

# LINCOLN HILLS No. 6A

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### GENERAL NOTES

- CONTRACTOR SHALL CHECK DETAIL DRAWINGS FOR MINIMUM GRADE AND BACKFILL REQUIREMENTS.
- ALL COMBINATION CONCRETE CURB AND GUTTER TO BE MASSILLON STANDARD EXCEPT WHERE VARIATIONS ARE TO BE EXTENDED OR MET - SEE SPECIFICATION BOOK AND PLANS.
- EXCAVATION FOR COMBINATION CONCRETE CURB AND GUTTER SHALL BE INCLUDED IN THE COST PER LINEAL FOOT OF SAID CURB AND GUTTER.
- ALL CATCH BASINS AND MANHOLES TO BE ADJUSTED TO GRADE WHERE NECESSARY.
- ALL CONCRETE TO BE 1:2: 4-6 BAG MIX 28 DAY - 3000 PSI COMPRESSIVE STRENGTH. MAX. SLUMP TO BE 4".
- CONTRACTOR SHALL PAY INSPECTOR(S) AT THE RATE OF TIME AND ONE HALF OF REGULAR RATE AFTER 4:30 P.M. MONDAY THRU FRIDAY SATURDAYS ALL DAY AT TIME AND ONE HALF.
- ALL MATERIALS USED WILL BE NEW - NO SALVAGED MATERIAL WILL BE ACCEPTED EXCEPT CASTINGS.
- IF CONTRACTOR EXCAVATES DEEPER THAN NECESSARY FOR CURB AND GUTTER, CONTRACTOR WILL FURNISH O.D.O.T. 304 AGGREGATE AND TAMP BEFORE CURB AND GUTTER IS CONSTRUCTED.
- IF SUBGRADE IS UNSUITABLE, CONTRACTOR WILL EXCAVATE AND REPLACE SUCH MATERIAL WITH CRUSHED RUN GRAVEL, AT THE DISCRETION OF THE INSPECTOR OR CITY ENGINEER. THIS FILL TO BE PLACED IN 6" LAYERS OR LESS; SAID FILL TO BE COMPACTED TO 95% MAXIMUM LABORATORY DRY WEIGHT BEFORE ANY ADDITIONAL LAYERS ARE ADDED. CONTRACTOR WILL BE PAID FOR EXTRA GRAVEL AND EXCAVATION. THIS COMPACTION TO BE DONE BEFORE FORMS ARE PLACED.
- CONTRACTOR TO BACKFILL CURB IMMEDIATELY AFTER CURB HAS BEEN IN PLACE FOR 48 HOURS.
- CONTRACTOR WILL NOTIFY THE DEVELOPER'S ENGINEER WHEN HE IS IN NEED OF CONSTRUCTION STAKES AND THIS OFFICE WILL COMPLY WITHIN A PERIOD OF 48 HOURS.
- ALL STORM SEWER PIPES WITHIN PAVEMENT LIMITS OR WITHIN 5' OF B/C LINE SHALL BE REINFORCED CONCRETE PIPE (ODOT 706.02) AND SHALL BE TYPE 'B' CONDUIT WITH GRANULAR BACKFILL TO WITHIN 1' OF FINISH GRADE IN ACCORDANCE WITH ODOT 603 CLASS B BEDDING AND GRANULAR BACKFILL. ALL STORM SEWERS NOT WITHIN 5' OF B/C SHALL BE SMOOTH LINED CORRUGATED POLYETHYLENE (ODOT 944) OR REINFORCED CONCRETE PIPE (ODOT 706.02) AND SHALL BE TYPE 'C' CONDUIT IN ACCORDANCE WITH ODOT 603 WITH CLASS B BEDDING AND SUITABLE SOIL BACKFILL.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES BEFORE ANY WORK IS BEGUN. THE CITY OF MASSILLON IS NOT RESPONSIBLE FOR ANY LOST TIME DUE TO UTILITY RELOCATION.
- MANHOLES AND CATCH BASINS SHALL BE CONSTRUCTED IN CONFORMANCE WITH MASSILLON CITY STANDARDS (FILE No. 581) AVAILABLE FROM THE CITY ENGINEER.
- CONTRACTOR SHALL CONTACT CITY OF MASSILLON ENGINEER DEPARTMENT (GREG McCUE) AT 330-830-1722 AT LEAST 2 DAYS PRIOR TO THE INITIATION OF CONSTRUCTION TO SCHEDULE A PRECONSTRUCTION MEETING.
- STREET LIGHTING IS REQUIRED. DEVELOPER SHALL CO-ORDINATE WITH ELECTRIC UTILITY COMPANY FOR POLE LOCATION AND TYPE.
- ALL CONSTRUCTION TRAFFIC TO USE ABRAHAM AVE. N.W. ONLY AS ENTRANCE/EXIT. NO CONSTRUCTION TRAFFIC TO TRAVEL ON LEE AVE. N.W.
- ABRAHAM AVE. N.W. IS TO BE RESURFACED FROM PROPOSED ALLOTMENT TO 28TH ST. N.W. AS PART OF THIS PROJECT. RESURFACING TO BE PERFORMED UPON COMPLETION OF THE FINAL PHASE OF LINCOLN HILLS DEVELOPMENT.
- THE DEVELOPER SHALL INSTALL, AT HIS COST, STREET SIGNS REPRESENTING THE NAMES OF ALL STREETS AT ALL INTERSECTIONS. DEVELOPER ALSO RESPONSIBLE FOR STOP SIGNS AND DIRECTIONAL SIGNS AS NECESSARY. ALL SIGNS SHALL CONFORM WITH CITY OF MASSILLON REGULATIONS.

### WATERLINE NOTES

ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO CONSUMERS OHIO WATER COMPANY SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION OF ALL WATER MAINS. CONSUMERS OHIO WATER COMPANY WILL BE RESPONSIBLE FOR CONSTRUCTION OF ALL WATER SERVICE CONNECTIONS FROM 8" WATER MAINS.

WATER MAIN MATERIALS SHALL CONFORM TO AWWA C151 FOR DUCTILE CAST IRON PIPE.

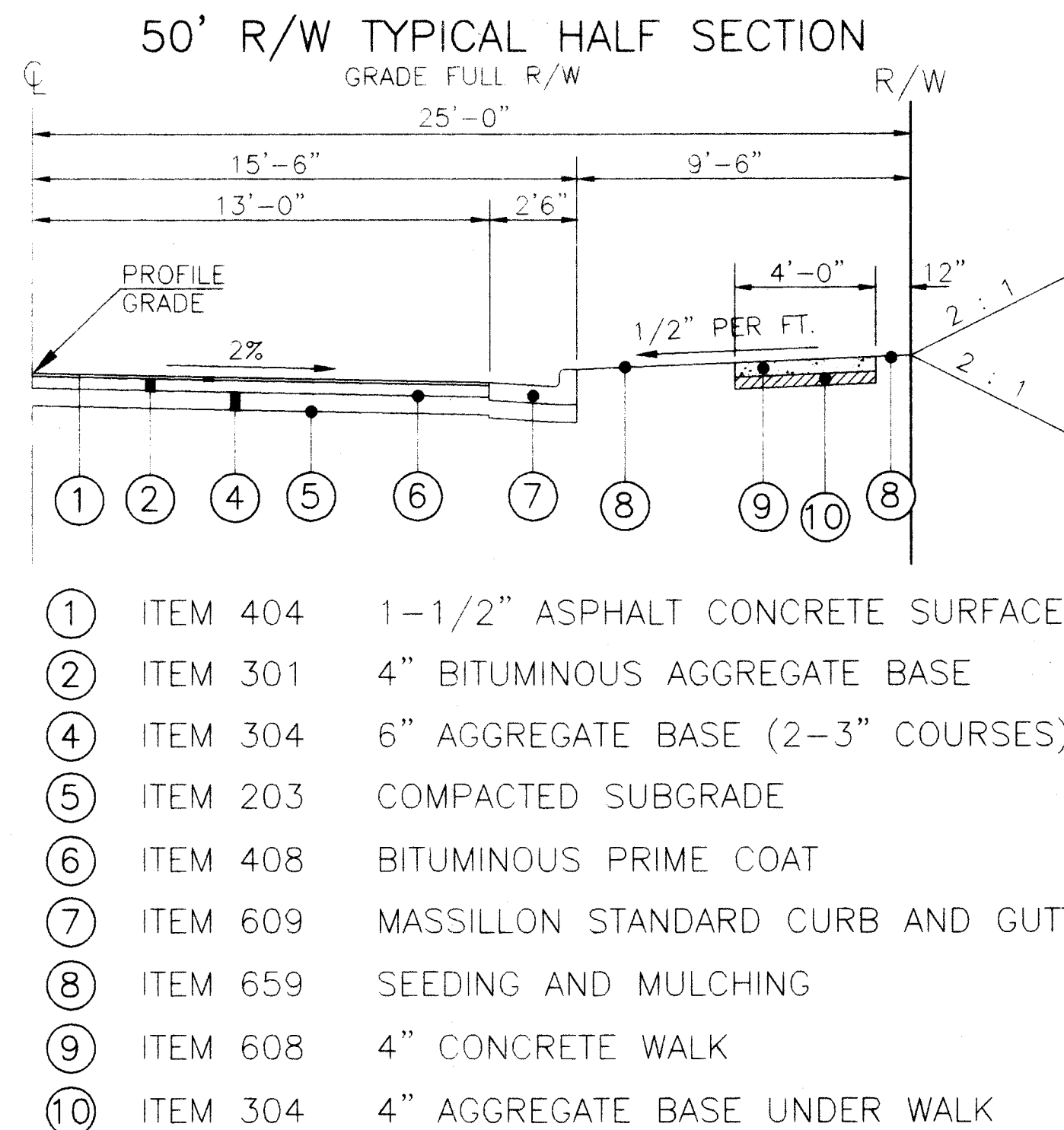
WATER MAINS SHALL BE INSTALLED AND PRESSURE TESTED IN ACCORDANCE WITH AWWA C600.

WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651.

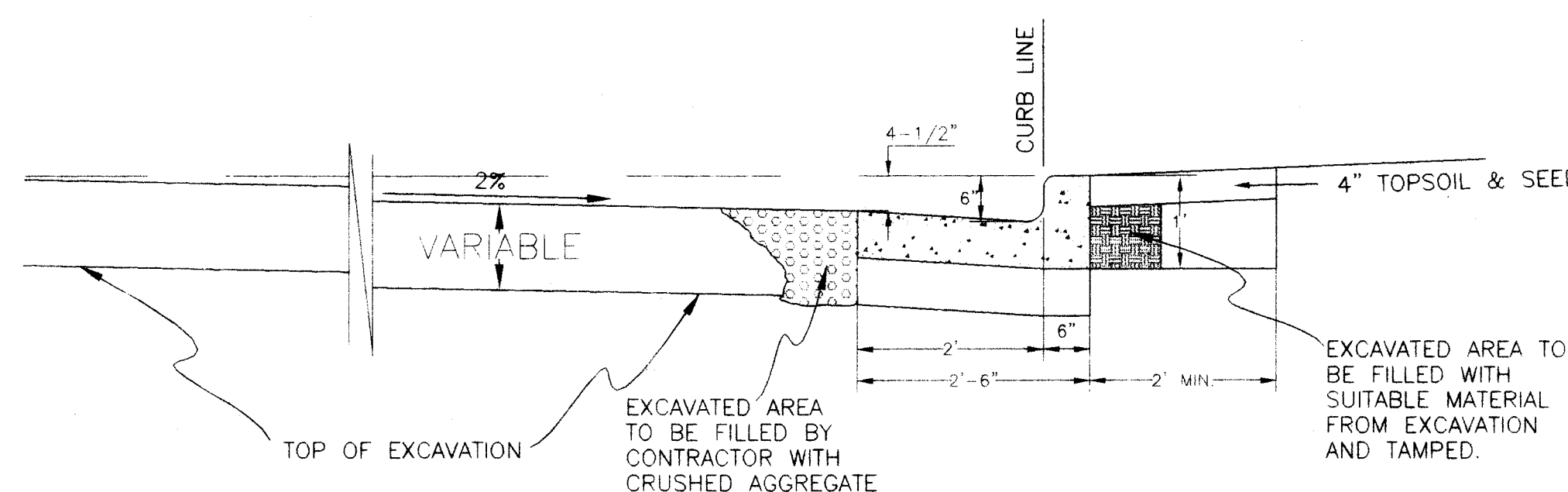
APPROVED BY CONSUMERS OHIO WATER COMPANY  
THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 199\_\_.

DONALD L. SNYDER, COWC

NOTE: CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM OF 18" VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND A MINIMUM OF 12" VERTICAL CLEARANCE BETWEEN STORM SEWER IS MAINTAINED.

