

GENERAL NOTES:

1. City of Wichita Datum.
2. Contractor will be required to provide a minimum advance notice of twenty-four (24) hours to utility companies prior to starting any excavation as follows:

Kansas One-Call 1-800-344-7233

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

Cox Cable
 Kansas Gas & Electric - Gas 262-4270 or 263-2061
 Kansas Gas & Electric - Electric 263-7511
 Arkla Gas Company 264-1141
 Southwestern Bell Tel. Co. 942-8350 or 263-8161
 City of Wichita Water Department 1-571-2611
 City of Wichita Sewer Maintenance 268-4908
 268-4071

3. Existing utility lines 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.
4. Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be the disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, 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.

5. 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 the work.
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. 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 the proposed new construction shall be saved and protected from damage.
8. Contractor shall vacuum test all manholes according to the City of Wichita standard specifications.
9. The tops of all Manholes to be set 0.4 feet above existing ground unless otherwise noted.
10. All areas disturbed by sewer construction, i.e. R/W, easements, and adjacent properties shall be restored with the same grass/sod as per AR 78.
11. Contractor shall maintain all existing BMP(s) on project site during construction. Contractor shall repair or replace any existing BMP(s) that are damaged (Cost subsidiary to site restoration). If BMP(s) were damaged prior to contractor beginning work on project, notify construction inspector or engineer.
12. Contractor shall backfill trench with sand and flush per City of Wichita specifications.
13. Traffic control as necessary shall be per the latest addition of the MUTCD.
14. Depth & location of all existing utilities shown must be field verified.

Scale 1" = 100'

**CONSTRUCTION PLANS
 SANITARY SEWER EXTENSIONS
 FOUR H ADDITION
 TO
 THE CITY OF WICHITA, KANSAS
 LATERAL 132, WESTLINK SEWER
 JAMES ARMOUR, P.E. - CITY ENGINEER
 PROJECT NO. 488-83761
 OCA NO. 744102**

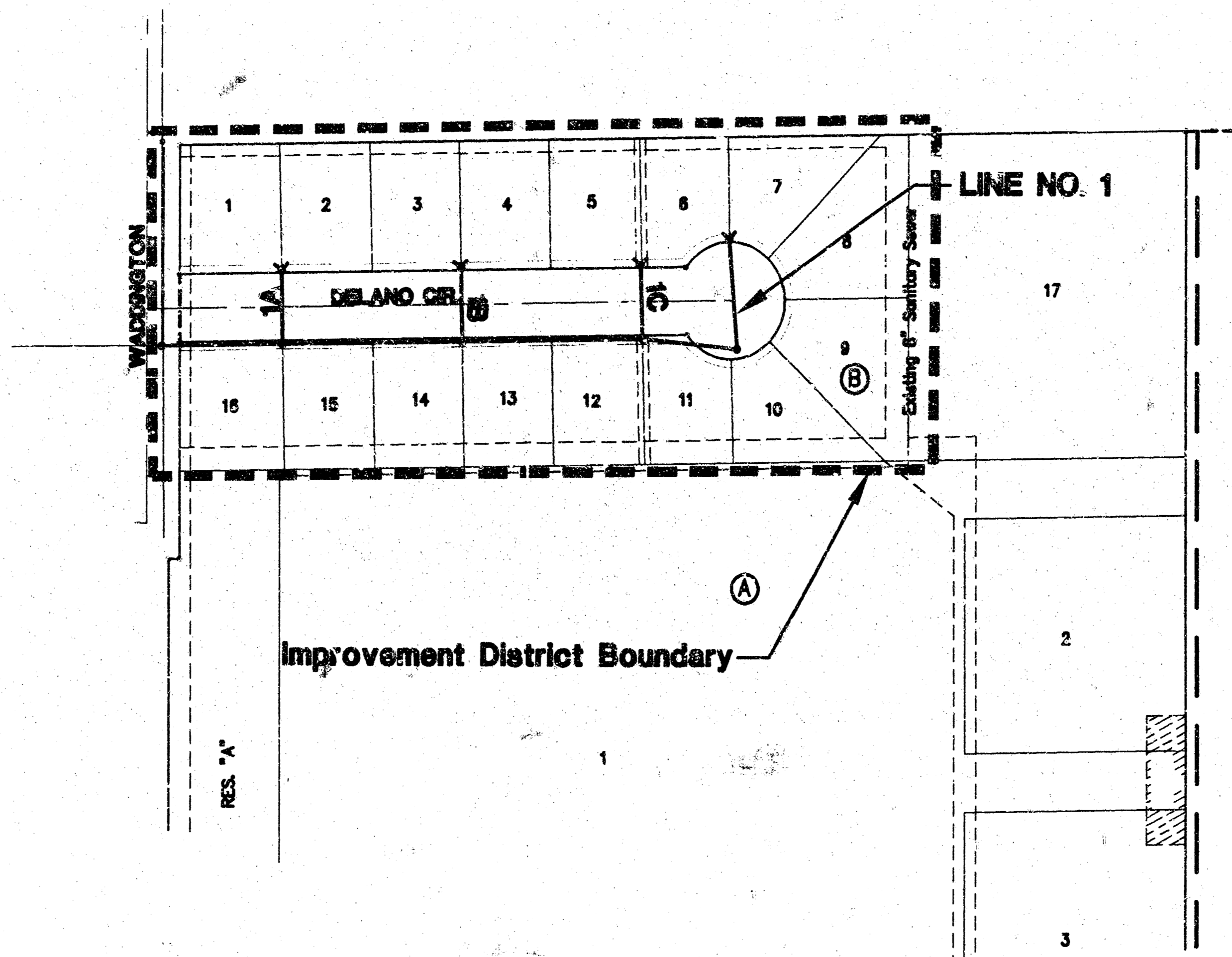
BENCH MARKS

City of Wichita Datum

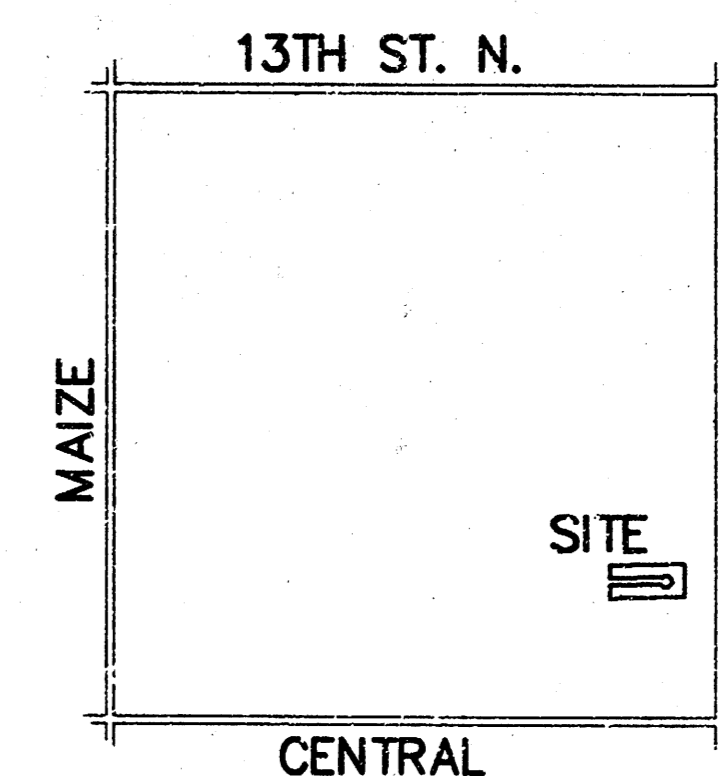
1. City of Wichita disc approx. 56.2' N. 32' W. of the intersection of Tyler & Central. Elevation 143.90
2. City of Wichita disc N.W. corner of RCB. Approx. 44' S. & 88' E. of intersection of Tyler & 10th St. N. Elevation 150.35

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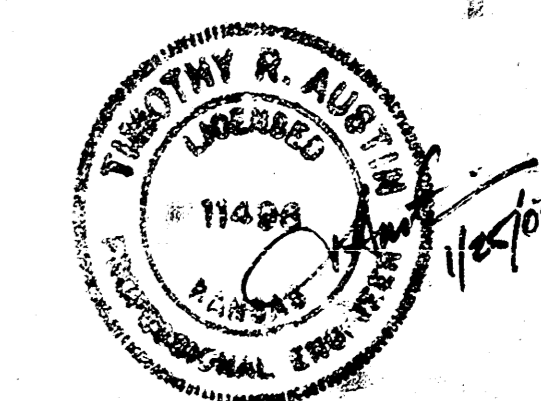
| | |
|-------------------------|-----------|
| TITLE SHEET | SHEET 1 |
| LINE NO. 1, 1A, 1B & 1C | SHEET 2 |
| TYPE "P" MANHOLE | SHEET 3 |
| CLEANOUT DETAIL | SHEET 4 |
| EROSION CONTROL DETAILS | SHEET 5-7 |
| COORDINATE POINT LIST | SHEET 8 |
| FOUR H ADDITION PLAT | SHEET 9 |



*WB Carter Construction Co., Inc. - Contractor
 Shearer, City-Inspector
 Released 5/3/05
 Per Plans
 Stubs
 .pdf by JDL 6/1/05*



LOCATION MAP
 No Scale

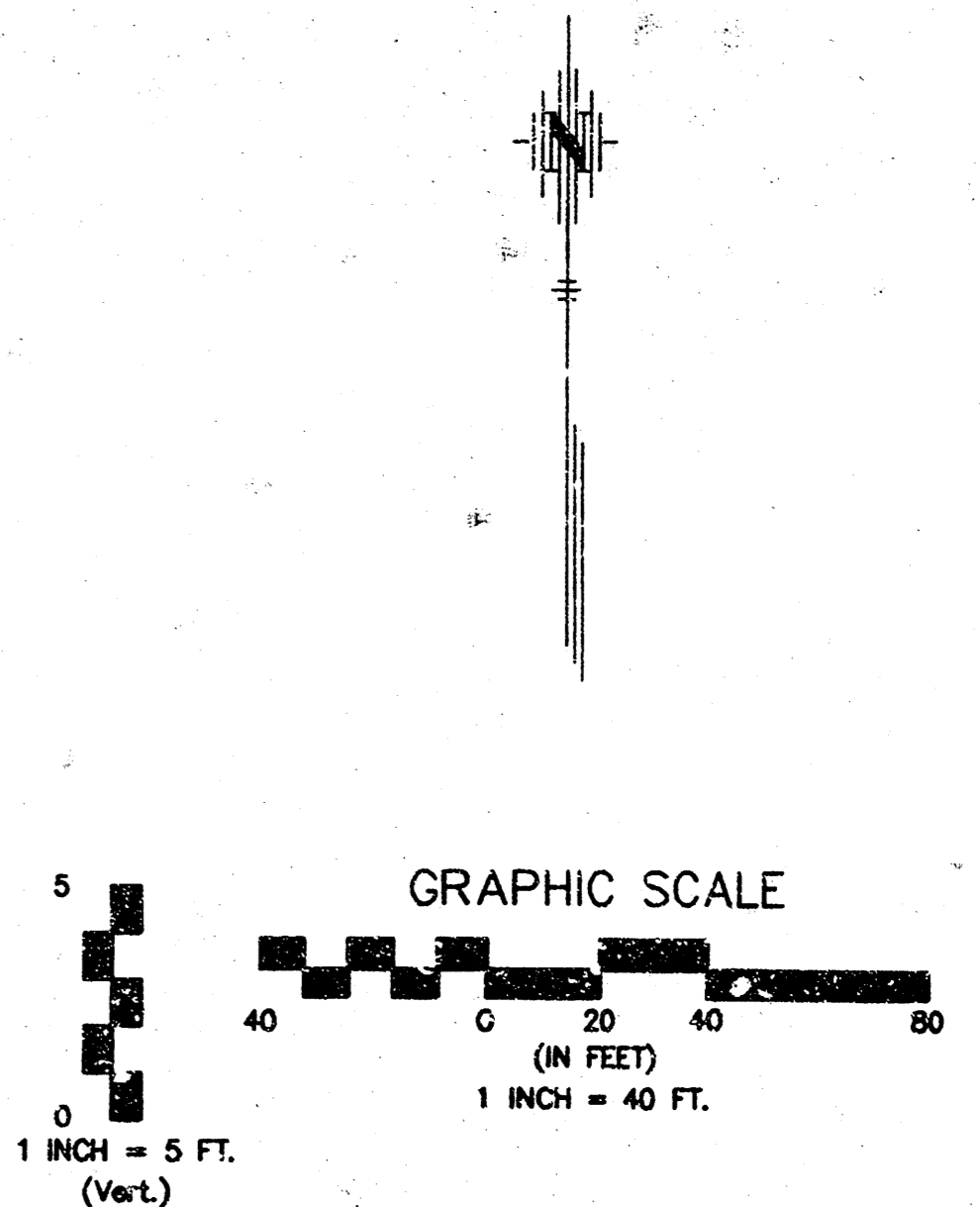
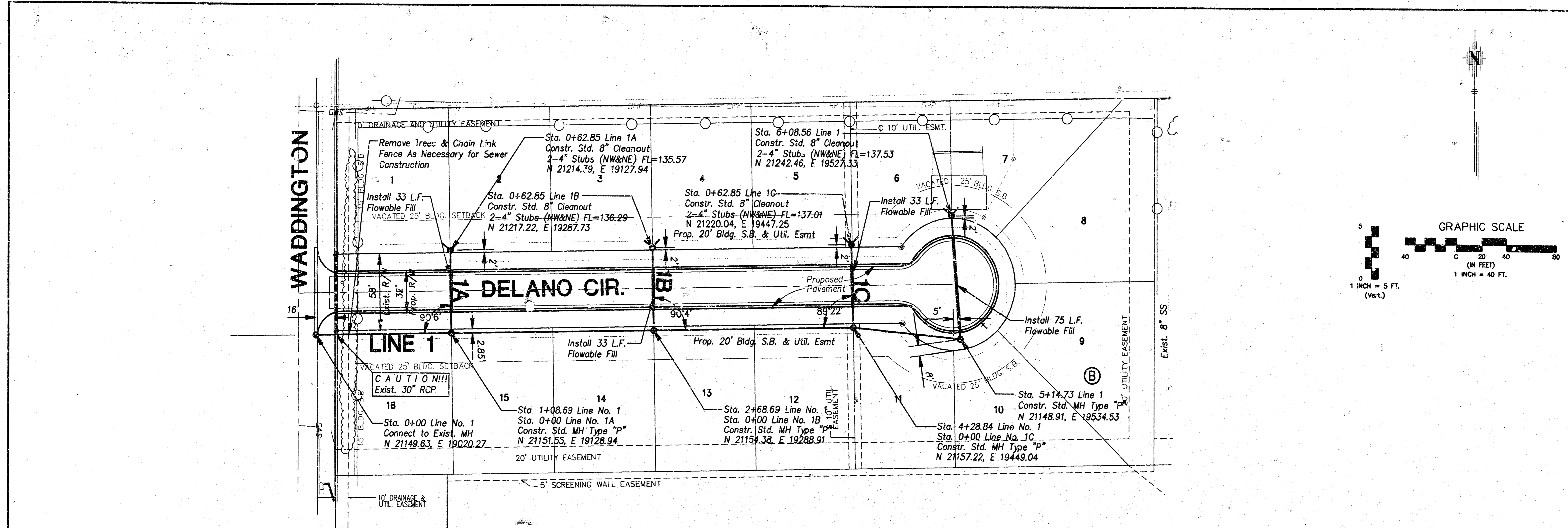


