

PLAN

DATE: _____ BY: _____

NO. _____

NOTES: SURVEYED, PLOTTED, CHECKED, ALIGNED, CHECKED, AT OF WAY, CHECKED.

PROFILE

DATE: _____ BY: _____

NO. _____

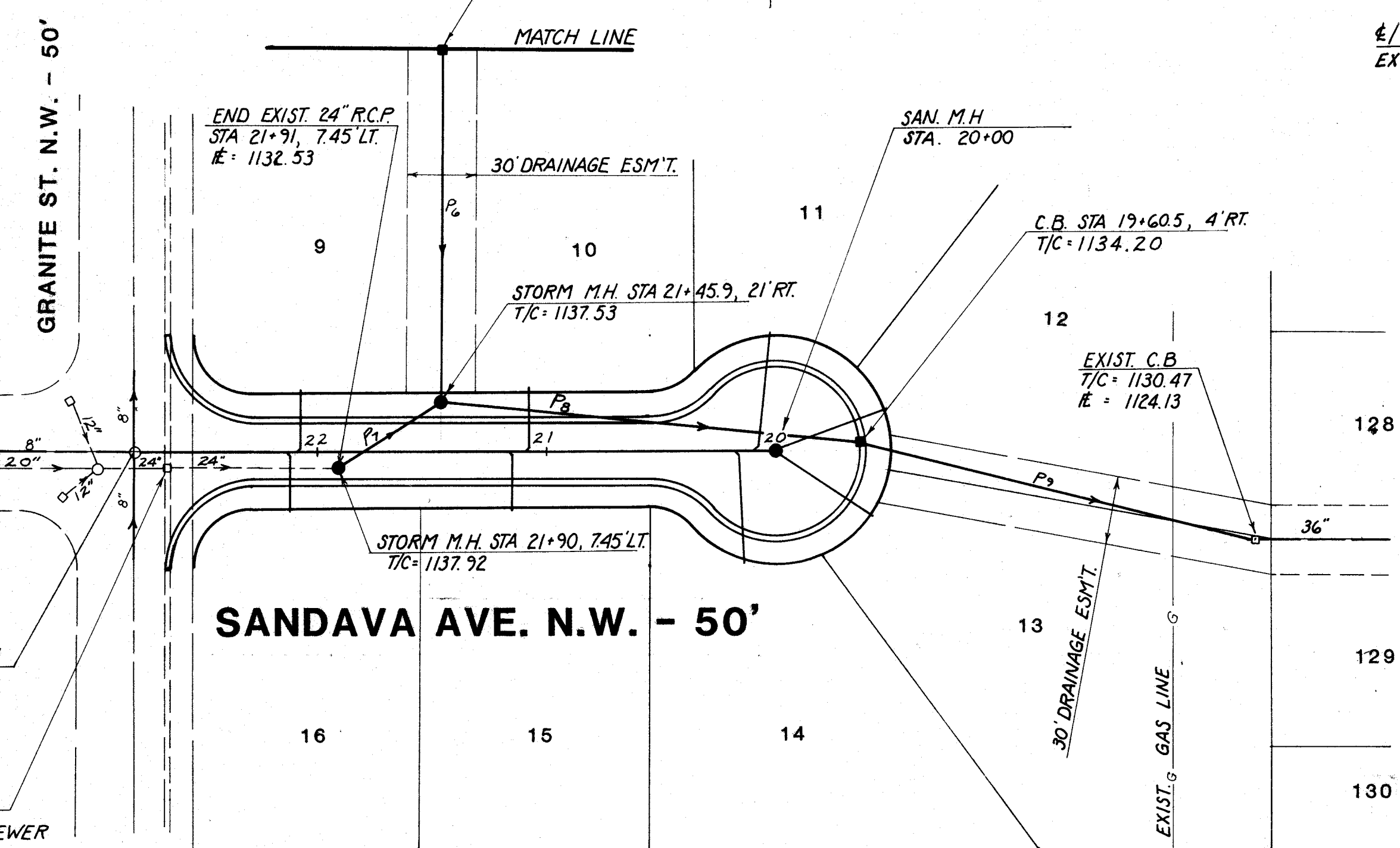
NOTES: SURVEYED, PLOTTED, CHECKED, GRADES, CHECKED, ELEVATIONS, CHECKED, VERTICAL, CHECKED.

TUBER ESTATES PB. 46, Pg. 107

1/4" STA. 22+80.91
EXIST. SAN. M.H.

REMOVE EXISTING C.B.
RESTORE 24" STORM SEWER
USING 2 (2) 24" R.C.P.

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE



APPROVED BY THE STARK COUNTY SUBDIVISION ENGINEER
THIS _____ DAY OF _____ 1988.

SUBDIVISION ENGINEER

APPROVED BY THE MASSILLON CITY ENGINEER
THIS _____ DAY OF _____ 1988.

MASSILLON CITY ENGINEER

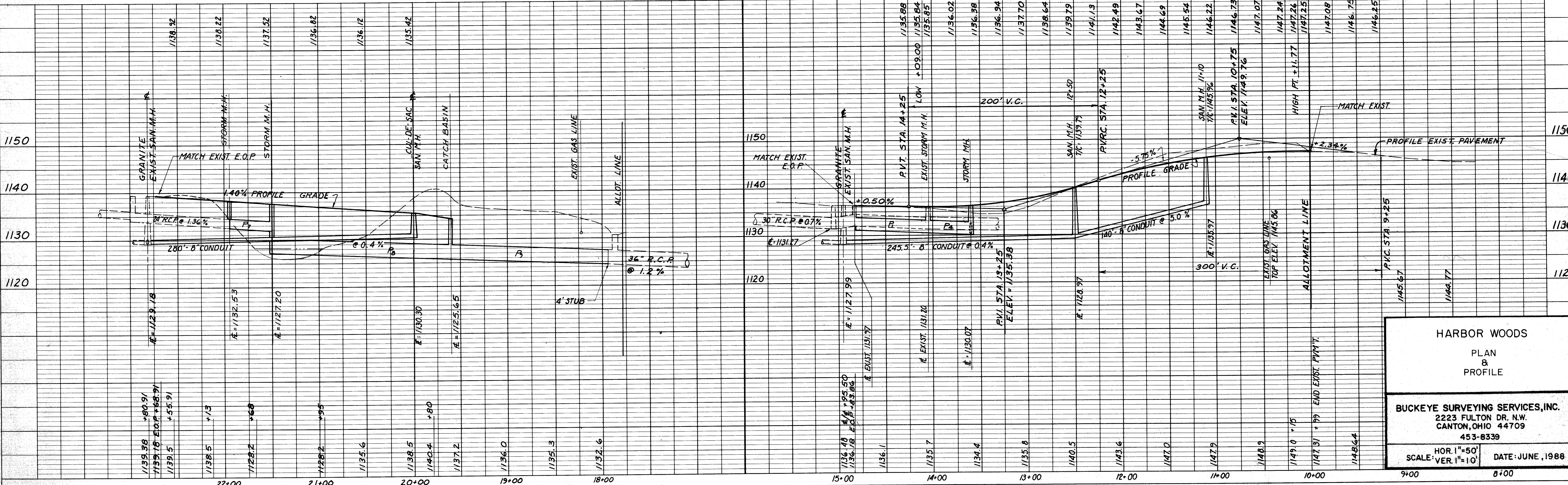
STORM SEWER DATA						
No.	SIZE	TYPE	LENGTH	SLOPE	INLET E.	OUTLET E.
P1	30"	RCP	78'	0.80%	1131.07	1130.45
P2	12"	RCP	19'	2.00%	1132.92	1132.54
P3	12"	RCP	11'	2.00%	1132.92	1132.70
P4	30"	RCP	48'	0.80%	1130.45	1130.07
P5	30"	RCP	154'	0.80%	1130.07	1128.84
P6	30"	RCP	54'	0.90%	1128.84	1127.45
P7	24"	RCP	54'	1.36%	1127.45	1127.80
P8	36"	RCP	185'	0.84%	1127.80	1125.65
P9	36"	RCP	175'	0.86%	1125.65	1124.14

BENCHMARK:
N.E. CORNER OF CONCRETE PAD FOR
TRANSFORMER BOX AT THE N.W. CORNER
OF LOT 34 IN TUBER ESTATES.

BENCHMARK:
TOP OF EXISTING CURB ON THE
EAST SIDE OF PALMER DR. N.W. AT
STA. 9+99.

