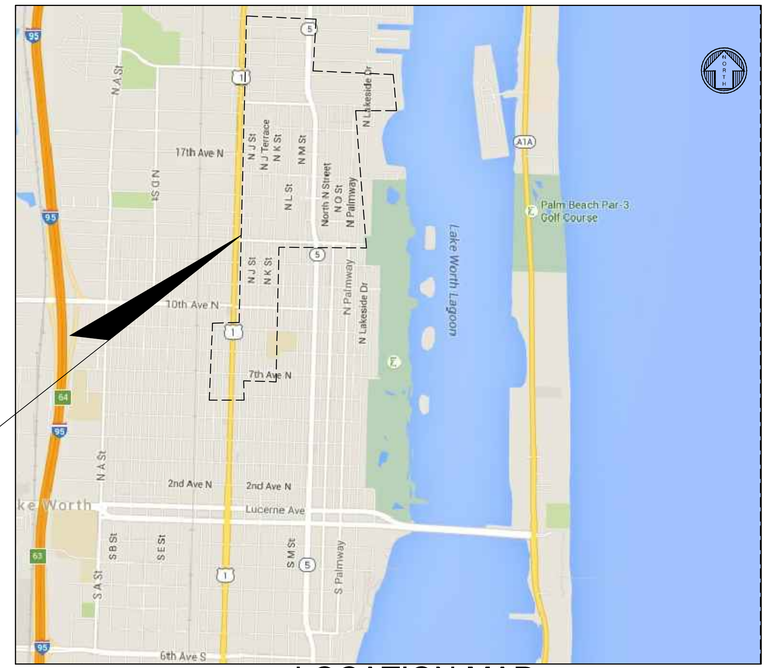
SHEET NO.
C-1

2 INCH WATER MAIN RE-PLACEMENT
PHASE II

100% BID PLANS

CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA
IFB #17-103



LOCATION MAP
SECTION 15, 21, & 22 TOWNSHIP 44, RANGE 43

SHEET NO:	DWG NO:	DRAWING TITLE
1	C-1	COVER SHEET
2	GN-1	GENERAL NOTES & SPECIFICATIONS
3	GN-2	NOTES, LEGENDS & ABBREVIATIONS
4	KS-1	KEY SHEET
5 thru 51	W-1 thru W-44	WATER PLANS
52 thru 54	WDET-1 thru WDET-3	WATER DETAILS
55 thru 56	PGDET-1 thru PGDET-2	PAVING & GRADING DETAILS
57 Sheets		TOPOGRAPHIC SURVEY

REV. #	DESCRIPTION	DATE
1	COVER SHEET	

WATER UTILITIES DIRECTOR:
BRIAN SHIELDS, P.E.

WATER UTILITIES ASSISTANT DIRECTOR:
JULIE PARHAM, P.E.

Always call 811 two full business days before you dig to have underground utilities located and marked.
Sunshine811.com

PREPARED FOR:

CITY OF LAKE WORTH

CITY COMMISSION

PAM TRIOLO, MAYOR
SCOTT MAXWELL, VICE MAYOR
CHRISTOPHER McVOY
ANDY AMOROSO
RYAN MAIER

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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VERTICAL INFORMATION HEREON IS RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88).

Matthew J. Cigale
Florida P.E. No. 74584

CITY PROJECT NUMBER: WT 1506
CTA PROJECT NUMBER:16-0001-001-01

I. APPLICABLE CODES

A. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CITY OF LAKE WORTH UTILITY DEPARTMENT APPROVED PRODUCTS LIST & ALL OTHER LOCAL, STATE AND NATIONAL CODES WHERE APPLICABLE.

B. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.

C. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D.).

D. WITHIN THE CITY OF LAKE WORTH JURISDICTIONAL RIGHT-OF-WAY, ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH CITY OF LAKE WORTH APPROVED PRODUCTS LIST, CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT & UTILITY DEPARTMENT "MINIMUM STANDARDS" REQUIREMENTS.

E. TRENCH SAFETY ACT

1. ALL TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 90-96 OF THE LAWS OF FLORIDA (THE TRENCH SAFETY ACT).
2. ALL TRENCH EXCAVATION IN EXCESS OF 5 FEET IN DEPTH SHALL BE UNDERTAKEN IN ACCORDANCE WITH O.S.H.A. STANDARD 29 CFR. SECTION 1926.650 SUBPART P.
3. A TRENCH SAFETY SYSTEM, IF REQUIRED, SHALL BE DESIGNED BY THE CONTRACTOR.

F. ASBESTOS CEMENT PIPE (ACP), AND TRANSITE PIPE, CONTAIN ASBESTOS MATERIAL. ALL ASBESTOS CONTAINING MATERIALS SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH THE CURRENT LOCAL, STATE AND FEDERAL REGULATIONS. THIS INCLUDES THE CUTTING, PLUGGING AND DISPOSAL OF EXISTING ACP OR TRANSITE WATER MAIN PIPES.

G. ALL HANDICAP ACCESSIBLE AREAS TO CONFORM WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT, LATEST EDITION.

H. IN THE EVENT OF A CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE REQUIREMENTS OF ANY JURISDICTIONAL AUTHORITIES, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

II. PRECONSTRUCTION RESPONSIBILITIES

A. FOR WORK WITHIN CITY OF LAKE WORTH JURISDICTIONAL RIGHT-OF-WAY, PLAN APPROVAL, CITY COMMISSION APPROVAL AND PERMIT ISSUANCE ARE REQUIRED PRIOR TO SCHEDULING PRE-CONSTRUCTION CONFERENCE.

B. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A PRECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS AND THE ENGINEER OF RECORD.

C. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL CERTIFICATION NUMBER AND FIELD MARKINGS AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION, CALL 811.

D. LOCATION OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE DRAWN FROM AVAILABLE RECORDS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE EXISTING FACILITIES SHOWN OR FOR ANY EXISTING FACILITY NOT SHOWN. THE CONTRACTOR SHALL VERIFY THROUGH VACUUM EXCAVATION & TEST HOLE METHODS, THE ELEVATIONS AND LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION. IF AN EXISTING FACILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION UPON EXCAVATION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE ISSUE.

E. THE CONTRACTOR SHALL COORDINATE W/ OTHER UTILITY OWNERS TO LOCATE, IDENTIFY OR RELOCATE EXISTING UTILITIES AS REQUIRED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS WORK. IT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

F. FOR STREET EXCAVATION OR CLOSING OR FOR ALTERATION OF ACCESS TO PUBLIC OR PRIVATE PROPERTY, INFORM:
1. LOCAL POLICE TRAFFIC SERGEANT
2. LOCAL FIRE DEPARTMENT DISPATCH
3. LAKE WORTH PUBLIC SERVICES DEPARTMENT

G. THE CONTRACTOR SHALL USE EXTREME CAUTION WORKING UNDER, OVER AND AROUND EXISTING ELECTRIC LINES. THE CONTRACTOR SHALL CONTACT THE CITY OF LAKE WORTH ELECTRIC UTILITY DEPARTMENT TO VERIFY LOCATIONS, VOLTAGE AND REQUIRED CLEARANCES, ONSITE, IN RIGHT-OF-WAYS AND IN EASEMENTS, PRIOR TO ANY CONSTRUCTION IN THE VICINITY OF EXISTING LINES.

H. ALL UTILITY / ACCESS EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION.

I. NO CONSTRUCTION MAY COMMENCE UNTIL THE APPROPRIATE PERMITS HAVE BEEN OBTAINED FROM ALL LOCAL, STATE, AND FEDERAL AGENCIES.

J. ALL REQUIRED GOVERNMENTAL AGENCY BUILDING AND RIGHT OF WAY PERMITS TO BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITY.

K. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULING FOR CONNECTION TO THE EXISTING WATER AND SEWER LINES WITH THE CITY OF LAKE WORTH WATER UTILITY DEPARTMENT.

L. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL APPLICABLE TESTS HAVE BEEN PERFORMED AND PASSED AND THE SYSTEM IS APPROVED BY APPLICABLE REGULATORY AGENCIES, INCLUDING THE PALM BEACH COUNTY HEALTH DEPARTMENT.

III. INSPECTIONS

A. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAKE WORTH PUBLIC SERVICES & UTILITY DEPARTMENT, THE ENGINEER OF RECORD, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND 24 HOUR ADVANCED NOTIFICATION PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS, WHERE APPLICABLE:

1. CLEARING AND FILLING
2. WATER DISTRIBUTION SYSTEM (INSTALLATION & TESTING)
3. SUBGRADE
4. LIMEROCK BASE
5. ASPHALTIC CONCRETE
6. SIDEWALK
7. SUBSTANTIAL COMPLETION
8. FINAL

IV. SHOP DRAWINGS

A. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD FOR THE FOLLOWING: FIRE HYDRANTS, VALVES, VALVES BOXES, METER BOXES, FITTINGS, PIPE MATERIAL, SERVICE CONNECTIONS AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED. CITY OF LAKE WORTH APPROVED PRODUCTS LIST MUST BE SUBMITTED.

V. TEMPORARY FACILITIES

A. GENERAL:

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.

B. TRAFFIC REGULATION:

1. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). CONTRACTOR IS RESPONSIBLE TO PREPARE AND PROCESS A MAINTENANCE OF TRAFFIC PLAN AND OBTAIN APPROVAL FROM CITY OF LAKE WORTH PUBLIC SERVICES & UTILITY DEPARTMENT AND PALM BEACH COUNTY TRAFFIC ENGINEERING AND FDOT WHERE APPLICABLE PRIOR TO THE START OF CONSTRUCTION.
2. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
3. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS, UNLESS IN ACCORDANCE WITH METHODS APPROVED BY THE ENGINEER OF RECORD AND THE CITY OF LAKE WORTH PUBLIC SERVICES & UTILITY DEPARTMENT.
4. THE SAFE WALK ROUTE FOR ALL SCHOOLS WITHIN THE VICINITY OF THE CONSTRUCTION ZONE SHALL BE MAINTAINED DURING THE ARRIVAL AND DISMISSAL OF SCHOOL.
5. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE.
6. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN ALL TRAFFIC CONTROL DEVICES DURING CONSTRUCTION. ANY DEVICE DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY RESTORED AT THE CONTRACTORS EXPENSE. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED IN ACCORDANCE WITH CITY OF LAKE WORTH PUBLIC SERVICES & UTILITY DEPARTMENT STANDARDS.

VI. WATER DISTRIBUTION SYSTEM:

A. SEPARATION OF WATER AND SEWER MAINS:

FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATERMAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES AND ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

1. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED SEWER, STORMWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 2-610, F.A.C.
2. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
3. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATERMAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE TYPE SANITARY SEWER, WASTEWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAINS AND GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATERMAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
4. NEW OR RELOCATED UNDERGROUND WATERMAINS SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED 'ON SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM' AS DEFINED IN SECTION 381.0065(2), F.S. AND RULE 64E-6.002, F.A.C.

VERTICAL SEPARATION BETWEEN UNDERGROUND WATERMAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCEMAINS, AND RECLAIMED WATER PIPELINES.

1. NEW OR RELOCATED UNDERGROUND WATERMAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST SIX INCHES, AND PREFERABLY TWELVE INCHES ABOVE, OR AT LEAST TWELVE INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
2. NEW OR RELOCATED UNDERGROUND WATERMAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPE LINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATERMAIN IS AT LEAST TWELVE INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATERMAIN ABOVE THE OTHER PIPELINE.
3. AT THE UTILITY CROSSING DESCRIBED IN PARAGRAPH 1 AND 2 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATERMAIN JOINTS SHALL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATERMAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWER, STORM SEWERS, STORMWATER FORCEMAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCEMAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER III 62-610, F.A.C.
4. WHERE 12" VERTICAL SEPARATION BETWEEN POTABLE WATER MAINS AND SANITARY OR STORM SEWERS CANNOT BE MAINTAINED, A 20 LINEAR FOOT SEGMENT OF DUCTILE IRON PIPE WATER MAIN WILL BE INSTALLED ON CENTER OVER THE CONFLICT.

B. MATERIALS:

1. PER CITY OF LAKE WORTH APPROVED PRODUCTS LIST OR AS OTHERWISE NOTED.
2. ALL WATER MAIN PIPE, INCLUDING FITTINGS, SHALL BE COLOR CODED OR MARKED BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90 DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE, AS WELL AS ALONG THE TOP OF THE PIPE.
3. EXISTING PIPE (4" AND ABOVE) DESIGNATED FOR ABANDONMENT SHALL BE FILLED WITH NON-EXCAVATABLE FLOWABLE FILL AND MEETING THE REQUIREMENTS OF FDOT STANDARD SPECIFICATION SECTION 121.
4. DUCTILE IRON FITTINGS FOR WATER DISTRIBUTION MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C153/A21.53-11. FITTINGS 4" AND LARGER SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.3-08.
5. ALL WATER MAIN INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 62-555.320, FLORIDA ADMINISTRATIVE CODE.
6. JOINTS FOR BELL AND SPIGOT DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO ANSI/AWWA STANDARD C111/A21.11-12 OR LATEST REVISION. MECHANICAL JOINT RESTRAINT SHALL BE PER CITY OF LAKE WORTH APPROVED PRODUCTS LIST.
7. WATER DISTRIBUTION VALVES SHALL BE GATE VALVES (4"-16") CONFORMING TO ANSI/AWWA C509-09 OR LATEST REVISION. THEY SHALL BE RESILIENT SEAT AND BI-DIRECTIONAL FLOW ONLY. MAXIMUM WORKING PRESSURE OF 200 PSI AND TESTED AT 400 PSI.

C. SERVICE CONNECTION:

1. PER CITY OF LAKE WORTH APPROVED PRODUCTS LIST OR AS OTHERWISE NOTED.

D. INSTALLATION:

1. ALL WATER AND FORCE MAINS SHALL BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" FOR DIP.
2. ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-10.
3. PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.
4. NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS & BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO THE CITY OF LAKE WORTH UTILITY DEPARTMENT AND THE PALM BEACH COUNTY HEALTH DEPARTMENT.
5. PIPE BEDDING MATERIAL SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8"-7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS, AND LARGER ROCK SHALL BE REMOVED. BEDDING MATERIAL SHALL BE COMPACTED IN 6" MAXIMUM LAYERS TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER AASTHO T-180. BEDDING MATERIAL SHALL BE PLACED 4" BELOW BOTTOM OF PIPE AND EXTEND TO SPRING LINE OF PIPE.
6. BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL (2" MAX. SIZE), PLACED AND COMPACTED TO ACHIEVE 98% OF THE MAXIMUM DENSITY PER AASTHO T-180, WITH WELL TAMPED LAYERS NOT TO EXCEED 6" TO A HEIGHT 12" ABOVE PIPE. REFER TO UTILITY TRENCH DETAIL WITHIN PLAN SHEETS.

E. TESTING:

1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED, DISINFECTED, AND CLEARED BY DEPARTMENT OF HEALTH.
2. HYDROSTATIC TESTING OF NEW WATER AND FORCE MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI (200 PSI MIN. FOR FIRELINES) FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION, THE PRESSURE TEST SHALL NOT VARY MORE THAN 5 PSI DURING THE TEST. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF THE CITY OF LAKE WORTH UTILITY DEPARTMENT AND THE ENGINEER OF RECORD.
3. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C651-05; METER RECONNECTIONS MAY BE MADE TO NEW LINES AFTER TWO CONSECUTIVE DAYS OF BACTERIOLOGICAL SAMPLES HAVE PASSED, AND COPIES OF RESULTS HAVE BEEN RECEIVED AND ACCEPTED BY THE ENGINEER, CITY OF LAKE WORTH UTILITY DEPARTMENT, AND DEPARTMENT OF HEALTH.
4. BACTERIOLOGICAL TESTS THAT MUST BE SUBMITTED TO DEPARTMENT OF HEALTH WITH THE FINAL WATER MAIN CERTIFICATION PACKAGE EXPIRE AFTER 60 DAYS (FROM THE DATE TESTS WERE PERFORMED). CONTRACTOR WILL BE REQUIRED TO PROVIDE NEW BACTERIOLOGICAL TESTS (AT CONTRACTORS EXPENSE) IF THEY SHOULD EXPIRE. CITY OF LAKE WORTH WILL ONLY PAY FOR PASSING BACTERIOLOGICAL TESTS AND FAILING TESTS MUST BE RETESTED ON ALL PORTIONS OF THE MAIN CONNECTED TO TESTING SITE, NOT JUST THE ONE LOCAL SITE THAT FAILS.
5. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS.
6. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:

$$L = \frac{S\,D\,P^{(0.5)}}{148000}$$

IN WHICH L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR. S EQUALS LENGTH OF PIPE (LINEAR FEET), D EQUALS NOMINAL DIAMETER OF PIPE (INCHES) AND P EQUALS THE MINIMUM TEST PRESSURE (POUNDS PER SQUARE INCH).

VII. PAVING

A. GENERAL:

1. ALL UNDERGROUND UTILITIES SHALL BE COMPLETED AND TESTED PRIOR TO FINISHED GRADING AND COMPACTION OF SUBGRADE.
2. ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION, SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
3. WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE CLEANLY SAW CUT TO ENSURE A PROPER JOINT.

B. MATERIALS:

1. LIMEROCK BASE MATERIAL SHALL BE CRUSHED LIMEROCK MIAMI OOLITE WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM (60% FOR LOCAL STREETS, DRIVEWAYS AND PARKING AREAS).
2. ASPHALT SURFACES FOR ROADWAYS SHALL CONFORM WITH THE FOLLOWING:

LOCAL: (40'-50' ROW)	2" TYPE S-III ASPHALT (TWO 1" LIFTS): BOTTOM COURSE: 1" LIFT OF TYPE S-III ASPHALTIC CONCRETE PAVEMENT FOLLOWED BY 1" LIFT OF TYPE S-III ASPHALTIC CONCRETE PAVEMENT. TACK COAT PER FDOT SECTION 300 BETWEEN LIFTS. NEW MATERIAL ONLY, NO RECYCLED ASPHALT (WEARING COURSE)
COLLECTOR: (60'-90' ROW)	2" TYPE S ASPHALT: BOTTOM COURSE 1 1/4" LIFT OF FDOT TYPE S-1 ASPHALTIC CONCRETE PAVEMENT FOLLOWED BY 3/4" THICKNESS OF FDOT TYPE S-III ASPHALTIC CONCRETE PAVEMENT. TACK COAT PER FDOT SECTION 300 BETWEEN LIFTS. NEW MATERIAL ONLY, NO RECYCLED ASPHALT (WEARING COURSE)

3. REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI EXCEPT WHERE OTHERWISE SHOWN ON THE PLANS.
4. SIDEWALK CONSTRUCTION SHALL BE CLASS I CONCRETE AND MINIMUM 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 5 FOOT O.C. WITHIN 48 HOURS OF PLACING. SIDEWALK THICKNESS SHALL BE 4" THICK WITHIN RESIDENTIAL AREAS. SIDEWALK THINKNESS SHALL BE 6" THICK WITHIN 10' OF CROSS STREETS/INTERSECTIONS, AT DRIVEWAYS, AND WITHIN ALL AREAS SUBJECT TO VEHICULAR TRAFFIC.
5. CURBS : CONCRETE 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS AT 10 FOOT (O.C.) MAX. SPACING (NO SECTION SHALL BE LESS THAN 4 FEET) WITHIN 48 HOURS OF PLACING.

