

# GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE BASED ON CITY OF WICHITA DATUM (MEAN SEA LEVEL ELEV. - 1187.4 = CITY DATUM).

2. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

KANSAS ONE CALL 687-2470

THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

CABLEVISION 262-4270 OR 263-2061  
K&E-EAS 263-7511  
K&E-ELECTRIC 264-1141  
PEOPLES NATURAL GAS 942-8811  
SOUTHWESTERN BELL TELEPHONE 1-571-2611

THE CONTRACTOR SHALL NOTIFY PIPELINE COMPANIES AT LEAST 24 HOURS IN ADVANCE OF ANY WORK BEING PERFORMED ACROSS AND/OR ADJACENT TO PIPELINES.

3. COST OF EXCAVATION, HAULING AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO OTHER ITEMS OF WORK.

4. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR FOR THIS PROJECT 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT ON SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION.

5. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ADJUTING 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 REESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS SUCH IRONS SHALL BE REESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

7. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES AND BANK LINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.

8. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION. LOCAL RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA SHALL BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS.

9. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

10. 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 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 FLOODPLAIN 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.

11. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN THE PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SALVAGE ALL SPRINKLER HEADS AND/OR VALVES AND GIVE SUCH MATERIAL TO THEIR OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE. ALL WORK IN CONNECTION WITH UNDERGROUND SPRINKLER SYSTEMS SHALL BE CONSIDERED AS SUBSIDIARY TO THE CONTRACT PAY ITEMS OF WORK.

12. ALL PROPOSED STUBS AND PLUGGED PIPES SHALL BE LOCATED WITH GREEN PLASTIC TAPE.

13. PRIOR TO LAYING THE NEW SEWER LINES THE CONTRACTOR SHALL EXPOSE AND VERIFY THE ELEVATION, GRADE AND ALIGNMENT OF THE EXISTING SANITARY SEWER AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FROM THE PLAN.

14. THE CONTRACTOR MUST EXAMINE THE CONSTRUCTION SITE PRIOR TO BIDDING AND BE SATISFIED AS TO THE WORK SHOWN FOR COMPLETION. AFTER BIDS HAVE BEEN RECEIVED, THE CONTRACTOR SHALL NOT ASSERT THAT THERE WAS A MISUNDERSTANDING OF THE QUANTITIES OF WORK OR OF THE NATURE FOR THE WORK TO BE COMPLETED.

15. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION AVAILABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

16. ALL PIPE JOINTS SHALL BE LAID AND PUSHED 'FULL HOME', WITH THE BEVELED END OF THE SPIGOT MAKING FULL CONTACT WITH THE CHAMFERED AREA AT THE THROAT OF THE BELL OR SOCKET, WITH NO SEPARATION BETWEEN THEM. IF SEPARATION IS DETERMINED, THE PIPE SHALL BE EXCAVATED AND RE-LAID ACCORDING TO SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.

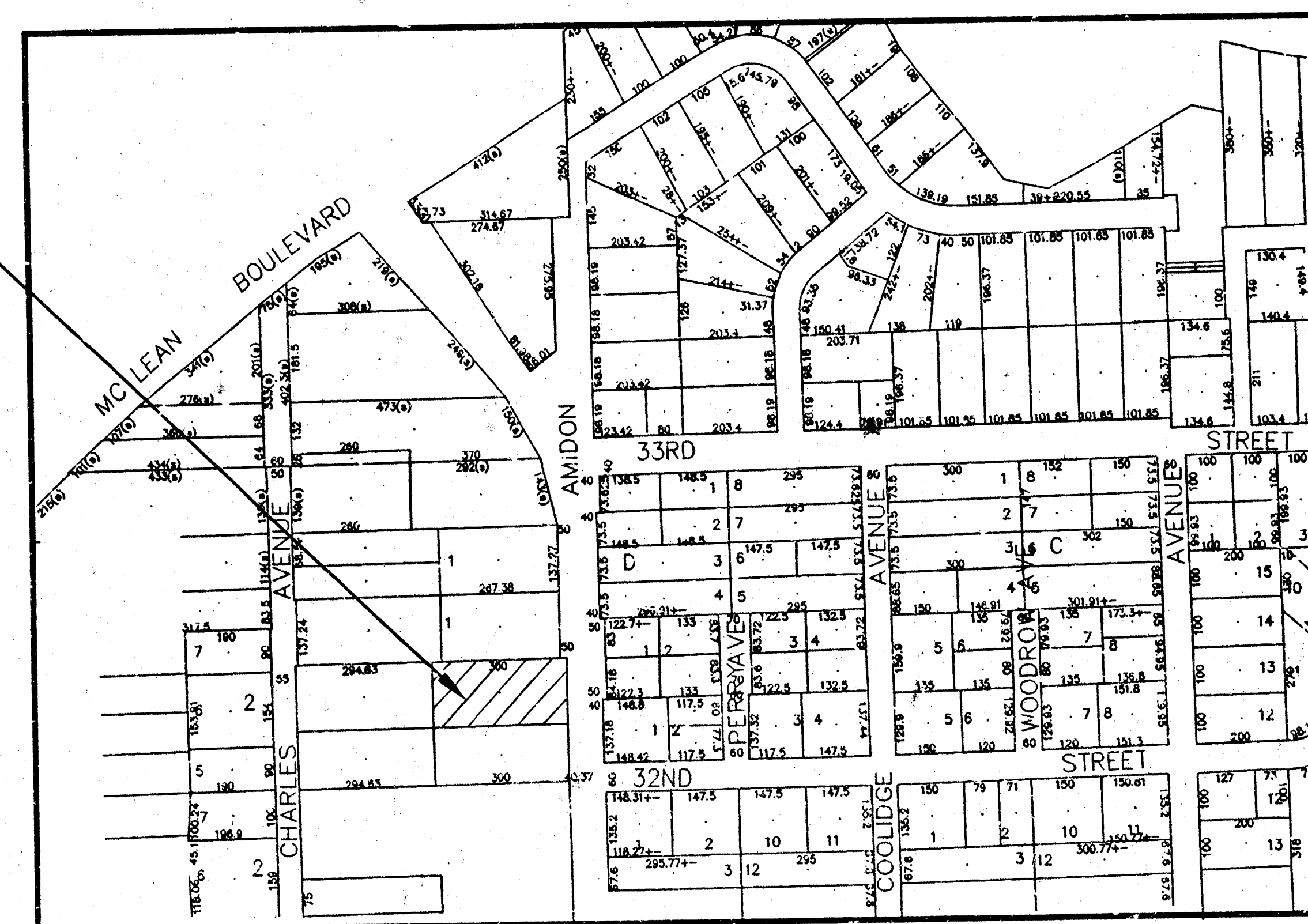
17. AT LEAST 24 HOURS BEFORE CONNECTING NEW SEWER PIPE TO THE EXISTING SEWAGE SYSTEM, THE CONTRACTOR SHALL CONTACT THE CITY OF WICHITA SEWER DEPARTMENT (268-4024). THE CONTRACTOR SHALL KEEP ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION, TO PREVENT WATER OR DEBRIS FROM ENTERING THE EXISTING SEWER. A MECHANICAL PLUG SHALL BE INSTALLED AND MAINTAINED TO ISOLATE THE EXISTING SEWER FROM THE NEW CONSTRUCTION UNTIL THE NEW CONSTRUCTION IS CLEANED, TESTED AND HAS BEEN ACCEPTED. THE WATER USED FOR CLEANING SHALL NOT BE ADDED TO THE FLOW OF THE EXISTING SEWER. THE CLEANING OR OTHERWISE ACCUMULATED WATER SHALL BE PUMPED OR OTHERWISE REMOVED PRIOR TO TESTING.

18. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY AS DIRECTED IN THE GENERAL CONDITIONS. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

19. SEEDING AND FERTILIZING OF ALL AREAS DISTURBED BY THE CONSTRUCTION OF THE SANITARY SEWER AS SHOWN ON THE PLANS SHALL BE PAID FOR AS A LUMP SUM FOR SEEDING AND FERTILIZING.

20. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

BENEFIT DISTRICT



PROJECT LOCATED IN THE S.W.1/4  
OF THE N.E.1/4, SEC. 31, T.26S., R.1E.  
WICHITA, SEDGWICK COUNTY, KANSAS

ALL MATERIALS, EQUIPMENT AND CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF WICHITA, KANSAS STANDARD DESIGN SPECIFICATIONS FOR SANITARY SEWERS AND K&E SANITARY SEWER SPECIFICATIONS # 26431.

## SUMMARY OF SANITARY SEWER QUANTITIES DESCRIPTION

| QUANTITIES DESCRIPTION                  | QUANTITY | UNIT |
|-----------------------------------------|----------|------|
| 8" SANITARY SEWER PIPE (SDR35) IN PLACE | 20.0     | L.F. |
| 0'-12' TRENCH EXCAVATION & BACKFILL     | 20.0     | L.F. |
| 8" CLEANOUT ASSEMBLY                    | 1        | EACH |
| SITE CLEARING & RESTORATION             | 1        | L.S. |
| CONSTRUCTION STAKING                    | 1        | L.S. |

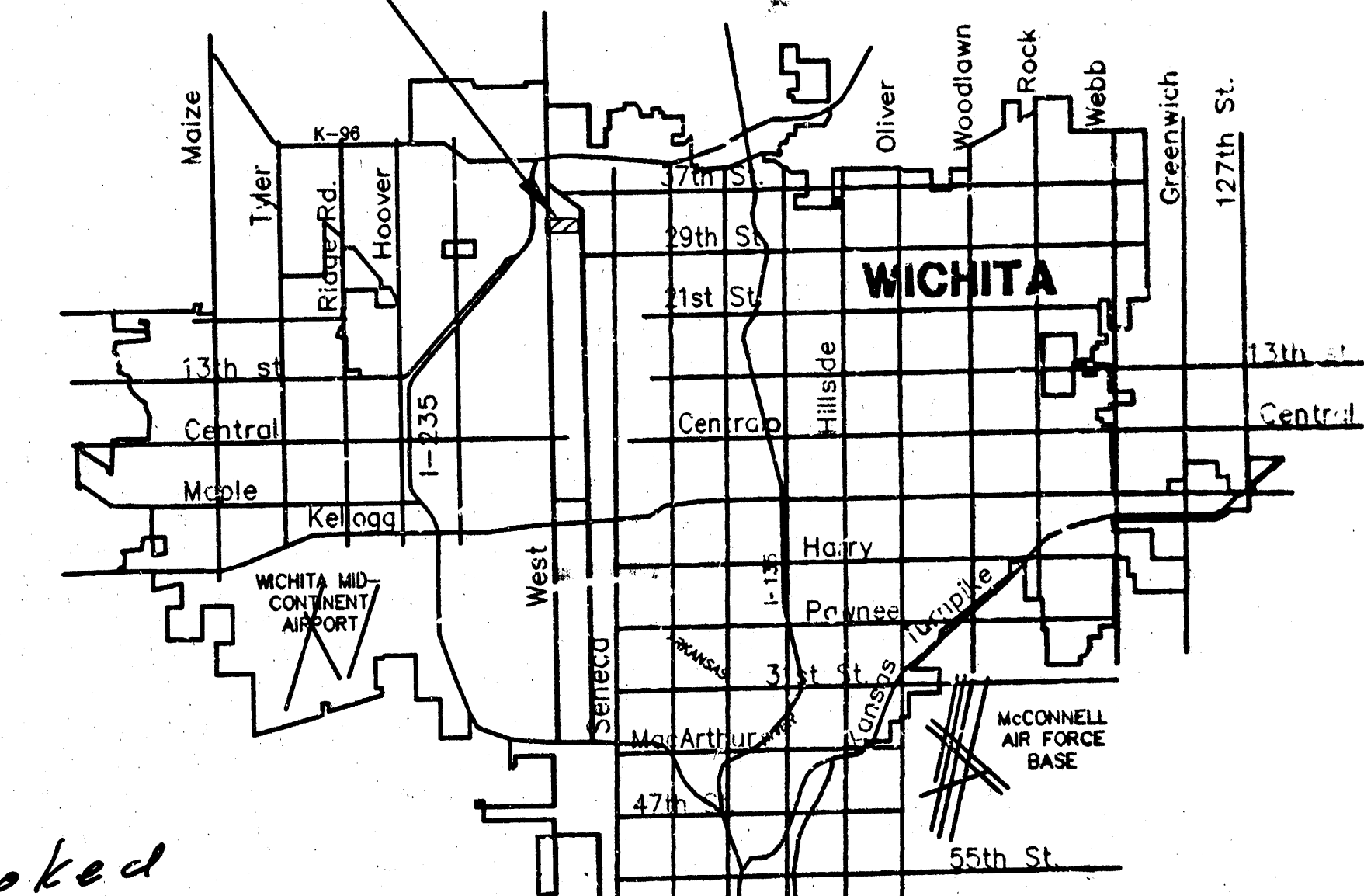
# SANITARY SEWER IMPROVEMENTS FOR PLEASANT VALLEY CHURCH OF CHRIST 3317 NORTH AMIDON, 67204 WICHITA, SEDGWICK COUNTY, KANSAS

