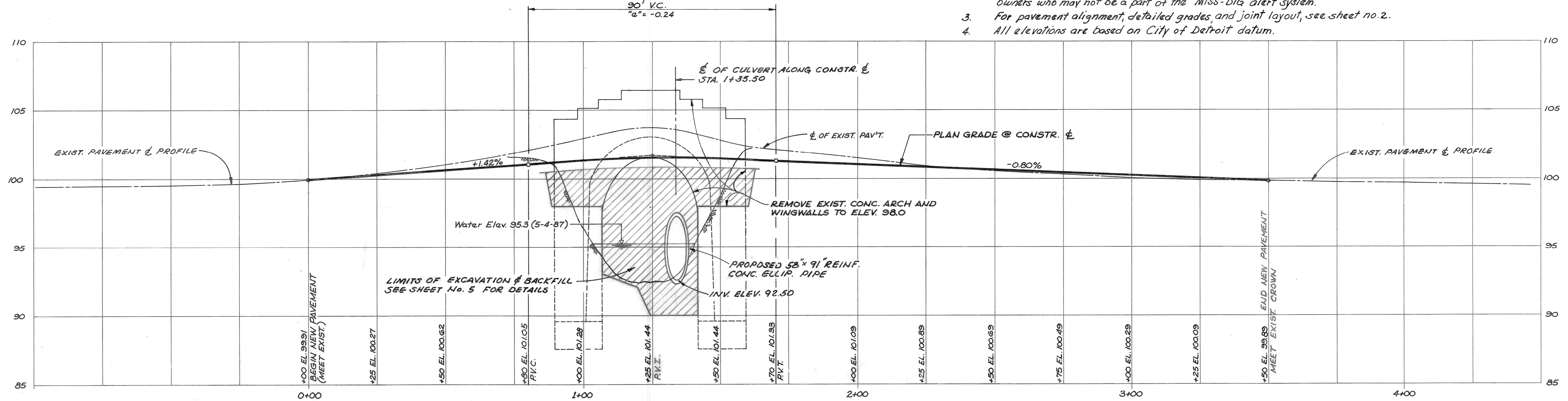


PLAN
1" = 20'



PROFILE
HOR. 1" = 20'
VERT. 1" = 4'

Legend

- +00.0 EXIST. GROUND ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR

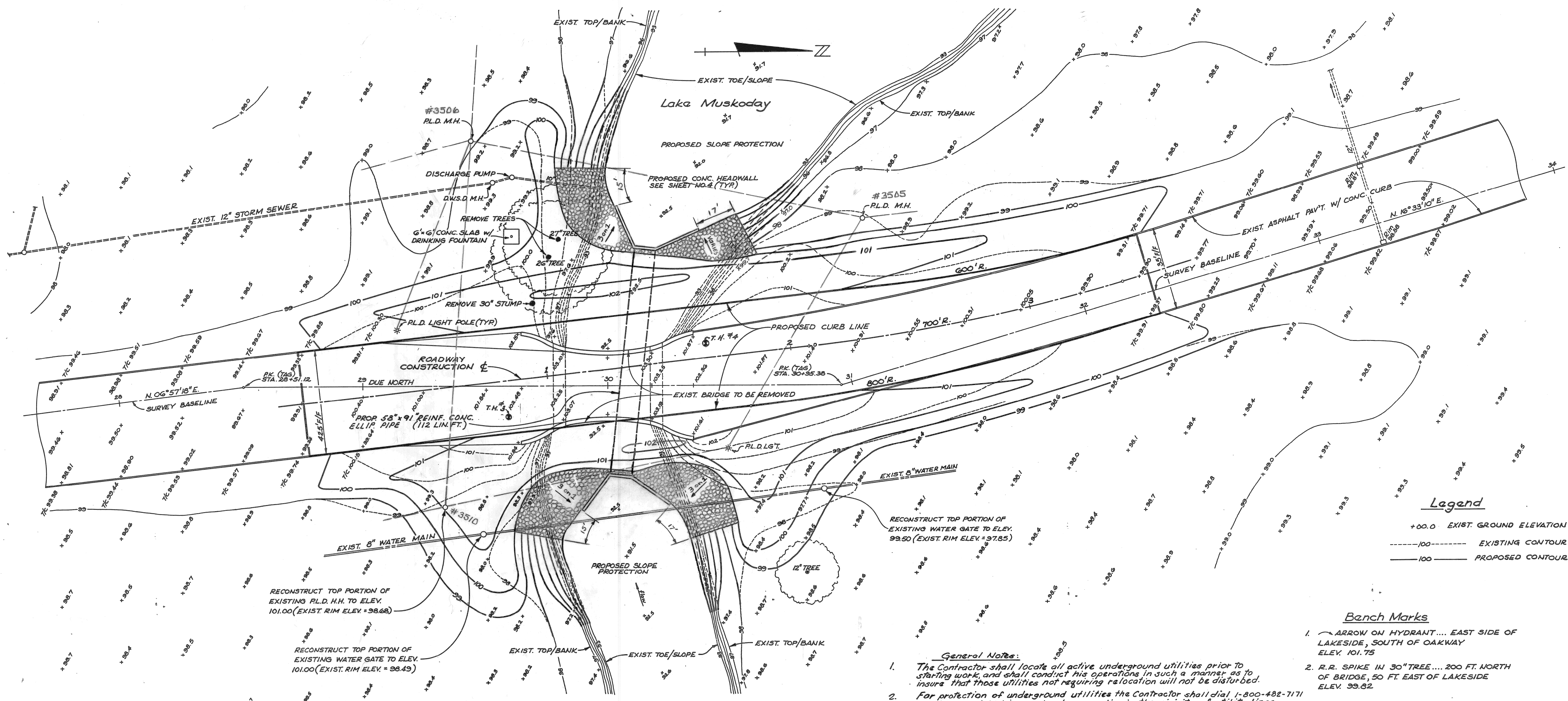
Bench Marks

1. ARROW ON HYDRANT.... EAST SIDE OF LAKESIDE, SOUTH OF OAKWAY ELEV. 101.75
2. R.R. SPIKE IN 30" TREE.... 200 FT. NORTH OF BRIDGE, 50 FT. EAST OF LAKESIDE ELEV. 99.82

