SURFACE AT RAILS SCALE 3" = 1'

The edges of Asphalt Surface adjacent to the rails are to be rounded as shown by a template or by other methods approved by the Engineer.

Spray edge of rail in contact with asphalt surface with one coat of Asphalt Emulsion AE 1.

All of the special work shown in detail will be considered incidental to the construction of sheet asphalt surface.

DETAIL SHOWING SINGLE TRACK ENCASUREMENT SCALE 1/2" = 1'

Track Encasement is to be placed in two courses as shown. Estimate 9640 Cu. Yds. Grade A Concrete per station.

3' Minimum

Sub-base material compacted crushed stone or slag

DETAIL SHOWING LONGITUDINAL SECTION OF TRACK SCALE 1/2" = 1'

PAVEMENT REINFORCEMENT

The Concrete Base is to be reinforced throughout with 1/2" dia. Bar Wire spaced 18" on center. Place reinforcement according to Standard Plan E-4-R-21C.

JUNCTIONS IN CONCRETE BASE COURSE

Transverse plane of Wedgeless joints for Base Course should be placed in the concrete base course at 30 feet equal intervals and of the spring of each street return.

FED. ROAD STATE	MICH.	PROJ. NO.	103-36	SHEET NO.	103-36	TOTAL SHEETS	103-36
ROUTE	STATE	COUNTY	WAYNE	SHEET NO.	103-36	TOTAL SHEETS	103-36
FED. ROAD STATE	MICH.	PROJ. NO.	103-36	SHEET NO.	103-36	TOTAL SHEETS	103-36
ROUTE	STATE	COUNTY	WAYNE	SHEET NO.	103-36	TOTAL SHEETS	103-36

Remove Railway Tracks within construction limits (Sta. 103+87 to 106+00). 426 lin. ft. of Old Pavement Removing Railway Tracks

Remove Old Pavement Curbs and Gutters within construction limits (Sta. 103+87 to 106+00). 712.0 Sq. Yds. Removing Old Pavement. (1227 Auth. L-7)