ELEV. 1141.66

ELEV. 1147.59

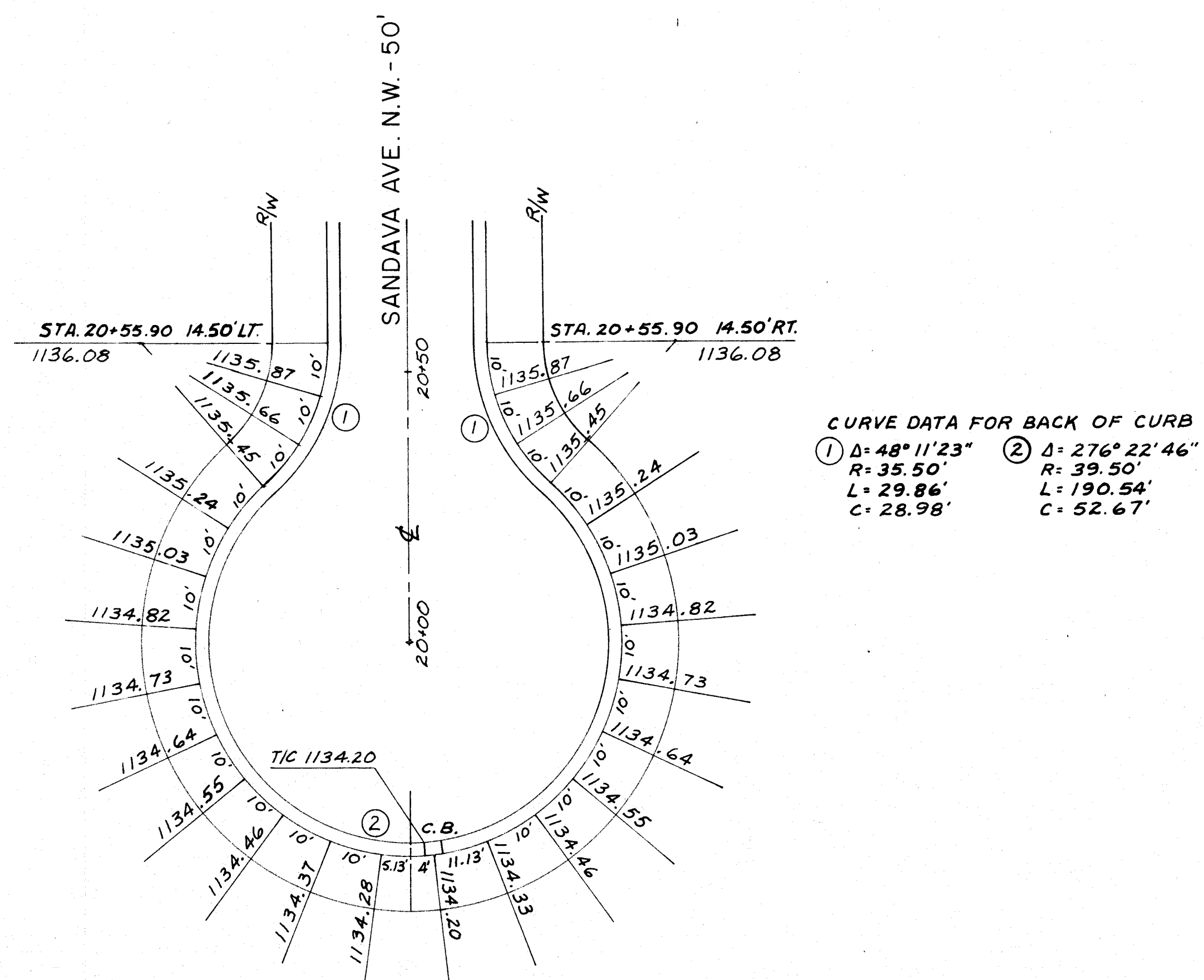
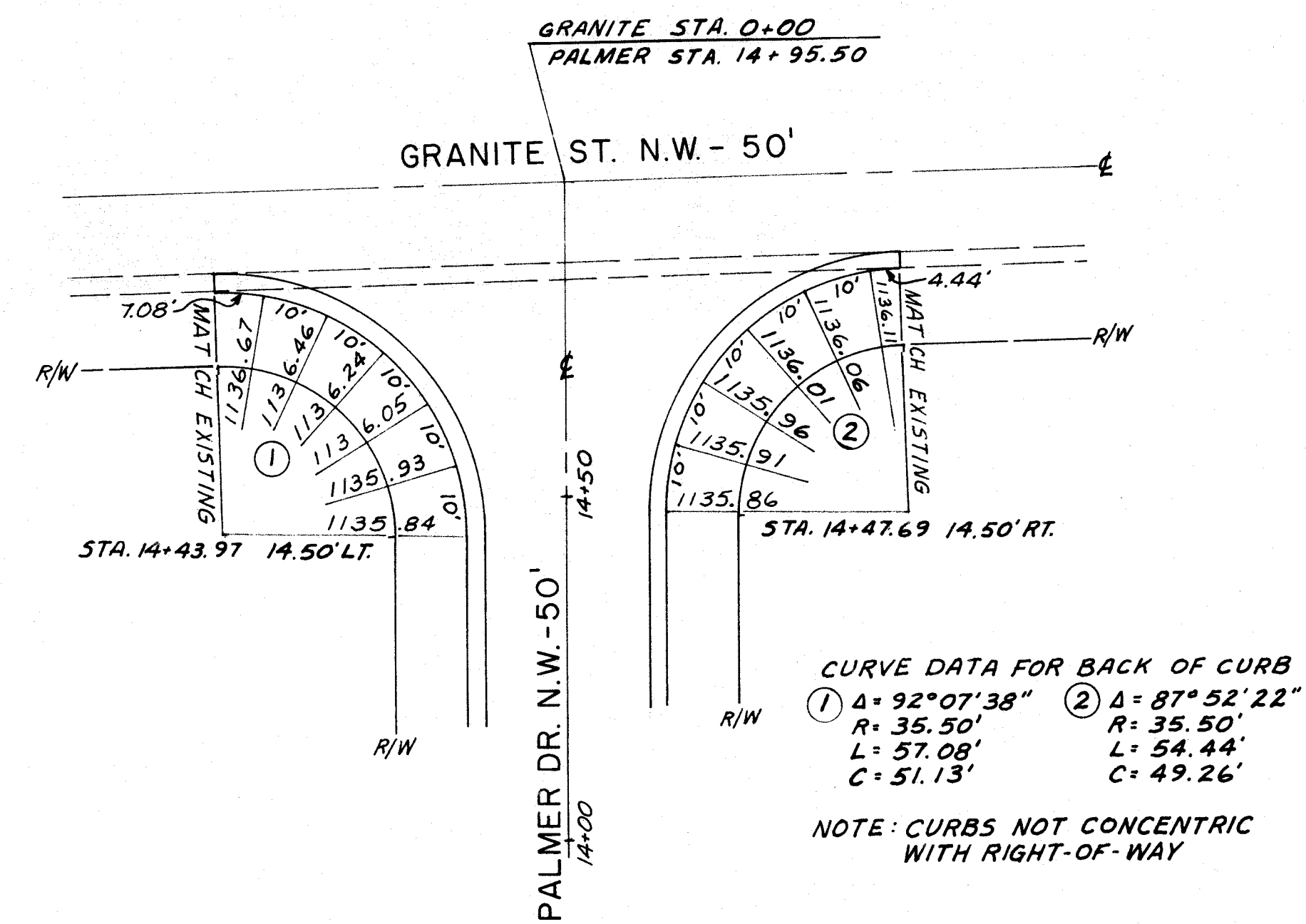
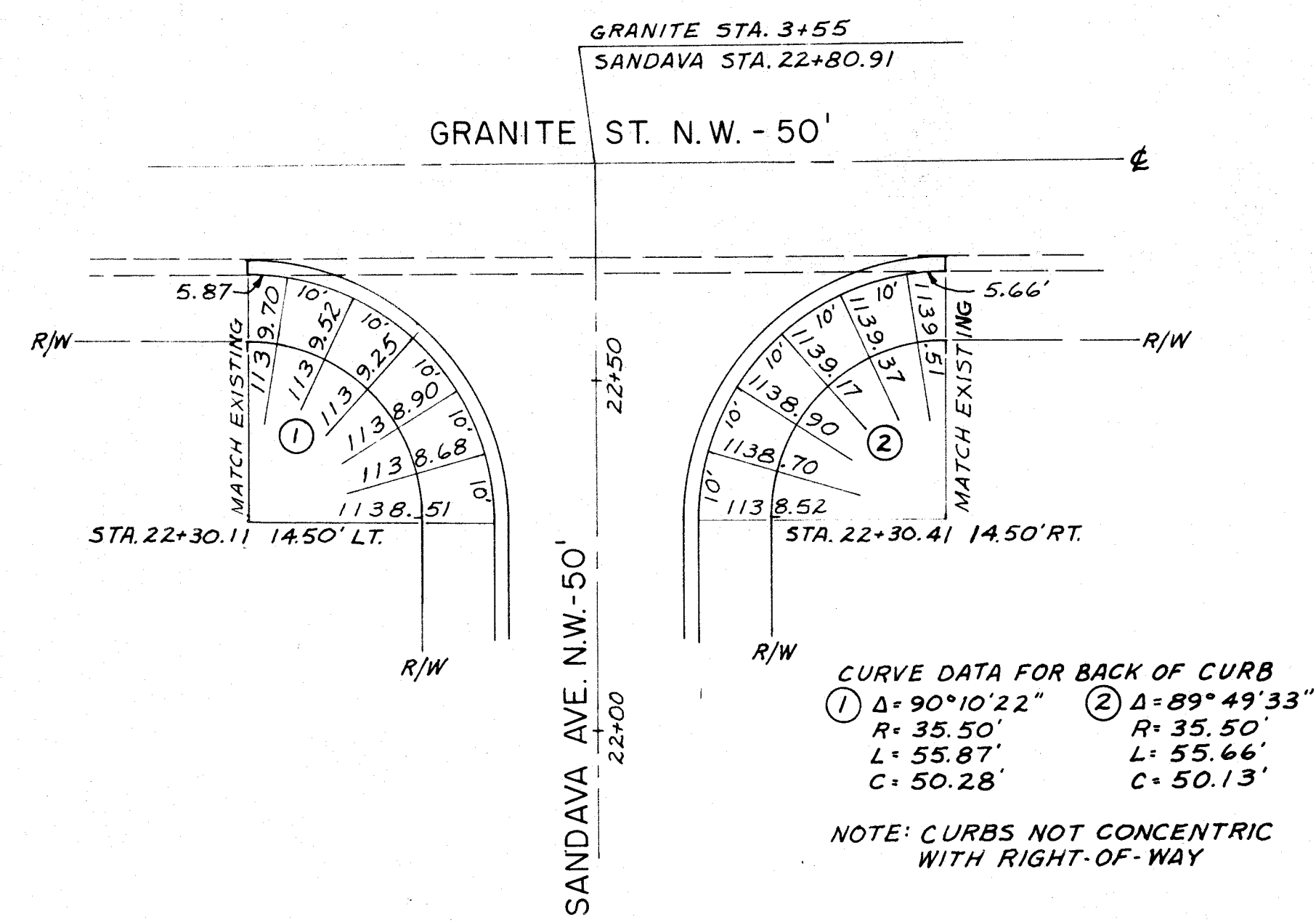