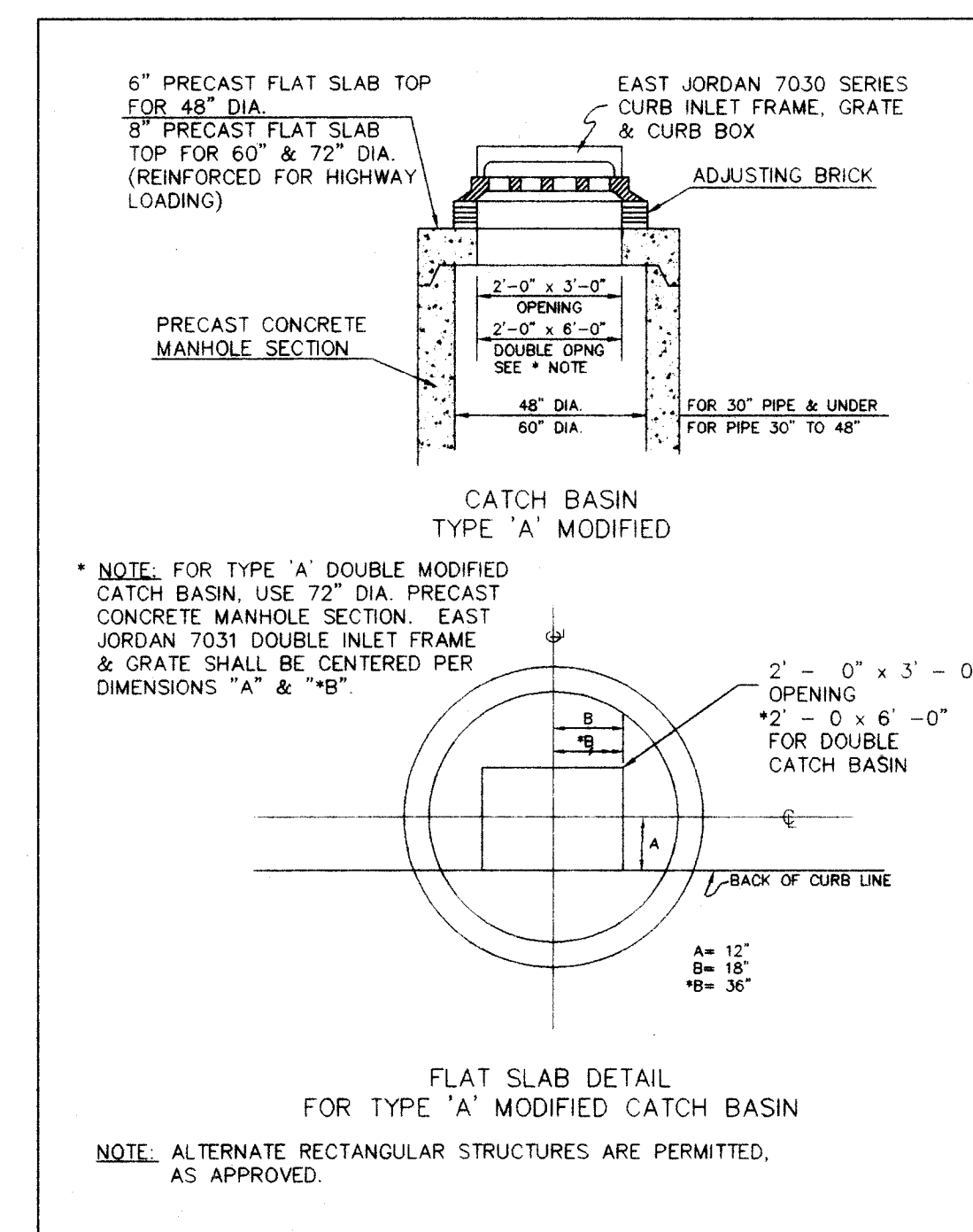


### MASSILLON STANDARD CURB AND GUTTER DETAIL (ODOT TYPE 2)



### SANITARY SEWER NOTES

- ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED ACCORDING TO MASSILLON CITY ENGINEERING DEPARTMENT SPECIFICATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
- ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
- FIRST FLOOR ELEVATION FOR BUILDING AT THE BUILDING SETBACK LINE SHALL BE A MINIMUM OF 6" ABOVE STREET CENTERLINE GRADE.
- MINIMUM COVER OVER ALL SANITARY SEWER MUST BE 3.0 FEET.
- ALL SANITARY SEWERS, 8" DIAMETER AND LARGER, MUST PASS INTERNAL TELEVISION INSPECTION. THE CONTRACTOR SHALL PROVIDE COMPLETE INTERNAL INSPECTION VIDEOTAPE TO THE SANITARY ENGINEERING DEPARTMENT. THE VIDEOTAPE PROCEDURE MUST BE IN ACCORDANCE WITH STARK COUNTY SANITARY ENGINEERING DEPARTMENT SPECIFICATIONS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MR. GREG McCUE, THE MASSILLON CITY ENGINEER, AT (330-830-1722) TO SCHEDULE A PRE-CONSTRUCTION MEETING. A MINIMUM OF 72 HOURS NOTICE IS REQUIRED TO SCHEDULE THIS MEETING.
- SANITARY SEWER MAY BE ANY OF THE FOLLOWING MATERIALS, HOWEVER THE COMPLETE SYSTEM MUST BE UNIFORM IN PIPE MATERIAL:
  - V.C.P. EXTRA STRENGTH A.S.T.M. C-700 WITH COMPRESSION TYPE JOINTS IN CONFORMANCE WITH A.S.T.M. C-425.
  - A.B.S. COMPOSITE PIPE A.S.T.M. D-2680 WITH CHEMICALLY WELDED PREMIUM JOINTS ASTM D-2680.
  - P.V.C. PIPE A.S.T.M. D-3034 S.D.R. 35 MAXIMUM WITH GASKETED PREMIUM JOINTS ASTM D-3212.
- A BULKHEAD SHALL BE CONSTRUCTED IN THE EXISTING MANHOLE AT THE ENTRANCE OF THE PROPOSED SEWER PIPE AND REMAIN IN PLACE UNTIL THE NEW SEWER LINE IS COMPLETE, TESTED AND APPROVED BY THE MASSILLON CITY ENGINEER, AT WHICH TIME THE BULKHEAD SHALL BE REMOVED.
- LEAKAGE LIMIT TEST TO BE 100 GAL./IN./MI./DAY.
- MANHOLE AND TRENCHES SHALL BE PER MASSILLON DETAILS. DRAWINGS. SANITARY SEWER PIPE TO BE PVC PER ASTM-3034 WITH JOINTS PER ASTM-3212. BEDDING PER ASTM-2321.

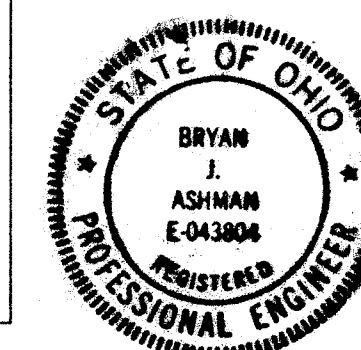


| ESTIMATED QUANTITIES |       |      |                                                  |
|----------------------|-------|------|--------------------------------------------------|
| ITEM                 | QTY.  | UNIT | DESCRIPTION                                      |
| EARTHWORK            |       |      |                                                  |
| 203                  | 4070  | S.Y. | SUBGRADE COMPACTION                              |
| 203                  | 3281  | C.Y. | ROADWAY EXCAVATION NOT INCL. EMBANK. CONST.      |
| 203                  | 200   | C.Y. | ROADWAY EMBANKMENT                               |
| ROADWAY              |       |      |                                                  |
| 301                  | 381   | C.Y. | BITUMINOUS AGGREGATE BASE                        |
| 304                  | 783   | C.Y. | AGGREGATE BASE                                   |
| 404                  | 144   | C.Y. | 1" ASPHALT CONCRETE                              |
| 408                  | 1384  | GAL. | PRIME COAT (0.4 GAL. PER SQ. YD.)                |
| 409                  | -     | C.Y. | SEAL COAT COVER AGGREGATE (0.008 C.Y./SQ.YD.)    |
| 409                  | -     | GAL. | SEAL COAT BITUMINOUS MATERIAL (0.3 GAL./SQ. YD.) |
| 604                  | 4     | EACH | STANDARD CITY MONUMENTS                          |
| 608                  | 8536  | S.F. | 4" CONCRETE WALK                                 |
| 609                  | 2174  | L.F. | MASSILLON STANDARD CURB AND GUTTER               |
| 659                  | 1318  | S.Y. | SEEDING AND MULCHING (ROADWAY)                   |
| SANITARY SEWER       |       |      |                                                  |
| 8C                   | 730   | L.F. | 6" SANITARY SEWER PIPE (LATERALS)                |
| 8                    | 988   | L.F. | 8" SANITARY SEWER PIPE                           |
| 8A                   | 15    | EACH | 8" x 6" WYES                                     |
| 1E                   | 36.91 | V.F. | SANITARY MANHOLES (COMPLETE) (4 EACH)            |
| STORM SEWER          |       |      |                                                  |
| 603                  | 49    | L.F. | 12" REINFORCED CONCRETE PIPE TYPE B              |
| 603                  | 44    | L.F. | 18" REINFORCED CONCRETE PIPE TYPE B              |
| 603                  | 120   | L.F. | 18" REINFORCED CONCRETE PIPE TYPE C              |
| 603                  | 137   | L.F. | 24" REINFORCED CONCRETE PIPE TYPE C              |
| 603                  | 118   | L.F. | 30" REINFORCED CONCRETE PIPE TYPE B              |
| 603                  | 662   | L.F. | 36" REINFORCED CONCRETE PIPE TYPE B              |
| 603                  | -     | L.F. | REINFORCED CONCRETE PIPE TYPE                    |
| 603                  | -     | L.F. | REINFORCED CONCRETE PIPE TYPE                    |
| 603                  | -     | L.F. | REINFORCED CONCRETE PIPE TYPE                    |
| 603                  | -     | L.F. | REINFORCED CONCRETE PIPE TYPE                    |
| 604                  | 1     | EACH | CATCH BASIN TYPE 'A'                             |
| 604                  | 2     | EACH | CATCH BASIN TYPE 'A' (MOD.)                      |
| 604                  | 2     | EACH | CATCH BASIN TYPE 'A' (DBL.)                      |
| 604                  | 2     | EACH | CATCH BASIN TYPE '2-2-A'                         |
| 604                  | 1     | EACH | CATCH BASIN: ODOT 2-3-B                          |
| 604                  | 3     | EACH | STORM MANHOLE (COMPLETE)                         |
| 604                  | 0     | EACH | CONCRETE PIPE HEADWALL ODOT TYPE 4B              |
| 601                  | -     | C.Y. | DUMPED ROCK CHANNEL PROTECTION TYPE              |
| 207                  | LUMP  | L.S. | EROSION AND SEDIMENT CONTROL AS REQUIRED         |
| WATERLINE            |       |      |                                                  |
| 638                  | 1151  | L.F. | 8" DUCTILE IRON PIPE, ANSI CLASS 52              |
| 638                  | 2     | EACH | 8" x 8" MJ TEE                                   |
| 638                  | 1     | EACH | REMOVE AND RELOCATE HYDRANT ASSY.                |
| 638                  | 5     | EACH | 8" GATE VALVE W/BOX                              |
| 638                  | 2     | EACH | 8" POJ PLUG & MARKER                             |
| 638                  | 1     | EACH | FIRE HYDRANT ASSEMBLY, COMPLETE                  |
| 638                  | 18    | EACH | WATER SERVICE CONNECTION W/CURB BOX              |

APPROVED BY THE MASSILLON CITY ENGINEER

THIS 21 DAY OF Oct., 1998

James J. Binkes  
MASSILLON CITY ENGINEER



COOPER & ASSOCIATES, LLP  
ENGINEERS & SURVEYORS

1359 MARKET  
AVENUE NORTH  
CANTON, OHIO  
44714

PHONE : 330 452-5731  
FAX : 330 452-9110

BRYAN J. ASHMAN  
JEROLD E. GEIB

LINCOLN HILLS No.6A

FOR: EARL GLICK

ROADWAY DETAILS AND ESTIMATED QUANTITIES

SURVEYED PLATTED FIELD BOOK DATE

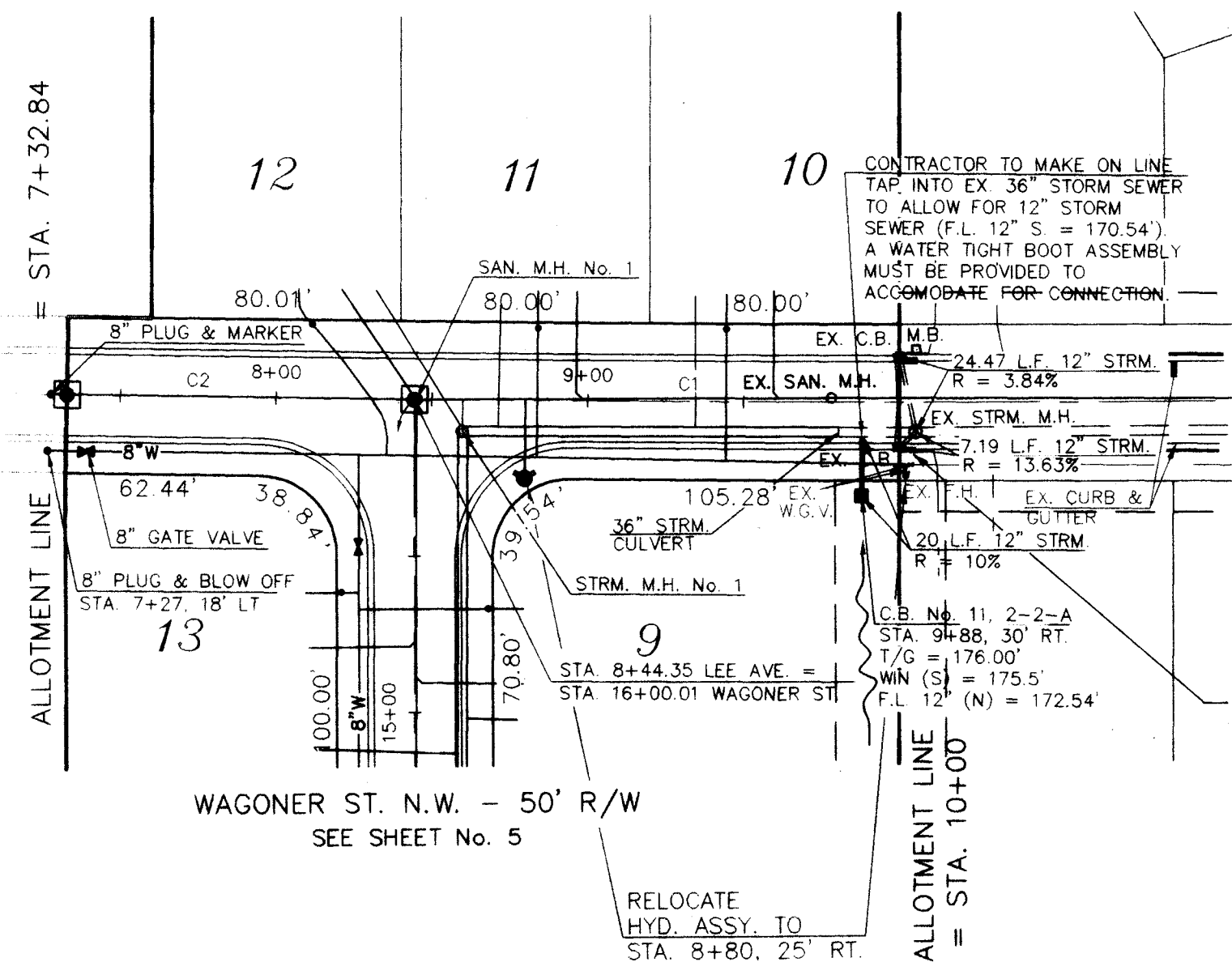
PROJ.# 98167

99 50 03

CL TOTAL CURVE DATA  
PC STA = 10+00 TO  
PT STA = 6+34.04  
Delta=00°57'01"  
R=16108.32'  
L=267.16'  
Tan=133.58'  
C=267.16'  
CB=586°04'42"E

CL CURVE 2 DATA  
CL CL STA = 8+44.33 TO  
AL STA = 7+32.84  
Delta=00°23'48"  
R=16108.32'  
L=111.49'  
Tan=55.75'  
C=111.49'  
CB=585°48'05"E

CL CURVE 1 DATA  
PC STA = 10+00 TO  
CL CL STA = 8+44.33  
Delta=00°33'13"  
R=16108.32'  
L=155.67'  
Tan=77.83'  
C=155.67'  
CB=586°16'35"E



CORE DRILL EXISTING SANITARY MANHOLE AND PROVIDE WATERTIGHT BOOT ASSEMBLY TO ACCOMMODATE PROPOSED 8" SANITARY SEWER CONNECTION (WEST). CONSTRUCT FORMED INVERT AT PROPOSED CONNECTION TO MEET EXISTING CHANNEL.