JANUARY 2005

PLANS PREPARED
 BY



POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 5940 E. Central, Suite 200 • Wichita, KS 67208-4212
 Phone 316/685-4114 • FAX 316/685-4444



| LINE NO. 1 | | LINE NO. 1A | | LINE NO. 1B | | LINE NO. 1C | |
|---|---|---|---|--|--|--|--|
| Sta. 0+00 Line No. 1 Connect to Exist. MH FL In = 134.46 FL Out = 134.66 | Sta. 1+00.69 Line No. 1 Sta. 0+00 Line No. 1A Constr. Std. MH Type "P" FL In = 134.89 FL Out = 134.89 | Sta. 2+68.69 Line No. 1 Sta. 0+00 Line No. 1B Constr. Std. MH Type "P" FL In = 135.73 FL Out = 135.86 | Sta. 4+08.69 Line No. 1 Sta. 0+00 Line No. 1C Constr. Std. MH Type "P" FL In = 136.47 FL Out = 136.56 | Sta. 6+08.56 Line 1 Constr. Std. 8" Cleanout 2-4" Stubs (NW&NE) FL=137.01 N 21220.04, E 19447.25 FL In = 136.76 FL Out = 136.81 | Sta. 0+00 Line No. 1A Sta. 1+08.69 Line No. 1B Constr. Std. MH Type "P" N 21151.53, E 19128.94 FL In = 136.96 FL Out = 137.16 | Sta. 0+00 Line No. 1A Sta. 1+08.69 Line No. 1B Constr. Std. MH Type "P" N 21151.53, E 19128.94 FL In = 136.96 FL Out = 137.16 | Sta. 0+00 Line No. 1A Sta. 1+08.69 Line No. 1B Constr. Std. MH Type "P" N 21151.53, E 19128.94 FL In = 136.96 FL Out = 137.16 |
| 0.88 L.F. 8" Pipe @ 0.40% Grade | 160.00 L.F. 8" Pipes @ 0.4% Grade | 160.15 L.F. 8" Pipe @ 0.4% Grade | 85.90 L.F. 8" Pipe @ 0.4% Grade | 62.85 L.F. 8" Pipe @ 0.4% Grade | 93.82 L.F. 8" Pipe @ 0.4% Grade | 62.85 L.F. 8" Pipe @ 0.4% Grade | 62.85 L.F. 8" Pipe @ 0.4% Grade |
| Top MH = 145.2 | Top MH = 145.7 | Top MH = 146.7 | Top MH = 147.4 | Top MH = 147.4 | Top MH = 145.0 | Top MH = 145.4 | Top MH = 145.6 |
| Existing 30" RCP FL 138.64 | Existing Ground | Existing Ground | Existing Ground | Existing Ground | Prop. 8" Water Line Top Elev. = 143.53 | Prop. 8" Water Line Top Elev. = 142.33 | Prop. 8" Water Line Top Elev. = 143.18 |
| Flowable Fill to Elev. = 143.2 | Flowable Fill to Elev. = 143.2 | Flowable Fill to Elev. = 143.2 | Flowable Fill to Elev. = 143.2 | Flowable Fill to Elev. = 143.2 | Flowable Fill to Elev. = 141.7 | Flowable Fill to Elev. = 142.3 | Flowable Fill to Elev. = 143.3 |
| Sta. 5+21.7 to Sta. 5+95.5 | Sta. 5+21.7 to Sta. 5+95.5 | Sta. 5+21.7 to Sta. 5+95.5 | Sta. 5+21.7 to Sta. 5+95.5 | Sta. 5+21.7 to Sta. 5+95.5 | Sta. 0+15.4 to Sta. 0+48.4 | Sta. 0+15.4 to Sta. 0+48.4 | Sta. 0+15.4 to Sta. 0+48.4 |

FOUR H ADDITION
SANITARY SEWER IMPROVEMENTS
SERIAL LINE NO. 1, 1A, 1B & 1C
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - CITY ENGINEER

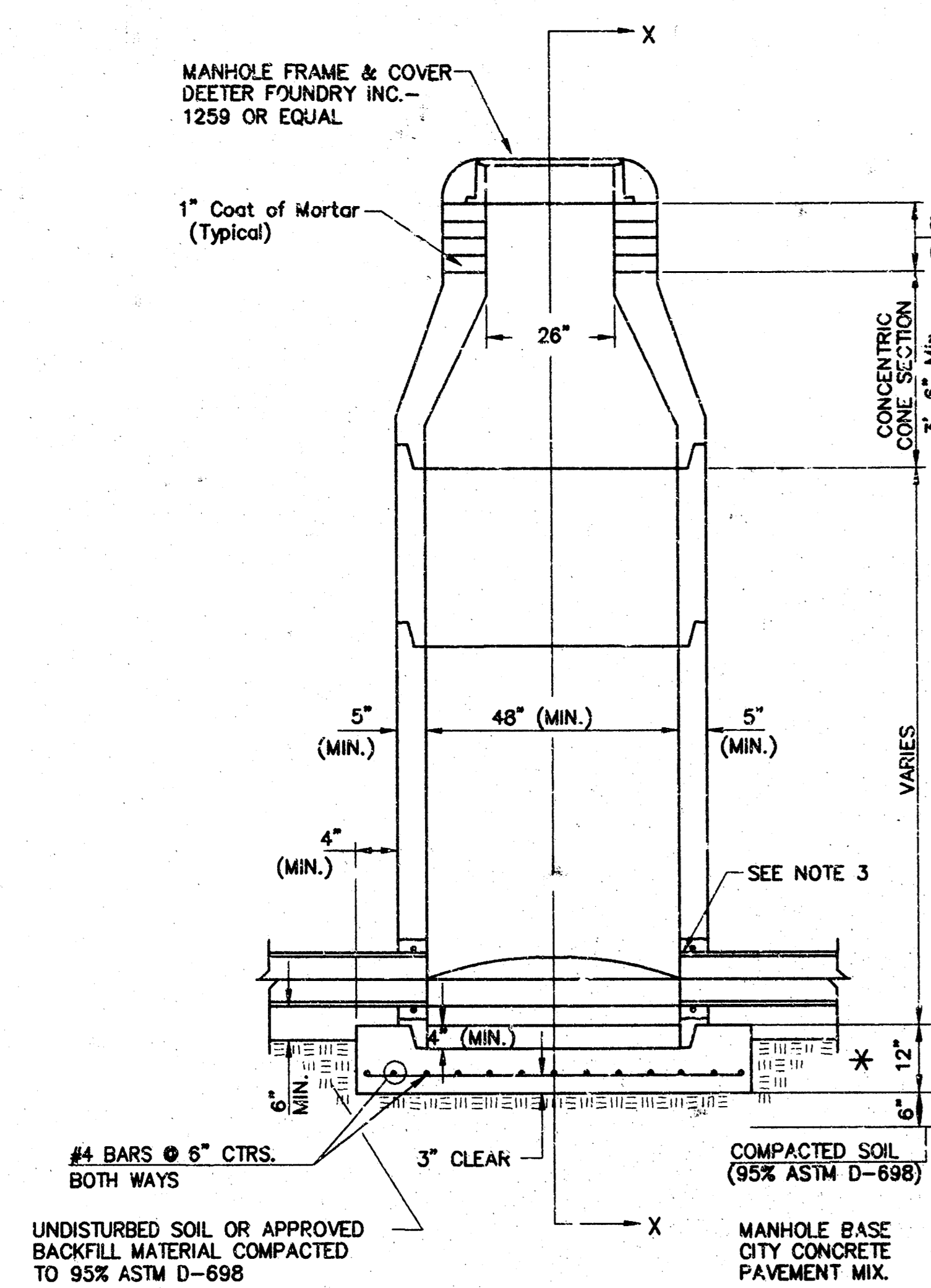
POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
8940 E. Central, Suite 200 • Wichita, KS 67208-9242
Phone 316-855-4114 • FAX 316-855-4444

FINAL

Designed By: T. Austin/S. Schmidt
Drawn By: S. Schmidt
Poe Job No.: AW 04106
Date: January 2005