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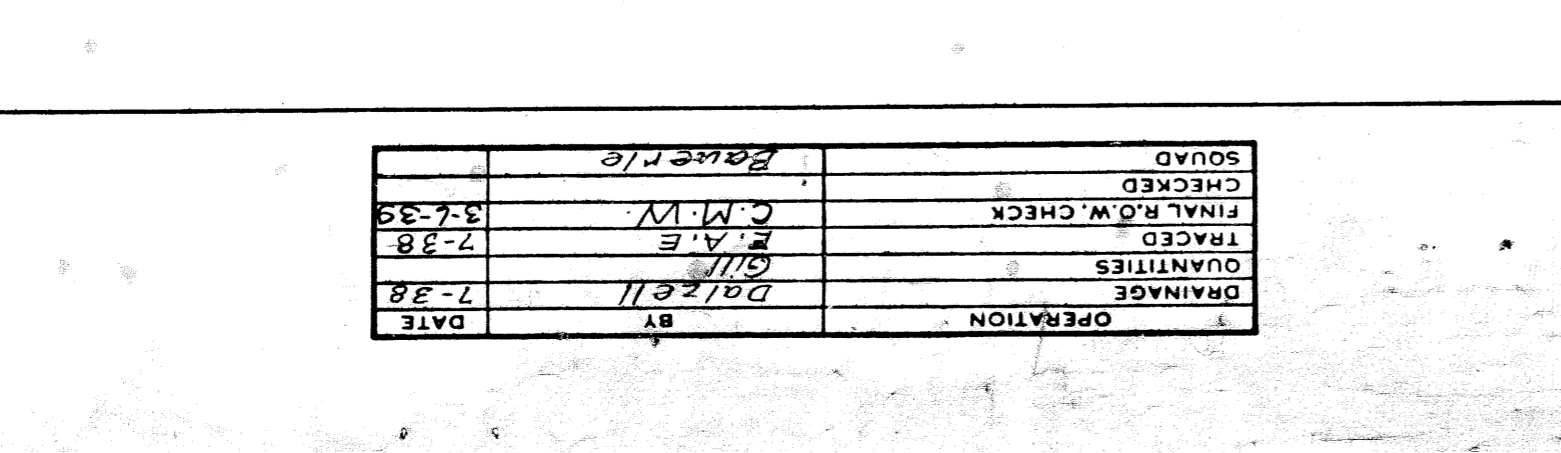
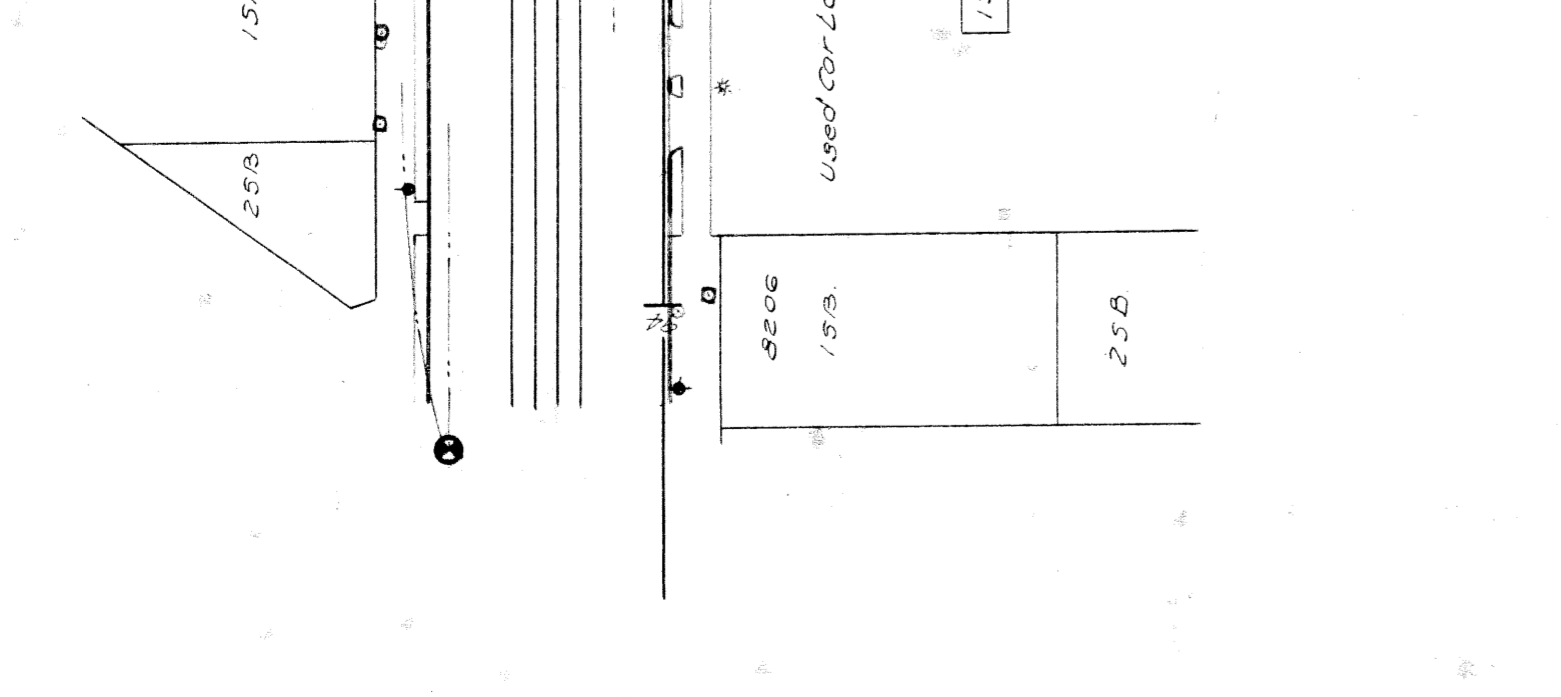
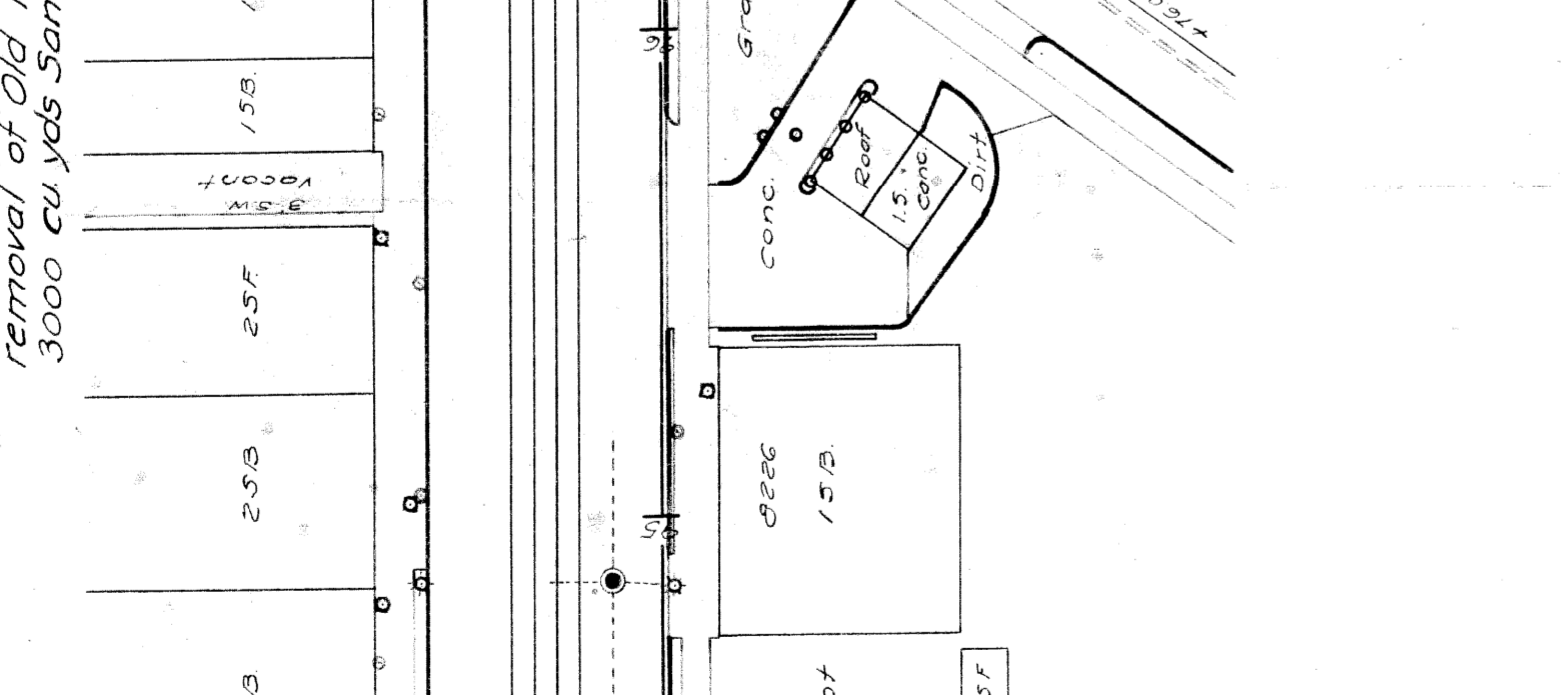
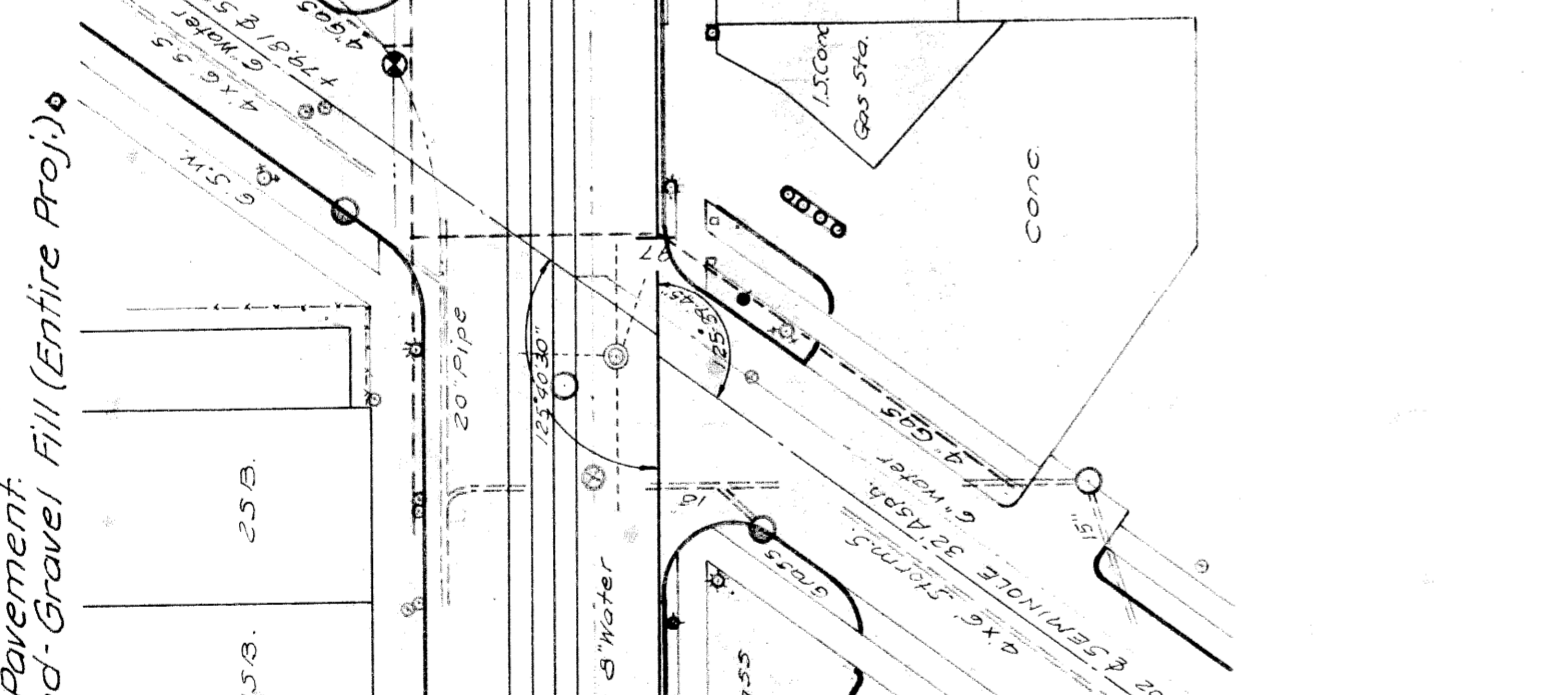
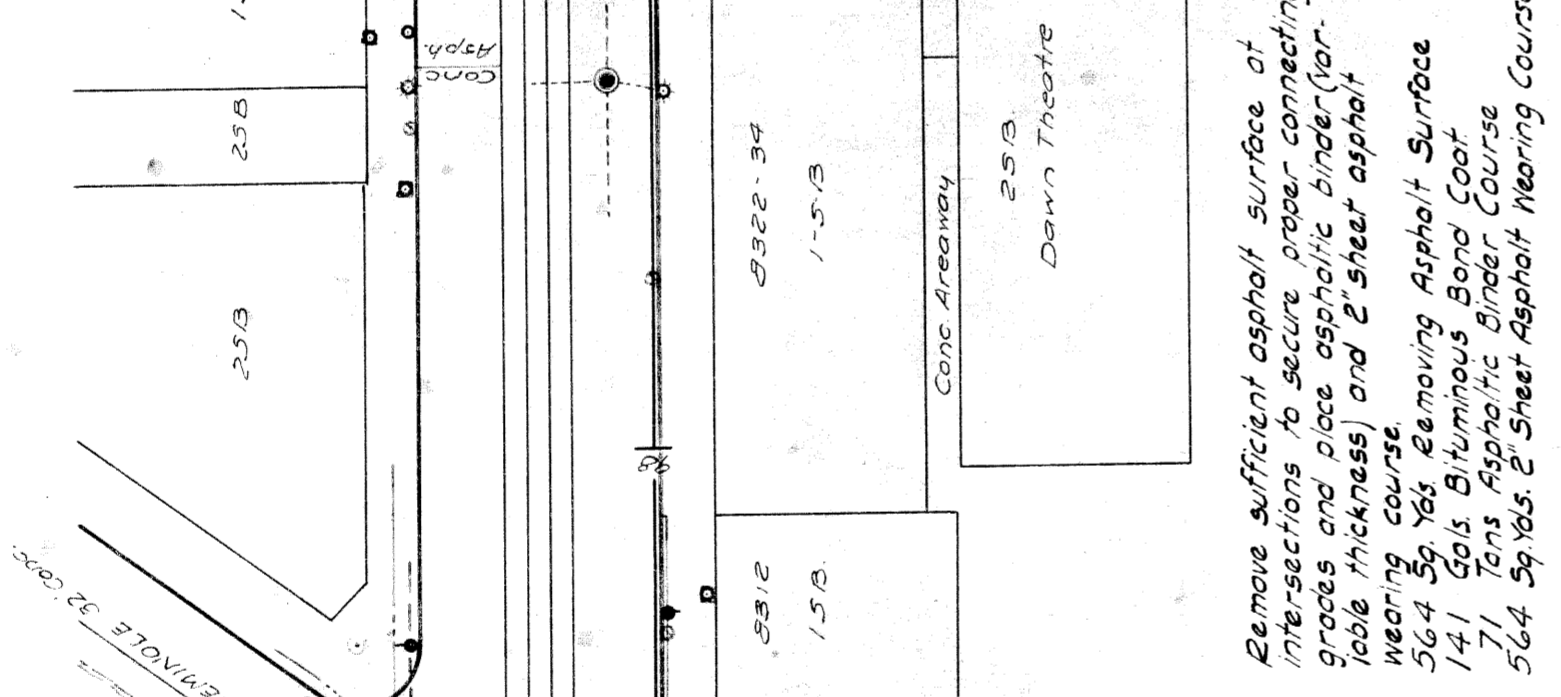
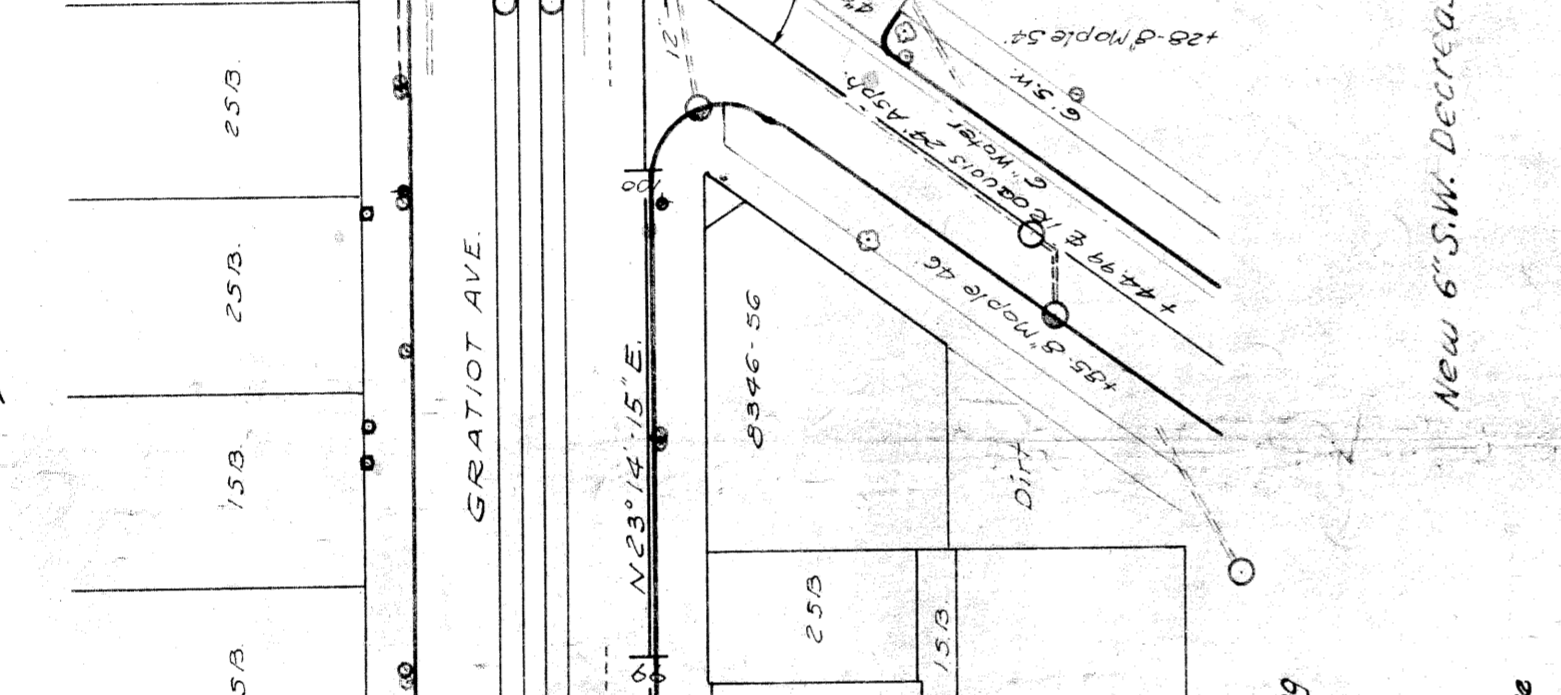
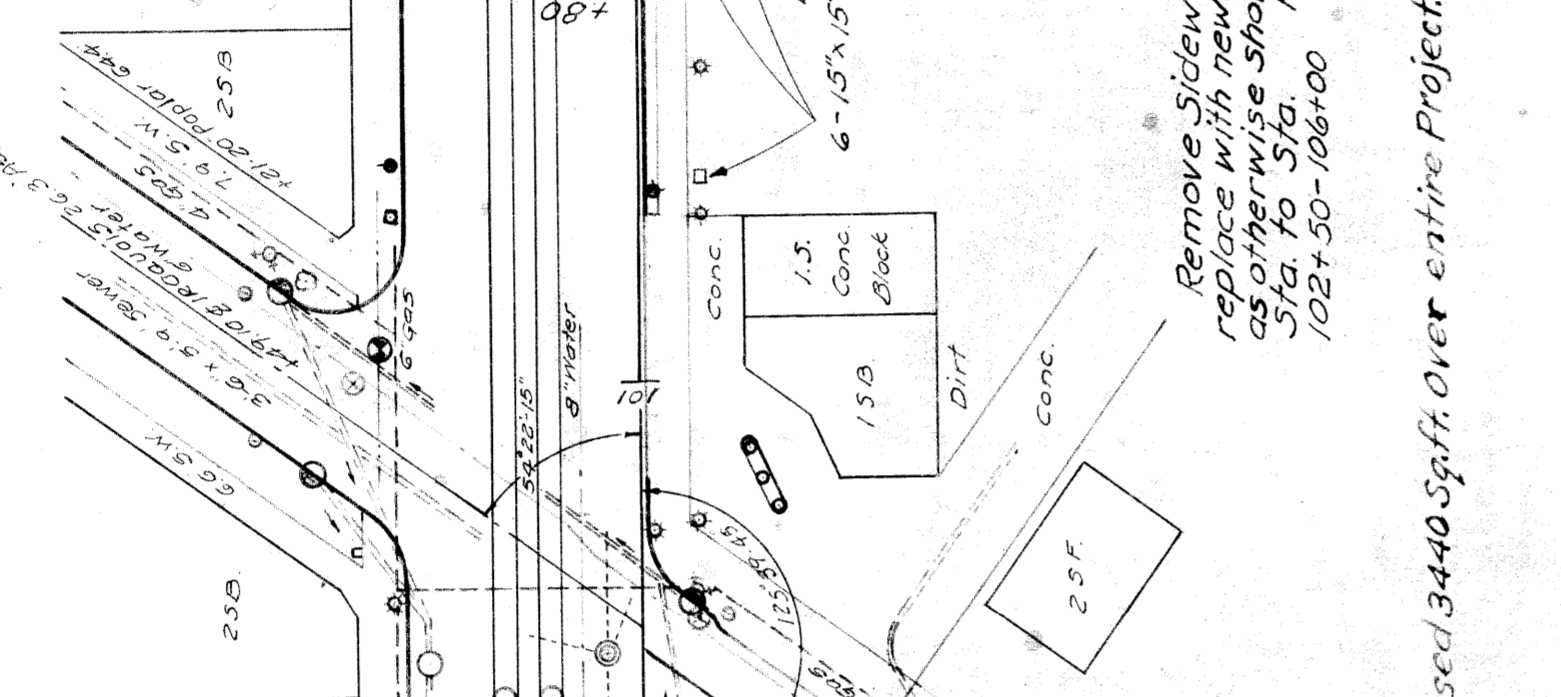
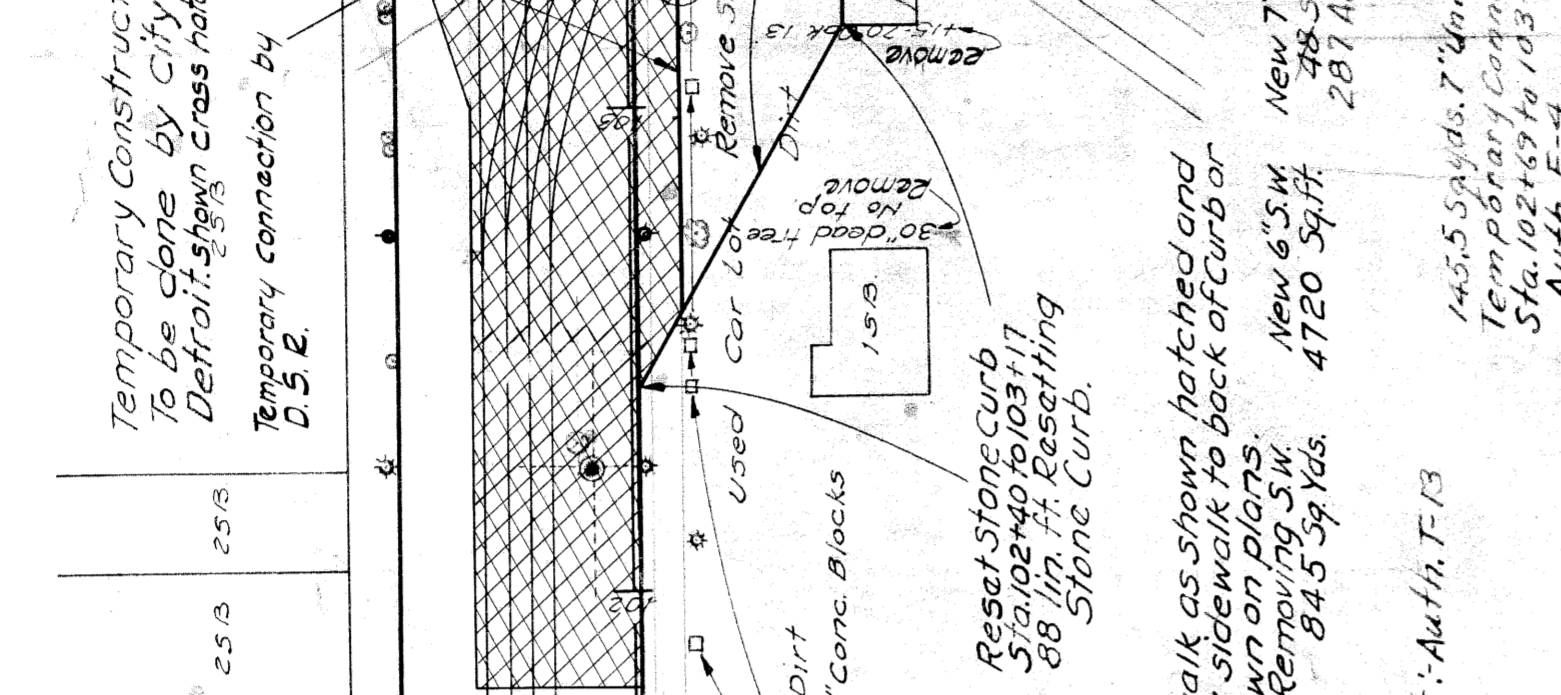
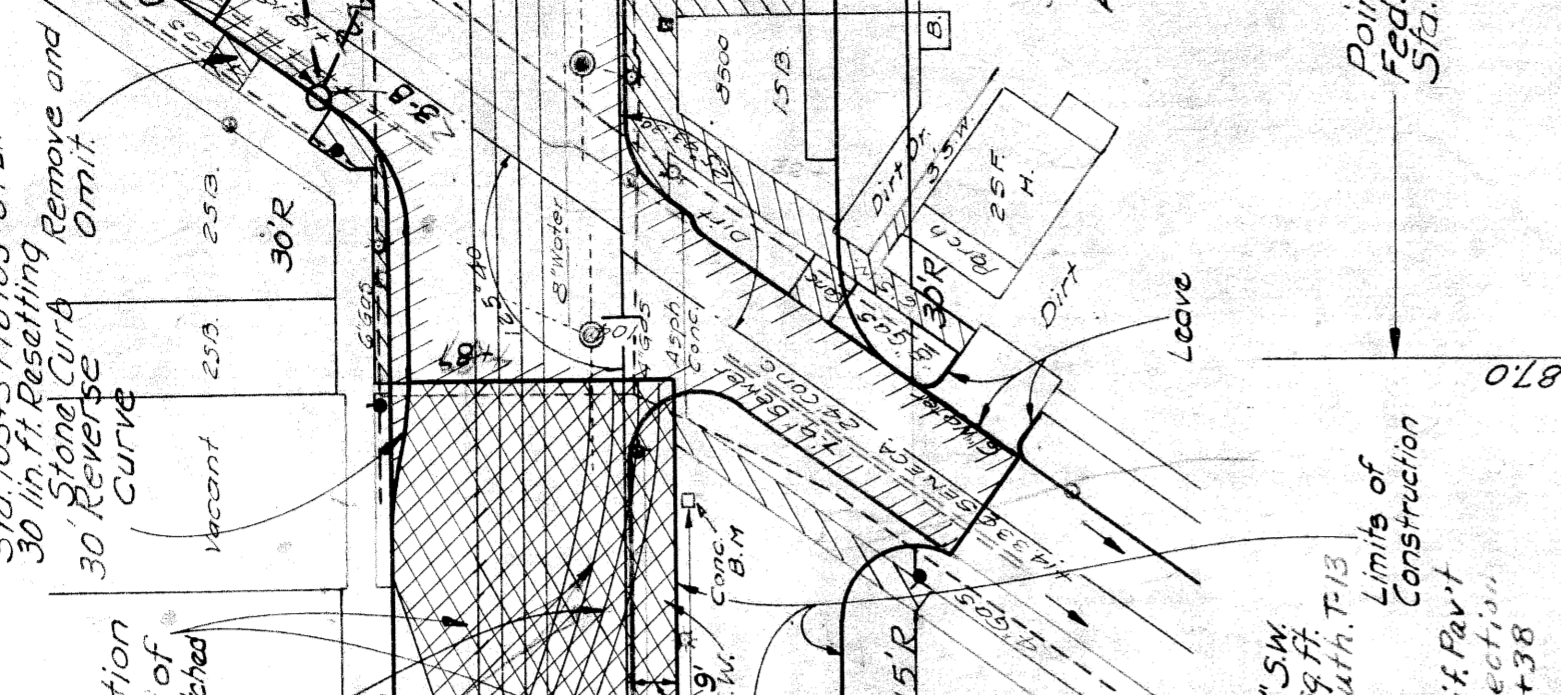
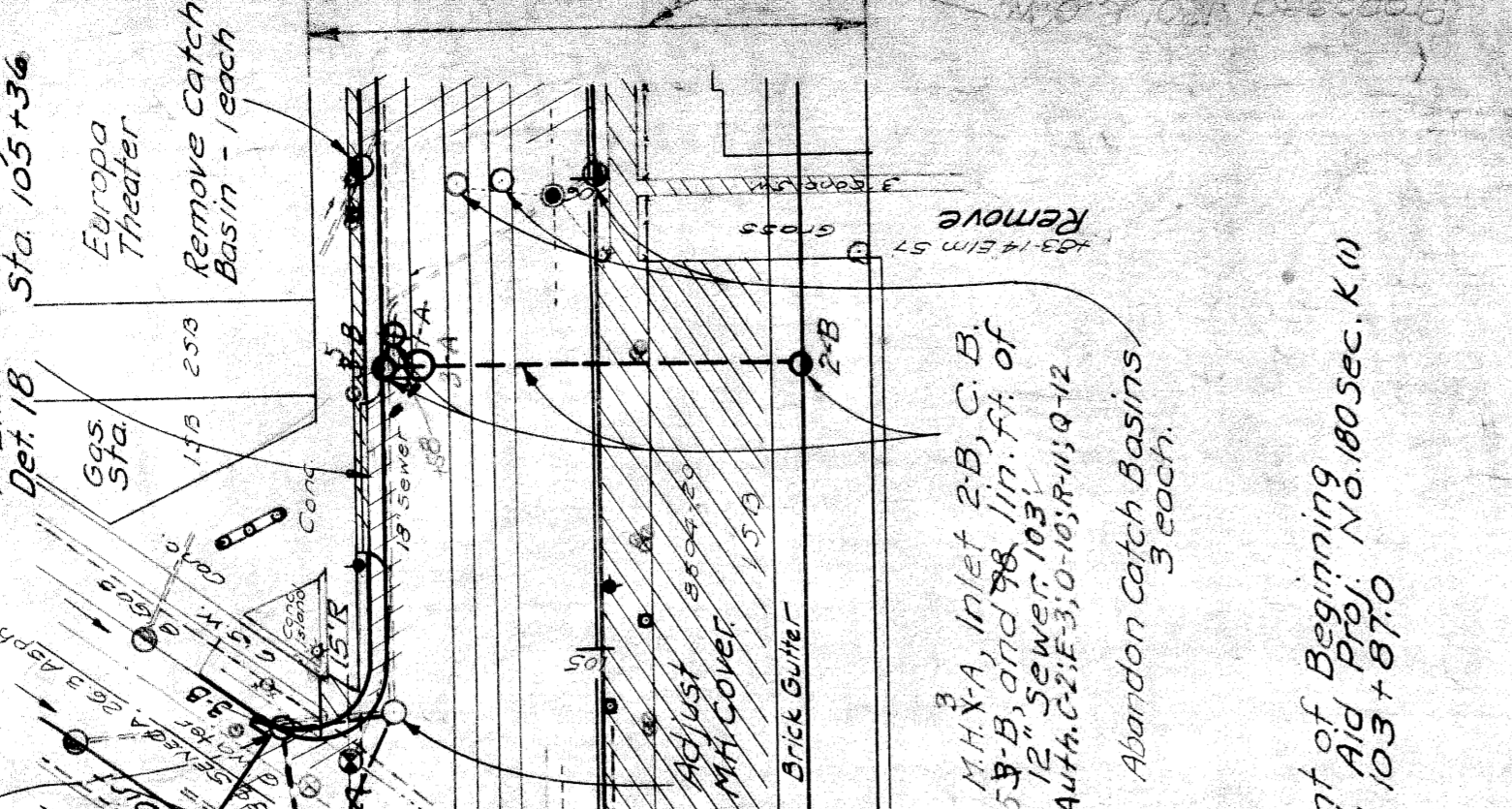
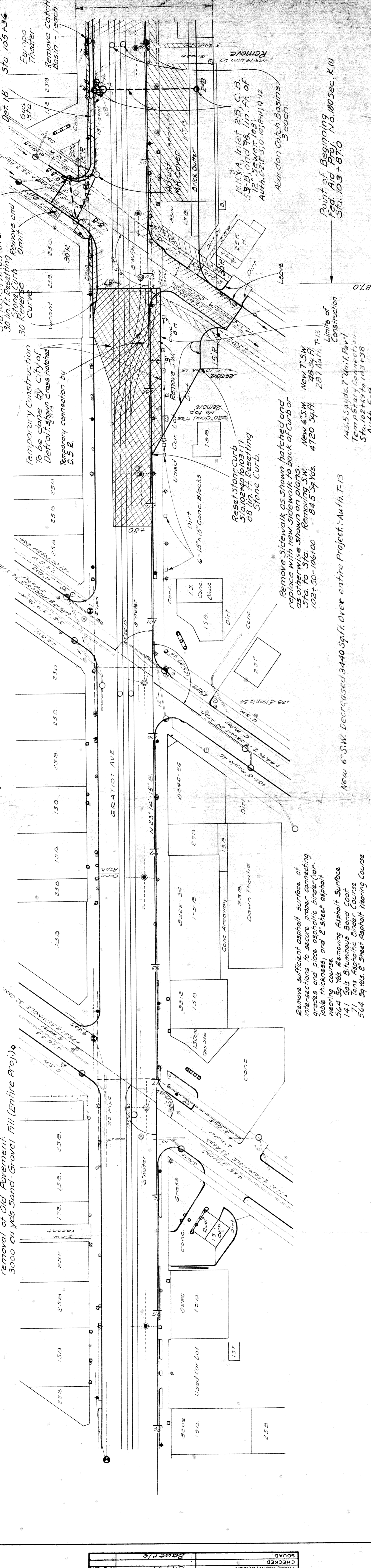
Remove Old Pavement Curbs and Gutters within construction limits (Sta. 103+87 to 106+00). 712.0 Sq. Yds. Removing Old Pavement. (1227 Auth. L-7)