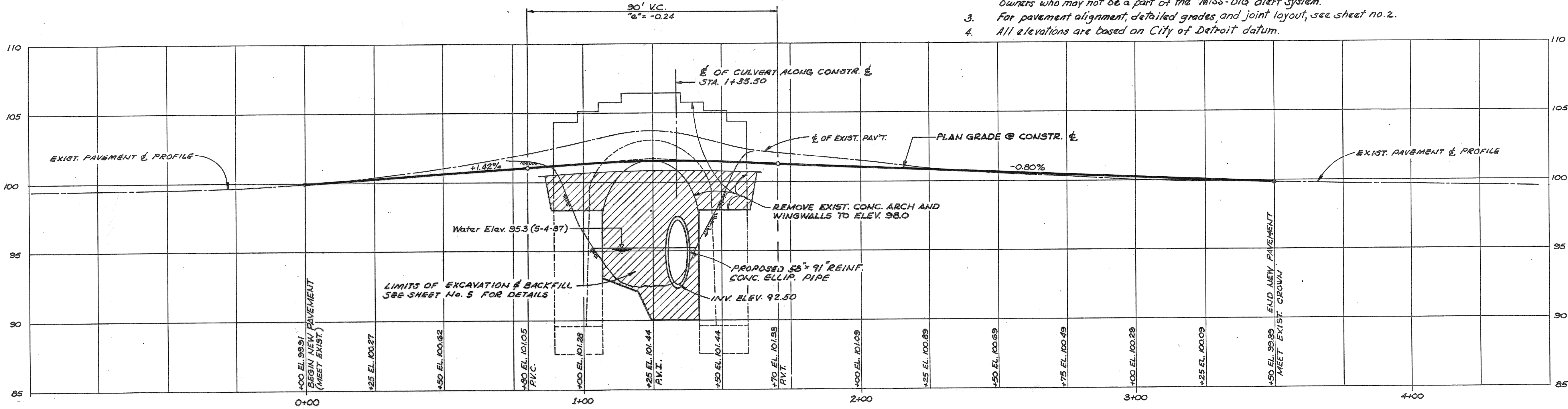
General Notes:

1. The Contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.
2. For protection of underground utilities the Contractor shall dial 1-800-482-7171 a minimum of 48 hours prior to excavating in the vicinity of utility lines. All "MISS-DIG" participating members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "MISS-DIG" alert system.
3. For pavement alignment, detailed grades, and joint layout, see sheet no. 2.
4. All elevations are based on City of Detroit datum.

SITE PLAN									
CITY OF DETROIT									
LAKESIDE DRIVE CULVERT									
MADISON MADISON INTERNATIONAL OF MICHIGAN Engineers, Architects, Planners 615 Griswold Street Detroit, Michigan 48226									
DESIGN BY K.C.H.					DRAWN BY K.C.H.				
CHECKED BY S.O.					DATE FEB. 1989				
PROJECT NO. 8605					SHEET NO. 1				



PLAN
1" = 20'



PROFILE
HOR. 1" = 20'
VERT. 1" = 4'

SITE PLAN

Sheet Title

CITY OF DETROIT

LAKESIDE DRIVE CULVERT

Project

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
615 Griswold Street
Detroit, Michigan 48226

DESIGN BY
K.C.H.

DRAWN BY
K.C.H.

CHECKED BY
S.O.

DATE
FEB. 1989

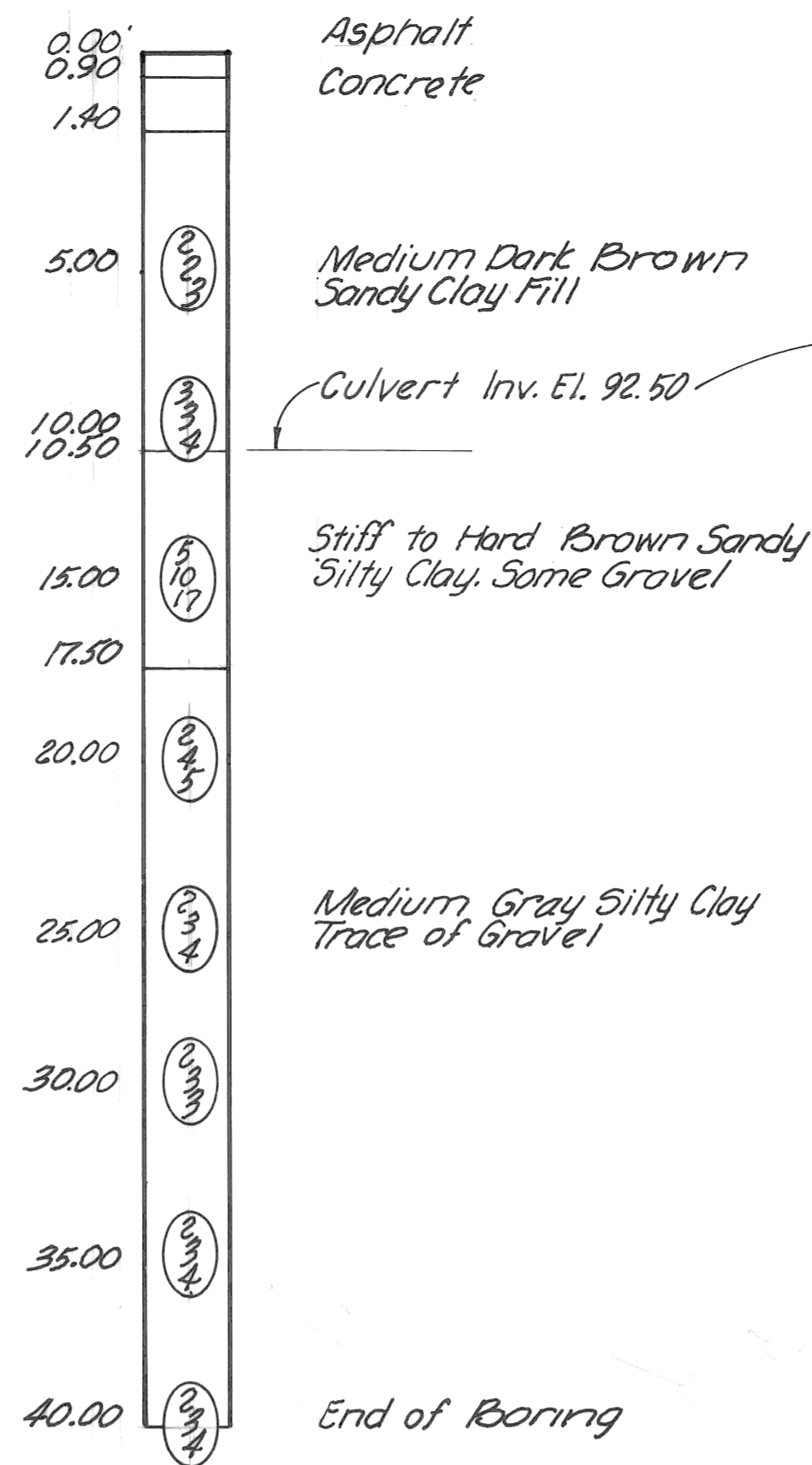
PROJECT NO.
8605

SHEET NO.
1-R

STATE OF MICHIGAN
BHAJU PATEL
ENGINEER
No. 28263
LICENSED PROFESSIONAL ENGINEER

3/13/90 SHORTENED CULVERT & ADD FL. D. 18/18/90
1/1/90 CHANGES REVIEW

TEST HOLE NO. 3



BORING DATE 2-3-87

Boring Dry at Completion.
Backfilled with the Excavated Material.