C. INSTALLATION:

1. STABILZED SUBGRADE FOR ROADWAYS SHALL BE COMPACTED TO 98% OF MAXIMUM DENSITY PER AASTHO T-180 AND HAVE A MIN. L.B.R. OF 40.
2. LIMEROCK BASE COURSE FOR PAVED AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AS PER AASTHO T-180, HAVE A L.B.R. OF 100, AND CONFORM WITH THE FOLLOWING:

LOCAL: (40'-50' ROW)	A MINIMUM THICKNESS OF 8" & SHALL BE CONSTRUCTED IN TWO FOUR INCH LIFTS OR 10" CRUSHED CONCRETE. PRIME & TACK COAT PER FDOT SECTION 300.
COLLECTOR: (60'-90' ROW)	A MINIMUM THICKNESS OF 12" & SHALL BE CONSTRUCTED IN TWO SIX INCH LIFTS. PRIME & TACK COAT PER FDOT SECTION 300.

3. INSTALLATION OF THE BASE COURSE AND WEARING COURSE SHALL CONFORM WITH THE REQUIREMENTS OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR TYPE "S" ASPHALTIC CONCRETE OR THE LATEST REVISION.

D. TESTING:

1. THE FINISHED SURFACE OF THE ASPHALT BASE COURSE AND THAT OF THE ASPHALT WEARING SURFACE SHALL NOT VARY MORE THAN 1/4" FROM THE TEMPLATE. ANY IRREGULARITIES EXCEEDING THIS LIMIT SHALL BE CORRECTED.
2. DENSITY TESTS ON LIMEROCK, SUBGRADE, AND ALONG THE PIPE INSTALLATION, SHALL BE TAKEN BY AN INDEPENDENT TESTING LABORATORY CERTIFIED BY THE STATE OF FLORIDA, AS CHOSEN BY AND PAID FOR BY THE CITY. CONTRACTOR SHALL SCHEDULE TESTING AND COORDINATE WITH TESTING LABORATORY. CITY WILL ONLY PAY FOR PASSING TEST RESULTS. FAILING TEST RESULTS WILL BE PAID FOR BY CONTRACTOR.
3. ALL TESTING COSTS (PAVING) SHALL BE PAID FOR BY THE CONTRACTOR.
4. DENSITY TESTS ON THE STABILIZED SUBGRADE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD, AND APPROVED BEFORE ANY LIMEROCK BASE IS CONSTRUCTED.
5. DENSITY TESTS AND AS-BUILTS ON THE FINISHED LIMEROCK BASE SHALL BE SUPPLIED TO THE ENGINEER OF RECORD (E.O.R.) AND APPROVED BEFORE ANY ASPHALT PAVEMENT IS CONSTRUCTED. INCLUDING AS-BUILTS ON PAVED SWALES AND DRIVEWAYS.

VIII. PAVEMENT MARKING & SIGNAGE

A. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," LATEST EDITION; AND CITY OF LAKE WORTH PUBLIC SERVICES & UTILITY DEPARTMENT STANDARDS (LATEST EDITION). ALL NEW PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

IX. DE-WATERING

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING IF DEWATERING PERMIT IS REQUIRED FOR ANY OF THE PROPOSED CONSTRUCTION ACTIVITIES. IF A DEWATERING PERMIT IS REQUIRED, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PREPARE AND SUBMIT A DEWATERING REPORT APPLICATION (PREPARED BY A STATE OF FLORIDA LICENSED ENGINEER OR A REGISTERED PROFESSIONAL GEOLOGIST) TO ALL APPLICABLE AGENCIES FOR PERMIT APPROVAL. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE TESTING AND MONITORING OF THE DEWATERING OPERATIONS AND WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MEANS AND METHODS OF DEWATERING WHICH WILL BE SET FORTH BY THE DEWATERING PERMIT(S) OBTAINED BY THE CONTRACTOR.

THE CONTRACTOR WILL BE REQUIRED TO PROVIDE TESTING AND MONITORING OF THE DEWATERING OPERATIONS AND WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MEANS AND METHODS OF DEWATERING WHICH WILL BE SET FORTH BY THE DEWATERING PERMIT(S) OBTAINED BY THE CONTRACTOR.

X. NPDES REQUIREMENT

A. AT LEAST TWO (2) DAYS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A CGP "NOTICE OF INTENT (N.O.I.) TO USE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THAT DISTURB ONE OR MORE ACRES OF LAND" FORM (DEP FORM 62-621.300(4)(b)) TO FDEP NOTICES CENTER. THE CONTRACTOR WILL BE RESPONSIBLE FOR (AT THE CONTRACTORS EXPENSE) (1) ASSISTING THE OWNER(S) WITH PREPARING, COMPLETING, AND FILING THE N.O.I. AND N.O.T. TO FDEP (2) PREPARING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (REQUIRED PRIOR TO THE NOI SUBMITTAL) (3) IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT WAS REQUIRED TO BE DEVELOPED PRIOR TO THE NOI SUBMITTAL, AND (4) RETENTION OF RECORDS REQUIRED BY THE PERMIT, INCLUDING RETENTION OF A COPY OF THE SWPPP AT THE CONSTRUCTION SITE FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL SITE STABILIZATION. A "NOTICE OF TERMINATION (N.O.T.) OF GENERIC PERMIT COVERAGE" FORM (DEP FORM 62-621.300(6)) MUST BE SUBMITTED TO FDEP TO DISCONTINUE PERMIT COVERAGE, SUBSEQUENT TO COMPLETION OF CONSTRUCTION. FOR ADDITIONAL INFORMATION SEE FDEP WEBSITE: http://www.dep.state.fl.us/water/stormwater/npdes. AS OF MARCH, 2003 THRESHOLD WILL BE REDUCED TO PROJECTS ONE ACRE OR MORE.

XI. PROJECT CLOSE-OUT

A. CLEAN-UP:

1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEPT BROOM CLEAN.
2. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT, OR EMPLOYEES, TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS. TO THAT END, THE CONTRACTOR SHALL DO, AS REQUIRED, ALL NECESSARY HIGHWAY, DRIVEWAY, WALK AND LANDSCAPING WORK. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.
3. WHERE MATERIAL OR DEBRIS HAS WASHED OR FLOWED INTO OR HAS BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
4. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
5. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.

B. PROJECT RECORD DOCUMENTS:

1. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH, MATERIAL AND ELEVATION OF ANY FACILITY NOT BUILT EXACTLY ACCORDING TO PLANS.
2. UPON COMPLETION OF DRAINAGE IMPROVEMENTS AND LIMEROCK BASE CONSTRUCTION (AND BEFORE PLACING ASPHALT PAVEMENT) THE CONTRACTOR SHALL FURNISH THE ENGINEER OF RECORD "AS-BUILT" PLANS FOR THESE IMPROVEMENTS. SEE ENGINEERS AS-BUILT REQUIREMENTS. ALL "AS-BUILT" INFORMATION SHALL BE CERTIFIED BY A FLORIDA REGISTERED LAND SURVEYOR.
3. UPON COMPLETION OF THE WATER SYSTEMS AND PRIOR TO FINAL PAYMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF ALL "AS-BUILT" CONTRACT DRAWINGS FOR REVIEW AND APPROVAL. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES AND DIMENSIONS, LOCATIONS, AND ELEVATIONS OF ALL IMPROVEMENTS. ALSO SEE ENGINEERS AS-BUILT REQUIREMENTS.
4. ALL "AS-BUILT" INFORMATION SHALL BE CERTIFIED BY A FLORIDA REGISTERED LAND SURVEYOR.

XII. ENGINEER'S AS-BUILT REQUIREMENTS

A. ALL AS-BUILT LOCATIONS MENTIONED BELOW SHALL PROVIDE COORDINATES (NORTHING AND EASTING) SPATIALLY LOCATED WITHIN STATE PLANE COORDINATES. ALL LOCATIONS (NORTHING AND EASTING) SHALL BE PROVIDED TO THE NEAREST HUNDREDTH OF A FOOT. ALSO ALL AS-BUILT LOCATION POINT COORDINATES SHALL BE PROVIDED AT THE CORRESPONDING NORTHING AND EASTING IN AN AUTOCAD FILE.

B. EASEMENT LOCATIONS (NORTHING AND EASTINGS) SHALL BE PROVIDED ON AS-BUILTS.

C. INDICATE PIPE JOINT LOCATIONS WHERE WATER AND WASTEWATER OR RECLAIMED WATER PIPING CROSSES.

D. SHOWING THE EXTENTS OF D.I.P. WATER MAIN OVER WATER CONFLICTS.

E. SHOW ALL ABANDONED IN PLACE FACILITIES INCLUDING THE EXTENT AND METHOD OF ABANDONMENT.

F. AS-BUILTS OF WATER AND FIRE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:

1. TOP OF PIPE ELEVATIONS SHALL BE PROVIDED AT VERTICAL DEFLECTION POINTS, EVERY 50 LINEAR FEET AND TO THE NEAREST HUNDREDTH OF A FOOT.
2. LOCATIONS AND TOP OF PIPE ELEVATIONS OF ALL VERTICAL DEFLECTION POINTS AND FITTINGS INCLUDING BENDS, TEES, CHECK VALVES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
3. ALL TIE INS TO EXISTING LINES SHALL PROVIDE LOCATION AND TOP OF PIPE ELEVATION.
4. LOCATION AND TOP OF PIPE ELEVATION AT THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR WHERE THE WATER SERVICE TERMINATES.
5. CROSSING INFORMATION BETWEEN PROPOSED WATER MAIN PIPING AND EXISTING AND PROPOSED SEWER MAIN, FORCE MAIN, DRAINAGE, WATER MAIN, UTILITIES, ETC.
6. THE ENDS OF ALL WATER SERVICES AT THE BUILDINGS OR HOMES SHALL BE AS-BUILT OR WHERE THE WATER SERVICE TERMINATES.

G. ROCK AS-BUILTS SHALL BE PROVIDED FOR ROADWAYS AND DRIVEWAYS AREAS WHICH SHALL CONSIST OF THE FOLLOWING:

1. ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.
2. ROCK AS-BUILTS AND LIP OF CURB AS-BUILT ELEVATIONS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS SHALL BE SHOWN.
4. ELEVATIONS AROUND ISLAND AREAS WILL ALSO BE REQUIRED.
5. WHERE CONCRETE IS TO BE USED AS A FINISHED PRODUCT FOR THE ROADWAY OR DRIVEWAY ROCK AS-BUILTS WILL BE REQUIRED AS INDICATED ABOVE AS WELL AS AS-BUILTS ON THE FINISHED CONCRETE AT LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.
6. AS-BUILTS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SWALES, PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL/SOD, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.

H. SIDEWALK AS-BUILTS SHALL BE PROVIDED CONSISTING OF THE FOLLOWING: LOCATION REFERENCED TO RIGHT OF WAY AND AS-BUILT ELEVATIONS PROVIDED AT BACK AND FRONT OF SIDEWALK EVERY 50 LF AND AT THE PC AND PT ALONG CURVES.

I. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS AND "AS-BUILTS", ON FULL SIZE, 24" X 36" REPRODUCIBLE MATERIAL. EIGHT (8) SETS OF THESE RECORD DRAWINGS AND "AS-BUILTS" SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL LAND SURVEYOR. ADDITIONALLY, AN ELECTRONIC COPY OF THESE RECORD DRAWINGS AND "AS-BUILTS", SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN BOTH PDF AND AUTOCAD (VERSION 2010 OR GREATER).

J. FINAL DELIVERABLES SHALL INCLUDE AN AUTOCAD-COMPATIBLE DIGITAL FILE CONTAINING ALL PERTINENT RECORD DRAWING AND "AS-BUILT" INFORMATION (INCLUDING, WATER, SEWER, PAVING, AND DRAINAGE). FILE TO BE SPATIALLY LOCATED WITHIN STATE PLANE COORDINATES.

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

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FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

GENERAL NOTES & SPECIFICATIONS

SHEET NO.
GN-1

G:\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-SPECS.dwg [GN-1] Dec 21, 2016 3:40pm KMENTING

TEST HOLE DATA

INDICATES TEST HOLE SYMBOL AND LOCATION

TEST HOLE #	UTILITY FOUND	SIZE AS FOUND (IN.)	MATERIAL AS FOUND	GROUND ELEVATION	COVER	TOP OF UTILITY ELEVATION	COMMENTS
1	TELEPHONE		CONCRETE	12.04	3.20	8.84	SEE NOTE
2	GAS	2	PLASTIC	11.12	2.60	8.52	YELLOW
3	WATER	6		10.92	3.38	7.54	SEE NOTE
4	TELEPHONE		CONCRETE	12.43	2.75	9.68	SEE NOTE
5	GAS	1	PLASTIC	12.19	2.55	9.64	YELLOW
6	WATER	4	CAST IRON	10.58	1.77	8.81	
7	WATER	6		10.51	2.60	7.91	SEE NOTE
8	TELEPHONE		CONCRETE	13.28	2.03	11.25	SEE NOTE
9	GAS	1	PLASTIC	13.04	3.19	9.85	YELLOW
10	GAS	1	PLASTIC	10.24	3.13	7.11	YELLOW
11	GAS	2	STEEL	15.23	2.11	13.12	
12	GAS	2	STEEL	14.70	2.26	12.44	
13	GAS	2	PLASTIC	13.87	3.54	10.33	YELLOW
14	UNKNOWN	6	CAST IRON	10.15	2.01	8.14	SEE NOTE
15	GAS	2	STEEL	15.30	2.15	13.15	RUNNING EAST/WEST
16	GAS	2	STEEL	15.62	3.89	11.73	SEE NOTE
17	GAS	2	PLASTIC	14.86	3.87	10.99	SEE NOTE
18	GAS	3	STEEL	13.80	2.97	10.83	
19	DID NOT FIND						
20	TELEPHONE		CONCRETE	13.19	3.38	9.81	SEE NOTE
21	GAS	1	STEEL	14.65	1.62	13.03	SEE NOTE
22	SEE TEST HOLE 17						
23	GAS	4	PLASTIC	5.55	3.33	2.22	YELLOW
24	UNKNOWN	3/4	COPPER	4.84	0.91	3.93	SEE NOTE
25	WATER	6	CAST IRON	4.43	2.34	2.09	SEE NOTE
26	GAS	2	PLASTIC	10.90	1.98	8.92	SEE NOTE
27	GAS	6	PLASTIC	10.14	3.00	7.14	YELLOW
28	GAS	2	PLASTIC	7.54	2.15	5.39	YELLOW
29	GAS	2	PLASTIC	7.13	4.34	2.79	SEE NOTE
30	GAS	2	PLASTIC	7.44	2.65	4.79	YELLOW
31	GAS	6	STEEL	8.39	2.06	6.33	
32	GAS	2	PLASTIC	14.23	2.54	11.69	YELLOW
33	GAS	2	PLASTIC	15.16	2.70	12.46	YELLOW
34	GAS	2		15.20	1.58	13.62	POOR CONDITION
35	GAS	2	STEEL	15.67	1.67	14.00	
36	GAS	2	PLASTIC	13.01	2.37	10.64	YELLOW
37	GAS	2	PLASTIC	13.57	3.44	10.13	YELLOW
38	GAS	2	STEEL	15.80	0.77	15.03	
39	GAS	2	STEEL	15.69	0.71	14.98	
39A	TELEPHONE	1	DBC	15.31	2.40	12.91	SEE NOTE
41	TELEPHONE	24	CONCRETE	12.15	3.45	8.70	SEE NOTE
42	TELEPHONE	10	CONCRETE	10.90	2.65	8.25	SEE NOTE
43	WATER	6	CAST IRON	12.13	2.10	10.03	
44	GAS	2	PLASTIC	12.64	4.51	8.13	YELLOW
45	TELEPHONE	4		10.96	2.50	8.46	
46	TELEPHONE	4	PVC GRAY	10.98	2.34	8.64	
47	GAS	4	PLASTIC	5.35	3.39	1.96	YELLOW
48	WATER	6	CAST IRON	5.35	2.13	3.22	
49	GAS	2	PLASTIC	3.15	2.77	0.38	YELLOW
50	GAS	2	PLASTIC	15.30	1.62	13.68	SEE NOTE

