

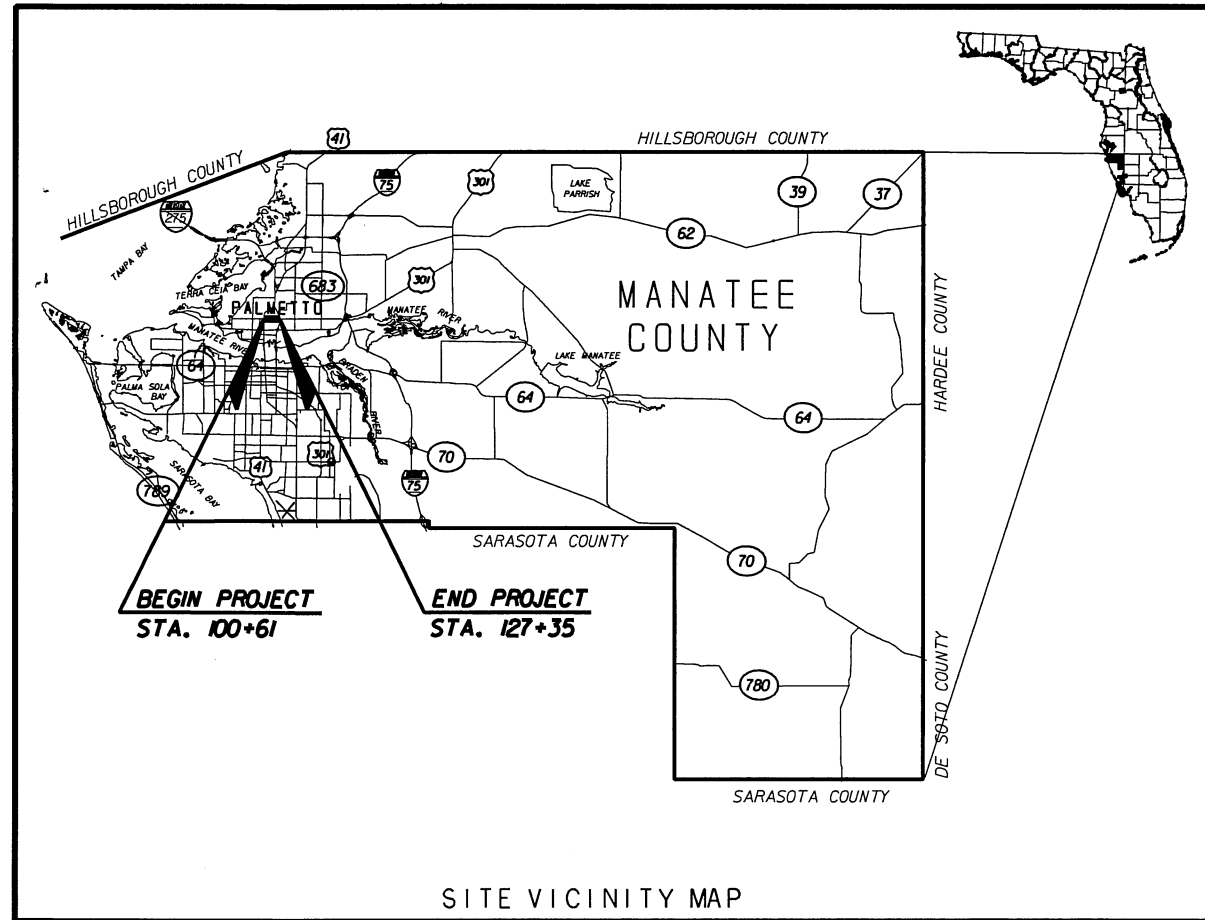
ATTACHMENT "H"

17th STREET WEST WATER MAIN RELOCATION PALMETTO, FLORIDA

RECEIVED
NOV 10 2008
PROJECT MGMT

DRAWING INDEX

SHEET	DESCRIPTION
1	PROJECT COVER SHEET
2	DETAILS AND GENERAL NOTES
3	DETAILS AND GENERAL NOTES
4	OVERHEAD PLAN STA. 100+00 TO 104+00
5	OVERHEAD PLAN STA. 104+00 TO 110+00
6	OVERHEAD PLAN STA. 110+00 TO 115+00
7	OVERHEAD PLAN STA. 115+00 TO 121+00
8	OVERHEAD PLAN STA. 121+00 TO 126+00
9	OVERHEAD PLAN STA. 126+00 TO 132+00



JONES EDMUNDS PROJECT NO.
09502073

DATE
DECEMBER, 2005

PREPARED BY:

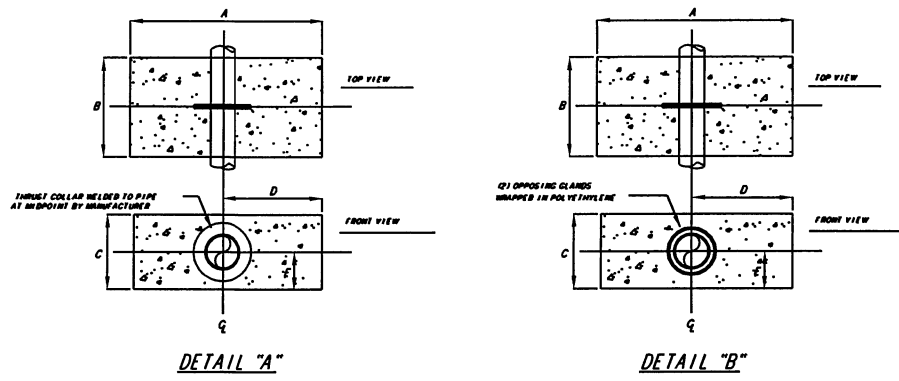


730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CEGERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

LEGEND

SYMBOL	DESCRIPTION
	SANITARY SEWER, MANHOLE, AND SERVICE
	WATER MAIN, SIZE INDICATED
	FORCE MAIN, SIZE INDICATED
	NON-POTABLE WATER MAIN, SIZE INDICATED
	DUCTILE IRON PIPE, SIZE INDICATED
	FIRE HYDRANT
	GATE VALVE
	REDUCER
	THRUST BLOCK
	RECLAIMED WATER USAGE SIGN

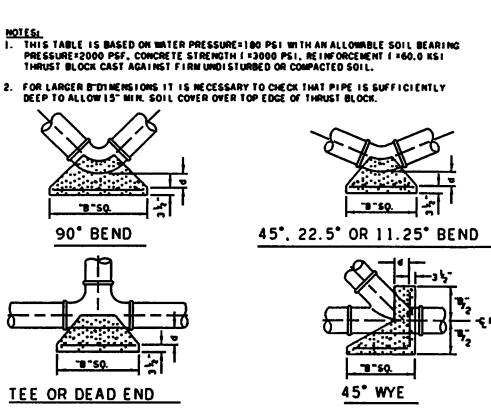
- NOTES:
- 1) DIMENSIONS OF CONCRETE COLLARS BASED ON 2000 P.S.F. SOIL BEARING.
 - 2) SPECIFICATIONS OF SPL 17 GLAND SHALL CONFORM TO THE PIPE MANUFACTURER'S SUPPLIED SHOP DRAWINGS, WHICH SHALL INDICATE A THRUST BAYING NOT LESS THAN THAT INCLUDED IN THE CHART BELOW.
 - 3) DIMENSIONS OF WELDED STEEL OR DUCTILE IRON THRUST COLLARS SHALL CONFORM TO THE PIPE MANUFACTURER'S SUPPLIED SHOP DRAWINGS WHICH SHALL INDICATE A THRUST BAYING NOT LESS THAN THAT INCLUDED IN THE CHART BELOW.
 - 4) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS. "HIGH EARLY" CONCRETE SHALL BE USED.
 - 5) SOIL CONDITIONS SHALL BE VERIFIED BY THE CITY'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
 - 6) FOR 3" PIPE USE 4" DIAMETER THRUST BAYING.



