PLANS FOR

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER ··· 29TH. ST. NO. TO 37TH. ST. NO.

CITY OF BEL AIRE
SEDGWICK COUNTY, KANSAS

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH THE SPECIFICATIONS.

2. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION ON EXISTING ROADWAYS AT ALL TIMES. VEHICULAR ACCESS TO ALL DWELLINGS IN THE PROJECT AREA SHALL BE PROVIDED AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS, AND BARRICADES IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS.

3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHTS AND WEEKENDS TO LESS THAN 50 FEET.

4. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY EIGHT (48) HOURS TO UTILITY AND PIPELINE 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:

CITY OF BEL AIRE	744-2888 or 744-2451
CABLEVISION	262-4270 or 263-2061
KPL GAS SERVICE COMPANY	263-7511
KANSAS GAS & ELECTRIC	264-1141
SOUTHWESTERN BELL TELEPHONE COMPANY	1-571-2611
CITY OF WICHITA WATER DEPARTMENT	268-4908
CITY OF WICHITA SEWER MAINTENANCE	268-4908
UNION PACIFIC RAILROAD YARDMASTER	268-9424

5. EXISTING UTILITIES AND THEIR LOCATIONS, 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 PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED. UNDERGROUND UTILITY LINES ARE TO BE ADJUSTED DURING CONSTRUCTION AS NOTED ON THE PLANS BY EITHER ITS OWNER OR THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO PROTECT AND WORK AROUND EXISTING UTILITIES WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

6. THE CONTRACTOR SHALL RESTORE ALL DITCHES, CHANNELS, BANK STABILIZATION, SWALES, ROAD SHOULDERS, RIP-RAP, ENTRANCES, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SPRINKLER SYSTEMS, SIDEWALKS, DRIVES, SIGNS, FENCES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN THEY SHALL BE REMOVED AND REPLACED OR RESET IN LIKE KIND.

7. TREES AND SHRUBS IN THE 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.

8. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES, DEBRIS 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.

9. POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED.

10. WHERE REMOVAL OF EXISTING FENCES NEXT TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH ADJACENT PROPERTY OWNERS. ALL REMOVAL AND RESETTING OF FENCES SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL 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 REGISTERED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW FOR SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE APPROVED BY THE ENGINEER. COST OF MAINTAINING SEWAGE FLOW THROUGH CONSTRUCTION SHALL BE CONSIDERED SUBSIDIARY TO THE OTHER ITEMS OF WORK.

13. ALL ELEVATIONS SHOWN ARE USGS MSL.

14. 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 THAT SURFACE OR PAVEMENT IS REQUIRED. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO OTHER ITEMS OF WORK.

15. ALL COSTS FOR REMOVAL AND REPLACEMENT OF EXISTING PAVEMENT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK. REMOVAL OF EXISTING PAVEMENT AND/OR REPLACEMENT OF EXISTING PAVEMENT SHALL CONFORM TO THE APPLICABLE SECTIONS OF THE SPECIFICATIONS. MINIMUM LIMITS OF SUCH PAVEMENT REMOVAL AND REPLACEMENT SHALL BE ONE FOOT BEYOND THE LIMITS OF THE EXCAVATION MADE FOR THE SEWER OR THE STRUCTURE, OR TO EXISTING PAVEMENT JOINT IF IT IS THREE FEET OR LESS BEYOND THE MINIMUM LIMITS.

16. FOR CONSTRUCTION IN AREAS WITH GRAVELED SURFACING, THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING SURFACING MATERIAL OVER THE AREA TO BE DISTURBED, AND CONSERVE THE MATERIAL FREE FROM ADMIXTURE WITH OTHER MATERIALS. AFTER TRENCHING AND BACKFILLING IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE SPECIFICATIONS, THE GRAVEL SURFACING MATERIAL SHALL BE REPLACED TO A DEPTH AT LEAST EQUAL TO THE UNDISTURBED GRAVEL SURFACING. IF THE GRAVEL TAKEN FROM THE DISTURBED AREA HAS BEEN ALLOWED TO BECOME MIXED WITH OTHER MATERIAL, IT SHALL NOT BE RE-USED BUT SHALL BE REPLACED WITH APPROVED CLEAN GRAVEL. COSTS FOR GRAVEL REPLACEMENT SHALL BE CONSIDERED AS SUBSIDIARY TO OTHER ITEMS OF WORK.

17. MAILBOXES WITHIN THE LIMITS OF THE PROJECT SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AS APPROVED BY THE ENGINEER. CONTRACTOR WILL BE REQUIRED TO MAKE SATISFACTORY PROVISIONS FOR MAIL DELIVERY TO PROPERTIES AFFECTED BY THIS PROJECT DURING ITS CONSTRUCTION. COST SUBSIDIARY TO OTHER ITEMS.

18. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF PROPERTY DIRECTLY AFFECTED BY THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF 5 DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.

19. THE COST OF SERVICE LINE AND CLEAN OUT CONSTRUCTION AND/OR RECONSTRUCTION SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.

20. ALL EXISTING GRASSED AREAS WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS AND RESEEDED IN LIKE KIND, UNLESS OTHERWISE NOTED ON THE PLANS. COSTS SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK. APPLICATION RATE FOR THE VARIOUS SEED MIXTURES SHALL BE AS APPROVED BY THE ENGINEER. SEEDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE SPECIFICATIONS.

21. SLOPES STEEPER THAN 10 TO 1 SHALL BE MULCHED AS REQUIRED BY STANDARD SPECIFICATIONS. COST OF MULCHING SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK.

22. THE COST OF MANHOLE STUB OUTS, WHERE SHOWN ON THE PLANS, SHALL BE SUBSIDIARY TO THE PRICE BID FOR MANHOLE.

23. AT SANITARY SEWER LINE (INCLUDING SERVICE LINES) AND WATER LINE CROSSINGS, THE SEWER LINE SHALL BE CONCRETE ENCASED FOR 10 FT. EACH WAY FROM THE WATER LINE, UNLESS THE SEWER LINE HAS 2 FT. OR MORE CLEARANCE BELOW THE WATER LINE.

24. A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUNDS SHALL BE CONSTRUCTED WITH A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP OF THE MANHOLE.

25. WHERE SHOWN ON DRAWINGS, GASKETED MANHOLE LIDS SHALL BE INSTALLED WITH REPLACABLE RUBBER O-RING SELF-SEALING GASKETS. PROVIDE ONE SPARE GASKET FOR EACH MANHOLE FRAME AND COVER INSTALLED. DO NOT INSTALL GASKETS UNTIL AFTER FINAL INSPECTION.

26. AFTER THE 10 INCH PVC SEWER LINE, OR PORTIONS THEREOF, HAVE BEEN ACCEPTED BY THE CITY, THE EXISTING 10 INCH AND 12 INCH VCP LINE, MANHOLES, AND APPURTENANCES SHALL BE ABANDONED IN PLACE OR REMOVED IN ACCORDANCE WITH THE SPECIFICATIONS.

27. CONTRACTOR TO PURCHASE CONNECTION PERMITS FOR HOUSE SERVICES FROM CITY OF WICHITA.

28. CONSTRUCTION OF K-96 AND ASSOCIATED OLIVER STREET IMPROVEMENTS BY CITY OF WICHITA CONTRACTOR WILL BE IN PROGRESS DURING THIS PROJECT. CONSTRUCTION OPERATIONS INVOLVING THE SEWER CROSSING AT OLIVER (STA. 22+24.5 TO STA. 23+68.1) AND OTHER POTENTIAL AREAS OF CONFLICT WITH OLIVER STREET IMPROVEMENTS SHALL BE COORDINATED AND SCHEDULED WITH MARK LORENZ, DONALDSON & SONS CONSTRUCTION COMPANY, 265-3101, WELL IN ADVANCE OF THE PLANNED WORK.