GENERAL NOTES

1. EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES AND "811" TO LOCATE ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES DURING CONSTRUCTION AND RESETTING UTILITIES TO NEW GRADE AND SLOPE WITHIN THE LIMITS OF CONSTRUCTION.
2. SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF THE FLORIDA TRENCH SAFETY ACT, THE FLORIDA UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT, AND ALL APPLICABLE O.S.H.A. REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL NECESSARY PRECAUTIONS WHEN WORKING IN THE VICINITY OF OVERHEAD ELECTRIC LINES.
3. MAINTENANCE OF TRAFFIC. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC (MOT) PLANS, PREPARED BY A WORK SITE TRAFFIC SUPERVISOR AS CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION, PRIOR TO COMMENCING CONSTRUCTION WITHIN CITY OF LAKE WORTH RIGHT-OF-WAY.
4. ACCESS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES.
5. WARRANTY. ALL WORK, MATERIALS, OR EQUIPMENT SHALL BE WARRANTIED FOR A MINIMUM OF ONE YEAR, FROM THE DATE OF FINAL ACCEPTANCE BY THE CITY OF LAKE WORTH, AGAINST DEFECTIVE MATERIALS AND/OR WORKMANSHIP. ALL WORK FOUND TO BE DEFECTIVE WILL BE REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE CITY OF LAKE WORTH.
6. SHOP DRAWINGS. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF SEVEN (7) COPIES (OR MORE, IF REQUIRED) OF SHOP DRAWINGS, PRODUCT DATA, MATERIAL SPECIFICATIONS AND OTHER INFORMATION REGARDING CONSTRUCTION MATERIALS AND STRUCTURES AS REQUESTED BY THE ENGINEER OF RECORD OR THE CITY OF LAKE WORTH. SHOP DRAWINGS MUST BE NEWLY PREPARED INFORMATION, DRAWN TO ACCURATE SCALE. STANDARD INFORMATION PREPARED WITHOUT SPECIFIC REFERENCE TO THE PROJECT WILL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW. SHOP DRAWINGS SHALL BE SUBJECT TO THE FOLLOWING:
   A. BY SUBMITTAL OF ANY SHOP DRAWING OR CATALOG DATA, BEARING AN APPROVAL STAMP, THE CONTRACTOR REPRESENTS THAT IT HAS DETERMINED AND VERIFIED ALL FIELD MEASUREMENTS, FIELD CONSTRUCTION CRITERIA, MATERIALS, DIMENSIONS, CATALOG NUMBERS AND SIMILAR DATA, OR WILL DO SO, AND THAT IT HAS CHECKED AND COORDINATED EACH ITEM WITH OTHER APPLICABLE APPROVED SHOP DRAWINGS AND THE CONTRACT REQUIREMENTS.
   B. SHOP DRAWINGS AND CATALOG DATA SUBMITTED WITHOUT THE CONTRACTOR'S STAMP OF APPROVAL WILL BE RETURNED TO THE CONTRACTOR WITHOUT REVIEW. APPROVAL OF SHOP DRAWINGS, SAMPLES, OR CATALOG DATA BY THE ENGINEER OF RECORD OR THE CITY OF LAKE WORTH SHALL NOT AUTHORIZE ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
   C. ANY PROPOSED SUBSTITUTE OR EQUAL TO THE THAT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE ACCOMPANIED BY CALCULATIONS SUBSTANTIATING EQUIVALENCY. SHOP DRAWINGS WITH SUBSTITUTE MATERIALS NOT ACCOMPANIED BY CALCULATIONS WILL BE RETURNED WITHOUT REVIEW.
   D. THE CONTRACTOR SHALL CONFIRM COMPATIBILITY OF PIPE SLOPES AND INVERTS DURING THE SHOP DRAWING AND MATERIALS ORDERING PHASE OF THE PROJECT AND ADVISE THE ENGINEER OF RECORD IN WRITING OF ANY DISCREPANCIES.
   E. INDIVIDUAL SHOP DRAWINGS FOR ALL PRECAST STRUCTURES ARE REQUIRED. CATALOG LITERATURE WILL NOT BE ACCEPTED FOR PRECAST STRUCTURES.
7. FIELD REVIEWS. THE CONTRACTOR SHALL PROVIDE NOTIFICATION, 48 HOURS (MIN.), PRIOR TO ANY REQUIRED FIELD REVIEWS OR INSPECTIONS AND SHALL SUPPLY ALL NECESSARY EQUIPMENT, LABOR, AND MATERIALS FOR INSPECTION AND/OR TEST. ALL WORK SHALL BE OPEN AND SUBJECT TO REVIEW AND/OR INSPECTION BY AUTHORIZED PERSONNEL OF THE CITY OF LAKE WORTH AND THE ENGINEER OF RECORD.
13. DENSITY TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT THE PROPER COMPACTION HAS BEEN ACHIEVED FOR ALL SUBGRADE, BASE MATERIAL, PIPE BASE MATERIAL, BACKFILL, & ALL OTHER AREAS WHERE COMPACTION REQUIREMENTS ARE SPECIFIED.
14. PERMITS. THE CONTRACTOR SHALL NOT COMMENCE CONSTRUCTION PRIOR TO RECEIPT OF ALL APPLICABLE PERMITS AND APPROVALS INCLUDING AN APPROVED MAINTENANCE OF TRAFFIC PLAN. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE REQUIREMENTS OF THE PERMITS AND AGENCY APPROVALS.
15. EROSION CONTROL. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH FDOT INDICES 102, 103 AND 106, THE FDEP NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (IF APPLICABLE), AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). FILTER FABRIC, HAY BALES, OR ROCK BAGS SHALL BE INSTALLED IN EACH INLET THROUGHOUT THE CONSTRUCTION PERIOD. A SOIL TRACKING PREVENTION DEVICE (STPD) SHALL CONSTRUCTED AT ALL UNSTABILIZED CONSTRUCTION ACCESS POINTS, PER FDOT INDEX NO. 106.
16. STORM DRAINAGE. ALL STORM DRAINAGE PIPE JOINTS SHALL BE WRAPPED IN FILTER FABRIC PER FDOT STANDARD INDEX NO. 280. ALL DRAINAGE STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. ALL GRATES SHALL BE SECURED TO THE STRUCTURES WITH AN EYEBOLT AND CHAIN. ALL STORM DRAINAGE SHALL BE FREE OF SILT AND SEDIMENT AT THE TIME OF FINAL ACCEPTANCE BY THE CITY OF LAKE WORTH.
17. DEWATERING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ANY DEWATERING PERMITS AND/OR APPROVALS NECESSARY FOR CONSTRUCTION. NO WATER FROM DEWATERING MEASURES SHALL BE DISCHARGED OFF-SITE. ALL DISCHARGE SHALL BE CONTAINED IN ON-SITE SEDIMENT BASINS.
18. SIDEWALKS. ALL SIDEWALKS SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, CHAPTER 11 - FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION. ALL CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 304 AND THE REQUIREMENTS OF THE FLORIDA BUILDING CODE. ALL WALKWAYS CROSSING VEHICULAR AREAS SHALL HAVE A DETECTABLE WARNING SURFACE (TRUNCATED DOMES) IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 304 AND THE FLORIDA BUILDING CODE, CHAPTER 11 - ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION. ALL SIDEWALKS SHALL BE BROOM FINISHED WITH AN EVEN, DUSTLESS SURFACE AND SHALL BE FREE OF CRACKS AT TIME OF FINAL ACCEPTANCE BY THE CITY OF LAKE WORTH.
19. PAVEMENT. WHERE FULL-DEPTH PAVEMENT REPLACEMENT IS SPECIFIED, EXISTING BASEROCK MAY NOT BE RE-USED, HOWEVER IT MAY BE UTILIZED AS SUBGRADE STABILIZATION MATERIAL. ALL SUBGRADE SHALL BE FREE OF MUCK, ROOTS, UNDERBRUSH, VEGETATIVE MATTER, GARBAGE, TRASH, OR ANY OTHER UNSUITABLE MATERIALS. BASEROCK AND ASPHALT SHALL BE PLACED IN MULTIPLE LIFTS AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION. FINAL LIFT OF ASPHALT SHALL PROVIDE A UNIFORM FINISH AND SHALL BE PLACED TO CORRECT MINOR IMPERFECTIONS IN THE FIRST LIFT AND TO PROVIDE POSITIVE DRAINAGE FOR THE ROADWAY.
20. SIGNING AND PAVEMENT MARKING. ALL PAVEMENT MARKINGS WITHIN CITY OF LAKE WORTH RIGHT-OF-WAY SHALL BE THERMOPLASTIC. THERMOPLASTIC SHALL NOT BE INSTALLED ON PAVEMENT UNTIL A MINIMUM OF FIVE CALENDAR DAYS AFTER THE FINAL LIFT OF ASPHALT HAS BEEN COMPLETED. BLUE/BLUE REFLECTIVE PAVEMENT MARKERS (RPM) SHALL BE INSTALLED TO INDICATE THE LOCATION OF ALL FIRE HYDRANTS.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT | GENERAL NOTES | DETAIL NO. 01 | ISSUED: 09/18/13

TEST HOLE NOTES:

1. UNABLE TO OBTAIN MATERIAL OF DUCT DUE TO CONCRETE SLAB ABOVE TELEPHONE DUCT. TOTAL WIDTH = 1.50. PK SET OVER WESTERN MOST EDGE OF CONCRETE SLAB.

3.UNABLE TO OBTAIN MATERIAL DUE TO POOR CONDITION OF UTILITY. TEST HOLE ALSO REVEALED 6" WATER CAP. CHIS "X" SET OVER TOP OF CAP.

4. UNABLE TO OBTAIN MATERIAL OF DUCT DUE TO CONCRETE SLAB ABOVE TELEPHONE DUCT. TOTAL WIDTH = 1.60. PK SET OVER WESTERN MOST EDGE OF CONCRETE SLAB.

7. UNABLE TO OBTAIN MATERIAL DUE TO POOR CONDITION OF UTILITY. TEST HOLE ALSO REVEALED 6" WATER CAP 2.4'± WEST OF HUB.

8. TEST HOLE REVEALED CONCRETE SLAB OVER TELEPHONE. TOTAL WIDTH = 2.60. PK SET OVER EASTER MOST EDGE OF CONCRETE SLAB.

14. GAS NOT FOUND AT LOCATION. TEST HOLE REVEALED A 6" CAST IRON UNKNOWN. CHIS "X" SET OVER CROWN OF 6" UNKNOWN

16. TEST HOLE EXCAVATED IN GRASS WEST OF SIDEWALK. CHIS "X" SET IN SIDEWALK OVER CROWN OF 2"GAS. TEST HOLE ALSO REVEALED A 2" WRAPPED STEEL GAS RUNNING EAST-WEST 0.50' NORTH OF PK. COVER = 2.40'

20. TOTAL WIDTH = 1.50'. "X" SET OVER EASTERN EDGE OF TELEPHONE DUCT. TEST HOLE ALSO REVEALED A 2" CAST IRON WATER RUNNING NORTH-SOUTH 1.00' WEST OF CHIS "X" WITH COVER = 1.25'

21. A. TEST HOLE REVEALED 2" STEEL IN POOR CONDITION RUNNING EAST-WEST, DIRECTLY BELOW 2" GAS COVER = 2.45'
    B. 1" STEEL UNKNOWN IN POOR CONDITION RUNNING EAST-WEST, 0.35 SOUTH OF PK. COVER = 1.75'
    C. 2" PVC (WHITE) UNKNOWN RUNNING EAST-WEST 0.45' SOUTH OF PK. COVER = 1.62' PK SET OVER CROWN OF 2" GAS

24. TEST HOLE REVEALED 0.75" COPPER UNKNOWN MATERIAL. HUB SET OVER CROWN OF 0.75" UNKNOWN.

25. TEST HOLE REVEALED A 6" WATER TEE FROM NORTH 1.4' ± EAST OF PK AND WATER CAP 2.5' ± OF PK. PK SET OVER CROWN OF 6" WATER RUNNING EAST-WEST.

26. TEST HOLE REVEALED 2" GAS TURNS 90° EAST 1.50' SOUTH OF SPIKE. SPIKE SET OVER CROWN OF 2" GAS, RUNNING NORTH-SOUTH.

29. TEST HOLE REVEALED A 1" STEEL WATER SERVICE RUNNING EAST-WEST, 1.8' SOUTH OF HUB. COVER = 1.04. HUB SET OVER CROWN OF 2" GAS.

39A. GAS REQUESTED AT THIS LOCATION. TEST HOLE REVEALED A 1" DIRECT BURIED TELEPHONE CABLE. REQUESTED GAS NOT FOUND AT THIS LOCATION.

41. UNABLE TO OBTAIN SIZE & DEPTH DUE TO ROUGH POUR CONCRETE. X CUT ON NORTH EDGE OF SLAB.

42. TEST HOLE REVEALED 4" C.I. WATER. 1.4' EAST OF X CUT. TOP COVER = 1.67. X SET ON EDGE OF DUCT.

50. GAS CAPS SOUTH OF HUB 1.5'

WATER PLAN VIEW NOTES

EXISTING SYMBOL LEGEND

- ANCHOR
- BOLLARD
- BFP BACKFLOW PREVENTOR
- CATCH BASIN
- CONCRETE POWER POLE
- CONCRETE LIGHT POLE
- CURB INLET
- DECORATIVE (YARD) LIGHT POLE
- DDCV DOUBLE DETECTOR CHECK VALVE
- DRAINAGE MANHOLE
- ELECTRICAL CONTROL BOX
- ELECTRICAL MANHOLE
- ELECTRICAL METER
- ELECTRICAL PULL BOX
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- FM FORCE MAIN VALVE
- IRR IRRIGATION VALVE
- MAILBOX
- METAL STREET LIGHT POLE
- PEDESTRIAN CROSSING SIGNAL
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- SIGN
- 10.0× SPOT GROUND ELEVATION
- 10.00× SPOT HARD SURFACE ELEVATION
- SPOT/LANDSCAPE LIGHTING
- TELEPHONE MANHOLE
- TRAFFIC CONTROL BOX
- TRAFFIC POLE
- TRAFFIC PULL BOX
- W WATER GATE VALVE
- WATER METER
- WOOD POWER POLE
- WOOD STREET LIGHT POLE
- SHADE TREE
- PALM TREE
- OHW OVER HEAD WIRES
- PROPERTY LINE
- WM WATER MAIN
- STRM STORM DRAINAGE
- SS SANITARY SEWER (GRAVITY)
- SSFM SANITARY SEWER (FORCE MAIN)
- PBCTED PALM BEACH COUNTY TRAFFIC ENGINEERING (BURIED FIBER OPTIC CABLE)
- FOC FIBER OPTIC CABLE
- GAS GAS MAIN
- E BURIED ELECTRIC
- TV BURIED TV
- TE BURIED TELEPHONE

PROPOSED LEGEND:

- FIRE HYDRANT ASSEMBLY
- WATER METER
- INDICATES NEW WATER METER WITH WATER SERVICE ROUTED ON PRIVATE PROPERTY FROM REAR OF PROPERTY TO NEW METER LOCATION AT FRONT OF PROPERTY.
- TEE
- CHECK VALVE
- GATE VALVE
- TEST HOLE
- TO BE ABANDONED
- TO BE REMOVED

PROPOSED LEGEND- PAVING & GRADING

- INDICATES MILL & OVERLAY EXISTING ASPHALT
- INDICATES MILL & OVERLAY EXISTING ASPHALT FDOT STANDARDS. SEE DETAIL
- INDICATES PAVEMENT RESTORATION
- INDICATES PAVEMENT RESTORATION FDOT STANDARDS. SEE DETAIL
- INDICATES CONCRETE RESTORATION
- INDICATES SOD RESTORATION

ABBREVIATION LEGEND:

D.I.P.	DUCTILE IRON PIPE
P.V.C.	POLYVIYNL CHLORIDE
C.M.P.	CORRUGATED METAL PIPE
R.C.P.	REINFORCED CONCRETE PIPE
V.C.P.	VITRIFIED CLAY PIPE
P.E.	POLYETHYLENE
P.R.B.	POLLUTION RETARDANT BAFFLE
R.W.L.	RAIN WATER LEADER
U.E.	UTILITY EASEMENT
ESMT	EASEMENT
EX.-EXIST.	EXISTING
EL.-ELEV.	ELEVATION
E.O.P.	EDGE OF PAVEMENT
LF	LINEAR FEET
I.E.	INVERT ELEVATION
G.E.	GRATE ELEVATION
R.E.	RIM ELEVATION
BOTT.	BOTTOM
B.O.P.	BOTTOM OF PIPE
T.O.P.	TOP OF PIPE
R.O.W.	RIGHT OF WAY
F.H.	FIRE HYDRANT
G.V.	GATE VALVE
D.D.C.V.	DOUBLE DETECTOR CHECK VALVE
F.D.C.	FIRE DEPARTMENT CONNECTION
S.P.	SAMPLE POINT
CB	CATCH BASIN
MH	MANHOLE
C.O.	CLEANOUT
W.M.	WATER MAIN
DRN.	DRAINAGE
STRM.	STORM
SAN.	SANITARY
S.S.	SANITARY SEWER
M.A.S.	MAINTANANCE ACCESS STRUCTURE
F.F.	FINISH FLOOR
N.A.V.D.	NORTH AMERICAN VERTICAL DATUM (1988)
F.S.	FLORIDA STATUE
N.V.A.L.	NON VEHICULAR ACCESS LINE

Always call 811 two full business days before you dig to have underground utilities located and marked.
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GENERAL NOTES:

1.) WATER AND SEWER SERVICE PROVIDED BY THE CITY OF LAKE WORTH.

2.) THE REMOVAL OR ABANDONMENT OF EXISTING UTLITIES (WATER, SEWER, GAS, ETC.) SHALL BE COORDINATED WITH THE CONSTRUCTION, ENGINEER'S ACCEPTANCE, AND CERTIFICATION OF THE PROPOSED WATER SYSTEM. ALL EXISTING UTILITIES (WATER, SEWER, GAS, ETC.) AND DRAINAGE SERVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE ENTIRE DURATION OF CONSTRUCTION.

3.) CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING, COORDINATING & MAINTAINING TEMPORARY WATER MAIN AND TEMPORARY WATER SERVICES INCLUDING CONNECTING TEMPORARY WATER SERVICES TO EXISTING WATER METER. CONTRACTOR SHALL ADJUST TEMPORARY WATER MAIN AND SERVICES AS REQUIRED TO FACILITATE THE INSTALLATION OF PROPOSED WATER AND SANITARY SEWER IMPROVEMENTS.

4.) CONTRACTOR SHALL COORDINATE THE SHUTDOWN OF EXISTING WATER SERVICE WITH THE CITY OF LAKE WORTH AND THE AFFECTED CITY RESIDENTS. OTHER THAN APPROVED SHUTDOWN HOURS BY THE CITY OF LAKE WORTH, EXISTING WATER SERVICE MUST BE MAINTAINED AND OPERATIONAL THROUGHOUT CONSTRUCTION.

5.) CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO STARTING THE WORK.

6.) CONTRACTOR IS REQUIRED TO OBTAIN PLUMBING PERMIT FROM CITY OF LAKE WORTH BUILDING DEPARTMENT FOR NEW WATER SERVICE ROUTING ON PRIVATE PROPERTY.

7.) CONTRACTOR IS RESPONSIBLE FOR COMPLETE RESTORATION OF EXISTING LANDSCAPING, SOD, DECORATIVE WALLS, FENCING, MAIL BOXES, ASPHALT, PAVERS, & CONCRETE DAMAGED DUE TO PROPOSED CONSTRUCTION ACTIVITIES IN OR OUT OF RIGHT OF WAY.

8.) CONTRACTOR TO ENSURE WATER SERVICE RECONNECTION PRIOR TO ABANDONMENT/ REMOVAL OF EXISTING WATER MAINS.

9.) PROPOSED METER BOX SYMBOLS ( ) INDICATES NEW WATER SERVICE W/ NEW METER BOX. CONTRACTOR SHALL READ & RECORD EXISTING METER READING. RELOCATE EXISTING METER TO NEWLY INSTALLED METER BOX AND WATER SERVICE.

10.) CONTRACTOR TO REMOVE VALVES AND VALVE BOXES FROM ALL ABANDONED AND/OR GROUT-FILLED WATER MAINS.

11.) EXISTING FIRE HYDRANTS DESIGNATED FOR REMOVAL SHALL BE SALVAGED AND DELIVERED TO THE CITY OF LAKE WORTH WATER UTILITIES SERVICES DEPARTMENT.

12.) CONTRACTOR SHALL CONTACT FLORIDA PUBLIC UTILITIES PRIOR TO THE REMOVAL OF EXISTING RETIRED GAS MAINS TO CONFIRM THAT THE GAS MAIN IS OUT OF SERVICE.

