LEE'S SUMMIT
MISSOURI

CITY OF LEE'S SUMMIT, MISSOURI
220 S.E. GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
(816) 969-1800

PUBLIC WORKS ENGINEERING DIVISION

Bid No. 36-322-1-C City of Lee's Summit, Missouri
Douglas Street / Lee's Summit Road Improvements, Colbern Road to Gregory Boulevard, STP-3301 (455),

ADDENDUM NO. 1

BID OPENING DATE AND TIME REMAIN THE SAME
Thursday, MAY 28, 2015 AT 2:00 P.M.

The original Request for Bid for ***Bid No. 36-322-1C City of Lee's Summit, Missouri Douglas Street / Lee's Summit Road Improvements, Colbern Road to Gregory Boulevard, STP-3301 (455),*** remains in effect except as revised by the following changes, which shall take precedence over anything to the contrary in the specifications.

The Bid Documents and Drawings for the above referenced project dated May 1, 2015 are hereby amended as follows. All other conditions remain unchanged.

Project Drawings and Details: ADD Water Main Relocation Plans

Add plans entitled "Water Main Relocation, Lee's Summit Road from KCMO City Limits to Gregory Blvd., Section 18 and 19, Township 48N, Range 31W, Kansas City, Jackson County, Missouri." Plans consist of 12 sheets prepared for the Kansas City Water Services Department (KCWS). Plans are for relocating water mains owned and operated by KCWS.

Add plans entitled "Douglas St. & Lee's Summit Road from Colbern Road to KCMO City Limits, Water Main Relocation, Lee's Summit, Jackson County, Missouri, Project No. 363161-C." Plans consist of 17 sheets prepared for the City of Lee's Summit.

Enclosures
2 Water Main Relocation Plan Sets:

1) Water Main Relocation, Lee's Summit Road from KCMO City Limits to Gregory Blvd., Section 18 and 19, Township 48N, Range 31W, Kansas City, Jackson County, Missouri (12 sheets)

2) Douglas St. & Lee's Summit Road from Colbern Road to KCMO City Limits, Water Main Relocation, Lee's Summit, Jackson County, Missouri, Project No. 363161-C (17 sheets)

ACKNOWLEDGEMENT

Each bidder shall acknowledge receipt of this Addendum No. 1 of Bid No. *36-322-1C City of Lee's Summit, Missouri Douglas Street / Lee's Summit Road Improvements, Colbern Road to Gregory Boulevard, STP-3301 (455),* by his/her signature affixed hereto, and shall attach this Addendum to the original bid submitted. Failure to sign and submit this addendum may render your bid Non-Responsive.

CERTIFICATION BY BIDDER:

SIGNATURE _____

TITLE _____

COMPANY _____

DATE _____

WATER MAIN RELOCATION
LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO GREGORY BLVD.

SECTION 18 AND 19 , TOWNSHIP 48N, RANGE 31W
KANSAS CITY, JACKSON COUNTY, MISSOURI

WATER SERVICES DEPARTMENT
ENGINEERING DIVISION

WATER MAIN SYMBOLS

	NEW	EXISTING
WATER MAINS		
ENCASEMENT PIPE		
FIRE HYDRANT ASSEMBLY		
BACKING BLOCK		
STRADDLE BLOCK		
VALVES		
FLUSHING ASSEMBLY		
TAPPING SLEEVE		
TAPPING SLEEVE AND VALVE		
AIR RELEASE VALVE		
REDUCER		
TEE		
PLUG		
SERVICE LINES:		
CONNECTION	W/S	W/S
CURB STOP		
METER	M	M
EASEMENTS		
RIGHT OF WAY		
LOT LINES	PL	

OTHER UTILITIES

(UNDERGROUND UNLESS INDICATED OTHERWISE)

	NEW	EXISTING
CABLE TV	TV	CATV
OVERHEAD ELECTRIC	OE	OE
NATURAL GAS	NG	NG
MANHOLE		
SANITARY SEWER	SAN	SAN
STORM SEWER	ST	ST
TELEPHONE	T	T
POWER POLE		PP
LIGHT POLE		LP

LOCATION MAP
NO SCALE

UTILTY CONTACTS

CABLE TV	TIME WARNER CABLE CONTACT ROY BELLIS TELEPHONE: (913) 643-1914	COMMUNICATION	LIGHTCORE – CENTUARYLINK CONTACT BRAIN CORNISH TELEPHONE (913) 345-7524
MISSOURI GAS ENERGY	MISSOURI GAS ENERGY CONTACT CHRIS COLLINS TELEPHONE: (816) 472-3413	COMMUNICATION	UNITE PRIVATE NETWORKS CONTACT JIM SKAGGS TELEPHONE: (816)-365-1465
POWER	KANSAS CITY POWER AND LIGHT CONTACT MARCUS ROBINSON TELEPHONE: (816) 245-3777	STORM SEWER	CITY OF KANSAS CITY, MISSOURI WATER SERVICES DEPARTMENT CONTACT HEATHER MASSEY TELEPHONE (816) 513-0460
TELEPHONE	AT&T COMMUNICATION CONTACT JOE BULLIMORE TELEPHONE: (816) 325-5658	MISSOURI UTILITY LINE LOCATION CENTER	MISSOURI ONE CALL 1-800-DIG-RITE (1-800-344-7483) LAW REQUIRES YOU TO CALL 48 HOURS BEFORE YOU DIG
PUBLIC WATER	CITY OF KANSAS CITY, MISSOURI WATER SERVICES DEPARTMENT CONTACT HEATHER MASSEY TELEPHONE (816) 513-0460		

INDEX OF SHEETS

SHEET NO.	TITLE
1	COVER SHEET
2	GENERAL LAYOUT, GENERAL NOTES AND SUMMARY OF QUANTIITIES
3	CONTROL DATA SHEET
4	6" AND 8" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
5	8" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
6	8" AND 12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
7	12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
8	12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
9	12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
10	12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
11	12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE
12	8" MAIN IN 85TH ST. AND 6" MAIN TRUMAN MEDICAL CENTER PLAN AND PROFILE

APPROVED: _____ DATE

ANDY SHIVELY, P.E., ENGINEERING OFFICER
FOR TERRY LEEDS, DIRECTOR, WATER SERVICES DEPARTMENT

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION
FOR
LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

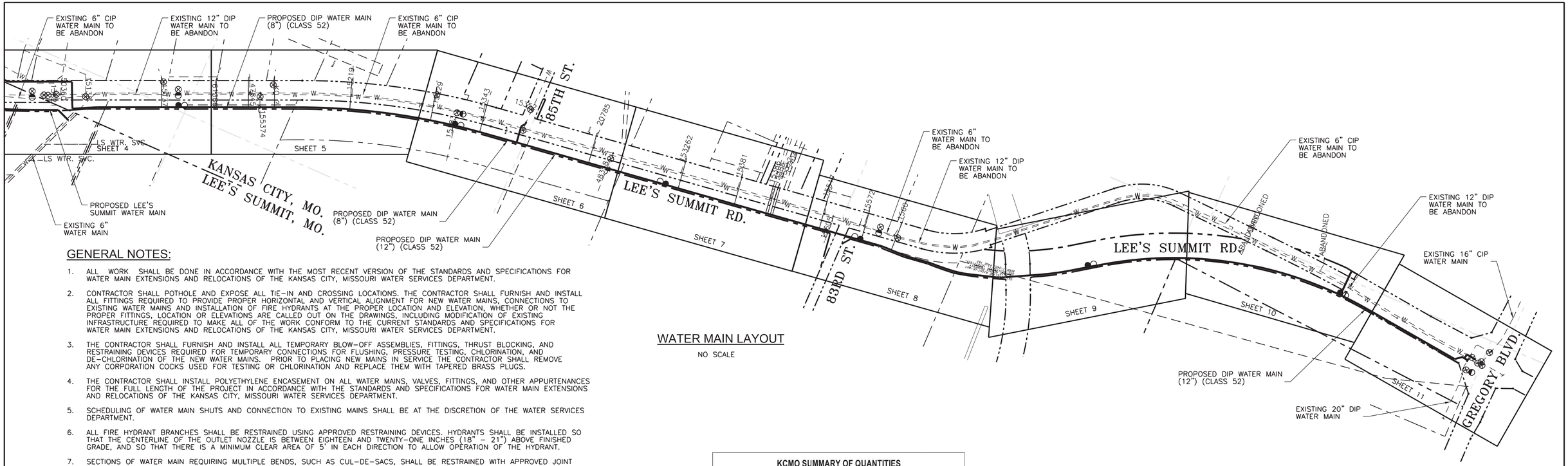
COVER SHEET

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		
CONTRACT NO.	CONTRACT DATE	MAP NO. J-4749 J-4949 J-5149 J-5151	WORK ORDER NO.	DRAWING NO. ------	
PROJECT NO. _____			SHEET 1 OF 12		

PLANS PREPARED BY:

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816 329-8600
FAX: 816 329-8602
CONTACT PERSON: MITCH LAMBETH
TSC PN: P101090353

$$USERNAME$$
2/17/2015 - 11:54:00 AM G:\KC\9\0353\Utilities\Plan Sheets\KCMO\G-001-COV.dgn



WATER MAIN LAYOUT

NO SCALE

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS AND RELOCATIONS OF THE KANSAS CITY, MISSOURI WATER SERVICES DEPARTMENT.

2. CONTRACTOR SHALL POTHOLE AND EXPOSE ALL TIE–IN AND CROSSING LOCATIONS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL FITTINGS REQUIRED TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT FOR NEW WATER MAINS, CONNECTIONS TO EXISTING WATER MAINS AND INSTALLATION OF FIRE HYDRANTS AT THE PROPER LOCATION AND ELEVATION, WHETHER OR NOT THE PROPER FITTINGS, LOCATION OR ELEVATIONS ARE CALLED OUT ON THE DRAWINGS, INCLUDING MODIFICATION OF EXISTING INFRASTRUCTURE REQUIRED TO MAKE ALL OF THE WORK CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS AND RELOCATIONS OF THE KANSAS CITY, MISSOURI WATER SERVICES DEPARTMENT.

3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY BLOW–OFF ASSEMBLIES, FITTINGS, THRUST BLOCKING, AND RESTRAINING DEVICES REQUIRED FOR TEMPORARY CONNECTIONS FOR FLUSHING, PRESSURE TESTING, CHLORINATION, AND DE–CHLORINATION OF THE NEW WATER MAINS. PRIOR TO PLACING NEW MAINS IN SERVICE THE CONTRACTOR SHALL REMOVE ANY CORPORATION COCKS USED FOR TESTING OR CHLORINATION AND REPLACE THEM WITH TAPERED BRASS PLUGS.

4. THE CONTRACTOR SHALL INSTALL POLYETHYLENE ENCASEMENT ON ALL WATER MAINS, VALVES, FITTINGS, AND OTHER APPURTENANCES FOR THE FULL LENGTH OF THE PROJECT IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS AND RELOCATIONS OF THE KANSAS CITY, MISSOURI WATER SERVICES DEPARTMENT.

5. SCHEDULING OF WATER MAIN SHUTS AND CONNECTION TO EXISTING MAINS SHALL BE AT THE DISCRETION OF THE WATER SERVICES DEPARTMENT.

6. ALL FIRE HYDRANT BRANCHES SHALL BE RESTRAINED USING APPROVED RESTRAINING DEVICES. HYDRANTS SHALL BE INSTALLED SO THAT THE CENTERLINE OF THE OUTLET NOZZLE IS BETWEEN EIGHTEEN AND TWENTY–ONE INCHES (18" – 21") ABOVE FINISHED GRADE, AND SO THAT THERE IS A MINIMUM CLEAR AREA OF 5' IN EACH DIRECTION TO ALLOW OPERATION OF THE HYDRANT.

7. SECTIONS OF WATER MAIN REQUIRING MULTIPLE BENDS, SUCH AS CUL–DE–SACS, SHALL BE RESTRAINED WITH APPROVED JOINT RESTRAINING DEVICES AND STRADDLE BLOCKS IN LIEU OF BACKING BLOCKS.

8. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN, ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES. CONTRACTORS SHALL POTHOLE AND EXPOSE ALL UTILITIES (INDICATED ON THE DRAWINGS, LOCATED AT GRADE BY A UTILITY LOCATING SERVICE, OR EVIDENT FROM UTILITY COMPANY INFORMATION) AT LEAST 500 FEET IN ADVANCE OF WATER MAIN CONSTRUCTION, DETERMINING THE DEPTH, SIZE, AND MATERIAL OF THE UTILITIES IN PROXIMITY TO THE PROPOSED WATER MAIN ALIGNMENT. DEFLECT PIPE TO MAINTAIN MINIMUM 5 FEET HORIZONTAL AND 18 INCH VERTICAL CLEARANCES BETWEEN PROPOSED WATER MAIN AND ALL EXISTING UTILITIES.

9. THE CONTRACTOR SHALL COMPLY WITH STATE LAW REQUIRING ANY PERSON OR FIRM DOING EXCAVATION ON THE PUBLIC RIGHT–OF–WAY DO SO ONLY AFTER GIVING NOTICE TO AND OBTAINING INFORMATION FROM UTILITY COMPANIES.

10. STREETS AND PARKING AREAS ARE TO BE TO GRADE AND CURBS IN PLACE PRIOR TO CONSTRUCTION OF WATER MAINS. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM GROUND COVER OF 42 INCHES BELOW FINISHED GRADE. SIXTEEN (16)–INCH AND LARGER WATER MAINS SHALL BE INSTALLED WITH A MINIMUM GROUND COVER OF 60 INCHES BELOW FINISHED GRADE.

11. WATER MAINS SHALL BE LAID AT LEAST 10 FEET, HORIZONTALLY FROM ANY SEWER. WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, A WATER MAIN MAY BE LAID CLOSER THAN 10 FEET TO A SEWER, PROVIDED THAT THE WATER MAIN IS LAID IN A SEPARATE TRENCH, OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER, AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER. WATER MAINS SHALL BE LAID SUCH THAT THERE IS A MINIMUM OF 18 INCHES CLEARANCE BETWEEN THE PIPE WALL AND THE EXTERIOR OF ANY MANHOLE AND/OR INLET ON THE SEWER LINE.

    WHENEVER A WATER MAIN MUST CROSS ABOVE A SEWER, A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER SHALL BE MAINTAINED. WHENEVER A WATER MAIN MUST CROSS UNDER A SEWER, A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE SEWER AND THE TOP OF THE WATER MAIN SHALL BE MAINTAINED. A FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ON THE SEWER TO BE CROSSED SO THAT THE JOINTS WILL BE EQUALLY DISTANT FROM THE SEWER AND AS FAR AWAY AS POSSIBLE. THE 18–INCH VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN 10 FEET, HORIZONTALLY, OF ANY SEWER IT CROSSES.

    WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL SEPARATION AS STIPULATED ABOVE, OR WHEN A WATER MAIN MUST CROSS UNDER A SEWER, THE SEWER MUST BE RECONSTRUCTED OF DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF SECTION 02618 OF THE STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS AND RELOCATIONS; PRE–STRESSED CONCRETE CYLINDER PIPE MEETING THE REQUIREMENTS OF SECTION 02619; OR PVC PRESSURE PIPE CONFORMING TO AWWA C–900 OR C–905, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS BEFORE BACKFILLING. THE REQUIRED LENGTH OF SEWER TO BE REPLACED OR CONSTRUCTED OF PRESSURE PIPE WILL BE THE LENGTH NECESSARY TO ACHIEVE 10 FEET HORIZONTAL SEPARATION.

    WHERE THESE CONDITIONS CANNOT BE MET, THE WATER SERVICES DEPARTMENT SHALL BE CONSULTED AS TO THE PRECAUTIONS TO BE TAKEN TO PROTECT THE PUBLIC WATER SUPPLY.

    FOR ALL SANITARY AND STORM SEWER CROSSINGS REFER TO STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS AND RELOCATIONS: STANDARD DETAILS #01016–1, #01016–2, #01016–3, #01016–6–4, AND #01016–5 AS REQUIRED.

12. AN EXCAVATION PERMIT MUST BE OBTAINED FROM THE CITY ENGINEER PRIOR TO COMMENCING CONSTRUCTION WITHIN THE PUBLIC RIGHT–OF WAY. CONTACT THE PUBLIC WORKS DEPARTMENT PERMIT COUNTER AT CITY HALL.

13. A STREET CLOSURE PERMIT MAY BE REQUIRED FOR THIS WORK. CONTACT THE STREET AND TRAFFIC DIVISION AT CITY HALL.

14. ALL WORK SHALL CONFORM TO THE LATEST REVISION OF THE KANSAS CITY, MISSOURI EROSION AND SEDIMENT CONTROL SPECIFICATIONS, WHICH ARE MADE A PART HEREOF BY REFERENCE. EROSION CONTROL PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER, PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE START OF THIS PROJECT.

15. THE END OF ALL ABANDONED WATER MAINS SHALL BE PLUGGED WITH CONCRETE.

16. COVERS, LIDS, AND STANDPIPES ON ALL ABANDONED VALVES SHALL BE REMOVED TO AT LEAST TWO FEET (2') BELOW GRADE AND THE AREA SHALL BE PROPERLY BACKFILLED. IN PAVED AREAS REMOVAL OF VALVE LID AND FILLING OF VALVE BOX WITH CONCRETE MAY BE ALLOWED AT WATER SERVICES DEPARTMENT DISCRETION.

17. EXISTING FIRE HYDRANTS THAT ARE REMOVED SHALL BE RETURNED TO THE WATER SERVICES DEPARTMENT STORE YARD AT 2409 E. 18TH ST.

18. WATER SERVICE LINES CONNECTED TO MAINS BEING ABANDONED SHALL BE RECONNECTED TO NEW MAINS IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR WATER SERVICES LINES OF THE WATER SERVICES DEPARTMENT, UNLESS SHOWN OTHERWISE. EXISTING WATER SERVICE LINES BEING TRANSFERRED TO NEW MAINS WILL BE UPGRADED TO MEET CURRENT REGULATIONS.

19. THE CONTRACTOR SHALL VERIFY THE OUTSIDE DIAMETER (O.D.) OF THE EXISTING WATER MAIN PRIOR TO SCHEDULING CONNECTION. PROVIDE SOLID SLEEVES AS REQUIRED.

20. CONTRACTORS SHALL PROTECT EXISTING POWER POLES AND LIGHT POLES FROM DAMAGE AND SHALL PROVIDE BRACING, SHORING, OR OTHER WORK NECESSARY FOR SUCH PROTECTION. ANY STRUCTURES REMOVED DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED.

21. PRIOR TO REMOVING EXISTING TRANSMISSION MAINS 16" AND LARGER FROM SERVICE, CONTRACTOR SHALL COORDINATE WITH KCWSD REGARDING THE TIMING AND DURATION OF THE INTERRUPTION OF SERVICE. NO TRANSMISSION MAIN SHALL BE TAKEN OUT OF SERVICE IN PEAK DEMAND TIMES (MAY 15TH THRU SEPT. 15TH).

KCMO SUMMARY OF QUANTITIES

NO.	BID ITEM	UNITS	QUANTITY
	WATER LINE QUANTITIES		
1	REDUCER (8"x6")	EA.	1
2	REDUCER (12"x6")	EA.	1
3	REDUCER (12"x8")	EA.	1
4	TEE (12"x6")	EA.	1
5	TEE (12"x8")	EA.	1
6	TEE (12"x12")	EA.	1
7	TEE (20"x12")	EA.	1
8	SOLID SLEEVE (6")	EA.	1
9	SOLID SLEEVE (8")	EA.	1
10	SOLID SLEEVE (16")	EA.	2
11	SOLID SLEEVE (20")	EA.	2
12	BEND (6") (22.5 DEGREE)	EA.	1
13	BEND (6") (90 DEGREE)	EA.	2
14	BEND (8") (45 DEGREE)	EA.	3
15	BEND (12") (11.25 DEGREE)	EA.	1
16	BEND (12") (22.5 DEGREE)	EA.	10
17	BEND (12") (45 DEGREE)	EA.	2
18	BEND (12") (90 DEGREE)	EA.	1
19	GATE VALVE (6")	EA.	2
20	GATE VALVE (8")	L.F.	2
21	GATE VALVE (12")	L.F.	5
22	DIP WATER MAIN (6") (CLASS 52)	L.F.	673
23	DIP WATER MAIN (8") (CLASS 52)	L.F.	1,916
24	DIP WATER MAIN (12") (CLASS 52)	L.F.	4,128
25	DIP WATER MAIN (16") (CLASS 54)	L.F.	10
26	DIP WATER MAIN (20") (CLASS 54)	EA.	10
27	FIRE HYDRANT ASSEMBLY (NEW)	EA.	7
28	AIR RELEASE VALVE	EA.	2
29	TYPICAL FLUSHING ASSEMBLY	EA.	1
30	AS-BUILT WATER PLANS	EA.	1

SUMMARY OF QUANTITIES ARE PROVIDED FOR BID PURPOSES ONLY. ANY ITEMS NOT LISTED ARE TO BE CONSIDERED SUBSIDIARY TO THE ITEMS LISTED ABOVE.

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0 200 400 600
SCALE FEET
1" = 200'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION
FOR
LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

GENERAL LAYOUT
GENERAL NOTES AND
SUMMARY OF QUANTITIES

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 2 OF 12

$$USERNAME$$
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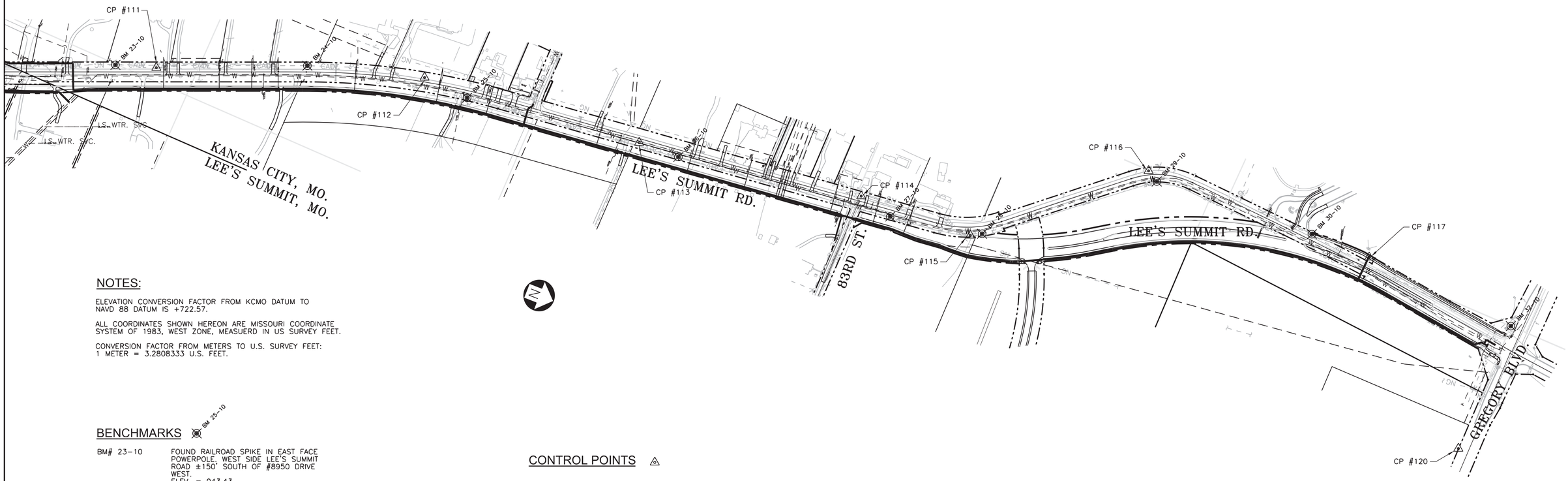


NOTES:

ELEVATION CONVERSION FACTOR FROM KCMO DATUM TO NAVD 88 DATUM IS +722.57.

ALL COORDINATES SHOWN HEREON ARE MISSOURI COORDINATE SYSTEM OF 1983, WEST ZONE, MEASUERD IN US SURVEY FEET.

CONVERSION FACTOR FROM METERS TO U.S. SURVEY FEET:
1 METER = 3.2808333 U.S. FEET.

BENCHMARKS

BM# 23-10 — FOUND RAILROAD SPIKE IN EAST FACE POWERPOLE. WEST SIDE LEE'S SUMMIT ROAD ±150' SOUTH OF #8950 DRIVE WEST.
ELEV. = 943.43

BM# 24-10 — FOUND RAILROAD SPIKE IN EAST FACE POWERPOLE. WEST SIDE LEE'S SUMMIT ROAD ±25' NORTH OF #2727 DRIVE EAST.
ELEV. = 927.36

BM# 25-10 — FOUND RAILROAD SPIKE IN WEST FACE POWERPOLE. EAST SIDE LEE'S SUMMIT ROAD AT DRIVE TO #8511.
ELEV. = 938.11

BM# 26-10 — FOUND RAILROAD SPIKE IN WEST FACE POWERPOLE. EAST SIDE LEE'S SUMMIT ROAD ±50' SOUTH DRIVE TO #8420.
ELEV. = 940.95

BM# 27-10 — FOUND "+" CUT IN SOUTH BOLT TOP FLANGE FIRE HYDRANT. EAST SIDE LEE'S SUMMIT ROAD ±75' NORTH OF 83RD ST.
ELEV. = 991.45

BM# 28-10 — FOUND RAILROAD SPIKE IN SOUTH FACE POWERPOLE. EAST SIDE LEE'S SUMMIT ROAD ±150' NORTH OF #8200 DRIVE.
ELEV. = 986.47

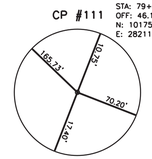
BM# 29-10 — FOUND RAILROAD SPIKE IN SOUTH FACE POWERPOLE. EAST SIDE LEE'S SUMMIT ROAD ±150' NORTH OF #8200 DRIVE.
ELEV. = 986.47

BM# 30-10 — SET "+" CUT TOP CENTER SOUTH HEADWALL FOR RCP UNDEER "ENTRANCE" DRIVE. EAST SIDE "TRUMAN MEDICAL CENTER LAKEWOOD"
ELEV. = 945.56

BM# 32-10 — FOUND 3" BRASS DISK IN MONUMENT BOX SOUTHWEST QUAD. LITTLE BLUE ROAD AND LEE'S SUMMIT ROAD
ELEV. = 916.35

CONTROL POINTS

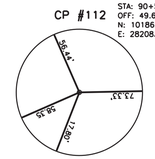
CP #111
STA: 79+76.48 ℄ LEE'S SUMMIT RD
OFF: 46.11' LT
N: 1017599.067
E: 2821195.039



½" REBAR

S. FACE 6"X6" POST FOR MAILBOX #8950 — N. 70.20'
+/- CL OF LEE'S SUMMIT ROAD — E. 17.40'
FND RR SPK IN E. FACE P.P. — S.S.W. 165.73'
FND RR SPK IN N. FACE P.P. — W. 10.75'

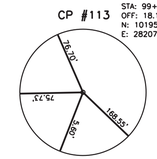
CP #112
STA: 90+56.53, ℄ LEE'S SUMMIT RD
OFF: 49.68' LT
N: 1018625.303
E: 2820837.075



½" BAR

WATER VALVE AT TOP SLOPE — N.N.W. 73.33'
SET NAIL & SHINER W. FACE P.P. — S.E. 58.35'
SET NAIL & SHINER N. FACE 4.5' DIA. — S.W. 56.44'
+/- CL OF LEE'S SUMMIT ROAD — E. 17.80'

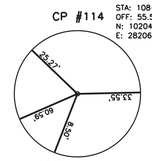
CP #113
STA: 99+59.85, ℄ LEE'S SUMMIT RD
OFF: 18.19' LT
N: 1019530.596
E: 2820766.253



½" REBAR

FND NAIL & SHINER IN S. FACE P.P. — N.N.E. 168.55'
FND NAIL & SHINER IN N. FACE P.P. — S.S.E. 75.73'
FND NAIL & SHINER IN E. FACE P.P. — S.W. 76.70'
E. EDGE ASPHALT — E. 5.60'

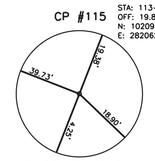
CP #114
STA: 108+83.81, ℄ LEE'S SUMMIT RD
OFF: 55.57' LT
N: 1020446.748
E: 2820640.644



½" REBAR

S. FACE 4"X4" WOOD CORNER POST — N.N.W. 33.55'
SET NAIL & SHINER N. FACE P.P. — S.E. 60.59'
FND NAIL & SHINER E. FACE P.P. — S.S.W. 25.27'
W. EDGE OF LEE'S SUMMIT RD — E. 8.50'

