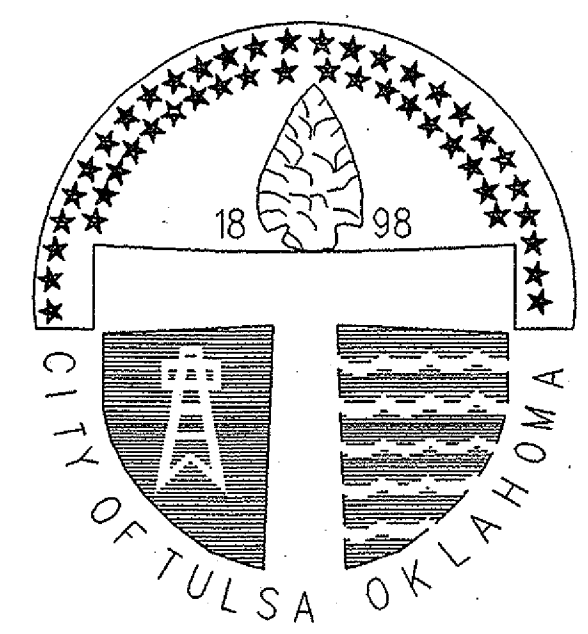


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REGISTERED NUMBER 0754

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED NUMBER 0754

DRAWING NUMBER
ES 96-07
Pipeline Rehab / Contract II
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED NUMBER 0754

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TULSA METROPOLITAN UTILITY AUTHORITY

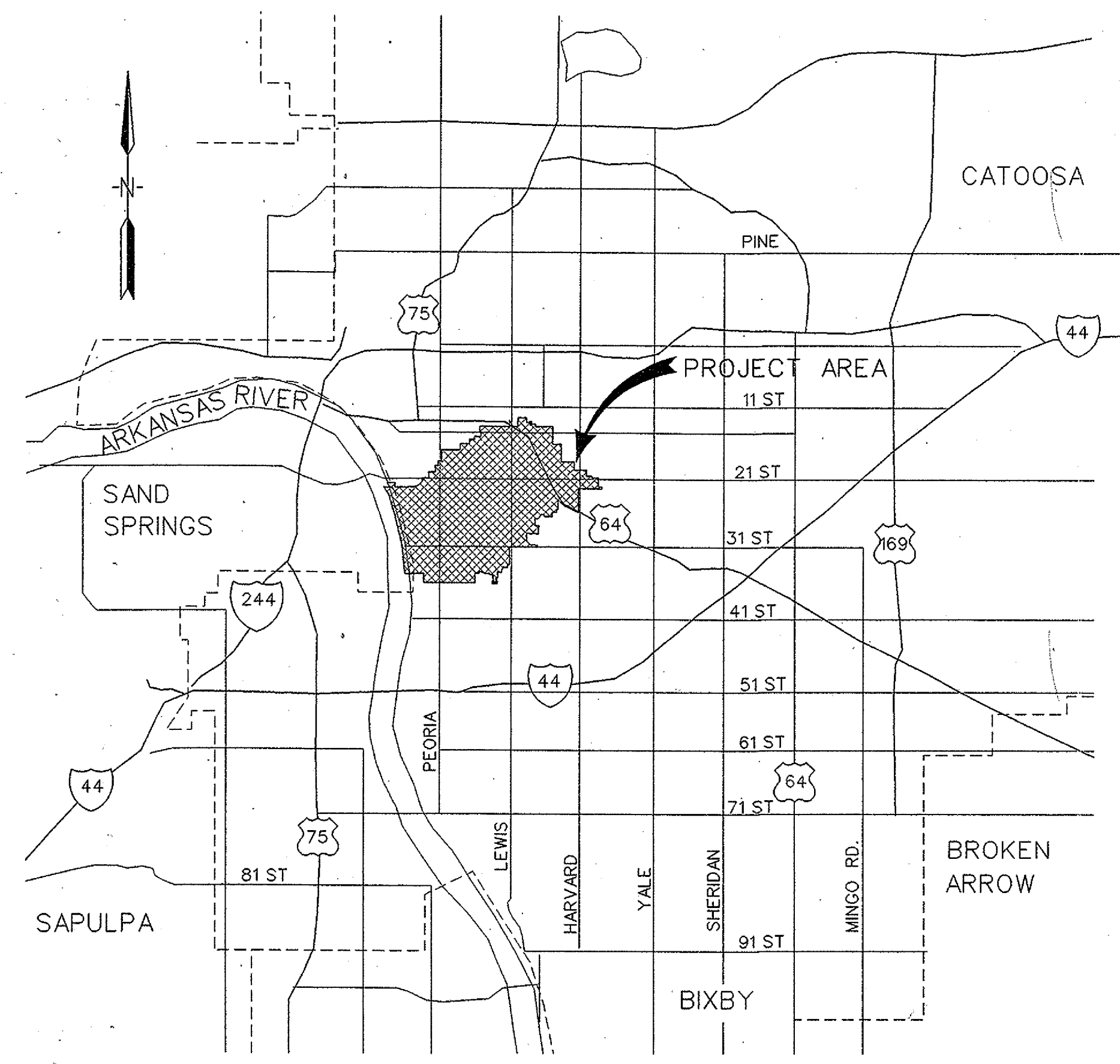
PROJECT NO. ES 96-07

Contract No.2 PIPELINE REHABILITATION AND REPLACEMENT

TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS

ORF PROJECT NO. C-401211-11

ACCOUNT NO. 6034-5455605-040522960108



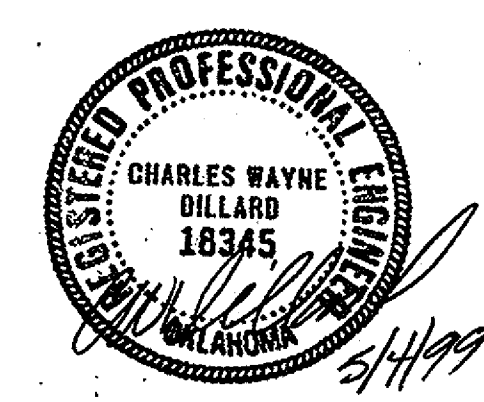
LOCATION MAP
NOT TO SCALE

APPROVED BY:

Mr. Charles Hardt 5/11/99
MR. CHARLES HARDT, P.E.
DIRECTOR OF PUBLIC WORKS

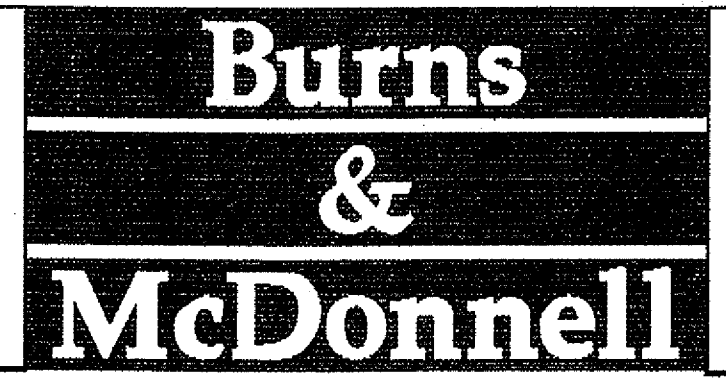
RECOMMENDED BY:

Mr. A.J. Hamlett Jr. 5-10-99
MR. A.J. HAMLETT JR., P.E.
DEPUTY DIRECTOR OF PUBLIC WORKS

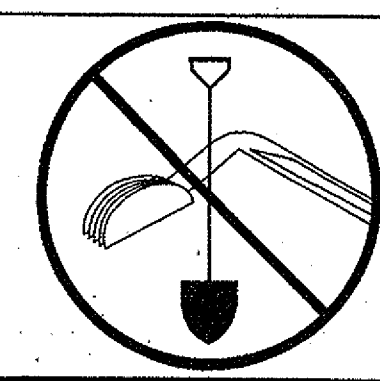


SHEET 1 OF 33 SHEETS

ENGINEERS
ARCHITECTS
CONSULTANTS

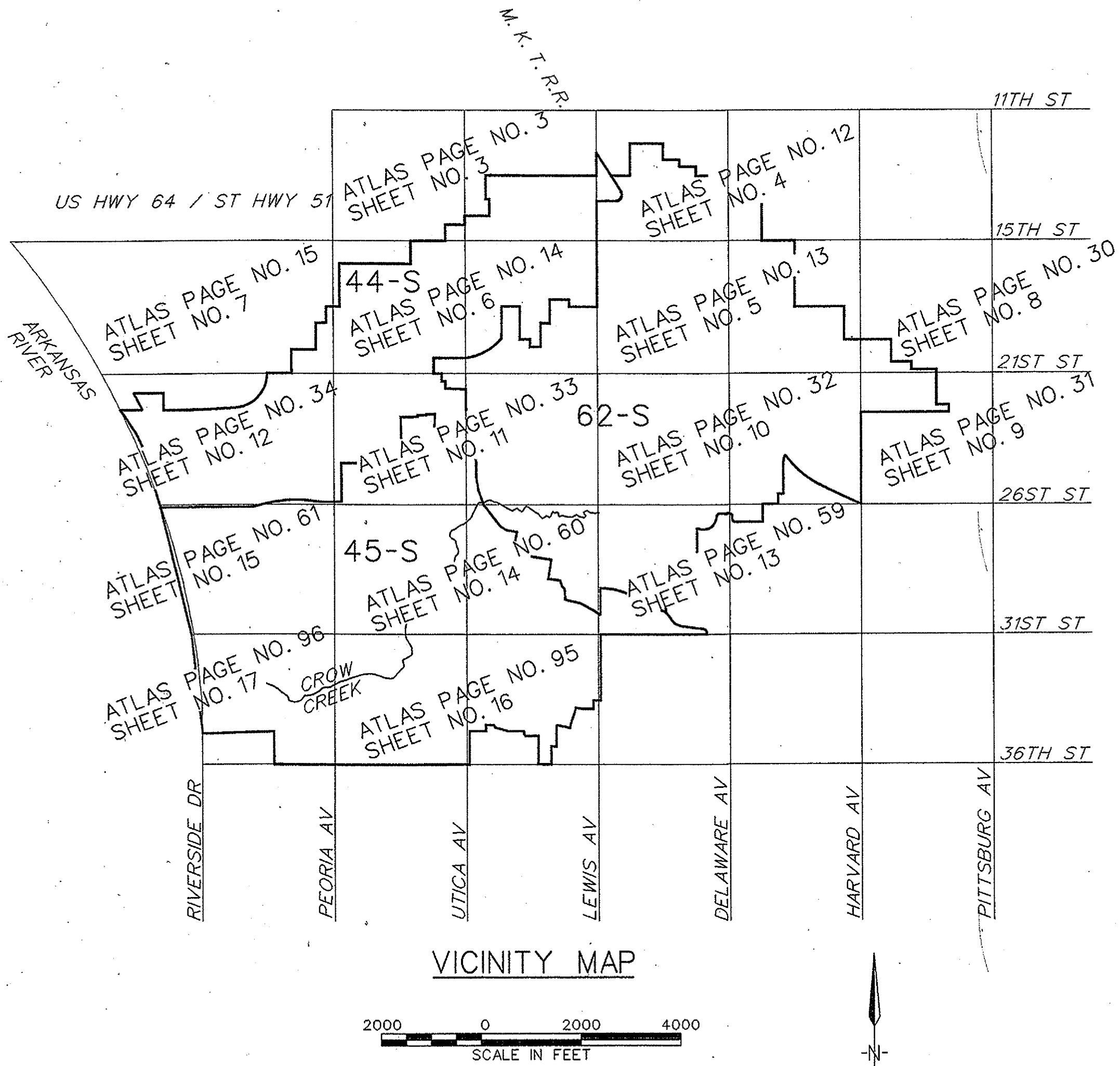


6450 SOUTH LEWIS AVENUE
SUITE 220
TULSA, OKLAHOMA 74136



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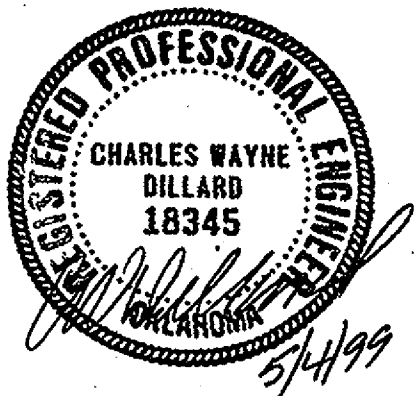


PIPELINE REHABILITATION GENERAL NOTES

- ALL MANHOLES, PIPE SIZES, OBSERVATIONS, DEFECTS, UTILITIES (ABOVE AND BELOW GROUND) AND THEIR LOCATIONS ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION BEFORE ANY CONSTRUCTION MATERIALS ARE ORDERED. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- SERVICE CONNECTION LOCATIONS ARE SHOWN ACCORDING TO TELEVISION INSPECTION INFORMATION. THE CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION ALL LIVE SERVICE CONNECTIONS AND RESTORE ONLY THOSE LIVE CONNECTIONS. CONTRACTOR SHALL SUBMIT STATIONING, FROM DOWNSTREAM MANHOLE, AND HOUSE/BUILDING ADDRESS FOR AS-BUILT DRAWINGS.
- PRIOR TO PIPELINE CONSTRUCTION, CONTRACTOR SHALL REMOVE ALL DEBRIS AND BLOCKAGES IN ORDER TO CLEAN AND RE-TELEVISION, IN COLOR, ALL LINES DESIGNATED FOR REHABILITATION. RE-TELEVISION LINES IS CONSIDERED SUBSIDIARY TO PIPELINE REHABILITATION AND WILL NOT BE PAID FOR DIRECTLY.
- IF INVERSION LINING OR SLIPLINING IS USED, THE CONTRACTOR SHALL REMOVE THAT PORTION OF PROTRUDING TAPS EXTENDING INTO THE PIPE BY SAW CUTTING. BREAKING OF THE PROTRUDING TAP WILL NOT BE ALLOWED.
- EMBEDMENT FOR ALL PIPES WILL BE AS SHOWN IN THE STANDARD DETAILS EXCEPT WHERE NOTED OTHERWISE ON DRAWINGS.
- THE CONTRACTOR SHALL HAVE, AT A MINIMUM, ONE (1) EXECUTED COPY OF THE CONTRACT DOCUMENTS AT THE JOB SITE AT ALL TIMES.
- DRIVEWAYS, SIDEWALKS, FENCES, SHRUBS, ORNAMENTAL AND FRUIT TREES AND OTHER AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING BEFORE DAMAGE OCCURRED.
- SAW-CUTS REQUIRED FOR REMOVAL AND REPLACEMENT ITEMS SHALL BE AT LEAST FULL ONE-HALF THE DEPTH OF THE EXISTING SURFACE MATERIAL. SAW-CUTS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS REMOVAL AND REPLACEMENT ITEMS REQUIRED.
- THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION STAKING FOR THE PROJECT AND SUCH STAKING SHALL BE CONSIDERED SUBSIDIARY TO THE CONTRACT AMOUNT. ENGINEER TO BE PROVIDED WITH COPIES OF ALL SURVEY FIELD NOTES.
- ALL UNSUITABLE MATERIALS REMOVED DURING TRENCHING AND EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. STOCKPILING OF EXCAVATED MATERIAL IN STREET OR ALLEY RIGHTS-OF-WAY MAY BE ALLOWED UPON APPROVAL BY THE OWNER.
- TREE SIZES PROVIDED ON THE PLANS ARE FOR INFORMATION ONLY.
- ALL VITRIFIED CLAY PIPE USED FOR CONSTRUCTION SHALL BE EXTRA STRENGTH.
- SIDEWALKS, CURBS AND PAVEMENTS SHALL BE FINISHED TO MATCH EXISTING SURROUNDING SURFACES.

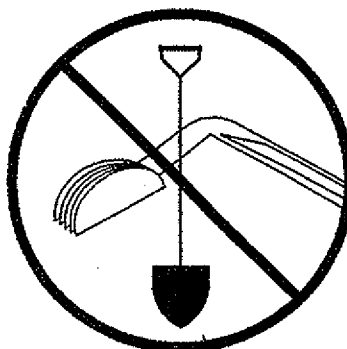
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SHEET NO.	DESCRIPTION
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2	NOTES, DRAWING INDEX, VICINITY MAP
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4	BASE SHEET (ATLAS PAGE 12)
5	BASE SHEET (ATLAS PAGE 13)
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18-24	PLAN & PROFILE SHEET
25-31	PIPELINE REHABILITATION & REPLACEMENT SCHEDULE
32-33	MANHOLE REHABILITATION & REPLACEMENT SCHEDULE



Contract No. 2	
PIPELINE REHABILITATION & REPLACEMENT	
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS	
TULSA METROPOLITAN UTILITY AUTHORITY	
PROJECT NO. ES 96-07	
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell	

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SHEET 2 OF 33 SHEETS

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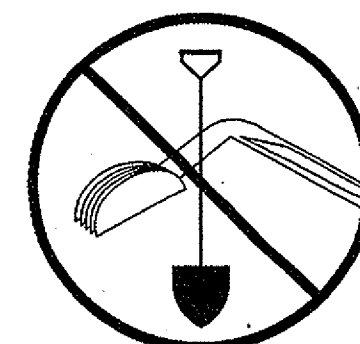
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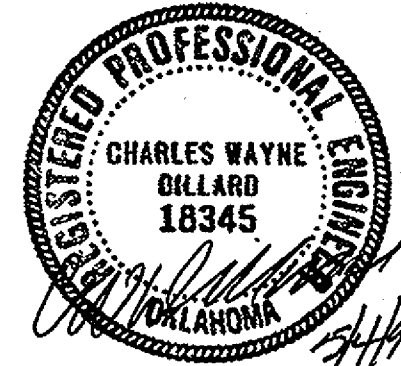
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- MANHOLE NUMBER
- DIRECTION OF FLOW
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- SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE

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CITY OF TULSA ATLAS PAGE NO. 3



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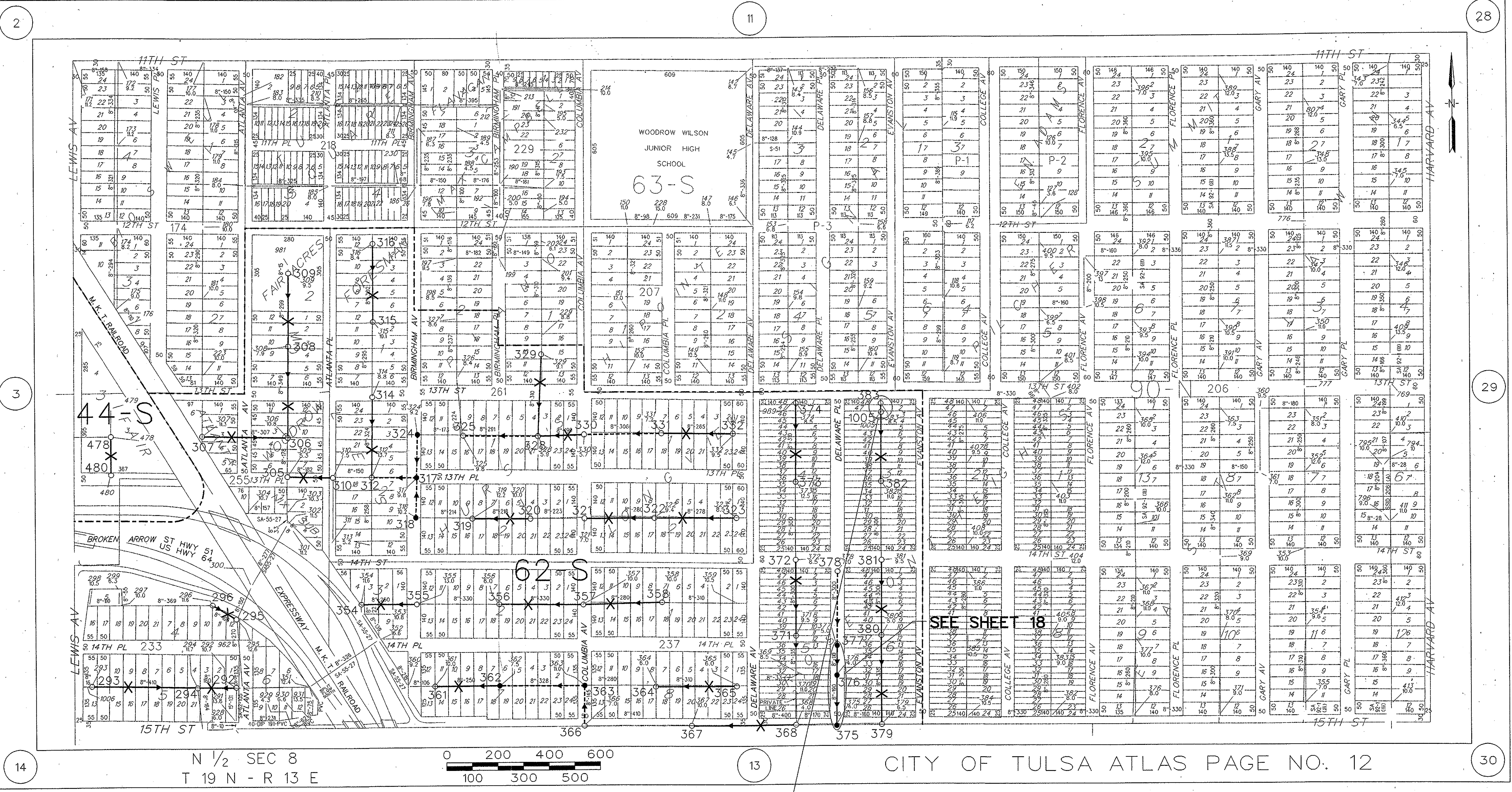
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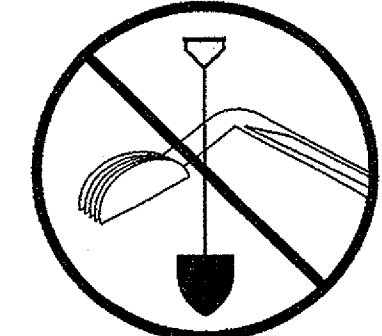
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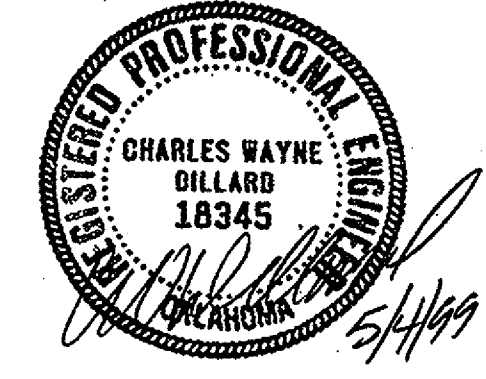
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PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT, INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY:
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DIRECTION OF FLOW

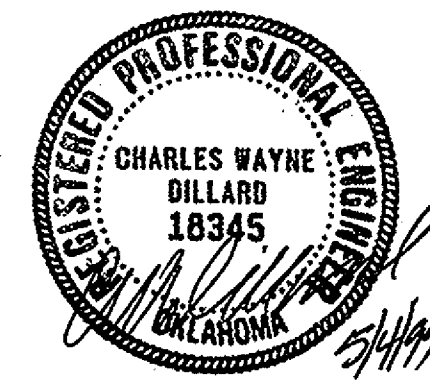
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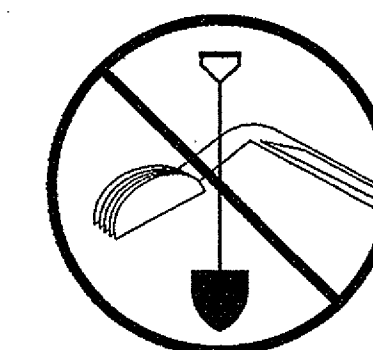
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Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
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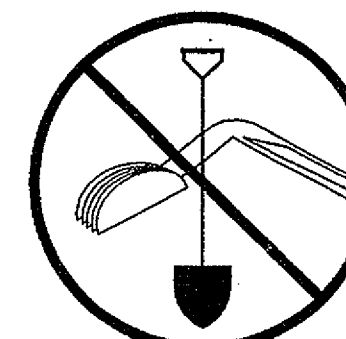
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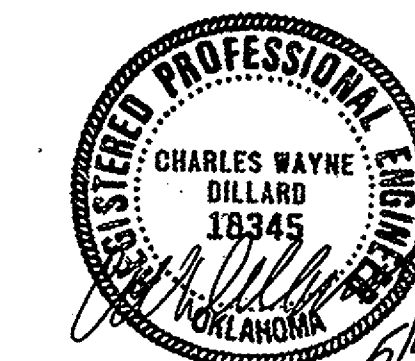
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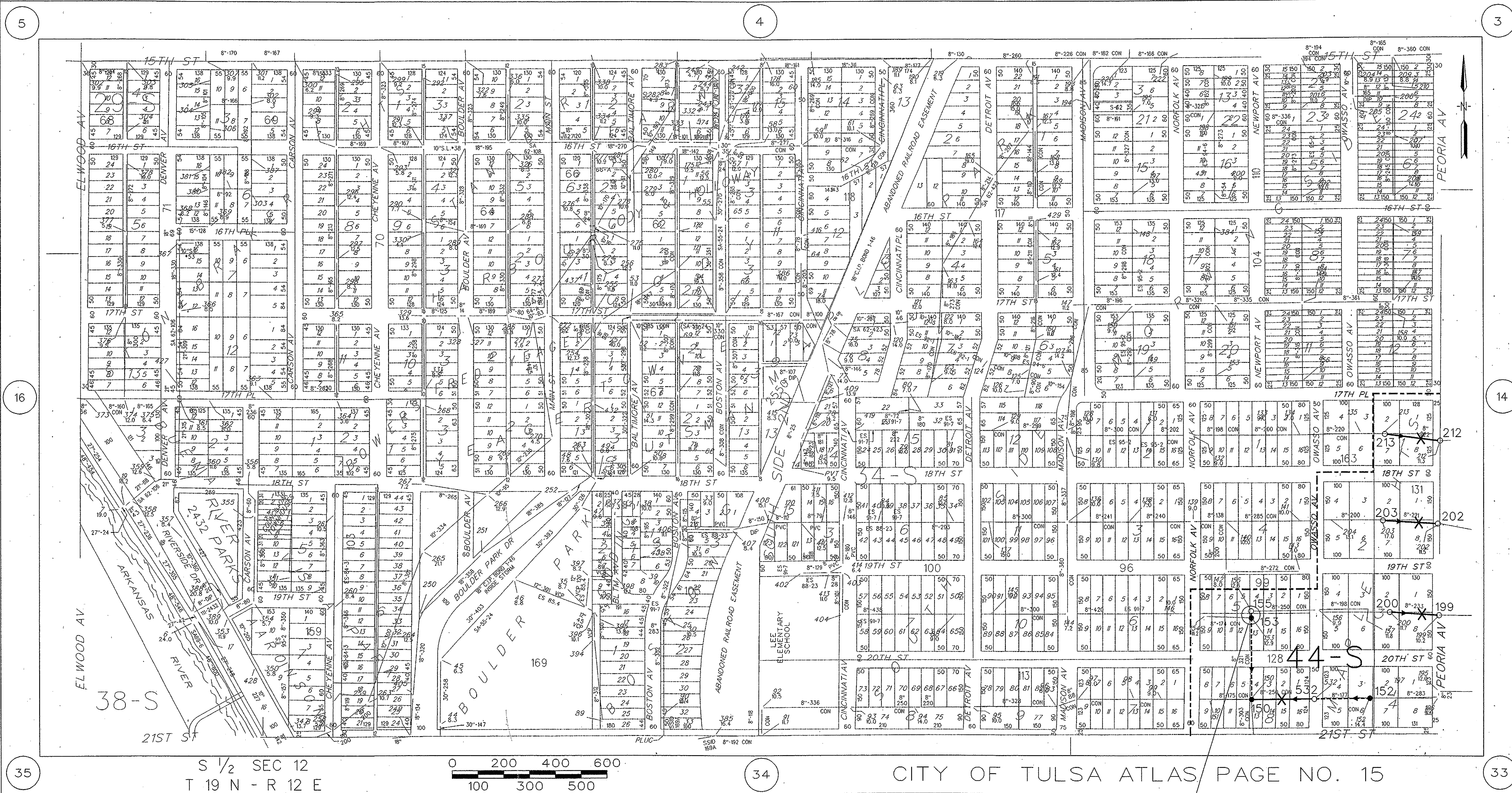


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TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell
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----- MAINTENANCE AREA

----- MAINTENANCE AREA BOUNDARY

○ EXISTING MANHOLE

● MANHOLE, REHABILITATE - SEE SCHEDULE

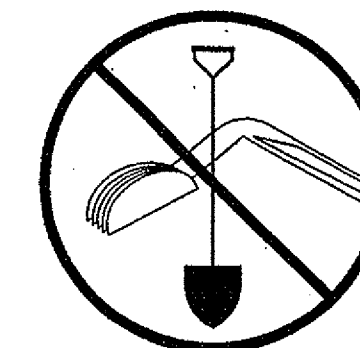
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----- SEWER LINE, RELINE - SEE SCHEDULE

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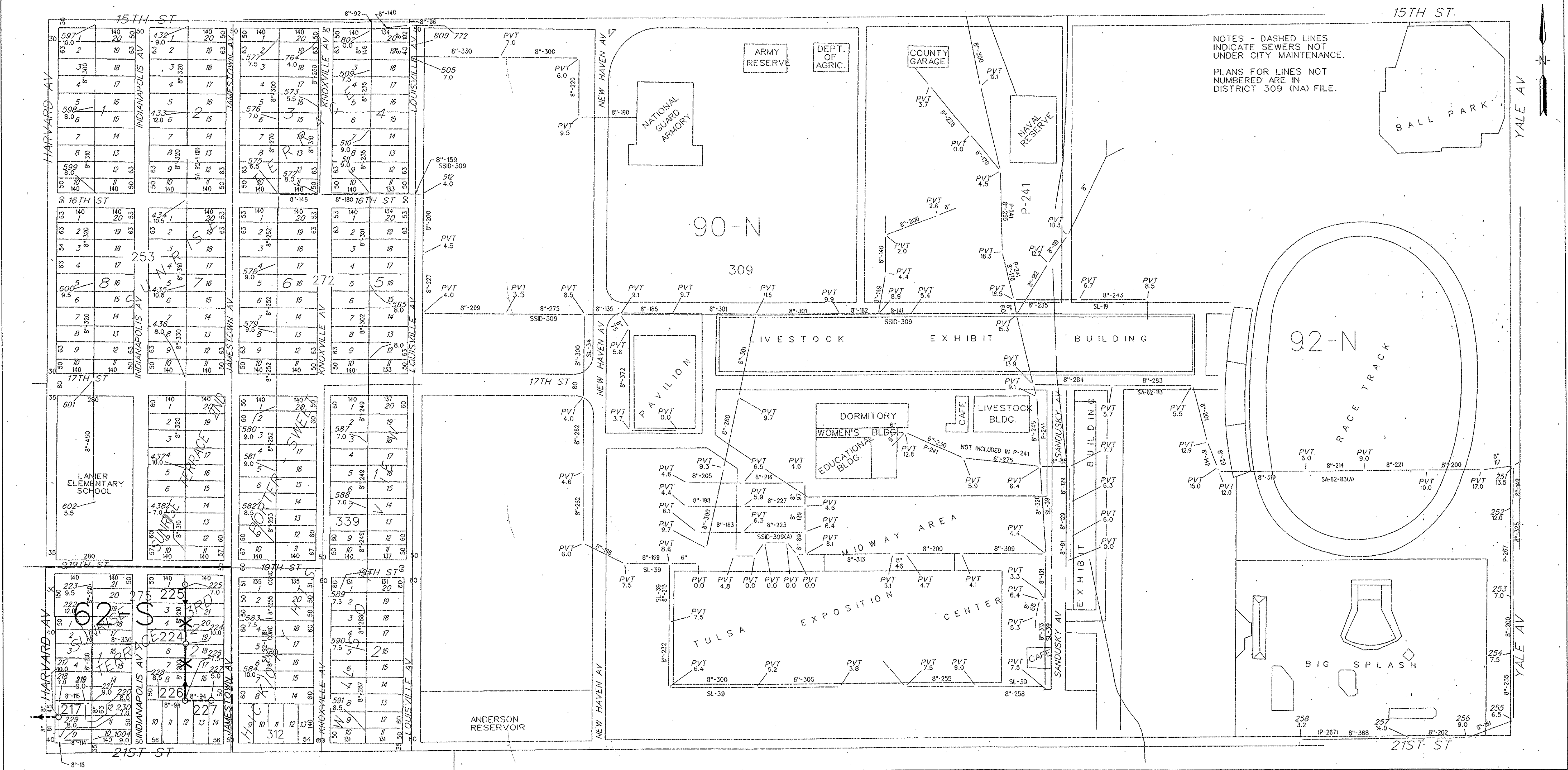
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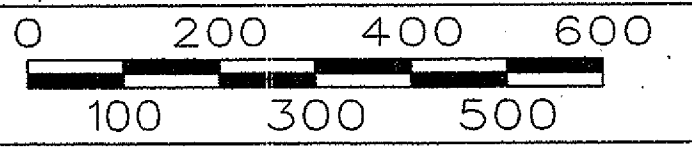
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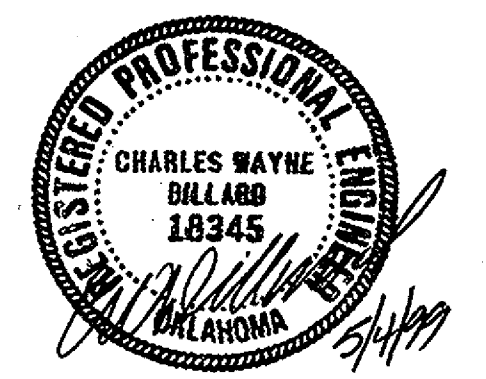
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NOTES - DASHED LINES
INDICATE SEWERS NOT
UNDER CITY MAINTENANCE.
PLANS FOR LINES NOT
NUMBERED ARE IN
DISTRICT 309 (NA) FILE.



