CONSTRUCTION PLANS FOR

# GROUNDWATER REMEDIATION FORCE MAIN

TO SERVE

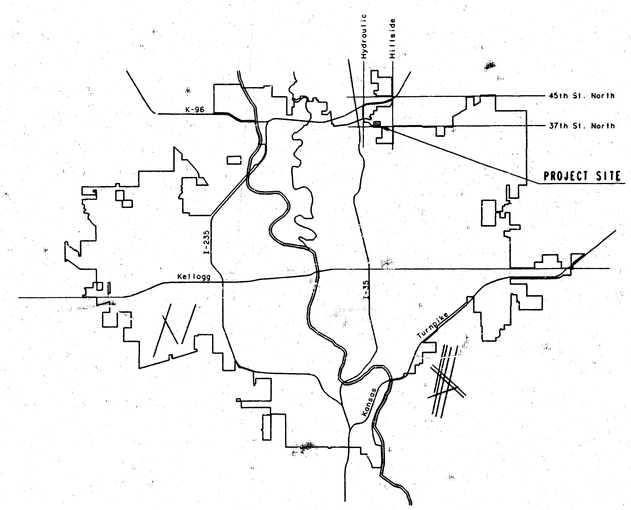
# UNOCAL CORPORATION

IN

# THE CITY OF WICHITA,

SEDGWICK COUNTY, KANSAS

MICHAEL E. LINDEBAK, P.E.-CITY ENGINEER




INDEX OF SHEETS


SHEET NO. 1 TITLE SHEET
SHEET NO. 2 KEY MAP and GENERAL NOTES
SHEET NO. 3&4 PLAN/PROFILE


P.E.C. PROJECT NO. 34-94361-3263

## JUNE, 1994

PLANS PREPARED BY

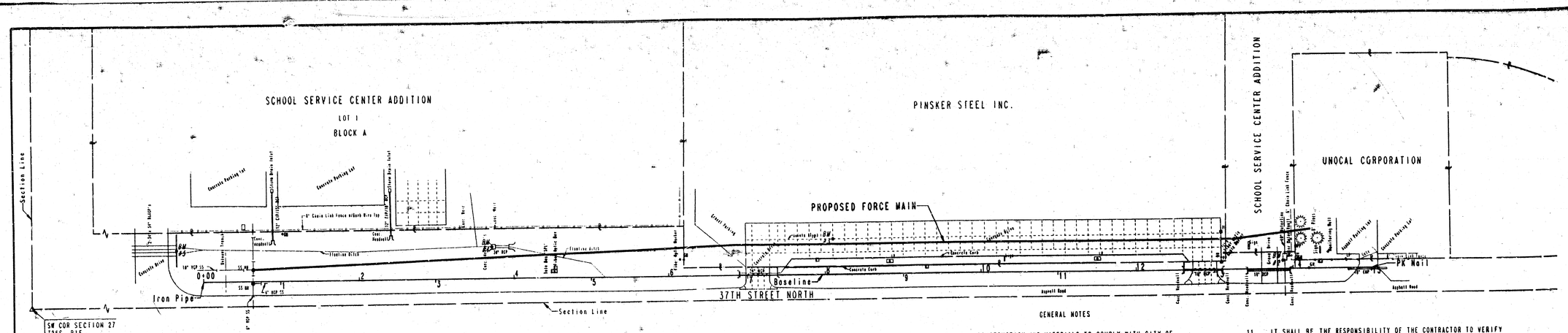
## PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

DEC 2 1994

DRAWING NAME: 34-94361 FM Title
LOCATION: 81 61SS
DESIGN UNITS:
PLOTTER UNITS:
DATE LAST WORKED ON: June 28, 1994
SPECIAL INSTRUCTIONS:
FM 2SL




## KEY MAP



SCALE: 1"=6C'

