

TIP PROJECT: B-4214

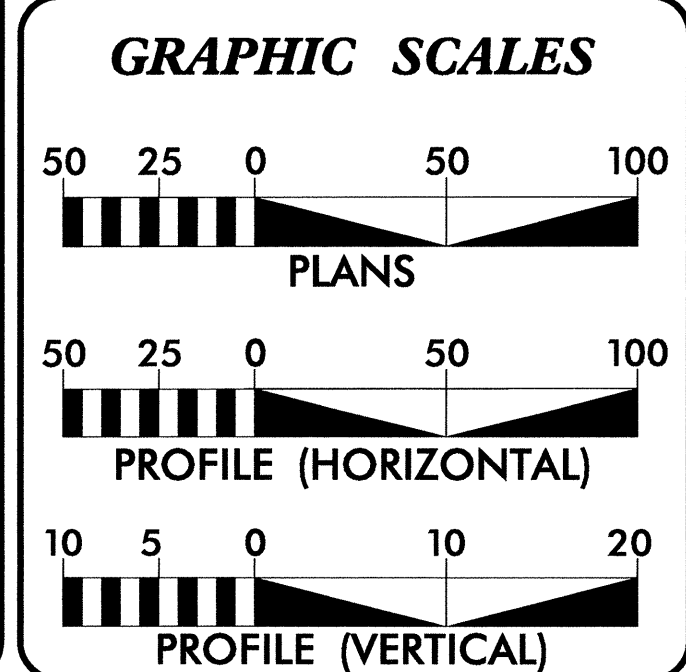
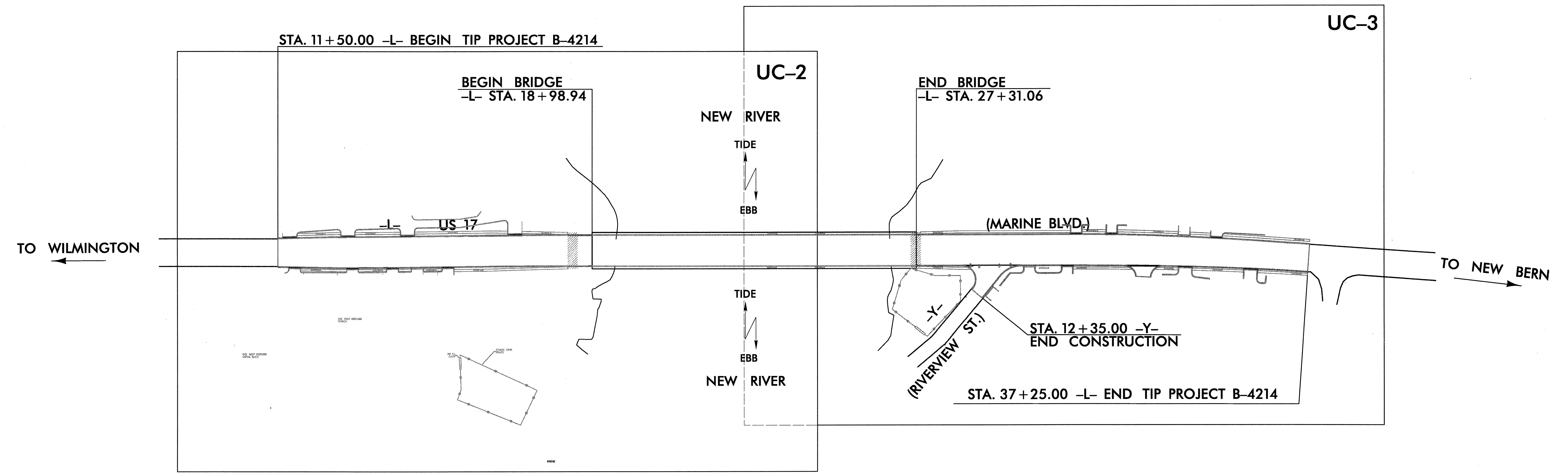
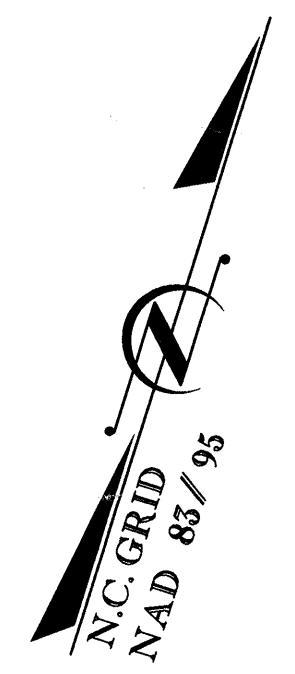
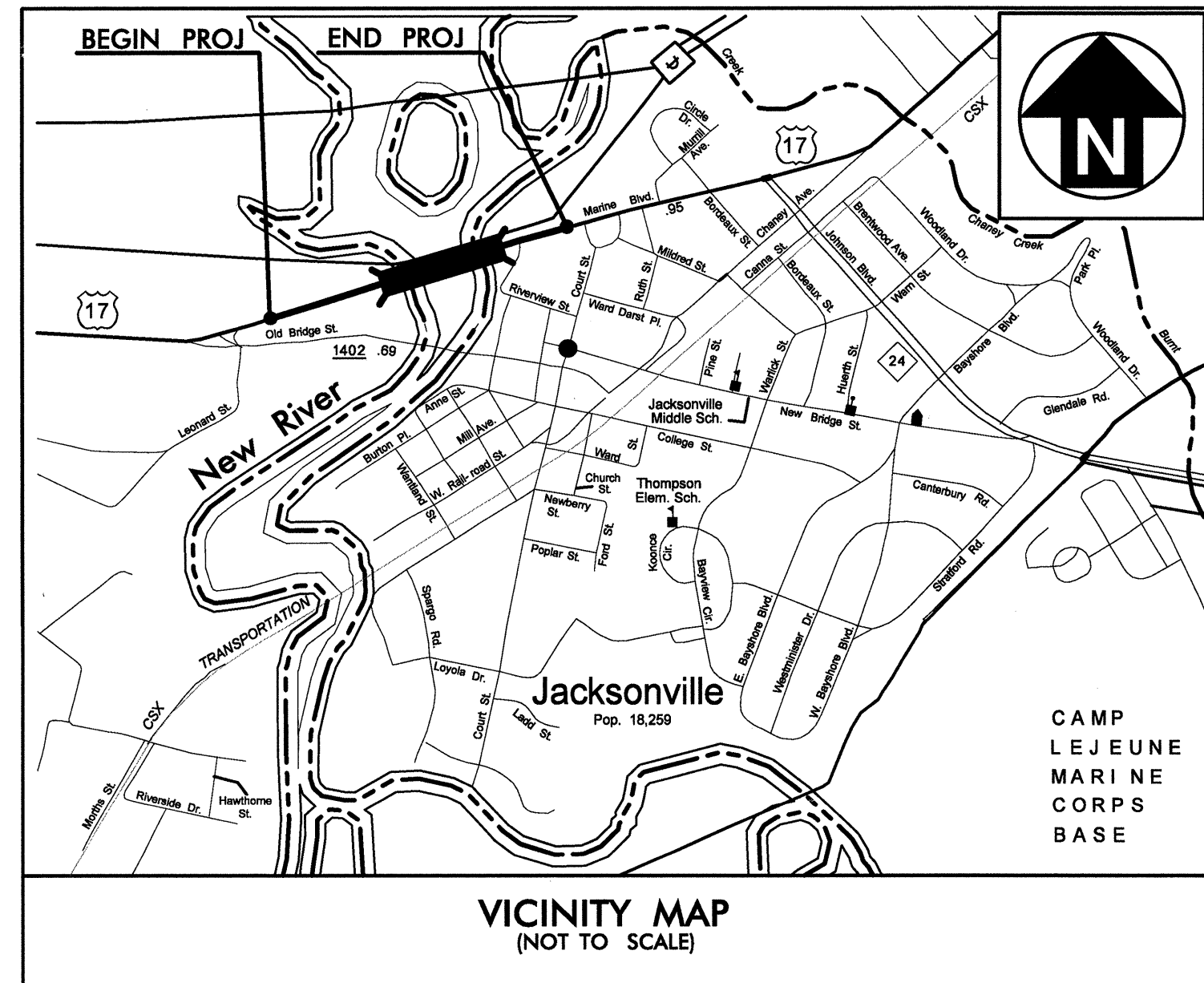
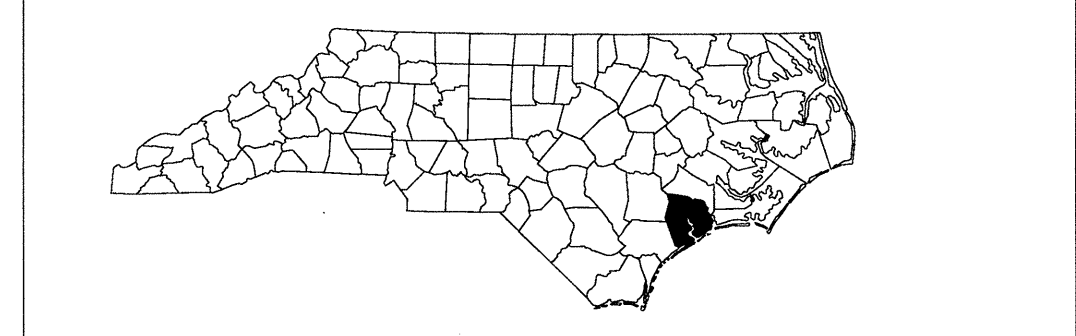
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ONSLOW COUNTY

**LOCATION: BRIDGE NO. 24 OVER NEW RIVER
AND APPROACHES ON US 17 BUS. (MARINE BLVD.)**

TYPE OF WORK: WATER AND SEWER RELOCATION

T.I.P. NO.	SHEET NO.
B-4214	UC-1



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 thru UC-3	UTILITY CONSTRUCTION PLAN SHEET(S)
UC-4	PROFILE SHEET(S)
UC-5	DETAIL SHEET(S)

WATER AND SEWER OWNERS ON PROJECT

(1) CITY OF JACKSONVILLE (WATER AND SEWER)

EarthTech
A Tyco International Ltd. Company
701 Corporate Center Drive, Suite 475
Raleigh, NC 27607
(919) 854-6200 - (919) 854-6259(FAX)