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Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
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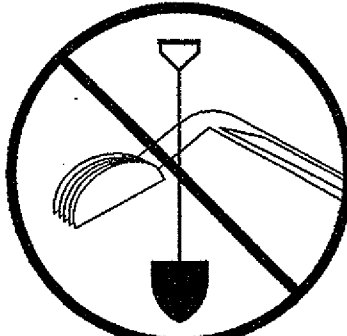
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UTILITY AUTHORITY**
PROJECT NO. ES 96-07

PLANS AND ESTIMATES PREPARED BY: **Burns & McDonnell**

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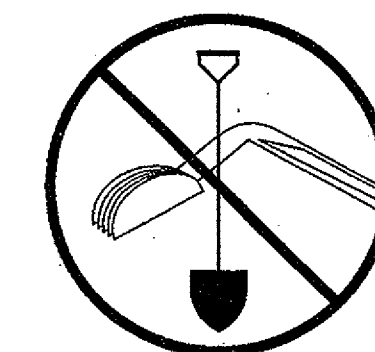
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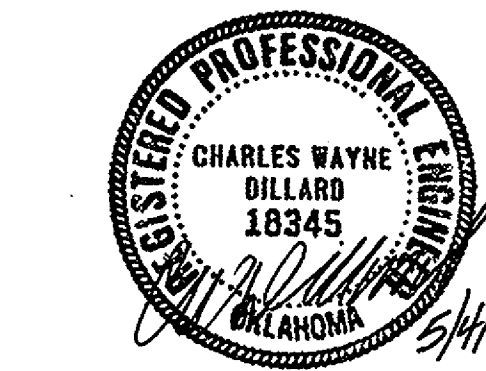
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TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS			
TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NO. ES 96-07			
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell			
REVISION	BY	DATE	APPROVED:
PLAN SCALE:	DRAWN	RAH 5/10/98	
	DESIGNED	VSM 5/9/98	
	SURVEY	JH 2/28/98	
PROFILE SCALE:	FIELD MNGR.		
	SECT. MNGR.	RDS 5/1/99	
HORIZONTAL:	PROJ. MNGR.	LSV 5/1/99	
	RECOMMENDED:		
	DEPUTY DIRECTOR		
FILE:	DRAWING:		
ATLAS PAGE NO:	31	DATE	
SHEET 9 OF 33 SHEETS			

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AR

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AR

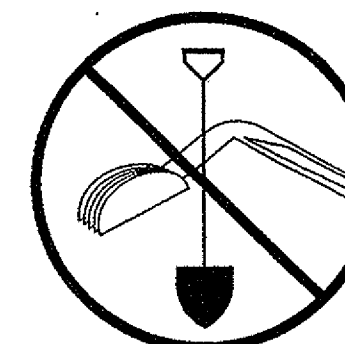
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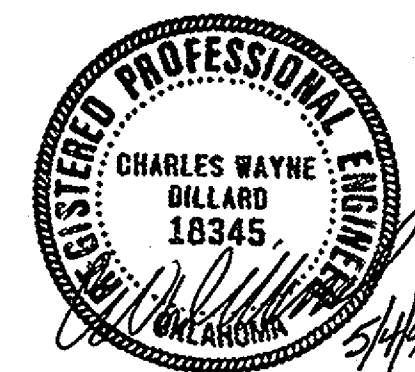
44-S

LEGEND

- MAINTENANCE AREA
MAINTENANCE AREA BOUNDARY
EXISTING MANHOLE
MANHOLE, REHABILITATE - SEE SCHEDULE
MANHOLE NUMBER
DIRECTION OF FLOW
SEWER LINE, REPLACE - SEE P & P SHEETS
SEWER LINE, RELINE - SEE SCHEDULE
SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE



BEFORE
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CALL OKIE



Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT

TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS



TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES-96-07

PLANS AND ESTIMATES PREPARED BY:

**Burns
&
McDonnell**

[illegible]

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY NUMBER 07548

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY NUMBER 07548

DRAWING NUMBER
ES 96-07
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REVISION BY NUMBER 07548

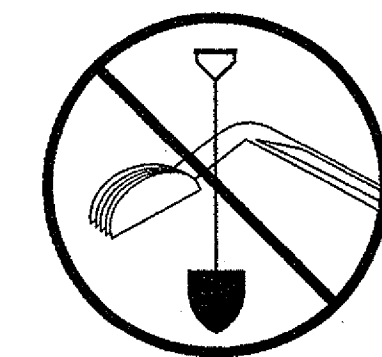
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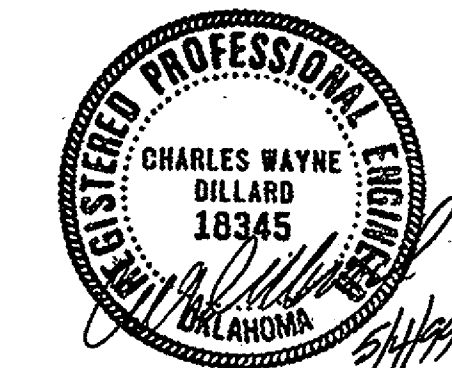
44-S

LEGEND

- MAINTENANCE AREA
- MAINTENANCE AREA BOUNDARY
- EXISTING MANHOLE
- MANHOLE, REHABILITATE - SEE SCHEDULE
- MANHOLE NUMBER
- DIRECTION OF FLOW
- SEWER LINE, REPLACE - SEE P & P SHEETS
- SEWER LINE, RELINE - SEE SCHEDULE
- SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE



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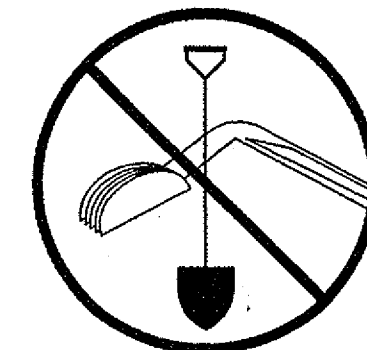
Contract No. 2 PIPELINE REHABILITATION & REPLACEMENT			
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS			
TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NO. ES 96-07			
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell			
PLAN SCALE:	DRAWN	RAH	5/10/98
1" = 200'	DESIGNED	VSM	5/9/98
	SURVEY	JH	2/28/98
PROFILE SCALE:	FIELD MNGR.		
HORIZONTAL:	SECT. MNGR.	RBS	5/1/99
VERTICAL:	PROJ. MNGR.	JW	5/1/99
RECOMMENDED:			
FILE:	DRAWING:		
ATLAS PAGE NO:	33		
APPROVED:			
PUBLIC WORKS DIRECTOR			
DATE			
SHEET 11 OF 33 SHEETS			



44-S

LEGEND

- MAINTENANCE AREA
- MAINTENANCE AREA BOUNDARY
- EXISTING MANHOLE
- MANHOLE, REHABILITATE - SEE SCHEDULE
- MANHOLE NUMBER
- DIRECTION OF FLOW
- SEWER LINE, REPLACE - SEE P & P SHEETS
- SEWER LINE, RELINE - SEE SCHEDULE
- SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE



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Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT

TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS



TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07

PLANS AND ESTIMATES PREPARED BY:

**Burns
&
McDonnell**

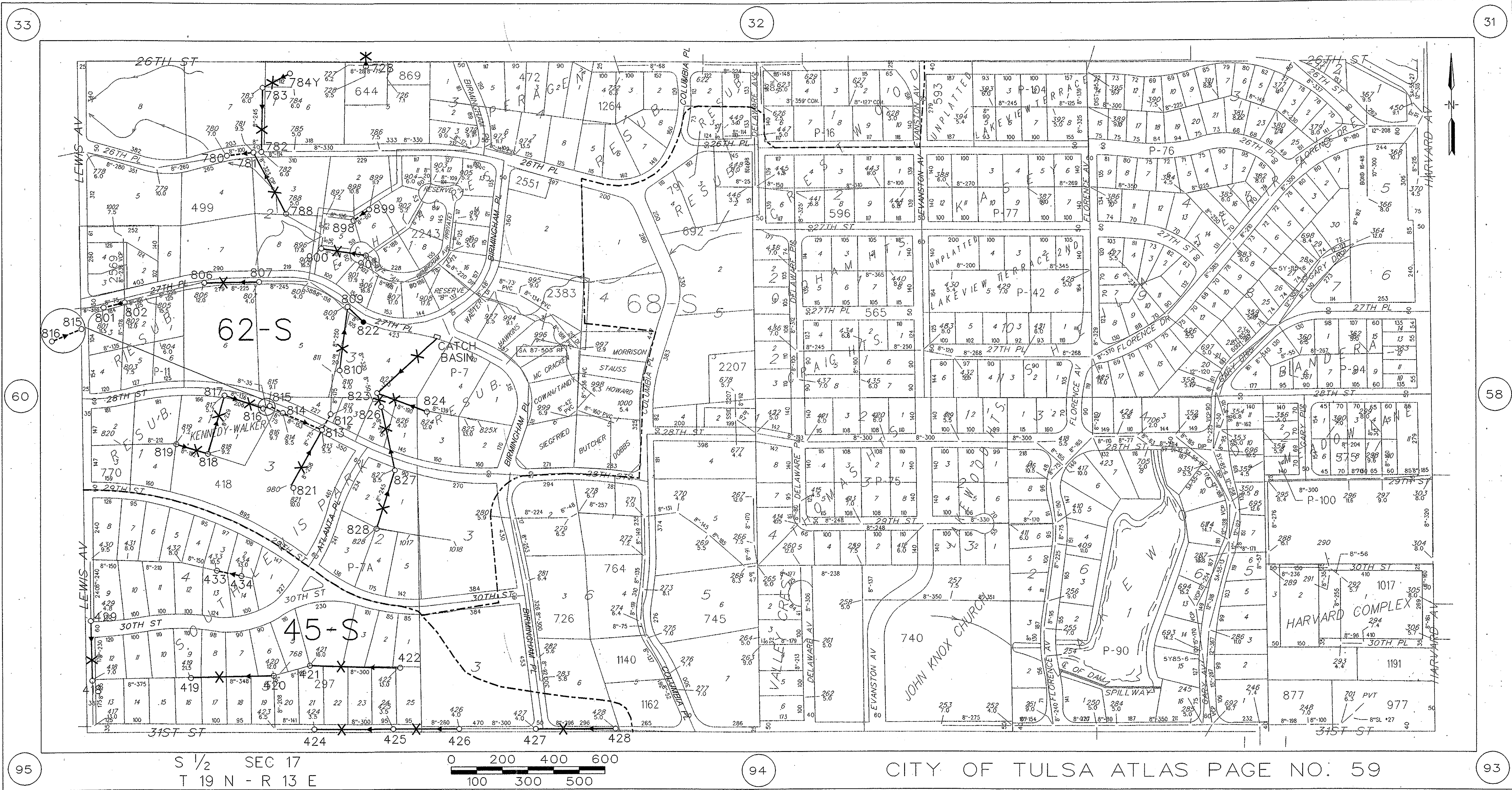
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			VERTICAL F.			PROJ. MNGR.			JSW 3/4/99			[Signature] PUBLIC WORKS DIRECTOR		
			FILE:			DRAWING:			DATE					
			ATLAS PAGE NO: 34									SHEET 12 OF 33 SHEETS		

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

DRAWING NUMBER
ES 96-07
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

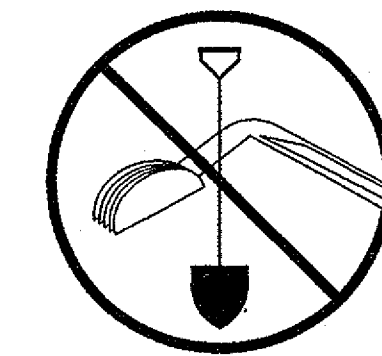
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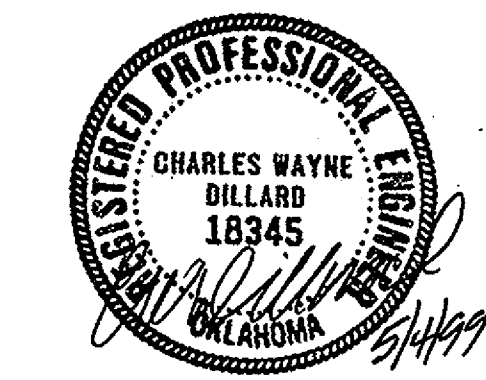
44-S

LEGEND

- MAINTENANCE AREA
- MAINTENANCE AREA BOUNDARY
- EXISTING MANHOLE
- MANHOLE, REHABILITATE - SEE SCHEDULE
- MANHOLE NUMBER
- DIRECTION OF FLOW
- SEWER LINE, REPLACE - SEE P & P SHEETS
- SEWER LINE, RELINE - SEE SCHEDULE
- SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE

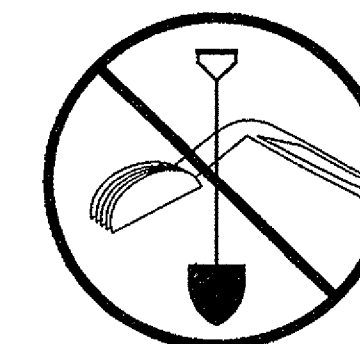
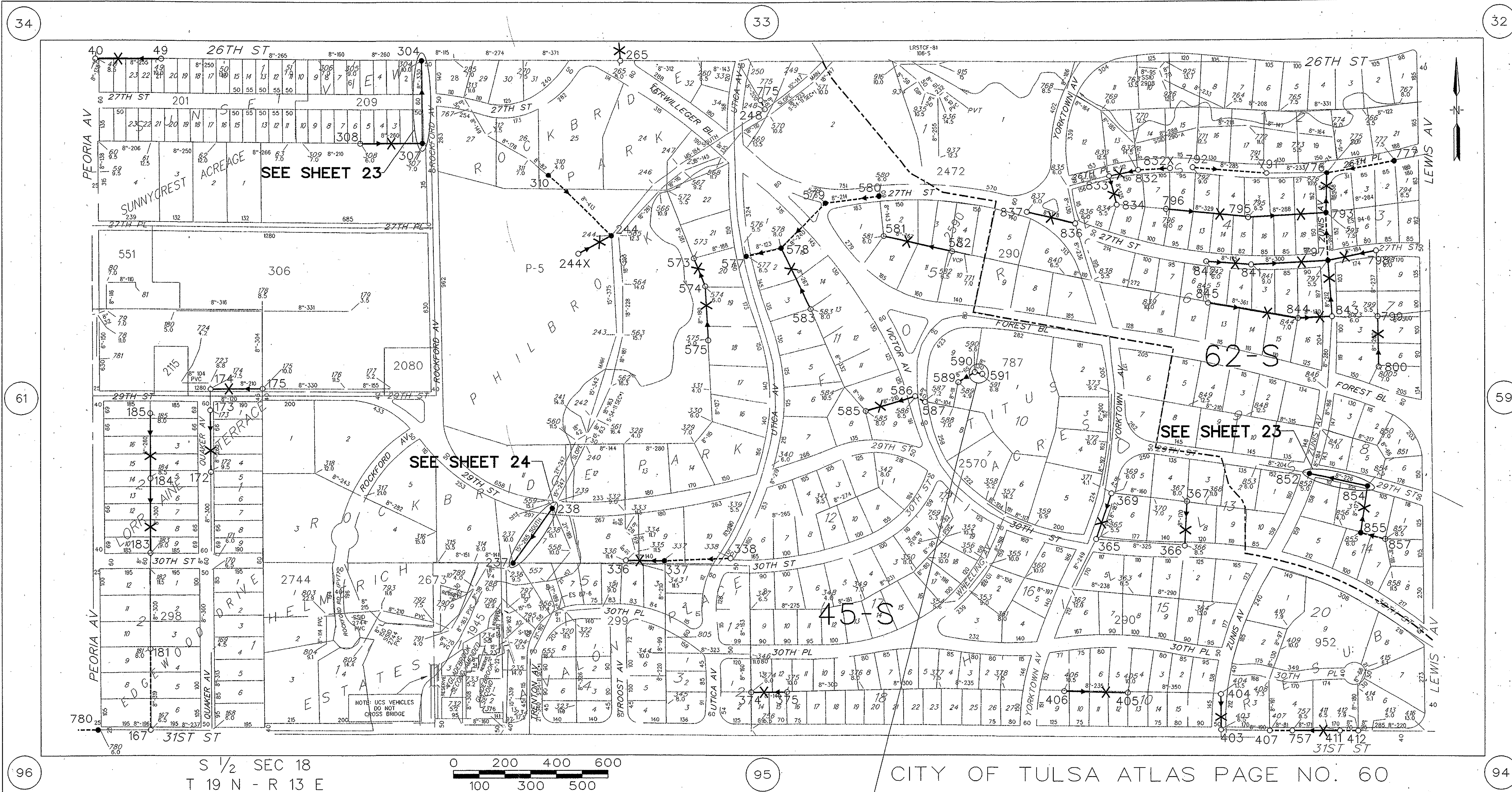
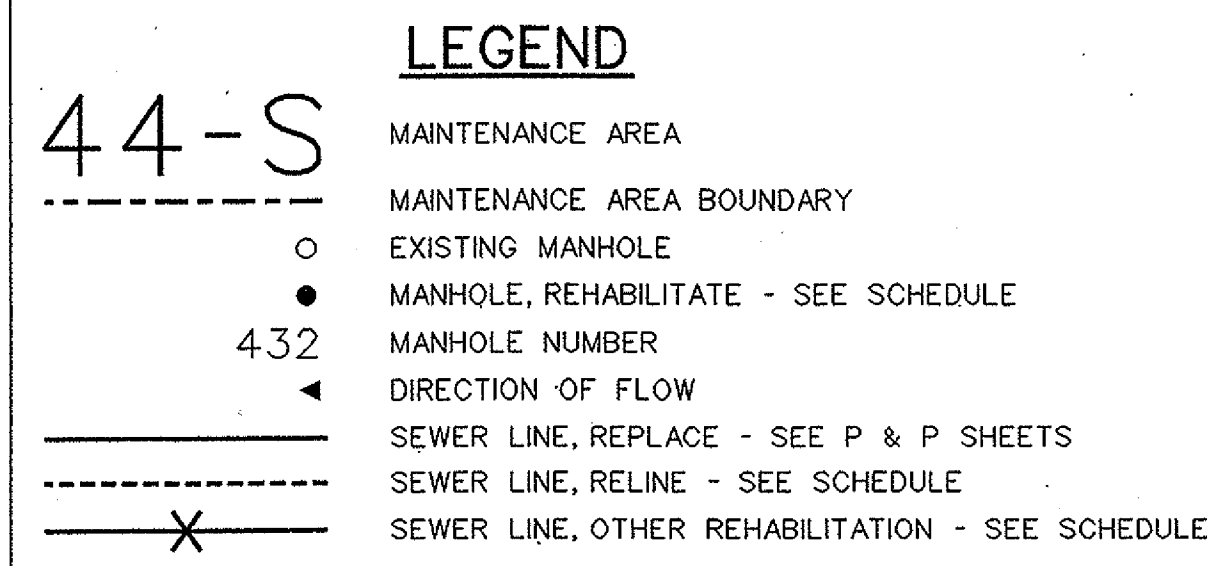


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CALL OKIE



REVISION		BY	DATE	PLAN SCALE:		DRAWN	RAH	5/10/98	APPROVED:
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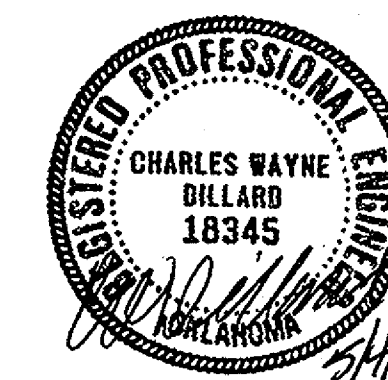
j:\tulsasses\96348-2\tulsa_atlas\tulss060.dgn 03 MAY '99 13:17:52 V_Miller




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YOU DIG...

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<h1 style="text-align: center;">CONTRACT NO. 2</h1> <h2 style="text-align: center;">PIPELINE REHABILITATION & REPLACEMENT</h2>				
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS				
 <h3 style="margin: 0;">TULSA METROPOLITAN UTILITY AUTHORITY</h3> <p style="margin: 0;">PROJECT NO. ES 96-07</p>				
PLANS AND ESTIMATES PREPARED BY:				Burns & McDonnell
E	PLAN SCALE:	DRAWN	RAH	5/10/98
		DESIGNED	VSM	5/9/98
	1" = 200'	SURVEY	JH	2/28/98
	PROFILE SCALE:	FIELD MNGR.		
		SECT. MNGR.	DR RW	5/9 5/99
	HORIZONTAL:	PROJ. MNGR.	JW	5/4/99
	VERTICAL	RECOMMENDED:		
	1" =	DEPUTY DIRECTOR		
				<i>MR Burns</i>
	FILE:	DRAWING:		PUBLIC WORKS DIRECTOR
	ATLAS PAGE NO:	60		SHEET 14 OF 33 SHEETS

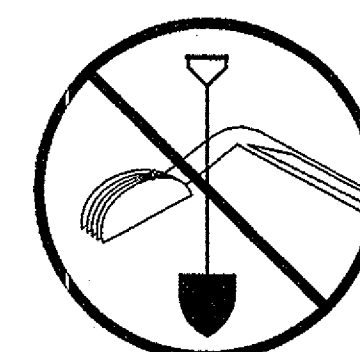
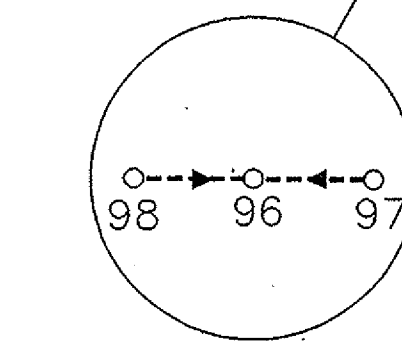
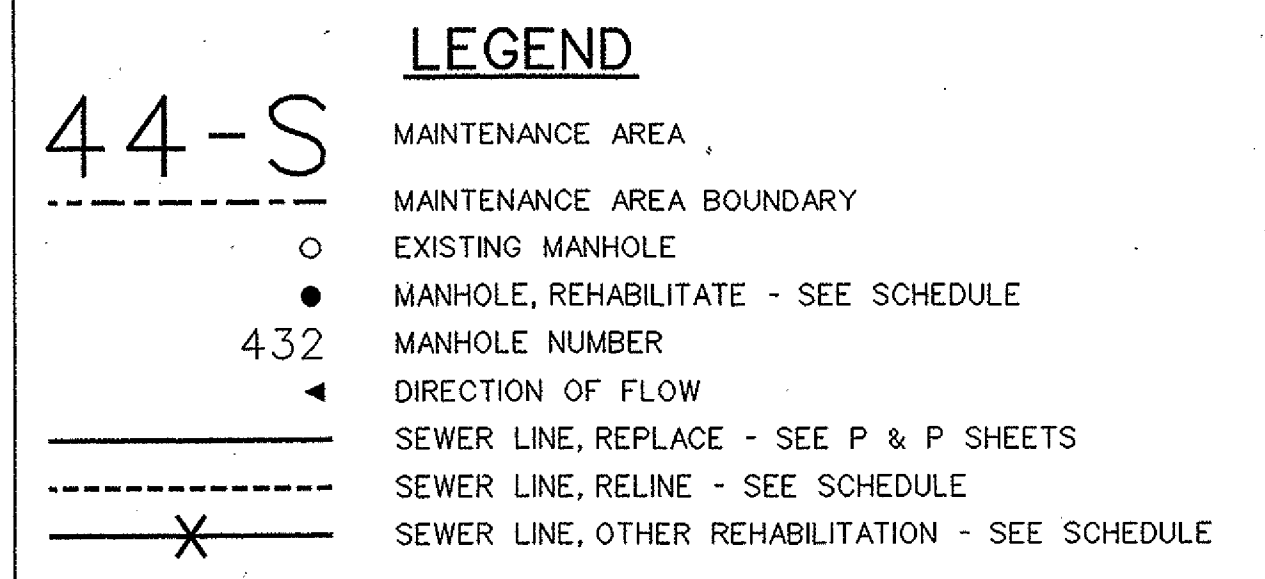
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

DRAWING NO. ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AR

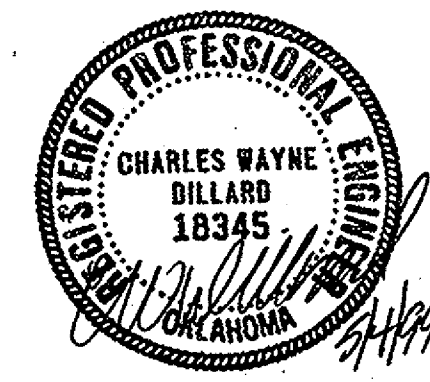
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McDonald

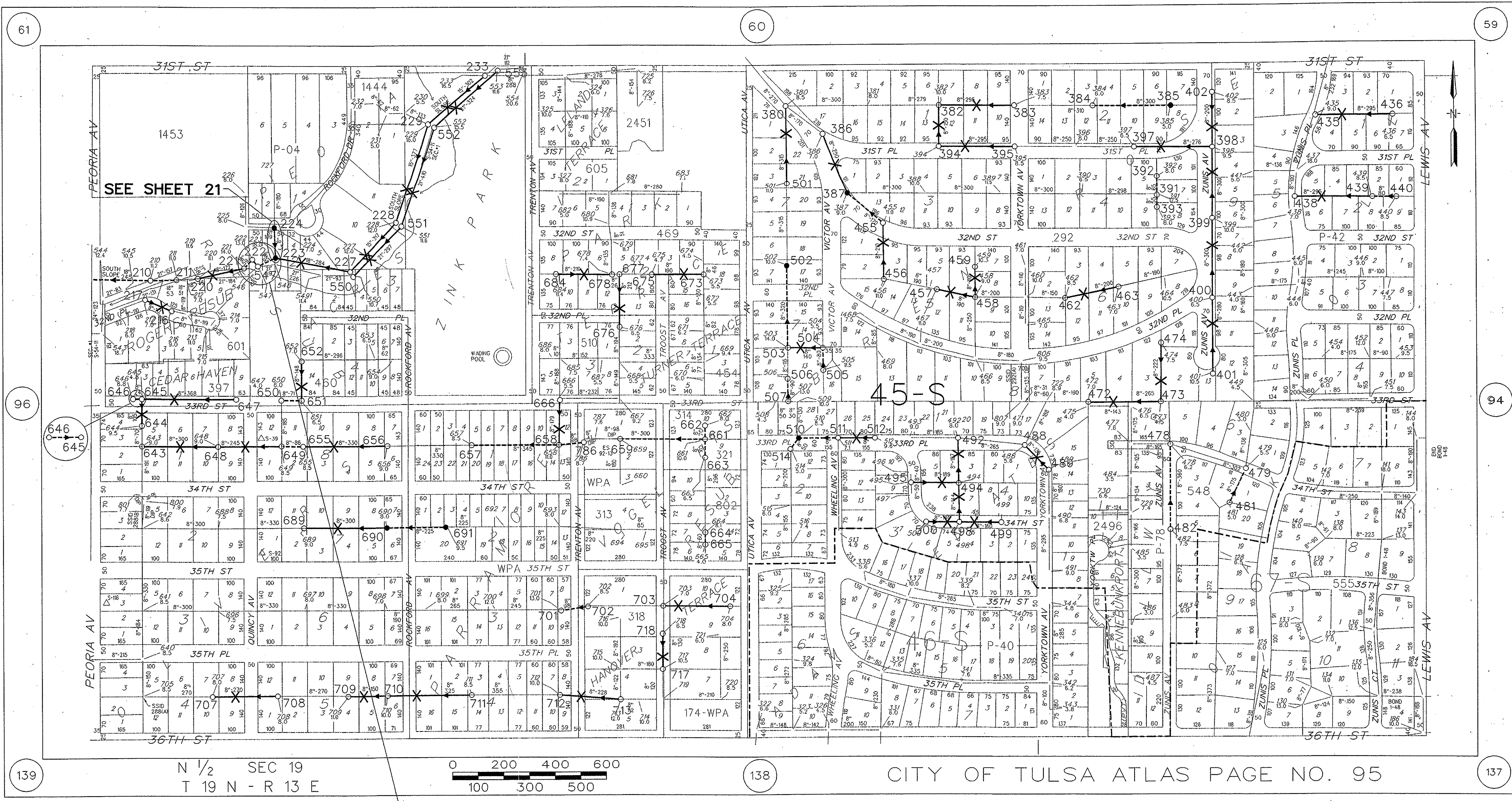
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						SURVEY	JH	2/28/98	
					PROFILE SCALE:	FIELD MNGR.			
					HORIZONTAL:	SECT. MNGR.		 5/1/99	
					VERTICAL	PROJ. MNGR.		JSV 3/4/99	
						RECOMMENDED:			
						DDP 5-10-98			
						DEPUTY DIRECTOR			
					FILE:	DRAWING:		DATE	
					ATLAS PAGE NO:	61		SHEET 15 OF 33 SHEETS	

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07/04
POSITION: EAST OF PINE ON THE LINE

DRAWING NUMBER
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07/04

DRAWING NUMBER
ES 96-07
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07/04

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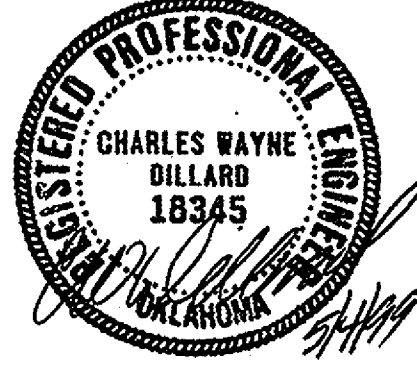


44-S

LEGEND

- MAINTENANCE AREA
- MAINTENANCE AREA BOUNDARY
- EXISTING MANHOLE
- MANHOLE, REHABILITATE - SEE SCHEDULE
- MANHOLE NUMBER
- DIRECTION OF FLOW
- SEWER LINE, REPLACE - SEE P & P SHEETS
- SEWER LINE, RELINE - SEE SCHEDULE
- SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE

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Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell

REVISION	BY	DATE

PLAN SCALE:	DRAWN	RAH	5/10/98	APPROVED:
1" = 200'	DESIGNED	VSM	5/9/98	
	SURVEY	JH	2/28/98	
PROFILE SCALE:	FIELD MNGR.			
	SECT. MNGR.			
HORIZONTAL:	PROJ. MNGR.			
	RECOMMENDED:			
VERTICAL	DEPUTY DIRECTOR			
	DRAWING:			
FILE:				
ATLAS PAGE NO:	95			