BENCH MARKS

B.M. #1 - City of Wichita Bench Mark Disk 39' N CL 29th; 32' E CL Oliver Elev. = 1347.15

B.M. #2 - City of Wichita Bench Mark Disk NE Wing Wall of RCB Elev. = 1348.225

#3 - City of Wichita Bench Mark Disk SW Wing Wall of RCB Elev. = 1348.805

4 - "□" Cut NE Corner WM Vault Elev. = 1350.94

#5 - City of Wichita Bench Mark Disk 28' S & 31' E 1/4 Corner Thimble Elev. = 1360.26

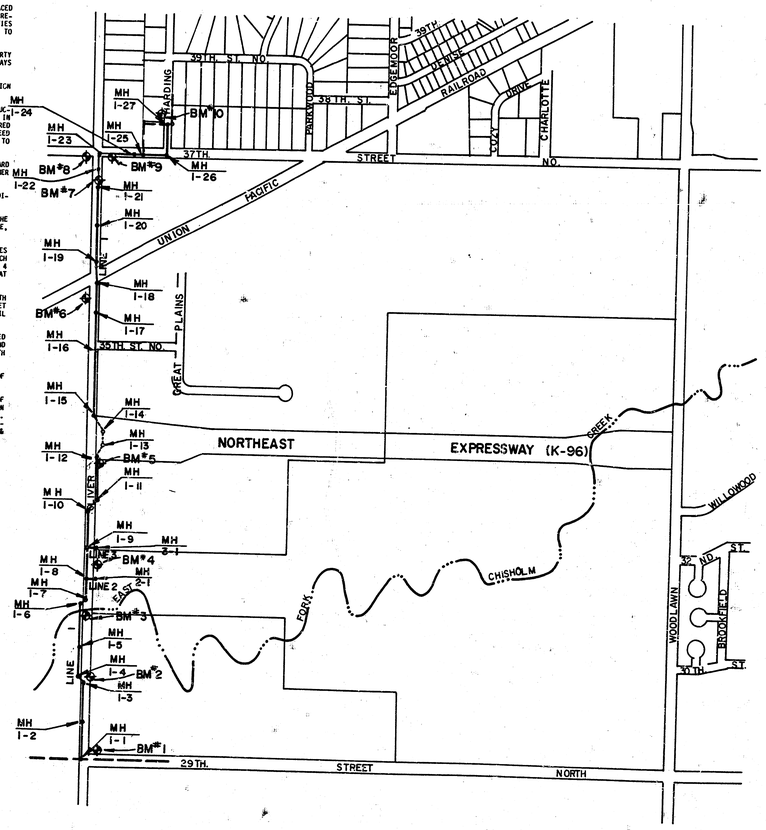
B.M. #6 - "□" Cut CL W Headwall RCB Elev. = 1365.00

B.M. #7 - "□" Cut NE Corner E Headwall RCB Near 300' S 37th/Oliver Elev. = 1370.09

B.M. #8 - City of Wichita Bench Mark Disk E End S Headwall RCB W 37th/Oliver Elev. = 1372.08

B.M. #9 - "□" Cut NW Corner S Headwall RCB Near 160' E 37th/Oliver Elev. = 1372.235

B.M. #10- "□" SE Corner Drive at 3815 N. Harding Elev. = 1373.00



LOCATION MAP

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-7	PLAN & PROFILE-LINE 1
8	PLAN & PROFILE-LINE 2, 3, & 4
9	DETAILS

APPROVED AS NOTED
CITY ENGINEER OF WICHITA

Sanitary Sewers VRH 11/4/91
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.

REVISED: JAN. 4, 1991 AS-BUILT 9-19-91
CITY OF WICHITA PRIVATE PROJECT NO. 277PPS (607861)

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER ··· 29TH. ST. NO. TO 37TH. ST. NO.

Design DSS/DCH
Drawn by DLM
Checked by DCH
Date Dec., 1990
Job no.

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #600
WICHITA, KANSAS 67226
636-5566

Sheet 1 of 9

MKEC Proj. No. 90-55-123-B

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER -- 29TH. ST. NO. TO 37TH. ST. NO.

REVISED: JAN. 4, 1991

N

Scale: 1" = 40' Horiz.
1" = 5' Vert.

CHISHOLM PARK ESTATES

"LOST ACRES ADDITION"

NORTHWEST PLAZA ADD.
LOT 1, BLOCK 1

OLIVER

29TH

EXIST. 30" SAN. SEWER

EXIST. 36" SAN. SEWER CONCRETE ENCASED

EXIST. 18" VCP

MH 1-1 See Notes

MH 1-2

MH 1-3

MH 1-4

MH 1-5

℄ Sta. 0+00 = S.E. Cor. Sec. 35, T. 26S, R. 1 E.

℄ Sta. 0+9.61 AB 30' Lt. AB

℄ Sta. 3+04.38 AB 30' Lt. AB

℄ Sta. ~~5+99.15~~ 6+24.08 AB 30' Lt. AB

℄ Sta. ~~6+29.15~~ 6+61.02 AB ~~60' Lt.~~ 60.47' Lt. AB

℄ Sta. 9+49.35 AB 60' Lt. AB

KG&E To Remove

Plug End Of Abandoned 12" VCP In Manhole

Creek Crossing: Concrete Encasement With Cut Off Wall See Detail.

Abandon Existing Sewer & Manholes Per General Notes.

Baseline & Section Line

50' R.O.W.

180°00'00"

135°00'00"

MATCH LINE 0+50

TREES

ANCHOR POLE

TRAVEL DRIVE

BENCH MARKS

B.M. #1 - City of Wichita Bench Mark Disk 39' N CL 29th; 32' E CL Oliver Elev. = 1347.15

B.M. #2 - City of Wichita Bench Mark Disk NE Wing Wall of RCB Elev. = 1348.225

NOTES

1. CONTRACTOR SHALL VERIFY CONDITION AND EXTENT OF CONCRETE ENCASEMENT BEFORE ORDERING MANHOLE. NOTIFY ENGINEER IF A DIFFERENT MANHOLE TYPE OR SIZE IS REQUIRED.
2. SPECIAL TYPE "P" MANHOLE SHALL BE MANUFACTURED AND INSTALLED PER APPLICABLE PORTIONS OF SPECIFICATIONS AND STANDARD DETAILS WITH MODIFICATIONS AS REQUIRED FOR DIMENSIONS AND ADAPTATION TO EXISTING 36 INCH PIPE.
3. REDUCER COLLAR SHALL BE POSITIONED AT THE BASE OF CONE SECTION.
4. MANHOLE SHALL BE TESTED FOR LEAKS IN ACCORDANCE WITH SPECIFICATIONS.

PLAN LINE 1

PROFILE LINE 1

MH 1-1 Sta. 0+00 Line 1 Const. Std. Type "D" Precast Spacer Type "P" Manhole M.H. Top = ~~1348.66~~ 1346.02 A.B.

