

# CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 1996 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

IN CO-OPERATION WITH  
MICHIGAN DEPARTMENT OF TRANSPORTATION  
AND

~~FEDERAL HIGHWAY ADMINISTRATION~~

~~FEDERAL AID URBAN PROJECT NO. MICHIGAN M-2000 ( )~~

CONTROL SECTION EDA 82522      JOB NO. 31809 A

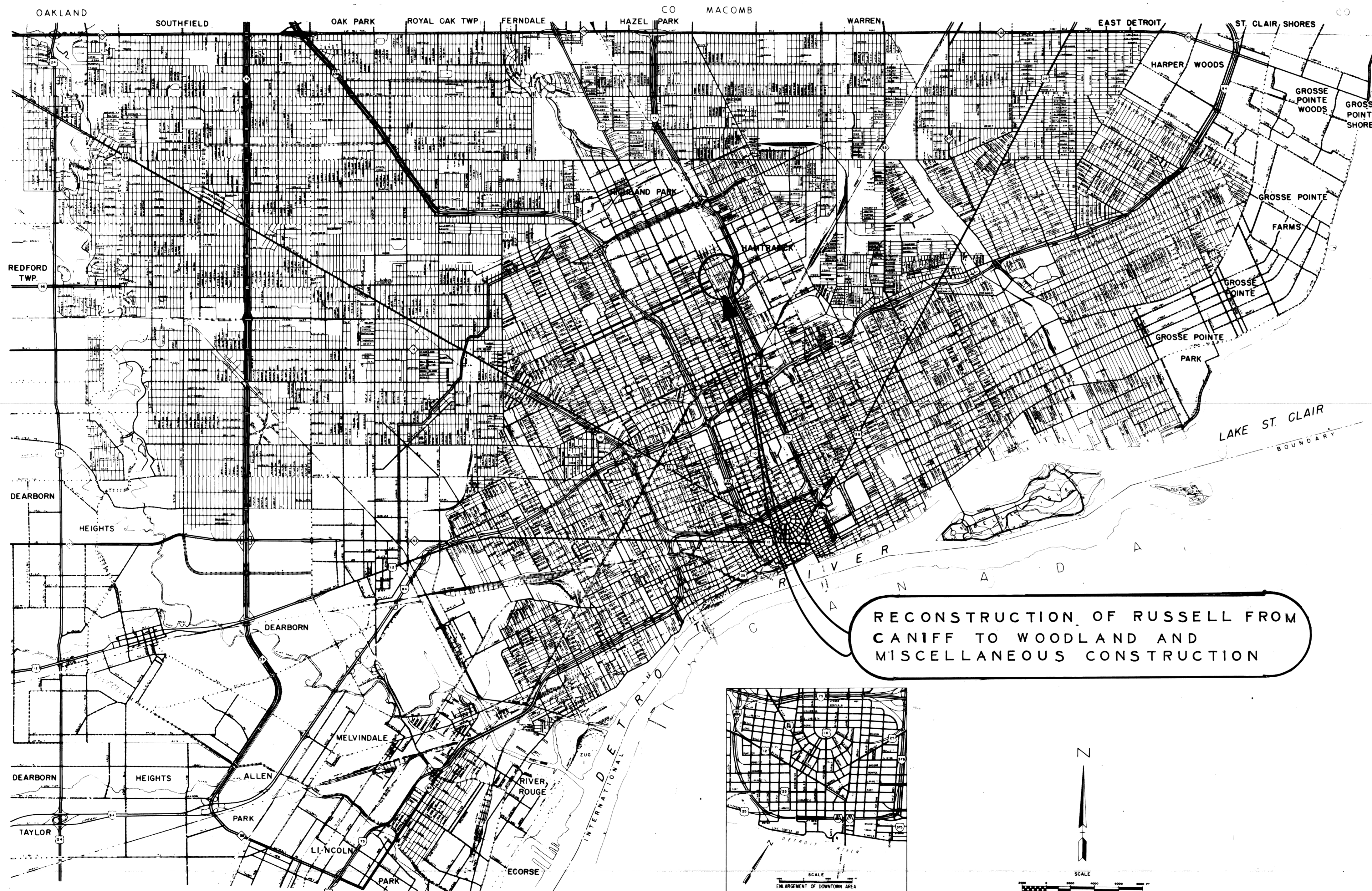
FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MICH.				
STREET	CITY	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

TRAFFIC COUNT - RUSSELL ST.

DESIGN SPEED	35MPH
POSTED SPEED	25MPH
ADT (1990)	46
ADT (2010)	150

- INDEX OF SHEETS**
1. TITLE SHEET
  2. TYPICAL SECTIONS
  3. ALIGNMENT PLAN
  4. CONSTRUCTION SEQUENCE
  5. REMOVAL AND UTILITY PLAN
  6. PAVING PLAN
  7. INTERSECTION DETAIL GRADE
  8. PAVEMENT MARKINGS
  - 9-II. SPECIAL STANDARDS & DETAILS
  12. QUANTITY SHEET
  - 13-21. P.L.D. PLANS AND QUANTITIES

- STANDARD PLANS**
- |        |         |
|--------|---------|
| II-28G | II-43D  |
| II-29E | IV-84E  |
| II-39K | V-100B  |
| II-40G | VI-125H |
| II-41G |         |
| II-42F |         |



ITEM NO. \_\_\_\_\_

CONTRACT FOR G, DS, P, & UTILITIES

LOCAL AUTHORITY APPROVAL  
CITY OF DETROIT  
CITY ENGINEERING DEPARTMENT

APPROVED BY E.M. Kennedy 6/1/97  
DEPUTY DIRECTOR DATE

APPROVED BY Chyd R Hopkins 6-1-92  
DIRECTOR DATE

PREPARED UNDER SUPERVISION OF  
William L. Talley 26185  
REGISTERED PROFESSIONAL ENGINEER REGISTRATION NO.

CITY OF DETROIT  
ORGANIZATION

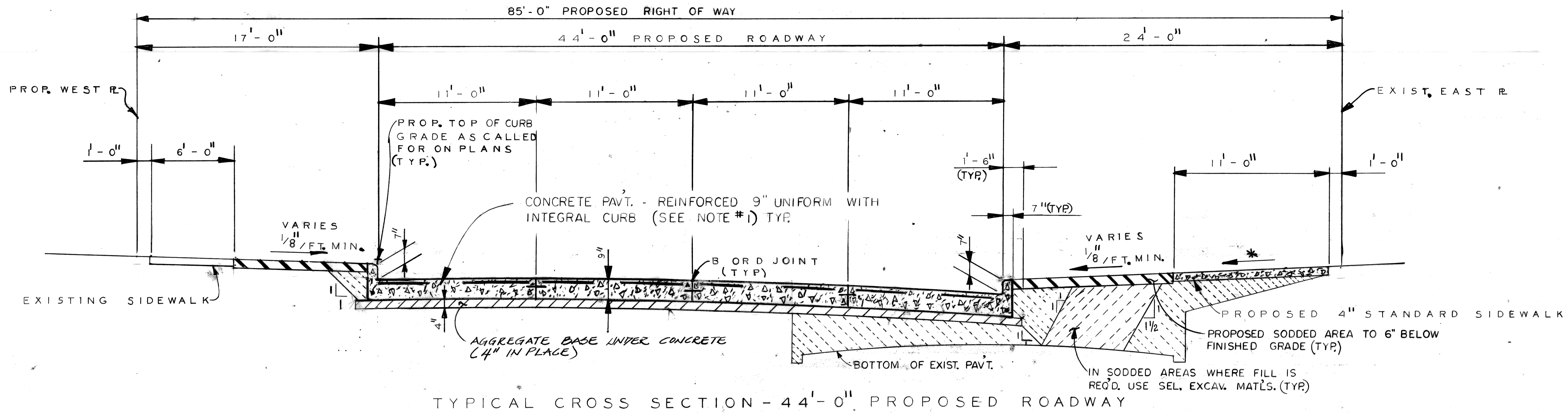
DETROIT, MICHIGAN  
ADDRESS

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.

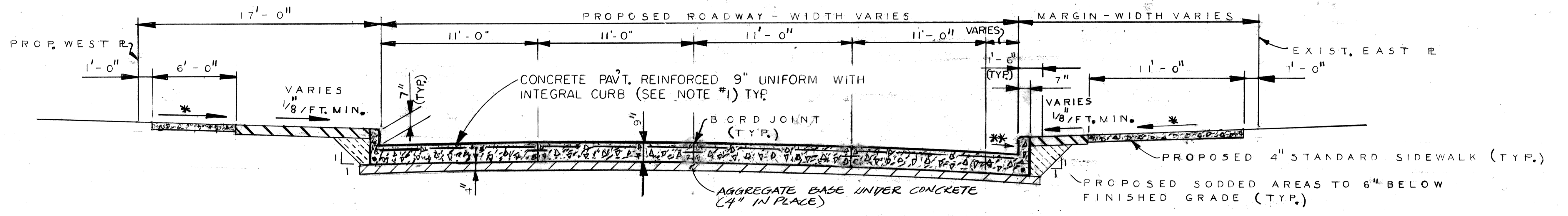
CONTROL SECTION EDA 82522, JOB NO. 31809 A

C

Orig. no. 1-11-80



TYPICAL CROSS SECTION - 44'-0" PROPOSED ROADWAY  
NO SCALE



TYPICAL CROSS SECTION - PROPOSED ROADWAY WIDTH VARIES  
NO SCALE

\* SIDEWALK SLOPES ARE TO BE 3/8" / FT. UNLESS THE ENGINEER DETERMINES THAT A MINIMUM SLOPE OF 1/4" / FT. OR A MAXIMUM SLOPE OF 3/4" / FT. MUST BE USED TO MEET EXISTING CONDITIONS.  
\*\* SLOPE VARIABLE WIDTH PAVEMENT AT 3/8" / FT. FROM B OR D JOINT TO CURB.

JOINT LEGEND

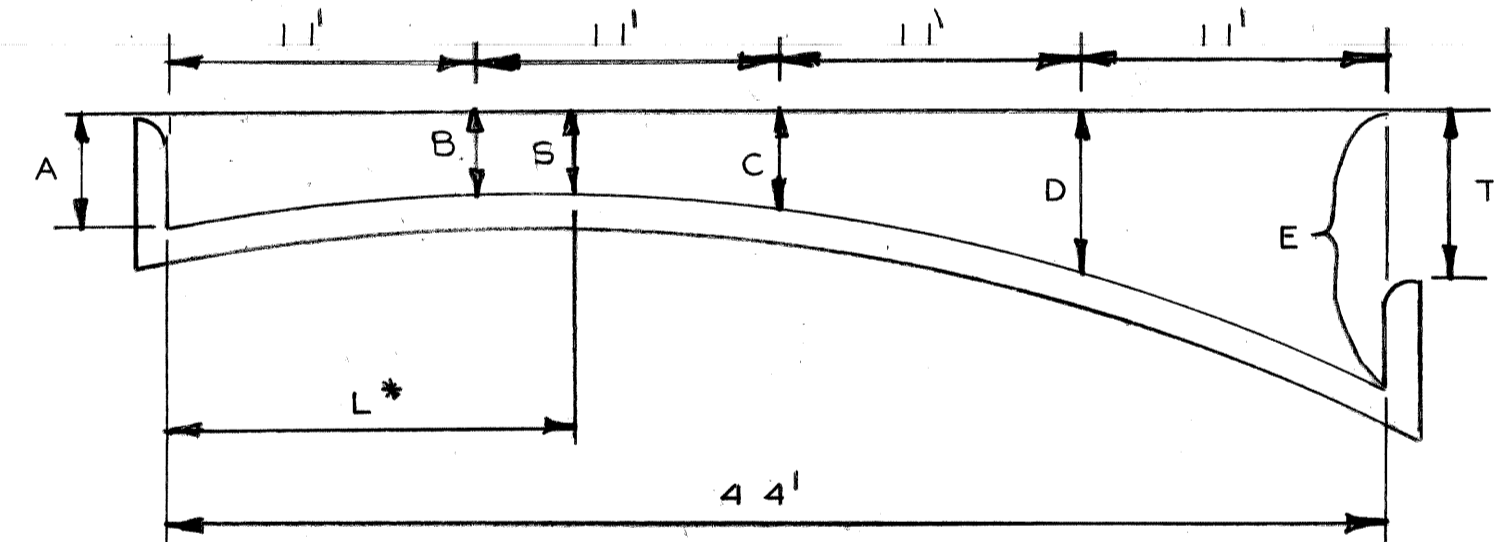
- ⓐ LONGITUDINAL BULKHEAD JOINT, ACCORDING TO M.D.O.T. STANDARD DRAWING II - 416
- ⓑ LONGITUDINAL LANE TIE JOINT WITH TIE BAR, ACCORDING TO M.D.O.T. STANDARD DRAWING II - 416
- ⓓ OPTIONAL, B OR D

NOTES

1. THE PROPOSED CURB SHALL BE INTEGRAL CURB (SEE DETAIL THIS SHT.). REGARDLESS OF CONSTRUCTION METHOD, THE PROPOSED CURB SHALL BE PAID FOR AS "CONC. PAVEMENT - REINF. 9" WITH INTEGRAL CURB".
2. BACKFILL, IF REQUIRED, UNDER PROPOSED SIDEWALKS SHALL BE GRANULAR MATERIAL CLASS II.
3. PLACE 4" CONC. SIDEWALK TO FACE OF BUILDING WHERE BUILDING FRONTS ON PROPERTY LINE.