SHEET 16 OF 33 SHEETS

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07549
PROPOSED DATE OF PRINT: MAY 1999

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07549
PROPOSED DATE OF PRINT: MAY 1999

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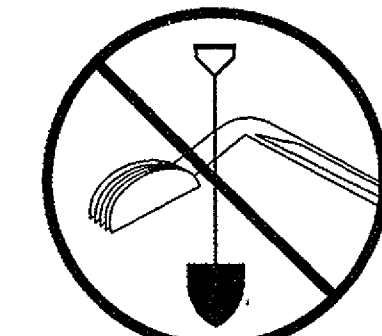
ES 98-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07549
PROPOSED DATE OF PRINT: MAY 1999

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44-S		LEGEND
-----		MAINTENANCE AREA
○		MAINTENANCE AREA BOUNDARY
●		EXISTING MANHOLE
●		MANHOLE, REHABILITATE - SEE SCHEDULE
432		MANHOLE NUMBER
▲		DIRECTION OF FLOW
---		SEWER LINE, REPLACE - SEE P & P SHEETS
---		SEWER LINE, RELINE - SEE SCHEDULE
X		SEWER LINE, OTHER REHABILITATION - SEE SCHEDULE



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YOU DIG...
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CALL OKIE



REVISION	BY	DATE

Contract No. 2 PIPELINE REHABILITATION & REPLACEMENT	
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS	
TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NO. ES 96-07	
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell	
PLAN SCALE: 1" = 200'	APPROVED: DATE SHEET 17 OF 33 SHEETS
DRAWN: VSM DESIGNED: JH SURVEY: JH	RAH 5/10/98 VSM 5/9/98 JH 2/28/98
PROFILE SCALE: 1" = 10'	FIELD MNGR. SECT. MNGR. PROJ. MNGR.
HORIZONTAL: 1" = 10'	RECOMMENDED DEPUTY DIRECTOR
VERTICAL: 1" = 10'	DATE PUBLIC WORKS DIRECTOR
FILE:	DRAWING:
ATLAS PAGE NO: 96	DATE

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REORDER BY NUMBER 07549

DRAWING NUMBER

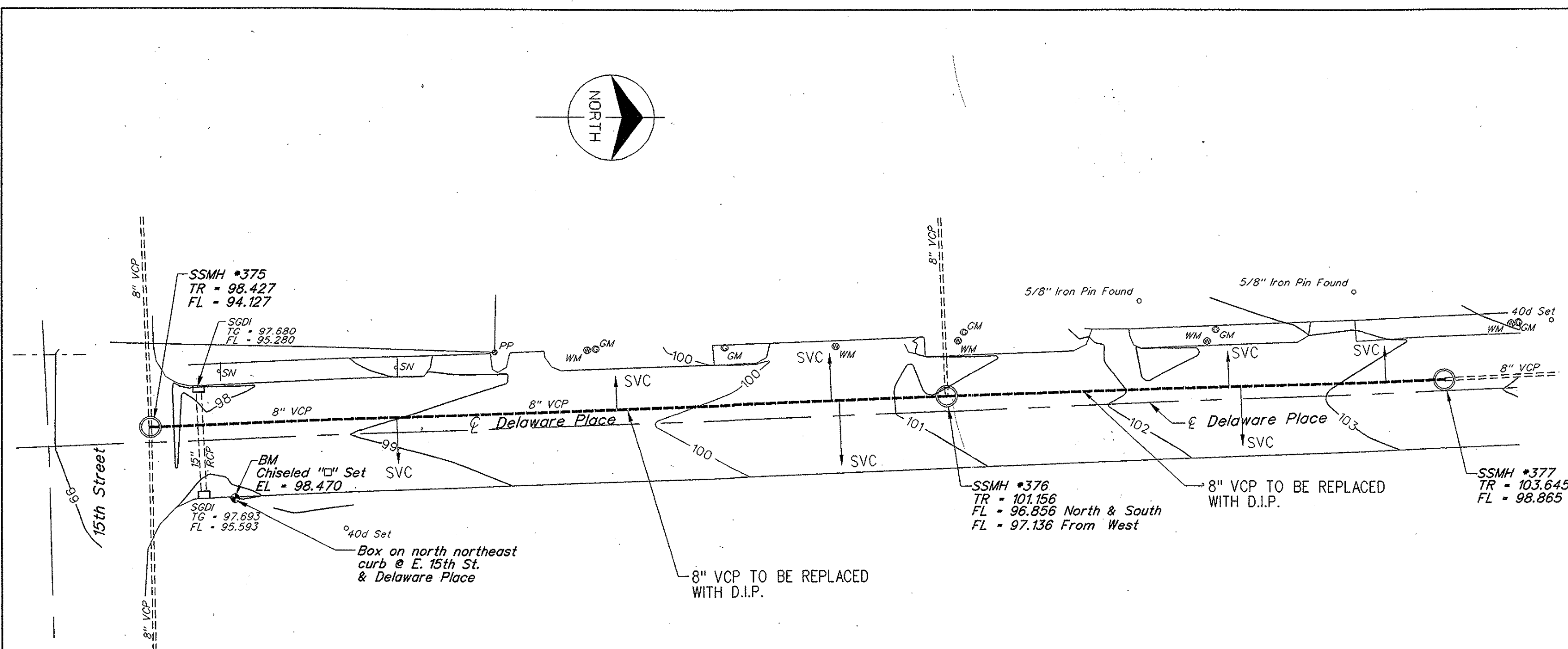
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REORDER BY NUMBER 07549

DRAWING NUMBER

ES 96-07

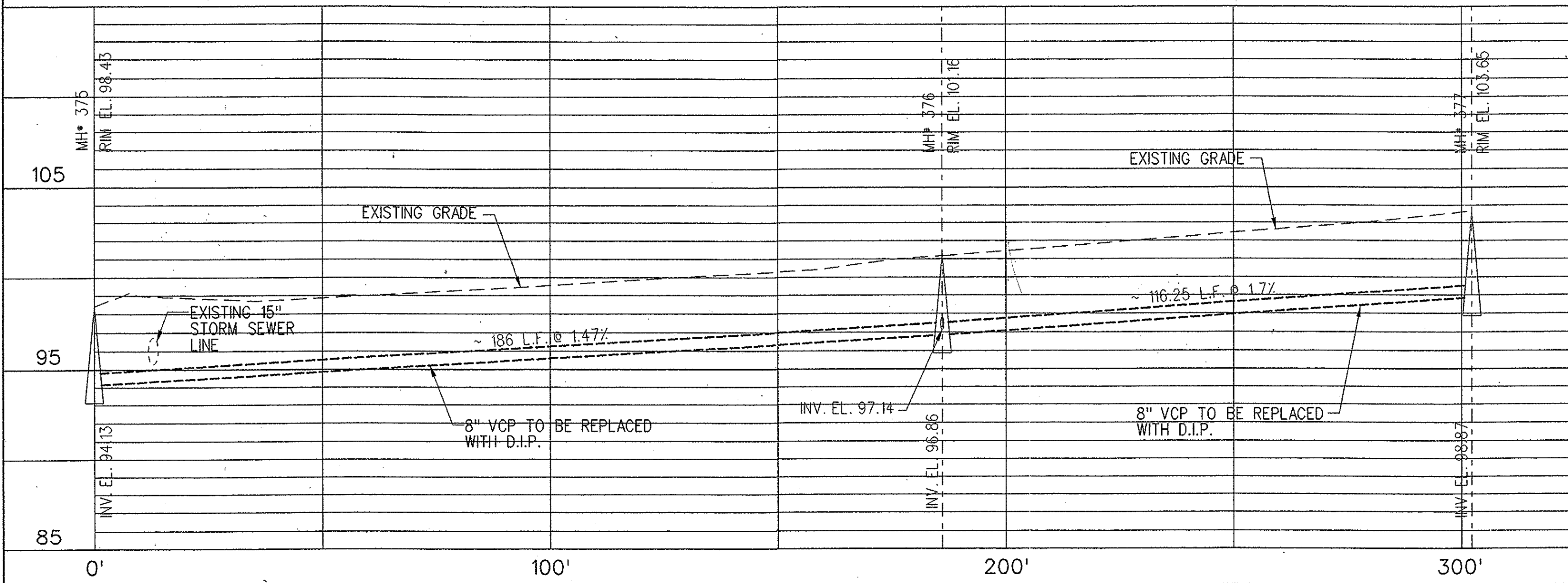
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 07549

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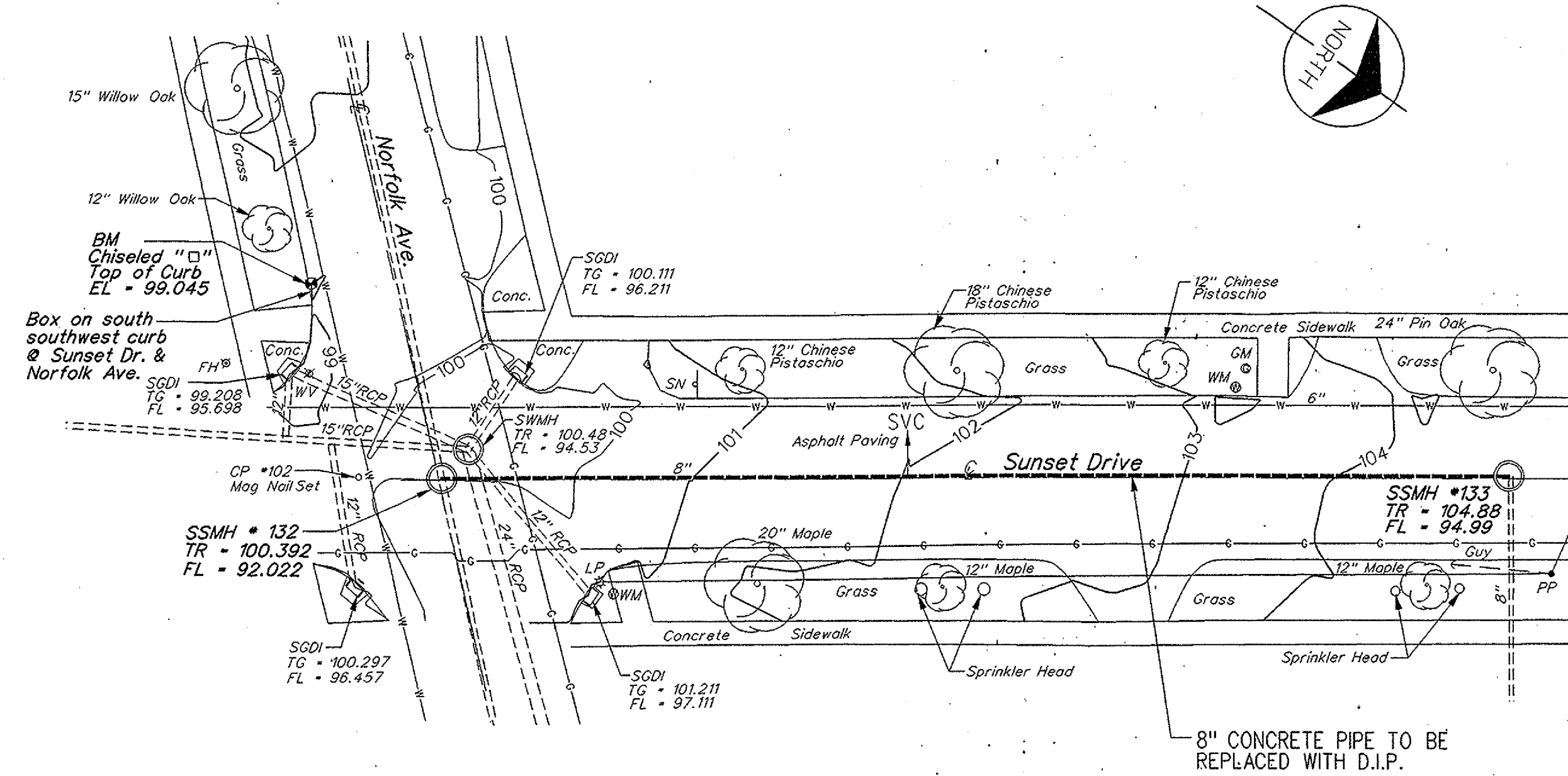
1434 South Delaware Place
Basin ID 62-S, MH# 375, MH# 376
ATLAS SHEET 12

1424 South Delaware Place
Basin ID 62-S, MH# 376, MH# 377
ATLAS SHEET 12

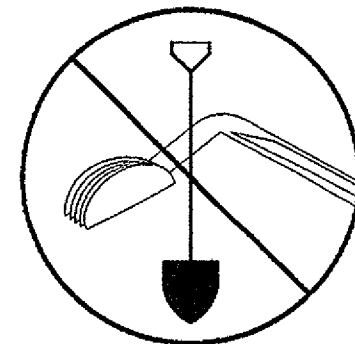
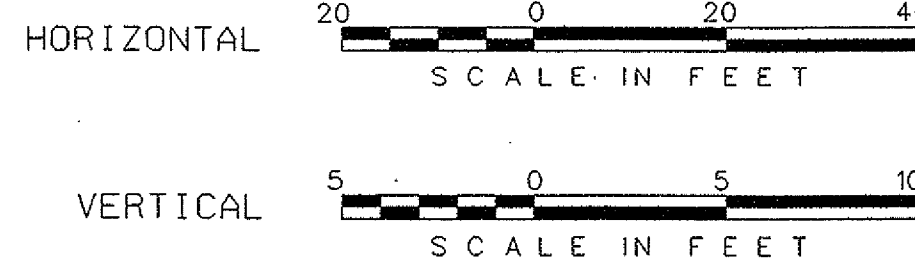
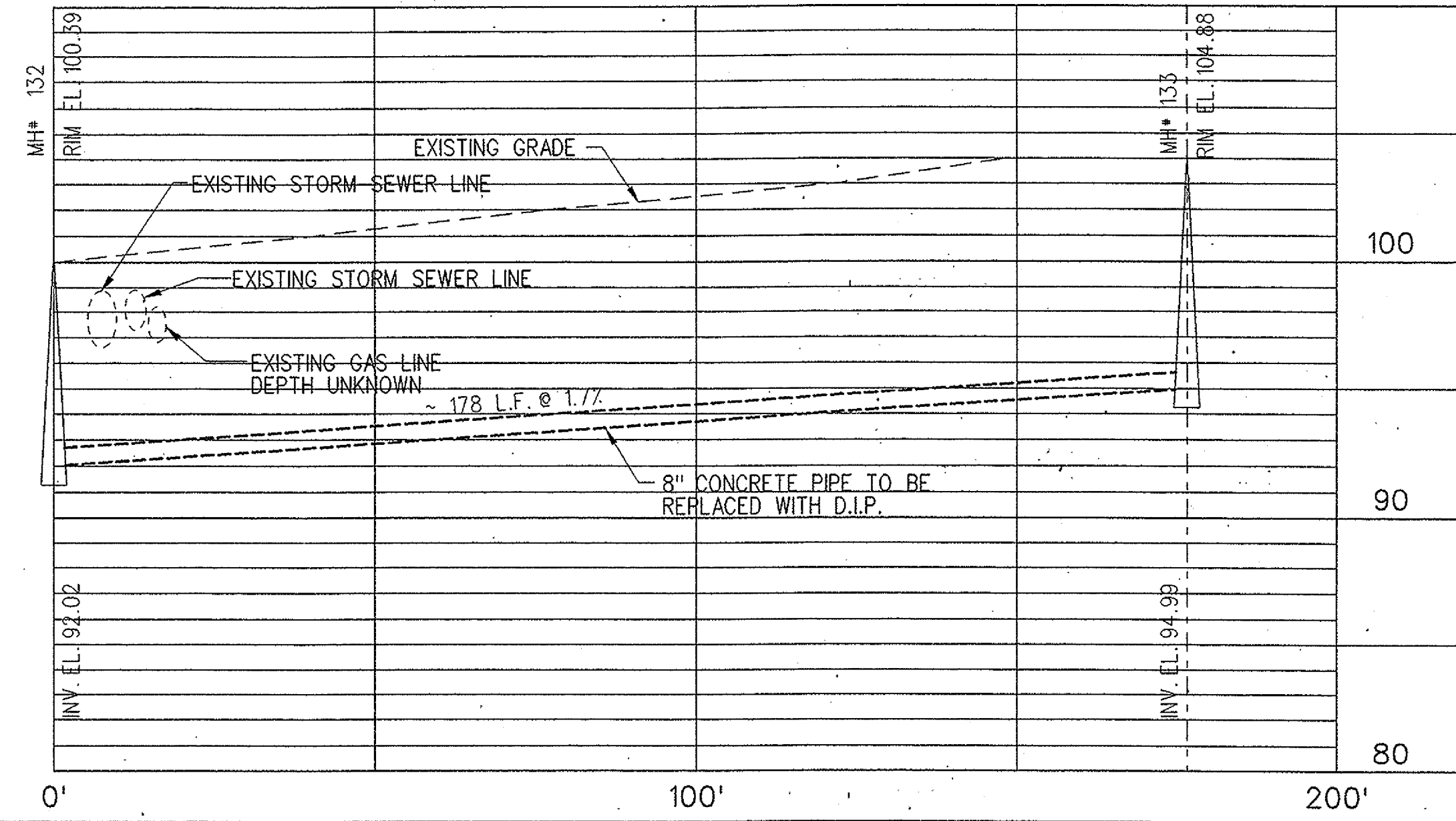


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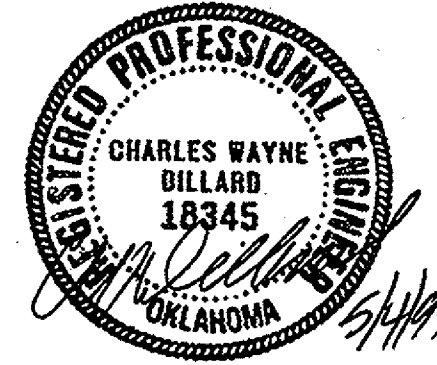
- | | | |
|--------------------------------|------------------------------------|---|
| GM - Gas Meter | SN - Sign | DT - Deciduous Tree |
| GV - Gas Valve | MB - Mailbox | CT - Coniferous Tree |
| ICV - Irrigation Control Valve | BM - Bench Mark/Floor Elevation | |
| WM - Water Meter | CP - Survey Control Point | |
| WV - Water Valve | B - Bush | |
| FH - Fire Hydrant | TJB - Telephone Cable Junction Box | |
| SSMH - Sanitary Sewer Manhole | Mag Nail Set | |
| SSMHY - Storm Water Manhole | 3/8" Iron Pin W/Cap Set | |
| CO - Cleanout | | |
| PP - Power Pole | SVC - Service Connection | |
| GUY - Guy Anchor | | |
| LP - Light Pole | SGDI - Single Grate Drop Inlet | |
| PPED - Telephone Pedestal | DGDI - Double Grate Drop Inlet | |
| | TG - Top of Grade Elev. | |
| | TR - Top of Rim Elev. | |
| | FL - Flow Line | |
| | | Fence Line (All Types) |
| | | OHE - Overhead Elec. (and Other Util's) |
| | | EUG - Underground Electric |
| | | OHT - Overhead Telephone |
| | | TUG - Underground Telephone |
| | | G - Natural Gas Line |
| | | W - Water Line |
| | | Sanitary Sewer Line |
| | | Edge of Gravel |
| | | Asphalt Surface |
| | | Concrete Surface |



1018 East Sunset Drive
Basin ID 44-S, MH# 132, MH# 133 ATLAS SHEET 34

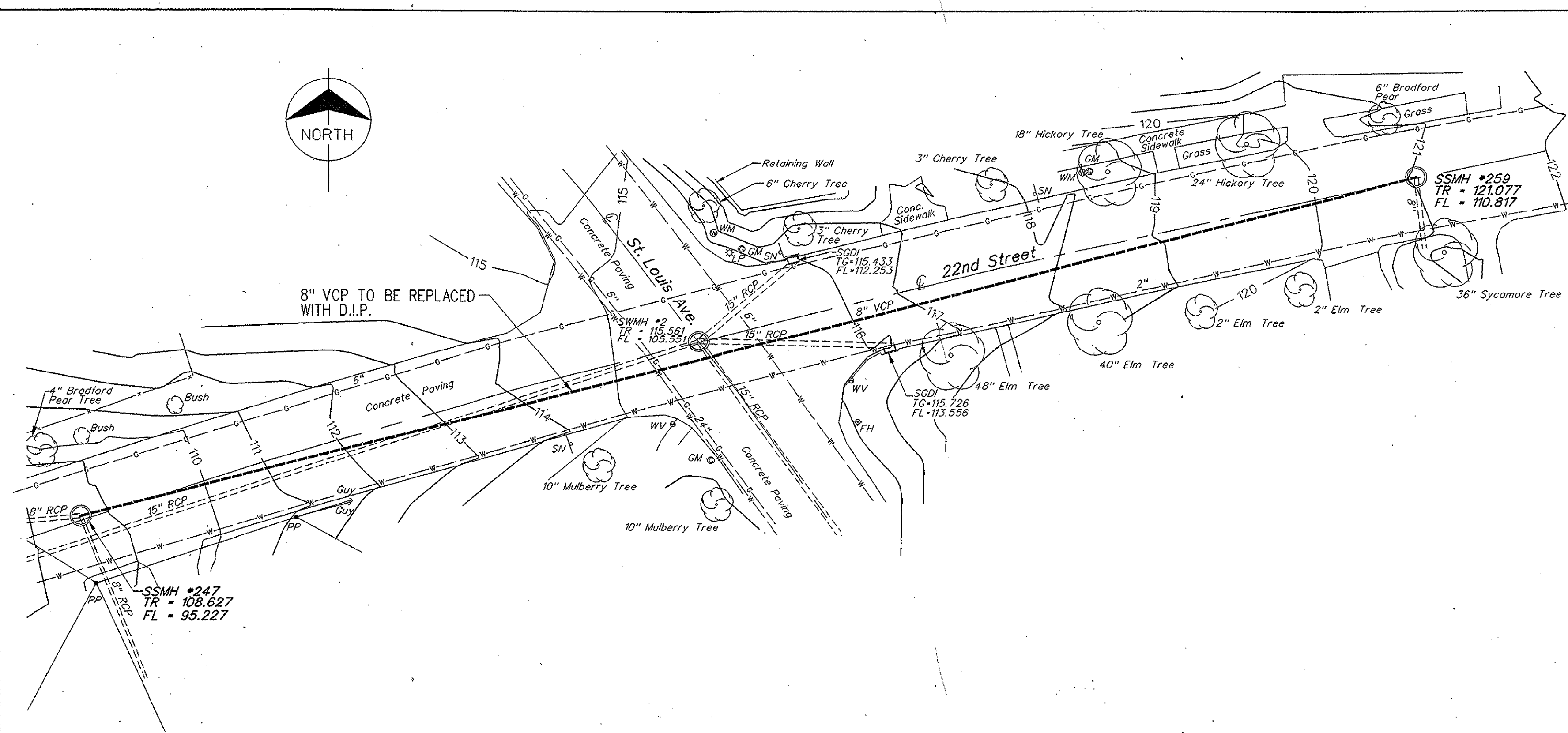


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YOU DIG...
1-800-522-6543
CALL OKIE

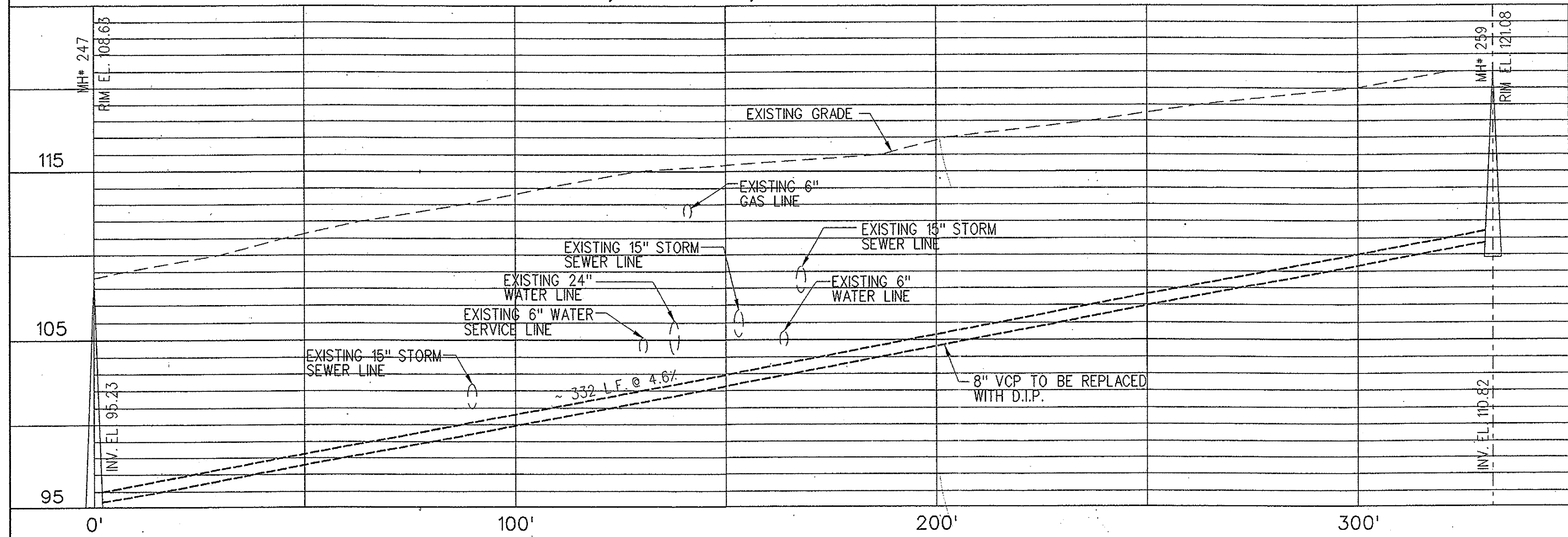


Contract No. 2 PIPELINE REHABILITATION & REPLACEMENT			
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS			
TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NO: ES 96-07			
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell			
REVISION	BY	DATE	APPROVED:
DESIGNED	JJK	10/7/98	
SURVEY	DLD	8/18/98	
FIELD MNGR.			
SECT. MNGR.	JSV	5/1/99	
PROJ. MNGR.			
RECOMMENDED			
DEPUTY DIRECTOR			
FILE:	DRAWING:	DATE	
ATLAS PAGE NO:			SHEET 18 OF 33 SHEETS

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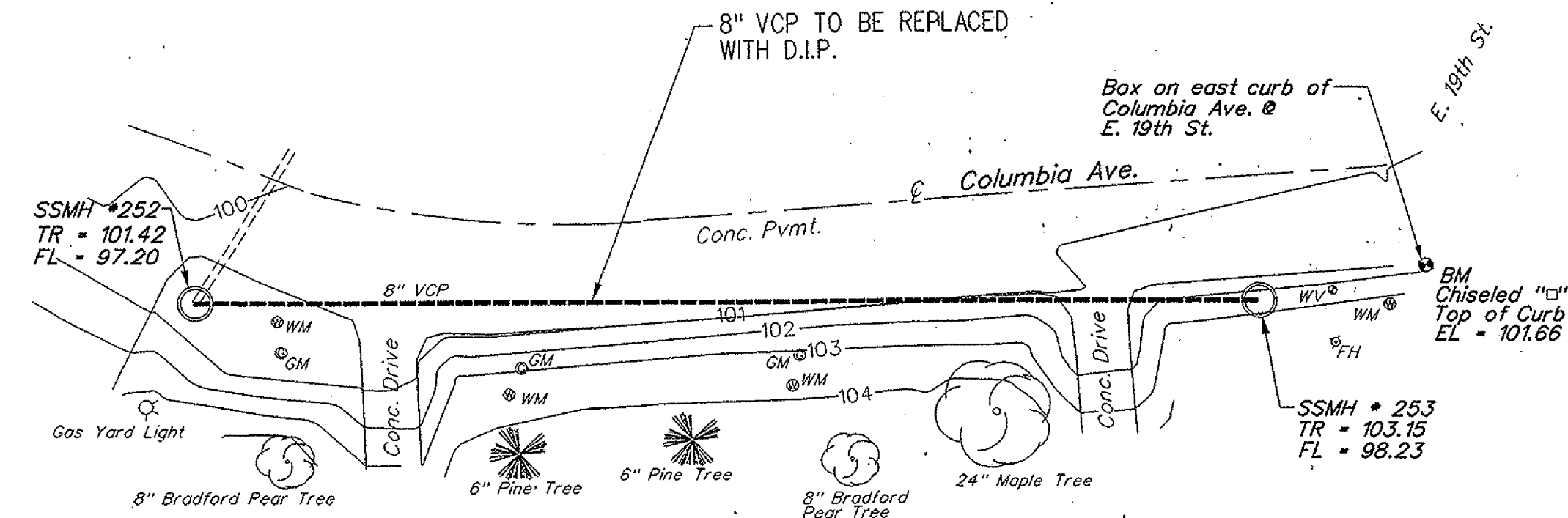
1562 East 22nd Street
Basin ID 44-S, MH# 247, MH# 259 ATLAS SHEET 33



Symbol Legend

- | | | |
|--------------------------------|------------------------------------|-----------------|
| GM - Gas Meter | SN - Sign | Deciduous Tree |
| GV - Gas Valve | BM - Mailbox | Coniferous Tree |
| ICV - Irrigation Control Valve | BM - Bench Mark/Floor Elevation | |
| WM - Water Meter | CP - Survey Control Point | |
| WV - Water Valve | Bush | |
| FH - Fire Hydrant | TJB - Telephone Cable Junction Box | |
| SSMH - Sanitary Sewer Manhole | RD - Roof Drain | |
| SWMH - Storm Water Manhole | Mag Nail Set | |
| CO - Cleanout | 3/8" Iron Pin W/Cap Set | |
| PP - Power Pole | SVC - Service Connection | |
| GUY - Guy Anchor | SGDI - Single Grate Drop Inlet | |
| LP - Light Pole | DGDI - Double Grate Drop Inlet | |
| PPED - Telephone Pedestal | TG - Top of Grade Elev. | |
| | TR - Top of Rim Elev. | |
| | FL - Flow Line | |
- | | |
|-----------|-----------------------------------|
| — x — x — | Fence Line (All Types) |
| — O — | Overhead Elec. (and Other Util's) |
| — E — | Underground Electric |
| — T — | Overhead Telephone |
| — U — | Underground Telephone |
| — G — | Natural Gas Line |
| — W — | Water Line |
| — S — | Sanitary Sewer Line |
| — E — | Edge of Gravel |
| — A — | Asphalt Surface |
| — C — | Concrete Surface |

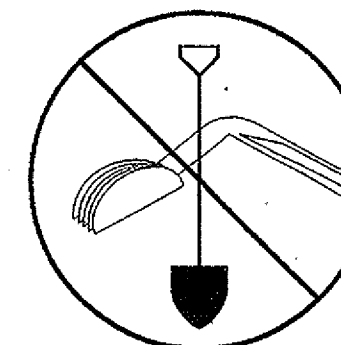
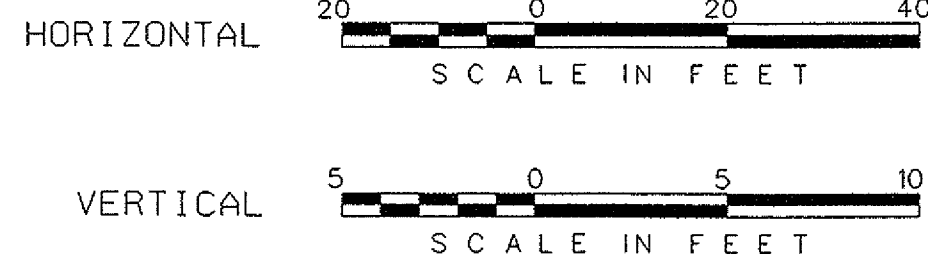
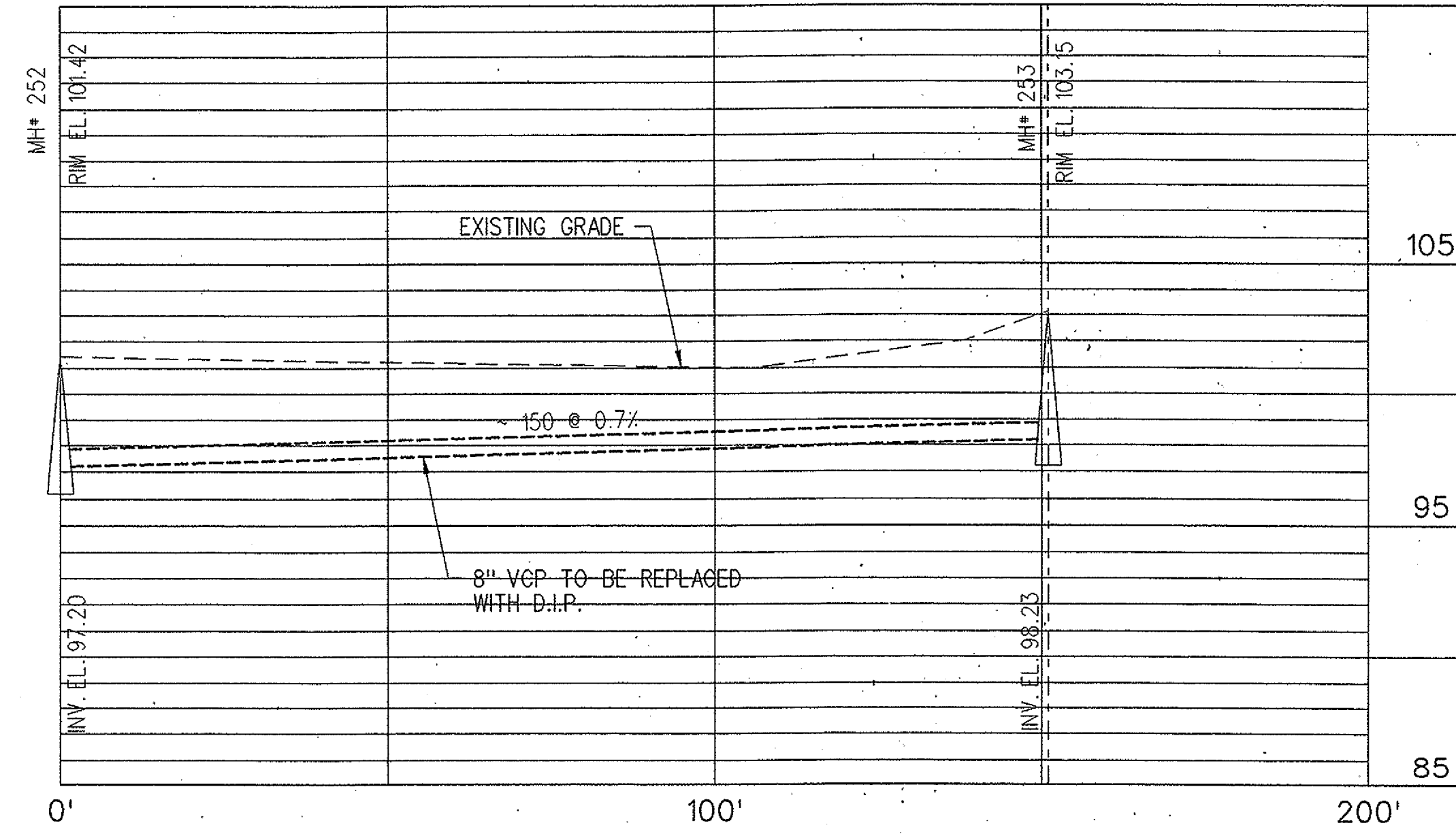
BM Chiseled "X" Set
EL = 122.603
"X" on north curb E. 22nd St.
240' east of St. Louis Ave.