[Professional Engineer Seal]
SEAL
023965
LARRY W. MITCHELL
ENGINEER
12-4-08

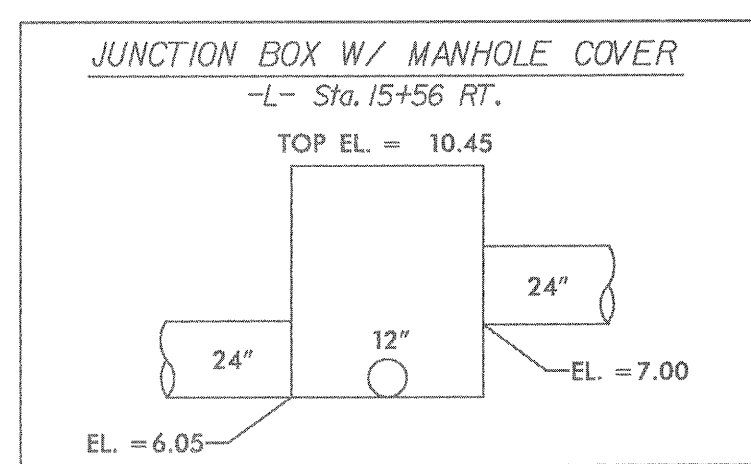
FOR:
DIVISION OF HIGHWAYS
PROJECT SERVICES
UTILITY SECTION

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 250-4128
FAX (919) 250-4119

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Carl Barclay, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Earth Tech, Inc. UTILITIES PROJECT DESIGNER

ALL WATER LINES AND SEWER LINES OWNED BY THE CITY OF JACKSONVILLE

UTILITY CONSTRUCTION



NOTE: PROVIDE 4" CIRCULAR DECK DRAINS AT 12' O.C. ACROSS THE ENTIRE BRIDGE ON BOTH THE LT & RT SIDES. USE 12" U.V. PVC TRUNK LINES AS COLLECTOR PIPES.

NOTE: EXISTING PAVEMENT AREAS IN TCE TO BE RESTORED AS GOOD OR BETTER AS EXISTING CONDITIONS.

PI Sta 13+75.00
 $\Delta = 0' 42' 58.2" (LT)$
 $D = 0' 42' 58.3"$
 $L = 99.99'$
 $T = 50.00'$
 $R = 8,000.00'$
 $SE = 025$
 $V = 50 \text{ mph}$

PI Sta 17+34.99
 $\Delta = 0' 42' 58.3" (RT)$
 $D = 0' 42' 58.3"$
 $L = 100.00'$
 $T = 50.00'$
 $R = 8,000.00'$
 $SE = 025$
 $V = 50 \text{ mph}$

PROP. 415' - 8" WATER LINE
 1 - 8" VALVE (LINE WL 1)

PROP. 1 - RELOCATE FIRE HYDRANT

PROP. 1 - RECONNECT WATER METER

PROP. 2 - 11.25 DEGREE BENDS

PROP. 1 - REMOVE UTILITY MANHOLE

PROP. 415' - ABANDON 8" UTILITY PIPE (PVC WATER)
 47.50' LT. OF -L- STA. 15+74.91

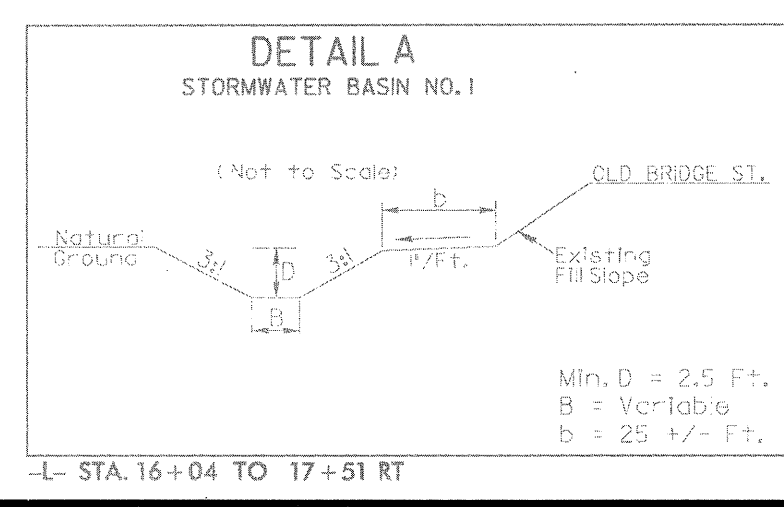
PROP. 1 - 4' DIA. UTILITY MANHOLE A2 STA. 3+53.95, LINE A

PROP. 353.95' - 10" SANITARY GRAVITY SEWER (LINE A)

PROP. 1 - REMOVE UTILITY MANHOLE

PROP. 1 - 4' DIA. UTILITY MANHOLE A1 STA. 0+00.00, LINE A
 42.20' LT. OF -L- STA. 12+20.43

PROP. 360' - ABANDON 8" UTILITY PIPE (TC SEWER)



MATCH LINE -L- STA. 24+50.00 SEE SHEET UC-3

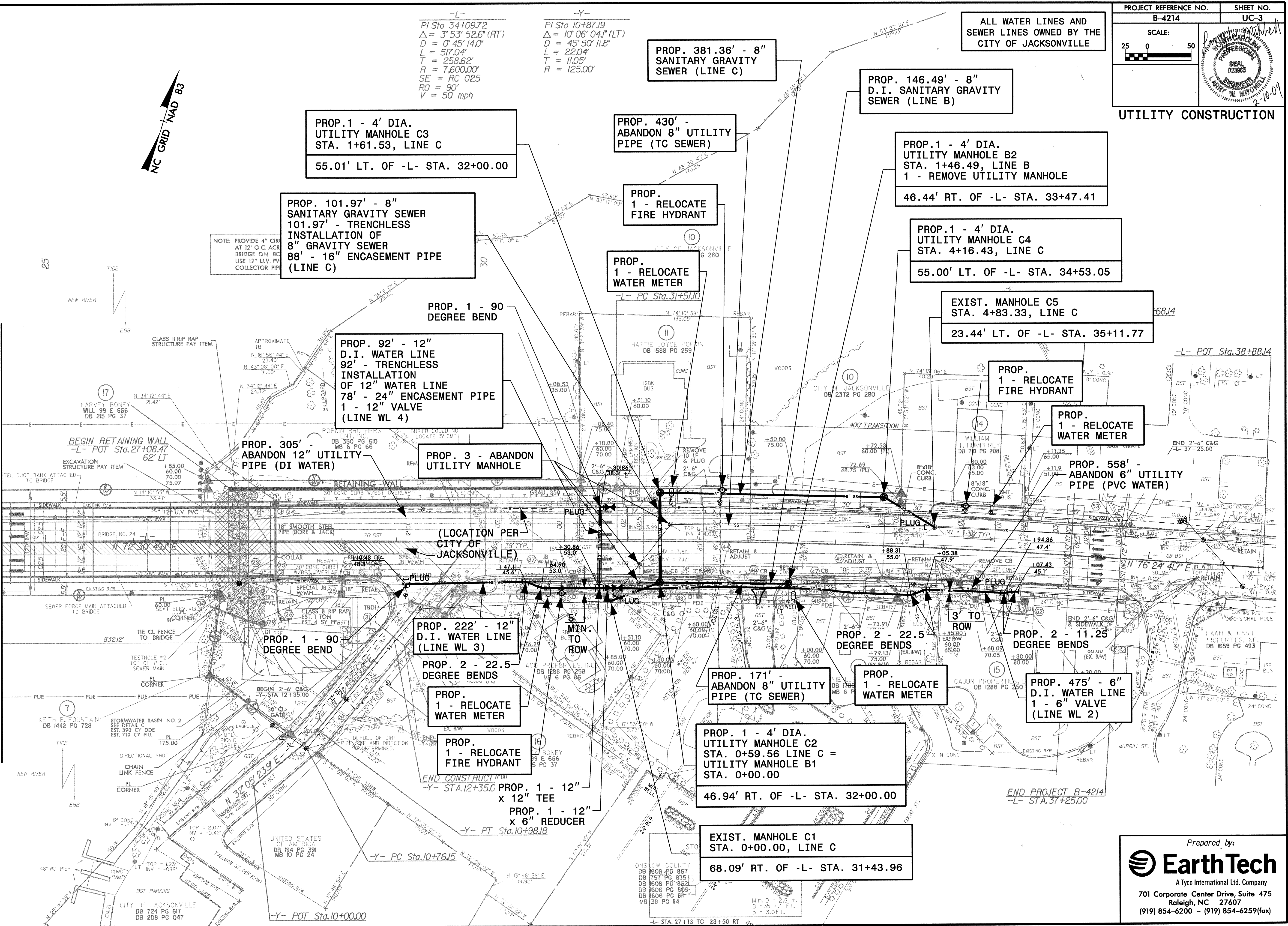
UTILITY CONSTRUCTION

-L-
PI Sta 34+09.72
Δ = 3° 53' 52.6" (RT)
D = 0' 45' 14.0"
L = 517.04'
T = 258.62'
R = 7,600.00'
SE = RC 025
RO = 90°
V = 50 mph

-Y-
PI Sta 10+87.19
Δ = 10° 06' 04.1" (LT)
D = 45° 50' 11.8"
L = 22.04'
T = 11.05'
R = 125.00'