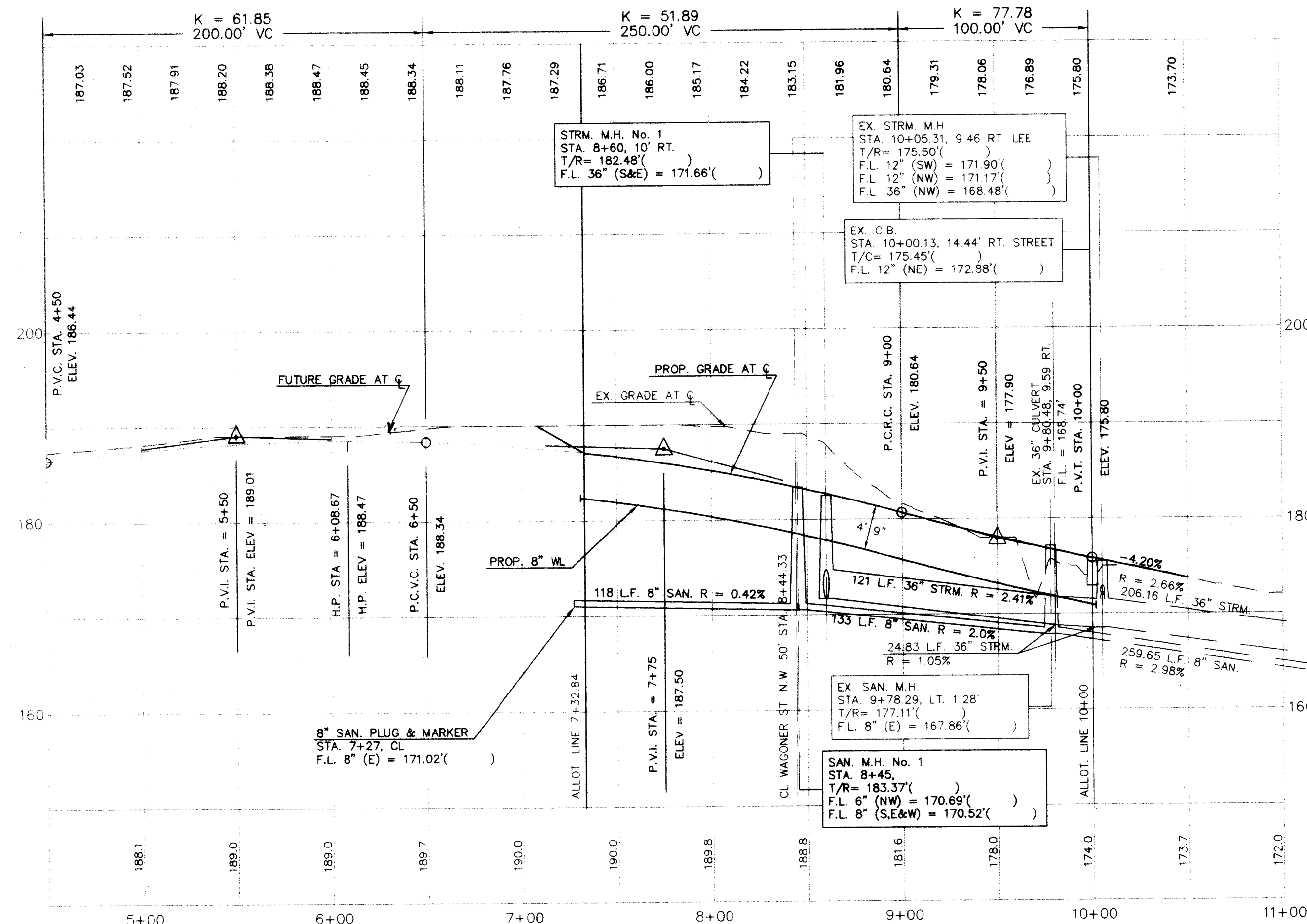
THE CONTRACTOR MUST ALLOW FOR THE DEVELOPER'S ENGINEERS TO OBTAIN AN AS-BUILT DISTANCE AND FLOWLINE ELEVATION FOR SANITARY SEWER STUB.

ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

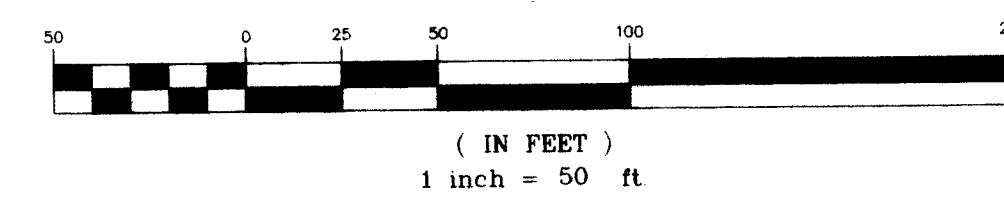
CONTRACTOR MUST CONSTRUCT ALL WATER LINES AND WATER SERVICE LINES SUCH THAT A MINIMUM VERTICAL AND HORIZONTAL CLEARANCE IS MAINTAINED (AS SHOWN BELOW) BETWEEN ALL SANITARY SEWERS AND STORM SEWERS.

| CROSSING       | VERTICAL (inches) | HORIZONTAL (feet) |
|----------------|-------------------|-------------------|
| SANITARY SEWER | 18                | 10                |
| STORM SEWER    | 12                | 4                 |

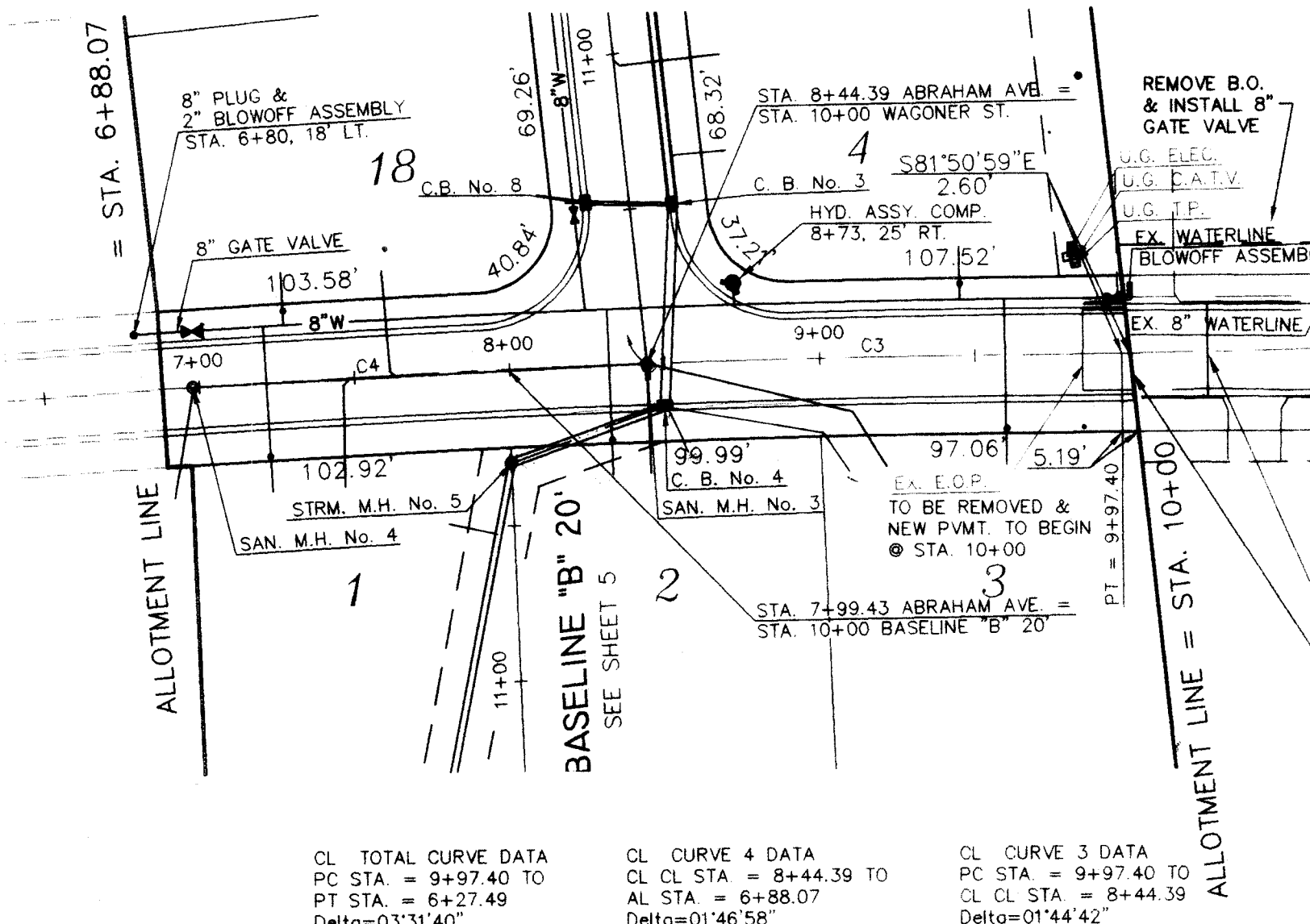
LEE AVE. N.W. - 50' R/W



GRAPHIC SCALE



WAGONER ST. N.W. - 50' R/W  
SEE SHEET No. 5



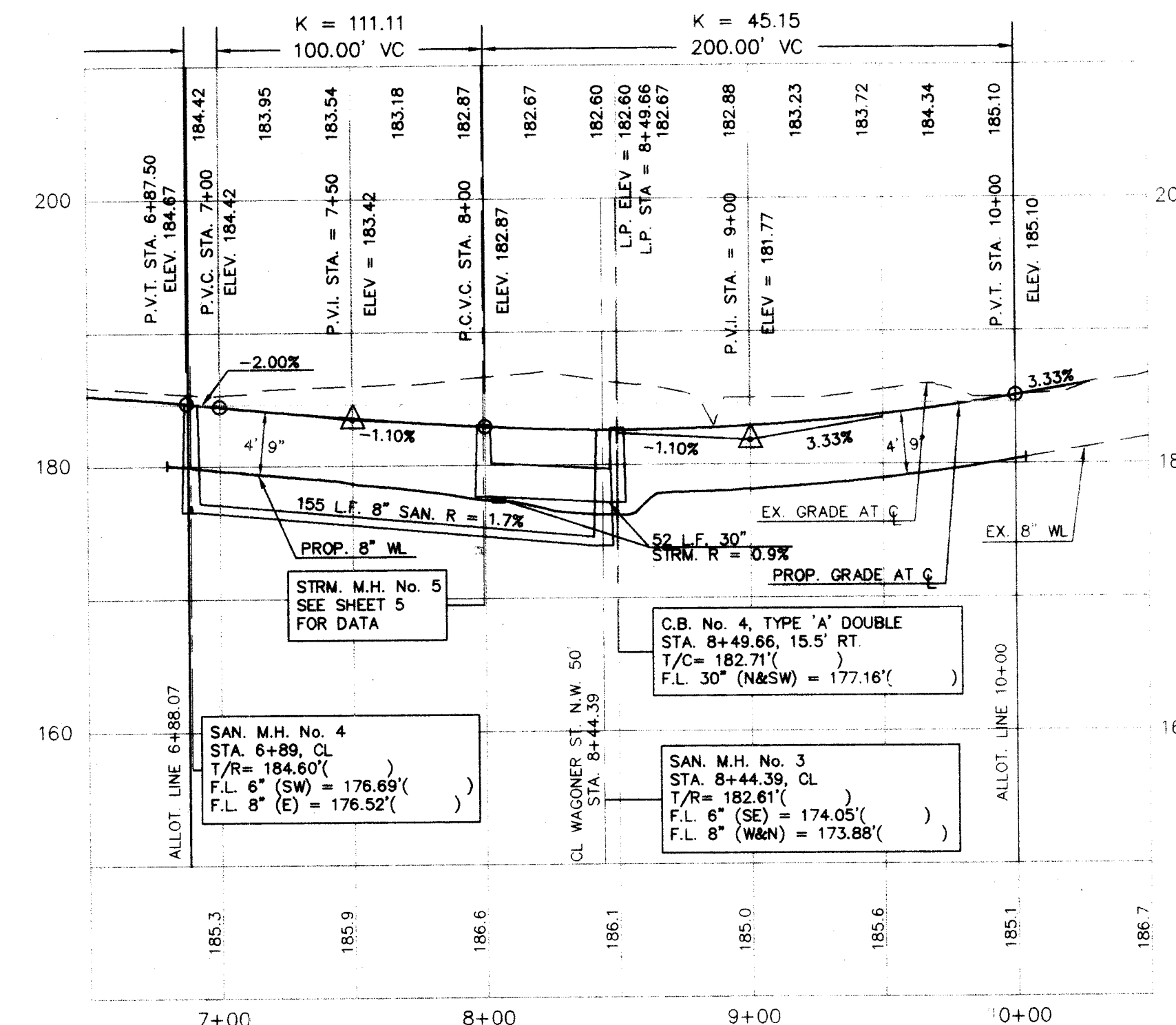
CL TOTAL CURVE DATA  
PC STA = 9+97.40 TO  
PT STA = 6+27.49  
Delta=03°31'40"  
R=5024.20'  
L=308.34'  
Tan=154.72'  
C=308.29'  
CB=N82°37'34"W

CL CURVE 4 DATA  
CL CL STA = 8+44.39 TO  
AL STA = 6+27.49  
Delta=01°46'58"  
R=5024.20'  
L=156.32'  
Tan=78.17'  
C=156.31'  
CB=N83°29'55"W

CL CURVE 3 DATA  
PC STA = 9+97.40 TO  
CL CL STA = 8+44.39  
Delta=01°44'42"  
R=5024.20'  
L=153.02'  
Tan=76.51'  
C=153.01'  
CB=N81°44'05"W

CONTRACTOR TO REMOVE ALL EXIST. CURB AND GUTTER WEST OF STA. 10+25 AND REPLACE WITH NEW CONC. CURB AND GUTTER. PROP. PAVEMENT TO BE FEATHERED INTO EXISTING IN THIS AREA TO CREATE A SMOOTH TRANSITION ALONG ROADWAY.