NOTE: PROPOSED WATER SERVICES ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY ACTUAL LOCATIONS OF EXISTING WATER SERVICE LOCATIONS ON PRIVATE PROPERTY OR AT THE PROPERTY LINE PRIOR TO INSTALLATION OF NEW WATER METER AT THE PROPOSED MAIN LINE. CONTRACTOR SHALL FIELD ADJUST PROPOSED MAIN LINE CONNECTIONS TO ACCOMMODATE EXISTING SERVICE(S). NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
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FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

NOTES, LEGEND & ABBREVIATIONS

SHEET NO.
GN-2

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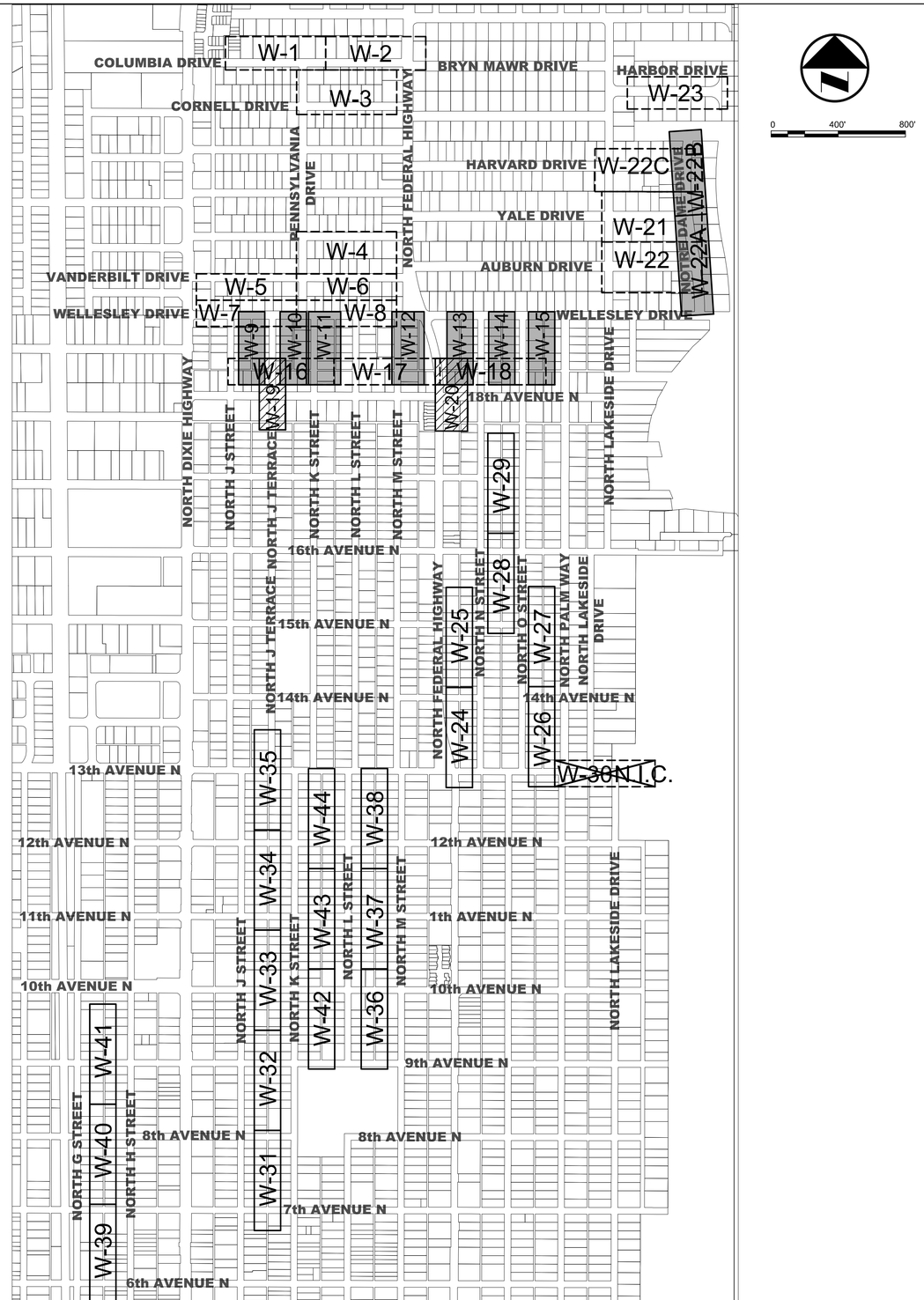

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2 INCH WATER MAIN REPLACEMENT
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PREPARED FOR:
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KEY SHEET

SHEET NO.
KS-1

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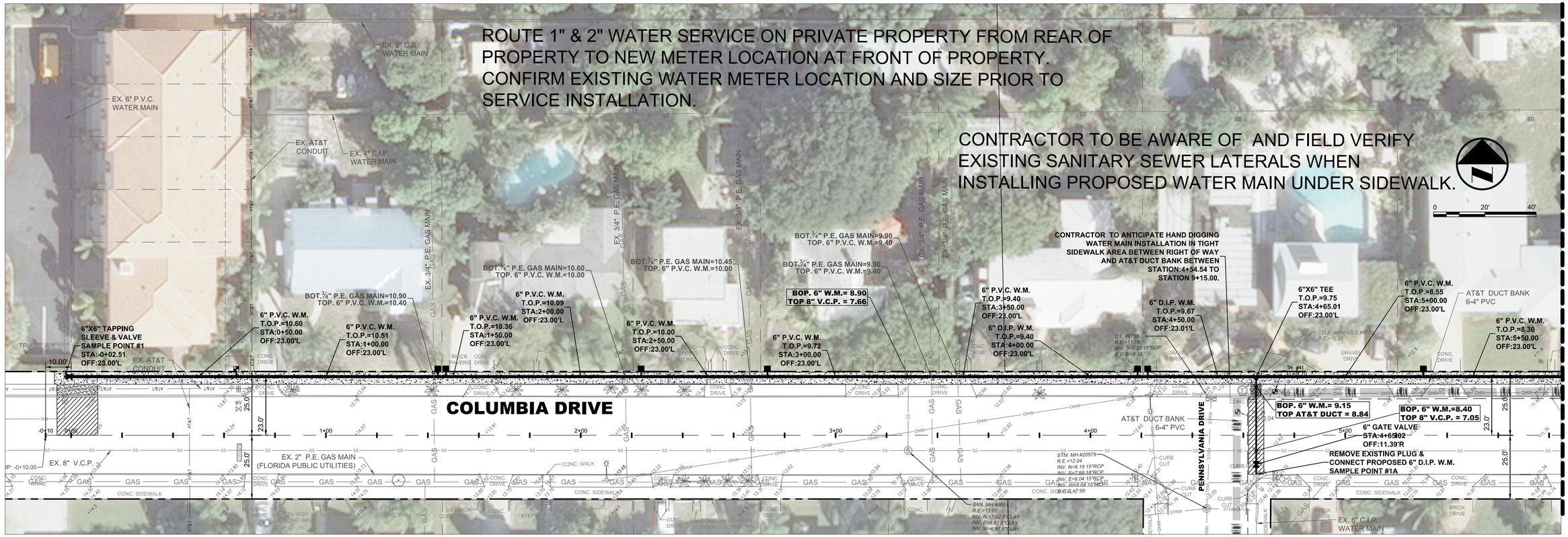

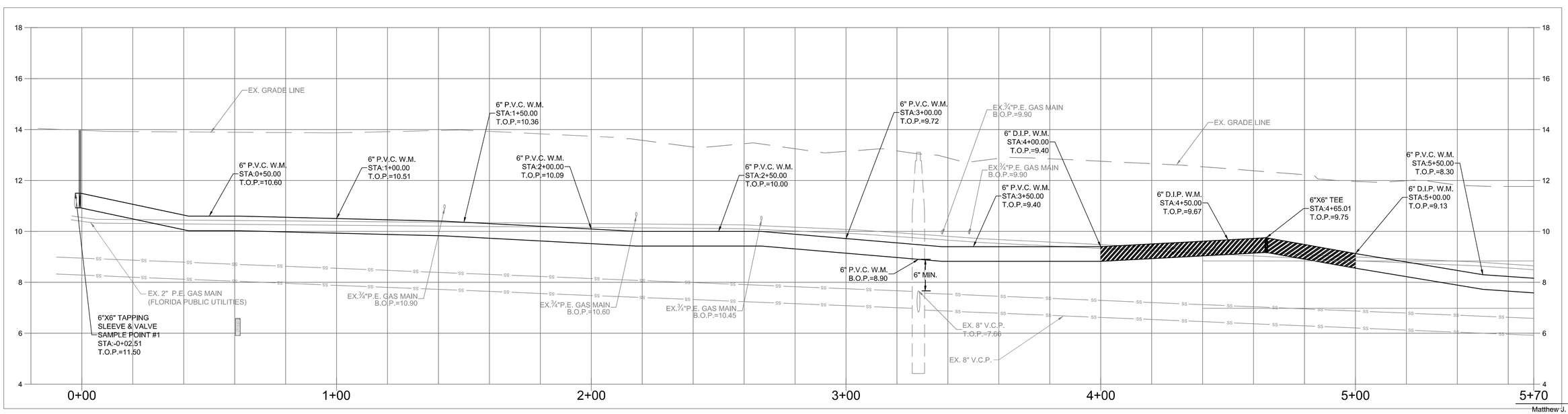

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-1

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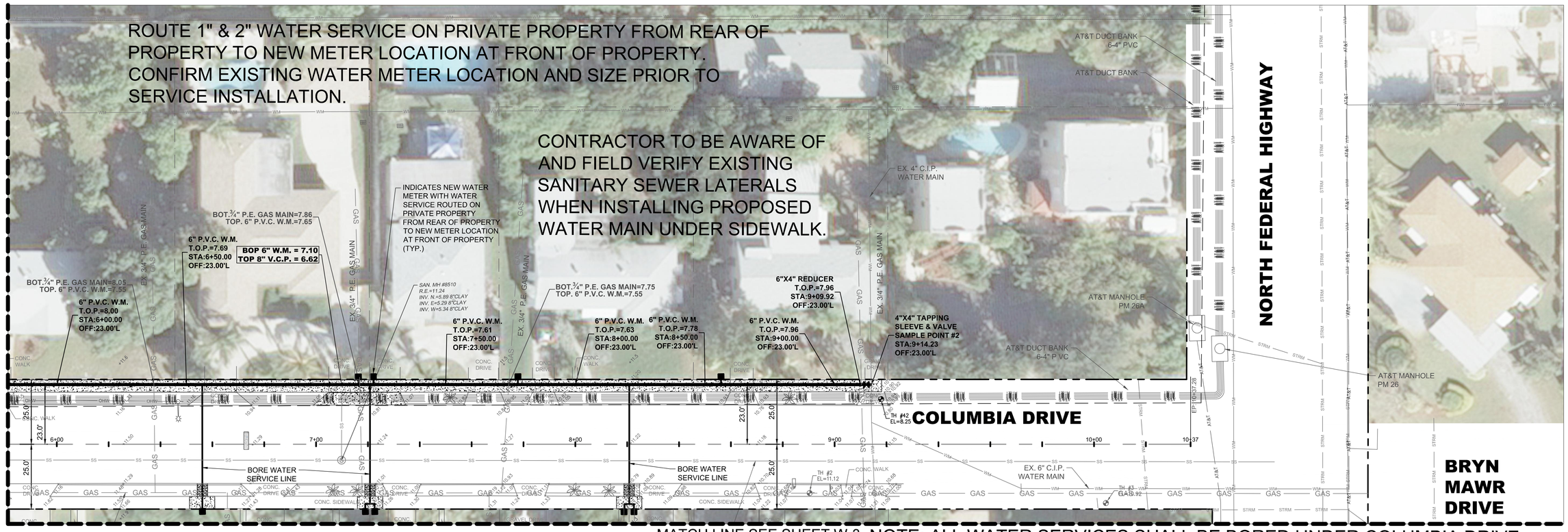

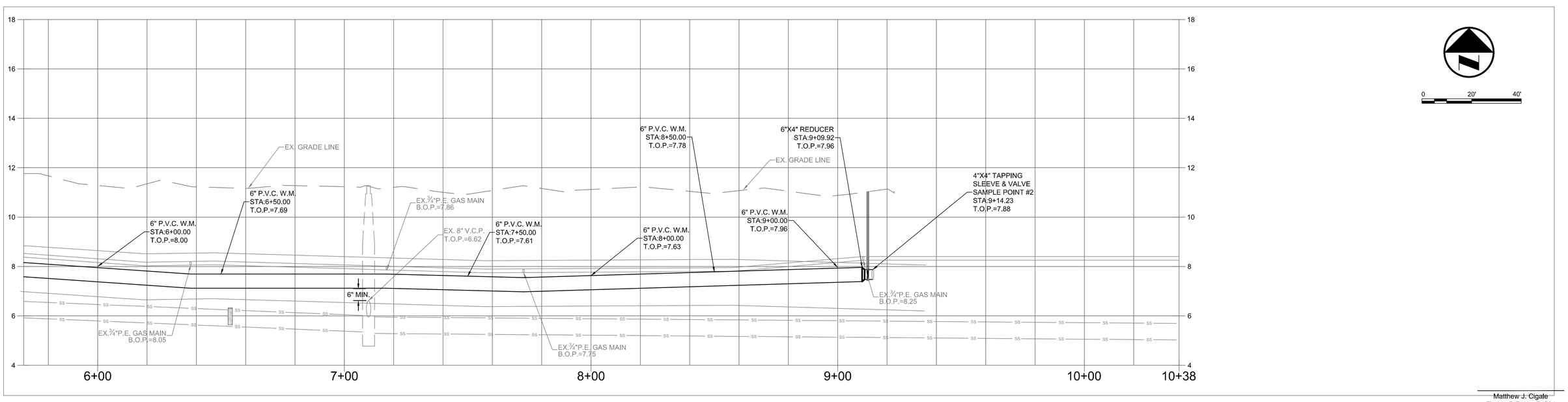

0 20' 40'

Matthew J. Cigale
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2 INCH WATER MAIN REPLACEMENT
PHASE II
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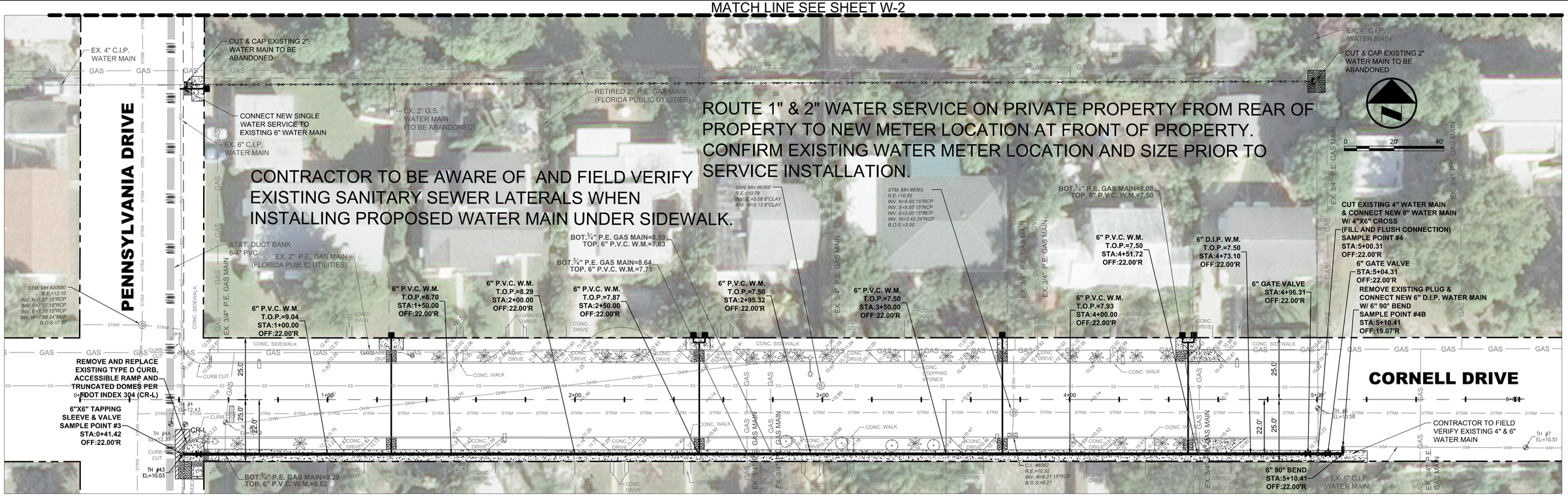
CITY OF LAKE WORTH

WATER MAIN PLAN

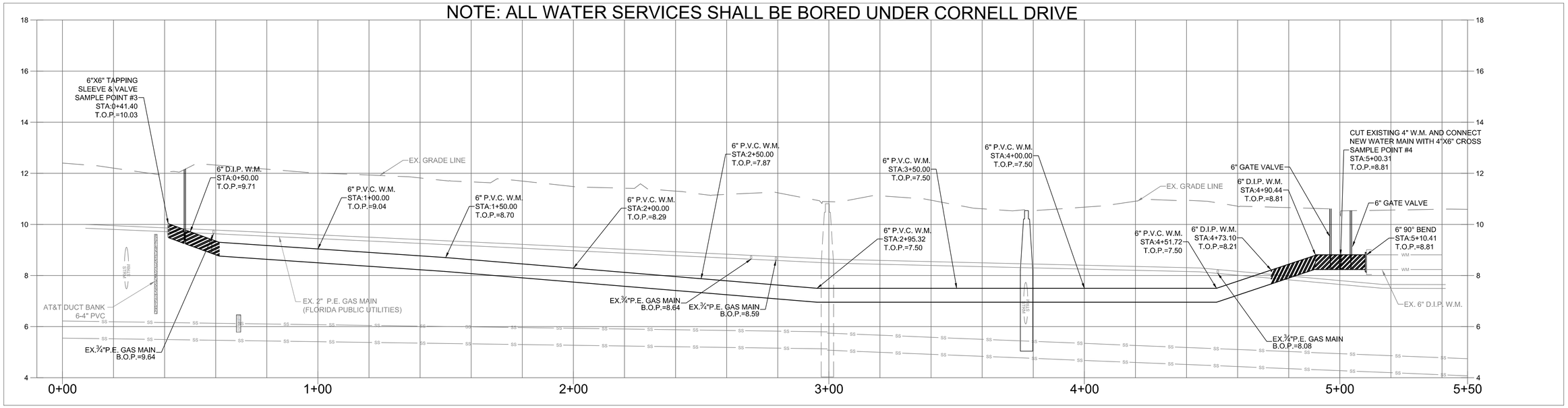
SHEET NO.
W-2

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-2] Dec 21, 2016 3:47pm KMENTING

MATCH LINE SEE SHEET W-2



NOTE: ALL WATER SERVICES SHALL BE BORED UNDER CORNELL DRIVE



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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-3

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-3] Dec 21, 2016 3:48pm KMENTING

MATCH LINE SEE SHEET W-6

Matthew J. Cigale
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CTA JOB No. 16-0001-001-01

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	NAME	DATE		NAME	DATE
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2 INCH WATER MAIN REPLACEMENT
PHASE II
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WATER MAIN PLAN

SHEET NO.
W-4

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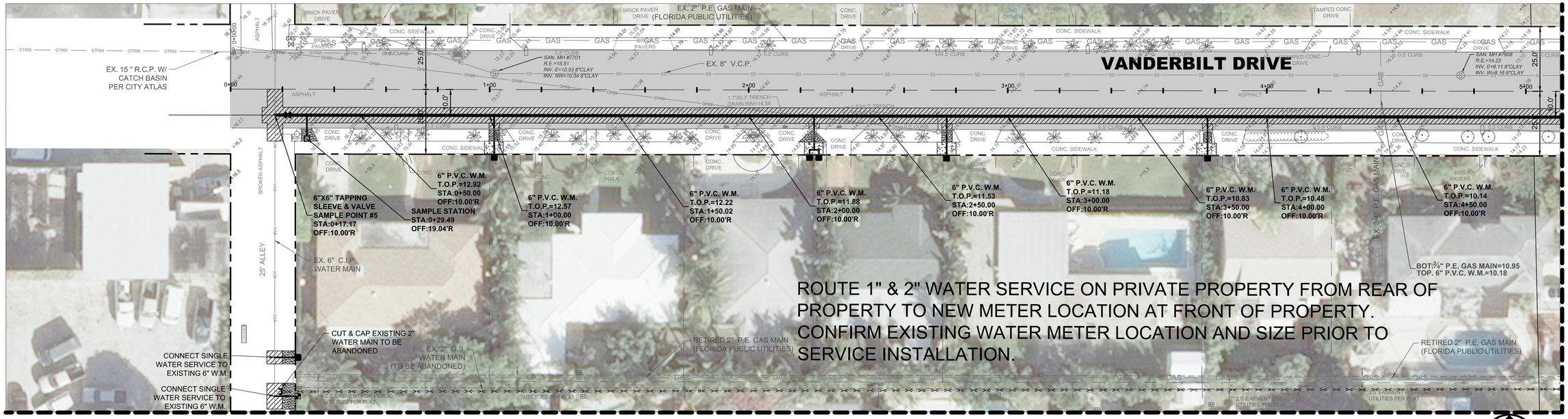