ALL WATER LINES AND SEWER LINES OWNED BY THE CITY OF JACKSONVILLE

MATCH LINE -L- STA. 24+50.00 SEE SHEET UC-2



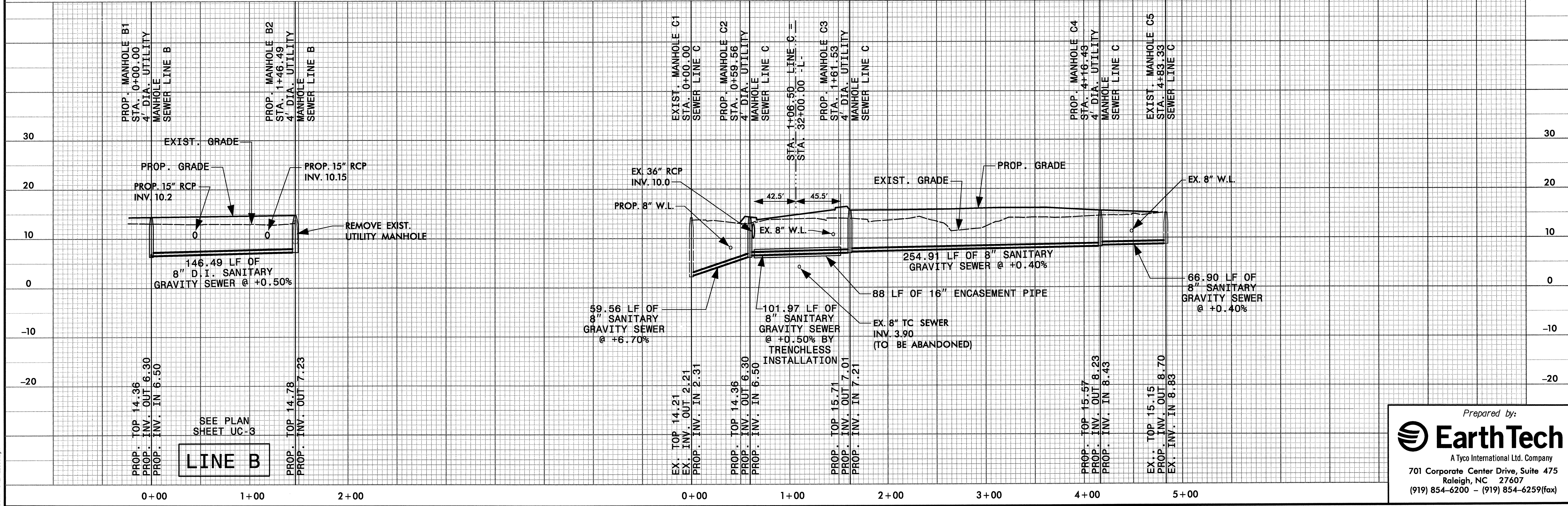
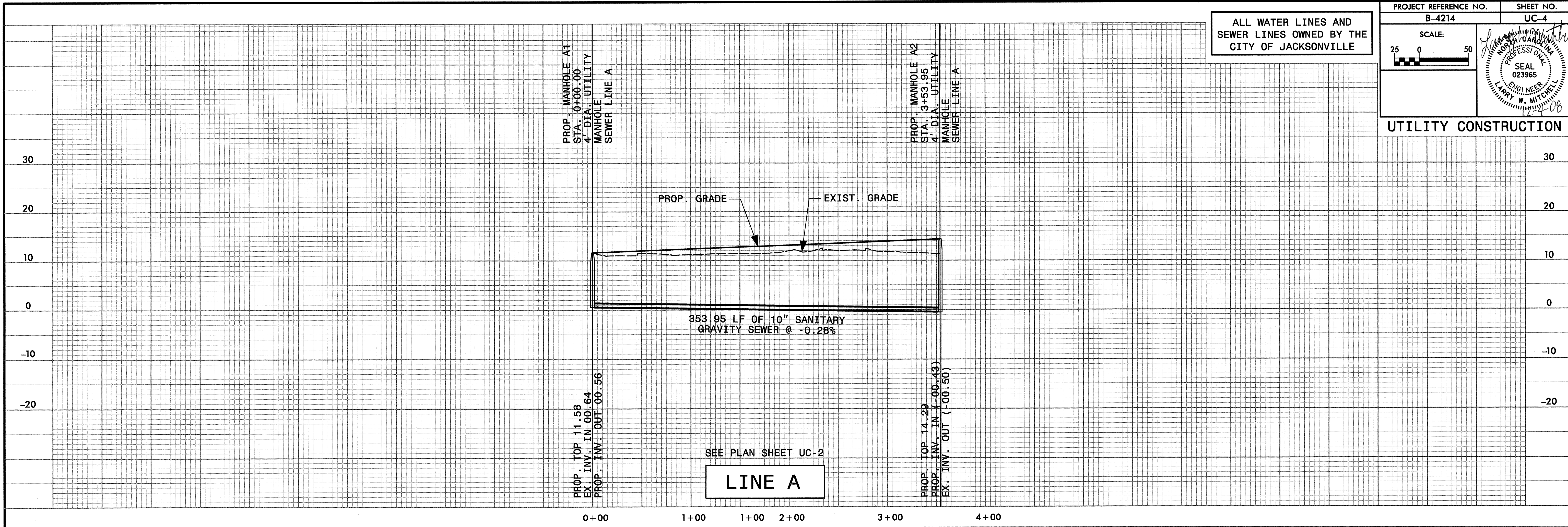
NOTE: PROVIDE 4" CIR AT 12" O.C. ACR BRIDGE ON BC USE 12" U.V. PV COLLECTOR PIPE

DATE: 2/10/2009
DWN: BACH, JMS/509

ALL WATER LINES AND SEWER LINES OWNED BY THE CITY OF JACKSONVILLE

PROJECT REFERENCE NO. B-4214	SHEET NO. UC-4
SCALE: 25 0 50	

UTILITY CONSTRUCTION

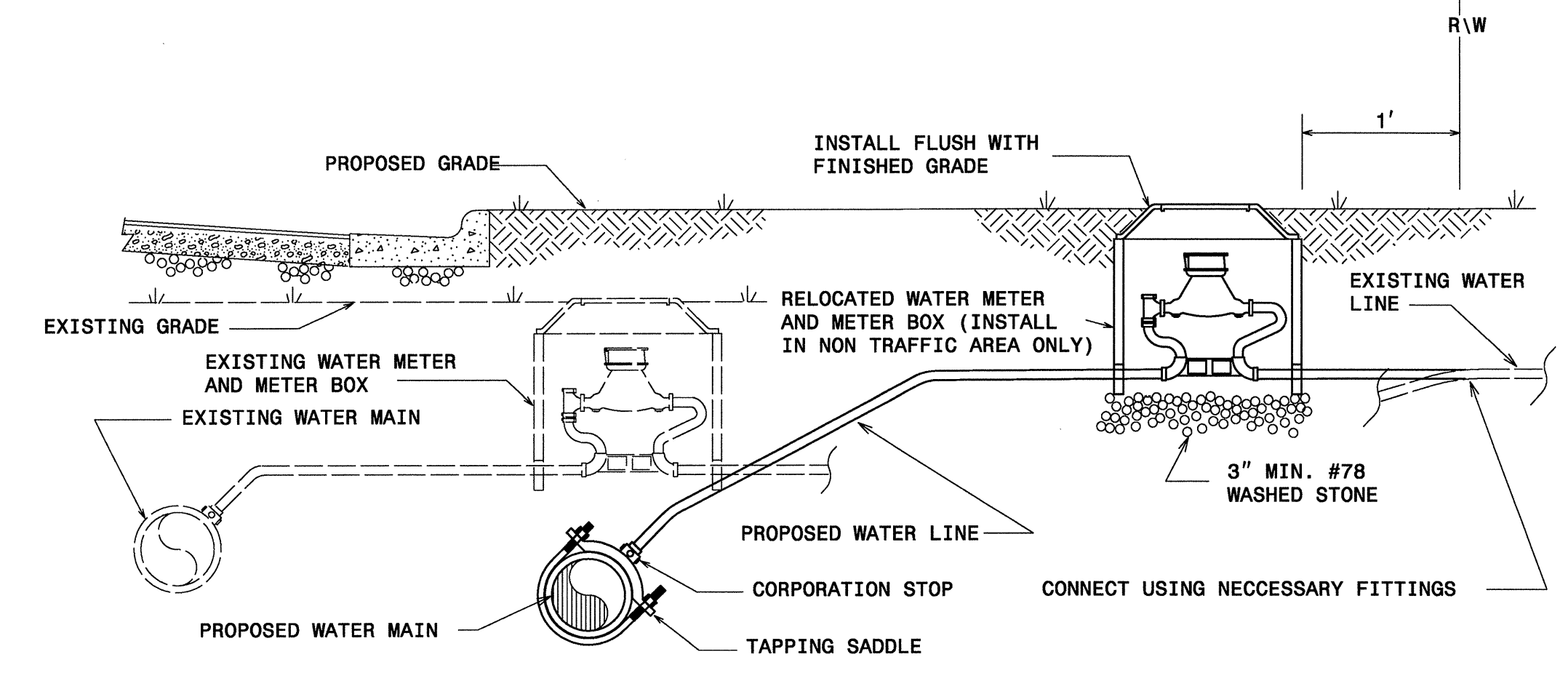
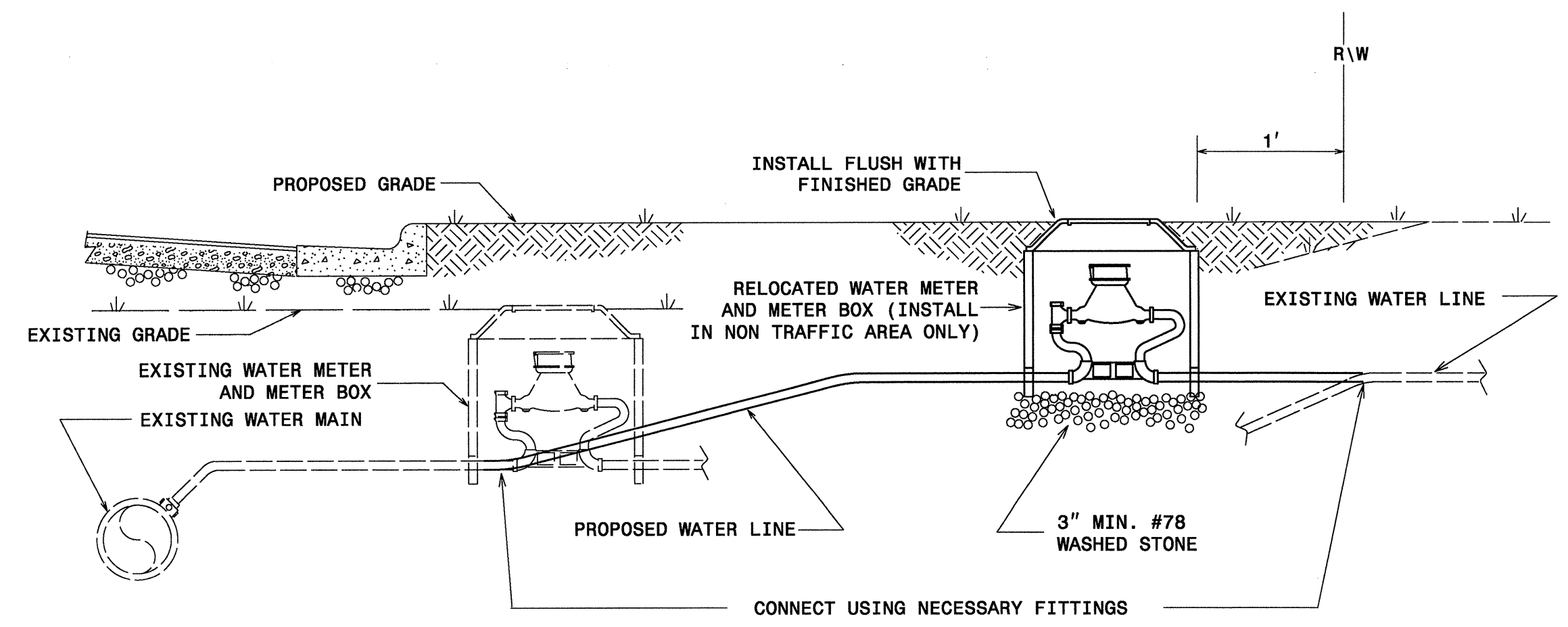


