

Lat. 8, Main, 2, C.I.S.
SANITARY SEWER IMPROVEMENTS
to serve

Auburn Hills 13th Addition
CITY OF WICHITA, KANSAS

Michael E. Lindesk, P.E. City Engineer

Project Number

468-83312

O.C.A. Number

743882

Sheet Index

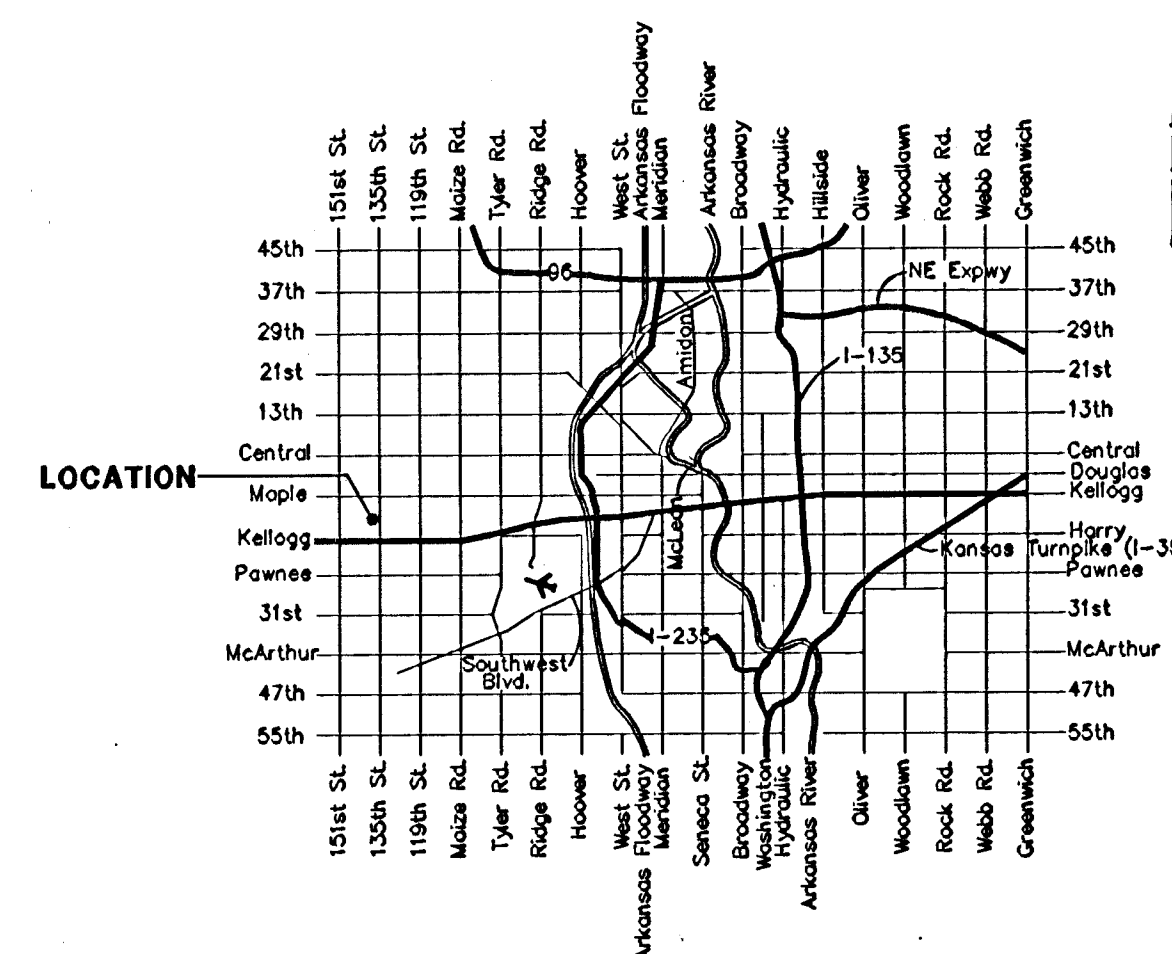
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Benchmark

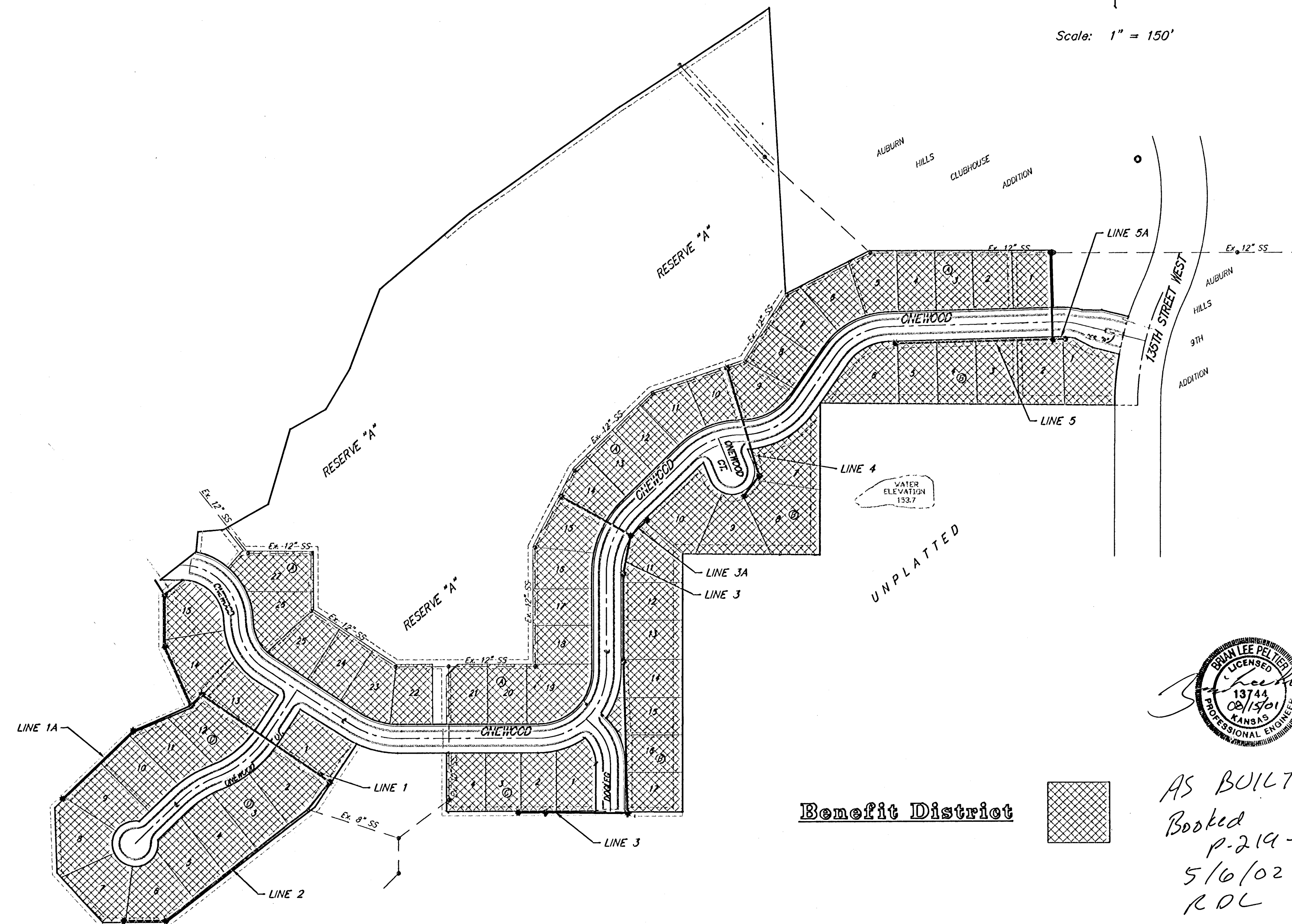
CITY DISC- 34.3' E. & 3.3' N. OF S.W. CORNER
OF N.W. 1/4, SEC. 25, T-27-S, R-2-W

ELEV.=156.63

(City Datum)



Vicinity Map



Scale: 1" = 150'

GENERAL NOTES:

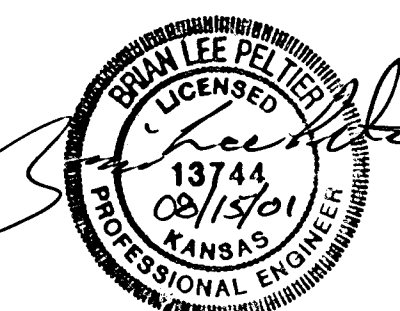
1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

Kansas One-Call 687-2470

The Contractor must notify the following in case of an emergency:

Cox Communications	262-0661
Kansas Gas Service Company	383-8600
KCE	383-8600
Peoples Gas Company	1-800-303-0752
Southwestern Bell Telephone Company	1-800-344-7233
City of Wichita Water Dept.	268-4908
City of Wichita Traffic Engineering	268-4446

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
3. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
4. The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days advance notice prior to start of construction.
5. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
7. This project is subject to a current SWPP Plan. Contractor shall comply with any unusual requirements as necessary for site to be in compliance during construction.
8. Contractor shall grade the sanitary sewer alignment to the profile and elevations shown on the easement grading plans. All costs for grading shall be paid as lump sum for easement grading plans.
9. All areas disturbed by construction operations shall be seeded with ryegrass at a rate of 300 lbs/acre immediately following construction in that area. Prior to seeding, area shall be prepared per city specs.
If disturbed area is adjacent to the golf course, the following seeding specs. shall be used:
Seed -- K-31 Fescue, 8#/100 sq. ft.
Mulch -- 2 Tons Prairie Hay/acre
Fertilizer -- 850 lbs/acre
Ground shall be prepared per City of Wichita specifications prior to seeding.
10. Stabilized construction entrance to be installed at engineers request if conditions warrant. See Detail, Sheet 7



Benefit District

AS BUILT
Booked
p. 219-220
5/6/02
RCL

BENCHMARK:

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(City Datum)

Sta. 0+00, Begin Line 1=
Sta. 0+00, Begin Line 2
Connect to Existing 8" Stub
Install Outside Drop in Existing Manhole.
Cost of Materials and Construction for
Outside Drop to be included in Bid
Item, Standard MH. Extend 8" Line NE.
Adjust Existing Manhole Rim from Elev.
= 189.22 to Elev. = 187.50. Cost to
be included in Bid Item "MH, Adj. w/o
New Rim & Cover."

AUBURN HILLS GOLF COURSE
CITY OF WICHITA

Sta. 0+78.0, Line 1
Construct Standard
Manhole.
Top Elev. = 186.50

Install 33.0 L.F. Flowable
Fill from Sta. 2+40.3 to
Sta. 2+73.3 per City
Specs.

Sta. 4+26.2, Line 1
Construct Standard
Manhole.
Top Elev. = 189.40

Sta. 4+58.4, Line 1=
Sta. 0+00, Line 1A
Construct Standard
Manhole.
Top Elev. = 189.00

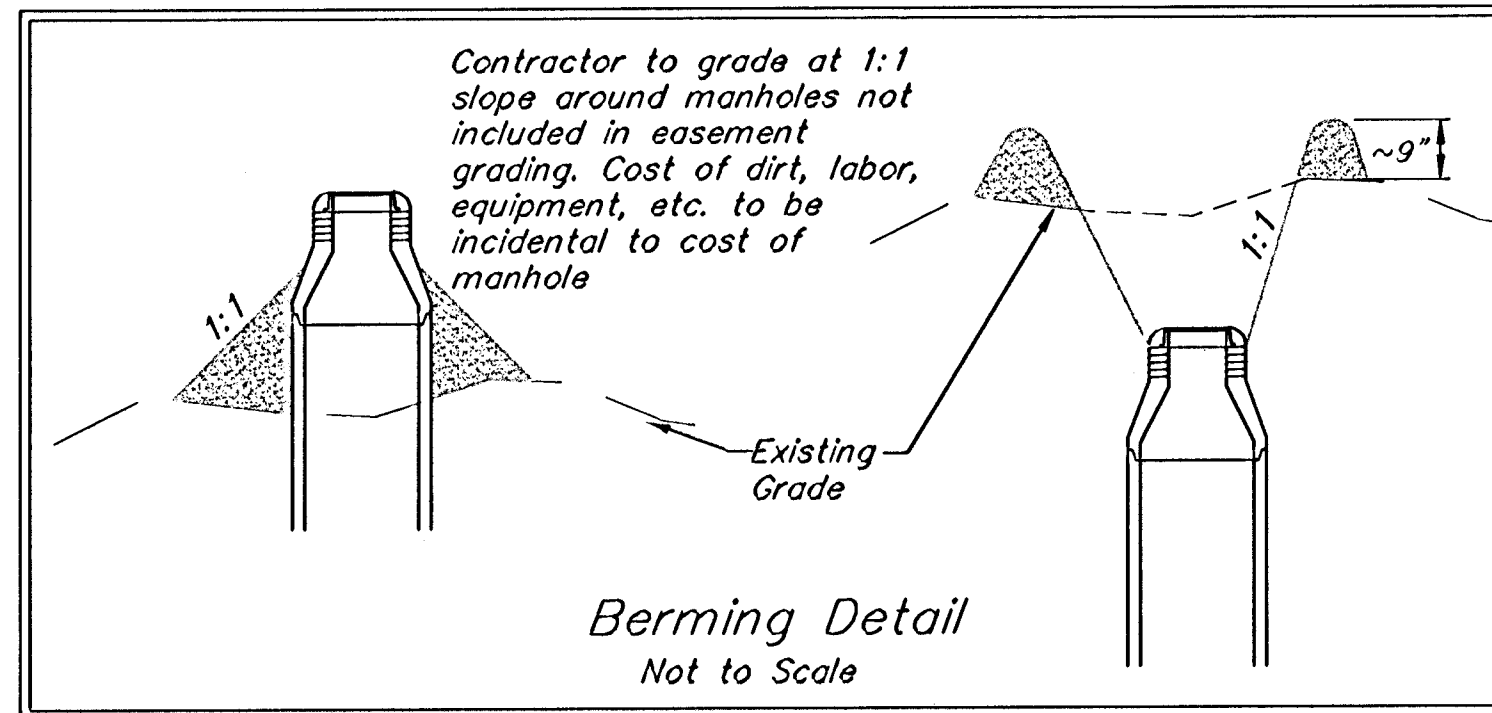
Sta. 5+97.1, Line 1
Construct Standard
Manhole.
Top Elev. = 193.50

Sta. 7+07.5, End Line 1
Construct Standard
Manhole.
Top Elev. = 194.40

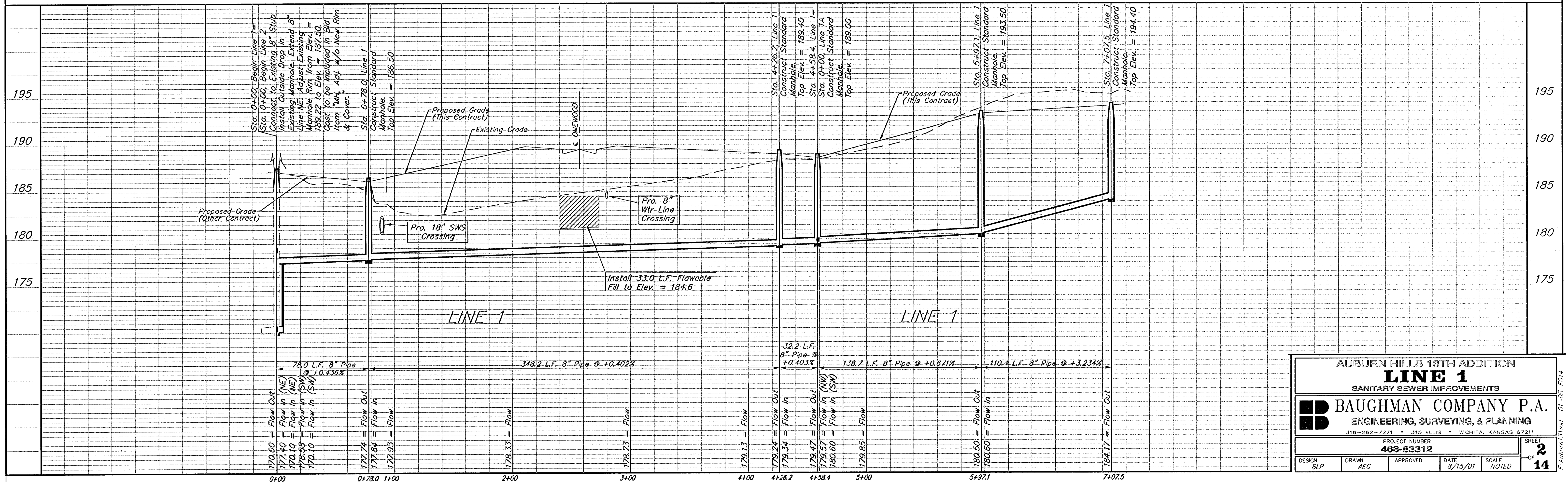
Scale:
1" = 40' Horizontal
1" = 5' Vertical
• = Iron

Contractor to Contact Ron
Masher, 641-9497, Auburn
Hills Golf Course One Week
Prior to Construction to
Coordinate Tree & Sprinkler
Conflicts.

Remove and Replant Trees
as Necessary for
Construction. Trees to be
Replanted per City Specs.
Cost to be included in "Site
Clearing & Restoration."



AUBURN HILLS 13TH ADDITION



AUBURN HILLS 13TH ADDITION
LINE 1
SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-89312

DESIGN: BLP DRAWN: AEG APPROVED: DATE: 8/13/01 SCALE: NOTED

SHEET **2** OF **14**

BENCHMARK:

CITY DISC- 34.3' E. & 3.3' N. OF S.W. CORNER
OF N.W. 1/4, SEC. 25, T-27-S, R-2-W.