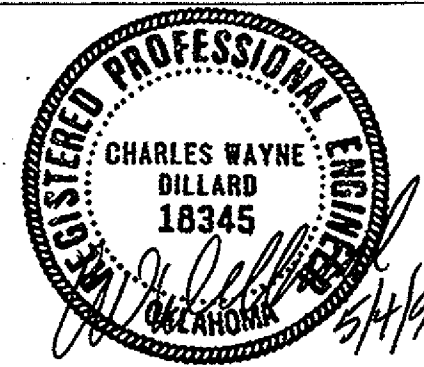
NOTE:

THIS SECTION OF SEWER HAS NOT BEEN T.V. INSPECTED.
CONTRACTOR SHALL FIELD LOCATE SERVICE CONNECTIONS (SVC).

1903 South Columbia Avenue
Basin ID 62-S, MH# 252, MH# 253 ATLAS SHEET 13



BEFORE
YOU DIG...
1-800-522-6543
CALL OKIE



Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell

REVISION	BY	DATE	PLAN SCALE:	DRAWN	DBL	9/9/98	APPROVED: <
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DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 07548

DRAWING NUMBER

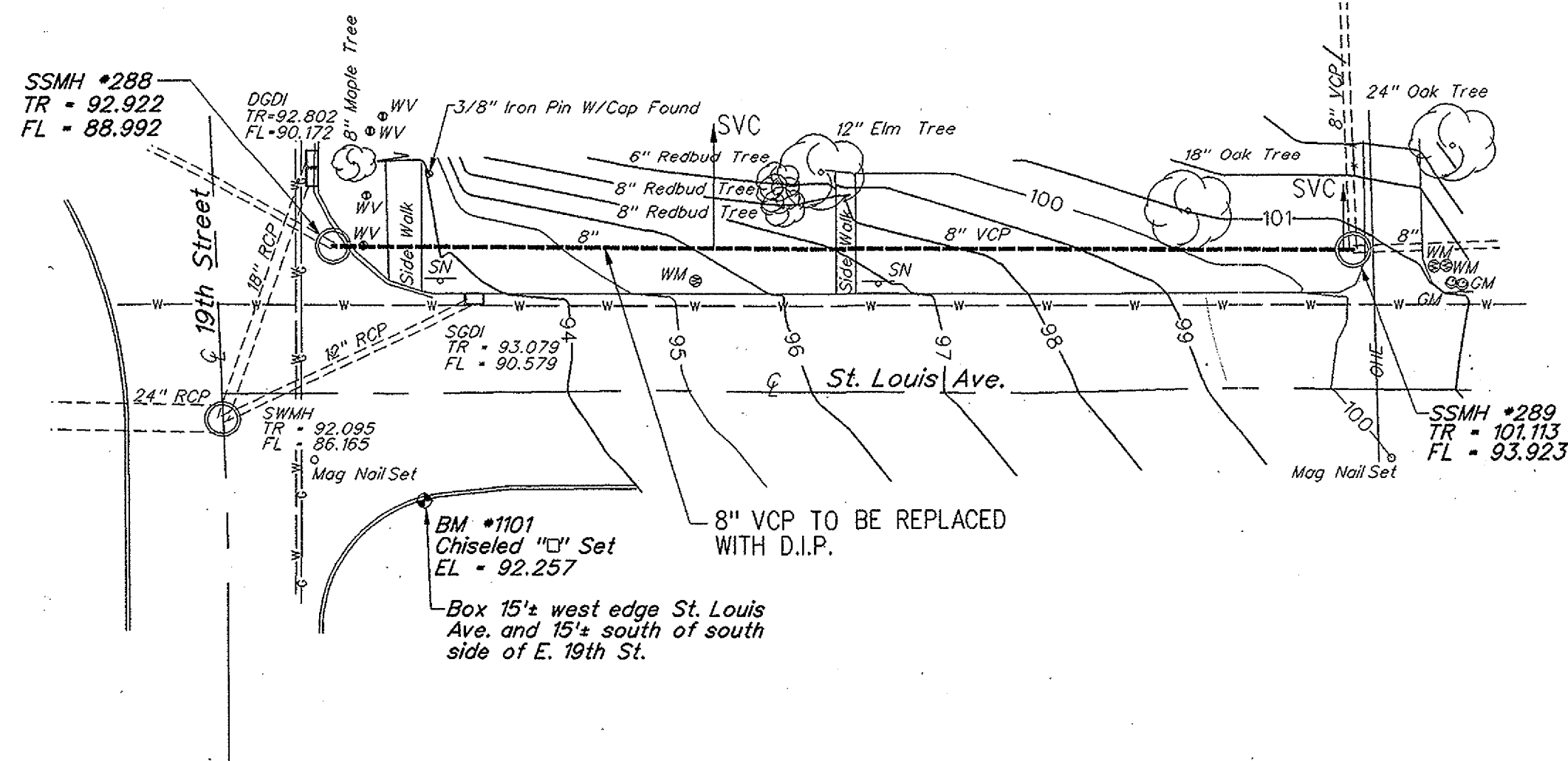
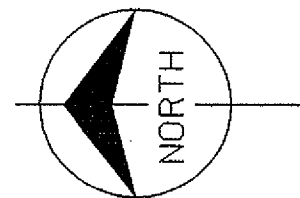
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 07548

DRAWING NUMBER

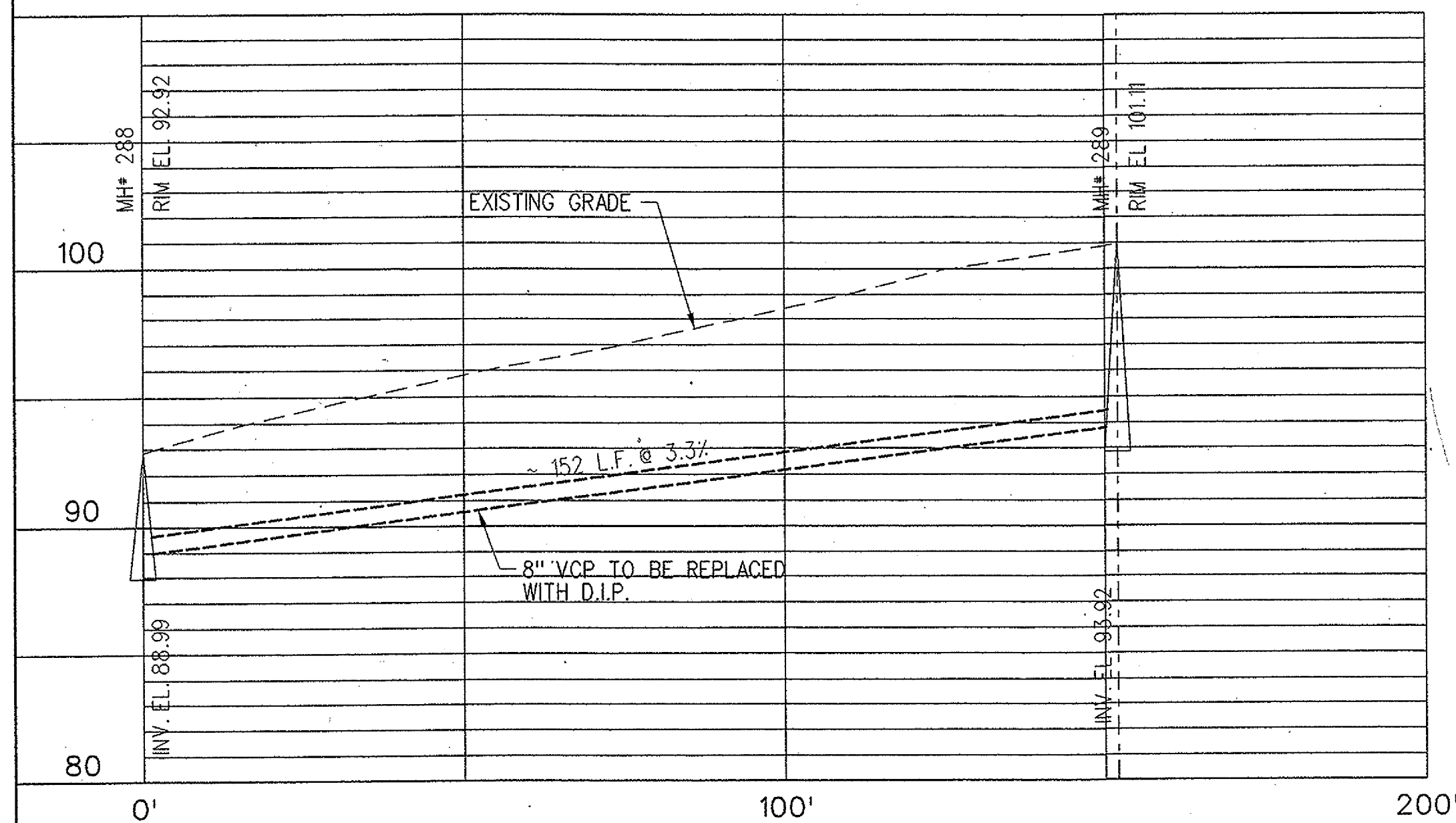
ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 07548

J:\udassas\96348-2\uses-prp\pp_6-7.dgn 03 MAY 99 13:25:52 V_Miller



1911 South St Louis Avenue
Basin ID 44-S, MH# 288, MH# 289 ATLAS SHEET 14



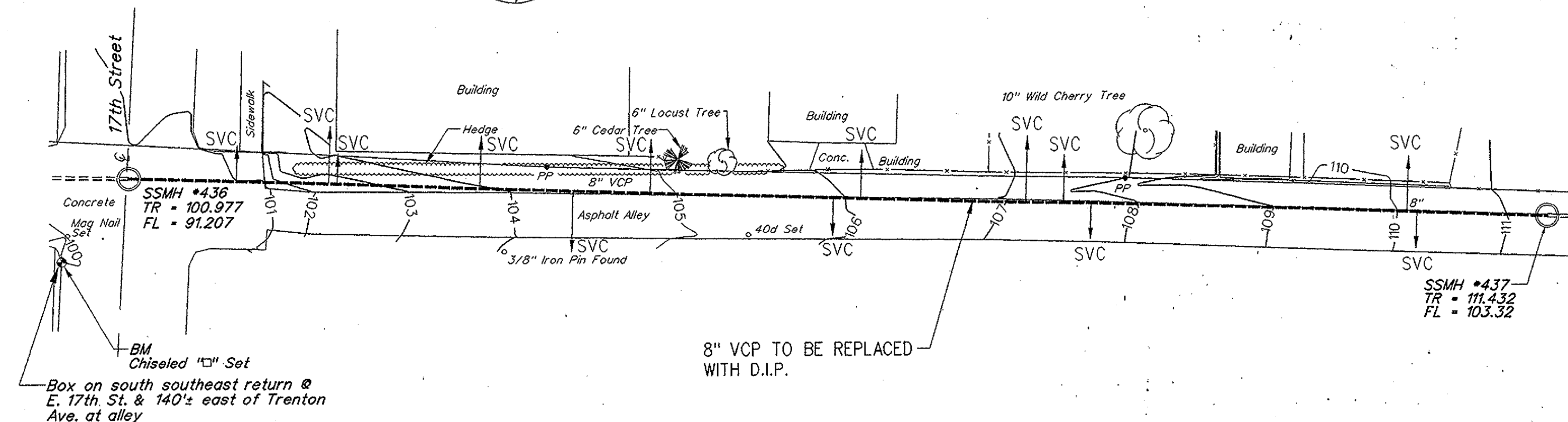
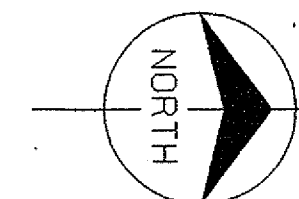
Symbol Legend

- GM - Gas Meter
- GV - Gas Valve
- ICV - Irrigation Control Valve
- WM - Water Meter
- WV - Water Valve
- FH - Fire Hydrant
- SSMH - Sanitary Sewer Manhole
- SSWMH - Storm Water Manhole
- CO - Cleanout
- GP - Power Pole
- GUY - Guy Anchor
- LP - Light Pole
- PPED - Telephone Pedestal

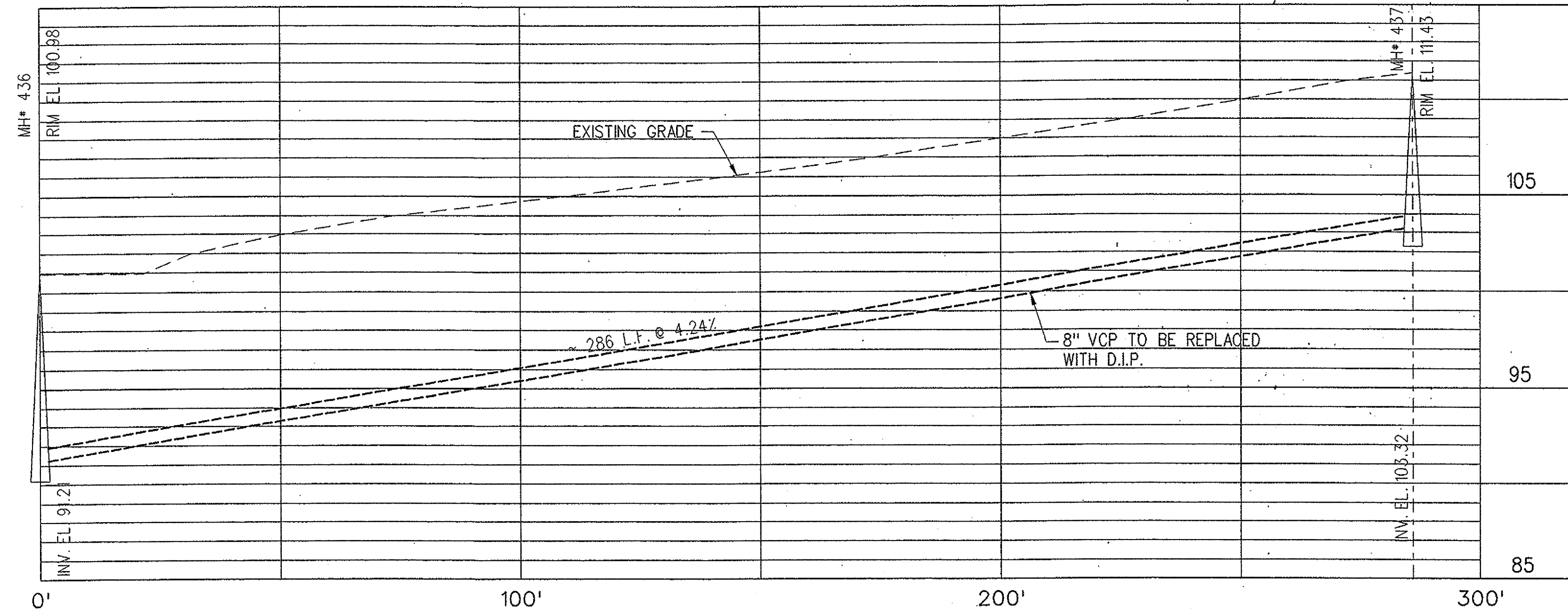
- SN - Sign
- BM - Bench Mark/Floor Elevation
- CP - Survey Control Point
- Bush
- TJB - Telephone Cable Junction Box
- RD - Roof Drain
- Mag Nail Set
- 3/8\"/>

- Deciduous Tree
- Coniferous Tree

- Fence Line (All Types)
- OHE - Overhead Elec. (and Other Util's)
- EUG - Underground Electric
- OHT - Overhead Telephone
- TUG - Underground Telephone
- G - Natural Gas Line
- W - Water Line
- Sanitary Sewer Line
- Edge of Gravel
- Asphalt Surface
- Concrete Surface



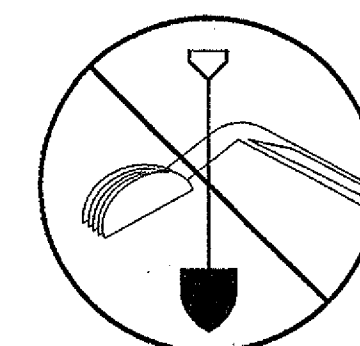
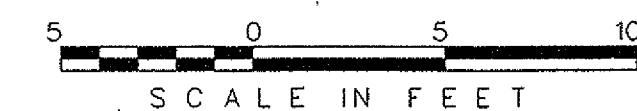
1607 South Trenton Avenue
Basin ID 44-S, MH# 436, MH# 437 ATLAS SHEET 14



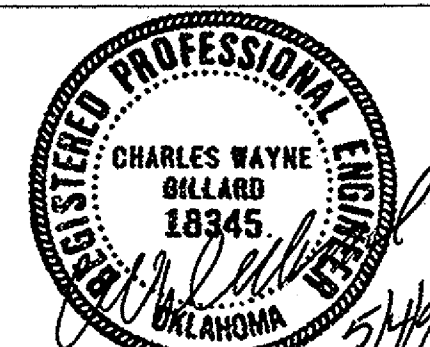
HORIZONTAL



VERTICAL



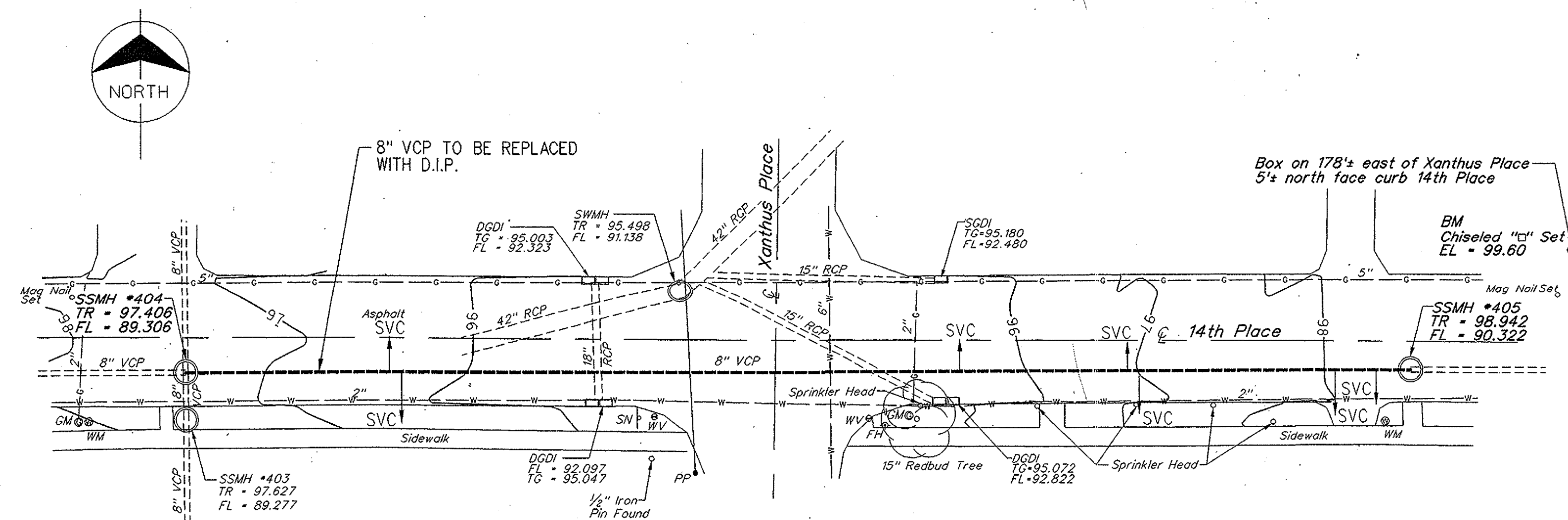
BEFORE
YOU DIG...
1-800-522-6543
CALL OKIE



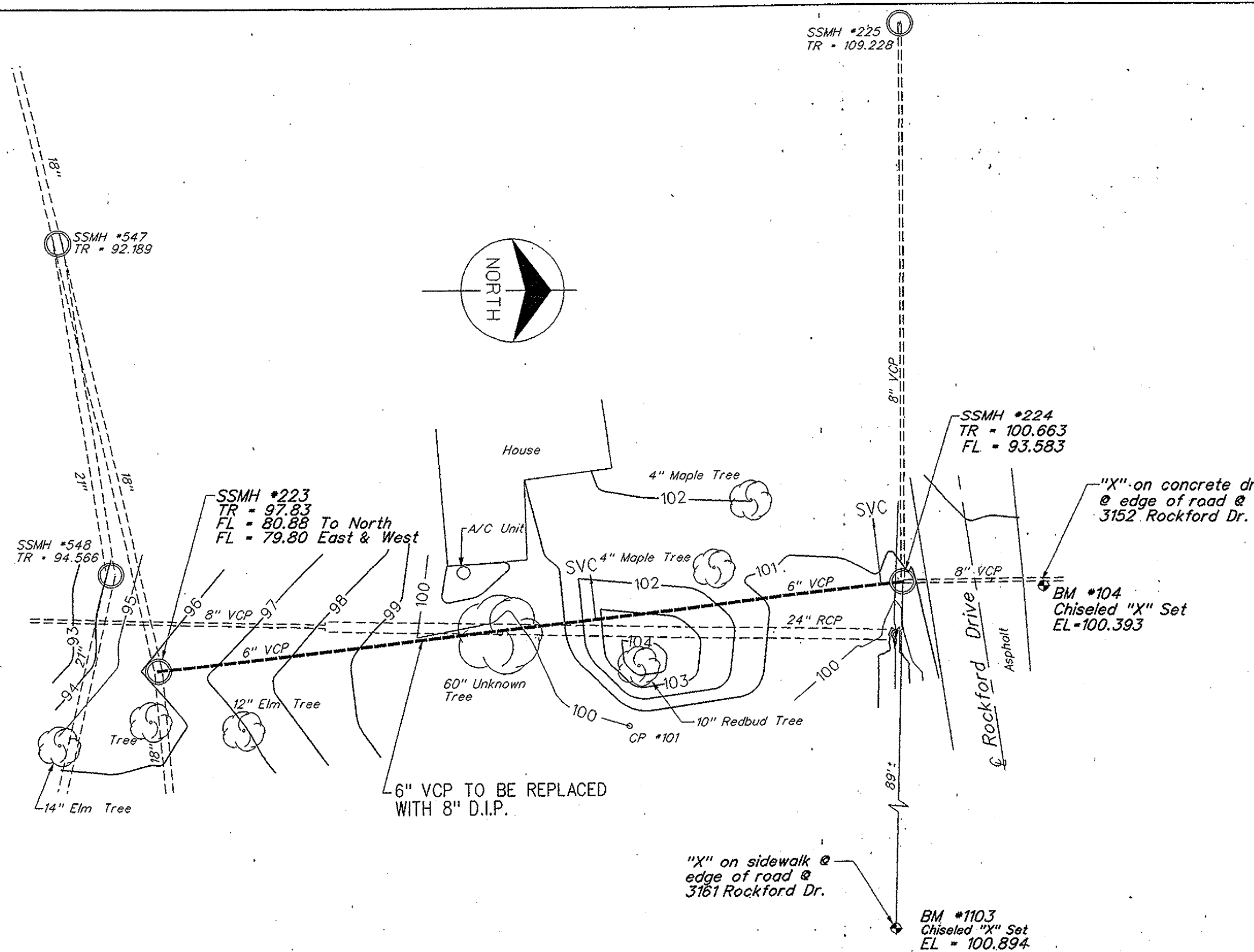
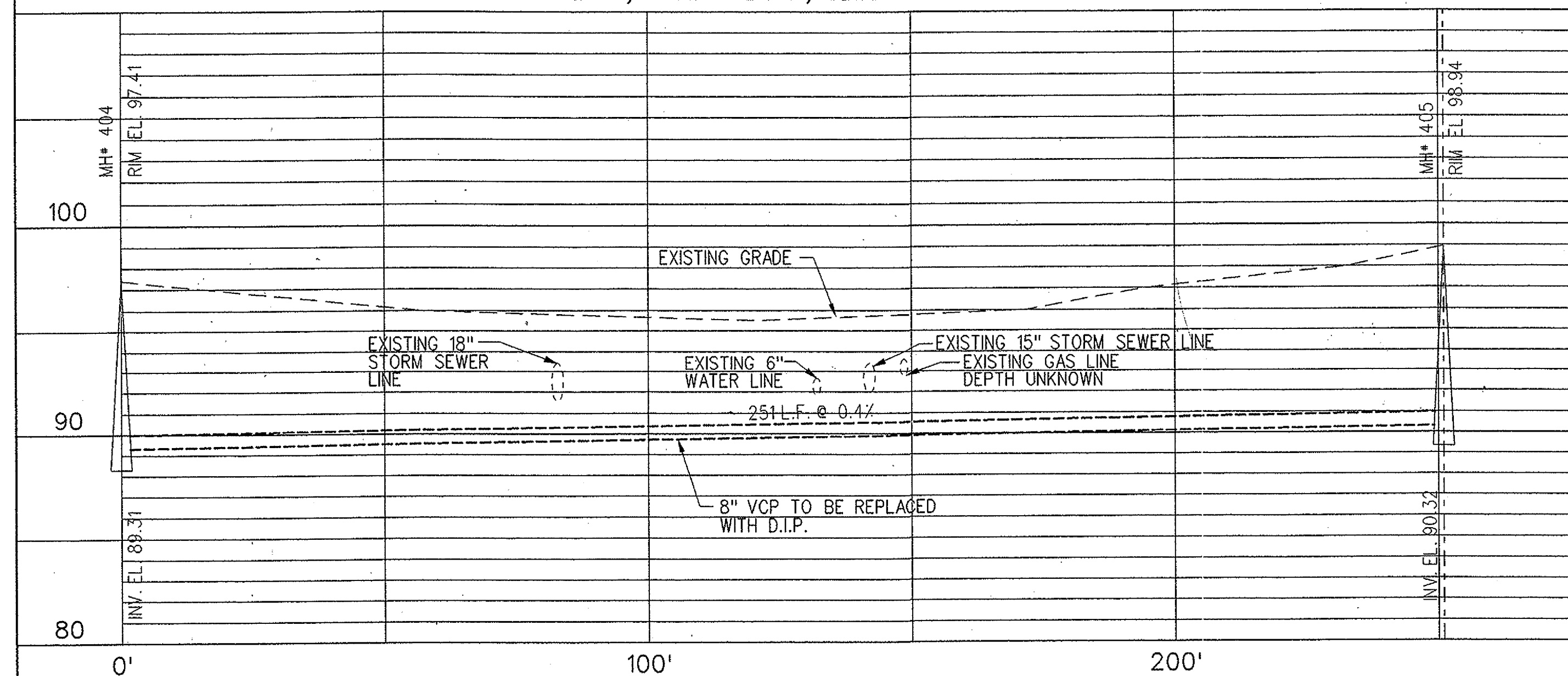
Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell

REVISION	BY	DATE	PLAN SCALE:	DRAWN	DBL	9/10/98	APPROVED:
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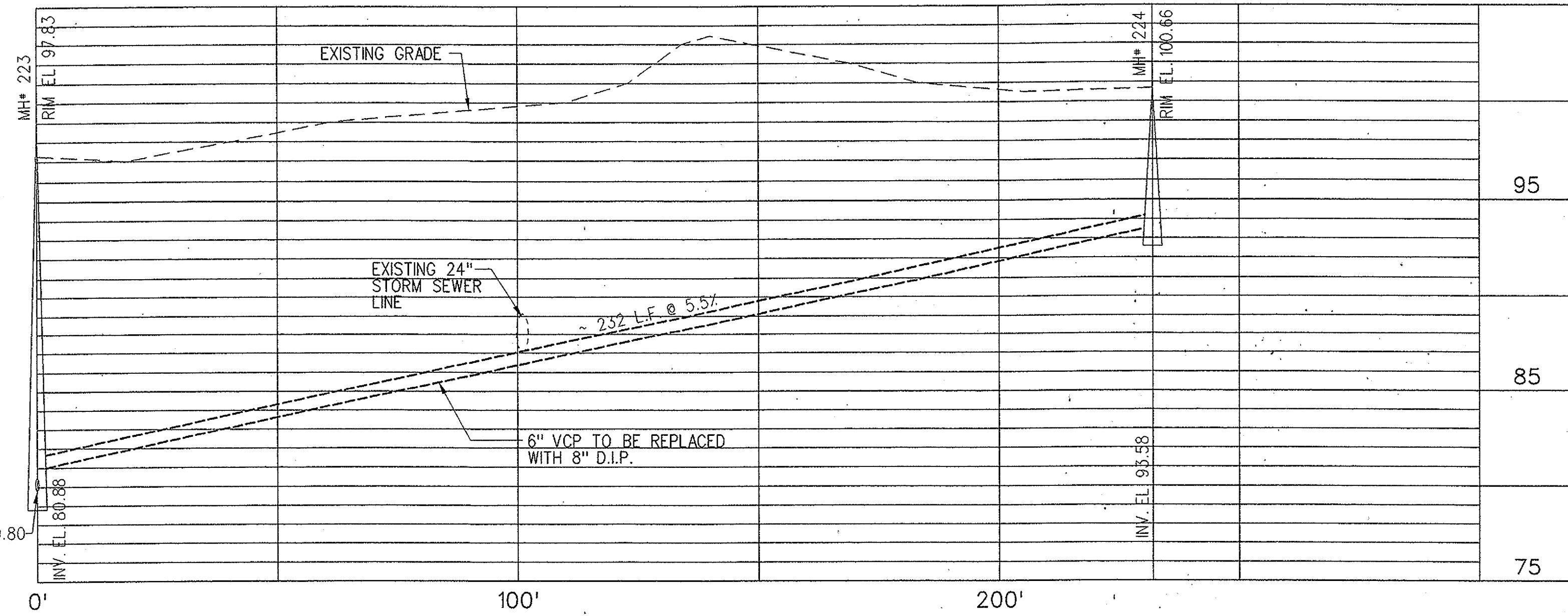
SHEET 20 OF 33 SHEETS