## BENCH MARK LIST

BM 2- BASELINE STATION 13+87, 10' LT.
CHISELED "O" SW CORNER WATER METER VAULT.
ELEV. 160.13

BM 3 - BASELINE STATION 8+10, 43' LT.
CHISELED "O" AT CONCRETE JOINT IN PINSKER STEEL PARKING
ELEV. 153.60

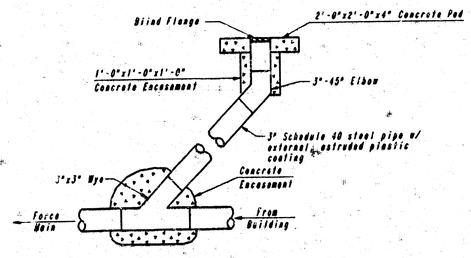
BM 4 - BASELINE STATION 3+71, 38' LT.
CHISELED "O" CENTER WEST END HEADWALL FOR 30" RCP.
ELEV. 140.64

BM 5 - BASELINE STATION 0-34, 38.5' LT.
CHISELED "O" CENTER EAST END HEADWALL FOR 2-54"X34" RCACP
ELEV. 139.22

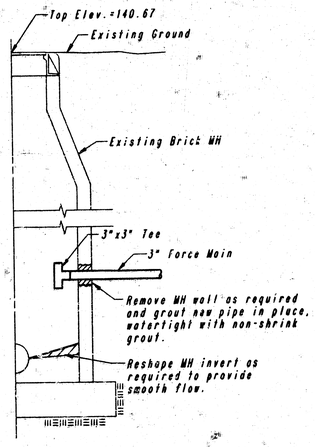
## BASELINE TIES

BASELINE STATION 0+00
IRON PIPE
39.5' NW TO SOUTH END HEADWALL 2-54"x34" RCACP
27.3' SW TO PC CONC. APPROACH USD 259 SUPPLY DIV. DR.
30.0' SOUTH TO CENTER 37TH STREET NORTH

BASELINE STATION 15+00
PK NAIL IN ASPHALT DRIVE
13.0' NE TO 6" STEEL GATE POST OF ASPHALT DRIVE
18.6' NW TO 6" STEEL GATE POST OF ASPHALT DRIVE
17.0' SOUTH TO NORTH EDGE PAVEMENT 37TH STREET NORTH
4.0' EAST TO CENTERLINE ASPHALT DRIVE TO 2100 E. 37TH ST. N.




CLEANOUT DETAIL




FORCE MAIN RECEIVING MANHOLE
BASELINE STA. 0+64.3, 14.3' LT.

## GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE CITY OF WICHITA DATUM.
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA: ARKLA, KPL/GAS SERVICE, THE WICHITA WATER DEPARTMENT, MULTIMEDIA CABLEVISION, K.G.&E. (ELECTRIC), AND SOUTHWESTERN BELL TELEPHONE.
5. 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 LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED 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. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE PRICE BID.
7. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 42 INCH DEPTH OF COVER OVER THE PROPOSED FORCE MAIN.
8. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. ARTS WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE PRICE BID.
9. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITE AS DIRECTED BY THE ENGINEER.