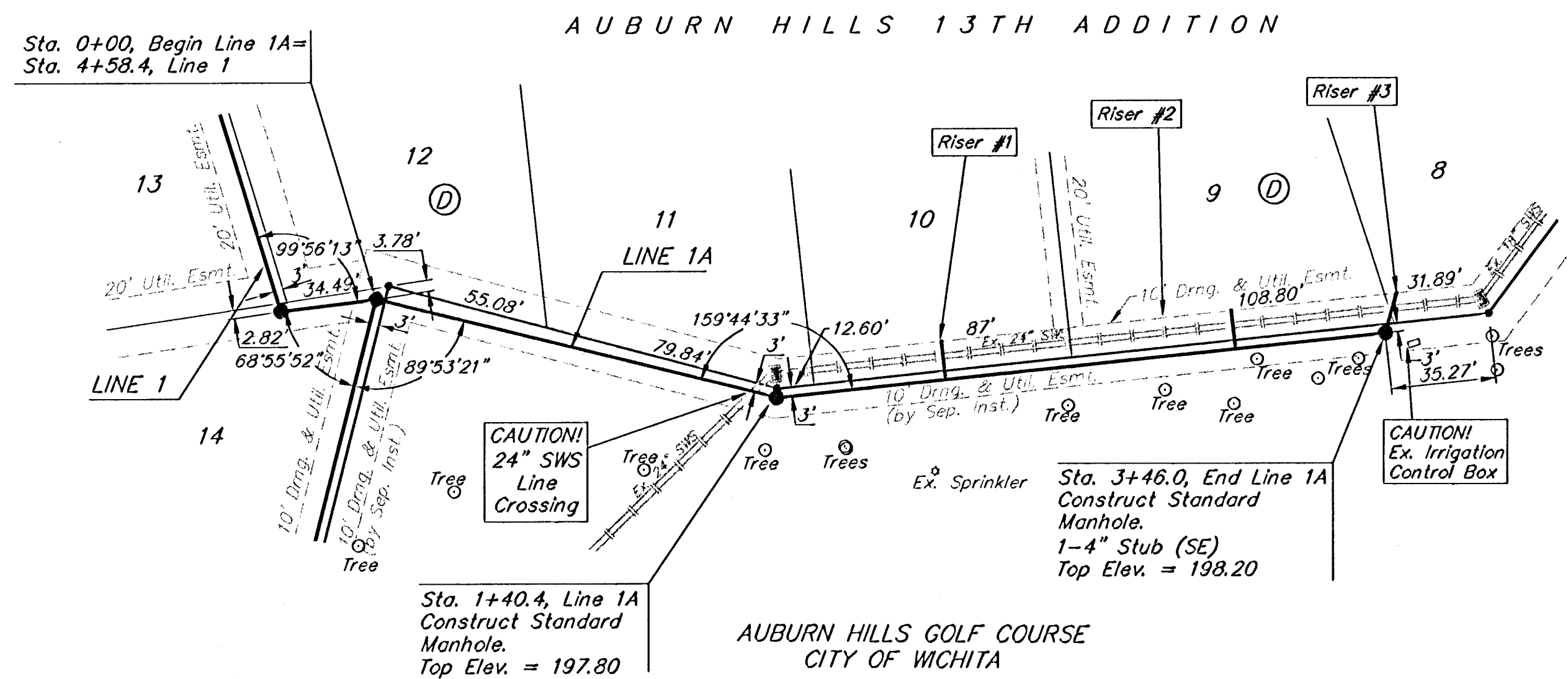
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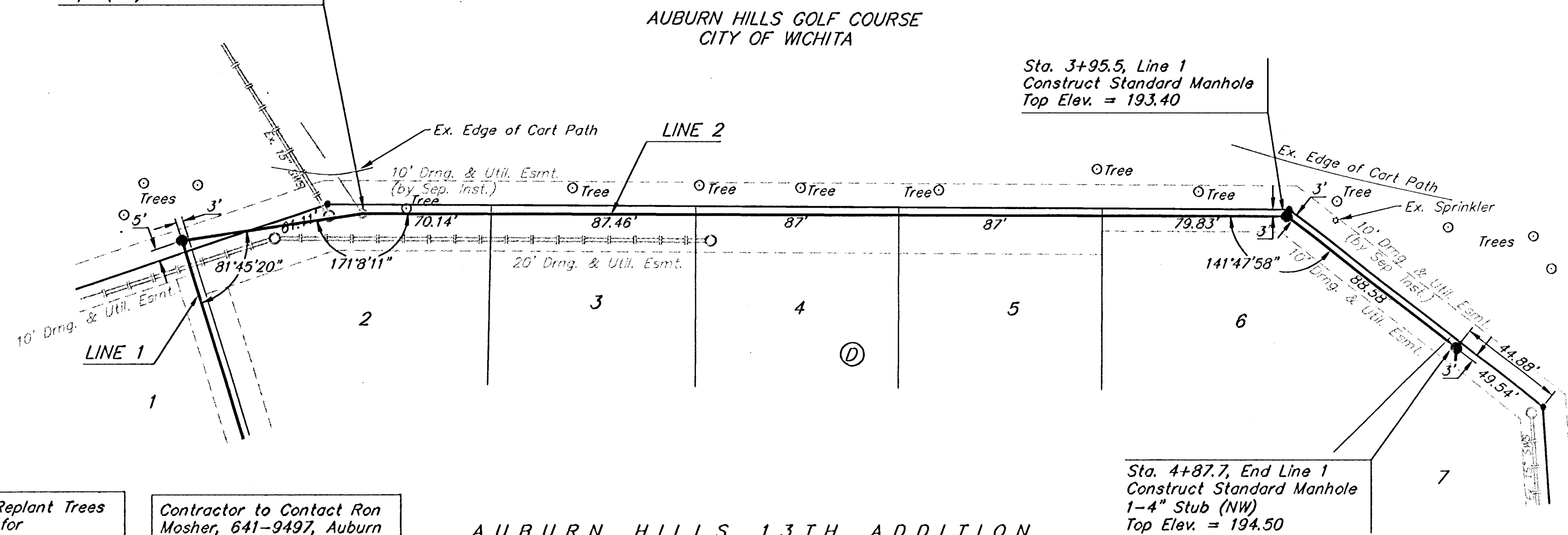
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION/DIRECTION	APPROXIMATE LENGTH 4" PIPE	
1	8" X 4" Tee Saddle	10	D	1A	2+17/Lt.	5.4'	13'
2	8" X 4" Tee Saddle	9	D	1A	2+95/Lt.	6.9'	13'
3	4" Stub w/ Riser	8	D	1A	3+46/Lt.	7.1'	14.2"

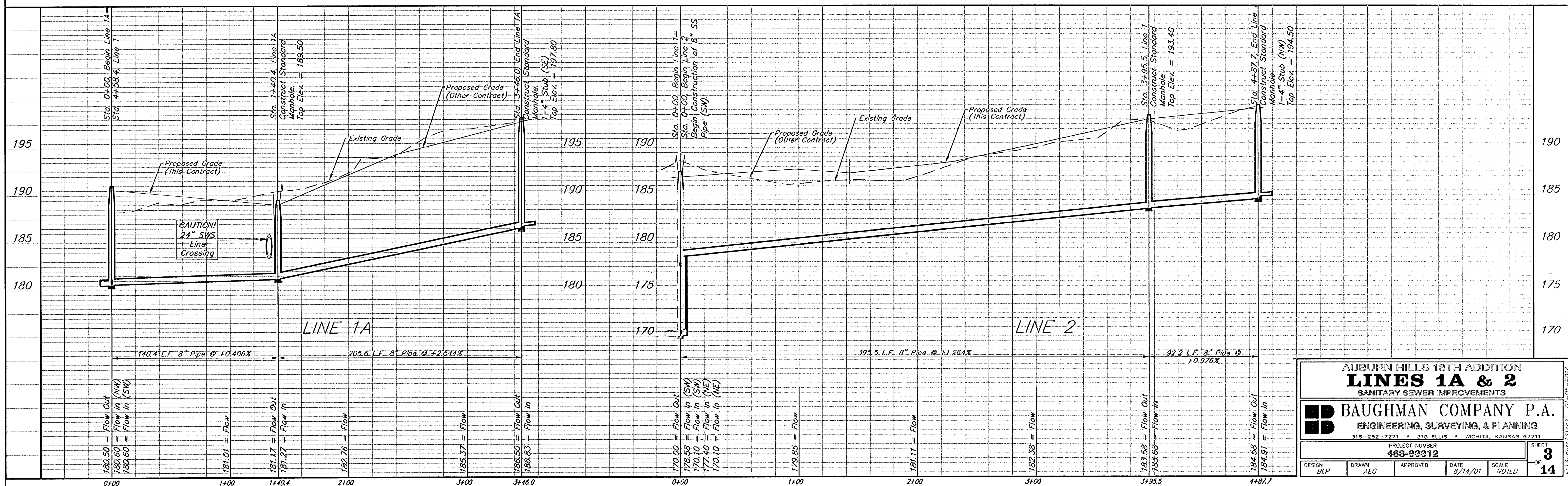
NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.
Contractor shall use method "B" for riser construction. (See Detail, Sheet 11.)



Sta. 0+00, Begin Line 1 = Sta. 0+00, Begin Line 2
Begin Construction of 8" SS Pipe (SW).



Scale:
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1" = 5' Vertical
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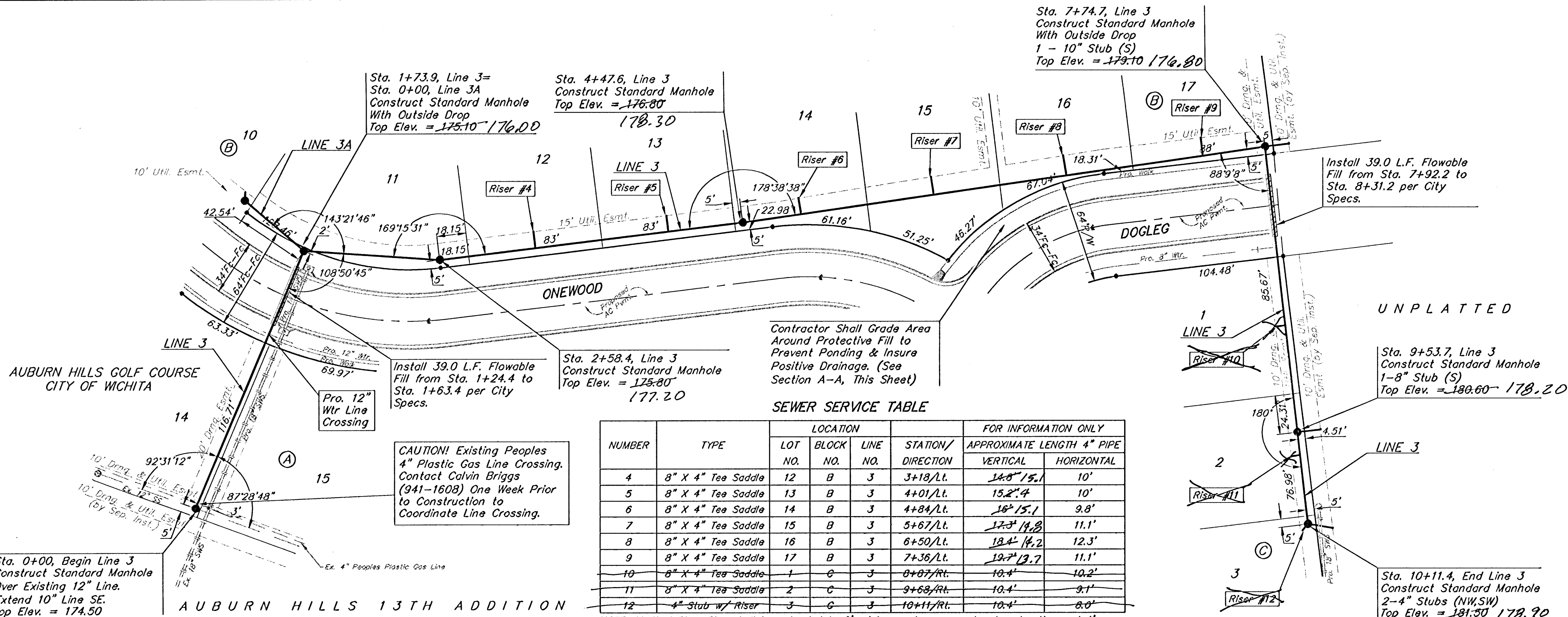


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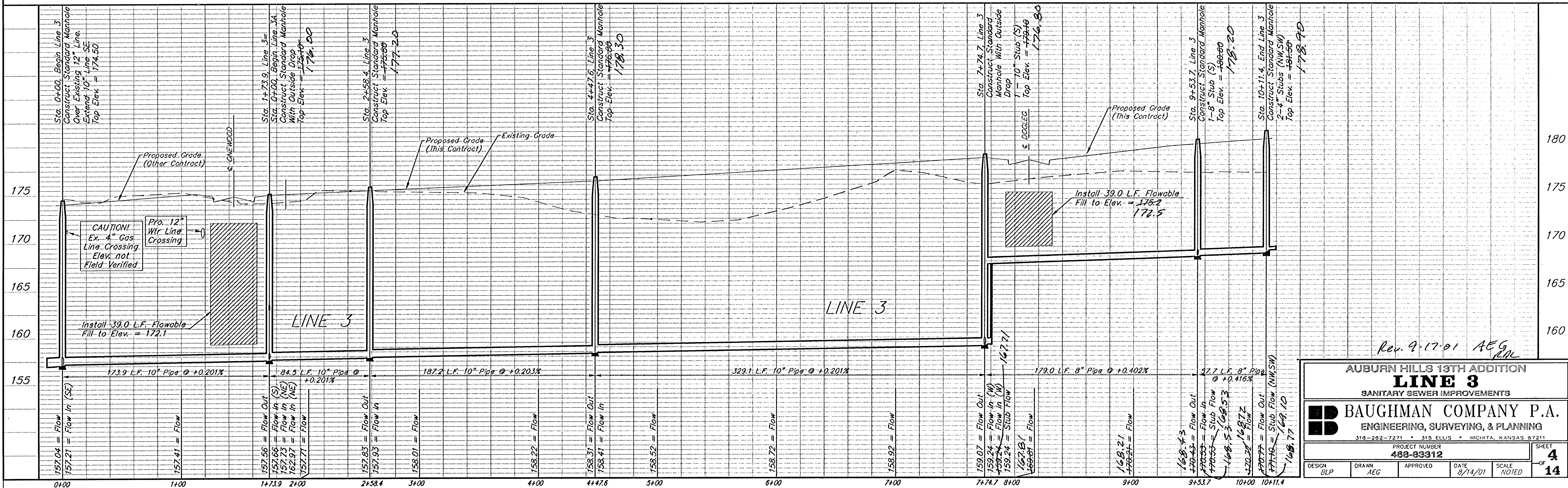
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION		STATION/ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.		APPROXIMATE LENGTH 4" PIPE	
4	8" X 4" Tee Saddle	12	B	3	3+18/Lt.	14.8' 15.1'
5	8" X 4" Tee Saddle	13	B	3	4+01/Lt.	15.2' 4'
6	8" X 4" Tee Saddle	14	B	3	4+84/Lt.	18' 15.1'
7	8" X 4" Tee Saddle	15	B	3	5+67/Lt.	17.3' 14.8'
8	8" X 4" Tee Saddle	16	B	3	6+50/Lt.	18.4' 14.2'
9	8" X 4" Tee Saddle	17	B	3	7+36/Lt.	19.7' 12.7'
10	8" X 4" Tee Saddle	1	C	3	8+07/Rt.	10.4' 10.2'
11	8" X 4" Tee Saddle	2	C	3	9+68/Rt.	10.4' 9.1'
12	4" Stub w/ Riser	3	C	3	10+11/Rt.	10.4' 8.0'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation. Contractor shall use method "B" for riser construction. (See Detail, Sheet 11)

Scale:
1" = 40' Horizontal
1" = 5' Vertical
• = Iron

Contractor to Contact Ron Mosher, 641-9497, Auburn Hills Golf Course One Week Prior to Construction to Coordinate Tree & Sprinkler Conflicts.



Rev. 9-17-01 AEG

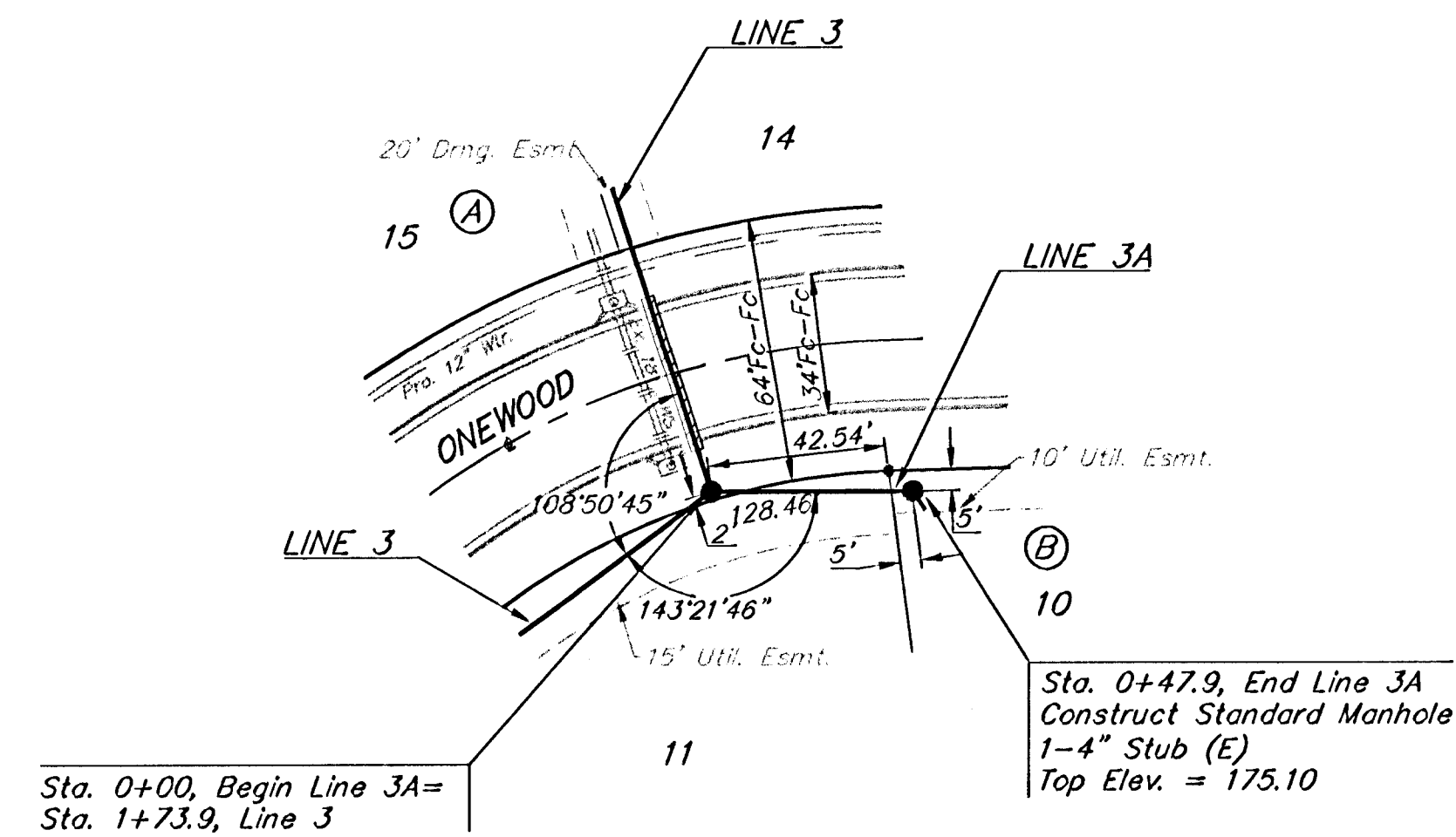
AUBURN HILLS 13TH ADDITION
LINE 3
SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211