ABRAHAM AVE. N.W. - 50' R/W



BENCH MARK:

TOP OF HYDRANT (OPERATING NUT) LOCATED ON THE SOUTH SIDE OF LEE AVE., EAST OF LINCOLN HILLS No. 6.  
ELEV. = 178.99'

BENCH MARK:

S.W. CORNER OF CONCRETE TRANSFORMER PAD, LOCATED AT THE WEST END OF ABRAHAM AVE. ON THE NORTH SIDE.  
ELEV. = 184.46'

SEWERAGE  
APPROVED  
AND ENVIRONMENTAL PROTECTION AGENCY  
AS EVIDENCED BY COPY OF  
LETTER OF APPROVAL  
HEREIN ATTACHED

DATE: SEPT 1998  
FIELD BOOK NO.  
SHEET 4 OF 7

BRYAN J. ASHMAN  
JEROLD E. GEIB  
COOPER & ASSOCIATES, LLP  
ENGINEERS AND SURVEYORS

1359 MARKET  
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44704  
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PLAN AND PROFILE  
LINCOLN HILLS No. 6A

FOR: EARL GLICK

STATE OF OHIO  
BRYAN J. ASHMAN  
E-043804  
REGISTERED PROFESSIONAL ENGINEER

PROJ. # 98167  
DATE: 9/29/98  
BY: M.B.J.  
REVISIONS: 1  
DATE: 9/29/98  
BY: M.B.J.

LEE AVE. N.W. 50' & ABRAHAM AVE. N.W. 50'

995003

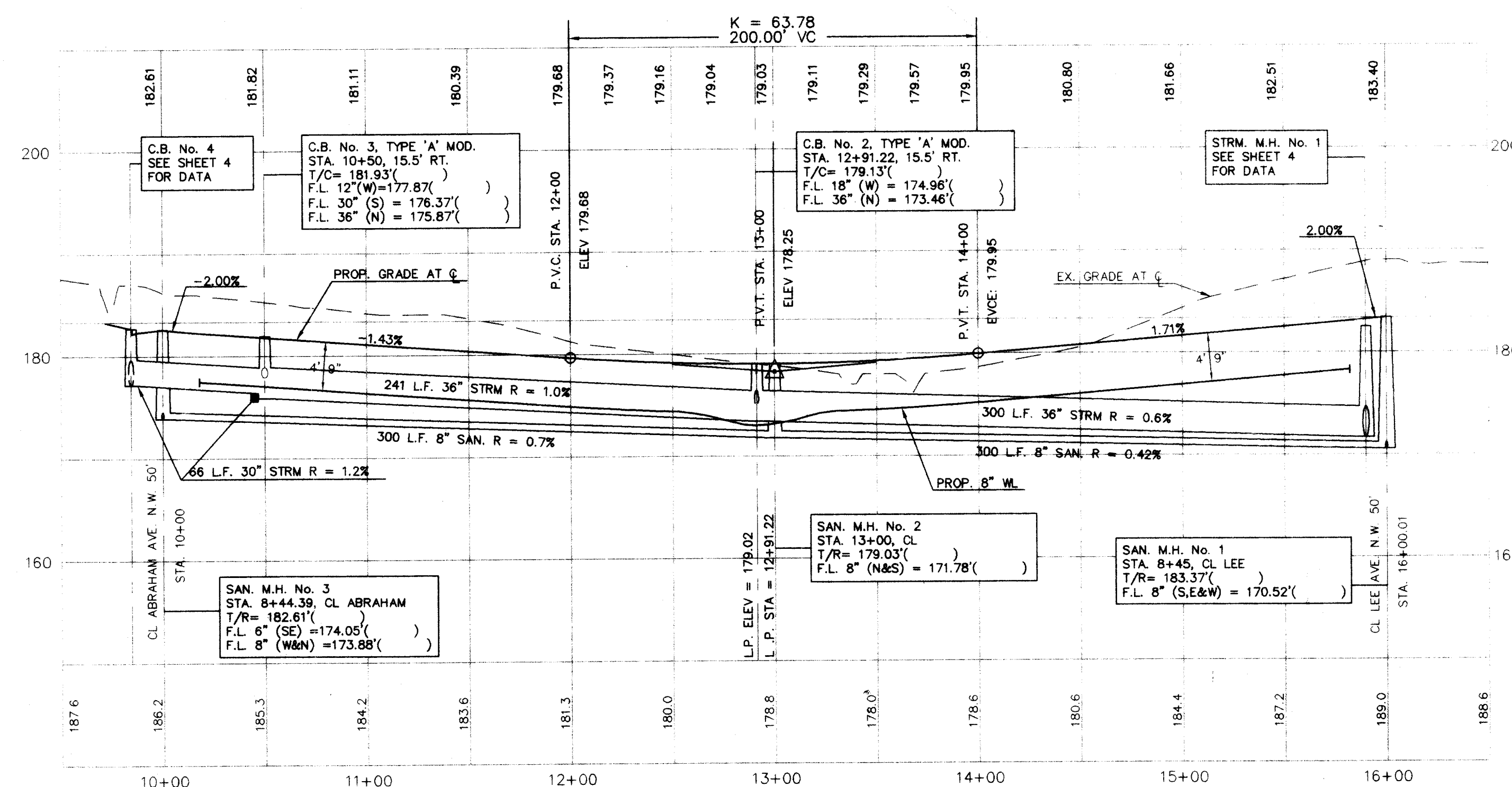
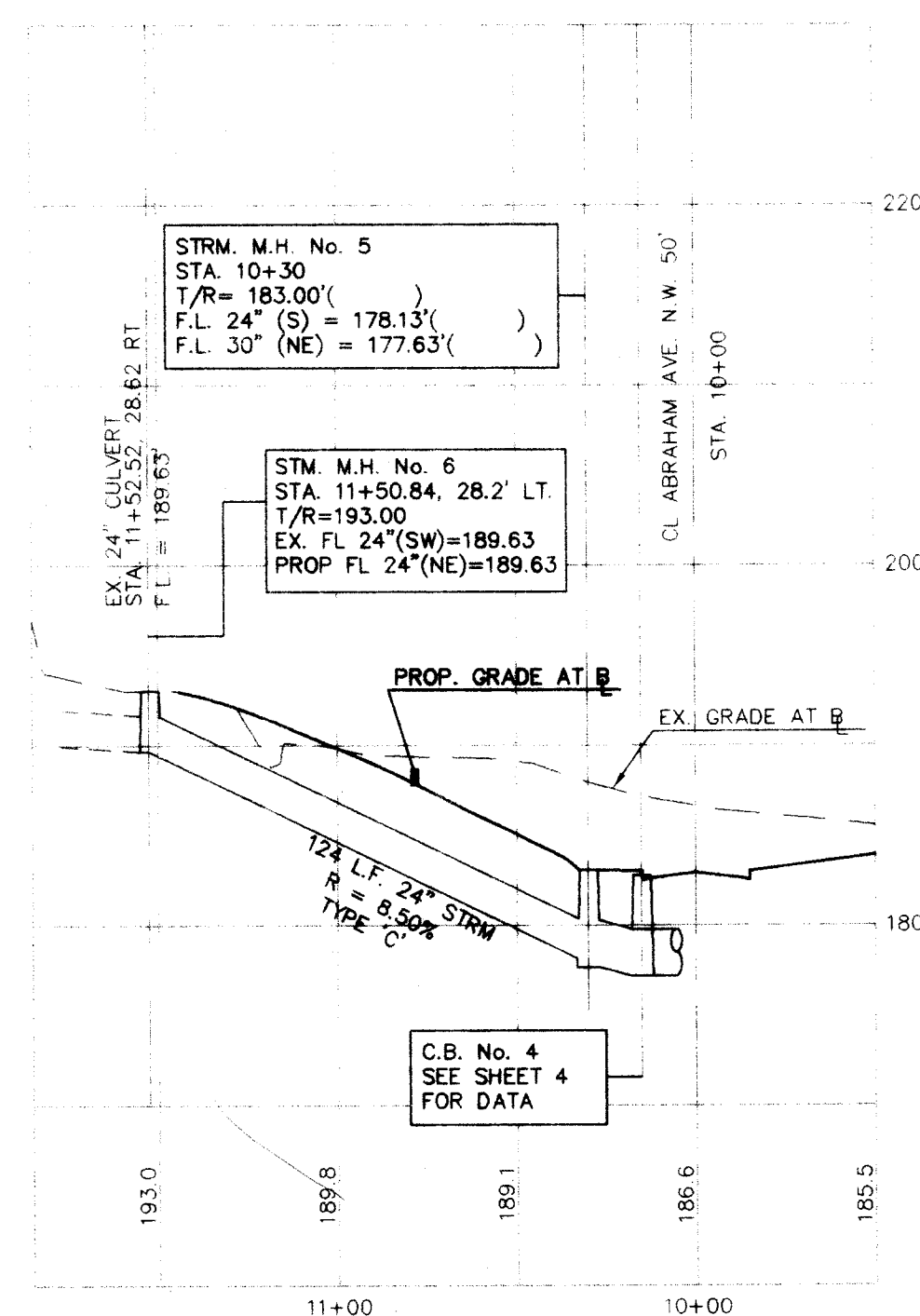
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| CROSSING       | VERTICAL (inches) | HORIZONTAL (feet) |
|----------------|-------------------|-------------------|
| SANITARY SEWER | 18                | 10                |
| STORM SEWER    | 12                | 4                 |

BASELINE "B" 20'

WAGONER ST. N.W. - 50' R/W



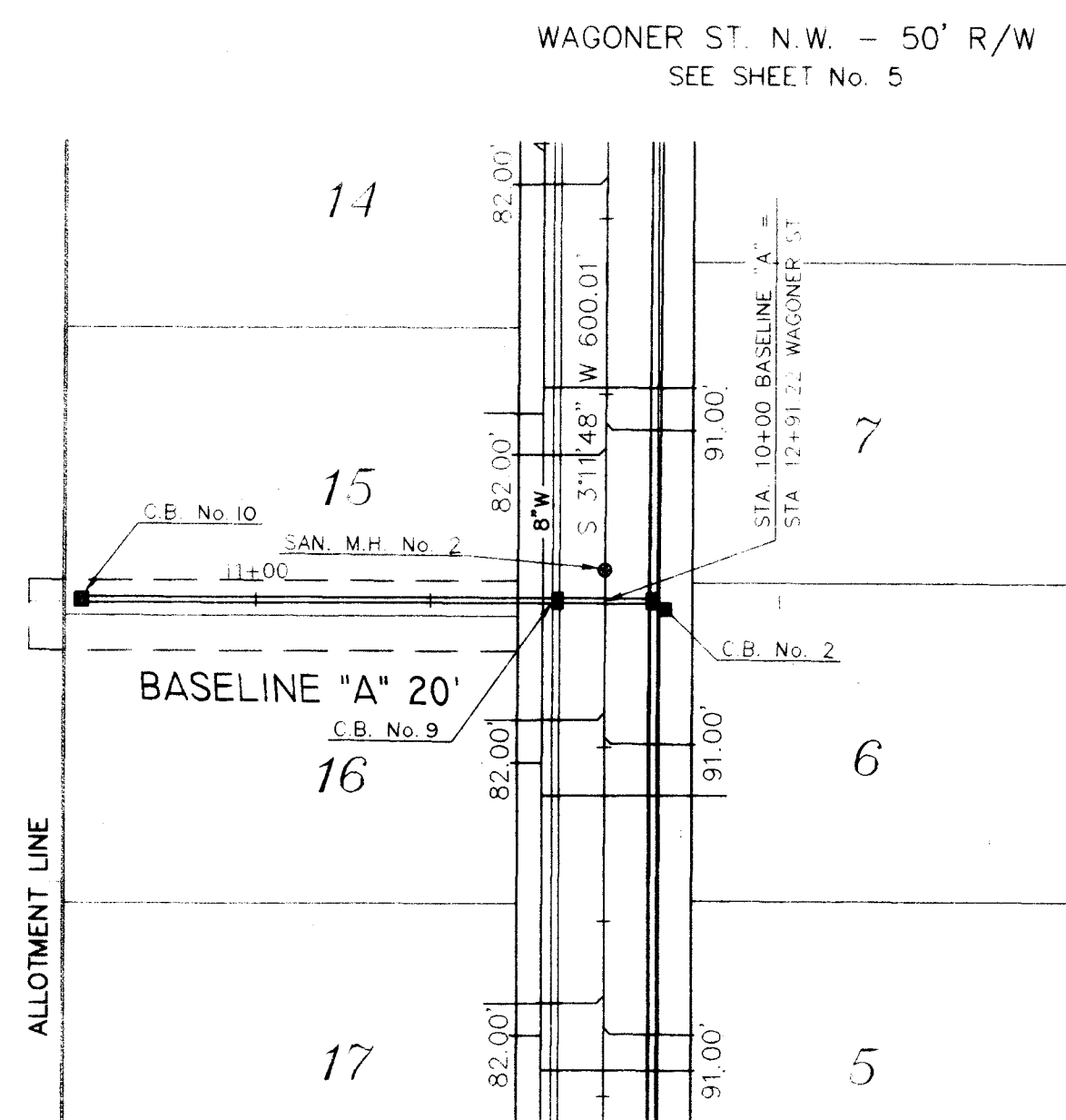
BENCH MARK:  
TOP OF HYDRANT (OPERATING NUT) LOCATED ON THE  
SOUTH SIDE OF LEE AVE., EAST OF LINCOLN HILLS No. 6.  
ELEV. = 178.99'