   ALL OTHER 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 MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
10. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL OBTAIN THE CONCURRENCE OF THE ENGINEER BEFORE PROCEEDING WITH SUCH WORK. COSTS FOR TREE/SHRUB REMOVAL AND TRIMMING, REGARDLESS OF SIZE, SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY DEPTHS OF EXISTING UTILITIES AND TO PROVIDE HORIZONTAL AND VERTICAL DEFLECTIONS ALONG THE FORCE MAIN AS REQUIRED TO AVOID CONFLICTS WITH THE EXISTING UTILITIES.
12. A SAW CUT OF AT LEAST ONE-HALF THE DEPTH OF EXISTING SURFACE COURSES OR ONE-FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE COURSE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THE SURFACE OR PAVEMENT IS REQUIRED. IN INSTANCES WHERE SAWED JOINTS, TO FACILITATE PAVEMENT REMOVAL FALLS WITHIN 3 FEET (3') OF EXISTING JOINTS, THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. REMOVAL AND REPLACEMENT OF EXISTING PAVEMENT SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE CITY OF WICHITA STANDARD SPECIFICATIONS.
13. THE CONTRACTOR SHALL MAINTAIN CONSTRUCTION RECORDS OF THE HORIZONTAL AND VERTICAL LOCATIONS OF THE FORCE MAIN SUCH THAT RECORD DRAWINGS CAN BE PREPARED UPON COMPLETION OF CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THRU CONSTRUCTION.
15. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT ACCESS THRU AND ACROSS THE CONSTRUCTION AREA AT ALL TIMES.
16. ALL FORCE MAIN PIPE SHALL BE 3" DIAMETER, SCHEDULE 40 STEEL WITH AN EXTERIOR, EXTRUDED PLASTIC COATING AS STATED IN THE SPECIFICATIONS.
17. TRAFFIC SHALL NOT BE DISRUPTED ON 37TH STREET NORTH OR IN THE ENTRANCES TO THE PINSKER STEEL PARKING LOT.