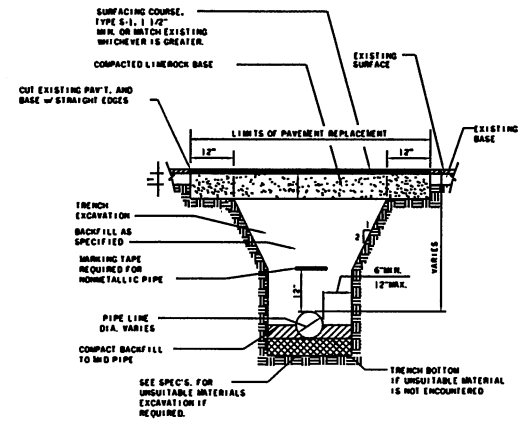
PIPE SIZE	A	B	C	D	CE	CY.	WELDED THRUST COLLAR WEIGHT (LBS.)
4"	1'-0"	2'-4"	1'-6"	1'-6"	0'-3"	0.33	4,500 lbs.
6"	1'-0"	2'-4"	1'-6"	2'-0"	0'-3"	0.44	9,300 lbs.
8"	1'-6"	2'-4"	2'-0"	2'-3"	1'-0"	0.67	15,000 lbs.
12"	1'-0"	2'-4"	3'-0"	3'-0"	1'-5"	1.33	34,000 lbs.
16"	1'-6"	2'-4"	4'-6"	3'-3"	2'-10"	2.17	59,000 lbs.

TYPICAL CONCRETE COLLAR DETAIL
N.T.S.

PIPE SIZE (IN.)	90° BEND				45° BEND				22.5° BEND				11.25° BEND				DEAD END				45° WYE			
	B	d	B	d	B	d	B	d	B	d	B	d	B	d	B	d	B	d	B	d	B	d		
4	1.3	3 1/2	1.0	3 1/2	0.7	3 1/2	0.6	3 1/2	1.1	3 1/2	1.0	3 1/2	1.0	3 1/2	1.0	3 1/2	1.0	3 1/2	1.0	3 1/2	1.0	3 1/2		
6	1.9	4 1/2	1.5	3 3/4	1.1	3 3/4	0.8	3 1/2	1.6	4	1.5	3 3/4	1.6	4	1.5	3 3/4	1.6	4	1.5	3 3/4	1.6	4		
8	2.6	6 1/4	1.9	4 3/4	1.4	3 3/4	1.0	3 1/2	2.2	5 1/2	2.2	5 1/2	2.2	5 1/2	2.2	5 1/2	2.2	5 1/2	2.2	5 1/2	2.2	5 1/2		
10	3.2	7 3/4	2.4	6	1.7	4 1/4	1.2	3 1/2	2.7	6 1/2	2.7	6 1/2	2.7	6 1/2	2.7	6 1/2	2.7	6 1/2	2.7	6 1/2	2.7	6 1/2		
12	3.8	9 1/4	2.8	6 3/4	2.0	5	1.5	3 3/4	3.2	7 3/4	3.2	7 3/4	3.2	7 3/4	3.2	7 3/4	3.2	7 3/4	3.2	7 3/4	3.2	7 3/4		
14	4.5	11	3.3	8	2.4	6	1.7	4 1/4	3.8	9 1/4	3.8	9 1/4	3.8	9 1/4	3.8	9 1/4	3.8	9 1/4	3.8	9 1/4	3.8	9 1/4		
16	5.1	12 1/4	3.8	9 1/4	2.7	6 1/2	1.9	4 3/4	4.3	10 1/2	4.3	10 1/2	4.3	10 1/2	4.3	10 1/2	4.3	10 1/2	4.3	10 1/2	4.3	10 1/2		
18	5.7	13 3/4	4.2	10 1/4	3.0	7 1/4	2.2	5 1/2	4.8	11 3/4	4.8	11 3/4	4.8	11 3/4	4.8	11 3/4	4.8	11 3/4	4.8	11 3/4	4.8	11 3/4		
20	6.4	15 1/2	4.7	11 1/2	3.4	8 1/4	2.4	6	5.4	13	5.4	13	5.4	13	5.4	13	5.4	13	5.4	13	5.4	13		
24	7.6	18 1/4	5.6	13 1/2	4.0	9 3/4	2.9	7	6.4	15 1/2	6.4	15 1/2	6.4	15 1/2	6.4	15 1/2	6.4	15 1/2	6.4	15 1/2	6.4	15 1/2		
30	9.5	23	7.0	17	5.0	12	3.6	8 3/4	8.0	19 1/4	8.0	19 1/4	8.0	19 1/4	8.0	19 1/4	8.0	19 1/4	8.0	19 1/4	8.0	19 1/4		
36	11.4	27 1/2	8.4	20 1/4	6.0	14 1/2	4.2	10 1/2	9.6	23	9.6	23	9.6	23	9.6	23	9.6	23	9.6	23	9.6	23		

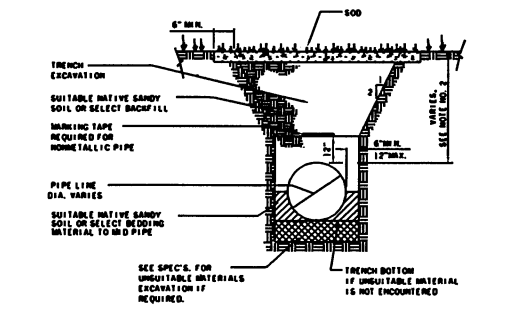


THRUST BLOCK DETAILS
N.T.S.



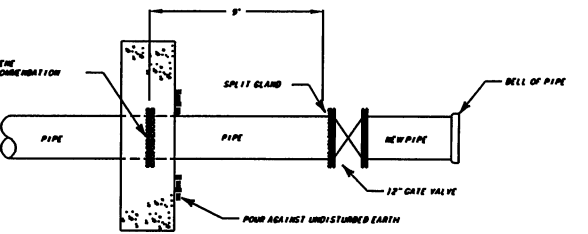
- NOTES:
1. UNDERMINING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.
 2. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPED AND FEATHERED.

TRENCH AND PAVEMENT REPLACEMENT DETAIL
N.T.S.



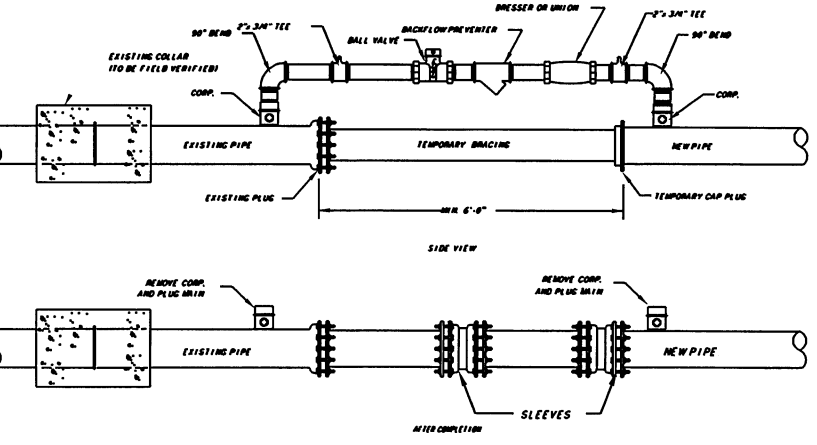
- NOTES:
1. UNDERMINING SHALL CONTINUE UNTIL BACKFILL IS COMPACTED AT LEAST 2 FEET ABOVE PIPE.
 2. 60" MIN. COVER OUTSIDE OF FENCE, 30" MIN. COVER INSIDE FENCE.

TRENCH DETAIL
N.T.S.