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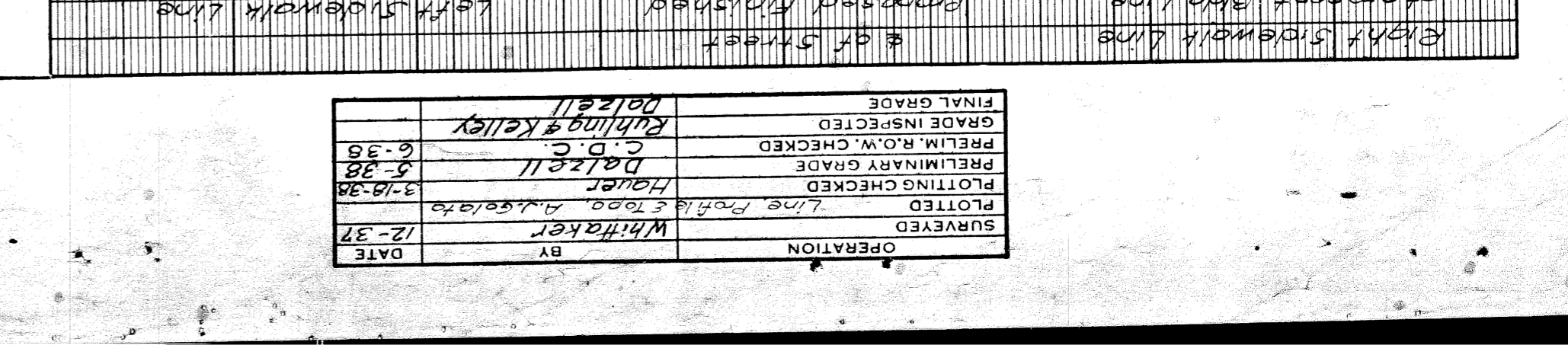
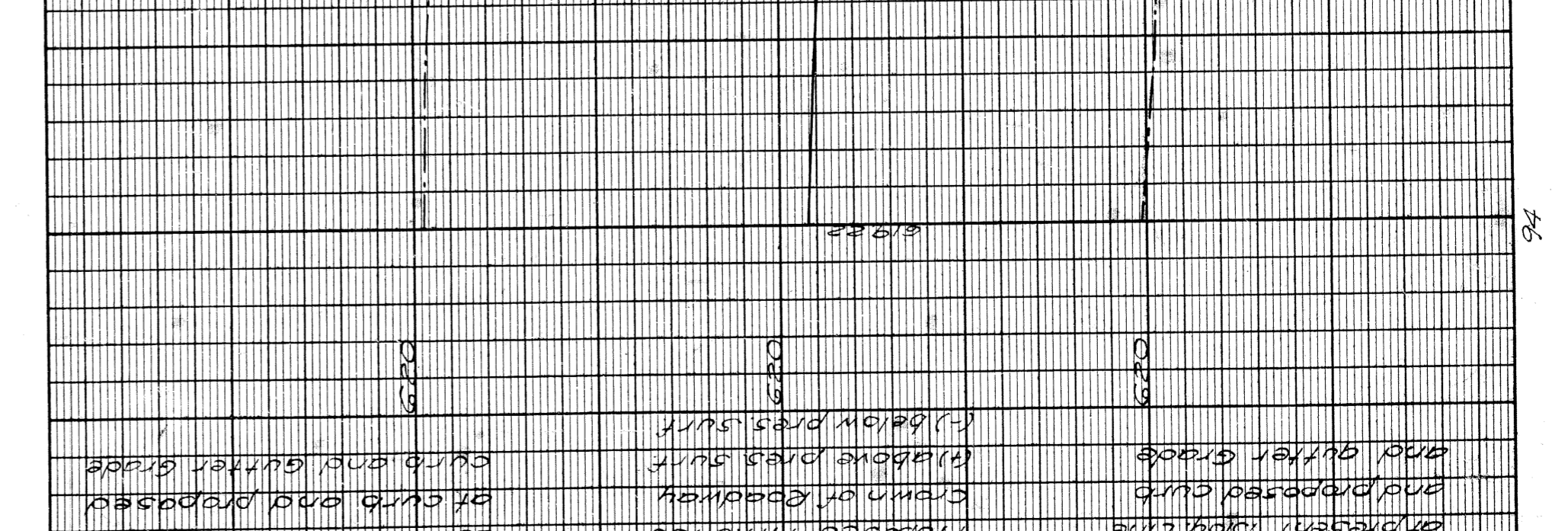
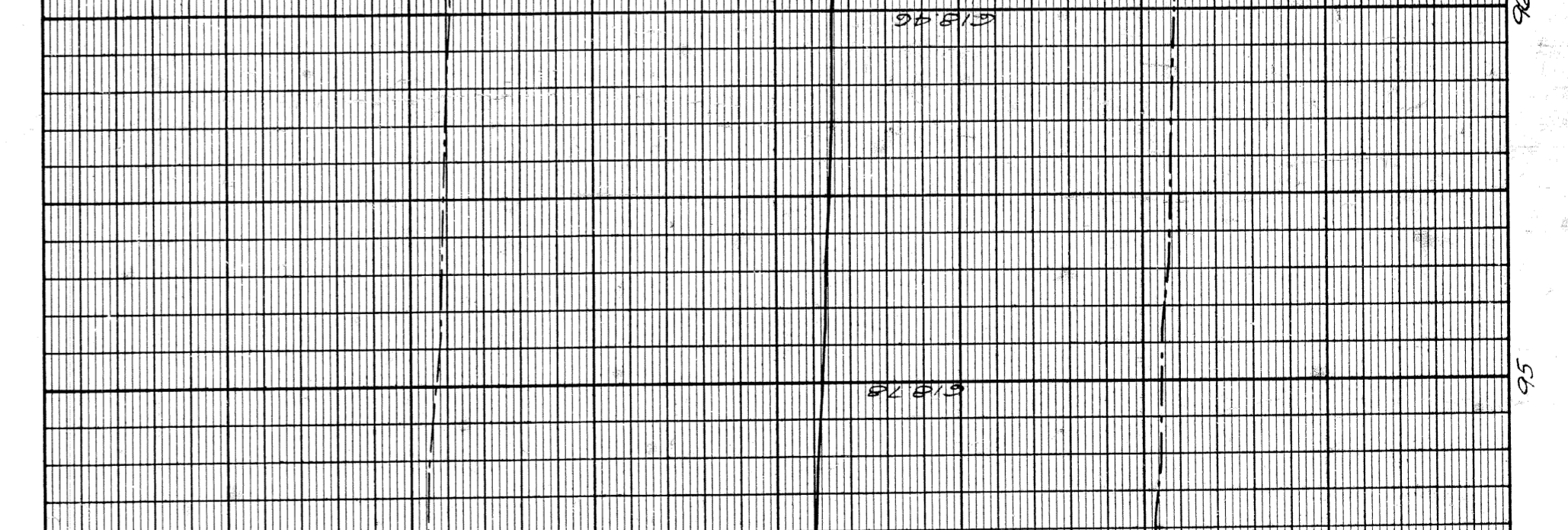
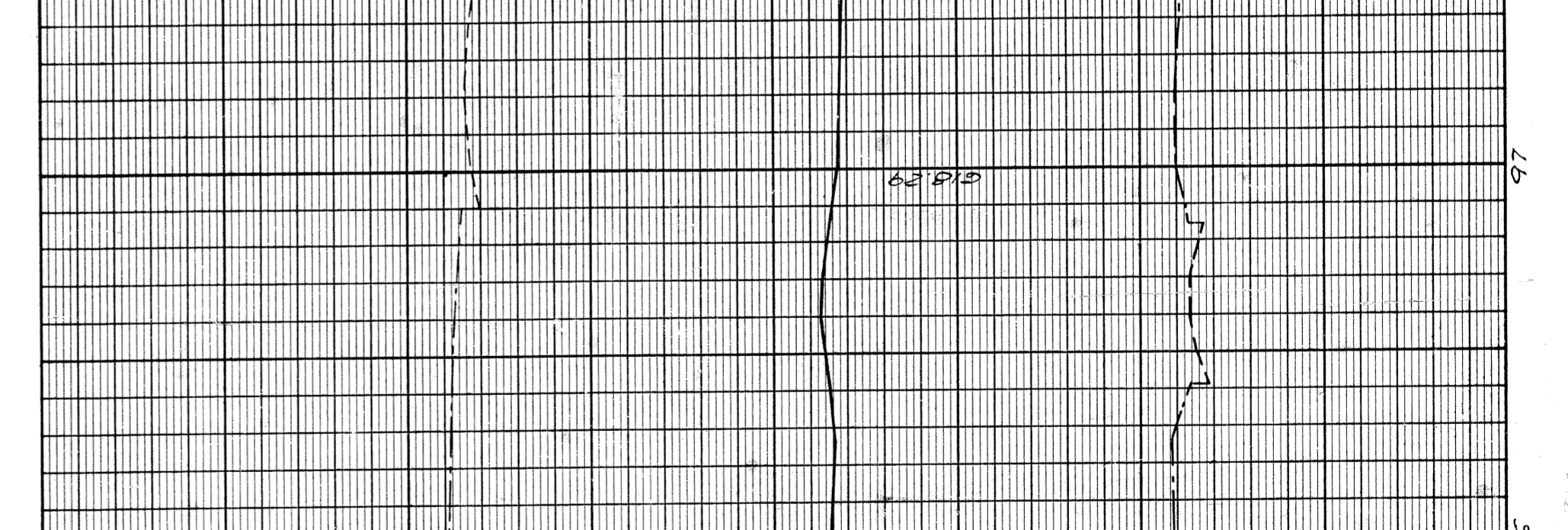
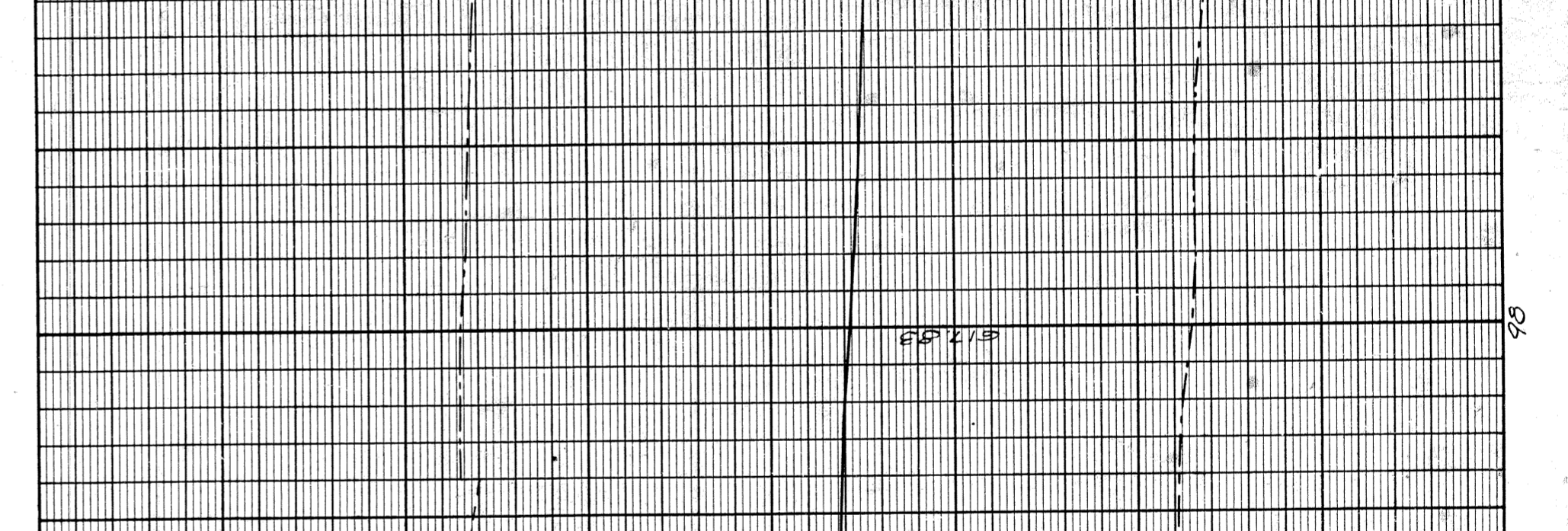
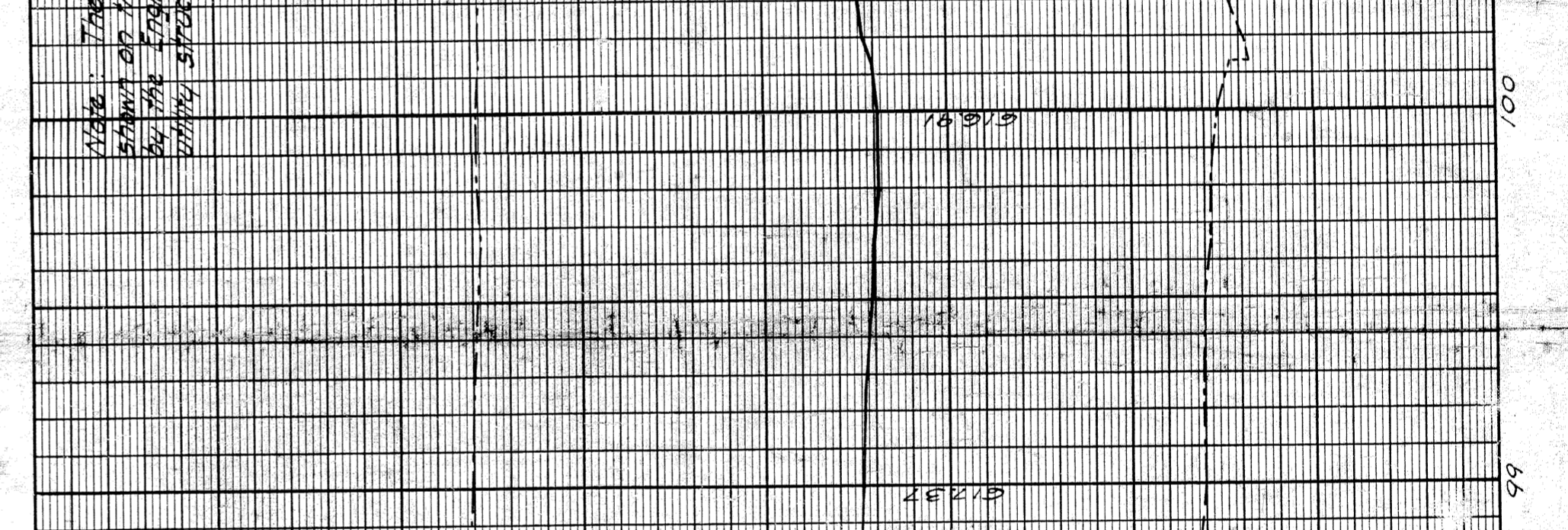
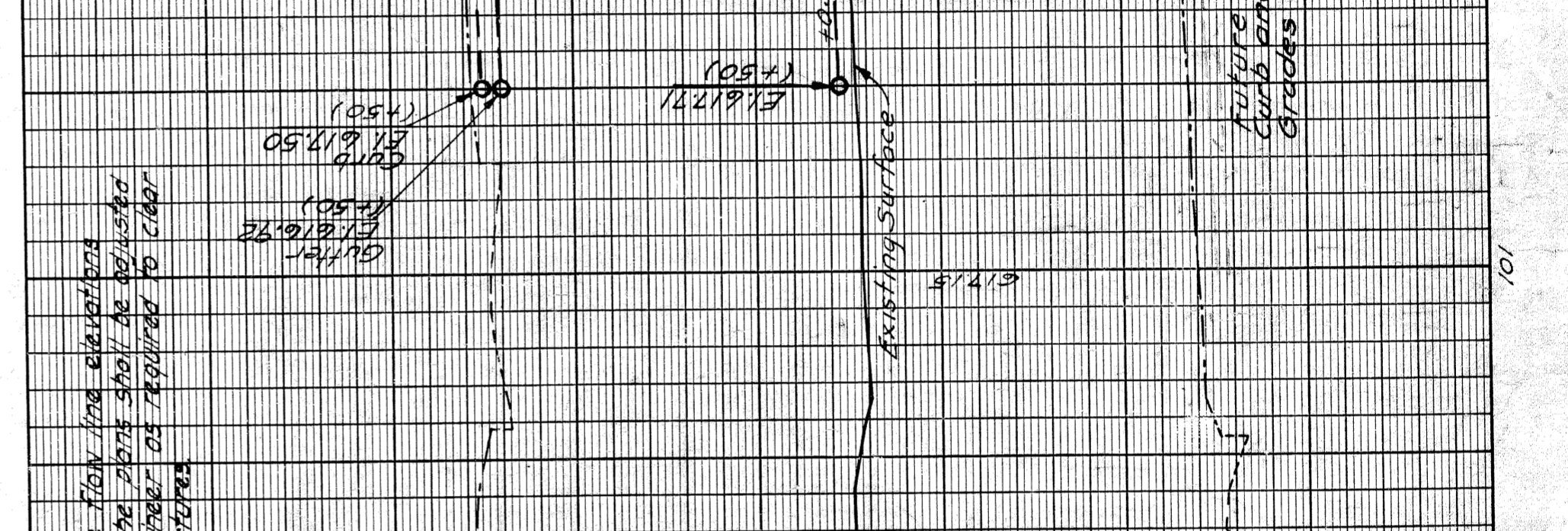
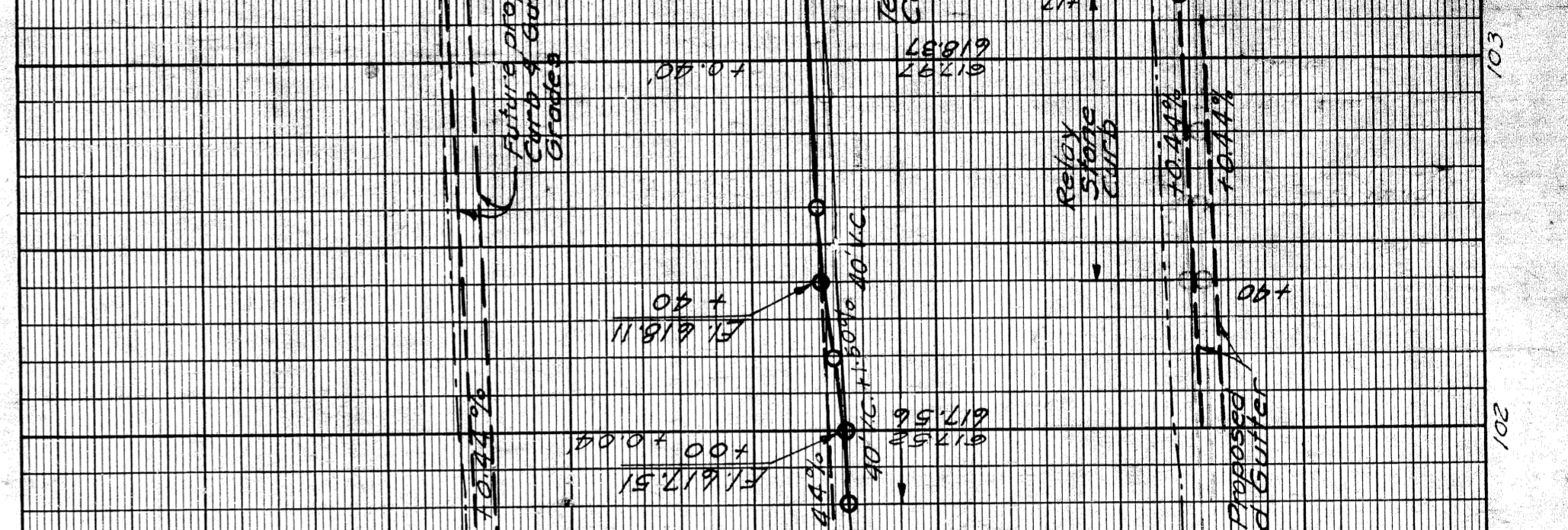
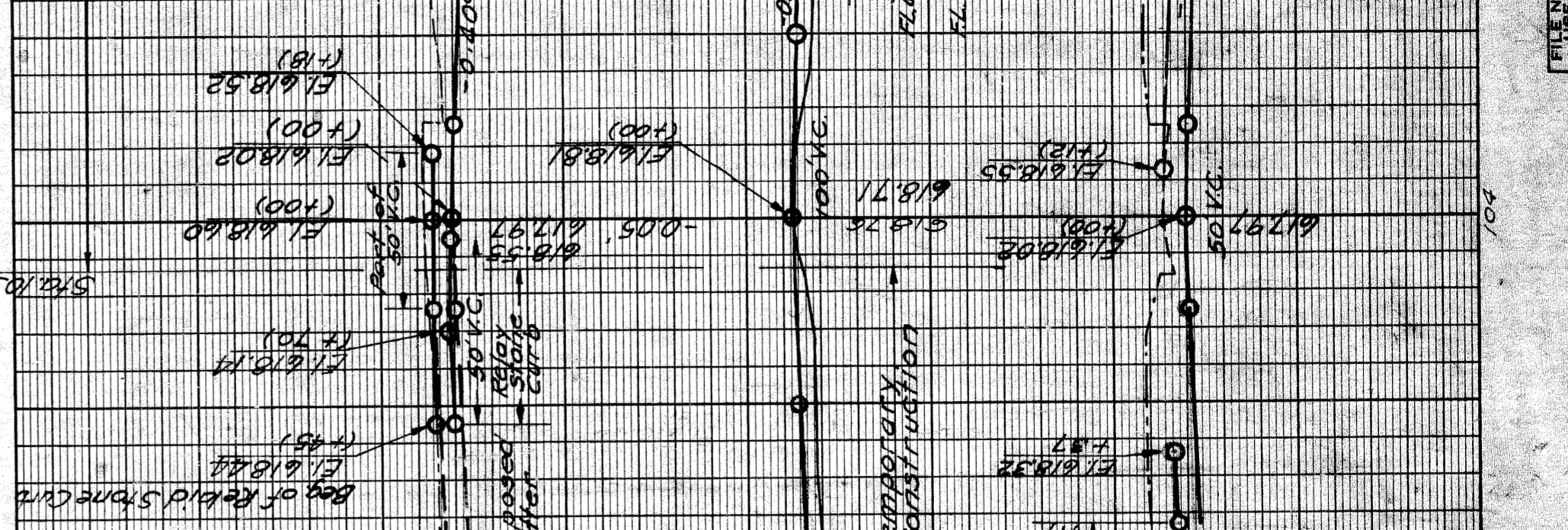
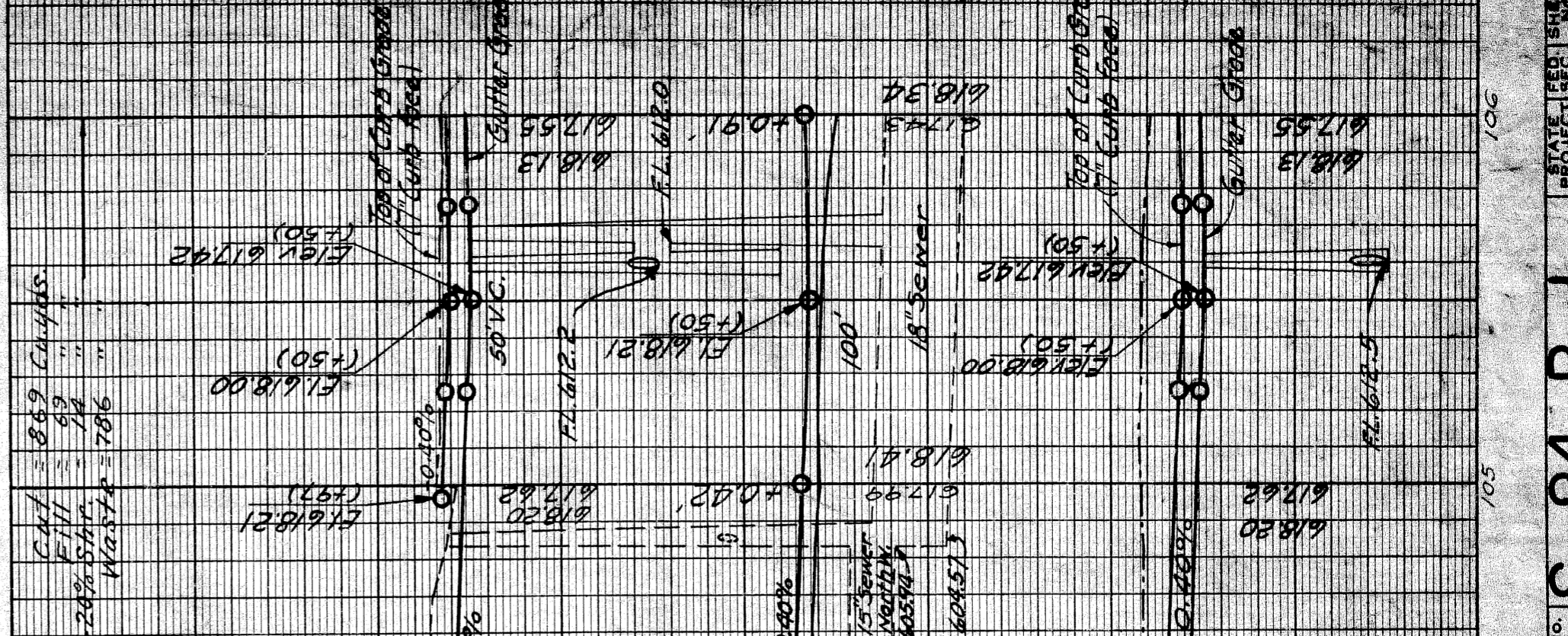
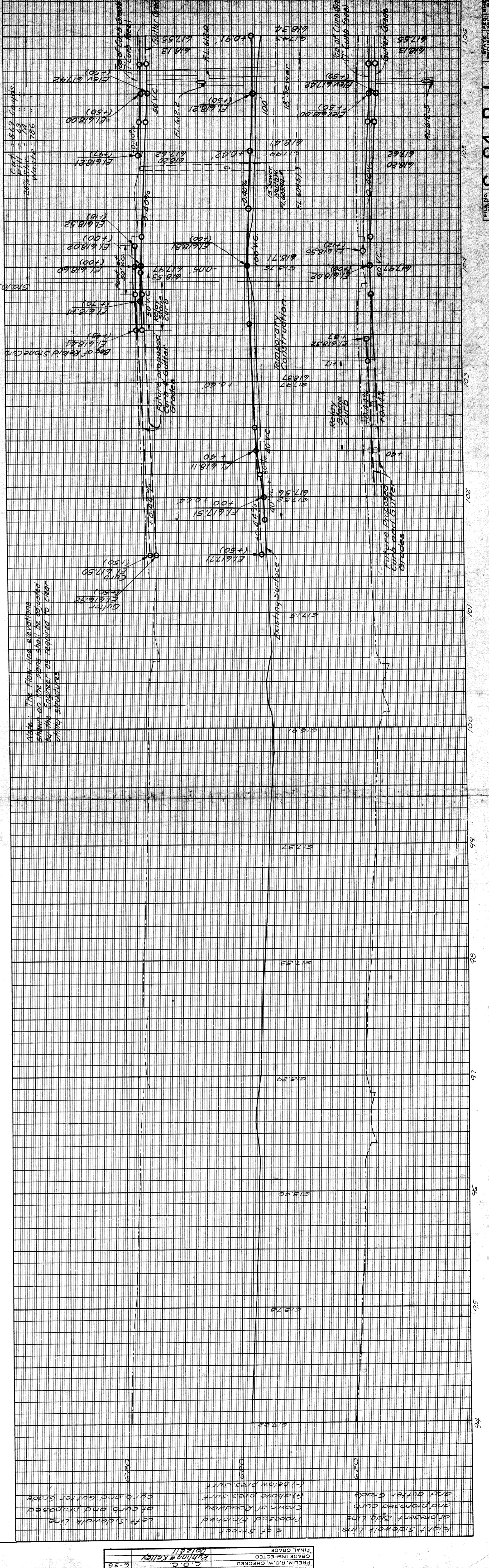
Remove Old Pavement Curbs and Gutters within construction limits (Sta. 103+87 to 106+00). 712.0 Sq. Yds. Removing Old Pavement. (1227 Auth. L-7)