| PLAN | CHECKED |
|---|---|
| | CHECKED |

| No. | Revision | By | Date |
|---|---|---|---|
| | | | |

CITY OF WICHITA, KANSAS

# KEY MAP & GENERAL NOTES

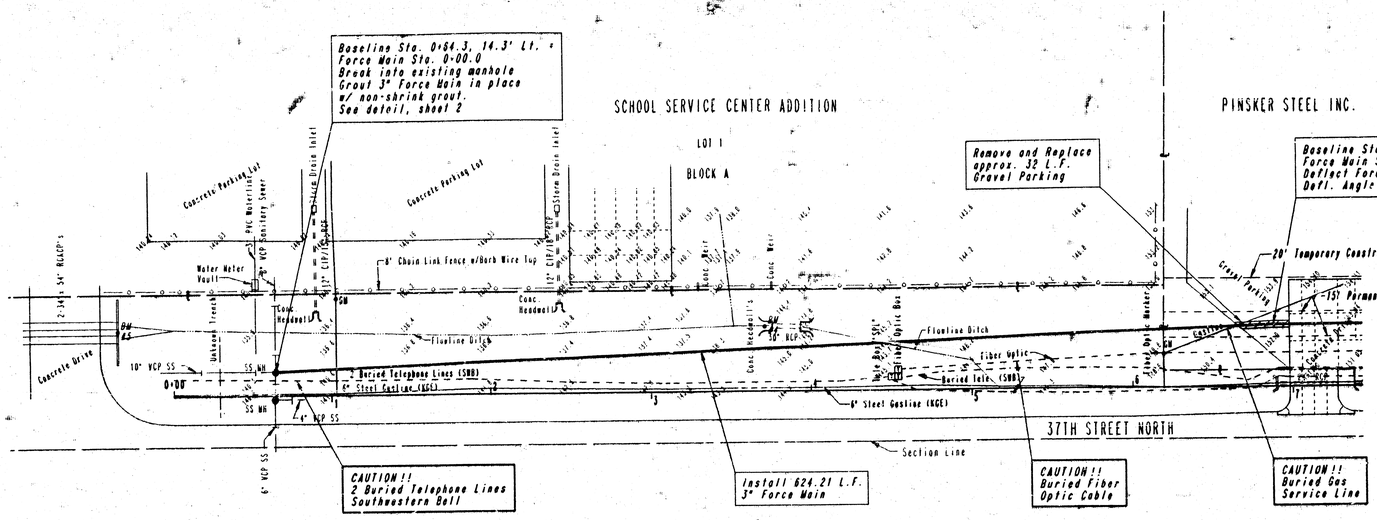
GROUNDWATER REMEDIATION FORCE MAIN

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

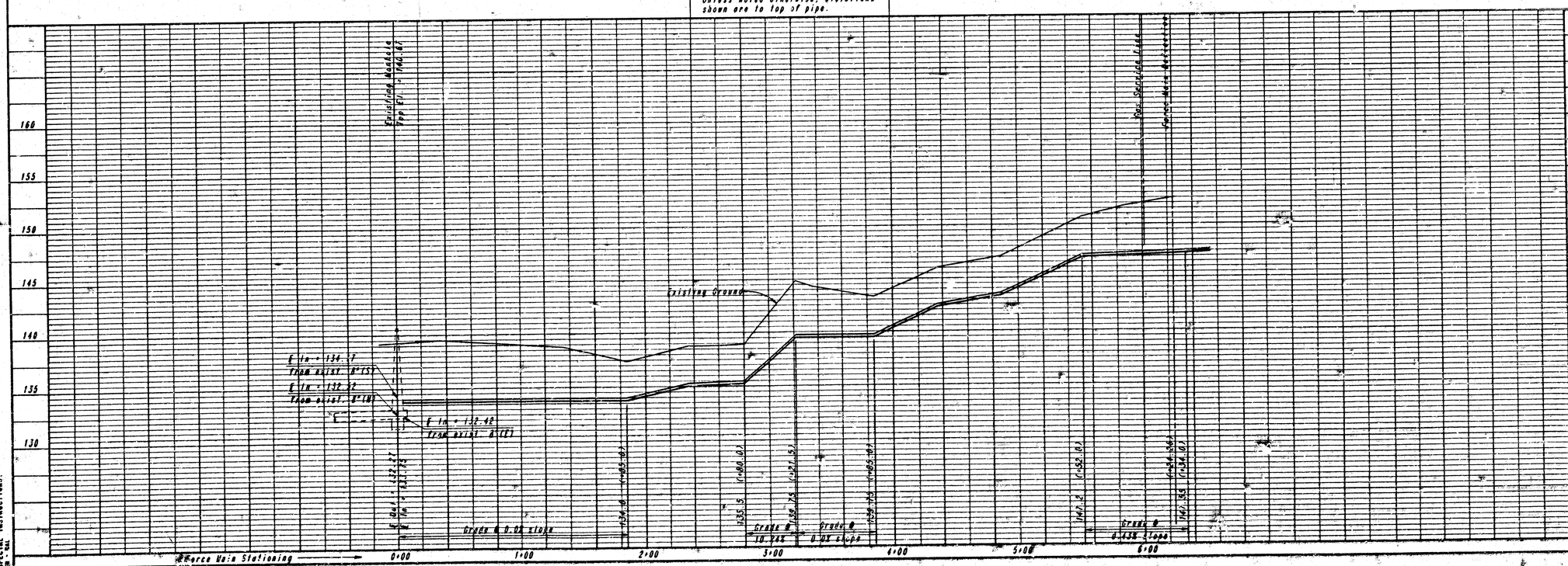
| Designed by | Job No. 34-94361 | Sht. 2 of 4 |
|---|---|---|
| Drawn by DMM | Date June, 1994 | |

DRAWING NAME: 34-94361 Key Map & GN
LOCATION: EA 0164
CENTER COORDINATES:
FILE LAST WORKED ON: June 30, 1994
DATE LAST WORKED ON:
SPECIAL INSTRUCTIONS:
35 - HAL

SCALE:
PLAN: LAT. & LONG. 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT.




Unless noted otherwise, elevations shown are to top of pipe.




PLAN CHECKED / CHECKED — BY — DATE

PROFILE CHECKED / CHECKED — BY — DATE

DRAWING NAME: 34-94361 FM P/P 1
LOCATION: FM 1731
LOCATION CONTROL DATE:
REVISION CODE:
DATE LAST REVISED ON: June 30, 1994
SPECIAL INSTRUCTIONS:
BY:

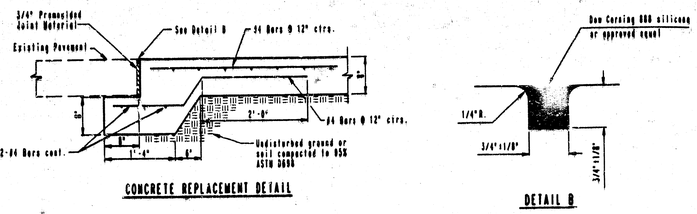
CITY OF WICHITA, KANSAS
GROUNDWATER REMEDIATION FORCE MAIN
STA. 0+00 TO STA. 6+24.26

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed By MDS, MDH | Job No. 34-94361
Drawn By DMM | Date June, 1994

Sheet 3 of 4

SCALE:
PLAN: LAT. & LONG. 40 0 40 80
PROFILE: HORIZ. SAME AS ABOVE
VERT.




CONCRETE REPLACEMENT DETAIL




DETAIL B

SCHOOL SERVICE CENTER ADDITION

LOT 1

BLOCK A

PINSKER STEEL INC.

SCHOOL SERVICE CENTER ADDITION

UNOCAL CORPORATION

Baseline Sta. 6+88.1, 36.75' Lt. = Force Main Sta. 6+24.21

Baseline Sta. 13+24.0, 36.75' Lt. = Force Main Sta. 12+60.11
Deflect Force Main
Defl. Angle = 6°08'23"

Remove and Replace 6' Chain Link Fence as required

Baseline Sta. 14+23.0, 47.35' Lt. = Force Main Sta. 13+59.68
End Force Main Construction
Plug pipe and mark location with redwood stake.

20' Temporary Construction Easement

15' Permanent Force Main Easement

Fiber Optic

Buried Tele. (SWB)

Concrete Curb

6" Steel Gasline (SGS)

Baseline

Section Line

37TH STREET NORTH

Asphalt Road

6" Steel Gasline (KGE)

Concrete Headwall

18" RCP

Concrete Parking Lot

6' Chain Link Fence

Asphalt Road

Note to Contractor:
1. Force Main from Baseline Sta. 6+97.89, 36.75' Lt. to Baseline Sta. 13+19.89, 36.75' Lt. shall be installed by horizontal boring techniques. Any concrete pvm't. damaged by construction shall be replaced by the Force Main Contractor. Any additional costs shall be considered subsidiary to the project. Whenever the edge of the cut through concrete pvm't. is within five (5) feet of a joint parallel with the cut, then the pavement shall be removed to the joint and replaced. See Concrete Replacement Detail, this sheet.

CAUTION!! Buried Gas Service Line

Install 635.9 L.F. 3" Force Main

Install 99.57 L.F. 3" Force Main

CAUTION!! 10" Waterline

Baseline Sta. 14+11.0, 46.05' Lt. = Force Main Sta. 13+47.61
Install Cleanout, see detail sheet 2.

NOTE:
Force Main 941010

PLAN CHECKED CHECKED DATE

PROFILE CHECKED CHECKED BY DATE

Unless noted otherwise, elevations shown are to top of pipe.

Force Main Reflection

Top of Conc. Pvm't

Existing Ground

Force Main Station

6+24.26 (+54.07)
1967.35 (+34.07)

6+97.89
668 L.F. Boring
5 Foot min. cover under pavement

13+19.89 (+56.07)
1951.0 (+56.07)

13+60.11 (+60.01)

13+59.68 (+59.60)
1951.0 (+59.60)

Grade @ 0.00% slope

6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 13:00

165 160 155 150 145 140 135

DRAWING NAME: 34-94361 FM P/P 2
LOCATION: E4 4132
CENTER COORDINATES:
DATE LAST WORKED ON: June 30, 1994
SPECIAL INSTRUCTIONS:
N.T.S.

CITY OF WICHITA, KANSAS

STA. 6+24.26 TO STA. 13+59.68

GROUNDWATER REMEDIATION FORCE MAIN

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
ENGINEERS
WICHITA, KANSAS

Designed By MDS, MDH | Job No. 34-94361
Drawn By DMH | Date June, 1994

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