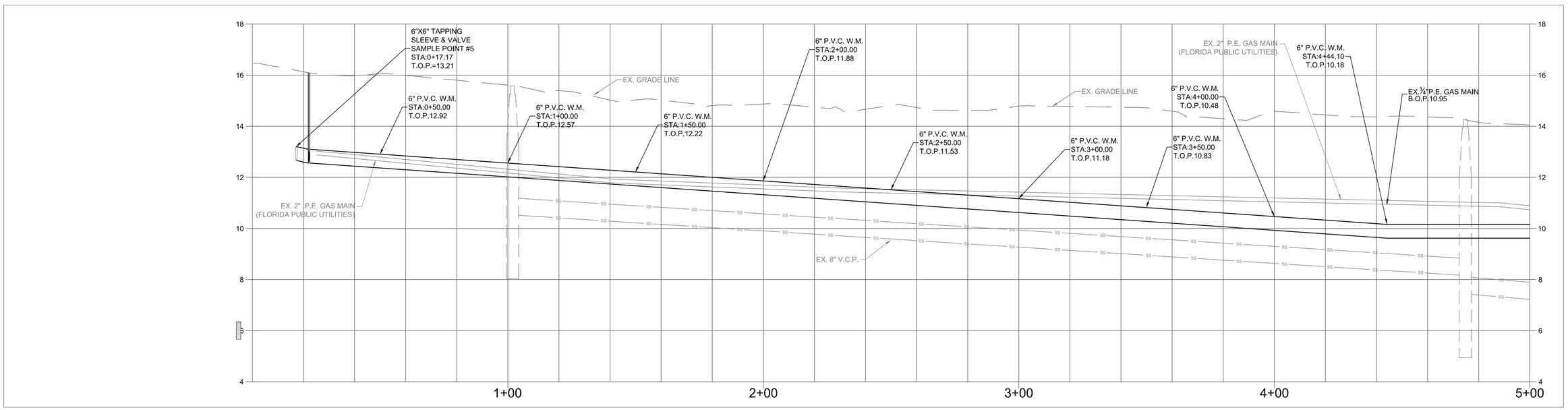

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2 INCH WATER MAIN REPLACEMENT
PHASE II
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WATER MAIN PLAN

SHEET NO.
W-5

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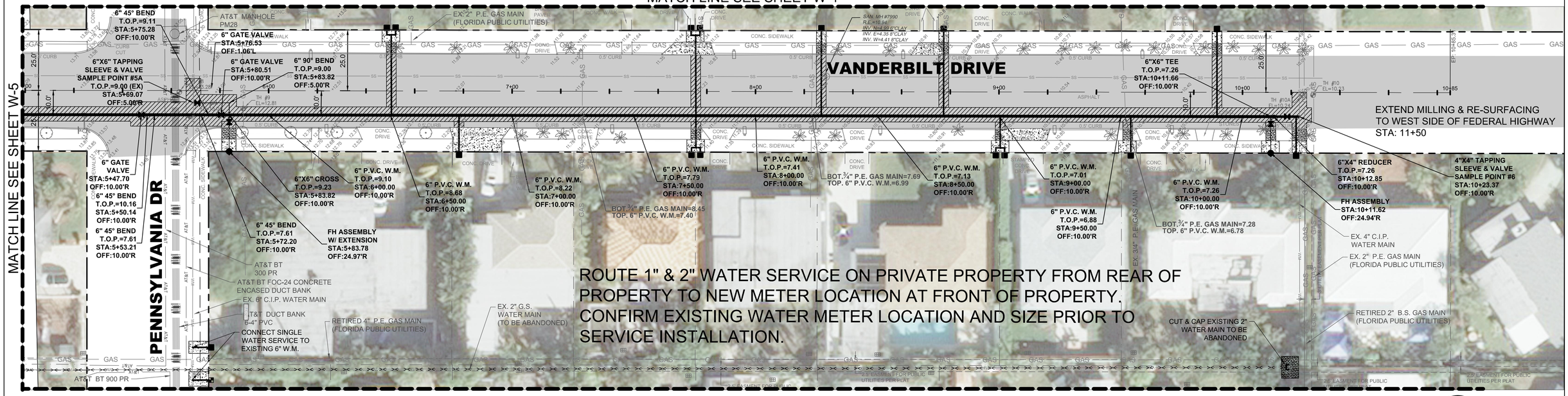

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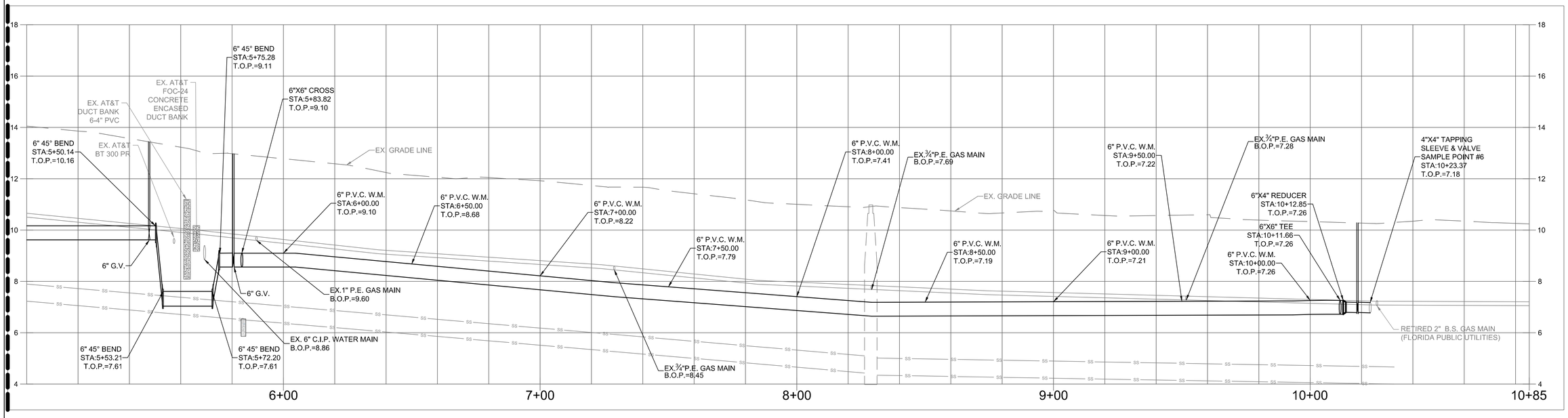

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-6

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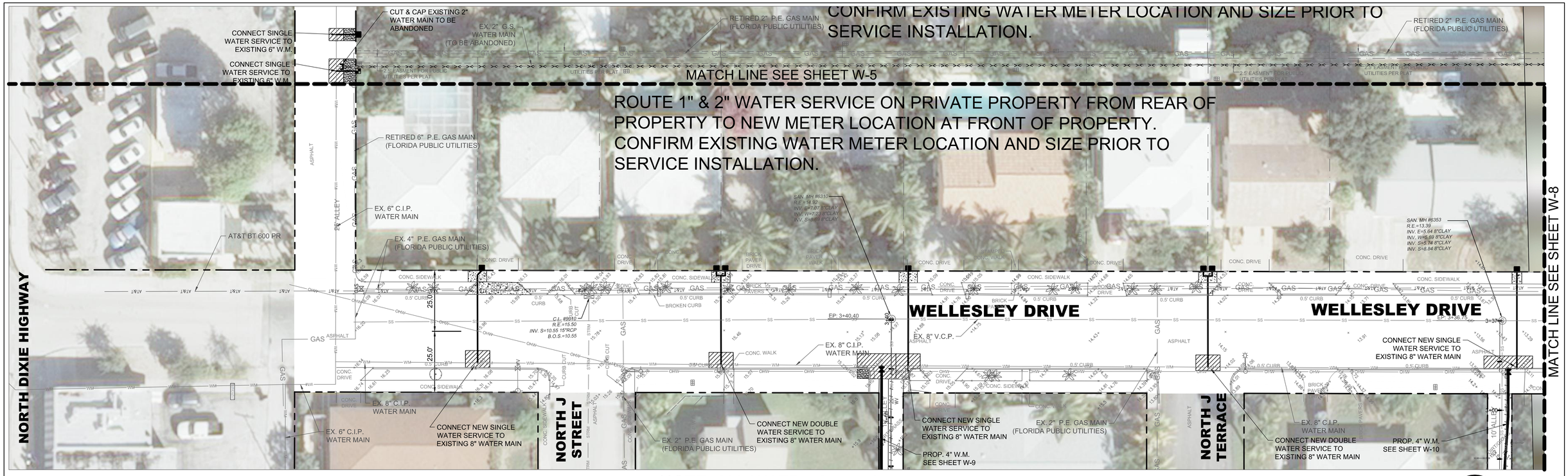

NOTE: ALL WATER SERVICES SHALL BE BORED UNDER WELLESLEY DRIVE

0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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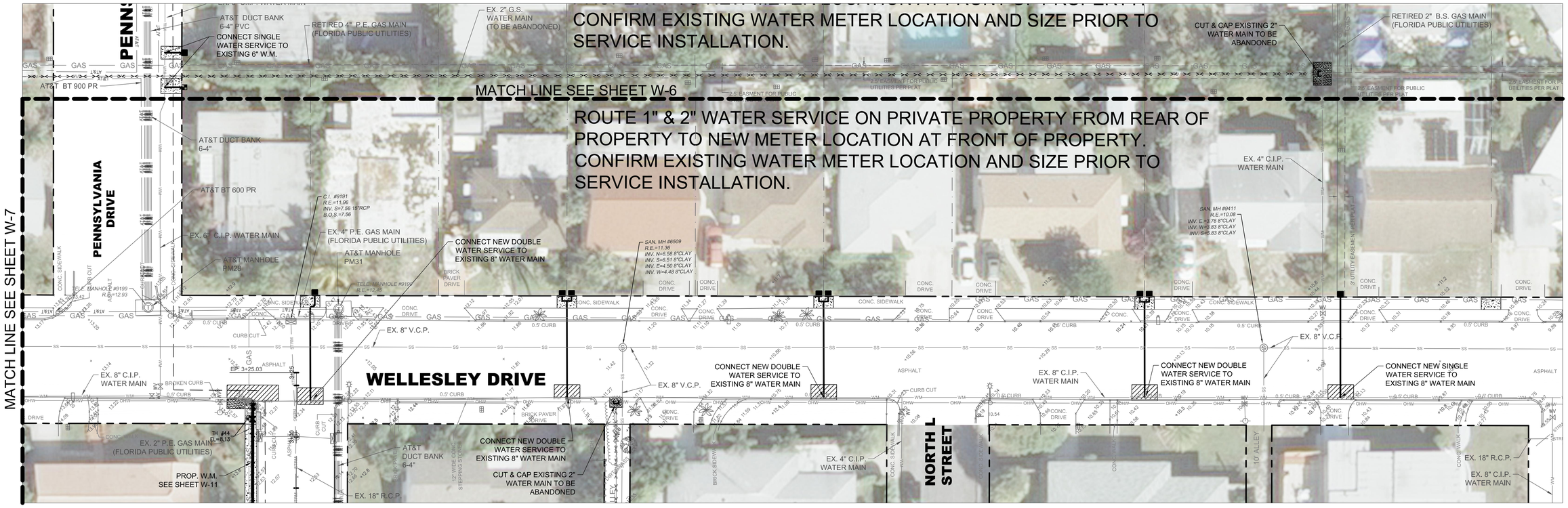
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-7

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-7] Dec 21, 2016 3:52pm KMENTING



NOTE: ALL WATER SERVICES SHALL BE BORED UNDER WELLESLEY DRIVE

0 20' 40'

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2 INCH WATER MAIN REPLACEMENT
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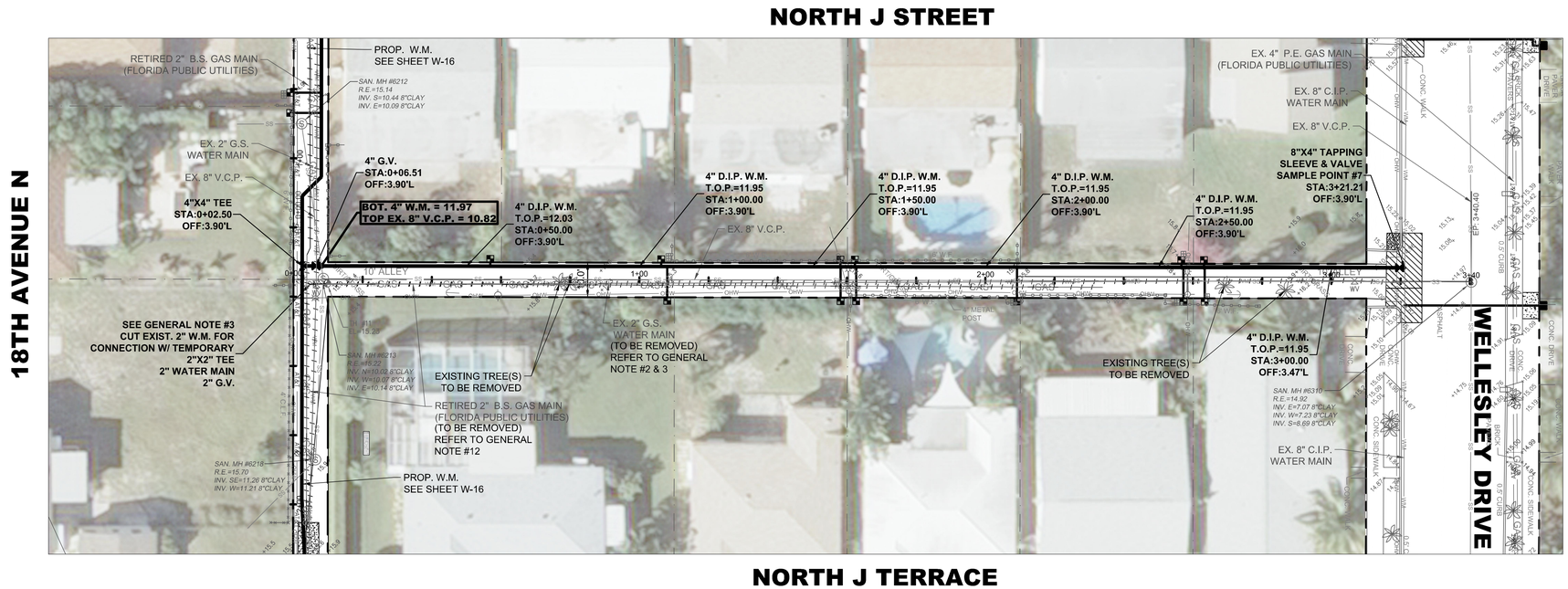
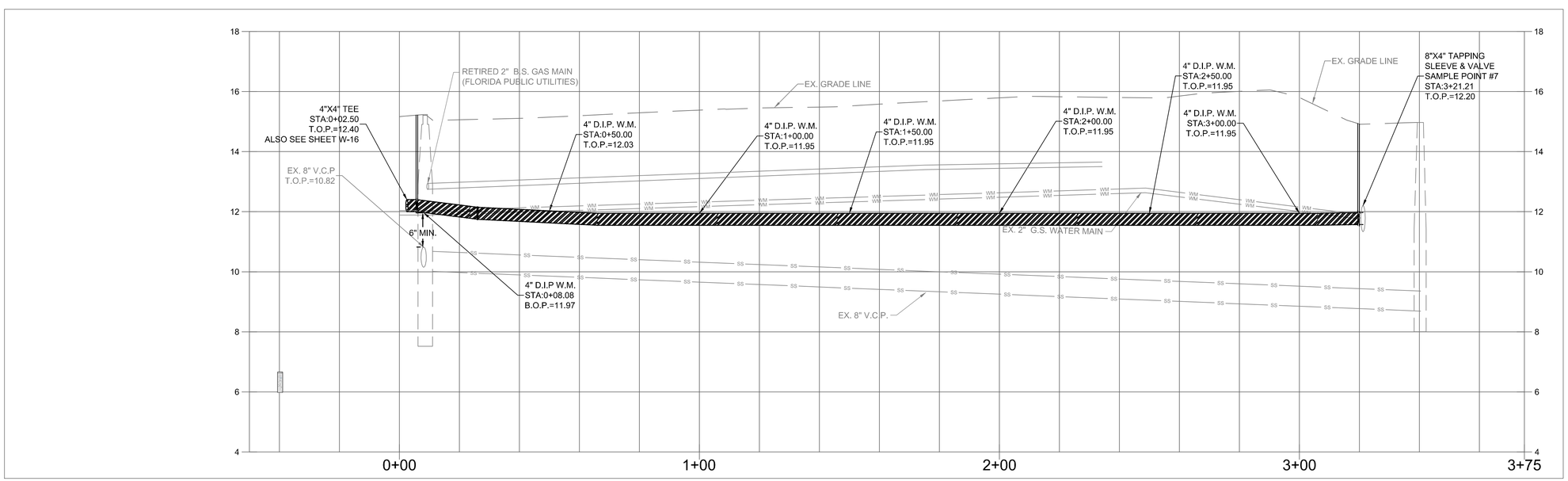
CITY OF LAKE WORTH

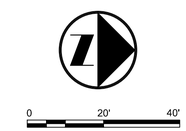
WATER MAIN PLAN

SHEET NO.
W-8

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-8] Dec 21, 2016 3:53pm KMENTING







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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-9

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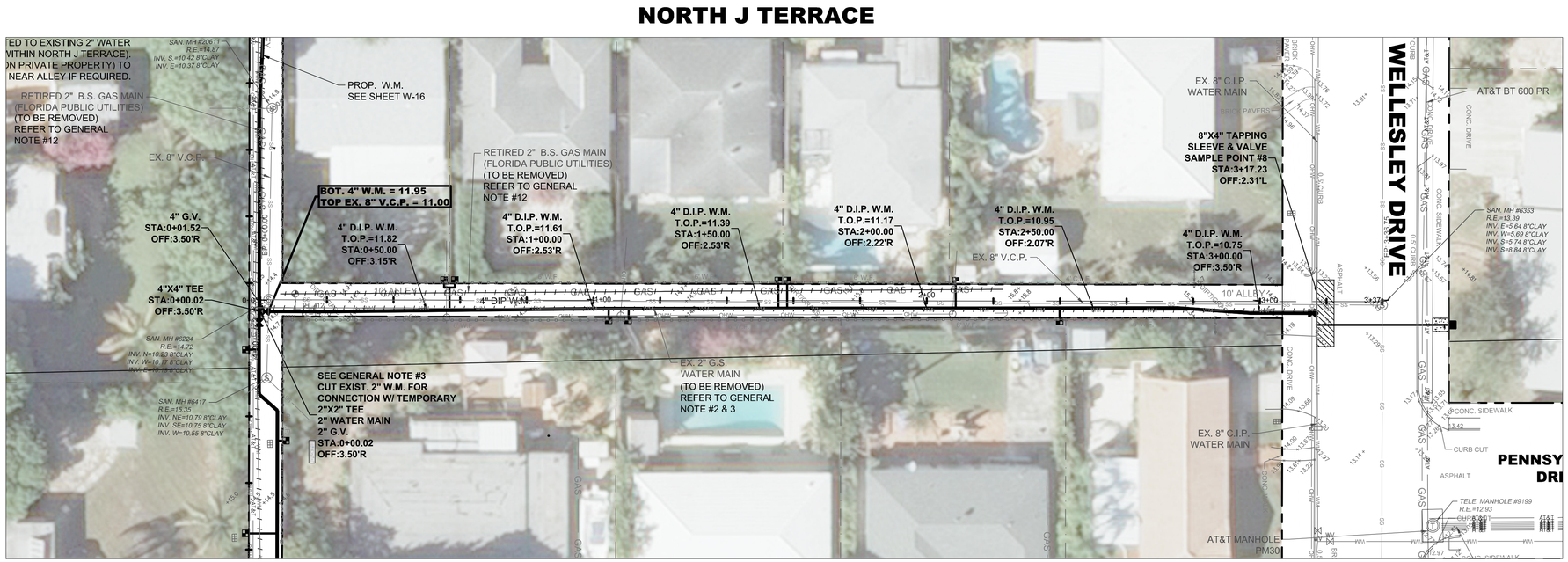
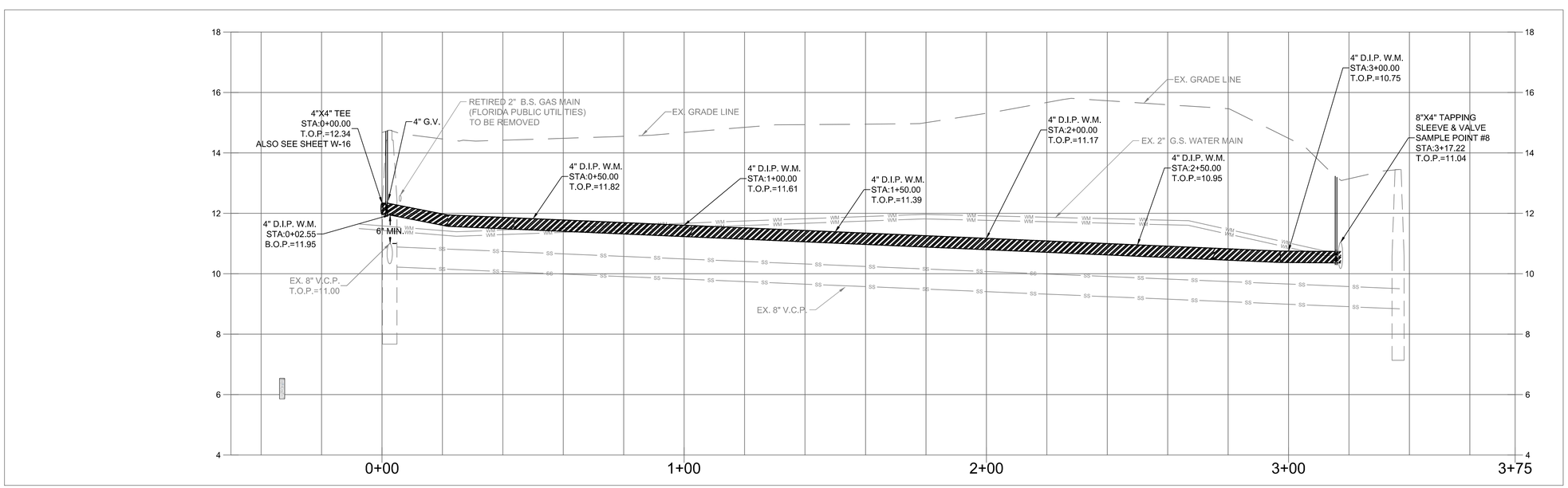