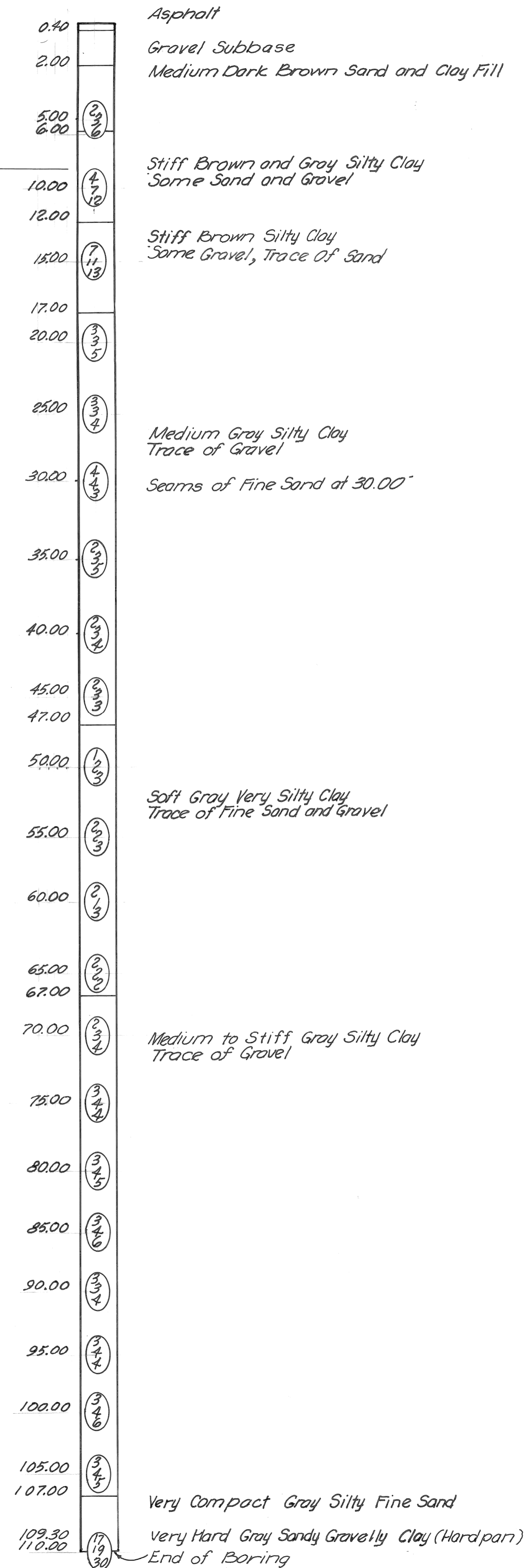
Notes:

- 0 1st 6"
- 0 2nd 6"
- 0 3rd 6"

1. Numbers in Circle Denotes Number of Blows Required To Drive A 2.00" O.D. x 1.50" I.D. Split Spoon Sampler 3 Successive 6" Increments Using A 140# Hammer Falling 30"

2. The Soil Boring Logs Represent Point Information. Presentation Of This Information In No Way Implies That Subsurface Conditions Are The Same At Locations Other Than The Exact Location Of The Boring.

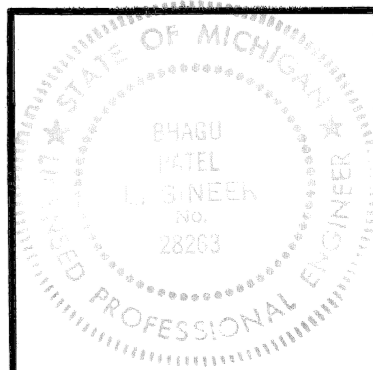
TEST HOLE NO. 4

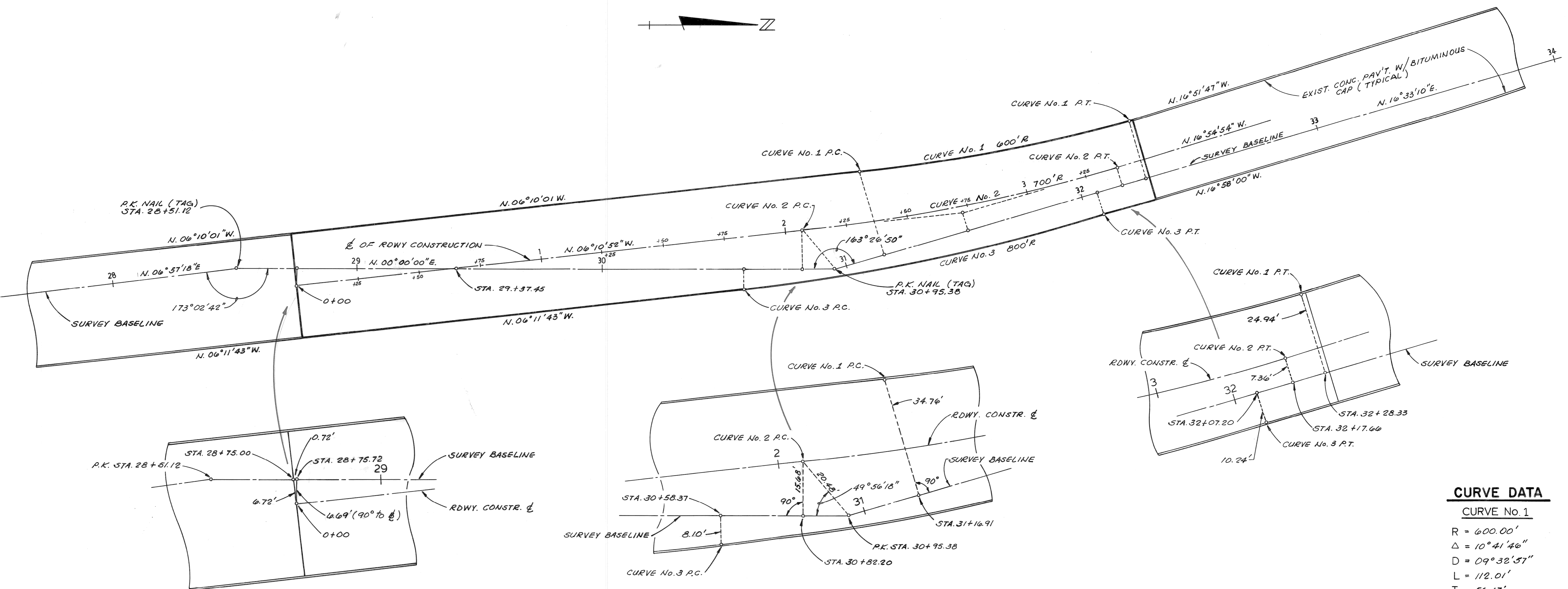


BORING DATE 2-4-87

Boring was Backfilled with Bentonite Slurry.