PROJ # 98167

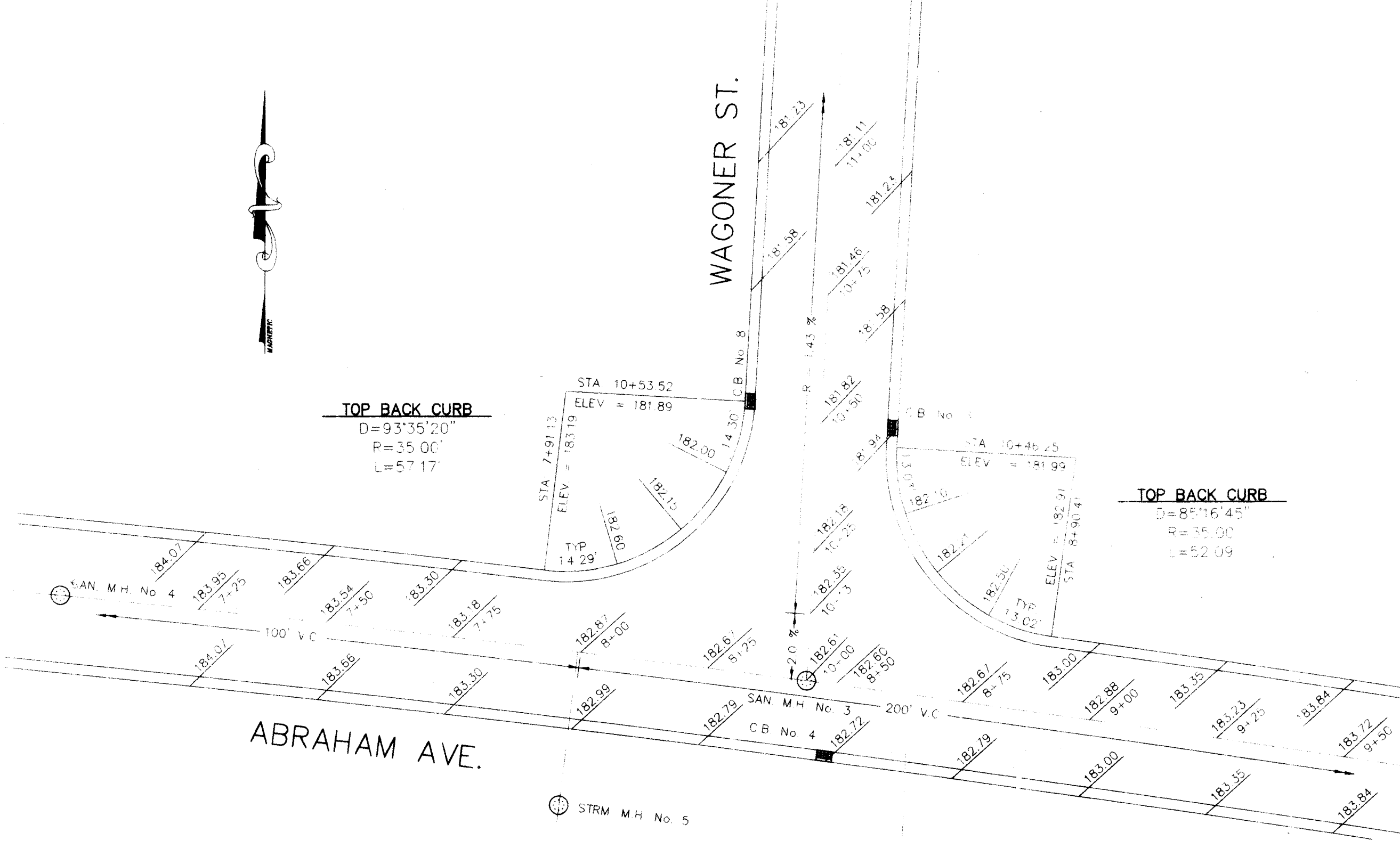
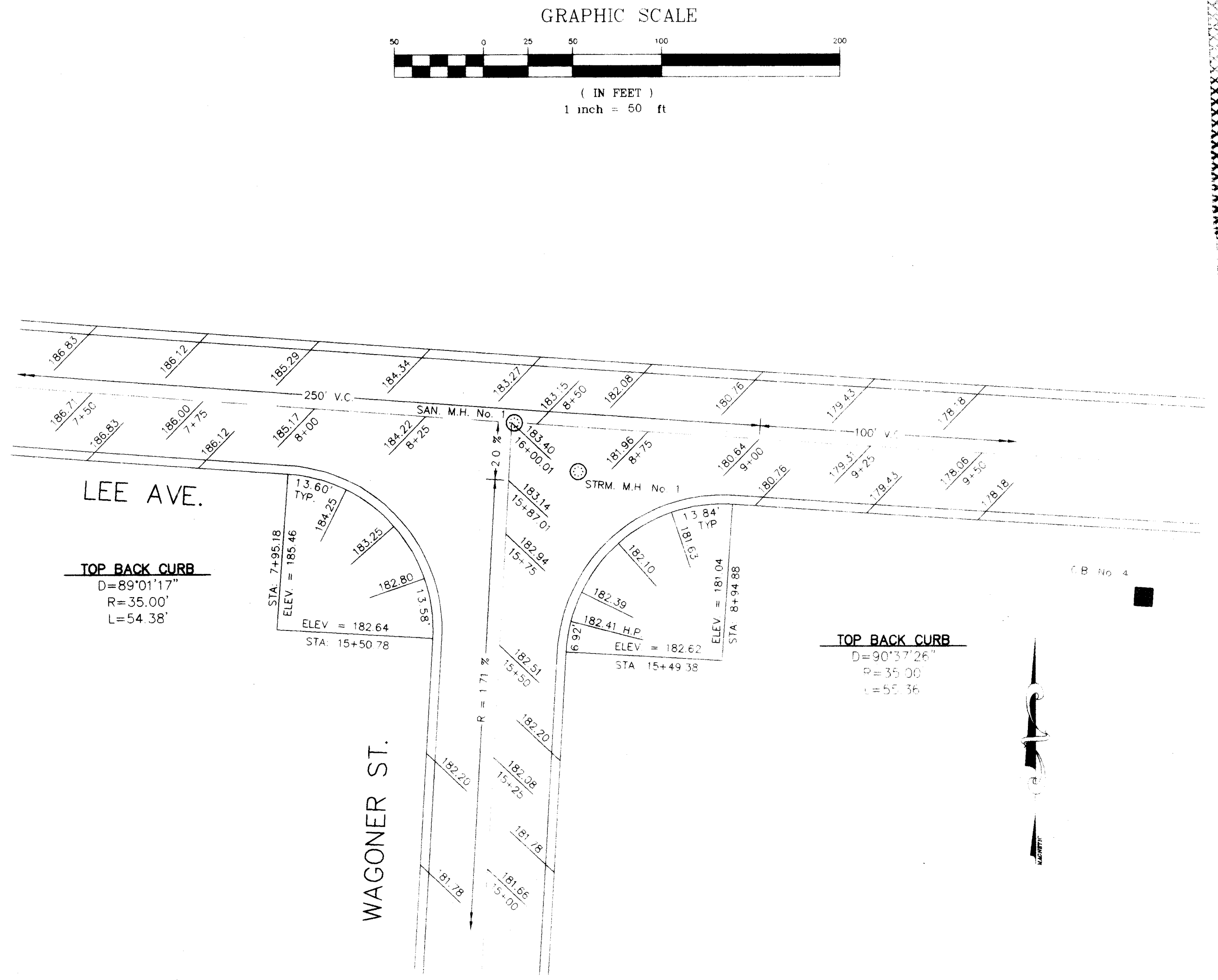
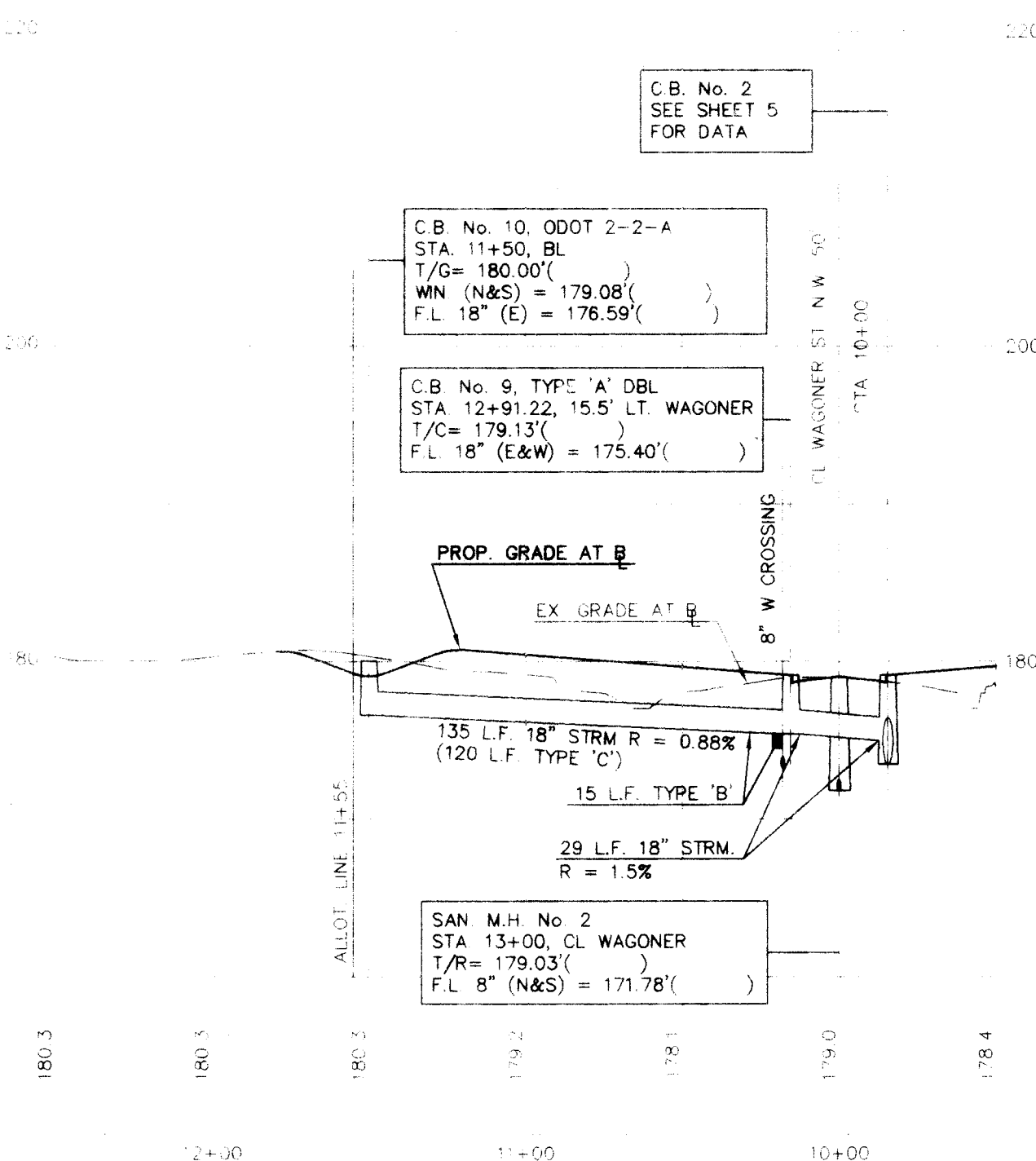
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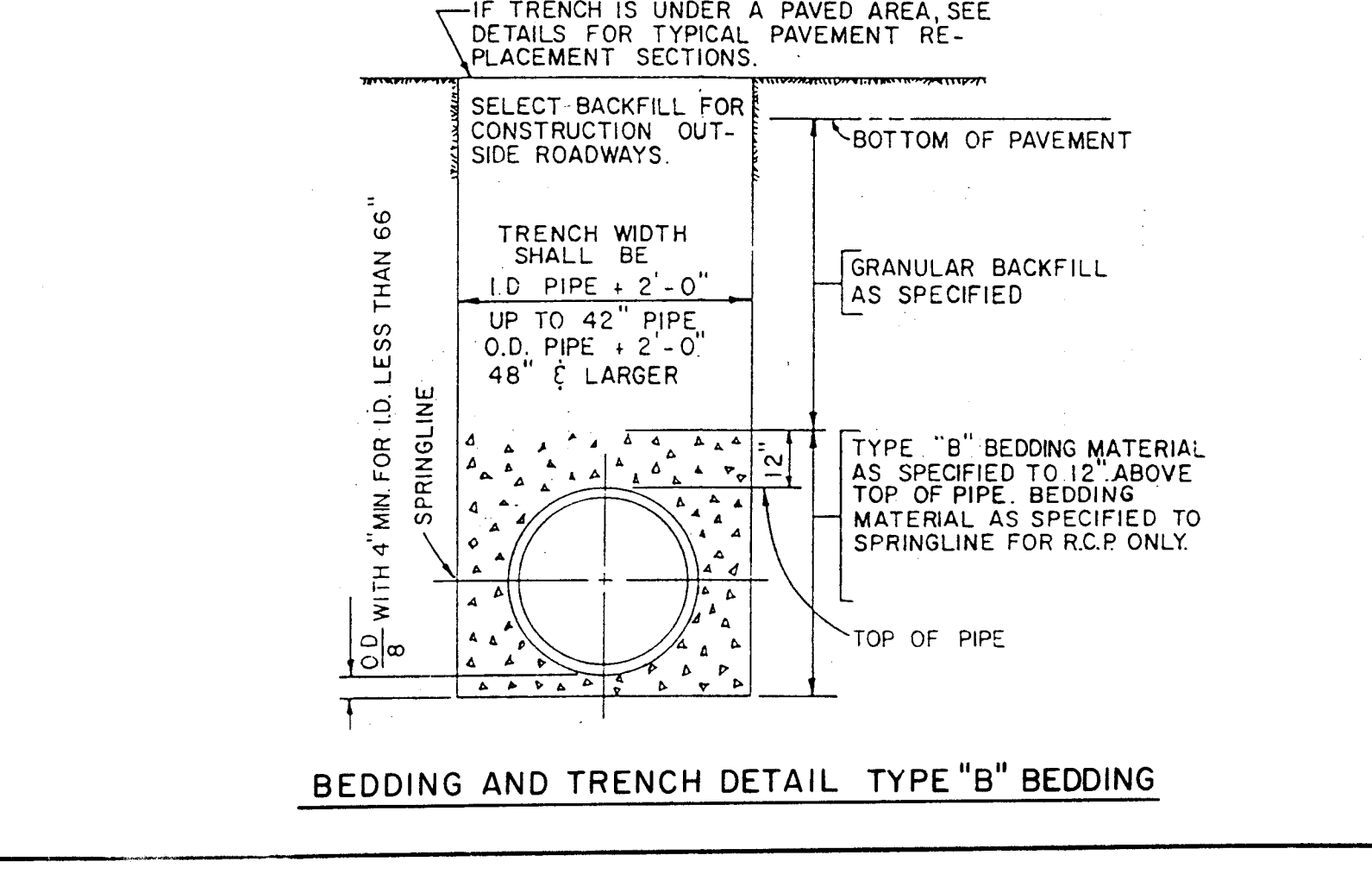