2 of 9

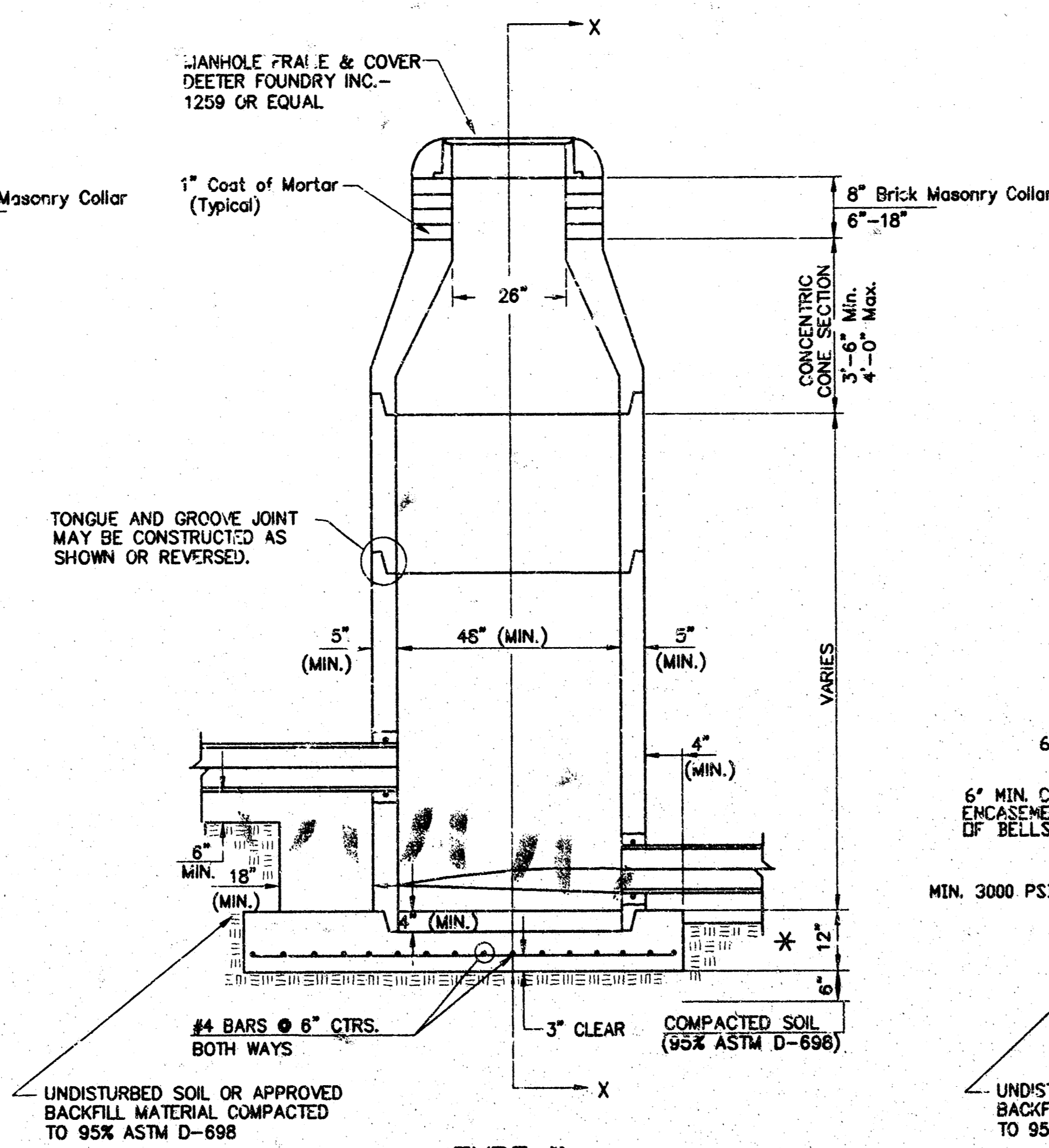
SEWER APPURTENANCES DETAILS



**TYPE P
STANDARD MANHOLE**

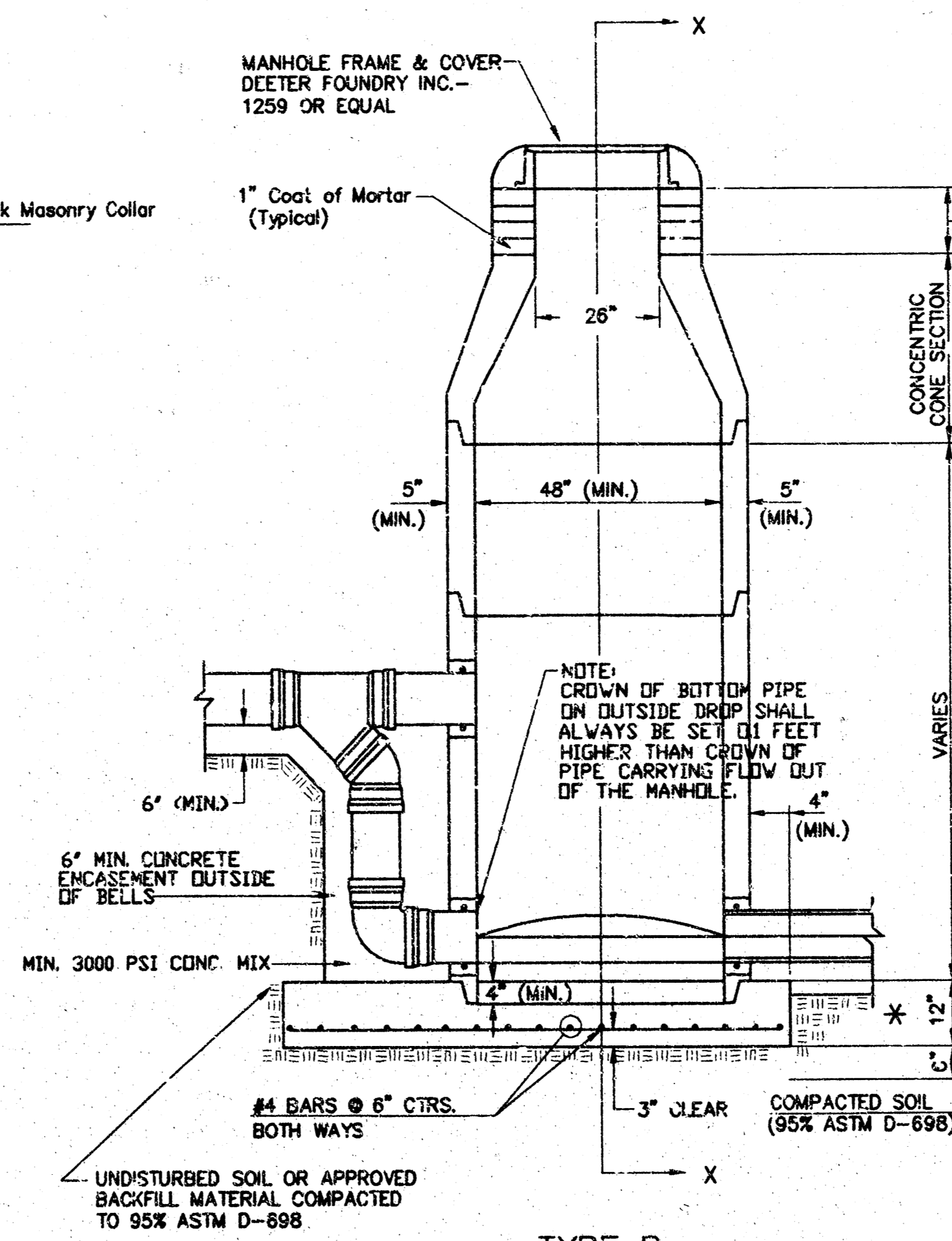
GENERAL NOTES
PRECAST MANHOLE NOTES

- ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
- NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
- 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 ENCASMENT A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
- ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED WITH 2 COATS TNEPEC SERIES 66 HI-BUILD EPOXOLINE, DRY THICKNESS OF 8 MILS (MIN.).
- EXTERIOR MANHOLE WALLS SHALL BE COATED WITH 1 COAT MOBILARMA 633 BITUMINOUS COATING.
- JOINT SEALING COMPOUND SHALL BE KENT SEAL NO. 2 OR APPROVED EQUAL.
- PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE.
- 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.
- LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
- 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 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.



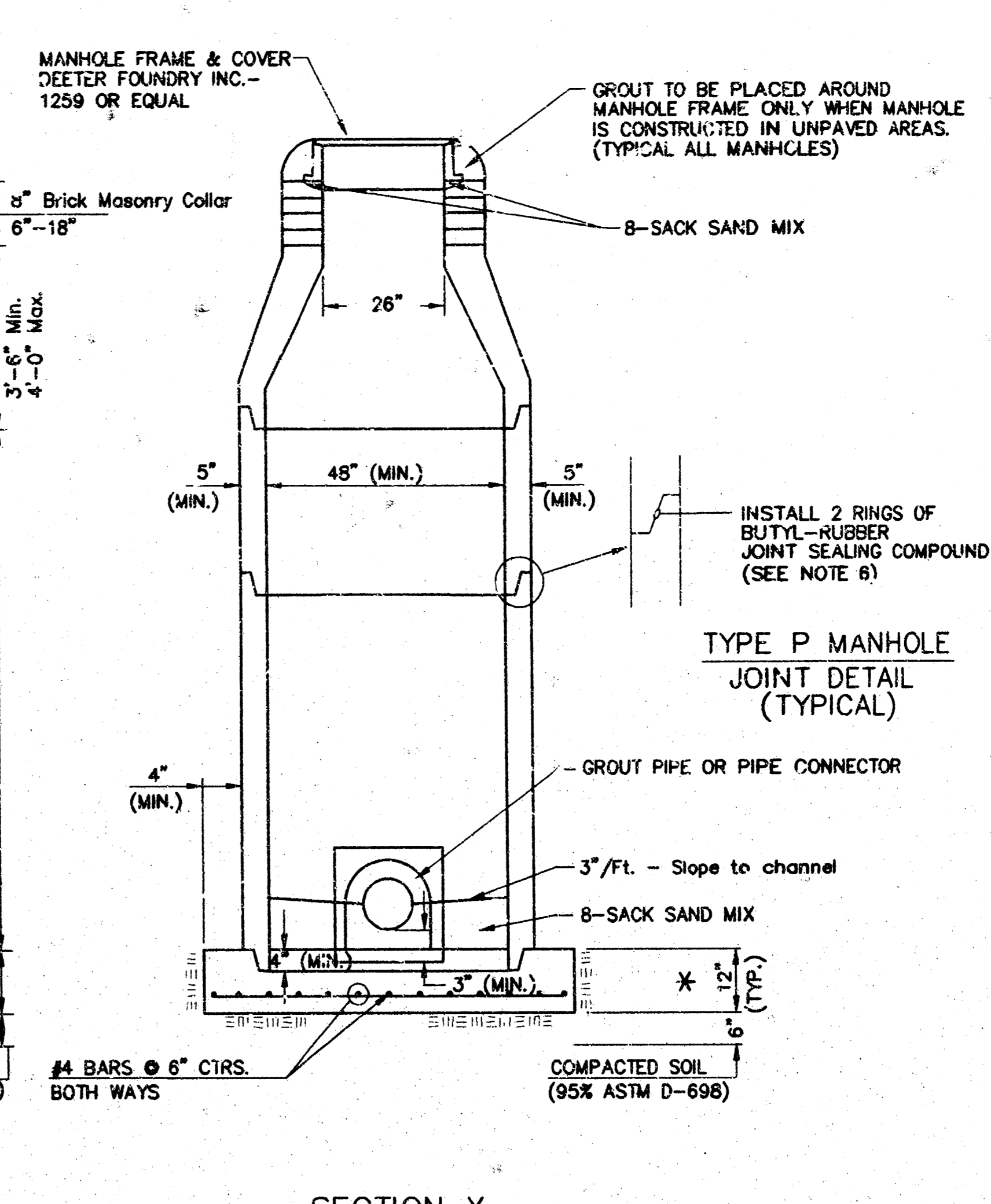
**TYPE P
INSIDE DROP MANHOLE**

- 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.
- 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.
- 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 HEAT 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.
- 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.

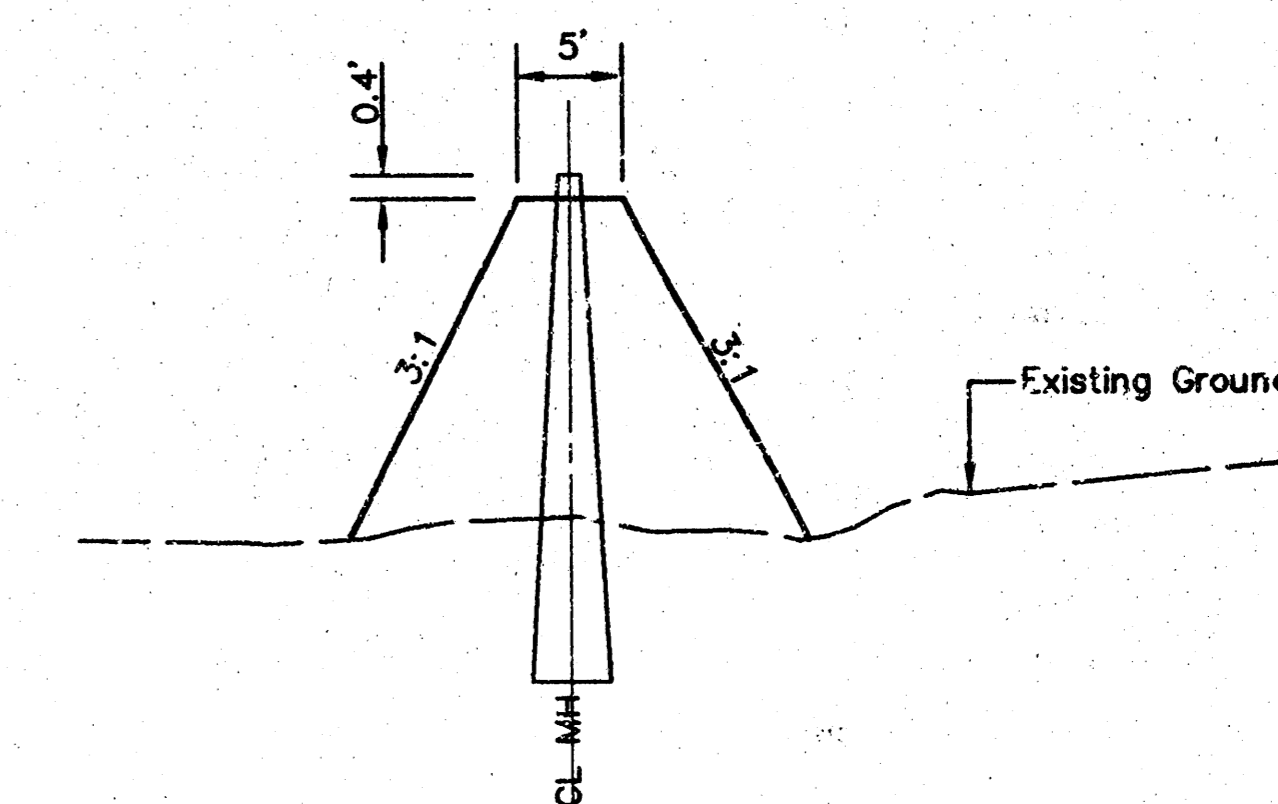


**TYPE P
OUTSIDE DROP MANHOLE**

- 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.
- 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.
- 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.
- 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.
- ALL MANHOLE BASE CONSTRUCTION THAT OCCURS IN THE FIELD MUST HAVE A MINIMUM OF EIGHT INCHES OF CONCRETE BELOW THE MANHOLE WALL AND THE WALL SECTION SHOULD EXTEND FOUR INCHES INTO THE BASE RESULTING IN A MINIMUM TOTAL BASE THICKNESS OF 12 INCHES. MONOLITHIC BASE SECTIONS CONSTRUCTED IN THE FACTORY AND CURED AS PER ASTM C478 MUST HAVE A MINIMUM EIGHT INCH THICK CONCRETE BASE. BASE SECTIONS CONSTRUCTED IN THE FACTORY UTILIZING A PREVIOUSLY MANUFACTURED MANHOLE WALL SECTION, AS OUTLINED IN THE ABOVE PARAGRAPH, MUST HAVE A MINIMUM BASE THICKNESS OF EIGHT INCHES WITH THE WALL SECTION EXTENDING FOUR INCHES INTO THE BASE AND BE MANUFACTURED IN COMPLIANCE WITH ASTM C478.