SOIL BORING LOGS NO. 3 and 4
CITY OF DETROIT LAKESIDE DRIVE CULVERT
Project MADISON MADISON INTERNATIONAL OF MICHIGAN Engineers, Architects, Planners 1420 Washington Blvd. Detroit, Michigan 48226
DESIGN BY DRAWN BY C.W. CHECKED BY S.O. DATE
PROJECT NO. 8605 SHEET NO. SB-1

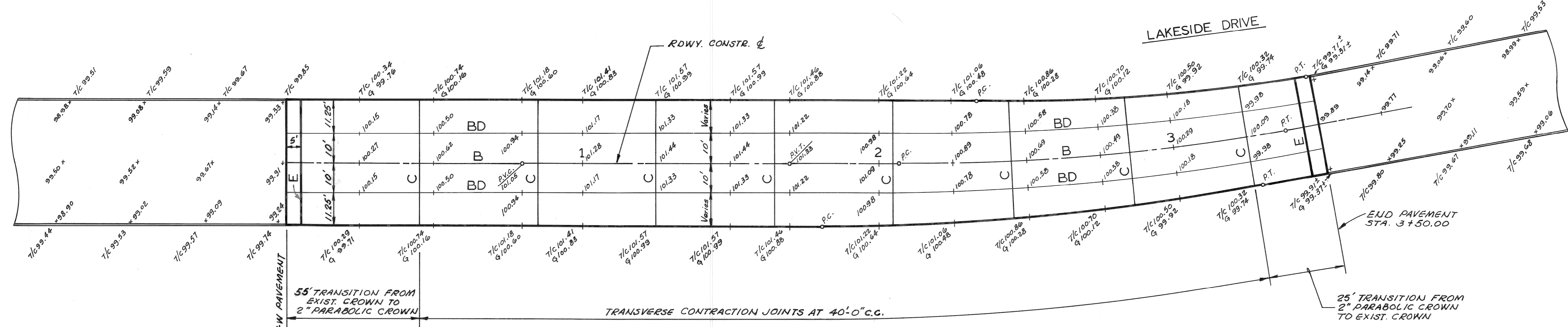




ALIGNMENT DIAGRAM
1" = 20'

CURVE DATA

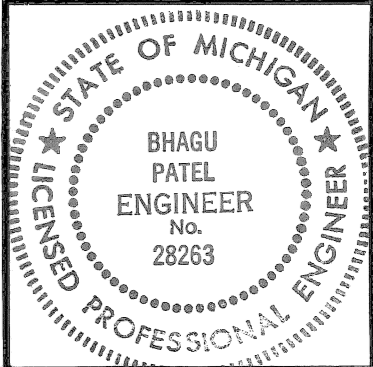
CURVE No. 1	
R	= 600.00'
Δ	= 10° 41' 46"
D	= 09° 32' 57"
L	= 112.01'
T	= 56.17'
Ch	= 111.85'
CURVE No. 2	
R	= 700.00'
Δ	= 10° 44' 02"
D	= 08° 11' 06"
L	= 131.14'
T	= 65.76'
Ch	= 130.95'
CURVE No. 3	
R	= 800.00'
Δ	= 10° 46' 17"
D	= 07° 09' 43"
L	= 150.40'
T	= 75.42'
Ch	= 150.18'

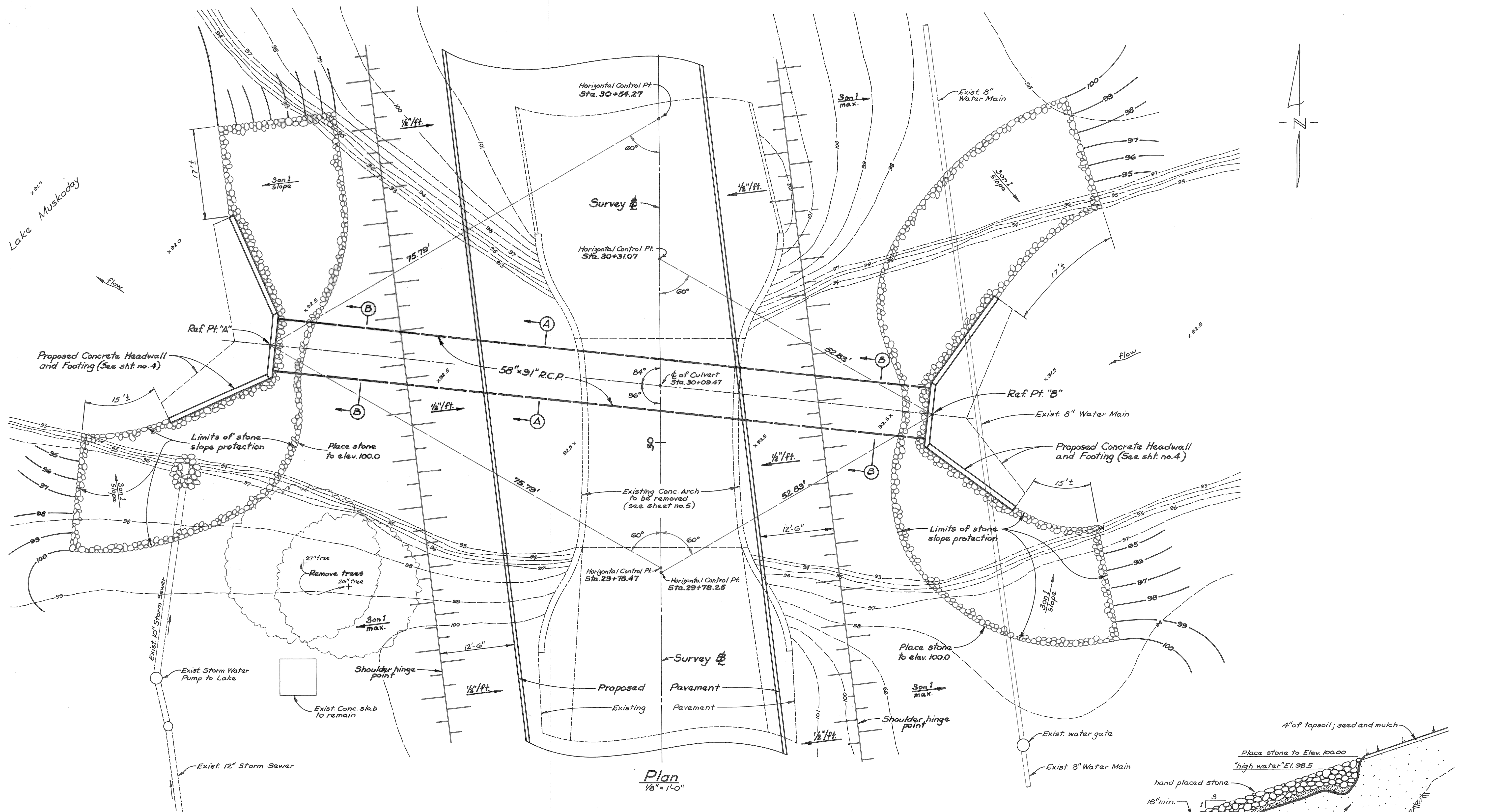


DETAILED GRADES
1" = 20'

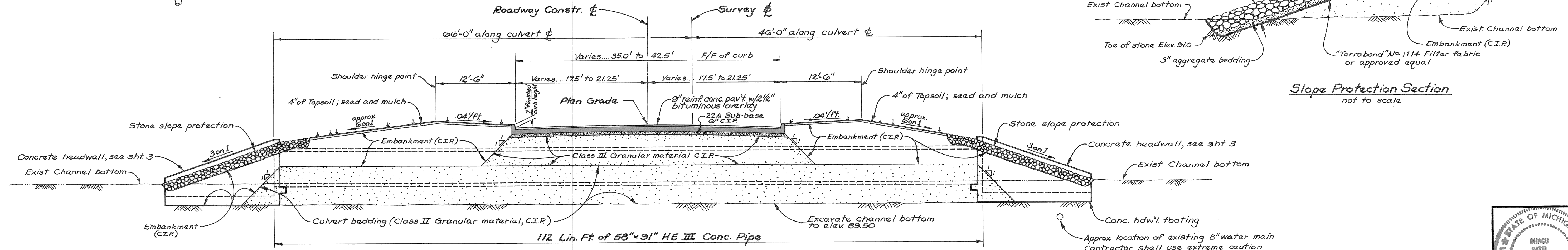
- Notes**
1. For joint details see City of Detroit std. dwg. # C-4943.
 2. For pavement & profile see sheet no. 1.
 3. All elevations are based on City of Detroit datum.
 4. See sheet no. 1 for bench marks.
 5. For joint filler material see "Special provision for sealing transverse joints with silicone sealant".
 6. See sheet no. 1 for stage construction details.
 7. Pavement elevations given are to finished grade bituminous overlay.