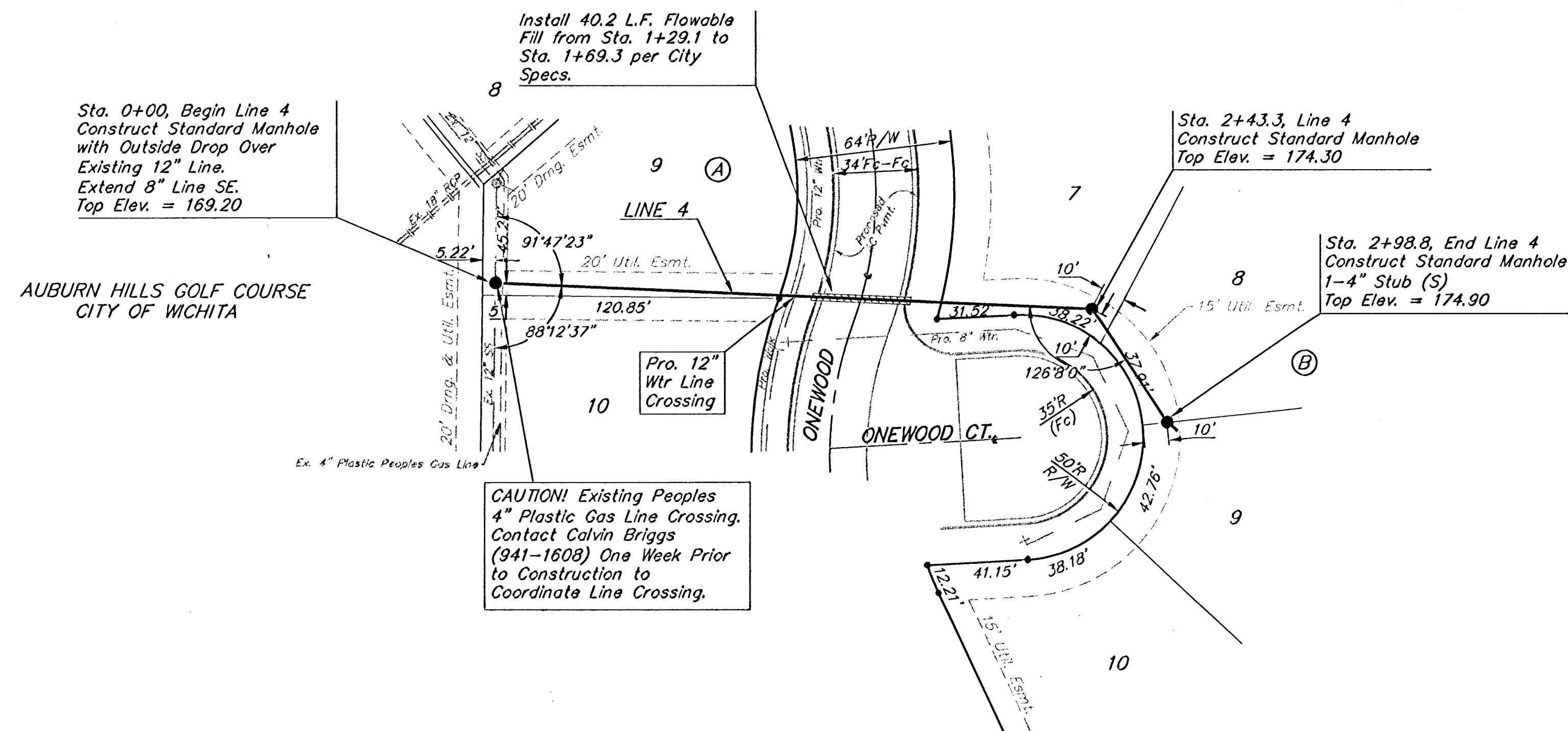
PROJECT NUMBER
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BENCHMARK:
CITY DISC- 34.3' E. & 3.3' N. OF S.W. CORNER
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ELEV.=156.63 (City Datum)



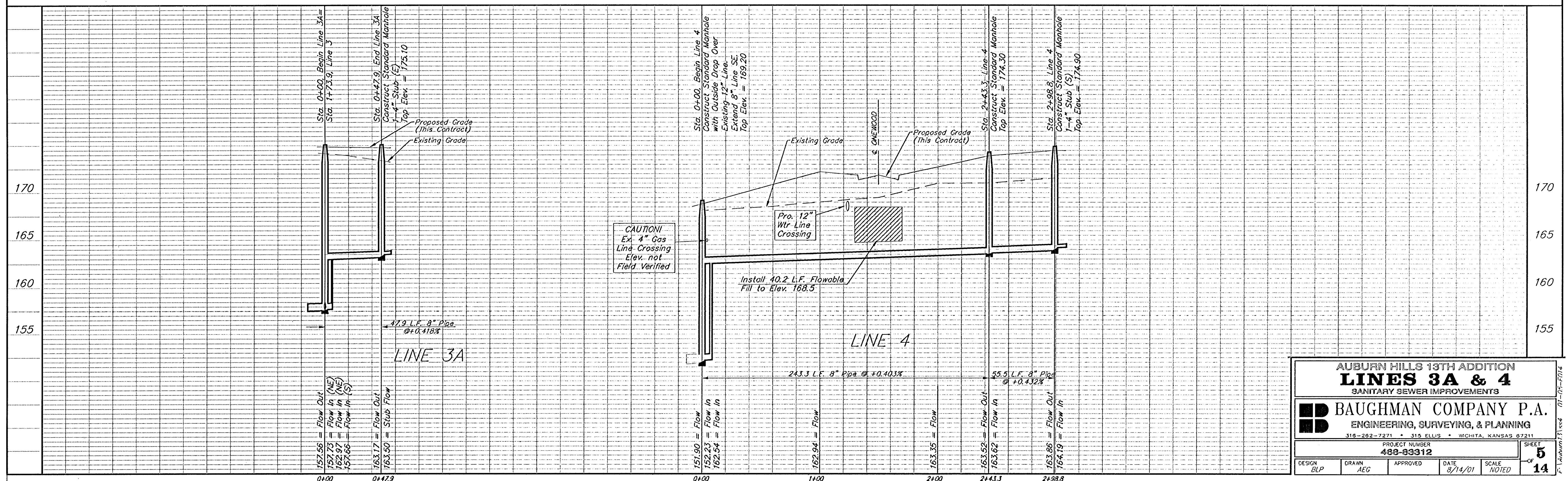
AUBURN HILLS 13TH ADDITION



AUBURN HILLS 13TH ADDITION

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Contractor to Contact Ron
Mosher, 641-9497, Auburn
Hills Golf Course One Week
Prior to Construction to
Coordinate Tree & Sprinkler
Conflicts.



AUBURN HILLS 13TH ADDITION
LINE 3A & 4
SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-83312

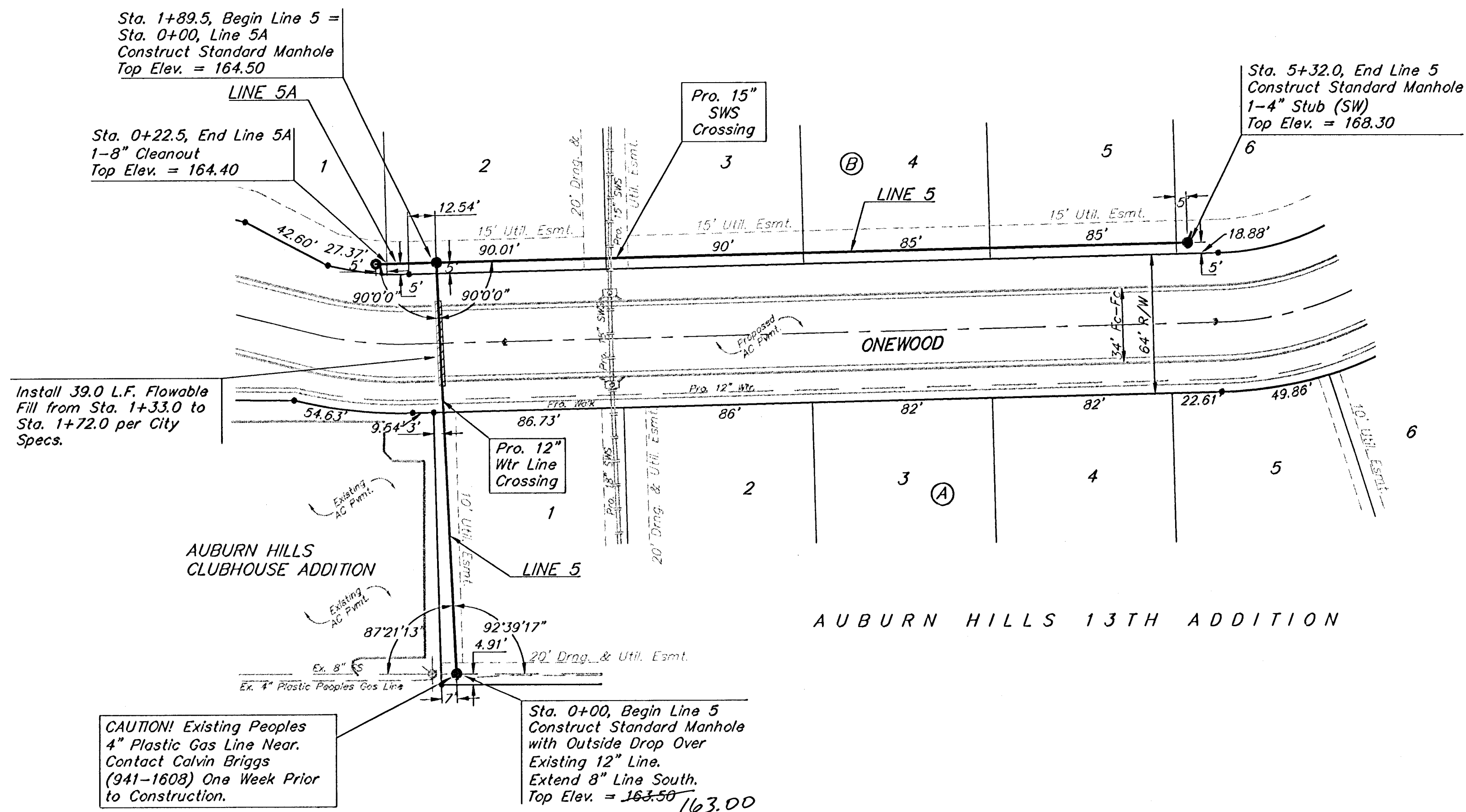
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BENCHMARK:

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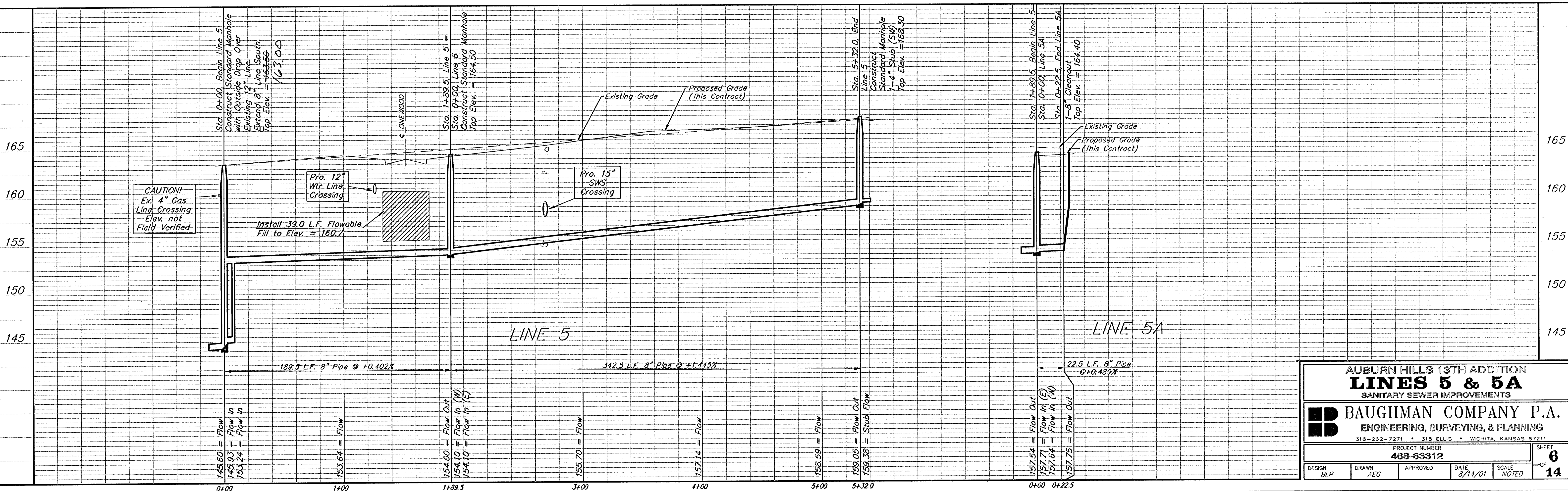
ELEV.=156.63

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Contractor to Contact Ron Mosher, 641-9497, Auburn Hills Golf Course One Week Prior to Construction to Coordinate Tree & Sprinkler Conflicts.



AUBURN HILLS 13TH ADDITION
LINES 5 & 5A
SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-282-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-83312

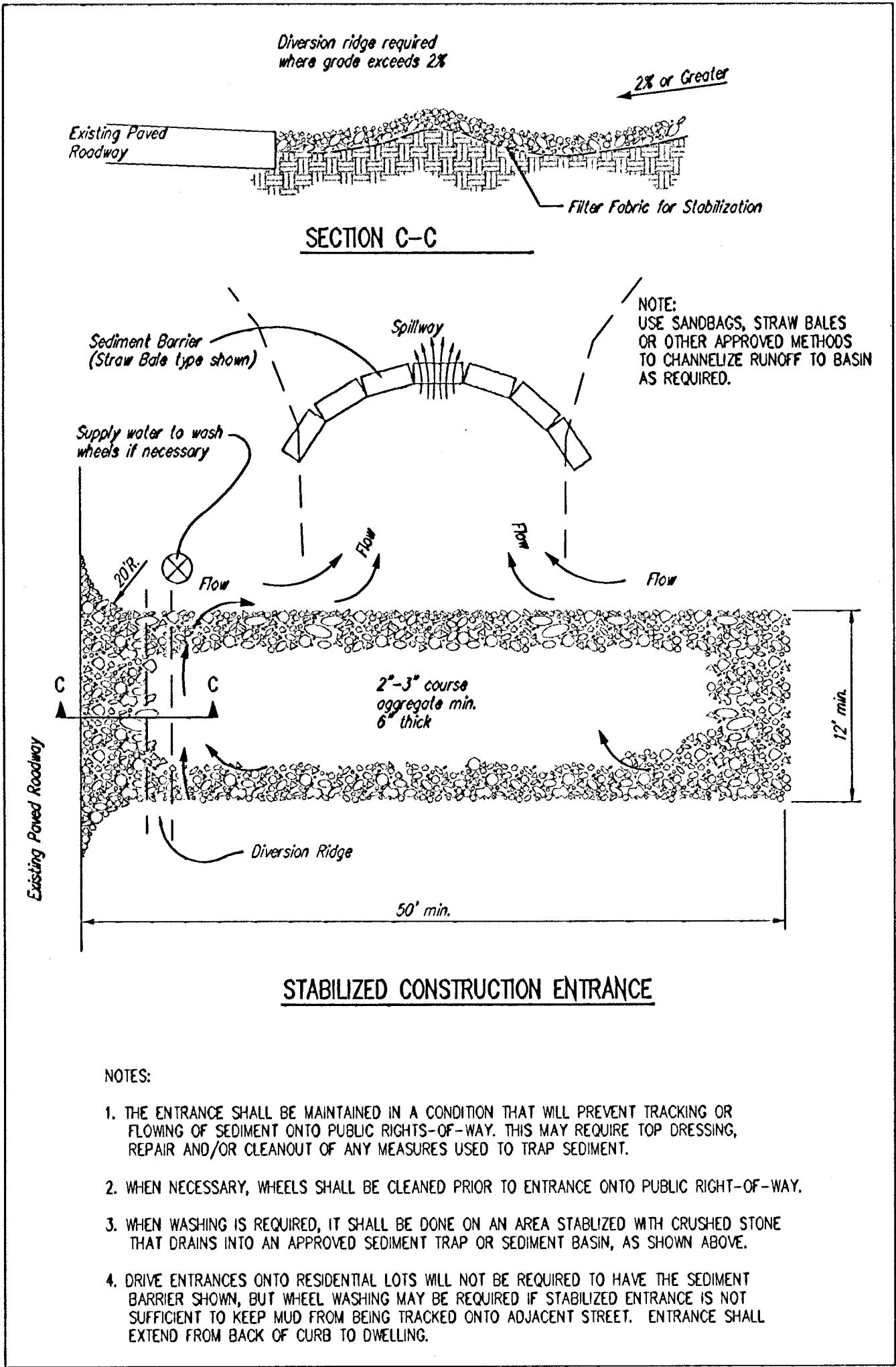
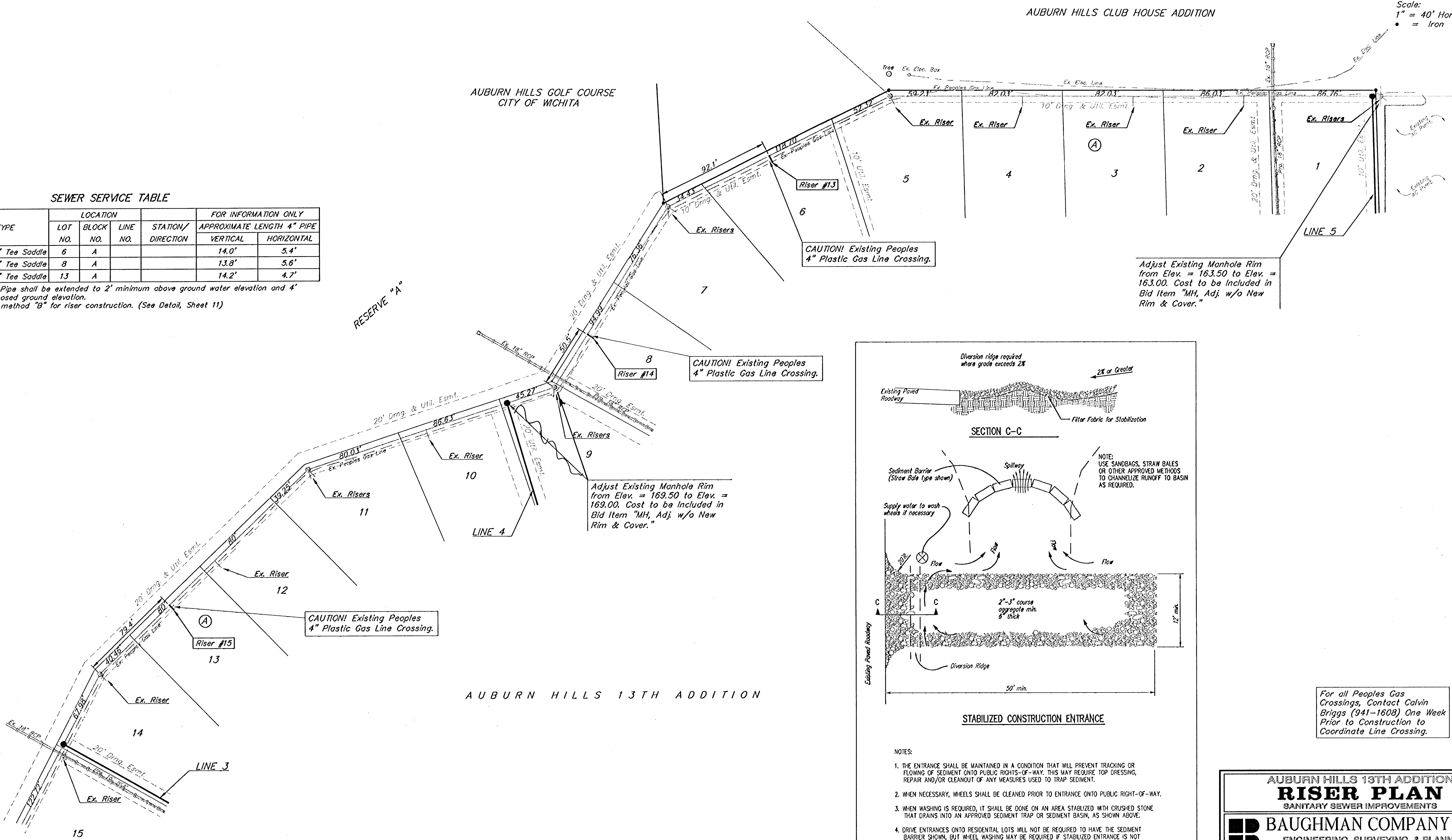
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CITY DISC- 34.3' E. & 3.3 N. OF S.W. CORNER
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SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION/DIRECTION	APPROXIMATE LENGTH 4" PIPE VERTICAL HORIZONTAL
13	12" X 4" Tee Saddle	6	A			14.0' 5.4'
14	12" X 4" Tee Saddle	8	A			13.8' 5.6'
15	12" X 4" Tee Saddle	13	A			14.2' 4.7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.
Contractor shall use method "B" for riser construction. (See Detail, Sheet 11)



