Lat. 34, C.I.S.

SANITARY SEWER IMPROVEMENTS

to serve

SHADOW WOODS ADDITION - PHASE I

CITY OF WICHITA, KANSAS

Neil Cable, P.E. City Engineer

Project Number

468-83595

O.C.A. Number

743982

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	262-4270
Kansas Gas Service	1-888-482-4950
Westar Energy	383-8650
Aquila Energy	1-888-482-4950
Southwestern Bell	268-2245
City of Wichita Water Dept.	268-4563
City of Wichita Sewer Maint.	268-4024
City of Wichita Storm Sewer Maint.	268-4090
City of Wichita Traffic Maint.	268-4034
Conoco Pipeline Co.	1-800-231-2551
Williams Pipeline Co.	529-6600
Phillips Pipeline Co.	1-800-766-8230

2. Utility service lines, poles, valve boxes, meters, and etcetera 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. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance an site location. Locations, in the opinion of the Engineer, will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archaeological investigations unless buried in a previously approved borrow location.

4. 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.

5. 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.

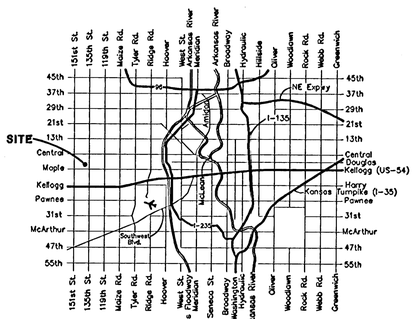
6. The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws

7. The Contractor shall be responsible for maintaining continuous flow of sewage through construction. Contractor's proposed method for maintaining sewage flow shall be approved by the Engineer. Cost of maintaining flow of sewage through construction will not be paid for directly and this cost shall be considered as subsidiary to the other pay items of work.

8. When connecting to existing manhole or stub, the contractor shall reshape manhole bottom or adjust the existing stub's alignment or elevation as necessary. Cost shall be subsidiary to project.

9. The Contractor shall grade around exposed manholes at a 1:1 slope. Manholes set lower than existing grade shall have 9" berm constructed around manhole to prevent infiltration into sanitary sewer system. Cost of dirt, labor, equipment, etc. to be incidental to cost of manhole. Easements shall be graded with the storm water drain improvement project as part of the mass grading plan.

10. This project does not include seeding. The site will be seeded with the storm water drain project as part of the mass-grading plan.



Vicinity Map

Benchmark

RR Spike in N. Face of PP in N. R/W of Maple N. of Nineiron. Elev. = 177.01 (City Datum)

"□" Cut center of north Headwall of RCBC in N. R/W of Maple 570' East of centerline of City View. Elev. = 187.91 (City Datum)

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Scale: 1" = 150'

Benefit District

AS BUILT
RDC
10/30/03
.PDF



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316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

BENCHMARKS:
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SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION\ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
1	8" X 4" Tee Saddle	26	E	1	4+23/Rt.	8.5'	5'
2	8" X 4" Tee Saddle	27	E	1	4+97/Rt.	10.0'	5'
3	8" X 4" Tee Saddle	28	E	1	5+71/Rt.	12.0	5'
4	8" X 4" Tee Saddle	1	C	1	7+27/Rt.	11.0'	5'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

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

AUBURN HILLS COMMERCIAL ADDITION 1
2ND AUBURN HILLS 12TH ADDITION
RIVERSIDE HEALTH SYSTEM ADDITION
SHADOW RIDGE ADDITION
MAPLE ST.
SHERIAC

Sta 0+00, Begin Line 1 Construct std. manhole over existing 15" sewer. Rim Elev. = 166.70

CAUTION! Ex. Cox Comm. Line Crossing. Contact Bryan Ring, Cox Communications 262-4270, two weeks prior to construction to coordinate line crossing.

Sta 3+09.6, Line 1 Construct std. manhole. Rim Elev. = 171.80

Sta ~~5+26.6~~ 5+23.6, Line 1 = Sta 0+00, Line 2 Construct std. manhole. Rim Elev. = 177.90

Sta 6+87.6, Line 1 Construct std. manhole. Rim Elev. = 183.20

Saw cut, remove, & replace pavement as necessary for sewer construction. Cost included in "Site Clearing & Restoration."

Sta 0+00 to Sta. 0+31.0 Install 31.0 L.F. Flowable Fill per City Specs

Sta 0+30.7 to Sta. 0+50.7 Install 20 L.F. Concrete Encasement per City Specs

Sta 0+90.7, Line 1 = Sta 0+00, Line 1A Construct special shallow manhole. Rim Elev. = 165.00

CAUTION! Ex. 24" water line Crossing

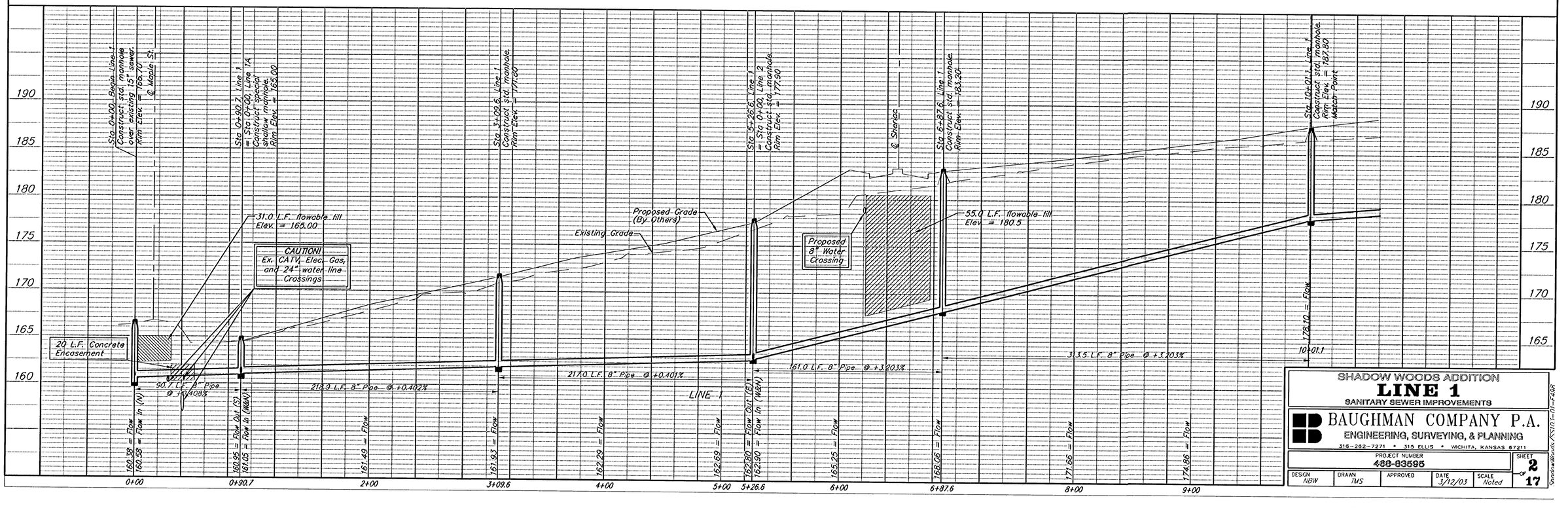
CAUTION! Ex. Westar Line Crossing. Contact Randy Truitt, Westar Energy 261-6512, two weeks prior to construction to coordinate line crossing.

CAUTION! Ex. Aquila Gas Line Crossing. Contact Calvin Briggs, Aquila Energy 941-1608, as soon as possible prior to construction to schedule and coordinate gas line adjustment.

Proposed 8" Water Crossing

Sta 6+22 to Sta 6+77 Install 55.0 L.F. flowable fill per City specs.

Sta 10+01.1, Line 1 Construct std. manhole. Rim Elev. = 187.80 Match Point



SHADOW WOODS ADDITION
LINE 1
SANITARY SEWER IMPROVEMENTS

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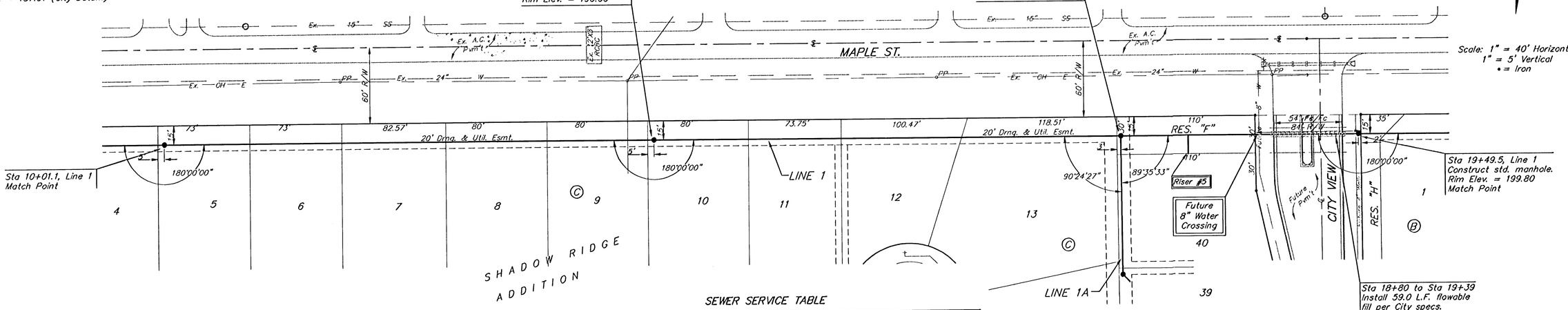
PROJECT NUMBER	SHEET
488-83595	2 OF 17

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	TMS		3/12/03	Noted

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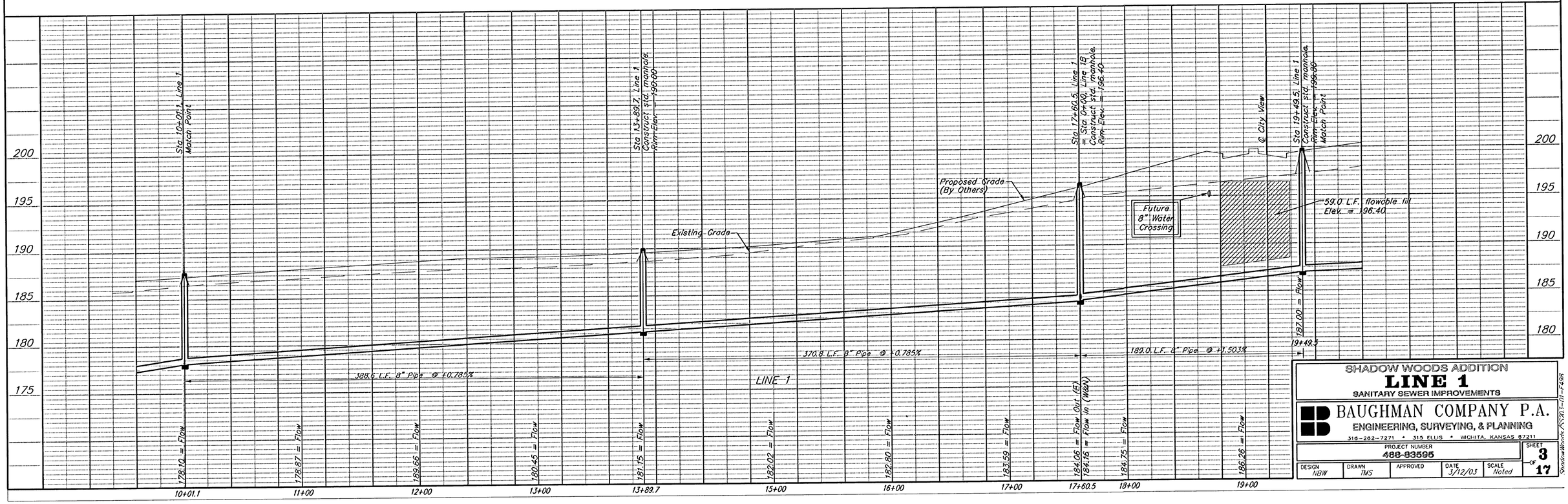
"□" Cut center of north Headwall of RCBC in N. R/W of Maple 570' East of centerline of City View.
Elev. = 187.91 (City Datum)



SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION\ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
5	8" X 4" Tee Saddle	40	C	1	18+14/Rt.	9.0'	15'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