<p>Sheet Title</p> <p>ALIGNMENT DIAGRAM AND DETAILED GRADES</p>	<p>Project</p> <p>CITY OF DETROIT</p> <p>LAKESIDE DRIVE CULVERT</p>
<p>DESIGN BY</p> <p>K. C. H.</p> <p>DRAWN BY</p> <p>C. J. B.</p> <p>CHECKED BY</p> <p>SO</p> <p>DATE</p> <p>FEB. 1989</p> <p>PROJECT NO.</p> <p>8605</p> <p>SHEET NO.</p> <p>2</p>	
<p>MADISON MADISON INTERNATIONAL OF MICHIGAN</p> <p>Engineers, Architects, Planners</p> <p>1420 Washington Blvd.</p> <p>Detroit, Michigan 48226</p>	

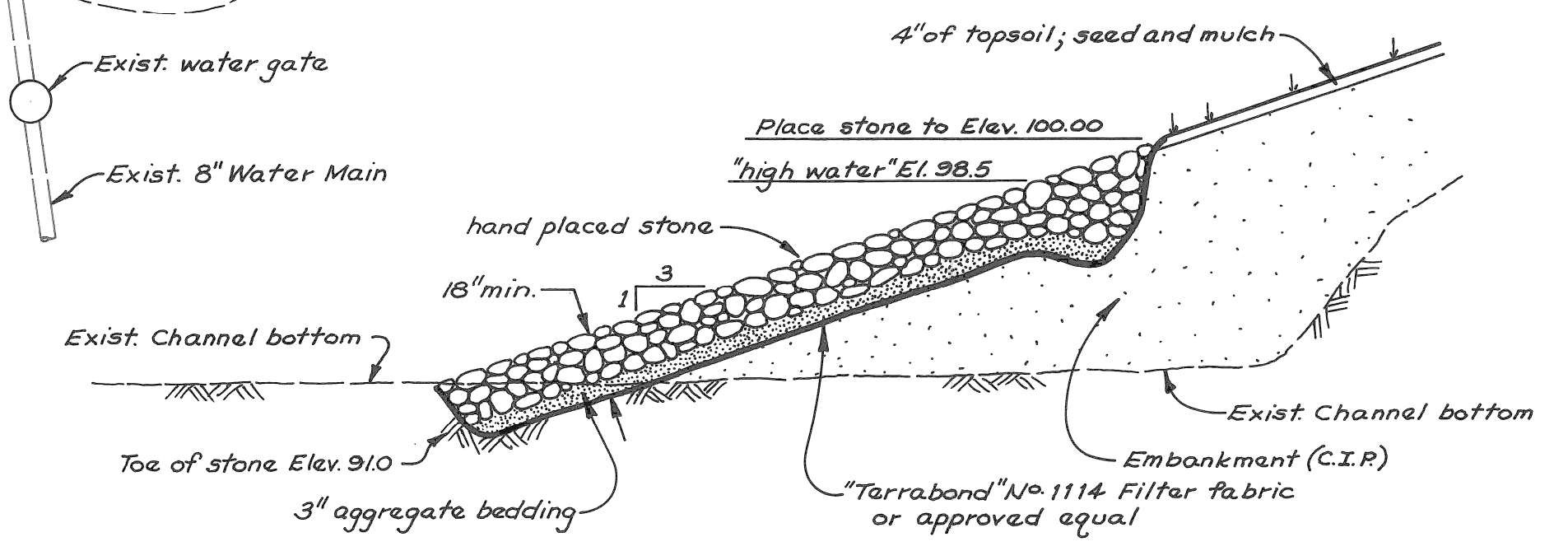




Plan
1/8" = 1'-0"



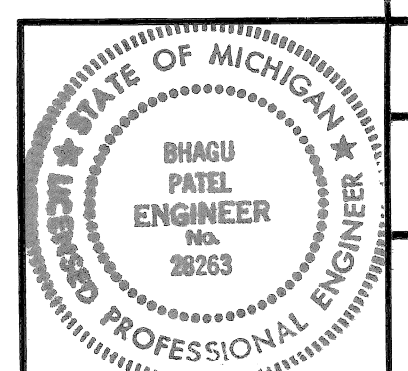
Profile
1/8" = 1'-0"