MH 1-2 Sta. ~~6+29.15~~ 6+61.02 Line 1 Const. Std. Type "D" Or "P" Manhole M.H. Top = ~~1348.66~~ 1347.22 A.B.

MH 1-3 Sta. 6+14.2 AB Line 1 Const. Std. Type "D" Or "P" Manhole With Rubber Gasket Self Sealing Lid M.H. Top = ~~1348.66~~ 1345.83 A.B.

MH 1-4 Sta. 6+61.8 AB Line 1 Const. Std. Type "D" Or "P" Manhole With Rubber Gasket Self Sealing Lid M.H. Top = ~~1348.66~~ 1345.86 A.B.

MH 1-5 Sta. 9+50.3 AB Line 1 Const. Std. Type "D" Or "P" Manhole M.H. Top = ~~1348.66~~ 1346.84 A.B.

Existing Ground

Exist. 12" Water Line

Exist. G" Gas Line

Exist Gas Line

Existing CATV

Exist. 16" Water Top Elev. = 1325.5

100 Year Flood = 1346.0

Creek Crossing: Concrete Encasement With Cut Off Wall See Detail.

7+20

8+10

294.3 AB ~~294.8~~ L.F. - 18" PVC @ 0.15%

319.9 AB ~~324.8~~ L.F. - 18" PVC @ 0.15%

47.6 AB ~~48.4~~ L.F. - 18" PVC @ 0.15%

288.5 AB ~~288.2~~ L.F. - 18" PVC @ 0.15%

ELEVATIONS IN FEET (USGS DATUM)

1350 1345 1340 1335 1330 1325

℄ Sta. 0+00 E = ~~1327.52~~ (E.W.) A.B. E = ~~1327.64~~ (E.W.) A.B. E In = 1329.00 (N.) A.B.

℄ Sta. 3+04.38 E Out = ~~1329.42~~ 1329.42 A.B. E In = ~~1329.42~~ 1329.42 A.B.

℄ Sta. 6+14.2 E Out = 1329.93 A.B. E In = 1329.98 A.B.

℄ Sta. 6+24.08 E Out = 1330.01 A.B. E In = 1330.06 A.B.

℄ Sta. 9+50.3 E Out = 1330.54 A.B. E In = 1330.54 A.B.

Match Line 1330.6

1329.19 1329.34 1329.64 1329.79 1330.08 1330.23 1330.38 1330.53

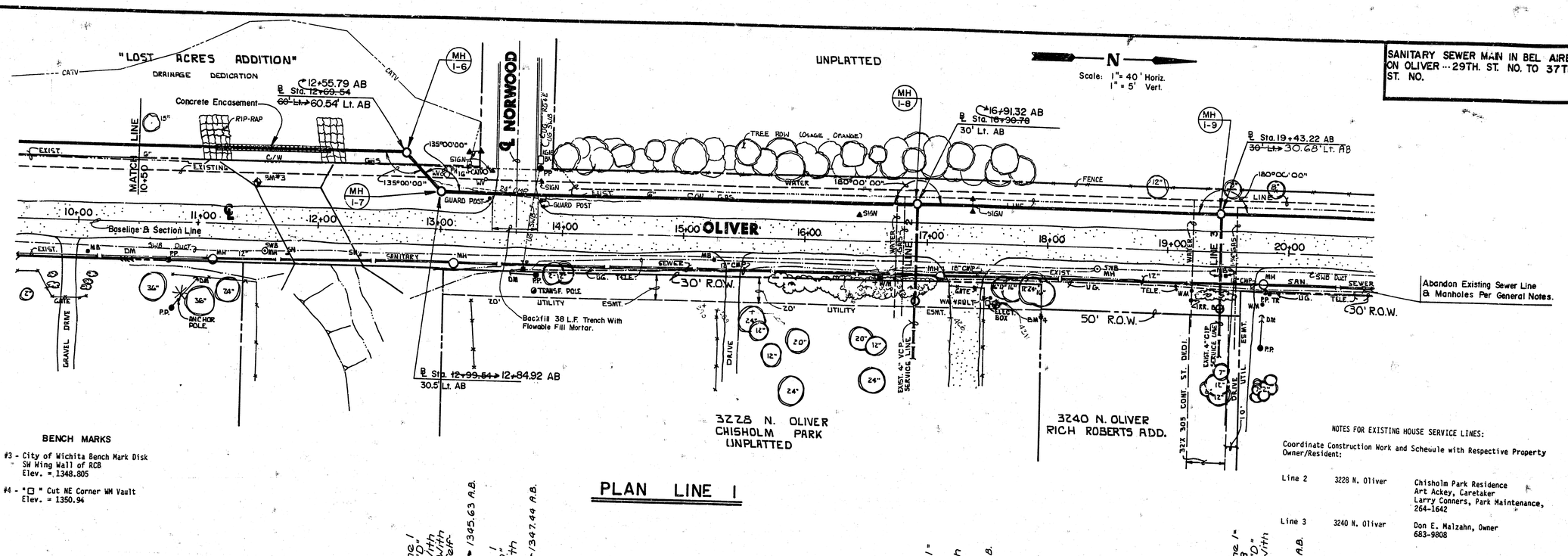
0 1 2 3 4 5 6 7 8 9 10 +50

29

M.K.E.C.

MKEC Proj. No. 90-55-193-8

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER -- 29TH. ST. NO. TO 37TH. ST. NO.



BENCH MARKS

B.M. #3 - City of Wichita Bench Mark Disk
SW Wing Wall of RCB
Elev. = 1348.805

B.M. #4 - "□" Cut NE Corner WM Vault
Elev. = 1350.94

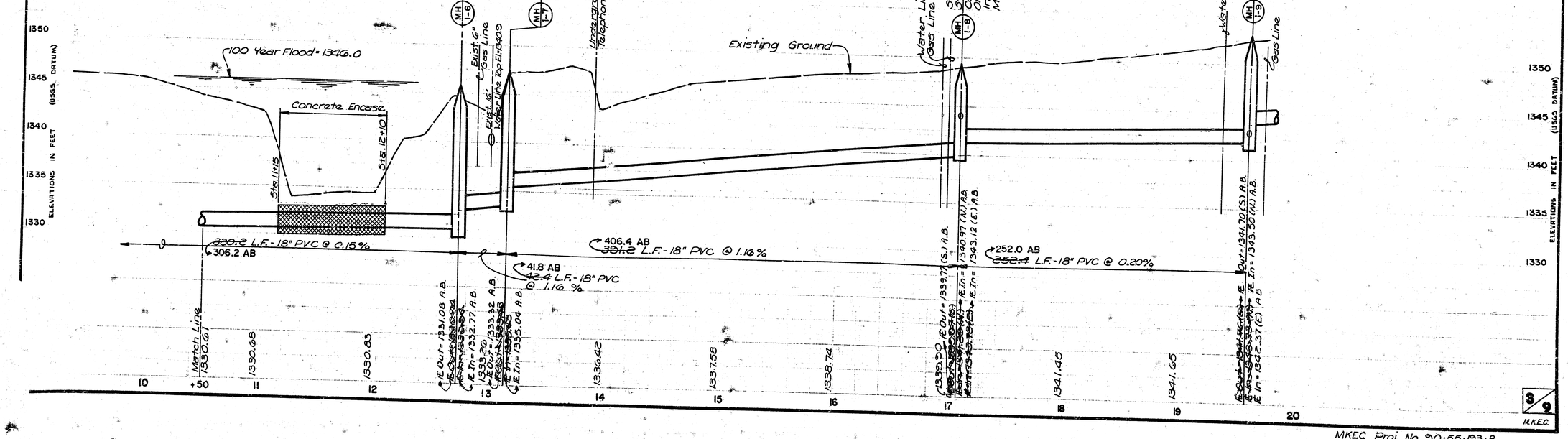
NOTES FOR EXISTING HOUSE SERVICE LINES:

Coordinate Construction Work and Scheuule with Respective Property Owner/Resident:

Line 2	3228 N. Oliver	Chisholm Park Residence Art Ackey, Caretaker Larry Conners, Park Maintenance, 264-1642
Line 3	3240 N. Olivar	Don E. Malzahn, Owner 683-9808

PLAN LINE 1

PROFILE LINE 1



MKEC Proj. No. 90-55-193-8

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER-- 29TH. ST. NO. TO 37TH. ST. NO.