EARTHWORK LEGEND

- ▨ GRANULAR MATERIAL CLASS II (SEE NOTE #2)
- ▨ AGGREGATE BASE CONCRETE (4" IN PLACE)
- ▨ SELECTED EXCAVATED MATERIAL (INCIDENTAL TO PAVING COSTS)
- ▨ CLASS A SODDING WITH 3" TOPSOIL



MISCELLANEOUS QUANTITIES

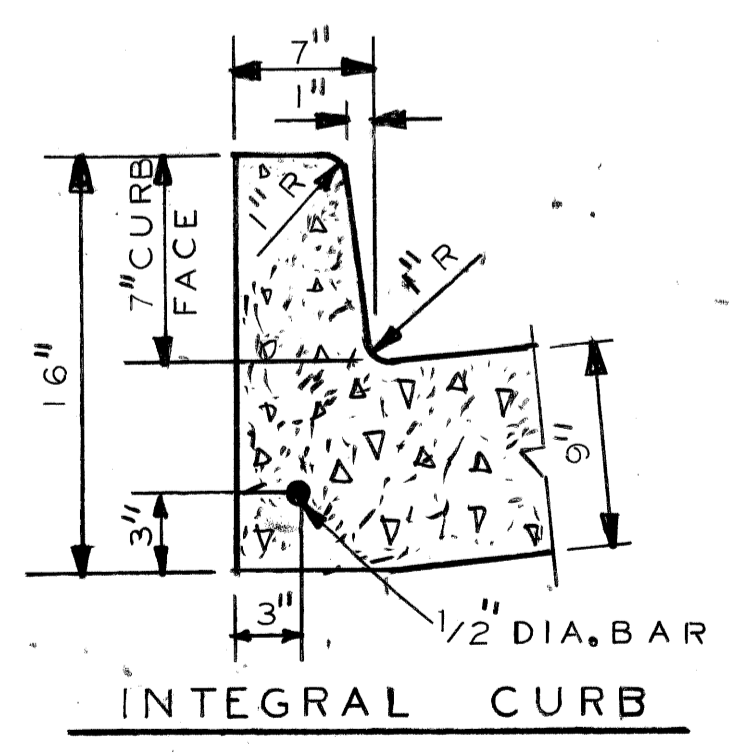
MOBILIZATION	1	LUMP SUM
FLAG CONTROL	1	LUMP SUM
MINOR TRAFFIC DEVICES	1	LUMP SUM
FIELD OFFICE	3	MONTHS

ESTIMATED QUANTITIES FOR USE AT THE DISCRETION OF THE ENGINEER

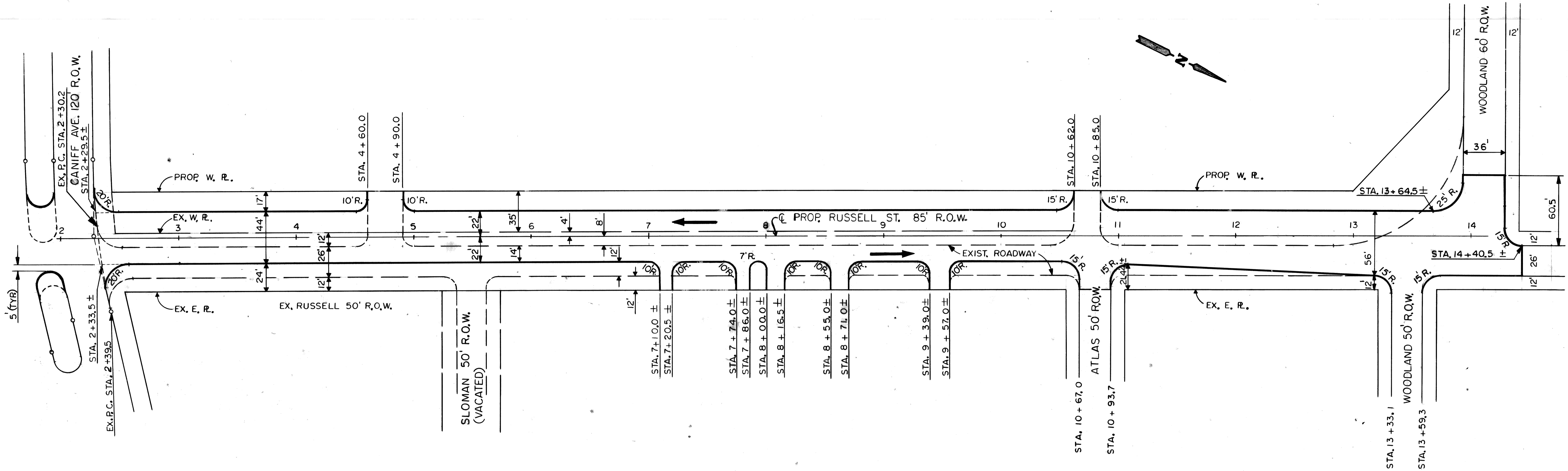
REMOVING MASONRY AND CONC. STRUCTURES 100 CU. YDS.	
SUBGRADE UNDERCUTTING, TYPE II	100 CU. YDS.
4" CONCRETE SIDEWALK	264 SQ. FT.
REMOVING SIDEWALK	23 SQ. YDS.
REMOVING PAVT. (REPAIR)	10 SQ. YDS.
CONC. PAVT. REPAIR, 10" NONREINFORCED	10 SQ. YDS.
CLASS "A" SODDING	43 SQ. YDS.
TOPSOIL SURFACE - 3"	43 SQ. YDS.
WATER	1 UNIT
SEWER CLEANOUT	100 LIN. FT.
CEMENT	3 TONS
CONCRETE CURB DETAIL "CD"	50 LIN. FT.
CLEANING DRAINAGE STR.	10 EACH

ELEMENTS FOR 44' ROADWAY

PAVEMENT WIDTH	CURB FACE	T	A	B	C	D	E	L	S
44'	7"	0	0.583	0.308	0.217	0.308	0.583	22.0	0.216
		0.1	0.583	0.333	0.267	0.383	0.683	20.5	0.265
		0.2	0.583	0.358	0.317	0.458	0.783	19.0	0.310
		0.3	0.583	0.383	0.367	0.533	0.883	17.5	0.351
		0.4	0.583	0.408	0.417	0.608	0.983	16.0	0.389
		0.5	0.583	0.433	0.467	0.683	1.083	14.5	0.424
		0.6	0.583	0.458	0.517	0.758	1.183	13.0	0.455
		0.7	0.583	0.483	0.567	0.833	1.283	11.5	0.483
		0.8	0.583	0.508	0.617	0.908	1.383	10.0	0.507



DESIGNED BY	N. H.	APPROVED:	<i>William L. Talley</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAUS OF STREETS AND HIGHWAYS	RECONSTRUCTION OF RUSSELL FROM CANIFF TO WOODLAND AND MISCELLANEOUS CONSTRUCTION	SHEET 2 OF 21 SHEETS
DRAWN BY	JONES	HIGHWAY ENGINEER				CONTRACT NO. 31809A
TRACED BY						ASSIGNMENT NO. 91-60-01
CHECKED BY	S. J.					DATE APRIL, 92

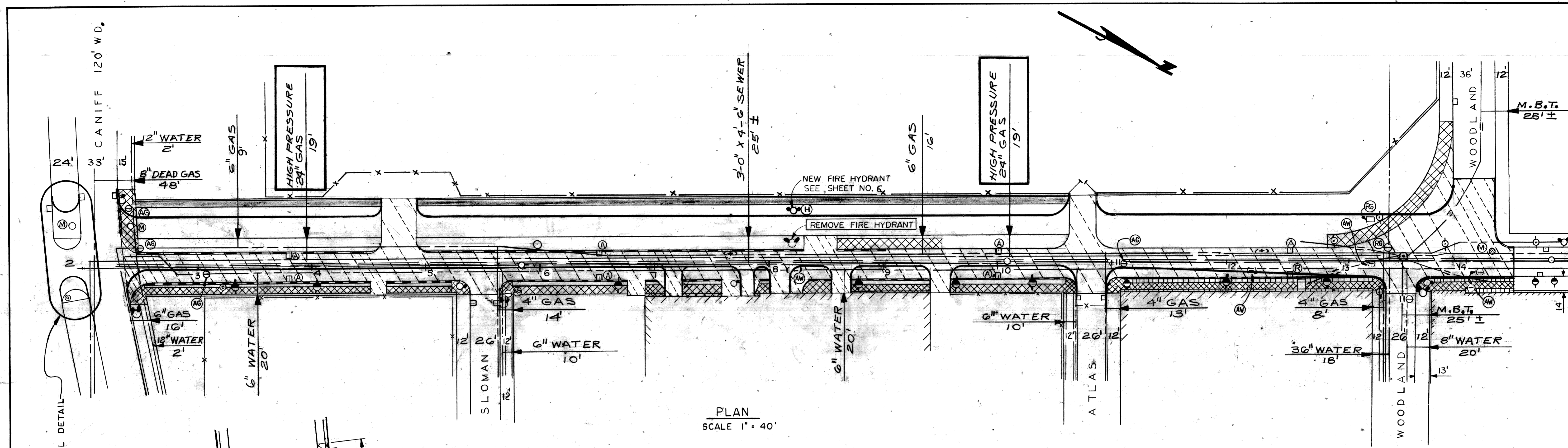


PLAN  
SCALE: 1" = 40'

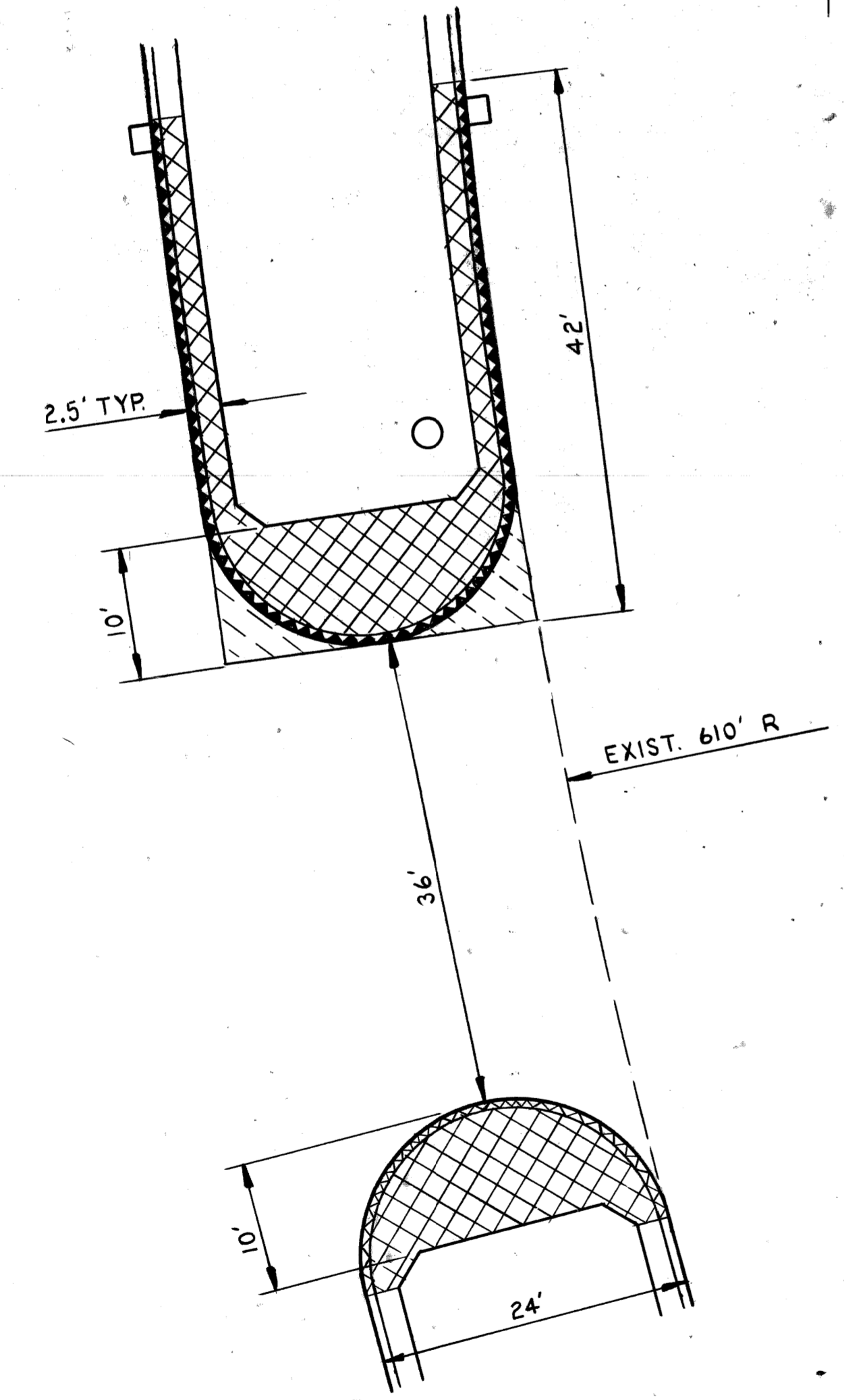
DESIGNED BY <i>N. Haidar</i>		APPROVED: <i>William H. Tally</i> ENGINEER OF STREETS		CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAUS OF STREETS AND HIGHWAYS	RECONSTRUCTION OF RUSSELL FROM CANIFF TO WOODLAND AND MISCELLANEOUS CONSTRUCTION	SHEET 3 OF 21 SHEETS	
DRAWN BY <i>Jones</i>		HIGHWAY ENGINEER				CONTRACT NO. 31809 A	ASSIGNMENT NO. 91-60-01
TRACED BY				FOR		DATE APRIL, 92	
CHECKED BY				ALIGNMENT SHEET			
COORD	DESCRIPTION	DRN	CK'D	AP'D	DATE		
REVISIONS LOCATED BY COORDINATES ON SHEET							

1 2 3 4 5 6 7 8 9 10 11



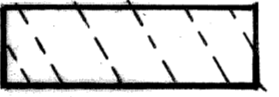
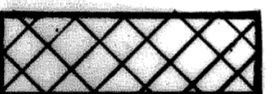


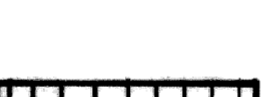
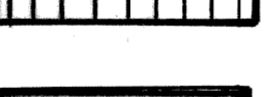









PLAN  
SCALE 1" = 40'



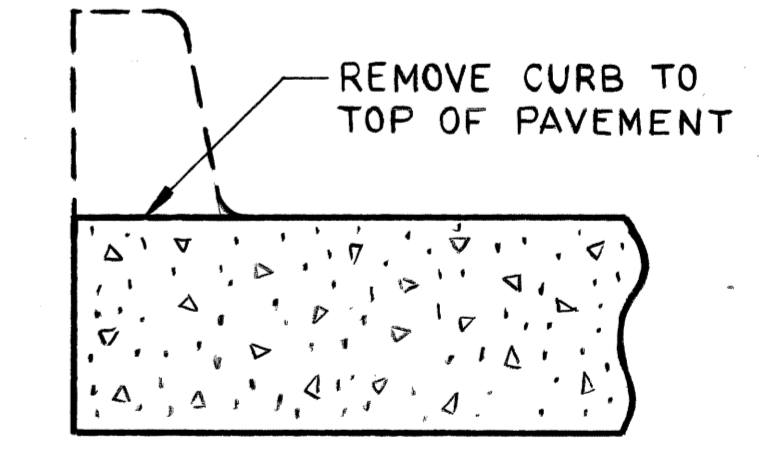
ISLAND REMOVAL DETAIL  
SCALE: 1" = 10'

REMOVAL LEGEND

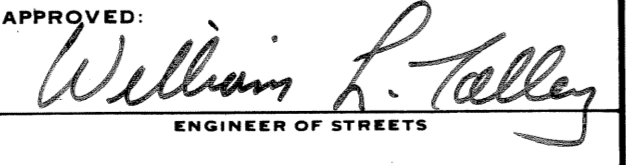
-  PAVEMENT REMOVAL
-  SIDEWALK REMOVAL
-  PARTIAL CURB REMOVAL (SEE NOTE #3)
-  CURB REMOVAL
-  BITUMINOUS PAVEMENT REMOVAL (INCIDENTAL TO EARTH EXCAVATION)
-  EXISTING SIDEWALK TO REMAIN
-  SEPARATE TYPE CURB REMOVAL (INCIDENTAL TO PAVEMENT REMOVAL)
-  ADJUSTING WATER SHUTOFF
-  ADJUSTING GATEWELL MANHOLE COVER
-  RECONSTRUCT GATEWELL MANHOLE
-  INSTALL NEW FIRE HYDRANT (NOZZLES FACING EAST)
-  ABANDON DRAINAGE STRUCTURE
-  REMOVING DRAINAGE STRUCTURE

NOTES:

1. FOR UTILITY LEGEND, SEE SHEET NO. 11
2. LOCATION OF EXISTING UTILITY LINES ARE BASED ON THE BEST AVAILABLE RECORDS AND ARE NOT GUARANTEED FOR ACCURACY.
3. PARTIAL CURB REMOVAL WILL BE PAID FOR AS REMOVING CURB.