2010 East 14th Place
Basin ID 44-S, MH# 404, MH# 405 ATLAS SHEET 3































3171 South Rockford Avenue
Basin ID 45-S, MH* 223, MH* 224 ATLAS SHEET 95



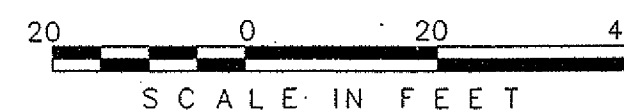
Symbol Legend

- ⊙ *GM* - Gas Meter
- ⊙ *GV* - Gas Valve
- ⊙ *ICV* - Irrigation Control Valve
- ⊙ *WM* - Water Meter
- ⊙ *WV* - Water Valve
- ⊙ *FDH* - Fire Hydrant
- ⊙ *SSMH* - Sanitary Sewer Manhole
- ⊙ *WSMH* - Storm Water Manhole
- *CO* - Cleanout
- *GUY* - Power Pole
- ⊙ *LP* - Guy Anchor
- ⊙ *LP* - Light Pole
- ⊙ *PPED* - Telephone Pedestal

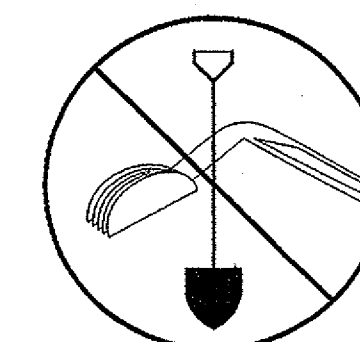
- | | |
|---|--------------------------------|
|  | - Sign |
|  | - Mailbox |
|  | - Bench Mark/Floor Elevation |
|  | - Survey Control Point |
|  | - Bush |
|  | - Telephone Cable Junction Box |
|  | - Roof Drain |
|  | - Mag Nail Set |
|  | - 3/8" Iron Pin W/Cap Set |
|  | - Service Connection |
|  | - Single Grate Drop Inlet |
|  | - Double Grate Drop Inlet |
|  | - Top of Grade Elev. |
|  | - Top of Rim Elev. |
|  | - Flow Line |

-  - Deciduous Tree
-  - Coniferous Tree
-  - Fence Line (All Types)
-  - Overhead Elec. (and Other Util's)
-  - Underground Electric
-  - Overhead Telephone
-  - Underground Telephone
-  - Natural Gas Line
-  - Water Line
-  - Sanitary Sewer Line
-  - Edge of Gravel
-  - Asphalt Surface
-  - Concrete Surface

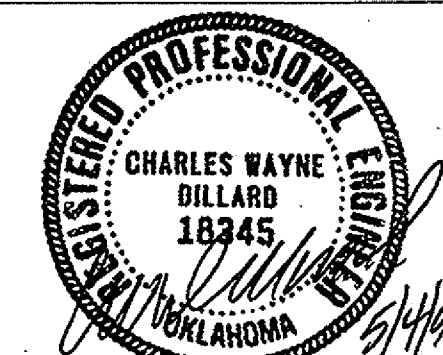
HORIZONTAL



VERTICAL



BEFORE
YOU DIG...
1-800-522-6543
CALL OKIE



Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT

TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS

 TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO: ES 96-07

PLANS AND ESTIMATES PREPARED BY:

Burns

**&
McDonnell**

PLAN SCALE:	DRAWN	DBL	9/10/98
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DESIGNED	JJK	9/1/98
----------	-----	--------

	SURVEY	DLD	8/25/9
--	--------	-----	--------

PROFILE SCALE:	FIELD MNGR.		
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SECT. MNGR.	PRF	5/99
-------------	-----	------

HORIZONTAL:		1/10	5/2/11
1" = 20'	PROJ. MNGR.	1/10	5/2/11

RECOMMENDED:

VERTICAL
1" = 5'

4040 5-10-99
DEPUTY: DIRECTOR

FILE:	DRAWING:
-------	----------

3 APPROVED:

1

8

[illegible][illegible]

11

Mr. B. L.

Public Works Director

DATE

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

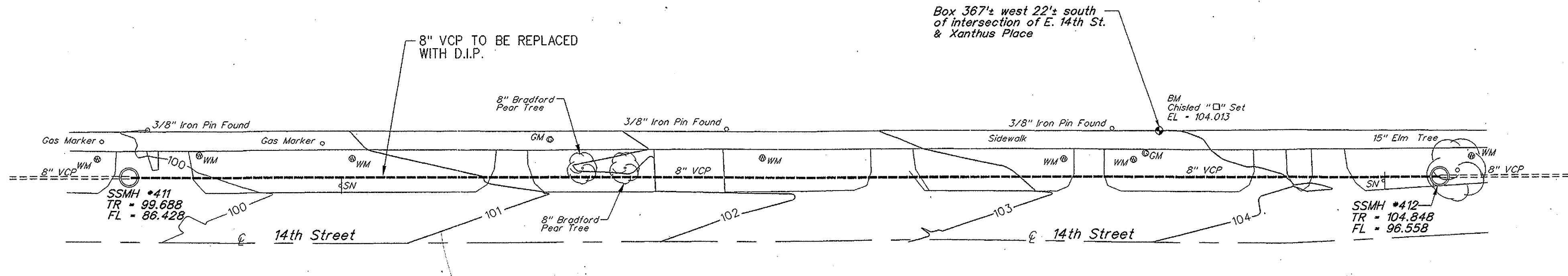
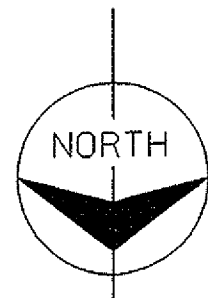
DRAWING NUMBER

ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

03 MAY 99 13:20:45 V_Miller

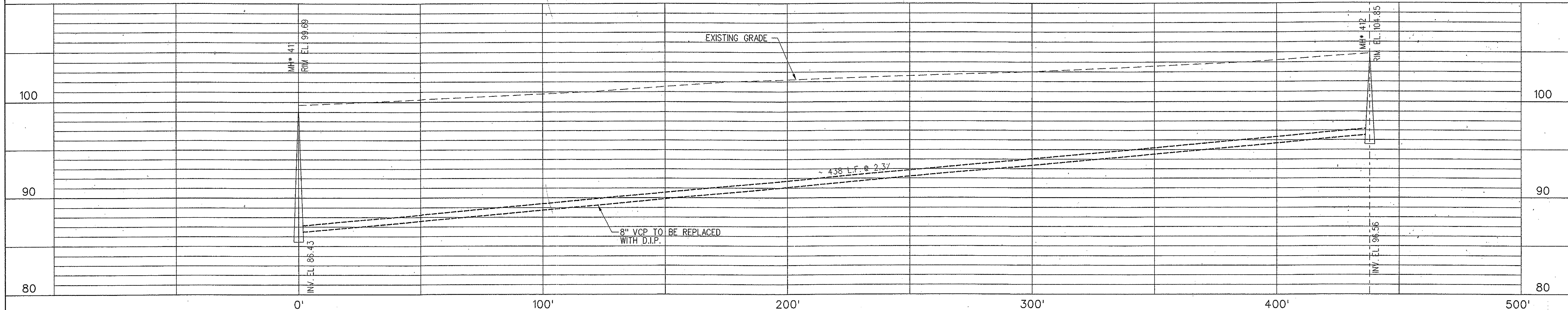
J:\tulsases\96348-2\sses.dwg ppp-10.dgn



NOTE:

NO TV INSPECTION PERFORMED ON THIS SECTION.
CONTRACTOR SHALL FIELD LOCATE SERVICE
CONNECTIONS (SVC).

1916 East 14th Street
Basin ID 44-S, MH# 411, MH# 412 ATLAS SHEET 3



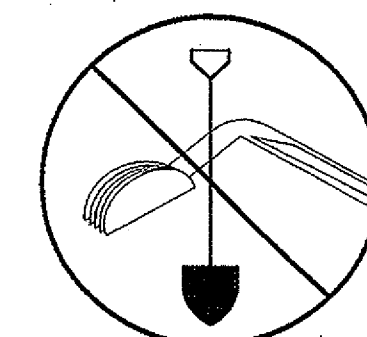
Symbol Legend

- | | | |
|--------------------------------|------------------------------------|---|
| GM - Gas Meter | SV - Sign | DT - Deciduous Tree |
| GV - Gas Valve | MB - Mailbox | CT - Coniferous Tree |
| ICV - Irrigation Control Valve | BM - Bench Mark/Floor Elevation | |
| WM - Water Meter | CP - Survey Control Point | |
| WV - Water Valve | B - Bush | |
| FH - Fire Hydrant | TJB - Telephone Cable Junction Box | |
| SSMH - Sanitary Sewer Manhole | RD - Roof Drain | |
| SWMH - Storm Water Manhole | MNS - Mag Nail Set | |
| CO - Cleanout | 3/8" IPW Pin W/Cap Set | |
| PP - Power Pole | SVC - Service Connection | |
| GUY - Guy Anchor | SGDI - Single Grate Drop Inlet | |
| LP - Light Pole | DGDI - Double Grate Drop Inlet | |
| PPED - Telephone Pedestal | TC - Top of Grate Elev. | |
| | TR - Top of Rim Elev. | |
| | FL - Flow Line | |
| | | Fence Line (All Types) |
| | | OHE - Overhead Elec. (and Other Util's) |
| | | EUG - Underground Electric |
| | | OHT - Overhead Telephone |
| | | TUG - Underground Telephone |
| | | G - Natural Gas Line |
| | | W - Water Line |
| | | Sanitary Sewer Line |
| | | Edge of Gravel |
| | | Asphalt Surface |
| | | Concrete Surface |

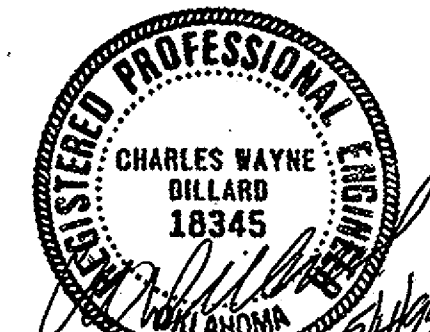
HORIZONTAL



VERTICAL



BEFORE
YOU DIG...
1-800-522-6543
CALL OKIE



Contract No. 2
PIPELINE REHABILITATION & REPLACEMENT
TULSA SOUTHSIDE PLANT INFLUENT
CROW CREEK BASIN REHABILITATION
SANITARY SEWER IMPROVEMENTS
TULSA METROPOLITAN
UTILITY AUTHORITY
PROJECT NO. ES 96-07
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell

McDonald

REVISION	BY	DATE	PLAN SCALE:	DRAWN	DBL	9/10/98	APPROVED:
				DESIGNED	JJK	9/1/98	
				SURVEY	DLD	8/25/98	
			PROFILE SCALE:	FIELD MNGR.	<i>DBL</i>	<i>8/25/98</i>	
			HORIZONTAL: 1" = 20'	SECT. MNGR.	<i>DBL</i>	<i>8/25/98</i>	
				PROJ. MNGR.	<i>JSU</i>	<i>9/4/99</i>	
			VERTICAL 1" = 5'	RECOMMENDED: <i>DBL 6-10-99</i>			
				DEPUTY DIRECTOR			<i>my R</i> PUBLIC WORKS DIRECTOR
			FILE:	DRAWING:			DATE
			ATLAS PAGE NO:				SHEET 22 OF 33 SHEETS

SHEET 22 OF 33 SHEETS

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07548

DRAWING NUMBER

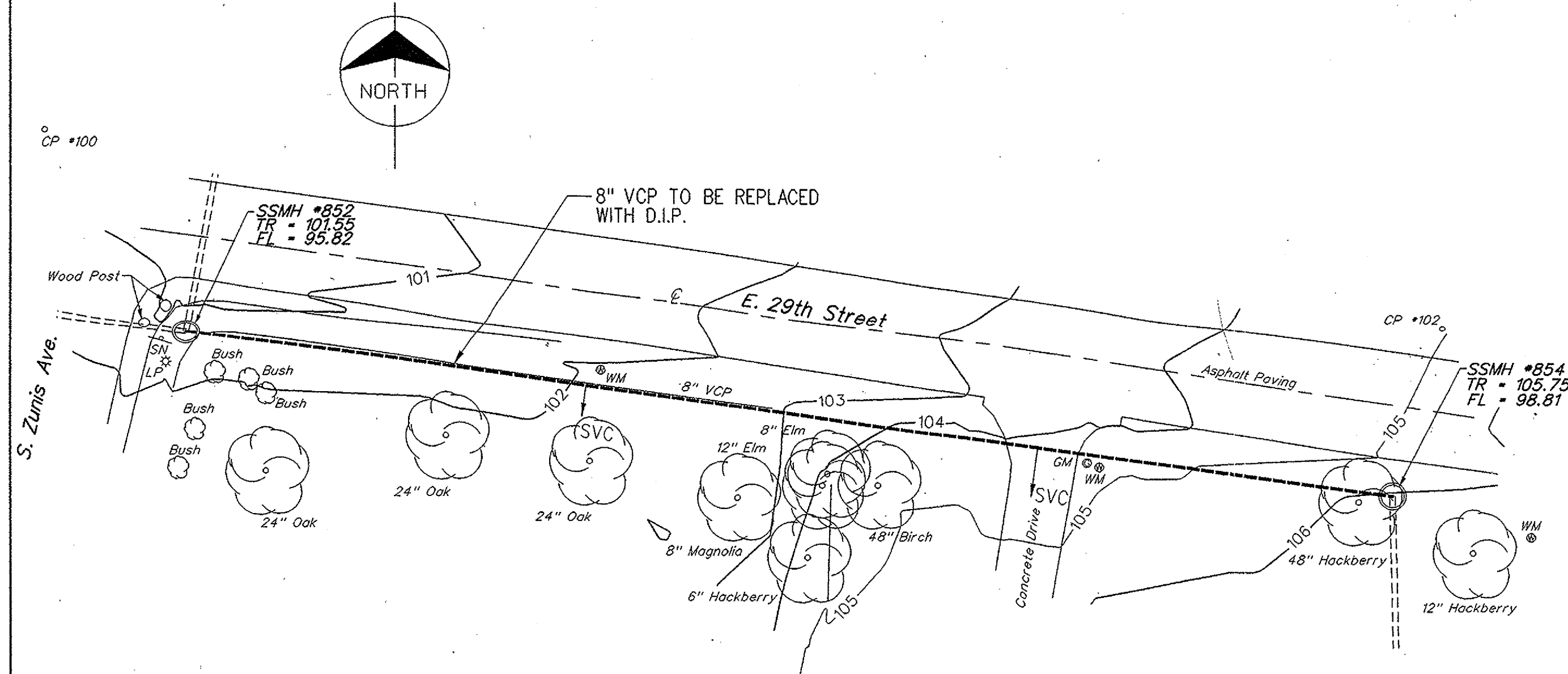
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07548

DRAWING NUMBER

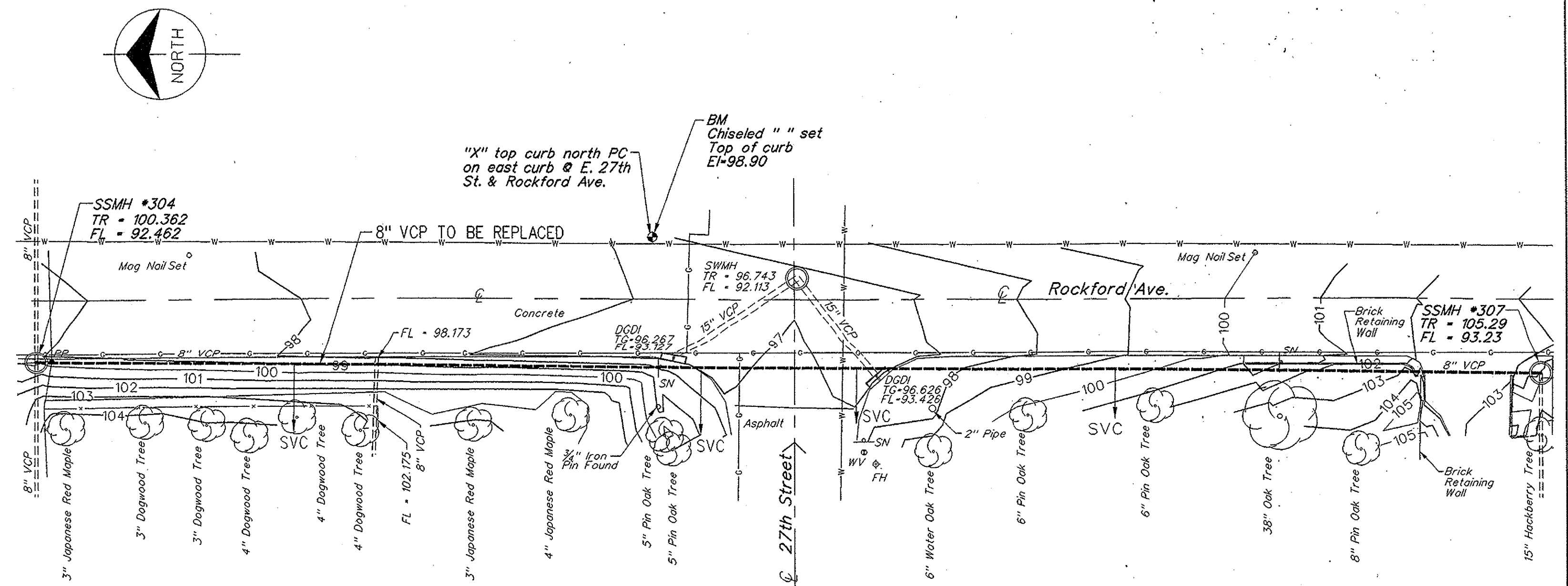
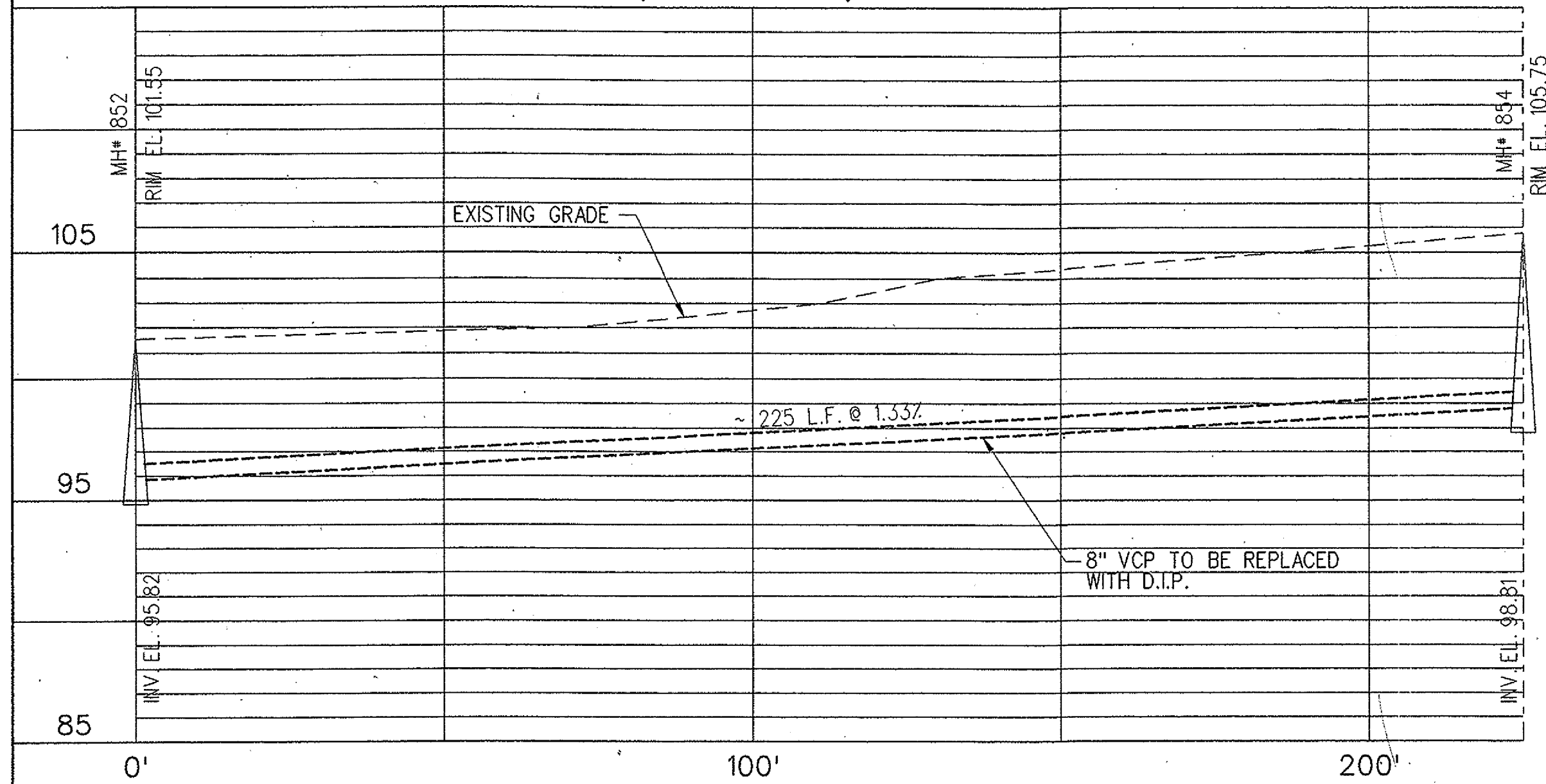
ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REDESIGNED BY NUMBER 07548

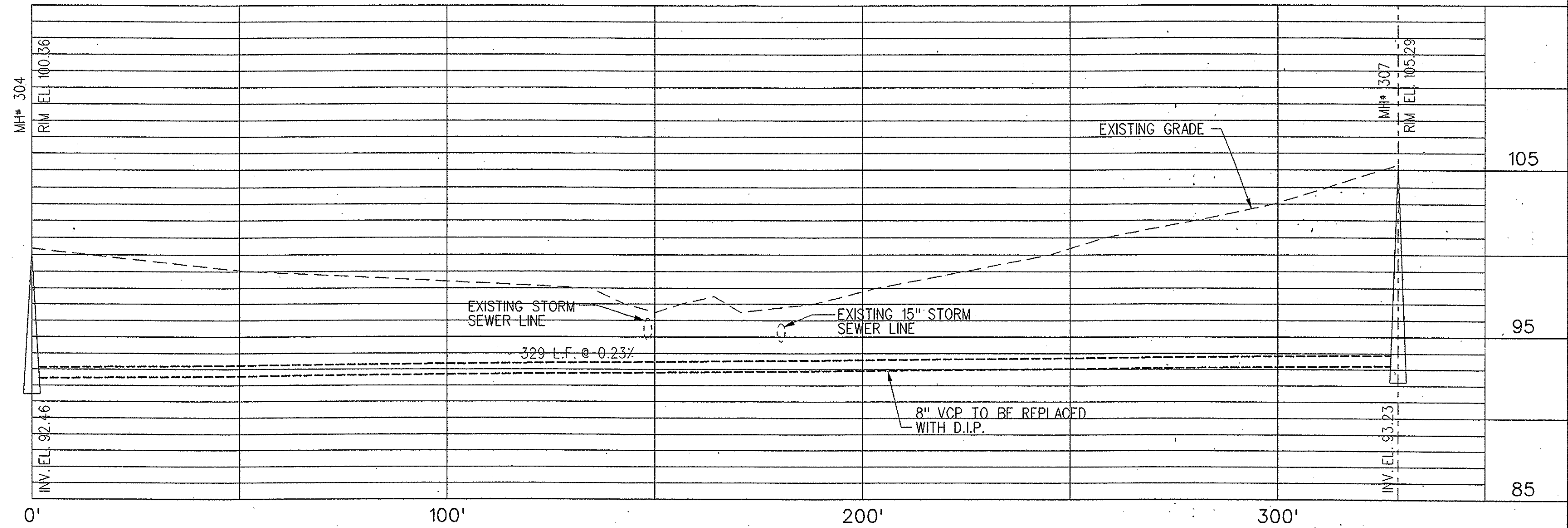
F:\utsses\96348-2\sses.dwg 03 MAY 99 13:23:08 V_Miller



2216 East 29th Street
Basin ID 62-S, MH# 852, MH# 854 ATLAS SHEET 60



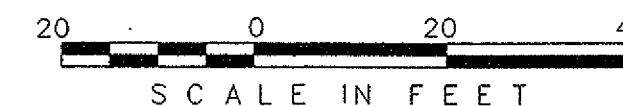
2716 South Rockford Avenue
Basin ID 45-S, MH# 304, MH# 307 ATLAS SHEET 60



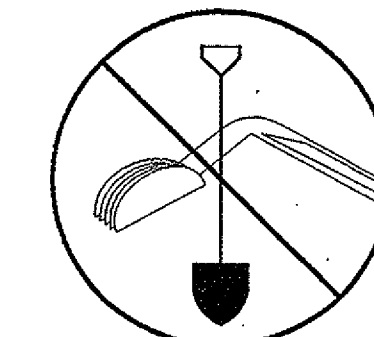
Symbol Legend

- | | | |
|----------------------------------|---|-------------------|
| ● GM - Gas Meter | — SN - Sign | — Deciduous Tree |
| ● GV - Gas Valve | — MB - Mailbox | — Coniferous Tree |
| ● ICV - Irrigation Control Valve | ● BM - Bench Mark/Floor Elevation | |
| ● WM - Water Meter | ● CP - Survey Control Point | |
| ● WV - Water Valve | ○ Bush | |
| ● FH - Fire Hydrant | — TUB - Telephone Cable Junction Box | |
| ○ SSMH - Sanitary Sewer Manhole | — RD - Roof Drain | |
| ○ SWMH - Storm Water Manhole | ● Mag Nail Set | |
| — CO - Cleanout | ● 3/8" Iron Pin W/Cap Set | |
| — PP - Power Pole | — SVC - Service Connection | |
| — GUY - Guy Anchor | — SGDI - Single Grate Drop Inlet | |
| — LP - Light Pole | — DGI - Double Grate Drop Inlet | |
| — PPED - Telephone Pedestal | — TC - Top of Grade Elev. | |
| | — TR - Top of Rim Elev. | |
| | — FL - Flow Line | |
| | — OHE - Overhead Elec. (and Other Util's) | |
| | — EUG - Underground Electric | |
| | — OHT - Overhead Telephone | |
| | — TUG - Underground Telephone | |
| | — G - Natural Gas Line | |
| | — W - Water Line | |
| | — S - Sanitary Sewer Line | |
| | — E - Edge of Gravel | |
| | — A - Asphalt Surface | |
| | — C - Concrete Surface | |

HORIZONTAL



VERTICAL



BEFORE
YOU DIG...
1-800-522-6543
CALL OKIE



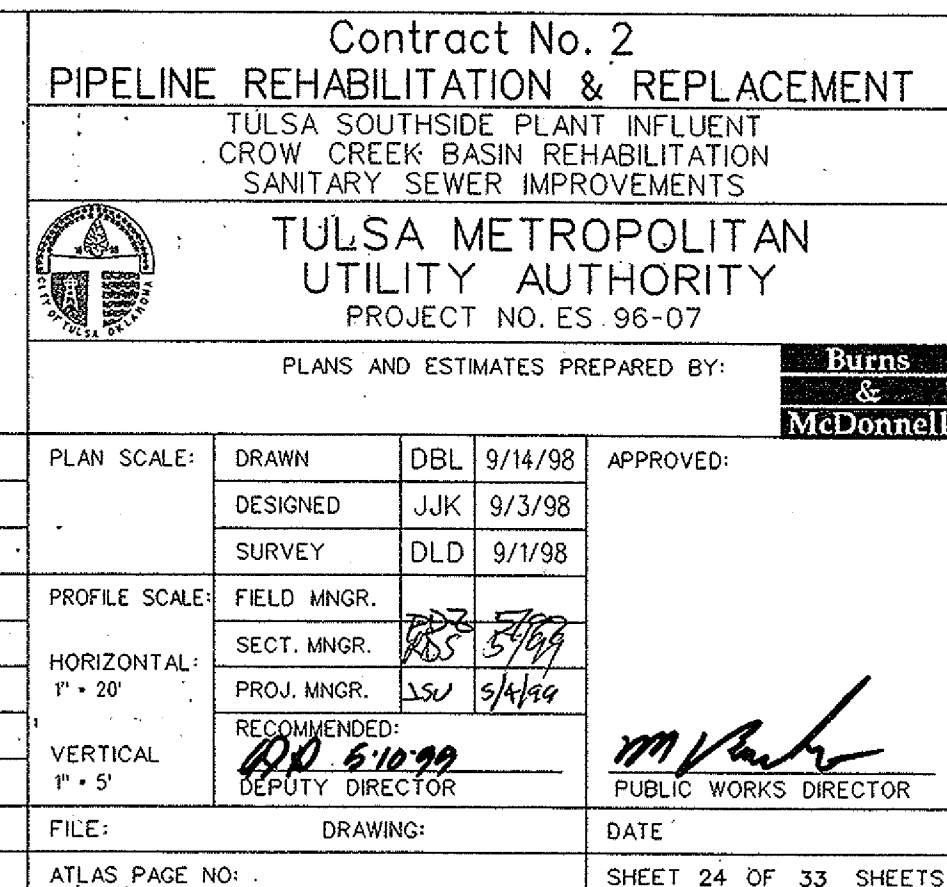
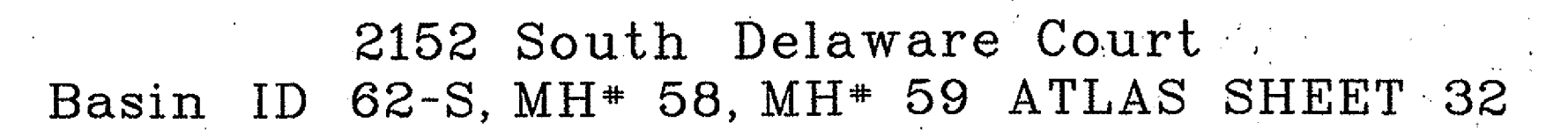
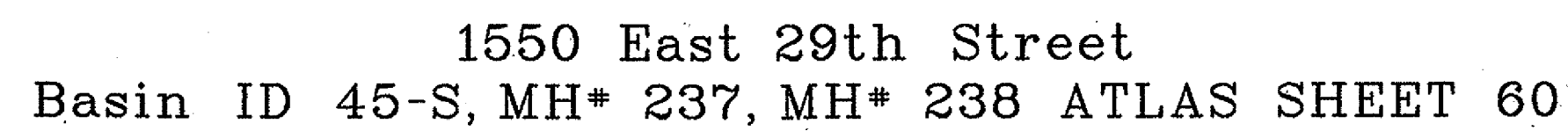
Contract No. 2 PIPELINE REHABILITATION & REPLACEMENT TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWER IMPROVEMENTS			
TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NO. ES 96-07			
PLANS AND ESTIMATES PREPARED BY: Burns & McDonnell			
REVISION	BY	DATE	APPROVED:
PLAN SCALE:	DRAWN	DBL 10/12/98	DESIGNED
			JJK 10/9/98
			SURVEY
			DLD 9/8/98
PROFILE SCALE:	FIELD MNGR.		
HORIZONTAL:	SECT. MNGR.		
1" = 20'			
	PROJ. MNGR.		
VERTICAL:	RECOMMENDED:		
1" = 5'			
FILE:	DRAWING:		DATE
ATLAS PAGE NO:			SHEET 23 OF 33 SHEETS