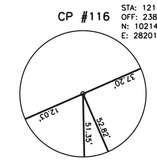
CP #115
STA: 113+53.67, ℄ LEE'S SUMMIT RD
OFF: 19.84' LT
N: 1020915.989
E: 2820628.112



BAR W/ "CONTROL POINT" CAP

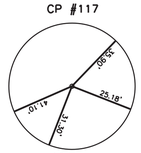
N.W. CORNER 2'x2' CONC. CORNER POST — N.N.E. 18.90'
SET NAIL & SHINER W. FACE WOOD FNC POST — E. 4.25'
GAS MARKER STEEL POST, TIED TO REBAR ON TOP — S. 39.73'
E. EDGE LEE'S SUMMIT RD — W. 19.38'

CP #116
STA: 121+07.48, ℄ LEE'S SUMMIT RD
OFF: 238.62' LT
N: 1021493.528
E: 2820122.100



½" BAR

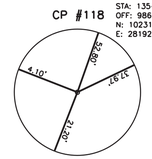
FND RR SPK IN W. FACE — N.E. 52.82'
FND NAIL & SHINER S.W. FACE WOOD FNC POST — E.N.E. 51.35'
SET PK & SHINER IN W. FOG LINE — S.E. 12.03'
SET NAIL & SHINER IN E. FACE GUY POLE — N.W. 37.20'

CP #117


½" REBAR

TOP CTR BELL RISER — N. 25.18'
W. EDGE PAVEMENT LEE'S SUMMIT RD — E. 31.30'
NEAR FACE METAL LIGHT POLE — S.E. 41.10'
N.E. BEND IN "TRUMAN MEDICAL CENTER" SIGN — W.S.W. 35.90'

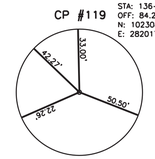
CP #118
STA: 135+27.47, ℄ LEE'S SUMMIT RD
OFF: 986.08' LT
N: 1023131.686
E: 2819267.789



½" REBAR

W. FACE 2' DIA. CONC FOOTING FOR STREET LIGHT — E. 21.20'
N. BACK OF CURB FOR DRIVE — S. 4.10'
S.E. CORNER TRUMAN MEDICAL CENTER LAKEWOOD DIRECTION SIGN — W. 52.80'
TOP CTR GREEN ELEC. BOX S. SIDE P.P. — N.W. 37.97'

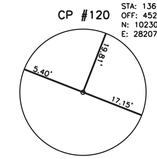
CP #119
STA: 136+17.47, ℄ LEE'S SUMMIT RD
OFF: 84.22' LT
N: 1023088.371
E: 2820172.755



3" ALUM. DISK

S.W. CORNER AREA INLET — S.E. 22.26'
N.W. CORNER TRUMAN MEDICAL CENTER ELEC. SIGN — S.S.W. 42.27'
SET NAIL 7 SHINER N. FACE P.P. — W.S.W. 33.00'
+/- CL OF LITTLE BLUE RD — N. 50.50'

CP #120
STA: 136+72.21, ℄ LEE'S SUMMIT RD
OFF: 452.66' RT
N: 1023070.579
E: 2820712.223



BAR W/ "CONTROL POINT" CAP

TOP SCREW NUT ON F.H. — N. 17.15'
FND "+" CUT ON TOP OF CURB FOR PARKING LOT — S. 5.40'
FND "+" CUT ON TOP OF CURB IN CURVE OF CURB E. EDGE DRIVE — W. 19.81'

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0 200 400 600
SCALE FEET
1" = 200'

PROFESSIONAL ENGINEER SEAL
STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

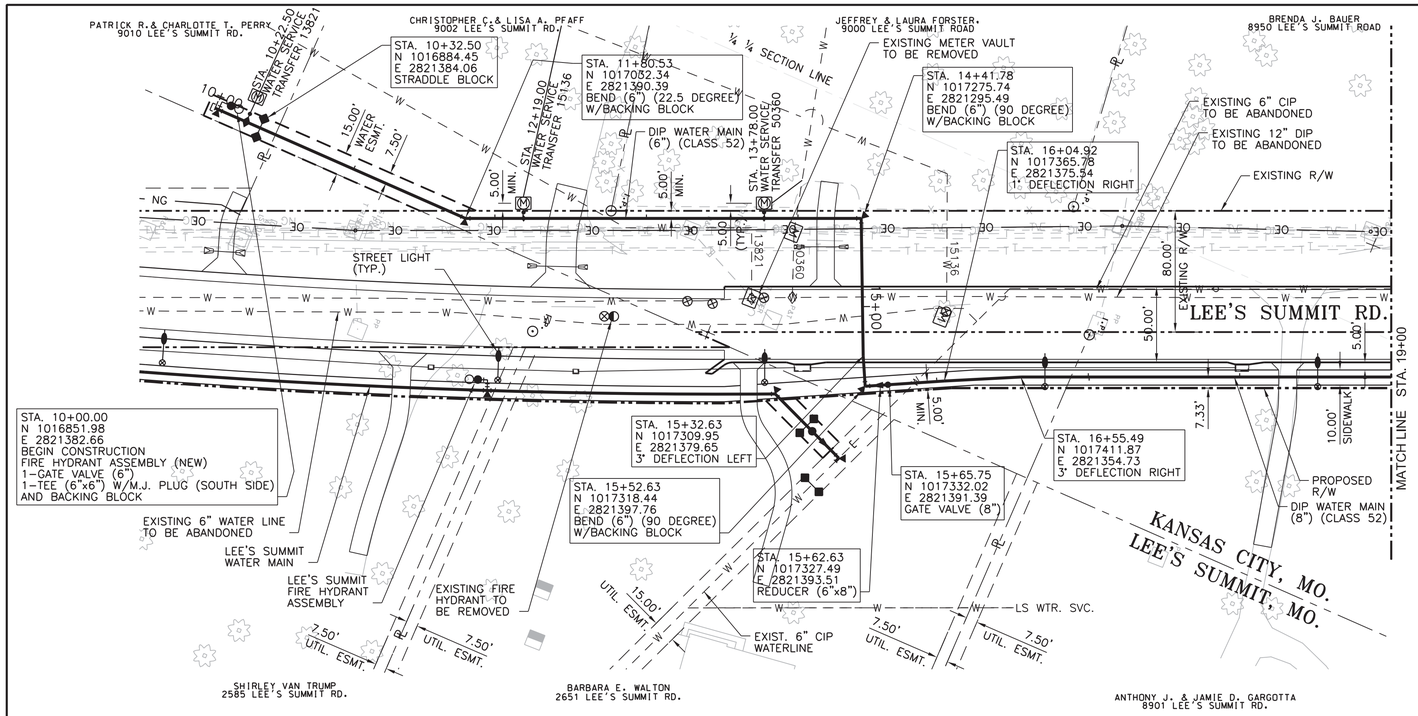
WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM KCMO CITY LIMITS TO GREGORY BLVD., JACKSON COUNTY, MISSOURI

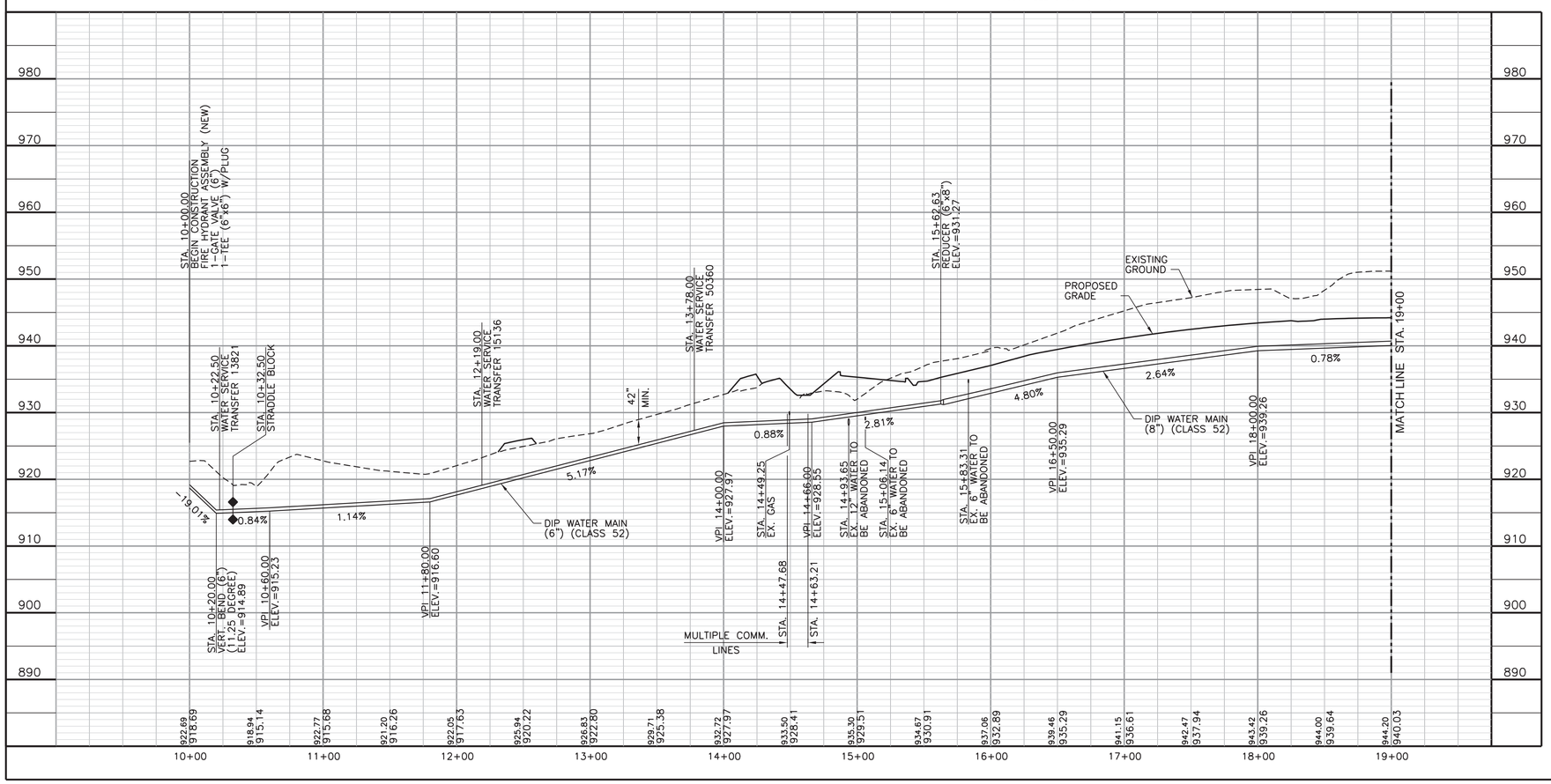
CONTROL DATA SHEET

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		
CONTRACT NO.	CONTRACT DATE	MAP NO. J-4749 J-4949 J-5149 J-5151	WORK ORDER NO.	DRAWING NO. ------	
PROJECT NO. ----------			SHEET 3 OF 12		

$$USERNAME$$
2/17/2015 - 11:58:50 AM G:\KCO\90353\Utilities\Plan Sheets\KCMO\G-003-CDS.dgn



EXISTING WATER SERVICES TO BE TRANSFERRED							
ADDRESS	REGISTER NUMBER	MAIN TO CURB		CURB IN		INSTALL CURB BOX	INSTALL / RELOCATE METER
		SIZE	TYPE	SIZE	TYPE		
9000 Lees Summit road	50360	3/4 "	K	3/4 "	K	YES	YES
9002 Lees Summit road	15136	3/4 "	K	3/4 "	K	YES	YES
9010 Lees Summit road	13821	3/4 "	K	3/4 "	K	YES	YES



NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE KANSAS CITY, MO. WATER SERVICES DEPARTMENT.

LEGEND

944.16 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

939.66 = FLOWLINE ELEV. OF WATER MAIN

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0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

6" AND 8" MAIN IN
LEE'S SUMMIT ROAD
PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 4 OF 12

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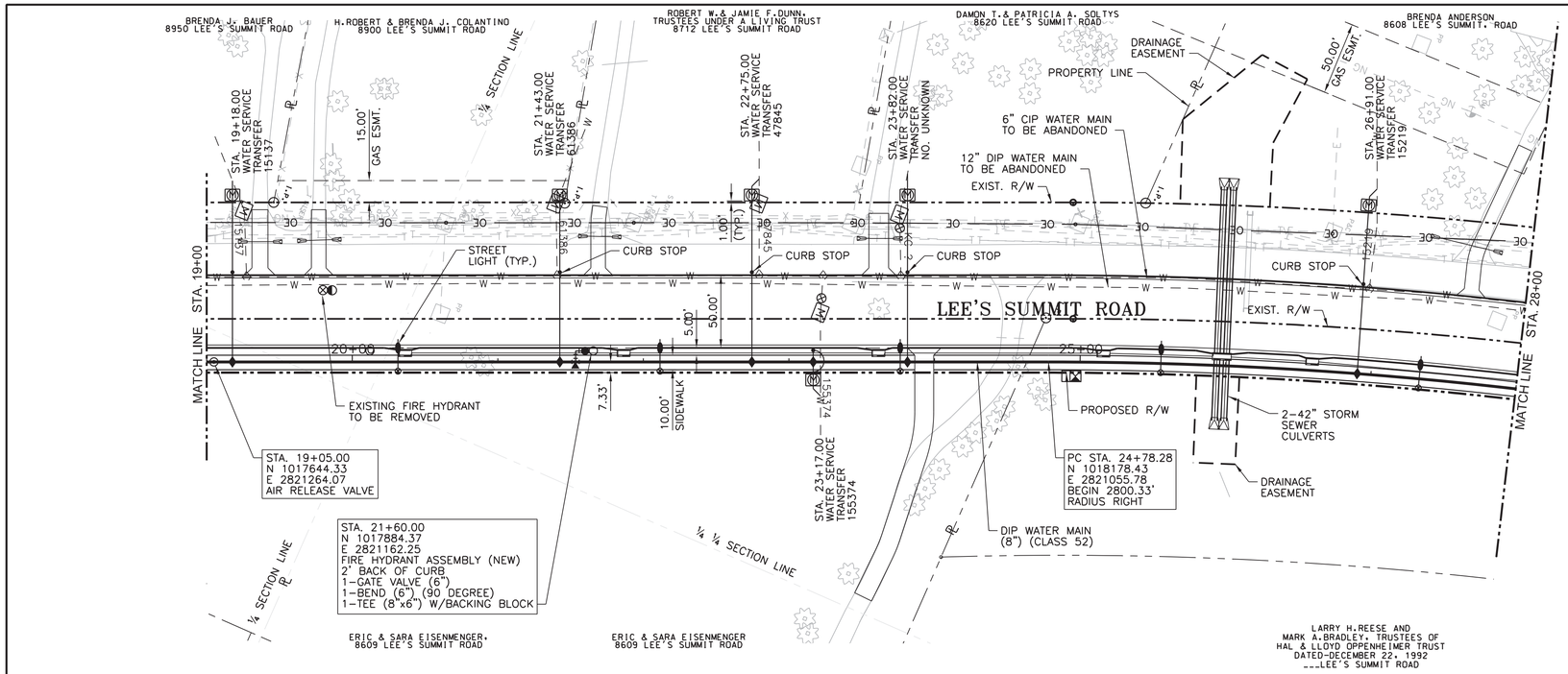

EXISTING WATER SERVICES TO BE TRANSFERRED							
ADDRESS	REGISTER NUMBER	MAIN TO CURB		CURB IN		INSTALL CURB BOX	INSTALL / RELOCATE METER
		SIZE	TYPE	SIZE	TYPE		
8608 Lees Summit Road	15219	3/4 "	K	3/4 "	K	YES	YES
8609 Lees Summit Road	155374	3/4 "	K	3/4 "	K	YES	YES
8620 Lees summit Road	xxxxx	3/4"	K	3/4"	K	YES	YES
8712 Lees Summit Road	47845	3/4"	K	3/4"	K	YES	YES
8900 Lees Summit Road	61386	3/4"	K	3/4"	K	YES	YES
8950 Lees Summit Road	15137	3/4"	K	3/4"	K	YES	YES

NOTES:

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LEGEND

933.57 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

933.57 = FLOWLINE ELEV. OF WATER MAIN

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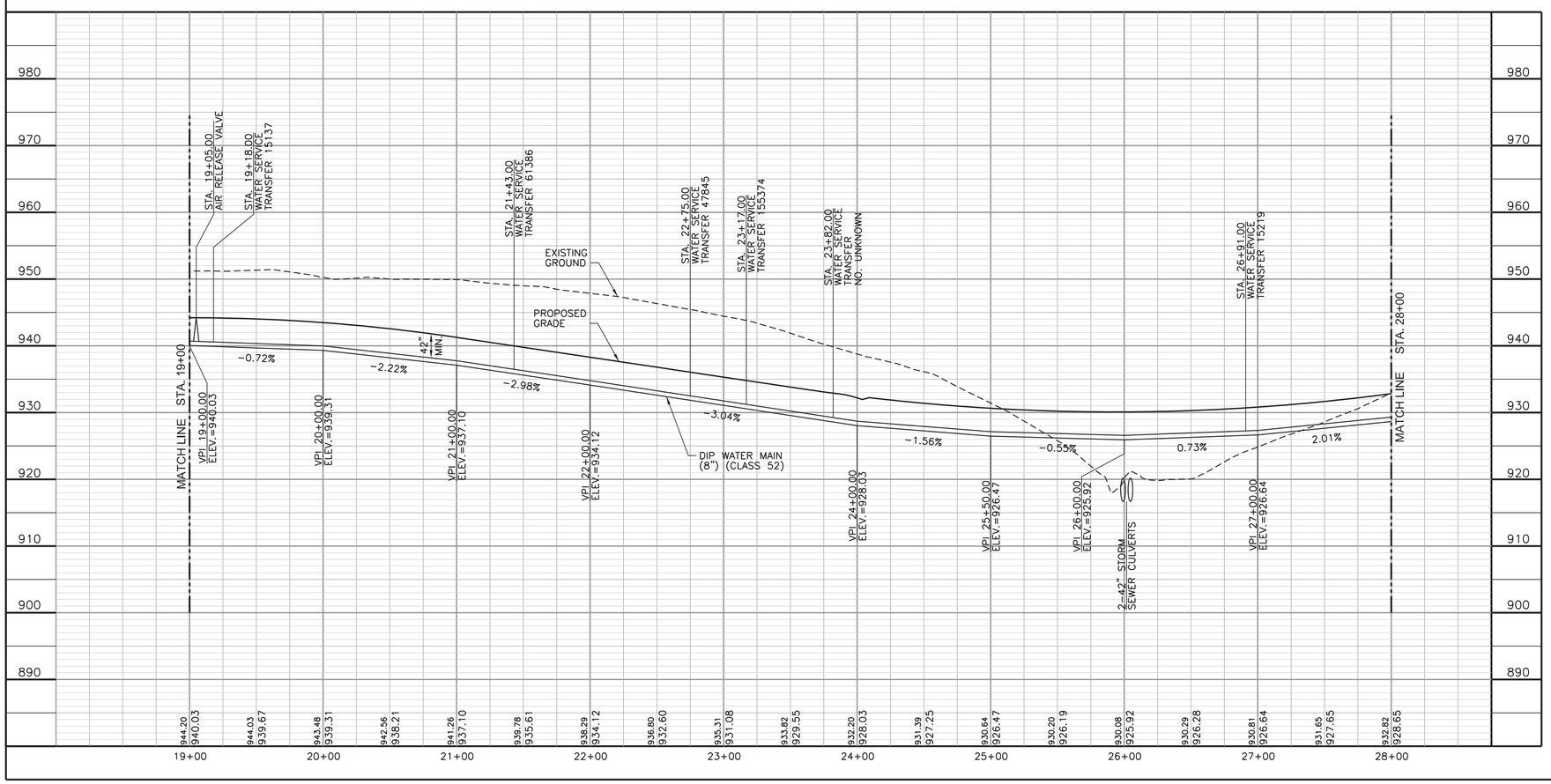
SCALE 1" = 10' (0, 10, 20, 30 FEET)

SCALE 1" = 50' (0, 50, 100, 150 FEET)



PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM KCMO CITY LIMITS TO GREGORY BLVD., JACKSON COUNTY, MISSOURI

8" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE

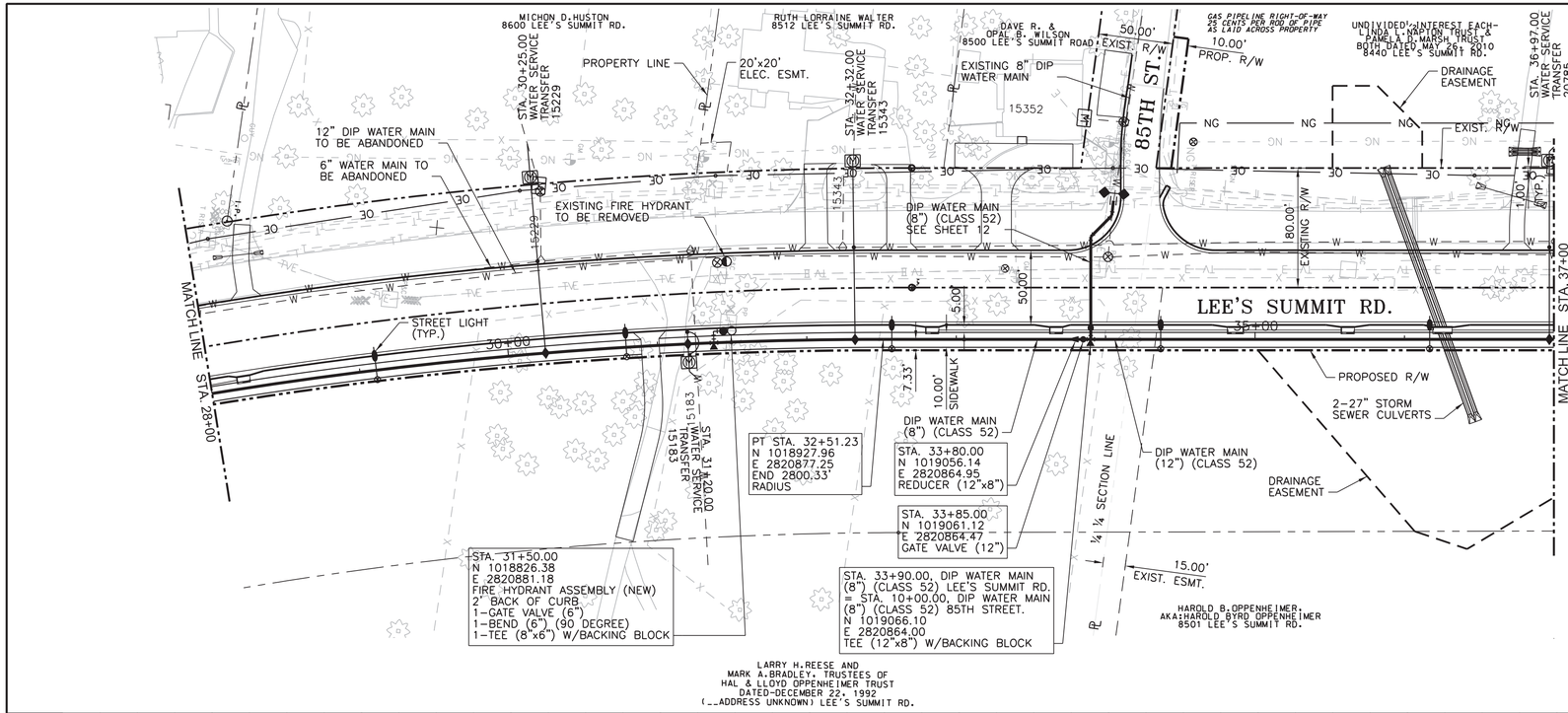
DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 5 OF 12

$$USERNAME$$
2/17/2015 - 11:58:35 AM G:\KC09\0353\UtBites\Plan Sheets\KCMO\C-102-WAT.dgn



EXISTING WATER SERVICES TO BE TRANSFERRED							
ADDRESS	REGISTER NUMBER	MAIN TO CURB		CURB IN		INSTALL CURB BOX	INSTALL / RELOCATE METER
		SIZE	TYPE	SIZE	TYPE		
8440 Lees Summit Road	20785	3/4 "	K	3/4 "	K	YES	YES
8512 Lees Summit Road	15343	3/4 "	K	3/4 "	K	YES	YES
xxxxx Lees Summit Road	15183	3/4"	K	3/4"	K	YES	YES
8600 Lees Summit Road	15229	3/4 "	K	3/4 "	K	YES	YES

NOTES:

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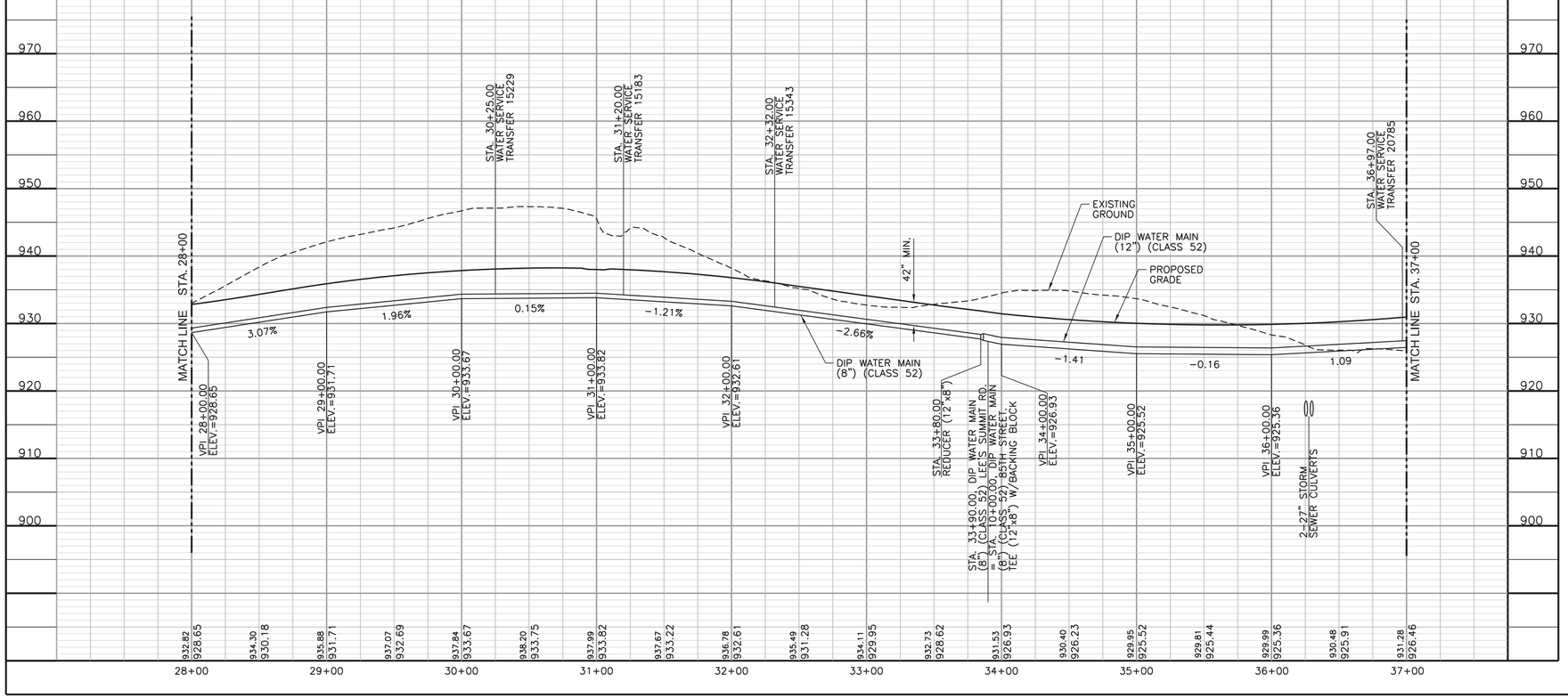