PARTIAL CURB REMOVAL DETAIL  
NO SCALE

REVISIONS LOCATED BY COORDINATES ON SHEET COOR'D DESCRIPTION DRN CKD AP'VD DATE		DESIGNED BY DRAWN BY JONES TRACED BY CHECKED BY N. Haidar	APPROVED:  ENGINEER OF STREETS HIGHWAY ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS	RECONSTRUCTION OF RUSSELL FROM CANIFF TO WOODLAND AND MISCELLANEOUS CONSTRUCTION REMOVAL AND UTILITY PLAN	SHEET 5 OF 21 SHEETS CONTRACT NO. 31809 A ASSIGNMENT NO. 91-60-01 DATE APRIL, 92
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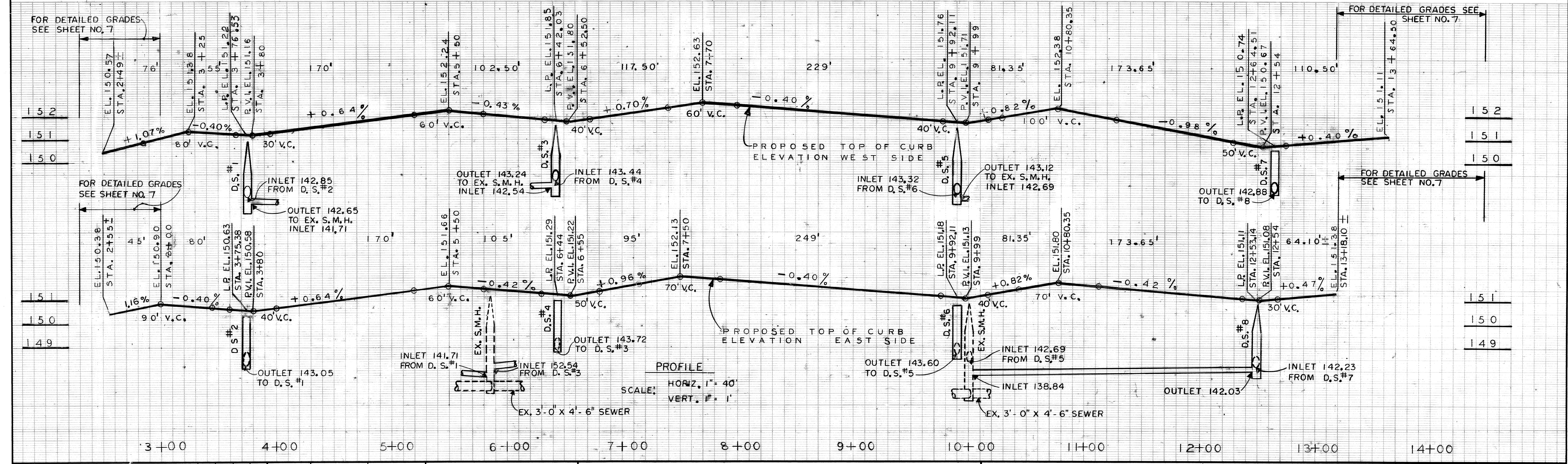
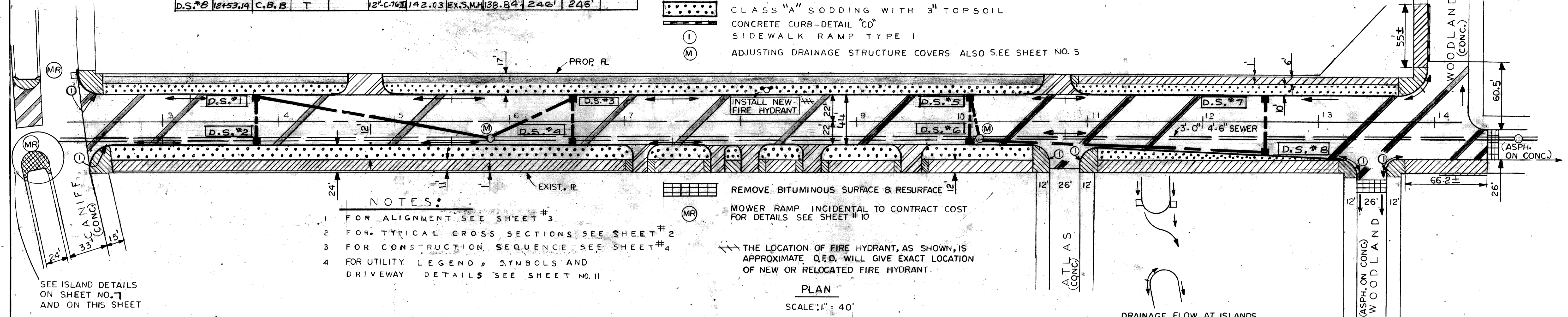
Drainage Structure (D.S.) No.	Station	D.S. Type	With Trap (T)	Cover	Outlet Sewer Size & Type	Outlet Elevation	Outlet Sewer Runs To: D.S. or Inlet Sewer Elev.	Sewer Length	Length of Trench Det. 9	Sewer Top Size
D.S.#1	3+76.53	C.B.B	T		12" C-76 III	142.65	EX. S.M.H. 141.71	210'	210'	
D.S.#2	3+75.38	C.B.A			12" C-76 III	143.05	D.S.#1 142.85	40'	40'	
D.S.#3	6+42.08	C.B.B	T		12" C-76 III	143.24	EX. S.M.H. 142.54	70'	70'	
D.S.#4	6+44.00	C.B.A			12" C-76 III	143.72	D.S.#3 143.44	40'	40'	
D.S.#5	9+92.11	C.B.B	T		12" C-76 III	143.12	EX. S.M.H. 142.69	43'	43'	
D.S.#6	9+92.11	C.B.A			12" C-76 III	143.60	D.S.#5 143.32	40'	40'	
D.S.#7	12+64.51	C.B.A			12" C-76 III	142.88	D.S.#8 142.23	50'	50'	
D.S.#8	12+53.14	C.B.B	T		12" C-76 III	142.03	EX. S.M.H. 138.84	246'	246'	

### LEGEND

- CONCRETE PAVEMENT - (REINFORCED) 9" UNIFORM WITH INTEGRAL CURB
- 4" CONCRETE SIDEWALK
- 6" CONCRETE SIDEWALK
- 7" INTEGRAL CURB & SIDEWALK ON EXISTING PAVEMENT
- EXISTING SIDEWALK TO REMAIN
- 8" UNIFORM CONCRETE DRIVEWAY
- CLASS "A" SODDING WITH 3" TOPSOIL
- CONCRETE CURB-DETAIL "CD"
- SIDEWALK RAMP TYPE I
- ADJUSTING DRAINAGE STRUCTURE COVERS ALSO SEE SHEET NO. 5