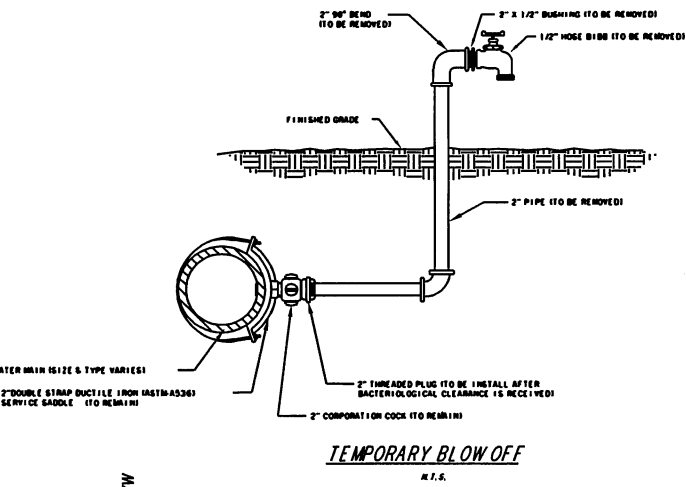


NOTE: COLLAR AND VALVE MUST BE ON SAME PIPE JOINT.

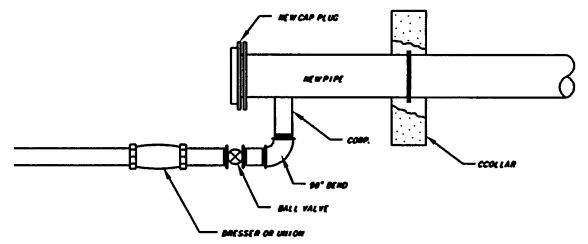
VALVE RESTRAINT DETAIL
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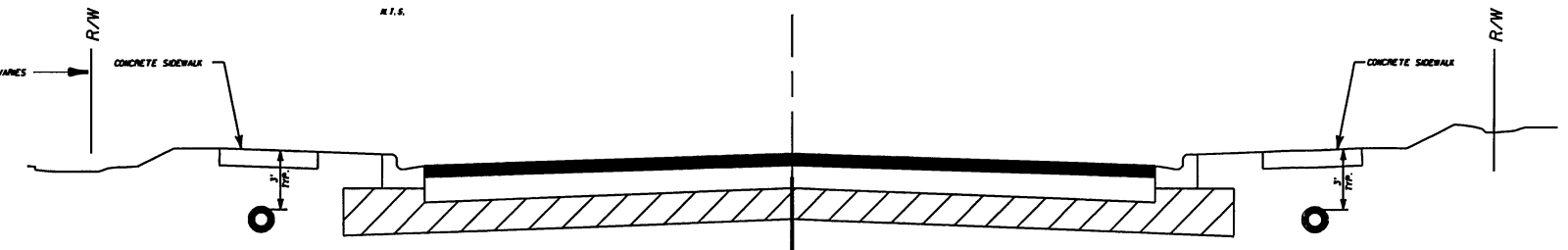
TYPICAL JUMPER CONNECTION DETAIL
N.T.S.



TEMPORARY BLOW OFF
N.T.S.



TIE IN DETAIL
N.T.S.



TYPICAL STREET SECTIONS
N.T.S.

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
WILLIAM T. HARLEY, P.E.	DEC. 05	0950207301
P.E. #63321	SCALE	DWG. NO.
	1"=20'	2

GENERAL WATER NOTES AND DETAILS

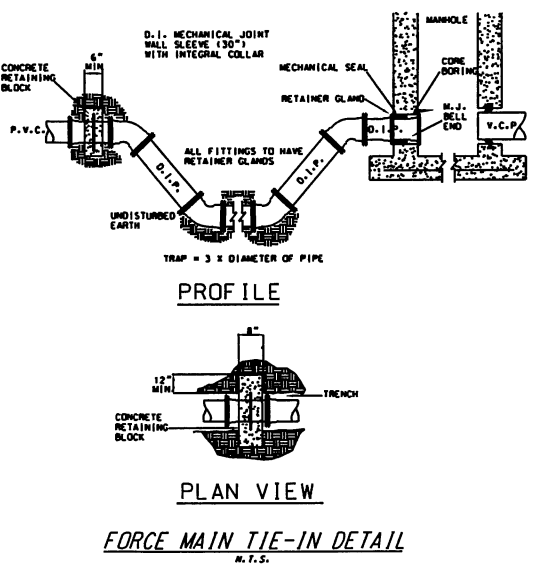
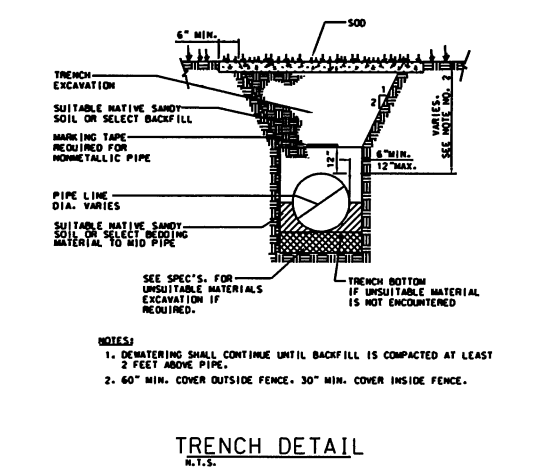
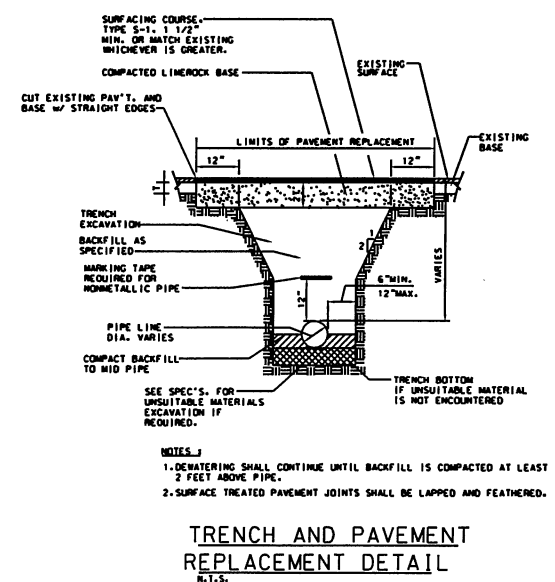
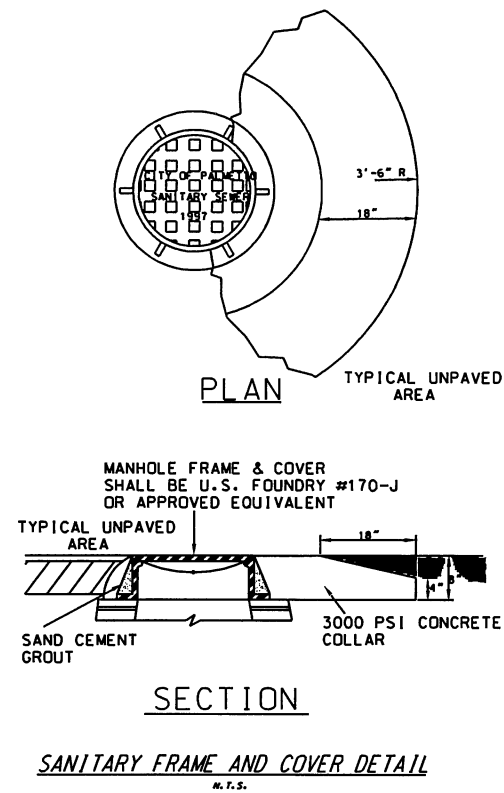
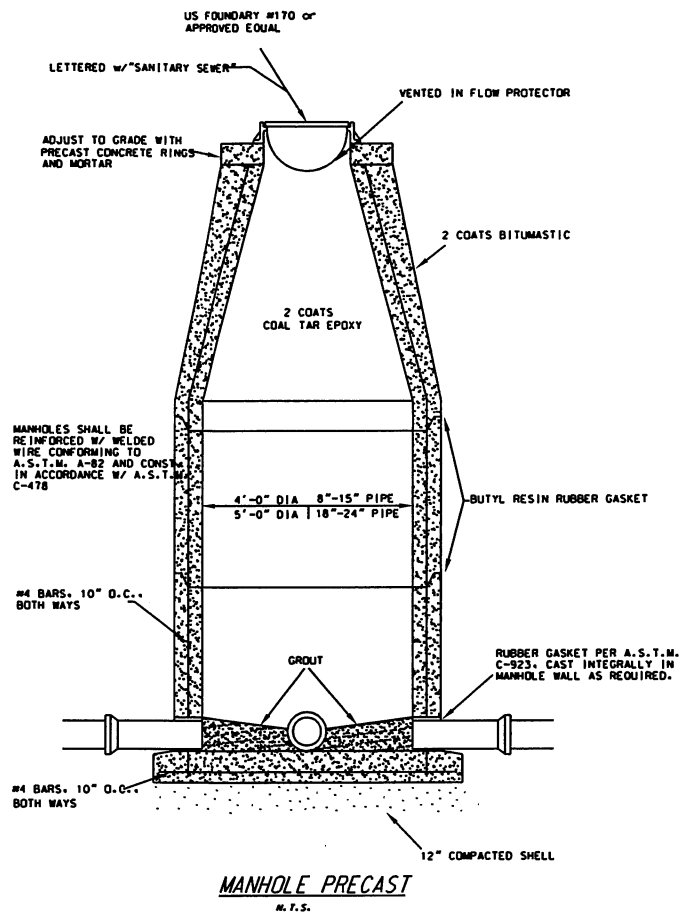
17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESHBY BLVD., SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