0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

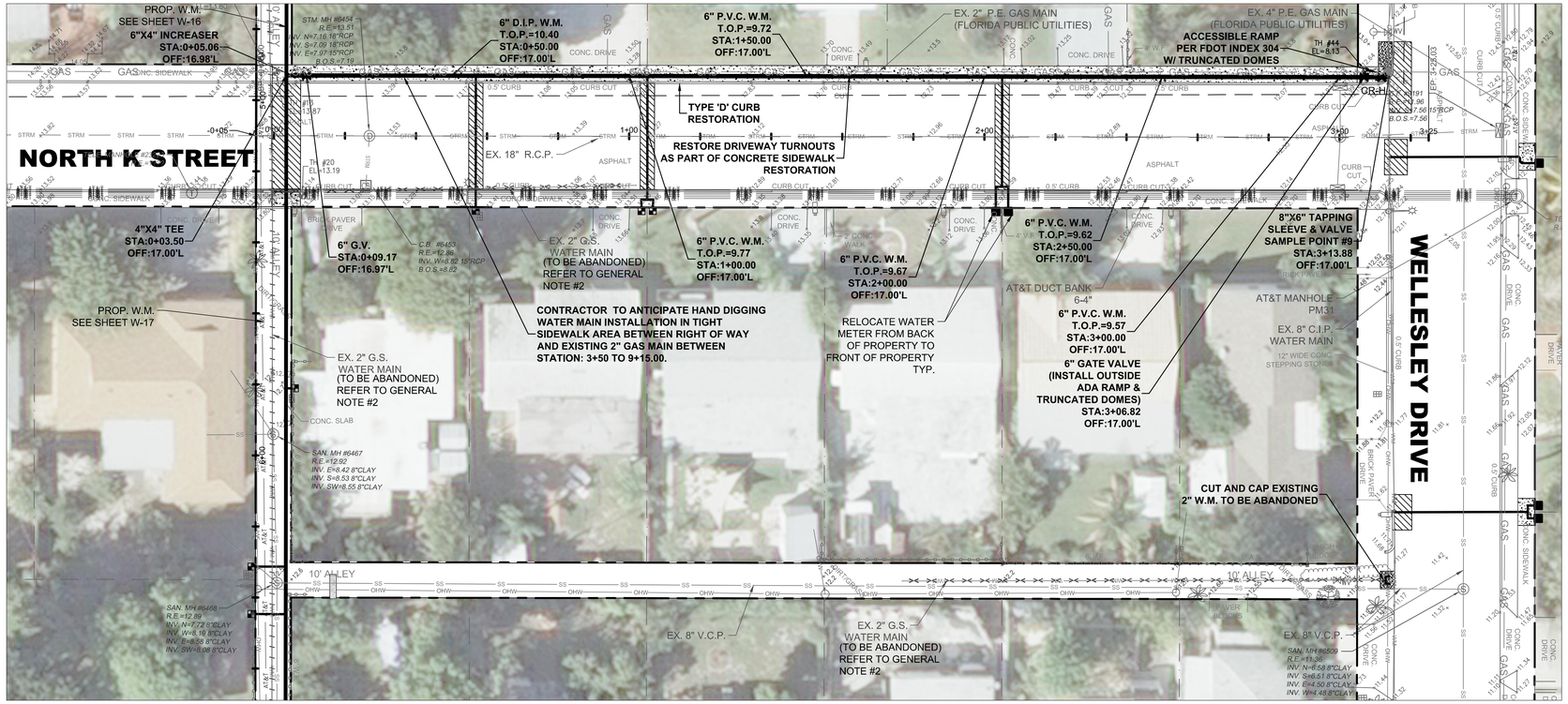
	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

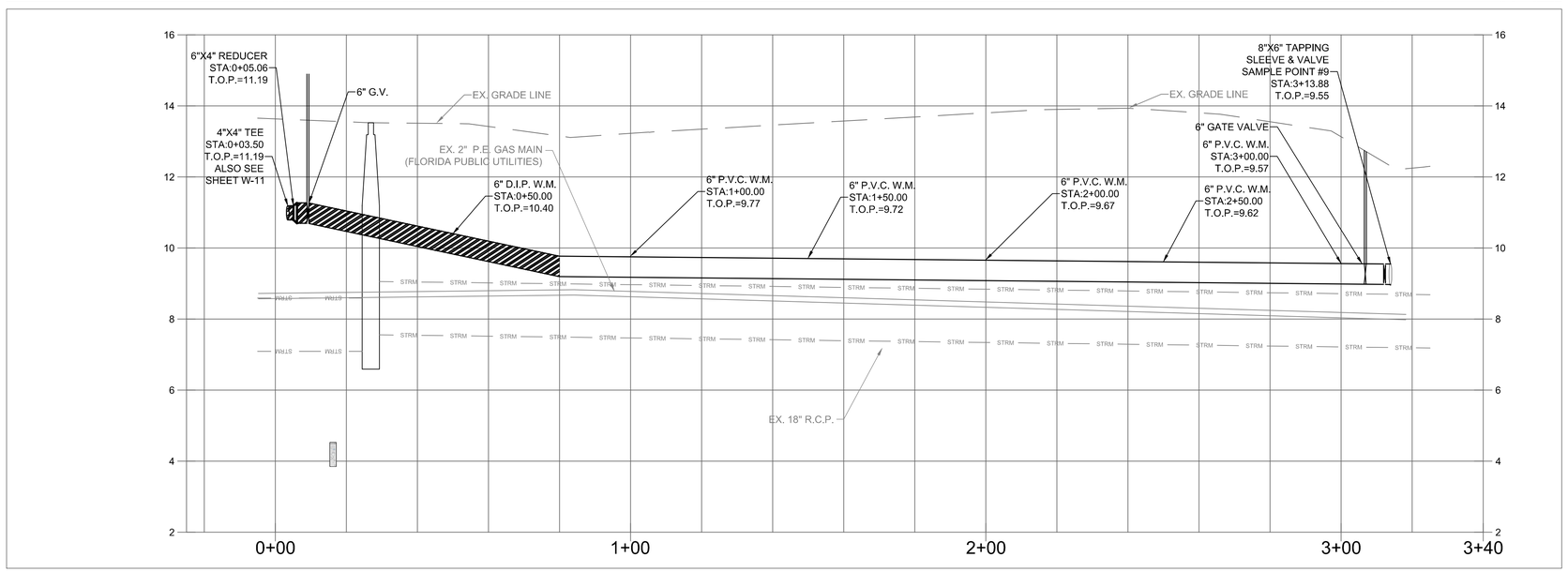
CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

SHEET NO.
W-10

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-10] Dec 21, 2016 3:56pm KMENTING





0 20' 40'

Matthew J. Cigale
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CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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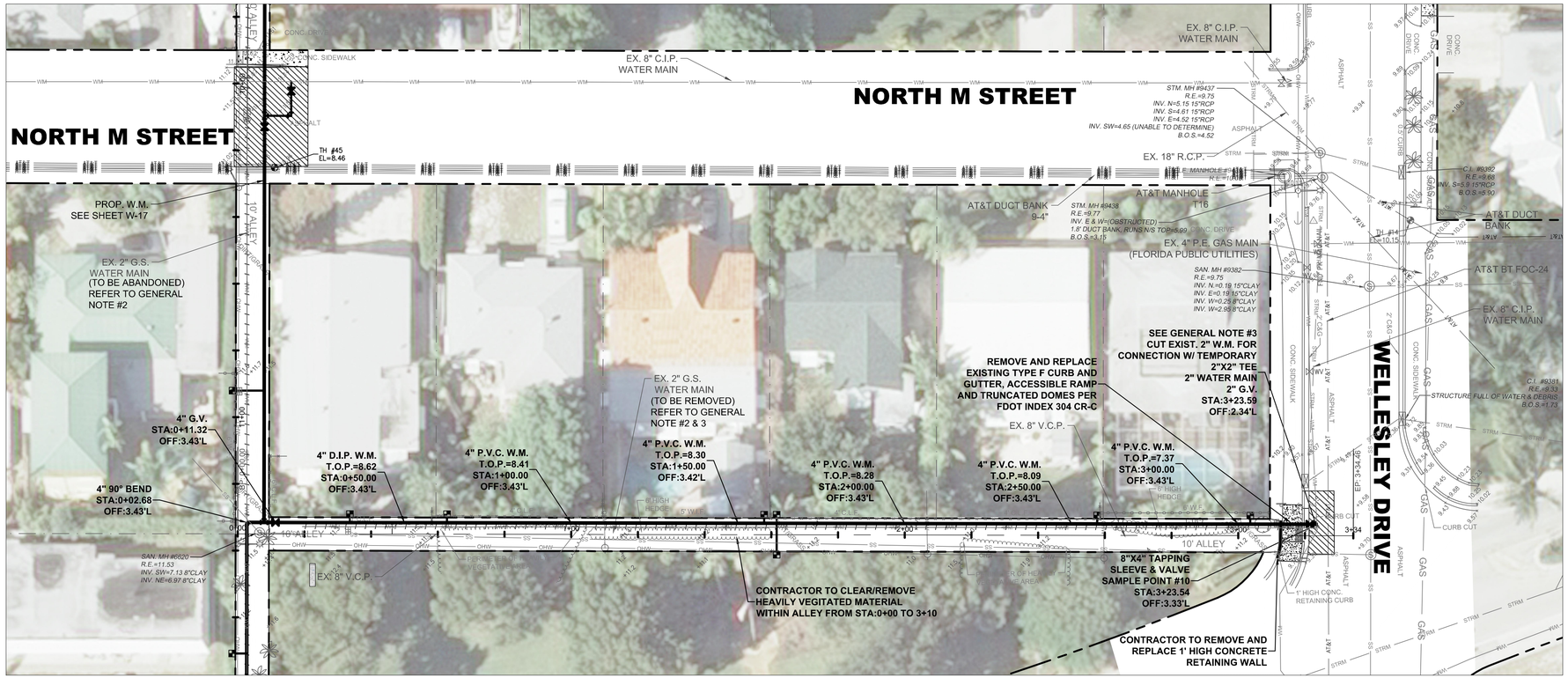
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000014

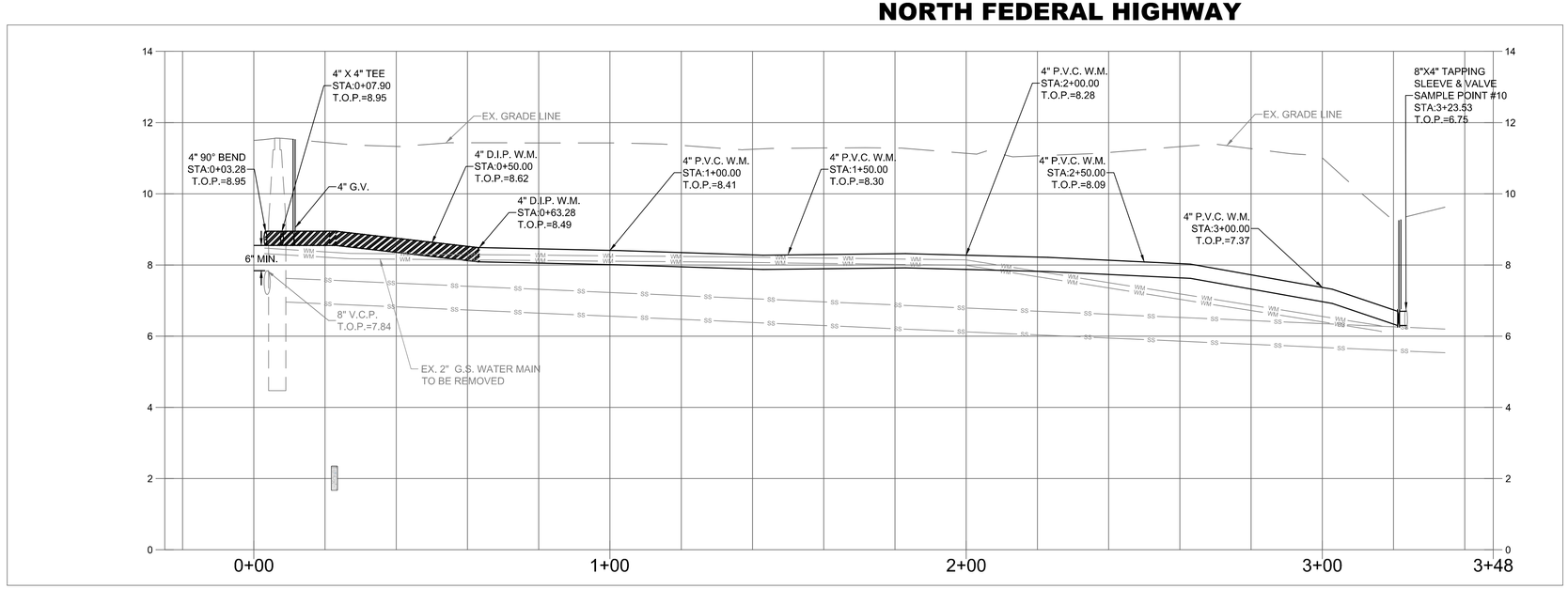
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-11

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-11] Dec 21, 2016 3:57pm KMENTING





0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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SUPERVISED BY:					

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

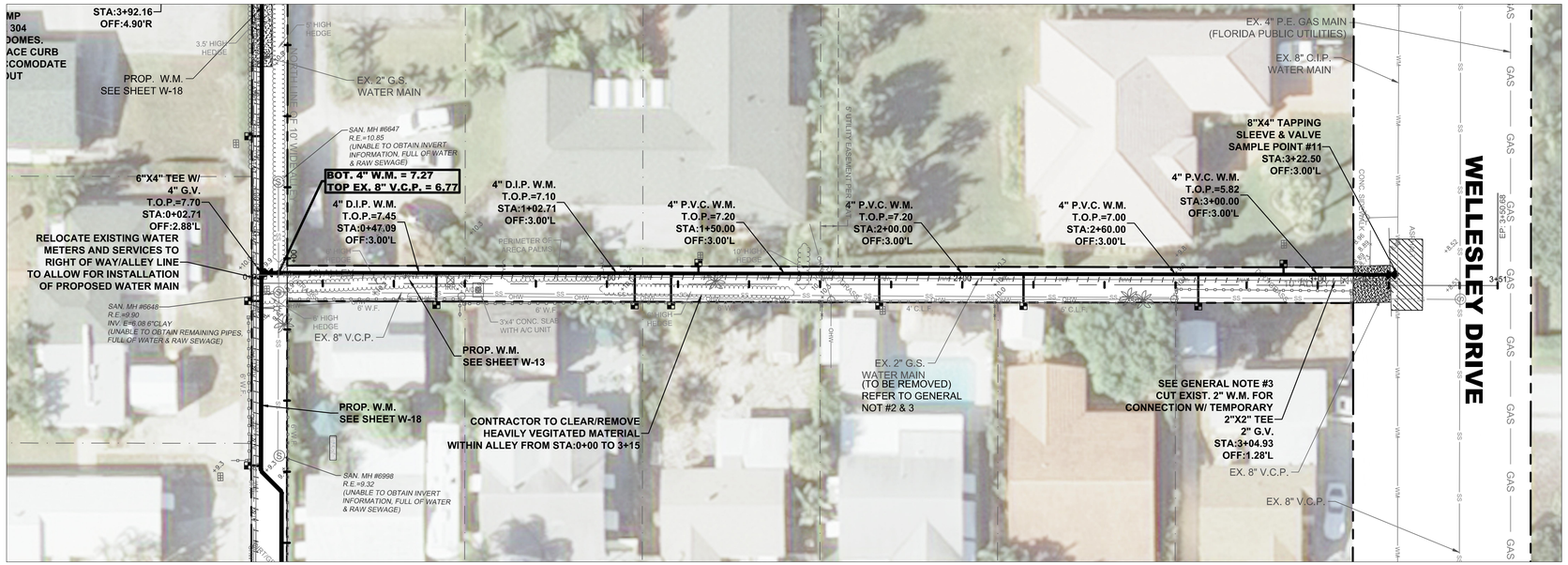
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-12

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-12] Dec 22, 2016 9:18am KMENTING