BENCH MARKS

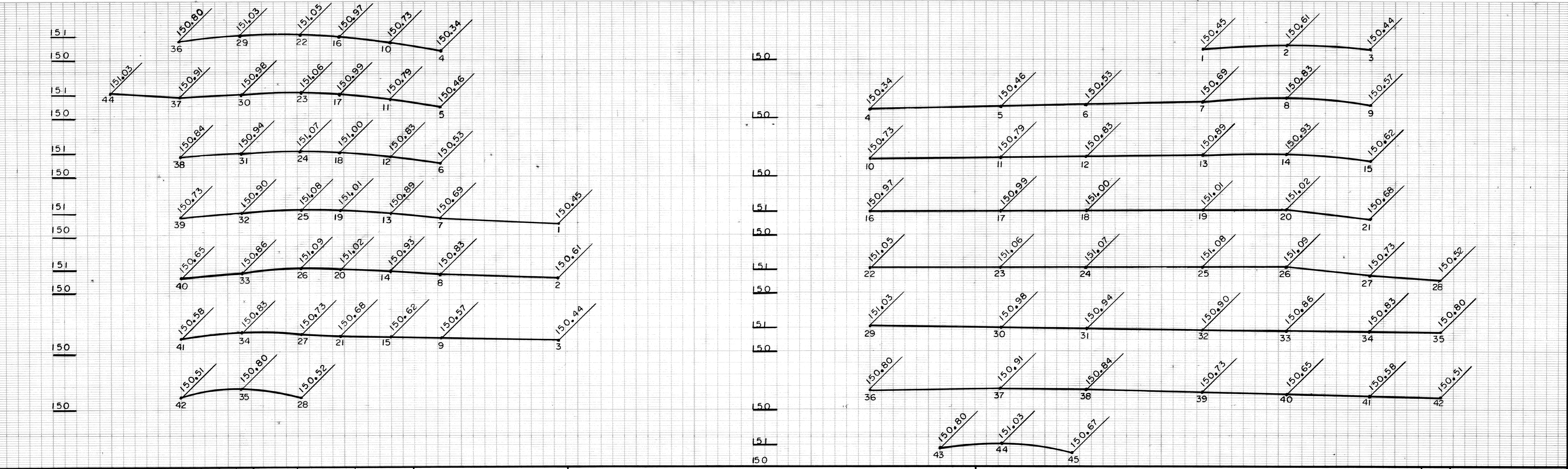
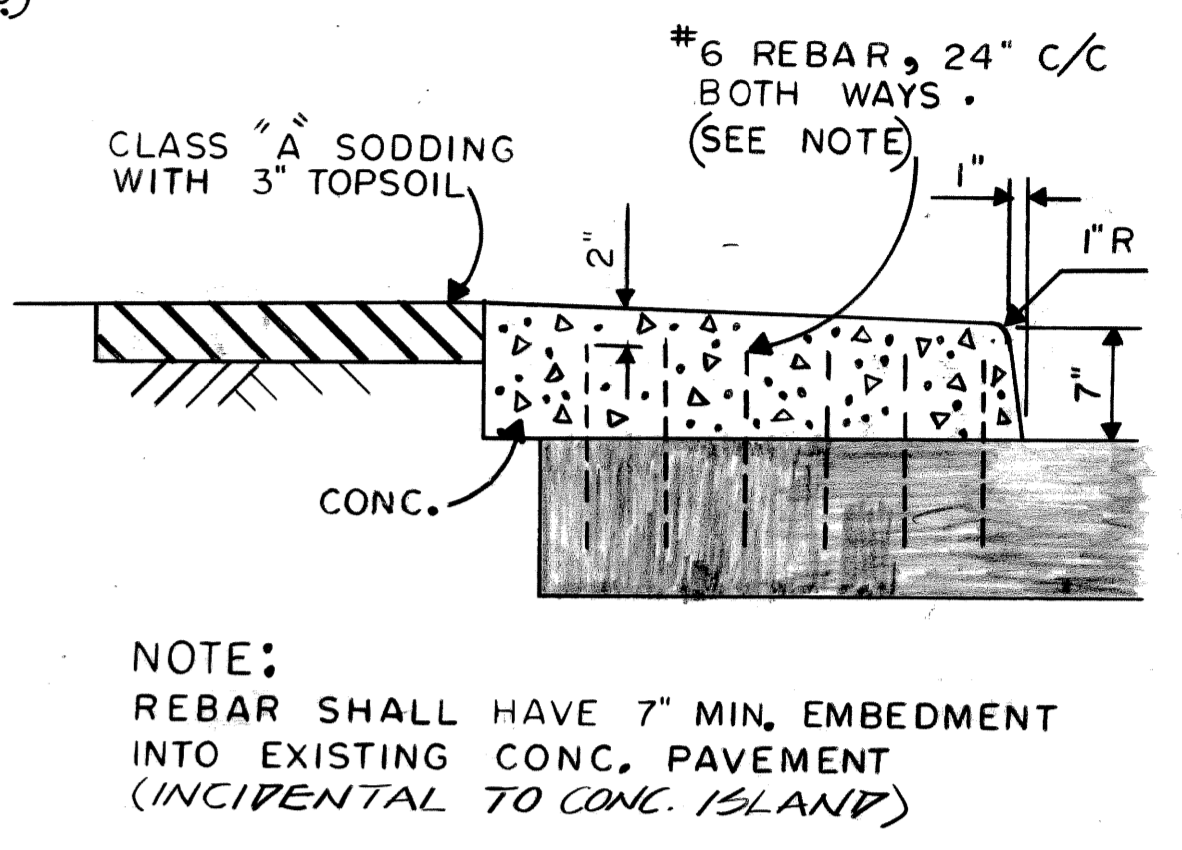
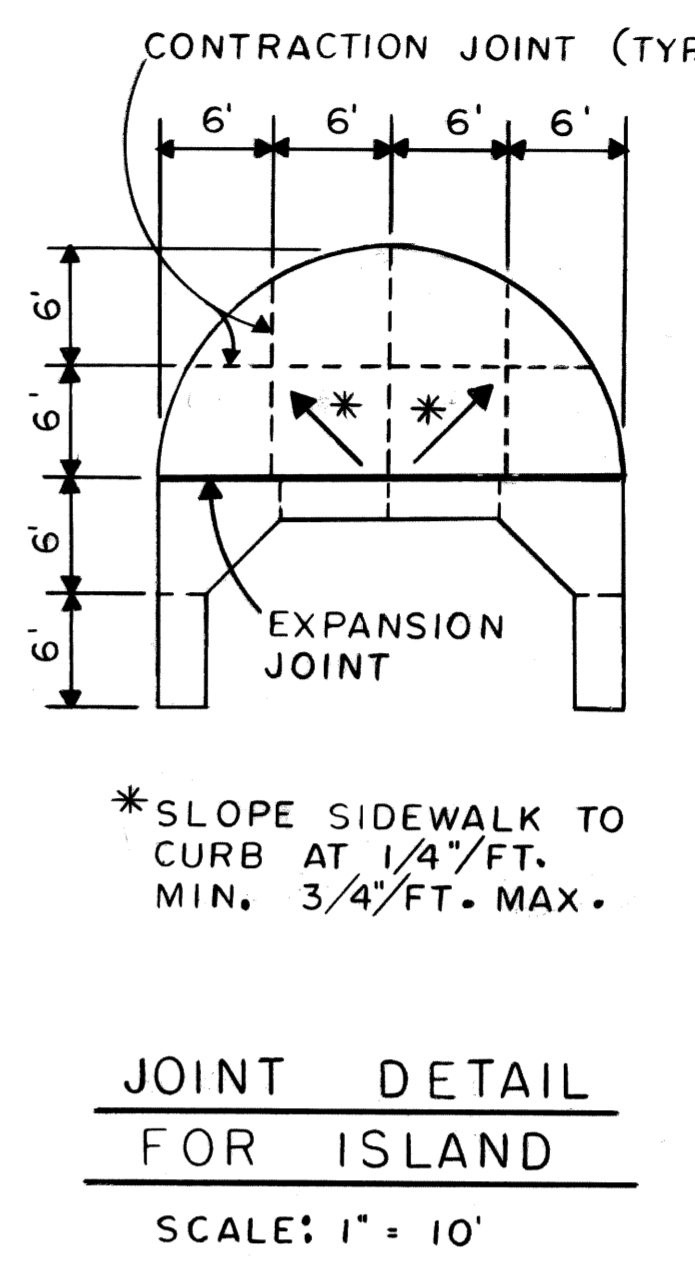
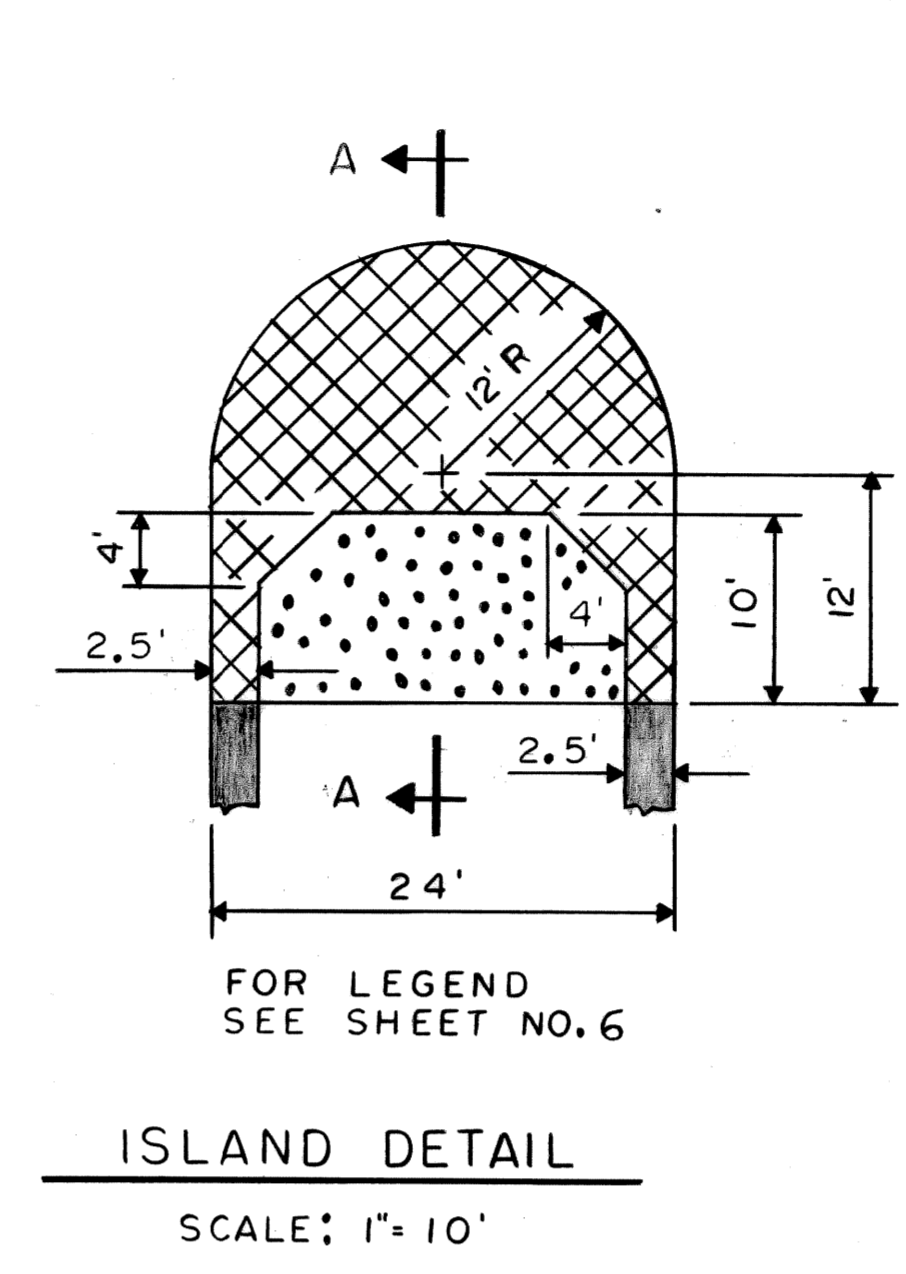
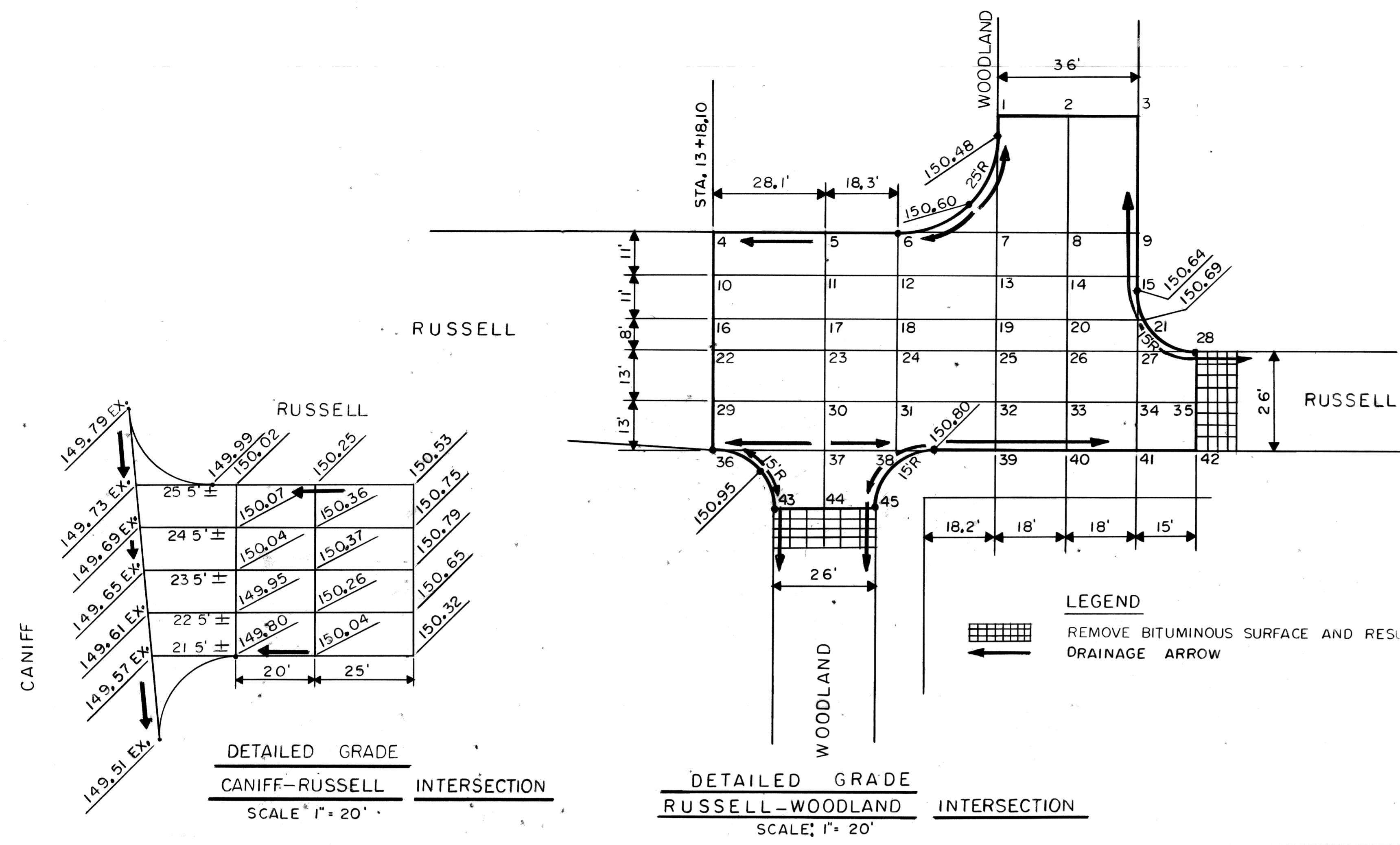
MARKS	ELEV
P.B.M. #43-257 N.W. COR. CANIFF & JOS CAMPAN	EL. 148.485
P.B.M. #43-250A N.E. COR. CANIFF & LUMPKIN	EL. 147.995
C.B.M. -> HYD. N.E. COR. CANIFF & RUSSELL	EL. 152.670
C.B.M. -> HYD. N.E. COR. SLOMAN & RUSSELL	EL. 154.785
C.B.M. -> HYD. W. SIDE RUSSELL 260' N. CURB SLOMAN	EL. 154.895
C.B.M. -> HYD. N.E. COR. WOODLAND & RUSSELL	EL. 154.420
C.B.M. -> HYD. W. SIDE RUSSELL 125' N.N. CURB WOODLAND	EL. 154.470



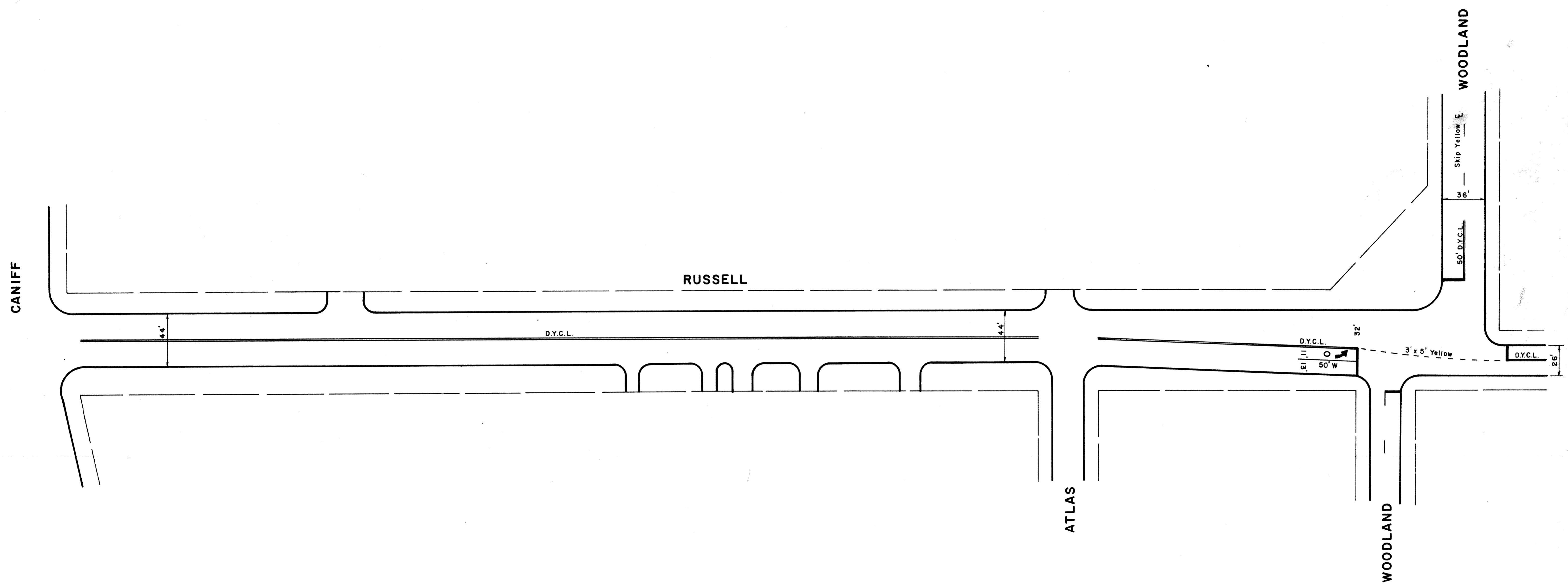
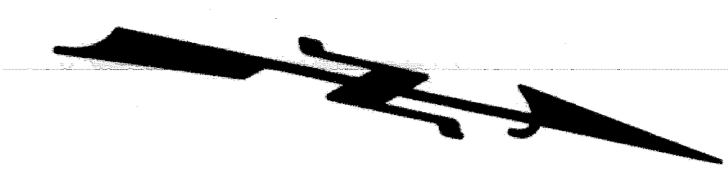
DESCRIPTION REVISIONS	PLAN	BY J.J.	CHECKED BY N.W.	APPROVED <i>William L. Kelley</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS	RECONSTRUCTION OF RUSSELL FROM CANIFF TO WOODLAND AND MISCELLANEOUS CONSTRUCTION PAVING PLAN	INDEX NO.	SHEET 6 OF 21 SHEETS
	GRADE	N.H.	M.L.	CONTRACT NO. 31009A				
	ESTIMATE	N.H.	N.W.	ASSIGNMENT NO. 91-60-01				
							DATE	APRIL, 92