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OPERATION	DATE
QUANTITIES	7-28
TRACED	7-28
FINAL R.O.W. CHECK	7-28
CHECKED	7-28
OPERATION	DATE
QUANTITIES	7-28
TRACED	7-28
FINAL R.O.W. CHECK	7-28
CHECKED	7-28

OPERATION	DATE
QUANTITIES	7-28
TRACED	7-28
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TRACED	7-28
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QUANTITIES	7-28
TRACED	7-28
FINAL R.O.W. CHECK	7-28
CHECKED	7-28
OPERATION	DATE
QUANTITIES	7-28
TRACED	7-28
FINAL R.O.W. CHECK	7-28
CHECKED	7-28

FED. ROAD STATE	REG. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	180		7	7
MICH. PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
U.2.5	Wayne	Dearborn		
FED. ROAD STATE	PROJ. NO.	COUNTY	SHEET NO.	TOTAL SHEETS
7	180		7	7

Remove Old Pavement Curbs and Gutters within construction limits. (Sta. 118+00 to Sta. 130+00). 5575 sq yds. Removing Old Pavement.

Place Driveway Return Def. 18" as follows: 15" + 18" + 15" = 48" total width. 15" + 18" + 15" = 48" total width.

Remove Railway Tracks within construction limits. (Sta. 118+00 to 130+00). 2400 lin ft. of Removing Car Tracks.

BM#15: El. 67.929 X in door-step of Bldg. at #9115

Place Sewer at following locations Sta. to Sta. Location Lin. ft. and Size: 123+31-123+05 37.7' 18" lin. ft. of 12" Sewer; 123+15-123+05 31.2' 18" lin. ft. of 12" Sewer; 127+65-127+23 42.4' 18" lin. ft. of 12" Sewer.

Remove Sidewalks shown hatched and replace to back of curb with new sidewalk or as otherwise shown on plans.

Remove Sidewalk New 7' S.W. 127+65-127+23 42.4' 18" lin. ft. of 12" Sewer. New 6' S.W. 127+65-127+23 42.4' 18" lin. ft. of 12" Sewer. 3227 sq. yds. 23' 11.5" sq. ft.

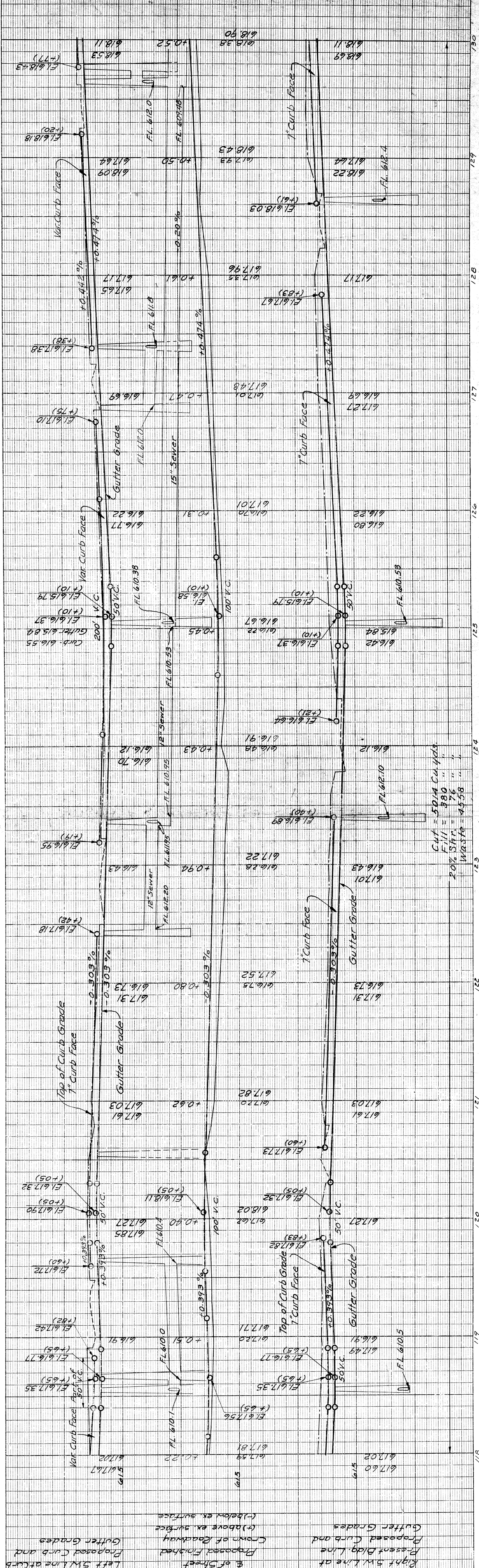
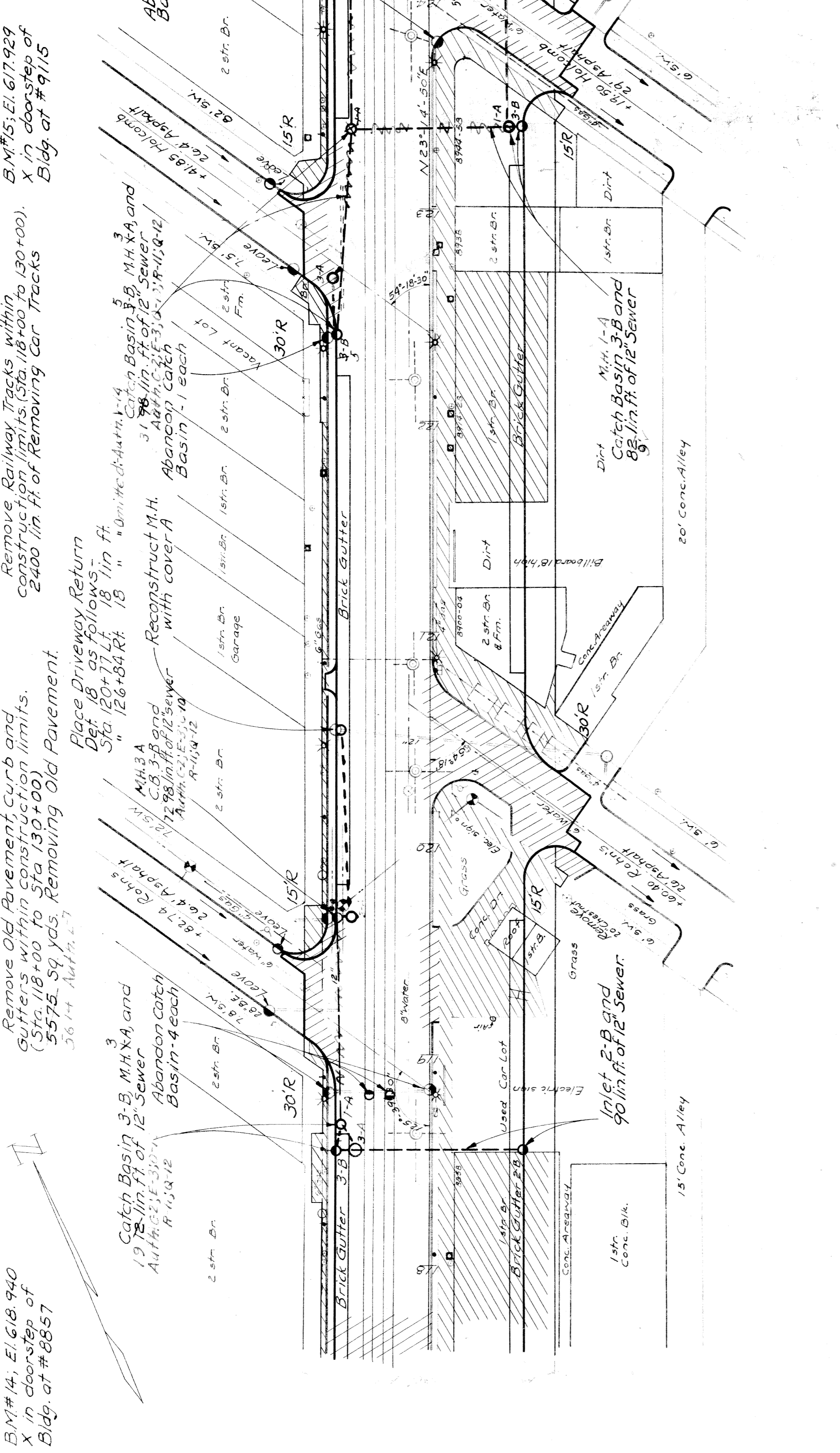
10' Driveway at Sta. 119+15.0