DESIGNED	WTH
DRAWN	MAW
CHECKED	
WILLIAM T. HARLEY, P.E.	
PROJECT ENGINEER	

LTR.	DATE	REVISIONS	BY	APPRO

N:\09502\17TH STREET WEST\013\ASHEET FILES\DETAILS NOTES02.DGN 12/19/2005 1:47:02 PM WHELD



- GENERAL NOTES - SEWER**
1. LOCATION OF UTILITIES IS BASED UPON INFORMATION SUPPLIED BY THE UTILITY COMPANIES. THE ENGINEER AND CITY OF PALMETTO ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. CONTRACTOR TO CONTACT LOCATE SERVICE FOR VERIFICATION OF UTILITIES PRIOR TO CONSTRUCTION.
 2. PRECAST MANHOLE SHALL CONFORM TO ASTM C478, AND SHALL CONSIST OF PRECAST REINFORCED CONCRETE RISER SECTIONS, A MONOLITHIC BASE SECTION, AN ECCENTRIC, CONCENTRIC OR FLAT SLAB TOP SECTION AS REQUIRED, ALL IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
 3. JOINT SEALANT SHALL BE BUTYL RUBBER RING JOINT, 1-INCH DIAMETER, CONFORMING TO FEDERAL SPECIFICATION SS-S-00210, TYPE I. CEMENT MORTAR JOINTS WILL NOT BE ACCEPTABLE, EXCEPT THAT EACH JOINT SHALL BE WIPED INSIDE THE MANHOLE WITH CEMENT MORTAR AFTER ASSEMBLY.
 4. INVERTS SHALL BE FACTORY CONSTRUCTED PRECAST CONCRETE OR FIELD CONSTRUCTED CEMENT MORTAR, BRICKWORK AND PLASTER. AT END MANHOLES, A "FALSE" INVERT SHALL BE CONSTRUCTED TO DRAIN ACCUMULATION OF WATER FROM MANHOLE BOTTOM. TROUGHS SHALL BE TROWELLED SMOOTH AND FREE OF HIGH OR LOW SPOTS AND RUBBED SMOOTH AFTER SETTING UP.
 5. MANHOLE STEPS SHALL BE OF ALUMINUM OR COMPOSITE PLASTIC STEEL CONSTRUCTION. MINIMUM DESIGN LIVE LOAD SHALL BE A SINGLE CONCENTRATED LOAD OF 300 POUNDS. STEPS SHALL HAVE NONSKID TOP SURFACES, AND SHALL BE DESIGNED SO THAT THE FOOT CANNOT SLIP OFF THE END. STEPS SHALL HAVE A MINIMUM CROSS-SECTIONAL DIMENSION OF 1-INCH, AND A MINIMUM WIDTH OF 10-INCHES. STEPS SHALL BE EVENLY PLACED ON 16-INCH CENTERS WITH EACH STEP EMBEDDED IN THE WALL A MINIMUM OF 3-INCHES. EACH STEP SHALL PROJECT A MINIMUM OF 4-INCHES FROM THE WALL AS MEASURED FROM THE POINT OF EMBEDMENT.
 6. GRAVITY SEWER PIPE SHALL BE LAID TO PRODUCE A STRAIGHT LINE OF PIPE ON A UNIFORM GRADE. ALL MISALIGNMENT OF PIPE SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
 7. WHENEVER PVC PIPE IS INSTALLED, TRACER WIRE AND WARNING TAPE SHALL BE INSTALLED TO FACILITATE FUTURE LOCATION OF THE FORCE MAIN.
 8. SERVICE CONNECTIONS SHALL BE PROPERLY INSTALLED AT THE REQUIRED LOCATIONS. ALL WYES, BENDS SERVICE PIPE AND OTHER APPURTENANCES SHALL BE PROVIDED AS REQUIRED FOR EACH CONNECTION. ALL JOINTS SHALL BE INSTALLED SO AS TO PROVIDE WATERTIGHT CONNECTIONS.
 9. ALL BACKFILL WILL BE SUBJECT TO A COMPACTION TEST BY AN INDEPENDENT LABORATORY SELECTED BY THE ENGINEER OR OWNER. IF COMPACTION FAILS THE TEST, CONTRACTOR SHALL REMOVE AND REPLACE TO THE SATISFACTION OF THE ENGINEER AND THE OWNER, AND SHALL ALSO PAY FOR THE COST OF THE TEST.
 10. NEW DISCHARGE MANHOLE INTERIOR SHALL BE PROTECTED FROM BIOGENIC CORROSION BY THE APPLICATION OF COAL TAR EPOXY IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS. ACCEPTABLE MANUFACTURERS ARE BENJAMIN-MOORE M47 OR M48, CARBOLINE BITUMASTIC 300M, OR APPROVED EQUAL.

DESIGNED	WITH
DRAWN	MAW
CHECKED	
BY	WILLIAM T. HARLEY, P.E.
APPROD.	PROJECT ENGINEER

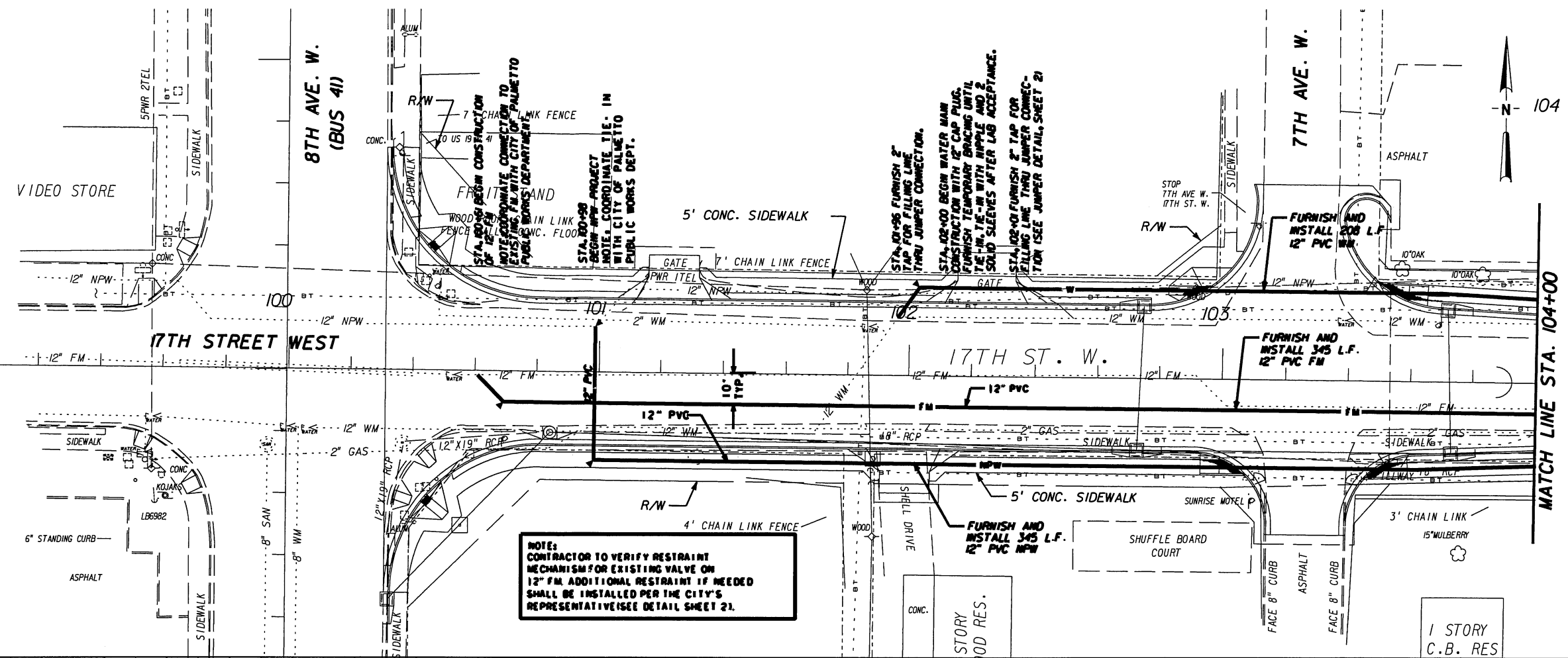
JONES EDMUNDS
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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