- NOTES:
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
 - DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

For all Peoples Gas Crossings, Contact Calvin Briggs (941-1608) One Week Prior to Construction to Coordinate Line Crossing.

AUBURN HILLS 13TH ADDITION

RISER PLAN

SANITARY SEWER IMPROVEMENTS

BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

PROJECT NUMBER

488-89912

DESIGN

BLP

DRAWN

AEG

APPROVED

DATE

8/14/01

SCALE

NOTED

SHEET

7

OF

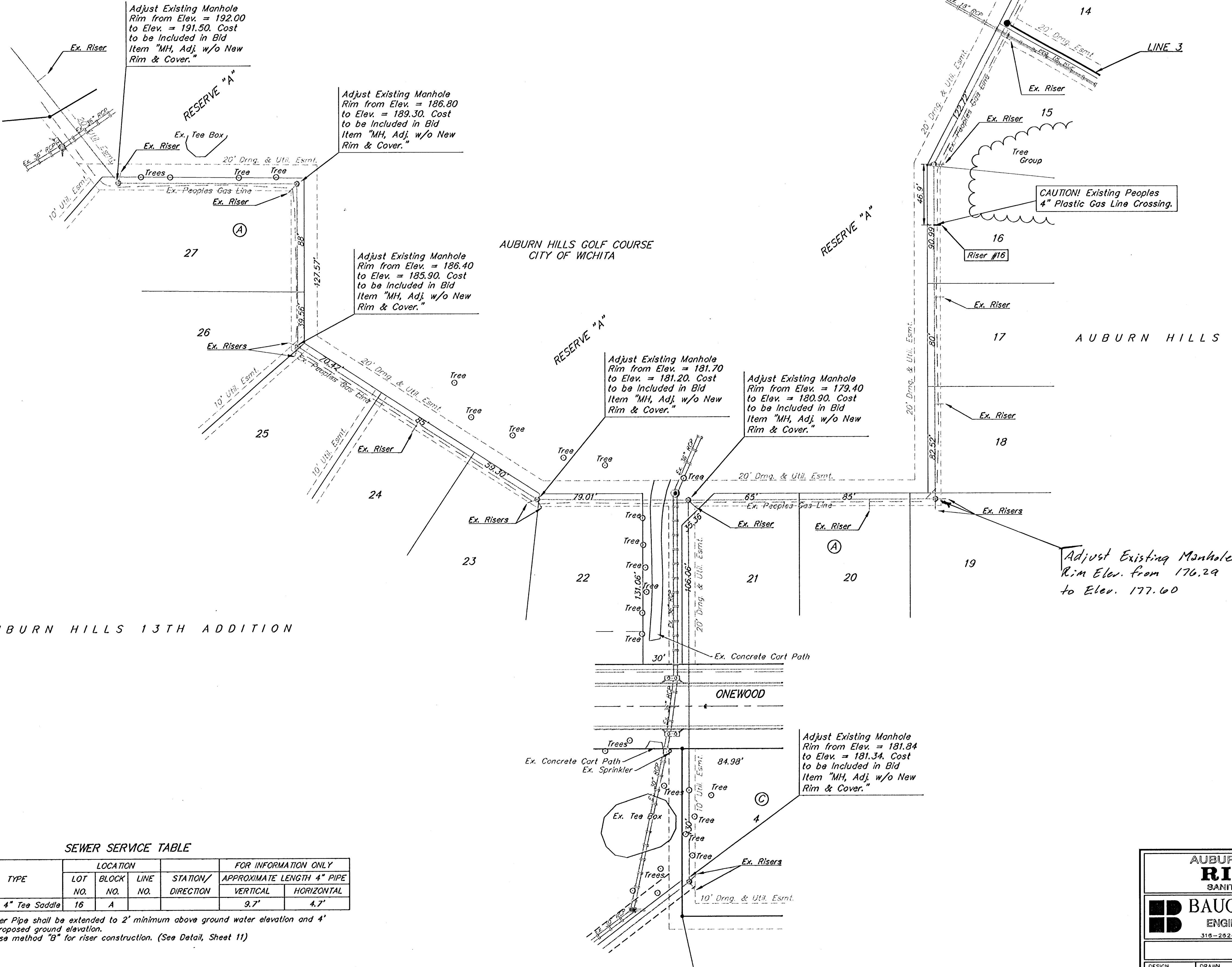
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14-AUBURN13 (S&B) 01-09-0014

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OF N.W 1/4, SEC. 25, T-27-S, R-2-W.

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AUBURN HILLS 13TH ADDITION

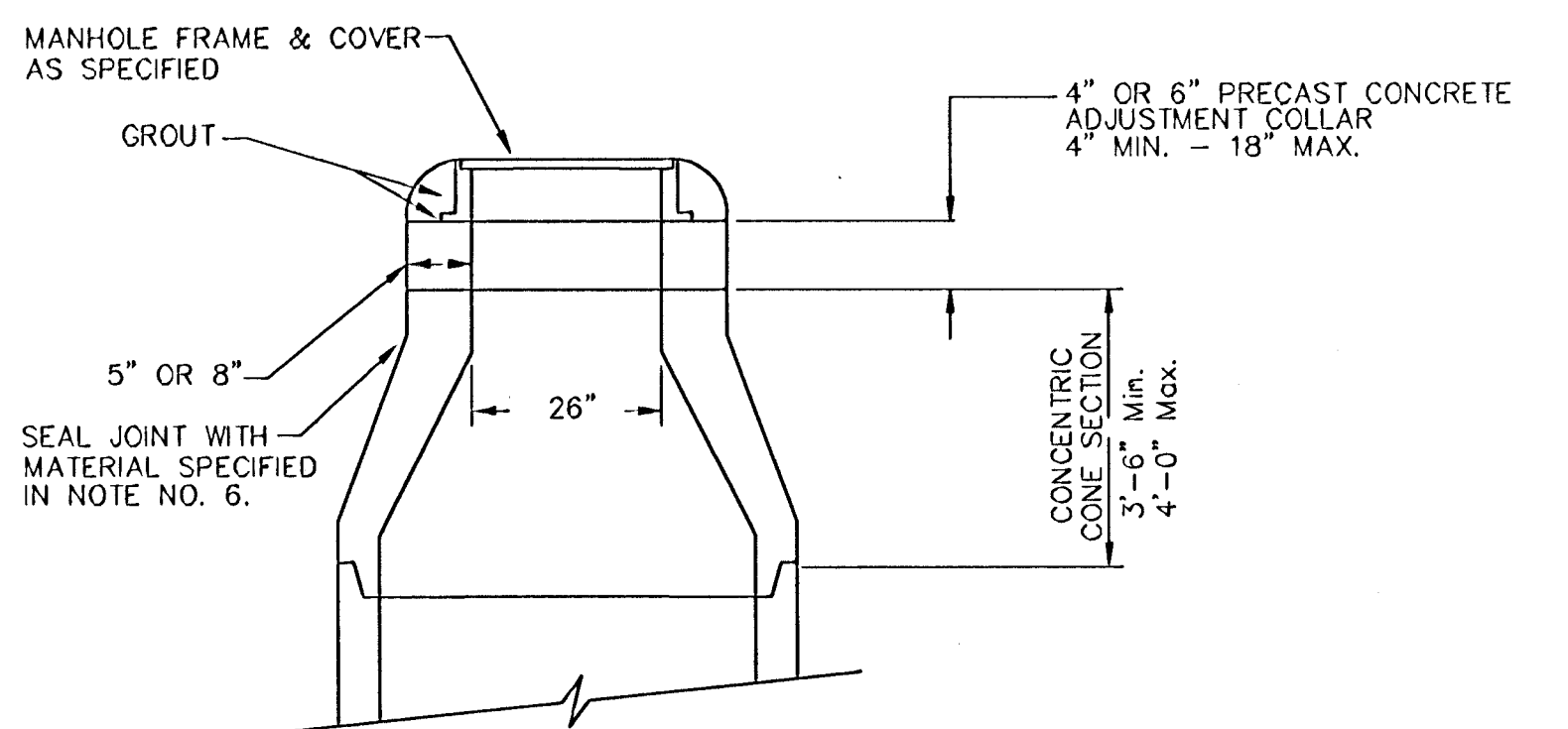
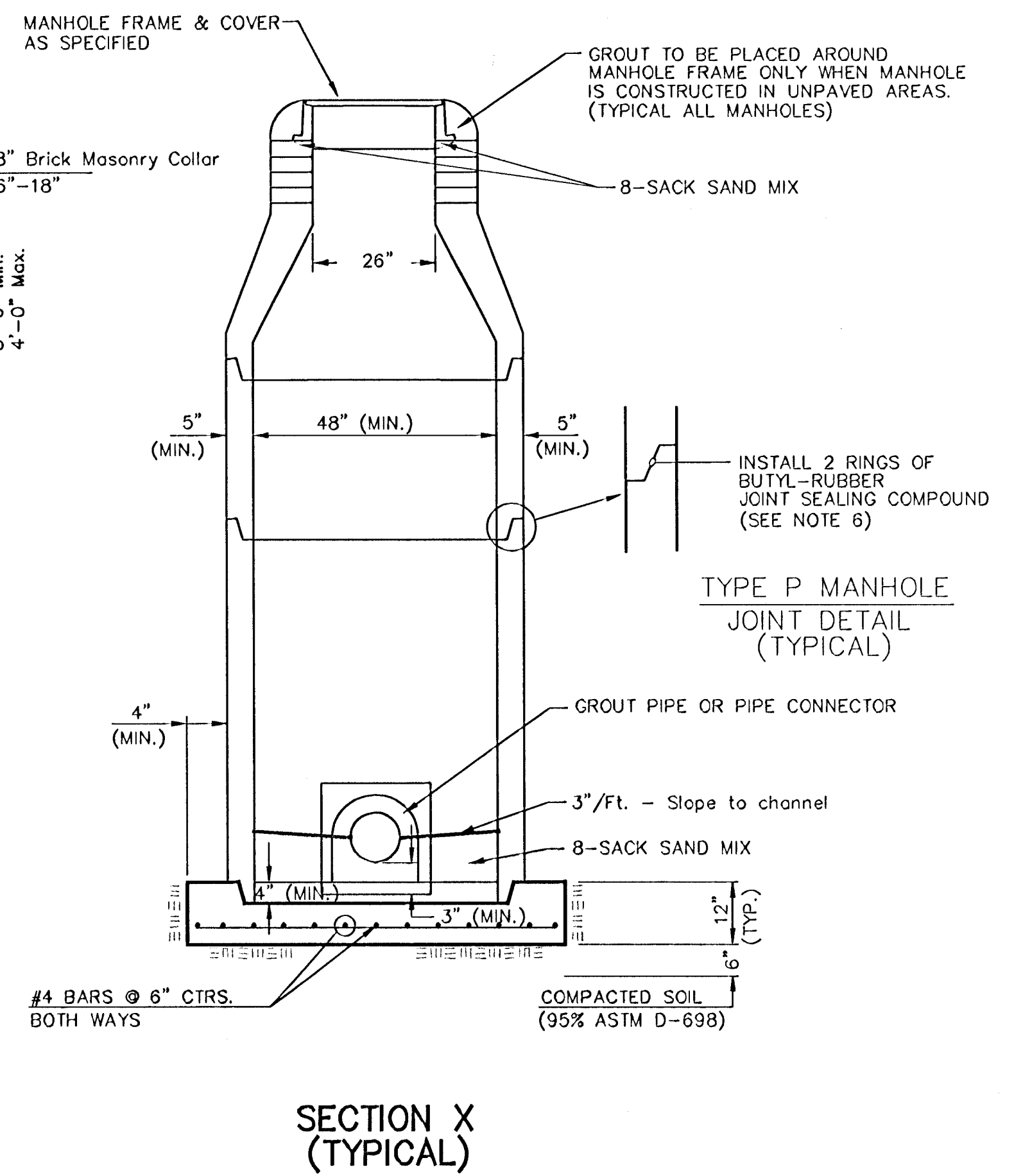
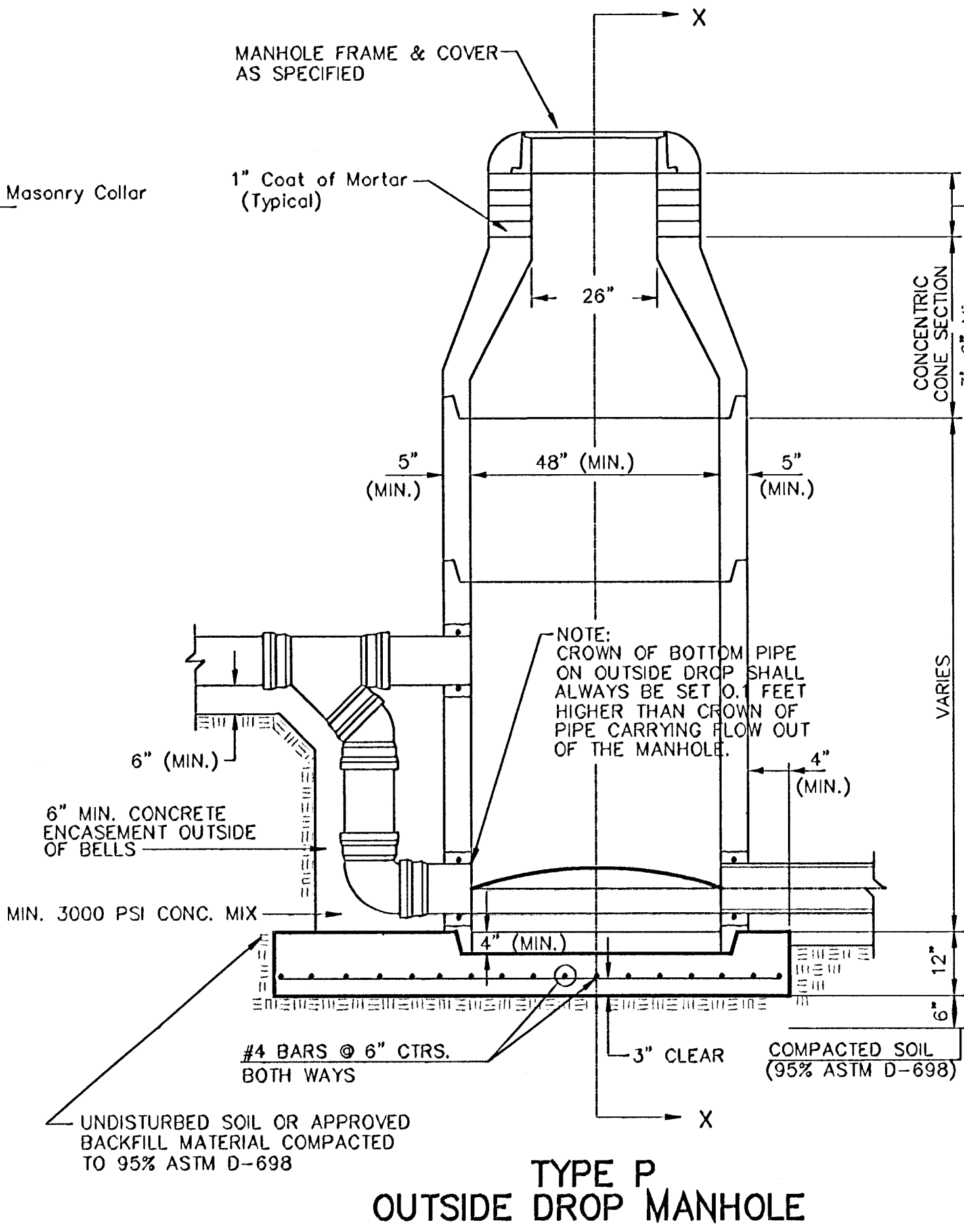
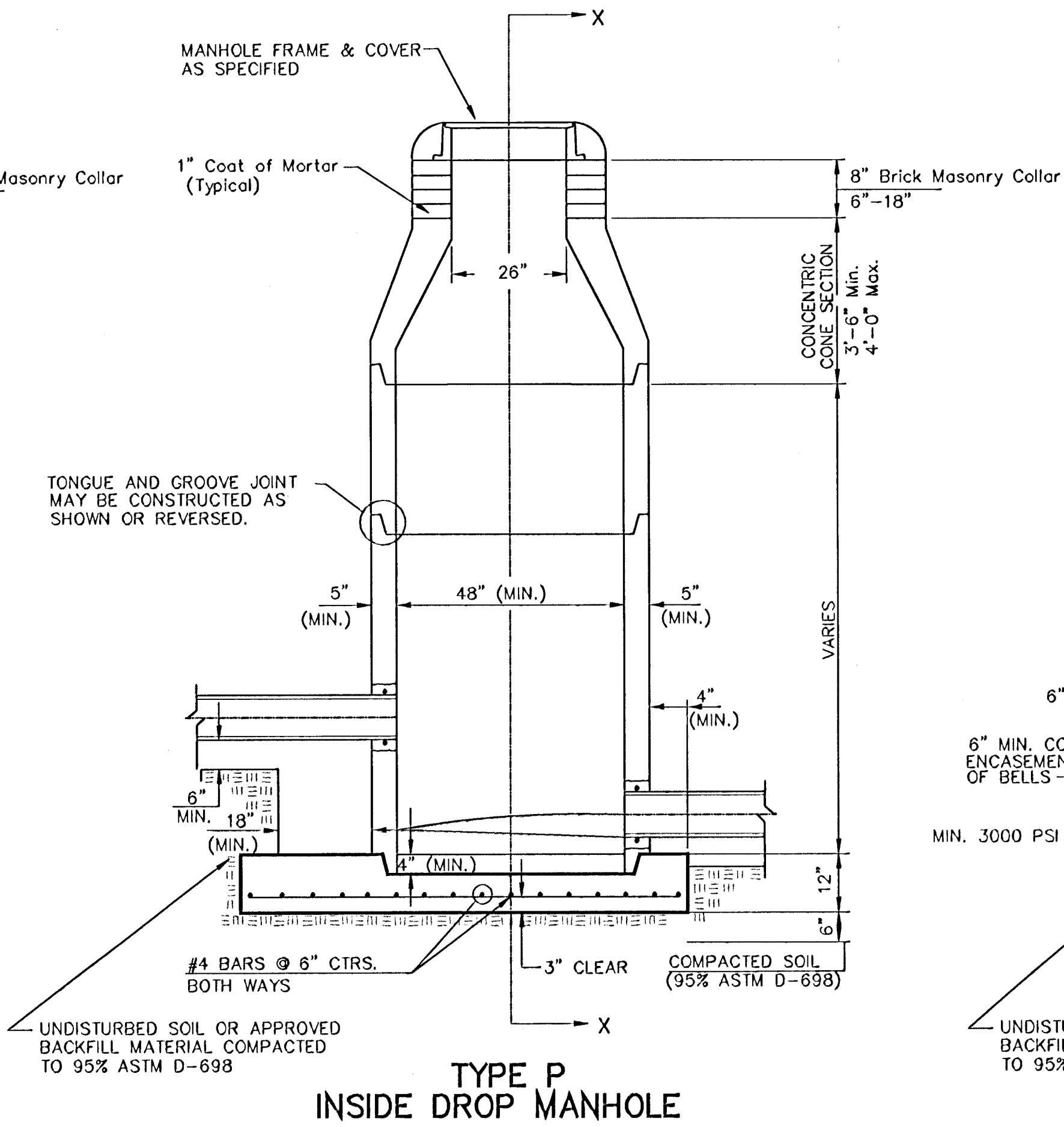
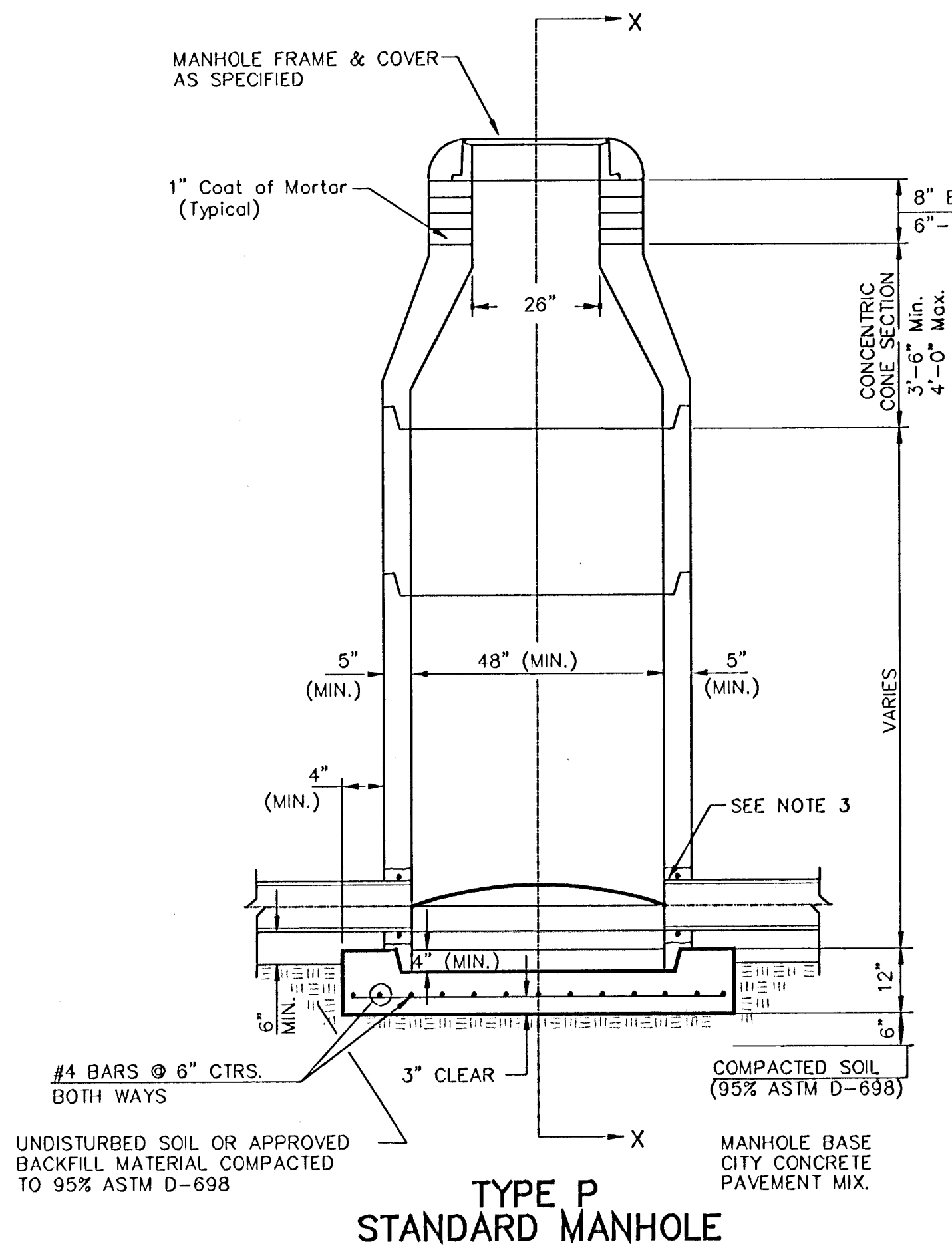
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION				FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.	STATION/DIRECTION	APPROXIMATE LENGTH 4" PIPE	
16	12" X 4" Tee Saddle	16	A			9.7'	4.7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.
Contractor shall use method "B" for riser construction. (See Detail, Sheet 11)