15' Catch Basins 3-B, M.H. 3-A and 90 lin. ft. of 12" Sewer. Author: C-2, E-3, U-10, R-10, Q-12.

15' Catch Basins 3-B, M.H. 3-A and 90 lin. ft. of 12" Sewer. Author: C-2, E-3, U-10, R-10, Q-12.

15' Catch Basins 3-B, M.H. 3-A and 90 lin. ft. of 12" Sewer. Author: C-2, E-3, U-10, R-10, Q-12.

15' Catch Basins 3-B, M.H. 3-A and 90 lin. ft. of 12" Sewer. Author: C-2, E-3, U-10, R-10, Q-12.



OPERATION	
BY DATE	DALELL 7-38
CHECKED	C.M.W. 7-38
TRACE	
QUANTITIES	
OPERATION	

OPERATION	
BY DATE	WHITTAKER 12-37
CHECKED	DALELL 5-38
TRACE	
QUANTITIES	
OPERATION	

FED. ROAD STATE DIST. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	1920	1	8

MICH. PROJECT	COUNTY	CITY	TWP.
U.S. 25	Wayne	Westland	

FISCAL YEAR	TWP.	SHEET NO.	TOTAL SHEETS
1920		1	8

POT Sta. 138+77.54 (axle)
 N 26° 25' 10" W X in S. side N. ent. Kreege Bldg.
 N 61° 10' 10" W X in NE. cor. Bldg. at NW. cor. Cooper & Gratiot
 N 89° 50' 40" W X in rim at base hyd. MV. cor. Cooper & Gratiot

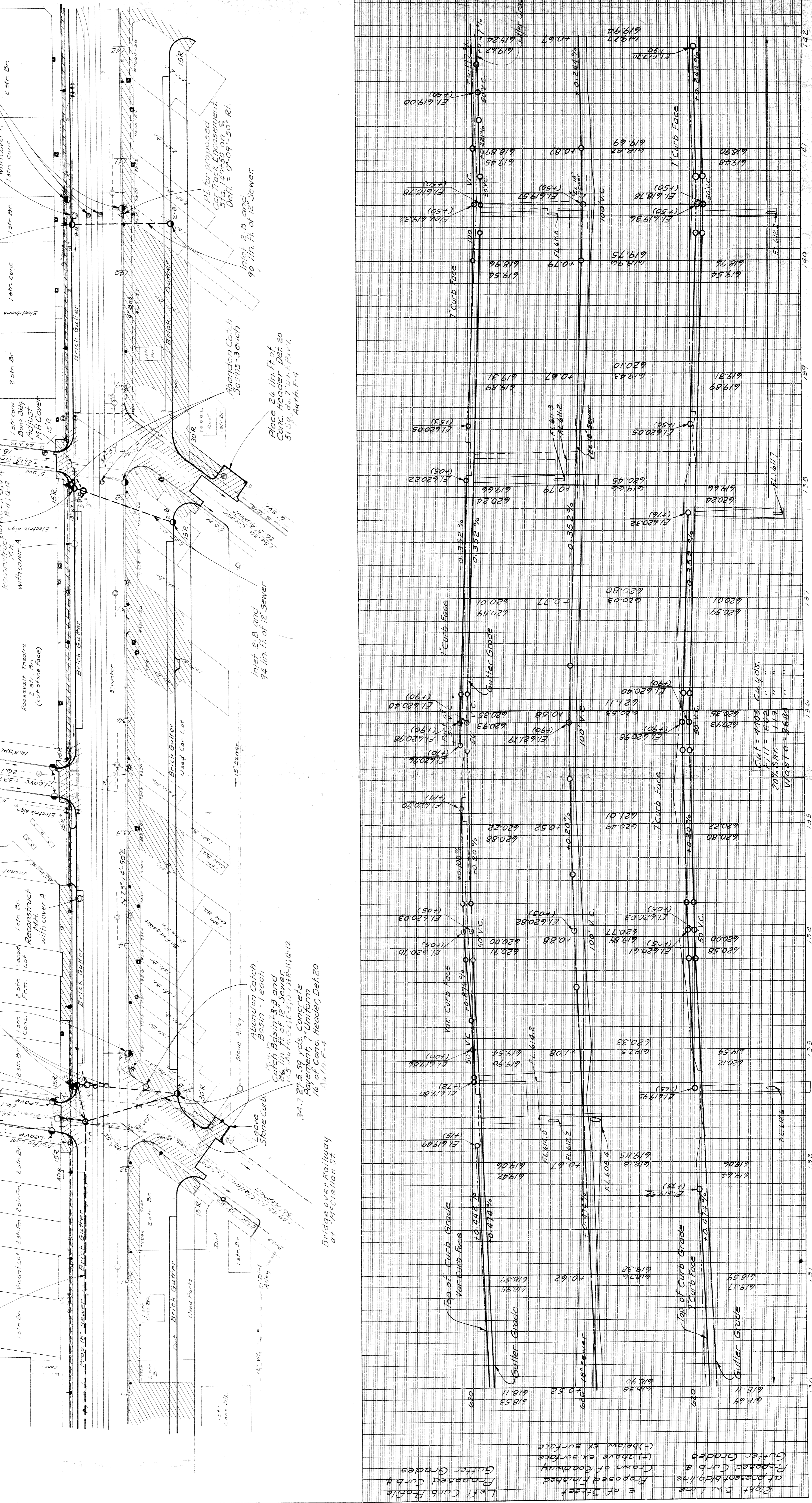
B.M. #18 El. 620.825
 X in step Bank Bldg.
 MV. cor. Gratiot Ch. & Gratiot

Remove Old Pavement, Curbs and Gutters
 within limits of 18" sewer. (Sta. 130+00 to 142+00)
 Old Pavement 5x6 ft. Arch. L. Removing

Remove Car Tracks within construction
 limits. (Sta. 130+00 to 142+00), 2400 lin. ft.
 of Removing Car Tracks

Note - For location and description
 of 18" Sewer See Table of Sewers on
 preceding sheet

OPERATION	DATE
BY Dalzell	7-38
BY Dalzell	7-38
BY Dalzell	7-38

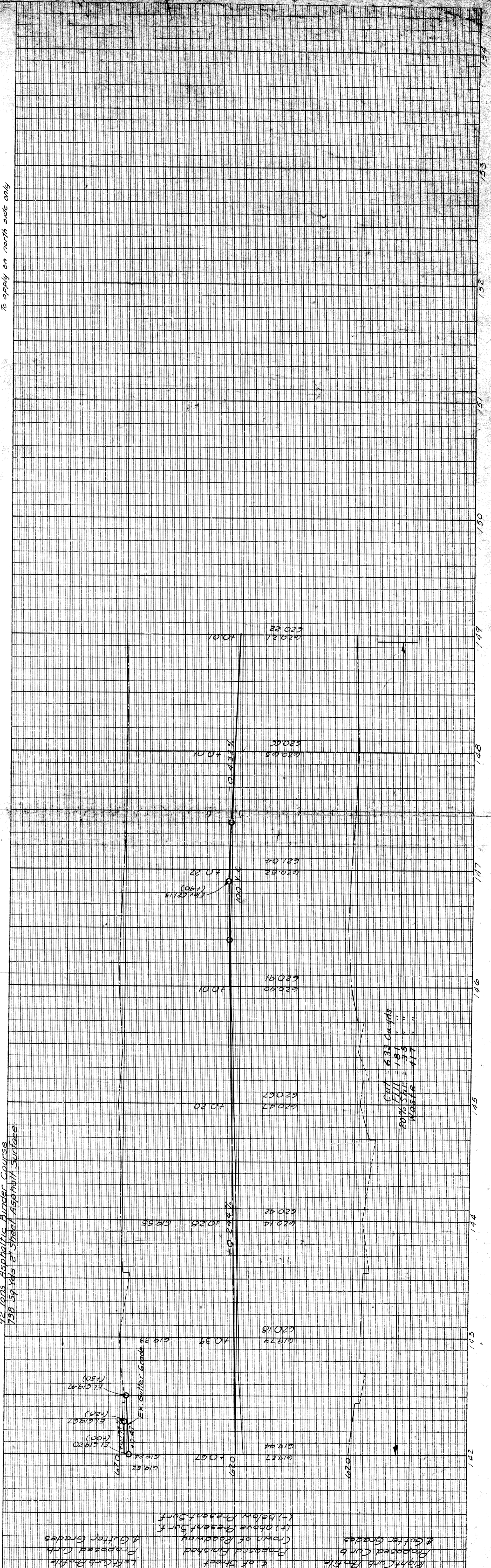
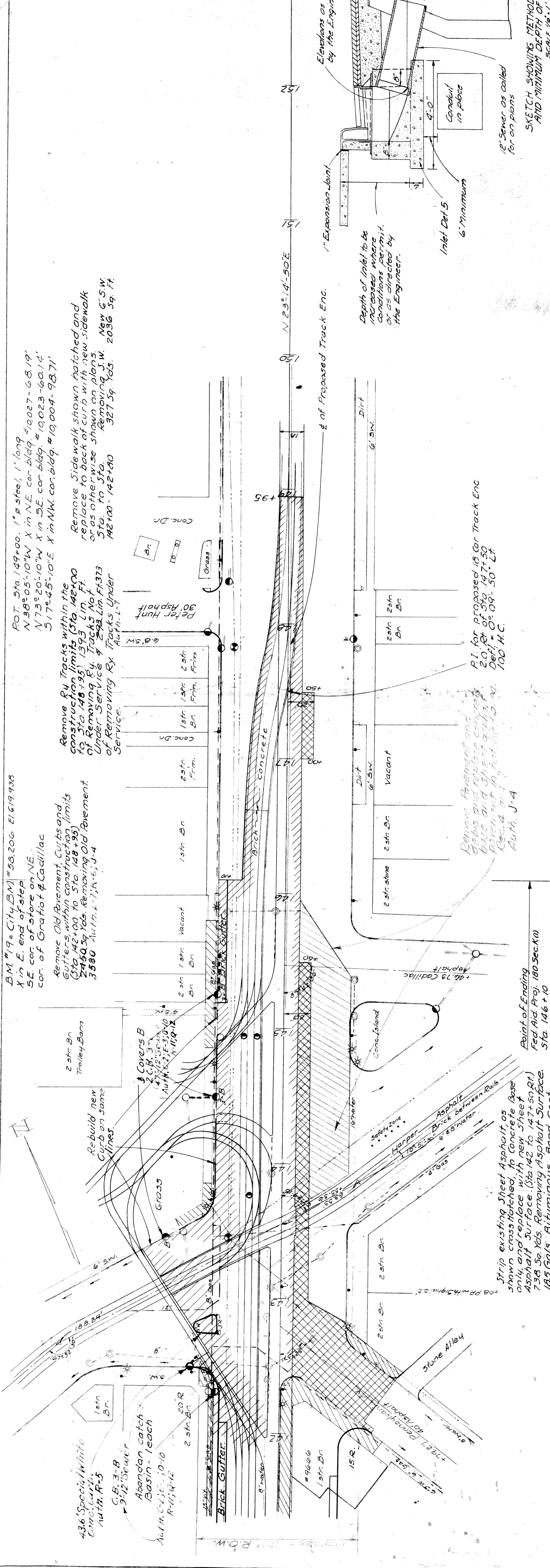


OPERATION	DATE
BY Dalzell	7-38
BY Dalzell	7-38
BY Dalzell	7-38



OPERATION	DATE
BY Dalzell	7-38
BY Dalzell	7-38
BY Dalzell	7-38

FED. ROAD DIST. NO.	STATE	FED. AID YEAR	TOTAL SHEETS
1	MICH.	1950	9
ROUTE	STATE PROJECT	COUNTY	CITY
U.S. 25	8-2-31	WAYNE	DETROIT
FED. ROAD DIST. NO.	STATE PROJECT	FED. AID YEAR	TOTAL SHEETS
1	MICH.	1950	9
ROUTE	STATE PROJECT	COUNTY	TWP.
U.S. 25	8-2-31	WAYNE	DETROIT