SHADOW WOODS ADDITION
LINE 1
SANITARY SEWER IMPROVEMENTS

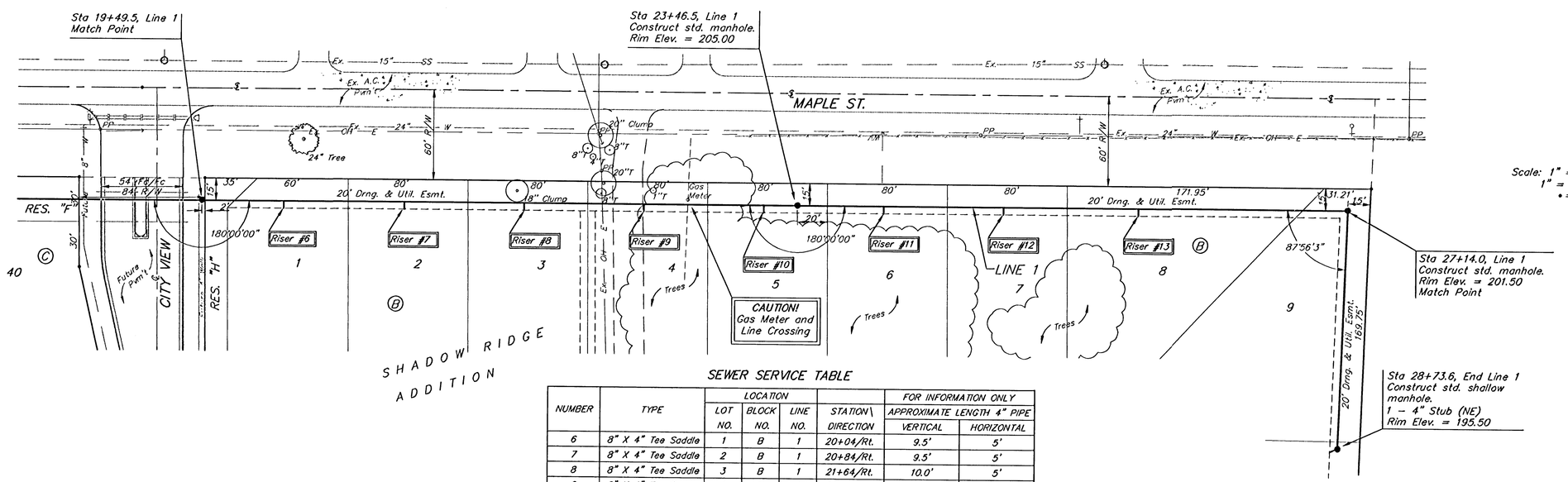
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PROJECT NUMBER					SHEET
488-83595					3 OF 17
DESIGN	DRAWN	APPROVED	DATE	SCALE	
NBW	TMS		3/12/03	Noted	

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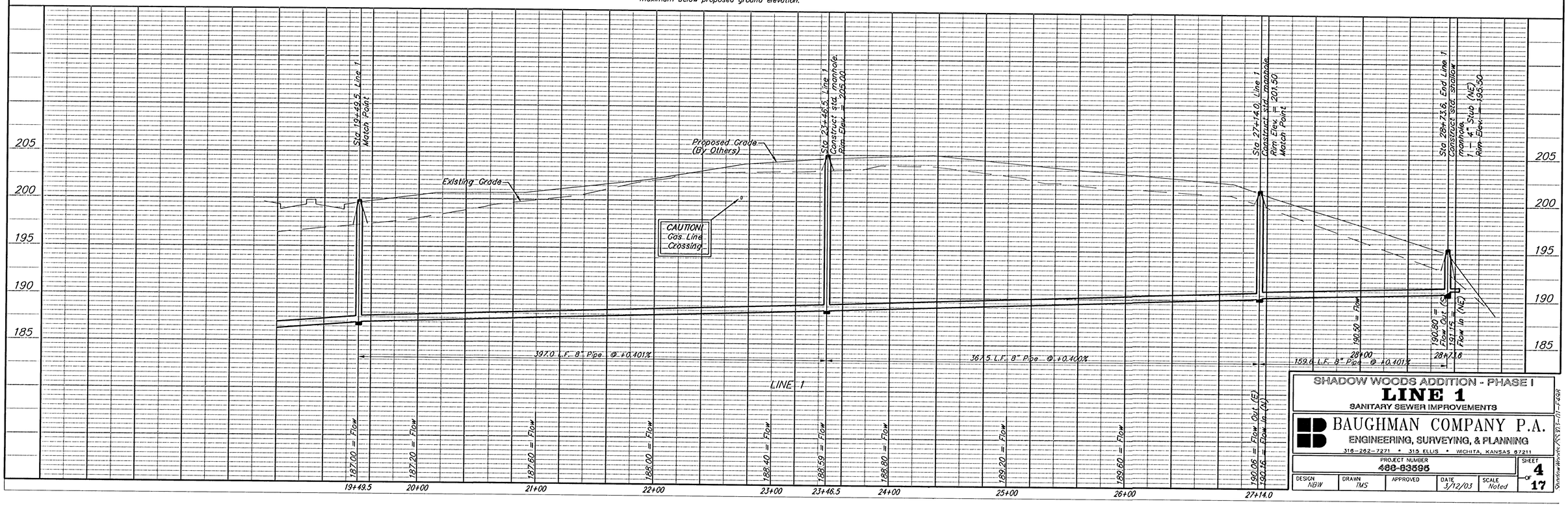
Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".

SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION \ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
6	8" X 4" Tee Saddle	1	B	1	20+04/Rt.	9.5'	5'
7	8" X 4" Tee Saddle	2	B	1	20+84/Rt.	9.5'	5'
8	8" X 4" Tee Saddle	3	B	1	21+64/Rt.	10.0'	5'
9	8" X 4" Tee Saddle	4	B	1	22+44/Rt.	11.0'	5'
10	8" X 4" Tee Saddle	5	B	1	23+24/Rt.	12.0'	5'
11	8" X 4" Tee Saddle	6	B	1	24+04/Rt.	12.0'	5'
12	8" X 4" Tee Saddle	7	B	1	24+84/Rt.	11.5'	5'
13	8" X 4" Tee Saddle	8	B	1	25+74/Rt.	10.0'	5'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



SHADOW WOODS ADDITION - PHASE I
LINE 1
SANITARY SEWER IMPROVEMENTS

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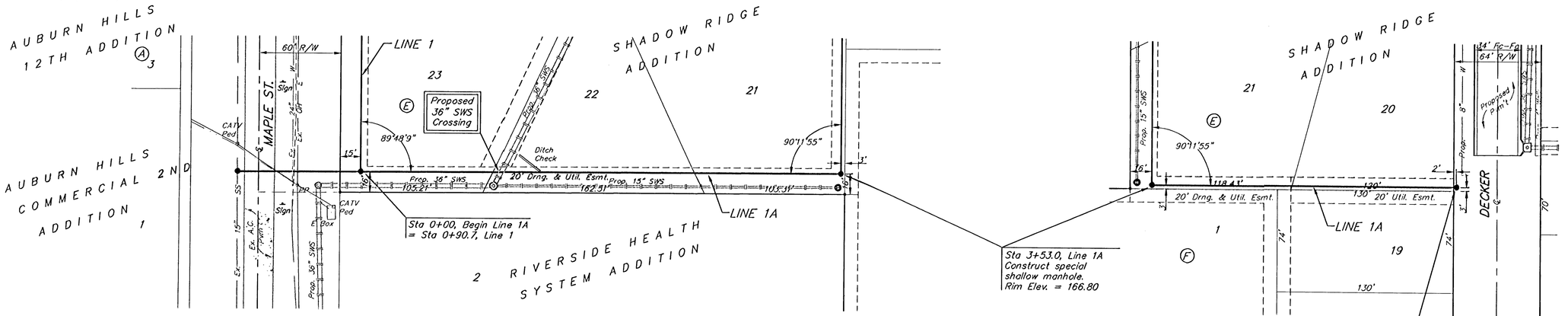
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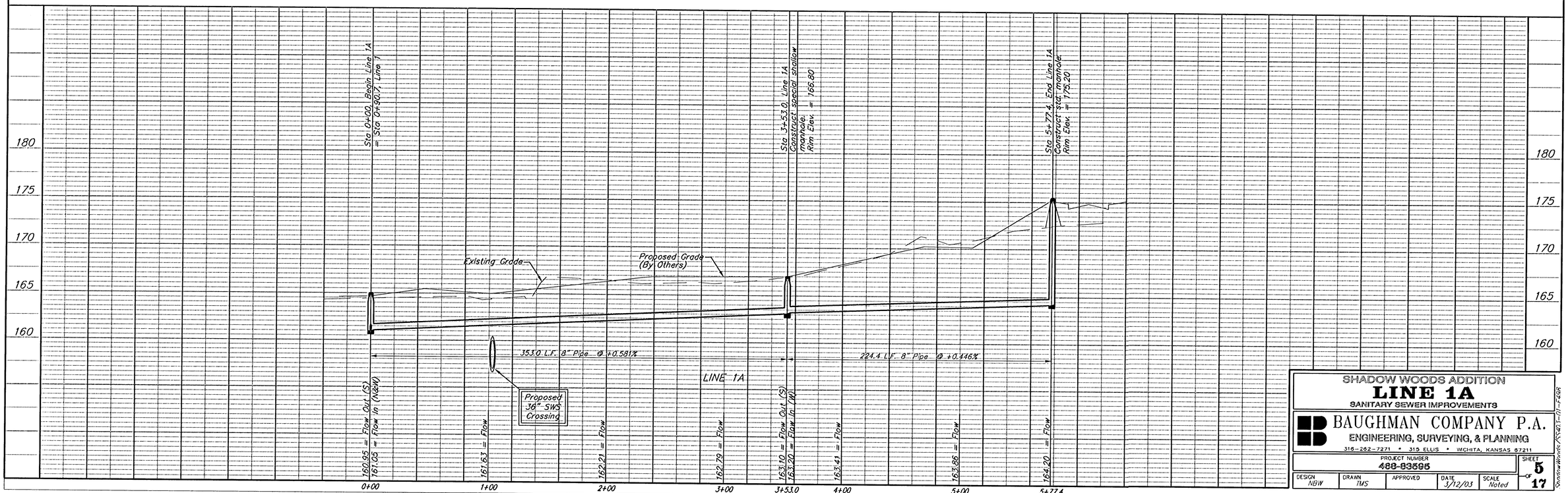
DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	TMS		3/12/03	Noted

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BENCHMARKS:
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SHADOW WOODS ADDITION
LINE 1A
SANITARY SEWER IMPROVEMENTS

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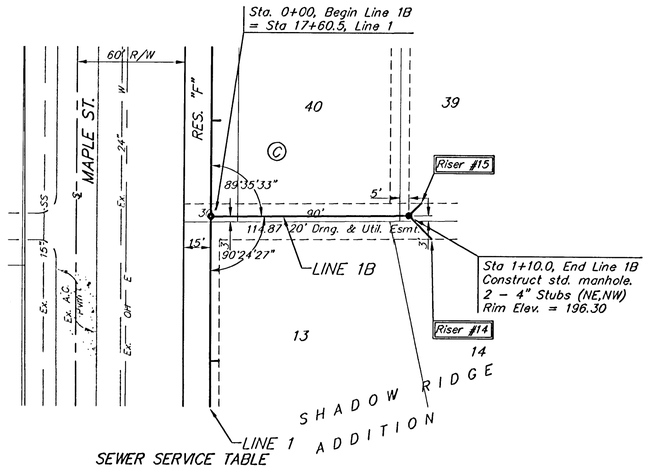
PROJECT NUMBER	SHEET
488-83595	5 OF 17