NOTE - FOR SYMBOLS @ ETC. SEE STANDARD DETAIL DRAWING NO. C-4171

BENCH	MARKS	ELEV
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	BY J. J.	CHECKED BY	APPROVED: <i>William L. Kelly</i> ENGINEER OF STREETS	CITY OF DETROIT CITY ENGINEERING DEPARTMENT BUREAU OF STREETS AND HIGHWAYS FOR	RECONSTRUCTION OF RUSSELL FROM CANIFF TO WOODLAND AND MISCELLANEOUS CONSTRUCTION INTERSECTION DETAIL GRADE	INDEX NO.	SHEET 7 OF 21 SHEETS
	GRADE N. H.					CONTRACT NO.	31809A
	ESTIMATE					ASSIGNMENT NO.	9J-60-01
	FINAL	CHECK N. W.	REVIEW			DATE	APRIL, 92

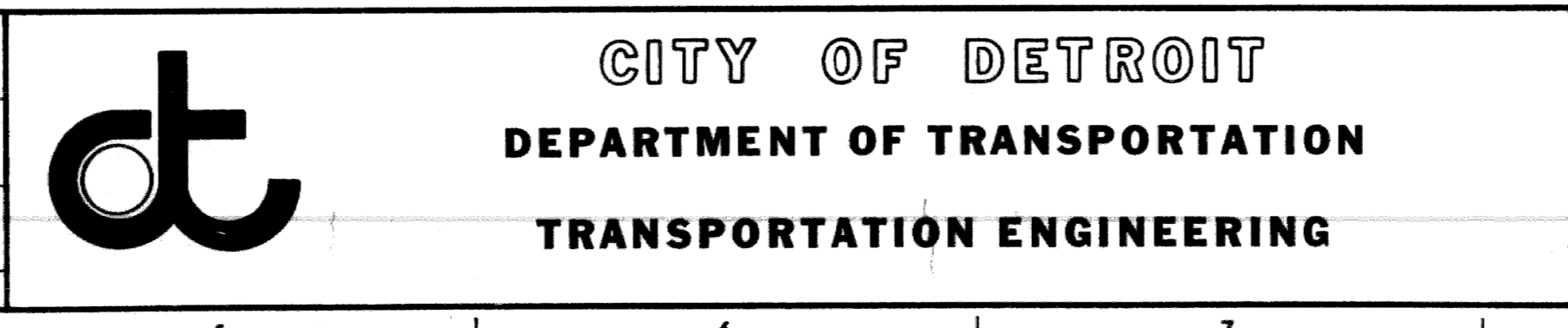


NO.	DESCRIPTION	DATE

REVISIONS LOCATED BY COORDINATES ON SHEET

DESIGNED BY	E.W.P.
DRAWN BY	
TRACED BY	
CHECKED BY	

APPROVED: *D.R. Zawacki*

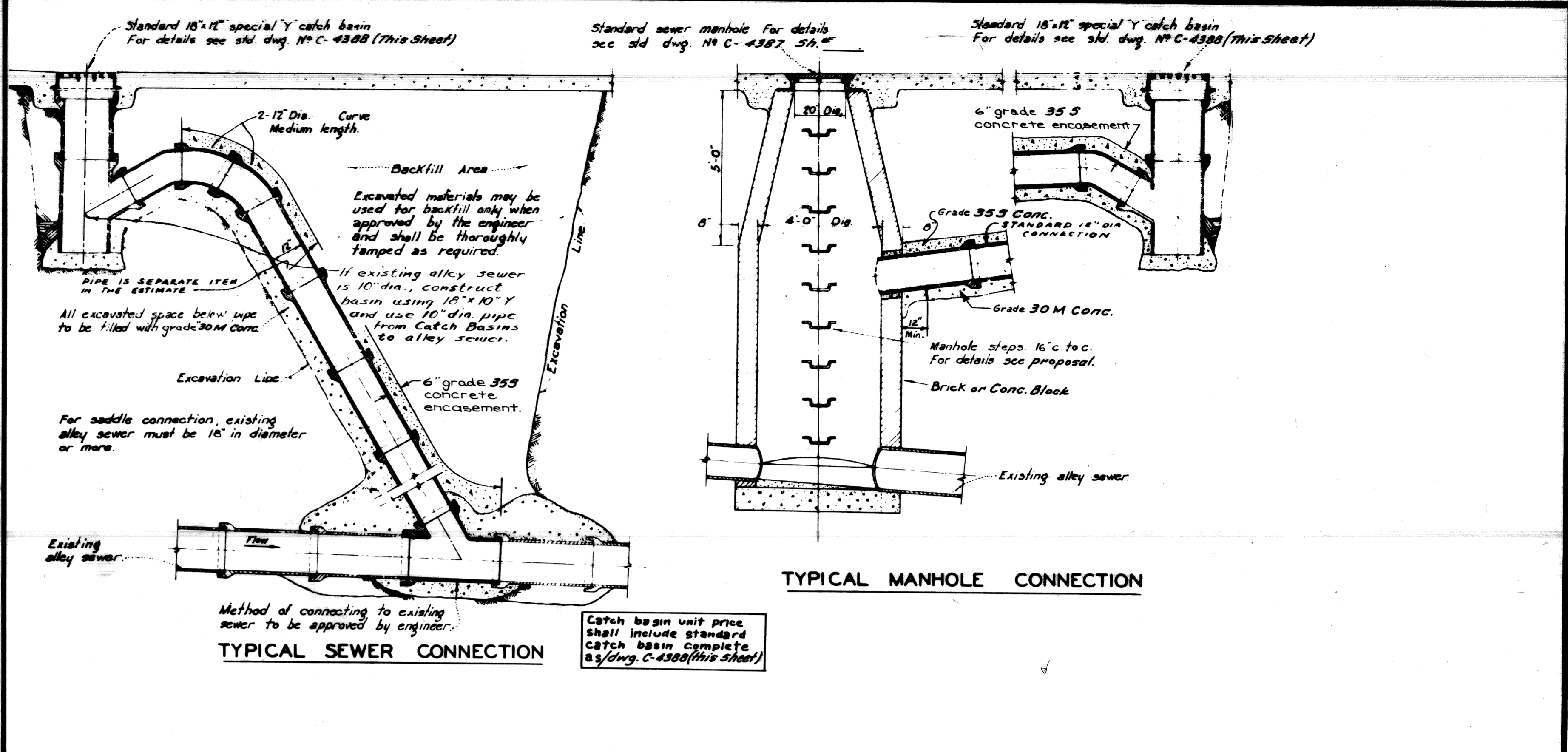
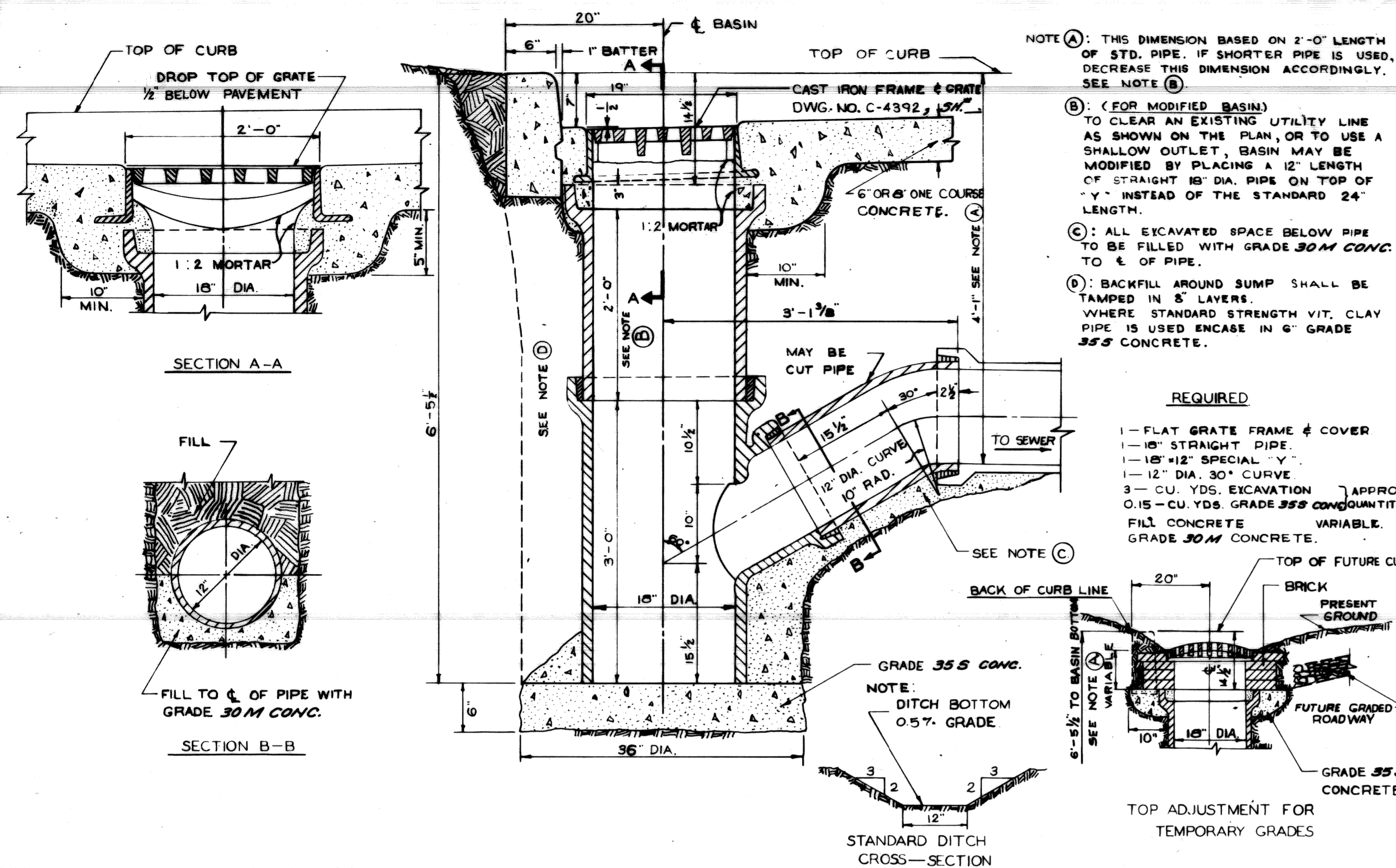


RECONSTRUCTION OF RUSSELL FROM  
CANIFF TO WOODLAND AND  
MISCELLANEOUS CONSTRUCTION  
PAVEMENT MARKINGS

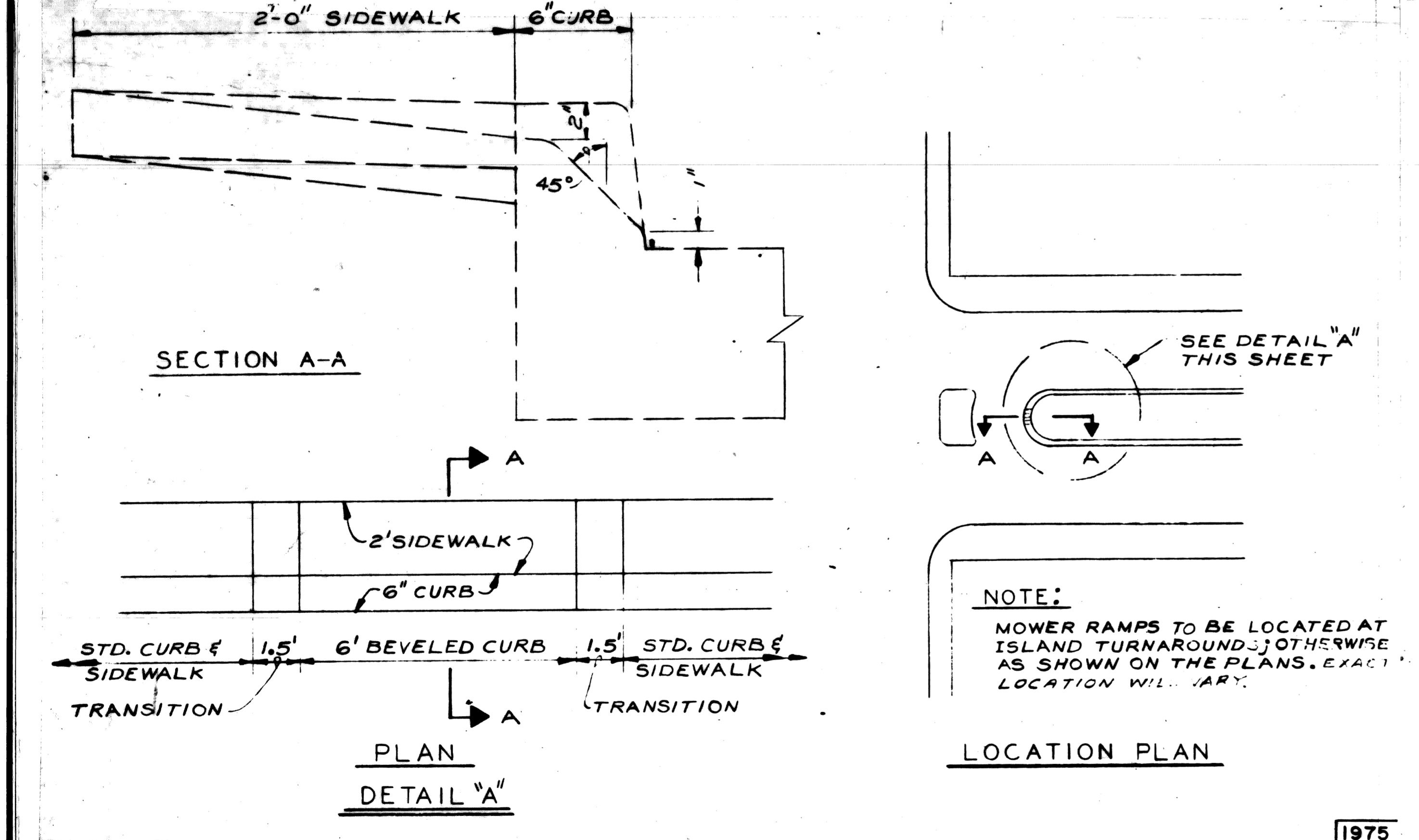
SHEET 8 OF 21 SHEETS  
SCALE: 1" = 40'  
DRWG No. CL-138  
DATE 12-3-90