REVISED JAN. 4, 1991

N

Scale: 1"= 40' Horiz.
1"= 5' Vert.

NOTE:
Southwestern Bell Will Relocate Terminal Pedestal At Sta. 24+68. Contact Ken Tillotson, 268-2222 At Least 10 Working Days In Advance.
KG&E May Need To Tie Off And Secure Power Poles During Construction. Contact Larry Deel, 261-6453 At Least 5 Working Days In Advance.

℄ Sta. 19+43.22 AB
~~30' Lt.~~ → 30.68' Lt. AB

℄ Sta. 22+09.33 AB
~~30' Lt.~~ → 31.14' Lt. AB
(See General Note 28)

Backfill 112 L.F. Trench With Flowable Fill Mortar For Pavement Removed During Construction, Replace With 6" Temporary A.C. Pavement (4" Bit. Base) Per City Of Wichita Standard Specification.

℄ Sta. 26+60.40
S.W. Cor. N.W. 1/4, Sec. 36, T.26 S., R.1E.

K-96 RIGHT-OF-WAY

Abandon Existing Sewer Line & Manhole Per General Notes

TREE ROW

FENCE

EXISTING

50' R.O.W.

30' R.O.W.

Sweet Gum (See Notes 1&4)

SPEED SIGN

OLIVER

Baseline & Section Line

LINE 3

LINE 2

TELCO DUCT

SANITARY SEWER

EVERGREEN TREE (TYP.)

See Notes 3 & 4

3316 N. OLIVER
UNPLATTED
See Note 2

3332 N. OLIVER
UNPLATTED

℄ Sta. 22+41.66 AB
~~45~~ → 39.22' Rt. AB

℄ Sta. 26+64.24
~~45.00~~ → 41.3' Rt. AB

℄ Sta. 27+89.34
77.79' Rt.

MATCH LINE 29+50

NOTE:
Pin Oaks Shall Be Protected From Damage.

Verify For The Engineer R. Of Existing 18" PVC Before Excavating Between Manholes 9 & 10.

Connect 4" C.I.P. To 18" PVC. In Accordance With Specification And With Wichita City Code.

MH 1-9 · MH 1-10 · MH 1-11 · MH 1-12 · MH 1-13

NOTES FOR EXISTING HOUSE SERVICE LINES:

Coordinate Construction Work and Schedule with Respective Property Owner/Resident:

4" Pipe	3316 N. Oliver	Donald E. Jackson, Owner 683-4380
4" Pipe	3332 N. Oliver	Wayne A. Sundling, Owner 684-7759

BENCH MARK

B.M. #5 - City of Wichita Bench Mark Disk 28' S & 31' E 1/4 Corner Thimble
Elev. = 1360.26

NOTES:

1. EXISTING SWEET GUM TREE NEAR STA. 24+40 SHALL BE TRANSPLANTED TO THE BACKYARD OF HOUSE AT 3316 N. OLIVER AND AS LOCATED BY PROPERTY OWNER. AFTER SEWER CONSTRUCTION IS COMPLETE, PLANT ONE NEW 7-8 FT. SWEET GUM TREE NEAR STA 24+40. GUARANTY OF NEW TREE BY CONTRACTOR SHALL BE UNTIL 10-1-91 AND LIMITED TO ONE REPLACEMENT.
2. 3316 N. OLIVER: ALL TREES IN RIGHT-OF-WAY ADJOINING THIS PROPERTY WHICH REMAIN IN PLACE SHALL BE PROTECTED FROM DAMAGE. REMOVE AND REPLACE FENCE IN LIKE KIND; COST SUBSIDIARY TO SITE CLEARING AND RESTORATION. CONNECT 4" C.I.P. SERVICE LINE TO MANHOLE 1-11.
3. EVERGREEN SHRUBS (SPREADERS) AND EVERGREEN TREES LOCATED IN STREET RIGHT-OF-WAY AT 3332 N. OLIVER SHALL BE TRANSPLANTED TO AN AREA GENERALLY 10-15 FEET EAST OF RIGHT-OF-WAY LINE AND AS LOCATED BY THE PROPERTY OWNER.
4. CONTRACTOR SHALL USE A MEANS AND METHOD FOR RELOCATION OF PLANTS THAT WILL ENSURE MINIMAL DAMAGE AND OPTIMAL GROWING CONDITIONS.

PLAN LINE 1

PROFILE LINE 1

ELEVATIONS IN FEET (1965 DATUM)

Existing Ground · Water · Gas · Water Line · Telco Duct · Telco Cable · 21"CP San. Sewer IE=1344.51 · Prop. K-96 Improvements · KG&E Cable · 4" C.I.P. Service Line IE=1351.30 · Proposed K-96 Improvements

19+56.7 AB — Sta. 19+56.7 Line 1 — Const. Std. Type "D" Or "D" Manhole With Inside Drop — M.H. Top = ~~1356.0~~ → 1352.85 A.B. — IE Out = 1341.70 (S.) A.B. — IE In = 1343.73 (W.) — IE In = 1340.51 (E.) — (1342.37 (E.) A.B.) — 1344.02

266.0 AB — ~~266.1~~ L.F. - 18" PVC @ 0.70%

22+22.7 AB — Sta. 22+22.7 Line 1 — Const. Std. Type "D" Or "D" Manhole With Concentric Cone Section — M.H. Top = ~~1355.0~~ → 1355.22 A.B. — IE Out = 1345.37 A.B. — IE In = 1345.47 A.B. — 1345.42 — 1344.72 — 1345.85

77.4 AB — ~~143.6~~ L.F. - 18" PVC @ 0.40%

23+00.1 AB — Sta. 23+00.1 Line 1 — Const. Std. Type "D" Or "D" Manhole — M.H. Top = ~~1357.00~~ → 1356.27 A.B. — IE Out = 1345.87 (S.W.) — IE In = 1345.92 (N.) — IE In = 1347.39 (E.) — 1346.25 — 1346.50 — 1346.75

422.4 AB — ~~332.4~~ L.F. - 18" PVC @ 0.25%

27+22.5 AB — Sta. 27+22.5 Line 1 — Const. Std. Type "D" Or "D" Manhole — M.H. Top = ~~1360.00~~ → 1361.31 A.B. — IE Out = 1346.88 A.B. — IE In = 1346.91 A.B. — 1347.30

Existing 130.3 L.F. - 18" PVC @ 0.41%

Existing 220.4 L.F. - 18" PVC @ 0.28%

29+52.8 Line 1 — Existing Manhole — M.H. Top = 1363.58 — IE Out = 1347.53 — IE In = 1347.53 — 1347.70 — Match Line

19 · 20 · 21 · 22 · 23 · 24 · 25 · 26 · 27 · 28 · 29 · +50

4/9

MKEC

MKEC Proj. No. 90-55-133-8

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER -- 29TH. ST. NO. TO 37TH. ST. NO.