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	TMS		3/12/03	Noted

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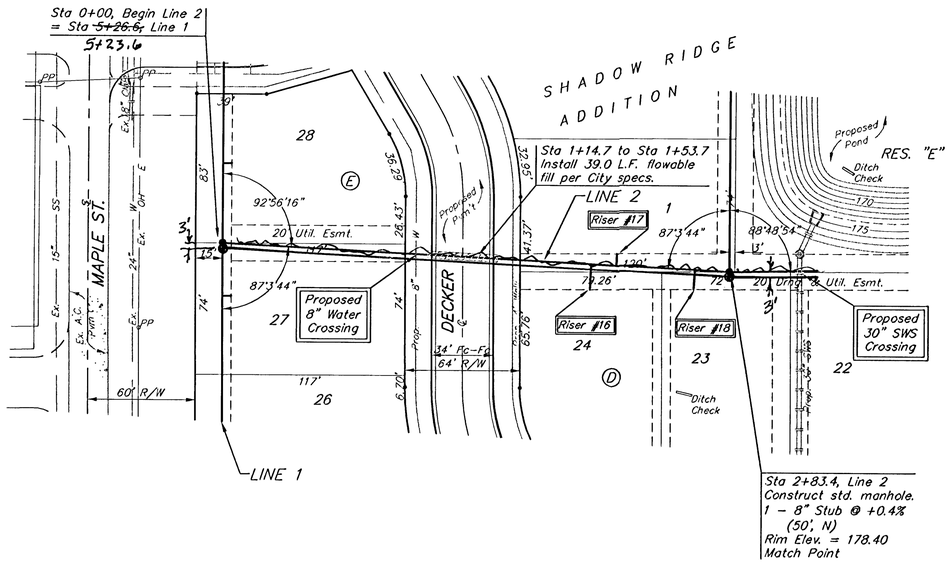
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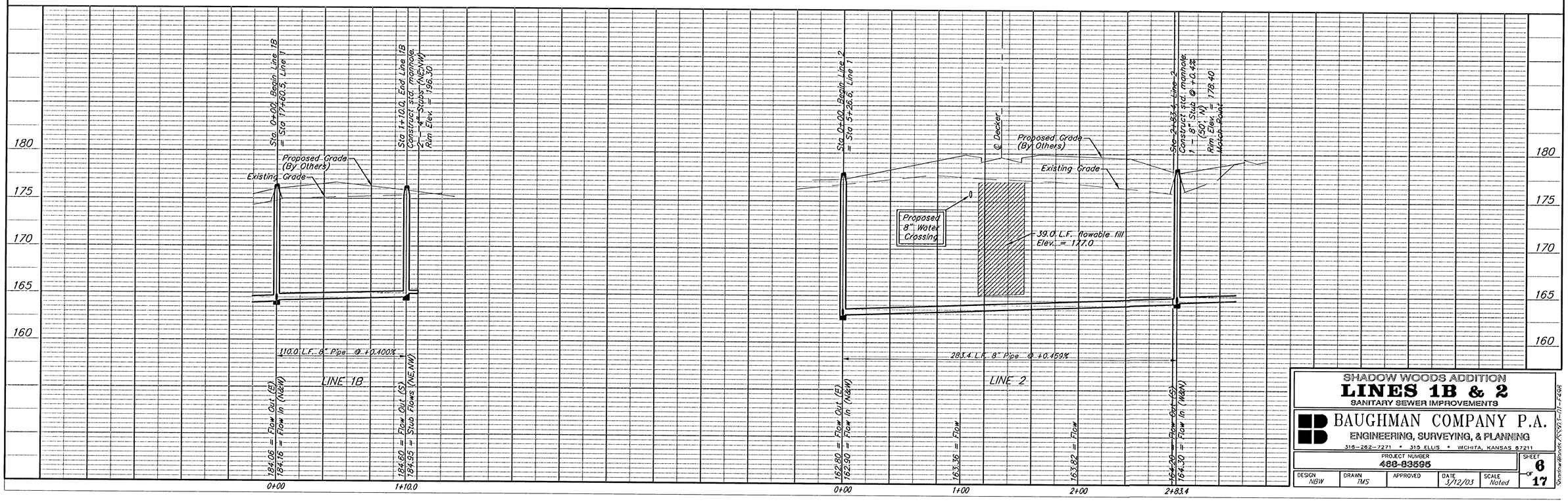
SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION\ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
14	4" Stub w/ Riser	14	C	1B	1+05/Rt.	7.5'	13.0'
15	4" Stub w/ Riser	39	C	1B	1+05/Lt.	10.0'	18.5'
16	8" X 4" Tee Saddle	24	D	2	2+06/Rt.	12.0'	14.5'
17	8" X 4" Tee Saddle	1	D	2	2+20/Lt.	12.0'	6.5'
18	8" X 4" Tee Saddle	23	D	2	2+64/Rt.	10.5'	11.0'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



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



SHADOW WOODS ADDITION
LINES 1B & 2
SANITARY SEWER IMPROVEMENTS

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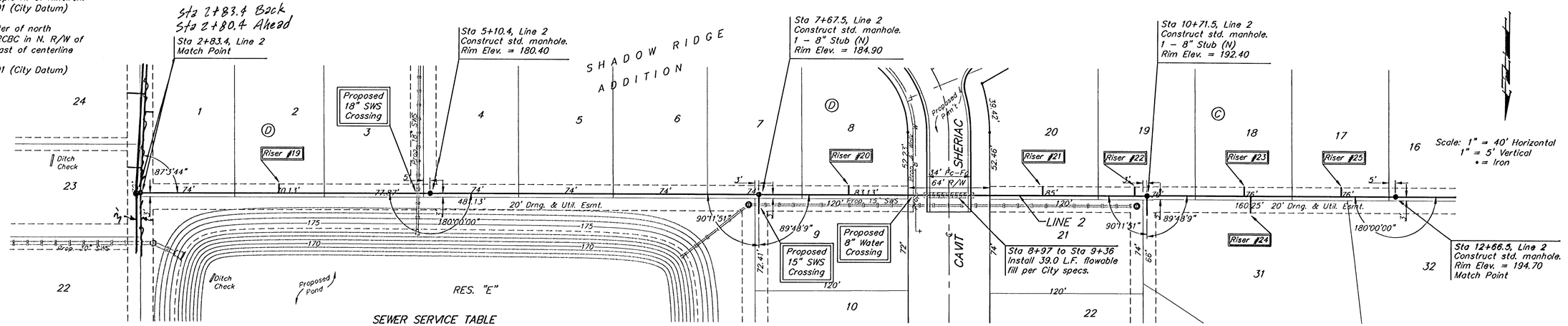
PROJECT NUMBER 488-83595

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
NBW	TMS		3/12/03	Noted	6 OF 17

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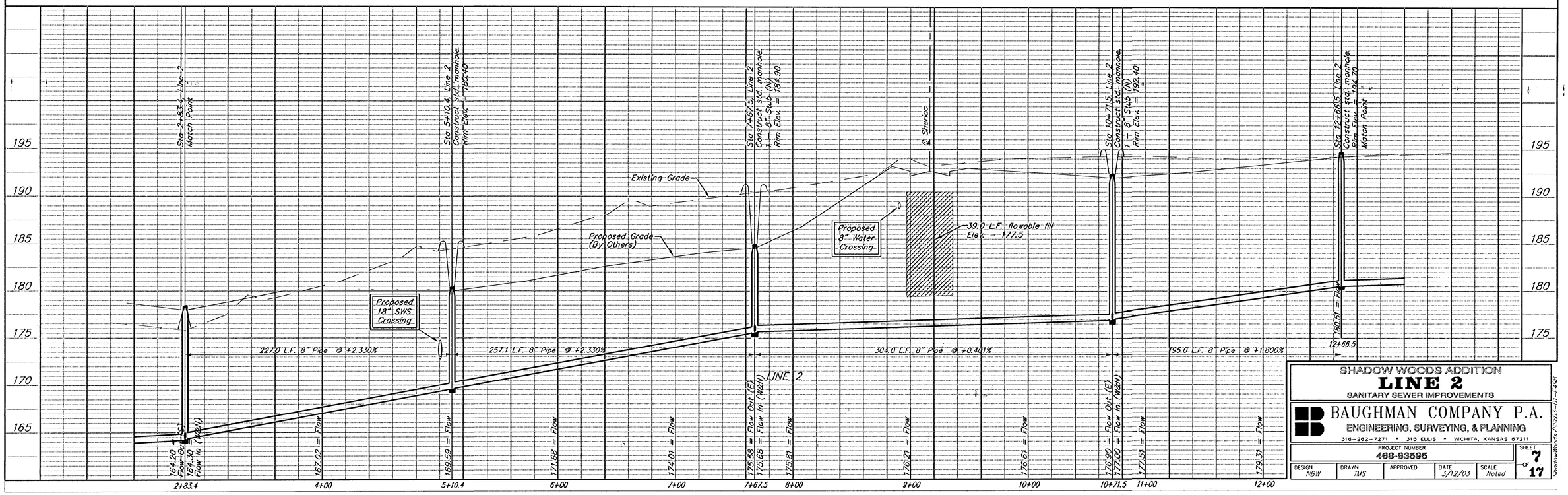
"□" Cut center of north Headwall of RCBC in N. R/W of Maple 570' East of centerline of City View. Elev. = 187.91 (City Datum)



SEWER SERVICE TABLE

NUMBER	TYPE	LOCATION			STATION\ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
19	8" X 4" Tee Saddle	2	D	2	3+92/Lt.	9.0'	7'
20	8" X 4" Tee Saddle	8	D	2	8+38/Lt.	9.5'	7'
21	8" X 4" Tee Saddle	20	C	2	9+90/Lt.	12.0'	7'
22	8" X 4" Tee Saddle	19	C	2	10+62/Lt.	11.5'	7'
23	8" X 4" Tee Saddle	18	C	2	11+48/Lt.	10.5'	7'
24	8" X 4" Tee Saddle	31	C	2	11+53/Rt.	10.5'	13'
25	8" X 4" Tee Saddle	17	C	2	12+24/Lt.	10.0'	7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



SHADOW WOODS ADDITION
LINE 2
SANITARY SEWER IMPROVEMENTS

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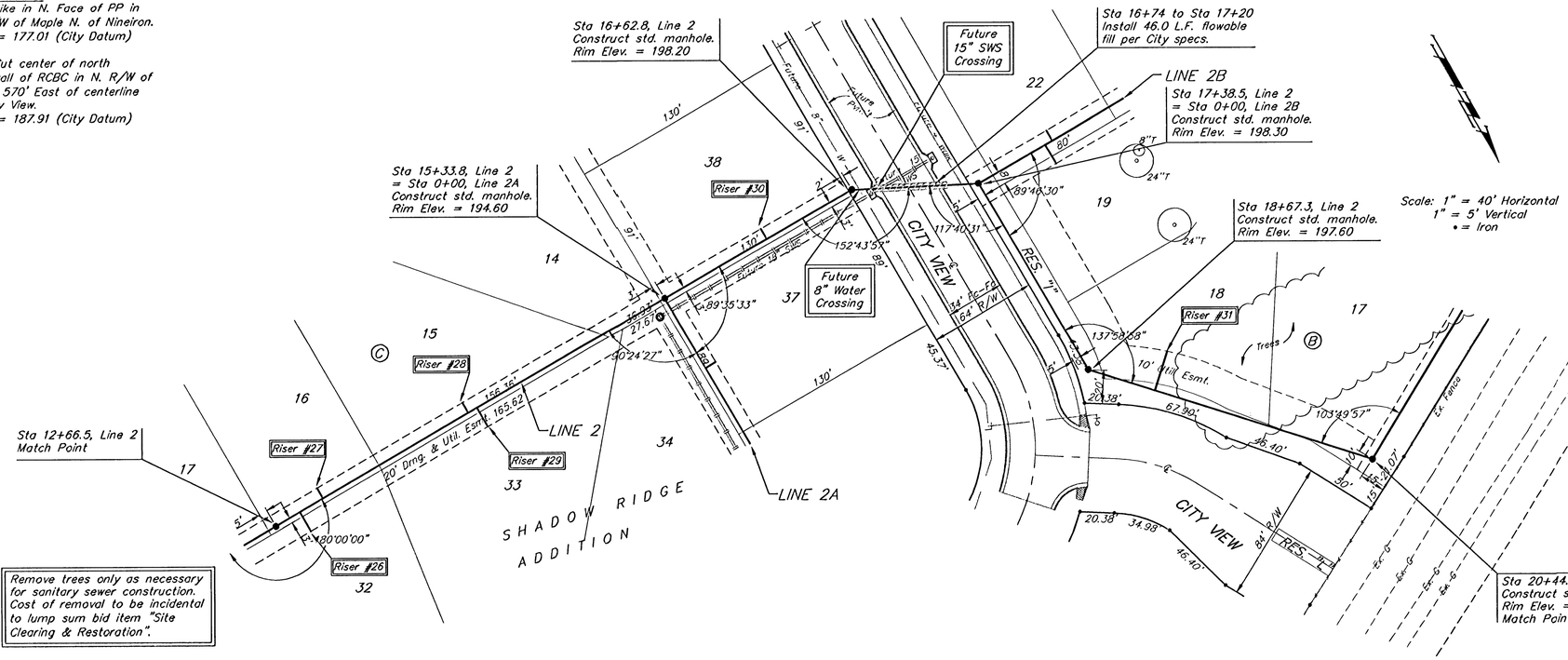
PROJECT NUMBER	SHEET
488-83595	7 OF 17

DESIGN	DRAWN	APPROVED	DATE	SCALE
NBW	TMS		3/12/03	Noted

Sanitary Woods/C5901-01-F488

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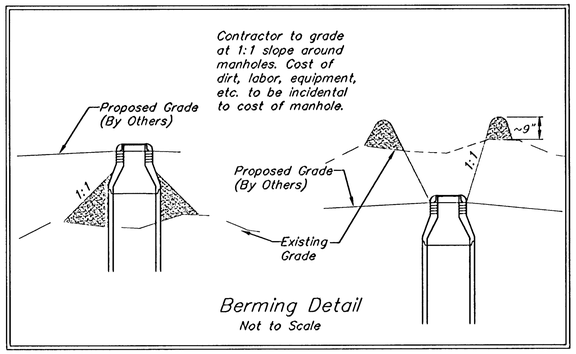