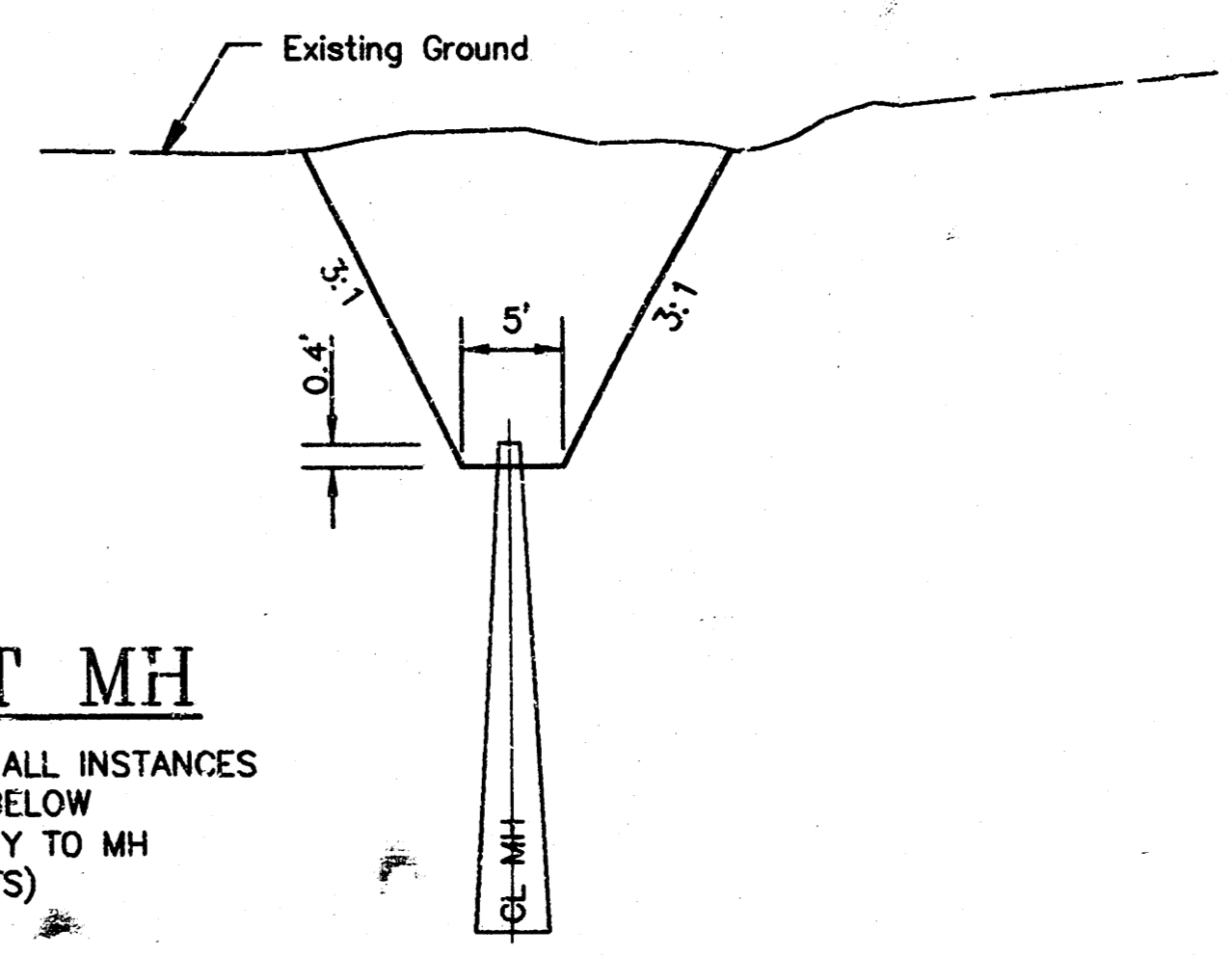


**SECTION X
(TYPICAL)**



PROTECTIVE FILL AT MH

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE MH TOP IS GREATER THAN 0.4' ABOVE EXISTING GROUND. (COST SUBSIDIARY TO MH INSTALLATION) (TYPICAL ALL SHEETS)

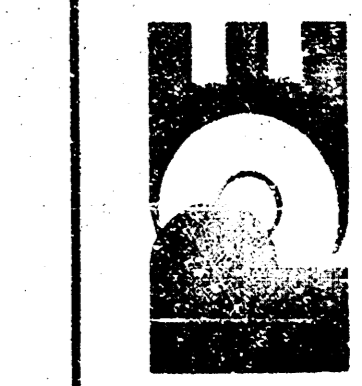


EXCAVATION AT MH

EXCAVATION SHALL BE PROVIDED IN ALL INSTANCES WHERE MH TOP IS LESS THAN 0.4' BELOW EXISTING GROUND. (COST SUBSIDIARY TO MH INSTALLATION). (TYPICAL ALL SHEETS)

FOUR H ADDITION
SANITARY SEWER IMPROVEMENTS
TYPE P MANHOLE DETAILS
CITY OF WICHITA, KANSAS
JAMES ARNDOR, P.E. - CITY ENGINEER

POE & ASSOCIATES, INC.
SANITARY SEWER ENGINEERS
5940 E. Central, Suite 203 • Wichita, KS 67208-4242
Phone 316-855-4114 • FAX 316-855-4444

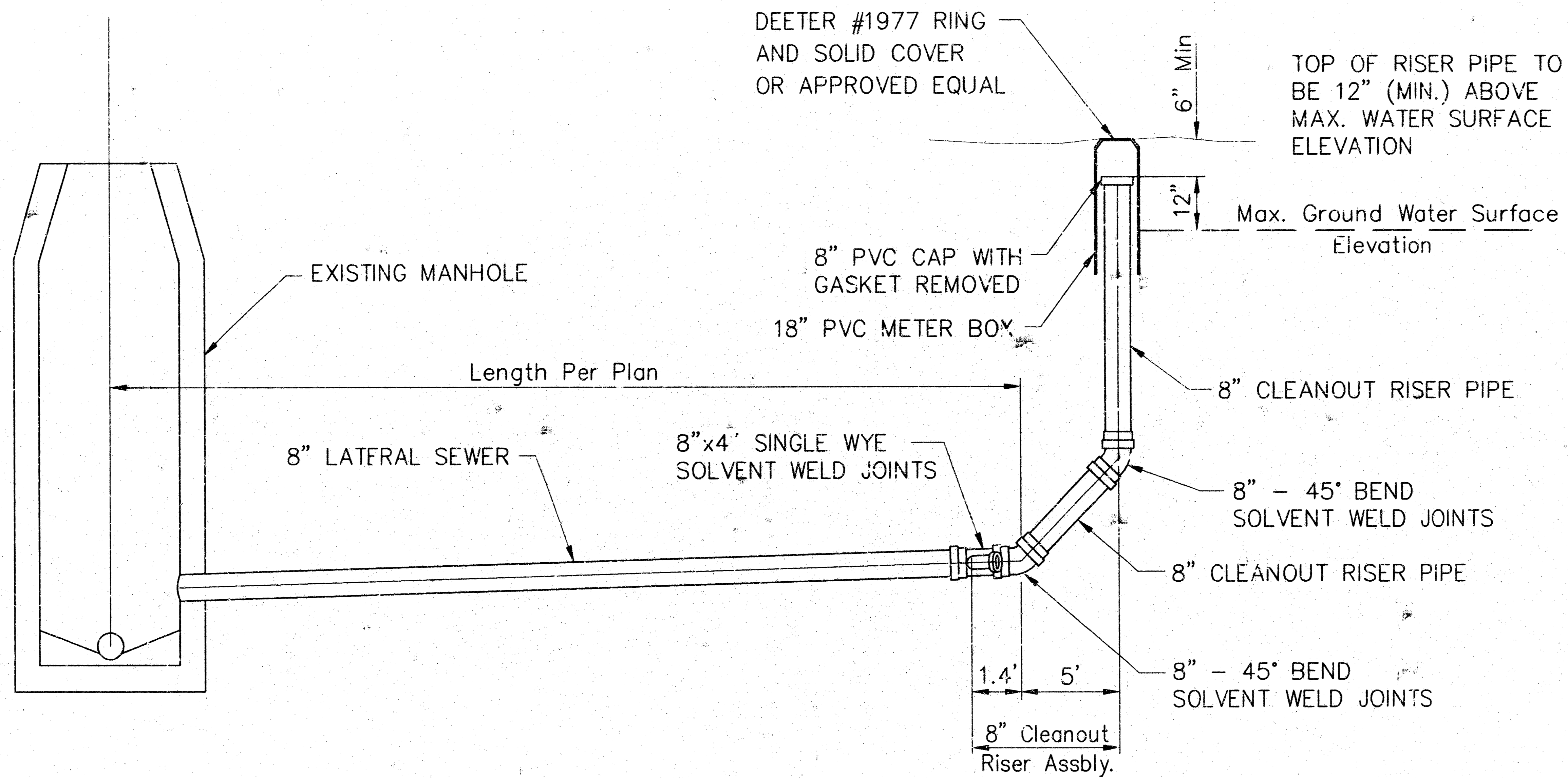


FINAL
Designed By: T. Austin/S. Schmidt
Drawn By: S. Schmidt
Fee Job No.: AM 04106
Date: January 2005

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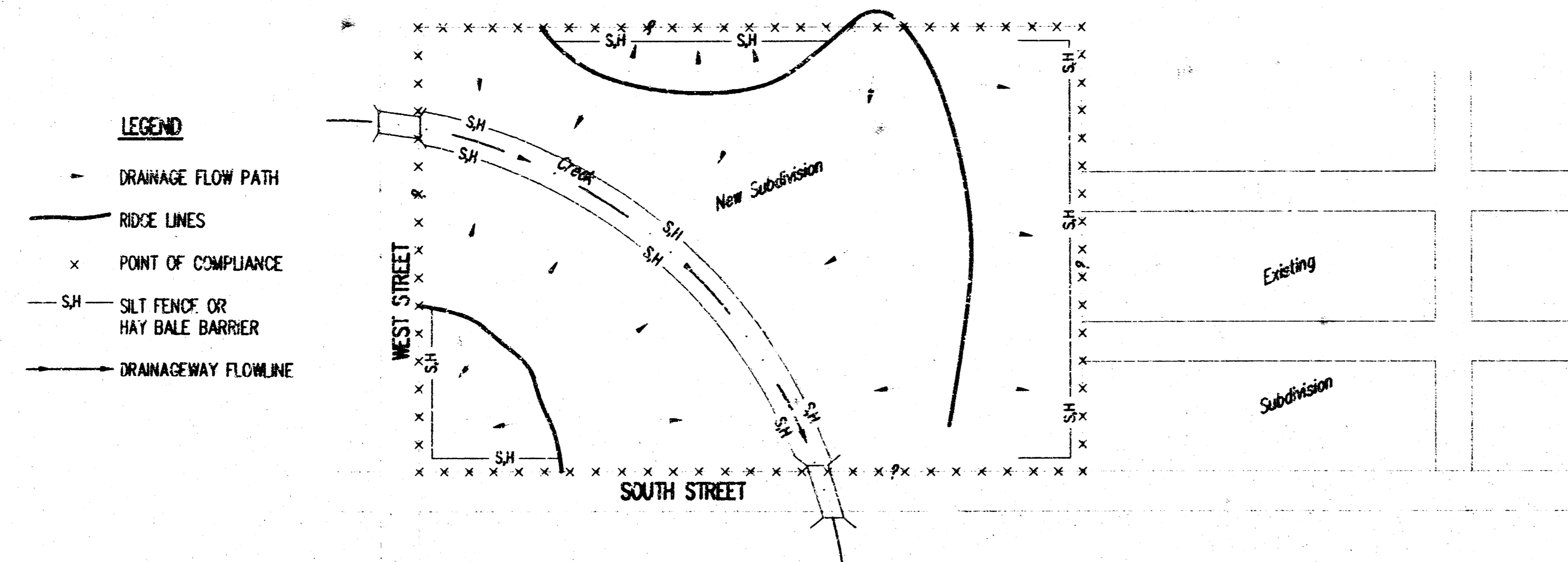
8" CLEANOUT



"Cleanout" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, ring & solid cover, meter box, and any other incidentals required to complete the work.

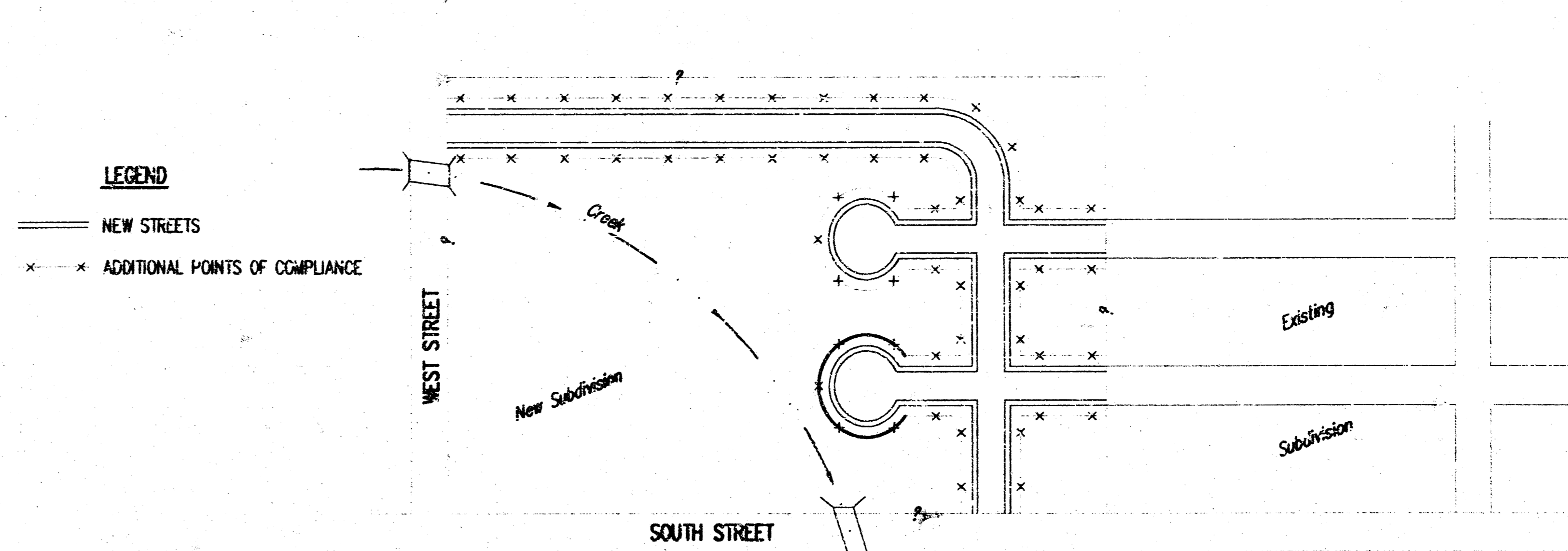
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|---|-----------------------------------|
| FINAL | Designed By: T. Austin/S. Schmidt |
| | Drawn By: S. Schmidt |
| | Poe Job No.: AM 04106 |
| | Date: January 2005 |
| FOUR H ADDITION SANITARY SEWER IMPROVEMENTS 8" CLEANOUT DETAILS CITY OF WICHITA, KANSAS JAMES ABRAHAM, P.E. - CITY ENGINEER | |
| POE & ASSOCIATES, INC. CONSULTING ENGINEERS 5946 Central Suite 200 • Wichita, KS 67205-4542 Phone 316/985-4114 • FAX 316/985-4444 | |

PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



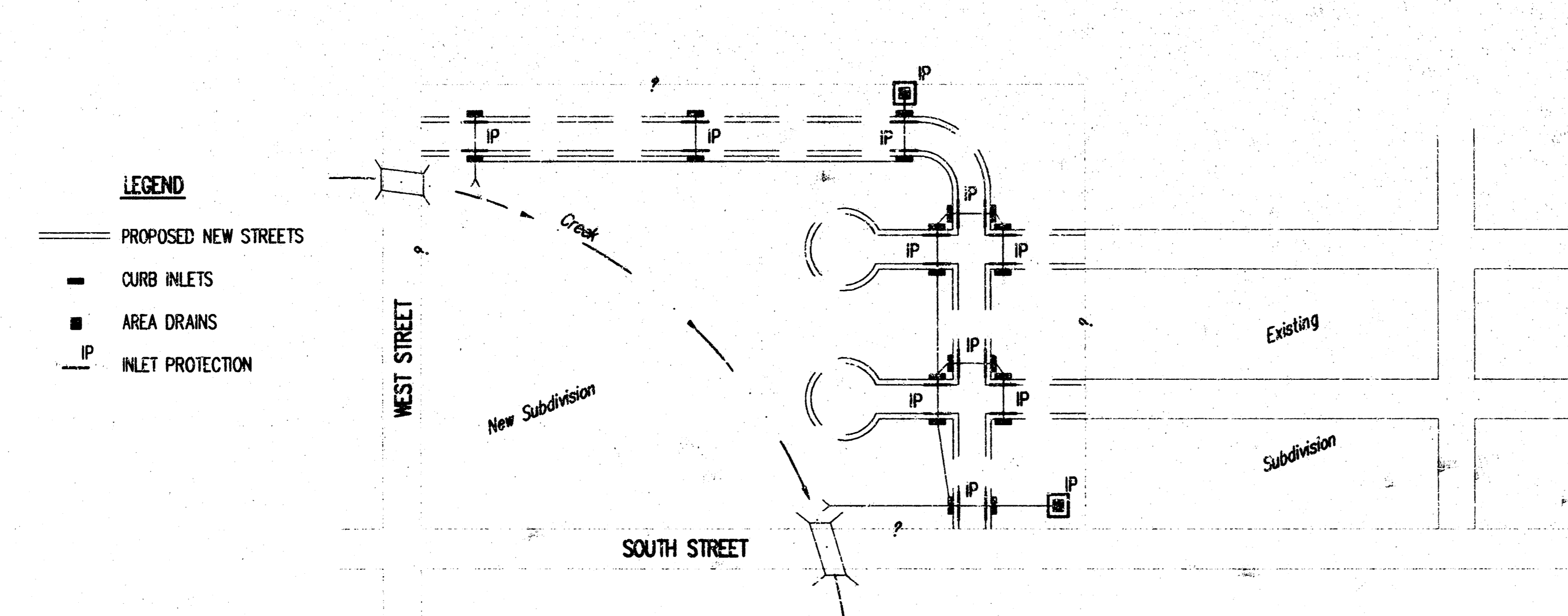
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 - STREET CONSTRUCTION



1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
 - A. SWAMP AREAS - INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - B. NON-SWAMP LOCATIONS - PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE CREEPER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 - INSTALLATION OF STORM SEWER

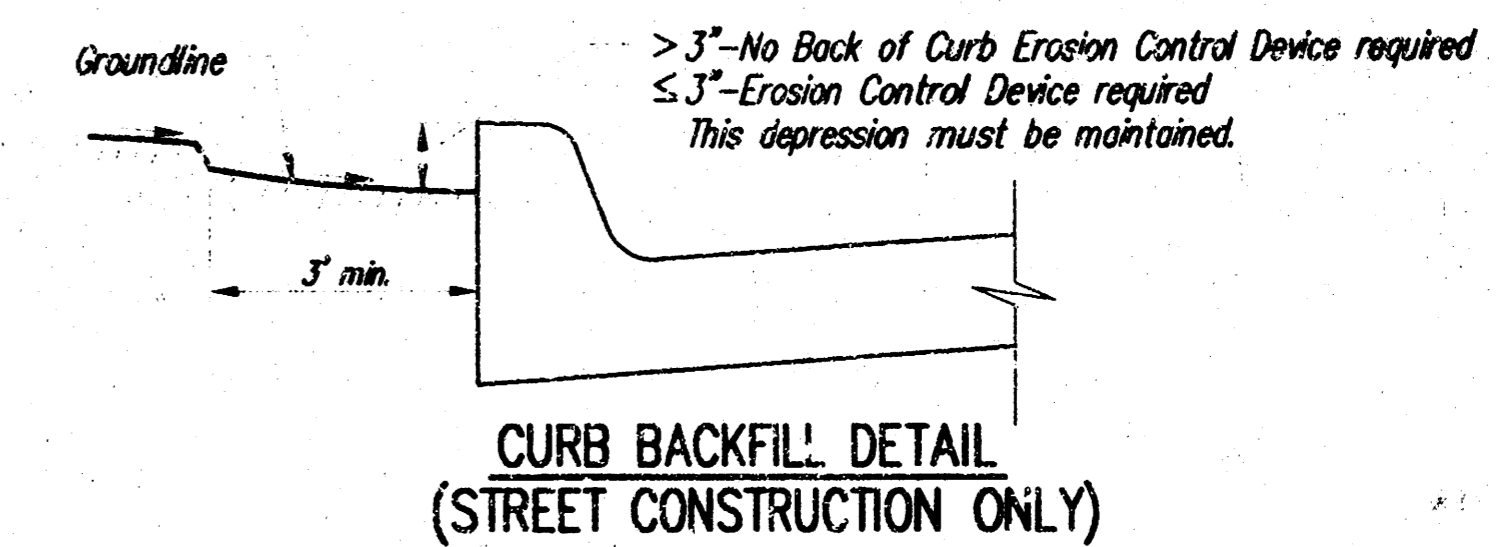


1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 - STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES:

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB SEDIMENT BARRIER DETAILS



CURB BACKFILL DETAIL (STREET CONSTRUCTION ONLY)



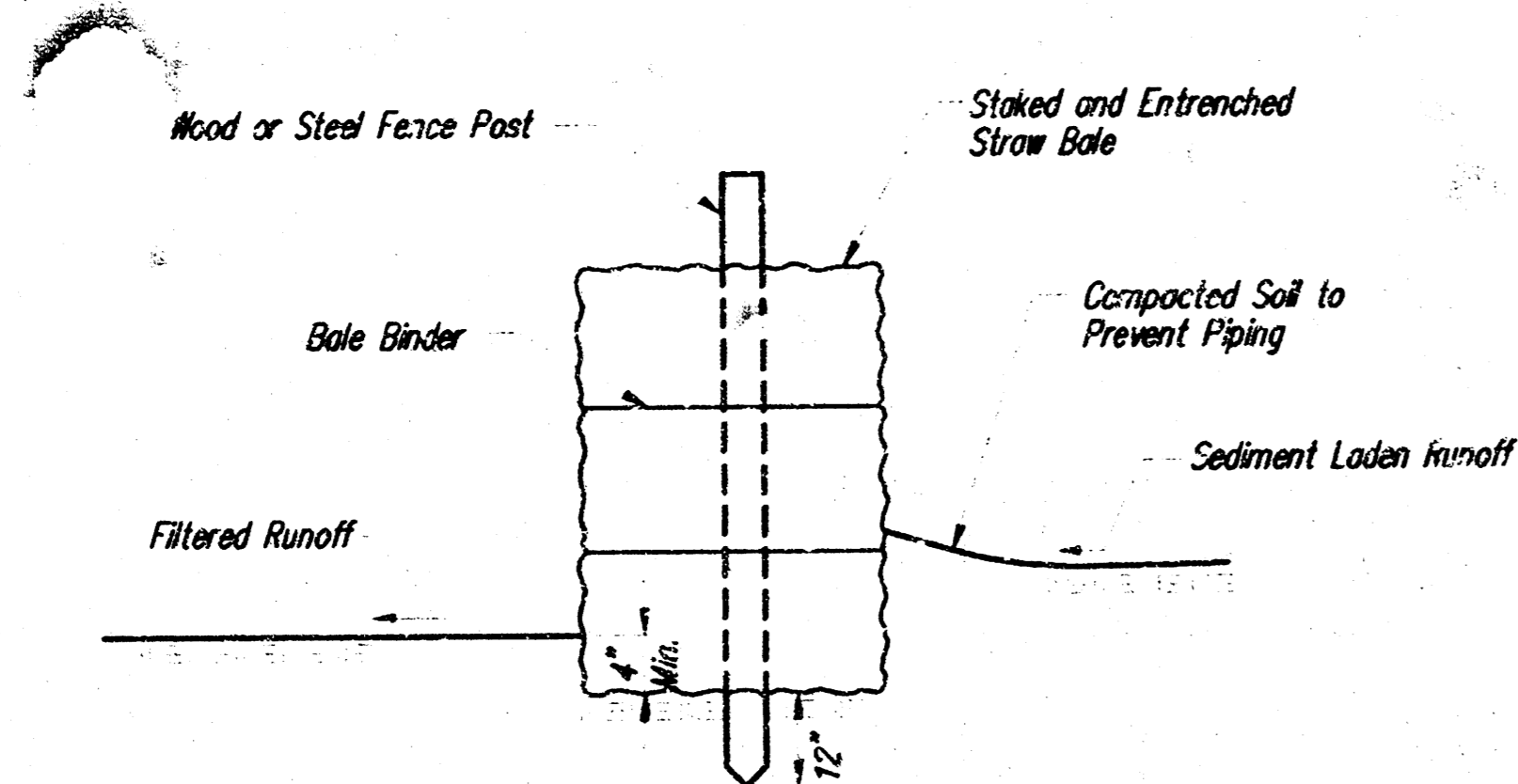
SOIL EROSION BMP'S
SUBDIVISION DEVELOPMENT PROCESS
 CHRISTOPHER W. CARRIER, P.E.
 STORM WATER ENGINEER
 PROJECT NUMBER: 468-83781 SCA NO: 744102
 DATE: SEPT. 2003 SHEET 5 OF 9

FINAL
 Designed By: T. Austin/S. Schmidt
 Drawn By: S. Schmidt
 Pse Job No.: AM 04106
 Date: January 2005

POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 8500 E. Central, Suite 200 • Wichita, KS 67208-6942
 Phone 316/885-4114 • FAX 316/885-4444

CITY OF WICHITA, KANSAS
 JAMES ARMOUR, P.E. - CITY ENGINEER

**FOUR H ADDITION
 SANITARY SEWER IMPROVEMENTS
 EROSION CONTROL DETAILS**



STRAW BALE BARRIERS

Material Specification:

Bale slope barriers may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture. The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long. Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

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, bale slope barriers should be placed along contours to avoid a concentration of flow. Bale 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:

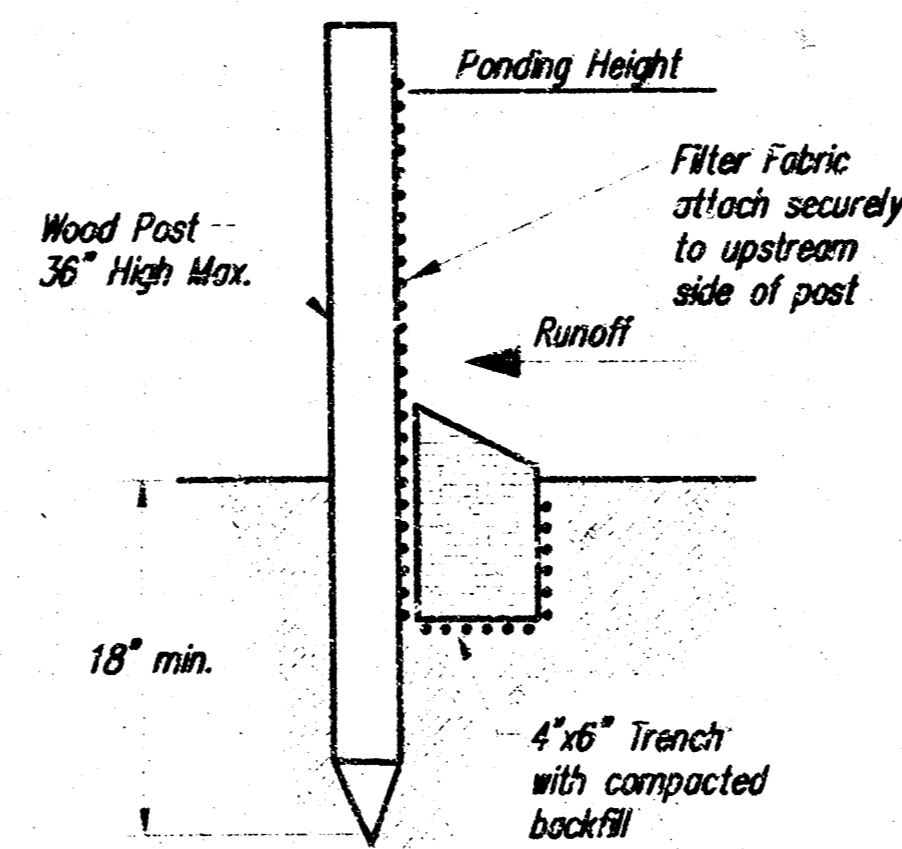
Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use. Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground. Once all the bales have been installed and anchored, place the excavated soil against the upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

List of common placement/installation mistakes to avoid:

When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails. Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out. Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale 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:



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:

F:\VPPS\DCAP\0904\proj\04\04\06\0606-noswd.dwg Tue Jan 25 05:03:24 2005 Steve Schmidt-Pop & Associates of Kansas, Inc.