COW PRIV. PROJ. NO. 1193 PPS(607861)  
MIKE LINDEBAK, P.E., CITY ENGINEER  
JANUARY 2002

## INDEX OF SHEETS

1. Title Sheet
2. Plan & Profile
3. Standard Backfill Details
4. Cleanout Assembly Details

## PROJECT LOCATION



## LOCATION MAP

APPROVED AS NOTED  
By CITY ENGINEER OF WICHITA

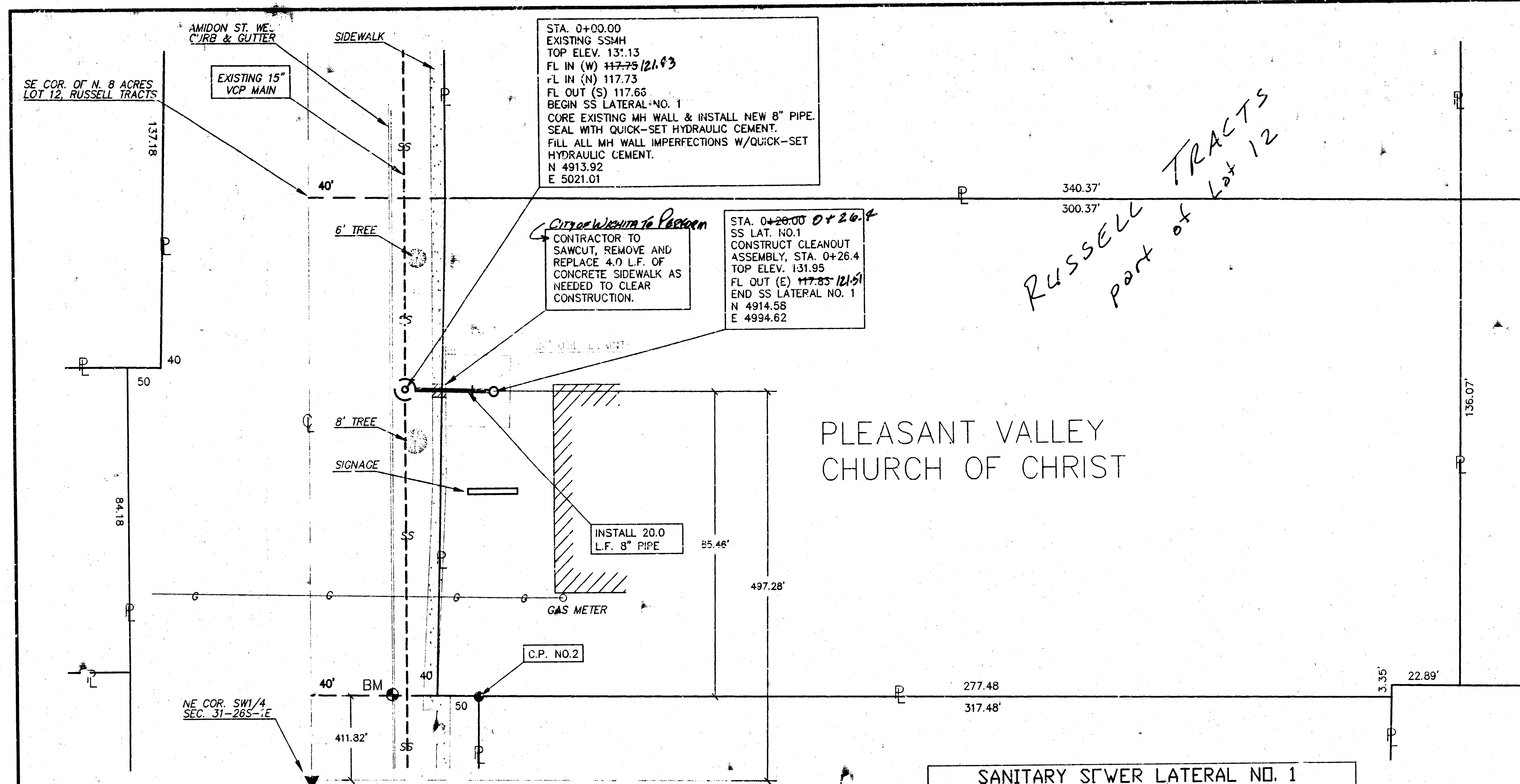
Sanitary Sewers VRH 1/4/02  
Storm Sewers \_\_\_\_\_  
Driveway Approaches \_\_\_\_\_  
Water Mains \_\_\_\_\_  
Paving \_\_\_\_\_

## NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM UNDER CONTRACT WITH THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

|                                                                                                 |                    |
|-------------------------------------------------------------------------------------------------|--------------------|
| CED PROJ. NO.: 20010827                                                                         |                    |
| <b>CERTIFIED ENGINEERING DESIGN, P.A.</b>                                                       |                    |
| 810 WEST DOUGLAS, SUITE C<br>WICHITA, KANSAS 67203<br>PH: (316) 262-8808<br>FAX: (316) 262-1000 | SHEET 1<br>TOTAL 4 |

AS-BUILT 2-26-02  
HOFW/CED Clearwater Excavating



**LEGAL DESCRIPTION.**  
THAT PART OF THE SOUTH 2 ACRES OF THE  
NORTH 8 ACRES OF LOT 12, RUSSELL TRACTS,  
SEDGWICK COUNTY, KANSAS DESCRIBED AS  
FOLLOWS:  
BEGINNING AT THE S.E. CORNER OF SAID  
NORTH 8 ACRES OF LOT 12; THENCE WEST  
ALONG THE SOUTH LINE OF SAID NORTH 8  
ACRES OF LOT 12, A DISTANCE OF 340.37  
FEET; THENCE NORTH 136.07 FEET, AND THENCE  
EAST A DISTANCE OF 22.89 FEET, AND THENCE  
NORTH A DISTANCE OF 3.35 FEET TO THE  
NORTH LINE OF THE SOUTH 2 ACRES OF THE  
NORTH 8 ACRES OF SAID LOT 12; THENCE  
EAST ALONG THE SAID LINE 317.48 FEET TO  
THE EAST LINE OF SAID LOT 12; THENCE  
SOUTH ALONG SAID EAST LINE TO THE P.O.B.,  
EXCEPT THE EAST 40 FEET.