Scale: 1" = 40' Horizontal
1" = 5' Vertical
• = Iron

SEWER SERVICE TABLE

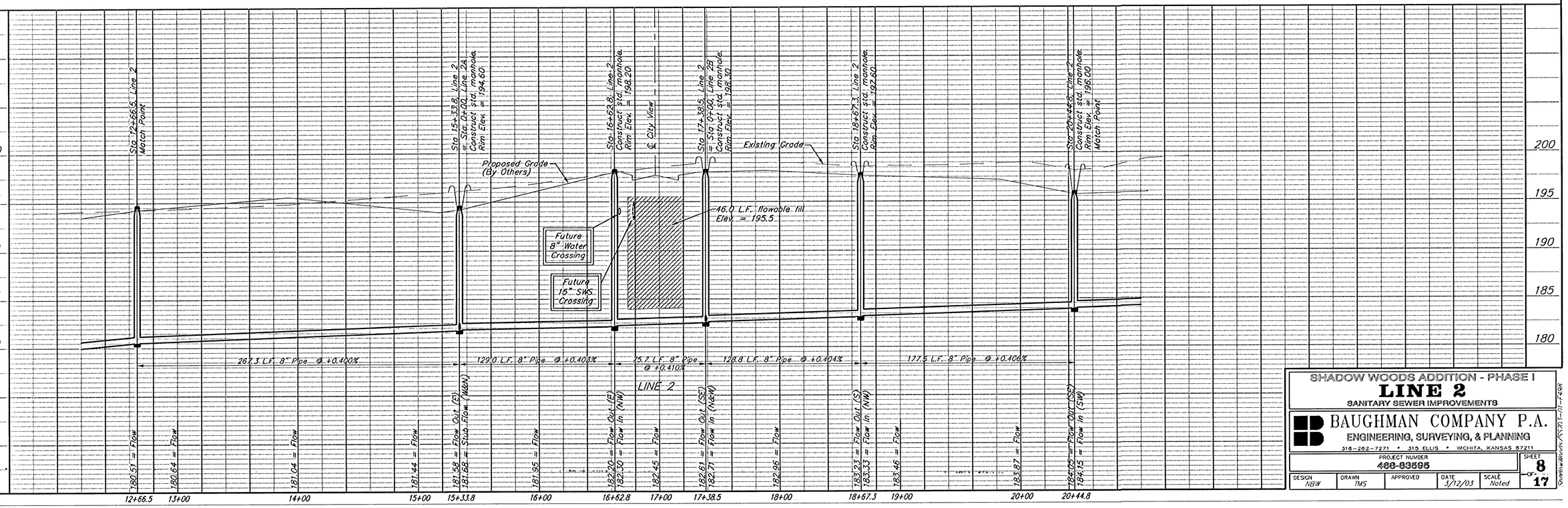
NUMBER	TYPE	LOCATION			STATION \ DIRECTION	FOR INFORMATION ONLY	
		LOT NO.	BLOCK NO.	LINE NO.		APPROXIMATE LENGTH 4" PIPE VERTICAL	HORIZONTAL
26	8" X 4" Tee Saddle	32	C	2	12+83/Rt.	10.0'	13'
27	8" X 4" Tee Saddle	16	C	2	12+98/Lt.	10.0'	7'
28	8" X 4" Tee Saddle	15	C	2	13+99/Lt.	10.5'	7'
29	8" X 4" Tee Saddle	33	C	2	14+05/Rt.	10.5'	13'
30	8" X 4" Tee Saddle	38	C	2	16+04/Lt.	10.5'	7'
31	8" X 4" Tee Saddle	18	B	2	19+09/Lt.	10.0'	24'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



Berming Detail
Not to Scale

Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".



SHADOW WOODS ADDITION - PHASE I
LINE 2
SANITARY SEWER IMPROVEMENTS

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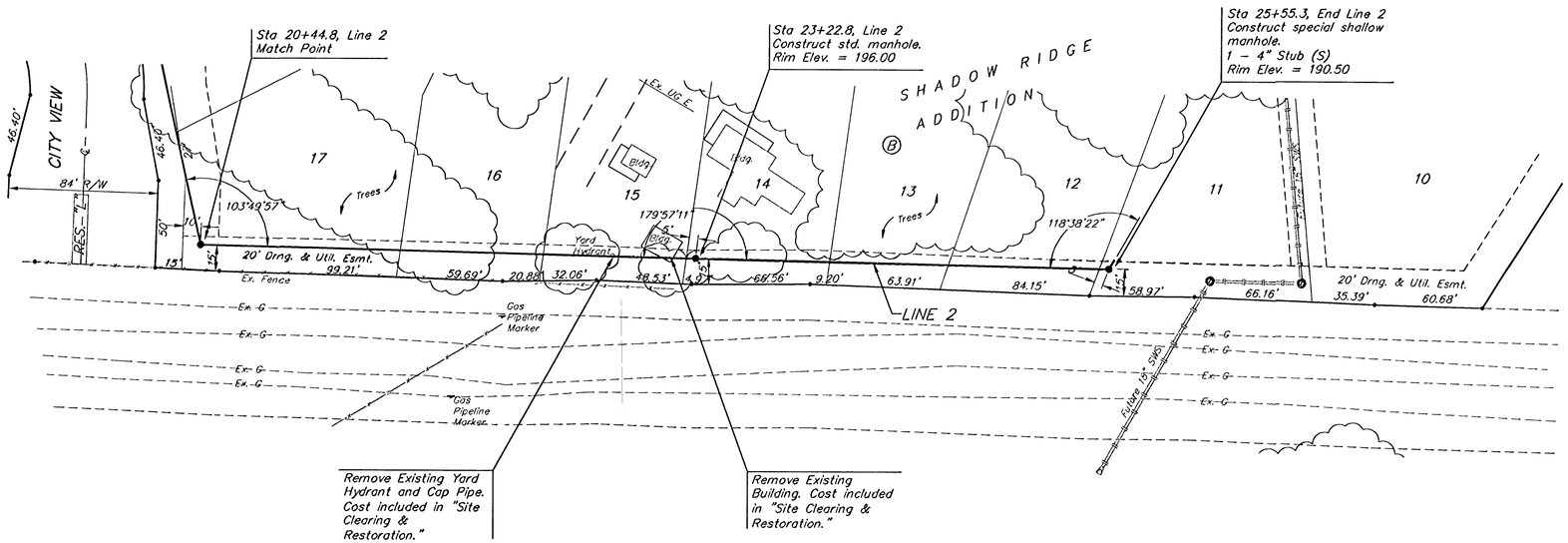
PROJECT NUMBER 468-83595 | SHEET 8 OF 17

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NBW	TMS		3/12/03	Noted

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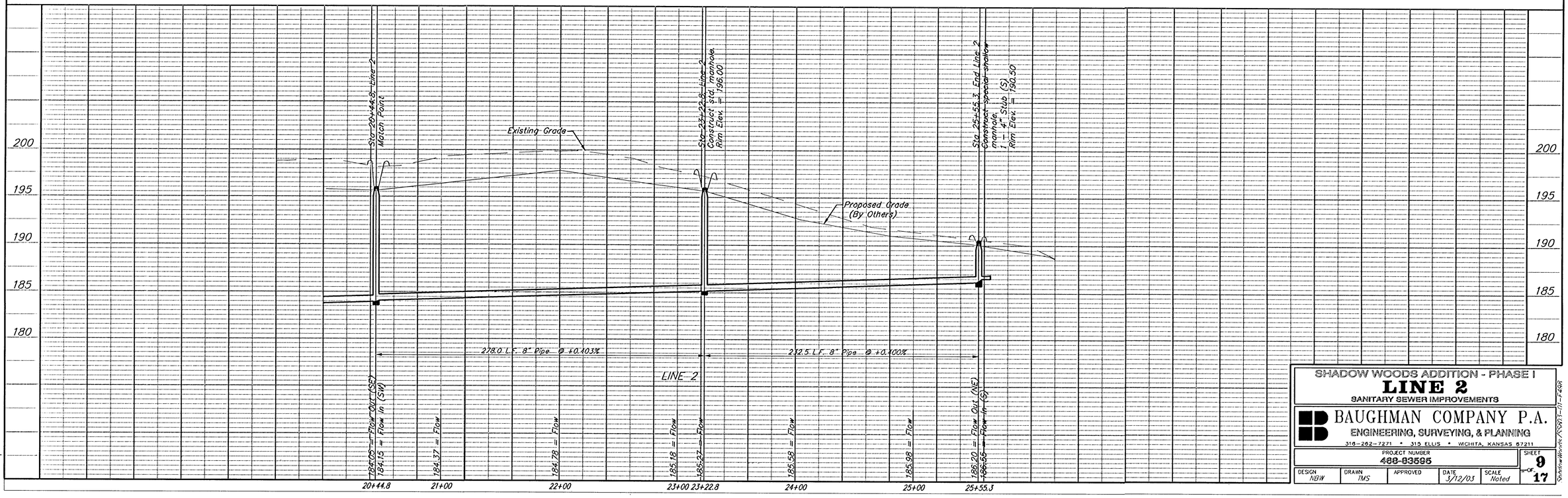
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Remove trees only as necessary for sanitory sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".

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



SHADOW WOODS ADDITION - PHASE I
LINE 2
SANITARY SEWER IMPROVEMENTS

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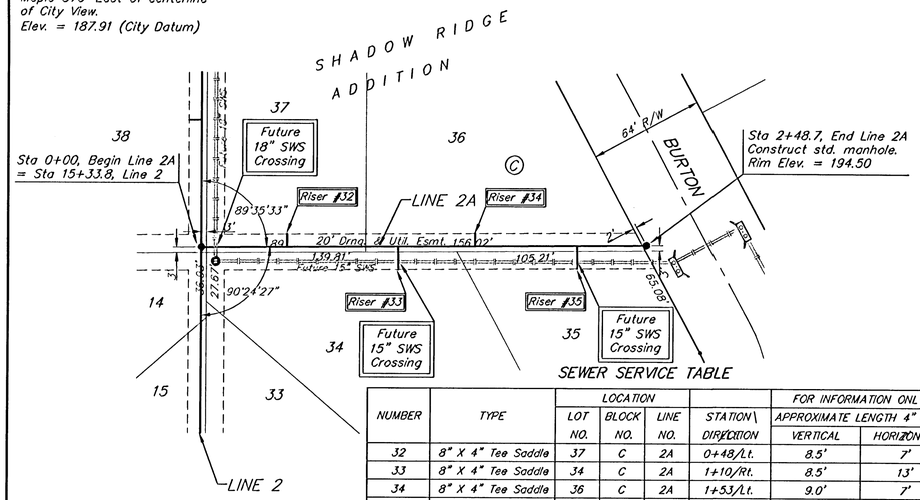
PROJECT NUMBER 466-83595

DESIGN	DRAWN	APPROVED	DATE	SCALE	SHEET
NBW	TMS		3/12/03	Noted	9 of 17

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BENCHMARKS:
RR Spike in N. Face of PP in N. R/W of Maple N. of Nineiron. Elev. = 177.01 (City Datum)

"□" Cut center of north Headwall of RCBC in N. R/W of Maple 570' East of centerline of City View. Elev. = 187.91 (City Datum)



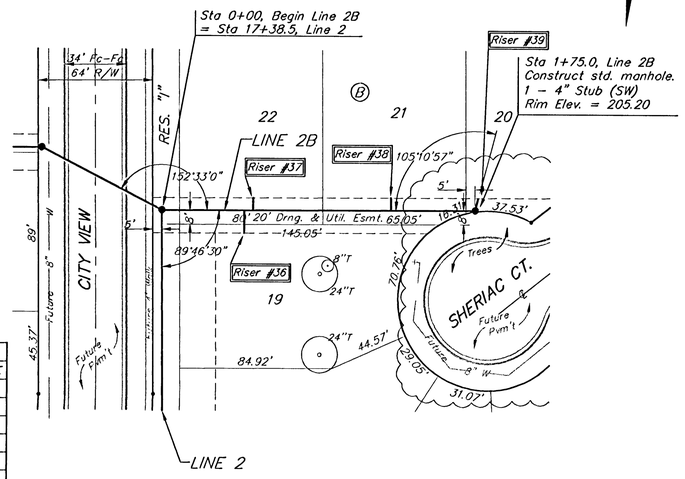
SEWER SERVICE TABLE

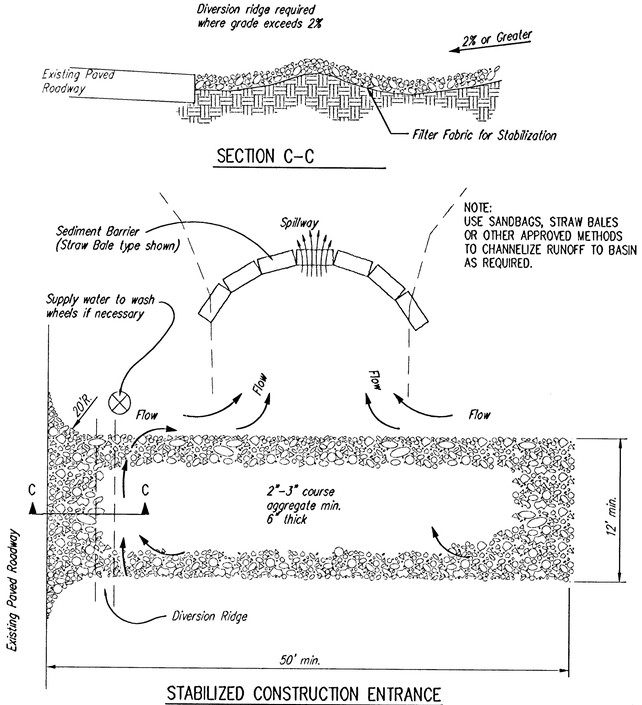
NUMBER	TYPE	LOCATION LOT NO.	LOCATION BLOCK NO.	LOCATION LINE NO.	STATION \ DIRECTION	FOR INFORMATION ONLY APPROXIMATE LENGTH 4" PIPE VERTICAL	FOR INFORMATION ONLY APPROXIMATE LENGTH 4" PIPE HORIZONTAL
32	8" X 4" Tee Saddle	37	C	2A	0+48/Lt.	8.5'	7'
33	8" X 4" Tee Saddle	34	C	2A	1+10/Rt.	8.5'	13'
34	8" X 4" Tee Saddle	36	C	2A	1+53/Lt.	9.0'	7'
35	8" X 4" Tee Saddle	35	C	2A	2+10/Rt.	7.0'	13'
36	8" X 4" Tee Saddle	19	B	2B	0+46/Rt.	10.0'	13'
37	8" X 4" Tee Saddle	22	B	2B	0+51/Lt.	10.0'	7'
38	8" X 4" Tee Saddle	21	B	2B	1+28/Lt.	8.5'	7'
39	4" Stub	20	B	2B	1+75/Lt.	8.5'	7'

NOTE: Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.