HARBOR WOODS
PLAN
&
PROFILE

BUCKEYE SURVEYING SERVICES, INC.
2223 FULTON DR. N.W.
CANTON, OHIO 44709
453-8339

HOR. 1"=50'
SCALE VER. 1"=10' DATE: JUNE, 1988

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
PRINTED IN U.S.A.



APPROVED BY THE STARK COUNTY SUBDIVISION ENGINEER
THIS _____ DAY OF _____ 1988.

SUBDIVISION ENGINEER

HARBOR WOODS
INTERSECTION
DETAILS

BUCKEYE SURVEYING SERVICES, INC.
2223 FULTON DR. N.W.
CANTON, OHIO 44709
453-8339

SCALE: 1" = 20'

DATE: JUNE, 1988

C S 132

GENERAL PAVEMENT NOTE:
WHERE EDGE OF REPLACED SECTION EXTENDS WITHIN 2'-0" OF ROADWAY EDGE, PAVEMENT IS TO BE REPLACED TO ROADWAY EDGE AT NO ADDITIONAL COST.

ITEM 21A PORTLAND CEMENT CONCRETE BASE OR SURFACE

NO. 6 WIRE MESH AS PER 709.10

12" MAX. PERMISSIBLE TRENCH WIDTH

3" EXISTING PAVEMENT UNDISTURBED EARTH

SAW CUT

12" MAX. PERMISSIBLE TRENCH WIDTH

3" EXISTING PAVEMENT UNDISTURBED EARTH

SAW CUT

ITEM 21B ASPHALT CONCRETE SURFACE COURSE PORTLAND CEMENT CONCRETE BASE COURSE

1" 404 ASPHALT CONCRETE

1 1/2" 402 ASPHALT CONCRETE

2" 4 1/2" LAYERS 304 AGGREGATE BASE FOR PAVEMENT

12" MAX. PERMISSIBLE TRENCH WIDTH

3" EXISTING PAVEMENT UNDISTURBED EARTH

SAW CUT

ITEM 21C ASPHALT CONCRETE SURFACE COURSE AGGREGATE BASE COURSE

1 1/2" 402 ASPHALT CONCRETE

2" 4 1/2" LAYERS 304 AGGREGATE BASE FOR PAVEMENT

12" MAX. PERMISSIBLE TRENCH WIDTH

3" EXISTING PAVEMENT UNDISTURBED EARTH

SAW CUT

ITEM 21D AGGREGATE BASE WITH SEAL COAT SURFACE TREATMENT

1" 404 ASPHALT CONCRETE

1 1/2" 402 ASPHALT CONCRETE

2" 4 1/2" LAYERS 304 AGGREGATE BASE FOR PAVEMENT

12" MAX. PERMISSIBLE TRENCH WIDTH

3" EXISTING PAVEMENT UNDISTURBED EARTH

SAW CUT

ITEM 21G ASPHALT OR CONCRETE DRIVEWAY AND WALK REPLACEMENT

EXISTING BRICK OR FLAGSTONE DRIVE OR WALK

3/4" SAND

12" MAX. PERMISSIBLE TRENCH WIDTH

6" 304 AGGREGATE BASE

UNDISTURBED EARTH

ITEMS 21E & 21G BRICK OR FLAGSTONE ROADWAY, DRIVEWAY AND WALK REPLACEMENT

EXISTING BRICK OR FLAGSTONE DRIVE OR WALK

3/4" SAND

12" MAX. PERMISSIBLE TRENCH WIDTH

6" 304 AGGREGATE BASE

UNDISTURBED EARTH

TYPICAL PAVEMENT, DRIVEWAY AND WALK REPLACEMENT SECTIONS

WIDTH

25' FT.

25' FT.

6" 304 AGGREGATE BASE

TYPICAL SECTION - GRAVEL DRIVE

NOTE: CONCRETE FOR THE CONCRETE SIDEWALKS SHALL BE FINISHED TO MATCH EXISTING ADJOINING SIDEWALKS.

WIDTH & SLOPE OF SIDEWALK TO MATCH EXISTING SIDEWALK

ITEM 609 CURB & GUTTER TO MATCH EXISTING CURB

4" 608 NORMAL CONCRETE AT DRIVEWAYS

ODOT CLASS "C" CONCRETE

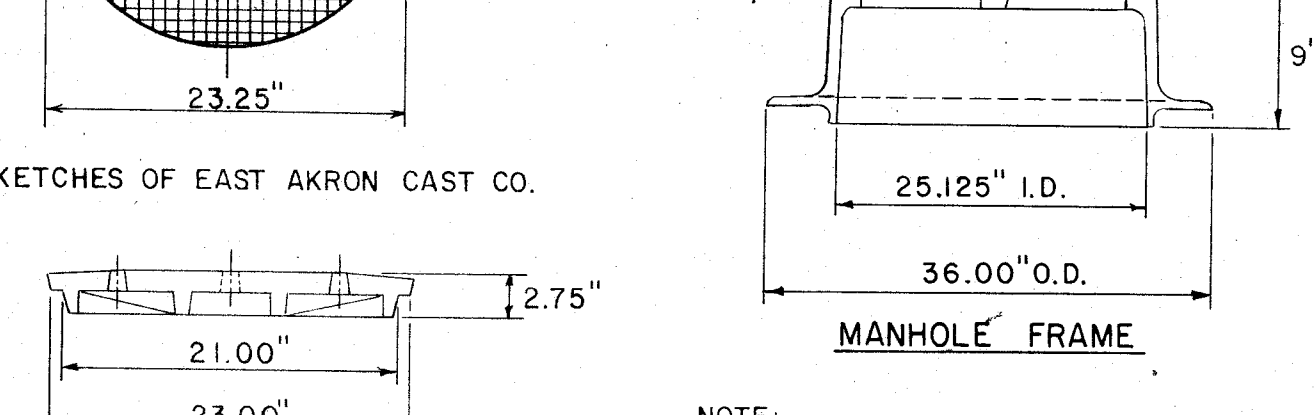
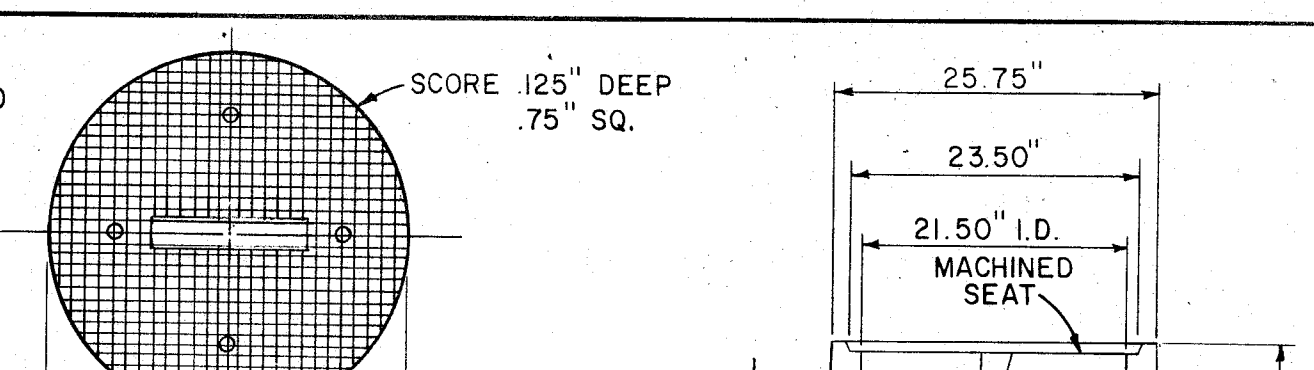
ITEM 21J & 21K SIDEWALK CURB & GUTTER DETAIL

4" 608 NORMAL CONCRETE AT DRIVEWAYS

ODOT CLASS "C" CONCRETE

ITEM 609 CURB & GUTTER TO MATCH EXISTING CURB

WIDTH & SLOPE OF SIDEWALK TO MATCH EXISTING SIDEWALK



MANHOLE COVER

23.25"

2.75"

23.00"

25.125" I.D.