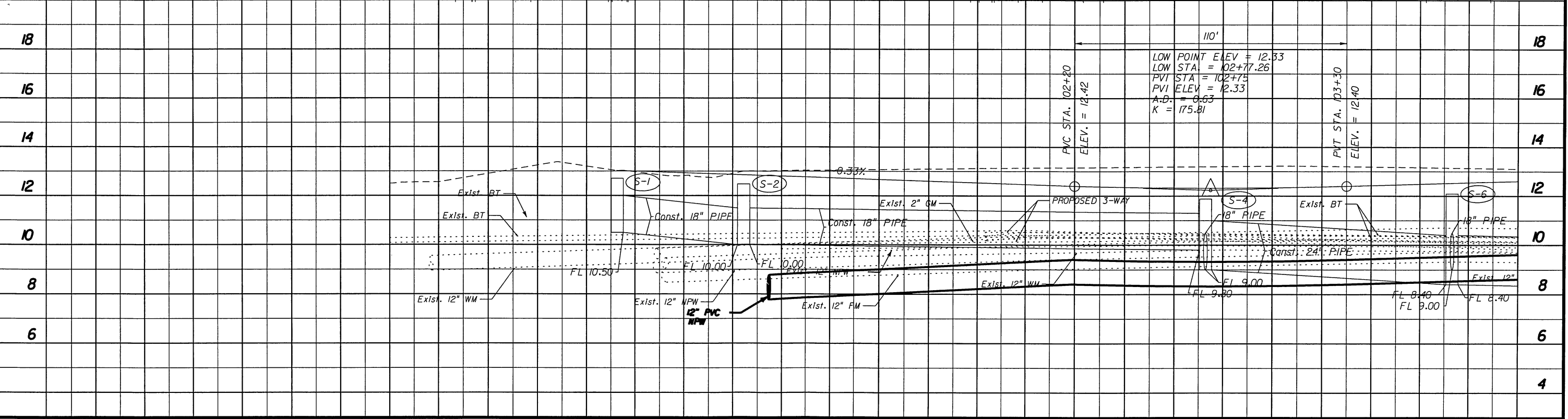
GENERAL SEWER NOTES
 AND DETAILS

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	DEC. 05	0950207301
WILLIAM T. HARLEY, P.E.	SCALE	DWG. NO.
P.E. #63321	1"=20'	3

12/19/2005 2:12:39 PM WJL
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NOTES:
 CONTRACTOR TO VERIFY RESTRAINT MECHANISM FOR EXISTING VALVE ON 12\"/>



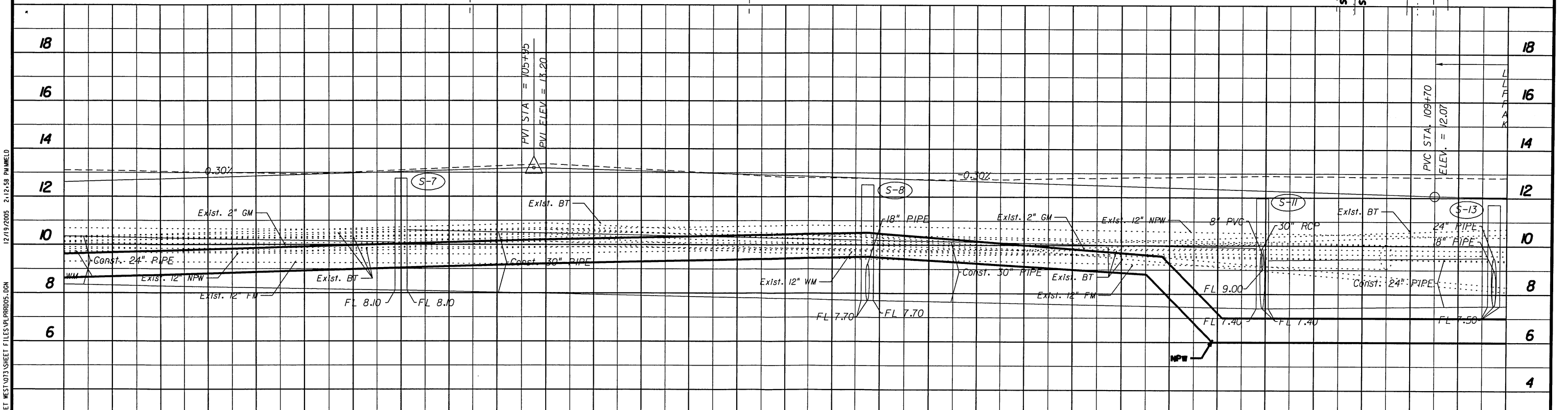
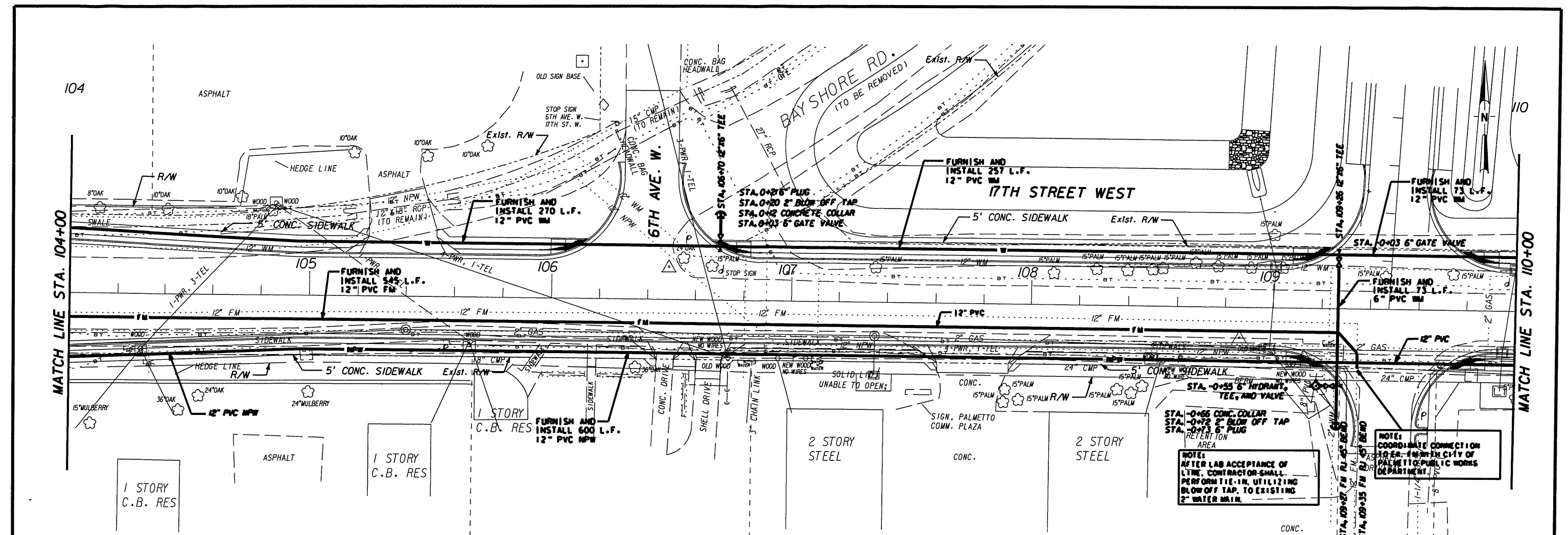
DESIGNED WTH
 DRAWN MAW
 CHECKED
 WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER



17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
WILLIAM T. HARLEY, P.E.	DEC. 05	0950207301
P.E. #63321	SCALE	DWG. NO.
	1"=20'	4



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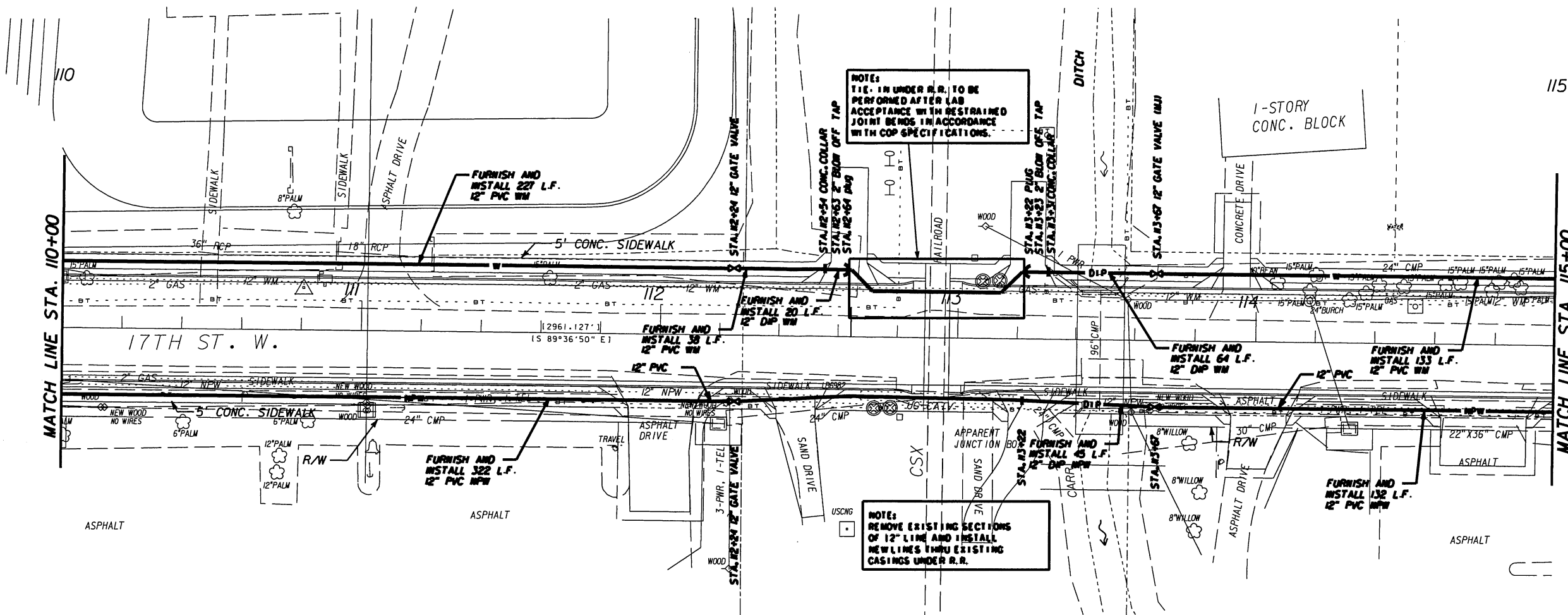
DESIGNED	WTH
DRAWN	MAW
CHECKED	
BY	WILLIAM T. HARLEY, P.E.
APPROD.	PROJECT ENGINEER

JONES EDMUNDS
 730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
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17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

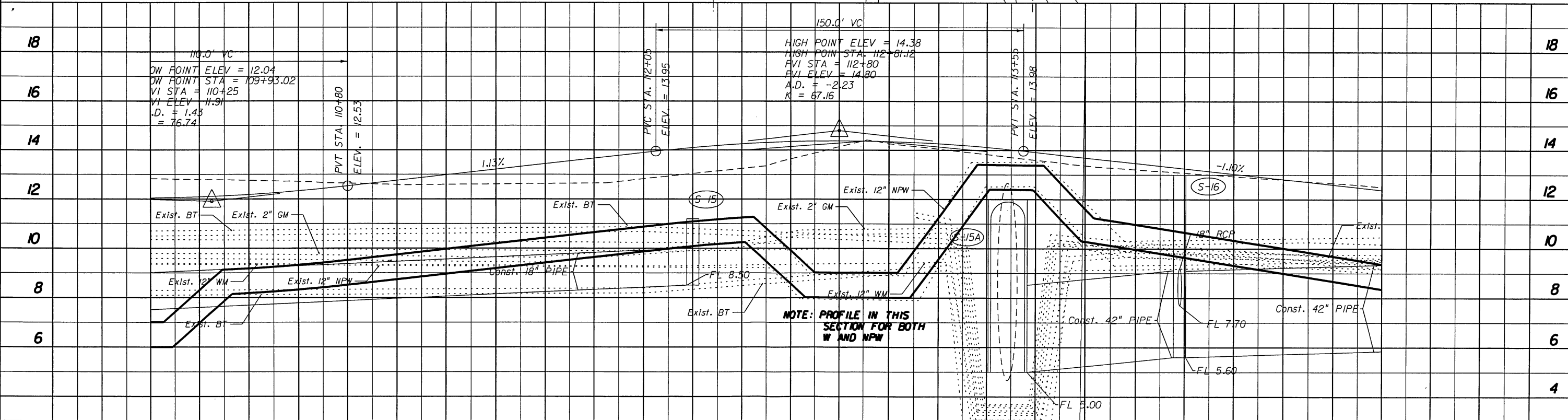
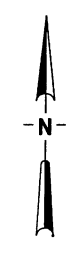
PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	DEC. 05	0950207301
WILLIAM T. HARLEY, P.E.	SCALE	DWG. NO.
P.F. #63321	1"=20'	5



NOTES:
TIE IN UNDER R.R. TO BE PERFORMED AFTER LAB ACCEPTANCE WITH RESTRAINED JOINT BENDS IN ACCORDANCE WITH COP SPECIFICATIONS.

NOTES:
REMOVE EXISTING SECTIONS OF 12" LINE AND INSTALL NEW LINES THRU EXISTING CASINGS UNDER R.R.