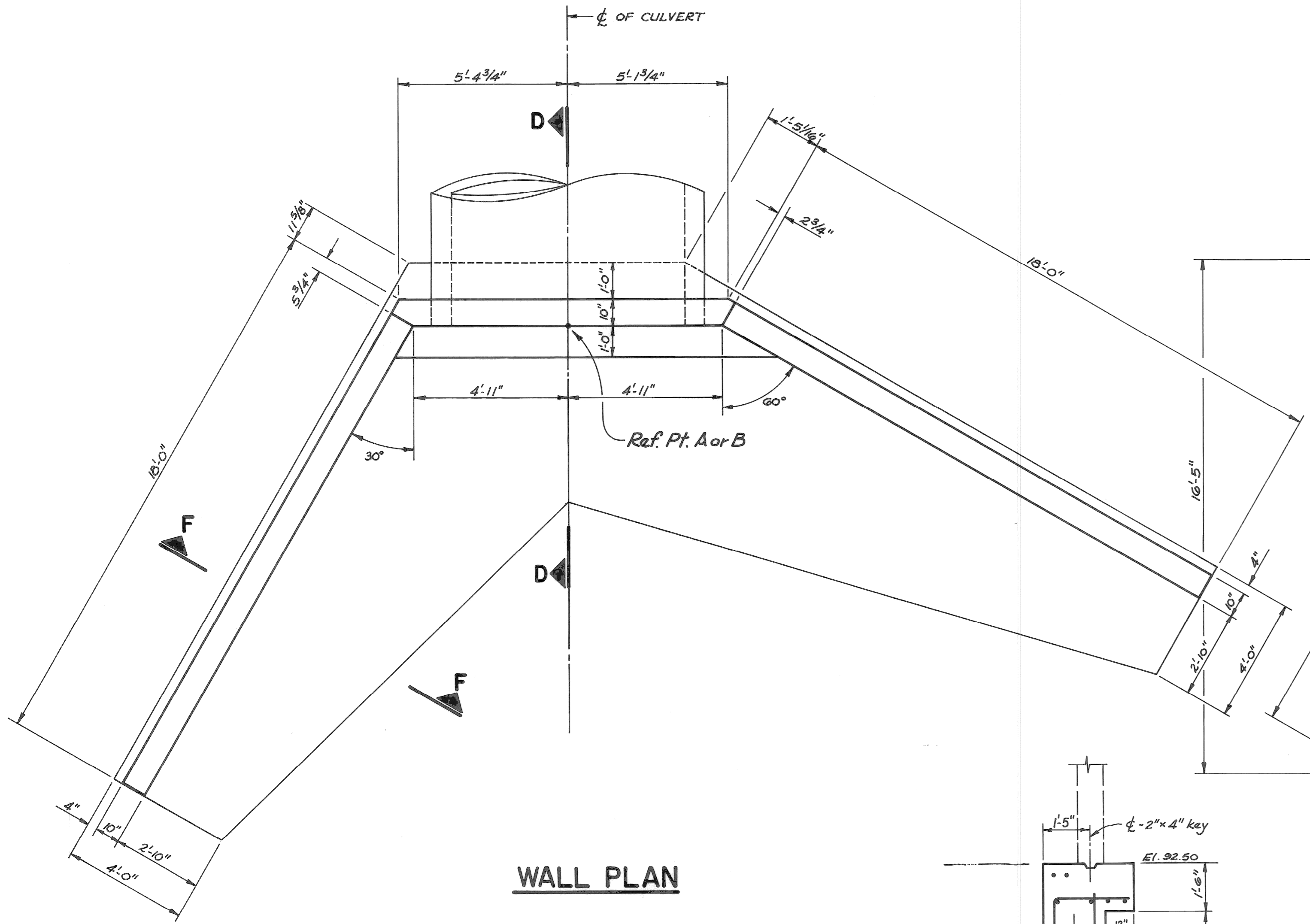


Slope Protection Section
not to scale

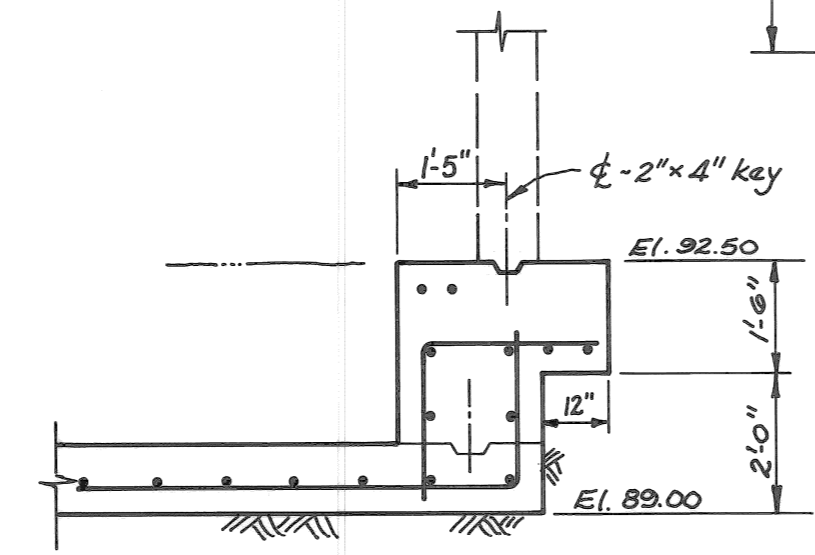
Approx. location of existing 8" water main. Contractor shall use extreme caution while excavating for headwall footing to ensure that no damage occurs to the exist. water main.

Sheet Title	CULVERT DETAILS
Project	CITY OF DETROIT LAKESIDE DRIVE CULVERT
DESIGN BY	MADISON MADISON INTERNATIONAL OF MICHIGAN
DRAWN BY	Engineers, Architects, Planners 1420 Washington Blvd. Detroit, Michigan 48226
CHECKED BY	S.O.
DATE	FEB. 1989
PROJECT NO.	8605
SHEET NO.	3