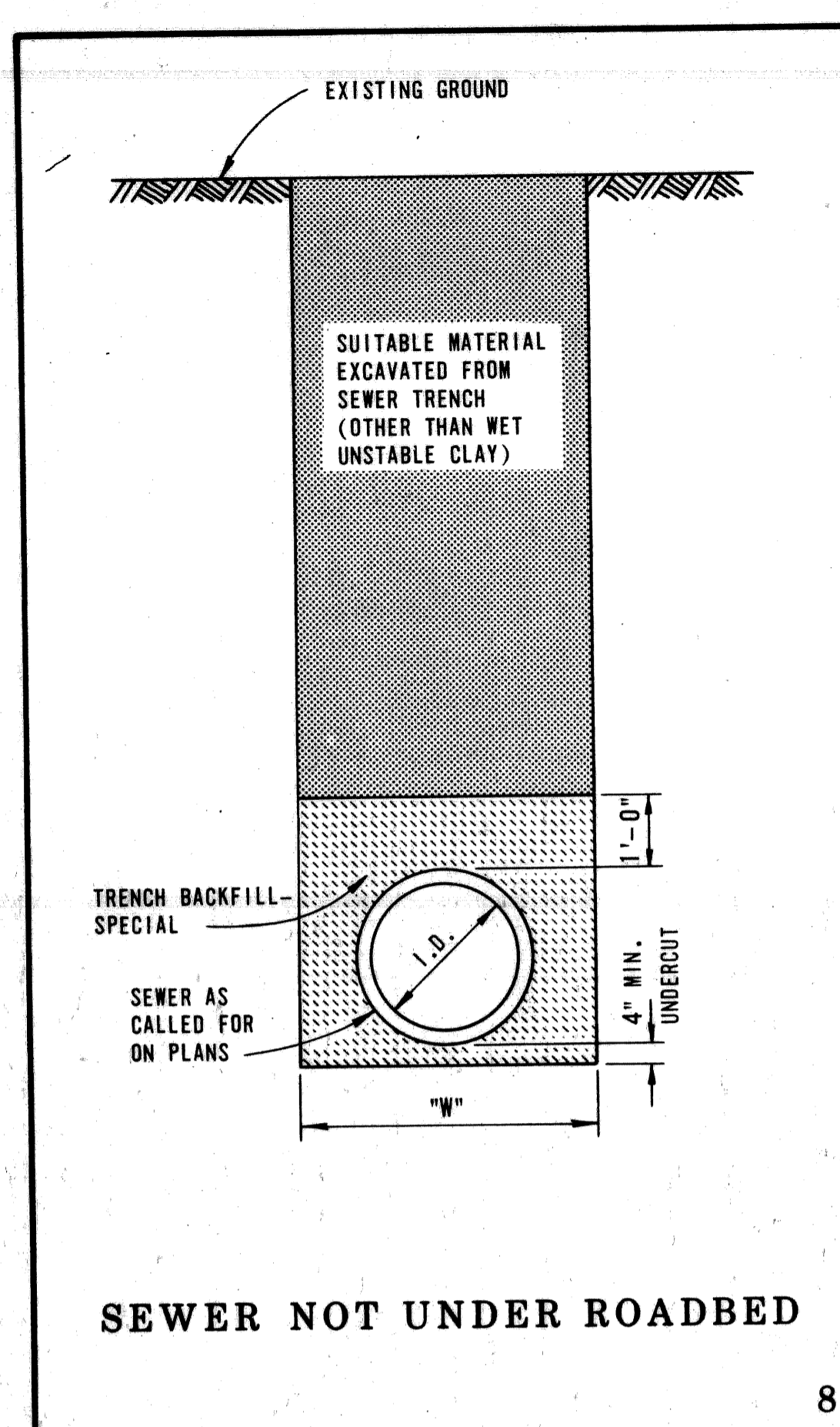


DESIGNED BY	APPROVED	CITY OF DETROIT	STANDARD DESIGN	DESIGNED BY	APPROVED	CITY OF DETROIT	ALLEY INSTALLATION
DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS	18" x 12" SPECIAL "Y" CATCH BASIN TO BE USED UNLESS DIRECTED OTHERWISE BY FIELD ENGINEER	DRAWN BY	ENGINEER OF STREETS	DEPARTMENT OF PUBLIC WORKS	STANDARD 18" x 12" SPECIAL "Y" CATCH BASIN.
TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE	BOOK NO.	TRACED BY	ASST. CITY ENGINEER	CITY ENGINEER'S OFFICE	
CHECKED BY	CITY ENGINEER	BUREAU OF DESIGN	SCALE 1/4"=1'-0"	CHECKED BY	CITY ENGINEER	BUREAU OF DESIGN	
		DETAIL STANDARD NO. 11	DATE 8-19-66			DETAIL STANDARD NO. 22	
			DWG. NO. C-4388				DWG. NO. C-4399



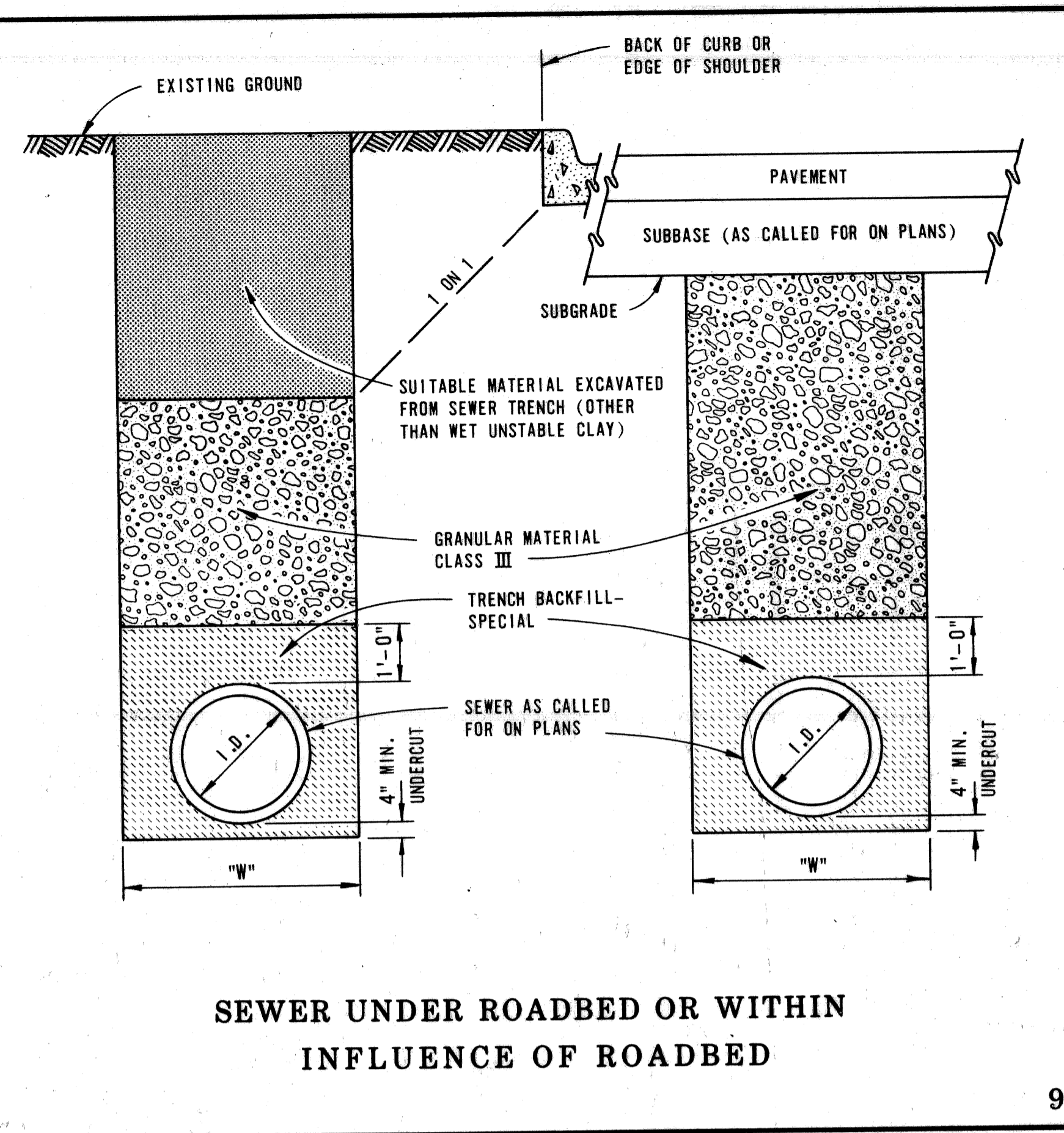
DESIGNED BY	APPROVED	CITY OF DETROIT	SPECIAL MOWER RAMP
DRAWN BY JONES	ENGINEER OF STREETS	CITY ENGINEERING DEPARTMENT	SCALE NONE
TRACED BY	DEPUTY DIRECTOR		DATE JULY 22, 1974
CHECKED BY	DIRECTOR		DWG. NO. C-5239

CITY OF DETROIT		SHEET 10 OF 21 SHEETS	
FOR		CONTRACT No. 31809 A	
SPECIAL DETAILS		DRWG. NO. 91-60-01	
		DATE APRIL, 92	



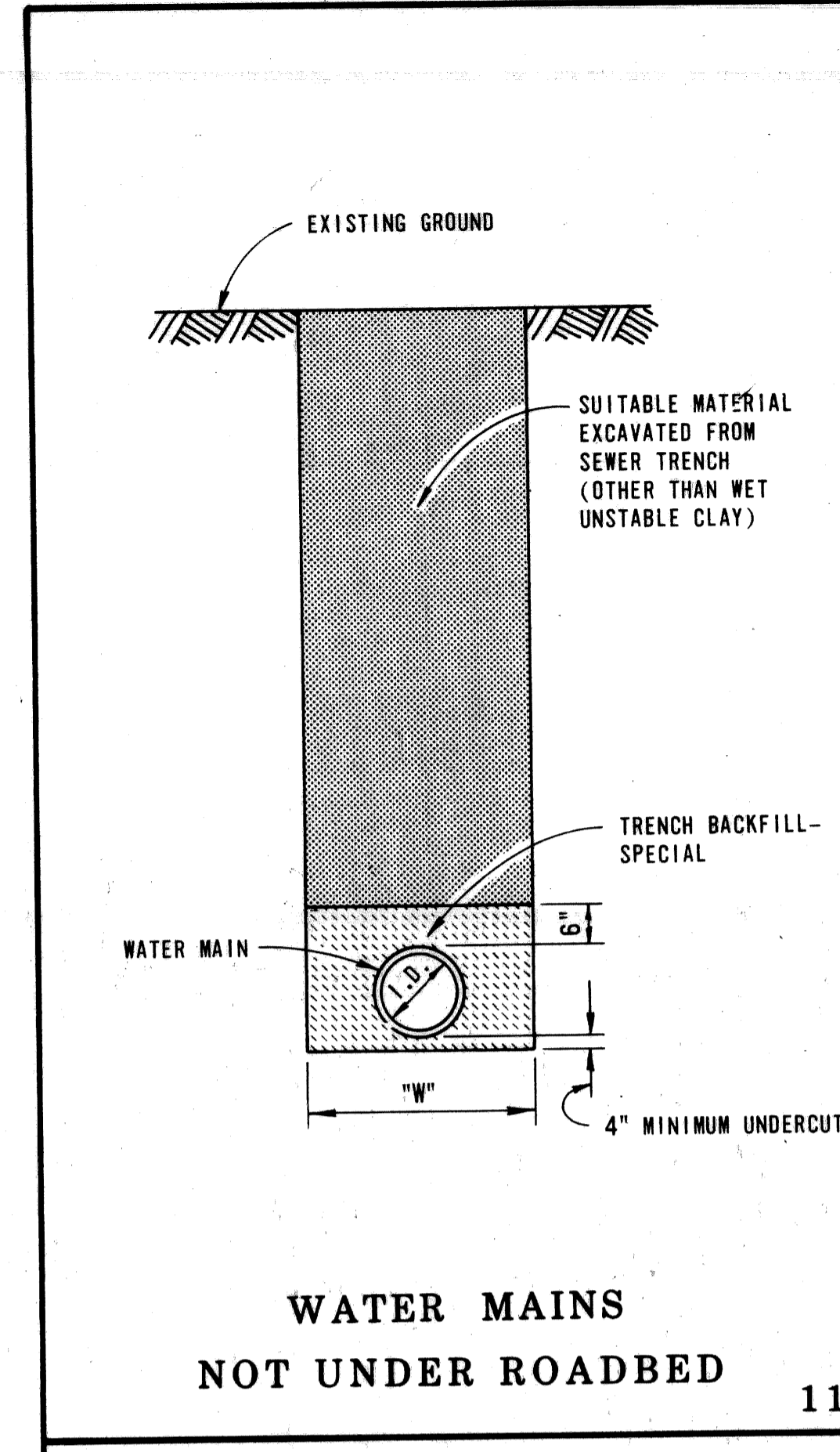
SEWER NOT UNDER ROADBED

8



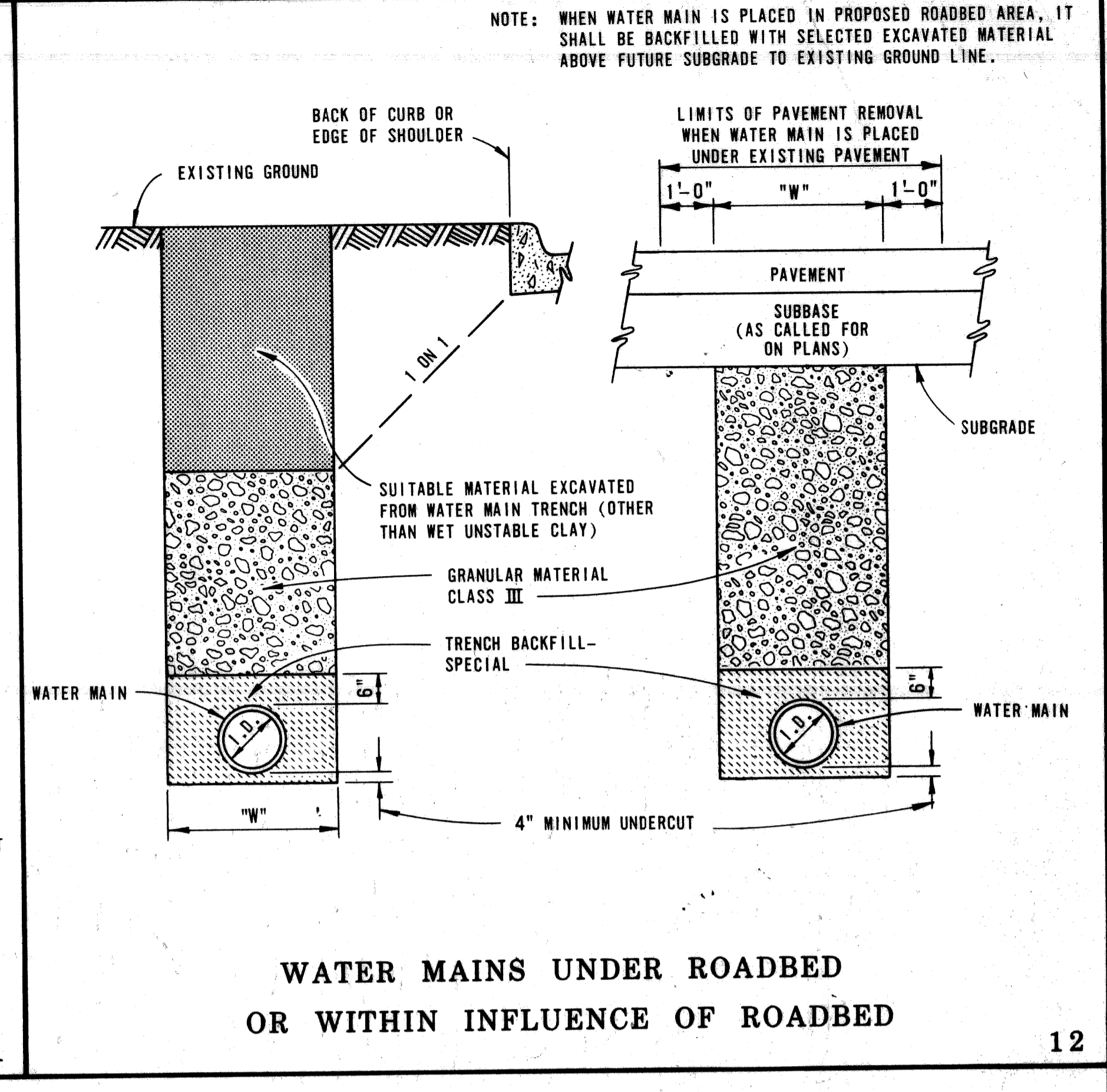
SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED

9



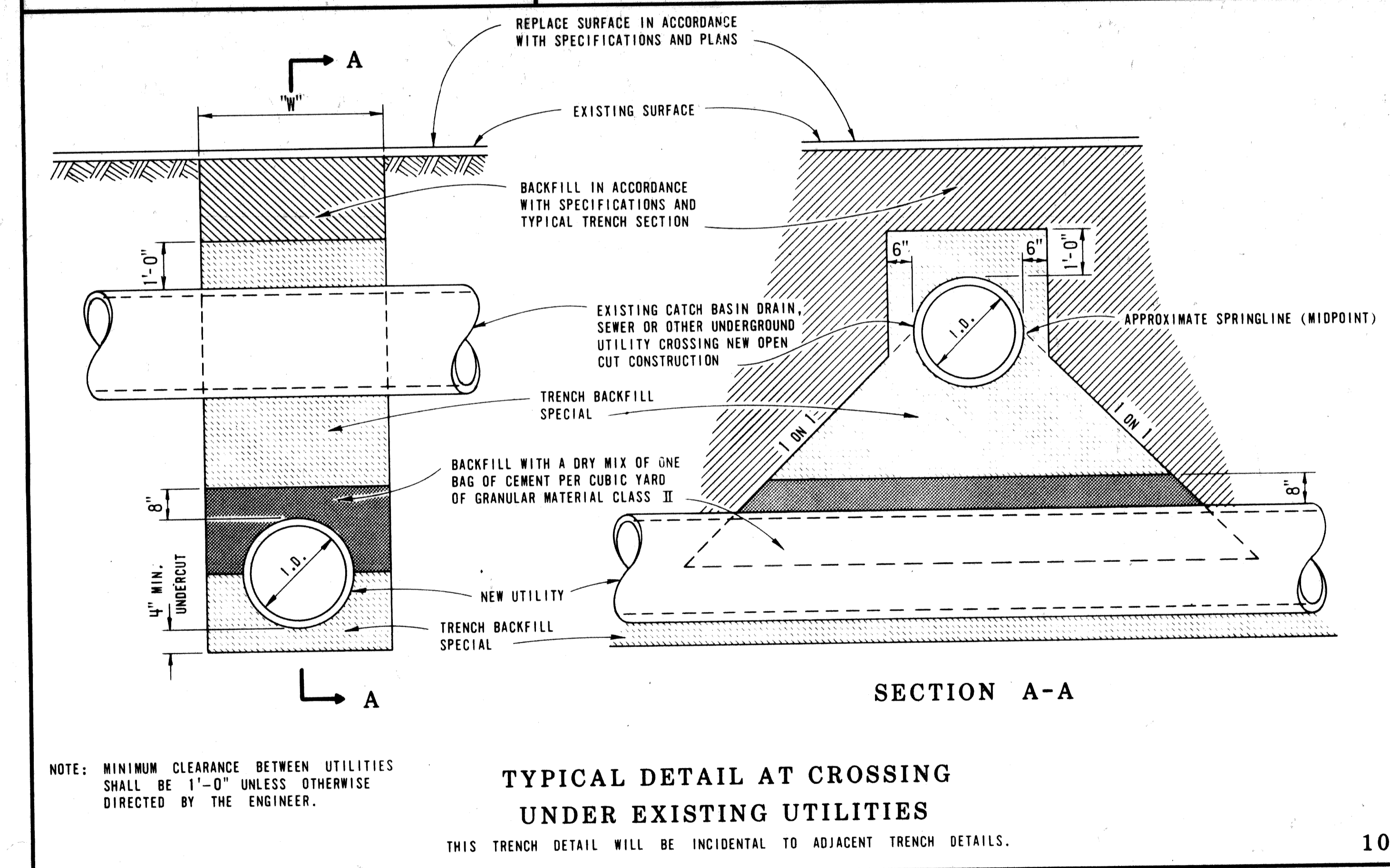
WATER MAINS NOT UNDER ROADBED

11



WATER MAINS UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED

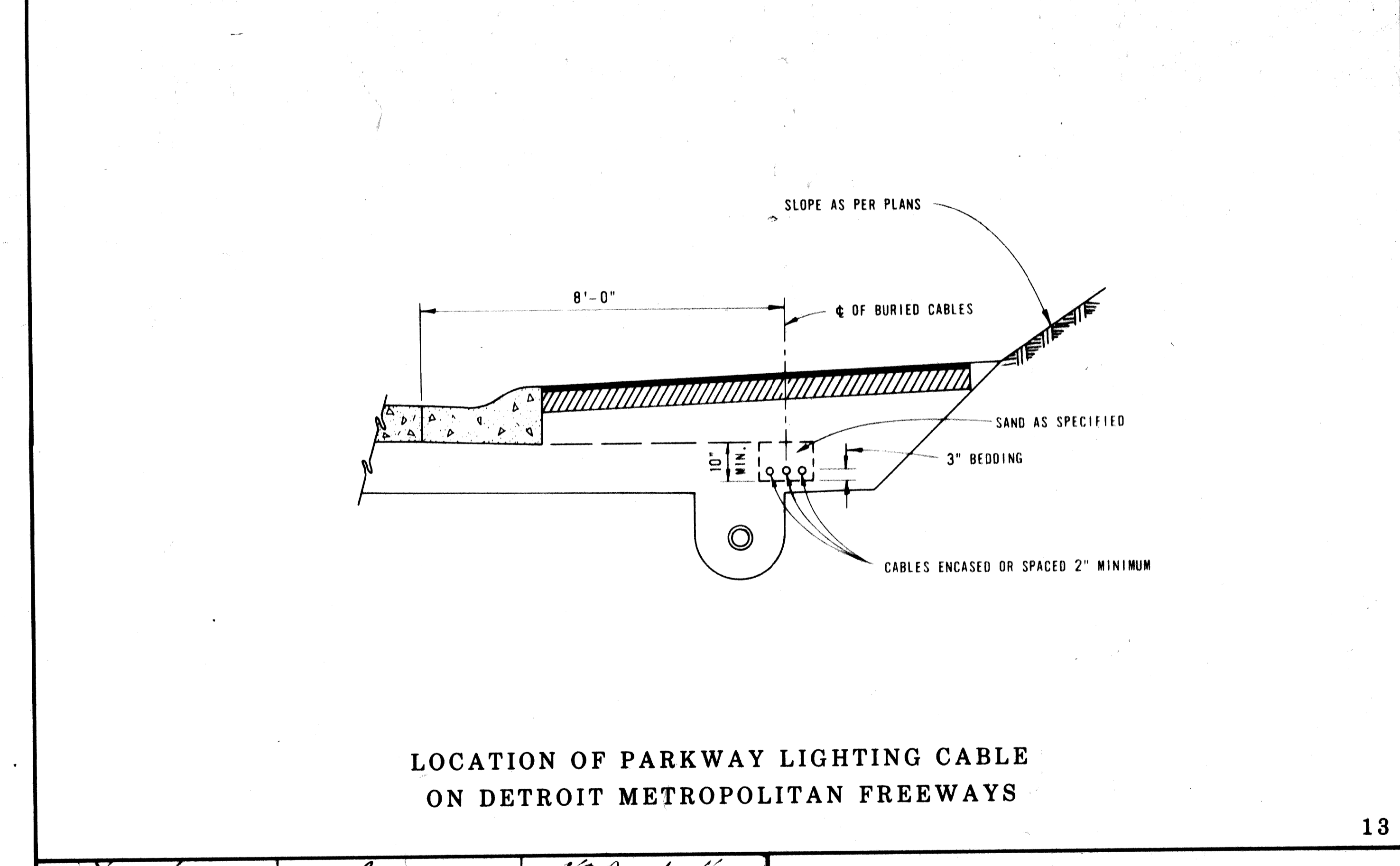
12



TYPICAL DETAIL AT CROSSING UNDER EXISTING UTILITIES

THIS TRENCH DETAIL WILL BE INCIDENTAL TO ADJACENT TRENCH DETAILS.

10



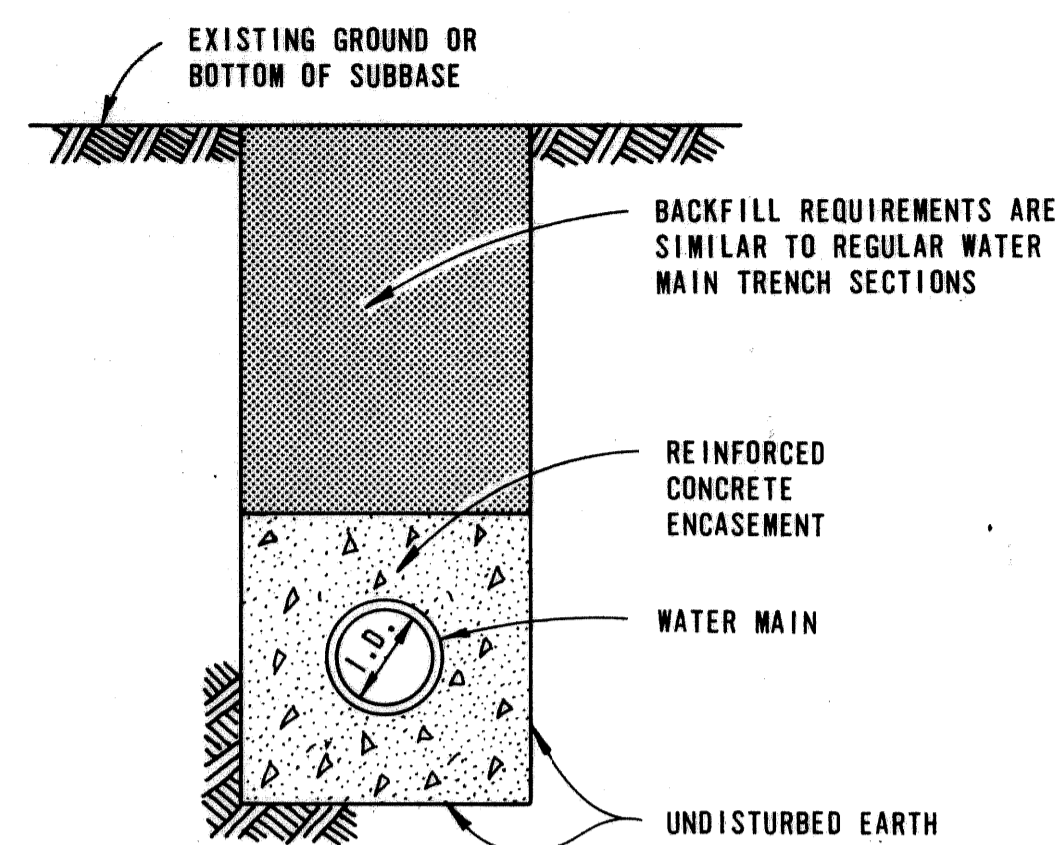
LOCATION OF PARKWAY LIGHTING CABLE ON DETROIT METROPOLITAN FREEWAYS

13

		MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS STANDARD PLAN FOR <b>UTILITY TRENCHES</b> TRENCH DETAILS 8, 9, 10, 11, 12 & 13 TO APPLY ON CITY OF DETROIT UTILITIES	
ENGINEER - BRIDGE DESIGN <i>[Signature]</i>	ENGINEER - ROAD DESIGN <i>[Signature]</i>	ENGINEER OF DESIGN <i>[Signature]</i>	ENGINEER OF DESIGN <i>[Signature]</i>
ENGINEER OF MAINTENANCE <i>[Signature]</i>	ENGINEER OF CONSTRUCTION <i>[Signature]</i>	DEPARTMENT DIRECTOR JAMES P. PITZ	ENGINEER OF MATERIALS & TECHNOLOGY <i>[Signature]</i>
PREPARED BY DESIGN DIVISION DRAWN BY: J.L.R. CHECKED BY: C.L.	ENGINEER OF TRAFFIC AND SAFETY <i>[Signature]</i>	DEPUTY DIRECTOR - HIGHWAYS <i>[Signature]</i>	6-6-88 F.H.W.A. APPROVAL
	4-22-88 PLAN DATE	<b>IV-84 E</b>	SHEET 1 OF 3

MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS STANDARD PLAN FOR <b>UTILITY TRENCHES</b> TRENCH DETAILS 8, 9, 10, 11, 12 & 13 TO APPLY ON CITY OF DETROIT UTILITIES	
ENGINEER - BRIDGE DESIGN <i>[Signature]</i>	ENGINEER - ROAD DESIGN <i>[Signature]</i>
ENGINEER OF DESIGN <i>[Signature]</i>	ENGINEER OF DESIGN <i>[Signature]</i>
ENGINEER OF MAINTENANCE <i>[Signature]</i>	ENGINEER OF CONSTRUCTION <i>[Signature]</i>
DEPARTMENT DIRECTOR JAMES P. PITZ	DEPARTMENT DIRECTOR JAMES P. PITZ
PREPARED BY DESIGN DIVISION DRAWN BY: J.L.R. CHECKED BY: C.L.	DEPUTY DIRECTOR - HIGHWAYS <i>[Signature]</i>
6-6-88 F.H.W.A. APPROVAL	4-22-88 PLAN DATE
<b>IV-84 E</b>	SHEET 2 OF 3

SHEET 10 A OF 21



REQUIRED ENCASEMENT SIZE FOR RESPECTIVE PIPE SIZES		
PIPE SIZE	ENCASEMENT SIZE	TRENCH WIDTH
6" THRU 12"	3'-0"	3'-0"
16"	3'-6"	3'-6"
24"	4'-6"	4'-6"
30"	5'-0"	5'-0"
36"	5'-6"	5'-6"
42"	6'-0"	6'-0"
48"	7'-0"	7'-0"
54"	7'-6"	7'-6"
60"	8'-0"	8'-0"
66"	8'-6"	8'-6"
72"	9'-0"	9'-0"

NOTE: REINFORCEMENT SHALL BE ACCORDING TO DETAILS SHOWN ON PLANS.