NOTE: PROFILE IN THIS SECTION FOR BOTH W AND NPW

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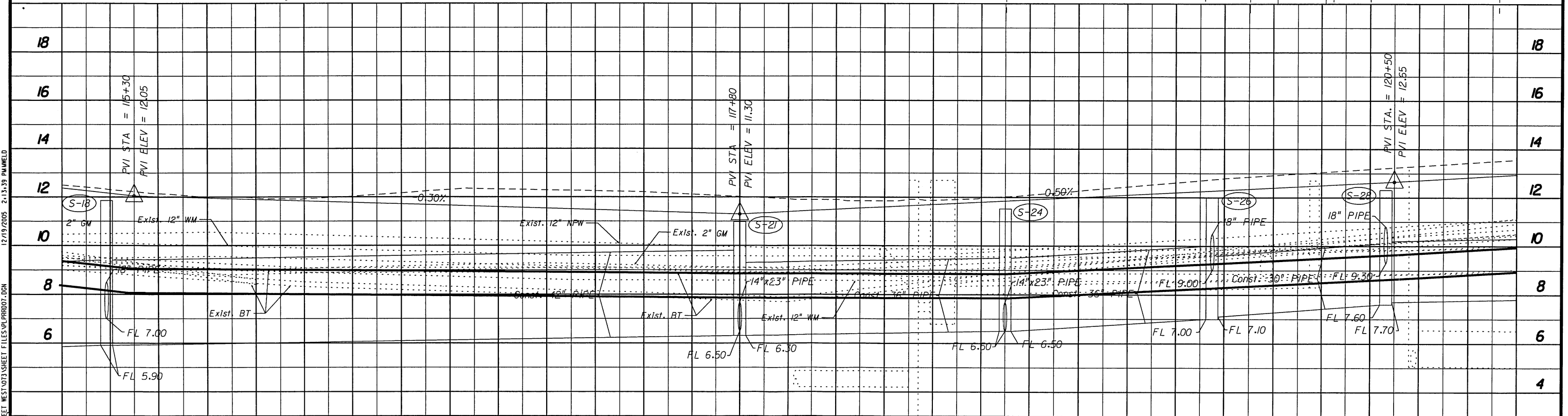
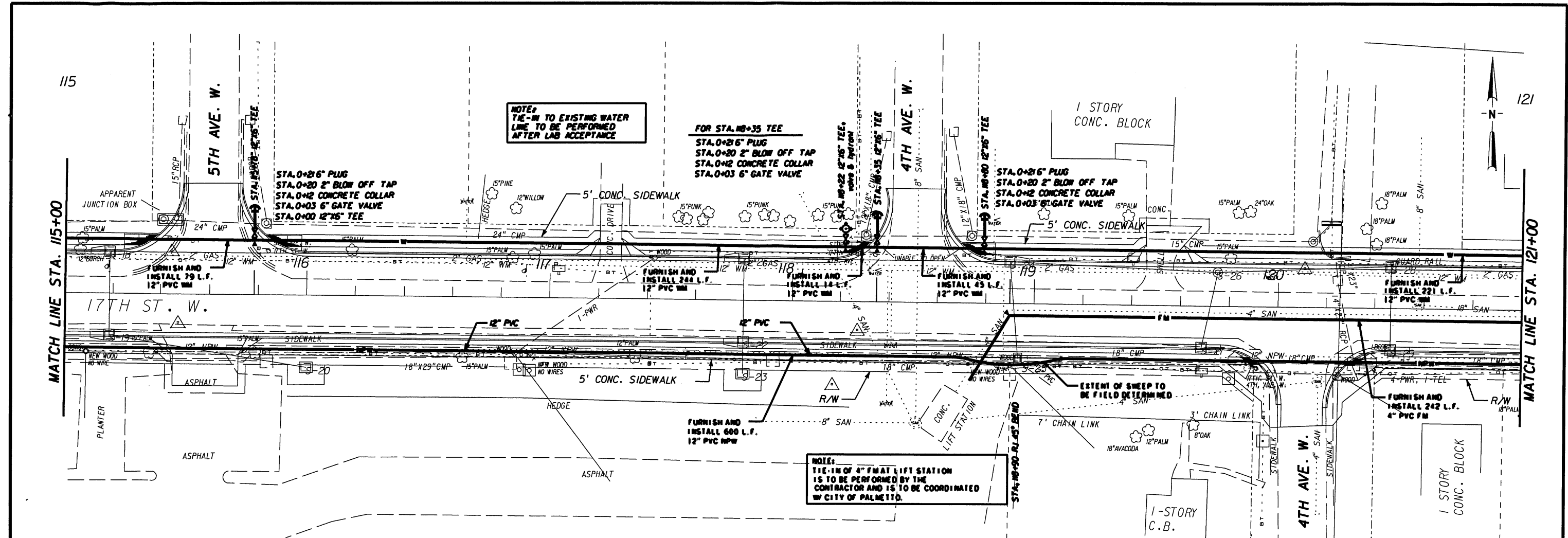
DESIGNED	WTH
DRAWN	MAW
CHECKED	
PROJECT ENGINEER	WILLIAM T. HARLEY, P.E.

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
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17TH STREET WEST
FROM BUSINESS U.S. 41 TO U.S. 41
MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
	DEC. 05	0950207301
WILLIAM T. HARLEY, P.E.	SCALE	DWG. NO.
P.E. #63321	1"=20'	6



LTR.	DATE	REVISIONS	BY	APPROV.

DESIGNED WITH
 DRAWN MAW
 CHECKED
 WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER

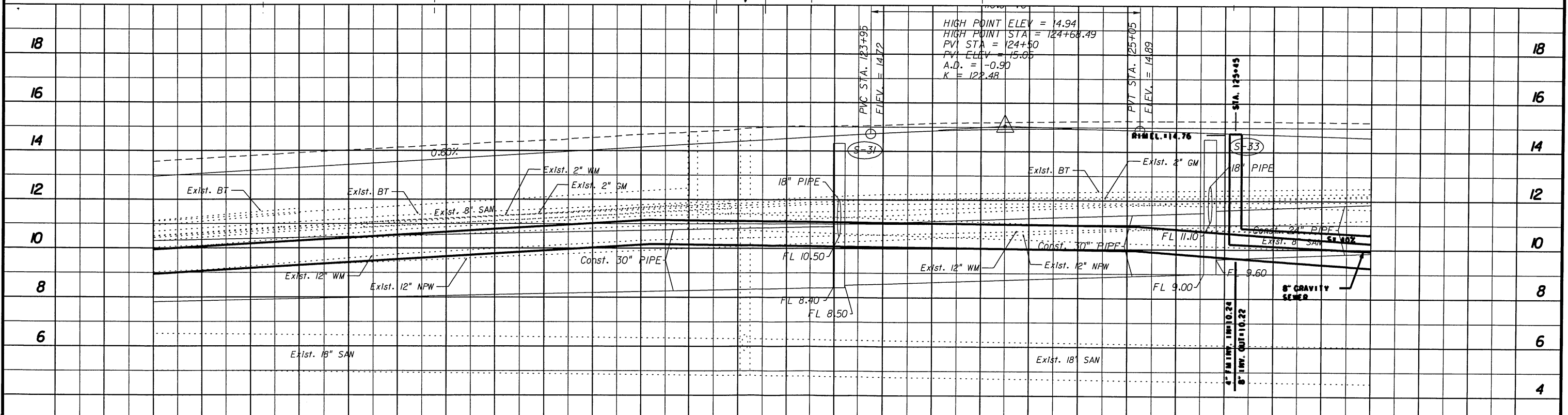
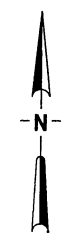
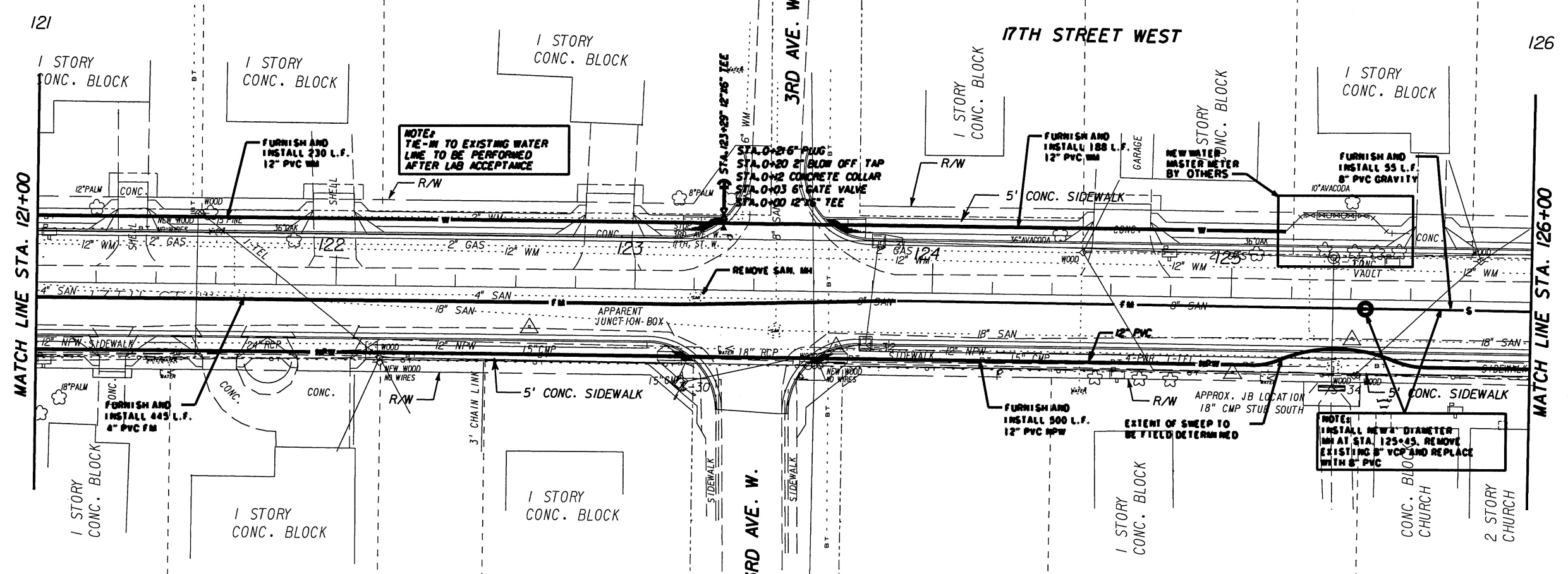
JONES EDMUNDS
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17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