**BENCHMARK #1**  
STANDARD DISC AT THE NE CORNER OF 29TH ST.  
NORTH, AND MERIDIAN.

ELEVATION = 129.04 CITY DATUM

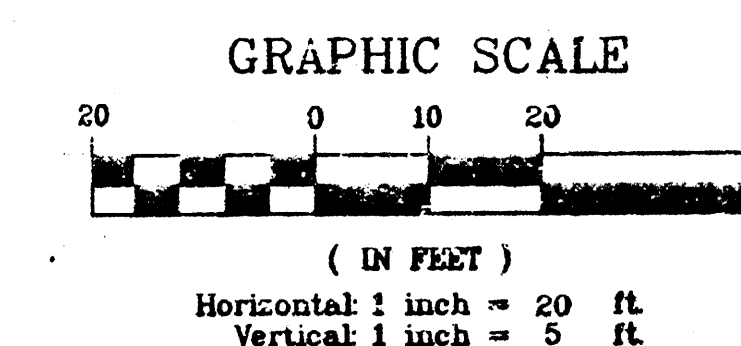
**BENCHMARK #2**

"C" CHISEL ON TOP OF CURB EAST OF THE NE  
CORNER OF PLEASANT VALLEY CHURCH OF CHRIST  
PROPERTY.

ELEVATION = 131.57 CITY DATUM

| HORIZONTAL CONTROL POINTS |                        |                                                |
|---------------------------|------------------------|------------------------------------------------|
| C.P. NO. 1                | N 5137.28<br>E 5000.00 | FOUND PROPERTY IRON                            |
| C.P. NO. 2                | N 5000.00<br>E 5000.00 | SET PIN, INTERSECTING<br>CORNER OF PROP. LINES |

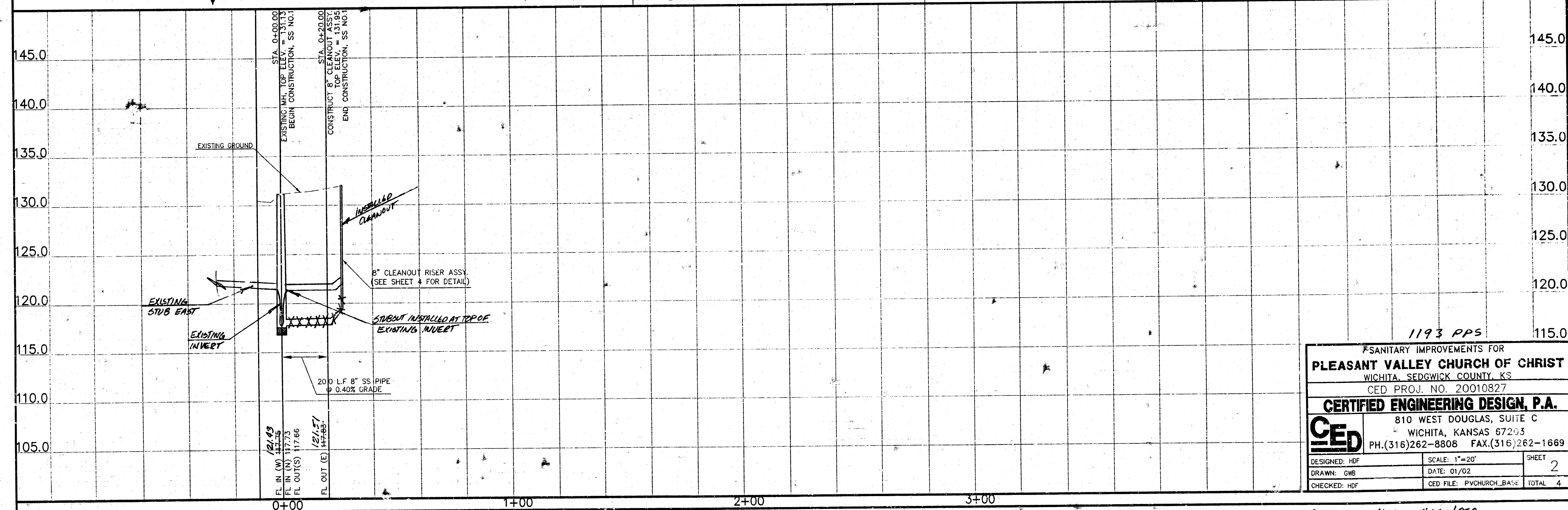
| LEGEND                    |                                             |
|---------------------------|---------------------------------------------|
| BM = BENCHMARK            | — = EXISTING TRAFFIC SIGN                   |
| ▲ = SECTION CORNER FOUND  | ⊕ = EXISTING POWER POLE                     |
| ● = PROPERTY PIN          | CL = CENTERLINE                             |
| ⊠ = STORM WATER SEWER MH  | PL = PROPERTY LINE                          |
| ⊙ = EXISTING SSMH         | W = WATER MAIN                              |
| ⊗ = PROPOSED SSMH         | SS = SANITARY SEWER                         |
| ⊕ = EXISTING FIRE HYDRANT | G = GAS MAIN                                |
| ⊖ = PROPOSED FIRE HYDRANT | SWS = STORM WATER SEWER                     |
| ⊕ = EXISTING WATER VALVE  | CP = SURVEY CONTROL POINT                   |
| ⊕ = LIGHT POLE            | CATV = CABLE T.V. BOX                       |
| ⊕ = EXISTING WELL         | UE = UNDERGROUND ELECTRIC                   |
|                           | UT = UNDERGROUND TELEPHONE<br>(FIBER OPTIC) |