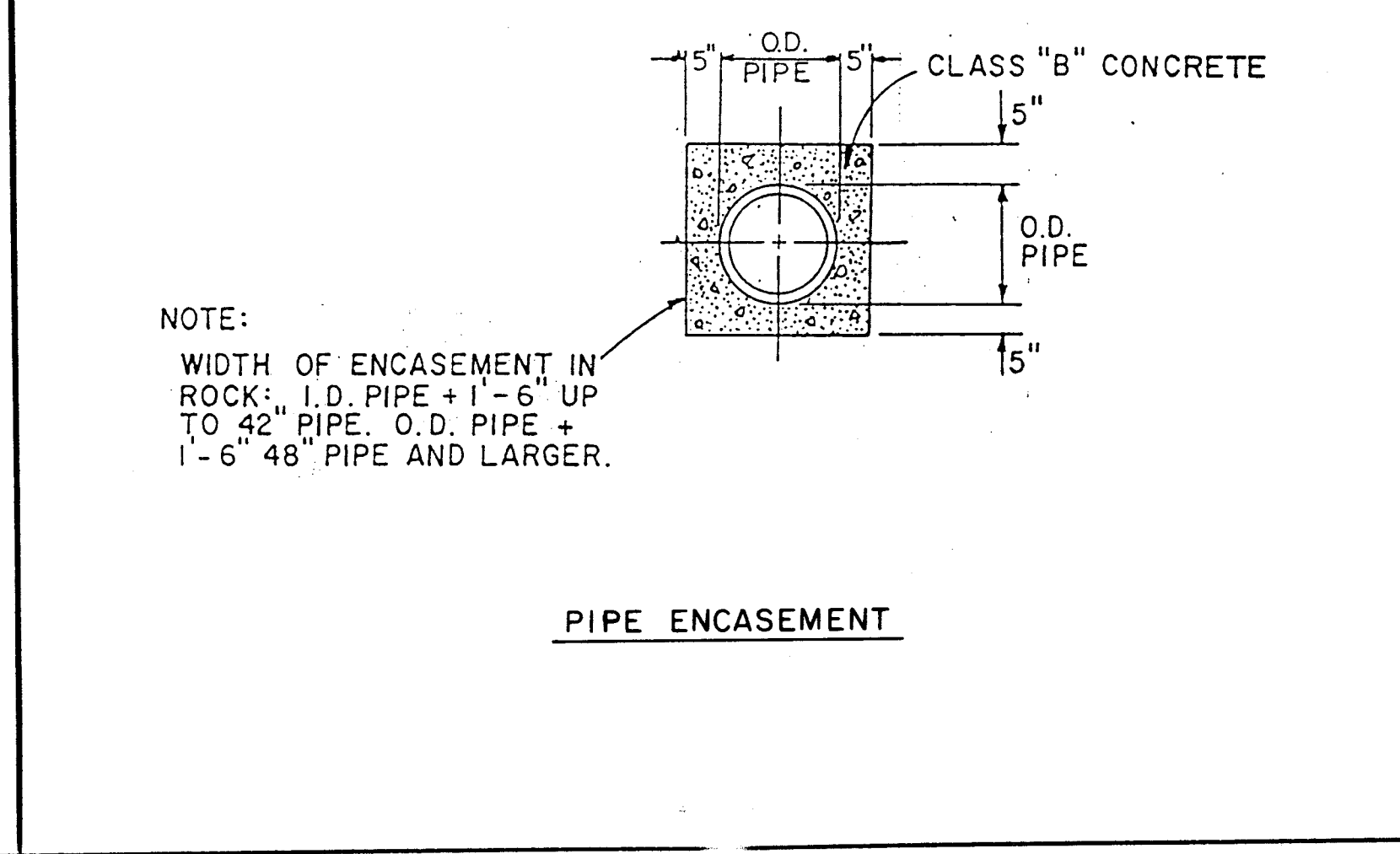
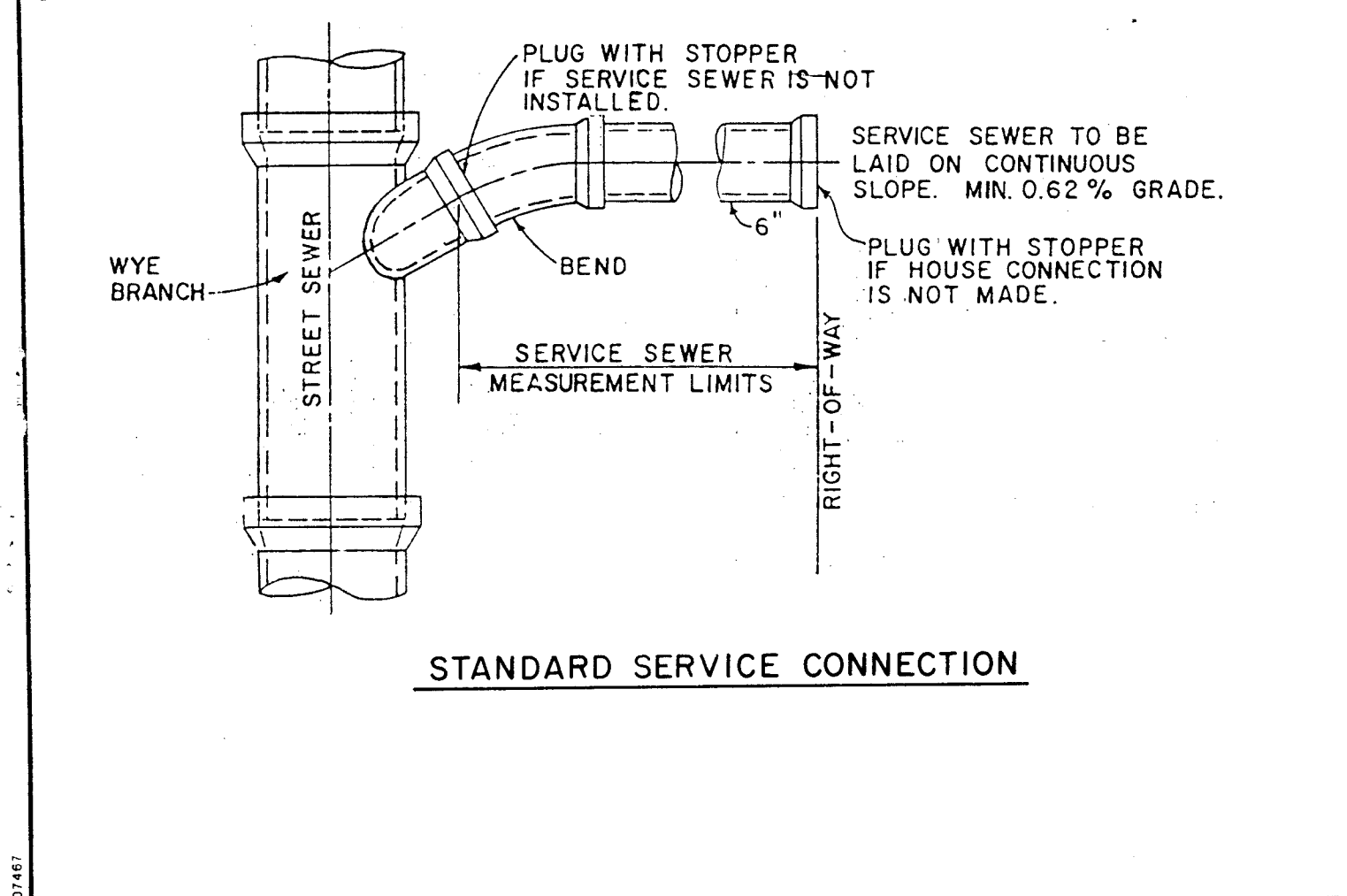
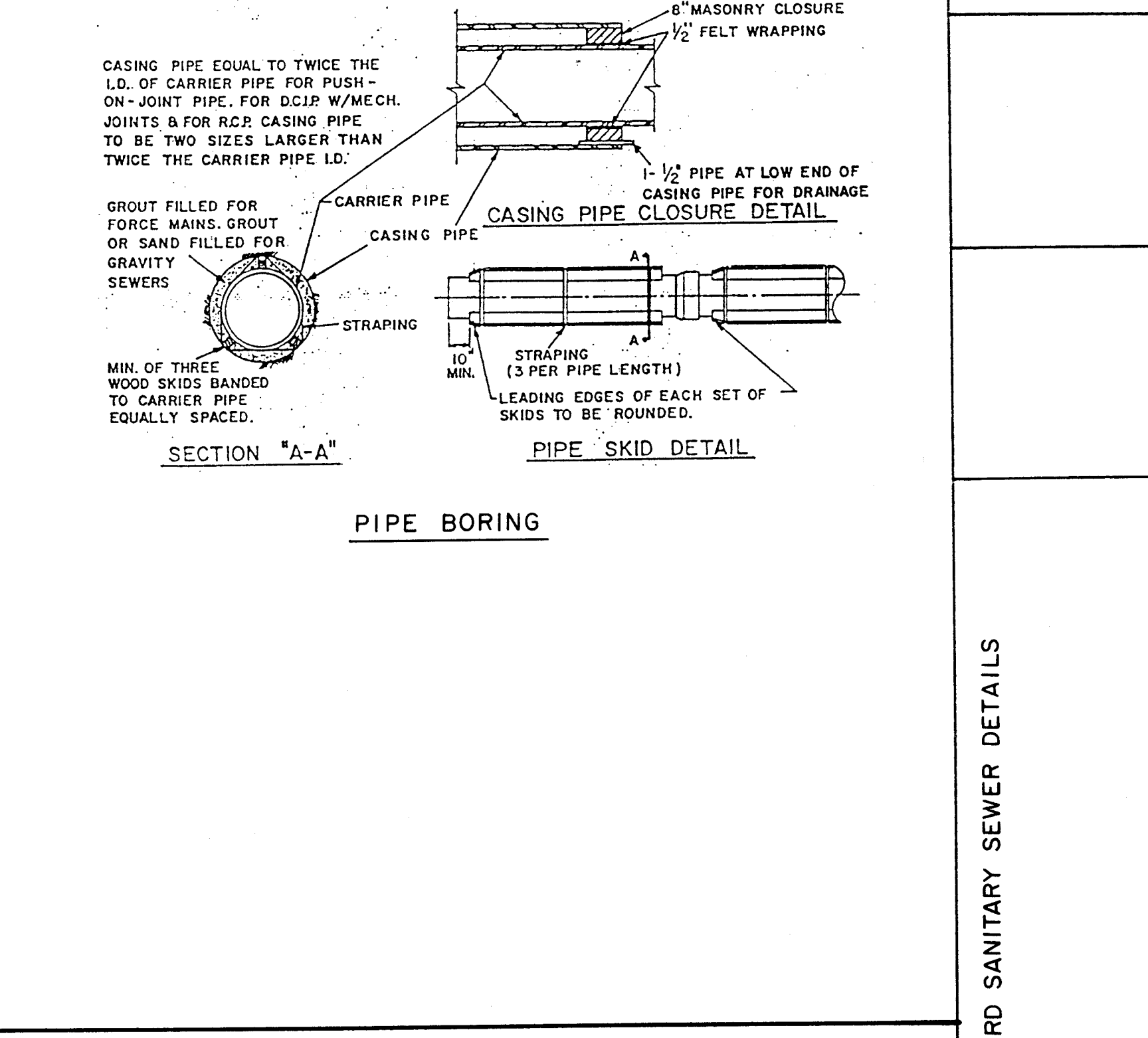
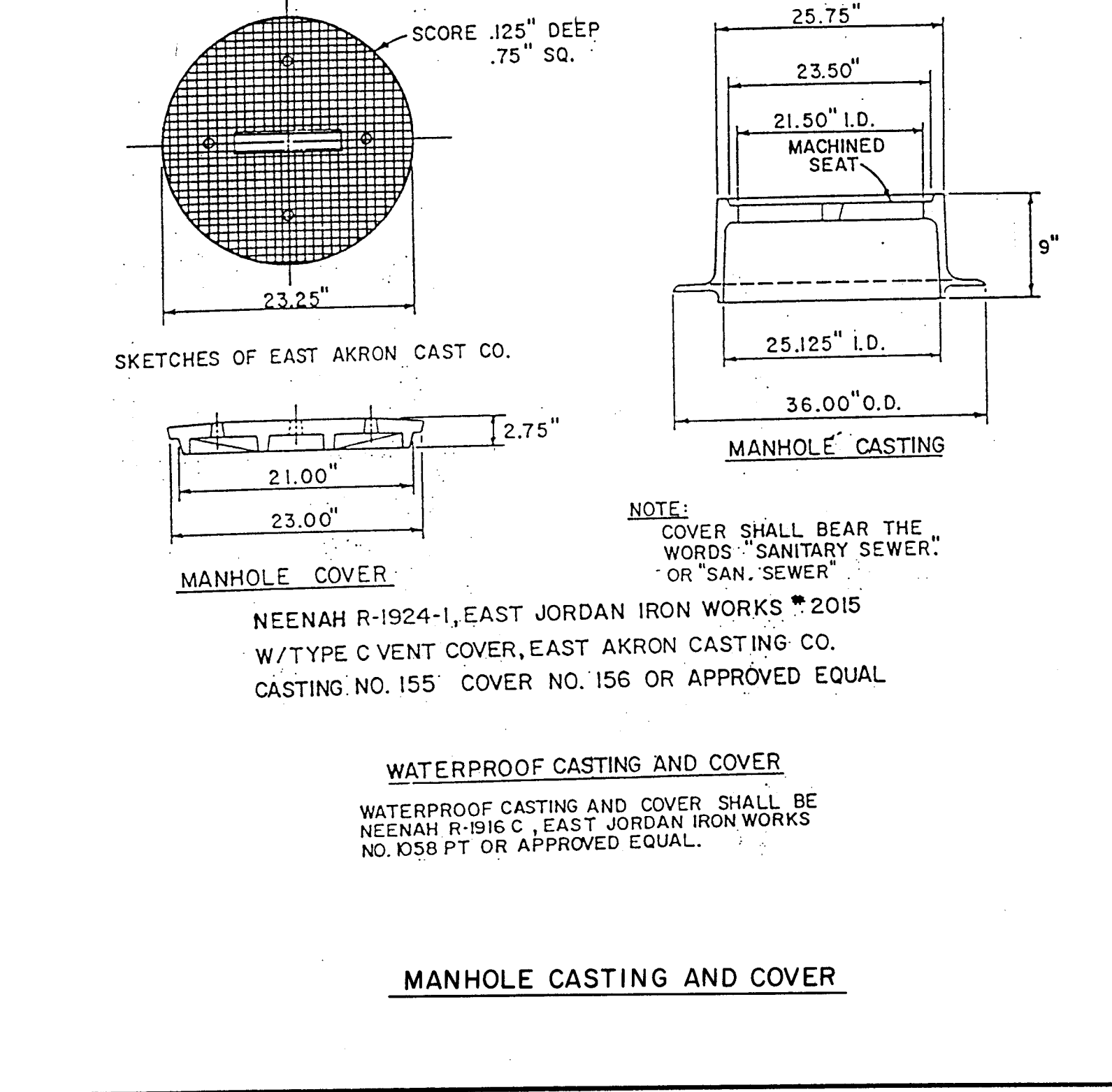
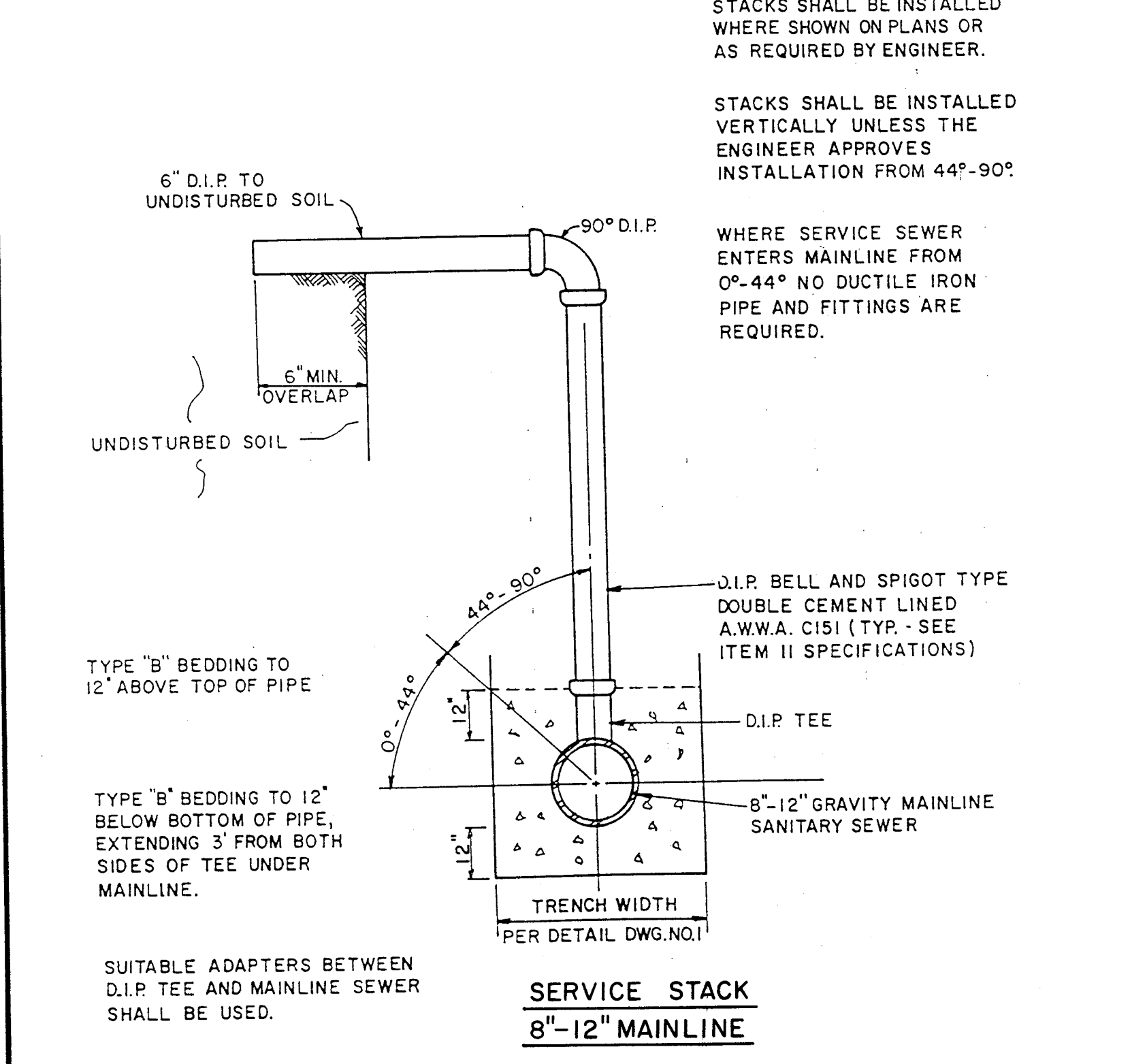