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AR

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AR

ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGORER BY NUMBER 075AR



DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED NUMBER 07545

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED NUMBER 07545

DRAWING NUMBER

ES 96-07

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REGISTERED NUMBER 07545

Sheet No	Atlas Sheet	BasinID	MHID	Pipe ID	RM	DistFromUSMH	DSMHLLength	MHAddress	MHPPreDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatri	Lamp Hole	Remarks
3	003	44S	44S-389A	44S-389A-44S-389	4360	285	306	1801	E	15TH	ST	8	10.0	S	VC		
3	003	44S	44S-391	44S-391-44S-390	4510		26	1701	E	15TH	ST	8	9.2	C	VC	44S-391	
3	003	44S	44S-393	44S-393-44S-392	4360	108	118	1861	E	15TH	ST	8	7.5	S	VC		
3	003	44S	44S-394	44S-394-44S-393	4510		40	1861	E	15TH	ST	8	7.2	S	VC		
3	003	44S	44S-399	44S-399-44S-398	4360	56	164	1415	S	ZUNIS	AV	8	6.6	S	VC		
3	003	44S	44S-400	44S-400-44S-399	4360	149	340	1427	S	TERRACE	DR	8	9.8	S	VC		
3	003	44S	44S-402	44S-402-44S-400	4360	156	166	1427	S	TERRACE	DR	8	9.6	S	VC		
3	003	44S	44S-404	44S-404-44S-403	4510		10	1792	E	14TH	PL	8	8.1	S	VC		
3	003	44S	44S-405	44S-405-44S-404	4440		250	2010	E	14TH	PL	8	8.6	A	VC		
3	003	44S	44S-409	44S-409-44S-408	4370	355	365	1419	S	UTICA	AV	8	8.3	A	VC		
3	003	44S	44S-412	44S-412-44S-411	4430		340	1916	E	14TH	ST	8	8.3	S	VC		
3	003	44S	44S-414	44S-414-44S-413	4360	48	252	1742	E	14TH	ST	8	8.4	A	VC		
3	003	44S	44S-416	44S-416-44S-411	4360	295	339	2020	E	14TH	ST	8	10.0	S	VC		
3	003	44S	44S-416	44S-416-44S-411	4360	329	339	2020	E	14TH	ST	8	9.6	S	VC		
3	003	44S	44S-417	44S-417-44S-416	4360	117	127	2032	E	14TH	ST	8	9.9	S	VC	44S-417	
3	003	44S	44S-425	44S-425-44S-423	4510		60	2043	E	13TH	PL	8	10.6	S	VC	44S-425	
3	003	44S	44S-427	44S-427-44S-426	4510		50	1301	S	TERRACE	DR	8	13.7	S	VC	44S-427	
3	003	44S	44S-428	44S-428-44S-426	4510		50	2309	E	13TH	PL	8	13.8	S	VC		
3	003	44S	44S-429	44S-429-44S-426	4360	275	285	2338	E	13TH	PL	8	10.1	S	VC		
3	003	44S	44S-431	44S-431-44S-430	4360	265	290	2004	E	13TH	ST	8	12.7	S	VC		
3	003	44S	44S-432	44S-432-44S-431	4360	275	280	1906	E	13TH	ST	8	10.6	S	VC		
3	003	44S	44S-446	44S-446-44S-444	4510		72	1639	E	15TH	ST	8	15.6	C	VC		
3	003	44S	44S-495	44S-495-44S-399	4370	149	193	2204	E	14TH	ST	8	6.5	C	VC	44S-495	
4	012	44S	44S-480	44S-480-44S-478	4360	139	149	2415	E	13TH	PL	8	5.5	A	VC		
4	012	62S	62S-1005	62S-1005-62S-382	4360	270	280	1304	S	EVANSTON	AV	8	9.0	S	VC		
4	012	62S	62S-292	62S-292-62S-294	4360	121	131	2447	E	15TH	ST	8	11.3	C	VC		
4	012	62S	62S-293	62S-293-62S-294	4360	169	410	2406	E	14TH	PL	8	9.3	S	VC		
4	012	62S	62S-296	62S-296-62S-295	4360	96	106	2443	E	14TH	PL	8	12.4	S	VC		
4	012	62S	62S-307	62S-307-62S-306	4360	163	307	1312	S	ATLANTA	AV	8	10.4	S	VC	62S-307	
4	012	62S	62S-308	62S-308-62S-306	4360	163	349	1237	S	ATLANTA	AV	8	7.9	S	VC		
4	012	62S	62S-309	62S-309-62S-308	4360	289	299	1207	S	ATLANTA	AV	8	9.5	S	VC		
4	012	62S	62S-310	62S-310-62S-305	4360	135	179	1327	S	ATLANTA	PL	8	7.5	A	VC		
4	012	62S	62S-314	62S-314-62S-312	4360	135	324	1301	S	ATLANTA	PL	8	8.7	S	VC		
4	012	62S	62S-316	62S-316-62S-315	4360	280	302	2536	E	12TH	ST	8	8.5	S	VC		
4	012	62S	62S-317	62S-317-62S-312	4510		175	1328	S	BIRMINGHAM	AV	8	9.7	S	VC		
4	012	62S	62S-318	62S-318-62S-317	4510		165	1313	S	BIRMINGHAM	AV	8	10.6	S	VC		
4	012	62S	62S-320	62S-320-62S-319	4360	199	226	2636	E	13TH	PL	8	10.0	S	VC		
4	012	62S	62S-322	62S-322-62S-321	4360	208	280	2724	E	13TH	PL	8	9.5	S	VC		
4	012	62S	62S-323	62S-323-62S-322	4360	265	278	1344	S	DELAWARE	AV	8	8.5	S	VC		
4	012	62S	62S-324	62S-324-62S-317	4510		165	1316	S	BIRMINGHAM	AV	8	9.2	S	VC		
4	012	62S	62S-328	62S-328-62S-325	4510		291	2636	E	13TH	ST	8	5.9	S	VC		
4	012	62S	62S-329	62S-329-62S-328	4360	276	310	1242	S	COLUMBIA	AV	8	9.1	S	VC		
4	012	62S	62S-330	62S-330-62S-328	4360	180	190	1308	S	COLUMBIA	AV	8	5.7	S	VC		
4	012	62S	62S-331	62S-331-62S-330	4510		306	2723	E	13TH	PL	8	7.1	S	VC		
4	012	62S	62S-332	62S-332-62S-331	4370	199	285	2748	E	13TH	ST	8	7.1	S	VC		
4	012	62S	62S-355	62S-355-62S-354	4360	7	250	1402	S	BIRMINGHAM	AV	8	13.4	S	VC		
4	012	62S	62S-357	62S-357-62S-356	4360	315	330	1410	S	COLUMBIA	AV	8	9.7	S	VC		
4	012	62S	62S-358	62S-358-62S-357	4360	173	280	2723	E	14TH	PL	8	11.1	S	VC		
4	012	62S	62S-358	62S-358-62S-357	4360	270	280	2723	E	14TH	PL	8	11.1	S	VC		
4	012	62S	62S-362	62S-362-62S-361	4360	35	250	2627	E	15TH	ST	8	9.6	S	VC		
4	012	62S	62S-362	62S-362-62S-361	4360	91	250	2627	E	15TH	ST	8	9.6	S	VC		
4	012	62S	62S-363	62S-363-62S-362	4510		328	1426	S	COLUMBIA	AV	8	10.0	S	VC		
4	012	62S	62S-365	62S-365-62S-364	4360	265	310	2745	E	15TH	ST	8	7.1	S	VC		
4	012	62S	62S-366	62S-366-62S-363	4510		145	2700	E	15TH	ST	8	6.3	C	VC		
4	012	62S	62S-368	62S-368-62S-367	4360	395	400	2811	E	15TH	ST	8	10.4	A	VC		
4	012	62S	62S-372	62S-372-62S-371	4360	121	300	2800	E	14TH	ST	8	9.3	S	VC		
4	012	62S	62S-374	62S-374-62S-373	4360	285	310	1301	S	DELAWARE	AV	8	9.7	S	VC		
4	012	62S	62S-376	62S-376-62S-375	4510		185	1434	S	DELAWARE	PL	8	4.4	A	VC		
4	012	62S	62S-377	62S-377-62S-376	4440		115	1424	S	DELAWARE	PL	8	4.8	A	VC		
4	012	62S	62S-378	62S-378-62S-377	4510		296	1402	S	DELAWARE	PL	8	6.3	A	VC		
4	012	62S	62S-380	62S-380-62S-379	4360	145	335	1424	S	EVANSTON	AV	8	5.8	S	VC		
4	012	62S	62S-381	62S-381-62S-380	4360	210	300	2814	E	14TH	ST	8	8.7	S	VC		
4	012	62S	62S-381	62S-381-62S-380	4360	290	300	2814	E	14TH	ST	8	8.7	S	VC		
4	012	62S	62S-383	62S-383-62S-1005	4510		31	1604	S	EVANSTON	AV	8	9.0	S	VC	62S-383	
5	013	62S	62S-147	62S-147-62S-146	4510		305	2442	E	21ST	ST	8	3.6	A	VC		
5	013	62S	62S-150	62S-150-62S-149	4360	30	166	2535	E	21ST	ST	8	7.9	S	VC		
5	013	62S	62S-160	62S-160-62S-156	4360	153	252	2617	E	21ST	ST	8	4.8	S	VC		
5	013	62S	62S-167	62S-167-62S-166	4510		55	2727	E	21ST	ST	8	13.0	A	VC		
5	013	62S	62S-176	62S-176-62S-175	4360	280	280	1726	S	DELAWARE	PL	8	12.7	S	VC		
5	013	62S	62S-177	62S-177-62S-176	4360	15	300	1704	S	DELAWARE	PL	8	12.1	S	VC		
5	013	62S	62S-177	62S-177-62S-176	4360	265	300	1704	S	DELAWARE	PL	8	12.1	S	VC		
5	013	62S	62S-179	62S-179-62S-178	4510		250	1918	S	EVANSTON	AV	8	13.0	S	VC		
5	013	62S	62S-180	62S-180-62S-179	4360	52	250	1903	S	DELAWARE	PL	8	9.2	S	VC		
5	013	62S	62S-180	62S-180-62S-179	4510		250	1903	S	DELAWARE	PL	8	9.2	S	VC		
5	013	62S	62S-181	62S-181-62S-180	4360	110	300	1729	S	DELAWARE	PL	8	10.0	S	VC		
5	013	62S	62S-181	62S-181-62S-180	4510		300	1729	S	DELAWARE	PL	8	10.0	S	VC		
5	013	62S	62S-183	62S-183-62S-180	4360	6	330	1905	S	EVANSTON	AV	8	14.2	S	VC		
5	013	62S	62S-183	62S-183-62S-180	4360	235	330	1905	S	EVANSTON	AV	8	14.2	S	VC		
5	013	62S	62S-187	62S-187-62S-186	4360	285	300	1702	S	COLLEGE	AV	8	8.4	S	VC		
5	013	62S	62S-188	62S-188-62S-183	4360	315	330	1904	S	FLORENCE	AV	8	12.3	S	VC		
5	013	62S	62S-189	62S-189-62S-188	4360	180	190	1914	S	FLORENCE	AV	8	13.2	S	VC		
5	013	62S	62S-190	62S-190-62S-189	4360	15	190	1931	S	COLLEGE	AV	8	9.7	S	VC		

Legend for Rehabilitation Methods

4360 Point Repair on Mainline – This is for correcting a defect on a mainline sewer where excavation is required. The pipe defect(s) may include broken pipe, dropped joint, offset joint, or a defective service line connection that has caused an offset in pipe alignment. Repair consists of excavating down to the pipe replacing one or more sections (up to 15 linear feet) of pipe. Included in this RM is the proper disposal of excavated waste material such as broken pipe contaminated

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER

Sheet No	Atlas Sheet	BasinID	MHID	Pipe ID	RM	DistFromUSMH	DSMHLengh	MHAddress	MHPReDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatri	Lamp Hole	Remarks
5	013	62S	62S-190	62S-190-62S-189	4360	175	190	1931	S	COLLEGE	AV	8	9.7	S	VC		
5	013	62S	62S-191	62S-191-62S-188	4360	290	300	1728	S	FLORENCE	AV	8	12.7	S	VC		
5	013	62S	62S-192	62S-192-62S-191	4360	285	300	1703	S	COLLEGE	AV	8	10.7	S	VC		
5	013	62S	62S-199	62S-199-62S-198	4360	139	290	1733	S	FLORENCE	ST	8	9.1	S	VC		
5	013	62S	62S-200	62S-200-62S-199	4360	22	300	1706	S	FLORENCE	PL	8	11.5	S	VC		
5	013	62S	62S-202	62S-202-62S-201	4510		60	2100	S	FLORENCE	PL	8	8.3	S	VC		
5	013	62S	62S-203	62S-203-62S-201	4360	220	230	1923	S	FLORENCE	PL	8	11.4	S	VC		
5	013	62S	62S-208	62S-208-62S-207	4510		60	3209	E	21ST	ST	8	11.3	C	VC		
5	013	62S	62S-214	62S-214-62S-213	4510		60	3235	E	21ST	ST	8	8.6	D	VC		
5	013	62S	62S-216	62S-216-62S-215	4370	145	300	1901	S	GARY	PL	8	11.0	S	VC		
5	013	62S	62S-217	62S-217-62S-1008	4510		41	1943	S	HARVARD	AV	8	11.1	A	VC		
5	013	62S	62S-249	62S-249-62S-966	4360	50	180	2608	E	19TH	ST	8	8.0	S	VC		
5	013	62S	62S-250	62S-250-62S-249	4360	165	255	2634	E	19TH	ST	8	6.2	S	VC		
5	013	62S	62S-253	62S-253-62S-252	4430		151	1903	S	COLUMBIA	AV	8	4.8	S	VC		
5	013	62S	62S-256	62S-256-62S-254	4360	15	281	2420	E	18TH	ST	8	9.0	D	VC		
5	013	62S	62S-256	62S-256-62S-254	4360	271	281	2420	E	18TH	ST	8	9.0	D	VC		
5	013	62S	62S-259	62S-259-62S-258	4510		330	2547	E	19TH	ST	8	9.2	S	VC		
5	013	62S	62S-260	62S-260-62S-259	4510		234	2612	E	18TH	ST	8	6.8	S	VC		
5	013	62S	62S-261	62S-261-62S-260	4510		292	2636	E	18TH	ST	8	8.4	S	VC		
5	013	62S	62S-262	62S-262-62S-261	4510		225	1817	S	COLUMBIA	AV	8	7.7	S	VC		
5	013	62S	62S-264	62S-264-62S-262	4510		80	1807	S	COLUMBIA	AV	8	7.6	S	VC	62S-264	
5	013	62S	62S-272	62S-272-62S-271	4510		281	2503	E	18TH	ST	8	8.9	S	VC		
5	013	62S	62S-275	62S-275-62S-274	4360	247	275	2611	E	18TH	ST	8	9.7	S	VC		
5	013	62S	62S-276	62S-276-62S-275	4360	260	275	1747	S	COLUMBIA	AV	8	12.0	S	VC		
5	013	62S	62S-277	62S-277-62S-276	4360	15	207	1803	S	COLUMBIA	AV	8	4.0	S	VC		
5	013	62S	62S-277	62S-277-62S-276	4360	197	207	1803	S	COLUMBIA	AV	8	4.0	S	VC		
5	013	62S	62S-281	62S-281-62S-280	4360	128	138	2417	E	17TH	PL	10	9.4	S	VC		
5	013	62S	62S-288	62S-333-62S-288	4360	38	148	1548	S	ATLANTA	AV	8	8.0	S	VC		
5	013	62S	62S-333	62S-333-62S-390	4510		53	1547	S	LEWIS	PL	8	8.5	S	VC		
5	013	62S	62S-335	62S-335-62S-334	4360	285	325	2442	E	15TH	ST	8	8.3	S	VC		
5	013	62S	62S-336	62S-336-62S-390	4360	103	113	1547	S	LEWIS	PL	8	3.1	S	VC		
5	013	62S	62S-337	62S-337-62S-336	4370	98	301	1528	S	LEWIS	PL	8	2.8	C	VC		
5	013	62S	62S-339	62S-339-62S-336	4360	98	168	1548	S	LEWIS	PL	8	5.6	S	VC		
5	013	62S	62S-340	62S-340-62S-339	4360	153	288	1527	S	LEWIS	AV	8	5.6	S	VC		
5	013	62S	62S-344	62S-344-62S-343	4360	155	309	2516	E	15TH	ST	8	11.6	S	VC		
5	013	62S	62S-386	62S-386-62S-921	4510		54	1717	S	LEWIS	AV	8	8.0	S	VC		
5	013	62S	62S-387	62S-387-62S-385	4360	130	217	1626	S	LEWIS	PL	8	5.4	S	VC		
5	013	62S	62S-392	62S-392-62S-391	4510		55	1612	S	LEWIS	PL	8	6.6	A	VC		
5	013	62S	62S-398	62S-398-62S-283	4360	130	375	2508	E	17TH	ST	10	10.8	S	VC		
5	013	62S	62S-402	62S-402-62S-403	4360	118	128	2522	E	16TH	ST	8	8.4	S	VC		
5	013	62S	62S-404	62S-404-62S-399	4360	27	122	2522	E	17TH	ST	8	4.0	S	VC		
5	013	62S	62S-409	62S-409-62S-407	4360	155	165	1733	S	COLUMBIA	AV	8	7.3	S	VC		
5	013	62S	62S-418	62S-418-62S-417	4360	65	195	1548	S	COLUMBIA	AV	8	5.8	S	VC		
5	013	62S	62S-418	62S-418-62S-417	4360	179	195	1548	S	COLUMBIA	AV	8	5.8	S	VC		
5	013	62S	62S-440	62S-440-62S-439	4510		64	2714	E	16TH	PL	8	6.7	S	VC		
5	013	62S	62S-442	62S-442-62S-441	4360	185	281	1728	S	COLUMBIA	PL	8	4.7	S	VC		
5	013	62S	62S-447	62S-447-62S-445	4510		60	1648	S	DELAWARE	AV	8	8.4	S	VC		
5	013	62S	62S-448	62S-448-62S-447	4360	45	242	1717	S	COLUMBIA	AV	8	9.1	S	VC		
5	013	62S	62S-449	62S-449-62S-448	4360	145	155	1730	S	DELAWARE	AV	8	9.9	S	VC		
5	013	62S	62S-450	62S-450-62S-940	4360	87	194	1624	S	COLUMBIA	PL	8	9.9	S	VC		
5	013	62S	62S-452	62S-452-62S-450	4360	179	261	1619	S	COLUMBIA	PL	8	10.8	S	VC		
5	013	62S	62S-453	62S-453-62S-452	4360	98	108	1617	S	COLUMBIA	PL	8	13.5	S	VC		
5	013	62S	62S-459	62S-459-62S-458	4360	176	360	1648	S	DELAWARE	PL	8	10.5	S	VC		
5	013	62S	62S-461	62S-461-62S-946	4510		301	1532	S	DELAWARE	PL	8	10.4	S	VC		
5	013	62S	62S-463	62S-463-62S-461	4360	250	260	1510	S	DELAWARE	PL	8	10.6	C	VC		
5	013	62S	62S-471	62S-471-62S-470	4360	157	167	1509	S	EVANSTON	AV	8	9.1	S	VC		
5	013	62S	62S-483	62S-483-62S-482	4370	110	120	1511	S	COLLEGE	AV	8	6.3	A	VC		
5	013	62S	62S-484	62S-484-62S-482	4370	115	125	1510	S	FLORENCE	AV	8	8.5	A	VC	62S-484	
5	013	62S	62S-878	62S-878-62S-477	4360	135	200	1519	S	COLLEGE	AV	8	9.6	S	VC		
5	013	62S	62S-987	62S-987-62S-147	4510		174	2509	E	21ST	ST	8	3.8	A	VC		
5	013	62S	62S-988	62S-988-62S-169	4510		94	2019	S	DELAWARE	PL	8	10.1	S	VC		
6	014	44S	44S-199	44S-199-44S-198	4360	15	233	1228	E	19TH	ST	8	10.5	S	VC		
6	014	44S	44S-199	44S-199-44S-198	4360	223	233	1228	E	19TH	ST	8	10.5	S	VC		
6	014	44S	44S-201	44S-201-44S-198	4360	280	330	1316	E	18TH	ST	10	14.4	S	CO		
6	014	44S	44S-202	44S-202-44S-201	4360	15	215	1232	E	18TH	ST	8	11.7	S	VC		
6	014	44S	44S-202	44S-202-44S-201	4360	205	215	1232	E	18TH	ST	8	11.7	S	VC		
6	014	44S	44S-205	44S-205-44S-201	4360	215	225	1804	S	QUAKER	ST	8	9.3	S	VC		
6	014	44S	44S-206	44S-206-44S-205	4360	210	225	1342	E	18TH	ST	8	15.9	S	VC		
6	014	44S	44S-225X	44S-225X-44S-225	4510		100	1728	S	QUINCY	AV	8	10.1	S	VC		
6	014	44S	44S-267	44S-267-44S-266	4360	185	270	1329	E	21ST	ST	8	9.7	S	VC		
6	014	44S	44S-269	44S-269-44S-268	4360	34	262	1515	E	21ST	ST	8	11.6	S	VC		
6	014	44S	44S-272	44S-272-44S-552	4510		30	1425	E	20TH	ST	8	10.7	S	VC		
6	014	44S	44S-274	44S-274-44S-273	4360	250	260	1327	E	20TH	ST	8	8.6	S	VC		
6	014	44S	44S-275	44S-275-44S-554	4510		100	1515	E	20TH	ST	8	21.2	S	VC		
6	014	44S	44S-282	44S-282-44S-281	4360	15	240	1420	E	17TH	PL	8	9.7	S	VC		
6	014	44S	44S-282	44S-282-44S-281	4360	218	240	1420	E	17TH	PL	8	9.7	S	VC		
6	014	44S	44S-283	44S-283-44S-483	4360	43	177	1421	E	19TH	ST	8	12.0	D	VC		
6	014	44S	44S-288	44S-288-44S-502	4360	58	144	1538	E	19TH	ST	8	4.1	C	VC		
6	014	44S	44S-289	44S-289-44S-288	4430		144	1911	S	ST LOUIS	AV	8	7.3	S	VC		
6	014	44S	44S-327	44S-327-44S-326	4360	310	313	1831	E	17TH	PL	8	10.5	S	VC		
6	014	44S	44S-330	44S-330-44S-329	4360	15	290	1912	E	17TH	PL	8	6.2	S	VC		
6	014	44S	44S-330	44S-330-44S-329	4360	175	290	1912	E	17TH	PL	8	6.2	S	VC		
6	014	44S	44S-335	44S-335-44S-333	4360	262	272	2115	E	18TH	ST	8	4.3	S	VC		
6	014	44S	44S-336	44S-336-44S-335	4510		70	2115	E	18TH	ST	8	6.9	S	VC		

Legend for Rehabilitation Methods

4360 Point Repair on Mainline - This is for correcting a defect on a mainline sewer where excavation is required. The pipe defect(s)

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER
ES 90-07

Sheet No	Atlas Sheet	BasinID	MHID	Pipe_ID	RM	DistFromUSMH	DSMHLength	MHAddress	MHPReDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatrl	Lamp Hole	Remarks
6	014	44S	44S-340	44S-340-44S-339	4510		198	1704	S	YORKTOWN	AV	8	10.0	A	VC		
6	014	44S	44S-342	44S-342-44S-341	4510		34	1715	S	YORKTOWN	AV	8	6.8	S	VC		
6	014	44S	44S-348	44S-348-44S-347	4360	4	105	2123	E	17TH	PL	8	5.1	S	VC		
6	014	44S	44S-350	44S-350-44S-349	4360	102	230	2324	E	17TH	ST	8	9.8	S	VC		
6	014	44S	44S-350	44S-350-44S-349	4360	215	230	2324	E	17TH	ST	8	9.8	S	VC		
6	014	44S	44S-353	44S-353-44S-352	4360	79	434	1535	S	GILLETTE	AV	8	10.9	S	VC		
6	014	44S	44S-353	44S-353-44S-352	4360	194	434	1535	S	GILLETTE	AV	8	10.9	S	VC		
6	014	44S	44S-355	44S-355-44S-353	4360	419	497	1440	S	LEWIS	AV	8	9.3	S	VC		
6	014	44S	44S-359	44S-359-44S-358	4360	46	305	1515	S	YORKTOWN	AV	8	4.0	S	VC	44S-359	
6	014	44S	44S-361	44S-361-44S-360	4360	184	300	1544	S	GILLETTE	AV	8	6.6	S	VC		
6	014	44S	44S-364	44S-364-44S-340	4510		241	1553	S	YORKTOWN	AV	8	6.3	S	VC		
6	014	44S	44S-369	44S-369-44S-370	4370	221	231	1860	E	16TH	PL	8	10.2	C	VC		
6	014	44S	44S-373	44S-373-44S-372	4360	155	450	1852	E	16TH	ST	8	4.5	S	VC		
6	014	44S	44S-383	44S-383-44S-382	4360	2	299	1521	S	YORKTOWN	PL	8	14.7	S	VC		
6	014	44S	44S-383	44S-383-44S-382	4360	285	299	1521	S	YORKTOWN	PL	8	14.7	S	VC		
6	014	44S	44S-384	44S-384-44S-383	4360	213	223	1518	S	GILLETTE	AV	8	12.4	S	VC		
6	014	44S	44S-386	44S-386-44S-318	4510		300	1611	S	UTICA	AV	8	12.1	A	VC		
6	014	44S	44S-435	44S-435-44S-434	4370	141	365	1614	E	17TH	PL	8	7.6	A	VC		
6	014	44S	44S-436	44S-436-44S-435	4360	350	360	1607	E	17TH	ST	8	9.8	S	VC		
6	014	44S	44S-437	44S-437-44S-436	4440		300	1607	S	TRENTON	AV	8	8.2	A	VC		
6	014	44S	44S-441	44S-441-44S-440	4370	283	292	1618	S	UTICA	AV	8	12.6	A	VC		
6	014	44S	44S-469	44S-469-44S-468	4370	217	227	1621	S	ST LOUIS	AV	8	12.0	A	VC		
6	014	44S	44S-475	44S-475-44S-339	4510		308	1722	S	YORKTOWN	AV	8	4.9	S	VC		
6	014	44S	44S-489	44S-489-44S-283	4510		60	1418	E	17TH	PL	8	11.0	S	VC		
6	014	62S	62S-495	62S-495-62S-891	4510		76	2211	E	21ST	ST	8	5.9	C	VC	62S-495	
6	014	44S	44S-512	44S-512-44S-511	4360	100	110	2115	E	18TH	ST	8	10.9	S	VC		
6	014	44S	44S-513	44S-513-44S-511	4360	222	232	2208	E	17TH	ST	8	10.5	S	VC		
6	014	44S	44S-554	44S-554-44S-552	4360	136	136	1516	E	19TH	ST	8	20.1	S	VC		
6	014	44S	44S-574	44S-574-44S-372	4510		60	1820	E	18TH	ST	8	12.5	S	VC		
6	014	44S	44S-592	44S-592-44S-593	4360	91	101	2324	E	17TH	ST	8	9.7	S	VC		
6	014	44S	44S-593	44S-593-44S-350	4510		46	2324	E	17TH	ST	8	6.2	S	VC		
6	014	62S	62S-238X	62S-238X-62S-238	4510		100	1920	S	LEWIS	AV	8	8.7	A	VC		
6	014	62S	62S-265	62S-265-62S-254	4360	271	281	1800	S	LEWIS	AV	12	13.2	A	VC		
6	014	62S	62S-286	62S-286-62S-285	4360	122	395	2211	E	18TH	ST	8	10.9	S	VC		
6	014	62S	62S-494	62S-494-62S-493	4370	156	166	2121	E	21ST	ST	12	10.4	A	VC		
6	014	62S	62S-511	62S-511-62S-506	4510		330	2131	E	18TH	ST	8	10.9	S	VC		
7	015	44S	44S-152	44S-152-44S-532	4510		177	1214	E	20TH	st	8	14.4	S	CO		
7	015	44S	44S-153	44S-153-44S-150	4510		321	1115	E	20TH	ST	8	12.8	S	CO		
7	015	44S	44S-155	44S-155-44S-153	4510		10	1124	E	19TH	ST	8	12.6	S	CO		
7	015	44S	44S-200	44S-200-44S-199	4360	218	233	1224	E	19TH	ST	8	11.7	S	VC		
7	015	44S	44S-203	44S-203-44S-202	4360	200	221	1225	E	19TH	ST	8	17.2	S	VC		
7	015	44S	44S-213	44S-213-44S-212	4360	207	222	1224	E	17TH	PL	8	11.5	S	VC		
7	015	44S	44S-532	44S-532-44S-150	4360	66	128	1130	E	20th	ST	8	6.0	S	CO		
7	015	44S	44S-532	44S-532-44S-150	4360	235	250	1130	E	20TH	ST	8	8.7	S	CO		
8	030	62S	62S-217	62S-217-62S-1008	4510		41	1943	S	HARVARD	AV	8	11.3	A	VC		
8	030	62S	62S-225	62S-225-62S-224	4360	200	210	1902	S	JAMESTOWN	AV	8	9.8	S	VC		
8	030	62S	62S-226	62S-226-62S-224	4360	190	200	3411	E	21ST	ST	8	11.4	S	VC		
8	030	62S	62S-227	62S-227-62S-226	4510		94	1936	S	JAMESTOWN	AV	8	5.5	S	VC		
9	031	62S	62S-106	62S-106-62S-105	4360	125	148	2204	S	INDIANAPOLIS	AV	8	7.7	S	VC		
9	031	62S	62S-112	62S-112-62S-111	4510		277	3544	E	23RD	ST	8	9.6	S	VC		
9	031	62S	62S-114	62S-114-62S-113	4360	155	310	3808	E	23RD	ST	8	1.5	S	VC		
9	031	62S	62S-114	62S-114-62S-113	4360	223	310	3808	E	23RD	ST	8	1.5	S	VC		
9	031	62S	62S-117	62S-117-62S-116	4360	237	274	2121	S	LOUISVILLE	AV	8	7.5	S	VC		
9	031	62S	62S-125	62S-125-62S-126	4510		28	2223	S	JAMESTOWN	AV	8	9.1	S	VC		
9	031	62S	62S-127	62S-127-62S-123	4360	143	207	3542	E	22ND	ST	8	6.8	S	VC		
9	031	62S	62S-129	62S-129-62S-128	4360	143	158	3527	E	21ST	ST	8	7.5	S	VC		
9	031	62S	62S-131	62S-131-62S-133	4510		67	3507	E	22ND	ST	8	7.7	S	VC	62S-131	
9	031	62S	62S-133	62S-133-62S-129	4360	143	264	3507	E	22ND	ST	8	7.8	S	VC		
9	031	62S	62S-135	62S-135-62S-134	4510		284	3316	E	21ST	ST	8	9.3	A	VC		
9	031	62S	62S-136	62S-136-62S-135	4510		284	3316	E	21ST	ST	8	4.9	A	VC		
9	031	62S	62S-138	62S-138-62S-137	4360	250	260	3529	E	21ST	ST	8	5.3	S	VC		
9	031	62S	62S-965	62S-965-62S-109	4360	246	261	2221	S	INDIANAPOLIS	AV	8	14.2	S	VC		
10	032	62S	62S-048	62S-048-62S-047	4510		54	2643	E	22ND	ST	12	18.4	S	VC		
10	032	62S	62S-053	62S-053-62S-052	4360	302	325	2740	E	21ST	ST	8	10.9	S	CO		
10	032	62S	62S-059	62S-059-62S-058	4430		194	2152	S	DELAWARE	AV	8	9.6	S	CO		
10	032	62S	62S-065	62S-065-62S-064	4510		61	2304	S	DELAWARE	CT	8	3.0	S	VC		
10	032	62S	62S-066	62S-066-62S-065	4510		175	2316	S	DELAWARE	CT	8	5.1	A	VC		
10	032	62S	62S-073	62S-073-62S-065	4360	14	331	2303	S	FLORENCE	AV	8	6.8	A	VC		
10	032	62S	62S-073	62S-073-62S-065	4360	204	331	2303	S	FLORENCE	AV	8	6.8	A	VC		
10	032	62S	62S-080	62S-080-62S-687	4360	125	135	2136	S	FLORENCE	PL	8	9.7	S	VC		
10	032	62S	62S-085	62S-085-62S-084	4360	211	295	2248	S	FLORENCE	PL	8	6.2	S	CO		
10	032	62S	62S-086	62S-086-62S-085	4360	5	200	2308	S	FLORENCE	PL	8	7.5	A	VC		
10	032	62S	62S-086	62S-086-62S-085	4370	190	200	2308	S	FLORENCE	PL	8	7.5	A	VC		
10	032	62S	62S-091	62S-091-62S-090	4360	10	301	3178	E	22ND	ST	8	4.3	A	CO		
10	032	62S	62S-091	62S-091-62S-090	4370	175	301	3178	E	22ND	ST	8	4.3	A	CO		
10	032	62S	62S-092	62S-092-62S-090	4510		166	2214	S	GARY	AV	8	7.4	S	PV		
10	032	62S	62S-099	62S-099-62S-098	4360	110	185	2646	S	GARY	AV	8	9.3	S	VC		
10	032	62S	62S-102	62S-102-62S-101	4360	168	185	3238	E	21ST	ST	8	10.1	A	VC		
10	032	62S	62S-105	62S-105-62S-100	4370	130	140	3303	E	22ND	ST	8	5.2	A	VC		
10	032	62S	62S-570	62S-570-62S-569	4360	100	110	2433	E	22ND	ST	8	10.3	S	VC		
10	032	62S	62S-581	62S-581-62S-578	4510		100	2443	E	23RD	ST	8	8.0	S	VC		
10	032	62S	62S-617	62S-617-62S-616	4360	265	275	2524	S	COLUMBIA	PL	8	7.0	S	VC		
10	032	62S	62S-624	62S-624-62S-619	4510		300	2328	S	DELAWARE	AV	8	9.3	S	CO		
10	032	62S	62S-641	62S-641-62S-640	4510		133	2651	E	22ND	ST	8	7.3	S	VC		