23.50" I.D.

36.00" O.D.

MANHOLE FRAME

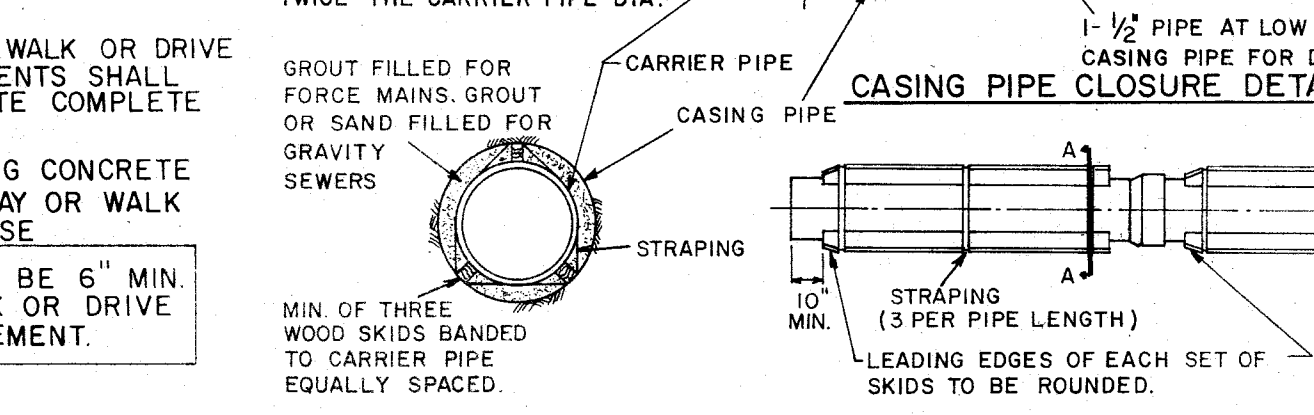
MANHOLE FRAME & COVER

NEENAH R-1924-1, EAST JORDAN IRON WORKS *2015

W/TYPE C VENT COVER, EAST AKRON CASTING CO.

FRAME NO. 155 COVER NO. 156 OR APPROVED EQUAL WATERPROOF FRAME AND COVER

WATERPROOF FRAME AND COVER SHALL BE NEENAH R-1916 C, EAST JORDAN IRON WORKS NO. 1058 FT. OR APPROVED EQUAL



SECTION "A-A"

PIPE SKID DETAIL

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

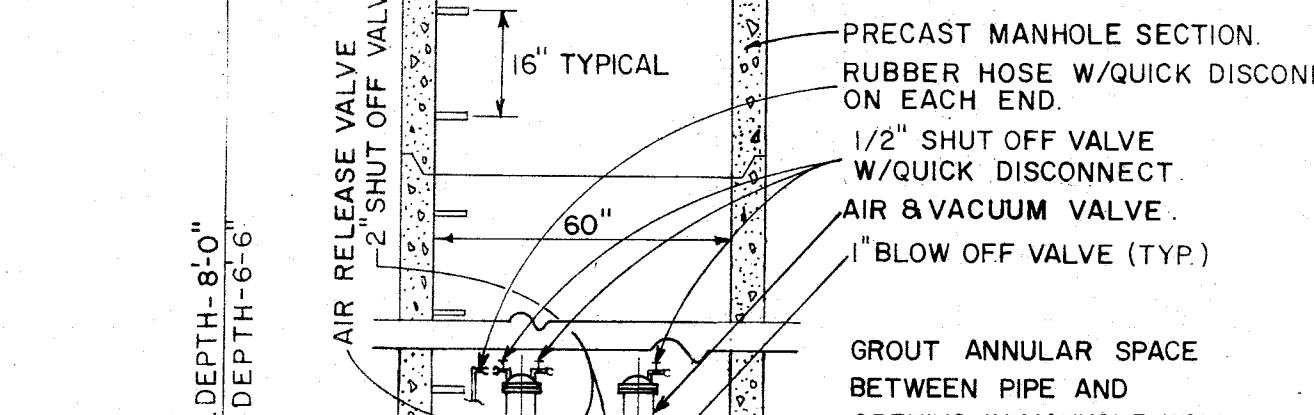
TO BE TWO SIZES LARGER THAN TWICE THE CARRIER PIPE DIA.

GROUT FILLED FOR FORCE MAINS, GROUT OR SAND FILLED FOR GRAVITY SEWERS

MIN. OF THREE WOOD SKIDS BANDO TO CARRIER PIPE EQUALLY SPACED

STRAPPING (3 PER PIPE LENGTH)

LEADING EDGES OF EACH SET OF SKIDS TO BE ROUNDED



SECTION "A-A"

PIPE SKID DETAIL

24" DIA. SLAB OPENING

2.60" CLEAR

6" MIN. FOR 48" DIA. PIPE

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

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COMBINATION AIR RELEASE & AIR VACUUM VALVE CHAMBER

NOTE: THIS CONNECTION TO BE USED WHEN DEPTH OF SEWER IS TO GREAT TO USE STANDARD HOUSE CONNECTION. LOCATION AS SHOWN ON PLANS OR DETERMINED AT TIME OF CONSTRUCTION.

90° LONG RADIUS BEND OR DOUBLE WYE

4" CLASS "B" CONCRETE, BOTTOM & SIDES TO TOP.

45° BEND

TO 45° SERVICE STACK, OVER 45° SERVICE SEWER

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

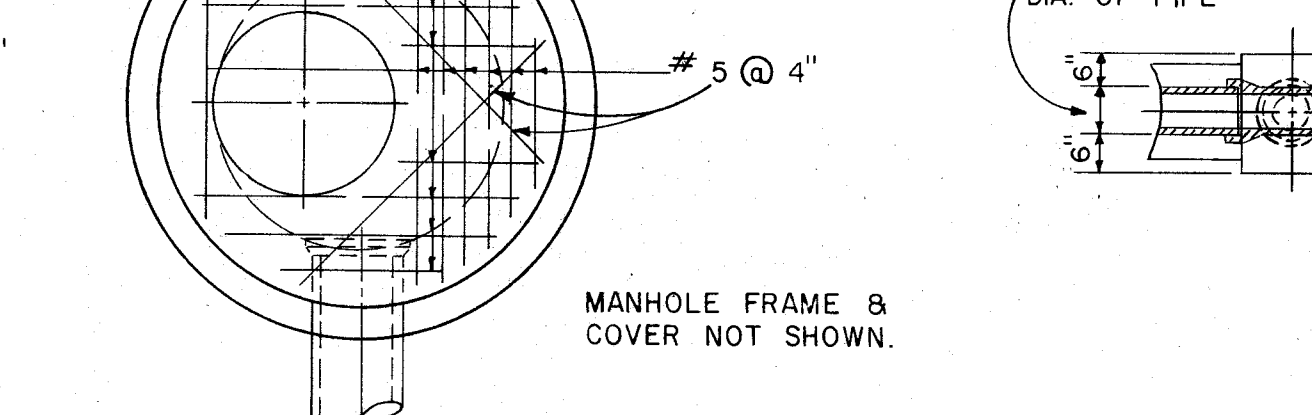
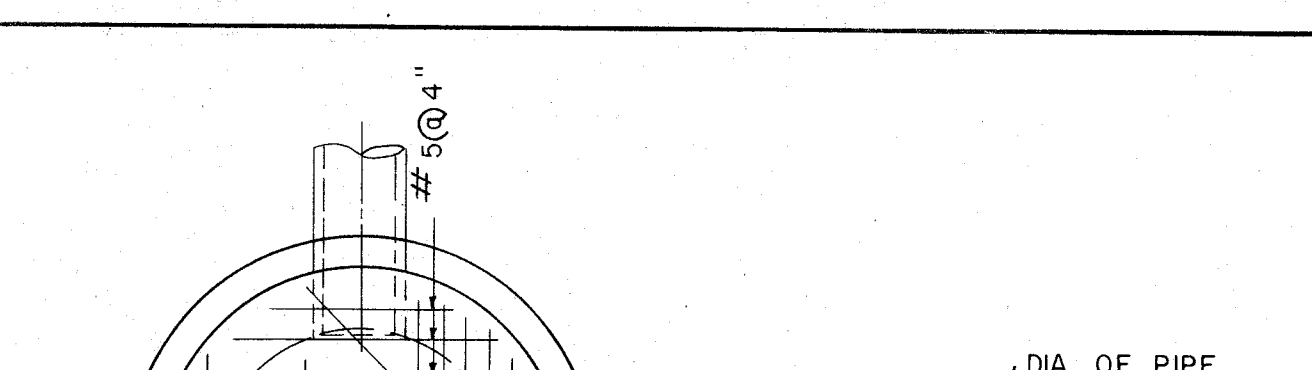
TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER



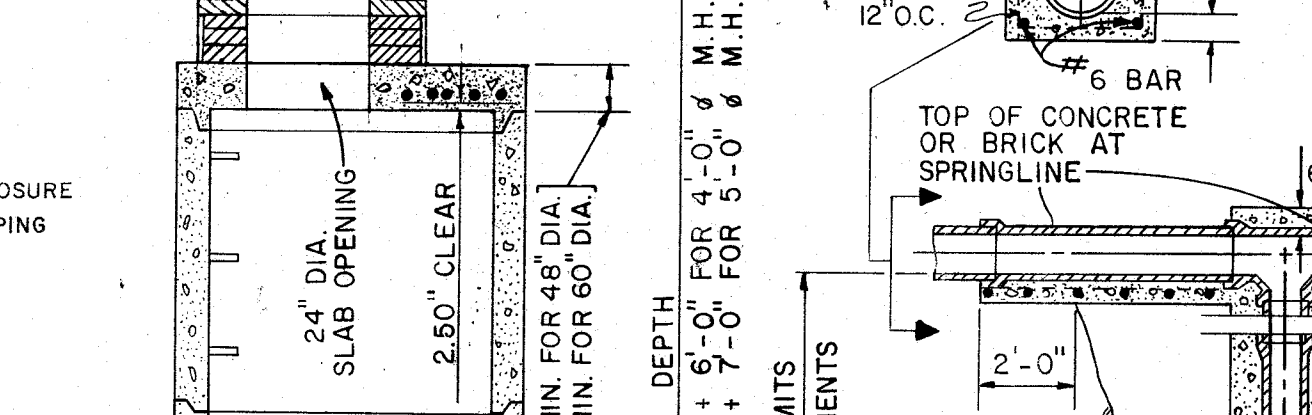
MANHOLE FRAME & COVER

NEENAH R-1924-1, EAST JORDAN IRON WORKS *2015

W/TYPE C VENT COVER, EAST AKRON CASTING CO.

FRAME NO. 155 COVER NO. 156 OR APPROVED EQUAL WATERPROOF FRAME AND COVER

WATERPROOF FRAME AND COVER SHALL BE NEENAH R-1916 C, EAST JORDAN IRON WORKS NO. 1058 FT. OR APPROVED EQUAL



SECTION "A-A"

PIPE SKID DETAIL

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

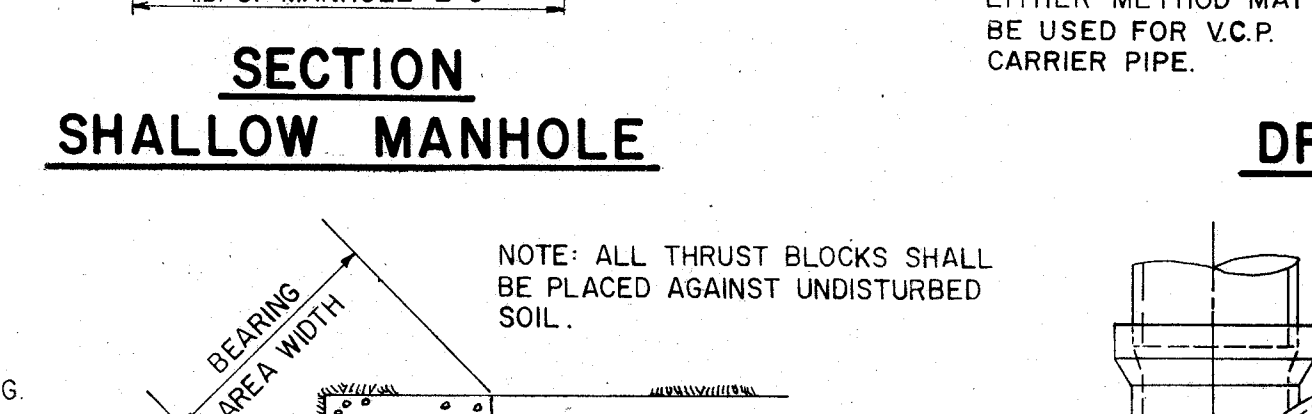
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LEADING EDGES OF EACH SET OF SKIDS TO BE ROUNDED



SECTION "A-A"

PIPE SKID DETAIL

24" DIA. SLAB OPENING

2.60" CLEAR

6" MIN. FOR 48" DIA. PIPE

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

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90° LONG RADIUS BEND OR DOUBLE WYE

4" CLASS "B" CONCRETE, BOTTOM & SIDES TO TOP.

45° BEND

TO 45° SERVICE STACK, OVER 45° SERVICE SEWER

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

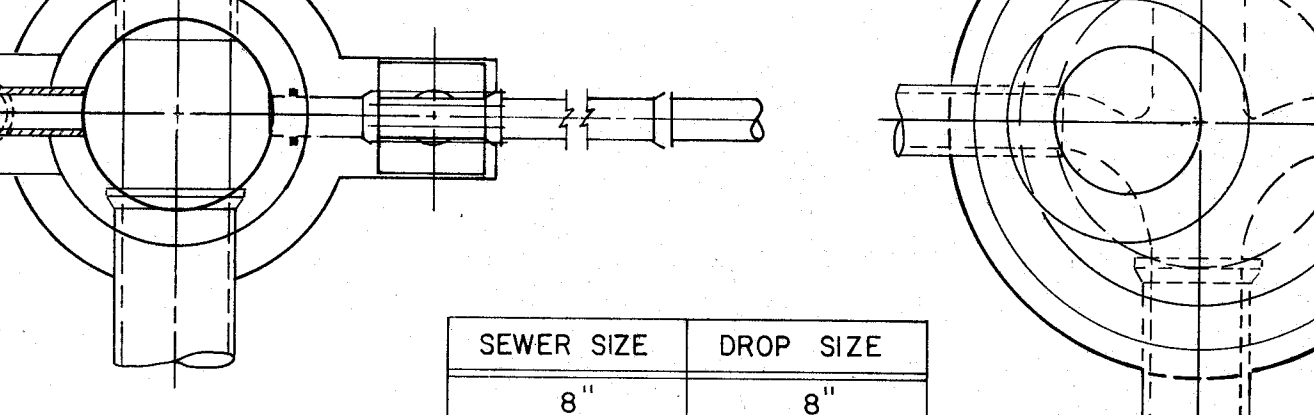
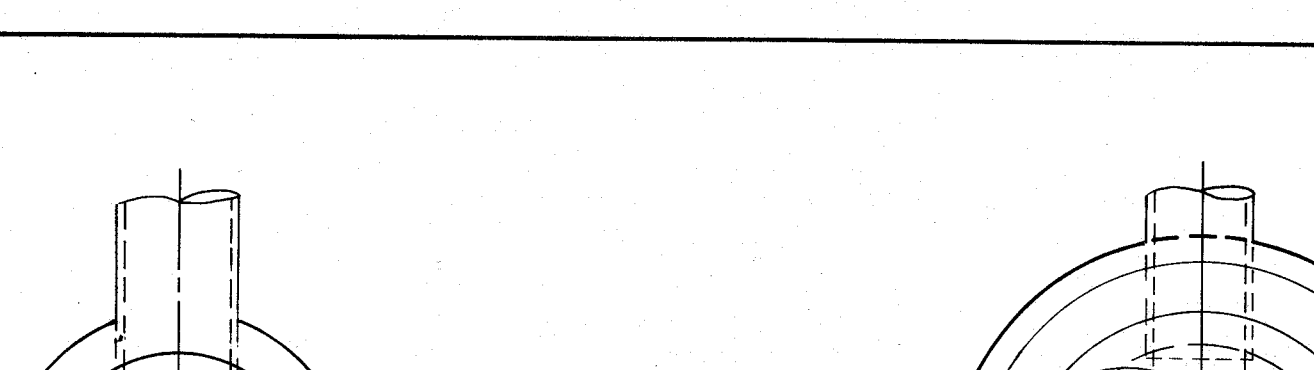
TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER



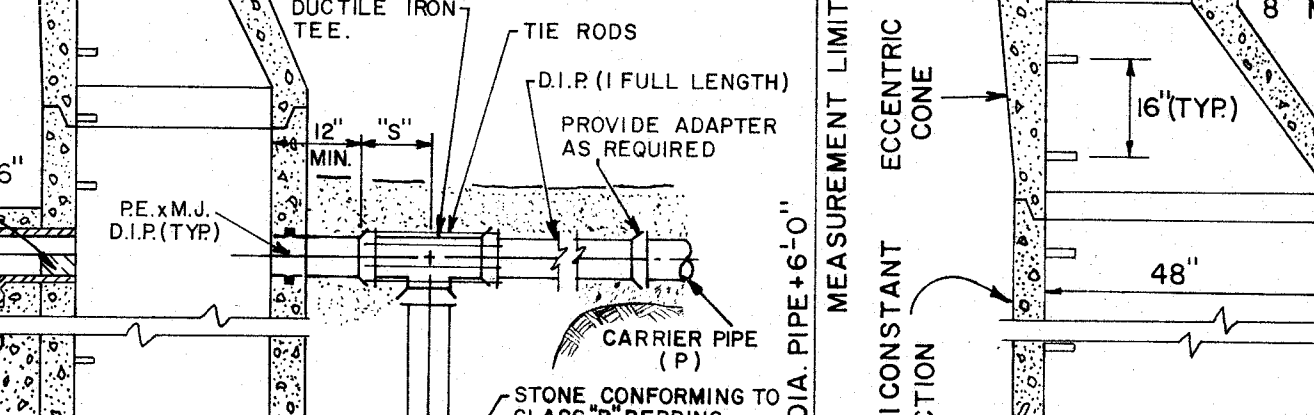
MANHOLE FRAME & COVER

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SECTION "A-A"

PIPE SKID DETAIL

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

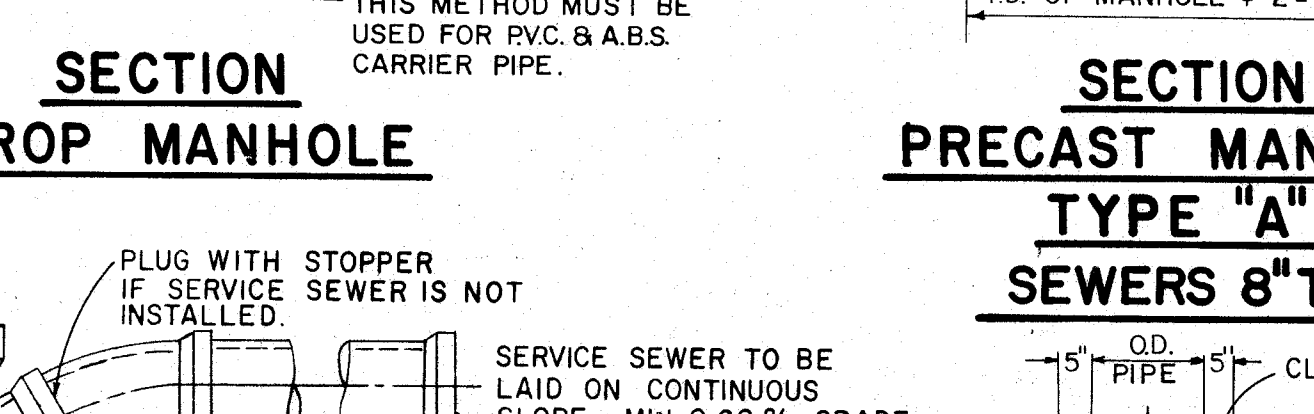
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MIN. OF THREE WOOD SKIDS BANDO TO CARRIER PIPE EQUALLY SPACED

STRAPPING (3 PER PIPE LENGTH)

LEADING EDGES OF EACH SET OF SKIDS TO BE ROUNDED



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TO 45° SERVICE STACK, OVER 45° SERVICE SEWER

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

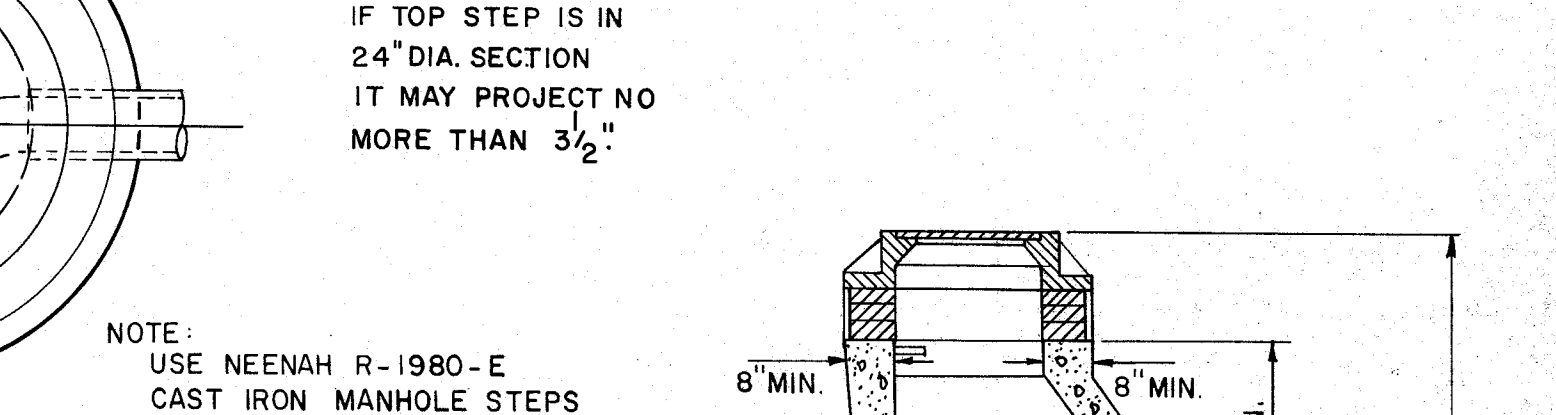
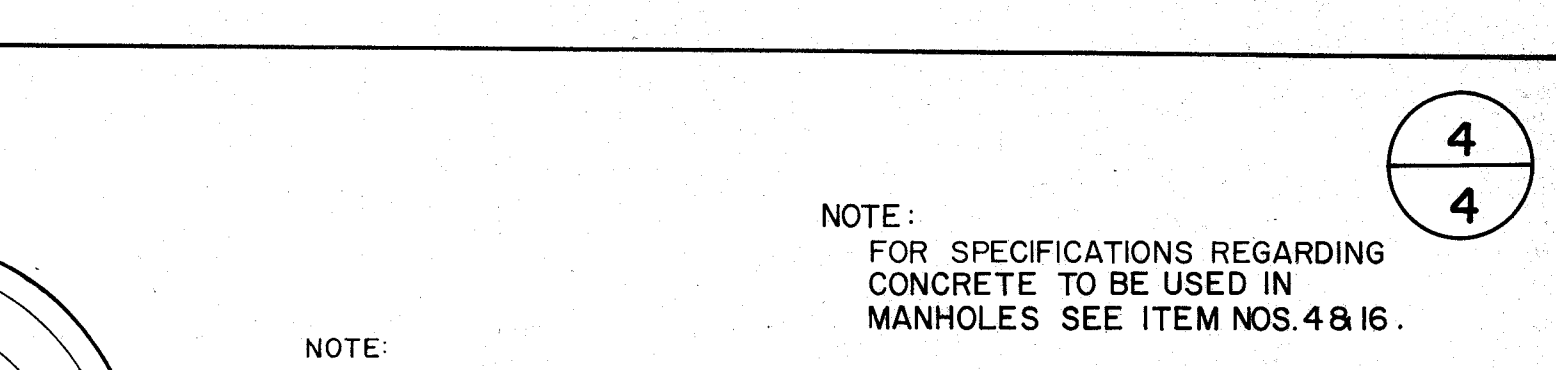
TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER



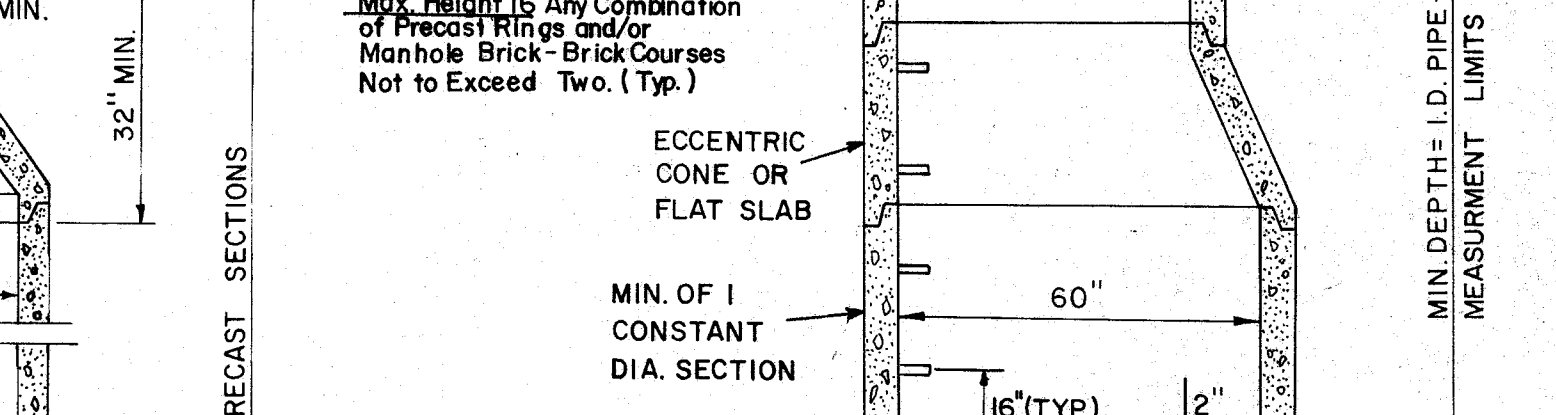
MANHOLE FRAME & COVER

NEENAH R-1924-1, EAST JORDAN IRON WORKS *2015

W/TYPE C VENT COVER, EAST AKRON CASTING CO.