NORTH FEDERAL HIGHWAY



NORTH N STREET

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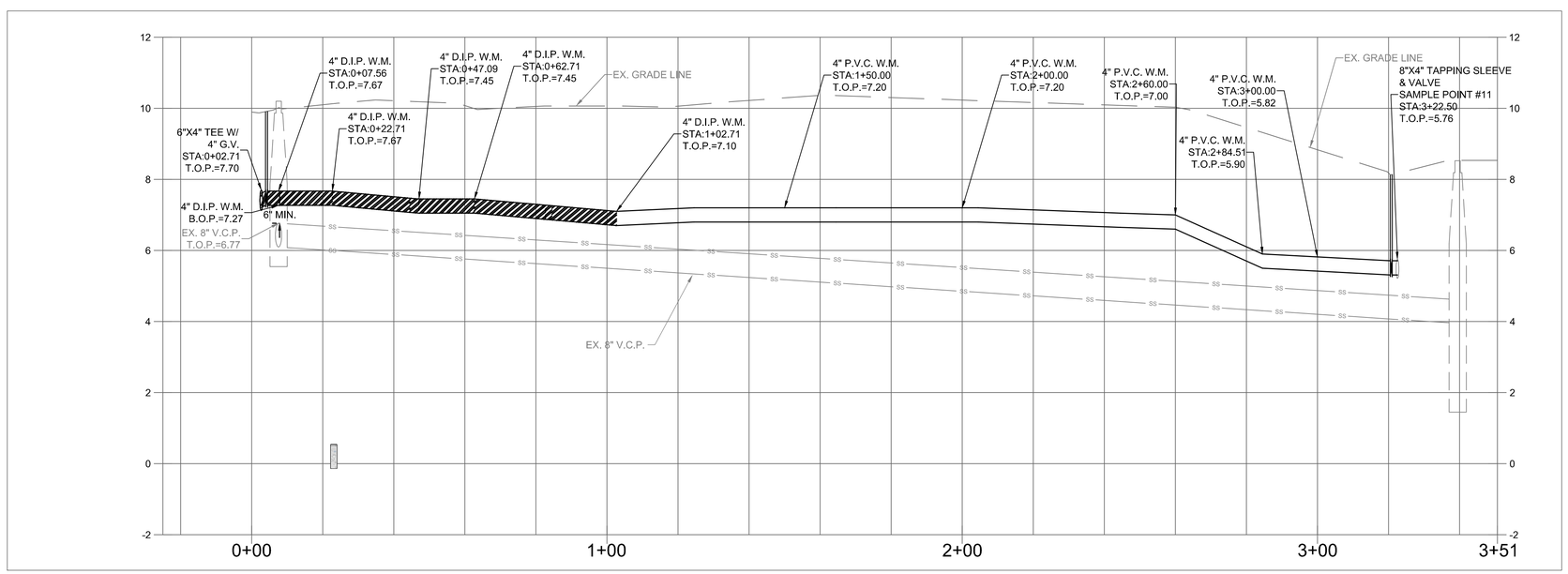

0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

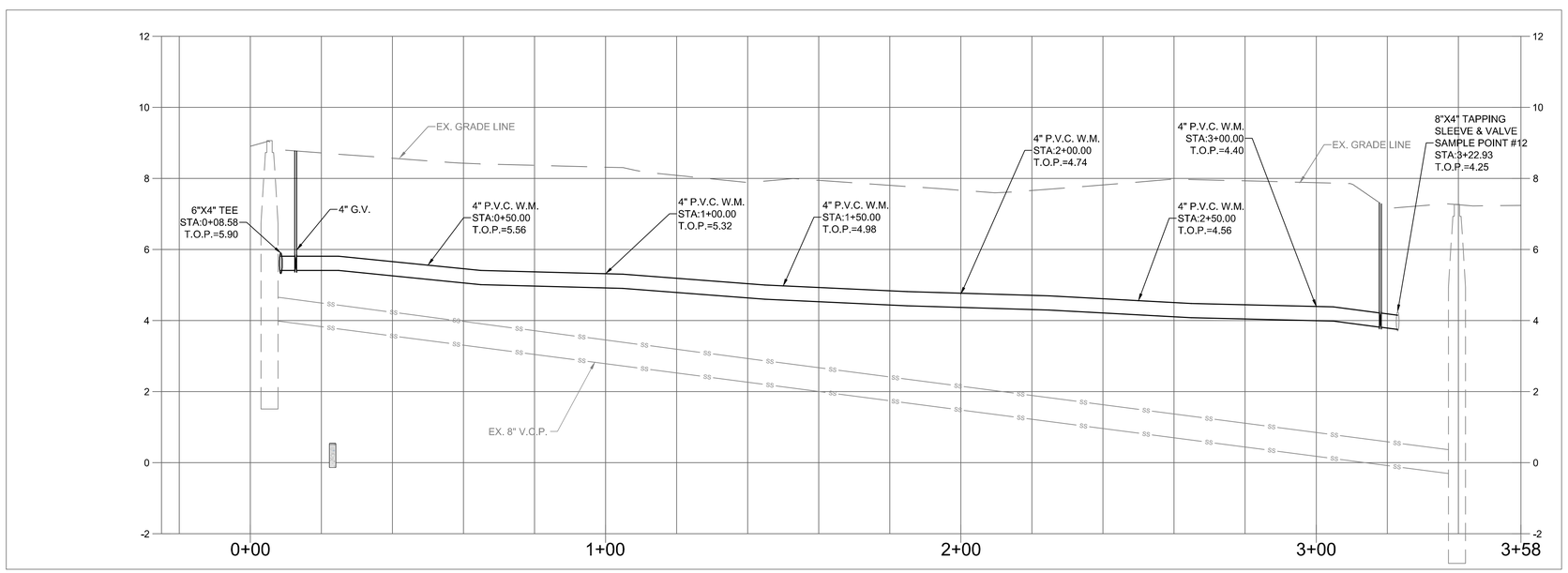
WATER MAIN PLAN

SHEET NO.
W-13

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-13] Dec 21, 2016 3:59pm KMENTING

NORTH N STREET

NORTH O STREET



0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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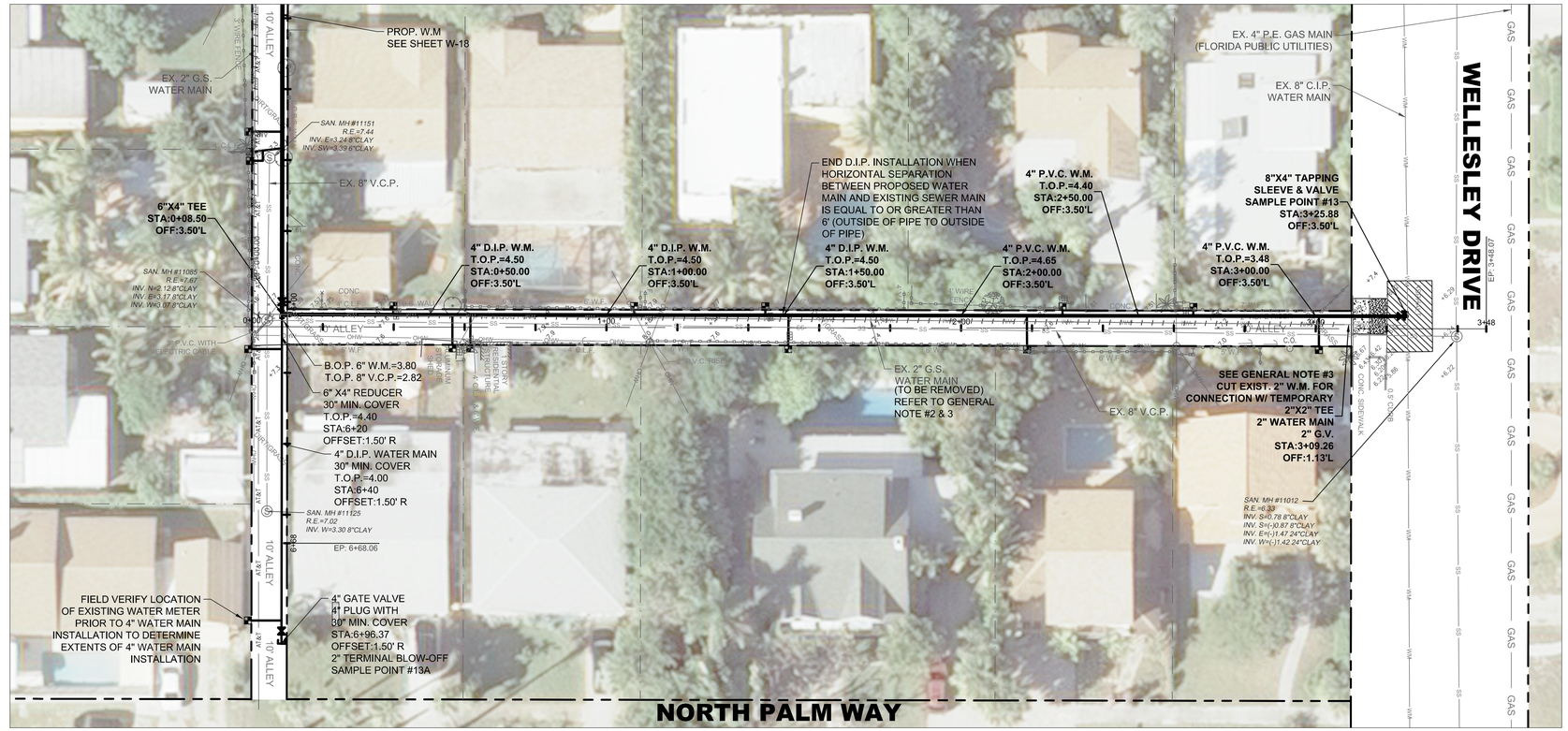
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

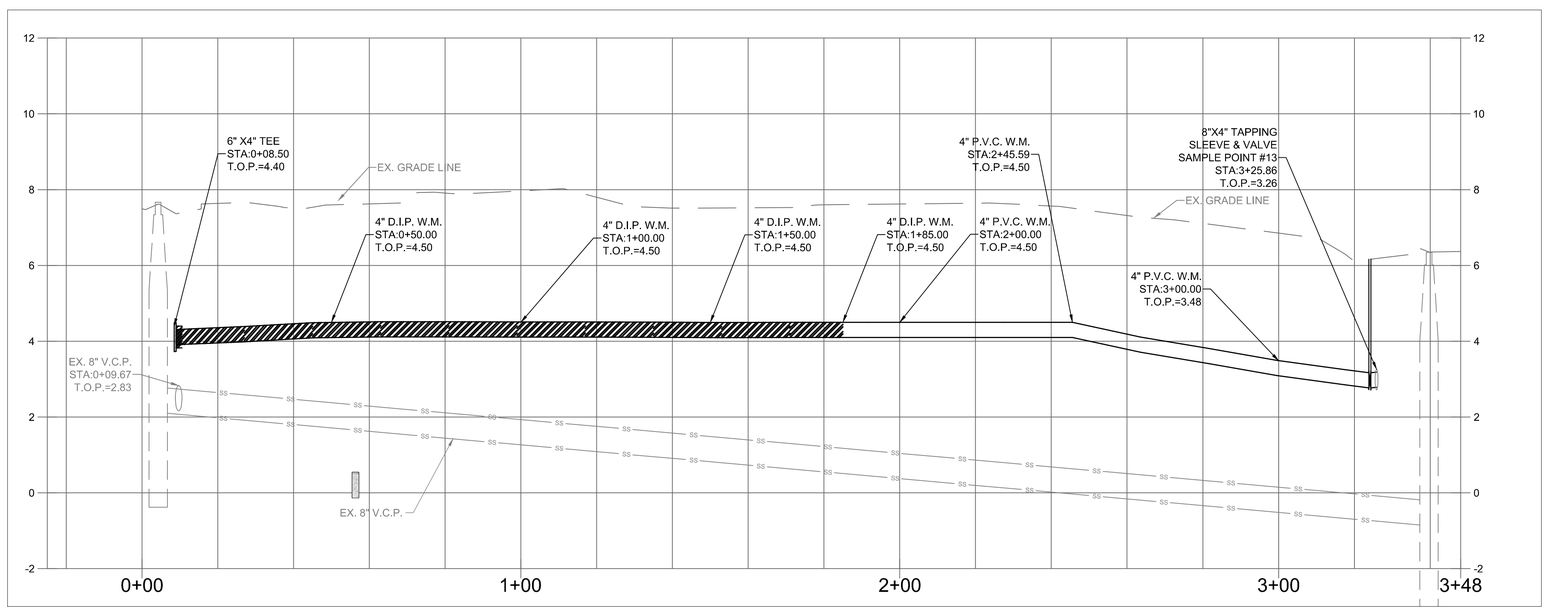
WATER MAIN PLAN

SHEET NO.
W-14

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-14] Dec 21, 2016 4:01pm KMENTING



ALL D.I.P. PIPE AND FITTINGS ON THIS SHEET TO BE POLYWRAPPED



0 20' 40'

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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	NAME	DATE		NAME	DATE
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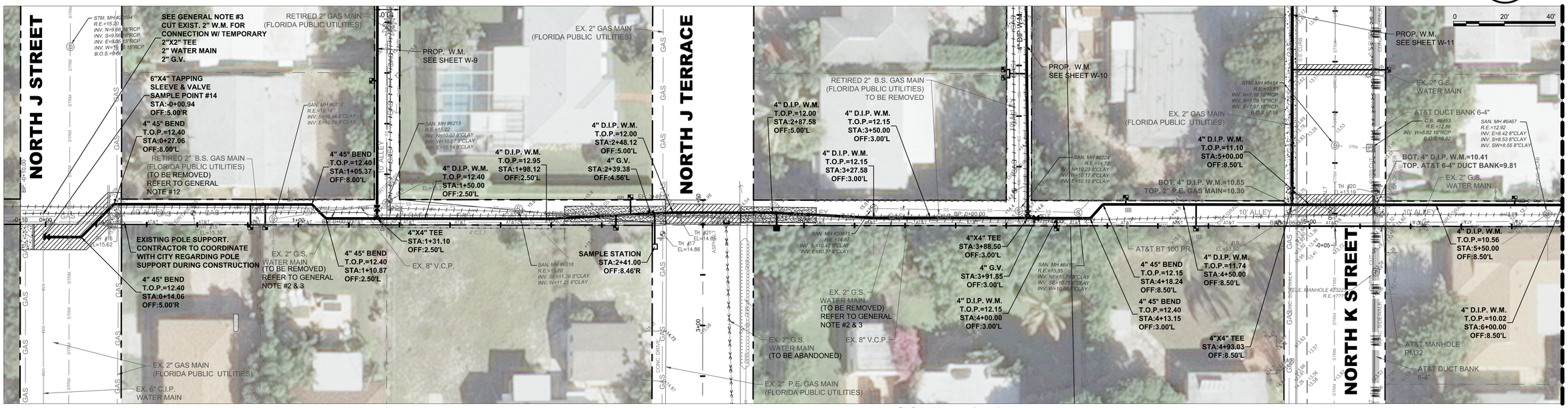
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-15

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-15] Dec 21, 2016 4:02pm KMENTING

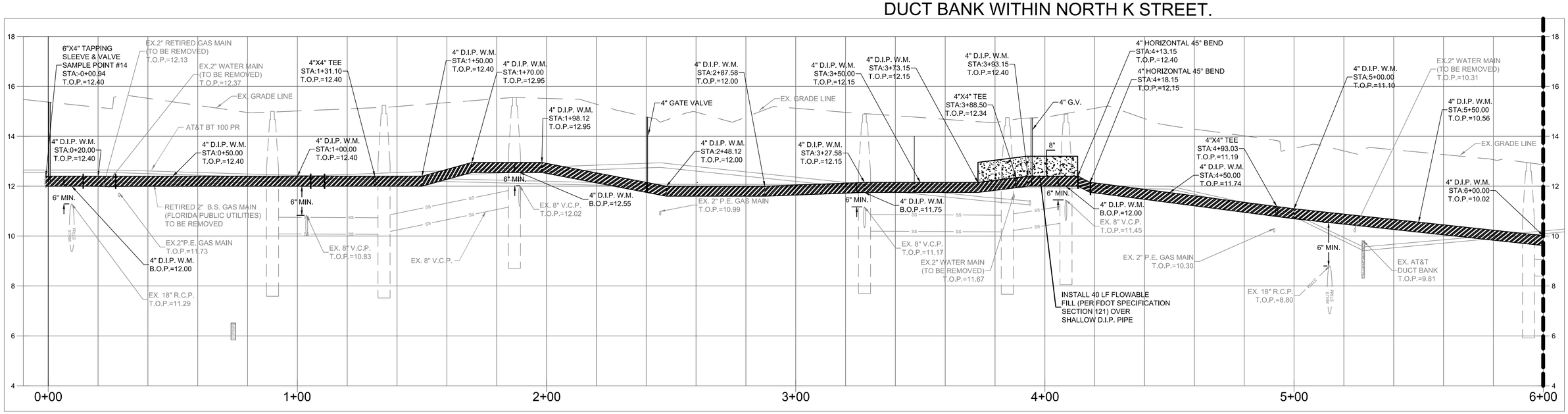
TO 19TH AVENUE N/WELLESLEY DRIVE



MATCH LINE SEE SHEET W-17

TO 18TH AVENUE N

CONTRACTOR TO BE AWARE OF AND FIELD VERIFY EXISTING BURIED AT&T CONDUIT WITHIN ALLEY & DUCT BANK WITHIN NORTH K STREET.



MATCH LINE SEE SHEET W-17

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

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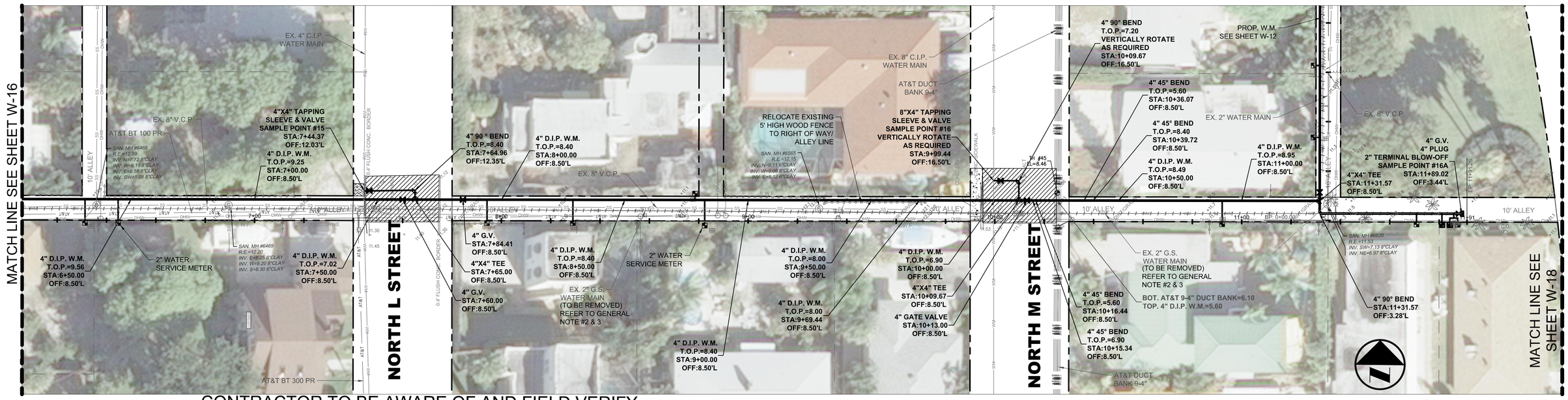
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

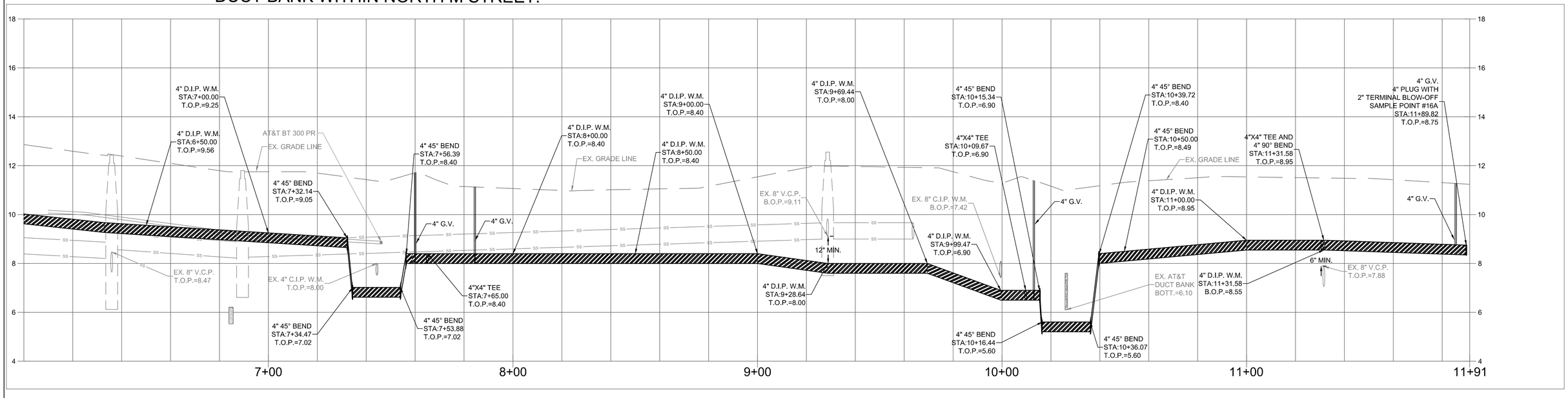
WATER MAIN PLAN

SHEET NO.
W-16

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-16] Dec 21, 2016 4:03pm KMENTING



CONTRACTOR TO BE AWARE OF AND FIELD VERIFY EXISTING BURIED AT&T CONDUIT WITHIN ALLEY & DUCT BANK WITHIN NORTH M STREET.