N

Scale: 1"= 40' Horiz.
1"= 5' Vert.

NOTE:
KG&E May Need To Tie Off And Secure Power Poles During Construction. Contact Larry Deel, 261-6453 At Least 5 Working Days In Advance.

Backfill 40L.F. Trench With Flowable Fill Mortar

Wichita Water Department Will Remove & Reset Fire Hydrant During Construction. Contact Bruce Cluck, 268-4908 At Least 48 Hours In Advance.

Abandon Existing Sewer Line & Manholes Per General Notes.

Remove Or Abandon 39± L.F. 18"PVC

Remove Or Abandon Approx. 12 L.F. Of 8"Pipe

MATCH LINE 29+50

℄ Sta. 30+10.40 76' Rt.

℄ Sta. 31+~~22.90~~ 23.5 AB ~~55'~~ Rt. 55.2' AB

℄ Sta. 35+~~61.61~~ 62.5 AB ~~55'~~ Rt. 55.2' AB

℄ Sta. 39+~~61.61~~ 62.1 AB 55' Rt. AB

K-96 RIGHT-OF-WAY

LOT 2 BLOCK 2

LOT 3, BLOCK 2

LOT 1, BLOCK 1

GREAT PLAINS BUSINESS PARK ADDITION

℄ 35TH. ST. NO.

EXIST. 8" SAN. SEWER

10' TEMPORARY CONSTRUCTION ESMT.

60' R/W

TOP OF BERM

EDGE OF FIELD

CROP LINE

TELEPHONE CABLE

TELCO. DUCT

SANITARY SEWER LINE

WATER MAIN

MH 1-14 · MH 1-15 · MH 1-16 · MH 1-17

PLAN LINE 1

PROFILE LINE 1

Proposed K-96 Improvements

Existing Ground

100 Year Flood = 1363.0

Telephone Cable

℄ 35th St. No.

Water ℄

Match Line

ELEVATIONS IN FEET (USGS DATUM)

1365 · 1360 · 1355 · 1350 · 1345 · 1340

MH 1-14 Sta. 30+30.3, Line 1 Existing Manhole M.H. Top = 1365.4

MH 1-15 Sta. 31+66.1 AB Sta. 31+66.3, Line 1 Const. Std. Type "D" Or "P" Manhole M.H. Top = 1365.55 ℄ 1365.59 AB

MH 1-16 Sta. 36+05.1 AB Sta. 36+04.6, Line 1 Const. Std. Type "D" Or "P" Manhole with Inside Drop M.H. Top = 1363.52 ℄ 1363.9 AB

MH 1-17 Sta. 40+04.7 AB Sta. 39+44.5, Line 1, Const. Std. Type "D" Or "P" Manhole M.H. Top = 1362.6 AB

* At Manhole Provide Rubber Gasket Self-Sealing Lid

220.4 AB

Existing ~~114.4~~ 115.2 AB L.F.-18" PVC @ 0.37%

~~438.7~~ 439.0 AB L.F.-18" PVC @ 0.225%

400 399.6 AB L.F.-18" PVC @ 0.225%

℄ Out = 1348.15 AB
℄ In = 1348.15

℄ Out = ~~1348.57~~ 1343.51 AB
℄ In = 1348.57 AB

1348.62 · 1348.85 · 1349.07 · 1349.30

℄ Out = 1349.52 AB
℄ In = 1349.56 (S) AB
1349.56 (N) AB
1352.39 (E) AB
℄ 1352.67 AB

1349.52 · 1349.75 · 1349.97 · 1350.20

℄ Out = 1350.42 AB
℄ In = 1350.46 AB

29 · +50 · 30 · 31 · 32 · 33 · 34 · 35 · 36 · 37 · 38 · 39 · 40

5/9

M.K.E.C.

MKEC Proj. No. 20-55-193-8

BENCH MARKS

B.M. #6 - "□" Cut CL W Headwall RCB
Elev. = 1365.00

B.M. #7 - "□" Cut NE Corner E Headwall RCB
Near 300' S 37th/Oliver
Elev. = 1370.09

NOTE:
At Railroad Crossing, Notify Union Pacific, Mary Stockdale, 268-9457 At Least 48 Hours In Advance Before Starting Excavation. Also, Call Union Pacific Communications 1-800-336-9193 To See If Fiber Optic Cable Installed Prior To Construction, Refer To Ticket 424333.

NOTE:
Contractor Shall Verify Size Of Existing Service Line At 3636 N. Oliver Before Connection. Notify Engineer if Different Than 6".

NOTE:
KG&E May Need To Tie Off And Secure Power Poles During Construction. Contact Larry Deel, 261-6453 At Least 5 Working Days In Advance.

CAUTION:
Southwestern Bell Fiber Optic Cable Located In Line 1 Construction Area From Sta. 42+40 To Sta. 58+90. Give 48 Hour Minimum Advance Notice To Ken Tillotson, 268-2222, Before Starting Excavation.

N

Scale: 1"= 40' Horiz.
1"= 5' Vert.

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER-- 29TH. ST. NO. TO 37TH. ST. NO.

REVISED: JAN. 4, 1991
REVISED: FEB. 26, 1991
REVISED: MARCH 4, 1991

Bore & Jack 30"d x 1/2"W Steel Casing For 18" PVC

MH I-20

℄ Sta. 44+04.45 → 07.2 AB
30' Rt. 29.5' AB

Remove Or Abandon Approximately 40 L.F. Of 6" Pipe.

EXISTING

16"

WATER LINE

Baseline & Section Line.

OLIVER

Baseline & Section Line

TELCO DUCT

101'-8" C/W STEEL CASING

END OF TELCO DUCT

SIGNAL LIGHTS

EXIST. 12" SAN. SEW.

LING. FIBER

SANITARY SEWER

50' R/W

60' R/W

10' TEMPORARY CONSTRUCTION ESMT.

10" SANITARY SEWER

Abandon Existing Sewer Line & Manhole Per General Notes.

℄ Sta. 39+61.61 → 62.1 AB
55' Rt. AB

MH I-17

MH I-18

MH I-19

MH I-21

MH I-22

CROP LINE

UTIL. ESMT.

PVT

17.1 AB
℄ Sta. 42+18.32 → 57.1 AB
57' Rt.

LOT 1
NORTH OLIVER INDUSTRIAL PARK

UNDERGROUND TELEPHONE CABLE

UNION PACIFIC

100'

75.6 AB
℄ Sta. 43+74.45 → 58.4' AB
57' Rt.

Reconnect Building Service Line With 6" Sch. 40 PVC Pipe With Solvent Weld Joints. Per Specifications And Wichita City Code. Provide 2' Minimum Clearance Below Water Line Crossing.

20' Sewer Esmt.

10' Temporary Construction Esmt.

3636 N. OLIVER

LOT 1
RICHLAND HEIGHTS ADDITION

℄ Sta. 49+34.72 AB
36' Rt. 29.4' AB

32.9 AB
℄ Sta. 50+35.98 → 55.75' AB
55.98' Rt.

LOT 1
EXPRESSWAY CENTER ADDITION

FLOODWAY

MATCH LINE 51+50

Concrete Encasement

2-UNKNOWN BOXES

GROUND LIGHTS

DRAINAGE ESMT.