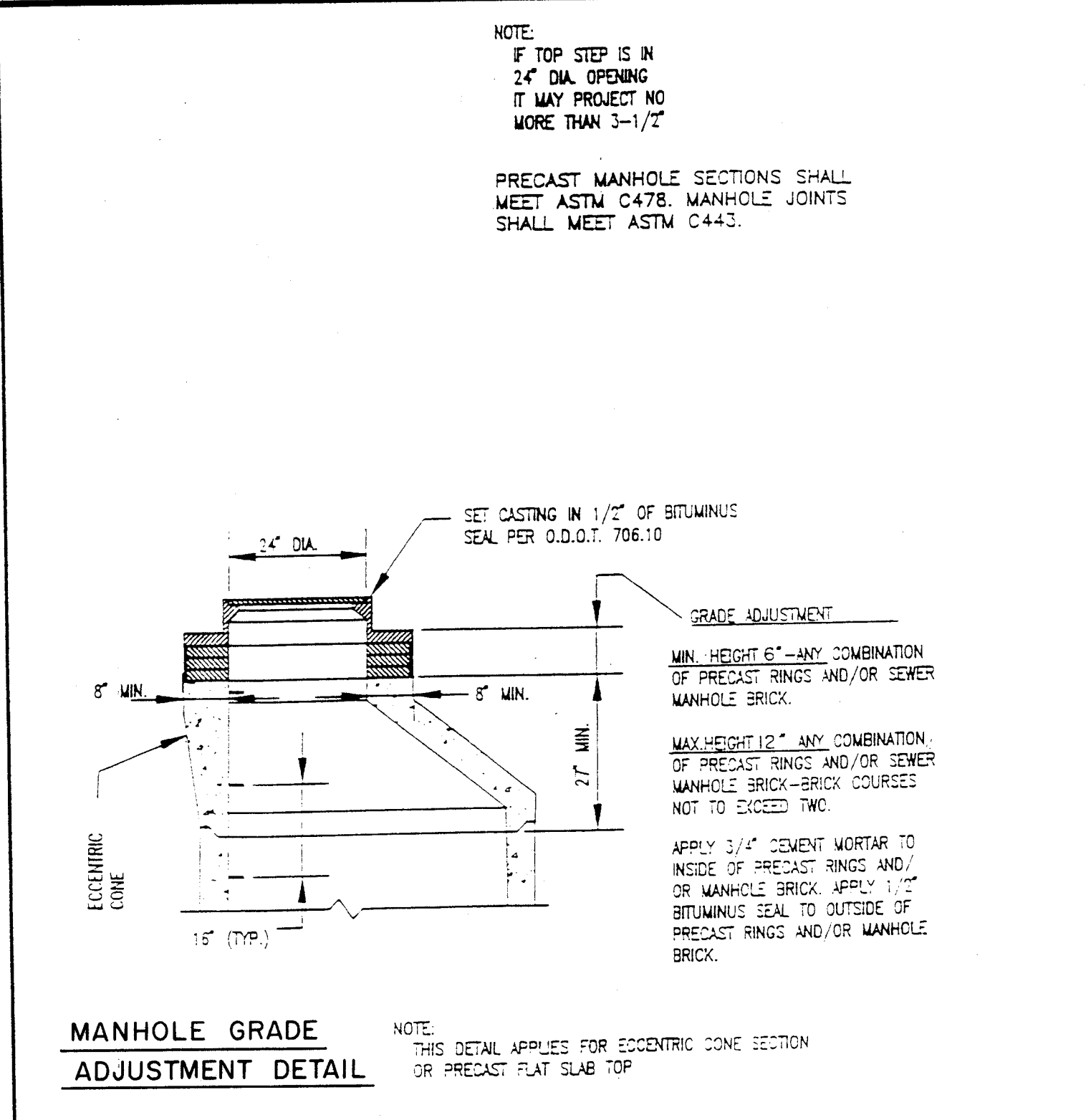
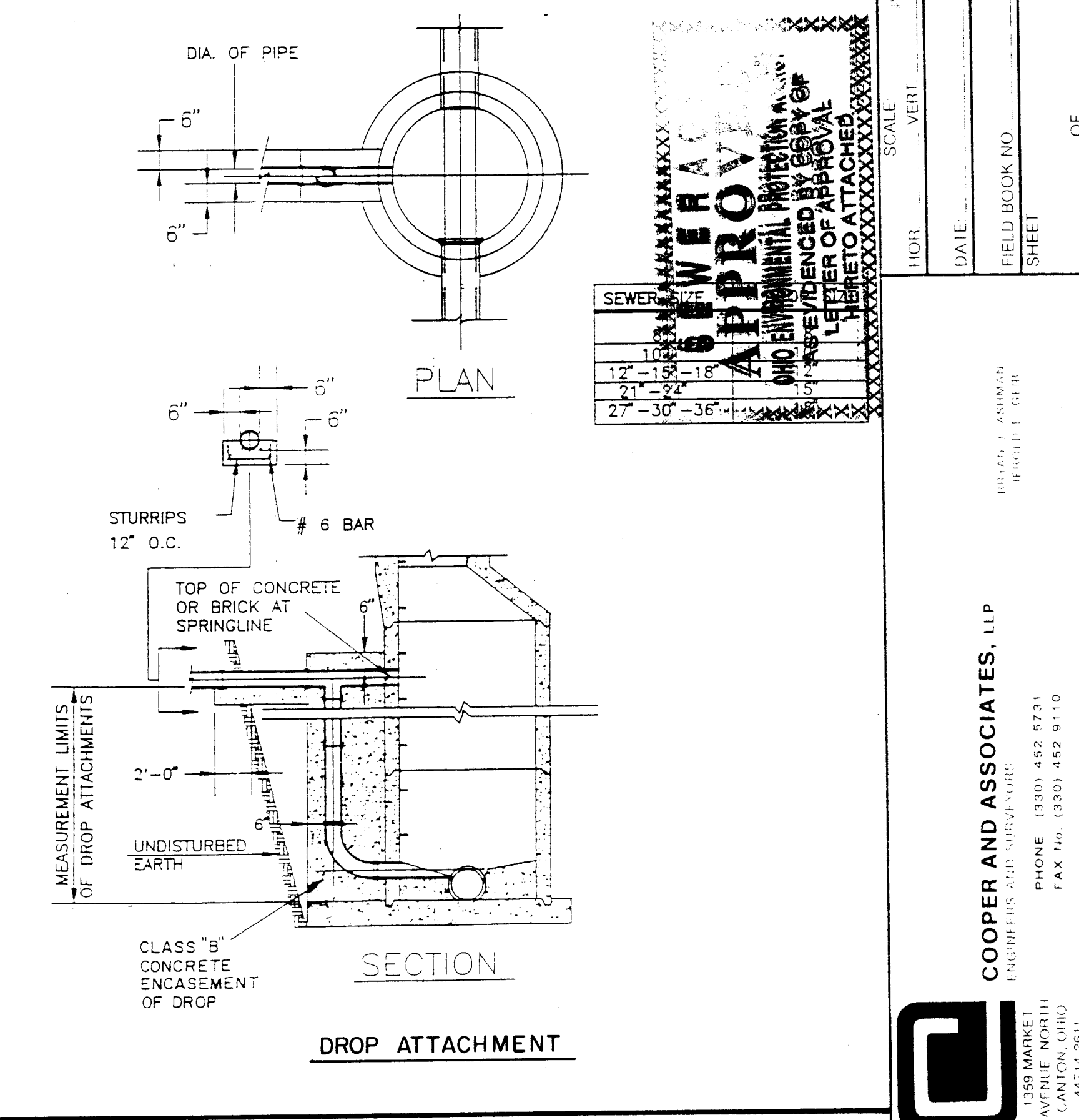
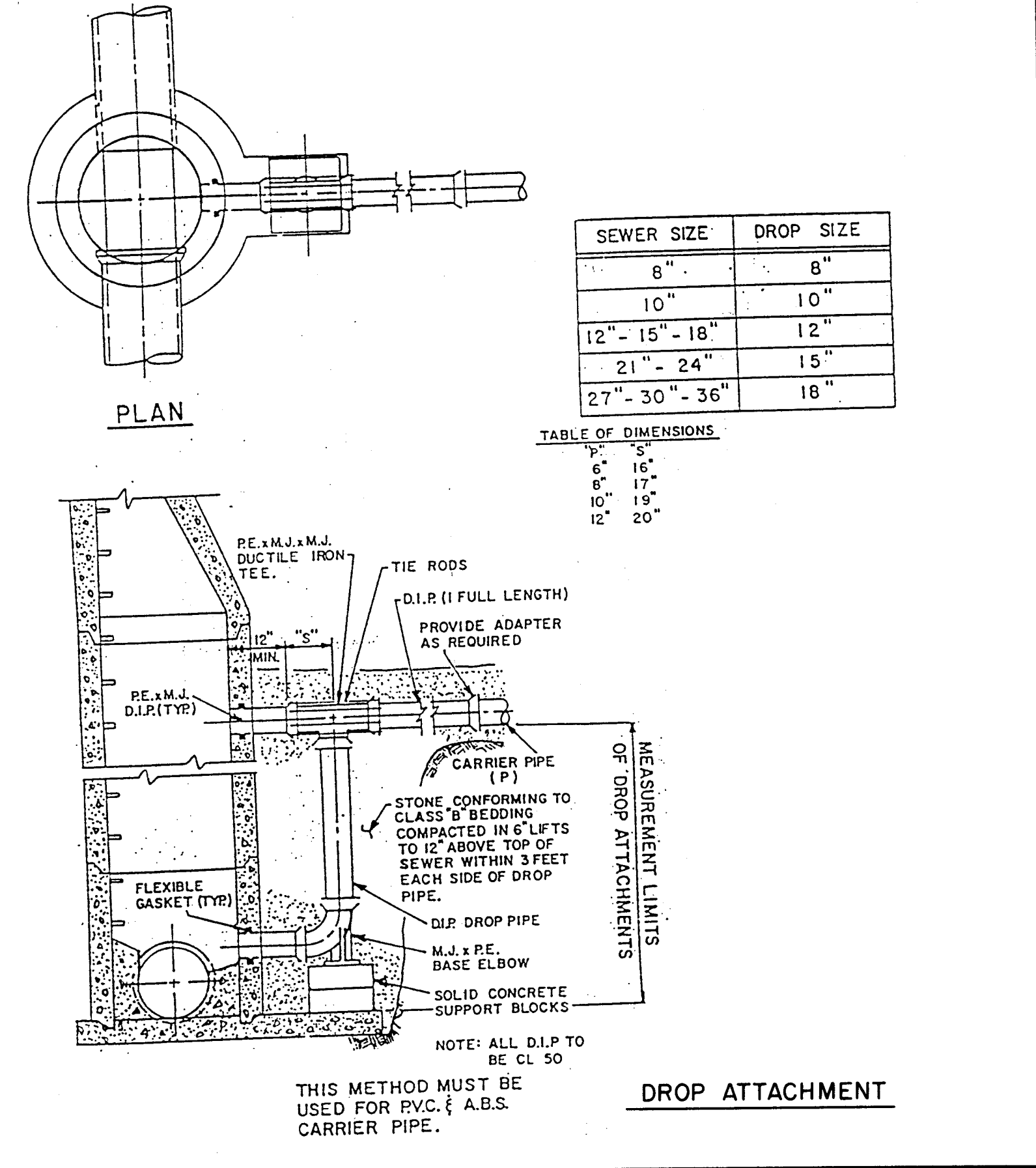
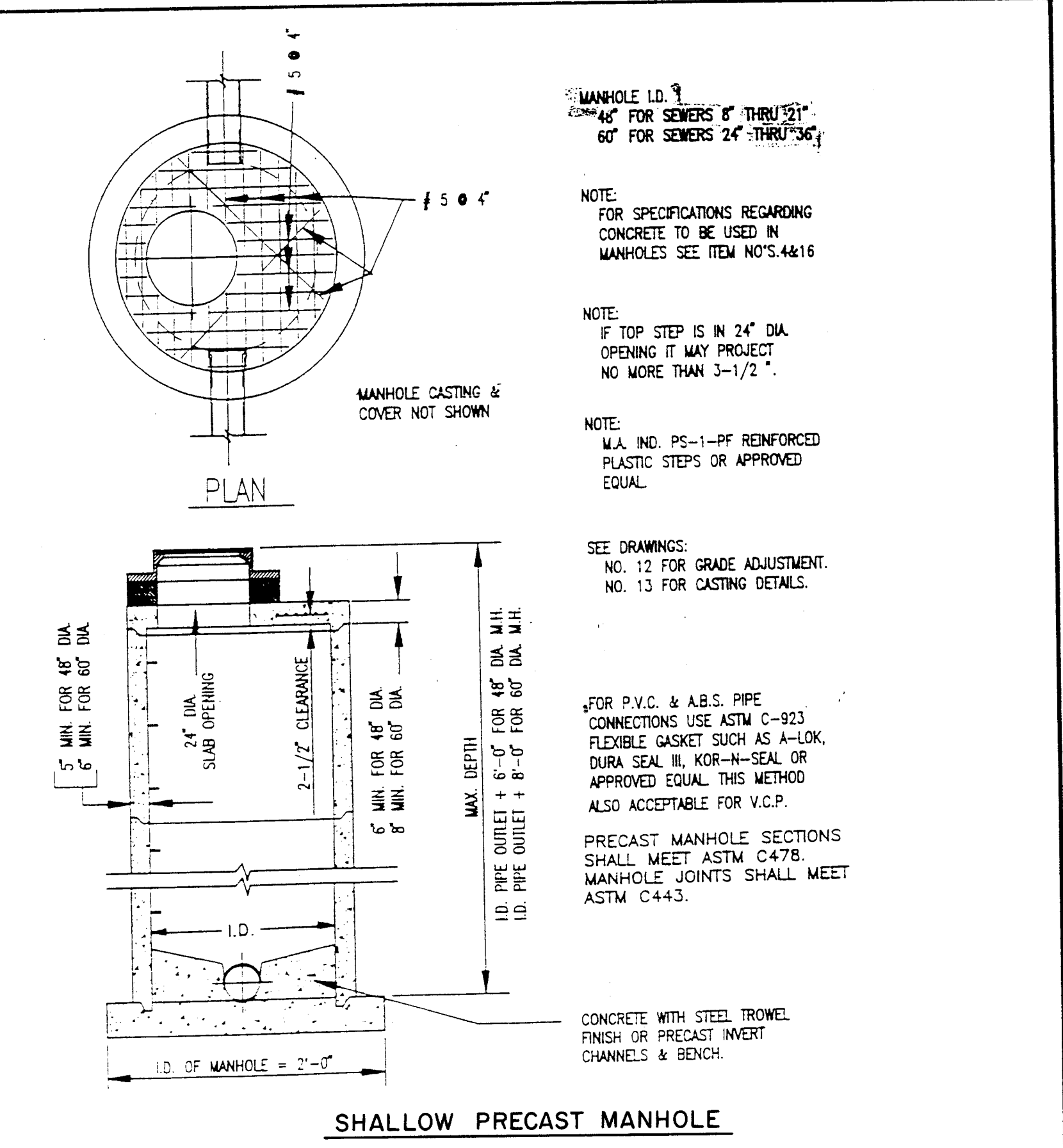
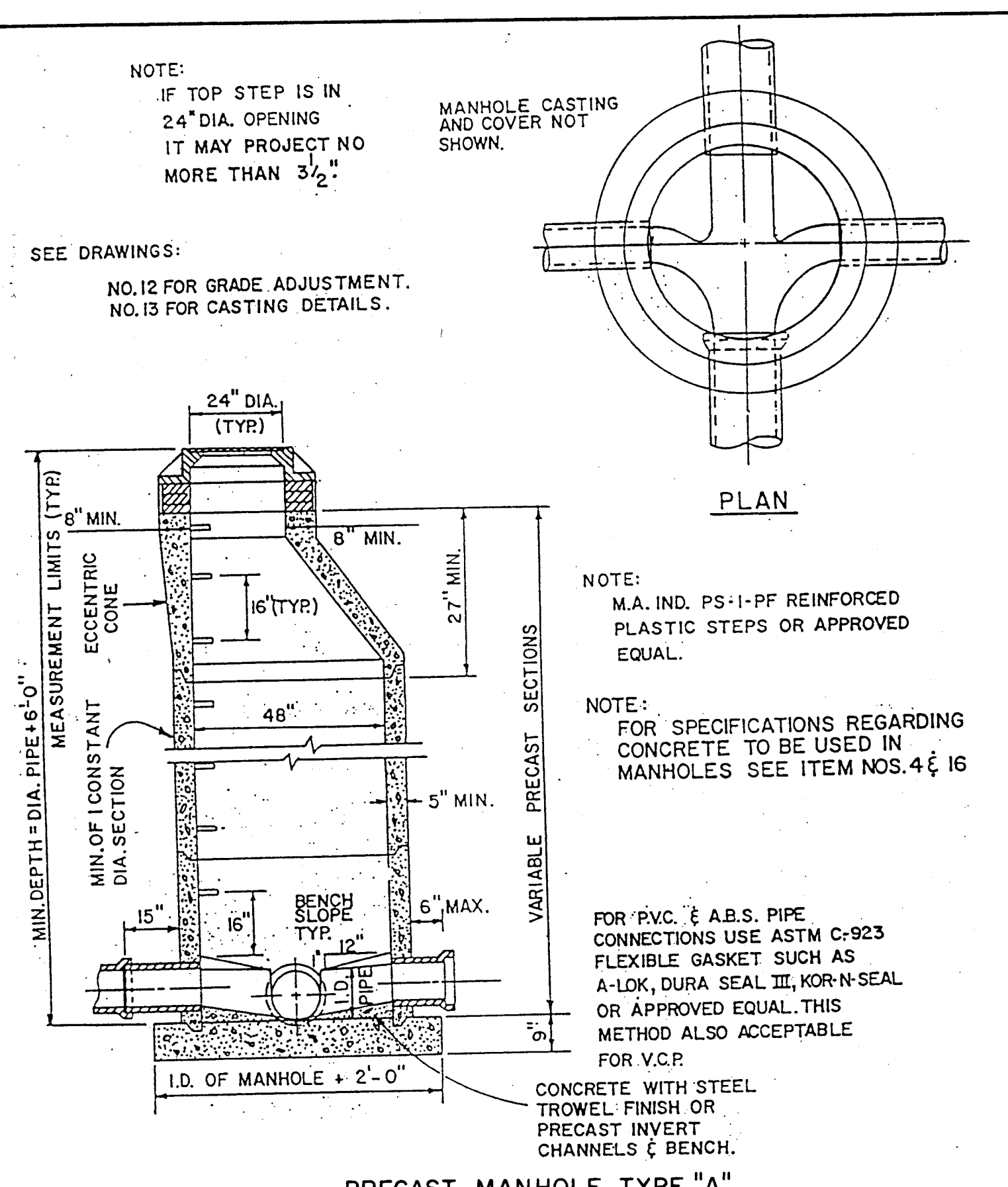
BASELINE "A" 20'