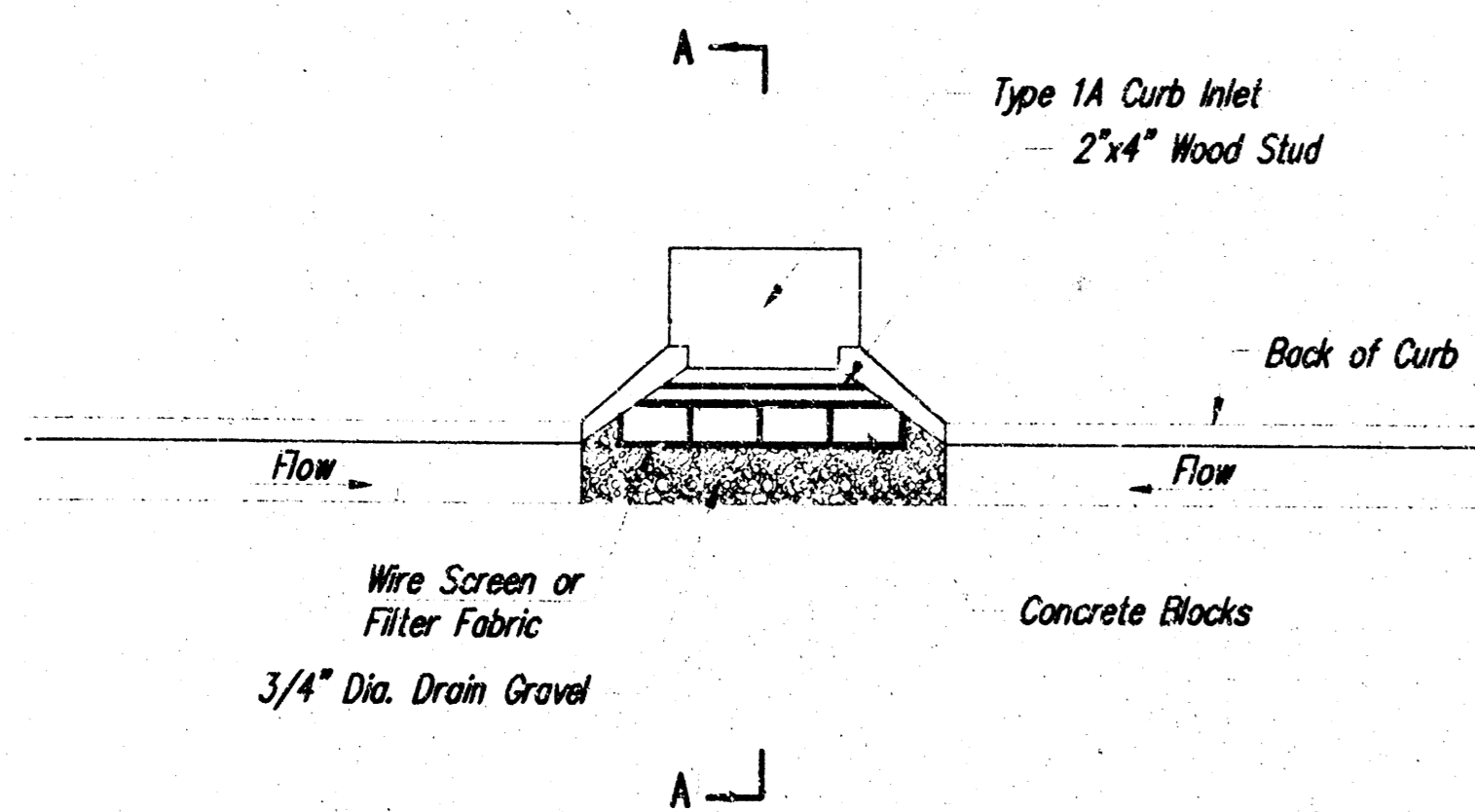
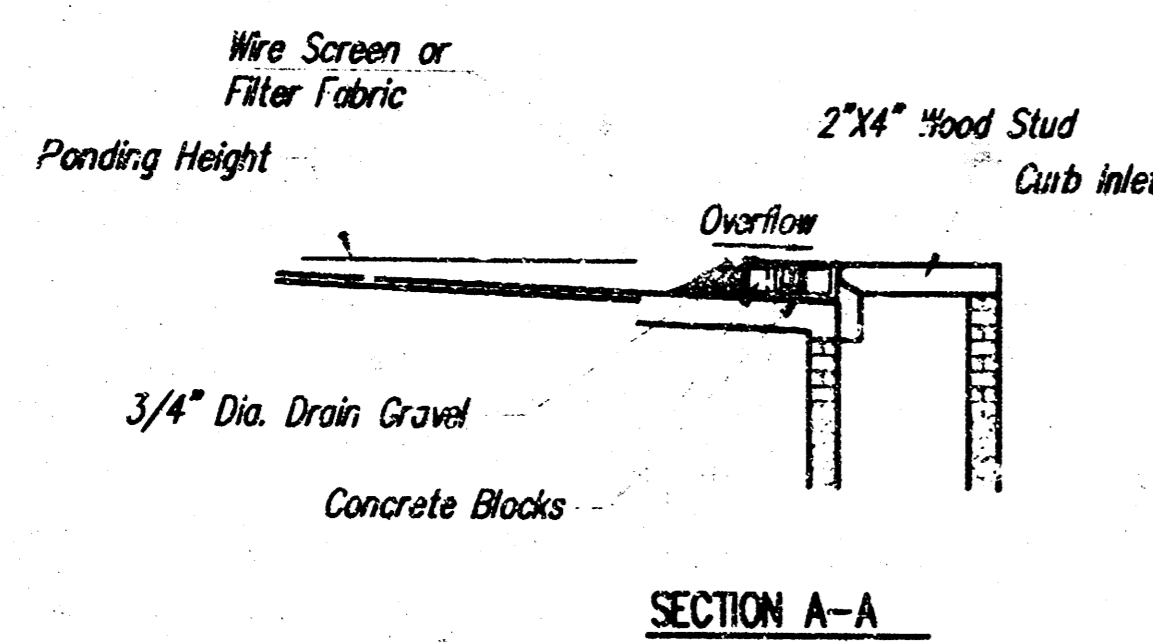
| | |
|--|-------------------|
| SOIL EROSION BMP | |
| BARRIER DETAILS | |
| CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER | |
| PROJECT NUMBER 458-83761 | DCA NO. 744102 |
| DATE SEPT. 2003 | SHEET 6 OF 9 |

FINAL
Designed By: T. Austin/S. Schmidt
Drawn By: S. Schmidt
Poc Job No.: AM 04106
Date: January 2005

FOUR H ADDITION
SANITARY SEWER IMPROVEMENTS
EROSION CONTROL DETAILS
CITY OF WICHITA, KANSAS
JAMES ARMOUR, P.E. - CITY ENGINEER

POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
5840 E. Central, Suite 200 • Wichita, KS 67208-4282
Phone 316/685-1114 • FAX 316/685-4444





CURB INLET GRAVEL FILTERS
(INLET PROTECTION-RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

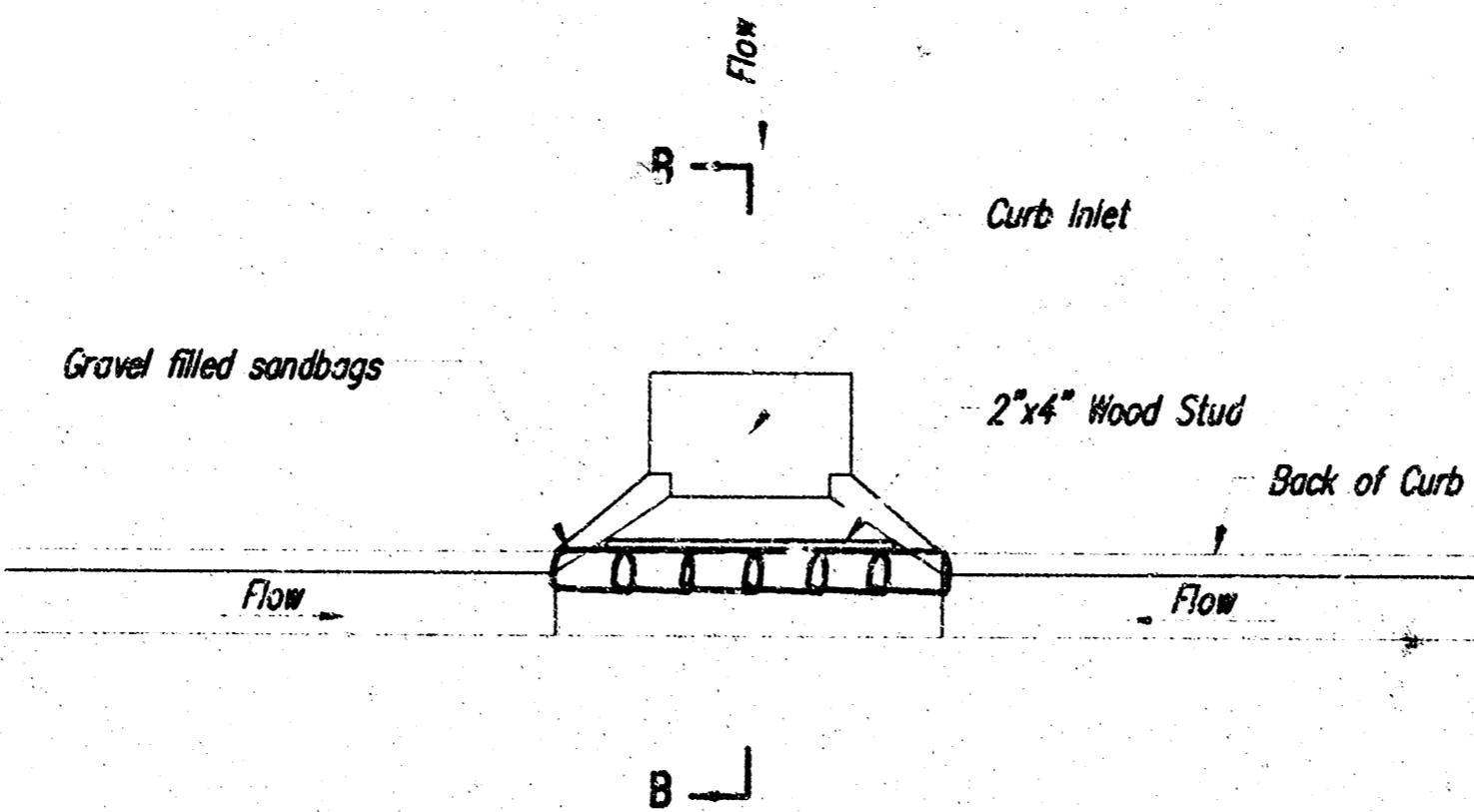
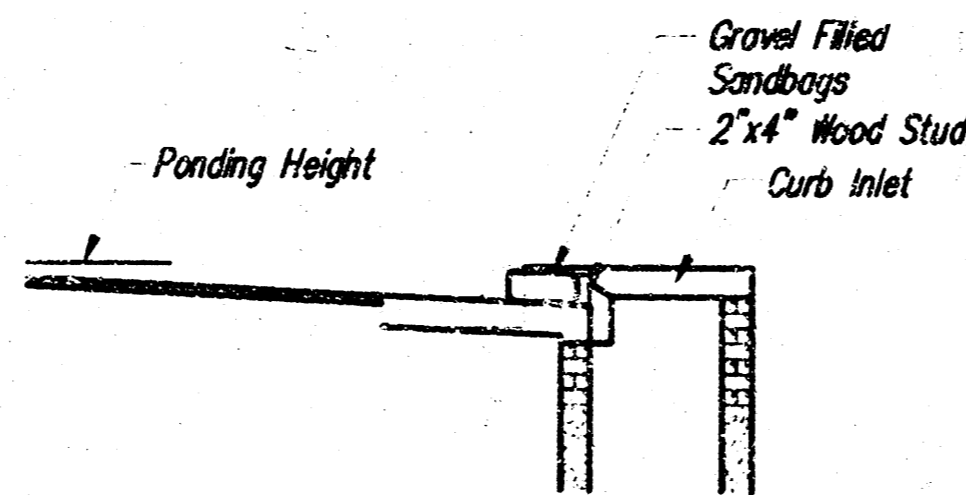
Instructions for Installing:

- STEP 1: Place concrete blocks around the inlet as shown in drawing. Insert 2x4 board as shown.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2"x4" board to prevent collapsing.

Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

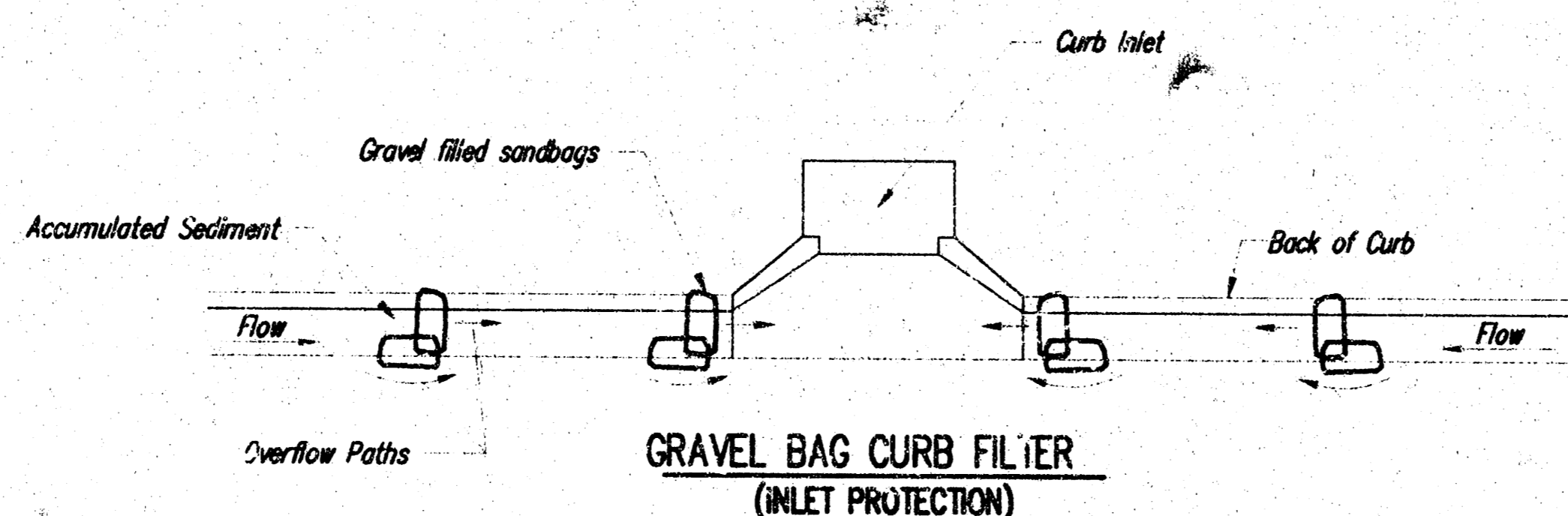
Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be computed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

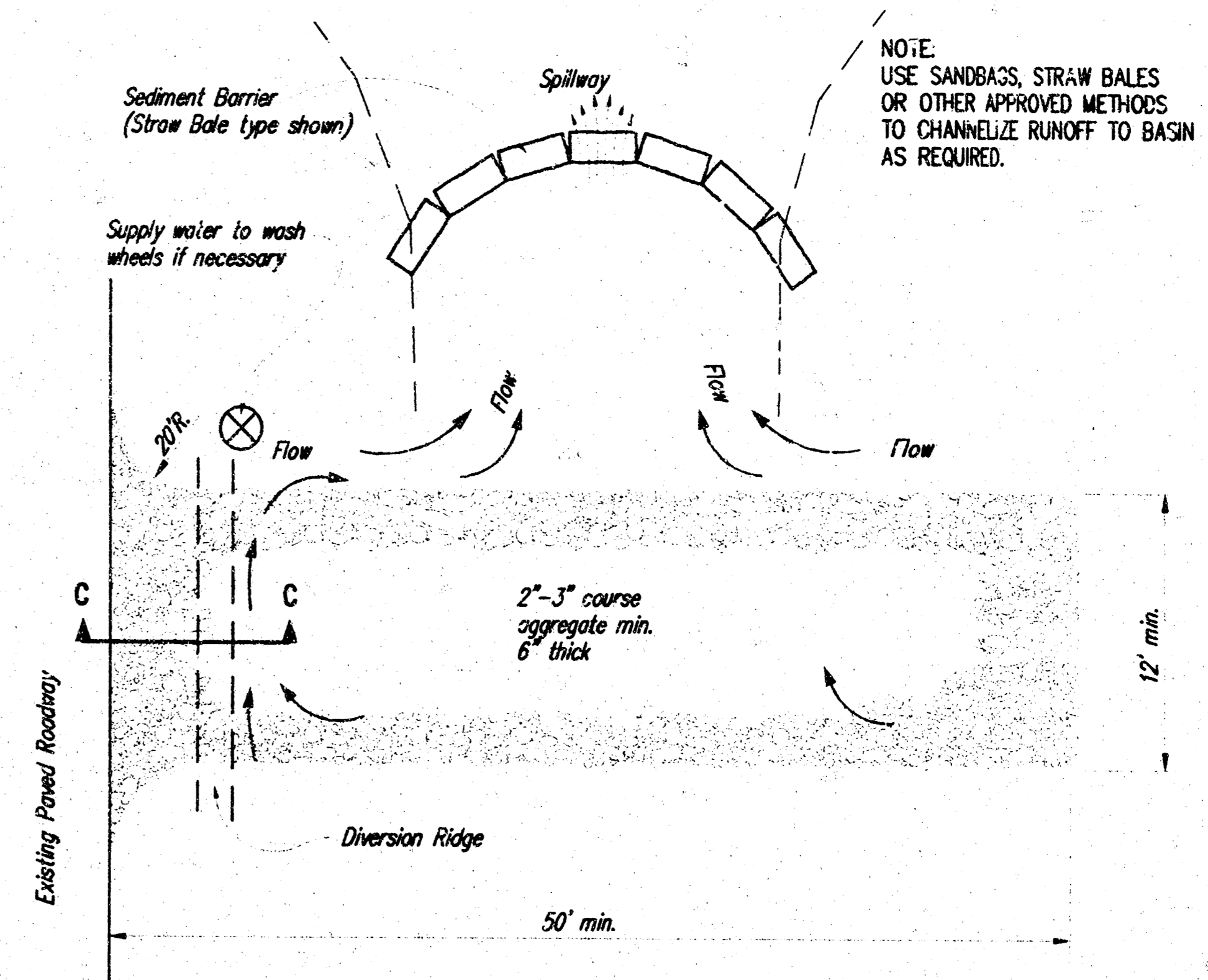
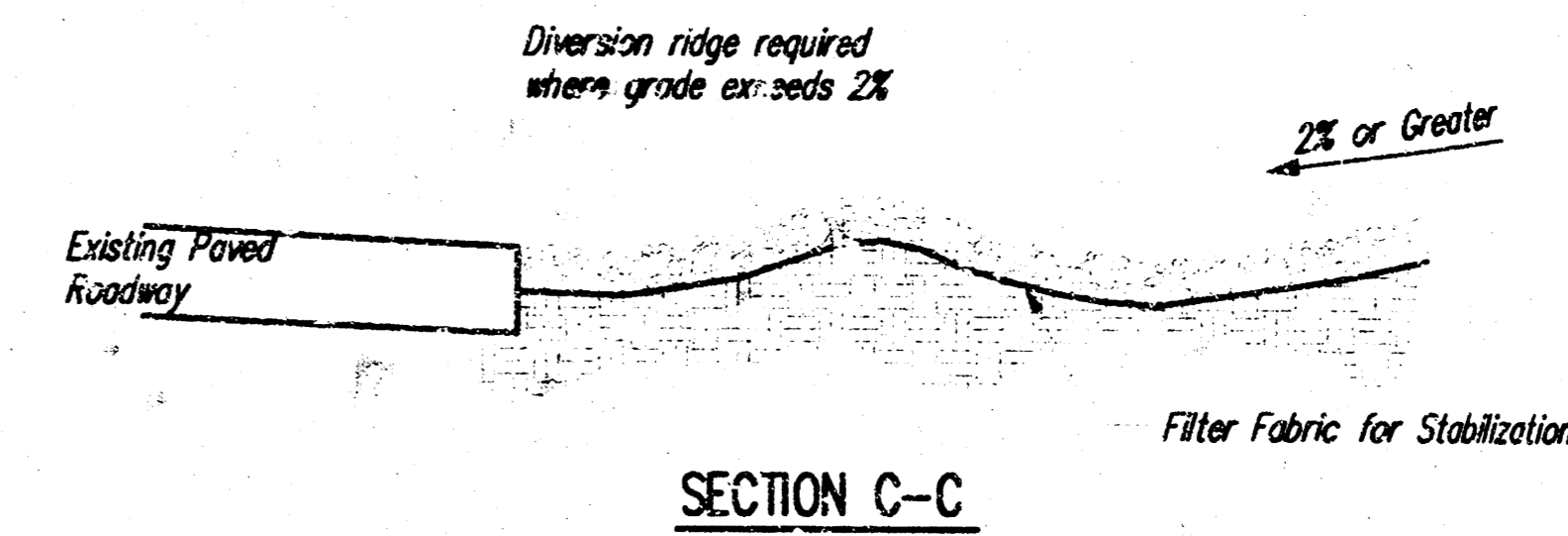
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

| GRADE (%) | SPACING (FEET) |
|-----------|----------------|
| 0.5 | 75 |
| 1.0 | 45 |
| 2.0 | 18 |
| 3.0 | 12 |
| 4.0 | 9 |
| 5.0 | 6 |

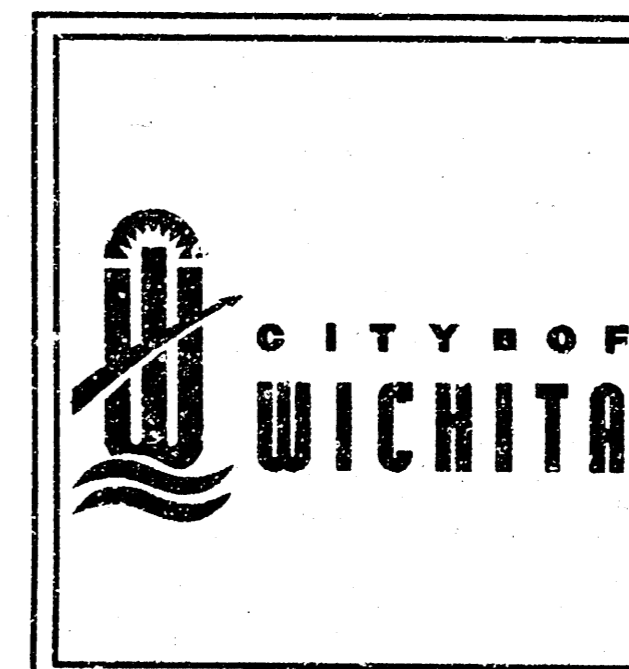
Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



NOTES:

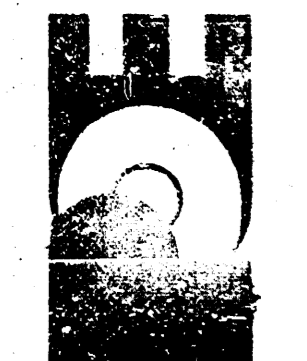
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
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.

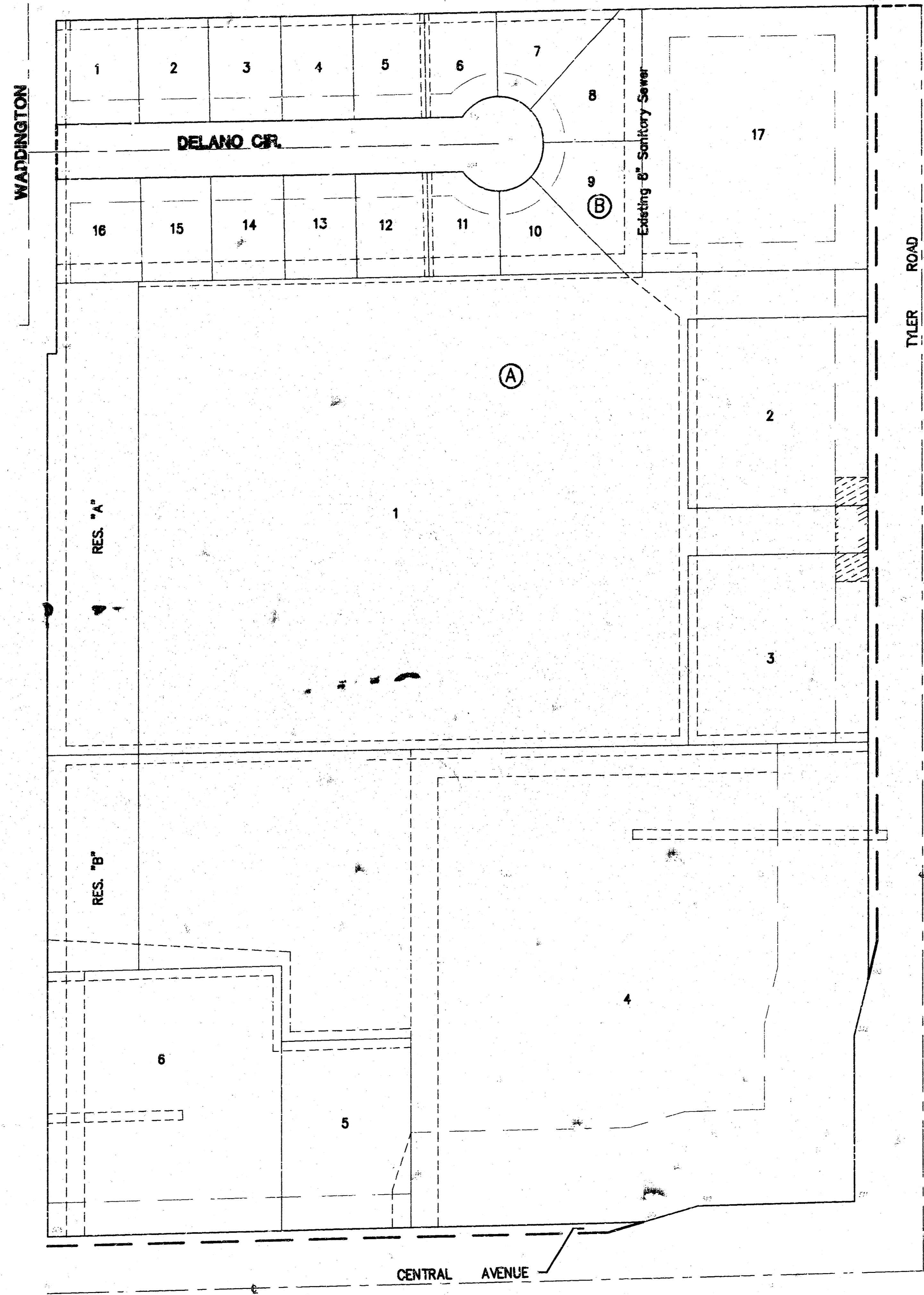


SOIL ENGINEER BEMP
CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE
Designed By: T. Austin/S. Schmidt
Drawn By: S. Schmidt
PROJECT NUMBER: 468-8376
DATE: SEPT. 2003
SHEET 7 OF 9