Remove trees only as necessary for sanitary sewer construction. Cost of removal to be incidental to lump sum bid item "Site Clearing & Restoration".

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

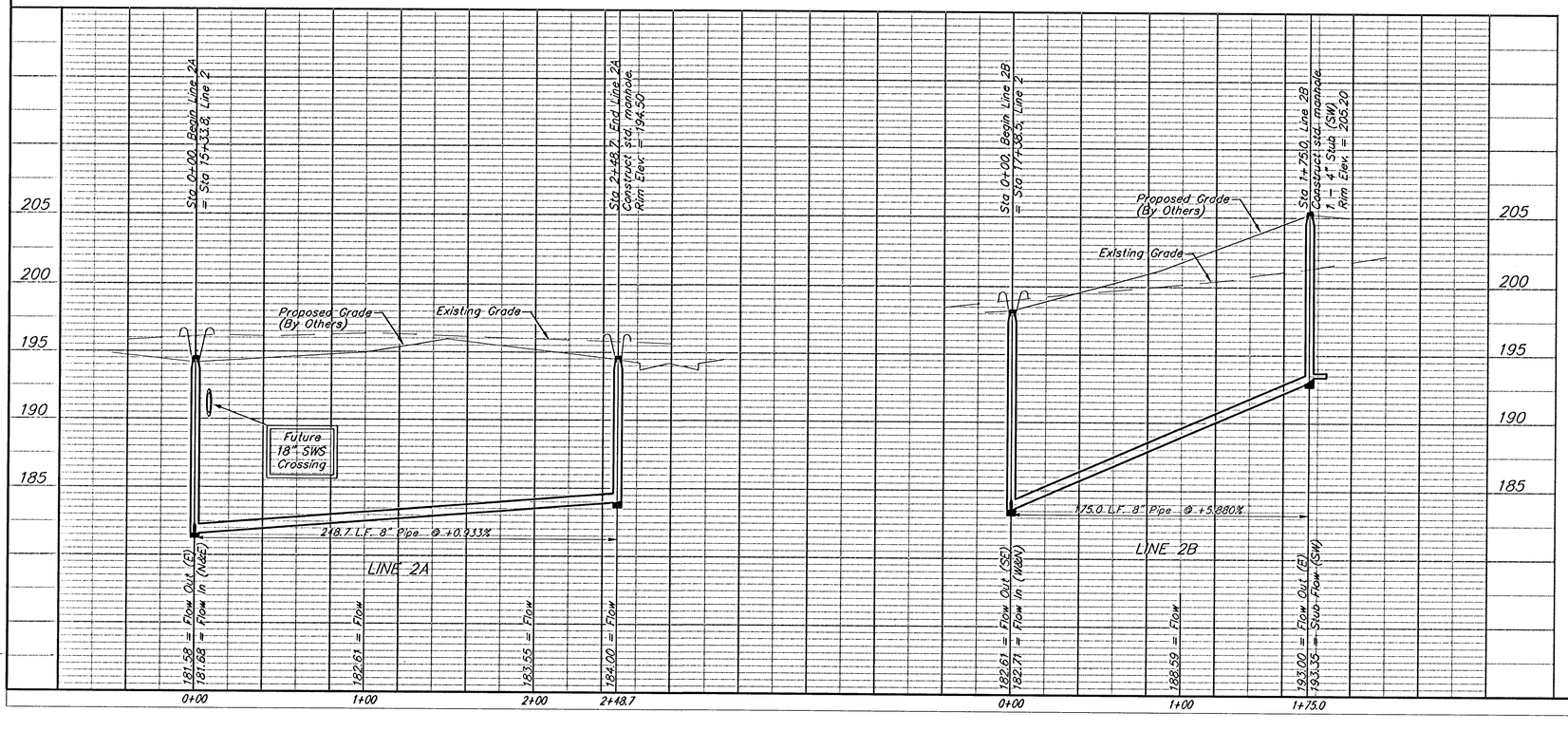




STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. 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.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. 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.
4. 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.



SHADOW WOODS ADDITION - PHASE I
LINES 2A & 2B
SANITARY SEWER IMPROVEMENTS

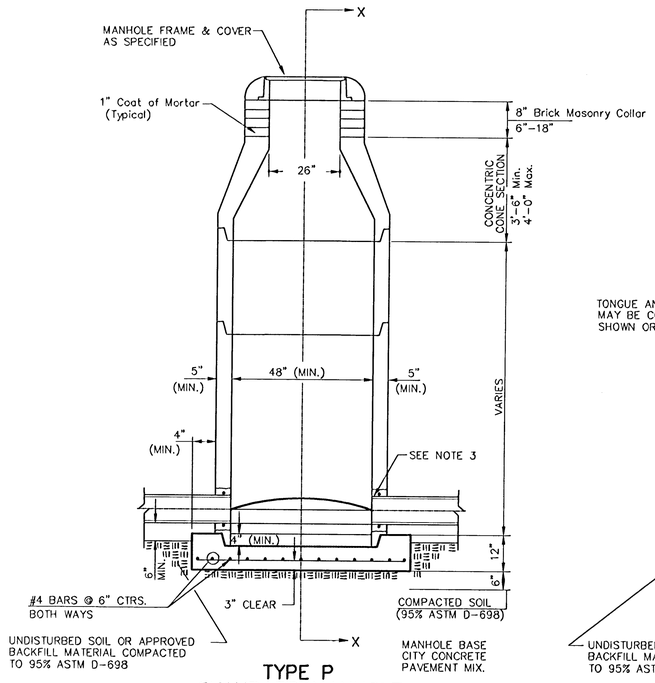
BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
488-83595	10 OF 17

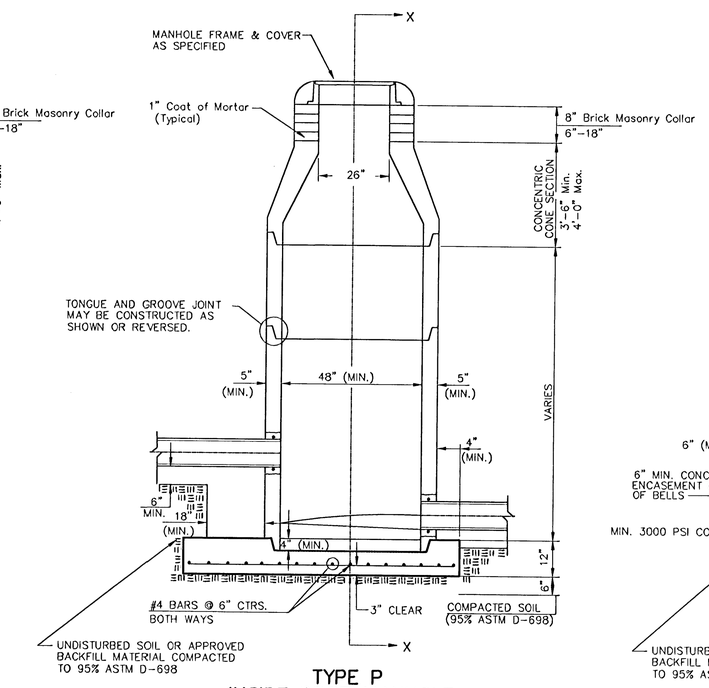
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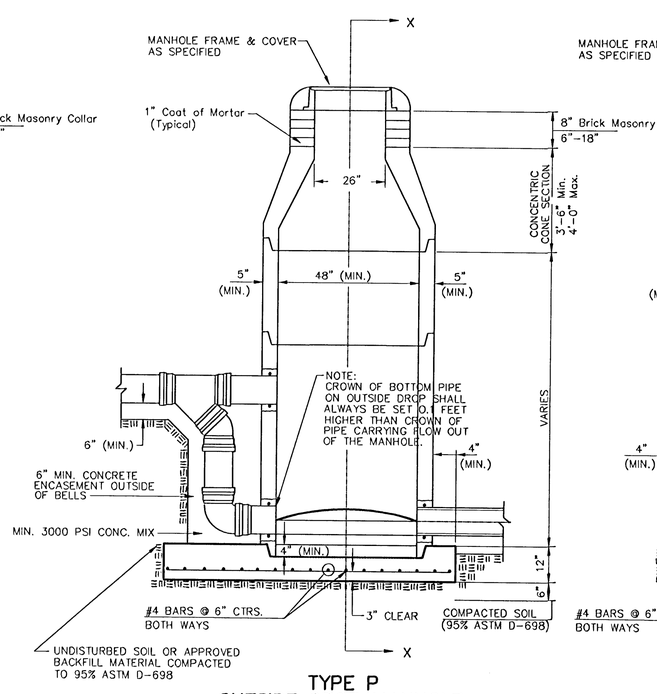
SEWER APPURTENANCES DETAILS



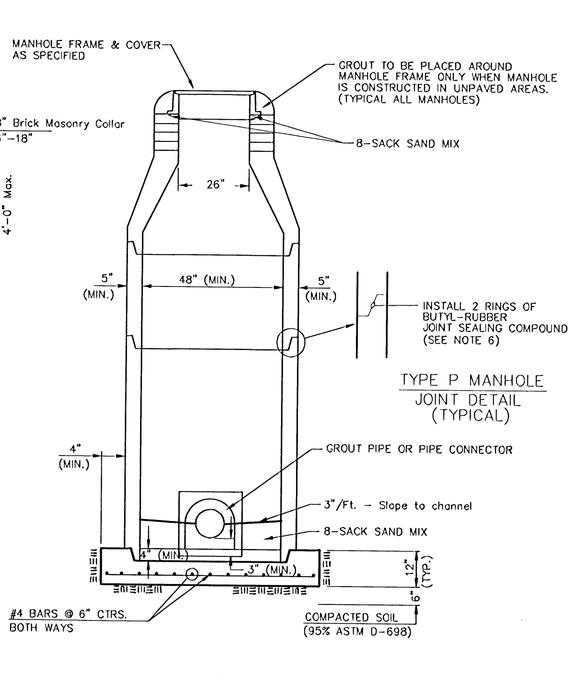
TYPE P
STANDARD MANHOLE



TYPE P
INSIDE DROP MANHOLE



TYPE P
OUTSIDE DROP MANHOLE

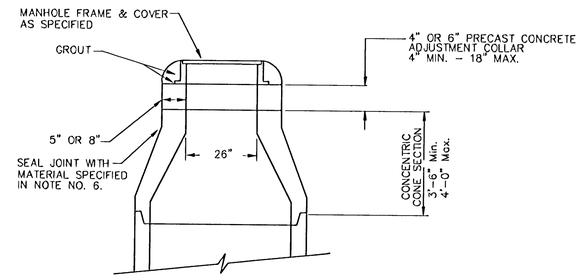


SECTION X
(TYPICAL)

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 TNEMEC 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 SACKS 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 MANHOLES SHALL BE AS SMALL AS PRACTICAL 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 CONNECTION 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 PAID FOR AT THE UNIT PRICE BID FOR 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 AS 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 INSIDE DROP MANHOLES. FLOW CHANNELS FOR INSIDE DROP 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 LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES 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 FLEXIBILITY OF THE JOINT. COST OF CRADLE 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. OUTSIDE 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 18" 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.