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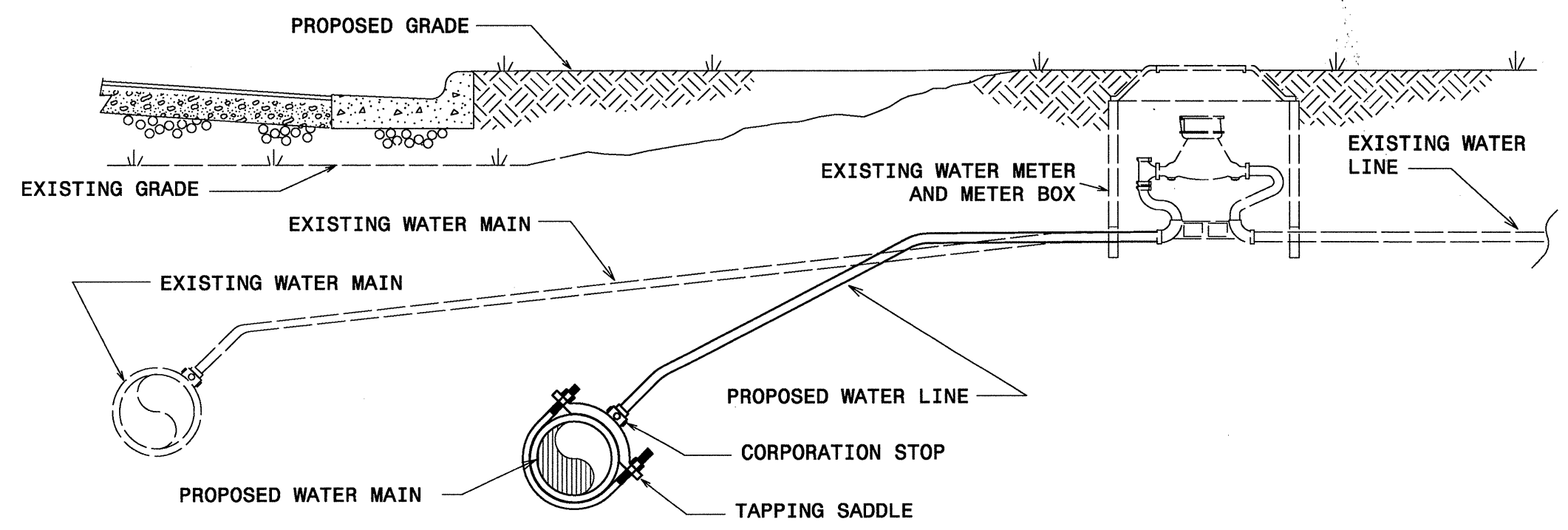
DATE: 12/1/2008
DWG: B4214_UC04.dwg

UTILITY CONSTRUCTION



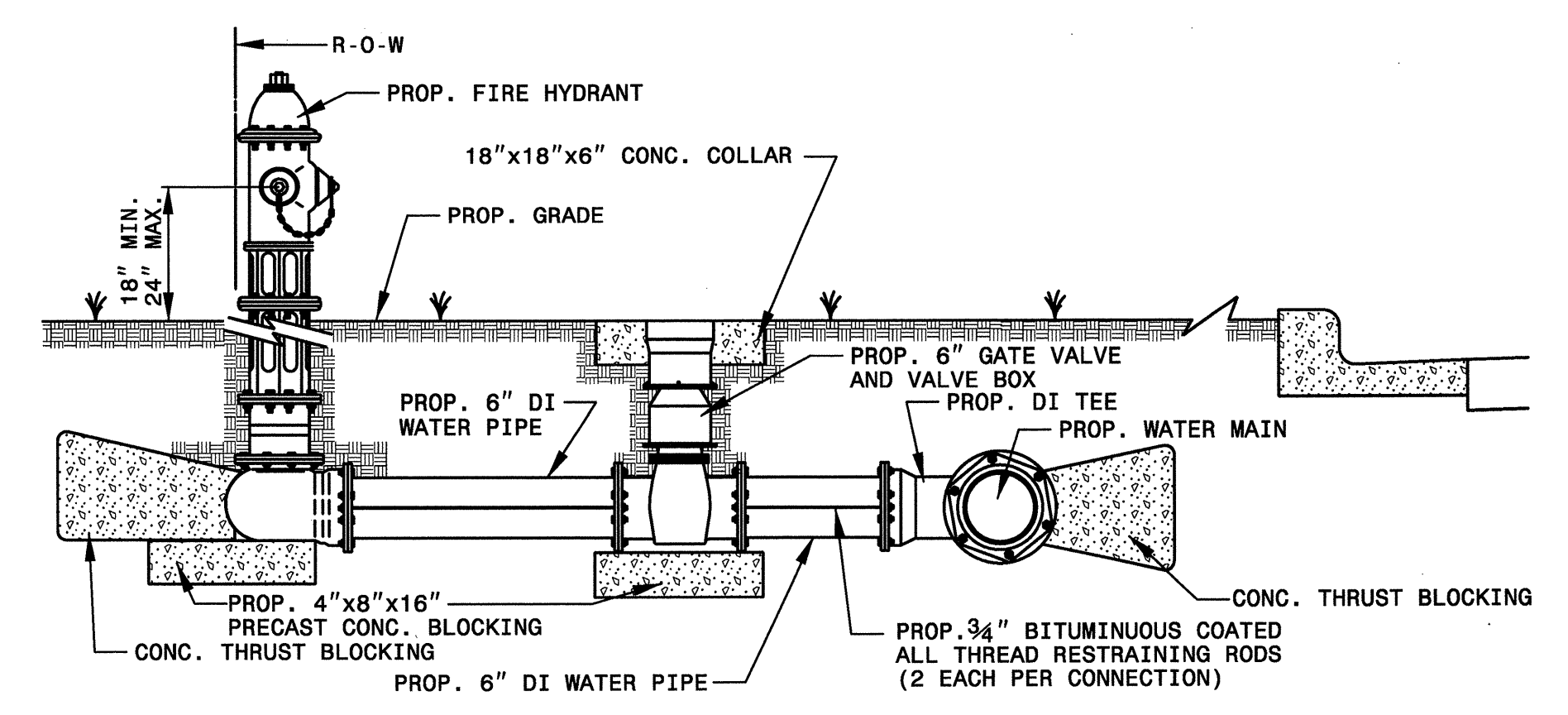
- NOTES:
1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.
 2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
 3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 3' COVER BELOW FINISHED GRADE.
 4. THE OWNER RESERVES THE RIGHT TO ADD OR DELETE WATER SERVICE TAPS AND TO CHANGE LOCATIONS FROM THOSE SHOWN.

WATER METER RELOCATION DETAILS

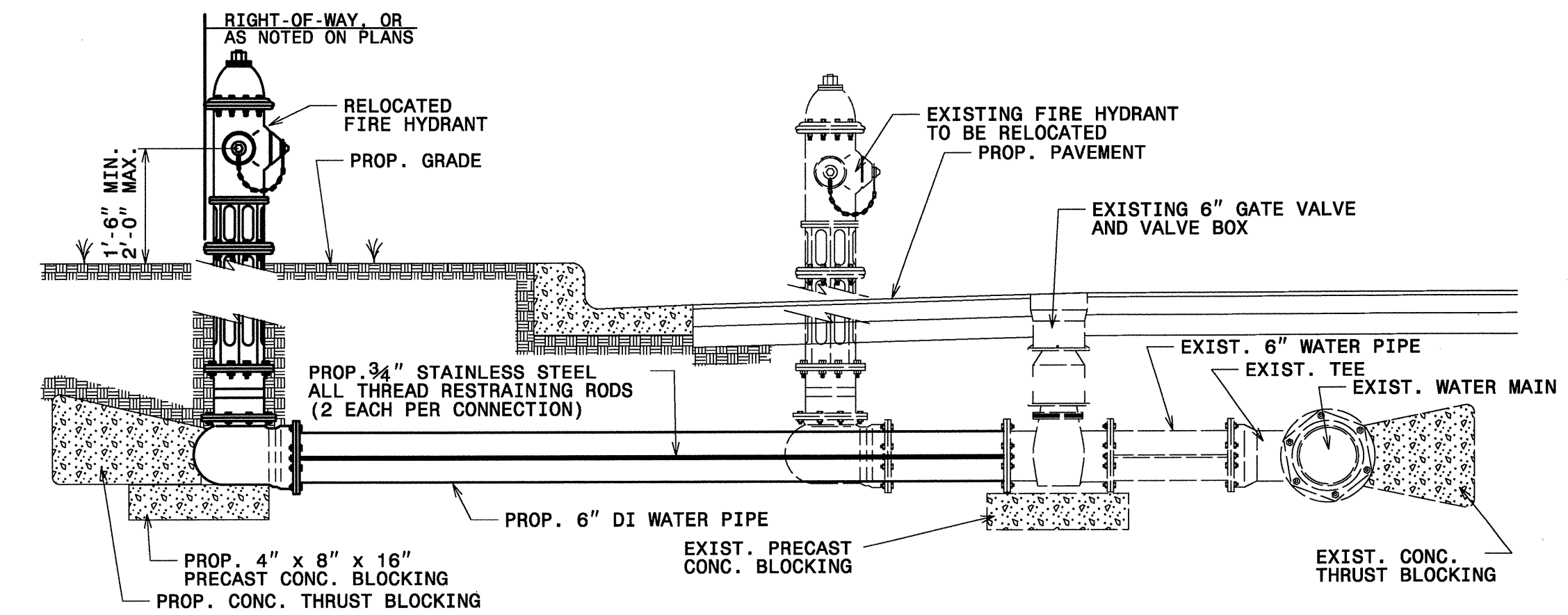


- NOTES:
1. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
 2. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 3' COVER BELOW FINISHED GRADE.