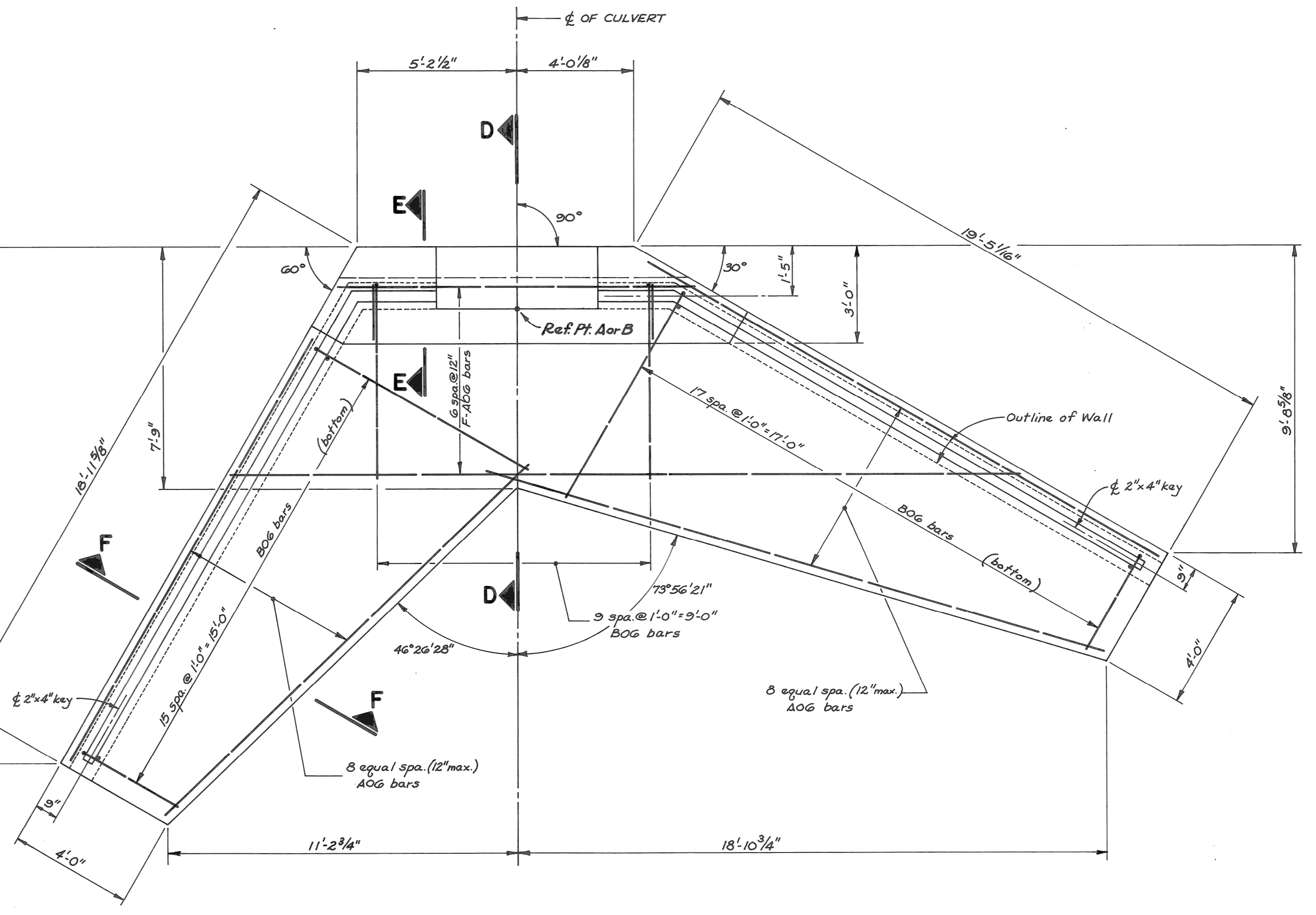




WALL PLAN

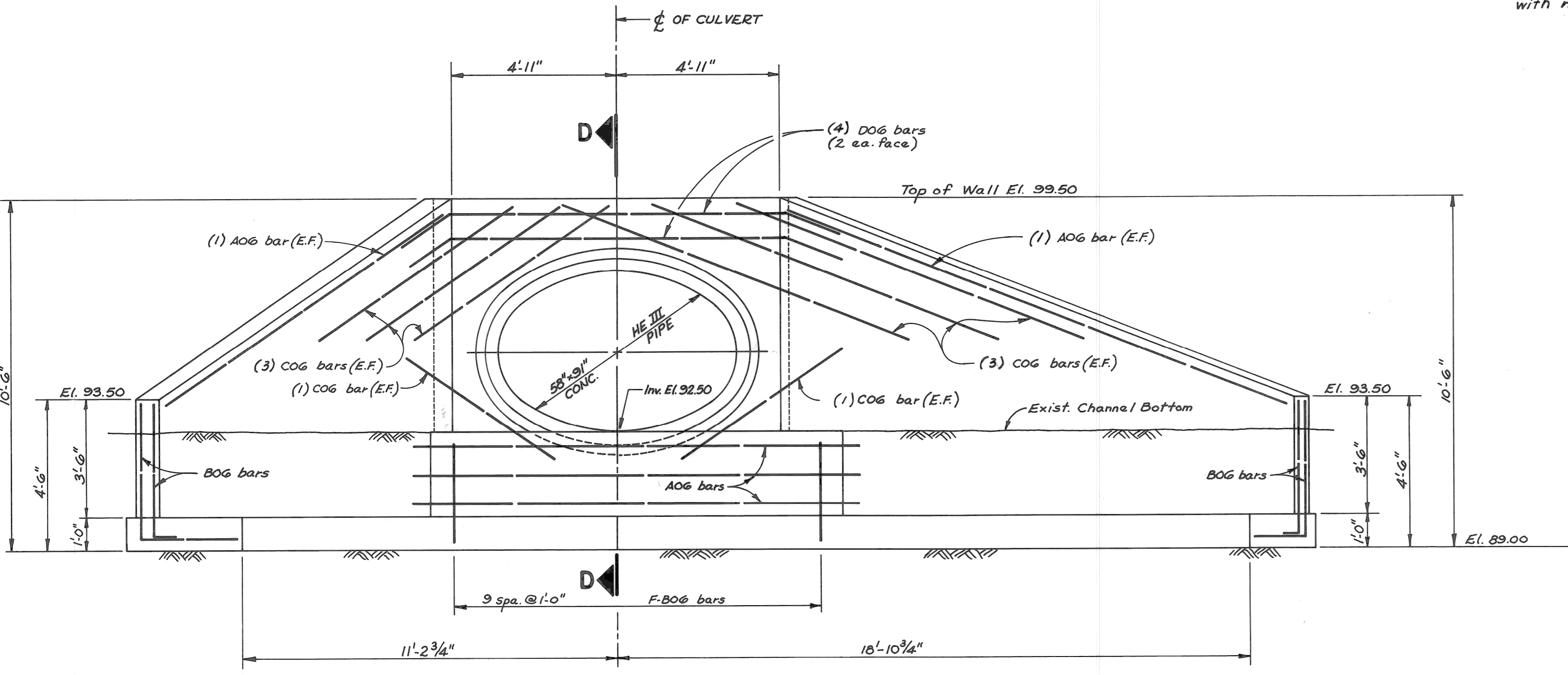


SECTION E-E

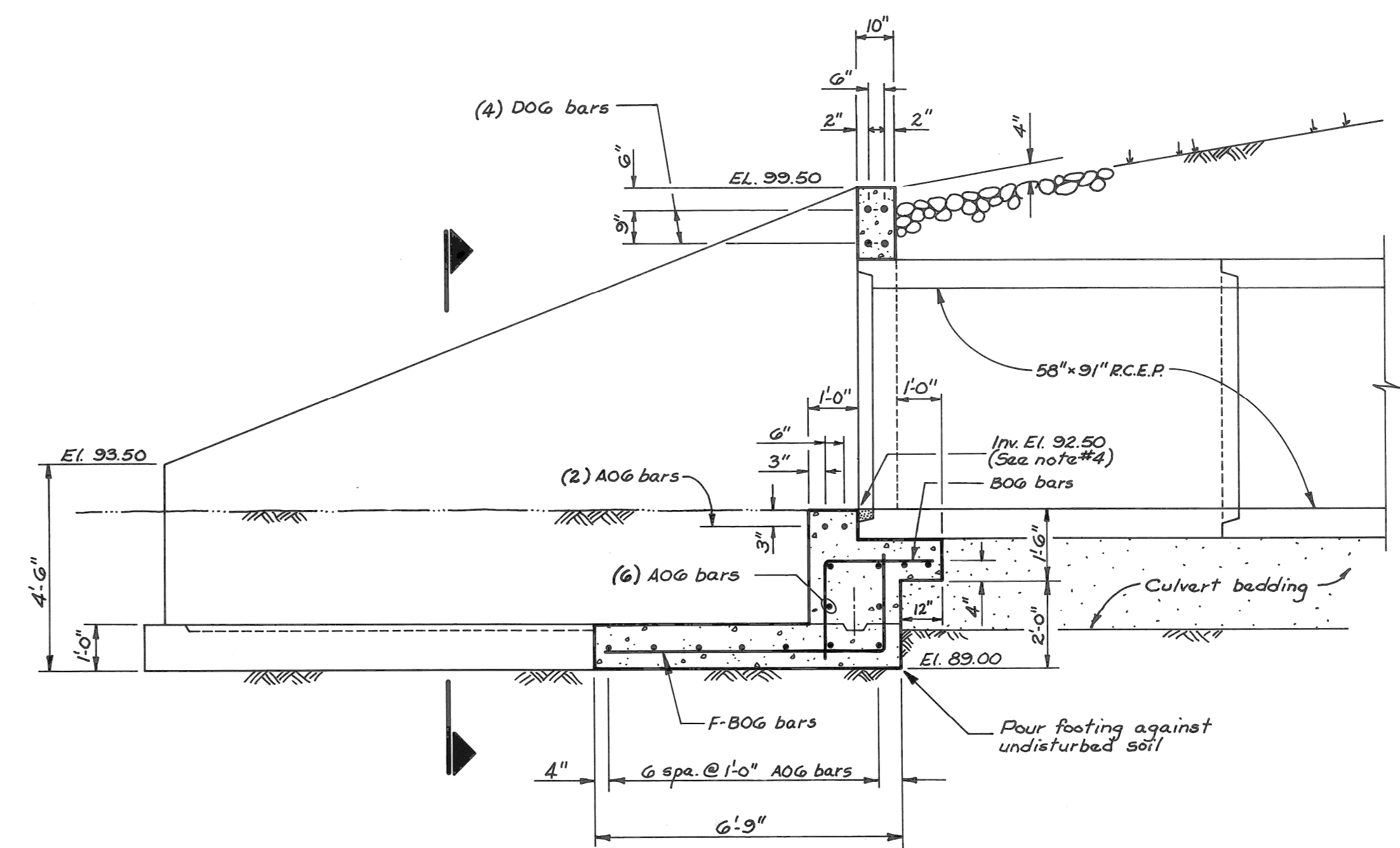


FOOTING PLAN

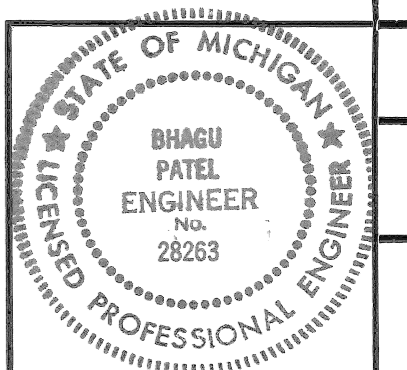
- Notes:**
1. All exposed edges shall be beveled one-half (1/2) inch.
 2. The bell or grooved end of the pipe shall be placed upstream with end of pipe flush with headwall face.
 3. Fill pipe groove along flow line at face of wall with non-shrink grout.



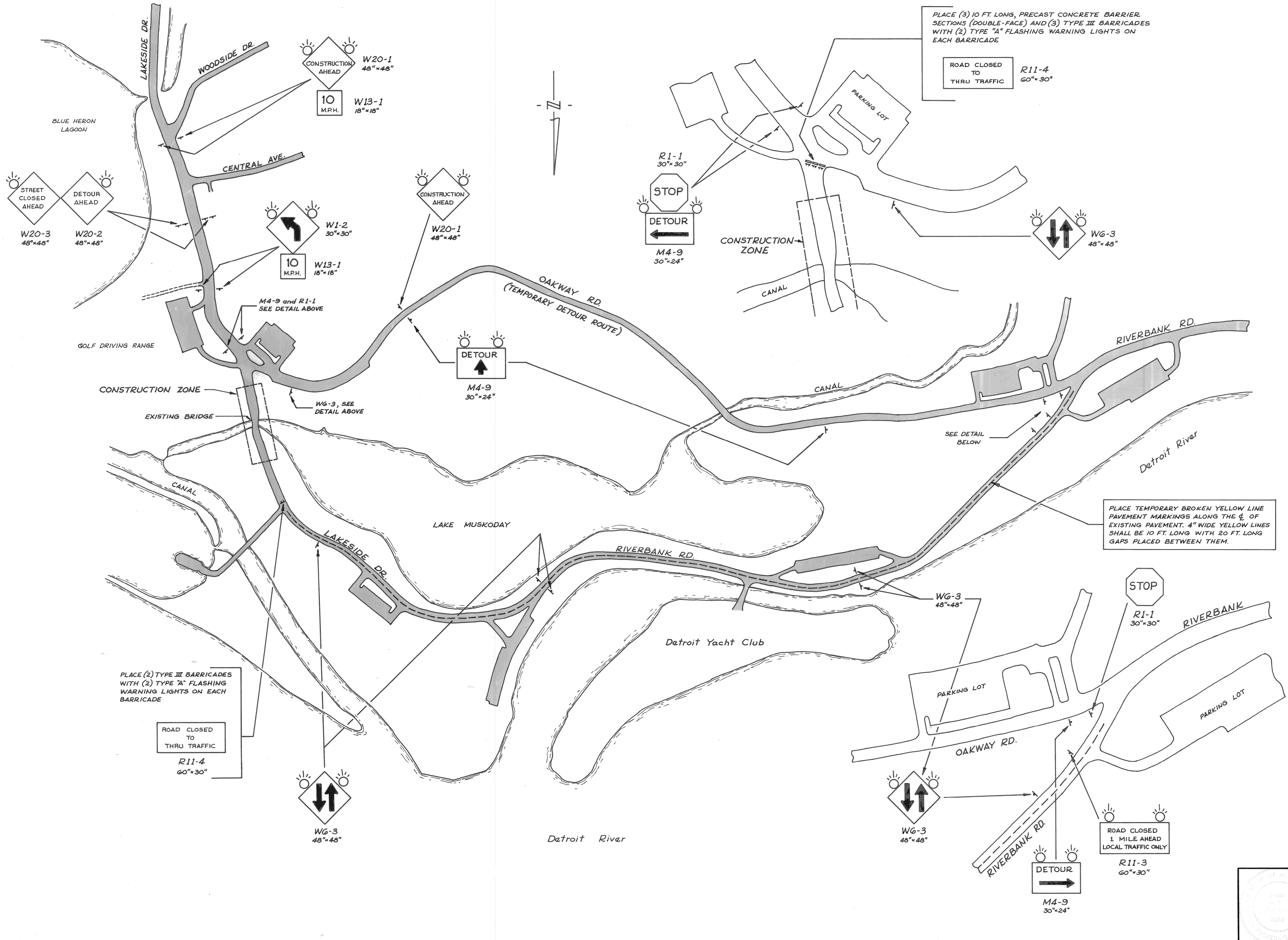
ELEVATION



SECTION D-D



Sheet Title	HEADWALL DETAILS
Project	CITY OF DETROIT LAKESIDE DRIVE CULVERT
Design By	K.C.H.
Drawn By	K.C.H.
Checked By	S.O.
Date	FEB. 1989
Project No.	8605
Sheet No.	4