### WATER MAINS IN REINFORCED CONCRETE ENCASEMENT

14

NOTES:

BEDDING UNDER THE UTILITY SHALL BE AS SHOWN OR THE TRENCH MAY BE UNDERCUT BELOW THE UTILITY AND THE UNDERCUT MATERIAL REPLACED WITH TRENCH BACKFILL - SPECIAL. BACKFILLING SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.

BACKFILL FOR UTILITY TRENCHES ABOVE TRENCH BACKFILL - SPECIAL SHALL BE AS FOLLOWS:

- (A) GRANULAR MATERIAL CLASS III SHALL BE USED TO BACKFILL UTILITY TRENCHES UNDER ROADBED.
- (B) GRANULAR MATERIAL CLASS III SHALL BE USED TO BACKFILL UTILITY TRENCHES OUTSIDE THE ROADBED BUT WITHIN THE 1 ON 1 ZONE OF INFLUENCE SHOWN. IT WILL ALSO BE USED AS BACKFILL UNDER SIDEWALKS, SURFACED AREAS, AND MISCELLANEOUS STRUCTURES, AND COMPACTED TO NOT LESS THAN 95% OF MAXIMUM UNIT WEIGHT.
- (C) MATERIAL EXCAVATED FROM THE UTILITY TRENCHES SHALL BE USED TO BACKFILL UTILITY TRENCHES OUTSIDE THE LIMITS OF THE 1 ON 1 ZONE OF INFLUENCE AND SHALL BE COMPACTED TO NOT LESS THAN 90% OF MAXIMUM UNIT WEIGHT.

GRANULAR MATERIAL CLASS I OR II MAY BE USED WHERE GRANULAR MATERIAL CLASS III IS CALLED FOR ON PLANS.

SUFFICIENT TRENCH WIDTH SHALL BE PROVIDED TO ALLOW FREE WORKING SPACE AND TO PERMIT COMPACTING THE BACKFILL AROUND THE PIPE.

THE FOLLOWING TRENCH WIDTHS ARE TO BE USED AS A GUIDE ONLY:

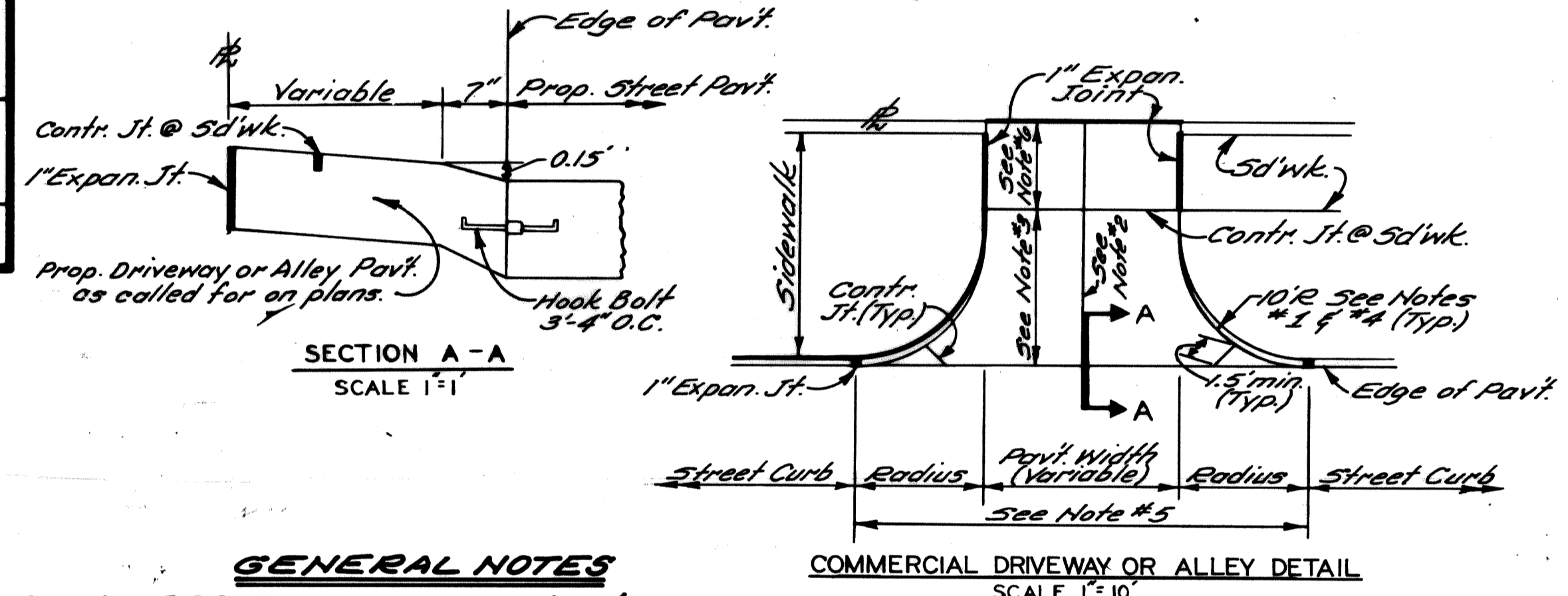
I.D. PIPE SIZE (INCHES)	LESS THAN 18	21	24	30	36	42	48	54	60
"W" TRENCH WIDTH (FEET)	3.0	3.5	4.0	5.0	6.0	7.0	8.0	9.5	10.0
I.D. PIPE SIZE (INCHES)	66	72	78	84	90	96	102	108	
"W" TRENCH WIDTH (FEET)	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	

ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 1' EACH SIDE OF THE TRENCH (6' MINIMUM).

<i>[Signature]</i> ENGINEER - BRIDGE DESIGN	<i>[Signature]</i> ENGINEER - ROAD DESIGN	<i>[Signature]</i> ENGINEER OF DESIGN	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS STANDARD PLAN FOR <b>UTILITY TRENCHES</b> TRENCH DETAILS 8, 9, 10, 11, 12 & 13 TO APPLY ON CITY OF DETROIT UTILITIES
<i>[Signature]</i> ENGINEER OF MAINTENANCE	<i>[Signature]</i> ENGINEER OF CONSTRUCTION	DEPARTMENT DIRECTOR JAMES P. PITZ	
PREPARED BY DESIGN DIVISION DRAWN BY: J.L.R. CHECKED BY: C.L.	<i>[Signature]</i> ENGINEER OF MATERIALS & TECHNOLOGY	BY: <i>[Signature]</i> DEPUTY DIRECTOR - HIGHWAYS	
6-6-88 F.H.W.A. APPROVAL	4-22-88 PLAN DATE	IV-84E	SHEET 3 OF 3

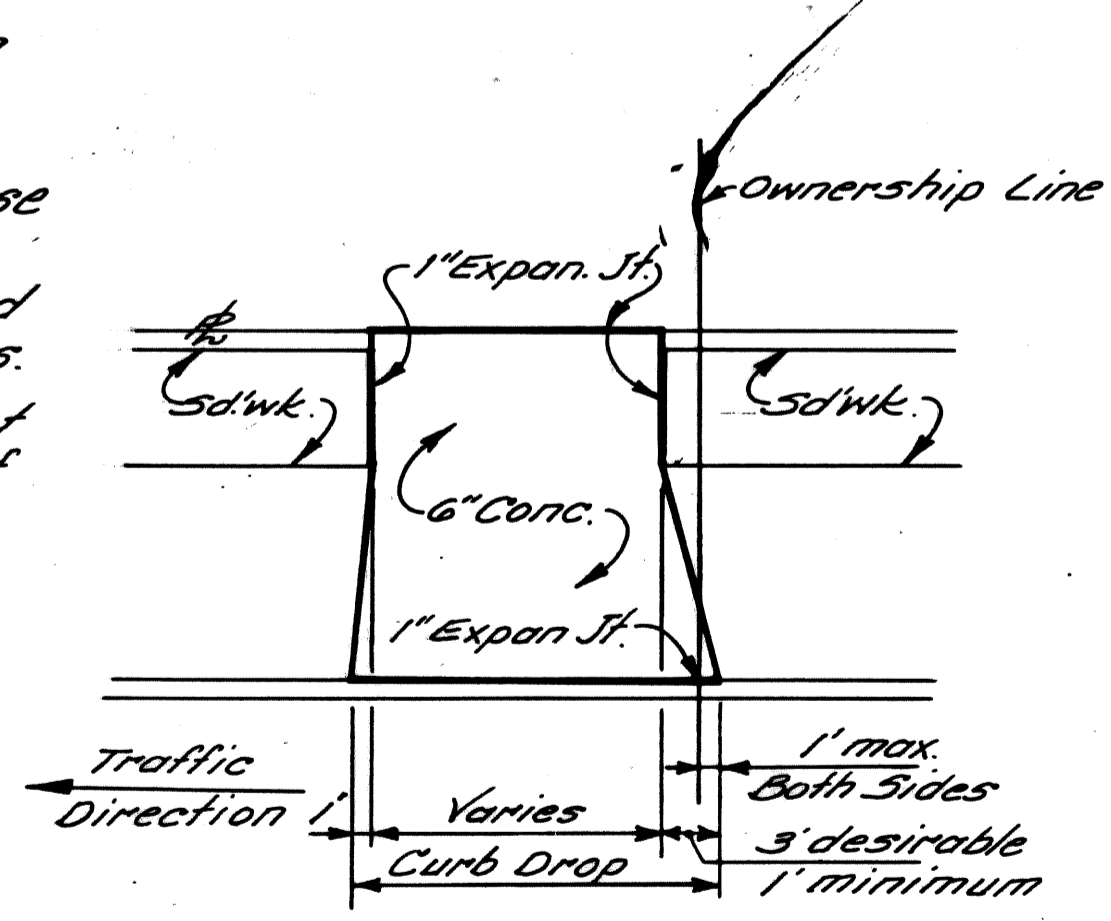
COLOR	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
BLACK	---	PROPERTY AND LOT LINES	---	GUARD RAIL FENCE	○	SEWER MANHOLE
---	---	PROPOSED CURB LINES AND HEADERS AT RETURNS	○	P.L.C. HANDHOLE	○	PLC MANHOLE
---	---	EXISTING CURB LINES OR EDGE OF PAVEMENT	○	WATER MANHOLE OR GRATE	○	GAS MANHOLE OR GRATE
---	---	PROPOSED CURB OR PAVING ON INTERSECTING STREET	○	WESTERN UNION MANHOLE	○	MICHIGAN BELL MANHOLE
---	---	PROPOSED SEWER TO CATCH BASINS	○	EDISON STEAM MANHOLE	○	EDISON ELECTRIC MANHOLE
---	---	EXISTING LATERAL SEWERS	○	FIRE DEPT MANHOLE	○	POLICE DEPT MANHOLE
---	---	EXISTING PUBLIC SEWERS	○	D.S.R. MANHOLE	○	FIRE DEPT STANDARD HYDRANT
---	---	EXISTING GAS LINES	○	FIRE DEPT HIGH PRESSURE HYDRANT	○	FIRE DEPT CALL BOX
---	---	EXISTING WATER LINES	○	FIRE DEPT HIGH PRESSURE MANHOLE	○	POLICE DEPT CALL BOX
---	---	ELEV OF SEWER INVERT	○	P.L.C. LIGHT POLE	○	P.L.C. POLE
---	---	PROPOSED C.B. M.H. & INLET SEWER	○	TELEPHONE POLE	○	EDISON POLE
---	---	ELEV	○	EDISON POLE	○	TREE PLANTER
---	---	EXISTING C.B. M.H. & INLET SEWERS	○	DETROIT EDISON ELECTRIC CONDUIT	---	DETROIT EDISON STEAM CONDUIT
---	---	PROPOSED C.B. M.H. & INLET SEWERS ON INTERSECTING STREETS	○	WESTERN UNION DUCTS	---	MICHIGAN BELL TELEPHONE DUCTS
						P.L.C. CONDUITS
						DETROIT FIRE OR POLICE DEPT CONDUITS (PLC COMMUNICATIONS)

CITY OF DETROIT		DEPARTMENT OF PUBLIC WORKS		STANDARD SYMBOLS FOR UTILITIES	
CITY ENGINEER'S OFFICE		BUREAU OF DESIGN		C-902-A	
PAVING		DETAIL NO. 25		SCALE: NO SCALE	
DESIGNED BY: J.R.D.		DRAWN BY: T. RANBY		DATE: 11/7/92	
CHECKED BY: NBI		APPROVED: Allen E. Proger		D.W. NO. C-902-A	



**GENERAL NOTES**  
**COMMERCIAL DRIVEWAYS & ALLEYS**

1. Transition edge of driveway or alley from curb at the street to no curb at the end of the driveway or alley radius.
2. Where driveway or alley exceeds 15' in width a contraction joint shall be placed longitudinally along  $\frac{1}{2}$ .
3. When distance exceeds 15', a transverse contraction joint will be required.
4. Radius 10' unless otherwise directed by the Engineer, or as shown on plans.
5. All work & materials req'd to construct the driveway or alley between the end of returns will be paid for as "Concrete Pavement" of the specified thickness.
6. Minimum & Maximum Slopes of  $\frac{1}{4}$ "/ft. &  $\frac{3}{4}$ "/ft. shall be used in the sidewalk area.



CITY OF DETROIT		CITY ENGINEERING DEPARTMENT		SHEET 11 OF 21 SHEETS	
CITY ENGINEERING DEPARTMENT		SPECIAL STANDARDS & SPECIAL DETAILS		CONTRACT No. 31809A	
DESIGNED BY: J.R.D.		DRAWN BY: T. RANBY		ASSIGNMENT No. A O 91-60-01	
CHECKED BY: NBI		APPROVED: Allen E. Proger		DATE: APRIL, 92	