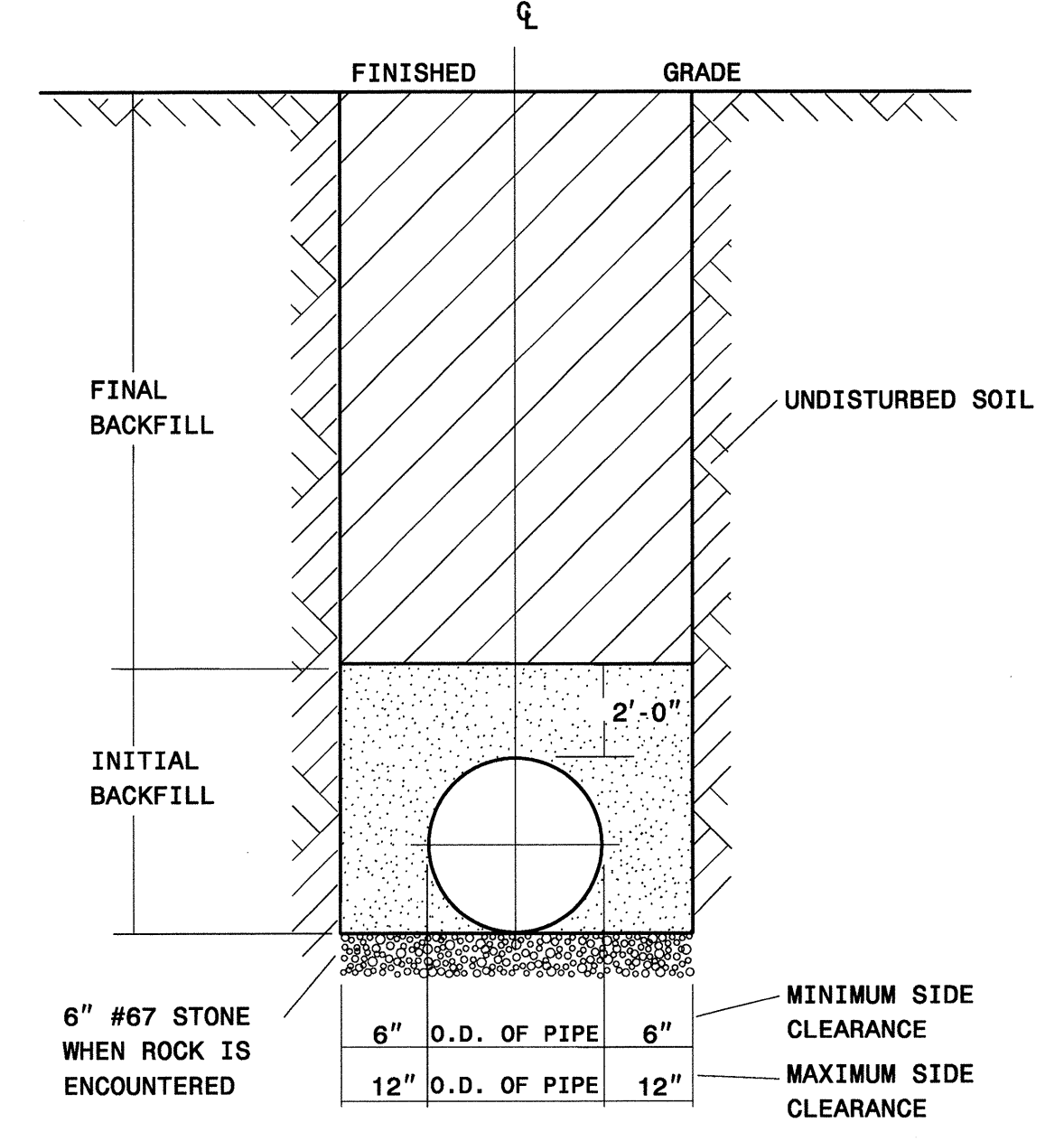
RECONNECT EXISTING WATER METER DETAIL



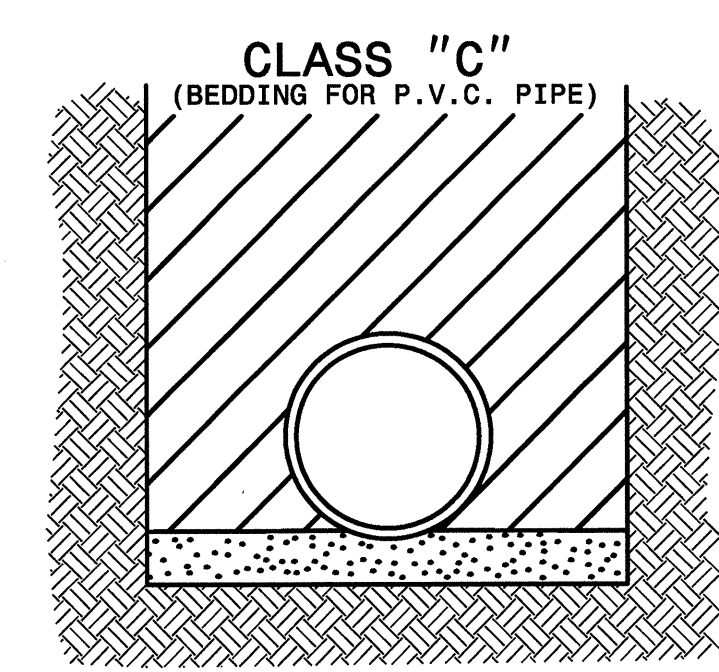
FIRE HYDRANT INSTALLATION DETAIL (UNPAVED AREAS)



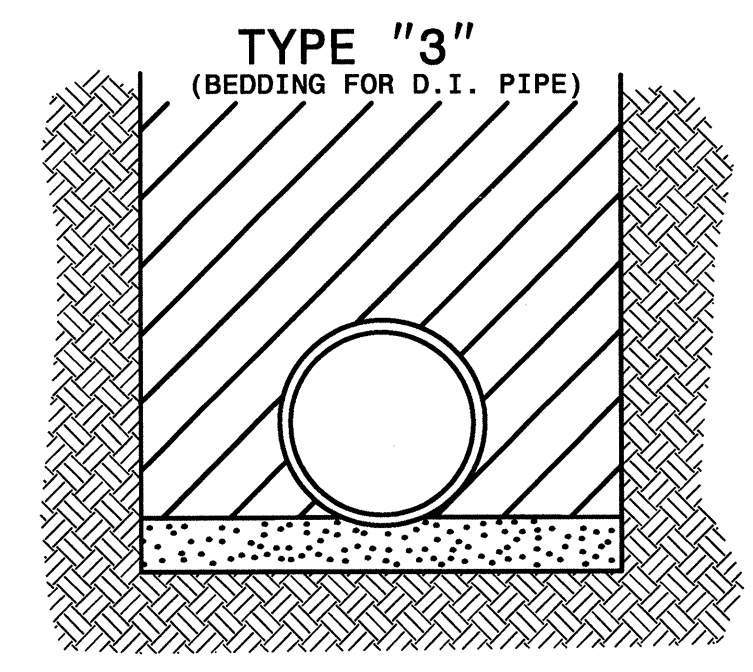
FIRE HYDRANT RELOCATION DETAIL



TRENCH & BACKFILL DETAIL



PIPE BEDDED IN LOOSE MATERIAL, LIGHTLY TAMPED WITH A MINIMUM OF 6" UNDER PIPE. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL, IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.



PIPE BEDDED IN 4" MINIMUM LOOSE SOIL. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

NOMINAL PIPE SIZE (inches)	MAXIMUM TRENCH WIDTH AT TOP OF PIPE	
	TRENCH WIDTH (inches)	TRENCH WIDTH (inches)
4	28	44
6	30	48
8	32	54
10	34	60
12	36	66
14	38	72
16	40	78
18	42	

Prepared by:

EarthTech

A Tyco International Ltd. Company

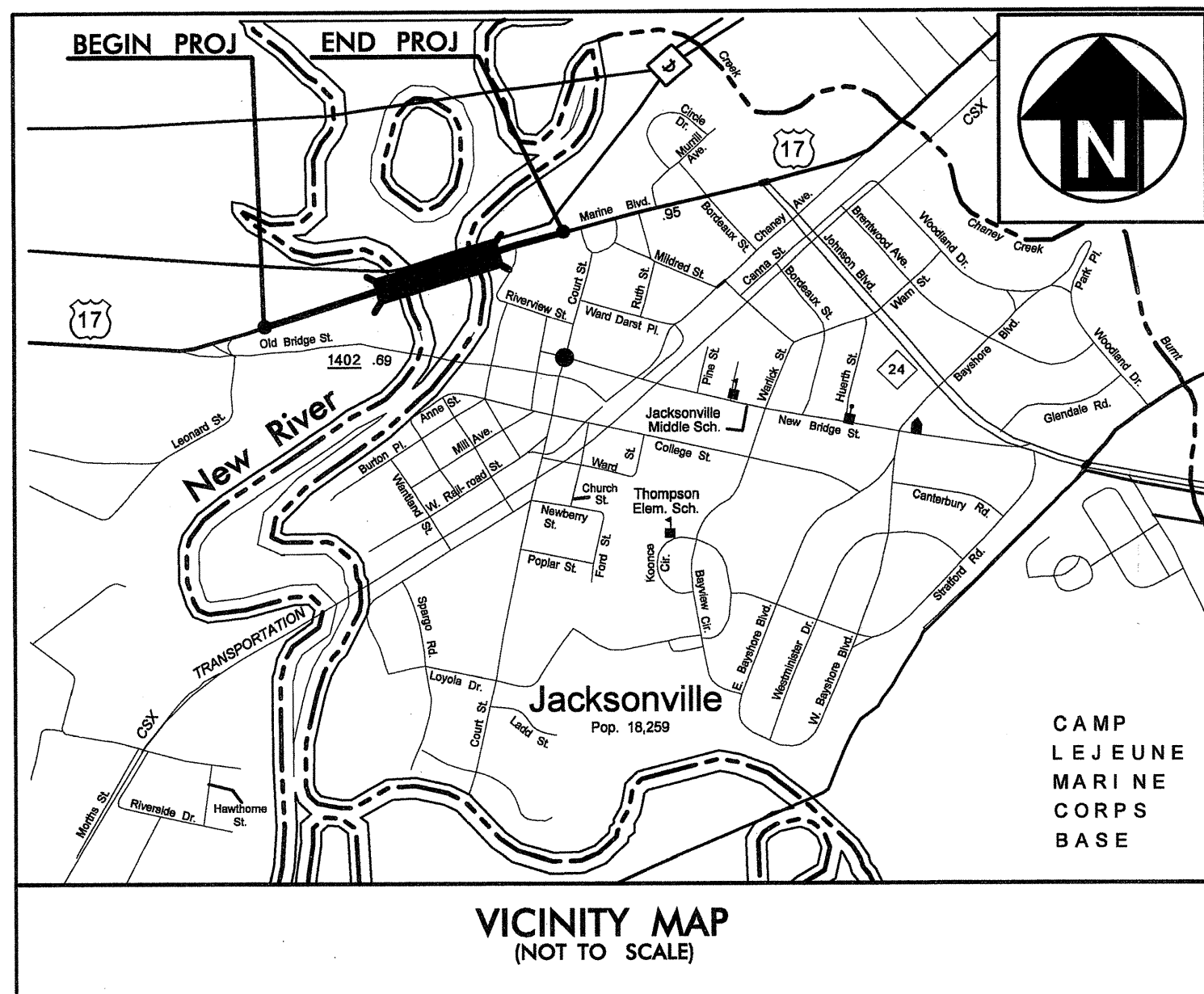
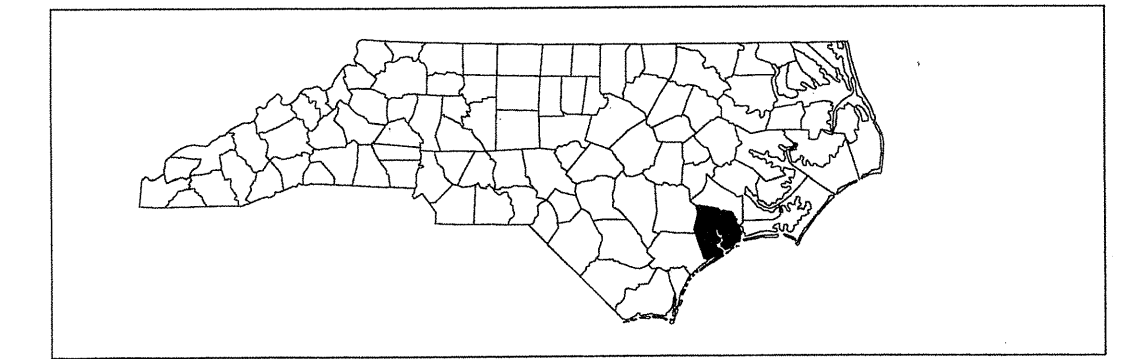
701 Corporate Center Drive, Suite 475
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TIP PROJECT: B-4214

CONTRACT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

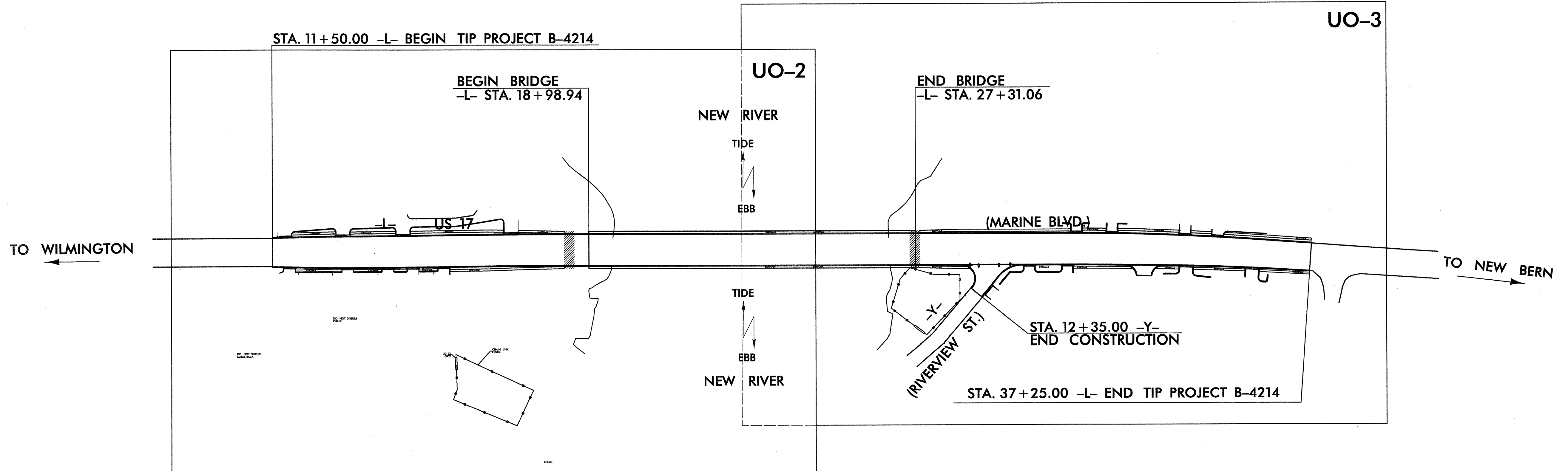
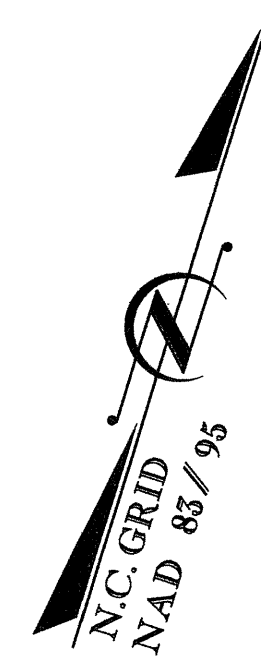
T.I.P. NO.	SHEET NO.
B-4214	UO-1



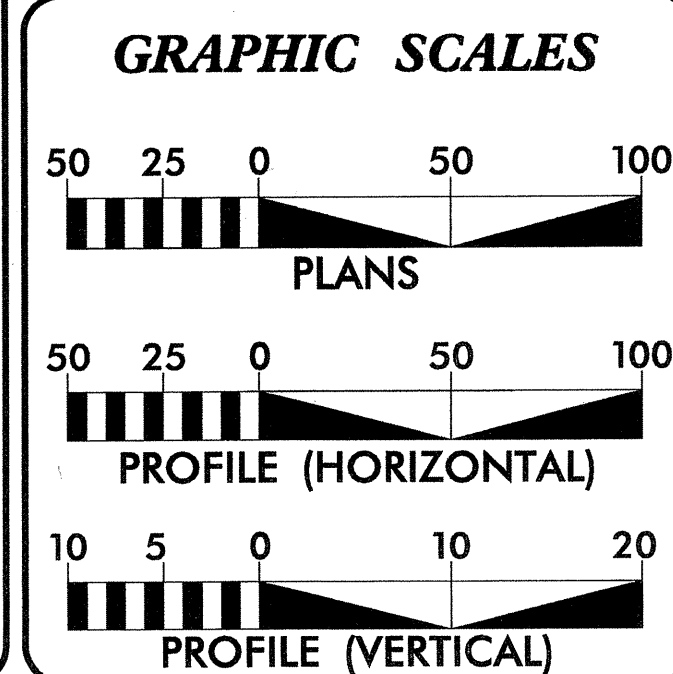
**UTILITY BY OTHERS PLANS
ONSLOW COUNTY**

**LOCATION: AND APPROACHES ON US 17 BUS. (MARINE BLVD.)
BRIDGE NO. 24 OVER NEW RIVER**

TYPE OF WORK: UTILITIES RELOCATION



UO-3



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 thru UO-3	UTILITY BY OTHERS PLAN SHEET(S)
UO-4	UTILITY BY OTHERS PROFILE SHEET(S)

- UTILITY OWNERS ON PROJECT**
- PROGRESS ENERGY (POWER DISTRIBUTION)
 - CENTURYLINK (TELECOMMUNICATIONS)
 - TIME WARNER (CABLE TELEVISION)

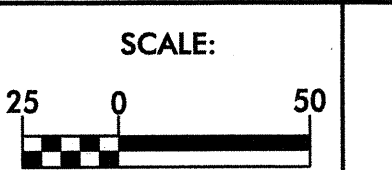
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FOR:
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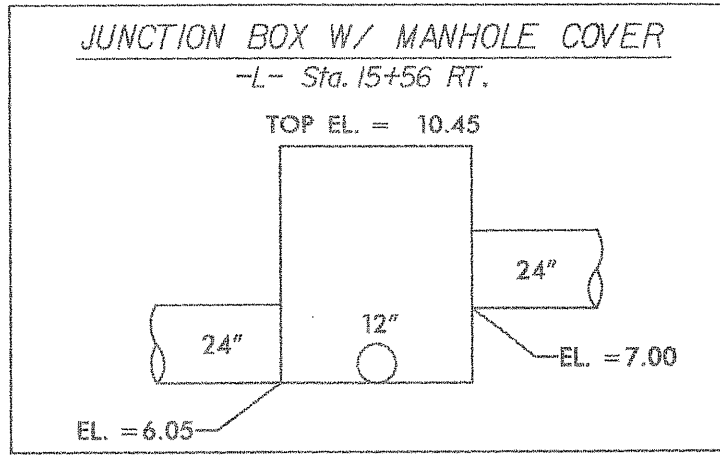
Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Carl Barclay, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Earth Tech, Inc. UTILITIES PROJECT DESIGNER