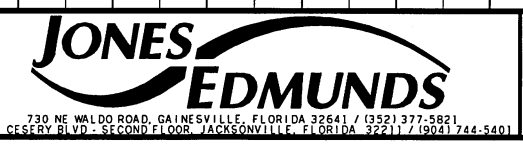
CERTIFICATE OF AUTHORIZATION #1814	DATE	PROJECT NO.
WILLIAM T. HARLEY, P.E.	DEC. 05	0950207301
P.E. #63321	SCALE	DWG. NO.
	1"=20'	7

12/19/2005 2:13:39 PALMED
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HIGH POINT ELEV = 14.94
 HIGH POINT STA = 124+68.49
 PVI STA = 124+50
 PVI ELEV = 15.05
 A.D. = -0.90
 K = 122.48

DESIGNED WITH
 DRAWN MAW
 CHECKED
 WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER



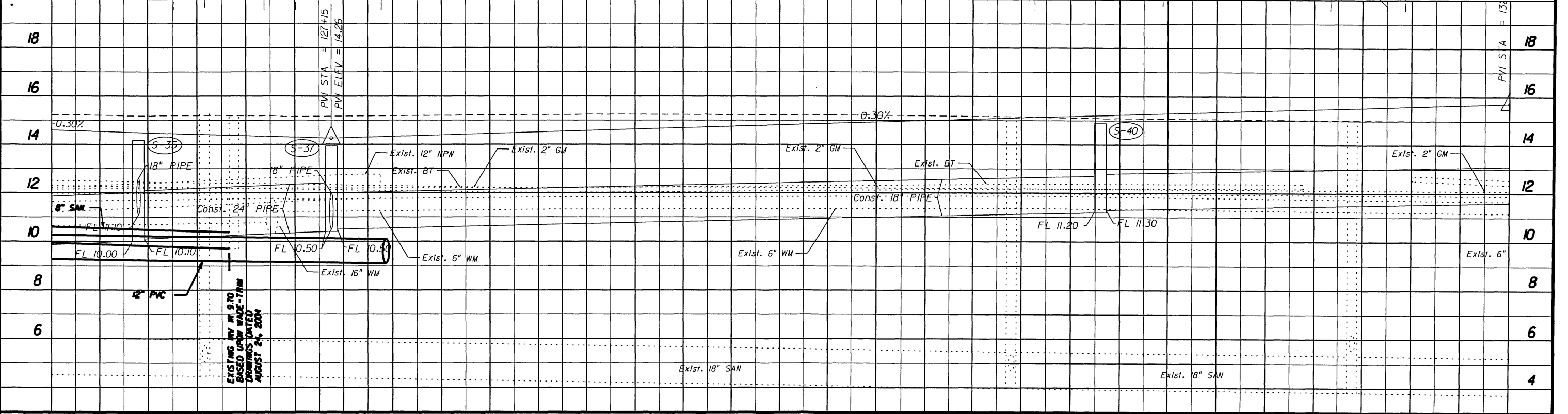
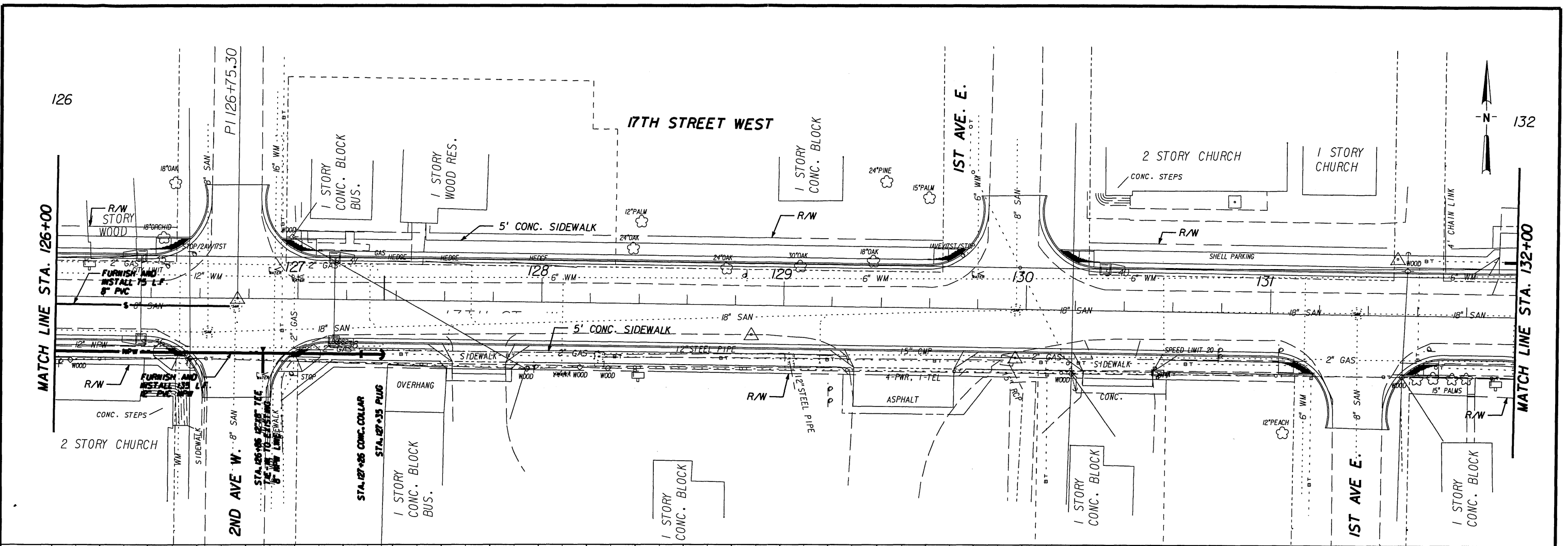
17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814 DATE DEC. 05 PROJECT NO. 0950207301
 WILLIAM T. HARLEY, P.E. SCALE 1"=20' DRG. NO. 8
 P.E. #63321

12/19/2005 2:13:57 PM WHELD
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12/19/2005 2:14:18 PM WELD
N:\09502 17TH STREET WEST\03\SHEET FILES\PLP0009.DGN



EXISTING BY M 970
BASED UPON WADE-TAM
DRAWINGS DATED
AUGUST 24, 2004

DATE	REVISIONS	BY	APPROV.

DESIGNED WTH
 DRAWN MAW
 CHECKED
 WILLIAM T. HARLEY, P.E.
 PROJECT ENGINEER

JONES EDMUNDS

730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
 1100 CECILY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

**17TH STREET WEST
 FROM BUSINESS U.S. 41 TO U.S. 41
 MANATEE COUNTY, FLORIDA**

PLAN AND PROFILE

CERTIFICATE OF AUTHORIZATION #1814 WILLIAM T. HARLEY, P.E. P.E. #63321	DATE DEC. 05	PROJECT NO. 0950207301
	SCALE 1"=20'	DWG. NO. 9