LEGEND

935.56 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

931.06 = FLOWLINE ELEV. OF WATER MAIN

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N

0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

8" AND 12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 6 OF 12

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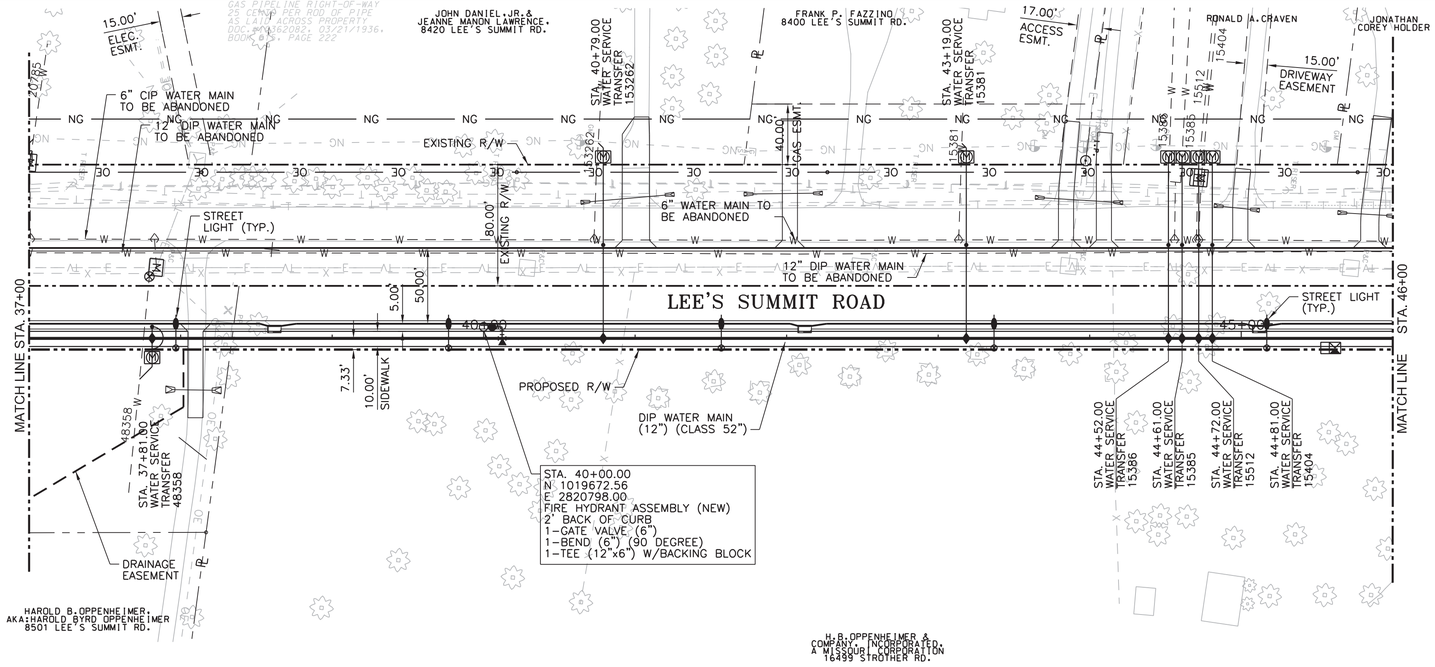
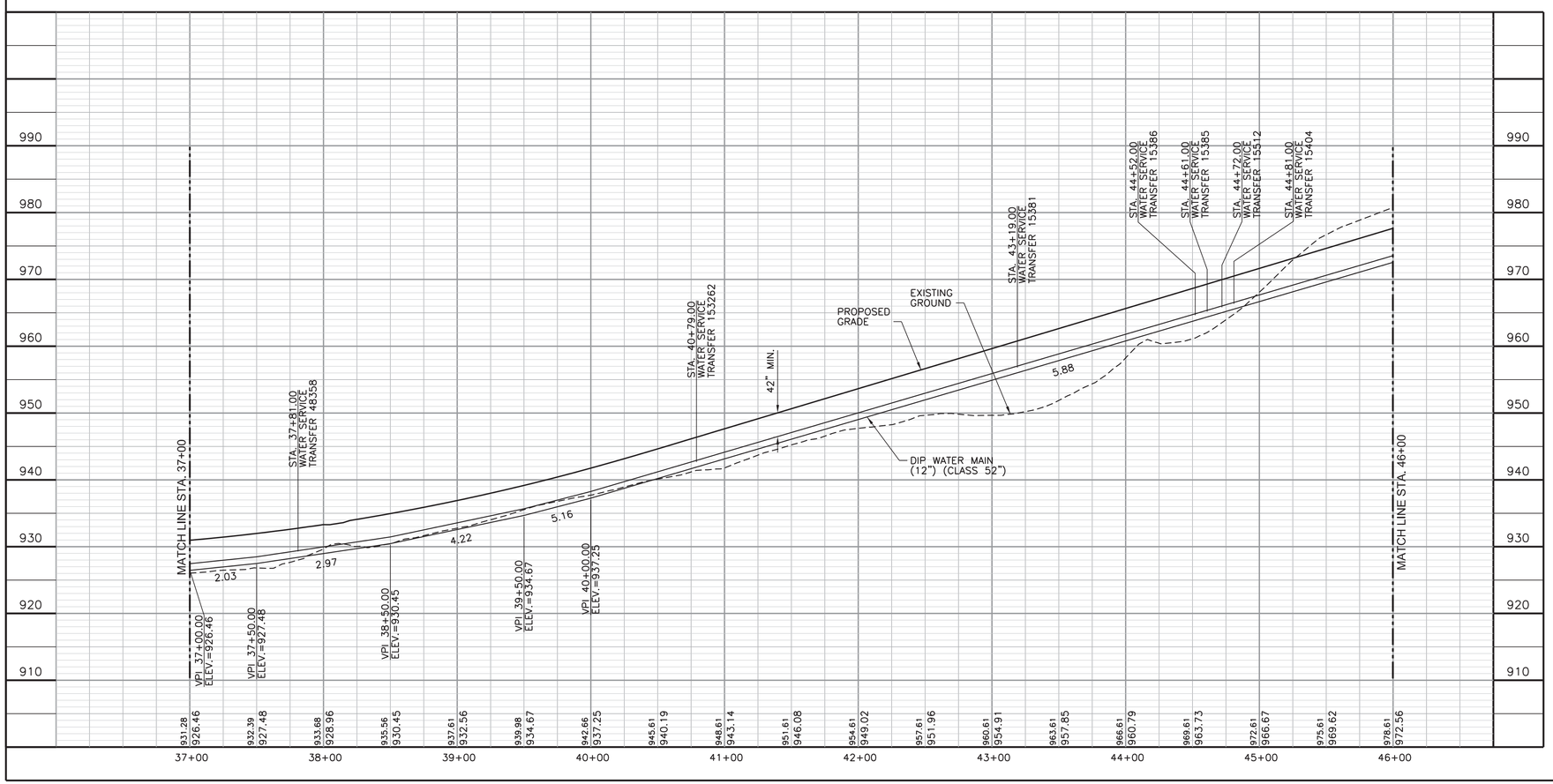


EXISTING WATER SERVICES TO BE TRANSFERRED							
ADDRESS	REGISTER NUMBER	MAIN TO CURB		CURB IN		INSTALL CURB BOX	INSTALL / RELOCATE METER
		SIZE	TYPE	SIZE	TYPE		
XXXX Lees Summit Road	15404	3/4 "	K	3/4 "	K	YES	YES
XXXX Lees Summit Road	15512	3/4 "	K	3/4 "	K	YES	YES
XXXX Lees Summit Road	15385	3/4 "	K	3/4 "	K	YES	YES
XXXX Lees Summit Road	15386	3/4 "	K	3/4 "	K	YES	YES
8400 Lees Summit Road	15381	3/4 "	K	3/4 "	K	YES	YES
8420 Lees Summit Road	153262	3/4 "	K	3/4 "	K	YES	YES
8501 Lees Summit Road	48358	3/4 "	K	3/4 "	K	YES	YES



NOTES:

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LEGEND

976.83 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

976.83 = FLOWLINE ELEV. OF WATER MAIN

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N

0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER
E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION
FOR
LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

12" MAIN IN
LEE'S SUMMIT ROAD
PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO.

SHEET 7 OF 12

$$USERNAME$$
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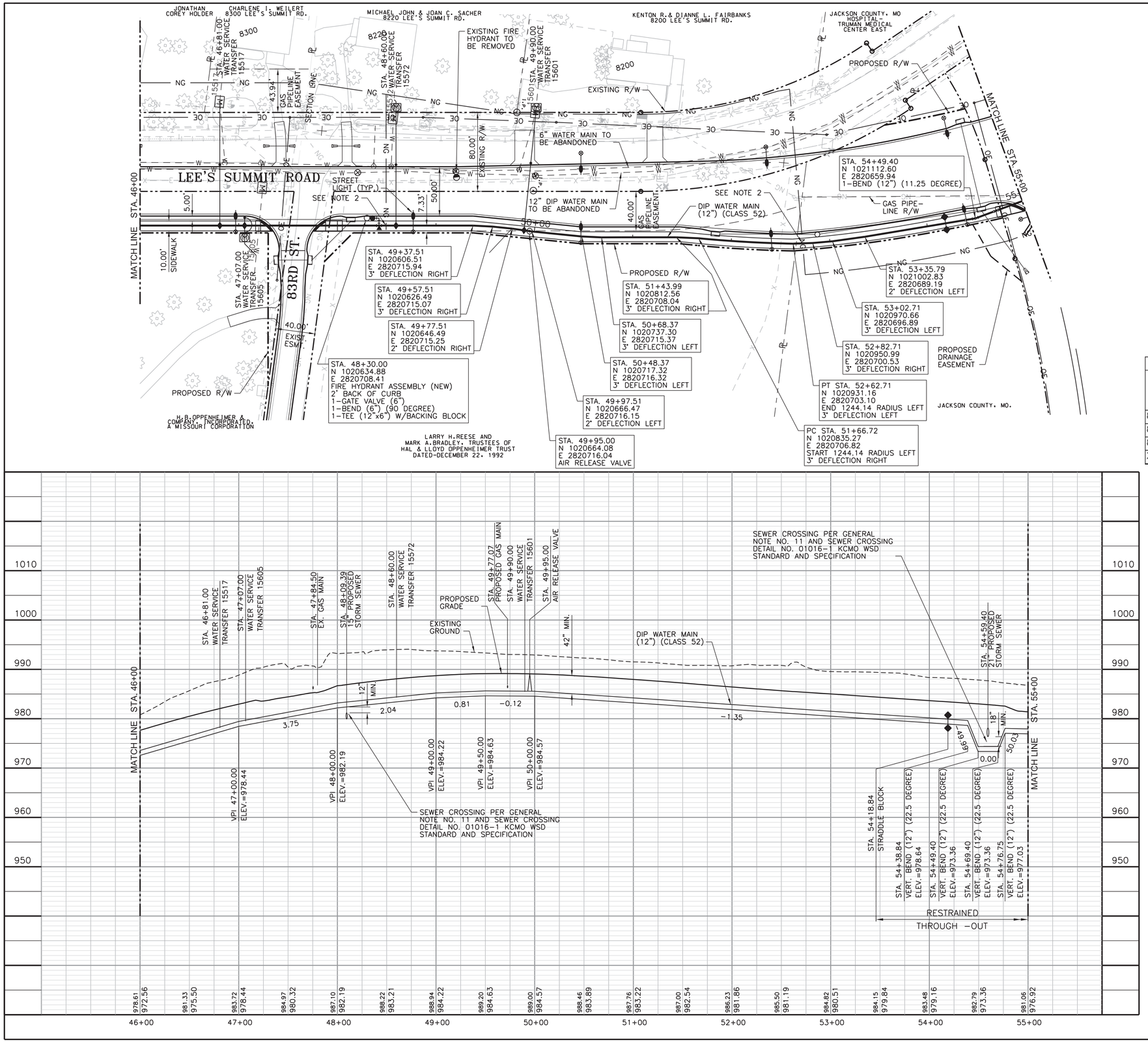

EXISTING WATER SERVICES TO BE TRANSFERRED							
ADDRESS	REGISTER NUMBER	MAIN TO CURB		CURB IN		INSTALL CURB BOX	INSTALL / RELOCATE METER
		SIZE	TYPE	SIZE	TYPE		
8200 Lees Summit Road	15601	3/4"	K	3/4"	K	YES	YES
8220 Lees Summit Road	15572	3/4"	K	3/4"	K	YES	YES
8300 Lees Summit Road	15517	3/4"	K	3/4"	K	YES	NO
XXXX Lees Summit Road	15605	3/4"	K	3/4"	K	YES	YES

NOTES:

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2. DOUBLE POLYWRAP WATER MAIN 10' EACH SIDE WHERE CROSSING GAS MAIN. DOUBLE POLY-WRAP TO BE CONSIDERED SUBSIDARY TO QUANTITIES.

LEGEND

974.65 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

974.65 = FLOWLINE ELEV. OF WATER MAIN

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N

0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM KCMO CITY LIMITS TO GREGORY BLVD., JACKSON COUNTY, MISSOURI

12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE

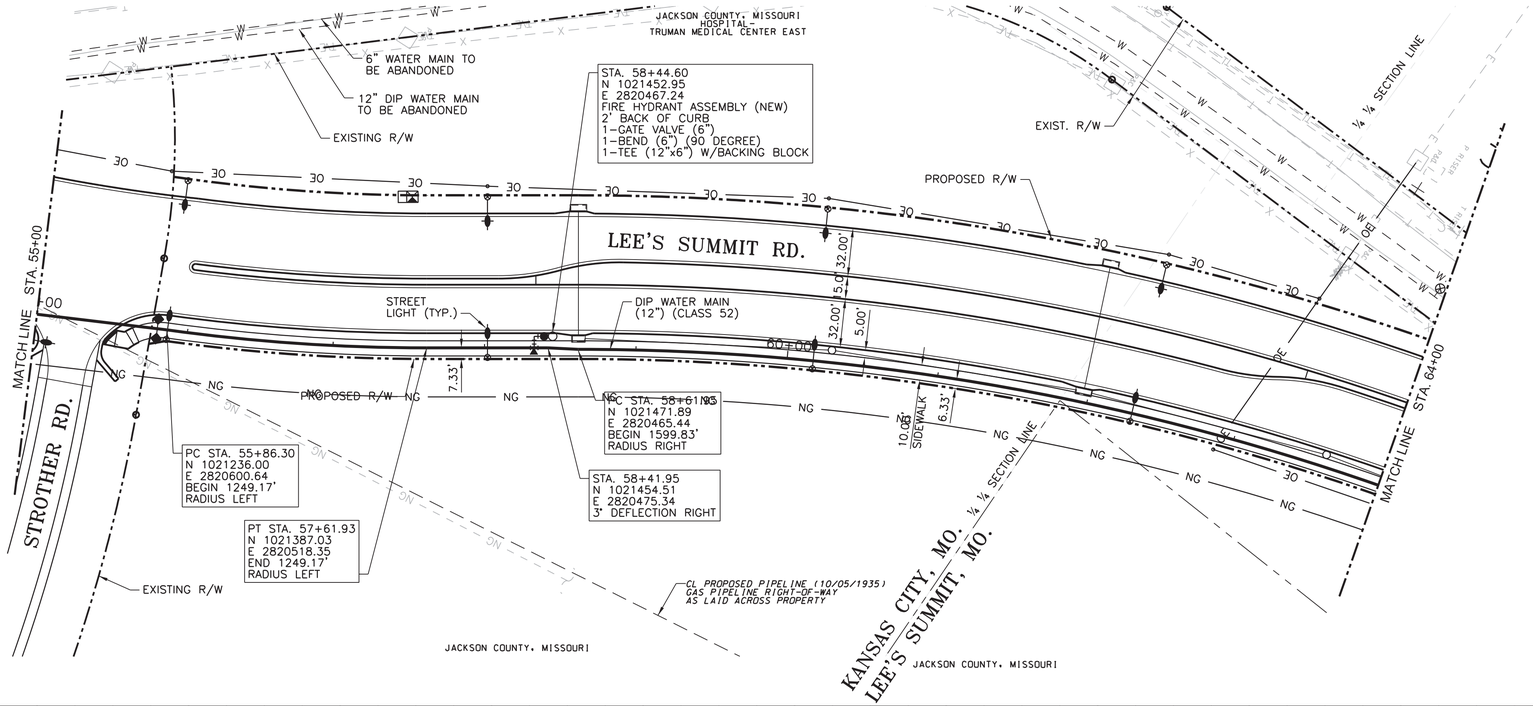
DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

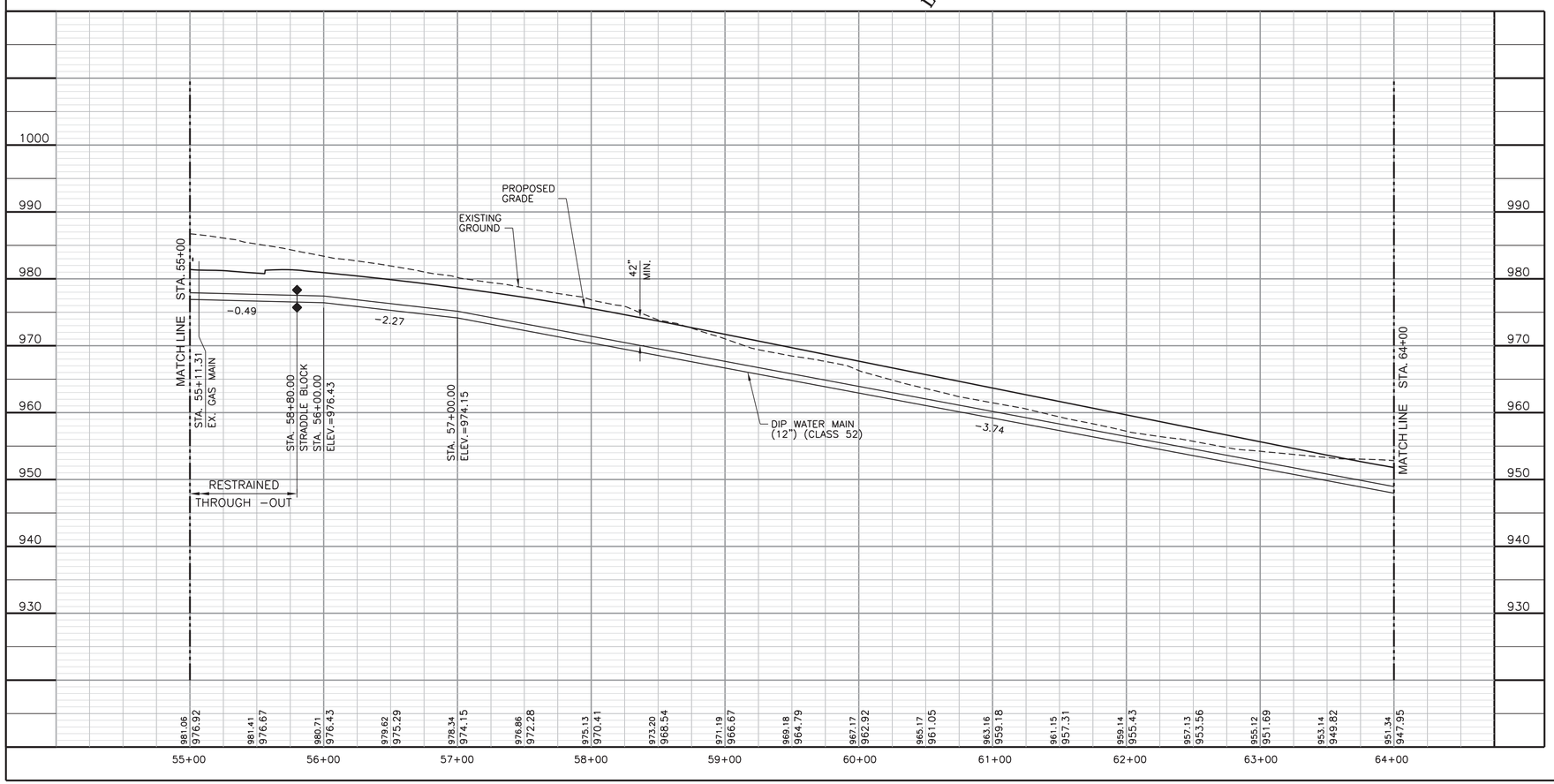
CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 8 OF 12

$$USERNAME$$
2/17/2015 - 11:25:03 AM G:\KC09\0353\UtBities\Plan Sheets\KCMO\IC-105-WAT.dgn





NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE KANSAS CITY, MO. WATER SERVICES DEPARTMENT.

LEGEND

952.46 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

952.46 = FLOWLINE ELEV. OF WATER MAIN

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0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 9 OF 12

$$USERNAME$$
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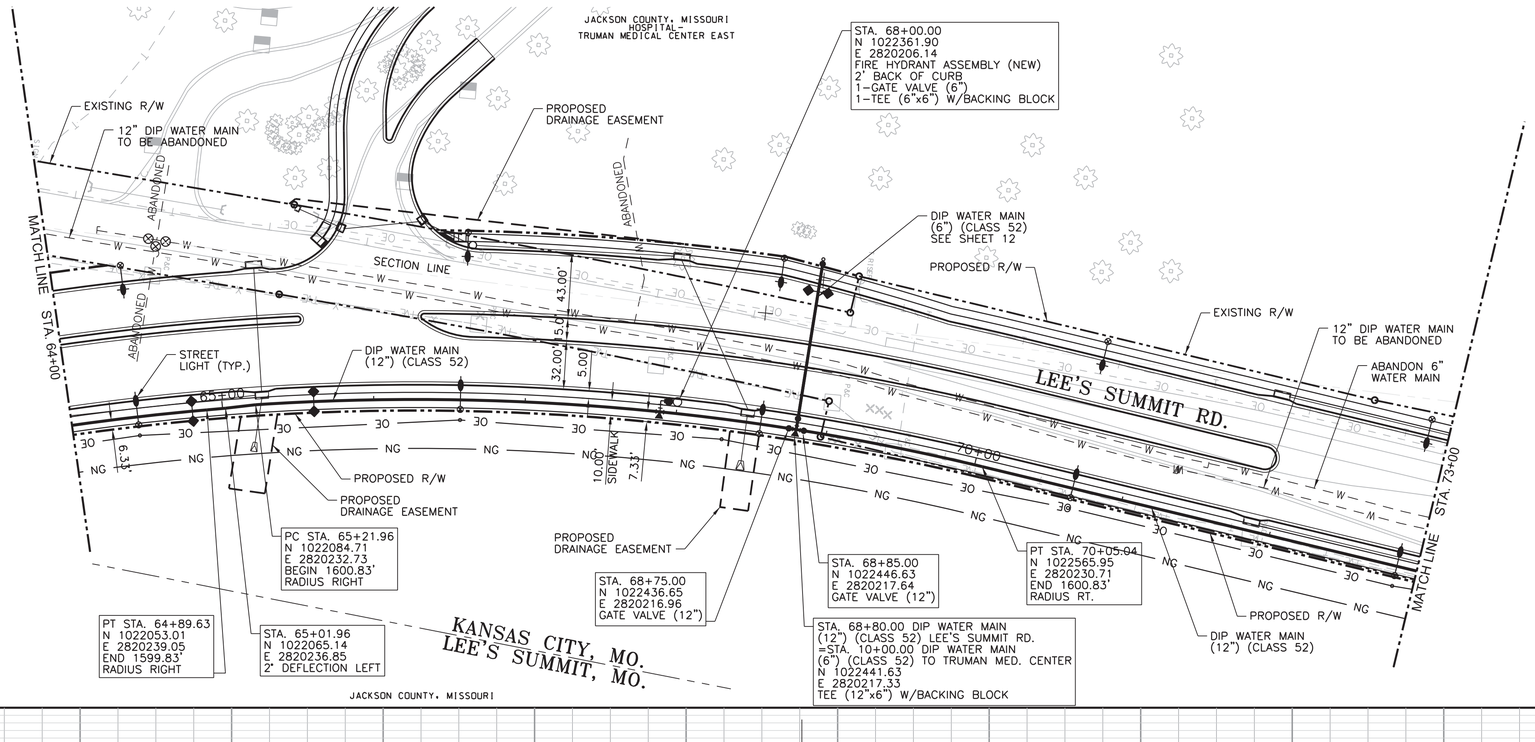

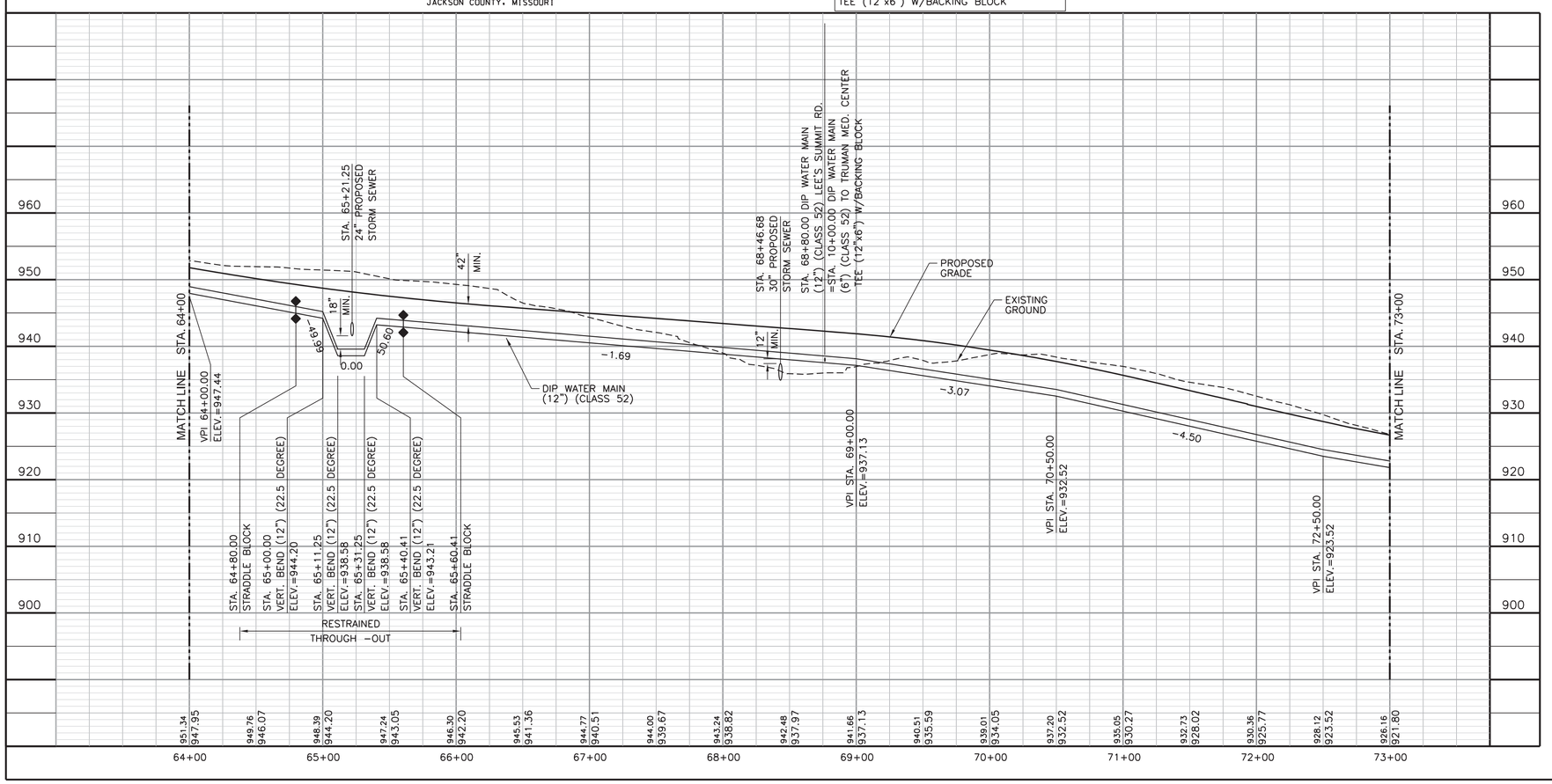

NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE KANSAS CITY, MO. WATER SERVICES DEPARTMENT.

LEGEND

932.54 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

932.54 = FLOWLINE ELEV. OF WATER MAIN

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N

0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION
FOR
LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM
KCMO CITY LIMITS TO GREGORY BLVD.,
JACKSON COUNTY, MISSOURI

12" MAIN IN
LEE'S SUMMIT ROAD
PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO.