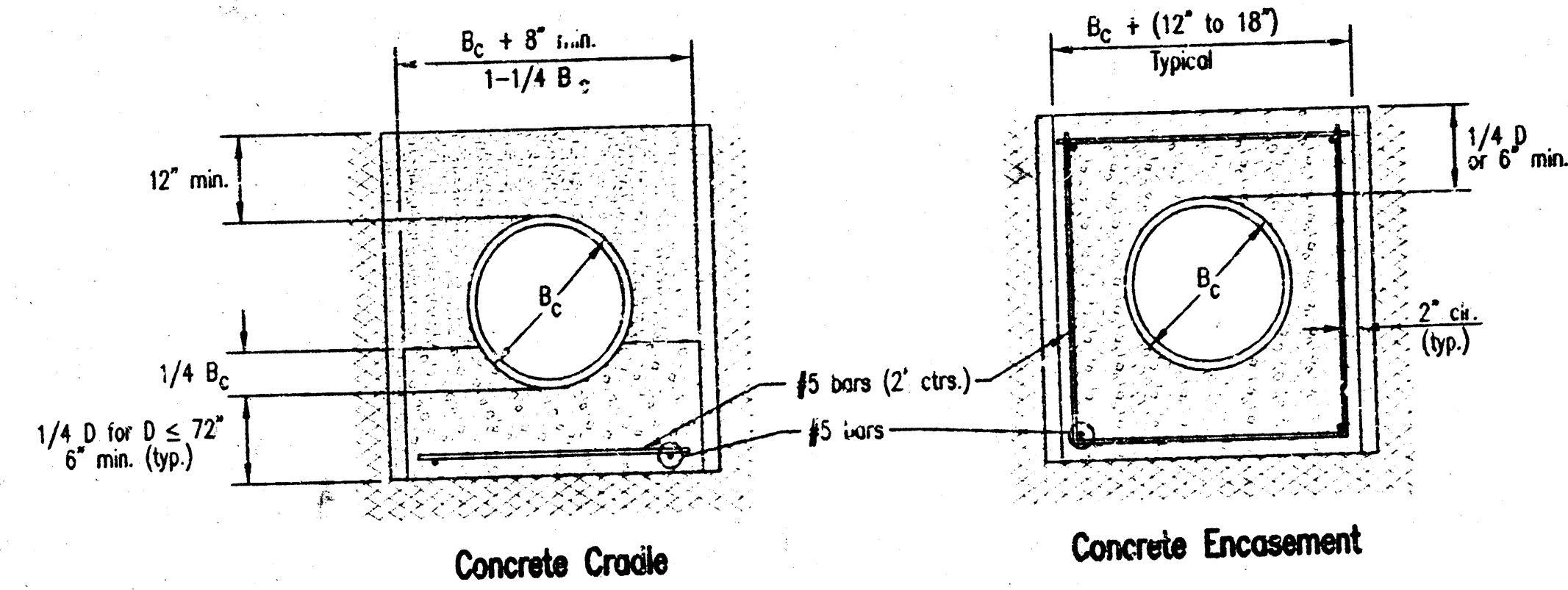
UTILITY LOCATIONS SHOWN HEREIN ARE BASED ON  
INFORMATION RECEIVED FROM KANSAS ONE-CALL  
(1-800-DIG-SAFE) IDENTIFIED BY TICKETS NO.  
460881 ON DECEMBER 20, 2001. BEFORE ANY  
DIGGING, CONTRACTOR SHOULD VERIFY UTILITY  
LOCATIONS BY CALLING 1-800-DIG-SAFE.

ANY UTILITIES NOT SHOWN ARE DUE TO THE  
RESPONSE TO KANSAS ONE-CALL.

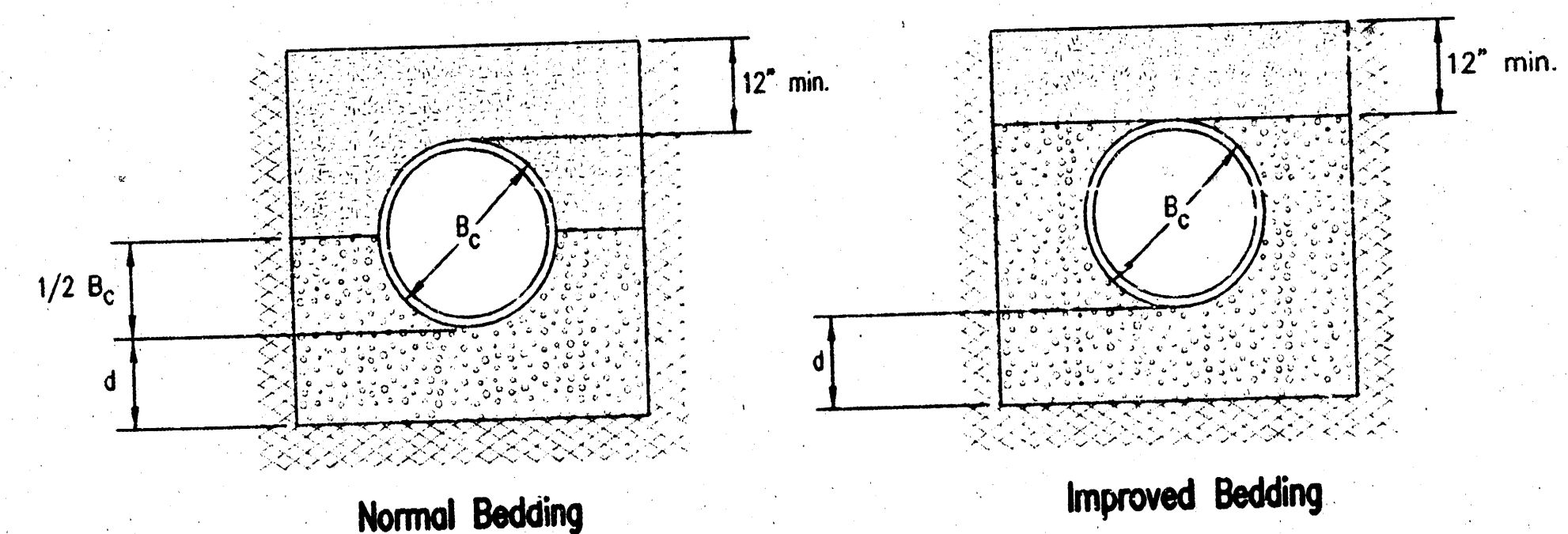
UTILITIES SHOWN REPRESENT THE BEST  
INFORMATION AVAILABLE FOR DESIGN. ADDITIONAL  
UTILITIES MAY BE PRESENT ON THIS PROJECT.  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR  
DETERMINING THE EXACT LOCATION, DEPTH, AND  
SIZE OF ALL UNDERGROUND UTILITIES PRIOR TO  
CONSTRUCTION. THE CONTRACTOR SHALL BE  
LIABLE FOR ANY DAMAGE CAUSED BY THE  
FAILURE TO DO SO.