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



UTILITIES BY OTHERS

FOR -L- PROFILE SEE SHEET 6



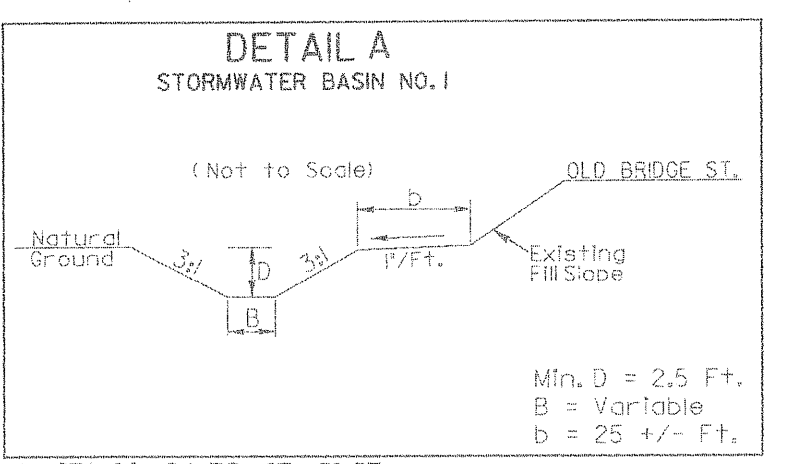
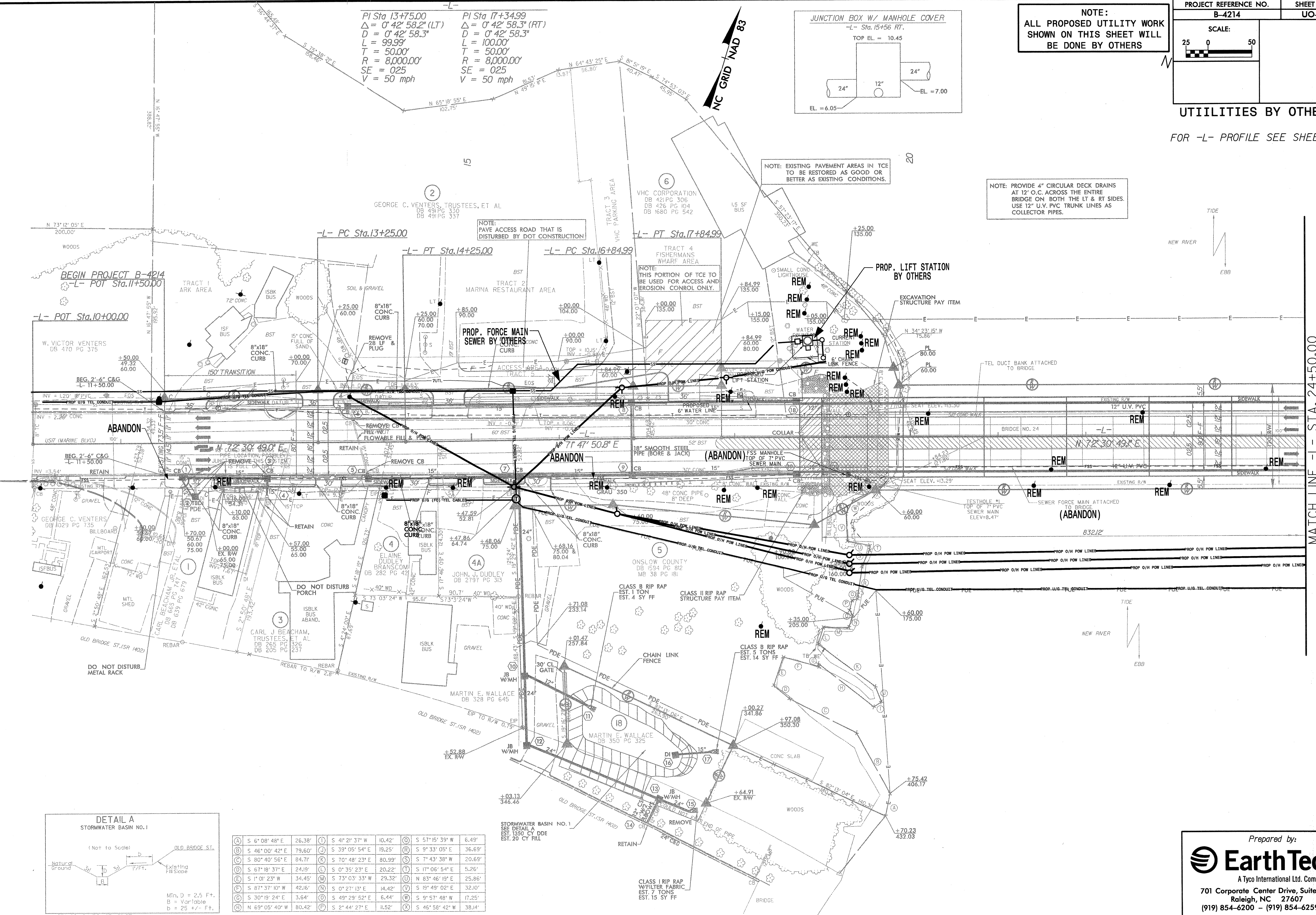
NOTE: PROVIDE 4" CIRCULAR DECK DRAINS
AT 12' O.C. ACROSS THE ENTIRE
BRIDGE ON BOTH THE LT & RT SIDES.
USE 12" U.V. PVC TRUNK LINES AS
COLLECTOR PIPES.

NOTE: EXISTING PAVEMENT AREAS IN TCE
TO BE RESTORED AS GOOD OR
BETTER AS EXISTING CONDITIONS.

NOTE: PAVE ACCESS ROAD THAT IS
DISTURBED BY DOT CONSTRUCTION

PI Sta 13+75.00 Δ = 0° 42' 58.2" (LT)
D = 0° 42' 58.3" L = 99.99'
R = 8,000.00' SE = 025 V = 50 mph

PI Sta 17+34.99 Δ = 0° 42' 58.3" (RT)
D = 0° 42' 58.3" L = 100.00'
R = 8,000.00' SE = 025 V = 50 mph



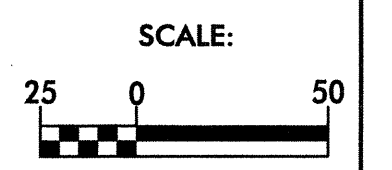
(A)	S 6° 08' 48" E	26.38'	(I)	S 41° 21' 37" W	10.42'	(O)	S 57° 15' 39" W	6.49'
(B)	S 46° 00' 42" E	79.60'	(J)	S 39° 05' 54" E	19.25'	(R)	S 9° 33' 05" E	36.69'
(C)	S 80° 40' 56" E	84.71'	(K)	S 70° 48' 23" E	80.99'	(S)	S 7° 43' 38" W	20.69'
(D)	S 67° 18' 37" E	24.19'	(L)	S 0° 35' 23" E	20.22'	(T)	S 17° 06' 54" E	5.26'
(E)	S 1° 01' 23" W	34.45'	(M)	S 73° 03' 33" W	29.32'	(U)	N 83° 46' 19" E	25.86'
(F)	S 87° 37' 10" W	42.16'	(N)	S 0° 27' 13" E	14.42'	(V)	S 19° 49' 02" E	32.10'
(G)	S 30° 19' 24" E	3.64'	(P)	S 49° 29' 52" E	6.44'	(W)	S 9° 57' 48" W	17.25'
(H)	N 69° 05' 40" W	80.42'	(Q)	S 2° 44' 27" E	11.52'	(X)	S 46° 58' 42" W	38.14'

MATCH LINE -L- STA. 24+50.00

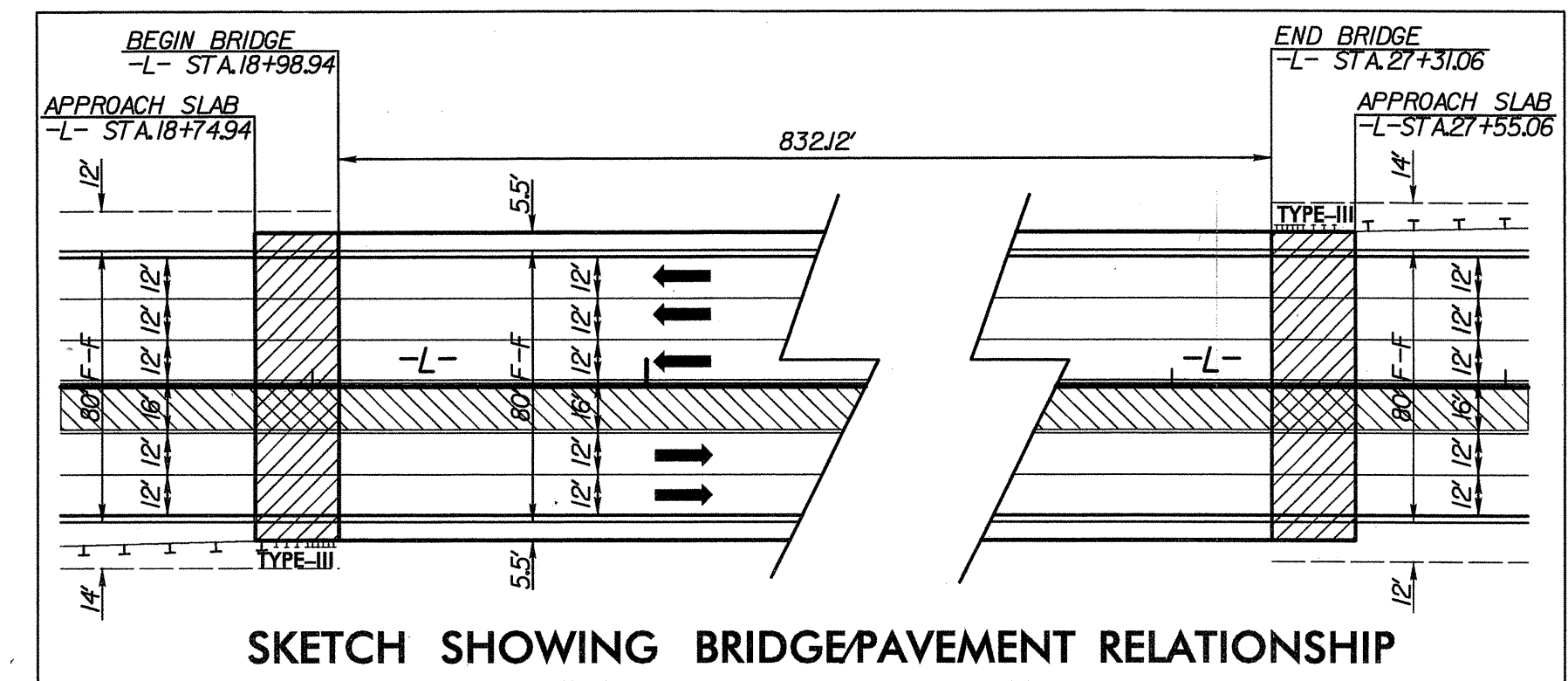
Prepared by:
EarthTech
 A Tyco International Ltd. Company
 701 Corporate Center Drive, Suite 475
 Raleigh, NC 27607
 (919) 854-6200 - (919) 854-6259(fax)