SHEET 10 OF 12

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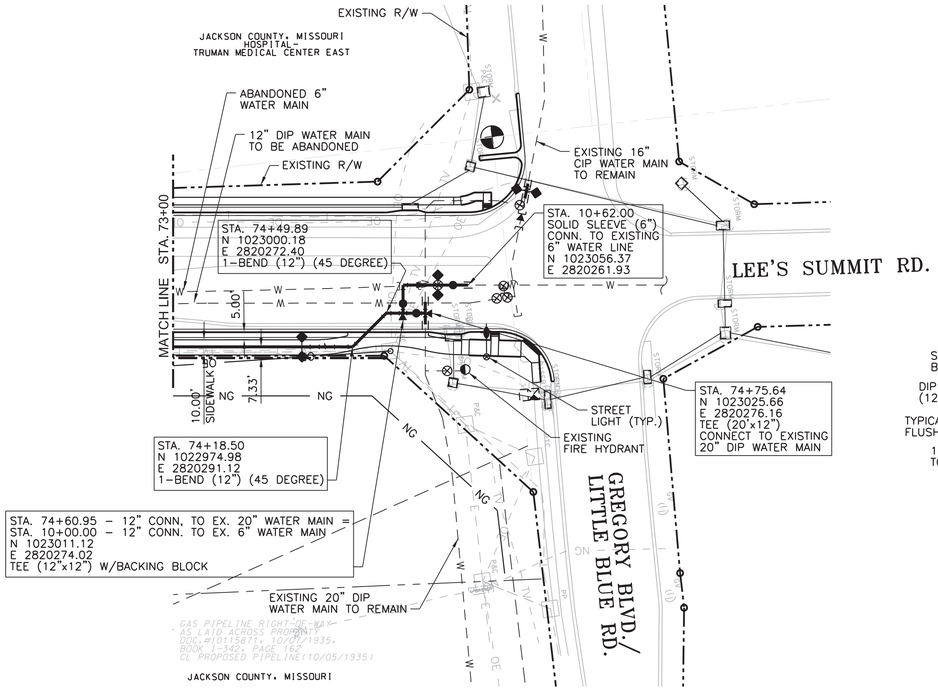
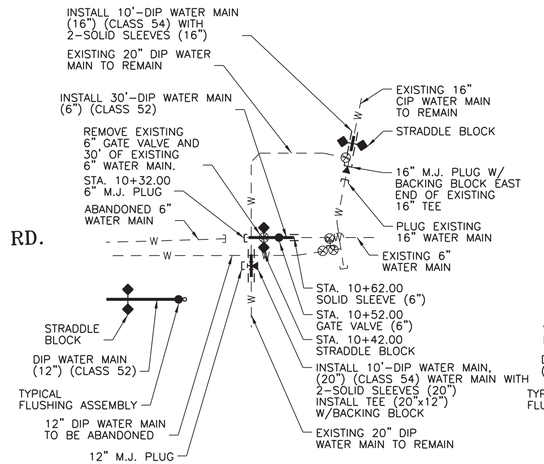
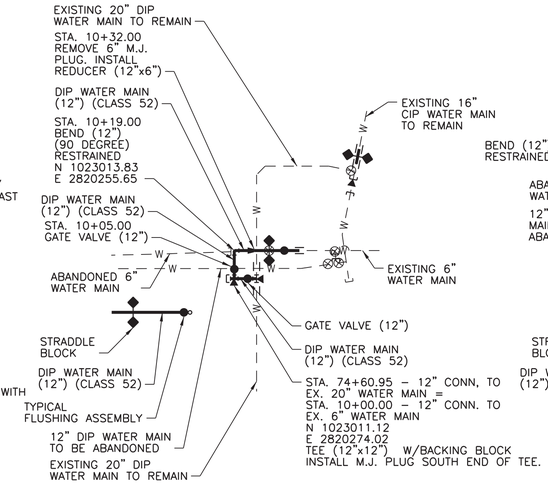
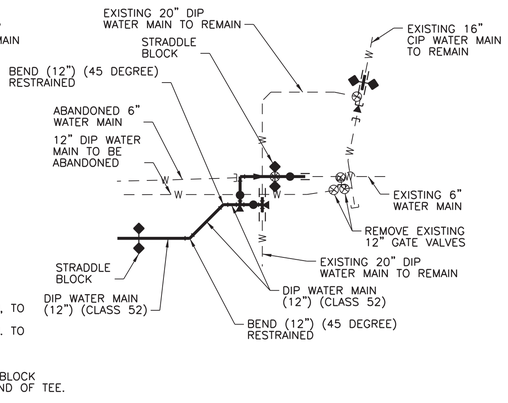




TEMPORARY CONNECTION - PHASE 1



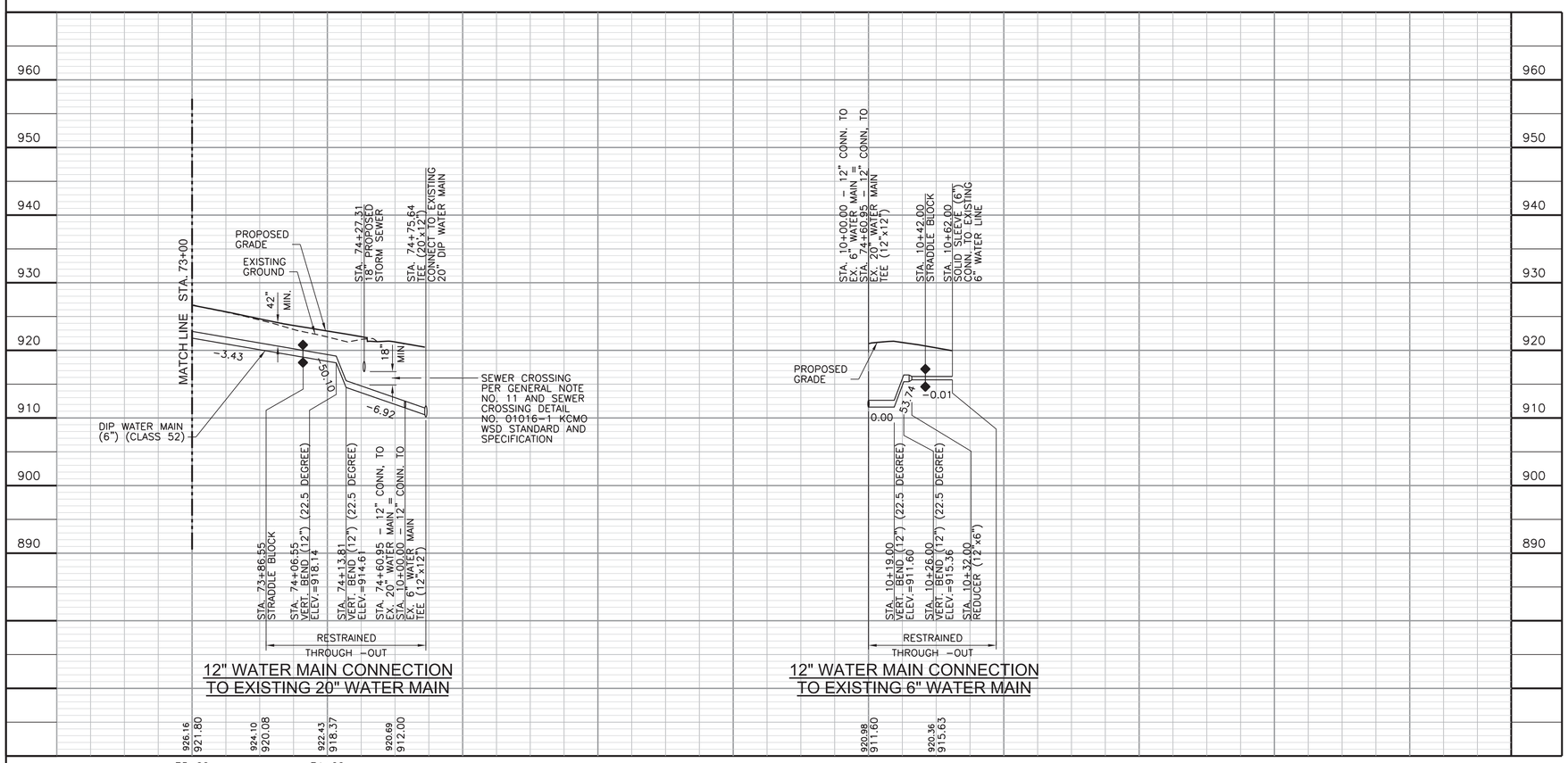
TEMPORARY CONNECTION - PHASE 2



PERMANENT CONNECTION - PHASE 3

LEE'S SUMMIT ROAD AND GREGORY BLVD.
CONNECTION DETAIL

RESTRAINED THROUGH-OUT
NO SCALE



12" WATER MAIN CONNECTION TO EXISTING 20" WATER MAIN

12" WATER MAIN CONNECTION TO EXISTING 6" WATER MAIN

NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE KANSAS CITY, MO. WATER SERVICES DEPARTMENT.

LEGEND

922.31 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

917.81 = FLOWLINE ELEV. OF WATER MAIN

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N

0 10 20 30
SCALE FEET
1" = 10'

0 50 100 150
SCALE FEET
1" = 50'

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM KCMO CITY LIMITS TO GREGORY BLVD., JACKSON COUNTY, MISSOURI

12" MAIN IN LEE'S SUMMIT ROAD PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 11 OF 12

$$USERNAME$$
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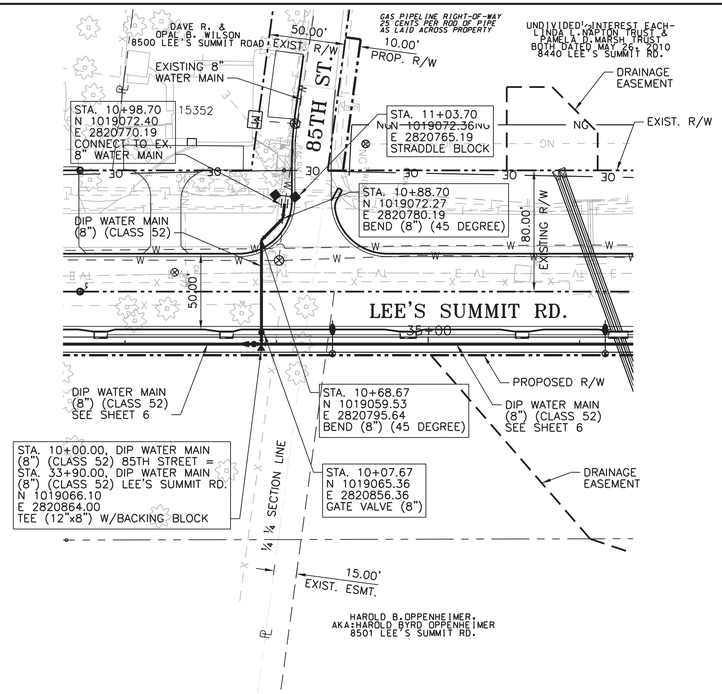
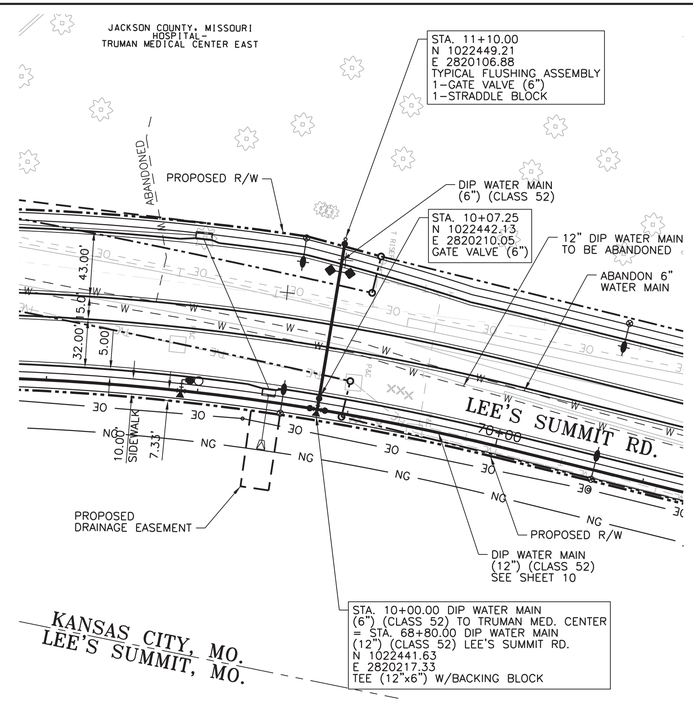
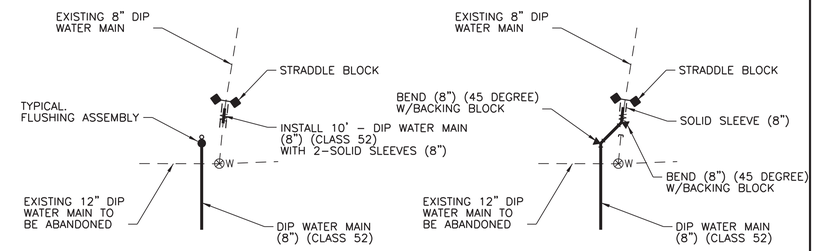




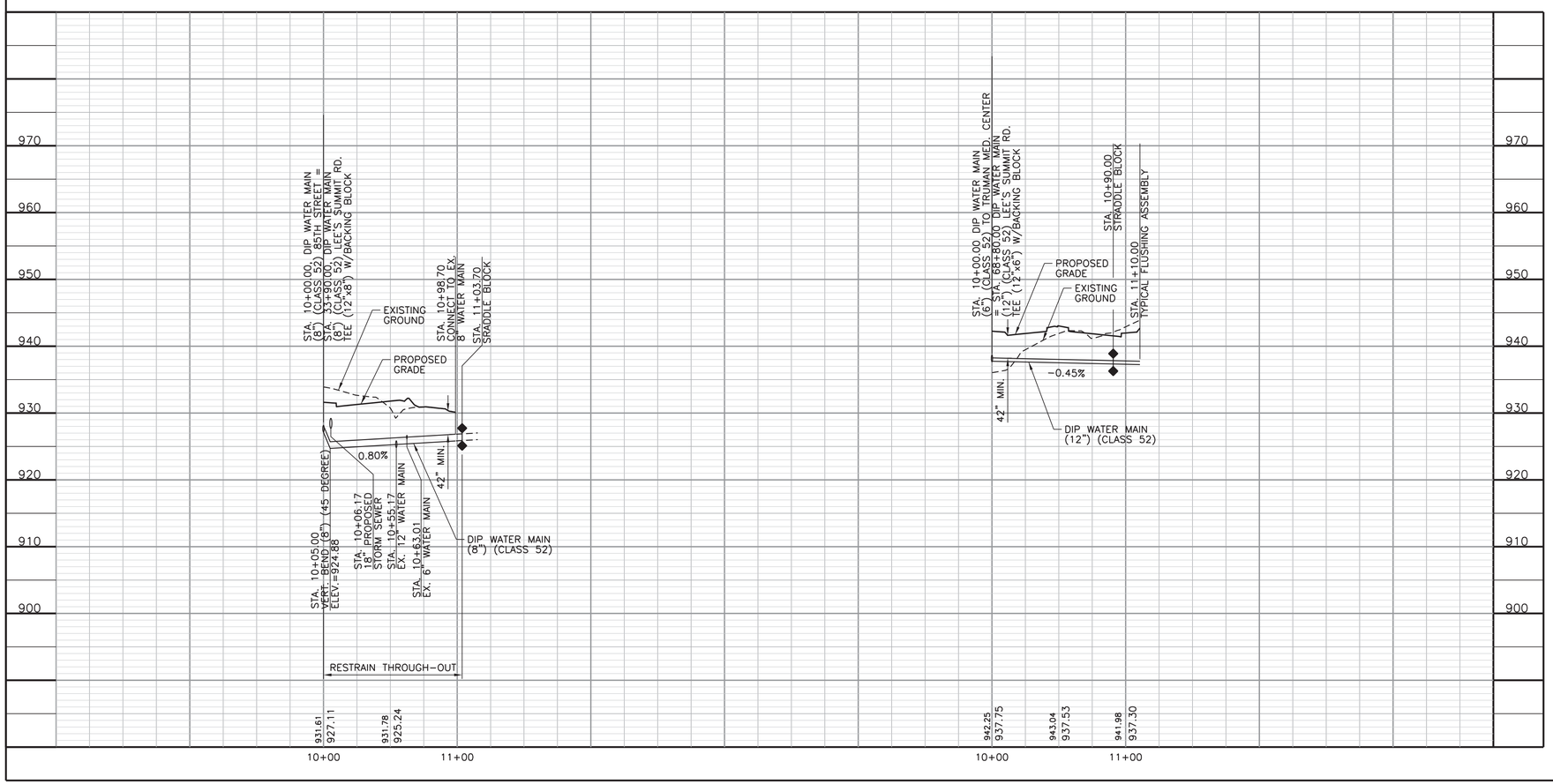


TEMPORARY CONNECTION

PERMANENT CONNECTION

85TH STREET 8" DIP CONNECTIN DETAIL

NO SCALE



NOTES:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE KANSAS CITY, MO. WATER SERVICES DEPARTMENT.

LEGEND

935.56 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

931.06 = FLOWLINE ELEV. OF WATER MAIN

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SCALE 1" = 10' (0, 10, 20, 30 FEET)

SCALE 1" = 50' (0, 50, 100, 150 FEET)

PROFESSIONAL ENGINEER SEAL

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

FOR WSD USE:

KANSAS CITY, MISSOURI, WATER SERVICES DEPARTMENT

WATER MAIN RELOCATION FOR LEE'S SUMMIT ROAD

LEE'S SUMMIT ROAD FROM KCMO CITY LIMITS TO GREGORY BLVD., JACKSON COUNTY, MISSOURI

8" MAIN IN 85TH ST. AND 6" MAIN TRUMAN MEDICAL CENTER PLAN AND PROFILE

DRAWN BY:	CHECKED BY:	DATE SUBMITTED:	RANGE	TOWNSHIP	SECTION
CAS	DRW	01-04-2013	31W	48N	18 & 19
CONTRACTOR			DATE COMPLETED		

CONTRACT NO.	CONTRACT DATE	MAP NO.	WORK ORDER NO.	DRAWING NO.
		J-4749 J-4949 J-5149 J-5151		------

PROJECT NO. ----------

SHEET 12 OF 12

$$USERNAME$$
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LEE'S SUMMIT MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

DOUGLAS ST. & LEE'S SUMMIT ROAD FROM COLBERN ROAD TO KCMO CITY LIMITS

WATER MAIN RELOCATION

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
PROJECT NO. 363161-C

UTILITY NOTES:

VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATION SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITES, CALL 1-800-344-7483, MISSOURI. LAW REQUIRES YOU TO CALL 48 HOURS BEFORE YOU DIG.

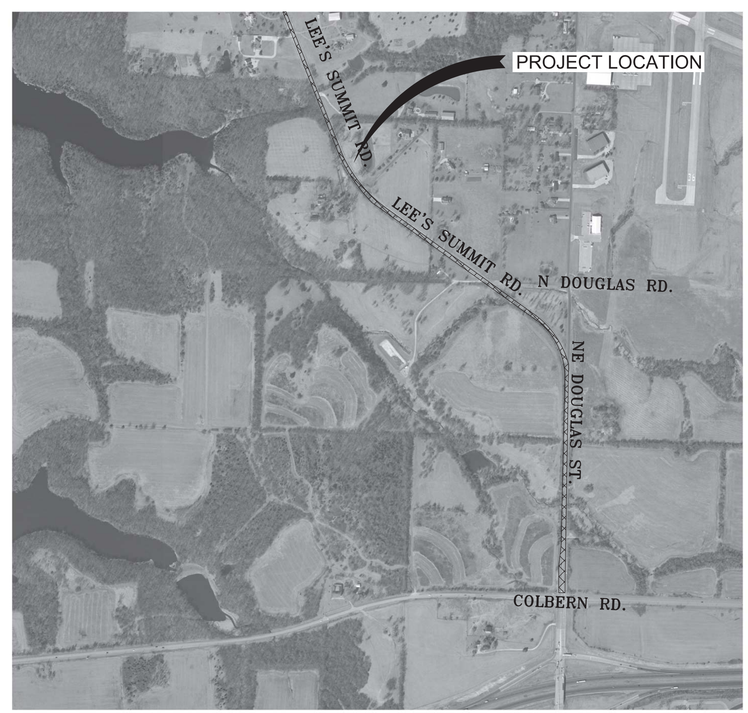
EMERGENCY UTILITY NUMBERS

KCP&L – DWIGHT HICKS	816 – 347 – 4309
COMCAST COMMUNICATIONS – STEVE CROMWELL	816 – 795 – 2257
MISSOURI GAS ENERGY – BECCA ORR	816 – 969 – 2230
AT&T – MARK MANION	816 – 325 – 6516
LEE'S SUMMIT WATER UTILITIES	816 – 969 – 1940
MODOT SIGNALS – MARK DURHAM	816 – 356 – 4748

PLANS PREPARED BY:

TranSystems

2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601
CONTACT: MITCH LAMBETH



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LOCATION MAP
NO SCALE

INDEX OF SHEETS

SHEET NO.	TITLE
G-001	COVER SHEET
G-002	GENERAL NOTES, LAYOUT AND SUMMARY OF QUANTITIES
G-003	CONTROL DATA SHEET
LS-101	16" WATER MAIN PLAN AND PROFILE STA. 10+00 – 20+00
LS-102	16" WATER MAIN PLAN AND PROFILE STA. 20+00 – 31+00
LS-103	20" WATER MAIN PLAN AND PROFILE STA. 10+00 – 21+00
LS-104	20" WATER MAIN PLAN AND PROFILE STA. 21+00 – 30+00
LS-105	12" WATER MAIN PLAN AND PROFILE STA. 10+00 – 20+00
LS-106	8" AND 12" WATER MAIN PLAN AND PROFILE STA. 20+00 – 30+00
LS-107	8" WATER MAIN PLAN AND PROFILE STA. 30+00 – 40+00
LS-108	8" WATER MAIN PLAN AND PROFILE STA. 40+00 – 47+71.77
LS-109	SANITARY SEWER LINE A, PLAN AND PROFILE
LS-110	SANITARY SEWER LINE B, PLAN AND PROFILE
LS-501	16" WATER MAIN CONNECTION DETAILS
LS-502	20" WATER MAIN CONNECTION DETAILS
LS-503	STANDARD WATER LINE DETAILS
LS-504	STANDARD WATER LINE DETAILS

PREPARED BY:

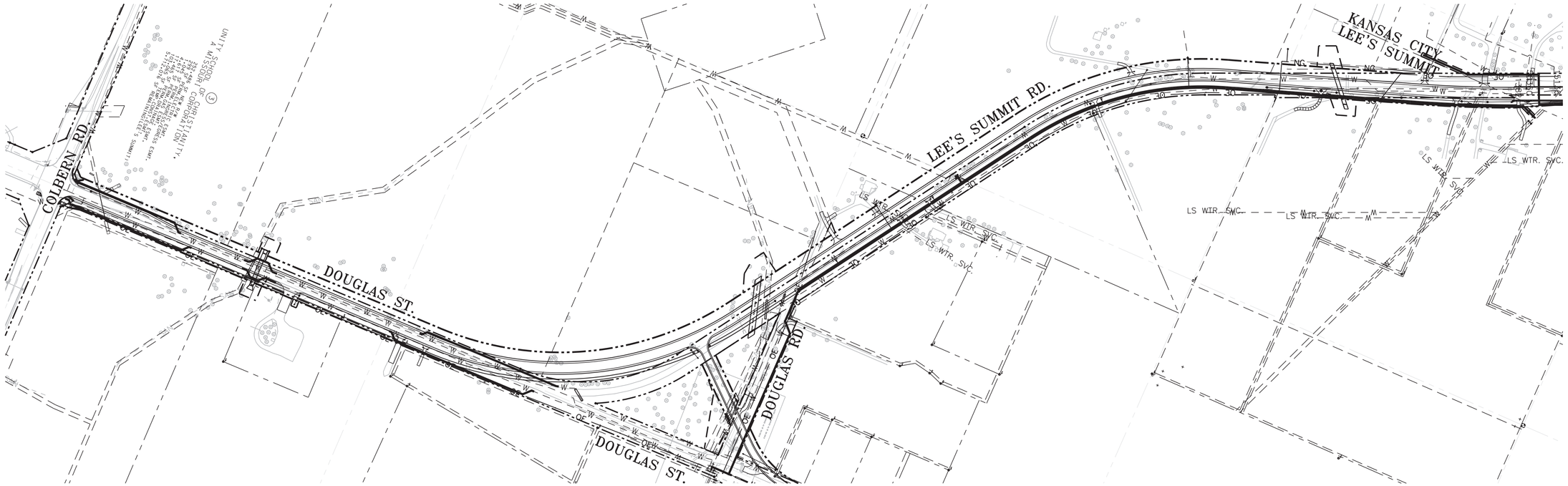
STATE OF MISSOURI
James M. Lambeth
NUMBER
E-23507
PROFESSIONAL ENGINEER

JAMES M. LAMBETH, P.E. DATE

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

dlmason
2/17/2015 - 4:05:56 PM - G:\KC09\035\Utilities\Plan Sheets\Lees Summit\G-001-COV.dgn

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE "CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900–WATER MAINS".
2. CONTRACTOR SHALL POTHOLE AND EXPOSE ALL TIE–IN AND CROSSING LOCATIONS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL FITTINGS REQUIRED TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT FOR NEW WATER MAINS, CONNECTIONS TO EXISTING WATER MAINS AND INSTALLATION OF FIRE HYDRANTS AT THE PROPER LOCATION AND ELEVATION, WHETHER OR NOT THE PROPER FITTINGS, LOCATION OR ELEVATIONS ARE CALLED OUT ON THE DRAWINGS, INCLUDING MODIFICATION OF EXISTING INFRASTRUCTURE REQUIRED TO MAKE ALL OF THE WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE "CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900–WATER MAINS".
3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY BLOW–OFF ASSEMBLIES, FITTINGS, THRUST BLOCKING, AND RESTRAINING DEVICES REQUIRED FOR TEMPORARY CONNECTIONS FOR FLUSHING, PRESSURE TESTING, CHLORINATION, AND DE–CHLORINATION OF THE NEW WATER MAINS. PRIOR TO PLACING NEW MAINS IN SERVICE THE CONTRACTOR SHALL REMOVE ANY CORPORATION COCKS USED FOR TESTING OR CHLORINATION AND REPLACE THEM WITH TAPERED BRASS PLUGS.
4. THE CONTRACTOR SHALL INSTALL POLYETHYLENE ENCASEMENT ON ALL WATER MAINS, VALVES, FITTINGS, AND OTHER APPURTENANCES FOR THE FULL LENGTH OF THE PROJECT IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE "CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900–WATER MAINS".
5. SCHEDULING OF WATER MAIN SHUTS AND CONNECTION TO EXISTING MAINS SHALL BE AT THE DISCRETION OF THE WATER UTILITIES DEPARTMENT.
6. ALL FIRE HYDRANT BRANCHES SHALL BE RESTRAINED USING APPROVED RESTRAINING DEVICES. HYDRANTS SHALL BE INSTALLED SO THAT THE CENTERLINE OF THE OUTLET NOZZLE IS BETWEEN TWENTY–ONE AND THIRTY INCHES (21" – 30") ABOVE FINISHED GRADE, AND SO THAT THERE IS A MINIMUM CLEAR AREA OF 5' IN EACH DIRECTION TO ALLOW OPERATION OF THE HYDRANT.
7. SECTIONS OF WATER MAIN REQUIRING MULTIPLE BENDS, SUCH AS CUL–DE–SACS, SHALL BE RESTRAINED WITH APPROVED JOINT RESTRAINING DEVICES AND STRADDLE BLOCKS IN LIEU OF BACKING BLOCKS.
8. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN, ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES. CONTRACTORS SHALL POTHOLE AND EXPOSE ALL UTILITIES (INDICATED ON THE DRAWINGS, LOCATED AT GRADE BY A UTILITY LOCATING SERVICE, OR EVIDENT FROM UTILITY COMPANY INFORMATION) AT LEAST 500 FEET IN ADVANCE OF WATER MAIN CONSTRUCTION, DETERMINING THE DEPTH, SIZE, AND MATERIAL OF THE UTILITIES IN PROXIMITY TO THE PROPOSED WATER MAIN ALIGNMENT. DEFLECT PIPE TO MAINTAIN MINIMUM 5 FEET HORIZONTAL AND 18 INCH VERTICAL CLEARANCES BETWEEN PROPOSED WATER MAIN AND ALL EXISTING UTILITIES.
9. THE CONTRACTOR SHALL COMPLY WITH STATE LAW REQUIRING ANY PERSON OR FIRM DOING EXCAVATION ON THE PUBLIC RIGHT–OF–WAY DO SO ONLY AFTER GIVING NOTICE TO AND OBTAINING INFORMATION FROM UTILITY COMPANIES.
10. STREETS AND PARKING AREAS ARE TO BE TO GRADE AND CURBS IN PLACE PRIOR TO CONSTRUCTION OF WATER MAINS. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM GROUND COVER OF 42 INCHES BELOW FINISHED GRADE.
11. WATER MAINS SHALL BE AT LEAST 10 FEET HORIZONTALLY FROM ANY SEWER.