Legend for Rehabilitation Methods

4360 Point Repair

DRAWING NUMBER
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Sheet No	Atlas Sheet	BasinID	MHID	Pipe_ID	RM	DistFromUSMH	DSMHLLength	MHAddress	MHPPreDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatrl	Lamp Hole	Remarks
10	032	62S	62S-648	62S-648-62S-644	4360	140	150	2732	E	22ND	ST	8	3.4	S	CO		
10	032	62S	62S-652	62S-652-62S-053	4510		107	2747	E	22ND	ST	8	12.3	O	VC		
10	032	62S	62S-674	62S-674-62S-673	4510		93	2916	E	21ST	ST	8	9.7	S	CO	62S-674	
10	032	62S	62S-675	62S-675-62S-673	4360	164	294	3002	E	21ST	ST	8	8.3	S	CO		
10	032	62S	62S-677	62S-677-62S-678	4510		227	2840	E	22ND	ST	8	3.9	S	CO		
10	032	62S	62S-683	62S-683-62S-682	4360	160	170	3140	E	21ST	ST	8	10.0	S			
10	032	62S	62S-688	62S-688-62S-687	4360	150	160	3119	E	21ST	PL	8	6.1	S	CO		
10	032	62S	62S-700	62S-700-62S-699	4360	85	294	2427	E	26TH	ST	8	6.4	S	VC		
10	032	62S	62S-707	62S-707-62S-706	4360	135	145	2539	E	25TH	PL	8	5.5	S	VC		
10	032	62S	62S-708	62S-708-62S-707	4360	130	180	2534	E	25TH	ST	8	4.3	S	VC		
10	032	62S	62S-712	62S-712-62S-711	4360	199	238	2523	E	25TH	ST	8	7.5	A	VC		
10	032	62S	62S-713	62S-713-62S-919	4510		53	2511	E	26TH	ST	8	8.3	A	VC		
10	032	62S	62S-715	62S-715-62S-714	4360	130	180	2550	E	24TH	ST	8	7.1	S	VC		
10	032	62S	62S-716	62S-716-62S-714	4360	66	163	2504	S	BIRMINGHAM	PL	8	8.0	A	VC		
10	032	62S	62S-716	62S-716-62S-714	4370	130	163	2504	S	BIRMINGHAM	PL	8	8.0	A	VC		
10	032	62S	62S-717	62S-717-62S-716	4370	148	312	2522	S	BIRMINGHAM	PL	8	8.7	A	VC		
10	032	62S	62S-718	62S-718-62S-717	4370	297	311	2545	S	BIRMINGHAM	PL	8	10.1	A	VC		
10	032	62S	62S-721	62S-721-62S-720	4360	153	163	2671	E	26TH	ST	8	7.1	S	VC		
10	032	62S	62S-723	62S-723-62S-724	4510		30	2533	S	BIRMINGHAM	AV	8	5.7	A	VC	62S-723	
10	032	62S	62S-728	62S-728-62S-725	4370	38	130	2536	E	26TH	ST	8	7.3	A	VC		
10	032	62S	62S-729	62S-729-62S-711	4510		153	2607	E	25TH	ST	8	7.8	S	VC		
10	032	62S	62S-733	62S-733-62S-732	4510		87	2549	E	24TH	ST	8	8.1	S	VC		
10	032	62S	62S-741	62S-741-62S-739	4510		65	2403	E	25TH	ST	8	5.9	A	VC		
10	032	62S	62S-742	62S-742-62S-741	4510		278	2423	E	25TH	ST	8	10.7	S	VC		
10	032	62S	62S-743	62S-743-62S-742	4360	263	279	2447	E	25TH	ST	8	12.1	S	VC		
10	032	62S	62S-750	62S-750-62S-749	4360	279	289	2435	E	25TH	ST	8	10.9	S	VC		
10	032	62S	62S-752	62S-752-62S-961	4360	137	178	2440	E	23RD	ST	8	11.0	S	VC		
10	032	62S	62S-756	62S-756-62S-752	4360	29	390	2405	E	24TH	ST	8	11.6	S	VC		
10	032	62S	62S-756	62S-756-62S-752	4360	163	390	2405	E	24TH	ST	8	11.6	S	VC		
10	032	62S	62S-919	62S-919-62S-712	4370	132	142	2517	E	25TH	ST	8	8.7	A	VC		
10	032	62S	62S-961	62S-961-62S-750	4360	142	152	2440	E	24TH	ST	8	13.3	S	VC		
10	032	62S	62S-985	62S-985-62S-984	4360	10	230	2544	E	22ND	ST	8	18.5	S	CO		
11	033	44S	44S-234	44S-234-44S-233	4370	107	117	2106	S	ST LOUIS	AV	8	6.8	A	VC		
11	033	44S	44S-245	44S-245-44S-244	4360	122	187	2208	S	TERWILLEGER	BV	8	13.4	S	VC		
11	033	44S	44S-247	44S-247-44S-243	4510		224	2205	S	TERWILLEGER	BV	8	13.3	A	VC		
11	033	44S	44S-249	44S-249-44S-248	4360	105	115	2227	S	TERWILLEGER	BV	8	10.7	S	VC		
11	033	44S	44S-255	44S-255-44S-252	4510		312	2267	S	TROOST	AV	8	4.7	S	VC		
11	033	44S	44S-256	44S-256-44S-255	4360	244	254	2249	S	TROOST	AV	8	9.3	S	VC		
11	033	44S	44S-259	44S-259-44S-247	4440		329	1562	E	22ND	ST	8	10.3	A	VC		
11	033	45S	45S-264	45S-264-45S-263	4510		278	1602	E	26TH	ST	8	8.7	S	VC	45S-264	
11	033	45S	45S-266	45S-266-45S-265	4360	218	228	2656	S	TRENTON	AV	8	8.7	S	VC		
11	033	45S	45S-268	45S-268-45S-267	4510		268	2605	S	ST LOUIS	AV	8	11.1	S	VC		
11	033	45S	45S-269	45S-269-45S-268	4360	93	103	2604	S	TRENTON	AV	8	11.1	S	VC	45S-269	
11	033	45S	45S-295	45S-295-45S-294	4510		75	1506	E	24TH	ST	8	6.4	S	VC	45S-295	
11	033	45S	45S-301	45S-301-45S-287	4510		79	1503	E	26TH	PL	8	8.9	S	VC		
11	033	62S	62S-010	62S-010-62S-009	4510		110	2520	S	YORKTOWN	AV	18	13.6	S	CO		CIPP Only
11	033	62S	62S-011	62S-011-62S-010	4510		87	2520	S	YORKTOWN	AV	18	15.1	S	CO		CIPP Only
11	033	62S	62S-525	62S-525-62S-524	4370	29	219	1950	S	UTICA	SQ	12	6.8	A	VC		
11	033	62S	62S-555	62S-555-62S-554	4360	120	130	2129	E	23RD	ST	8	10.7	S	VC		
11	033	62S	62S-560	62S-560-62S-559	4510		300	2206	S	LEWIS	AV	8	8.4	S	VC		
11	033	62S	62S-561	62S-561-62S-560	4510		303	2221	E	22ND	PL	8	8.8	S	VC		
11	033	62S	62S-562	62S-562-62S-561	4510		310	2206	S	LEWIS	AV	8	10.4	S	VC		
11	033	62S	62S-694	62S-694-62S-693	4370	15	197	2111	E	26TH	ST	8	6.2	C	VC		
11	033	62S	62S-694	62S-694-62S-693	4360	136	197	2111	E	26TH	ST	8	6.2	C	VC		
11	033	62S	62S-699	62S-699-62S-698	4360	219	229	2405	E	26TH	ST	8	6.3	A	VC		
11	033	62S	62S-736	62S-736-62S-735	4510		349	2125	E	25TH	PL	8	7.4	S	VC		
11	033	62S	62S-739	62S-739-62S-740	4510		85	2249	E	25TH	PL	8	5.1	S	VC		
11	033	62S	62S-740	62S-740-62S-738	4510		260	2249	E	25TH	PL	8	10.9	S	VC		
11	033	62S	62S-741	62S-741-62S-739	4510		65	2403	E	25TH	ST	8	5.9	A	VC		
11	033	62S	62S-745	62S-745-62S-744	4360	307	321	2125	E	25TH	ST	8	11.9	S	VC		
11	033	62S	62S-746	62S-746-62S-745	4360	290	300	2144	E	24TH	ST	8	10.8	S	VC		
11	033	62S	62S-747	62S-747-62S-746	4360	285	285	2215	E	25TH	ST	8	11.4	S	VC		
11	033	62S	62S-759	62S-759-62S-758	4510		300	2203	E	24TH	ST	8	8.2	S	VC		
11	033	62S	62S-760	62S-760-62S-759	4360	233	309	2223	E	24TH	ST	8	9.3	S	VC		
11	033	62S	62S-760	62S-760-62S-759	4370	285	309	2223	E	24TH	ST	8	9.3	S	VC		
12	034	44S	44S-008	44S-008-44S-007	4510		349	4	W	26TH	ST	30	8.7	D	CO		CIPP Only
12	034	44S	44S-018	44S-018-44S-017	4360	345	345	4	W	24TH	ST	30	7.2	D	CO		
12	034	44S	44S-028	44S-028-44S-027	4360	160	170	4	E	24TH	ST	10	10.7	A	VC		
12	034	44S	44S-030	44S-030-44S-029	4510		22	4	E	24TH	ST	12	5.0	S	VC		
12	034	44S	44S-038	44S-038-44S-037	4360	60	300	130	E	24TH	ST	8	15.3	S	VC		
12	034	44S	44S-045	44S-045-44S-044	4360	135	400	2509	S	BOSTON	PL	8	8.5	S	VC		
12	034	44S	44S-048	44S-048-44S-047	4360	165	260	2504	S	BOSTON	PL	8	14.1	S	VC		
12	034	44S	44S-051	44S-051-44S-050	4360	269	318	116	E	26TH	ST	8	11.1	S	VC		
12	034	44S	44S-056	44S-056-44S-055	4510		42	116	E	26TH	PL	8	6.7	S	VC		
12	034	44S	44S-058	44S-058-44S-057	4360	175	260	2641	S	BOSTON	PL	8	6.0	S	VC		
12	034	44S	44S-059	44S-059-44S-058	4510		325	2611	S	BOSTON	PL	8	7.9	S	VC		
12	034	44S	44S-060	44S-060-44S-059	4360	173	327	2519	S	BOSTON	PL	8	12.3	S	VC		
12	034	44S	44S-060	44S-060-44S-059	4360	285	327	2519	S	BOSTON	PL	8	12.3	S	VC		
12	034	44S	44S-064	44S-064-44S-062	4360	15	230	2731	S	BOSTON	AV	12	9.4	S	CO		
12	034	44S	44S-064	44S-064-44S-062	4360	220	230	2731	S	BOSTON	AV	12	9.4	S	CO		
12	034	44S	44S-071	44S-071-44S-070	4360	85	201	2530	S	CINCINNATI	AV	8	11.1	S	VC		
12	034	44S	44S-073	44S-073-44S-581	4360	159	174	2428	S	CINCINNATI	AV	8	8.1	S	VC		
12	034	44S	44S-092	44S-092-44S-091	4360	281	301	1249	E	26TH	ST	8	12.7	S	VC	44S-073	
12	034	44S	44S-093	44S-093-44S-092	4360												

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ES 96-07

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Sheet No	Atlas Sheet	BasinID	MHID	Pipe_ID	RM	DistFromUSMH	DSMHLength	MHAddress	MHPreDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatrl	Lamp Hole	Remarks
12	034	44S	44S-093	44S-093-44S-092	4360	210	220	1270	E	25TH	ST	8	12.6	S	VC		
12	034	44S	44S-099	44S-099-44S-098	4510		20	2543	S	CINCINNATI	AV	10	10.8	S	CO		
12	034	44S	44S-101	44S-101-44S-098	4510		104	2538	S	NORFOLK	AV	8	11.7	S	VC		
12	034	44S	44S-102	44S-102-44S-101	4510		85	2617	S	OWASSO	AV	8	11.7	S	VC	44S-102	
12	034	44S	44S-103	44S-103-44S-473	4360	85	249	218	E	25TH	ST	8	13.1	S	VC		
12	034	44S	44S-106	44S-106-44S-105	4370	172	258	2510	S	NORFOLK	AV	8	13.4	A	VC		
12	034	44S	44S-130	44S-130-44S-129	4360	126	136	1136	E	SUNSET	DR	8	15.2	S	VC		
12	034	44S	44S-132	44S-132-44S-128	4510		176	2145	S	NORFOLK	AV	8	8.3	A	VC		
12	034	44S	44S-133	44S-133-44S-132	4440		177	1018	E	SUNSET	DR	8	9.9	A	VC		
12	034	44S	44S-134	44S-134-44S-133	4360	162	346	2114	S	NORFOLK	AV	8	11.2	S	VC		
12	034	44S	44S-144	44S-144-44S-143	4360	262	267	1118	E	21ST	ST	8	11.9	S	VC		
12	034	44S	44S-148	44S-148-44S-147	4360	63	207	2167	S	NORFOLK	TR	8	12.0	S	VC		
12	034	44S	44S-159	44S-159-44S-158	4510		68	2540	E	25TH	PL	8	11.8	S	VC		
12	034	44S	44S-172	44S-172-44S-169	4370	135	176	1247	E	24TH	PL	8	9.3	A	VC		
12	034	44S	44S-173	44S-173-44S-172	4360	161	221	2441	S	OWASSO	PL	8	11.3	S	VC		
12	034	44S	44S-174	44S-174-44S-173	4510		50	2441	S	OWASSO	PL	8	8.2	S	VC		
12	034	44S	44S-177	44S-177-44S-176	4370	168	168	2452	S	PEORIA	AV	8	11.8	A	VC		
12	034	44S	44S-184	44S-184-44S-182	4360	158	207	2175	S	OWASSO	AV	8	7.0	S	VC		
12	034	44S	44S-186	44S-186-44S-185	4370	30	245	1223	E	21ST	PL	8	12.0	A	VC		
12	034	44S	44S-473	44S-473-44S-100	4510		100	2530	S	NORFOLK	AV	8	9.3	S	VC		
12	034	44S	44S-530	44S-530-44S-529	4370	367	377	2161	S	OWASSO	PL	24	17.5	A	CO		
12	034	44S	44S-531	44S-531-44S-530	4510		12	2161	S	OWASSO	PL	10	12.0	A	VC		
13	059	45S	45S-420	45S-420-45S-419	4360	338	348	2511	E	31ST	ST	8	14.3	S	VC		
13	059	45S	45S-422	45S-422-45S-421	4360	285	300	2545	E	31ST	ST	8	15.1	S	VC		
13	059	45S	45S-425	45S-425-45S-424	4370	126	300	2545	E	31ST	ST	8	2.9	A	VC		
13	059	45S	45S-426	45S-426-45S-425	4370	250	260	2615	E	31ST	ST	8	3.6	A	VC		
13	059	45S	45S-428	45S-428-45S-427	4370	285	296	3041	E	31ST	ST	8	4.4	A	VC		
13	059	45S	45S-429	45S-429-45S-418	4370	170	230	2407	S	LEWIS	AV	8	5.7	C	VC		
13	059	45S	45S-434	45S-434-45S-433	4510		100	2440	E	29TH	ST	8	12.9	S	VC	45S-434	
13	059	62S	62S-781	62S-781-62S-780	4510		93	2447	E	26TH	PL	8	10.4	A	VC		
13	059	62S	62S-783	62S-783-62S-782	4360	32	245	2456	E	26ST	ST	8	7.2	S	VC		
13	059	62S	62S-784Y	62S-784Y-62S-783	4360	102	112	2518	E	26TH	ST	8	7.2	S	VC	62S-784Y	
13	059	62S	62S-788	62S-788-62S-781	4360	78	323	2455	E	27TH	PL	8	6.3	S	VC		
13	059	62S	62S-802	62S-802-62S-801	4510		75	2410	E	27TH	PL	8	11.6	S	VC		
13	059	62S	62S-807	62S-807-62S-806	4360	210	211	2445	E	27TH	PL	8	5.0	S	VC		
13	059	62S	62S-810	62S-810-62S-809	4360	146	250	2451	E	28TH	ST	8	9.7	S	VC		
13	059	62S	62S-813	62S-813-62S-812	4510		58	2450	E	28TH	ST	8	6.6	S	VC		
13	059	62S	62S-814	62S-814-62S-813	4510		153	2440	E	28TH	ST	8	8.9	S	VC		
13	059	62S	62S-815	62S-815-62S-814	4510		75	2436	E	28TH	ST	8	8.5	S	VC		
13	059	62S	62S-816	62S-816-62S-815	4510		35	2436	E	28TH	ST	8	9.1	S	VC		
13	059	62S	62S-817	62S-817-62S-816	4360	20	136	2436	E	28TH	ST	8	6.0	S	VC		
13	059	62S	62S-818	62S-818-62S-817	4360	121	229	2436	E	28TH	ST	8	9.6	S	VC		
13	059	62S	62S-819	62S-819-62S-818	4360	142	152	2412	E	28TH	ST	8	8.1	S	VC		
13	059	62S	62S-821	62S-821-62S-813	4360	43	258	2465	E	29TH	ST	8	7.9	S	VC		
13	059	62S	62S-822	62S-822-62S-809	4360	97	107	2480	E	27TH	PL	8	3.4	S	VC		
13	059	62S	62S-824	62S-824-62S-823	4360	23	190	2511	E	28TH	ST	8	11.2	D	VC		
13	059	62S	62S-826	62S-826-62S-823	4360	23	300	2501	E	28TH	ST	8	4.9	S	VC		
13	059	62S	62S-827	62S-827-62S-826	4370	235	245	2504	E	28TH	ST	8	9.5	S	VC		
13	059	62S	62S-828	62S-828-62S-827	4360	230	250	2525	E	30TH	ST	8	10.9	S	VC		
13	059	62S	62S-899	62S-899-62S-898	4510		60	2660	S	BIRMINGHAM	PL	8	10.7	S	VC		
13	059	62S	62S-901	62S-901-62S-900	4370	35	189	2660	S	BIRMINGHAM	AV	8	17.6	C	VC		
14	060	45S	45S-049	45S-049-45S-040	4360	123	255	1323	E	27TH	ST	8	10.9	S	VC		
14	060	45S	45S-173	45S-173-45S-172	4360	232	262	2905	S	QUAKER	AV	8	6.7	S	VC		
14	060	45S	45S-175	45S-175-45S-174	4360	165	210	1359	E	29TH	ST	8	10.9	S	VC		
14	060	45S	45S-184	45S-184-45S-183	4360	45	300	2920	S	QUAKER	AV	8	9.0	S	VC		
14	060	45S	45S-185	45S-185-45S-184	4360	240	250	2908	S	QUAKER	AV	8	8.5	S	VC		
14	060	45S	45S-238	45S-238-45S-237	4430		265	1505	E	29TH	ST	15	14.8	S	VC		
14	060	45S	45S-244X	45S-244X-45S-244	4360	215	225	2727	S	ROCKFORD	AV	8	6.2	S	VC		
14	060	45S	45S-307	45S-307-45S-304	4430		330	2716	S	ROCKFORD	AV	8	12.3	S	VC		
14	060	45S	45S-308	45S-308-45S-307	4360	23	245	1382	E	27TH	ST	8	7.4	S	VC		
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Sheet No	Atlas Sheet	BasinID	MHID	Pipe_ID	RM	DistFromUSMH	DSMHLLength	MHAddress	MHPreDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatrl	Lamp Hole	Remarks
14	060	45S	45S-780	45S-780-45S-165	4510		40	1300	E	31ST	ST	8	5.8	A	CO		CIPP Only
14	060	62S	62S-777	62S-777-62S-776	4510		274	2224	E	26TH	PL	8	7.8	S	VC		
14	060	62S	62S-792	62S-792-62S-791	4510		285	2136	E	26TH	PL	8	8.2	S	VC		
14	060	62S	62S-793	62S-793-62S-776	4360	59	158	2201	E	27TH	ST	8	7.2	S	VC		
14	060	62S	62S-795	62S-795-62S-793	4360	178	288	2152	E	26TH	PL	8	7.8	S	VC		
14	060	62S	62S-796	62S-796-62S-795	4360	273	329	2131	E	27TH	ST	8	7.3	S	VC		
14	060	62S	62S-797	62S-797-62S-793	4510		189	2204	E	27TH	ST	8	4.9	S	VC		
14	060	62S	62S-798	62S-798-62S-797	4360	174	184	2204	E	27TH	ST	8	6.5	S	VC		
14	060	62S	62S-800	62S-800-62S-799	4360	185	200	2221	S	FOREST	BL	8	8.1	S	VC		
14	060	62S	62S-832X	62S-832X-62S-832	4510		100	2136	E	26TH	PL	8	12.6	S	VC		
14	060	62S	62S-833	62S-833-62S-832	4360	97	112	2116	E	26TH	PL	8	11.7	S	VC		
14	060	62S	62S-834	62S-834-62S-833	4360	97	125	2115	E	27TH	ST	8	10.5	S	VC		
14	060	62S	62S-837	62S-837-62S-836	4370	115	178	1860	E	27TH	ST	8	5.4	C	VC		
14	060	62S	62S-841	62S-841-62S-797	4360	15	300	2158	E	27TH	ST	8	8.9	S	VC		
14	060	62S	62S-841	62S-841-62S-797	4360	174	300	2158	E	27TH	ST	8	8.9	S	VC		
14	060	62S	62S-842	62S-842-62S-841	4360	15	175	2138	E	27TH	ST	8	5.3	S	VC		
14	060	62S	62S-842	62S-842-62S-841	4360	165	175	2138	E	27TH	ST	8	5.3	S	VC		
14	060	62S	62S-843	62S-843-62S-797	4360	174	212	2723	S	ZUNIS	AV	8	5.4	S	VC		
14	060	62S	62S-844	62S-844-62S-843	4360	120	130	2172	E	27TH	ST	8	7.5	S	VC		
14	060	62S	62S-845	62S-845-62S-844	4360	115	361	2125	S	FOREST	BL	8	7.9	S	VC		
14	060	62S	62S-854	62S-854-62S-852	4430		226	2216	E	29TH	ST	8	7.1	S	VC		
14	060	62S	62S-855	62S-855-62S-854	4360	162	172	2216	E	29TH	ST	8	6.7	S	VC		
14	060	62S	62S-857	62S-857-62S-855	4510		101	2232	E	29TH	ST	8	6.5	S	VC		
15	061	45S	45S-030	45S-030-45S-777	4360	89	170	203	E	27TH	PL	8	8.7	S	VC		
15	061	45S	45S-038	45S-038-45S-037	4360	210	235	1245	E	27TH	ST	8	14.2	S	VC		
15	061	45S	45S-040	45S-040-45S-039	4360	128	138	1304	E	26TH	PL	8	10.1	S	VC		
15	061	45S	45S-056	45S-056-45S-055	4360	50	140	1251	E	27TH	PL	8	7.4	S	VC		
15	061	45S	45S-071	45S-071-45S-070	4360	47	172	303	E	29TH	ST	8	14.7	S	VC		
15	061	45S	45S-072	45S-072-45S-071	4360	157	252	327	E	29TH	ST	8	11.2	S	VC		
15	061	45S	45S-082	45S-082-45S-784	4360	48	147	204	E	29TH	ST	8	12.1	S	VC		
15	061	45S	45S-084	45S-084-45S-083	4360	106	165	2912	S	DETROIT	AV	8	7.3	S	VC		
15	061	45S	45S-085	45S-085-45S-084	4360	150	287	321	E	29TH	PL	8	10.5	S	PV		
15	061	45S	45S-093	45S-093-45S-092	4510		99	1212	E	29TH	PL	8	7.3	S	VC		
15	061	45S	45S-095	45S-095-45S-094	4360	148	158	1334	E	29TH	PL	8	8.0	S	VC		
15	061	45S	45S-097	45S-097-45S-096	4510		39	1211	E	30TH	ST	8	9.2	S	VC		
15	061	45S	45S-098	45S-098-45S-096	4510		44	2949	E	18TH	ST	8	9.1	S	VC		
15	061	45S	45S-099	45S-099-45S-083	4360	106	162	2935	S	CINCINNATI	AV	8	6.1	S	VC		
15	061	45S	45S-104	45S-104-45S-018	4360	58	160	2950	S	BOSTON	PL	8	6.6	S	PV		
15	061	45S	45S-105	45S-105-45S-104	4360	175	190	3002	S	BOSTON	PL	8	6.2	S	VC		
15	061	45S	45S-108	45S-108-45S-107	4360	185	200	3048	S	BOSTON	PL	8	5.2	S	VC		
15	061	45S	45S-159	45S-159-45S-158	4360	101	111	1207	E	31ST	ST	8	5.3	S	VC		
15	061	45S	45S-162	45S-162-45S-158	4360	145	155	3041	S	WOODWARD	ST	8	4.9	S	CO		
15	061	45S	45S-739	45S-740-45S-739	4360	9	312	2800	S	RIVERSIDE	DR	48	8.4	S	OT		
15	061	45S	45S-774	45S-774-45S-773	4510		18	1260	E	27TH	PL	8	7.9	S	VC		
15	061	45S	45S-778	45S-778-45S-011	4370	84	108	2800	S	RIVERSIDE	DR	10	13.2	S	VC		
15	061	45S	45S-786	45S-786-45S-021	4360	40	135	2908	S	CINCINNATI	AV	8	8.8	S	CO		
16	095	45S	45S-210	45S-210-45S-209	4510		55	1322	E	32ND	PL	18	10.9	S	VC		
16	095	45S	45S-211	45S-211-45S-210	4510		115	1323	E	32ND	PL	18	10.6	S	VC		
16	095	45S	45S-217	45S-217-45S-216	4360	37	172	1337	E	32ND	PL	8	7.0	S	VC		
16	095	45S	45S-221	45S-221-45S-220	4360	43	59	3171	S	ROCKFORD	AV	18	13.4	S	VC		
16	095	45S	45S-222	45S-222-45S-221	4510		95	3171	S	ROCKFORD	AV	18	12.8	O	VC		
16	095	45S	45S-223	45S-223-45S-547	4510		126	3171	S	ROCKFORD	AV	6	7.0	C	VC		
16	095	45S	45S-224	45S-224-45S-223	4430		284	3155	S	ROCKFORD	DR	15	11.7	S	VC		
16	095	45S	45S-227	45S-227-45S-223	4360	80	317	3135	S	ROCKFORD	DR	15	10.0	S	VC		
16	095	45S	45S-228	45S-228-45S-227	4360	269	377	3117	S	ROCKFORD	DR	15	16.1	D	VC		
16	095	45S	45S-229	45S-229-45S-228	4360	100	302	3100	E	3157	ST	15	15.1	S	VC		
16	095	45S	45S-233	45S-233-45S-229	4360	292	295	1851	E	31ST	PL	8	8.1	S	VC		
16	095	45S	45S-383	45S-383-45S-382	4360	214	300	3106	S	ZUNIS	AV	8	6.1	S	VC		
16	095	45S	45S-385	45S-385-45S-384	4510		250	1815	E	32ND	ST	8	8.8	C	VC		
16	095	45S	45S-387	45S-387-45S-386	4360	155	65	2154	E	31ST	PL	8	14.5	S	VC		
16	095	45S	45S-392	45S-392-45S-391	4510		55	3150	S	ZUNIS	AV	8	5.7	S	VC		
16	095	45S	45S-393	45S-393-45S-391	4510		294	1851	E	31ST	PL	8	7.4	S	VC		
16	095	45S	45S-395	45S-395-45S-394	4360	135	274	3125	S	ZUNIS	AV	8	9.4	S	VC		
16	095	45S	45S-398	45S-398-45S-397	4360	198	300	3147	S	ZUNIS	AV	8	9.7	S	VC		
16	095	45S	45S-399	45S-399-45S-398	4370	259	280	3313	S	ZUNIS	AV	8	5.3	S	VC		
16	095	45S	45S-400	45S-400-45S-399	4360	285	202	2202	E	31ST	ST	8	7.9	S	VC		
16	095	45S	45S-401	45S-401-45S-400	4360	280	295	2258	E	31ST	ST	8	8.4	S	VC		
16	095	45S	45S-402	45S-402-45S-398	4360	192	295	2252	E	31ST	PL	8	9.2	S	VC		
16	095	45S	45S-436	45S-436-45S-435	4360	15	80	2258	E	31ST	PL	8	9.0	S	VC		
16	095	45S	45S-439	45S-439-45S-438	4360	85	186	1820	E	32ND	ST	8	9.3	C	VC		
16	095	45S	45S-440	45S-440-45S-439	4510		210	1805	E	32ND	PL	8	12.8	S	VC		
16	095	45S	45S-455	45S-455-45S-387	4510		190	1839	E	32ND	PL	8	12.0	S	VC		
16	095	45S	45S-456	45S-456-45S-455	4360	5	110	1840	E	32ND	ST	8	7.4	S	VC		
16	095	45S	45S-458	45S-458-45S-457	4360	175	200	2133	E	32ND	PL	8	9.4	S	VC		
16	095	45S	45S-459	45S-459-45S-458	4360	100	265	2140	E	32ND	PL	8	5.9	S	VC		
16	095	45S	45S-463	45S-463-45S-462	4360	135	175	3414	S	ZUNIS	PL	8	5.6	S	VC		
16	095	45S	45S-473	45S-473-45S-472	4360	175	360	3434	S	ZUNIS	AV	8	5.8	A	VC		
16	095	45S	45S-474	45S-474-45S-473	4360	212	134	3325	S	YORKTOWN	AV	8	4.7	S	VC		
16	095	45S	45S-481	45S-481-45S-479	4510		187	1941	E	34TH	ST	8	6.4	S	VC		
16	095	45S	45S-482	45S-482-45S-478	4510		189	3326	S	XANTHUS	AV	8	9.8	S	VC		
16	095	45S	45S-489	45S-489-45S-488	4370	124											
16	095	45S	45S-494	45S-494-45S-492	4360	177											
16	095	45S	45S-495	45S-495-45S-494	4360	172											
16	095	45S	45S-498	45S-498-45S-494	4360	134	144	1941	E	34TH	ST	8	6.1	S	VC		

Legend for Rehabilitation Methods

4360 Point Repair on Mainline - This is for correcting a defect on a mainline sewer where excavation is required. The pipe defect(s) may include broken pipe, dropped joint, offset joint