OPERATION	DATE
BY	DATE
DAISSEL	3-6-39
OPERATION	DATE
BY	DATE
DAISSEL	3-6-39

OPERATION	DATE
BY	DATE
DAISSEL	3-6-39
OPERATION	DATE
BY	DATE
DAISSEL	3-6-39

OPERATION	DATE
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OPERATION	DATE
BY	DATE
DAISSEL	3-6-39

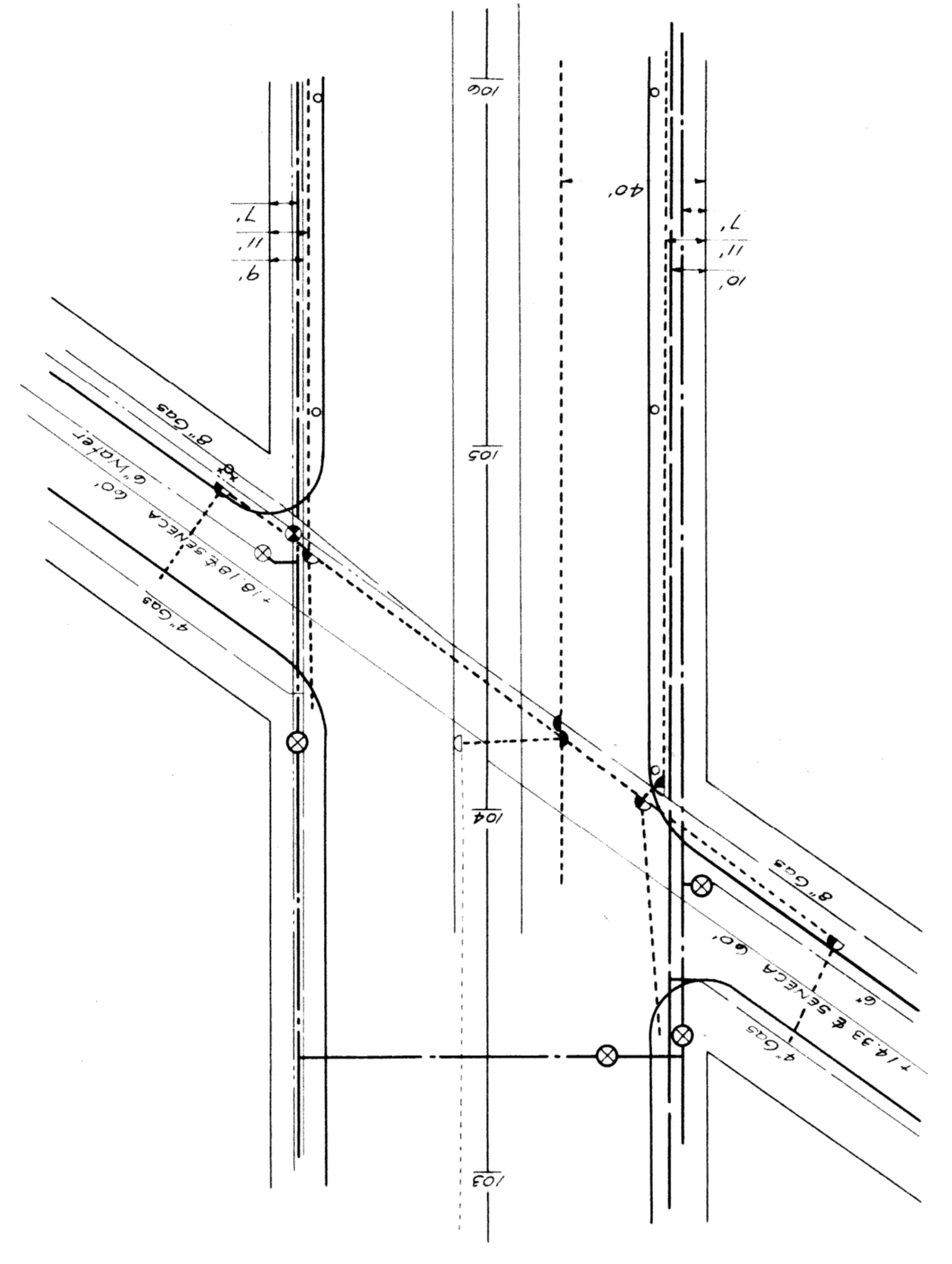
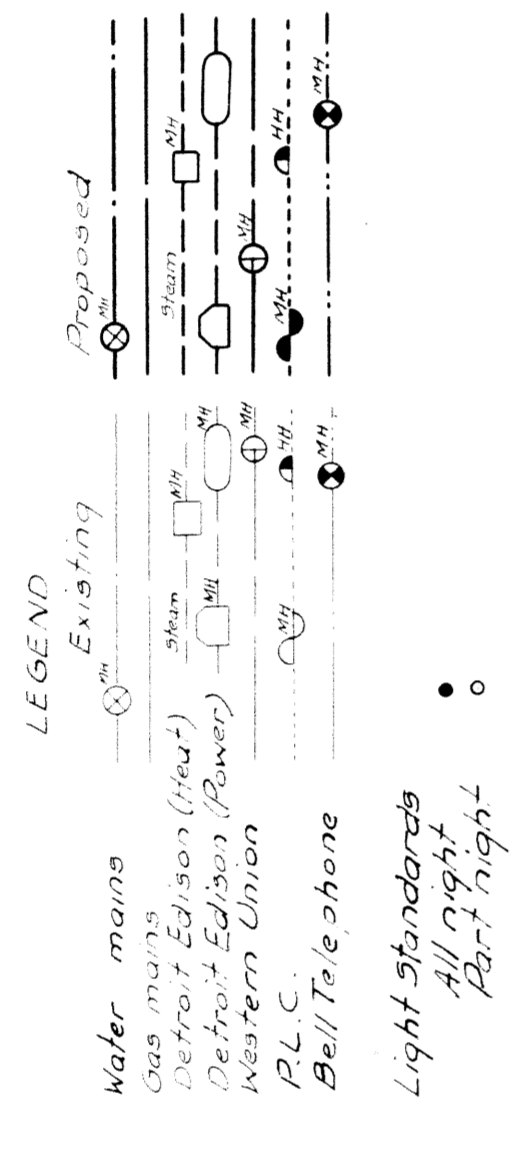
OPERATION	DATE
BY	DATE
DAISSEL	3-6-39
OPERATION	DATE
BY	DATE
DAISSEL	3-6-39

OPERATION	DATE
BY	DATE
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OPERATION	DATE
BY	DATE
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OPERATION	DATE
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OPERATION	DATE
BY	DATE
DAISSEL	3-6-39

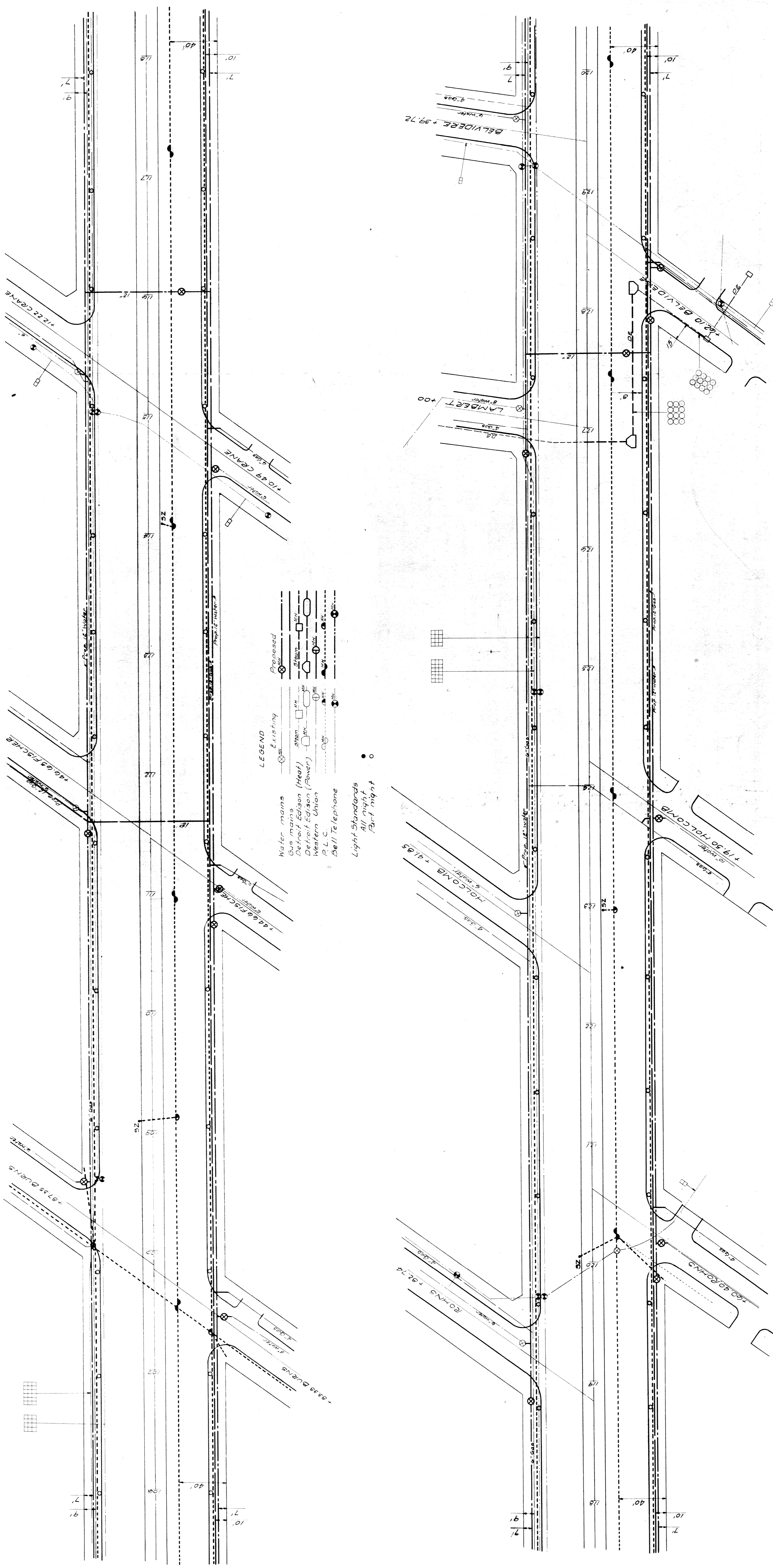
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MICH.	100-K(1)			
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
100-27	100-27	WASHTENAW	DETROIT	10	
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE PROJECT	COUNTY	CITY	SHEET NO.	TOTAL SHEETS

PUBLIC UTILITIES



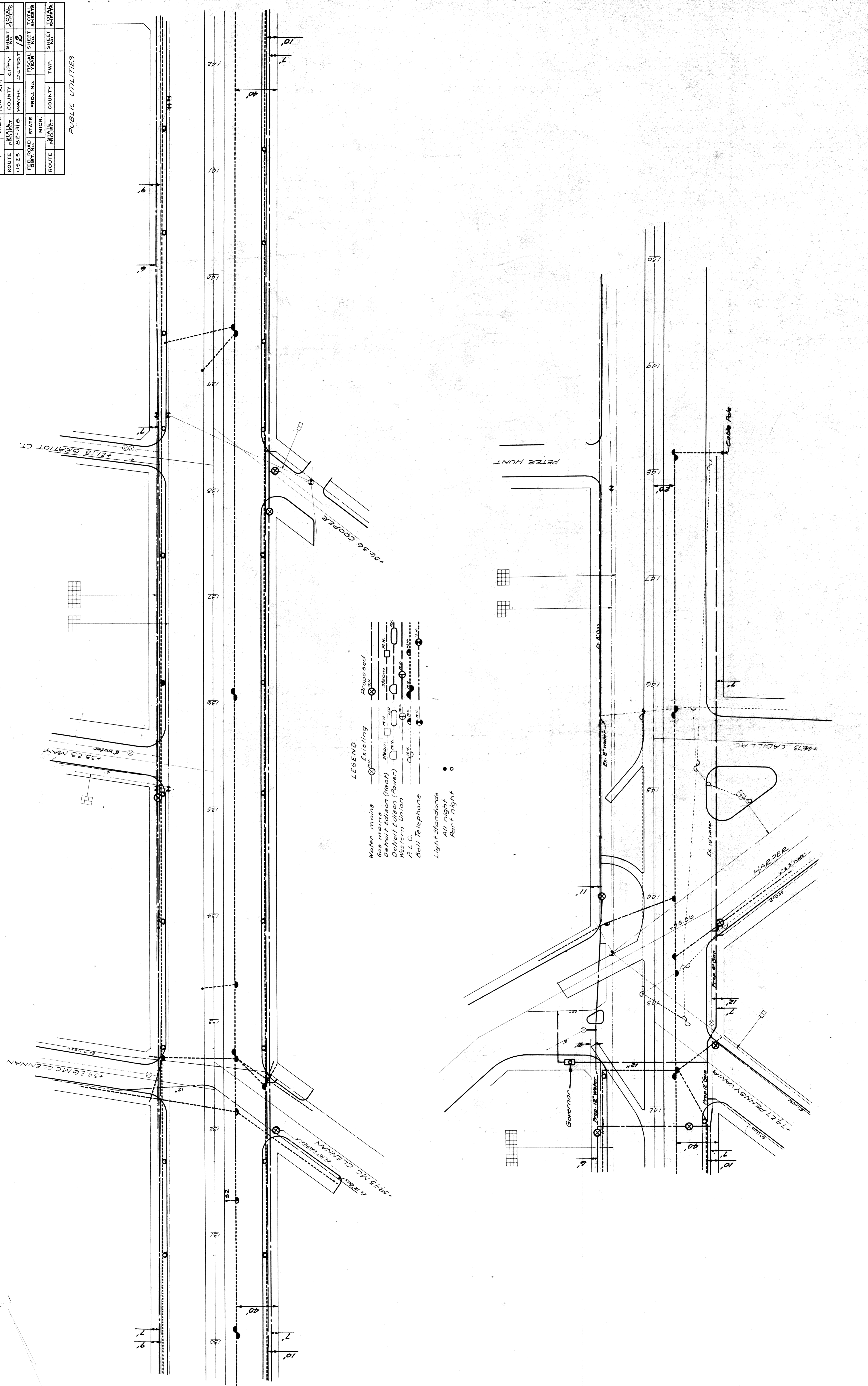
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7	MICH.	190-K(1)		
ROUTE	PROJECT	COUNTY	CITY	SHEET NO.
U.S. 23	82-318	WAYNE	DETRIT	11
FISCAL YEAR	STATE	PROJECT	COUNTY	TWP.
190-K(1)	MICH.			
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.

PUBLIC UTILITIES

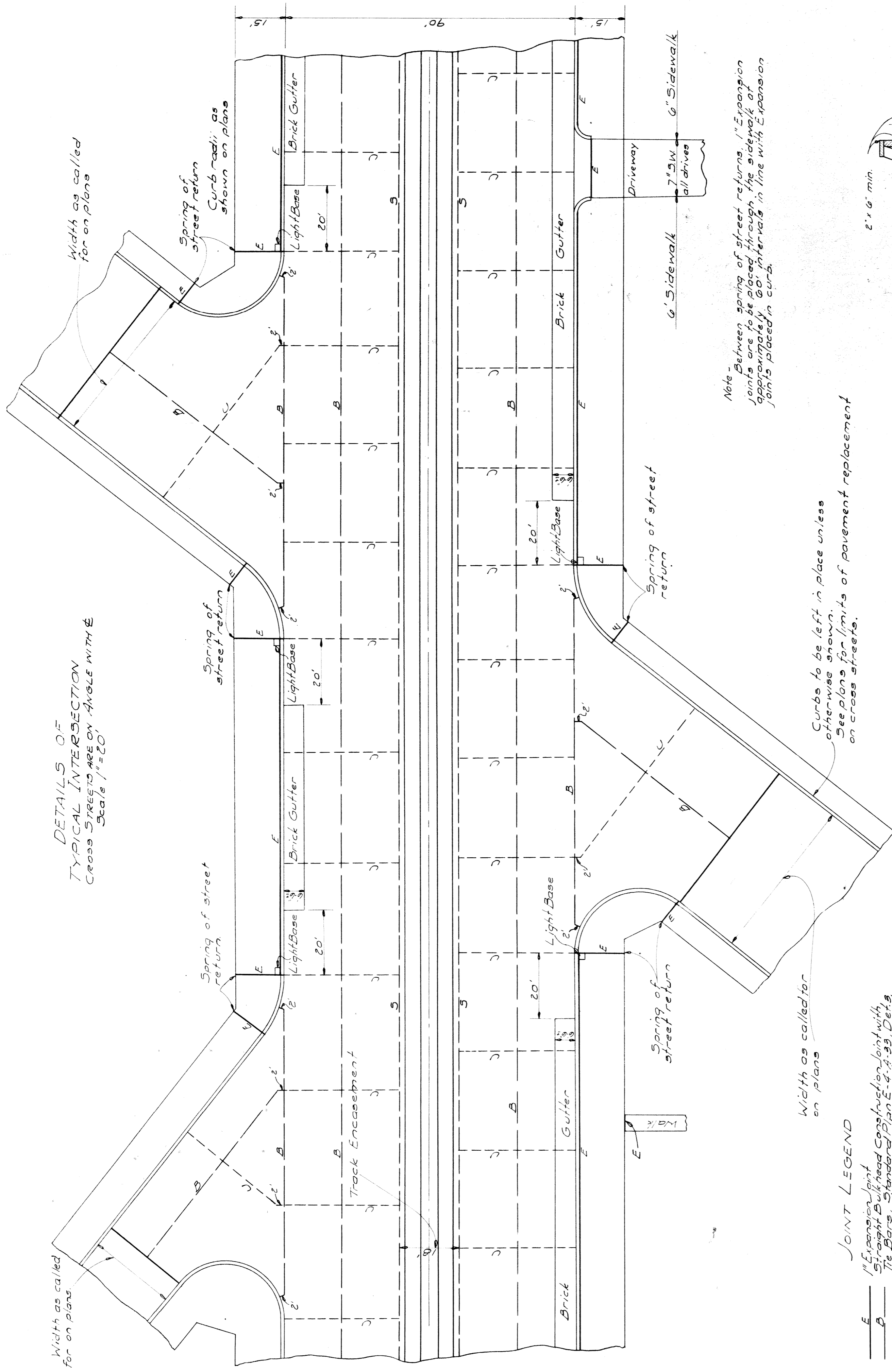


FED. DIST. NO.	STATE	FED. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MICH.	180-K(1)			
ROUTE	STATE	COUNTY	CITY	SHEET	TOTAL SHEETS
U.S. 25	52-31A	WAYNE	DETROIT	12	
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