FINAL
Designed By: T. Austin/S. Schmidt
Drawn By: S. Schmidt
Poe Job No.: AM 24106
Date: January 2005

FOUR H ADDITION
SANITARY SEWER IMPROVEMENTS
EROSION CONTROL DETAILS
CITY OF WICHITA, KANSAS
JAMES ARBUCKLE, P.E. - CITY ENGINEER
POE & ASSOCIATES, INC.
CONSULTING ENGINEERS
8900 E. Central Suite 200 Wichita, KS 67208-6242
Phone 316-963-4114 FAX 316-963-4444



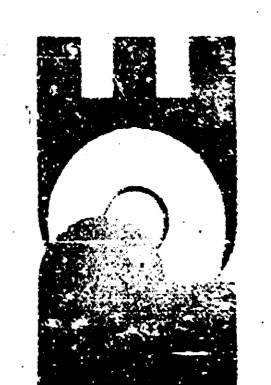


Scale 1" = 80'

| Point# | Northing | Easting |
|--------|-----------|-----------|
| 500 | 21336.748 | 19939.949 |
| 501 | 21320.766 | 19036.322 |
| 502 | 21210.771 | 19036.374 |
| 503 | 21218.745 | 19487.226 |
| 504 | 21160.754 | 19488.252 |
| 505 | 21152.762 | 19036.401 |
| 506 | 20968.343 | 19036.487 |
| 507 | 20968.410 | 19026.487 |
| 508 | 20033.487 | 19026.548 |
| 509 | 20051.633 | 19690.040 |
| 510 | 20068.274 | 19750.020 |
| 511 | 20073.058 | 19924.955 |
| 512 | 20248.058 | 19924.955 |
| 513 | 20308.470 | 19939.949 |

FINAL

Designed By: T. Austin/S. Schmidt
 Drawn By: S. Schmidt
 Pce Job No.: AM 04106
 Date: January 2005



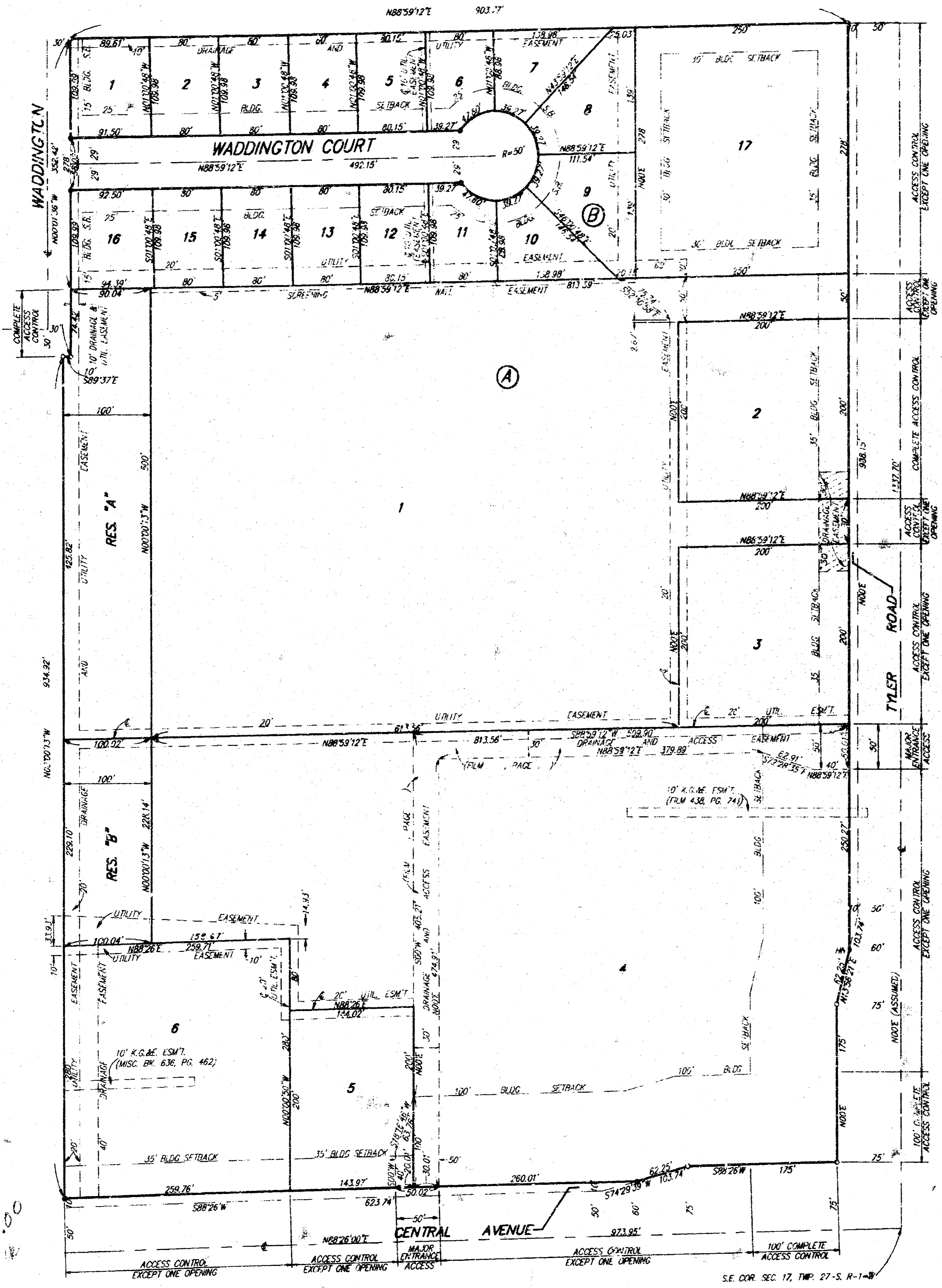
POE & ASSOCIATES, INC.
 CONSULTING ENGINEERS
 6940 E Central, Suite 200 - Wichita, KS 67208-6942
 Phone 316/685-4114 • FAX 316/685-4444

FOUR H ADDITION
 SANITARY SEWER IMPROVEMENTS
 SEWERLINE NO. 1, 1A, 1B & 1C
CITY OF WICHITA, KANSAS
 JAMES ARMOUR, P.E. - CITY ENGINEER

| No. | Date | By | Revised | Description |
|-----|------|----|---------|-------------|
| | | | | |
| | | | | |
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FOUR H ADDITION

WICHITA, SEDGWICK COUNTY, KANSAS

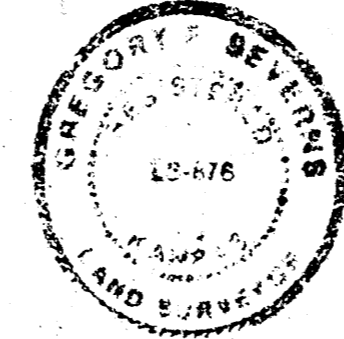


State of Kansas) SS We, Baughman Company, P.A., Surveyors in
Sedgwick County) do hereby certify that we have surveyed
and plotted "FOUR H ADDITION", Wichita, Sedgwick County, Kansas
and that the accompanying plat is a true and correct exhibit of the
property surveyed, described as and being a replat of the following:
All of Lot 1, 4-H Club Addition, Wichita, Sedgwick County, Kansas; and
all of Lot 1, 4-H Club 2nd Addition, Wichita, Sedgwick County, Kansas.

All being situated in the SE1/4 of Sec. 17, Twp. 27-S, R-1-W of
the 6th P.M., Sedgwick County, Kansas.
Existing public easements and dedications being vacated by
virtue of KSA 12-512(b).

Baughman Company, P.A.

Date 3/3/93



Gregory F. Severns
Surveyor

Know all men by these presents that we,
the undersigned, have caused the land described in the surveyors
certificate to be platted into lots, blocks, streets and reserves to be
known as "FOUR H ADDITION", Wichita, Sedgwick County, Kansas.
Reserve "A" and Reserve "B" are hereby reserved for landscaping,
open space, screen wall construction, and drainage purposes.
Reserve "A" shall be owned and maintained by the owner of Lot 1.
Reserve "B" shall be owned and maintained by the owner of Lot 4.
The streets are hereby dedicated to and for the use of the public.
The utility easements are hereby granted as indicated for the construction and
maintenance of all public utilities. The drainage easements are hereby
granted as indicated for drainage purposes. The drainage and utility easements
are hereby granted as indicated for drainage purposes and for the
construction and maintenance of all public utilities. The access and
drainage easements are hereby granted for access purposes and for
drainage purposes. The screening wall easement is hereby granted
as indicated for screening purposes. Access controls as depicted
on the face of the plat are hereby granted to the City of Wichita,
Kansas. The permitted entrance locations shall be as determined
by the City Engineer of the City of Wichita, Kansas. Building Setback
Lines within block "A" as per Four H Community Unit Plan, DP-209.

T V Realty, L. L. C.

Stephen J. Mardis
Manager

State of Kansas) SS The foregoing instrument acknowledged
Sedgwick County) before me, this 3rd day of March, 1993, by Stephen J. Mardis,
Manager of T V Realty, L. L. C., on behalf of the Company.

Notary Public

My App't. Exp. 2-3-95

We, the undersigned, holders of a mortgage
on the above described property do hereby consent to this plat of
"FOUR H ADDITION", an Addition to the Four H Addition, Sedgwick County, Kansas.

Bank IV

State of Kansas) SS I, _____, President
Sedgwick County) do hereby certify that I am the duly
authorized officer of the above named bank and I have
fore me this 3rd day of March, 1993, at _____
Vice President of Bank IV, on v.

Notary Public

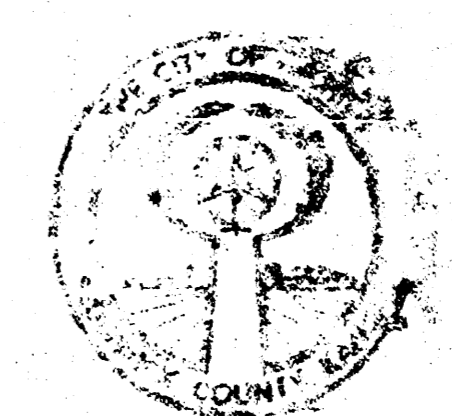
My App't. Exp. 1/1/96

This plat of "FOUR H ADDITION", Wichita,
Sedgwick County, Kansas, has been submitted to and approved by
the Wichita-Sedgwick County Metropolitan Area Planning Commission,
Wichita, Kansas.
Dated this 23rd day of February, 1993.
Wichita-Sedgwick County Metropolitan Area Planning Commission.

L. O. Breckenridge, Jr.
Chairman

Marvin S. Kraut
Secretary

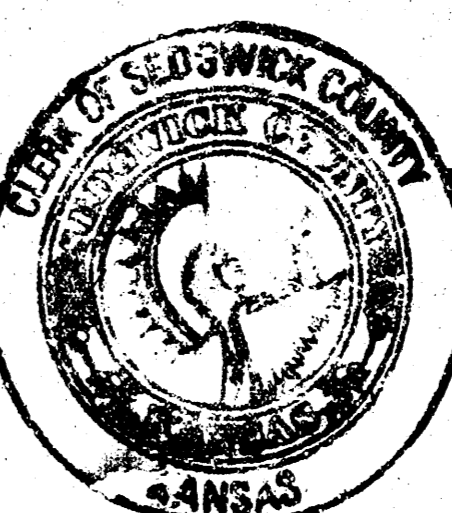
This plat approved and all dedications
shown hereon accepted by the City Council of the City of Wichita,
Kansas, this 23rd day of March, 1993.



Frank M. Dille
Mayor

Pat Burnett
Deputy City Clerk

Entered on transfer record this 1st day
of April, 1993.



Susan E. Crockett-Spoon
County Clerk

State of Kansas) SS This is to certify that this plat has been
Sedgwick County) filed for record in the office of the Register of Deeds, this 1st day
of April, 1993, at _____, and is duly
recorded.

Pat Kettler
Register of Deeds

Ed Reso
Deputy