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SECTION "A-A"

PIPE SKID DETAIL

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

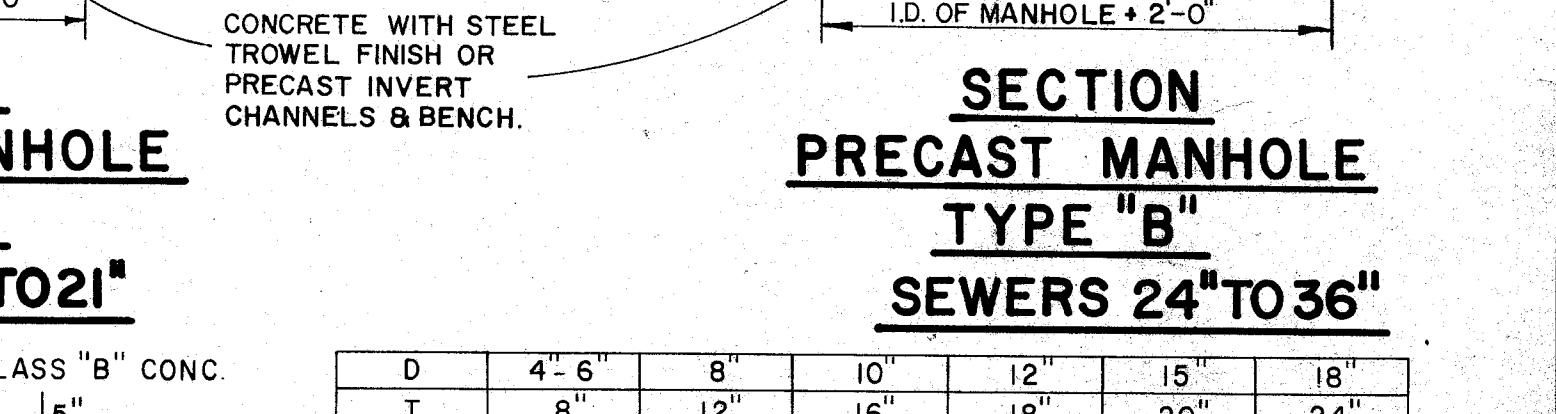
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90° LONG RADIUS BEND OR DOUBLE WYE

4" CLASS "B" CONCRETE, BOTTOM & SIDES TO TOP.

45° BEND

TO 45° SERVICE STACK, OVER 45° SERVICE SEWER

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

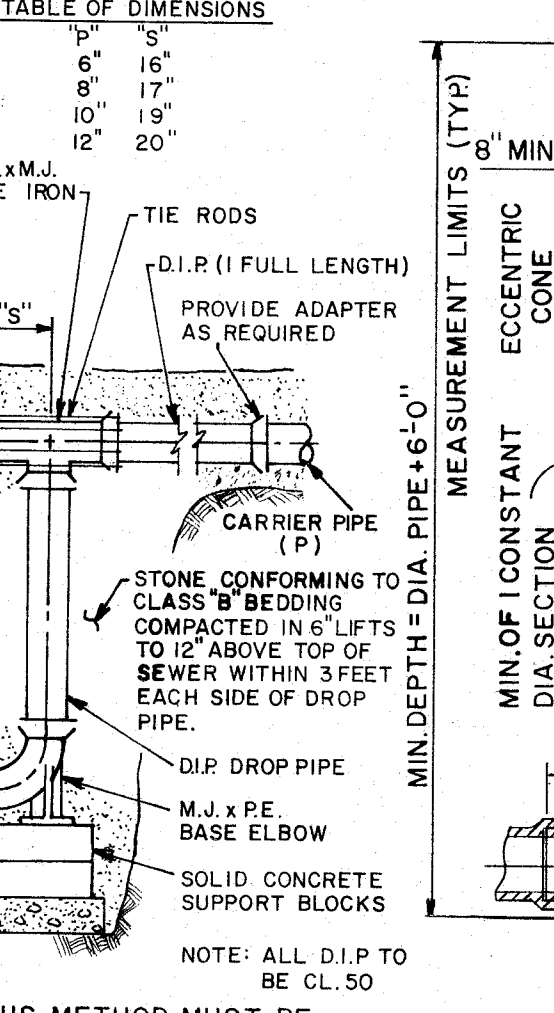
TEE BRANCH

MIN. TYP.

MAIN SEWER

TABLE OF DIMENSIONS

SEWER SIZE	DROP SIZE
8"	8"
10"	10"
12" - 15" - 18"	12"
21" - 24"	15"
27" - 30" - 36"	18"



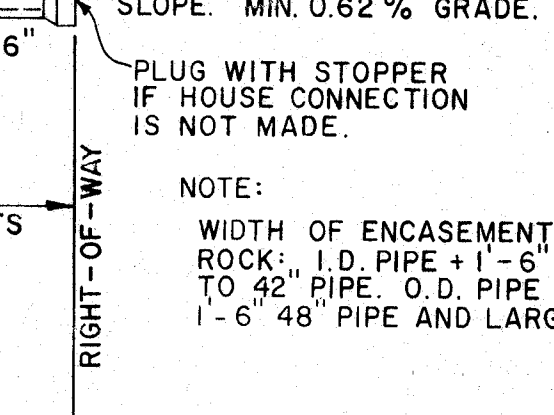
MANHOLE FRAME & COVER

NEENAH R-1924-1, EAST JORDAN IRON WORKS *2015

W/TYPE C VENT COVER, EAST AKRON CASTING CO.

FRAME NO. 155 COVER NO. 156 OR APPROVED EQUAL WATERPROOF FRAME AND COVER

WATERPROOF FRAME AND COVER SHALL BE NEENAH R-1916 C, EAST JORDAN IRON WORKS NO. 1058 FT. OR APPROVED EQUAL



SECTION "A-A"