    WHENEVER A WATER MAIN MUST CROSS ABOVE A SEWER, A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER SHALL BE MAINTAINED. WHENEVER A WATER MAIN MUST CROSS UNDER A SEWER, A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE SEWER AND THE TOP OF THE WATER MAIN SHALL BE MAINTAINED. A FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ON THE SEWER TO BE CROSSED SO THAT THE JOINTS WILL BE EQUALLY DISTANT FROM THE SEWER AND AS FAR AWAY AS POSSIBLE. THE 18–INCH VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN 10 FEET, HORIZONTALLY, OF ANY SEWER IT CROSSES.

    WHEN LOCAL CONDITIONS PREVENT A VERTICAL SEPARATION OF 18 INCHES, THE SEWER MUST BE ENCASED WITHIN 10 FEET OF EITHER SIDE OF THE WATER MAIN.

    WHERE THESE CONDITIONS CANNOT BE MET, THE WATER UTILITIES DEPARTMENT SHALL BE CONSULTED AS TO THE PRECAUTIONS TO BE TAKEN TO PROTECT THE PUBLIC WATER SUPPLY.
12. A TRAFFIC CONTROL PERMIT MAY BE REQUIRED FOR THIS WORK. CONTACT THE PUBLIC WORKS ENGINEERING DIVISION LOCATED AT CITY HALL, VIA PHONE AT 816–969–1800, OR COMPLETE ON–LINE FORM AT http://cityofls.net/Public–Works/Traffic–transit/Temporary–traffic–control–Permit.aspx.
13. ALL WORK SHALL CONFORM TO THE LATEST REVISION OF THE LEE'S SUMMIT, MISSOURI EROSION AND SEDIMENT CONTROL SPECIFICATIONS, WHICH ARE MADE A PART HEREOF BY REFERENCE. EROSION CONTROL PLANS SHALL BE SUBMITTED TO THE CITY ENGINEER, PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE START OF THIS PROJECT.
14. THE END OF ALL ABANDONED WATER MAINS SHALL BE PLUGGED WITH CONCRETE.
15. COVERS, LIDS, AND STANDPIPES ON ALL ABANDONED VALVES SHALL BE REMOVED TO AT LEAST TWO FEET (2') BELOW GRADE AND THE AREA SHALL BE PROPERLY BACKFILLED. IN PAVED AREAS REMOVAL OF VALVE LID AND FILLING OF VALVE BOX WITH CONCRETE MAY BE ALLOWED AT WATER UTILITIES DEPARTMENT DISCRETION.
16. EXISTING FIRE HYDRANTS AND VALVES FROM THE VALVE VAULTS THAT ARE REMOVED SHALL BE RETURNED TO THE LEE'S SUMMIT WATER UTILITIES DEPARTMENT .
17. WATER SERVICE LINES CONNECTED TO MAINS BEING ABANDONED SHALL BE RECONNECTED TO NEW MAINS IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR WATER SERVICES LINES OF THE WATER UTILITIES DEPARTMENT, UNLESS SHOWN OTHERWISE. EXISTING WATER SERVICE LINES BEING TRANSFERRED TO NEW MAINS WILL BE UPGRADED TO MEET CURRENT REGULATIONS.
18. THE CONTRACTOR SHALL VERIFY THE OUTSIDE DIAMETER (O.D.) OF THE EXISTING WATER MAIN PRIOR TO SCHEDULING CONNECTION. PROVIDE SOLID SLEEVES AS REQUIRED.
19. CONTRACTORS SHALL PROTECT EXISTING POWER POLES AND LIGHT POLES FROM DAMAGE AND SHALL PROVIDE BRACING, SHORING, OR OTHER WORK NECESSARY FOR SUCH PROTECTION. ANY STRUCTURES REMOVED DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED.
20. PRIOR TO REMOVING EXISTING TRANSMISSION MAINS 16" AND LARGER FROM SERVICE, CONTRACTOR SHALL COORDINATE WITH LEE'S SUMMIT WATER UTILITIES DEPARTMENT REGARDING THE TIMING AND DURATION OF THE INTERRUPTION OF SERVICE.

LEGEND:

WATER MAINS
ENCASEMENT PIPE
FIRE HYDRANT ASSEMBLY
BACKING BLOCK
STRADDLE BLOCK
VALVES
FLUSHING ASSEMBLY
TAPPING SLEEVE
TAPPING SLEEVE AND VALVE
AIR RELEASE VALVE
REDUCER
TEE
PLUG

SERVICE LINES:
CONNECTION — W/S
CURB STOP
METER — M
EASEMENTS
RIGHT OF WAY
LOT LINES — PL

0 200 400 600
SCALE 1" = 200' FEET

LEE'S SUMMIT SUMMARY OF QUANTITIES

NO.	BID ITEM	UNITS	QUANTITY
	WATER LINE QUANTITIES		
1	REDUCER (8"x6")	EA.	1
2	REDUCER (12"x8")	EA.	1
3	TEE (12"x12")	EA.	3
4	SOLID SLEEVE (6")	EA.	1
5	SOLID SLEEVE (12")	EA.	1
6	SOLID SLEEVE (16")	EA.	6
7	SOLID SLEEVE (20")	EA.	6
8	BEND (8") (11.25 DEGREE)	EA.	4
9	BEND (8") (22.5 DEGREE)	EA.	4
10	BEND (8") (45 DEGREE)	EA.	1
11	BEND (8") (90 DEGREE)	EA.	1
12	BEND (12") (11.25 DEGREE)	EA.	1
13	BEND (12") (22.5 DEGREE)	EA.	2
14	BEND (12") (45 DEGREE)	EA.	2
15	BEND (16") (45 DEGREE)	EA.	12
16	BEND (20") (11.25 DEGREE)	EA.	1
17	BEND (20") (45 DEGREE)	EA.	9
18	GATE VALVE (8")	EA.	3
19	BUTTERFLY VALVE (12")	EA.	3
20	PVC WATER MAIN (8") (C-900)	EA.	2,225
21	PVC WATER MAIN (12") (C-900)	L.F.	1,594
22	DIP WATER MAIN (16") (CLASS 54)	L.F.	1,267
23	DIP WATER MAIN (20") (CLASS 54)	L.F.	1,160
24	STEEL ENCASEMENT PIPE (20")	L.F.	118
25	FIRE HYDRANT ASSEMBLY (NEW)	EA.	9
26	FIRE HYDRANT ASSEMBLY (RECONNECT)	EA.	1
27	BLOW OFF ASSEMBLY	EA.	1
	SANITARY SEWER QUANTITIES		
28	CAP AND SEAL EX. SAN. SEWER MANHOLE	EA.	1
29	ADJUST EXISTING SANITARY SEWER MANHOLE TOP	EA.	1

Tran Systems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:	MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: NO SCALE
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
GENERAL NOTES LAYOUT AND SUMMARY OF QUANTITIES

SHEET NO.
G-002
SHEET 2 OF 17

dlmason
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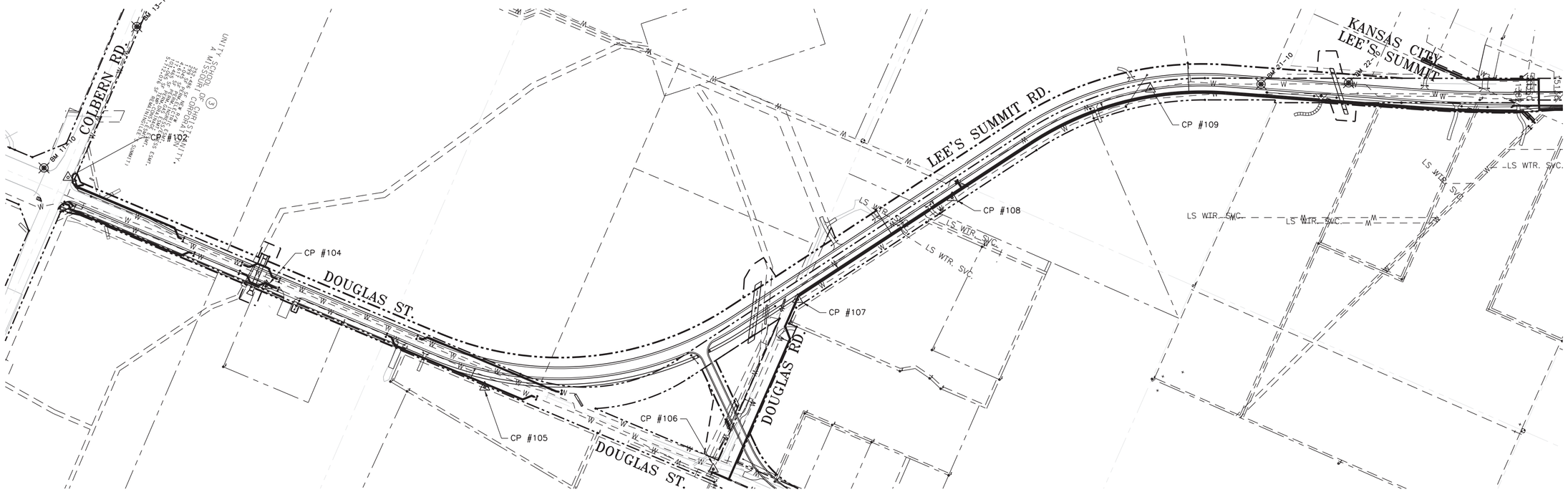


0 200 400 600
SCALE FEET
1" = 200'

NOTES:

ELEVATION CONVERSION FACTOR FROM KCMO DATUM TO NAVD 88 DATUM IS +722.57.

ALL COORDINATES SHOWN HEREON ARE MISSOURI COORDINATE SYSTEM OF 1983, WEST ZONE, MEASUERD IN US SURVEY FEET.

CONVERSION FACTOR FROM METERS TO U.S. SURVEY FEET:
1 METER = 3.2808333 U.S. FEET.

BENCHMARKS

BM 25-10

BM# 11-10 — FOUND "U" CUT TOP EAST SIDE CONCRETE FOOTING FOR SIGNAL IN SOUTHWEST QUAD. DOUGLAS ST. (AKA: LEES SUMMIT ROAD) AND NORTHEAST COLBERN ROAD.
ELEV. = 985.48

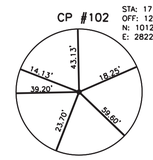
BM# 13-10 — SET "+" CUT ON NORTHEAST BOLT TOP FLANGE FIRE HYDRANT, NORTH SIDE OF NORTHEAST COLBERN ROAD ±500' WEST OF DOUGLAS ST. (AKA: LEES SUMMIT ROAD).
ELEV. = 965.50

BM# 21-10 — SET "L" CUT NORTHWEST CORNER OF WEST HEADWALL OF RCB UNDER LEES SUMMIT ROAD ±250' SOUTH OF #551 DRIVE.
ELEV. = 907.71

BM# 22-10 — FOUND "L" CUT NORTHWEST CORNER OF EAST HEADWALL OF RCB UNDER LEES SUMMIT ROAD ±40' NORTH OF #551 DRIVE.
ELEV. = 897.50

CONTROL POINTS

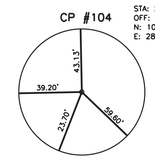
CP #102
STA: 17+77.73 ℄ DOUGLAS ST.
OFF: 1207.64' LT
N: 1012382.179
E: 2822452.995



½" REBAR

SET MAG & SHINER S. FACE FNC POST — N.N.E. 16.50'
SET MAG & SHINER IN N. FOG LINE N.E. COLBERN RD — S. 14.13'
S.E. CORNER I-BEAM FOR E. GATE POST FOR FIELD ENTRANCE — N.W. 18.25'
GRAVEL FIELD ENTRANCE — E. +/- 20'

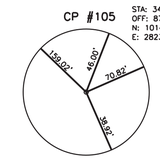
CP #104
STA: 26+09.89 ℄ DOUGLAS ST.
OFF: 28.41' RT
N: 1013182.573
E: 2823709.843



½" REBAR

SET NAIL & SHINER IN W. FACE PP — N.N.E. 59.60'
8' CHAINLINK FNC W/ 3 BARBS AIRPORT FNC — E. 23.70'
"L" CUT ON N.E. CORNER E. HDWL RCB UNDER DOUGLS ST. (BM #16-10) — S.S.E. 39.20
TOP CTR F.H. — W.S.W. 43.13'

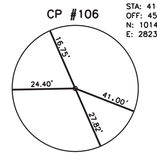
CP #105
STA: 34+83.92 ℄ DOUGLAS ST.
OFF: 87.47' RT
N: 1014069.877
E: 2823770.605



½" BAR W/ LATHE

SET NAI & SHINER W. FACE 2' CIRC. ASH — N.E. 38.92'
PR SPK IN W. FACE P.P. — S.S.W. 159.02'
MAG & SHINER IN E. FOG LINE DOUGLAS — W. 46.00'
TOP CTR BELL BOX AT S. SIDE P.P. — N.W. 70.82'

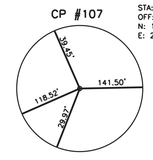
CP #106
STA: 41+62.07 ℄ DOUGLAS ST.
OFF: 459.00' RT
N: 1014965.191
E: 2823745.619



½" REBAR

FND NAIL & SHINER S. FACE P.P. — N. 41.00'
TOP CTR F.H. — N.E. 27.82'
FND NAIL & SHINER N. FACE P.P. — S.S.E. 24.40'
WATER VALVE IN ROAD — S.W. 16.75'

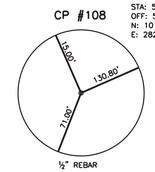
CP #107
STA: 46+62.21 ℄ LEE'S SUMMIT RD
OFF: 61.16' RT
N: 1015027.037
E: 2823049.248



½" REBAR

FND NAIL & SHINER W. FACE P.P. — N.N.W. 141.50'
TOP CTR NUT OF F.H. — E. 29.97'
FND NAIL & SHINER N. FACE P.P. W/ LIGHT POST FOR "AIRPORT —✈ SIGN — S.E. 118.52'
S.W. 39.45'

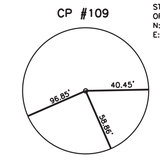
CP #108
STA: 53+44.23 ℄ LEE'S SUMMIT RD
OFF: 59.29' RT
N: 1015420.894
E: 2822492.444



½" REBAR

"+" CUT ON SOUTHERLY BOLT ON TOP FLANGE OF F.H. — N.W. 130.80'
SET NAIL & SHINER W. FACE P.P. — E. 71.00'
+/- CL OF LEE'S SUMMIT ROAD — S.W. 15.00'

CP #109
STA: 61+99.60 ℄ LEE'S SUMMIT RD
OFF: 24.95' RT
N: 1015956.697
E: 2821853.949



½" REBAR

SET NAIL & SHINER W. FACE P.P. — N.E. 58.86'
SET NAIL & SHINER N. FACE P.P. — S.E. 96.85'
TOP CTR BELL BOX ON N.E. SIDE OF TELE. POLE W. CASES ON E. FACE — N.N.W. 40.45'

Tran Systems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: 1"=200'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
CONTROL DATA SHEET

SHEET NO.
G-003
SHEET 3 OF 17

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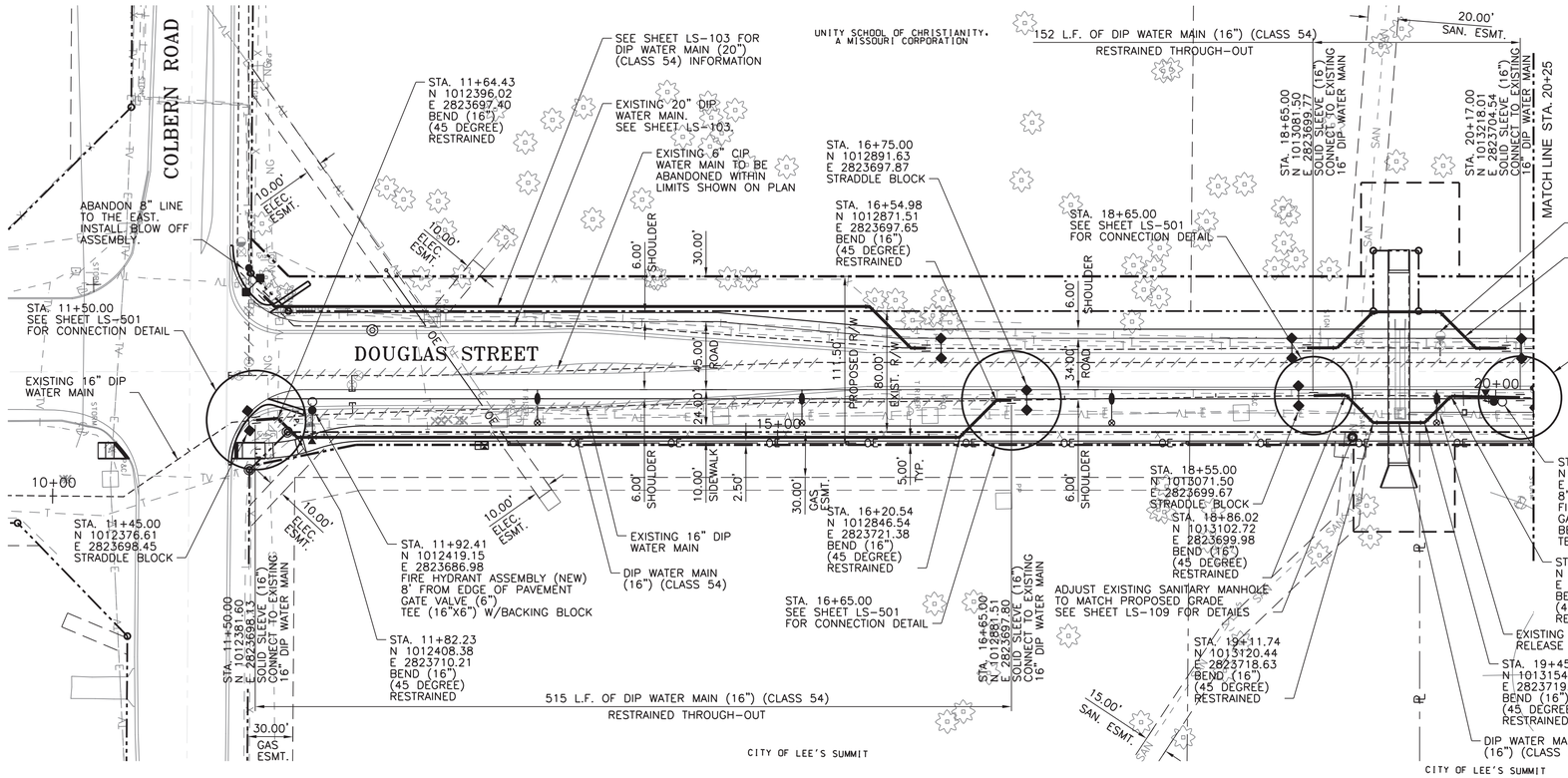


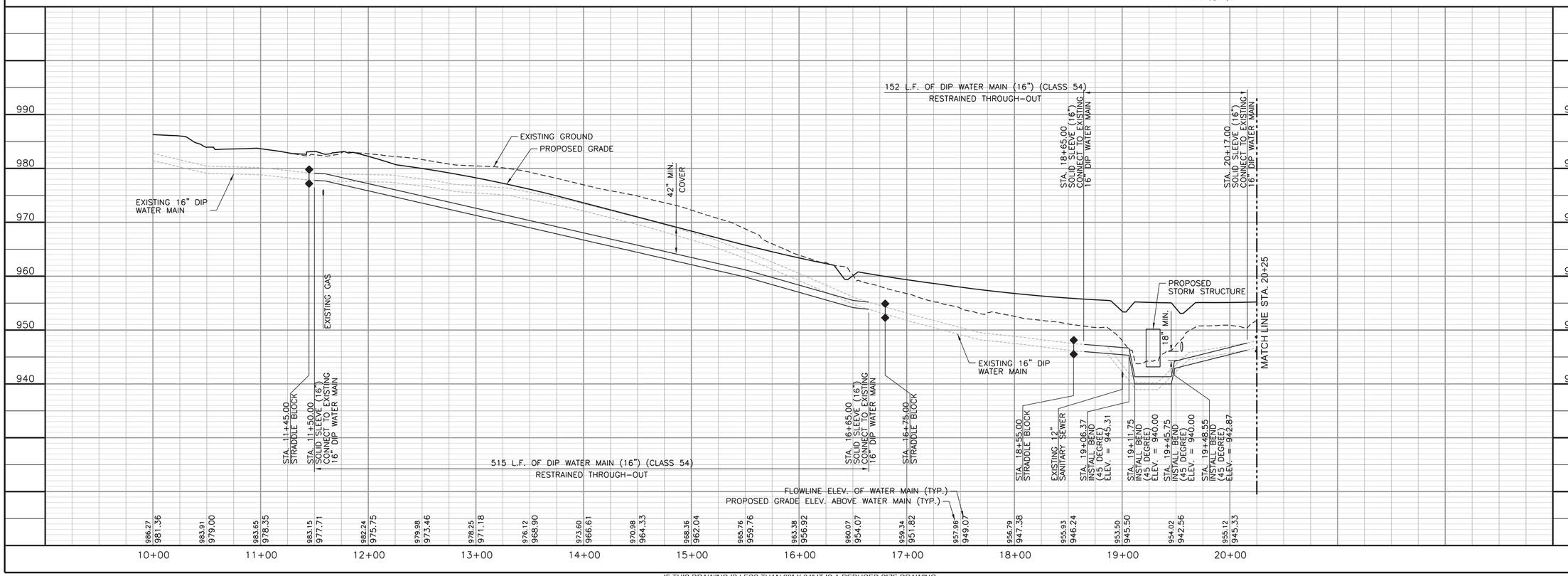
NOTE:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900-WATER MAINS.

LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN



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PROFESSIONAL ENGINEER

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FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO:	P101090353
SCALE:	1"=50'
DATE:	2/17/2015
DESIGNED BY:	RJ
DRAWN BY:	CAS
CHECKED BY:	DRW

SHEET TITLE:

16" WATER MAIN PLAN AND PROFILE STA. 10+00 TO STA. 20+25

SHEET NO.

LS-101

SHEET 4 OF 17

dlmason
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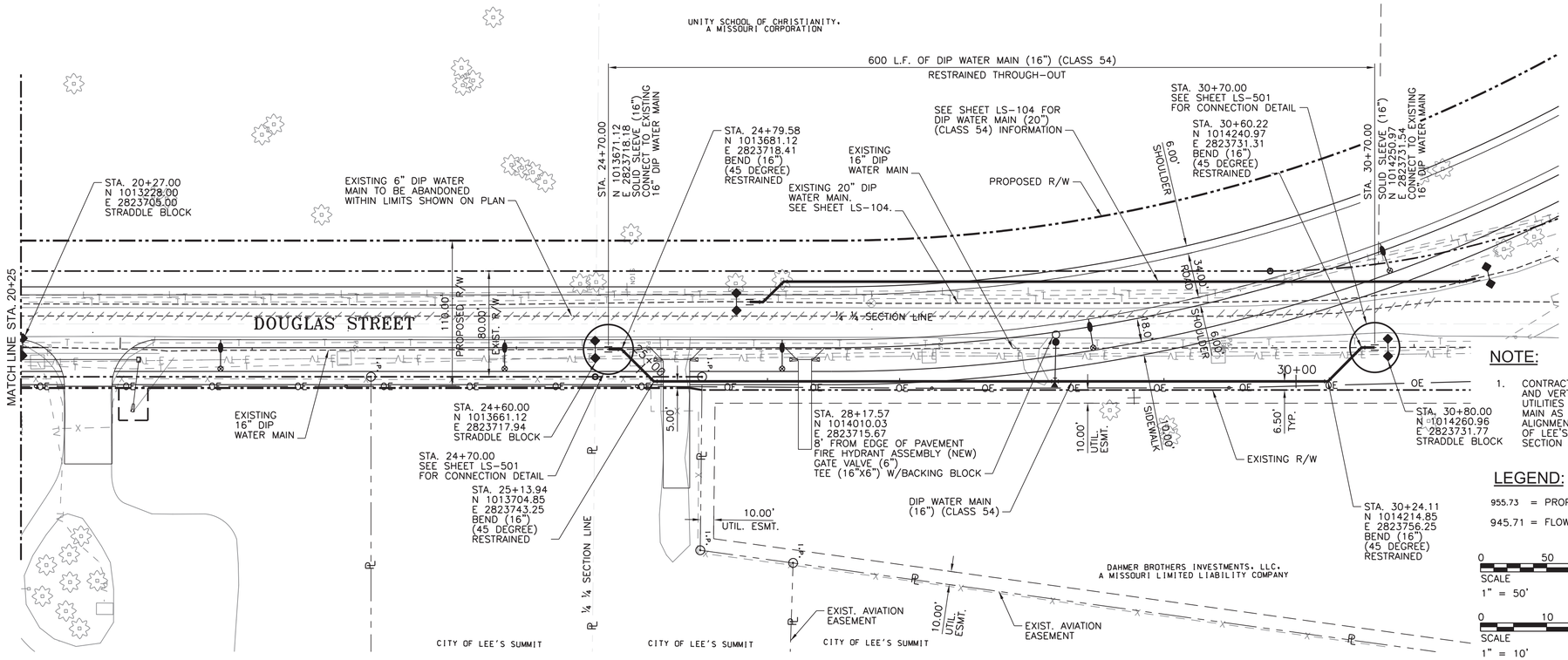

NOTE:

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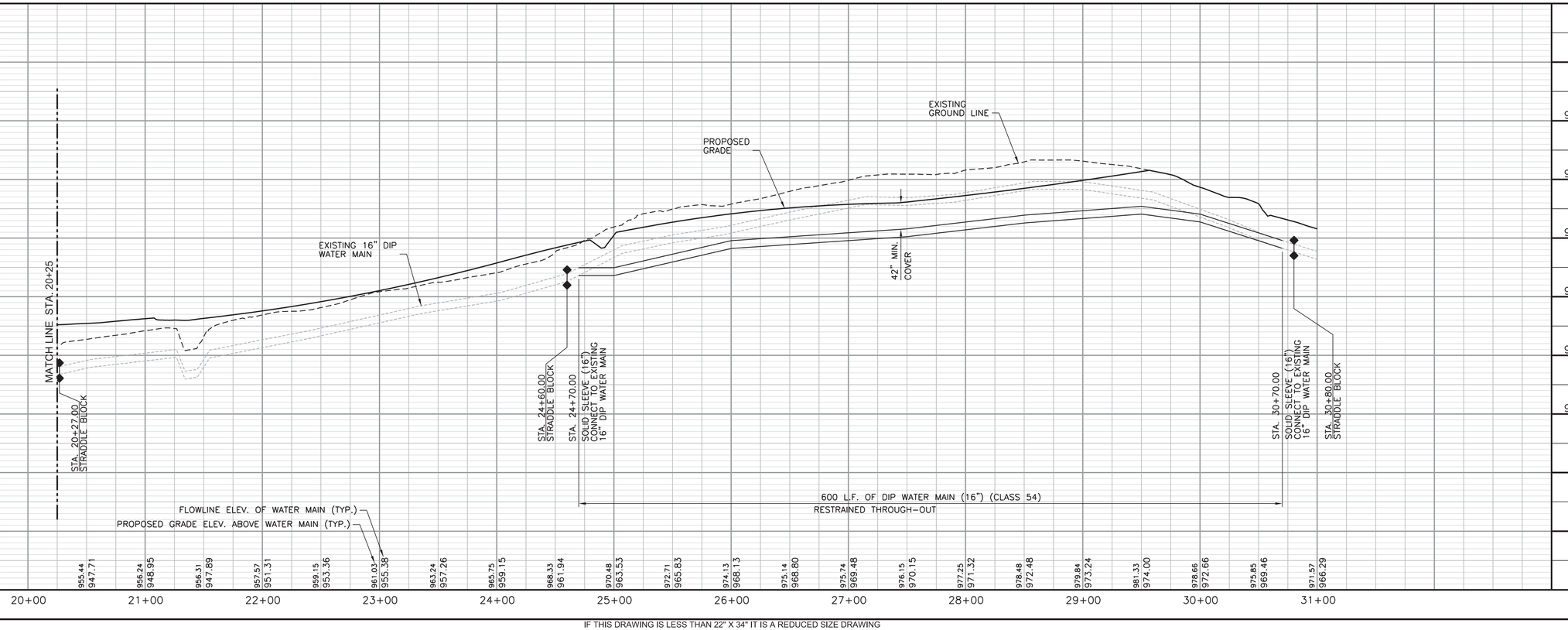
LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN



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FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LS LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO:	P101090353
SCALE:	1"=50'
DATE:	2/17/2015
DESIGNED BY:	RJ
DRAWN BY:	CAS
CHECKED BY:	DRW

SHEET TITLE:

16" WATER MAIN PLAN AND PROFILE STA. 20+25 TO STA. 31+00

SHEET NO.