ALTERNATE CONSTRUCTION
IN UNPAVED AREAS

STD. MANHOLE DETAILS
SEWER APPURTENANCES

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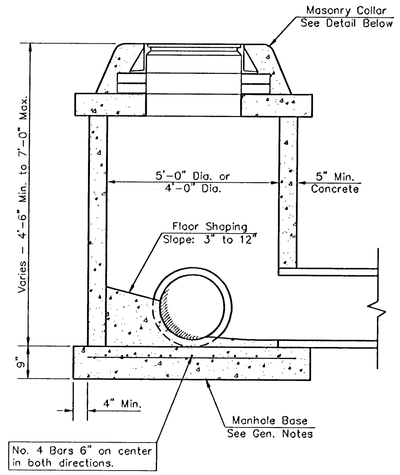
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SHEET 11 OF 17

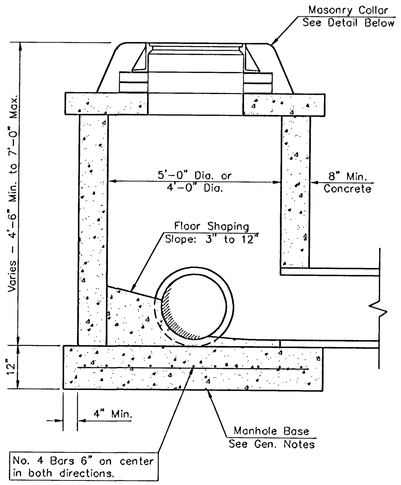
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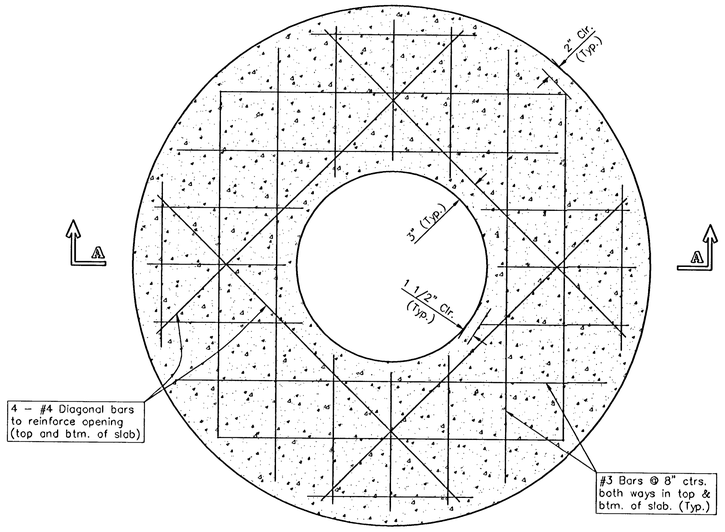
Std.Manhole



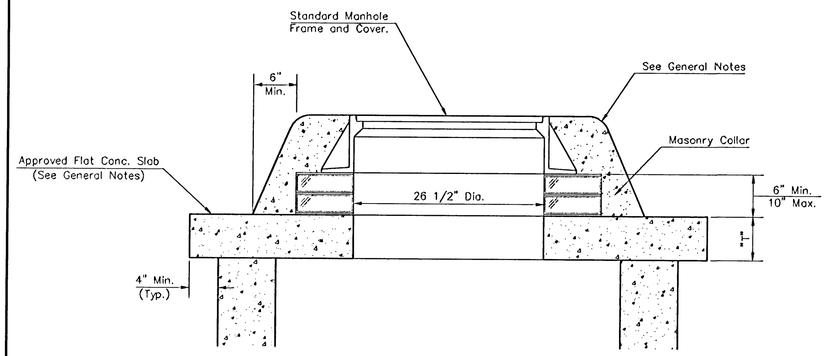
SHALLOW TYPE "P" MANHOLE



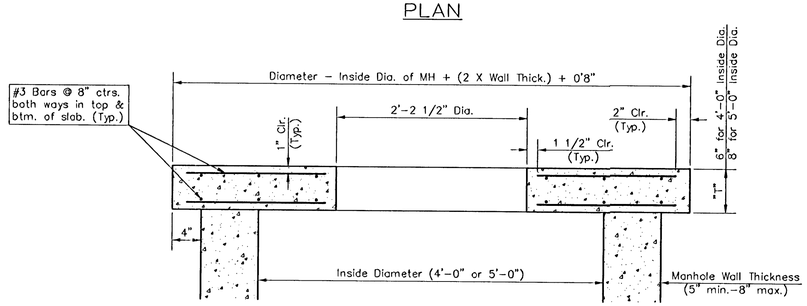
SHALLOW TYPE "C" MANHOLE



PLAN

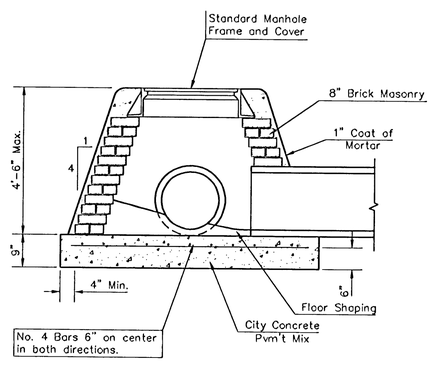


MASONRY COLLAR DETAIL

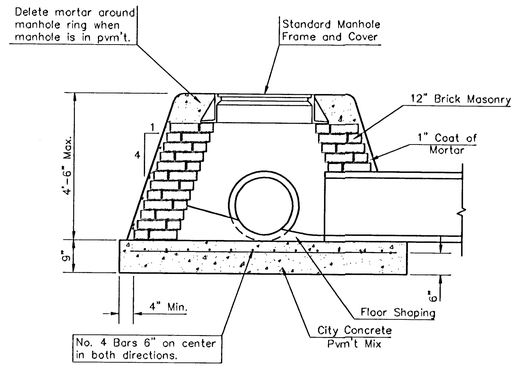


SECTION A–A

FLAT CONCRETE SLAB DETAILS



SPECIAL SHALLOW TYPE "A" MANHOLE



SPECIAL SHALLOW TYPE "B" MANHOLE

GENERAL NOTES

1. Mortar used in masonry construction shall contain 8 sacks 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 cement 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.

2. 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 6" 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.

3. 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 as 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. Manhole floors shall have slopes of 3 inches per foot in the areas outside of the flow channels sloped toward the flow channels. Pipes laid through manholes shall have the top half removed to neat lines 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.

4. 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 flexibility of the joint. Cost of cradle within manhole excavation or to clay pipe joints adjacent to manhole shall be included in the unit price bid for the manhole.

5. 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 drawings.

6. The crowns of inflowing pipes shall never be set lower than the crown of the outflowing pipe.

7. Standard shallow manholes type "P" and "C" shall be paid for at the unit price bid per each for the type and diameter indicated. All standard shallow manhole diameters will be 4' unless indicated otherwise.

8. All brick used in manhole construction shall meet Grade SW of ASTM C652 or C62-87.

CITY OF WICHITA, KANSAS

STD. SHALLOW MANHOLES

TYPE 'F' AND TYPE 'C'

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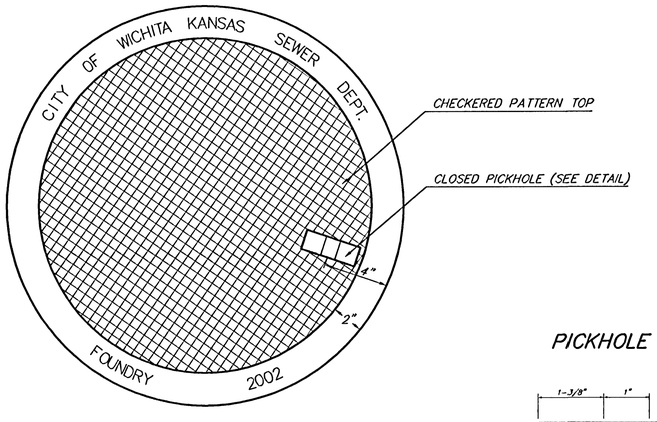
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DETAIL SHL WMH2.DWG

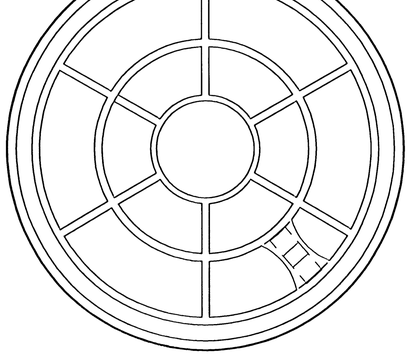
MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

MANHOLE COVER
Weight = 180 Lbs.

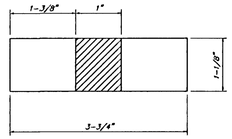


TOP VIEW

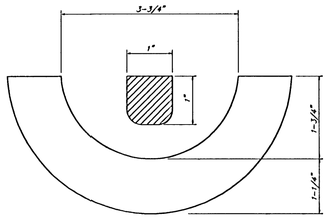


BOTTOM VIEW

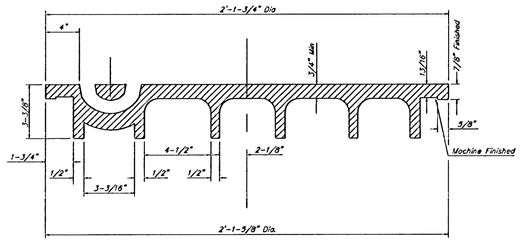
PICKHOLE DETAIL



TOP VIEW

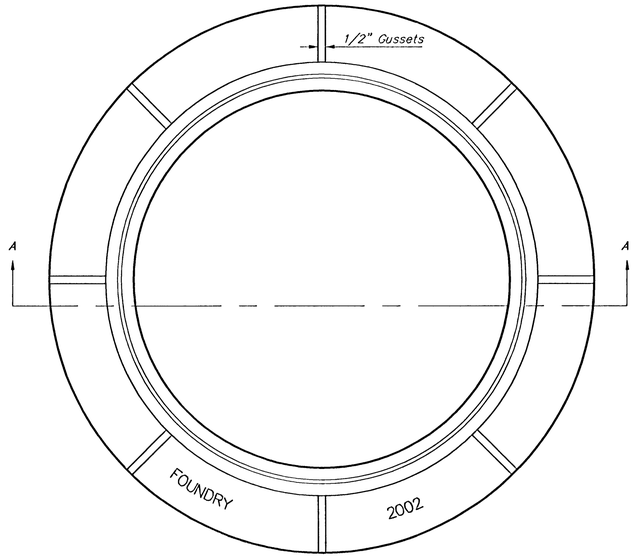


SECTION VIEW

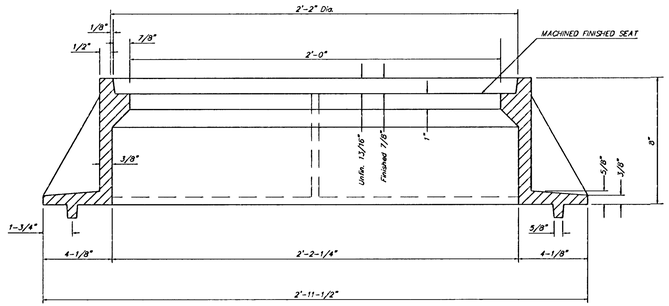


SECTION VIEW

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 VERTICAL FACE IN 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 BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. 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.