BENCH MARK:  
S.W. CORNER OF CONCRETE TRANSFORMER PAD, LOCATED  
AT THE WEST END OF ABRAHAM AVE. ON THE NORTH SIDE.  
ELEV. = 184.46'

SEWERAGE  
APPROVAL  
AS EVIDENCED BY COPY OF  
LETTER OF APPROVAL  
LETTER TO ATTACHED

|                                                                 |  |
|-----------------------------------------------------------------|--|
| SCALE: HORIZ. 1"=50' VERT. 1"=10'                               |  |
| DATE: JULY, 1998                                                |  |
| FIELD BOOK NO.                                                  |  |
| SHEET                                                           |  |
| 6 OF 7                                                          |  |
| BRYAN J. ASHMAN<br>JEROLD E. GEIB                               |  |
| COOPER & ASSOCIATES, LLP<br>ENGINEERS AND SURVEYORS             |  |
| 150 MARKET<br>AVENUE, NORTH<br>WHEELING, OHIO<br>44144          |  |
| PLAN AND PROFILE<br>LINCOLN HILLS No. 6A                        |  |
| FOR: EARL GLICK                                                 |  |
| BRYAN J. ASHMAN<br>E-043804<br>REGISTERED PROFESSIONAL ENGINEER |  |
| PROJ.# 98167                                                    |  |
| REVISIONS                                                       |  |
| DATE BY                                                         |  |
| DESCRIPTION                                                     |  |
| DWN BY: RW CHK'D BY:                                            |  |



MASSILLON STANDARD SANITARY SEWER DETAILS

| DESCRIPTION | DATE | BY      |
|-------------|------|---------|
| REVISIONS   |      |         |
| DWN BY      |      | CHKD BY |