LS-102

SHEET 5 OF 17

dmason
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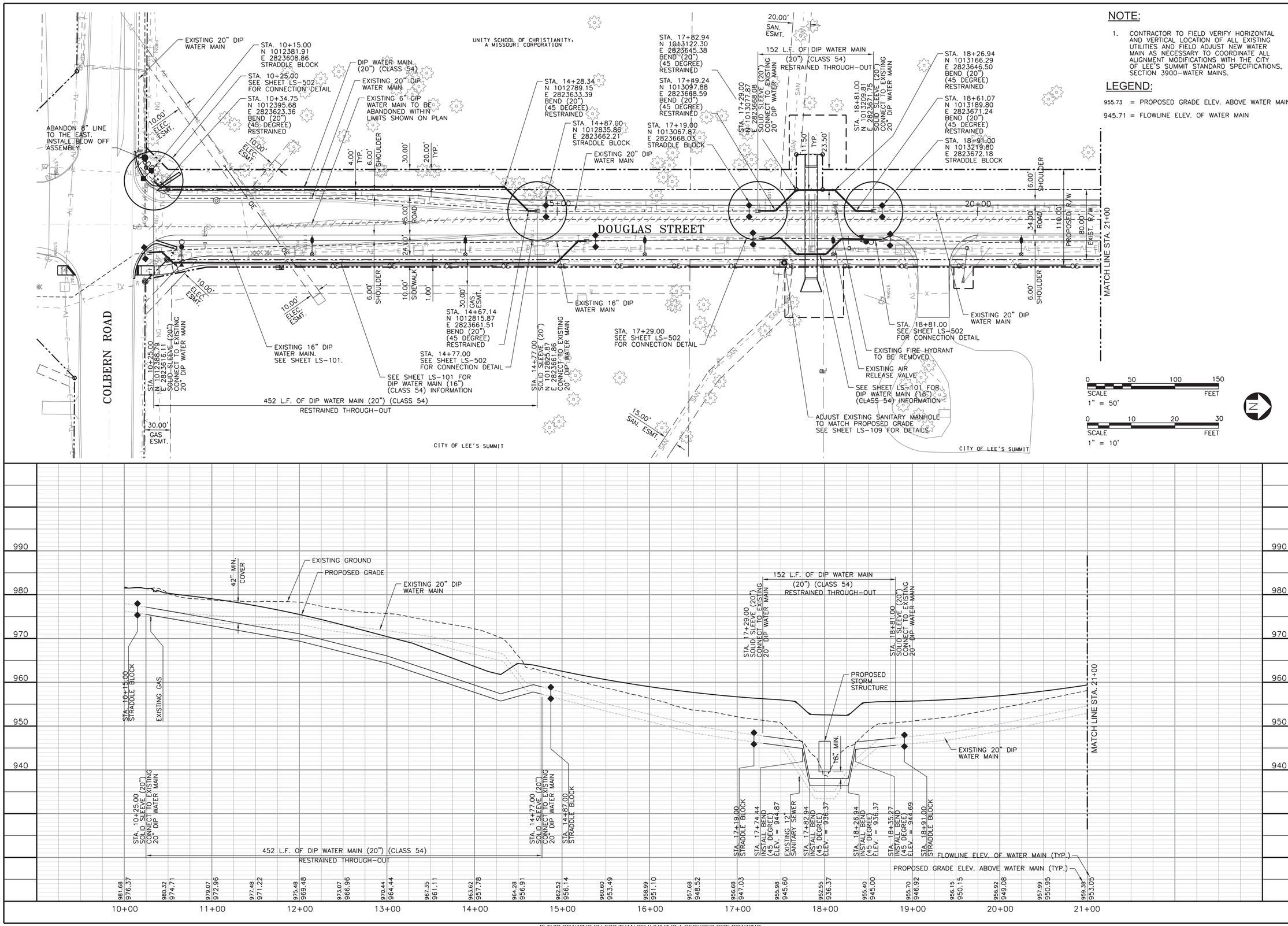

NOTE:

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LEGEND:

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945.71 = FLOWLINE ELEV. OF WATER MAIN

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STATE OF MISSOURI
James M. Lambeth
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PROFESSIONAL ENGINEER

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WATER MAIN RELOCATION

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PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO:	P101090353
SCALE:	1" = 50'
DATE:	2/17/2015
DESIGNED BY:	RJ
DRAWN BY:	CAS
CHECKED BY:	DRW

SHEET TITLE:

20" WATER MAIN PLAN AND PROFILE STA. 10+00 TO STA. 21+00

SHEET NO.

LS-103

SHEET 6 OF 17

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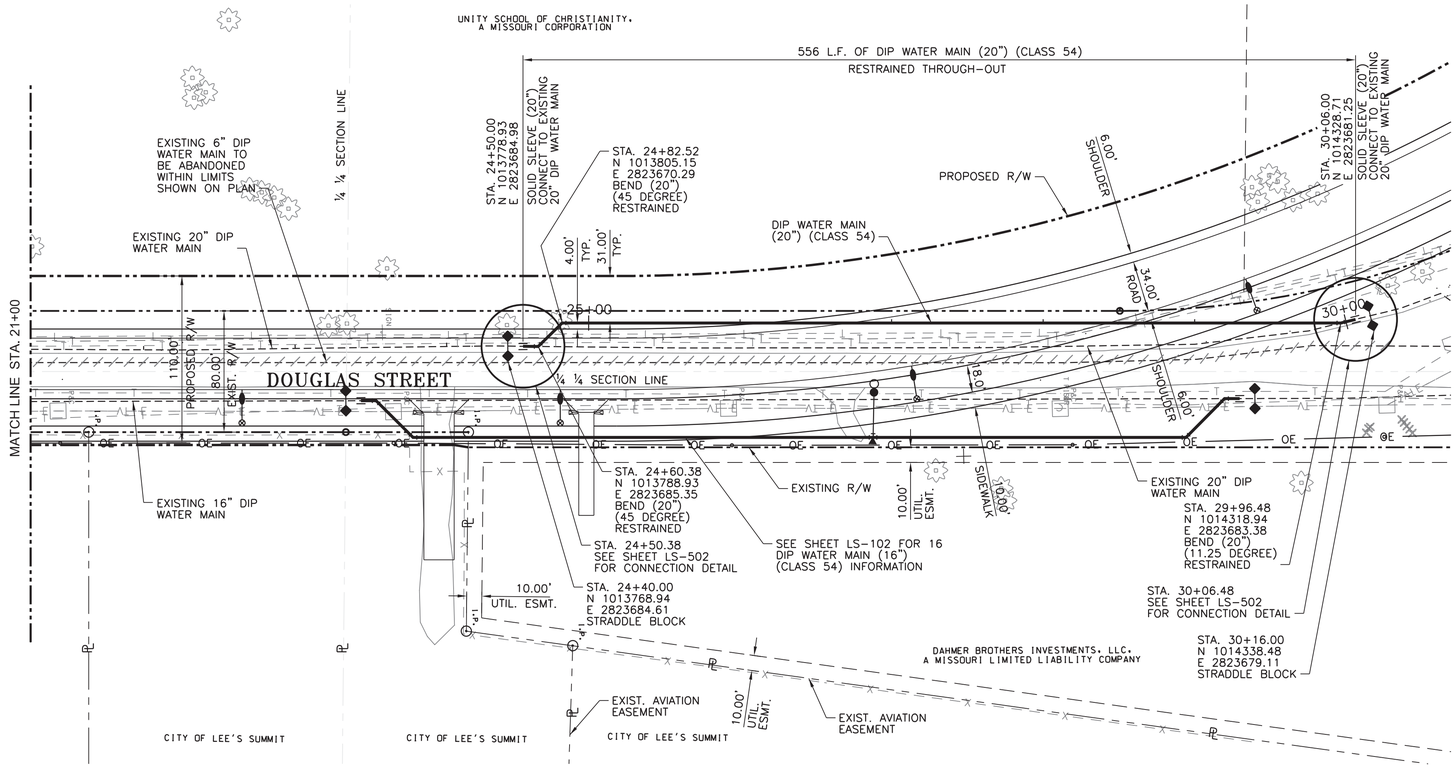

NOTE:

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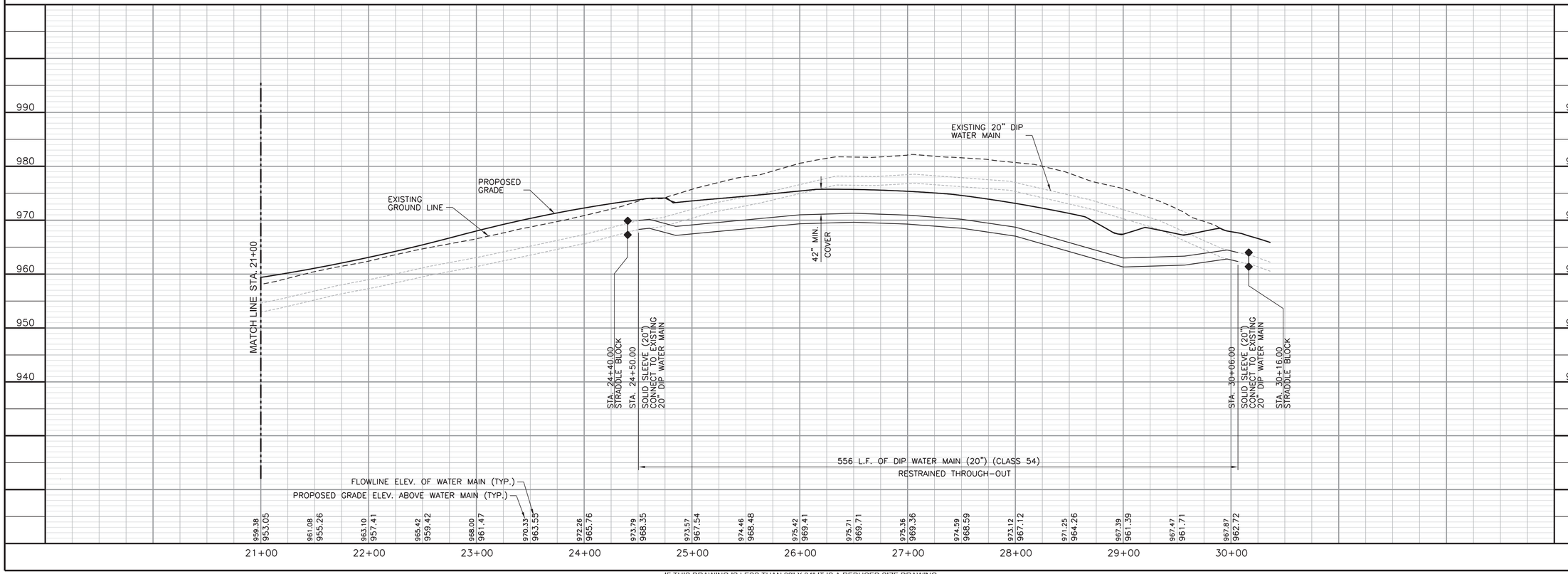
LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN

0 50 100 150 SCALE FEET 1" = 50'

0 10 20 30 SCALE FEET 1" = 10'



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COLBERN ROAD
WATER MAIN RELOCATION

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PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: 1"=50'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
20" WATER MAIN PLAN AND PROFILE STA. 21+00 TO STA. 30+20

SHEET NO.
LS-104
SHEET 7 OF 17

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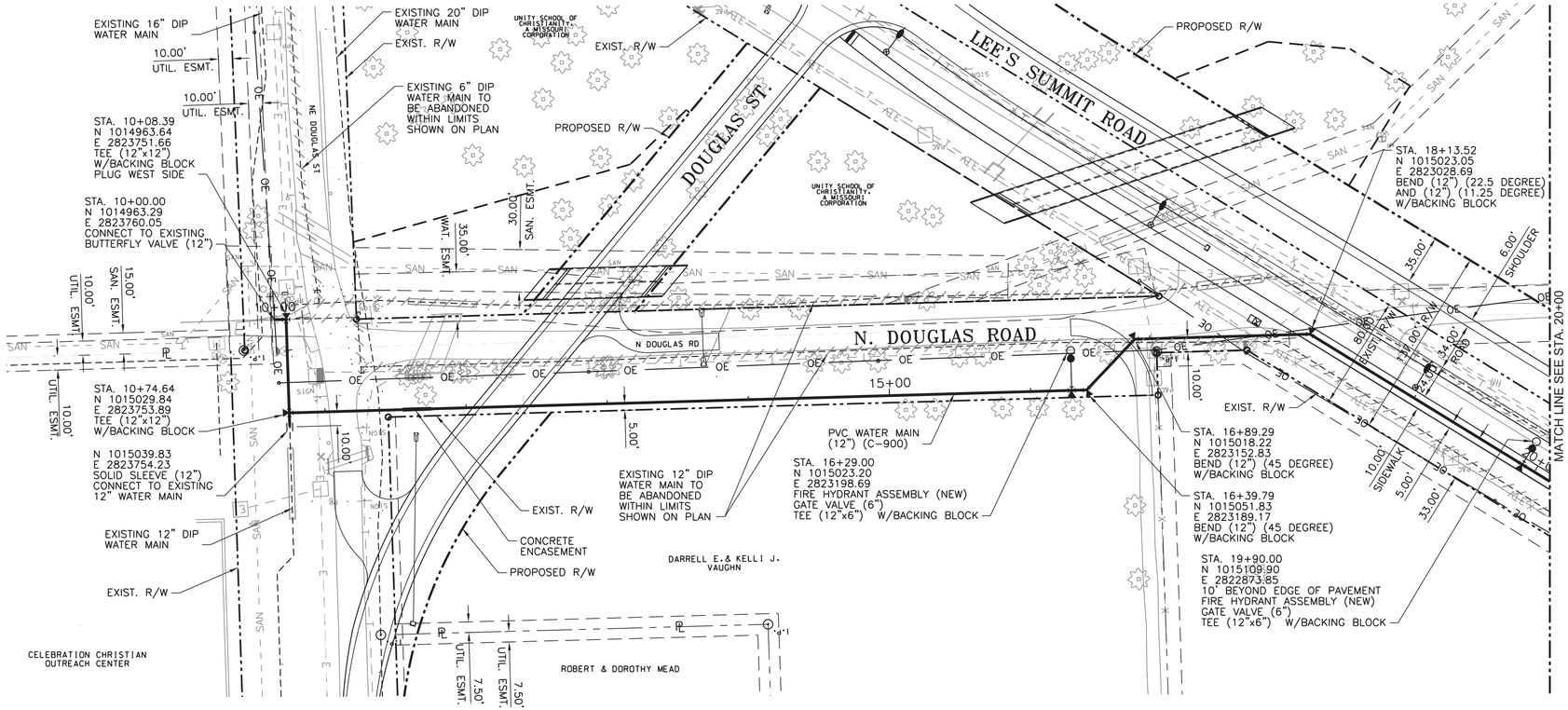
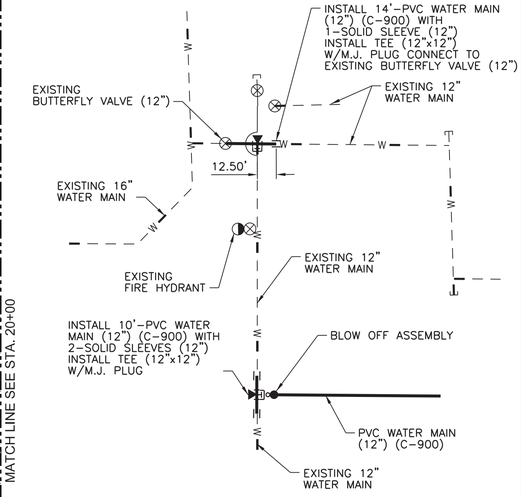
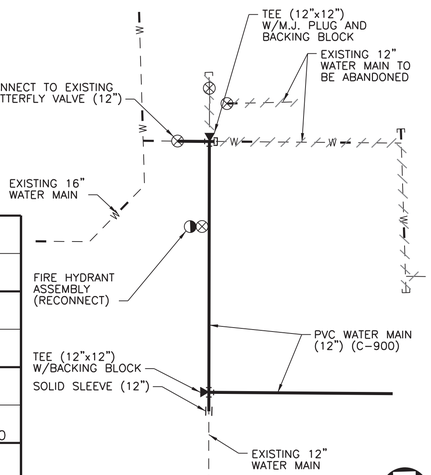


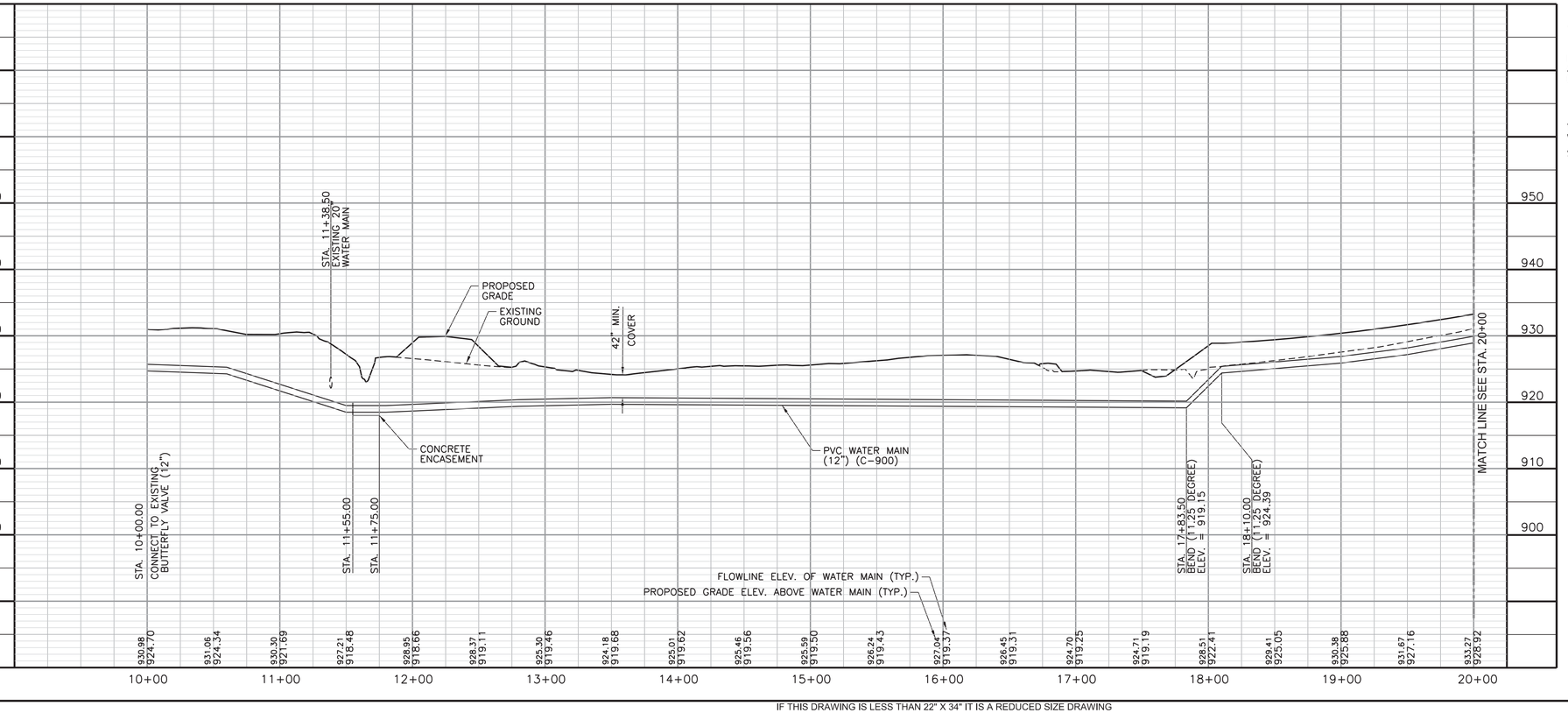


TEMPORARY CONNECTION



PERMANENT CONNECTION

PVC WATER MAIN (12") (C-900) STA. 10+00.00 CONNECTION DETAIL



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LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN

0 50 100 150
SCALE FEET
1" = 50'

0 10 20 30
SCALE FEET
1" = 10'

Tran Systems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

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LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO:	P101090353
SCALE:	1"=50'
DATE:	2/17/2015
DESIGNED BY:	RJ
DRAWN BY:	CAS
CHECKED BY:	DRW

SHEET TITLE:
12" WATER MAIN PLAN AND PROFILE STA. 10+00 TO STA. 20+00

SHEET NO.
LS-105

SHEET 8 OF 17

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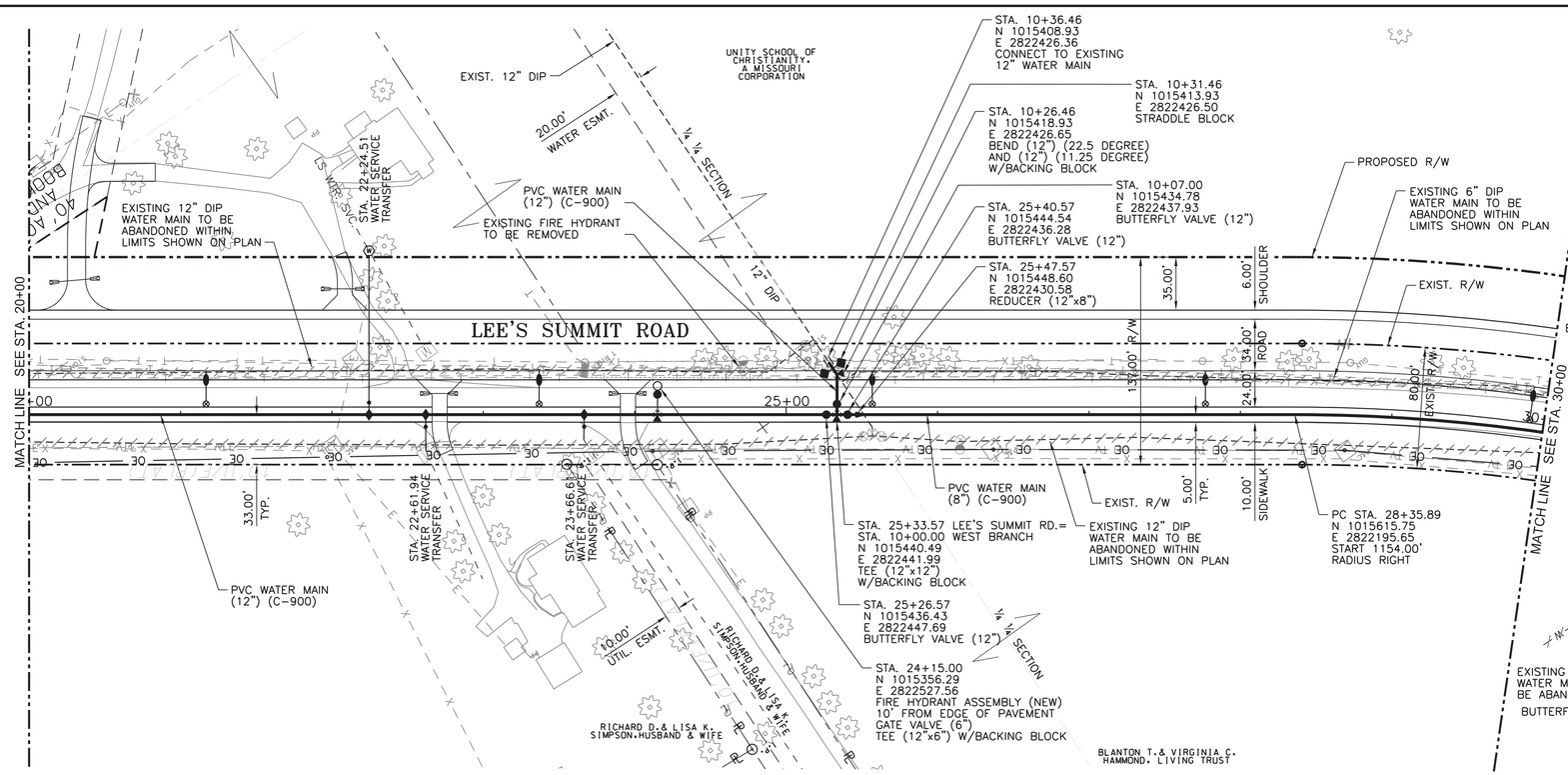
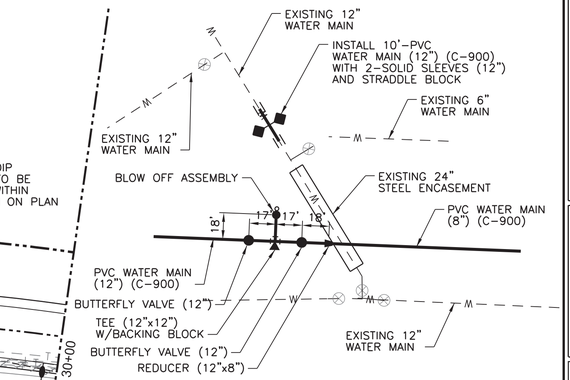
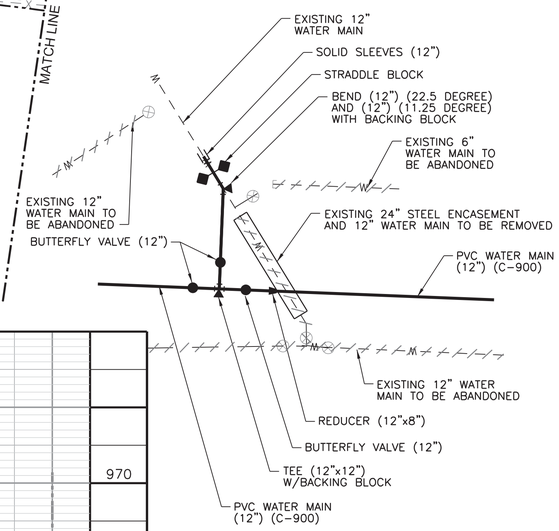