TREES

PROFILE LINE 1

ELEVATIONS IN FEET (USGS DATUM)

1370
1365
1360
1355
1350
1345

40+04.7 AB
Sta. 40+04.7, Line 1
Const. Std. Type "D" Or "P" Manhole * M.H. Top = 1362.6 AB
MH I-17

Existing Cable located Above Pipe

Telco Cable

100 Year = 1363.0

42+59.6 AB
Sta. 42+55.7, Line 1
Const. Std. Type "D" Or "P" Manhole M.H. Top = 1364.4
℄ 1364.05 AB
MH I-18

Telco Cable

Telco Fiber Optic

44+18.1 AB
Sta. 44+14.2, Line 1
Const. Std. Type "D" Or "P" Manhole Inside Drop * M.H. Top = 1364.2
℄ 1364.13 AB
MH I-19

44+60.9 AB
Sta. 44+57.0, Line 1
Const. Std. Type "D" Or "P" Manhole Inside Drop * M.H. Top = 1366.4
℄ 1366.0 AB
MH I-20

Water Line

Water Line & Telco Cable

Gas Line

100 Year Flood = 1368.0

Existing Ground

12" VCP, ℄ = 54.27

Bore & Jack 30"d x 1/2" w Steel Casing For 18" PVC

42+61.3

44+01.85

254.9 AB
254.7 L.F. - 18" PVC @ 0.20%

158.5 AB
158.1 L.F. - 18" PVC @ 0.25%

42.8 AB
40.4 L.F. - 18" PVC @ 0.25%

527.9 AB
533.3 L.F. - 18" PVC @ 0.30%

101.7 AB
104.5 L.F. 18" PVC @ 0.24%

℄ Out = 1350.46
℄ In = 1350.46 AB

1350.71

1350.57

℄ Out = 1351.00 AB
℄ In = 1351.11
℄ 1351.00 AB

1351.22

℄ Out = 1351.23 AB
℄ In = 1351.33 (S)
1351.46 (N)
1351.62 (N.E.)
(@ Pipe Service Line)

1351.47

℄ Out = 1351.73 AB
℄ In = 1351.72
1353.72

1352.22
1353.57 AB

1353.85

1354.15

1354.45

1354.75

1355.05

℄ Out = 1355.31 AB
℄ In = 1355.31 AB
1355.33

1355.70 AB
℄ Out = 1355.52 AB
℄ In = 1355.75
1355.93

Water Line 1357.03

49+88.3 AB
Sta. 49+83.3, Line 1
Const. Std. Type "D" Or "P" Manhole * M.H. Top = 1367.5
℄ 1369.65 A.B.
MH I-21

Gas

Telco Fiber Optic

Exist. 10" VCP
℄ = 1357.78
Telco Cable

100 Year Flood = 1369.0

50+90.0 AB
Sta. 50+83.3, Line 1
Const. Std. Type "D" Or "P" Manhole With Inside Drop * M.H. Top = 1367.41 A.B.
MH I-22

Future Channel (By Others)

Concrete Encasement

40 41 42 43 44 45 46 47 48 49 50 51 +50

* At Manholes: Provide Rubber Gasket Self-Sealing Lid.

6 9

MKEC

MKEC Proj. No. 90-55-193-B

NOTE:
KG&E May Need To Tie Off And Secure Power Poles During Construction. Contact Larry Deel, 261-6453 At Least 5 Working Days In Advance.

CAUTION:
Southwestern Bell Fiber Optic Cable Located In Line 1 Construction Area From Sta. 42+40 To Sta. 58+90. Give 48 Hour Minimum Advance Notice To Ken Tillotson, 268-2222, Before Starting Excavation.

Southwestern Bell Guy Anchor: Replacement By Southwestern Bell Contact Ken Tillotson, 268-2222 Provide 2 Weeks Minimum Advanced Notice.

Abandon Existing Sewer Line & Manhole Per General Notes

BENCH MARKS

B.M. #8 - City of Wichita Bench Mark Disk
E End S Headwall RCB
W 37th/Oliver
Elev. = 1372.08

B.M. #9 - "□" Cut NW Corner S Headwall RCB
Near 160' E 37th/Oliver
Elev. = 1372.235

B.M. #10 - "□" Cut SE Corner Drive at 3815 N. Harding
Elev. = 1373.00

CHAN'S ACRES

Install 18± L.F. 10" PVC At 0.41% Slope. Remove Manhole & Connect New To Existing Pipe.

AURORA PARK ADD.

SANITARY SEWER MAIN IN BEL AIRE ON OLIVER--29TH. ST. NO. TO 37TH. ST. NO.

Scale: 1"=40' Horiz.
1"=5' Vert.

CAUTION:
CABLE TV LINE LOCATED AT STA. 59+51. GIVE 48 HOUR MINIMUM NOTICE TO DON SHUE, 262-4270 BEFORE STARTING EXCAVATION.

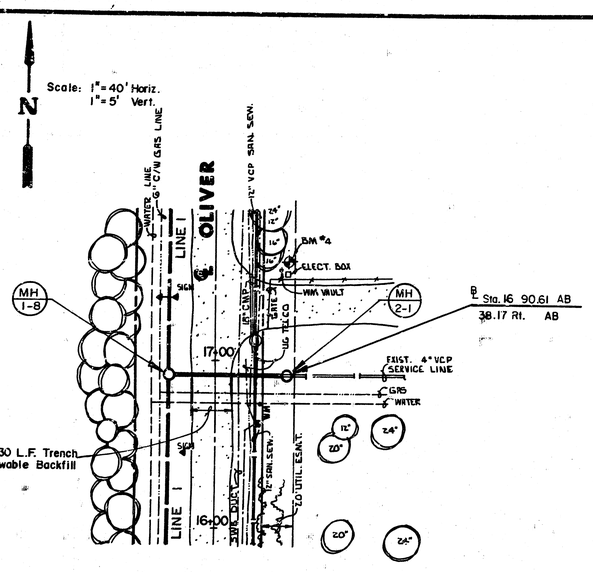
PLAN LINE 1

PROFILE LINE 1

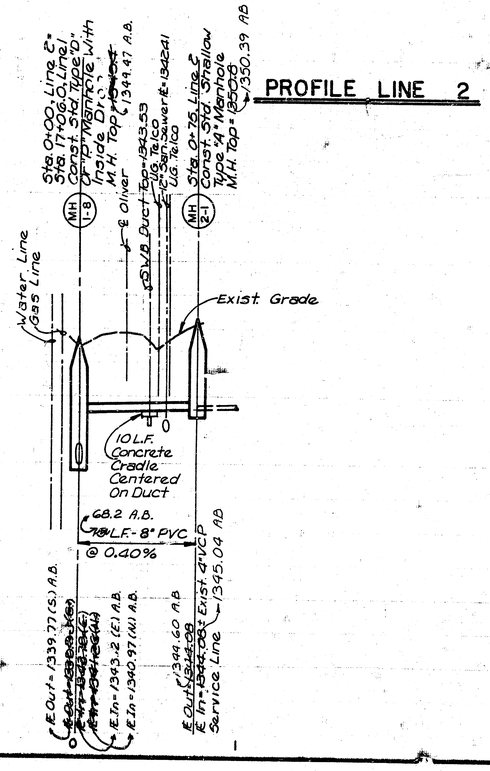
* At Manhole: Provide Rubber Gasket Self-Sealing Lid.