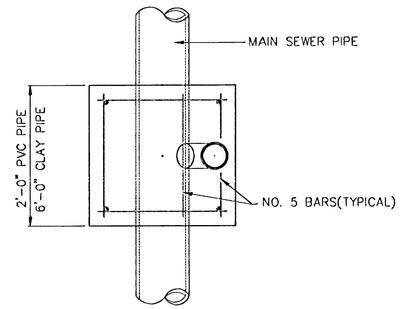
MANHOLE FRAME AND COVER DETAIL
ADOPTED AS STANDARD DESIGN BY
CITY OF WICHITA, KANSAS

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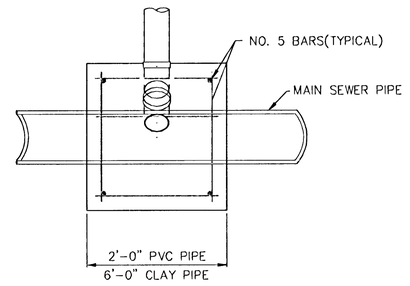
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STAFF	STAFF			NONE	

L:\Details\Manhole

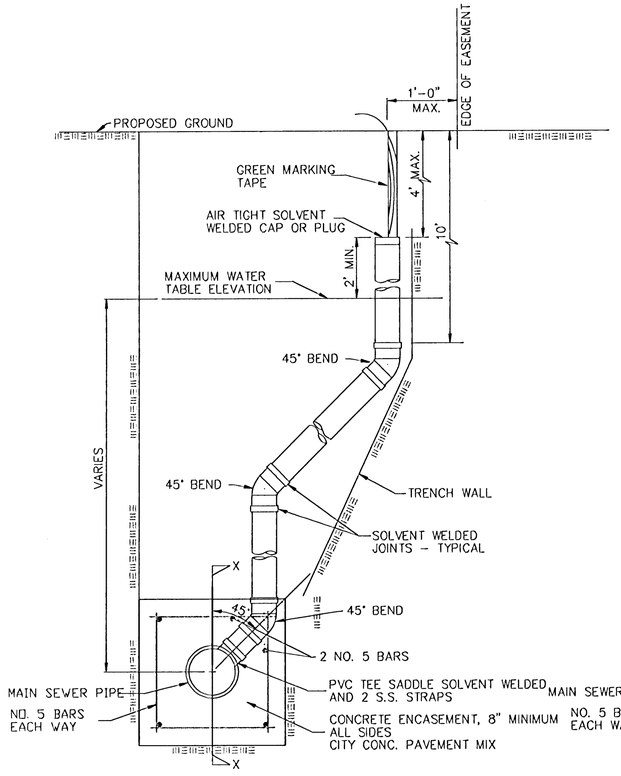
VERTICAL RISER DETAILS
ADOPTED AS STANDARD DESIGN
BY
CITY OF ROSE HILL, KANSAS
OCTOBER 1992



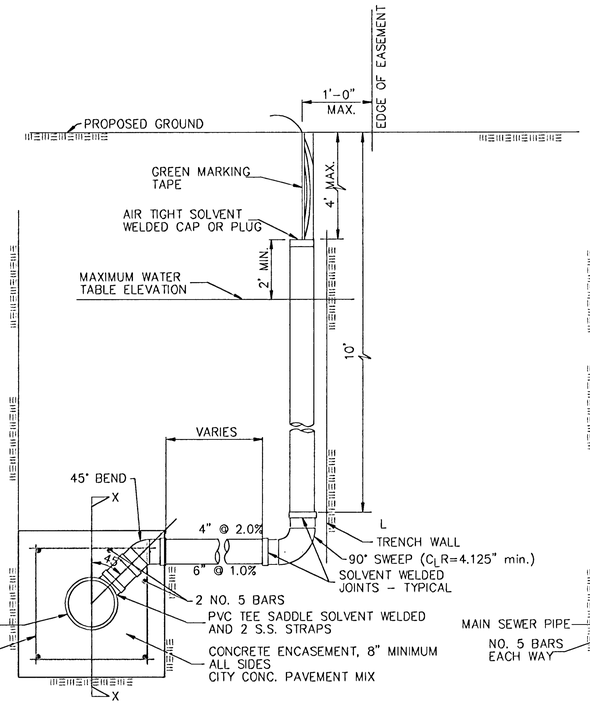
TYPICAL PLAN VIEW



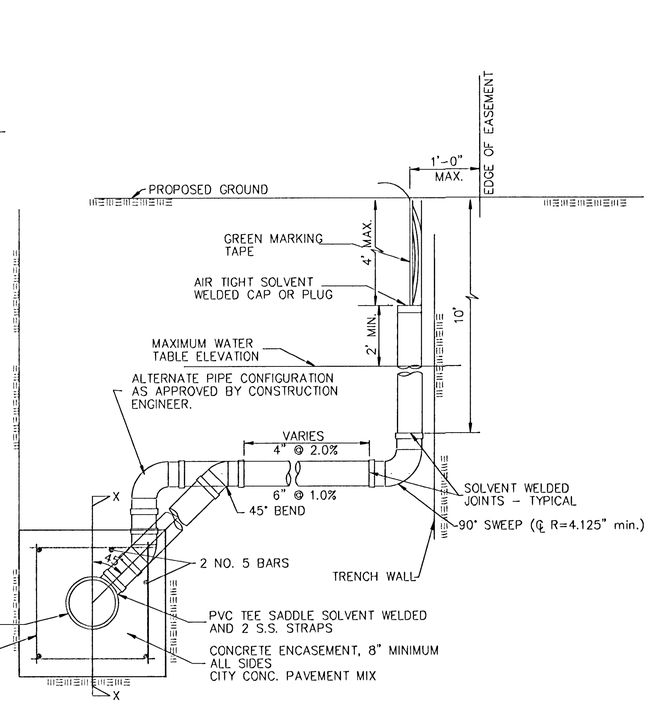
TYPICAL SECTION X–X



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 ENCASEMENT. 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".

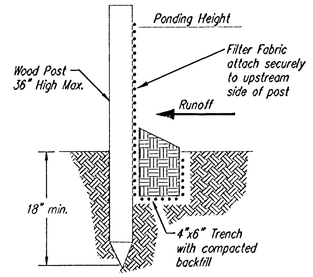
City of Rose Hill Standard
Riser Details

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER	SHEET
468-83595	14 OF 17

DESIGN	DRAWN	APPROVED	DATE	SCALE
			3/12/03	NONE

Details\Riser01



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.

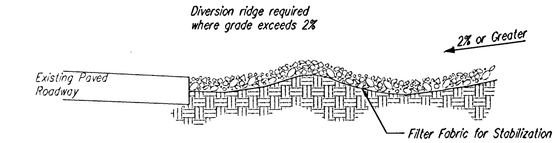
List of common placement/installation mistakes to avoid:

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, ilails, 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.

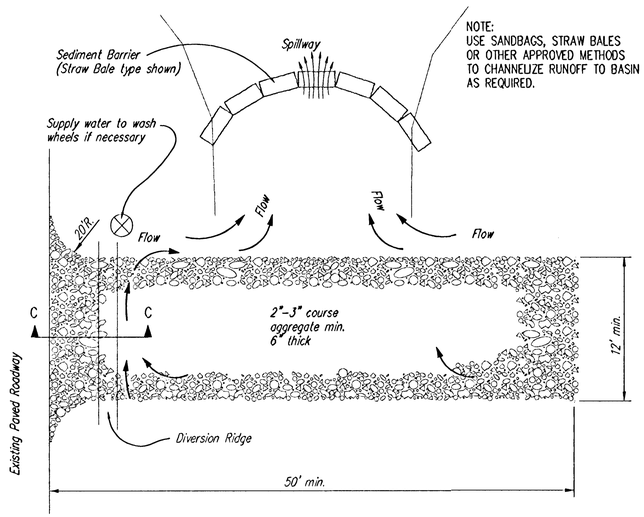
Inspection and Maintenance:

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?



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. 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.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. 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.
4. 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.

CITY OF WICHITA

SOIL EROSION BMP DETAILS

CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER	OCA NO.
468-83595	743982

DATE	
AUG 2002	SHEET 15 OF 17

SHADOW WOODS ADDITION
WICHITA, SEDGWICK COUNTY, KANSAS

Maple Group, L.L.C.,

_____, Member
Jay W. Russell
(See Page 1 for Owners Acknowledgement)

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION CITY DATUM
1-24	D	177.2
1-7	E	160.5

BENCHMARK:
135th St. W. & Maple –
City of Wichita Benchmark Disc
on headwall at NE corner
of intersection.
34.00' SW to Section Cor. Iron.
Elev. = 150.29 City Datum
(1337.69 NGVD29)

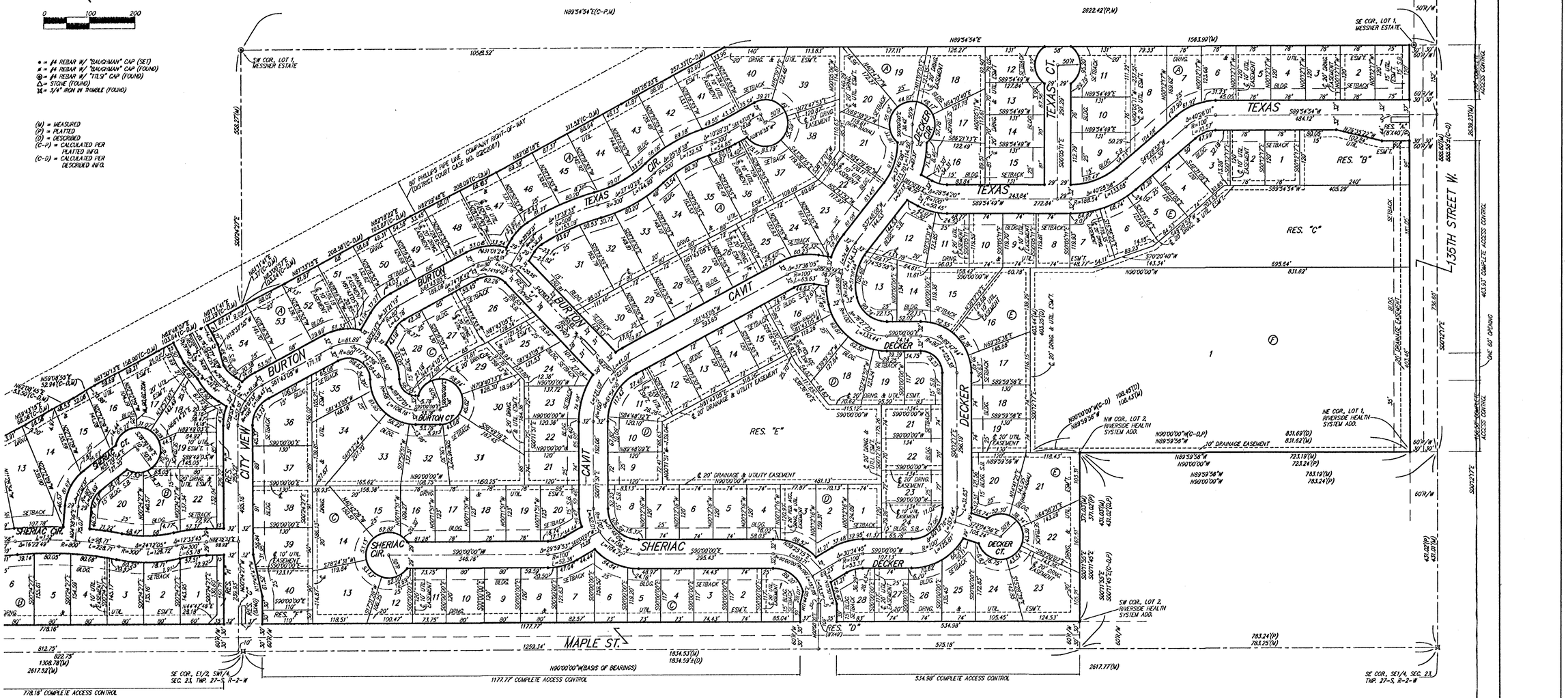
NOTE:
A master grading plan for drainage has been developed for this subdivision and is on file with the City of Wichita, Kansas. All drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage system shall be allowed.

NOTE:
A drainage plan has been developed for this subdivision and is on file with the City of Wichita, Kansas. Drainage intent shall remain as depicted or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage plan shall be allowed.

0 100 200

● = ¼ REBAR W/ "BAUGHMAN" CAP (SET)
✱ = ¼ REBAR W/ "BAUGHMAN" CAP (FOUND)
◉ = ¼ REBAR W/ "ITLS" CAP (FOUND)
△ = STONE (FOUND)
⋈ = 3/4" IRON W/ THIMBLE (FOUND)

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



BAUGHMAN COMPANY P. A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211
F:\PLAT\SHADOW WOODS ADDITION\DWG\SHADOWWOODSF.DWG-MOC