For all Peoples Gas Crossings, Contact Calvin Briggs (941-1608) One Week Prior to Construction to Coordinate Line Crossing.

SEWER APPURTENANCES DETAILS



ALTERNATE CONSTRUCTION IN UNPAVED AREAS

- ### GENERAL NOTES
- PRECAST MANHOLE NOTES**
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
 2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
 3. APPROVED FLEXIBLE WATERSTOP GASKETS SHALL BE INSTALLED TO JOIN THE SEWER TO THE MANHOLE WALL WHEN A.B.S. COMPOSITE PIPE OR P.V.C. PIPE IS USED. FOR OTHER TYPES OF PIPE THE SEWER SHALL BE GROUTED IN PLACE WITH NON-SHRINK GROUT. THE SEWER PIPE SHALL BE SUPPORTED WITH CONCRETE ENCASEMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
 4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNE MEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.)
 5. EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
 6. JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
 7. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
 8. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
 9. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
 10. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 BAGS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACED AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE SMALLER THAN 24" SHALL HAVE AN INSIDE DIAMETER OF 4". MANHOLES CONSTRUCTED WHERE PIPE SIZES ARE 24" OR LARGER SHALL HAVE AN INSIDE DIAMETER OF 5". COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.

11. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO. 4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
12. OPENINGS SHALL BE CUT INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS CUT INTO EXISTING MANHOLE WALLS SHALL BE REINFORCED TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. AND A.B.S. COMPOSITE PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NON-SHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CORRECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAYER AT THE UNIT PRICE FOR THE OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
13. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF-CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED. SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS EXCEPT FOR OUTSIDE DROP STACKS. THE MANHOLE FLOORS OF ALL EXISTING MANHOLES SHALL BE CONSTRUCTED AS INDICATED BY THE DRAWING. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES RIGID THROUGH MANHOLES SHALL HAVE THE TOP HALF RIGID TO NEW LIMITS FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
14. PIPES INSTALLED WITHIN THE EXCAVATION MADE FOR THE MANHOLE SHALL BE CRADLED WITH CONCRETE TO THE LIMITS OF THE MANHOLE EXCAVATION. WHEN CLAY PIPE IS USED, THE CRADLE SHALL EXTEND TO THE FIRST JOINT OUTSIDE THE MANHOLE. THE CRADLE SHALL BE TERMINATED AT THE CLAY PIPE JOINT IN A MANNER WHICH WILL MAINTAIN THE STABILITY OF THE JOINT. COST OF CRADLING WITHIN MANHOLE EXCAVATION OR TO CLAY PIPE JOINTS ADJACENT TO MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.

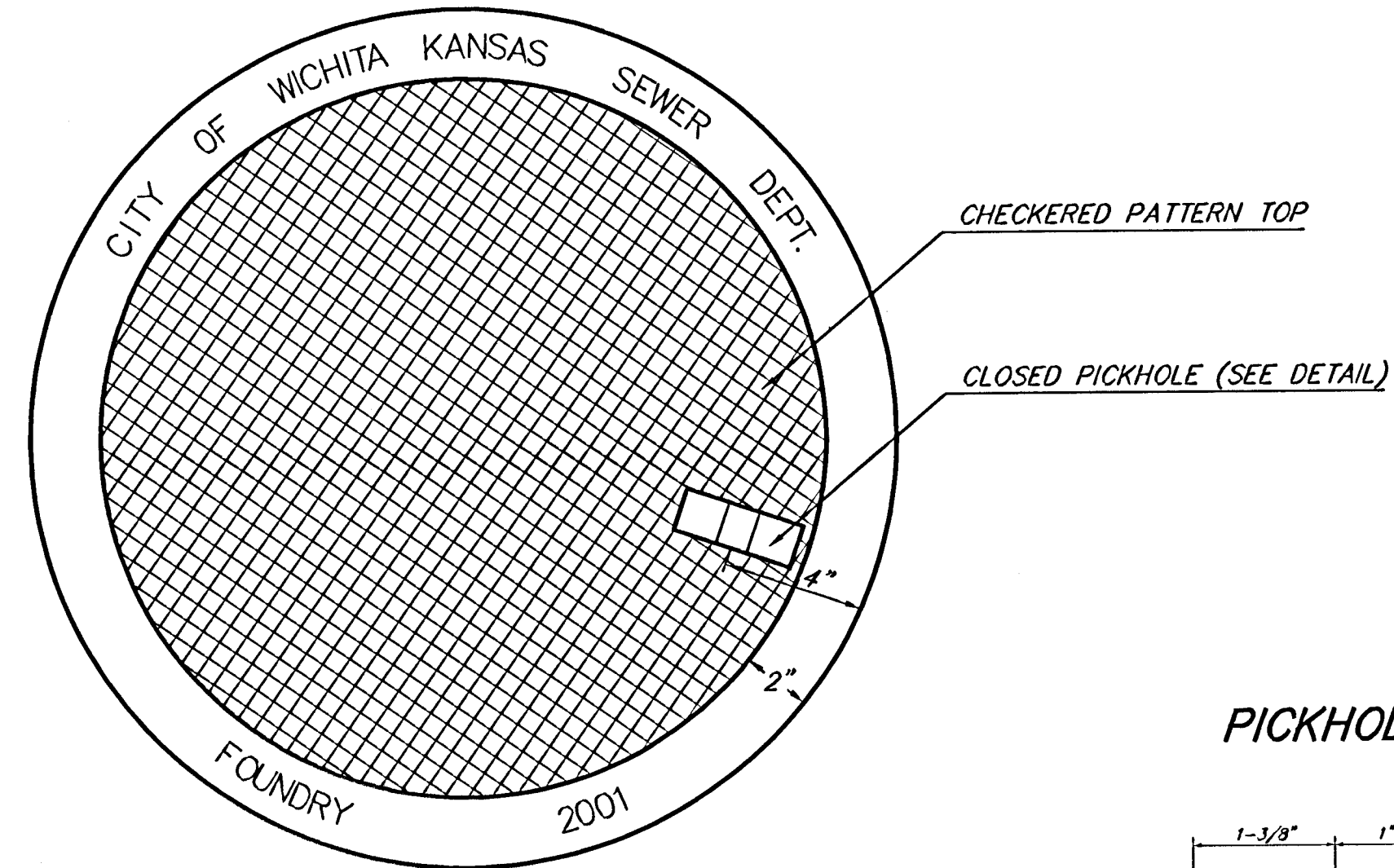
15. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
16. THE VERTICAL DROP IN INSIDE DROP MANHOLES SHALL NOT EXCEED 2' FOR INFLOWING PIPES SIZED 12" OR SMALLER AND 2' FOR INFLOWING PIPES LARGER THAN 12". THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
17. STANDARD MANHOLES AND STANDARD INSIDE DROP MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. INSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
18. A BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 10" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.

City of Wichita			
STD. MANHOLE DETAILS			
SEWER APPURTENANCES			
 BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING			
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211			
PROJECT NUMBER 488-8312			SHEET 9
DESIGN STAFF	DRAWN STAFF	APPROVED	DATE 06-01
		SCALE NONE	OF 14

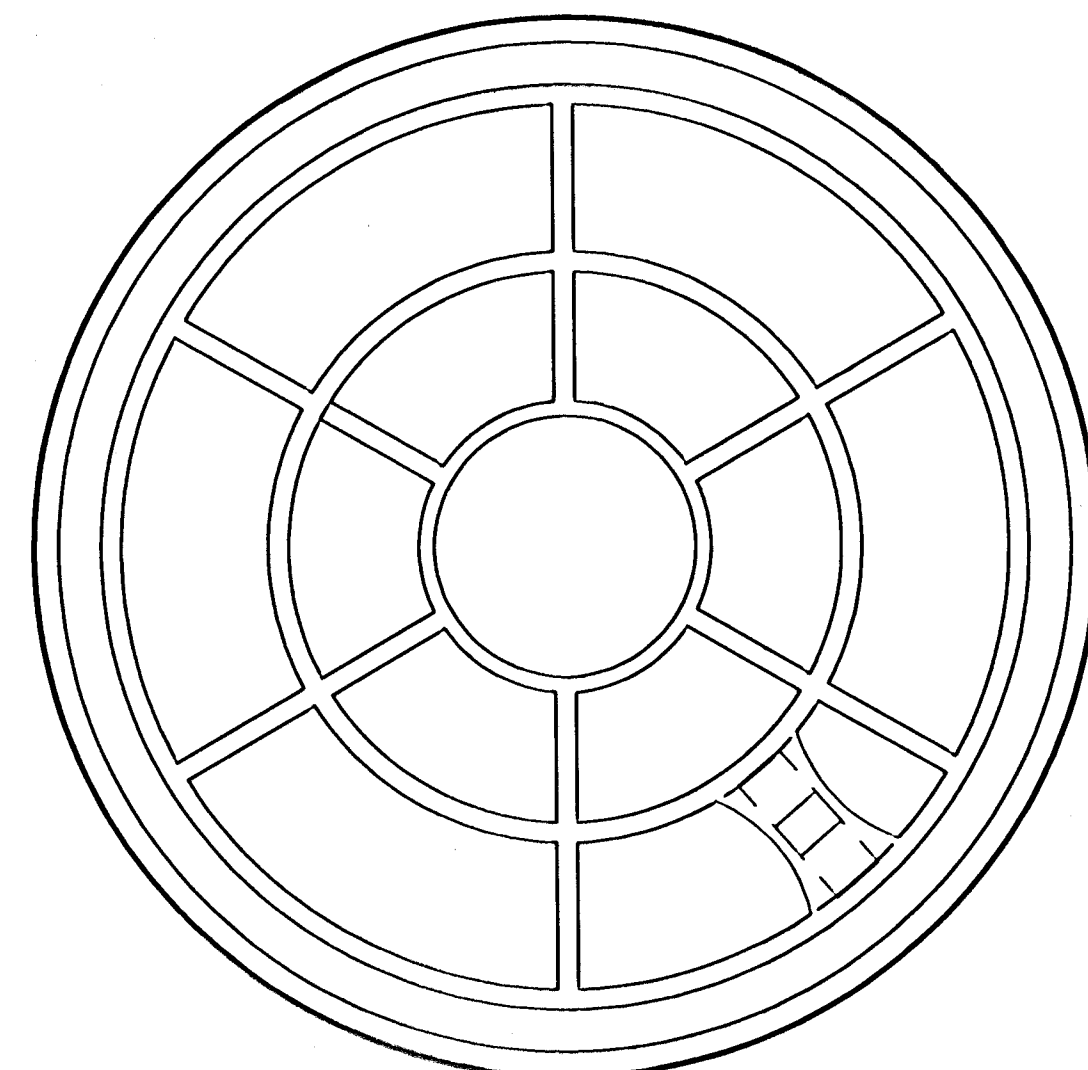
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