MKEC Proj. No. 90-55-193-B

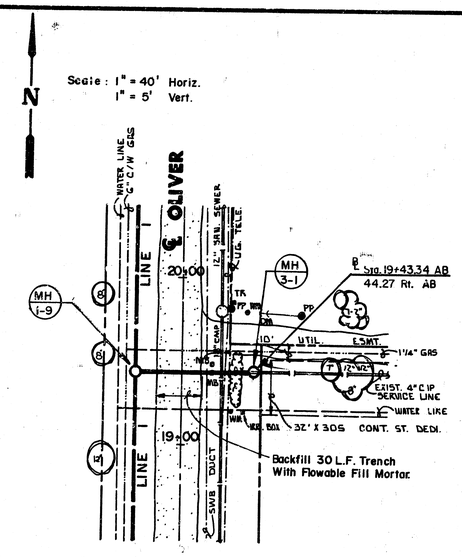
SANITARY SEWER MAIN IN BEL AIRE ON OLIVER-- 29TH. ST. NO. TO 37TH. ST. NO.



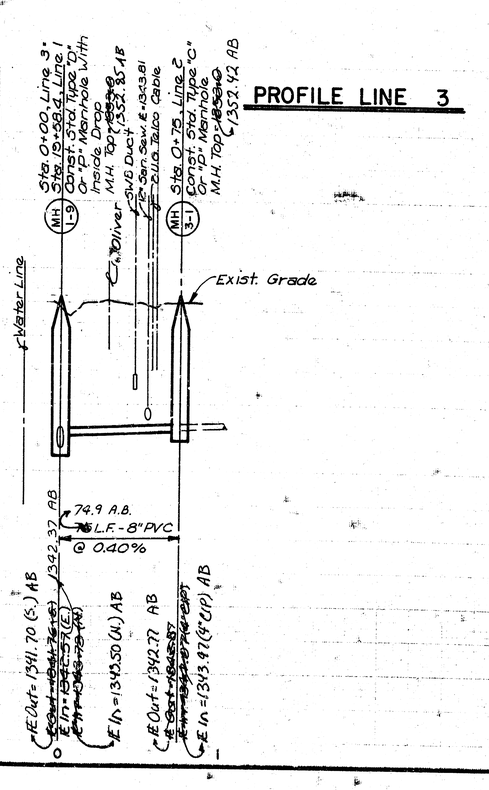
PLAN LINE 2



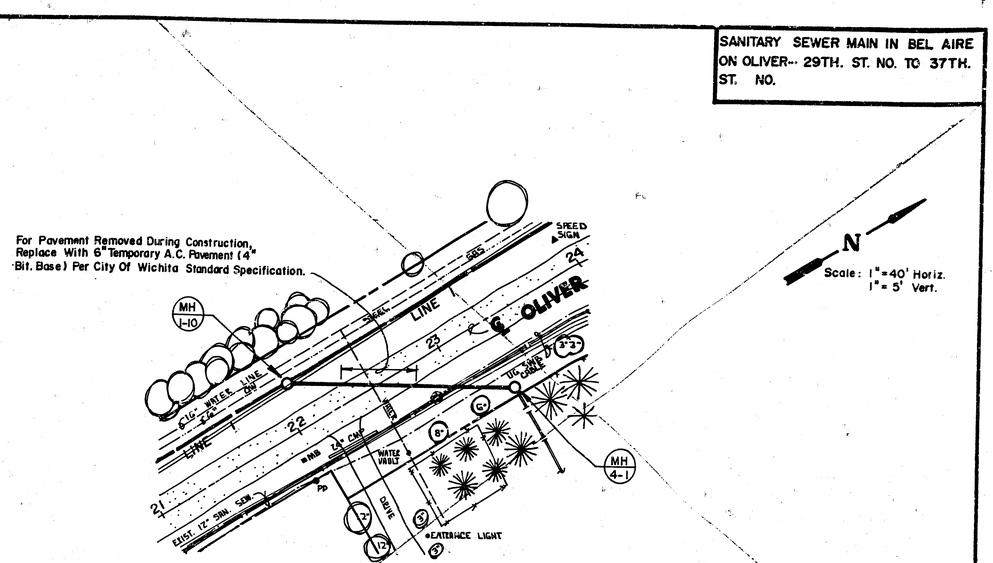
PROFILE LINE 2



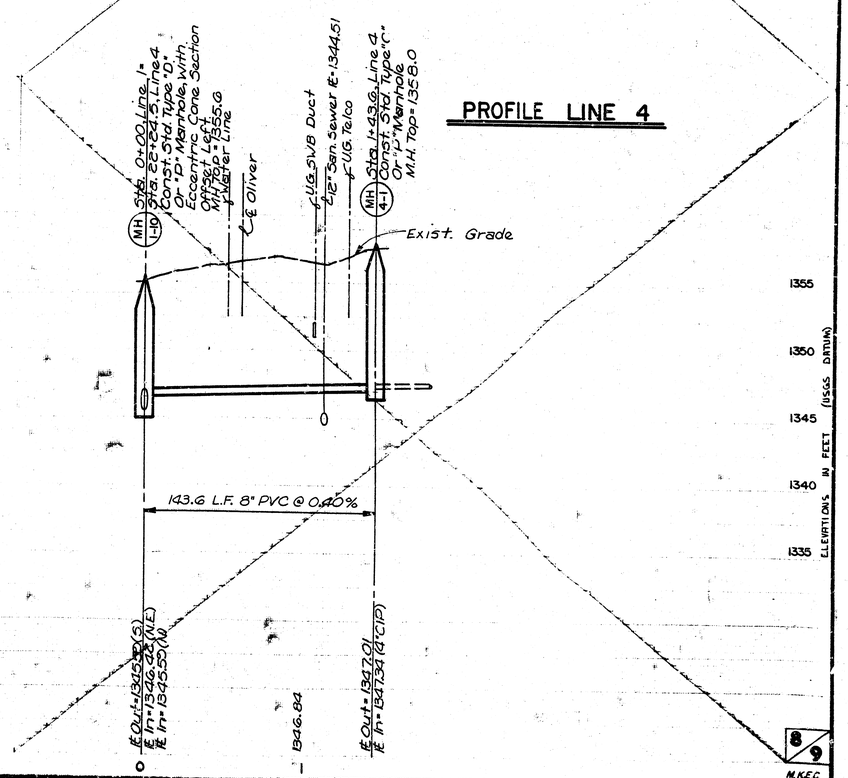
PLAN LINE 3



PROFILE LINE 3



PLAN LINE 4

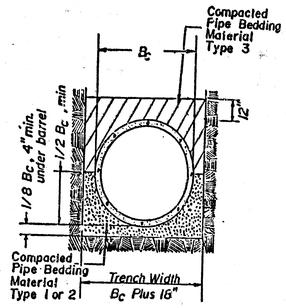


PROFILE LINE 4

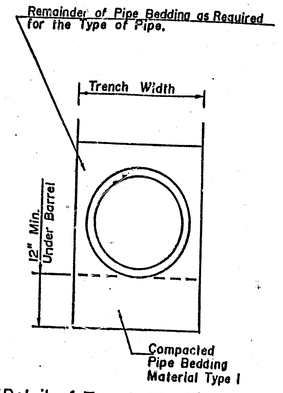
8/9

M.K.E.C.