PUBLIC UTILITIES

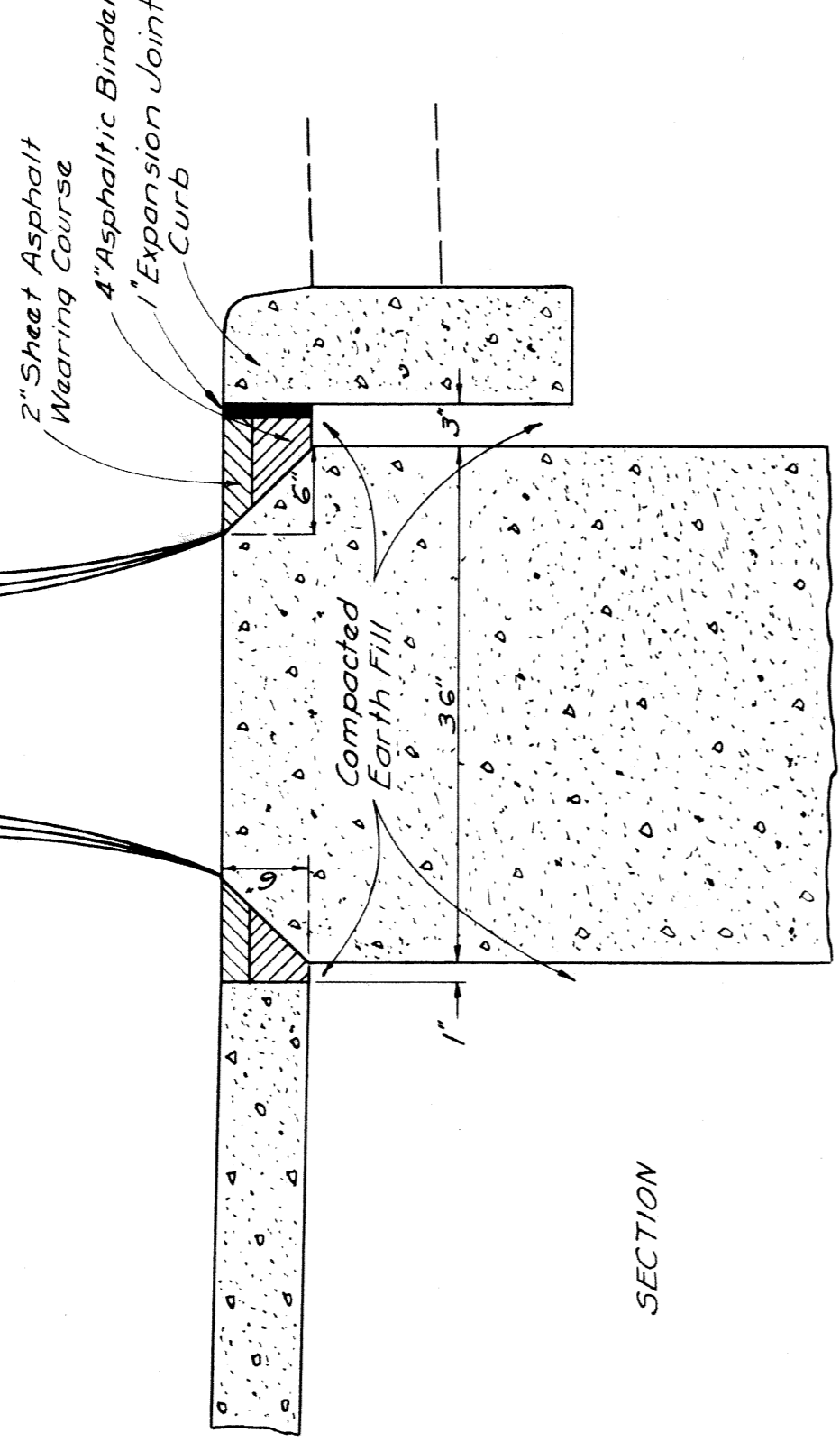


FISCAL YEAR	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MICH.	180-K(1)			
ROUTE	STATE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
U.S. 25	82-31	WAYNE	DETROIT	73	
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

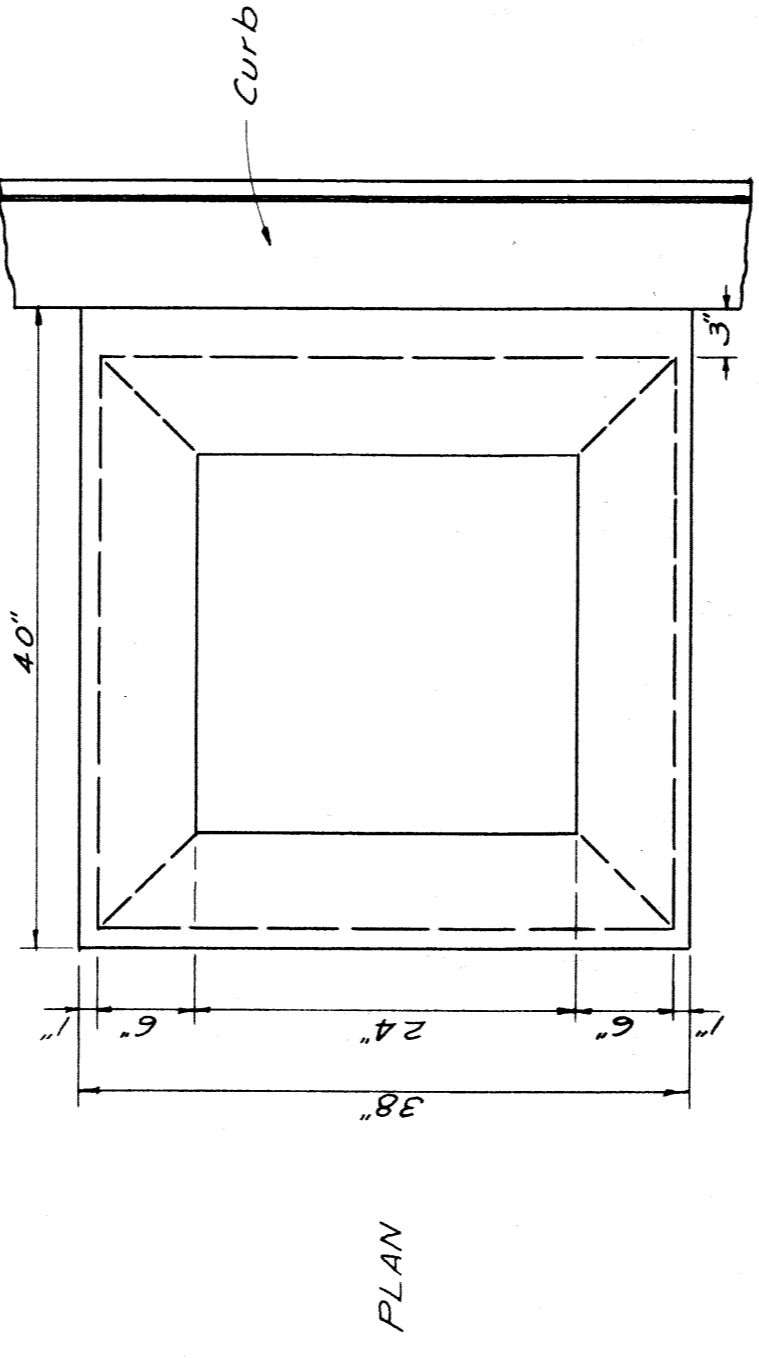


Width as called for on plans
Scale 1/200

Width as called for on plans



SECTION



PLAN

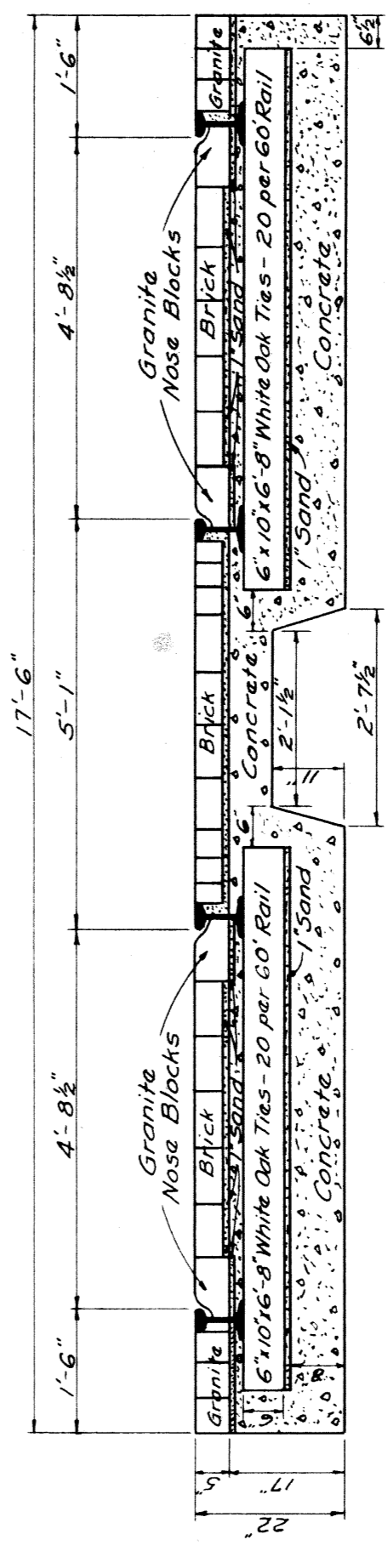
SKETCH SHOWING LAMP POST BASE
SCALE 1/8\"/>

Note: Between spring of street returns, 1\"/>

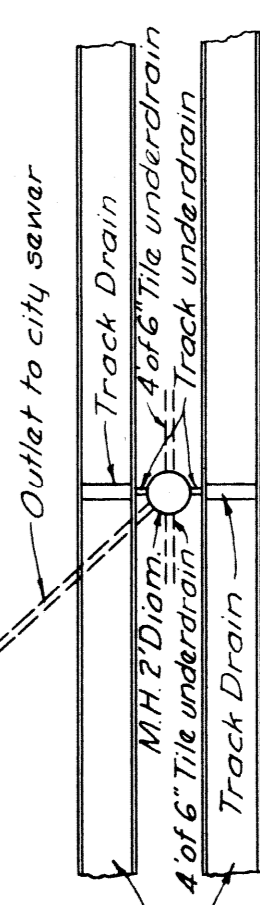
Curbs to be left in place unless otherwise shown. See plans for limits of pavement replacement on cross streets.

JOINT LEGEND

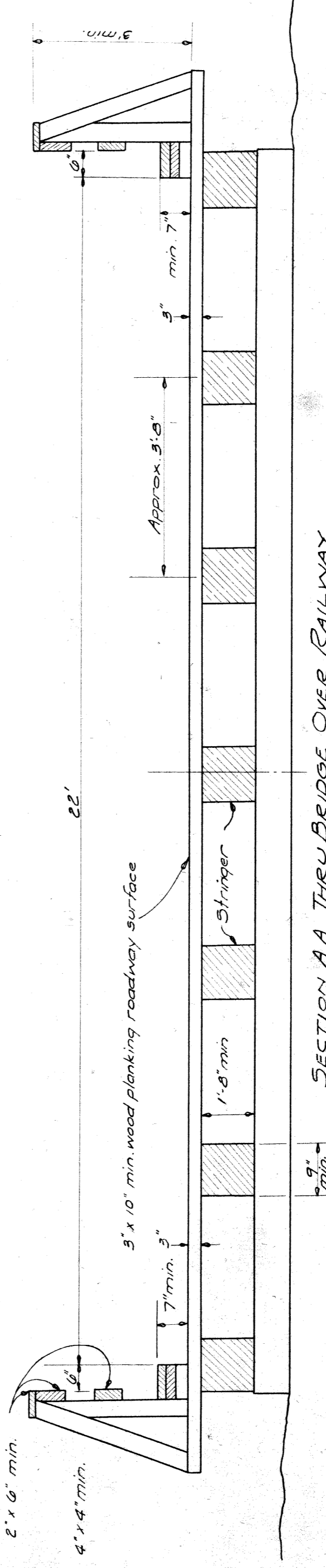
- E --- Expansion Joint
- S --- Straight Bulkhead Construction Joint with Tie Bars, Standard Plan E-4-1-33, Det. 9
- U --- Right Bulkhead Construction Joint with Tie Bars, Standard Plan E-4-1-33, Det. 4
- U --- Transverse Plane of Weariness Joint, Standard Plan E-4-1-33, Det. 6, Alt. 1 or 2



TYPICAL SECTION SHOWING DOUBLE TRACK IN PLACE ON SENECA TO HARPER AVE.
SCALE 1/152

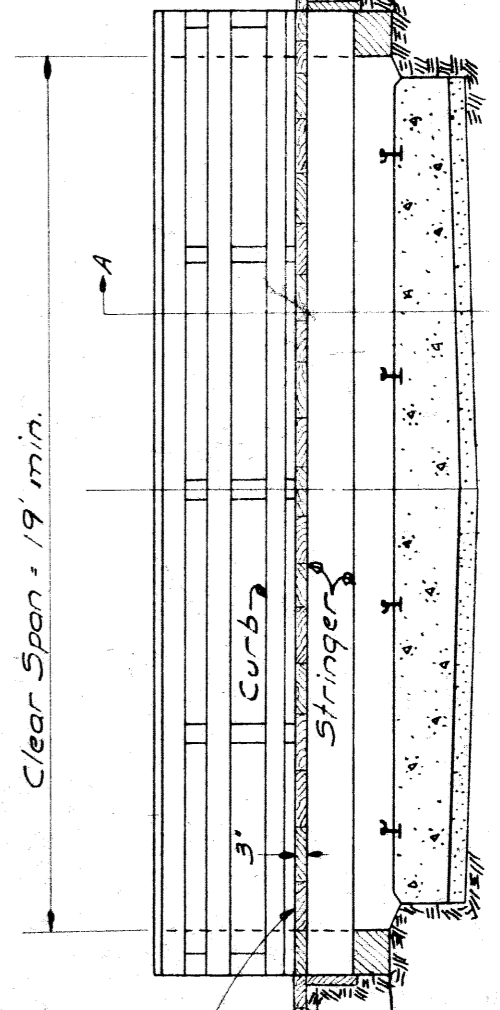


SKETCH SHOWING DRAIN LAYOUT FOR DSR TRACKS FROM SENECA TO HARPER AVE.
6\"/>



SECTION AA THRU BRIDGE OVER RAILWAY
Scale 1/2

NOTE: All parts of the bridge structure are to be thoroughly fastened together by bolting, bolting or other approved methods. The 3\"/>



LONGITUDINAL SECTION THRU BRIDGE OVER RAILWAY
Scale 1/4

Bridge over railway shall be constructed in accordance with the specifications for temporary structures.

QUANTITY SHEET - B

FILE NO. 82-31
 NO. 300
 STENCIL

DATE
 HISTORY CHECKED
 ENTERED ON PLANS BY

DATE
 DATA COMPLETED

DATE
 CHECKED BY

DATE
 PLAN ESTIMATE BY

DATE
 PROJECT ENG.

DATE
 DATA COMPLETED

DATE
 CHECKED BY

DATE
 PLAN ESTIMATE BY

DATE
 PROJECT ENG.

SURFACING				GUARD RAIL & GUARD POSTS				AS PER PLANS				AS CONSTRUCTED					
STA. TO STA.	LENGTH	WIDTH	REMARKS	STA. TO STA.	LENGTH	WIDTH	EXPLANATION OF CHANGES	STA. TO STA.	LIN FT. EACH	CABLE	POSTS	EXPLANATION OF CHANGES	STA. TO STA.	LIN FT. EACH	CABLE	POSTS	EXPLANATION OF CHANGES
103+87	108.71	Int.															
104+95.71	710.14	90															
107+05.95	159.64	Int.															
108+64.89	202.24	90															
110+67.13	160.74	Int.															
112+27.87	205.09	90															
114+32.96	156.79	Int.															
115+89.75	243.90	90															
118+43.65	175.84	Int.															
122+42.76	177.68	Int.															
124+20.44	258.30	90															
126+70.74	60.64	Int.															
127+39.30	43.63	90															
127+83.21	77.11	Int.															
128+60.37	60.39	90															
129+20.71	56.66	Int.															
131+77.37	197.44	90															
131+74.81	97.15	Int.															
132+71.56	241.91	90															
135+70.87	56.61	Int.															
135+70.48	205.26	90															
137+25.74	77.72	Int.															
139+53.46	1041.54	Int.															
TOTAL				370.438	4910.8	40,660.6	163.00	3,869.2									
103+87	148.95	4508.00															
103+87	142+00	56.40															
142+00	147+50	73.80															
TOTAL				420.87	4716.3	9016.0											
TOTAL				791.308	9626.9	49676.6	163.00	3869.2									

CURBS AND GUTTERS LIN. FT.				MANHOLES CATCH BASINS AND INLETS				AS PER PLANS				AS CONSTRUCTED			
STA. TO STA.	DRIVE RETURNS	EXPLANATION OF CHANGES	STA. TO STA.	DRIVE RETURNS	EXPLANATION OF CHANGES	STA. TO STA.	DETAIL NO.	STATION	EXPLANATION OF CHANGES	STA. TO STA.	DETAIL NO.	STATION	EXPLANATION OF CHANGES		
TOTAL															

STORM SEWER				AS CONSTRUCTED			
STA. TO STA.	EXPLANATION OF CHANGES	STA. TO STA.	EXPLANATION OF CHANGES				
TOTAL							

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
7	MICH.	180 SECKO	1	3
ROUTE	COUNTY	CITY	SHEET NO.	TOTAL SHEETS
U.S. 25	DETOIT	GRATIOT	3	3
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
	MICH.			
ROUTE	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 3
 REMOVING DEBRIS FROM OLD BASEMENTS

Within the limits of the proposed right of way, the Contractor shall remove from old basements and dispose of all debris and rubbish not previously removed by the City of Detroit. This work will be considered incidental to the work of Sand-Gravel Fill.

REMOVING SIDEWALK

The following items are classed as Removing Sidewalk:

1. Concrete sidewalk.
2. Concrete and brick driveways having a thickness of 6" or less.
3. Concrete floors having a thickness of 5" or less.

The estimated extent of this work is shown on the plans but the Engineer shall determine the exact amount to be removed. Portions of the broken sidewalk may be placed in Sand-Gravel backfill areas as outlined under "Removing Old Pavement."

CONSTRUCTION OF NEW SIDEWALK

New concrete sidewalk is to be placed between the back of curb and new right of way line on the East side. On the west side, new concrete sidewalk shall be placed from the back of the new curb to the existing sidewalk and the existing sidewalk shall be replaced where shown on plans or as directed by the Engineer. Sidewalk shall be constructed as follows:

For sidewalks, other than at driveways, 6-inch Concrete Sidewalk, and,
 For sidewalks across all driveways, 7-inch Concrete Sidewalk.

Where new sidewalk construction along property lines abuts existing buildings or proposed building construction, construct sidewalk regular to within one foot of the property line. Place one-inch expansion joint one foot from property line and parallel to it and place one-foot filler strip of sidewalk between the expansion joint and property line. This allows for adjustment of small irregularities along the building line without altering the general slope of the sidewalk.

SAND-GRAVEL FILL

All trenches excavated deeper than one foot below the sub-grade of the new pavement or sidewalk, all abandoned sewer and other utility manholes, catch basins, and similar structures, all basements occurring within the limits of the project, and all old sewer and other utility trenches which may have sunk to levels lower than one foot below the proposed pavement or sidewalk subgrade shall be backfilled with Sand-Gravel Fill, thoroughly compacted, to the elevation of the bottom of the proposed pavement or sidewalk. However, places of broken pavement, sidewalk or masonry walls, not

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 5
 DETROIT STREET RAILWAY COMMISSION (Contd)

stockpiled along the project for disposal by the D.S.R. Trolley poles are to be moved by the D.S.R. This work will be paid for at the contract unit price per lineal foot for "Removing Railway Track Under Service" and for "Removing Railway Track Not Under Service."