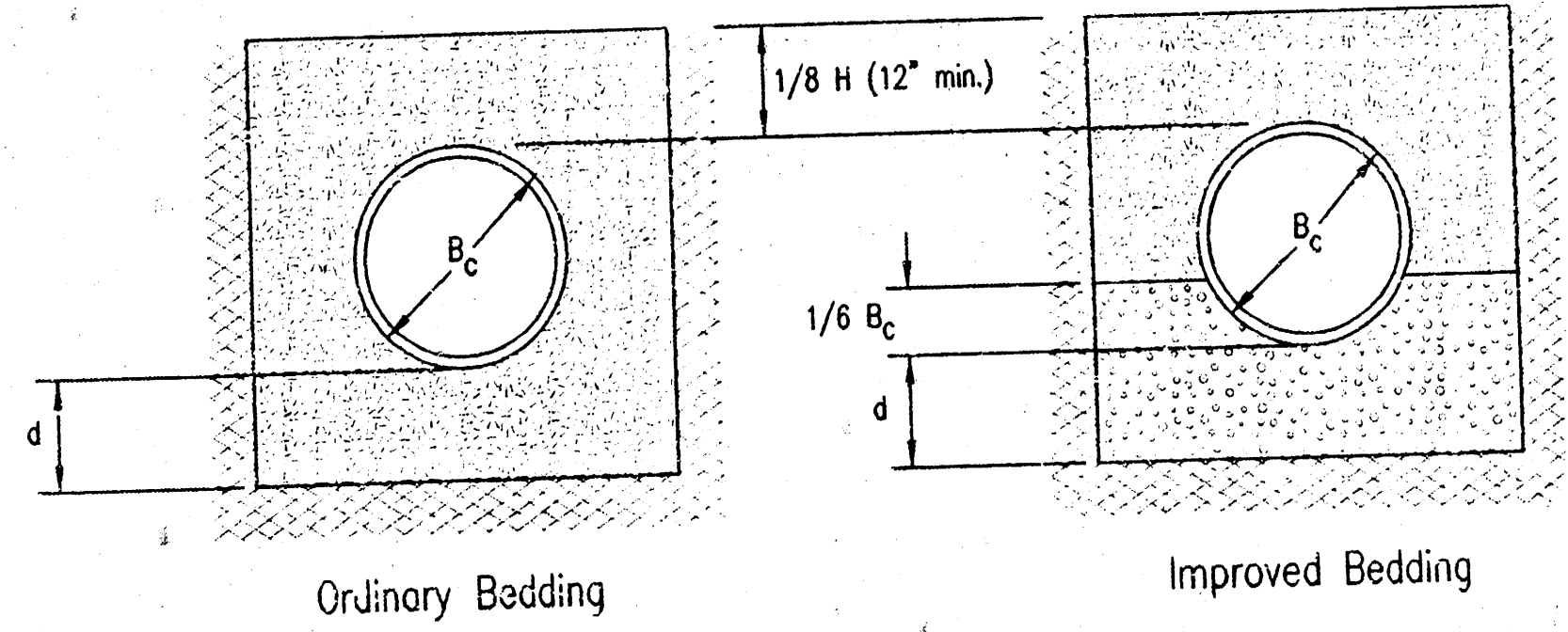
AS-BUILT 2-6-02 AOF W/CED



CLASS A



CLASS B



CLASS C

PIPE ZONE BACKFILLING

- $B_c$  = Outside Pipe Diameter  
 $H$  = Backfill from Top of Pipe to Existing Ground  
 $D$  = Inside Pipe Diameter  
 $d$  = Depth of Bedding Material Below Pipe  
 Granular Bedding Material or Sand-Gravel Bedding  
 Compacted Embedment  
 Concrete

| Depth of Bedding Material Below Pipe |                |                |
|--------------------------------------|----------------|----------------|
| D                                    | d(min)<br>Soil | d(min)<br>Rock |
| 27" & smaller                        | 4"             | 6"             |
| 30" to 60"                           | 5"             | 9"             |
| 66" & larger                         | 6"             | 12"            |

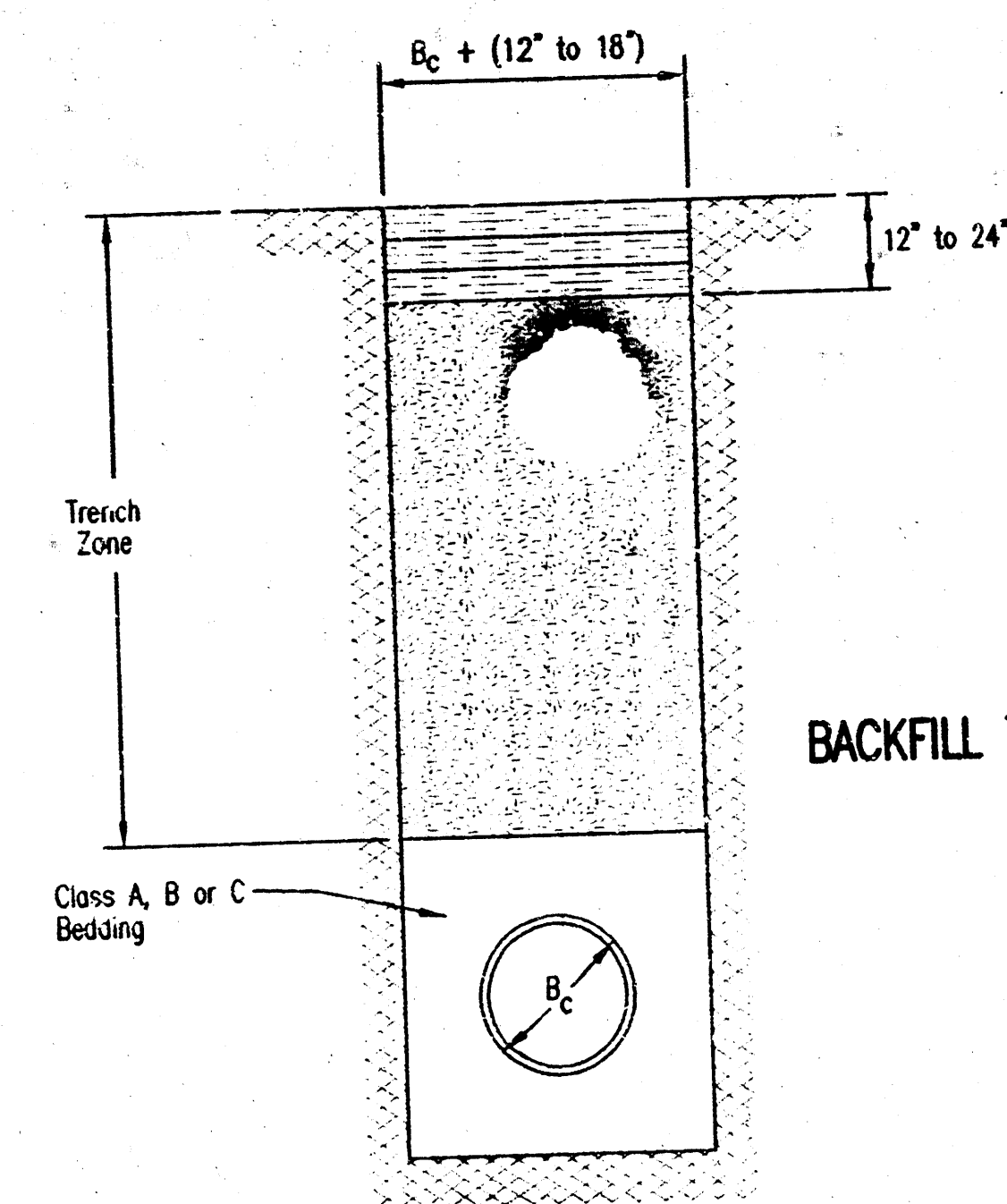
Granular Bedding Material shall be an approved material consisting of durable crushed rock conforming with the requirements of the latest revision of ASTM C-33 Size No. 67 (3/4" to No. 4); to be placed in not more than 6" layers and compacted by slicing with a shovel or vibrating. Soundness, abrasion, and absorption limits shall be as required for coarse aggregates in Section 03010-Cc, concrete work in the specifications.