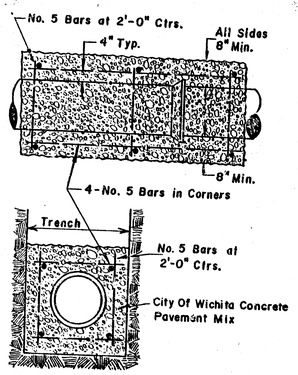
MKEC Proj. No. 20-55-133-B



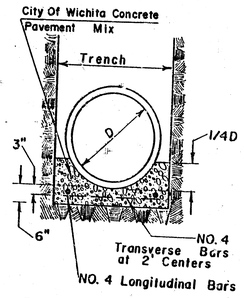
Detail Of Improved Bedding For P.V.C. Or P.V.C. Composite Pipe.



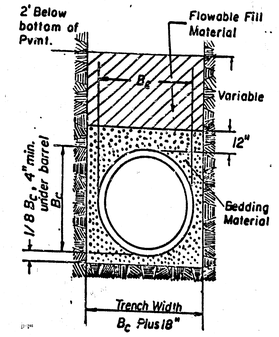
Detail of Trench Stabilization, Required When Trench is Wet or Unstable or When Dewatering is Required.



Detail Of Reinforced Concrete Encasement



Detail Of Reinforced Concrete Cradle



Detail Of Flowable Fill For Sanitary Sewer Pipe & Water Line.

SUPPLEMENTAL SPECIFICATIONS
FLOWABLE FILL

1. DESCRIPTION

This work shall consist of placing a flowable mortar fill material in sewer, water and utility trenches under the pavement or at other locations as shown on the plans or as specified. The work shall be done in accordance with this specification.

2. MATERIALS

All materials shall meet requirements for the respective items in the Standard Specifications with the following exceptions.

A. Cement shall be Type I.

B. Fly Ash shall meet requirements of ASTM C 618, Class C, and shall come from a source approved by the engineer.

C. Fine Aggregate for flowable mortar shall be natural sand consisting of mineral aggregate particles. The gradation of this material shall be as follows:

Sieve Size	% Passing
3/8	100
200	0 - 30

It is intended that the sand be a firm sand that will stay in suspension in the mortar to the utmost required for proper flow. Commonly, mortar or plastic sand units will for this purpose. The sand intended for use shall be submitted to the contract laboratory before the work begins. If the engineer reserves the right to [illegible] specified proportions. The contractor will not be responsible [illegible] requires testing. The engineer will provide inspection [illegible] as deems appropriate, normally source approval followed by visual inspection.

D. Mix Design. The mix design for flowable mortar is as follows:

Quantity of Dry Materials per Cubic Yard

Cement	100 pounds
Fly Ash	300 pounds
Fine Aggregate	2600 pounds

These quantities of dry materials, with approximately 30 gallons of water will yield approximately 1 cubic yard of flowable mortar of the proper consistency.

E. Fluidity of the flowable mortar shall be measured by the Corps of Engineers flow cone method according to their specification CRD-C611-80. Prior to filling the flow cone with flowable mix, the mixture shall be passed through a 4 5 inch screen. Time of efflux shall be approximately 12 seconds. These measurements shall be made by the engineer, at least once every 4 working hours.

3. PROPORTIONING AND MIXING EQUIPMENT

Sufficient mixing capacity or mixers shall be provided to permit the intended pour to be placed without interruption.

4. PLACEMENT OF MORTAR

Flowable mortar shall be placed one foot beyond either side of the pavement by any reasonable means into the area to be filled. The fill shall be brought up uniformly to an elevation 12" above the top of the pipe or 2' below the bottom of proposed pavement whichever is higher. Placement of mortar shall then cease and the fill protected from traffic for a period of 72 hours.

5. LIMITATION OF OPERATIONS

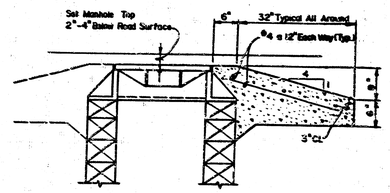
A. Mortar shall not be placed on frozen ground.

B. Mortar batching, mixing, and placing may be started, if weather conditions are favorable, when the temperature is at least 36 degrees F and rising. At time of placement, mortar must have a temperature of at least 40 degrees F. Mixing and placing shall stop when the temperature is 36 degrees F or less and falling.

C. Each filling stage shall be as continuous an operation as is practicable.

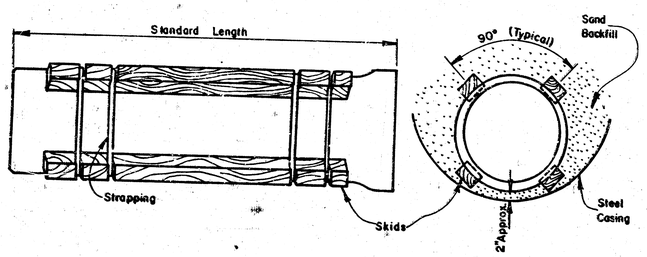
6. MEASUREMENT AND PAYMENT

All materials, labor, equipment, tools and incidentals shall be used for at the unit price bid per linear foot of trench filled, regardless of trench depth and/or pipe size, unless indicated otherwise by plans or contract.

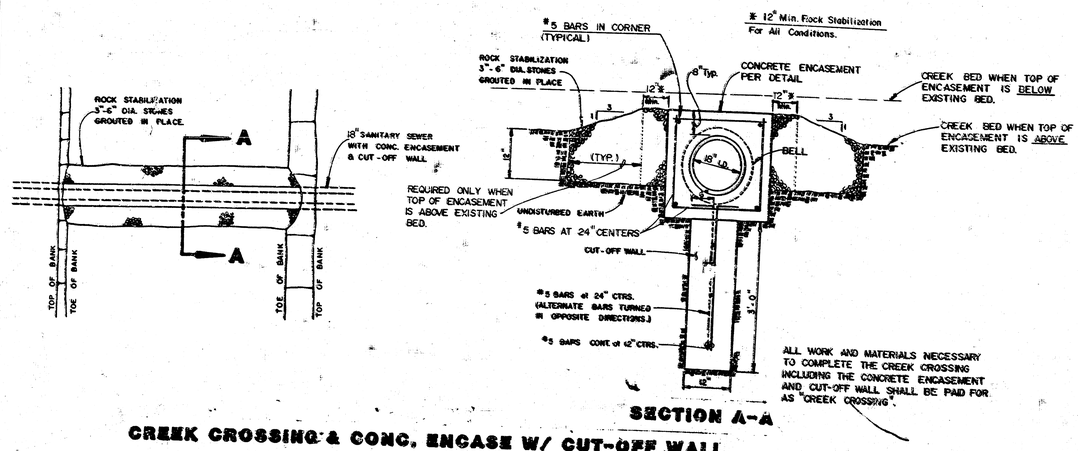


CONCRETE COLLAR FOR MANHOLE COVER
(When Located in Graveled Surfacing)

MANHOLE 1-27 SPECIAL DETAIL



STEEL ENCASEMENT DETAIL



SECTION A-A

CREEK CROSSING & CONC. ENCASE W/ CUT-OFF WALL

DETAILS

Design
Drawn by
Checked by
Date
Job no.

MID-KANSAS ENGINEERING CONSULTANTS PA
3500 NORTH ROCK ROAD
BUILDING #800
WICHITA, KANSAS 67226
636-5666

Sheet 9 of 9