PIPE SKID DETAIL

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

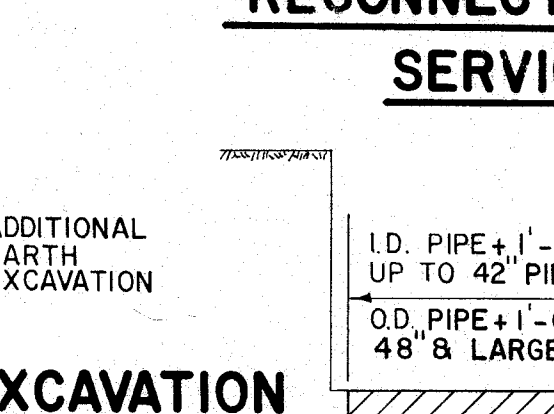
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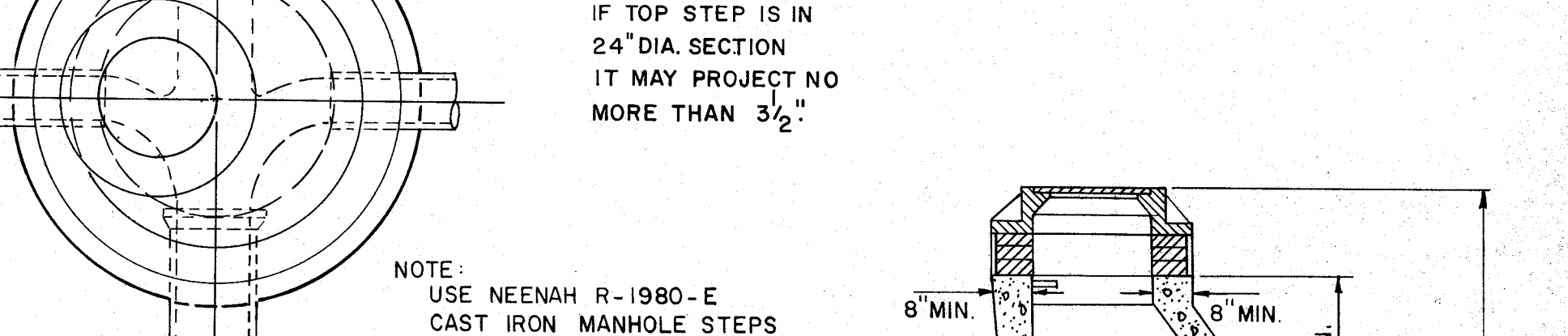
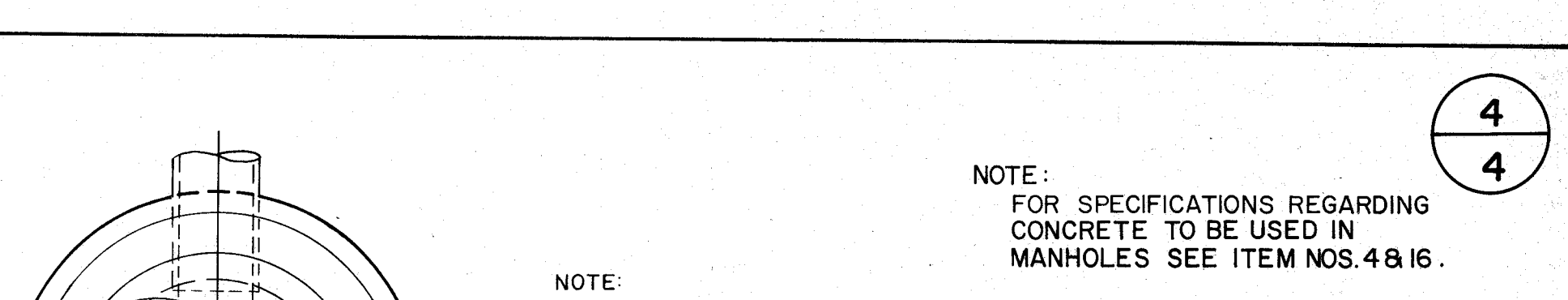
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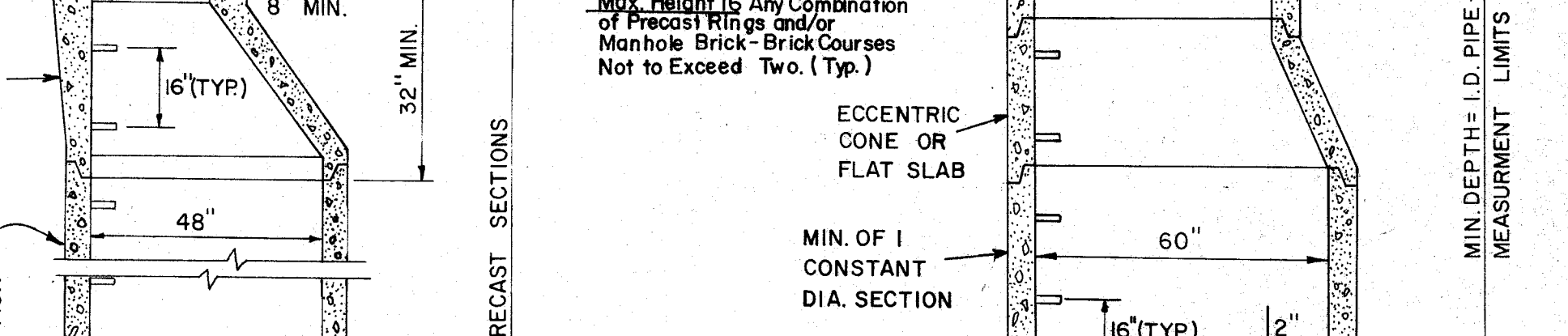
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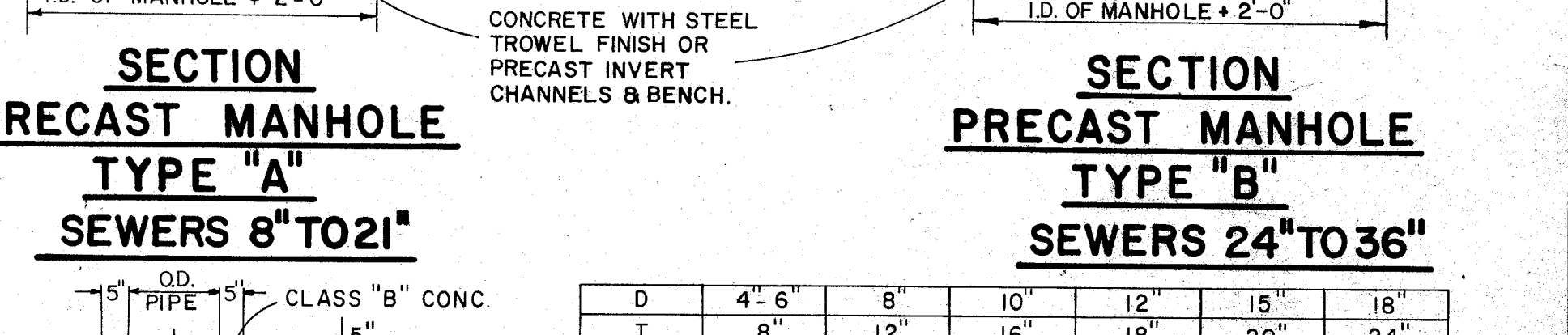
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GROUT FILLED FOR FORCE MAINS, GROUT OR SAND FILLED FOR GRAVITY SEWERS

MIN. OF THREE WOOD SKIDS BANDO TO CARRIER PIPE EQUALLY SPACED

STRAPPING (3 PER PIPE LENGTH)

LEADING EDGES OF EACH SET OF SKIDS TO BE ROUNDED



SECTION "A-A"

PIPE SKID DETAIL

24" DIA. SLAB OPENING

2.60" CLEAR

6" MIN. FOR 48" DIA. PIPE

8" MASONRY CLOSURE

1/2" FELT WRAPPING

1 1/2" PIPE AT LOW END OF CASING PIPE FOR DRAINAGE

TO BE TWO SIZES LARGER THAN TWICE THE CARRIER PIPE DIA.

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COMBINATION AIR RELEASE & AIR VACUUM VALVE CHAMBER

NOTE: THIS CONNECTION TO BE USED WHEN DEPTH OF SEWER IS TO GREAT TO USE STANDARD HOUSE CONNECTION. LOCATION AS SHOWN ON PLANS OR DETERMINED AT TIME OF CONSTRUCTION.

90° LONG RADIUS BEND OR DOUBLE WYE

4" CLASS "B" CONCRETE, BOTTOM & SIDES TO TOP.

45° BEND

TO 45° SERVICE STACK, OVER 45° SERVICE SEWER

4" CLASS "B" CONCRETE ENCASUREMENT

TEE BRANCH

MIN. TYP.

MAIN SEWER

TYPICAL SERVICE STACK

4" CLASS "B" CONCRETE ENCASUREMENT

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4" CLASS "B" CONCRETE ENCASUREMENT

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MAIN SEWER

NOTE:
IF TOP STEP IS IN 24" DIA. SECTION IT MAY PROJECT NO MORE THAN 3/2"

NOTE:
USE NEENAH R-1980-E CAST IRON MANHOLE STEPS M.A. IND. PS-I-PF REINFORCED PLASTIC STEPS OR APPROVED EQUAL.

NOTE:
SET FRAME ON 1" CEMENT MORTAR BED

NOTE:
GRADE ADJUSTMENT (TYP.)
Min. Height 8"-Any Combination of Precast Rings and/or Manhole Brick (Typ.)
Max. Height 16"-Any Combination of Precast Rings and/or Manhole Brick-Brick Courses Not to Exceed Two (Typ.)

NOTE:
0.50" # GALV. STEEL TEST PIPE X 12" LONG, CAP INSIDE (AS REQUIRED)

NOTE:
FOR PVC & A.B.S. PIPE CONNECTIONS USE ASTM C-923 FLEXIBLE GASKET SUCH AS A-LOK, DURA SEAL III, KOR-N-SEAL OR APPROVED EQUAL. THIS METHOD ALSO ACCEPTABLE FOR V.C.P.

NOTE:
CONCRETE WITH STEEL TROWEL FINISH OR PRECAST INVERT CHANNELS & BENCH.

NOTE:
EITHER METHOD MAY BE USED FOR V.C.P. CARRIER PIPE.

NOTE:
THIS METHOD MUST BE USED FOR PVC & A.B.S. CARRIER PIPE.

NOTE:
PLUG WITH STOPPER IF SERVICE SEWER IS NOT INSTALLED.

NOTE:
SERVICE SEWER TO BE LAID ON CONTINUOUS SLOPE. MIN. 0.62% GRADE.

NOTE:
PLUG WITH STOPPER IF HOUSE CONNECTION IS NOT MADE.

NOTE:
WIDTH OF ENCASUREMENT IN ROCK: I.D. PIPE + 1'-6" UP TO 42" PIPE, O.D. PIPE + 1'-6" 48" PIPE AND LARGER.

NOTE:
I.D. PIPE + 2'-0" UP TO 42" PIPE, O.D. PIPE + 2'-0" 48" PIPE AND LARGER.

NOTE:
I.D. PIPE + 1'-6" UP TO 42" PIPE, O.D. PIPE + 1'-6" 48" PIPE AND LARGER.

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I.D. PIPE + 2'-0" UP TO 42" PIPE, O.D. PIPE + 2'-0"