Sand-Gravel Bedding Material - sand-gravel mix meeting Type UD-1 of the 1990 Kansas Standard Specifications for State Road and Bridge Construction.

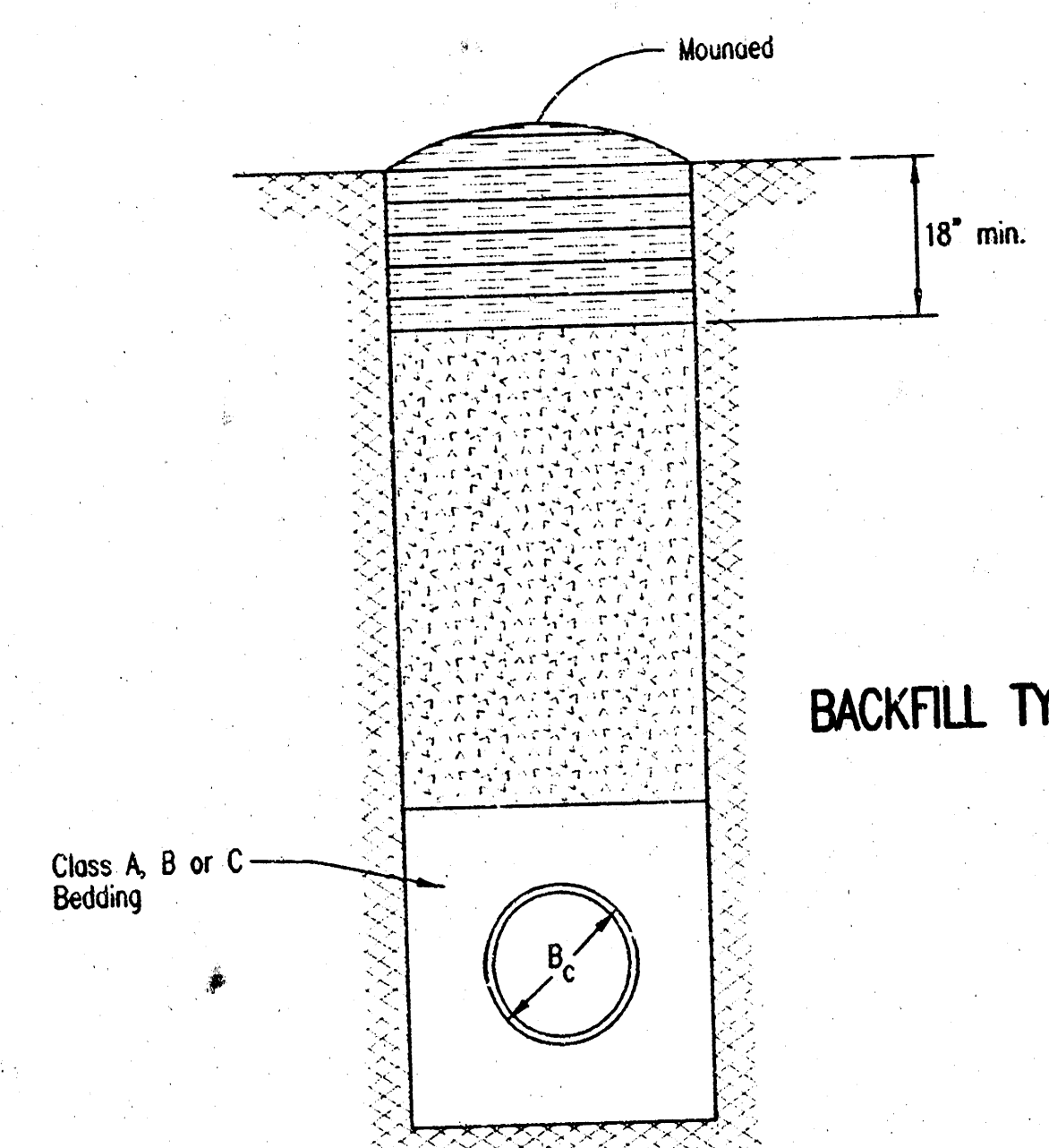
Compacted Embedment shall be an approved sand material free from debris, organic material, and stones with 100% passing the 3/4" sieve to be placed in uniform layers not more than 6" thick and compacted to 95 percent maximum density as determined by ASTM D698. Granular Bedding Material may be substituted for all or part of Compacted Embedment Materials.

Class A "Concrete Cradle" and/or Class A "Concrete Encasement" is not required unless specified on the plans. However, where unexpected trench conditions exist or improper trenching is performed Class A Bedding may be required as determined by the Engineer.