The existing track encasement is reported to be 20 inches deep. No adjustment will be made in the contract unit price for Removing Railway Track because of variation in this thickness.

CONSTRUCTION - The D. S. R. Commission will furnish and install all track, ties, ballast, poles and wires, and all surface track drains between tracks (including manholes, gutters, manhole sumps and manholes for same), also all sewer connections from these manholes to the existing city sewer system.

The Road Contractor shall place all subbase, concrete encasement (in two courses) and the sheet asphalt surface course as shown on the plans.

Where special track work is to be installed at intersection with Harper and Pennsylvania Avenue the track encasement is to be placed under service. This will be paid for at the contract unit price per cubic yard for Track Encasement, Grade A Concrete (Under Service) and for Track Encasement, Grade A Concrete (Not Under Service).

COOPERATION - The work to be performed by the Detroit Street Railway Commission shall be subject to the approval of the Engineer. The Road Contractor shall conduct his work at all times so as to expedite the work of new track installation and operation. No claims will be allowed under this contract for any delay or inconvenience caused by failure of any of the above parties to complete any part of the work at any specified time.

TEMPORARY TRACK - The Detroit Street Railway Commission shall make complete installation of all temporary tracks and temporary reverse curves (including any track encasement) that may be necessary.

MAINTAINING TRAFFIC - (Grading, Drainage and Base Course Contract)

Detroit Street Railway traffic will be maintained by the Detroit Street Railway Commission through the use of existing tracks and of temporary tracks at each end of the project. The Road Contractor shall so conduct his operations as to facilitate the maintenance of such traffic.

Through traffic will be detoured by the Department, the location of detour streets is shown on the title sheet.

The Contractor shall at all times make provision for the passage of fire Detroit vehicles across Gratiot Avenue at the intersections with Crane and McCallan.

During the construction of the D. S. R. tracks a movable bridge over railway, capable of carrying legal loads and city fire trucks,

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 6
 MAINTAINING TRAFFIC (Contd)

and conforming essentially to the details shown on plans, shall be provided at each of the above crossings.

Satisfactory facilities shall be provided by the Contractor for local vehicular traffic along Gratiot Avenue and over intersecting streets, except that during periods of actual construction, reasonable sections of the project may be closed to all vehicular traffic as directed by the Engineer.

Reasonable facilities shall be provided for pedestrian traffic throughout the project, with access provided to local property entrances.

The Contractor shall notify the Engineer at least 26 hours in advance of starting any work that would interfere with traffic and the Engineer shall give at least 24 hours notice to the Detroit Fire Department and the Detroit Police Department prior to the closing of any portion of the project to traffic. The Engineer shall also keep any Fire and Police Departments properly informed regarding the condition of any portion of the project that may be open to traffic.

Maintaining Traffic shall be considered as incidental to the construction of the project, except as follows:

"Bridges over Railway" will be paid for at the contract unit price each, which price shall be payable in full for the structure, including ramps, complete in place, moving the structures as required for proper maintenance of cross traffic, and maintaining traffic over the same.

* MAINTAINING TRAFFIC - (Sheet Asphalt Contract)

Reasonable facilities shall be provided by the Contractor for local traffic at all times except during the period actually required for placing the asphalt, binder course and sheet asphalt wearing course or sections thereof. The sheet asphalt wearing course, the project or sections thereof shall be opened to traffic by the Engineer, shall be incidental to the construction of the project.

* REMOVING ASPHALT SURFACE - (Sheet Asphalt Contract)

At street returns sufficient existing asphalt surface shall be removed before placing new sheet asphalt, to secure proper connecting grades, as directed by the Engineer.

This will be paid for at the contract unit price per square yard for "Removing Asphalt Surface."

* SEALING LIGHT POST BASES - (Sheet Asphalt Contract)

The area around new light post bases shall be sealed with sheet asphalt according to details shown on plans. This will be paid for at the contract unit price each for "Sealing Light Post Bases."

* Only items marked thus apply to Sheet Asphalt Contract.

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 7
 REMOVING DEBRIS FROM OLD BASEMENTS

Within the limits of the proposed right of way, the Contractor shall remove from old basements and dispose of all debris and rubbish not previously removed by the City of Detroit. This work will be considered incidental to the work of Sand-Gravel Fill.

REMOVING SIDEWALK

The following items are classed as Removing Sidewalk:

1. Concrete sidewalk.
2. Concrete and brick driveways having a thickness of 6" or less.
3. Concrete floors having a thickness of 5" or less.

The estimated extent of this work is shown on the plans but the Engineer shall determine the exact amount to be removed. Portions of the broken sidewalk may be placed in Sand-Gravel backfill areas as outlined under "Removing Old Pavement."

CONSTRUCTION OF NEW SIDEWALK

New concrete sidewalk is to be placed between the back of curb and new right of way line on the East side. On the west side, new concrete sidewalk shall be placed from the back of the new curb to the existing sidewalk and the existing sidewalk shall be replaced where shown on plans or as directed by the Engineer. Sidewalk shall be constructed as follows:

For sidewalks, other than at driveways, 6-inch Concrete Sidewalk, and,
 For sidewalks across all driveways, 7-inch Concrete Sidewalk.

Where new sidewalk construction along property lines abuts existing buildings or proposed building construction, construct sidewalk regular to within one foot of the property line. Place one-inch expansion joint one foot from property line and parallel to it and place one-foot filler strip of sidewalk between the expansion joint and property line. This allows for adjustment of small irregularities along the building line without altering the general slope of the sidewalk.

SAND-GRAVEL FILL

All trenches excavated deeper than one foot below the sub-grade of the new pavement or sidewalk, all abandoned sewer and other utility manholes, catch basins, and similar structures, all basements occurring within the limits of the project, and all old sewer and other utility trenches which may have sunk to levels lower than one foot below the proposed pavement or sidewalk subgrade shall be backfilled with Sand-Gravel Fill, thoroughly compacted, to the elevation of the bottom of the proposed pavement or sidewalk. However, places of broken pavement, sidewalk or masonry walls, not

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 8
 SAND-GRAVEL FILL (Contd)

Larger than one-man size may be placed in basement fills, PROVIDED THAT, no piece shall be placed within areas to be occupied by new utility structures, except as directed by the Engineer. The dual contents of fill (broken pavement, sidewalk and masonry walls) placed in basement fills shall be placed in separate layers. The fill shall be placed in areas from which the buildings have been removed and which lie within the proposed right of way lines. In order to properly support the Sand-Gravel Fill at right of way lines where there is no building basement wall for a support, it is planned that waste earth from the project shall be placed outside of the right of way lines in such a manner as to properly support such Sand-Gravel Fill, same to be done at all times as directed by the Engineer. No adjustment in unit prices will be allowed for any change in quantities due to more or less Sand-Gravel Fill being actually required than is set up in the estimate.

Sand-Gravel Fill shall consist of an approved bank run sand or gravel, all of the material shall be of such size that it will pass through a 2 1/2 inch square opening. All sand and fine material which, when dry, will pass through No. 10 sieve, shall not contain clay and silt in excess of 10 per cent by weight.

Sand-Gravel Fill will be paid for at the contract unit price per cubic yard, loose measure, which price shall be payment in full for furnishing, hauling, placing, and compacting the material and completing the work.

DISPOSING OF SURPLUS EXCAVATION

All surplus excavation shall be disposed of by the Contractor with no over-haul allowance.

RIGHT OF WAY

The City of Detroit shall be responsible for securing all necessary right of way as shown on plans and for the moving, removing or altering of all buildings within said right of way.

The Contractor shall perform no work on any parcel of property until Highway Department and the City of Detroit City Engineer have been notified in writing and the City of Detroit City Engineer is responsible for any delays in construction work due to any damage in clearing right of way. No claims by the Contractor for delay due to such delays will be allowed.

DETROIT STREET RAILWAY COMMISSION

REMOVE - Rails, paving, ties, track encasement, and other appurtenances shall be removed and disposed of by the Contractor according to 2407 of the Standard Specifications. Rails shall be kept in place until they are removed. Excavated shall be disposed of in a place of disposal approved by the City of Detroit. Steel rails and other material having salvage value shall be

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 9
 REMOVING OLD PAVEMENT

The following items are classed as Removing Old Pavement:

1. Concrete base course together with all existing surfacing.
2. Concrete base course having a thickness greater than 6".
3. Concrete driveways having a thickness greater than 6".
4. Concrete floors having a thickness greater than 6".

The material thus removed may be placed in the sand-gravel backfill areas as directed by the Engineer, provided that no pieces shall be larger than one-man size or placed in areas to be occupied by new utility structures. The existing pavement is reported to consist of 6-inch concrete base with 3 1/2-inch sheet asphalt surface.

In certain sections the operation of pavement removal may necessitate the removal of earth with Sand-Gravel Fill. The material removed shall be replaced by Sand-Gravel Fill to the elevation of the sub-grade. An allowance of 3" of Sand-Gravel Fill has been included in the estimate for this purpose. If more than 3" of Sand-Gravel Fill is required, this additional material shall be placed by the Contractor at his expense.

REMOVING MASONRY

Within the limits of the proposed right of way the Contractor shall remove existing walls, foundations, etc., not previously removed by the City of Detroit. The excavation may be placed in the sand-gravel backfill areas as outlined under "Removing Old Pavement." No gravel in unit price will be allowed because of variation between the estimated quantities and work actually performed.

82-31 FA 180 Sec. K (1) GRATIOT AVENUE
 SUPPLEMENTAL SPECIFICATIONS CONTINUED - Sheet 10
 COOPERATION

Detail plans shall be submitted to the Engineer, by each public utility, whether publicly or privately owned, for all work proposed to be performed by said utility, before proceeding with such work. Notice as aforesaid shall be given to the Engineer, and shall also be given to the proposed contractor, so that the Engineer may be satisfied as to the proposed work. The Contractor may refuse to perform the work of the Contractor and maintenance of traffic. The work to be performed by each utility shall be done in a manner satisfactory to the Engineer and so as to expedite the work of the Road Contractor, interfere as little as possible with the work of other utilities or the Road Contractor, and finish the installation previous to the completion of the grading by the Road Contractor. EXCEPT, that final adjustment of surface structures may be made later when requested by the Engineer. All trenches made by any utility for installation of underground work shall be backfilled with Sand-Gravel Fill placed in approximately 12 inch layers, each layer and thoroughly compacted, subject to approval by the Engineer.

The Road Contractor shall conduct his work at all times so as to expedite the work of installing these utilities. No claims will be allowed under this contract for delays or inconvenience caused by the failure of any of the above parties to complete any part of the work by any specified time.

REMOVING OLD PAVEMENT

The following items are classed as Removing Old Pavement:

1. Concrete base course together with all existing surfacing.
2. Concrete base course having a thickness greater than 6".
3. Concrete driveways having a thickness greater than 6".
4. Concrete floors having a thickness greater than 6".

The material thus removed may be placed in the sand-gravel backfill areas as directed by the Engineer, provided that no pieces shall be larger than one-man size or placed in areas to be occupied by new utility structures. The existing pavement is reported to consist of 6-inch concrete base with 3 1/2-inch sheet asphalt surface.

In certain sections the operation of pavement removal may necessitate the removal of earth with Sand-Gravel Fill. The material removed shall be replaced by Sand-Gravel Fill to the elevation of the sub-grade. An allowance of 3" of Sand-Gravel Fill has been included in the estimate for this purpose. If more than 3" of Sand-Gravel Fill is required, this additional material shall be placed by the Contractor at his expense.

REMOVING MASONRY

Within the limits of the proposed right of way the Contractor shall remove existing walls, foundations, etc., not previously removed by the City of Detroit. The excavation may be placed in the sand-gravel backfill areas as outlined under "Removing Old Pavement." No gravel in unit price will be allowed because of variation between the estimated quantities and work actually performed.

82-31 FA 180 Sec. K (1)

NOTES

PAVEMENT REINFORCEMENT

The concrete base course shall be reinforced throughout with Mesh, Bar Mat or Expanded Metal Mesh Reinforcement. Place reinforcement according to Standard Plan E-4-A-214.

TRANSVERSE PLANE OF WEAKNESS JOINTS IN CONCRETE BASE COURSE

Transverse plane of weakness joints shall be placed where shown in special details on the plans and elsewhere as follows: In Concrete Base Course transverse plane of weakness joints shall be placed at the spring of street returns and at approximately 40-foot interval between.

PARKING MARKING STRIPS

In approving these plans, the City of Detroit agrees that parallel parking only will be permitted on or adjacent to the pavement.

BRICK PARKING STRIPS

The location of the brick parking strips shown on the plans are approximate and the Engineer is to check the location with the Detroit Police Department.

GRADES FOR INTERSECTIONS

All intersections are to be considered as complete units and the grades determined before construction is started. The central 50 feet of pavement width on Gratiot Avenue is to have the same crown throughout the entire project except where crossing railway tracks.

TILTING OF PAVEMENT

Where plan gutter grades show the proposed left and right gutters to be at different elevations, the crown for the pavement is to be adjusted as follows: The central 50 feet of pavement width is to have the same crown throughout the entire project except where crossing railway tracks. The differences in gutter elevations obtained by increasing or decreasing the normal crown in the outer 18 feet of width according to the plan grades.

* Only items marked thus apply to Sheet A-6-B-1 Contract.

PUBLIC UTILITIES

The following public utilities are represented on this project:

- Detroit City Gas Company
- Detroit Edison Company
- Detroit Public Lighting Commission
- Michigan Bell Telephone Company
- Detroit Street Railway Commission
- Detroit Police Department
- Detroit Department of Water Supply
- Detroit Fire Department (Signal Dept.) (Water Dept.)

All existing poles and similar service structures that come within the limits of the proposed construction are to be removed by their respective owners or moved by them to locations approved by the Engineer.

82-31 FA 180 Sec. K (1)

NOTES APPLYING TO STANDARD PLANS

where the following items are called for on plans they are to be constructed according to the Standard Plan given below opposite each item unless otherwise indicated.

- Pavement Reinforcement E-4-A-210
- Manholes, Catch Basins and Inlets E-4-A-27R
- Cover A E-4-A-27-A1
- Cover B E-4-A-27-B1
- Manhole Box E-4-A-27-F1
- Catch Basin Trap E-4-A-27-T1
- Concrete Curb and Concrete Curb and Gutter E-4-A-29A
- Concrete Driveway Returns and Driveway Openings E-4-A-29A
- Concrete End Header E-4-A-29A, Detail 20
- Straight Bulkhead Construction Joint with Tie Bars E-4-A-33, Detail 3
- Straight Bulkhead Construction Joint without Tie Bars E-4-A-33, Detail 4
- Transverse Plane of Weakness Joint for Concrete Base Course Alternate 1 or 2 E-4-A-33, Detail 6
- 7" Concrete Sidewalk E-4-A-110A, Detail 3
- Concrete Pavement, 7" Uniform E-4-A-110A, Detail 4
- Reverse Curves E-4-A-110A, Detail 11
- Barrieraide and Construction Signs E-6-A-108B

82-31 FA 180 Sec. K (1)

SUMMARY OF QUANTITIES LENGTH 0.8 MILE SHEET ASPHALT SURFACE

- Removing Asphalt Surface 1,302 sq yds
- Bituminous Bond Coat 326 gals
- Asphaltic Binder Course 163.0 tons
- 1 1/2" Asphaltic Binder Course 40,660.6 sq yds
- 1 1/2" Sheet Asphalt Wearing Course 4,918.8 sq yds
- 2" Sheet Asphalt Wearing Course 37,043.8 sq yds
- 3" Vitrified Brick Surface Course 3,869.2 sq yds
- Sealing Lamp Post Bases 77 each

SUMMARY OF QUANTITIES LENGTH 0.8 MILE GRADING, DRAINAGE AND BASE COURSE

- Removing Trees 8" to 12" dia 4 each
- Removing Trees 13" to 24" dia 8 each
- Removing Trees 25" to 36" dia 2 each
- Removing Old Pavement 20,200 sq yd
- Removing Sidewalk 11,128 sq yd
- Removing Masonry 920 cu yd
- Removing Railway Track (Not under service) 9,016 lin ft
- Removing Railway Track (Under service) 293 lin ft
- Earth Excavation 15,150 cu yd
- Sand-Gravel Fill 16,245 cu yd loose measure
- 12" Sewer 1,730 lin ft
- 15" Sewer 460 lin ft
- 18" Sewer 272 lin ft
- Manholes, 14 each
- Inlets, 28 each
- Catch Basins, 3A 2 each
- Catch Basins, 3B 19 each
- Inlets 5B 2 each
- Covers B 3 each
- Reconstructing Manholes with Cover A 5 each
- Fine Grading and Cleanup 42.23 sta
- Resetting Stone Curb 118 lin ft
- Concrete Curb, Det 3 7,654 lin ft
- Concrete Driveway Return Det 1B 398 lin ft
- Concrete Base Course 10-14-10" 35,149.8 sq yd
- Pavement Reinforcement 35,149.8 sq yd
- Concrete Pavement 7" Uniform 27.5 sq yd
- Crushed Stone or Slag Subbase (4" Compacted) 9,379 sq yd
- Track Encasement, Grade A Concrete (Not under service) 3,759.9 cu yd
- Track Encasement, Grade A Concrete (Under service) 150.4 cu yd
- 6" Concrete Sidewalk 78,440 sq ft
- 7" Concrete Sidewalk 1,767 sq ft
- Concrete End Header, Det. 20 42 lin ft
- Bridges over Railway 2 each

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
U.S. 25	22-313	WAYNE	DETROIT	10	10
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