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REORDER BY NUMBER 0754R

DRAWING NUMBER
45S 96-07
PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 0754R

Sheet No	Atlas Sheet	BasinID	MHID	Pipe_ID	RM	DistFromUSMH	DSMHLLength	MHAddress	MHPreDir	MHStName	MHSfx	PipeSize	PipeDepth	SurfaceMat	PipeMatri	Lamp Hole	Remarks
16	095	45S	45S-499	45S-499-45S-498	4360	129	159	1961	E	34TH	ST	8	6.2	S	VC		
16	095	45S	45S-500	45S-500-45S-498	4370	129	135	1944	E	34TH	ST	8	5.7	A	VC		
16	095	45S	45S-501	45S-501-45S-380	4360	255	315	3140	S	VICTOR	AV	8	11.3	S	VC		
16	095	45S	45S-503	45S-503-45S-502	4510		320	3219	S	UTICA	AV	8	14.8	S	VC		
16	095	45S	45S-504	45S-504-45S-503	4360	130	140	3238	S	VICTOR	AV	8	5.9	S	VC		
16	095	45S	45S-505	45S-505-45S-504	4510		78	3252	S	VICTOR	AV	8	5.8	S	VC	45S-505	
16	095	45S	45S-507	45S-507-45S-506	4510		93	1711	E	33RD	PL	8	9.3	S	VC		
16	095	45S	45S-511	45S-511-45S-510	4510		155	1721	E	33RD	PL	8	4.3	S	VC		
16	095	45S	45S-512	45S-512-45S-511	4360	140	155	1915	E	33RD	PL	8	3.9	S	VC		
16	095	45S	45S-514	45S-514-45S-510	4510		50	1720	E	33RD	PL	8	6.5	A	VC		
16	095	45S	45S-547	45S-547-45S-222	4510		86	3171	S	ROCKFORD	AV	18	12.9	S	VC		CIPP Only
16	095	45S	45S-551	45S-551-45S-550	4360	78	297	3135	S	ROCKFORD	DR	21	11.5	D	CO		
16	095	45S	45S-552	45S-552-45S-551	4360	282	410	3117	S	ROCKFORD	DR	21	15.5	D	CO		
16	095	45S	45S-553	45S-553-45S-552	4360	309	324	3100	E	31ST	ST	21	17.4	S	CO		
16	095	45S	45S-645	45S-645-45S-644	4370	55	105	3257	S	PEORIA	AV	8	4.2	A	VC		
16	095	45S	45S-646	45S-646-45S-645	4510		24	3257	S	PEORIA	AV	8	4.1	S	VC	45S-646	
16	095	45S	45S-647	45S-647-45S-645	4360	90	368	1343	E	33RD	ST	8	3.9	S	VC		
16	095	45S	45S-648	45S-648-45S-643	4370	176	300	1335	E	34TH	ST	8	8.7	S	VC		
16	095	45S	45S-649	45S-649-45S-648	4360	235	245	1407	E	34TH	ST	8	8.3	S	VC		
16	095	45S	45S-651	45S-651-45S-650	4510		71	1421	E	33RD	ST	8	6.2	S	VC		
16	095	45S	45S-652	45S-652-45S-651	4360	56	148	1421	E	33RD	ST	8	7.8	S	VC		
16	095	45S	45S-655	45S-655-45S-649	4510		86	1410	E	33RD	ST	8	8.7	S	VC		
16	095	45S	45S-656	45S-656-45S-655	4360	71	330	1440	E	33RD	ST	8	8.6	S	VC		
16	095	45S	45S-658	45S-658-45S-657	4510		345	1547	E	34TH	ST	8	11.8	S	VC		
16	095	45S	45S-661	45S-661-45S-659	4510		331	3312	S	UTICA	AV	8	11.7	S	VC		
16	095	45S	45S-662	45S-662-45S-661	4510		70	3304	S	UTICA	AV	8	11.7	S	VC	45S-662	
16	095	45S	45S-665	45S-665-45S-664	4510		60	1645	E	35TH	ST	8	8.2	S	VC	45S-665	
16	095	45S	45S-666	45S-666-45S-658	4360	169	179	1611	E	33RD	ST	8	4.8	S	VC		
16	095	45S	45S-675	45S-675-45S-673	4360	115	190	3216	S	TROOST	AV	8	4.7	S	VC		
16	095	45S	45S-677	45S-677-45S-676	4360	179	212	3216	S	TROOST	AV	8	7.4	S	VC		
16	095	45S	45S-684	45S-684-45S-678	4360	11	219	1608	E	32ND	ST	8	11.5	S	VC		
16	095	45S	45S-690	45S-690-45S-689	4360	290	300	1442	E	34TH	ST	8	8.2	S	VC		
16	095	45S	45S-691	45S-691-45S-690	4510		233	1516	E	34TH	ST	8	9.1	S	CO		
16	095	45S	45S-696	45S-696-45S-641	4370	169	300	1335	E	35TH	PL	8	8.0	C	VC		
16	095	45S	45S-702	45S-702-45S-701	4510		98	3511	S	TRENTON	AV	8	6.8	S	VC		
16	095	45S	45S-704	45S-704-45S-703	4360	240	250	3504	S	UTICA	AV	8	7.7	S	VC		
16	095	45S	45S-708	45S-708-45S-707	4360	255	256	1408	E	35TH	PL	8	8.1	S	VC		
16	095	45S	45S-710	45S-710-45S-709	4360	140	150	1446	E	35TH	PL	8	10.6	S	VC		
16	095	45S	45S-711	45S-711-45S-710	4360	135	320	1522	E	35TH	PL	8	9.1	S	VC		
16	095	45S	45S-713	45S-713-45S-712	4360	218	228	3537	S	TRENTON	AV	8	12.1	S	VC		
16	095	45S	45S-718	45S-718-45S-717	4370	121	131	3519	S	TROOST	AV	8	4.3	C	VC		
16	095	45S	45S-786	45S-786-45S-658	4510		98	3313	S	TRENTON	AV	8	8.8	S	CO		
17	096	45S	45S-121	45S-121-45S-120	4510		225	3115	S	BOSTON	CT	8	7.2	S	VC		
17	096	45S	45S-133	45S-133-45S-132	4360	269	285	3148	S	CINCINNATI	AV	8	6.4	S	VC		
17	096	45S	45S-187	45S-187-45S-186	4360	114	330	3128	S	MADISON	AV	18	9.5	A	VC		
17	096	45S	45S-189	45S-189-45S-188	4360	85	302	3103	S	MADISON	AV	8	9.1	D	CO		
17	096	45S	45S-191	45S-191-45S-190	4360	39	258	3164	S	WOODWARD	BV	8	9.1	S	CO		
17	096	45S	45S-192	45S-192-45S-191	4360	243	306	1030	E	32ND	PL	8	8.6	A	CO		
17	096	45S	45S-529	45S-529-45S-528	4370	290	305	3251	S	CINCINNATI	AV	8	8.6	A	VC		
17	096	45S	45S-594	45S-594-45S-593	4360	85	290	124	E	33RD	PL	8	5.4	S	VC		
17	096	45S	45S-596	45S-596-45S-595	4360	273	291	224	E	33RD	ST	8	5.3	S	VC		
17	096	45S	45S-597	45S-597-45S-596	4360	210	220	244	E	33RD	ST	8	5.1	S	VC		
17	096	45S	45S-599	45S-599-45S-598	4360	313	320	116	E	34TH	ST	8	12.5	S	VC		
17	096	45S	45S-601	45S-601-45S-600	4360	304	323	230	E	34TH	ST	8	13.1	S	VC		
17	096	45S	45S-603	45S-603-45S-602	4360	222	344	250	E	33RD	PL	8	8.9	A	VC		
17	096	45S	45S-603	45S-603-45S-602	4360	330	344	250	E	33RD	PL	8	8.9	A	VC		
17	096	45S	45S-604	45S-604-45S-603	4370	114	199	1106	E	33RD	PL	8	9.9	A	VC		
17	096	45S	45S-605	45S-605-45S-604	4370	184	305	1040	E	33RD	PL	8	9.9	A	VC		
17	096	45S	45S-606	45S-606-45S-605	4370	290	305	1114	E	33RD	PL	8	7.5	A	VC		
17	096	45S	45S-607	45S-607-45S-606	4370	104	114	1114	E	33RD	PL	8	7.6	A	VC		
17	096	45S	45S-608	45S-608-45S-747	4510		88	1203	E	33RD	ST	8	7.8	C	VC		
17	096	45S	45S-610	45S-610-45S-607	4370	27	260	1141	E	33RD	PL	8	7.9	A	VC		
17	096	45S	45S-613	45S-613-45S-602	4360	265	275	1026	E	34TH	ST	8	9.5	S	VC		
17	096	45S	45S-614	45S-614-45S-613	4360	260	282	1046	E	34TH	ST	8	7.7	S	VC		
17	096	45S	45S-615	45S-615-45S-614	4360	267	281	1110	E	34TH	ST	8	8.3	S	VC		
17	096	45S	45S-616	45S-616-45S-615	4360	266	284	3402	S	PEORIA	AV	8	7.9	S	VC		
17	096	45S	45S-618	45S-618-45S-616	4370	165	175	3340	S	PEORIA	AV	8	8.4	A	VC		
17	096	45S	45S-619	45S-619-45S-602	4360	155	165	1004	E	34TH	ST	8	13.8	S	VC		
17	096	45S	45S-621	45S-621-45S-620	4360	293	308	1050	E	34TH	ST	8	10.5	S	VC		
17	096	45S	45S-623	45S-623-45S-622	4510		100	3520	S	NORFOLK	AV	8	8.9	A	VC	45S-623	
17	096	45S	45S-624	45S-624-45S-622	4360	235	245	1119	E	35TH	PL	8	8.4	S	VC		
17	096	45S	45S-630	45S-628-45S-620	4510		63	3515	S	MADISON	PL	8	6.0	A	VC		
17	096	45S	45S-629	45S-629-45S-628	4360	120	130	3515	S	MADISON	PL	8	9.5	G	VC	45S-629	
17	096	45S	45S-630	45S-630-45S-628	4510		63	3515	S	MADISON	PL	8	9.6	A	VC		
17	096	45S	45S-634	45S-634-45S-633	4360	260	270	1047	E	36TH	ST	8	10.2	S	VC		
17	096	45S	45S-635	45S-635-45S-634	4360	255	280	1115	E	36TH	ST	8	9.7	S	VC		
17	096	45S	45S-747	45S-747-45S-607	4360	27	181	1203	E	33RD	ST	8	7.6	S	VC		
17	096	45S	45S-749	45S-749-45S-608	4510		116	1202	E	33RD	PL	8	5.2	C	VC		
17	096	45S	45S-752	45S-752-45S-751	4510		21	1214	E	33RD	ST	8	4.4	C	VC	45S-752	
17	096	45S	45S-765	45S-765-45S-764	4510		65	3133	S	BOSTON	CT	8	6.5	S	VC		

Legend for Rehabilitation Methods

4360 Point Repair on Mainline - This is for correcting a defect on a mainline sewer where excavation is required. The pipe defect(s) may include broken pipe, dropped joint, offset joint, of a defective service line connection that has caused an offset in pipe alignment. Repair consists of excavating down to the pipe replacing one or more sections (up to 15 linear feet) of pipe. Included in this RM is the proper disposal of excavated waste material such as broken pipe contaminated by the sewage. The cost basis for this rehabilitation method will be a price per point repair for the pipe diameter involved.

4370 Point Repair on Mainline Under Pavement - This is for correcting a defect on a mainline sewer and is exactly the same as RM 4360 above except that pavement must be removed and replaced. The same conditions apply otherwise. The cost basis for this rehabilitation method will be a price per point repair for the pipe diameter involved.

4430 Replace Entire Mainline - This is for correcting numerous problems on a mainline by replacing the entire line segment. The cost basis for this rehabilitation method will be a price per foot and will vary depending upon depth.

4440 Replace Entire Mainline Under Pavement - This method is identical to RM 4430 above except that pavement must be removed and replaced. The same conditions apply otherwise. The cost basis for this rehabilitation method will be a price per foot and will vary depending upon depth.

DRAWING NUMBER

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Sheet No.	Atlas Sheet	BasinID	MHID	MHAddress	MHPreDir	MHStName	MHSfx	MHDepth	MHDiameter	SurfaceMaterial	MHMTWall	Total Of Defect Code	1000	1020	1032	1045	1050	1060	1210
3	003	44S	44S-404	1792	E	14TH	PL	8.12	48	A	B	1				1			
3	003	44S	44S-412	1916	E	14TH	ST	8.34	48	S	B	1				1			
3	003	44S	44S-411	1940	E	14TH	ST	13.26	48	C	B	1				1			
3	003	44S	44S-405	2010	E	14TH	PL	8.64	48	A	B	2				1	1		
4	012	62S	62S-318	1313	S	BIRMINGHAM	AV	10.56	48	S	B	2				1	1		
4	012	62S	62S-324	1316	S	BIRMINGHAM	AV	9.18	48	S	B	1				1			
4	012	62S	62S-317	1328	S	BIRMINGHAM	AV	9.74	48	C	B	2				1	1		
4	012	62S	62S-377	1424	S	DELAWARE	PL	4.83	48	A	B	1				1			
4	012	62S	62S-363	1426	S	COLUMBIA	AV	9.96	48	C	B	1				1			
4	012	62S	62S-376	1434	S	DELAWARE	PL	4.40	48	A	B	2				1	1		
4	012	62S	62S-362	2627	E	15TH	ST	9.62	48	S	B	2				1	1		
4	012	62S	62S-375	2800	E	15TH	ST	4.36	48	A	B	1				1			
5	013	62S	62S-461	1532	S	DELAWARE	PL	10.40	48	S	B	2				1	1		
5	013	62S	62S-253	1903	S	COLUMBIA	AV	4.84	49	S	B	2				1	1		
5	013	62S	62S-252	1923	S	COLUMBIA	AV	4.26	48	S	B	1				1			
5	013	62S	62S-146	2021	S	LEWIS	AV	3.75	30	A	B	1						1	
5	013	62S	62S-147	2442	E	21ST	ST	3.56	30	A	B	1						1	
5	013	62S	62S-987	2509	E	21ST	ST	3.80	30	A	B	1						1	
5	013	62S	62S-258	2519	E	19TH	ST	10.12	48	S	B	1							
5	013	62S	62S-259	2547	E	19TH	ST	9.18	48	S	B	1				1			
5	013	62S	62S-260	2612	E	18TH	ST	6.84	48	S	B	1				1			
5	013	62S	62S-261	2636	E	18TH	ST	8.38	48	S	B	1				1			
6	014	44S	44S-363	1530	S	YORKTOWN	AV	8.48	48	S	C	1				1			
6	014	44S	44S-288	1538	E	19TH	ST	4.10	48	A	B	1				1			
6	014	44S	44S-364	1553	S	YORKTOWN	AV	6.34	48	C	B	1				1			
6	014	44S	44S-436	1607	E	17TH	ST	9.80	48	A	B	2				1	1		
6	014	44S	44S-437	1607	S	TRENTON	AV	8.18	48	A	B	1				1			
6	014	44S	44S-340	1704	S	YORKTOWN	AV	9.98	48	C	B	2				1	1		
6	014	44S	44S-317	1710	E	17TH	ST	14.56	48	A	B	2				1	1		
6	014	44S	44S-318	1717	E	17TH	ST	11.12	48	A	B	2				1	1		
6	014	44S	44S-375	1815	E	16TH	ST	12.52	48	S	B	1				1			
6	014	44S	44S-324	1831	S	17TH	ST	17.90	48	C	B	2		1	1				
6	014	44S	44S-339	1876	E	17TH	ST	5.00	48	A	B	2		1		1			
6	014	44S	44S-289	1911	S	ST LOUIS	AV	7.34	48	S	B	2				1	1		
7	015	44S	44S-153	1115	E	20TH	ST	12.80	48	S	B	2				1		1	
7	015	44S	44S-150	1122	E	20TH	ST	12.94	48	S	B	3			1	1	1		
7	015	44S	44S-152	1214	E	20TH	ST	Unknown	Unknown	S	Unknown	1	1						
8	031	62S	62S-134	3303	E	22ND	ST	3.26	48	C	B	1				1			
8	031	62S	62S-136	3316	E	21ST	ST	4.90	48	A	B	1				1			
8	031	62S	62S-135	3316	E	21ST	ST	9.33	48	S	B	2				1		1	
9	032	62S	62S-058	2132	S	DELAWARE	CT	9.70	48	S	C	1				1			
9	032	62S	62S-059	2152	S	DELAWARE	AV	9.60	48	S	C	1				1			
9	032	62S	62S-092	2214	S	GARY	AV	7.44	48	S	C	2				1	1		
9	032	62S	62S-711	2607	E	25TH	ST	4.86	48	A	C	1				1			
9	032	62S	62S-678	2860	E	22ND	ST	6.38	48	A	B	2				1		1	
10	033	44S	44S-259	1562	E	22ND	ST	10.30	48	A	B	2				1	1		
10	033	62S	62S-735	2102	E	25TH	ST	6.48	48	C	C	1				1			
10	033	62S	62S-758	2123	E	24TH	ST	Unknown	Unknown	Unknown	Unknown	1	1						
10	033	62S	62S-736	2125	E	25TH	PL	7.36	48	D	C	2				1	1		
10	033	62S	62S-759	2203	E	24TH	ST	8.16	48	C	C	2				1	1		
10	033	62S	62S-738	2230	E	25TH	ST	11.54	48	C	C	1	1						
10	033	62S	62S-740	2249	E	25TH	PL	10.86	48	D	B	2				1		1	
10	033	44S	44S-252	2265	S	ST LOUIS	AV	5.88	48	S	B	2				1	1		
10	033	44S	44S-255	2267	S	TROOST	AV	4.67	48	S	B	2				1	1		
10	033	62S	62S-692	2520	S	YORKTOWN	AV	7.53	48	S	B	2				1	1		
10	033	45S	45S-268	2605	S	ST LOUIS	AV	11.17	48	S	B	1				1			
10	033	45S	45S-304	2622	S	ROCKFORD	AV	7.64	48	S	B	1				1			
10	033	45S	45S-263	2630	S	TROOST	AV	8.78	48	S	B	2				1		1	
10	033	45S	45S-267	2636	S	TRENTON	AV	9.38	48	S	B	1				1			
11	034	44S	44S-133	1018	E	SUNSET	DR	9.88	48	A	B	1			1				
11	034	44S	44S-132	2145	S	NORFOLK	AV	8.34	48	A	B	2				1	1		
11	034	44S	44S-058	2641	S	BOSTON	PL	6.00	48	S	B	1				1			
12	059	45S	45S-768	2511	E	31ST	ST	14.10	48	S	B	2				1	1		
13	060	45S	45S-238	1505	E	29TH	ST	15.12	48	C	C	1				1			
13	060	45S	45S-310	1550	E	27TH	ST	5.72	48	S	C	1				1			
13	060	45S	45S-558	1550	E	29TH	ST	10.10	48	S	C	1				1			
13	060	45S	45S-237	1550	E	29TH	ST	13.44	48	S	C	1				1			
13	060	45S	45S-337	1626	E	29TH	ST	5.56	48	S	C	2				1	1		
13	060	45S	45S-679	1701	S	VICTOR	AV	8.04	48	C	B	2				1	1		
13	060	62S	62S-793	2201	E	27TH	ST	7.24	48	S	B	1				1			
13	060	62S	62S-776	2202	E	26TH	PL	10.84	48	D	B	1				1			
13	060	62S	62S-797	2204	E	27TH	ST	4.92	48	C	B	2		1		1			
13	060	62S	62S-852	2216	E	29TH	ST	5.78	48	S	B	2				1	1		
13	060	62S	62S-855	2216	E	29TH	ST	6.65	48	S	B	1				1			
13	060	62S	62S-854	2216	E	29TH	ST	7.08	48	S	B	1				1			
13	060	62S	62S-777	2224	E	26TH	PL	7.78	48	S	B	2				1	1		
13	060	62S	62S-768	2620	S	YORKTOWN	AV	4.72	48	S	B	1				1			

Legend for rehabilitation methods

1000. Locate and Expose Manhole - This method requires finding or exposing the manhole for inspection by the ENGINEER. The approximate location, based upon the best available record data, is indicated on the drawings. The cost basis for this rehabilitation method will be a price per each.

1020. Realign and grout casting. - The casting has been loosened from the chimney or cone. The casting should be positioned properly over the chimney or cone and grouted back in place, sealing the connection to prevent leaks. The cost basis for this rehabilitation method will be a price per each.

1022. Replace Casting (Frame and Lid) - A new frame and lid should be installed to replace a broken or missing frame and/or lid. This means to remove the existing casting, (if one exists) and install a new one. All undamaged parts are to be turned over to the City of Tulsa. The cost basis for this rehabilitation method will be a price per each.

1030. Raise Casting to or Above Grade - This is required when a manhole is below grade, especially if it is subject to ponding or inundation. The casting should be raised to the height that would prevent it from being under significant ponding whenever possible. The work will consist of detaching the casting from the existing chimney or cone; constructing a new or additional chimney section; resetting the casting; and grouting everything in place. The cost basis for this rehabilitation method will be a price per each.

1032. Raise Casting to or Above Grade and Install a Solid Lid - This is required when a manhole is below grade and the lid is vented, especially if it is subject to ponding or inundation. The casting should be raised to the height that would prevent it from being under significant ponding whenever possible and a solid lid installed, which may require replacement of the frame and lid. The work will consist of detaching the casting from the existing chimney or cone; constructing a new or additional chimney section; resetting or replacing the casting; and, grouting everything in place. The cost basis for this rehabilitation method will be a price per each.

1046. Clean Manhole, Repair Steps as Needed & Coat Area Around Steps - This is required due to missing or broken step(s), and/or where they are embedded into the manhole wall. Rehabilitation will be similar to RM1050 below except that it applies only to the step(s) and the immediate area around the step(s). The cost basis for this rehabilitation method will be a price per step.

1050. Stop I/I, Clean Manhole, Repair as Needed & Coat - This is required when leaks are evident in the manhole; and, usually has missing mortar or brick, and/or may have severe deterioration of the manhole or a significant component of the manhole. Prior to repairs the manhole should be cleaned using a high pressure washer or manually washed to remove grease or dirt that would prevent the repair materials from adhering to the interior surface of the manhole. Repairs may consist of replacing bricks, patching concrete with a patch mix or grout and stopping leaks by using packing materials, chemical grout or applying exterior waterproofing compounds. After repairs are made, the entire interior surface should be coated with special purpose waterproofing materials that are resistant to chemical degradation common to sanitary sewers. The cost basis for this rehabilitation method will be a price per vertical foot.

1052. Stop I/I, Clean Manhole, Repair Manhole Bottom & Coat to 1' Above Pipe Crown - This is required when leaks are evident at the Bench, Trough or Pipe Seal; and, there may be some deterioration in that part of the manhole. Rehabilitation will be similar to RM1050 above except that it applies only to the Bench, Trough and Pipe Seal. The cost basis for this rehabilitation method will be a price per each.

1060. Remove Roots, Clean Manhole, Repair as Needed & Coat - This is required when roots are evident in the manhole; usually has missing mortar or brick, and/or may have severe deterioration of the manhole or a significant component of the manhole; and, usually leaks are evident in the manhole. Rehabilitation will be similar to RM 1050 above except that the roots should be removed and a root inhibitor applied before the other repairs are made. The cost basis for this rehabilitation method will be a price per vertical foot.

1210. Replace Manhole - This is recommended for manholes that are undersized or have deteriorated to the degree that total replacement is required. The existing manhole should be completely removed and replaced with a new manhole, frame and cover. The cost basis for this rehabilitation method will be a price per manhole for the first six (6) feet of depth plus an additional price per vertical foot for depth in excess of six (6) feet.

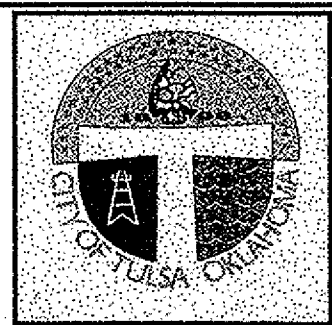
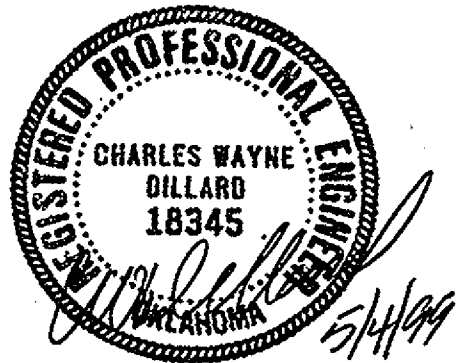
Legend for Manhole Materials

Surface- Type of material at Manhole Surface

A - Asphalt
C - Concrete
D - Dirt
O - Other
S - Sod

MHMTWall - Material of manhole construction

B - Brick
C - Concrete



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Fax: 918 712-9554

CONTRACT NO. 2 MANHOLE REHABILITATION & REPLACEMENT									
TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWERS IMPROVEMENTS TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NUMBER : ES 96-07									
Drawn by :	ERS	12/02/1998	File Name	Comp_Contract1_LF	APPROVED:				
Designed by:	VSM	05/09/1999							
Sect. Wngr.	RJS	5/99							

Sheet No.	Atlas Sheet	BasinID	MHID	MHAddress	MHPreDir	MHSTName	MHSfx	MHDepth	MHDiameter	SurfaceMaterial	MHMTWall	Total Of Defect Code	1000	1020	1032	1045	1050	1060	1210
13	060	45S	45S-580	2701	S	VICTOR	AV	6.55	48	S	B	1				1			
13	060	45S	45S-577	2704	S	VICTOR	AV	5.88	48	S	B	1				1			
13	060	45S	45S-578	2704	S	VICTOR	AV	8.54	48	S	B	2				1		1	
13	060	45S	45S-307	2716	S	ROCKFORD	AV	12.28	48	S	B	1				1			
13	060	45S	45S-244	2727	S	ROCKFORD	AV	10.24	48	S	C	1				1			
16	095	45S	45S-691	1516	E	34TH	ST	9.08	48	S	B	2				1		1	
16	095	45S	45S-510	1715	E	33RD	PL	7.78	48	S	B	2				1	1		
16	095	45S	45S-387	1815	E	32ND	ST	8.80	48	S	B	2				1		1	
16	095	45S	45S-385	3106	S	ZUNIS	AV	6.06	48	S	B	2				1	1		
16	095	45S	45S-224	3171	S	ROCKFORD	AV	7.02	48	S	B	1				1			
16	095	45S	45S-223	3171	S	ROCKFORD	AV	17.98	48	S	B	3		1		1		1	
16	095	45S	45S-502	3222	S	VICTOR	AV	12.29	48	S	B	2				1	1		
17	096	45S	45S-209	1257	E	32ND	ST	17.92	48	C	C	1				1			
Totals													3	4	3	82	29	9	3

Legend for rehabilitation methods

Legend for rehabilitation methods

- 1000. Locate and Expose Manhole** - This method requires finding or exposing the manhole for inspection by the ENGINEER. The approximate location, based upon the best available record data, is indicated on the drawings. The cost basis for this rehabilitation method will be a price per each.
- 1020. Realign and grout casting** - The casting has been loosened from the chimney or cone. The casting should be positioned properly over the chimney or cone and grouted back in place, sealing the connection to prevent leaks. The cost basis for this rehabilitation method will be a price per each.
- 1022. Replace Casting (Frame and Lid)** - A new frame and lid should be installed to replace a broken or missing frame and/or lid. This means to remove the existing casting, (if one exists) and install a new one. All undamaged parts are to be turned over to the City of Tulsa. The cost basis for this rehabilitation method will be a price per each.
- 1030. Raise Casting to or Above Grade** - This is required when a manhole is below grade, especially if it is subject to ponding or inundation. The casting should be raised to the height that would prevent it from being under significant ponding whenever possible. The work will consist of detaching the casting from the existing chimney or cone; constructing a new or additional chimney section; resetting the casting; and grouting everything in place. The cost basis for this rehabilitation method will be a price per each.
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- 1045. Clean Manhole, Repair Steps as Needed & Coat Area Around Steps** - This is required due to missing or broken step(s), and/or where they are embedded into the manhole wall. Rehabilitation will be similar to RM1050 below except that it applies only to the step(s) and the immediate area around the step(s). The cost basis for this rehabilitation method will be a price per step.
- 1050. Stop I/I, Clean Manhole, Repair as Needed & Coat** - This is required when leaks are evident in the manhole; and, usually has missing mortar or brick, and/or may have severe deterioration of the manhole or a significant component of the manhole. Prior to repairs the manhole should be cleaned using a high pressure washer or manually washed to remove grease or dirt that would prevent the repair materials from adhering to the interior surface of the manhole. Repairs may consist of replacing bricks, patching concrete with a patch mix or grout and stopping leaks by using packing materials, chemical grout or applying exterior waterproofing compounds. After repairs are made, the entire interior surface should be coated with special purpose waterproofing materials that are resistant to chemical degradation common to sanitary sewers. The cost basis for this rehabilitation method will be a price per vertical foot.
- 1052. Stop I/I, Clean Manhole, Repair Manhole Bottom & Coat to 1' Above Pipe Crown** - This is required when leaks are evident at the Bench, Trough or Pipe Seal; and, there may be some deterioration in that part of the manhole. Rehabilitation will be similar to RM1050 above except that it applies only to the Bench, Trough and Pipe Seal. The cost basis for this rehabilitation method will be a price per each.
- 1060. Remove Roots, Clean Manhole, Repair as Needed & Coat** - This is required when roots are evident in the manhole; usually has missing mortar or brick, and/or may have severe deterioration of the manhole or a significant component of the manhole; and, usually leaks are evident in the manhole. Rehabilitation will be similar to RM 1050 above except that the roots should be removed and a root inhibitor applied before the other repairs are made. The cost basis for this rehabilitation method will be a price per vertical foot.
- 1210. Replace Manhole** - This is recommended for manholes that are undersized or have deteriorated to the degree that total replacement is required. The existing manhole should be completely removed and replaced with a new manhole, frame and cover. The cost basis for this rehabilitation method will be a price per manhole for the first six (6) feet of depth plus an additional price per vertical foot for depth in excess of six (6) feet.

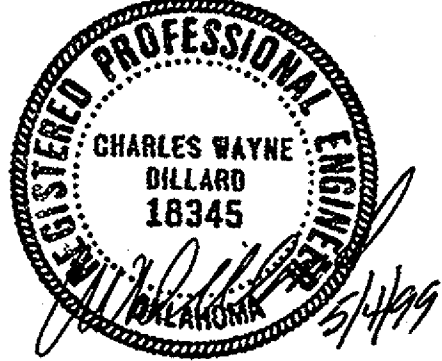
Legend for Manhole Materials

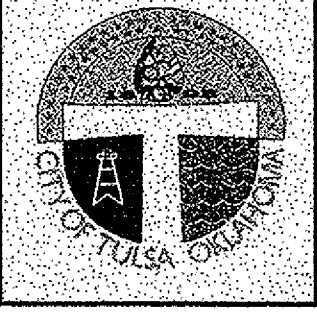

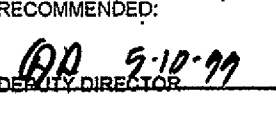
Surface- Type of material at Manhole Surface

- A - Asphalt
- C - Concrete
- D - Dirt
- O - Other
- S - Sod

MHMTWall - Material of manhole construction

- B - Brick
- C - Concrete



 Burns & McDonnell	CONTRACT NO. 2 MANHOLE REHABILITATION & REPLACEMENT							
	TULSA SOUTHSIDE PLANT INFLUENT CROW CREEK BASIN REHABILITATION SANITARY SEWERS IMPROVEMENTS TULSA METROPOLITAN UTILITY AUTHORITY PROJECT NUMBER : ES 96-07							
	Drawn by :	ERS	12/02/1998	File Name	Comp_Contract1_LF	APPROVED:  PUBLIC WORKS DIRECTOR		
	Designed by:	VSM	05/09/1998					
	Sect. Mngr.	KDS	5/14/99					
Proj. Mngr.	SW	5/14/99						
Plans and Estimates Prepared by Burns & McDonnell					RECOMMENDED:  PUBLIC WORKS DIRECTOR			
REVISION		BY	DATE	REVISION		BY	DATE	DATE
SHEET 33 OF 33 SHEETS								