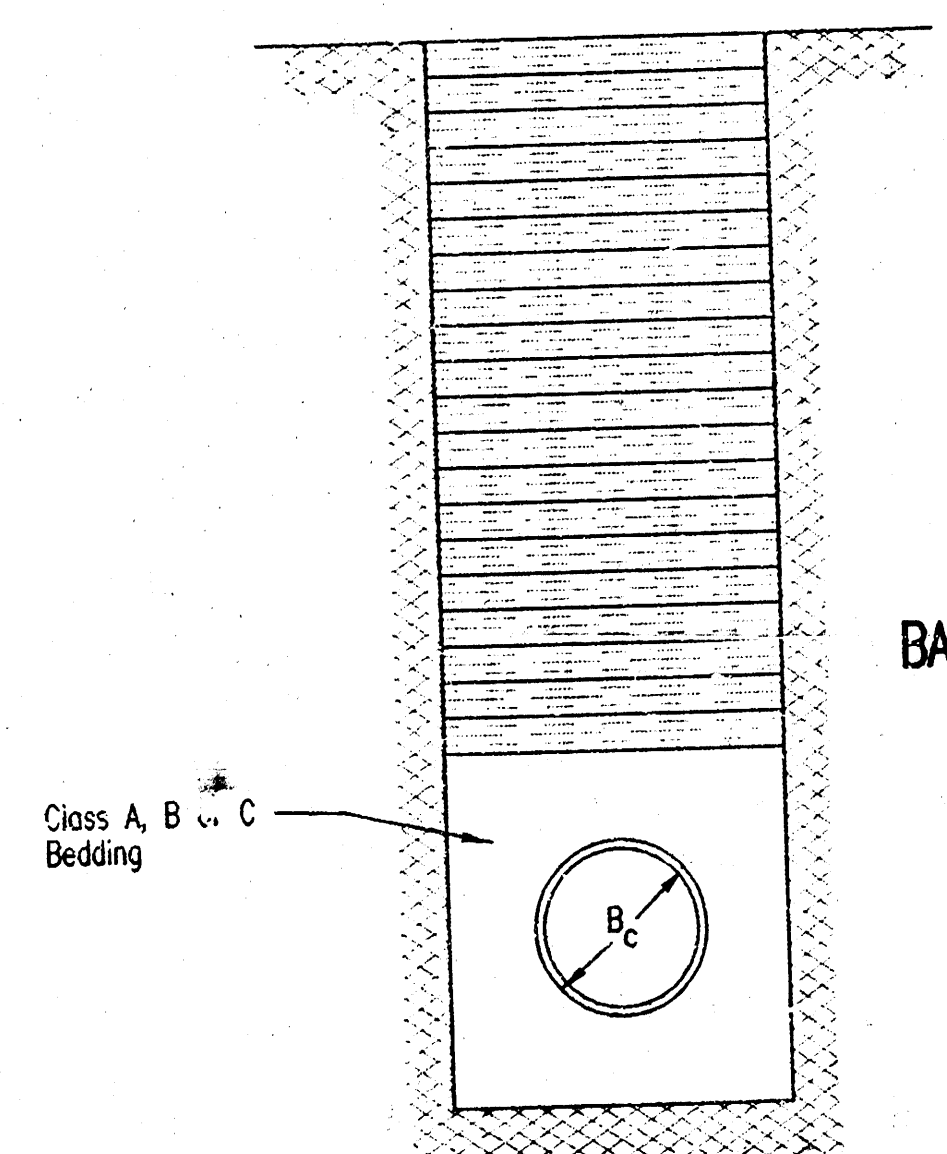
- Class B Bedding shall be used for all flexible pipe.
- Class B Normal Bedding shall be used for PVC Pipe unless wet conditions are encountered.
  - Class B Improved Bedding shall be used for other flexible pipe, and for PVC pipe in wet conditions.
- Class C Bedding shall be used for all rigid pipe.
- Class C Ordinary Bedding shall be used for all rigid pipe unless wet conditions are encountered.
  - Class C Improved Bedding shall be used for wet conditions existing in the trench, as directed by the Engineer, at no additional cost to the Owner. The dimensions shall be equal to that required for "rock" excavation (see specifications).



BACKFILL TYPE I



BACKFILL TYPE II



BACKFILL TYPE III

TRENCH ZONE BACKFILLING

- $B_c$  = Outside Pipe Diameter  
 Compacted Granular Backfill  
 Uncompacted Earth Backfill  
 Compacted Earth Backfill

Compacted Granular Backfill material shall be an approved sand material free from debris, organic material and stones with 100% passing the 3/4" sieve and not more than 15% passing a No. 200 sieve; to be jetted and mechanically vibrated into place and compacted to 95% density as determined by ASTM D698.

Uncompacted Earth Backfill material may be natural soil free from large clods or stones, brush, roots more than 2 inches in diameter, debris, and junk. Flooding with water shall be provided as directed by the Engineer.

Compacted Earth Backfill shall consist of material existing prior to trenching or selected material as directed by the Engineer, and shall be compacted to 90% density as determined by ASTM D698.

Backfill: Backfill material and compaction requirements shall conform to either Type I, Type II or Type III as specified in the plans. One years maintenance will be required on all backfill.

Backfilling Through Rock: Backfilling through rock shall be performed as specified in the paragraph Backfill above, except that the Pipe Zone is increased to provide eighteen (18) inches of cover over the pipe. When approved by the Engineer the remainder of the backfill may be excavated rock provided the excavated rock has been broken up so that earth and rock will thoroughly mix and not result in voids around the larger pieces of rock. Any excess rock remaining after the trench has been backfilled shall be removed or wasted as directed by the Engineer.

Backfilling Under Pavement: Backfilling under existing or proposed pavement shall be performed as Backfill Type I to a level of two (2) feet from the bottom of the pavement. The remainder of the trench shall be backfilled with selected material, sufficiently damp to be properly compacted in layers not exceeding six (6) inches in depth, compaction shall be performed with mechanical tampers and continued until a relative density of 100 percent of standard density, in conformance with ASTM D698 is attained.

Backfilling Under Gravel Streets: Where the trench crosses or is in existing gravel surfaced streets, the backfill shall be compacted as provided in the paragraph "Backfilling Under Pavement".

BACKFILL DETAILS

AS-BUILT 2-26-02 HOFM/OED

10 04 01 08