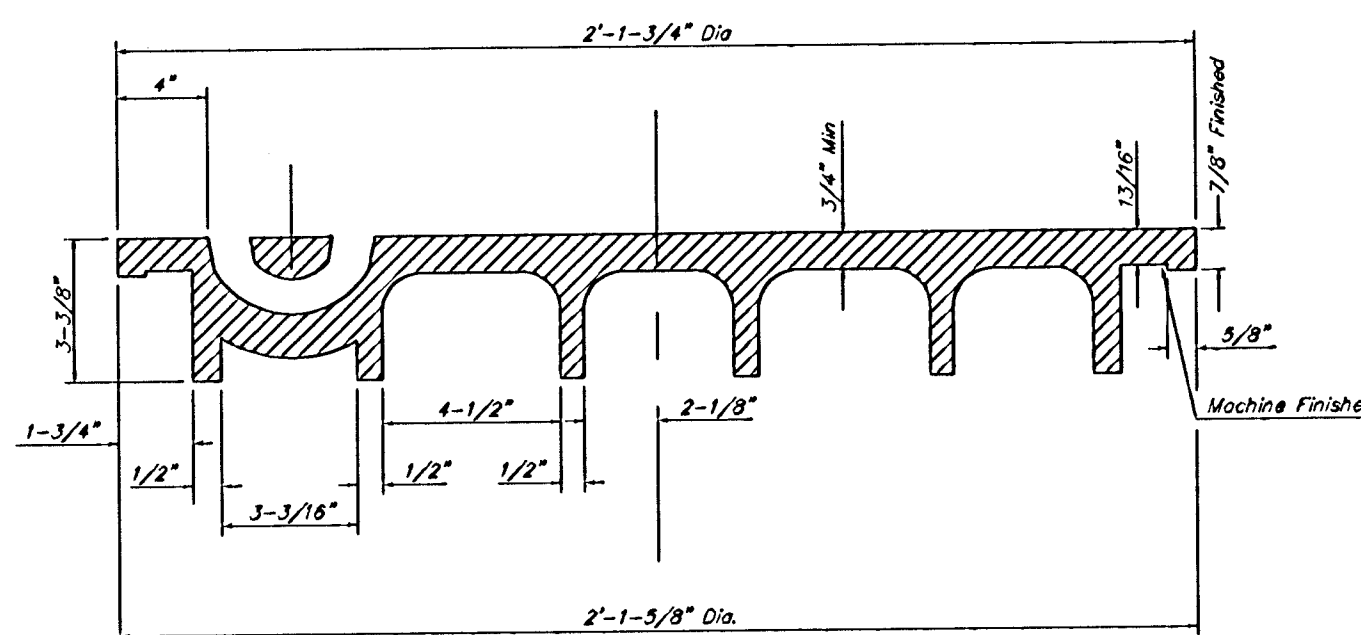
MANHOLE COVER
Weight = 180 Lbs.



TOP VIEW

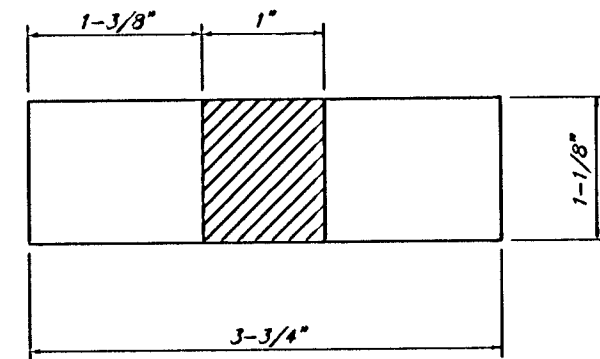


BOTTOM VIEW

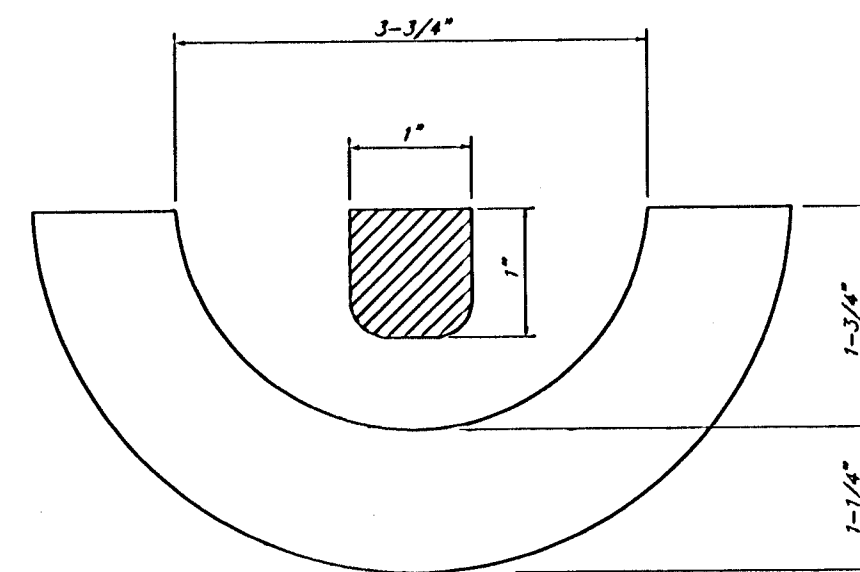


SECTION VIEW

PICKHOLE DETAIL

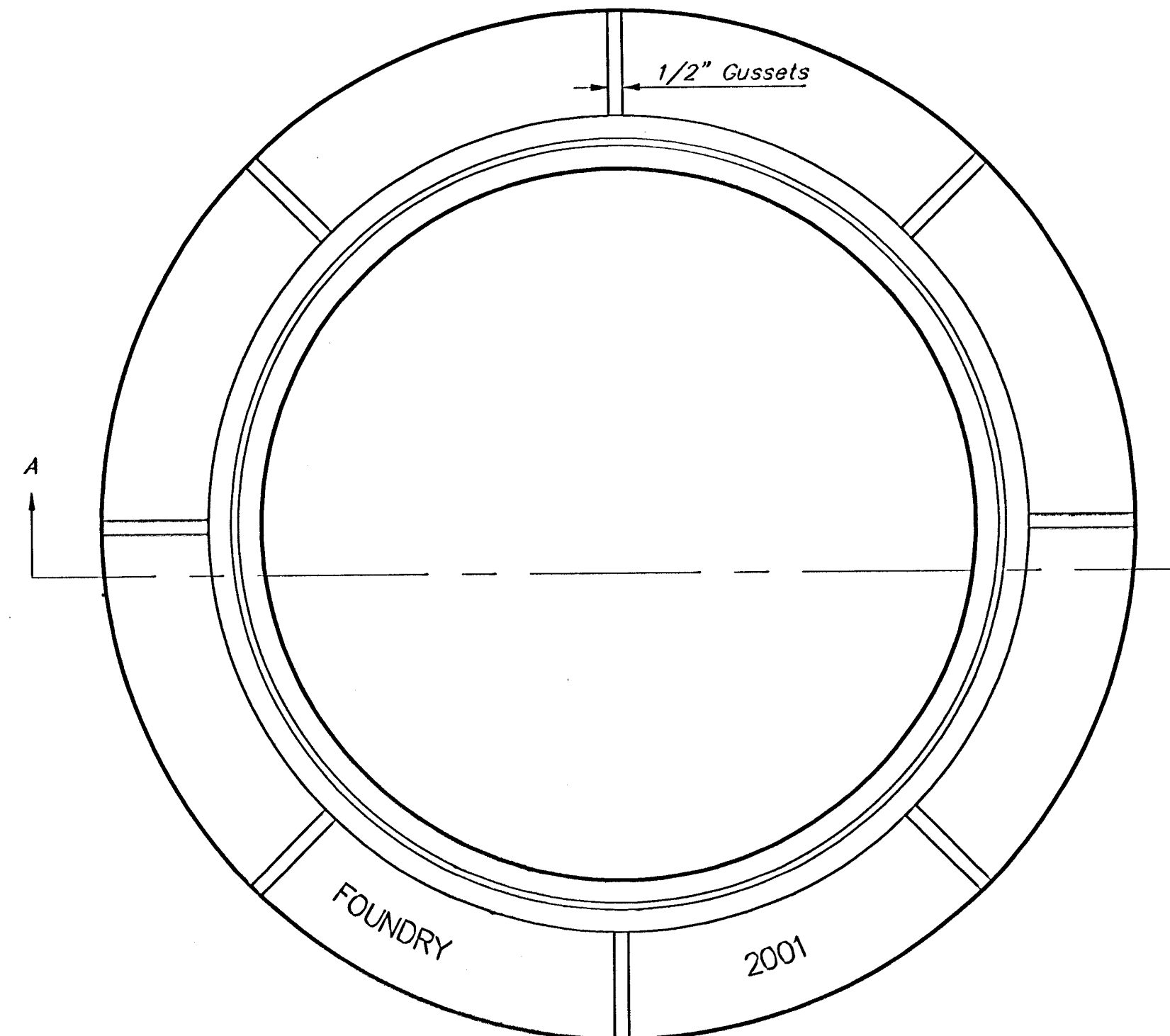


TOP VIEW

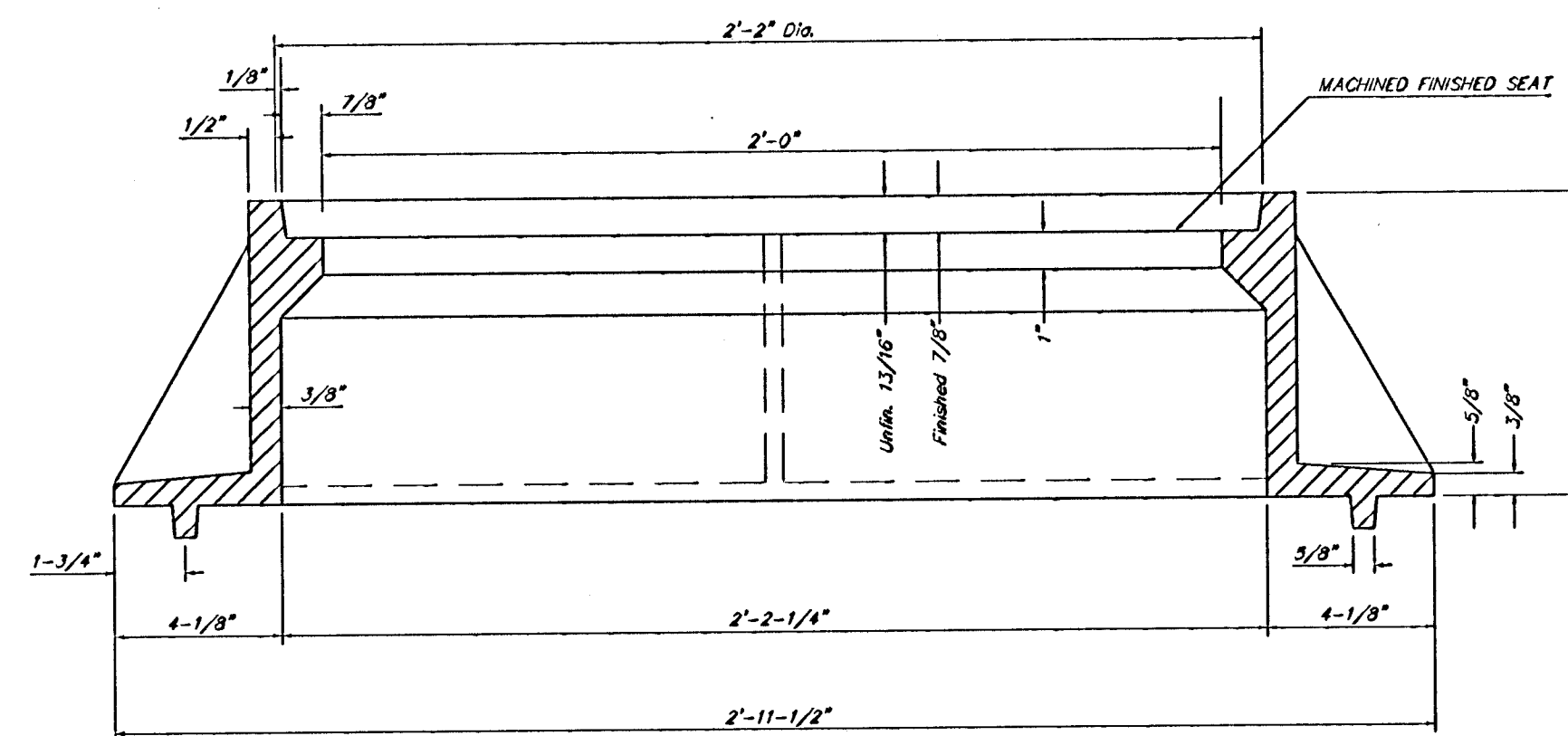


SECTION VIEW

MANHOLE FRAME
Weight = 145 Lbs.



TOP VIEW



SECTION A-A

GENERAL NOTES

MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

MANHOLE CASTINGS SHALL BE COATED WITH AN ASPHALT PAINT RESULTING IN A SMOOTH, TOUGH AND TENACIOUS COATING WHICH IS NOT BRITTLE OR TACKY.

MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

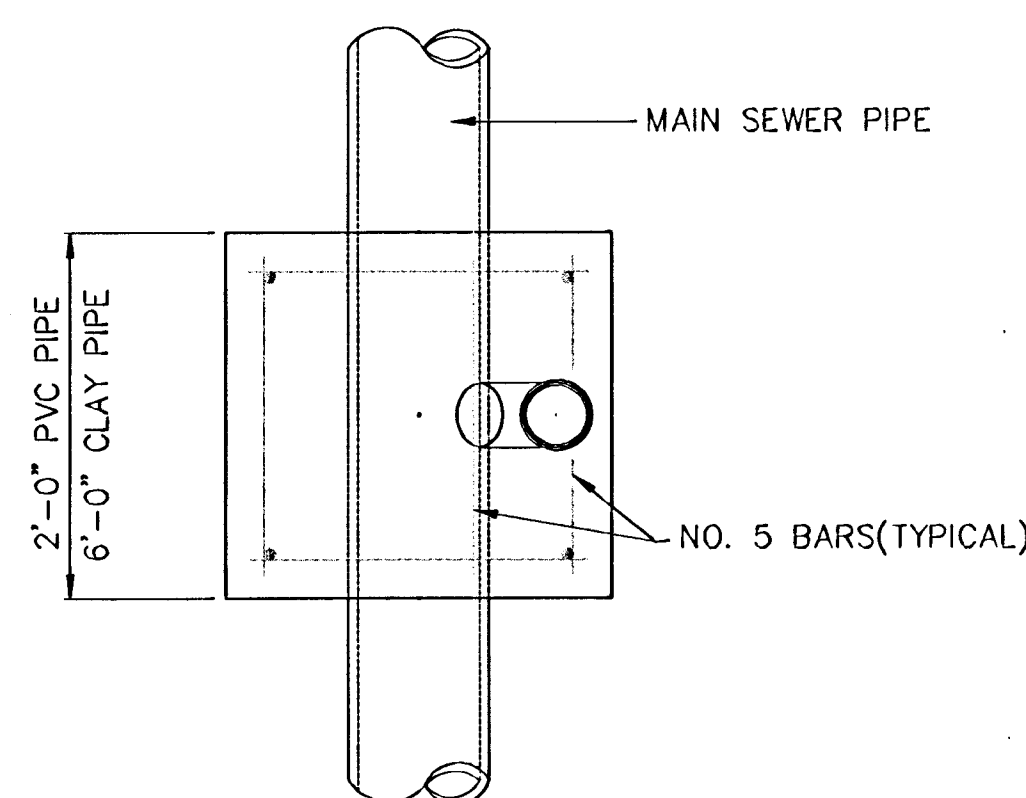
THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE SEATING SURFACES OF THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH AS THESE SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUT SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

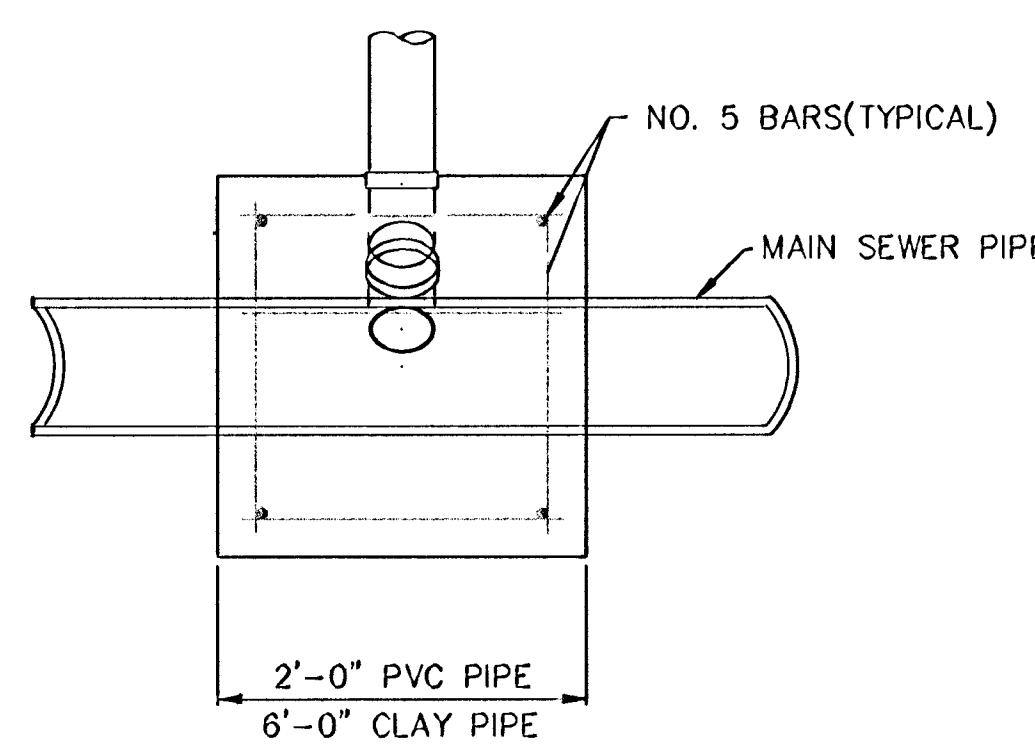
MANHOLE FRAME AND COVER DETAIL	
ADOPTED AS STANDARD DESIGN BY CITY OF WICHITA, KANSAS	
	BAUGHMAN COMPANY P.A. ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211	
PROJECT NUMBER 488-83312	
DESIGN <i>STAFF</i>	DRAWN <i>STAFF</i>
APPROVED	DATE <i>06-01</i>
SCALE <i>NONE</i>	