SHADOW WOODS ADDITION
WICHITA, SEDGWICK COUNTY, KANSAS

State of Kansas)
Sedgwick County) SS

We, Baughman Company, P.A., Surveyors in aforesaid county and state do hereby certify that we have surveyed and platted "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas and that the accompanying plat is a true and correct exhibit of the property surveyed, described as that part of the SE¼ of Sec. 23, Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County, Kansas described as follows: Beginning at the NW corner of Riverside Health Systems Addition, Wichita, Sedgwick County, Kansas; thence westerly along the extended north line of said Riverside Health Systems Addition, 108.45 feet; thence northerly parallel with the east line of said SE¼, 403.25 feet; thence easterly with a deflection angle to the right of 90°07'06", 135.98 feet; thence northeasterly with a deflection angle to the left of 19°34'09", 143.34 feet; thence northeasterly with a deflection angle to the left of 20°51'47", 203.52 feet; thence easterly with a deflection angle to the right of 40°26'03", 465.29 feet to a point on the east line of said SE¼; thence northerly along the east line of said SE¼, 304.00 feet, more or less, to the SE corner of the N½ of said SE¼, said SE corner also being the intersection of the east line of said SE¼ and the extended south line of Messner Estate, Wichita, Sedgwick County, Kansas; thence westerly along the south line of the N½ of said SE¼ and along the south line of said Messner Estate, 1563.90 feet to the intersection with the southeast line of Amendment of Right of Way Agreement (District Court Case No. 82C2067); thence southwesterly with a deflection angle to the left of 28°28'30" along the southeast line of said Agreement, 257.33 feet; thence southwesterly with a deflection angle to the right of 00°41'55" along the southeast line of said Agreement, 311.52 feet; thence southwesterly with a deflection angle to the right of 00°21'28" along the southeast line of said Agreement, 208.09 feet; thence southwesterly with a deflection angle to the left of 00°11'24" along the southeast line of said Agreement, 103.87 feet; thence southwesterly with a deflection angle to the left of 00°45'07" along the southeast line of said Agreement, 208.56 feet; thence southwesterly with a deflection angle to the right of 01°27'43" along the southeast line of said Agreement, 103.24 feet; thence southwesterly with a deflection angle to the left of 01°49'16" along the southeast line of said Agreement, 1.37 feet to a point on the west line of said SE¼; thence southerly along the west line of said SE¼, 757.47 feet to the SW corner of said SE¼; thence easterly along the south line of said SE¼, 1834.59 feet, more or less, to the intersection with the extended west line of said Riverside Health Systems Addition; thence northerly along said extended west line, 431.02 feet to the point of beginning, TOGETHER with that part of the E½ of the SW¼ of said Sec. 23 lying south of and adjacent to the southeast line of Amendment of Right of Way Agreement (District Court Case No. 82C2067), more particularly described as follows: Beginning at the SE corner of said SW¼; thence northerly along the east line of said E½, 757.47 feet to the intersection with the southeast line of said Agreement; thence southwesterly with a deflection angle to the left of 118°23'51" along the southeast line of said Agreement, 102.29 feet; thence southwesterly with a deflection angle to the right of 01°34'26" along the southeast line of said Agreement, 103.84 feet; thence southwesterly with a deflection angle to the left of 00°55'55" along the southeast line of said Agreement, 158.90 feet; thence southwesterly with a deflection angle to the left of 02°41'18" along the southeast line of said Agreement, 52.94 feet; thence southwesterly with a deflection angle to the right of 02°59'30" along the southeast line of said Agreement, 53.50 feet; thence southwesterly with a deflection angle to the left of 02°25'29" along the southeast line of said Agreement, 66.56 feet; thence southwesterly with a deflection angle to the right of 02°22'24" along the southeast line of said Agreement, 157.26 feet; thence southwesterly with a deflection angle to the left of 01°37'50" along the southeast line of said Agreement, 58.97 feet; thence southwesterly with a deflection angle to the right of 01°53'14" along the southeast line of said Agreement, 101.55 feet; thence southwesterly with a deflection angle to the left of 00°58'26" along the southeast line of said Agreement, 60.68 feet; thence southerly with a deflection angle to the left of 59°18'40", 321.29 feet to a point on the south line of said E1/2, said point being 486.05 feet east of the SW corner of said E1/2; thence easterly along the south line of said E½, 822.75 feet to the point of beginning, TOGETHER with that part of the SE¼ of Sec. 23, Twp. 27-S, R-2-W of the 6th P.M., Sedgwick County, Kansas described as follows: Beginning at the NE corner of Lot 1, Riverside Health System Addition, Wichita, Sedgwick County, Kansas; thence westerly along the north line of said Riverside Health System Addition, and as extended westerly, 831.69 feet; thence northerly parallel with the east line of said SE¼, 403.25 feet; thence easterly with a deflection angle to the right of 90°07'06", 135.98 feet; thence northeasterly with a deflection angle to the left of 19°34'09", 143.34 feet; thence northeasterly with a deflection angle to the left of 20°51'47", 203.52 feet; thence easterly with a deflection angle to the right of 40°26'03", 465.29 feet to a point on the east line of said SE¼; thence southerly along the east line of said SE¼, 584.58 feet to the intersection with the north line of said Riverside Health System Addition, as extended easterly; thence westerly along said extended north line, 60.00 feet to the point of beginning, all being subject to road rights-of-way of record.

Existing public easements and dedications being vacated by virtue of K.S.A. 12-512(b).

Baughman Company, P.A.

Michael A. Conrey 18-971 21 2003, Surveyor
Michael G. Conrey

MICHAEL G. CONREY — REGISTERED — 18971 — BANNAR — LAND SURVEYOR

Know all men by these presents that we, the undersigned, have caused the land in the surveyors certificate to be platted into Lots, Blocks, Streets, and Reserves to be known as "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas. The utility easements are hereby granted as indicated for the construction and maintenance of all public utilities. The drainage and utility easements are hereby granted as indicated for drainage purposes and for the construction and maintenance of all public utilities. The drainage easements are hereby granted as indicated for drainage purposes. The pedestrian access and drainage easement is hereby granted as indicated for pedestrian access purposes to or from Reserve "E", and for drainage purposes, and no fences or other obstructions shall be constructed or placed on or within this easement. The pedestrian access, drainage, and utility easement is hereby granted as indicated for pedestrian access purposes to or from Reserve "E", for drainage purposes, and for the construction and maintenance of all public utilities, and no fences or other obstructions shall be constructed or placed on or within this easement. The streets are hereby dedicated to and for the use of the public. Reserves "A", "D", "G", "J", "K", and "L" are hereby reserved for open space, landscaping, utilities, drainage purposes, and streets. Reserve "B" is hereby reserved for open space, landscaping, lakes, drainage purposes, berms, entry monuments, and utilities as confined to easements. Reserve "C" is hereby reserved for open space, landscaping, lakes, drainage purposes, berms, and utilities as confined to easements. Reserve "E" is hereby reserved for open space, landscaping, lakes, drainage purposes, berms, sidewalks, gazebos, recreational areas, and utilities as confined to easements. Reserves "F" and "H" are hereby reserved for open space, landscaping, screening walls, entry monuments, utilities, and drainage purposes. Reserve "I" is hereby reserved for open space, landscaping, utilities, screening walls, berms, and drainage purposes. Reserves "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", and "L" shall be owned and maintained by the homeowners association for the addition. Access controls shall be as depicted on the face of the plat and are hereby granted to the City of Wichita, Kansas. The permitted opening locations shall be as determined by the City Engineer of the City of Wichita, Kansas. The Minimum Building Pad Elevations for the lowest opening to the structures shall be as indicated on the face of the plat.

Maple Group, L.L.C.

_____, Member
Jay W. Russell

New Life Covenant Church, Inc.

_____, President
Joe A. Winger

_____, Vice-President
Robert J. Schmidt

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this 21st day of January, 2003, by Jay W. Russell, Member of Maple Group, L.L.C., on behalf of the company.

SUSAN K. MONETTE Notary Public - State of Kansas My Appt. Expires 11-9-03

_____, Notary Public
SUSAN K. MONETTE

My App't. Exp. 11-9-03

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this 21st day of January, 2003, by Joe A. Winger, President of New Life Covenant Church, Inc., on behalf of the corporation.

SUSAN K. MONETTE Notary Public - State of Kansas My Appt. Expires 11-9-03

_____, Notary Public
SUSAN K. MONETTE

My App't. Exp. 11-9-03

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this 22nd day of January, 2003, by Robert J. Schmidt, Vice-President of New Life Covenant Church, Inc., on behalf of the corporation.

SUSAN K. MONETTE Notary Public - State of Kansas My Appt. Expires 11-9-03

_____, Notary Public
SUSAN K. MONETTE

My App't. Exp. 11-9-03

We the undersigned holders of a mortgage on the above described property, do hereby consent to this plat of "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas.

Konza Bank

_____, VP
MAX WHITTLE (Title)

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this 21st day of January, 2003, by MAX Whittle, Vice-president (Title) of Konza Bank, on behalf of the bank.

SUSAN K. MONETTE Notary Public - State of Kansas My Appt. Expires 11-9-03

_____, Notary Public
SUSAN K. MONETTE

My App't. Exp. 11-9-03

We the undersigned holders of a mortgage on the above described property, do hereby consent to this plat of "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas.

Prairie State Bank-West Wichita

_____, V.P.
LORI J. NEWELL (Title)

State of Kansas)
Sedgwick County) SS

The foregoing instrument acknowledged before me, this 21st day of January, 2003, by Lori J. Newell, Vice president (Title) of Prairie State Bank-West Wichita, on behalf of the bank.

SUSAN K. MONETTE Notary Public - State of Kansas My Appt. Expires 11-9-03

_____, Notary Public
SUSAN K. MONETTE

My App't. Exp. 11-9-03

This plat of "SHADOW WOODS ADDITION", Wichita, Sedgwick County, Kansas has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this _____ day of _____, _____.
Wichita-Sedgwick County Metropolitan Area Planning Commission

_____, Chair
Bernard A. Hentzen

_____, Secretary
Dale Miller

This plat approved and all dedications shown hereon accepted by the City Council of the City of Wichita, Kansas, this _____ day of _____, 2003.

At the direction of the City Council

_____, City Manager
Chris Cherches

_____, City Clerk
Pat Graves

Reviewed in accordance with K.S.A. 58-2005 on this _____ day of _____, 2003.

_____
Tricia L. Robello, L.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Entered on transfer record this _____ day of _____, 2003.

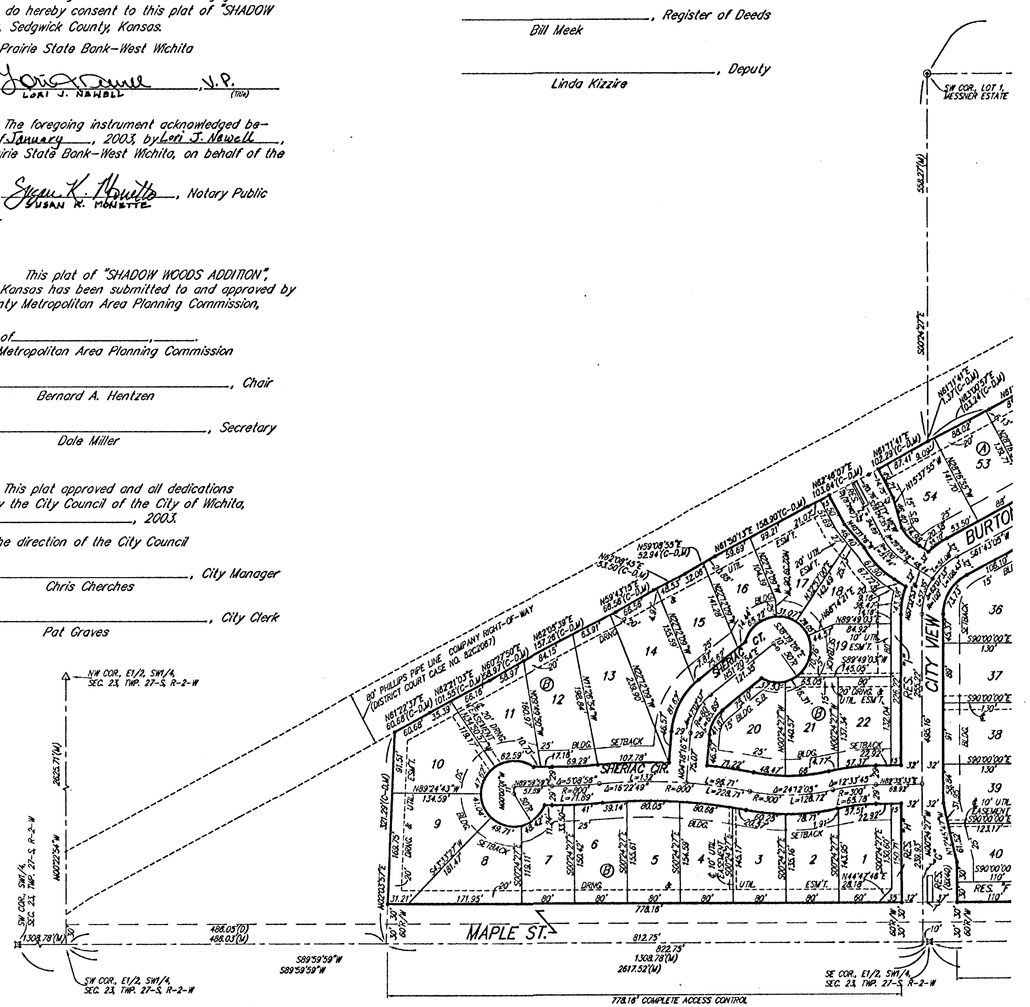
_____, County Clerk
Don Brace

State of Kansas)
Sedgwick County) SS

This is to certify that this plat has been filed for record in the office of the Register of Deeds, this _____ day of _____, 2003 at _____ o'clock ___M; and is duly recorded.

_____, Register of Deeds
Bill Meek

_____, Deputy
Linda Kizzire



• = ¼ REBAR W/ "BAUGHMAN" CAP (SET)
⊙ = ¼ REBAR W/ "BAUGHMAN" CAP (FOUND)
◎ = ¼ REBAR W/ "T.T.S." CAP (FOUND)
△ = STONE (FOUND)
⋈ = 3/4" IRON IN THIMBLE (FOUND)

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

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 grades or as modified with the approval of the City Engineer of the City of Wichita, Kansas. No obstructions which impede the flow of this drainage system shall be allowed.

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MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES		
LOT	BLOCK	ELEVATION CITY DATUM
1-24	D	177.2
1-7	E	160.5

BENCHMARK:
1.5DIA SS. W. & Maple - City of Wichita Benchmark Disc on headwall at NE corner of intersection. 34.00' SW to Section Cor. Iron. Elev. = 150.29 City Datum (1337.69 NGVD29)

PAGE 1 OF 2

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