PLACE (3) 10 FT. LONG, PRECAST CONCRETE BARRIER SECTIONS (DOUBLE-FACE) AND (3) TYPE III BARRICADES WITH (2) TYPE "A" FLASHING WARNING LIGHTS ON EACH BARRICADE

ROAD CLOSED TO THRU TRAFFIC R11-4 60" x 30"

PLACE TEMPORARY BROKEN YELLOW LINE PAVEMENT MARKINGS ALONG THE $\frac{1}{2}$ OF EXISTING PAVEMENT. 4" WIDE YELLOW LINES SHALL BE 10 FT. LONG WITH 20 FT. LONG GAPS PLACED BETWEEN THEM.

PLACE (2) TYPE III BARRICADES WITH (2) TYPE "A" FLASHING WARNING LIGHTS ON EACH BARRICADE

ROAD CLOSED TO THRU TRAFFIC R11-4 60" x 30"

ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY R11-3 60" x 30"

TRAFFIC CONTROL

CITY OF DETROIT
LAKESIDE DRIVE CULVERT

Project
Sheet Title

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.
Detroit, Michigan 48226

DESIGN BY
K.C.H.
DRAWN BY
K.C.H.
CHECKED BY
B.M.P.
DATE
FEB. 1989
PROJECT NO.
8605
SHEET NO.
6