Understanding Learning

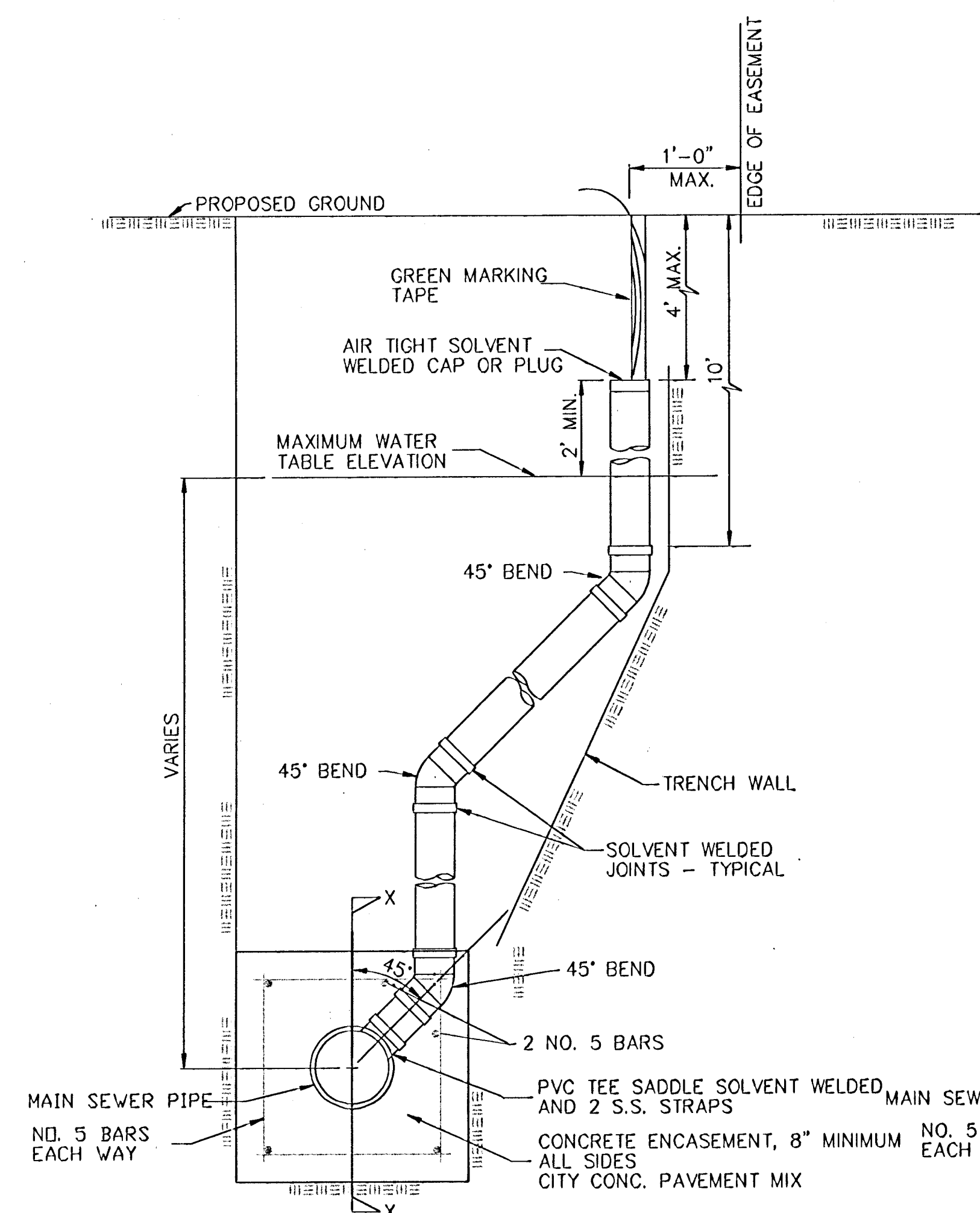
VERTICAL RISER DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA, KANSAS
OCTOBER 1992



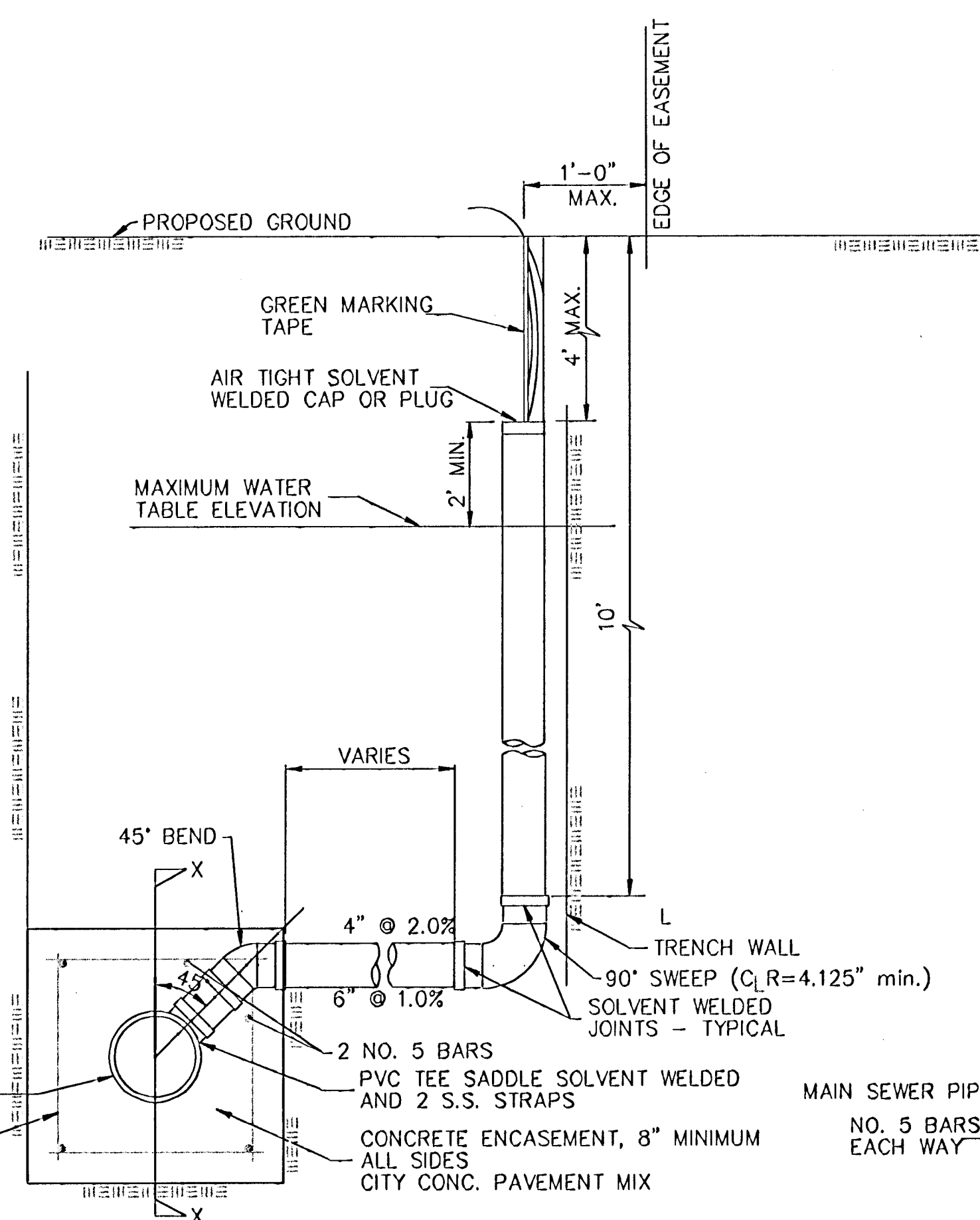
TYPICAL PLAN VIEW



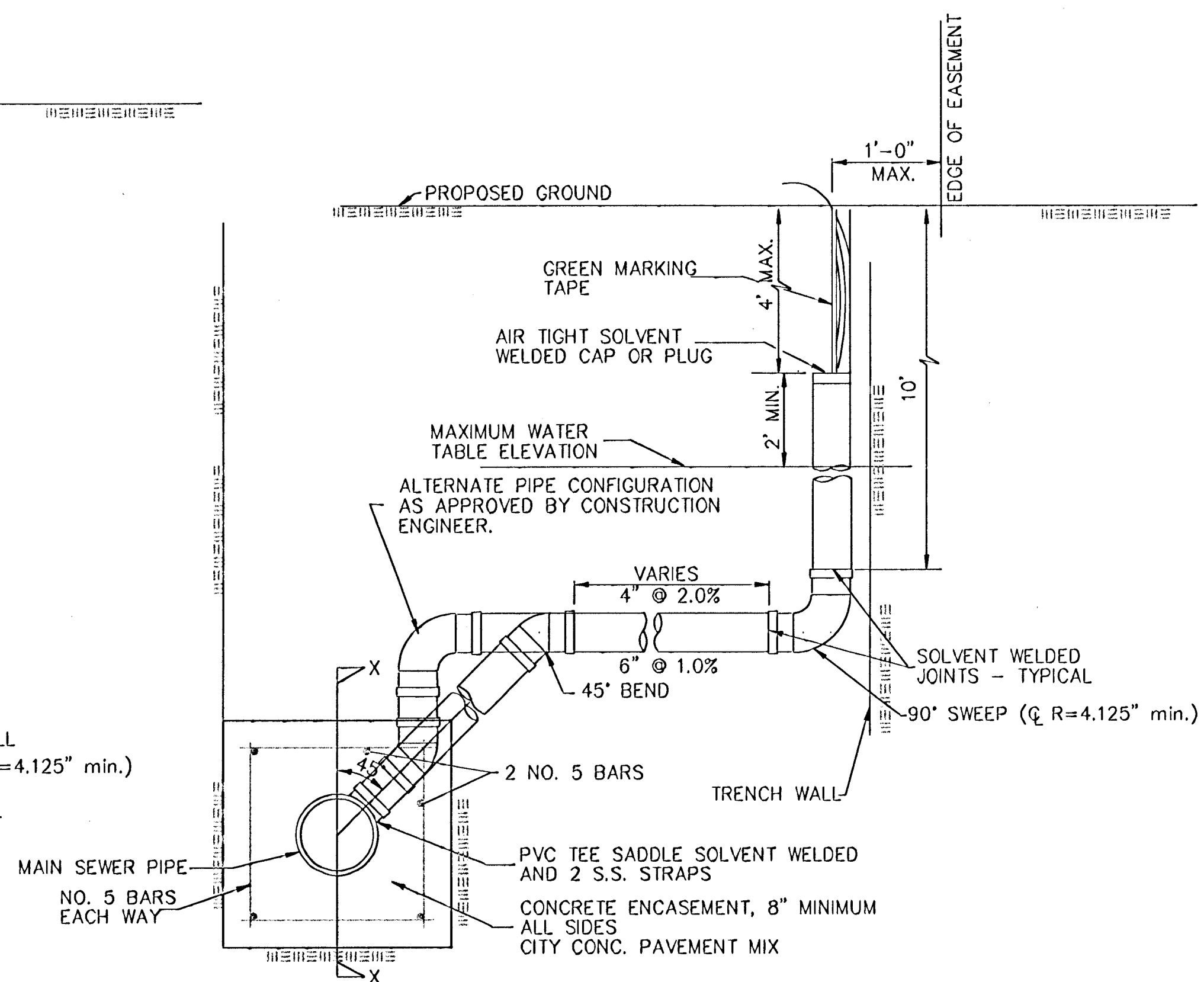
TYPICAL SECTION X-X



METHOD "A"



METHOD "B"



METHOD "C"

NOTE: RISER PIPE REQUIREMENTS AT MANHOLE STUBS SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

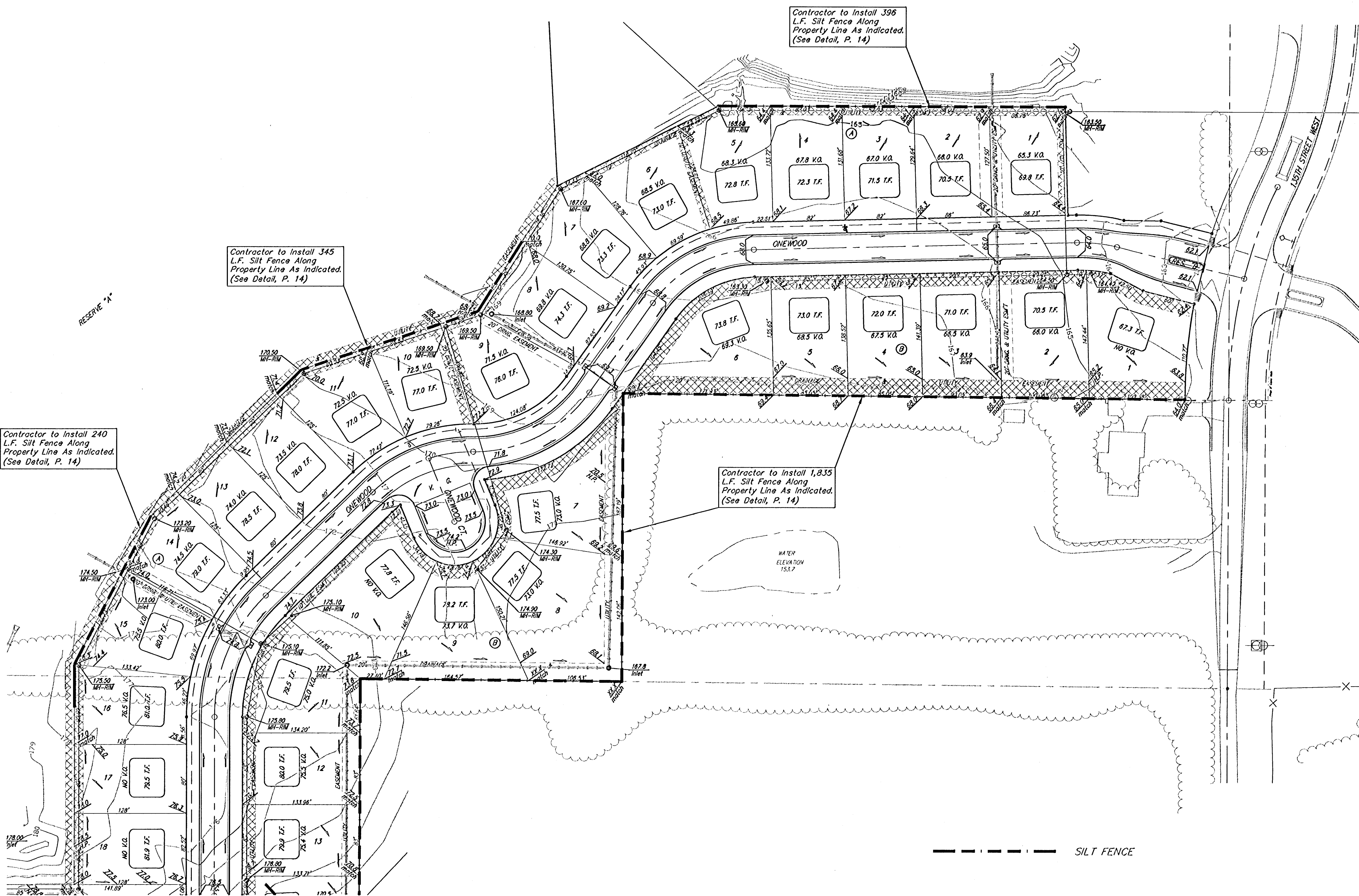
- GENERAL NOTES
1. RISERS. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.
 2. PIPE STUBS. Pipe stubs shall be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole pipe stub and the flowline of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.
 3. SIZING. Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers and stubs shall be approved by the Construction Engineer prior to installation.
 4. RISER OR STUB MATERIAL. Risers and stubs shall be constructed of Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. . All pipe joints shall be solvent welded.
 5. REINFORCED CONCRETE ENCASUREMENT. Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary Sewer mains shall be reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.
 6. BEDDING. Bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.
 7. SUPPORT OF RISERS. Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and backfilling the riser pipe shall be approved by the Construction Engineer.
 8. PLUGGING. The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.
 9. TOP OF THE RISER PIPE. The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. Where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.
 10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be marked by fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.
 11. LOCATION MEASURES. The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.
 12. RISER LOCATION. The riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.
 13. PAYMENT. "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.
- "Manhole stubs" shall be paid for at the contract unit price per each, which shall be full compensation for all labor, material, and incidentals necessary to complete the work including all pipe, fittings, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".