2/15/2010 10:55:58 AM

NOTE:
ALL PROPOSED UTILITY WORK
SHOWN ON THIS SHEET WILL
BE DONE BY OTHERS



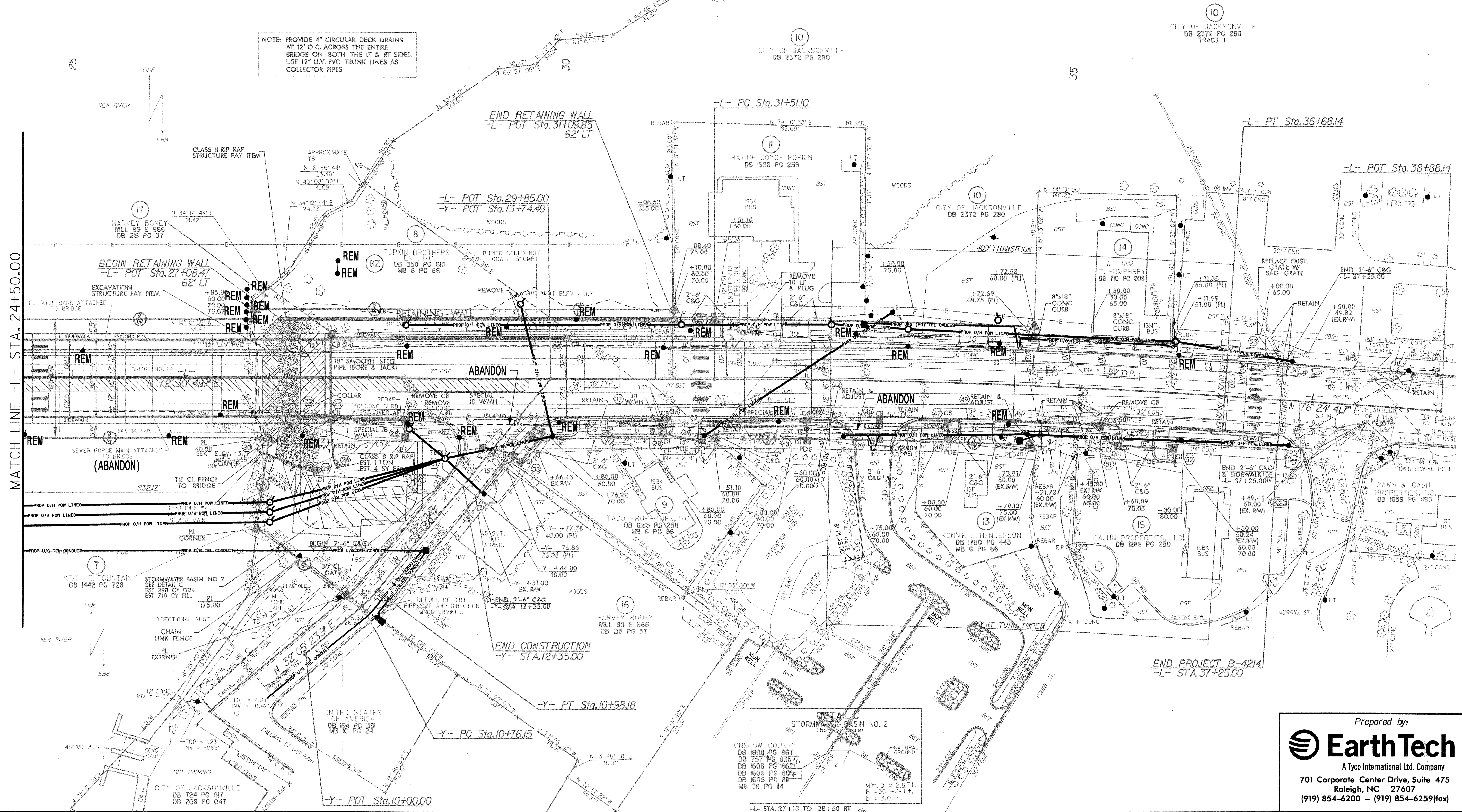
UTILITIES BY OTHERS



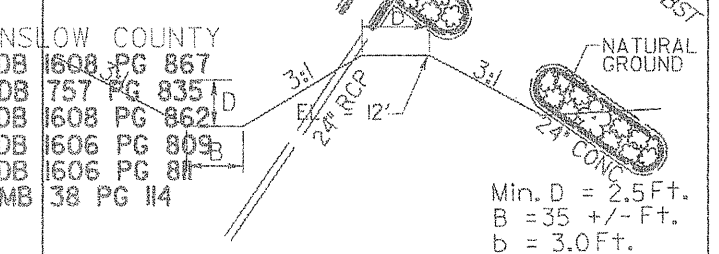
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R = 7,600.00'
SE = RC 025
RO = 90'
V = 50 mph

-Y-
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 $\Delta = 10^{\circ} 06' 04.1''$ (LT)
D = 45' 50' 11.8"
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T = 11.05'
R = 125.00'

NOTE: PROVIDE 4" CIRCULAR DECK DRAINS
AT 12' O.C. ACROSS THE ENTIRE
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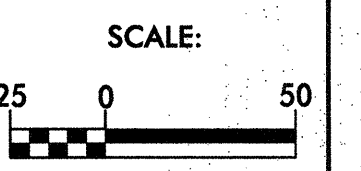


MATCH LINE -L- STA. 24+50.00



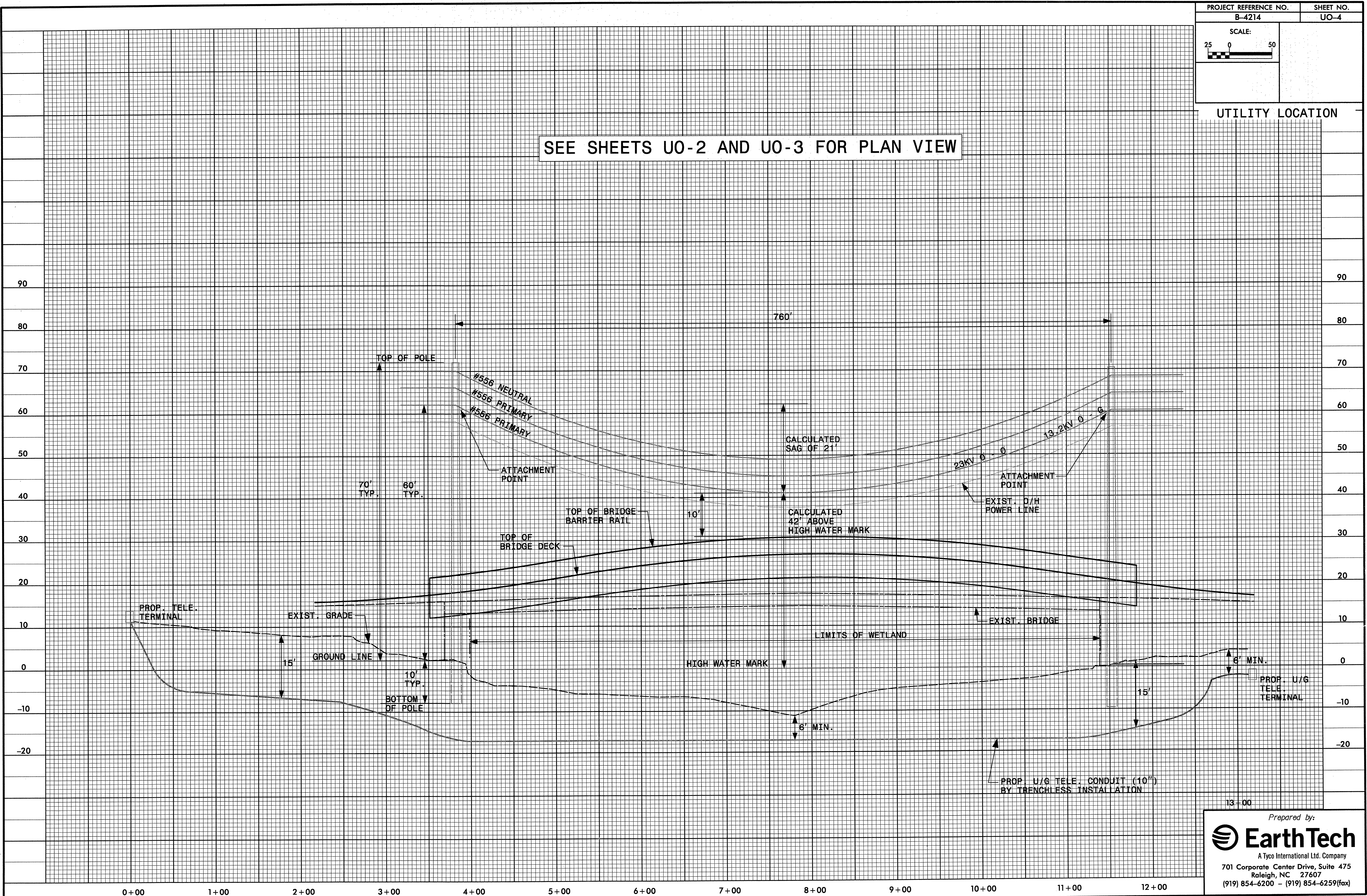
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2/15/2010 8:58:55 AM



UTILITY LOCATION

SEE SHEETS UO-2 AND UO-3 FOR PLAN VIEW



DATE: 10/30/2008
DGN: b4214_uo_06.dwg

Prepared by:
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