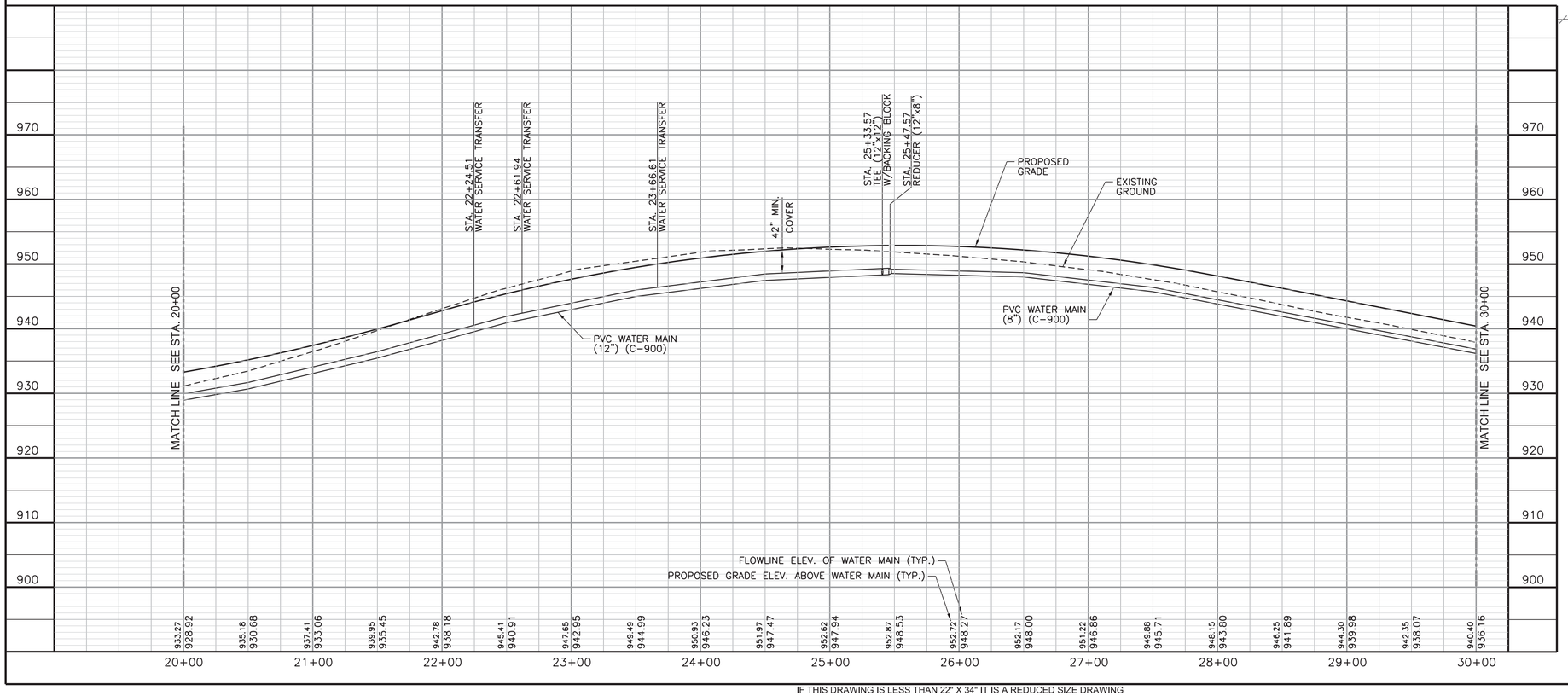


TEMPORARY CONNECTION



PERMANENT CONNECTION

PVC WATER MAIN (12") (C-900) & (8") (C-900) STA. 25+33.57 CONNECTION DETAIL



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945.71 = FLOWLINE ELEV. OF WATER MAIN

0 50 100 150
SCALE FEET
1" = 50'

0 10 20 30
SCALE FEET
1" = 10'

TranSystems
2400 PERSHING ROAD
SUITE 400
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STATE OF MISSOURI
James M. Lambeth
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CONSULTANTS:

LEE'S SUMMIT ROAD
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COLBERN ROAD
WATER MAIN RELOCATION

LS LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

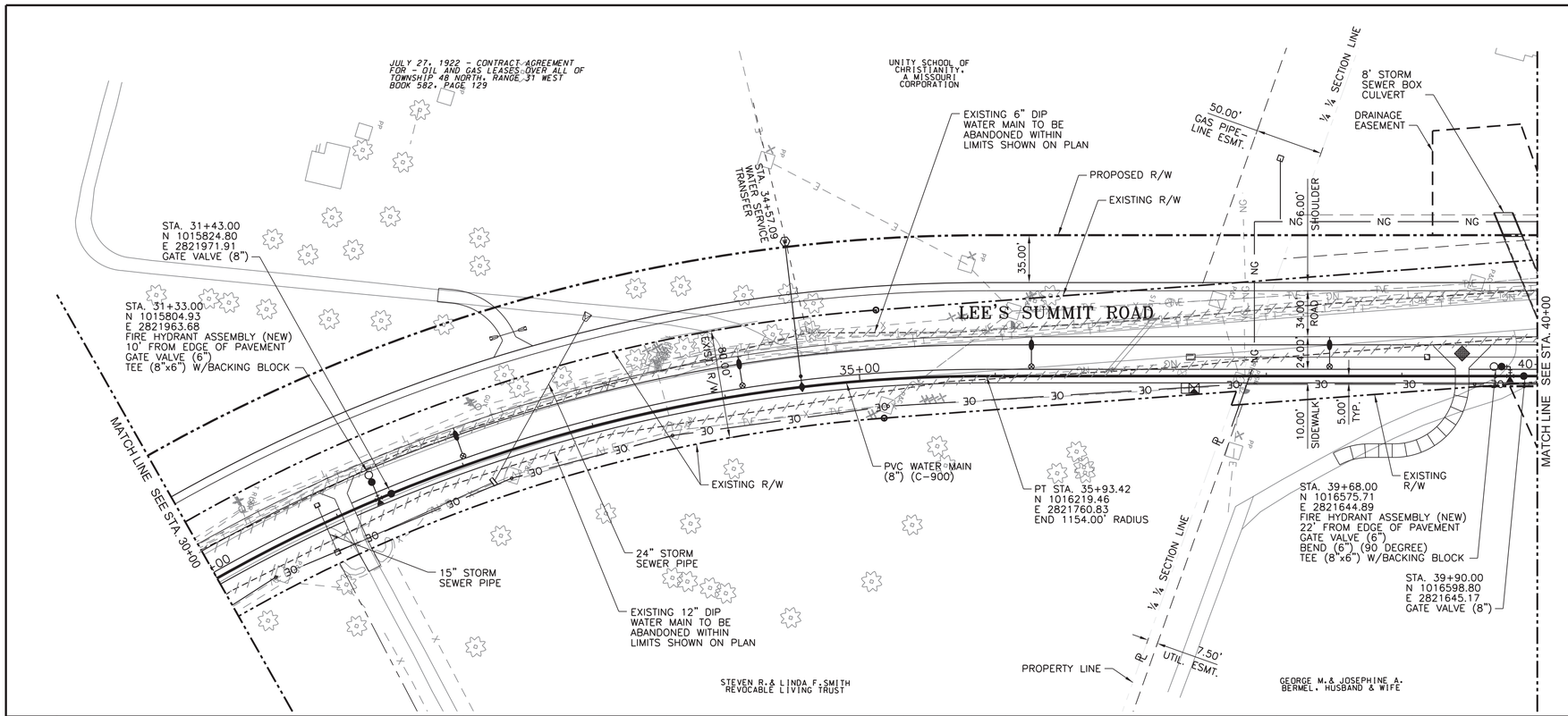
PROJ NO:	P101090353
SCALE:	1"=50'
DATE:	2/17/2015
DESIGNED BY:	RJ
DRAWN BY:	CAS
CHECKED BY:	DRW

SHEET TITLE:
8" & 12" WATER MAIN PLAN AND PROFILE STA. 20+00 TO STA. 30+00

SHEET NO.
LS-106
SHEET 9 OF 17

dmason
2/17/2015 - 4:11:56 PM - G:\KC09\0353\Utilities\Plan Sheets\Lees Summit\C-106-LSWTR.dgn

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



NOTE:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900-WATER MAINS.

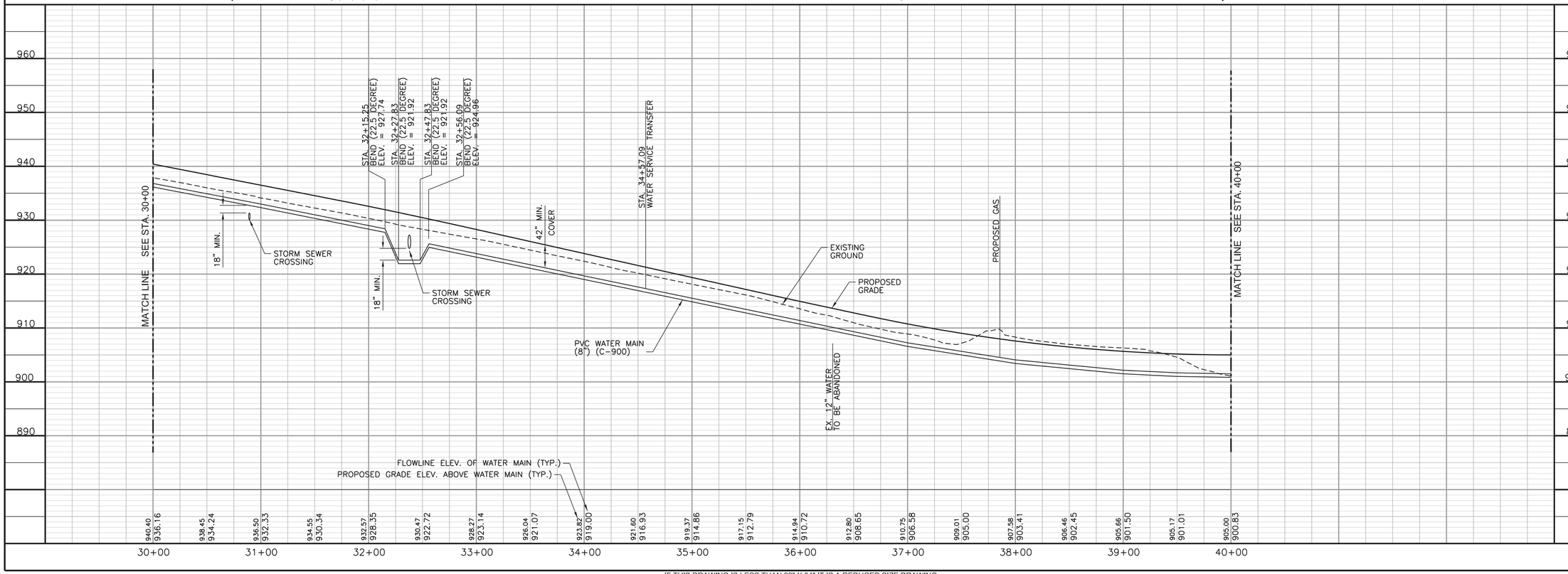
LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN

0 50 100 150
SCALE FEET
1" = 50'

0 10 20 30
SCALE FEET
1" = 10'



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TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

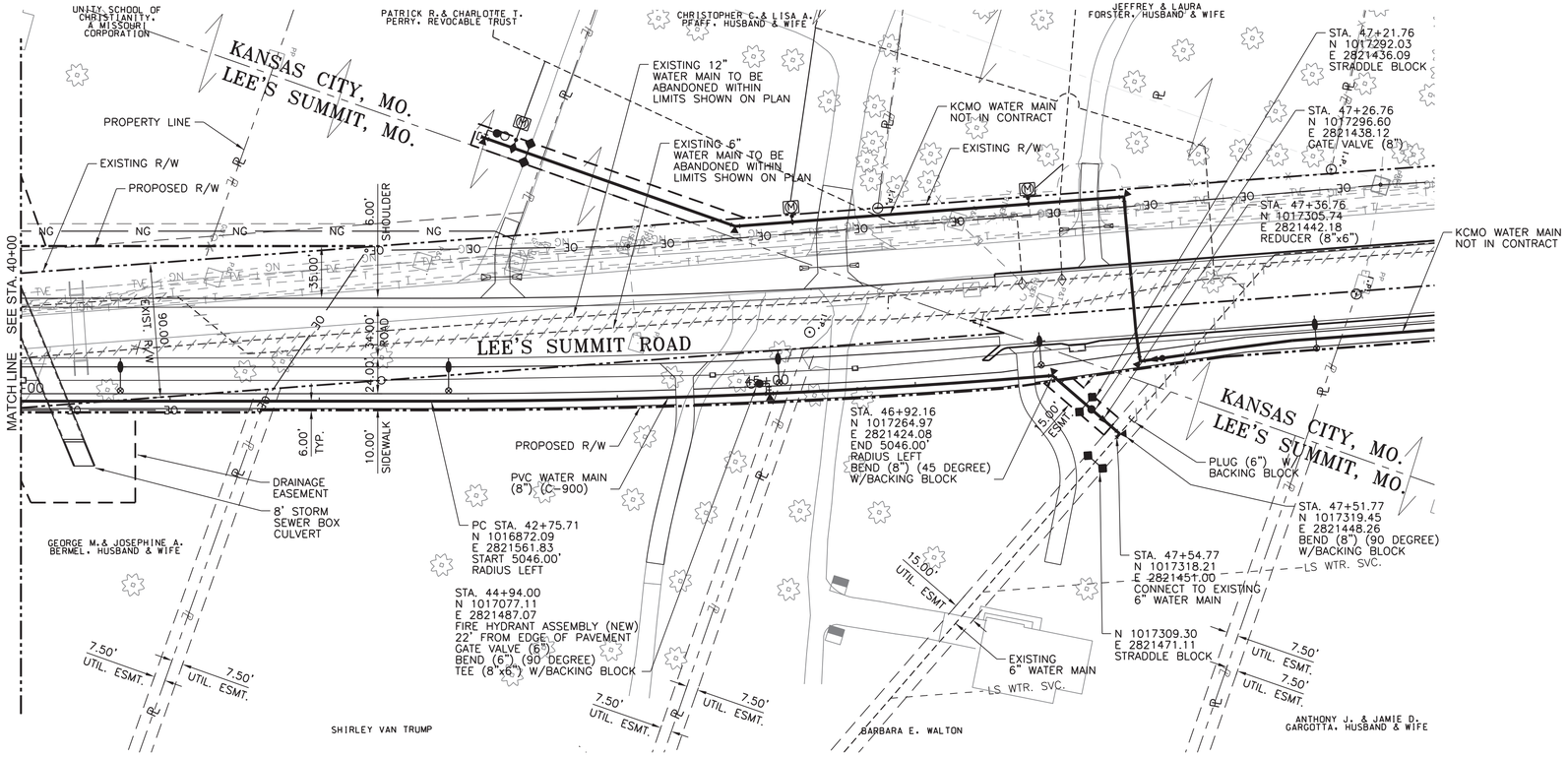
REVISIONS:		
MARK	DATE	DESCRIPTION

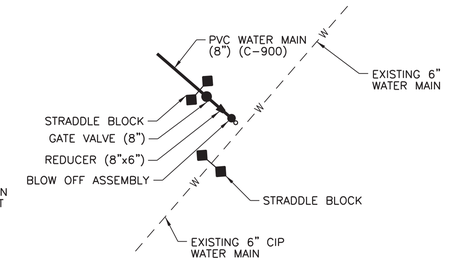
PROJ NO: P101090353
SCALE: 1"=50'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
8" WATER MAIN PLAN AND PROFILE STA. 30+00 TO STA. 40+00

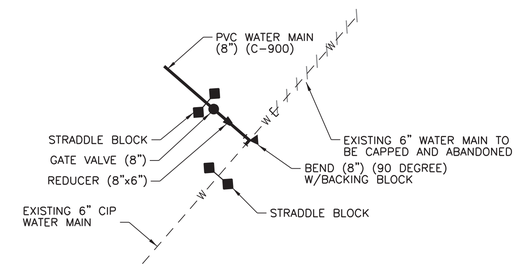
SHEET NO.
LS-107
SHEET 10 OF 17

dmason
2/17/2015 - 4:11:57 PM - G:\KC\99\0353\Utilities\Plan Sheets\Lees Summit\C-107-LSWTR.dgn



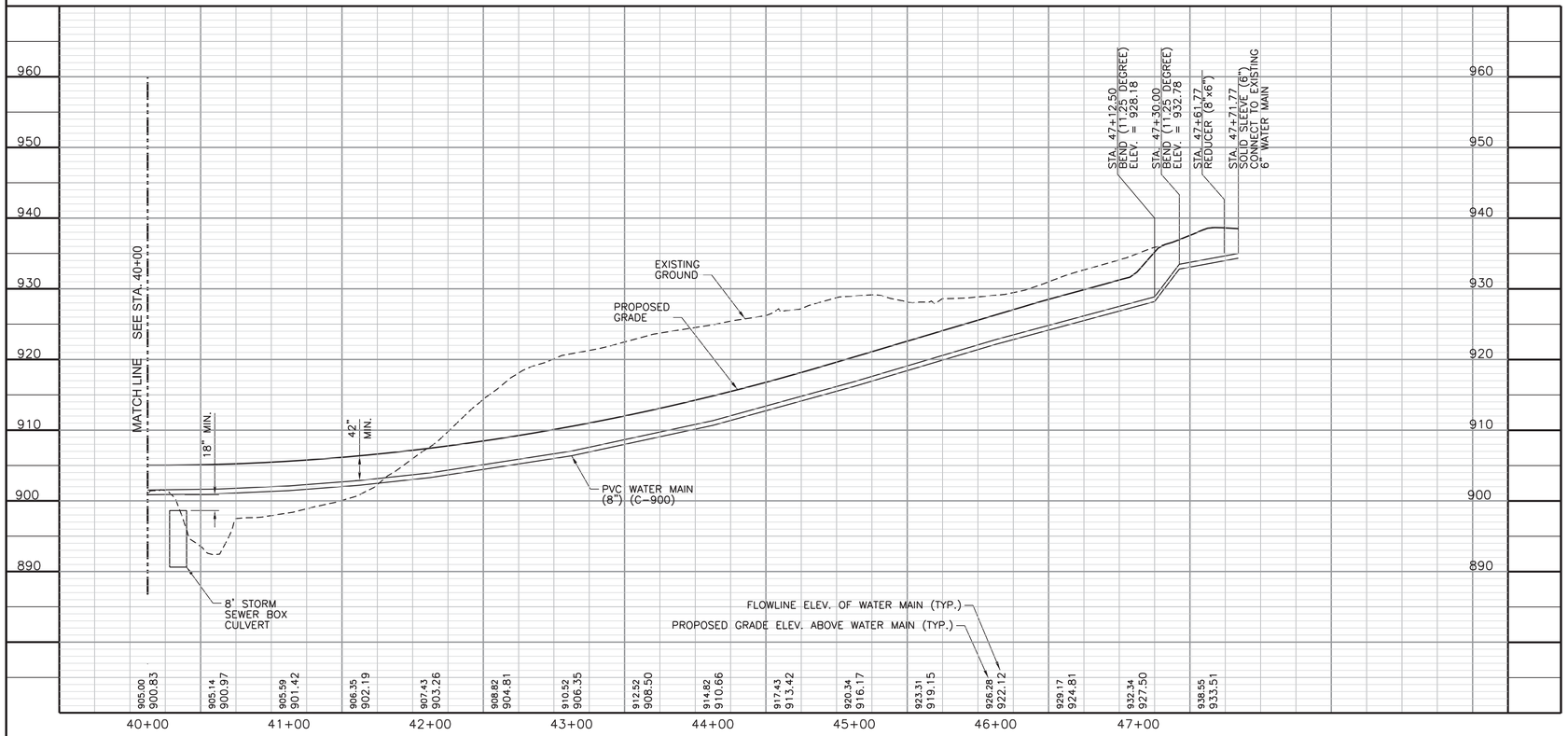


TEMPORARY CONNECTION



PERMANENT CONNECTION

PVC WATER MAIN
(8") (C-900) STA. 47+53.77
CONNECTION DETAIL



NOTE:

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES AND FIELD ADJUST NEW WATER MAIN AS NECESSARY TO COORDINATE ALL ALIGNMENT MODIFICATIONS WITH THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS, SECTION 3900–WATER MAINS.

LEGEND:

955.73 = PROPOSED GRADE ELEV. ABOVE WATER MAIN

945.71 = FLOWLINE ELEV. OF WATER MAIN

0 50 100 150
SCALE FEET
1" = 50'

0 10 20 30
SCALE FEET
1" = 10'

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

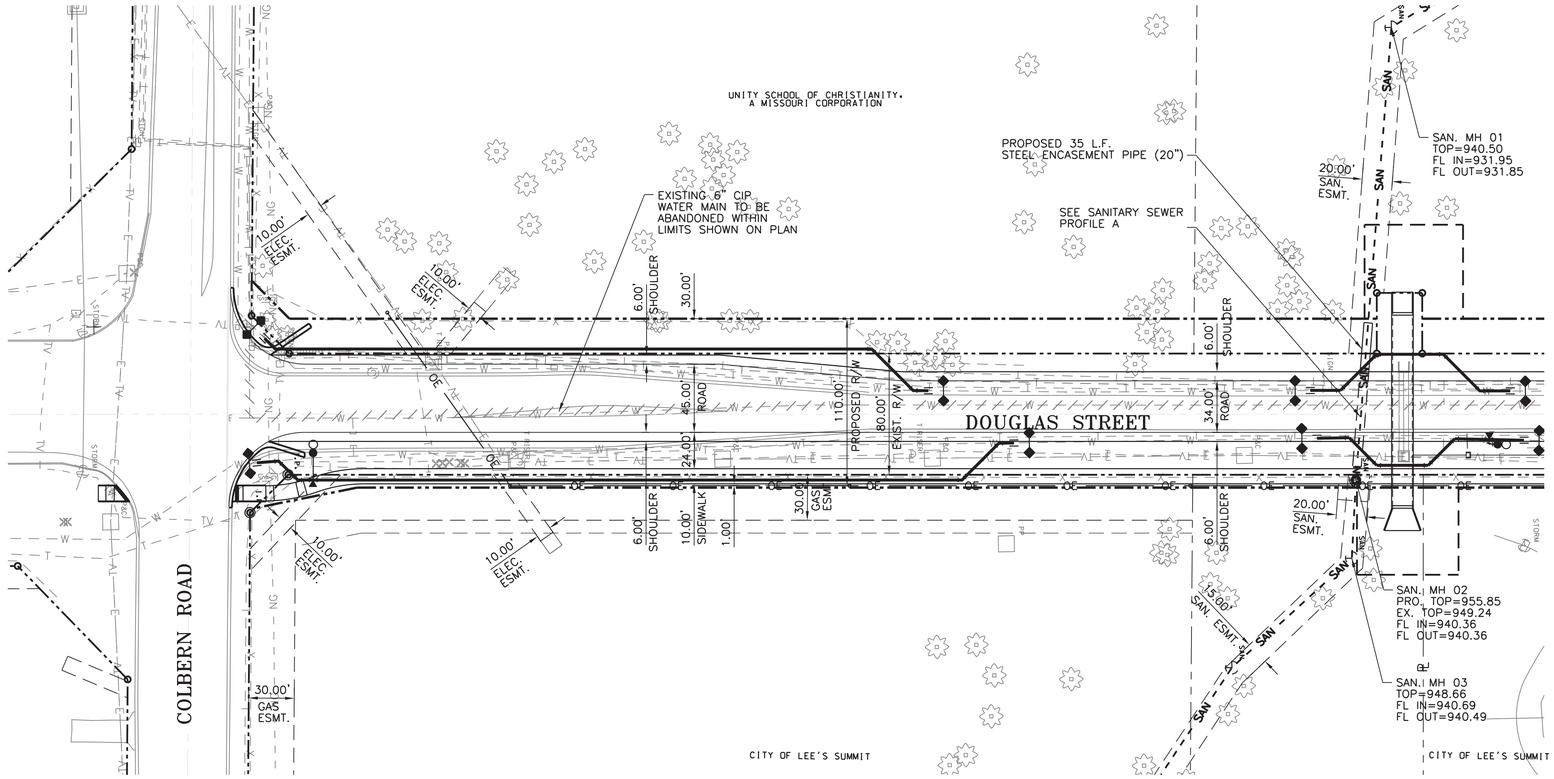
PROJ NO: P101090353
SCALE: 1"=50'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
8" WATER MAIN PLAN AND PROFILE STA. 40+00 TO STA. 47+71.77

SHEET NO.
LS-108
SHEET 11 OF 17

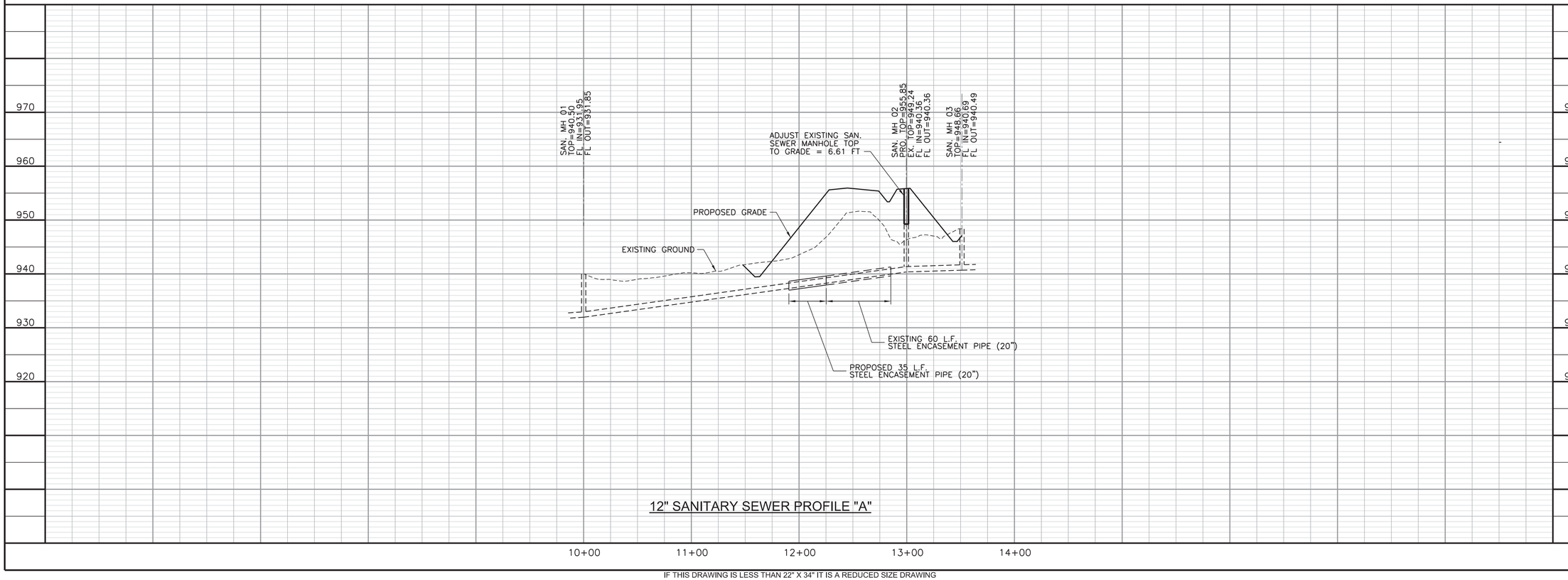
dlmason
2/17/2015 - 4:11:57 PM - G:\KC09\0353\Utilities\Plan Sheets\Lees Summit\C-108-LSWTR.dgn

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



SCALE 1" = 50' (0, 50, 100, 150 FEET)

SCALE 1" = 10' (0, 10, 20, 30 FEET)



12" SANITARY SEWER PROFILE "A"

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

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CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: 1"=50'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:

SANITARY SEWER PLAN AND PROFILE LINE A

SHEET NO. LS-109

SHEET 12 OF 17

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

dlmason
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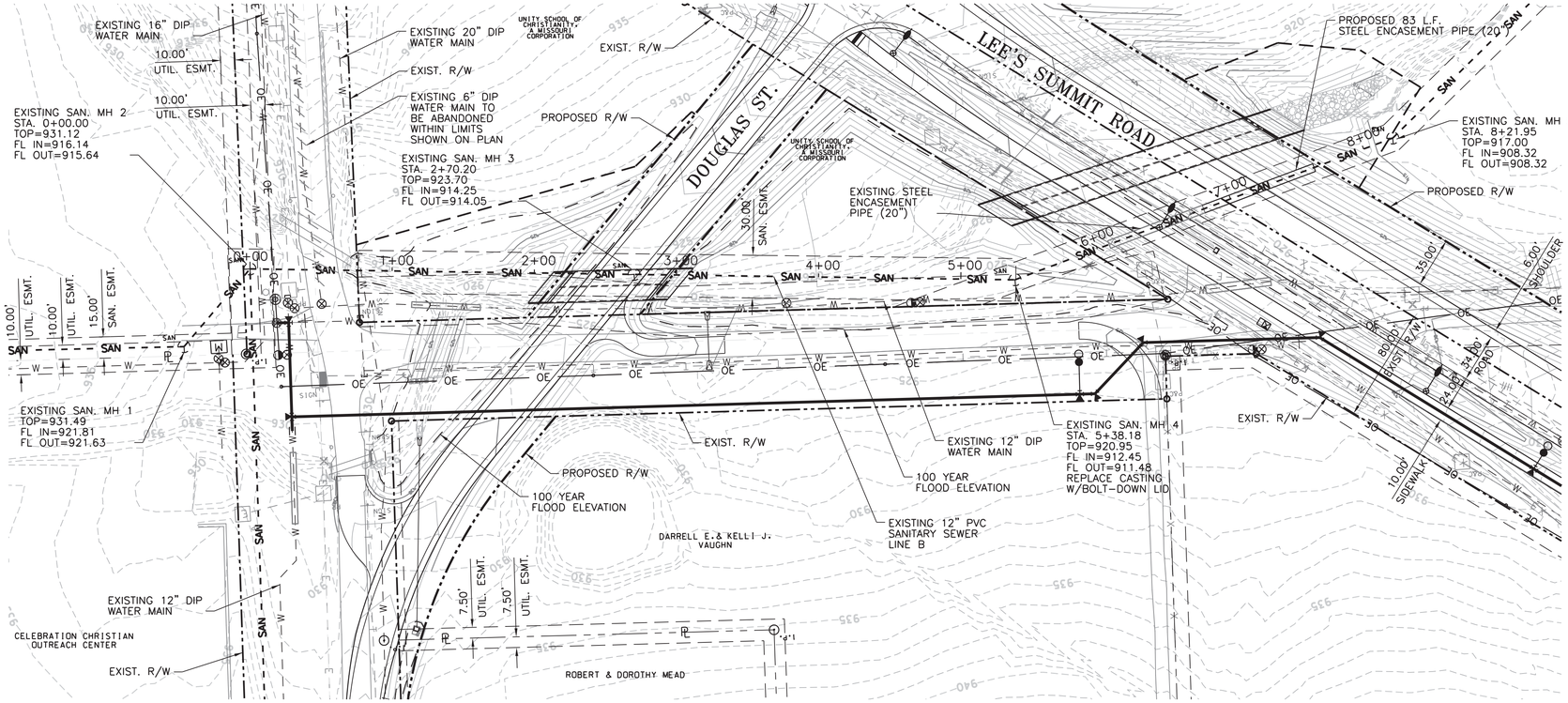
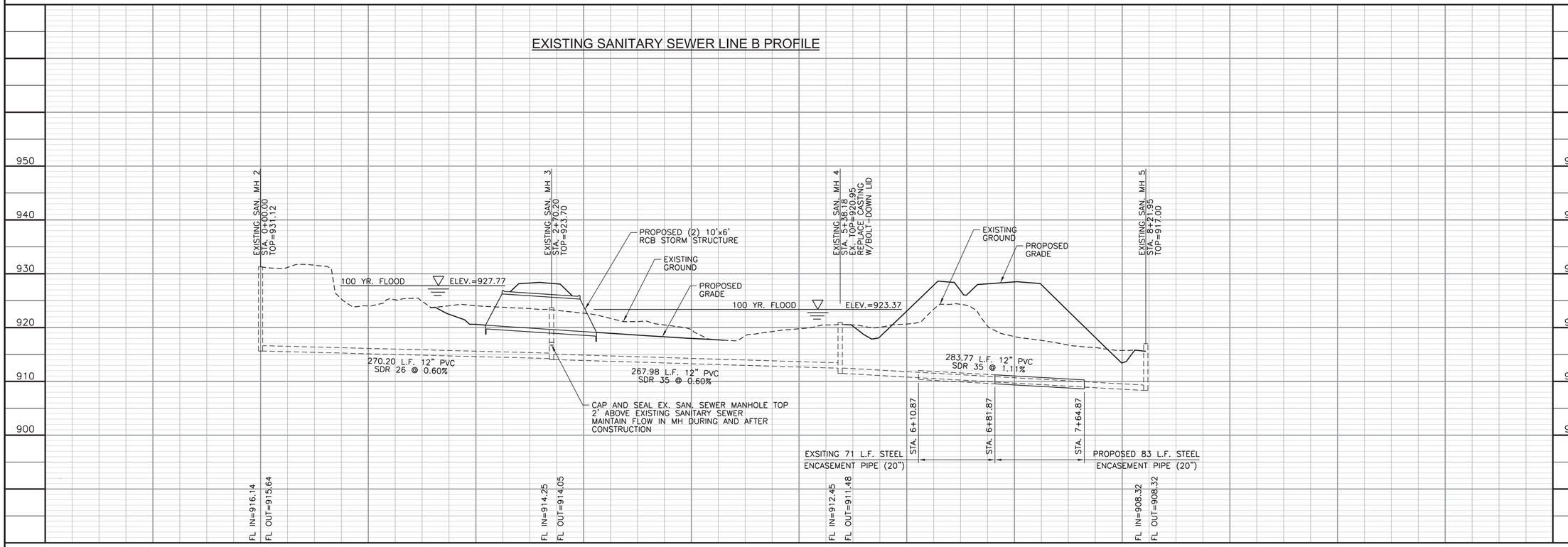


EXISTING SANITARY SEWER LINE B PROFILE



IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER
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CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

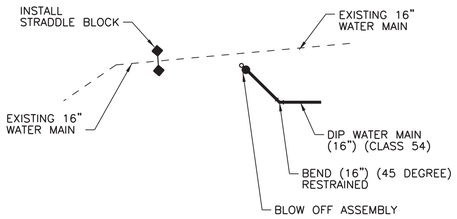
REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: 1"=50'
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

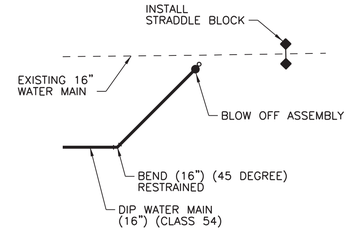
SHEET TITLE:
SANITARY SEWER PLAN AND PROFILE LINE B

SHEET NO.
LS-110
SHEET 13 OF 17

dlmason
2/17/2015 - 4:12:01 PM - G:\KC090353\Utilities\Plan Sheets\Lees Summit\C-110-LSSAN.dgn



TEMPORARY CONNECTION



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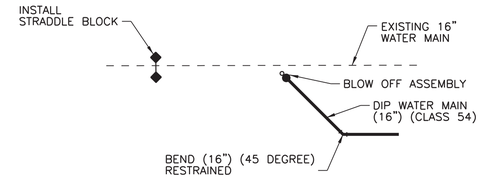

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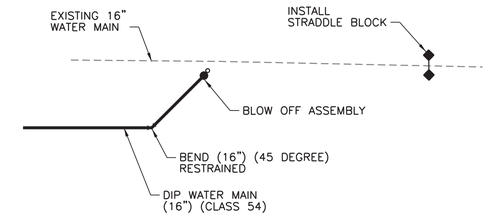

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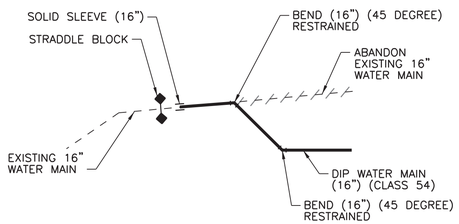
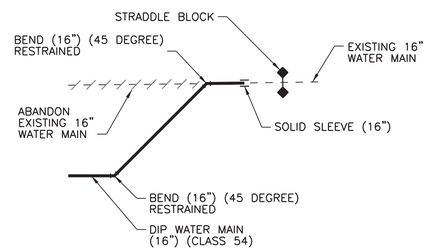


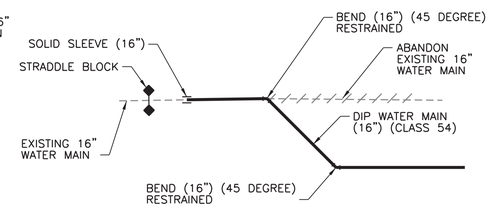
PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 11+50.00
CONNECTION DETAIL

SEE SHEET LS-101 FOR LOCATION
RESTRAINED THROUGH -OUT



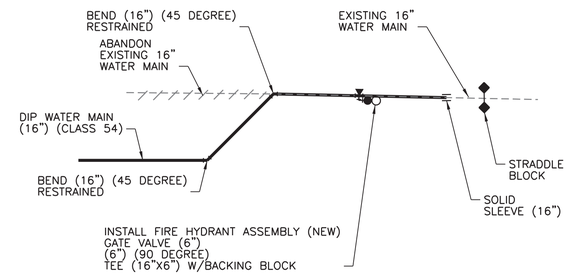
PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 16+65.00
CONNECTION DETAIL

SEE SHEET LS-101 FOR LOCATION
RESTRAINED THROUGH -OUT



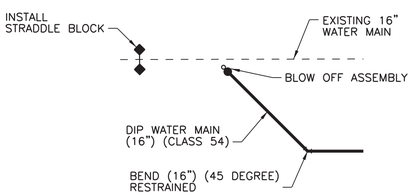
PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 18+55.00
CONNECTION DETAIL

SEE SHEET LS-101 FOR LOCATION
RESTRAINED THROUGH -OUT

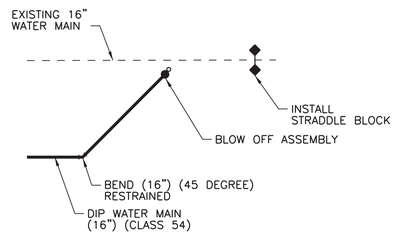


PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 20+17.00
CONNECTION DETAIL

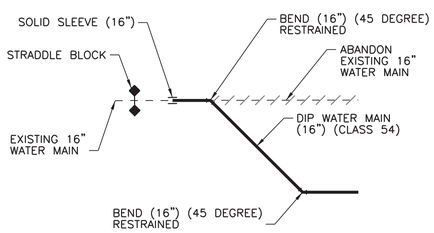
SEE SHEET LS-101 FOR LOCATION
RESTRAINED THROUGH -OUT



TEMPORARY CONNECTION

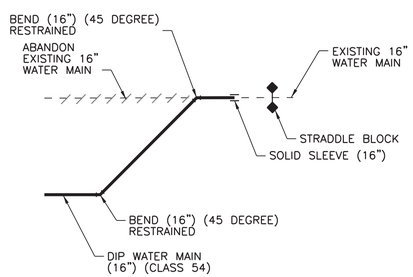


TEMPORARY CONNECTION



PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 24+70.00
CONNECTION DETAIL

SEE SHEET LS-102 FOR LOCATION
RESTRAINED THROUGH -OUT



PERMANENT CONNECTION
DIP WATER MAIN
(16") (CLASS 54) STA. 30+70.00
CONNECTION DETAIL

SEE SHEET LS-102 FOR LOCATION
RESTRAINED THROUGH -OUT

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER
E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: NO SCALE
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
16" WATER MAIN CONNECTION DETAILS

SHEET NO.
LS-501
SHEET 14 OF 17

dlmason
2/17/2015 - 4:12:02 PM - G:\KC090303\Utilities\Plan Sheets\Lees Summit\C-501-DTL.dgn

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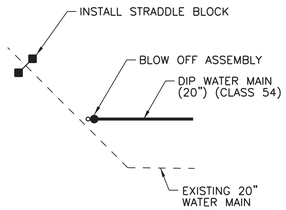
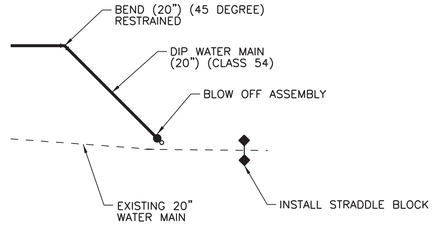


TEMPORARY CONNECTION



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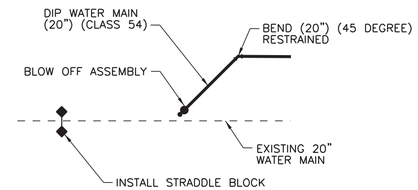

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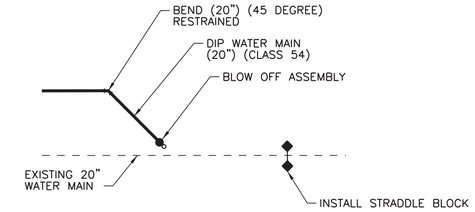

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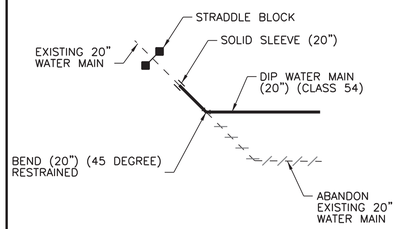
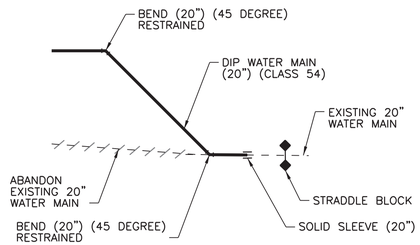
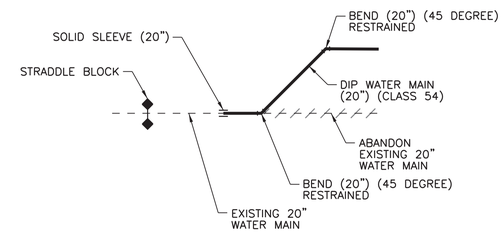


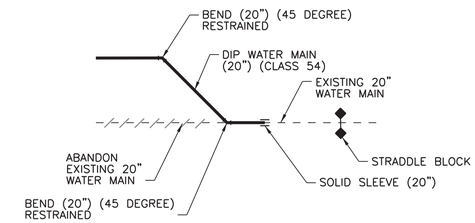
PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 10+25.00
CONNECTION DETAIL
SEE SHEET LS-103 FOR LOCATION
RESTRAINED THROUGH -OUT



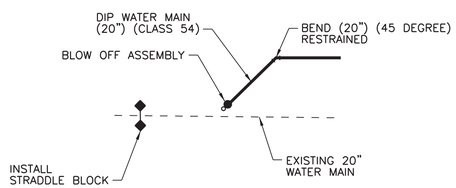
PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 14+77.00
CONNECTION DETAIL
SEE SHEET LS-103 FOR LOCATION
RESTRAINED THROUGH -OUT



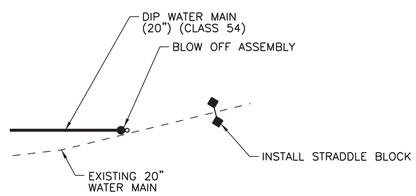
PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 17+29.00
CONNECTION DETAIL
SEE SHEET LS-103 FOR LOCATION
RESTRAINED THROUGH -OUT



PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 18+81.00
CONNECTION DETAIL
SEE SHEET LS-103 FOR LOCATION
RESTRAINED THROUGH -OUT



TEMPORARY CONNECTION



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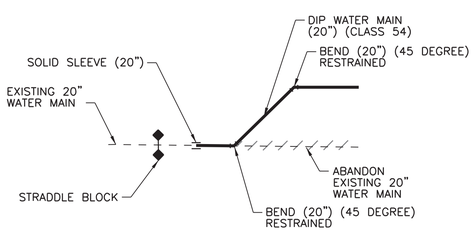
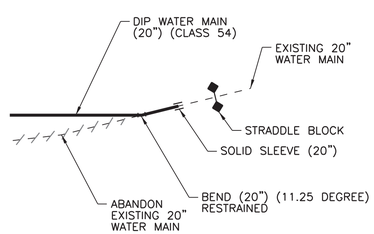


PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 24+50.00
CONNECTION DETAIL
SEE SHEET LS-104 FOR LOCATION
RESTRAINED THROUGH -OUT



PERMANENT CONNECTION
DIP WATER MAIN
(20") (CLASS 54) STA. 30+06.00
CONNECTION DETAIL
SEE SHEET LS-104 FOR LOCATION
RESTRAINED THROUGH -OUT

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
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STATE OF MISSOURI
James M. Lambeth
NUMBER
E-23507
PROFESSIONAL ENGINEER
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CONSULTANTS:

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FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: NO SCALE
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:
20" WATER MAIN CONNECTION DETAILS

SHEET NO.
LS-502
SHEET 15 OF 17

dmason
2/17/2015 - 4:12:33 PM - G:\KC0990353\Utilities\Plan Sheets\Lees Summit\C-502-DTL.dgn

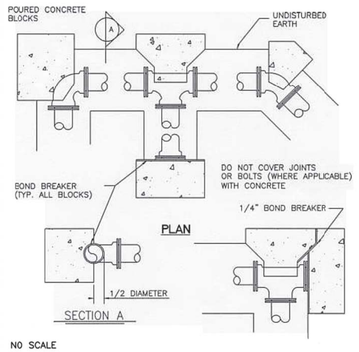
HORIZONTAL CONCRETE THRUST BLOCKING

Working Pressure	150	psi
Surge Allowance	100	psi
Design Pressure	250	psi
Soil Bearing Capacity	1500	psf
Safety Factor	1.0	
Min. Bearing Area	4.0	sf
Max. Bearing Area	50.0	sf

Concrete Becring Area (sf)

Nom. Dia. (inches)	180 Tee, Plug	90 Bend	45 Bend	22.5 Bend	11.25 Bend
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	Rest. Jt.	32.5	16.5	8.3
20	Rest. Jt.	Rest. Jt.	40.1	20.4	10.3
24	Rest. Jt.	Rest. Jt.	Rest. Jt.	29.4	14.8

ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT. MEGA LUGS MAY BE USED ONLY IN CONJUCTION WITH CONCRETE THRUST BLOCKING.



NO SCALE

Subject to revision without notice.

W1.dwg 090904 22:30

CITY OF LEE'S SUMMIT, MISSOURI

HORIZONTAL THRUST RESTRAINT DETAILS

Date: 09/16/04 | Rev: | Rev: | Rev:

W-1

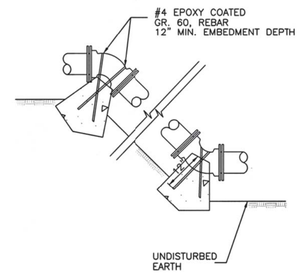
VERTICAL (UPWARD) CONCRETE THRUST BLOCKING

Working Pressure	150	psi
Surge Allowance	100	psi
Design Pressure	250	psi
Conc. Unit Weight	140	pcf
Safety Factor	1.0	
Min. Block Size	4.0	cf
Max. Block Size	216.0	cf

Concrete Volume (cf)

Nom. Dia. (inches)	180 Tee, Plug	90 Bend	45 Bend	22.5 Bend	11.25 Bend
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	Rest. Jt.	154.6	78.8	39.6
14	Rest. Jt.	Rest. Jt.	210.4	107.3	53.9
16	Rest. Jt.	Rest. Jt.	Rest. Jt.	140.1	70.4
18	Rest. Jt.	Rest. Jt.	Rest. Jt.	177.3	89.1
20	Rest. Jt.	Rest. Jt.	Rest. Jt.	Rest. Jt.	110.0
24	Rest. Jt.	Rest. Jt.	Rest. Jt.	Rest. Jt.	158.4

ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT. MEGA LUGS MAY BE USED ONLY IN CONJUCTION WITH CONCRETE THRUST BLOCKING.



NO SCALE

Subject to revision without notice.

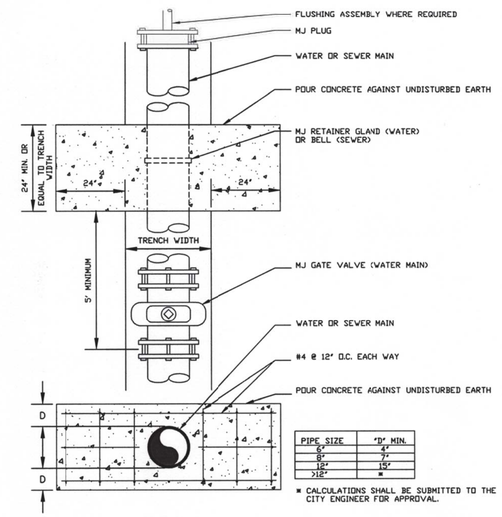
W2.dwg 090904 2:32

CITY OF LEE'S SUMMIT, MISSOURI

VERTICAL THRUST RESTRAINT DETAILS

Date: 09/16/04 | Rev: | Rev: | Rev:

W-2



PIPE SIZE	"D" MIN.
6"	4'
8"	7'
12"	15'
>12"	*

* CALCULATIONS SHALL BE SUBMITTED TO THE CITY ENGINEER FOR APPROVAL.

NOT TO SCALE

Subject to revision without notice.

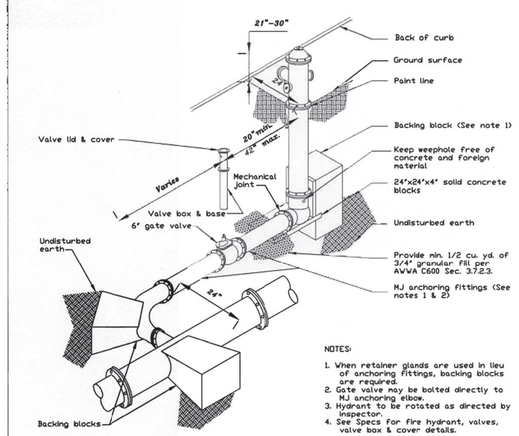
W3.dwg 090904 22:38

CITY OF LEE'S SUMMIT, MISSOURI

STRADDLE BLOCK

Date: 09/16/04 | Rev: | Rev: | Rev:

W-3



NOTES:

1. When retainer glands are used in lieu of anchoring fittings, backing blocks are required.
2. Gate valve may be bolted directly to MJ anchoring elbow.
3. Hydrant to be rotated as directed by inspector.
4. See Specs for fire hydrant, valves, valve box & cover details.

Not to scale

Subject to revision without notice.

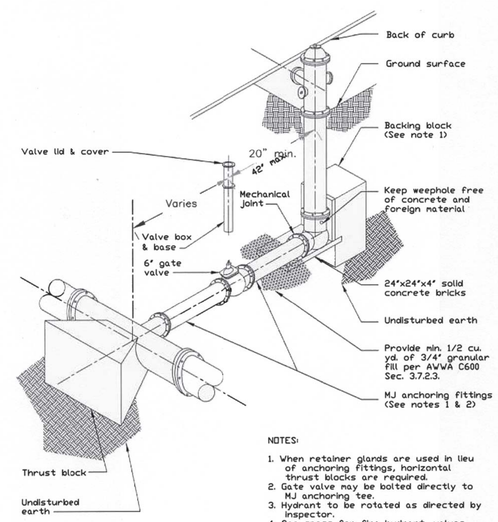
W11.dwg 091004 00:08

CITY OF LEE'S SUMMIT, MISSOURI

HYDRANT INSTALLATION WITH 90° BEND

Date: 09/16/04 | Rev: | Rev: | Rev:

W-11



NOTES:

1. When retainer glands are used in lieu of anchoring fittings, horizontal thrust blocks are required.
2. Gate valve may be bolted directly to MJ anchoring tee.
3. Hydrant to be rotated as directed by inspector.
4. See specs for fire hydrant, valves, valve box, and cover details.

Not to scale

Subject to revision without notice.

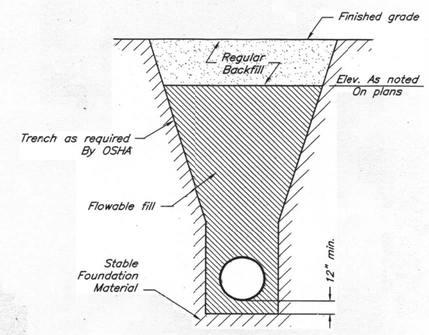
W10.dwg 091004 00:05

CITY OF LEE'S SUMMIT, MISSOURI

HYDRANT INSTALLATION - STRAIGHT SET

Date: 09/16/04 | Rev: | Rev: | Rev:

W-10



NOTES

1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL BE A MINIMUM OF 2 FEET BELOW FINISHED GRADE.

Subject to revision without notice.

W9.dwg 090904 22:40

CITY OF LEE'S SUMMIT, MISSOURI

TRENCH CHECK

Date: 09/16/04 | Rev: | Rev: | Rev:

W-9

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:		
MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: NO SCALE
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:

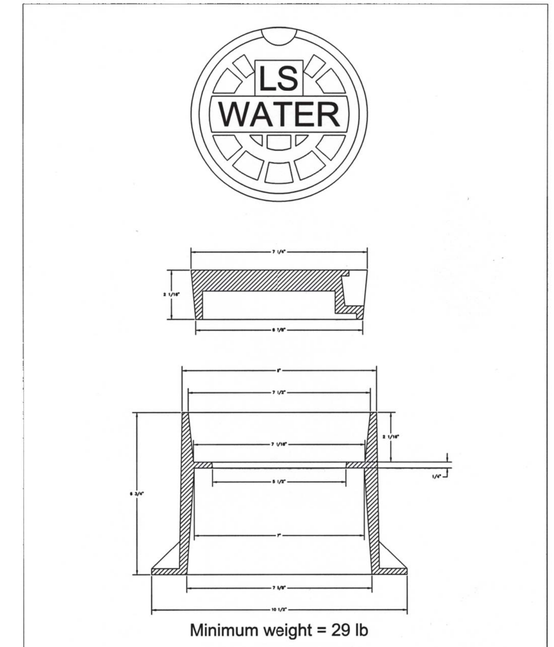
STANDARD WATER LINE DETAILS

SHEET NO.
LS-503

SHEET 16 OF 17

jmlambeth
2/17/2015 - 5:43:21 PM - G:\KC09\0353\Utilities\Plan Sheets\Lees Summit\C-503-DTL.dgn

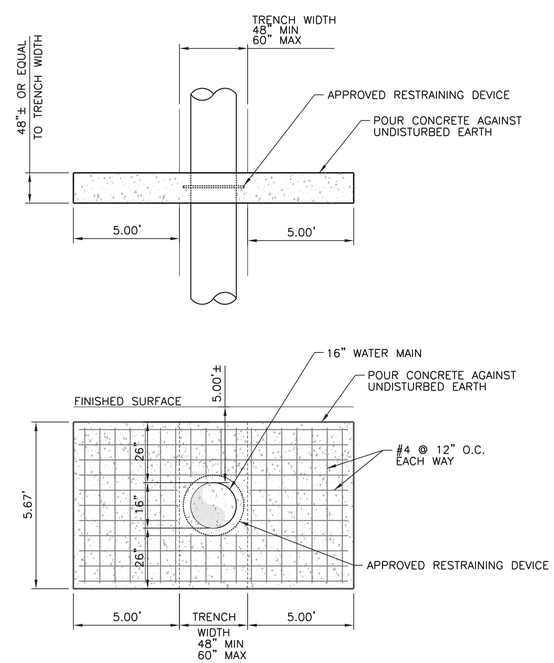
IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



Subject to revision without notice.

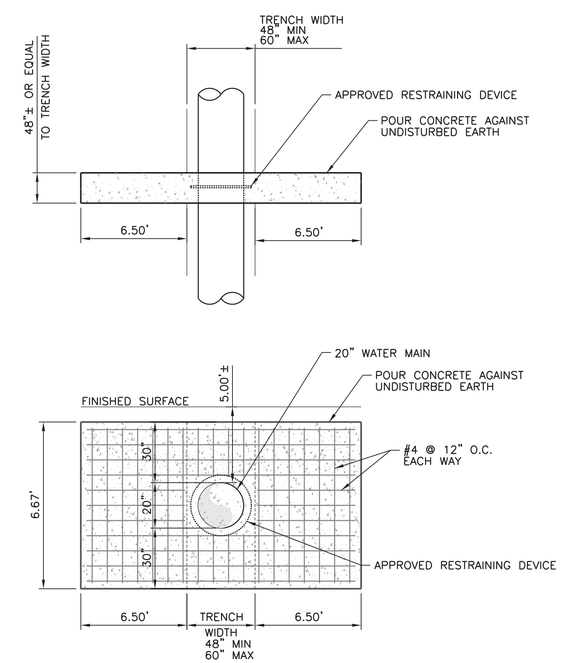
CITY OF LEE'S SUMMIT, MISSOURI	Date: 09/16/04
	Rev:
	Rev:
VALVE BOX COVER	Rev:
	W-5

W5.dwg 09/09/04 22:59



16" STRADDLE BLOCK DETAIL

NO SCALE



20" STRADDLE BLOCK DETAIL

NO SCALE

TranSystems
2400 PERSHING ROAD
SUITE 400
KANSAS CITY, MISSOURI 64108
PHONE: 816-329-8600
FAX: 816-329-8601

STATE OF MISSOURI
James M. Lambeth
NUMBER
E-23507
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

CONSULTANTS:

LEE'S SUMMIT ROAD
FROM KCMO CITY LIMITS TO
COLBERN ROAD
WATER MAIN RELOCATION

LS LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

REVISIONS:

MARK	DATE	DESCRIPTION

PROJ NO: P101090353
SCALE: NO SCALE
DATE: 2/17/2015
DESIGNED BY: RJ
DRAWN BY: CAS
CHECKED BY: DRW

SHEET TITLE:

STANDARD
WATER LINE
DETAILS

SHEET NO.
LS-504
SHEET 17 OF 17

dlmason
2/17/2015 - 4:12:04 PM - G:\KC09\0353\Utilities\Plan Sheets\Lees Summit\C-504-DTL.dgn

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