City of Wichita Standard
Riser Details
AUBURN HILLS 13TH ADDITION

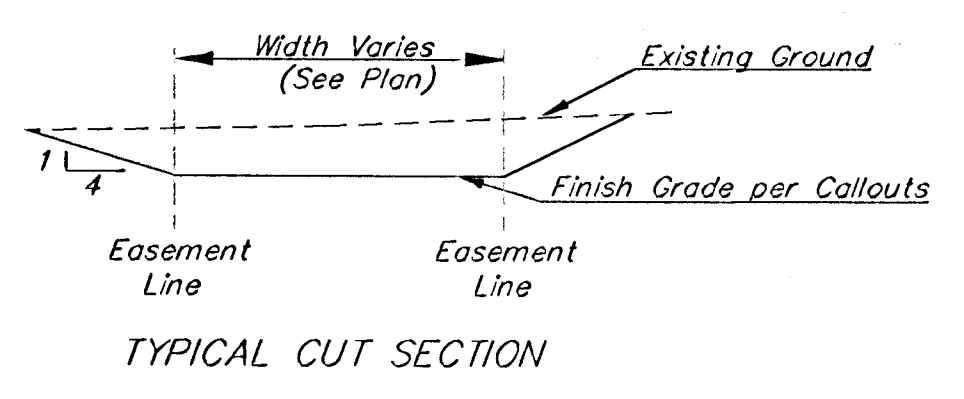
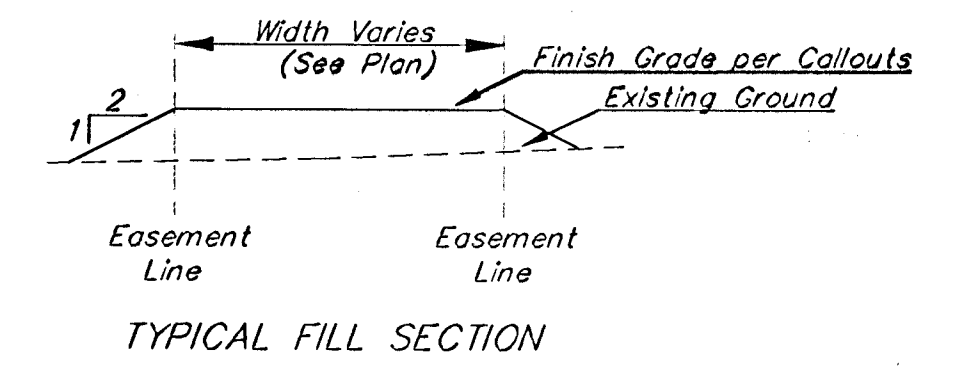
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
315-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 488-83312	SHEET 11
DESIGN	OF 14
DRAWN	DATE 08/15/01
APPROVED	SCALE NONE

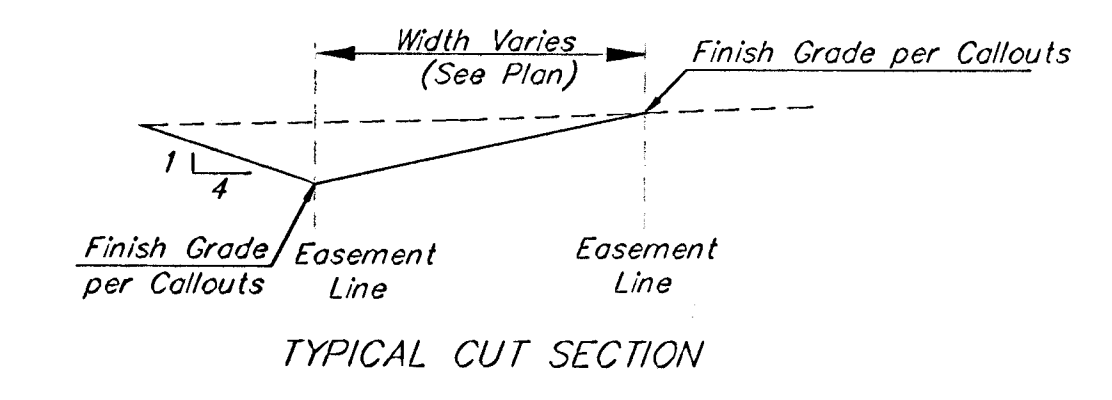
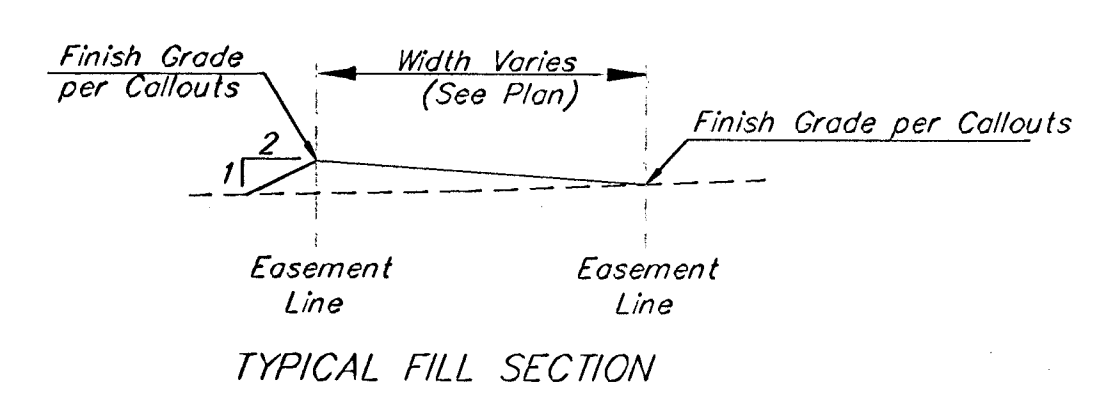
BENCHMARK:
CITY DISC- 34.3' E. & 3.3' N. OF S.W. CORNER OF
N.W. 1/4, SEC. 25, T-27-S, R-2-W. ELEV.=156.63
CITY DATUM(1344.03 M.S.L.)



SCALE: 1" = 60'
• = IRON



SECTION A-A



SECTION B-B

= Easements To Be Graded

Approximate Easement Grading Quantities:
(For Information Only)
Excavation: 1000 C.Y.
Fill: 4330 C.Y.

The contractor shall grade the easements as shown to the elevations given on the easement grading plan. All costs for grading shall be incidental to the Easement Grading Bid Item.

The contractor shall 'straight' grade the easements between the elevations given. Where a callout designates 'Match', the contractor will grade to the existing ground elevation.

Remove Trees Only as Necessary For Construction. Cost to be Included in Bid Item "Site Clearing & Restoration"

AUBURN HILLS 13TH ADDITION

EASEMENT GRADING PLAN

WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER 468-89312				SHEET 12 OF 14
DESIGN BLP	DRAWN DC	APPROVED	DATE 8/14/01	
SCALE 1" = 60'				

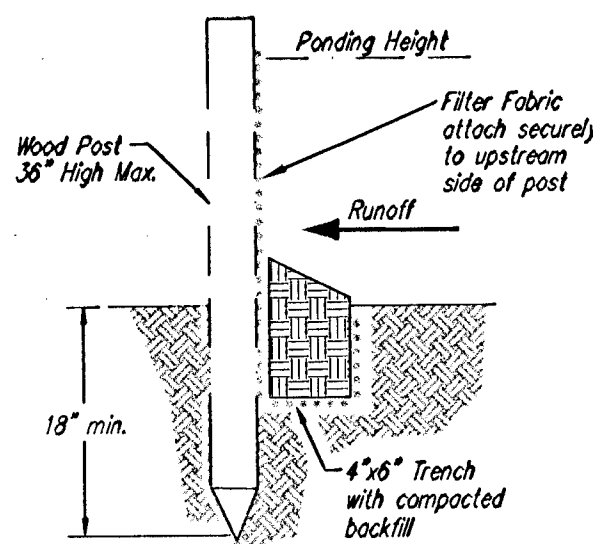
Auburn Hills 13th Addition

BENCHMARK:
CITY DISC- 34.3' E. & 3.3' N. OF S.W. CORNER OF
N.W. 1/4, SEC. 25, T-27-S, R-2-W. ELEV.=156.63
CITY DATUM(1344.03 M.S.L.)

SCALE: 1" = 60'

• = IRON

See Sheet 12 for typical sections and general notes.



SILT FENCE BARRIERS

SILT FENCE BARRIERS

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification. The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment. When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow. Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use. Roll out a continuous length of silt fence fabric on the downslope side of the trench. Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed. Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts. Just downslope of the trench, drive posts into the ground to a depth of at least 18". Place posts no more than 4' apart. Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates. Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail. Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out. Silt fence slope barriers must be dug into the ground-silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

Silt fence slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Do the silt fences sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the slope barrier?

Contractor to Install 1,835
L.F. Silt Fence Along
Property Line As Indicated.
(See Detail, This Sheet)

Contractor to Leave 10
L.F. of Easement
Ungraded to Prevent
Ponding.

Contractor to Install 80
L.F. Silt Fence As Indicated.
(See Detail, This Sheet)

SILT FENCE

*FOR INFORMATION ONLY

2480 L.F. SILT FENCE
1 STABILIZED CONSTRUCTION
ENTRANCE AS NECESSARY

*TO BE PAID FOR AS THE
LUMP SUM BID ITEM
"EROSION CONTROL BMP'S"

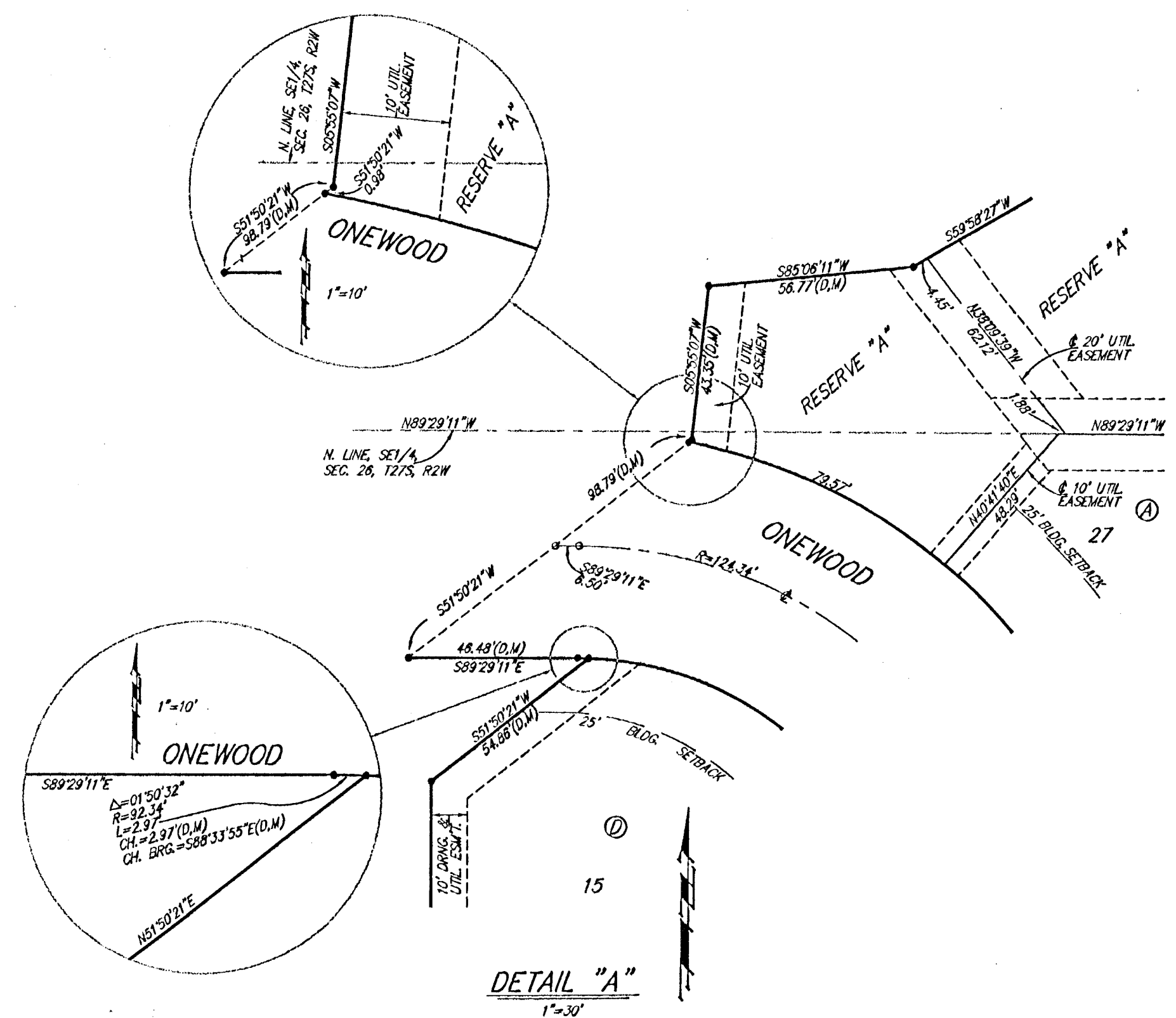
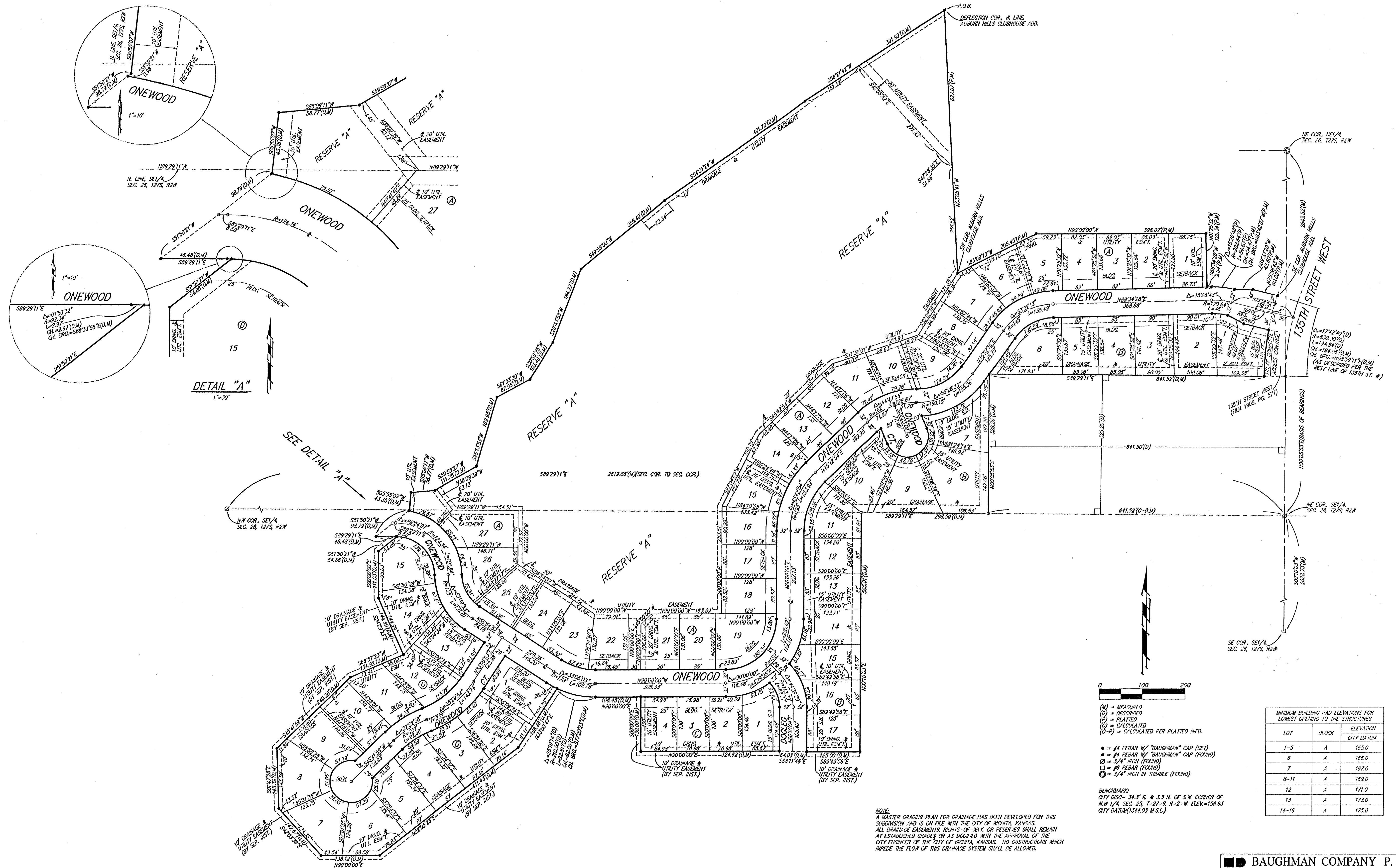
AUBURN HILLS 13TH ADDITION
EASEMENT GRADING PLAN
WICHITA, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
318-292-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER
488-93312
DESIGN: BLP DRAWN: DC APPROVED: DATE: 8/15/01 SCALE: 1" = 60' SHEET: **13** OF **14**

AUBURN HILLS 13TH ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS



0 100 200

(M) = MEASURED
(D) = DESCRIBED
(P) = PLATTED
(C) = CALCULATED
(C-P) = CALCULATED PER PLATTED INFO.

• #4 REBAR W/ "BAUGHMAN" CAP (SET)
• #4 REBAR W/ "BAUGHMAN" CAP (FOUND)
• 5/4" IRON (FOUND)
• #8 REBAR (FOUND)
• 5/4" IRON IN TRIMBLE (FOUND)

BENCHMARK:
CITY DSC- 34.3' E. & 3.3' N. OF S.W. CORNER OF
N.W. 1/4, SEC. 28, T-27-S, R-2-W. ELEV. = 158.83
CITY DATUM (1544.03 M.S.L.)

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION CITY DATUM
1-5	A	165.0
6	A	166.0
7	A	167.0
8-11	A	168.0
12	A	171.0
13	A	171.0
14-16	A	175.0

NOTE:
A MASTER GRADING PLAN FOR DRAINAGE HAS BEEN DEVELOPED FOR THIS SUBDIVISION AND IS ON FILE WITH THE CITY OF WICHITA, KANSAS.
ALL DRAINAGE EASEMENTS, RIGHTS-OF-WAY, OR RESERVES SHALL REMAIN AT ESTABLISHED CHANGES OR AS MODIFIED WITH THE APPROVAL OF THE CITY ENGINEER OF THE CITY OF WICHITA, KANSAS. NO OBSTRUCTIONS WHICH IMPED THE FLOW OF THIS DRAINAGE SYSTEM SHALL BE ALLOWED.

BAUGHMAN COMPANY P. A.
ENGINEERING, SURVEYING, & PLANNING
316-282-7221 • 315 ELLIS • WICHITA, KANSAS 67211
F:\A\A\AUBURN HILLS 13TH ADDITION\AUBURN HILLS 13TH ADDITION.DWG