TO 18TH AVENUE N

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
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CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

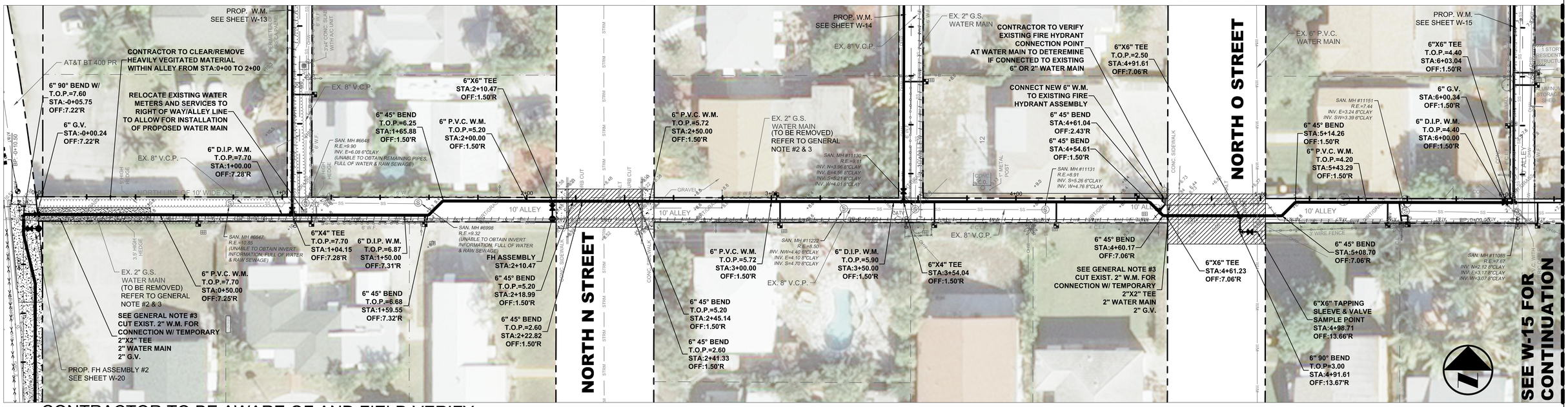
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-17

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-17] Dec 22, 2016 9:19am KMENTING

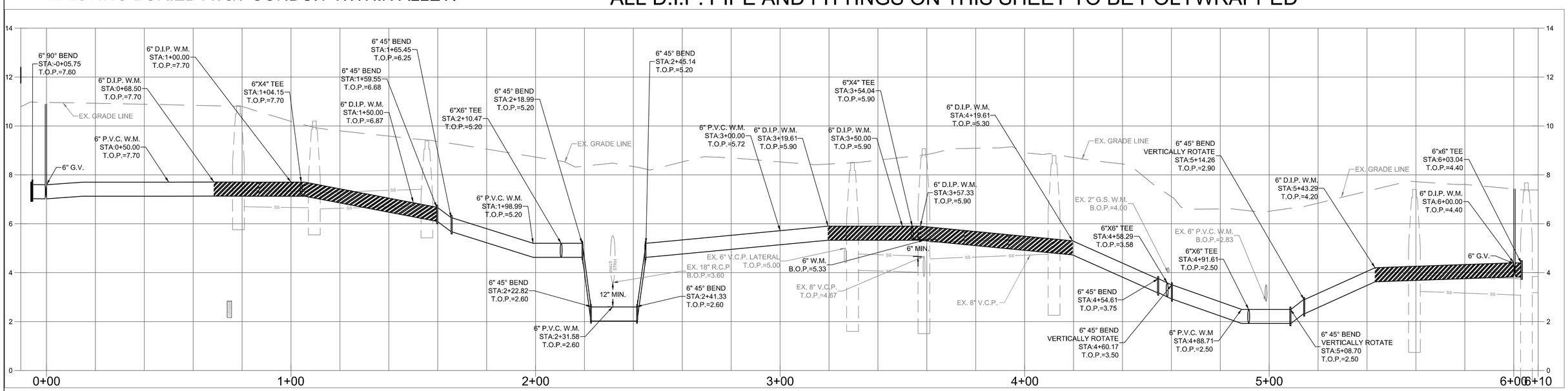
TO 19TH AVENUE N/WELLESLEY DRIVE



CONTRACTOR TO BE AWARE OF AND FIELD VERIFY EXISTING BURIED AT&T CONDUIT WITHIN ALLEY.

TO 18TH AVENUE N

ALL D.I.P. PIPE AND FITTINGS ON THIS SHEET TO BE POLYWRAPPED



Matthew J. Cigale
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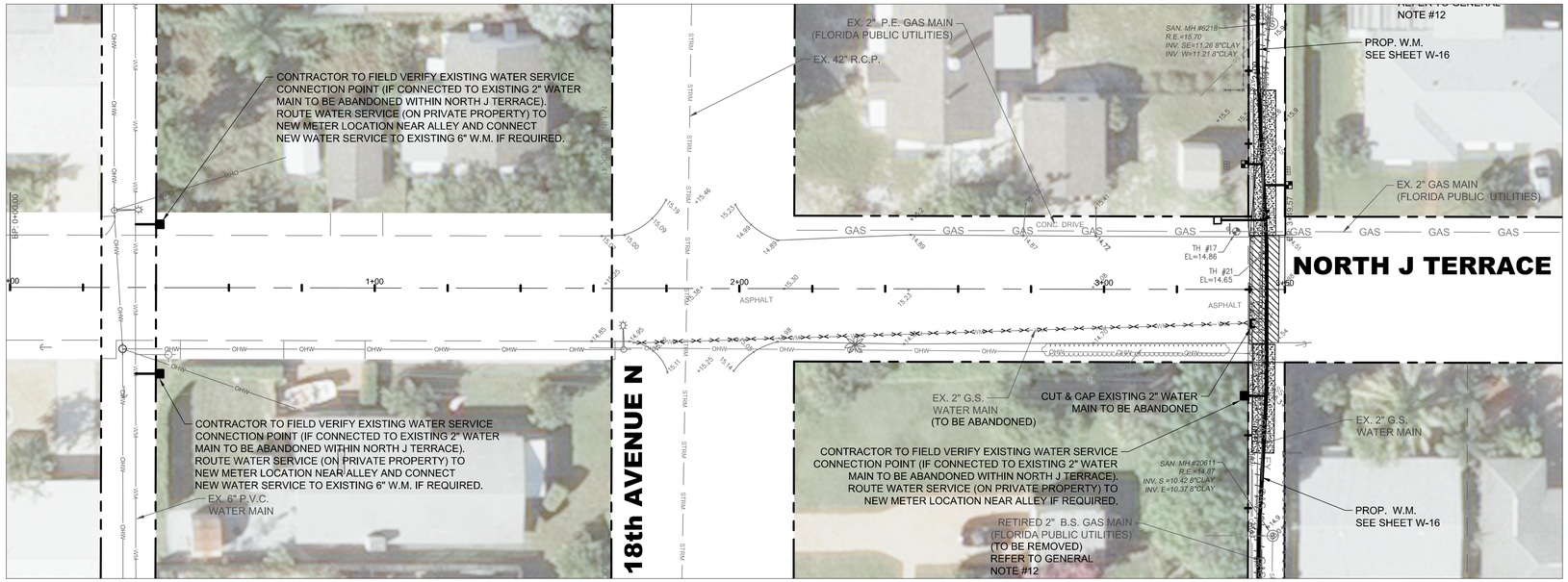
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

SHEET NO.
W-18

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-18] Dec 21, 2016 4:05pm KMENTING



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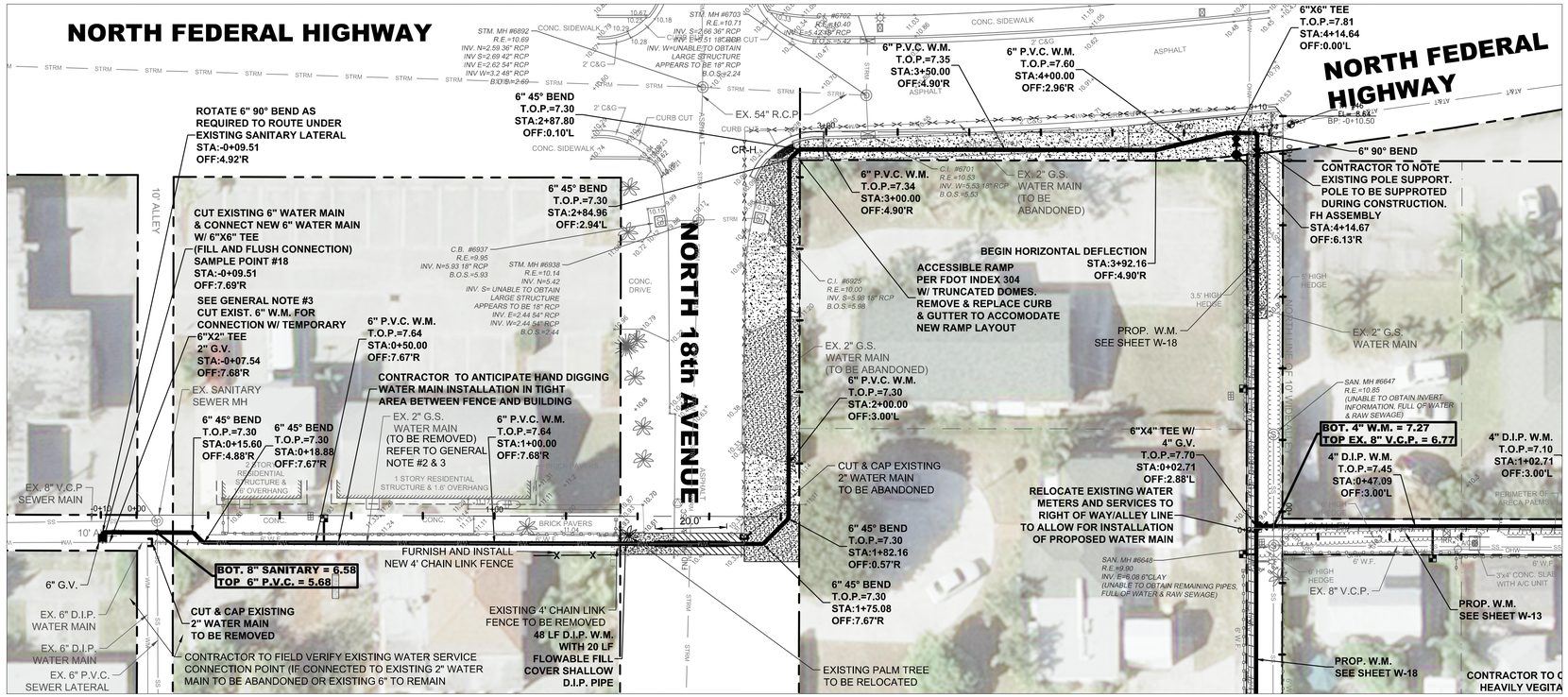
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

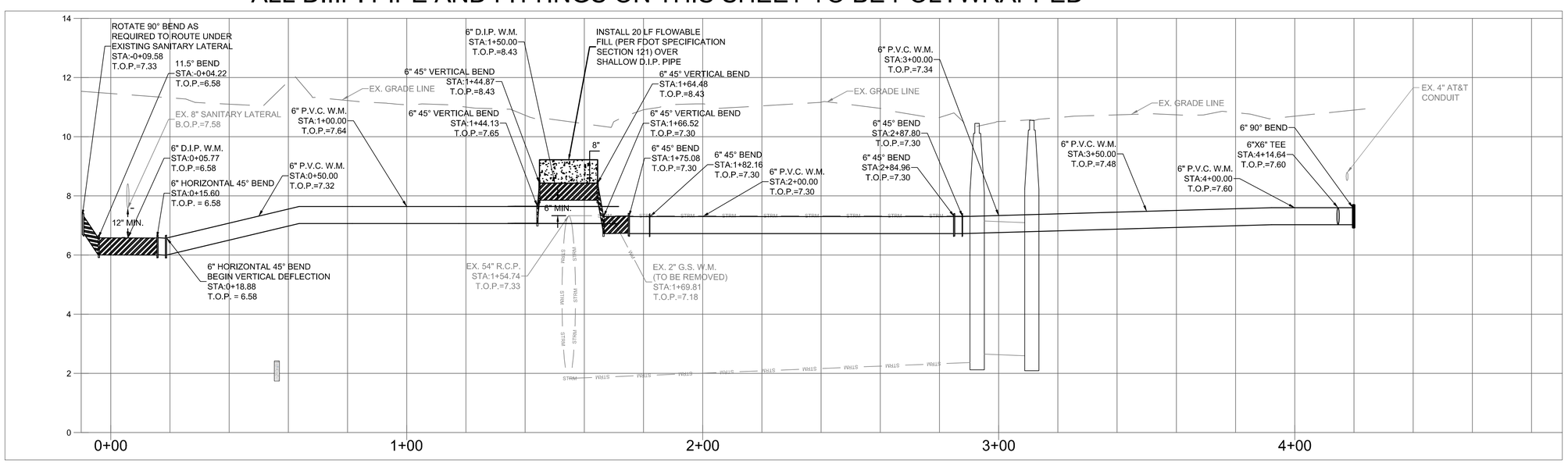
SHEET NO.
W-19

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-19] Dec 21, 2016 4:06pm KMENTING

CONTRACTOR TO BE AWARE OF AND FIELD VERIFY EXISTING BURIED AT&T CONDUIT.



ALL D.I.P. PIPE AND FITTINGS ON THIS SHEET TO BE POLYWRAPPED



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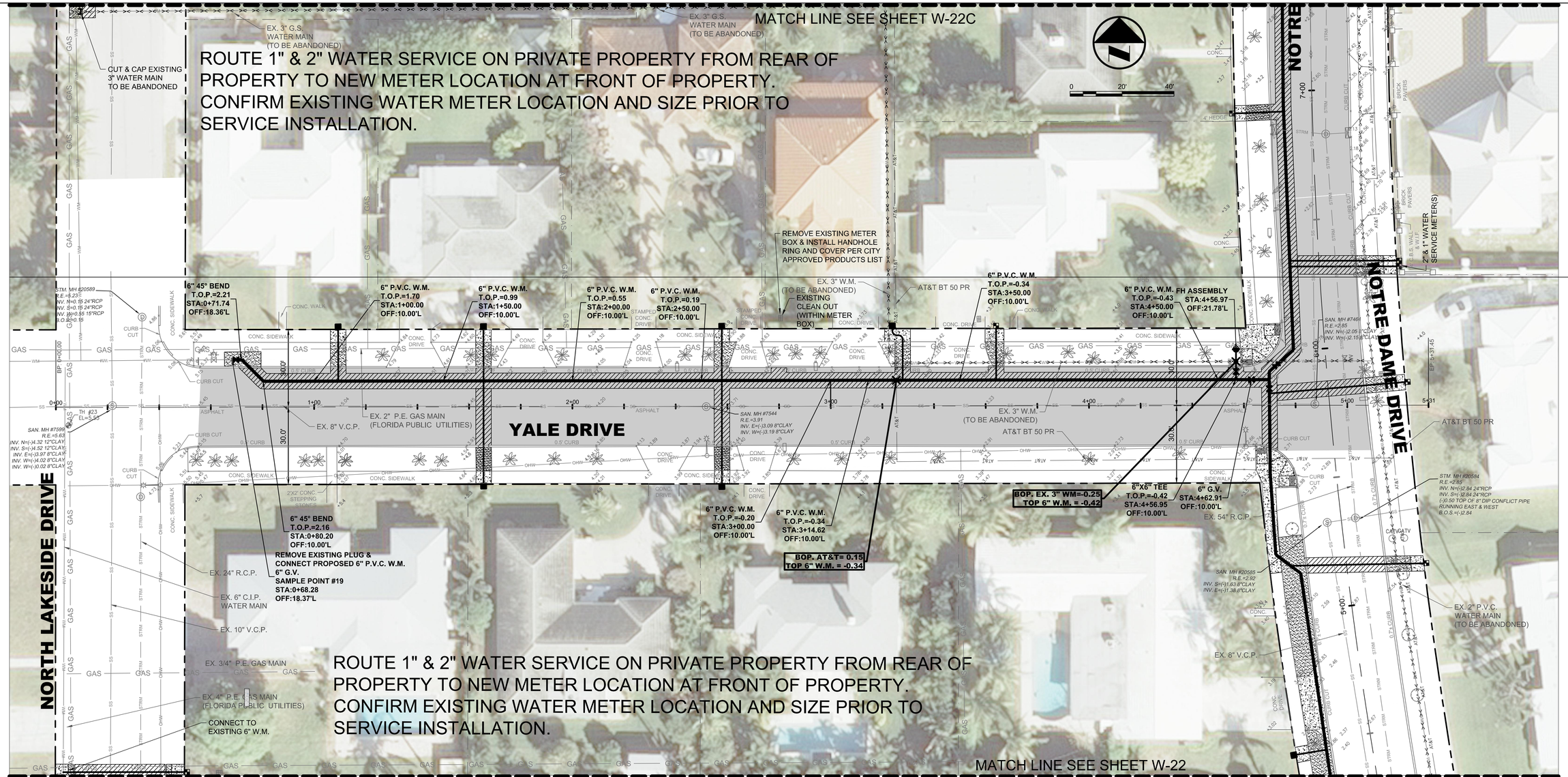
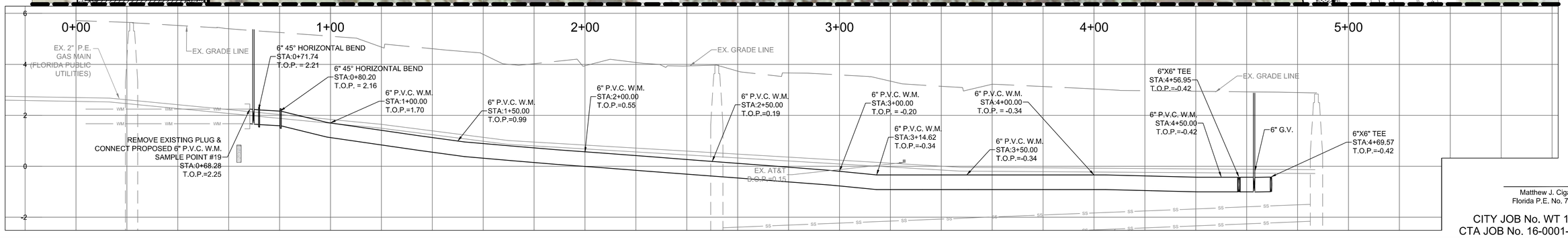
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-20

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-20] Dec 22, 2016 9:20am KMENTING





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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

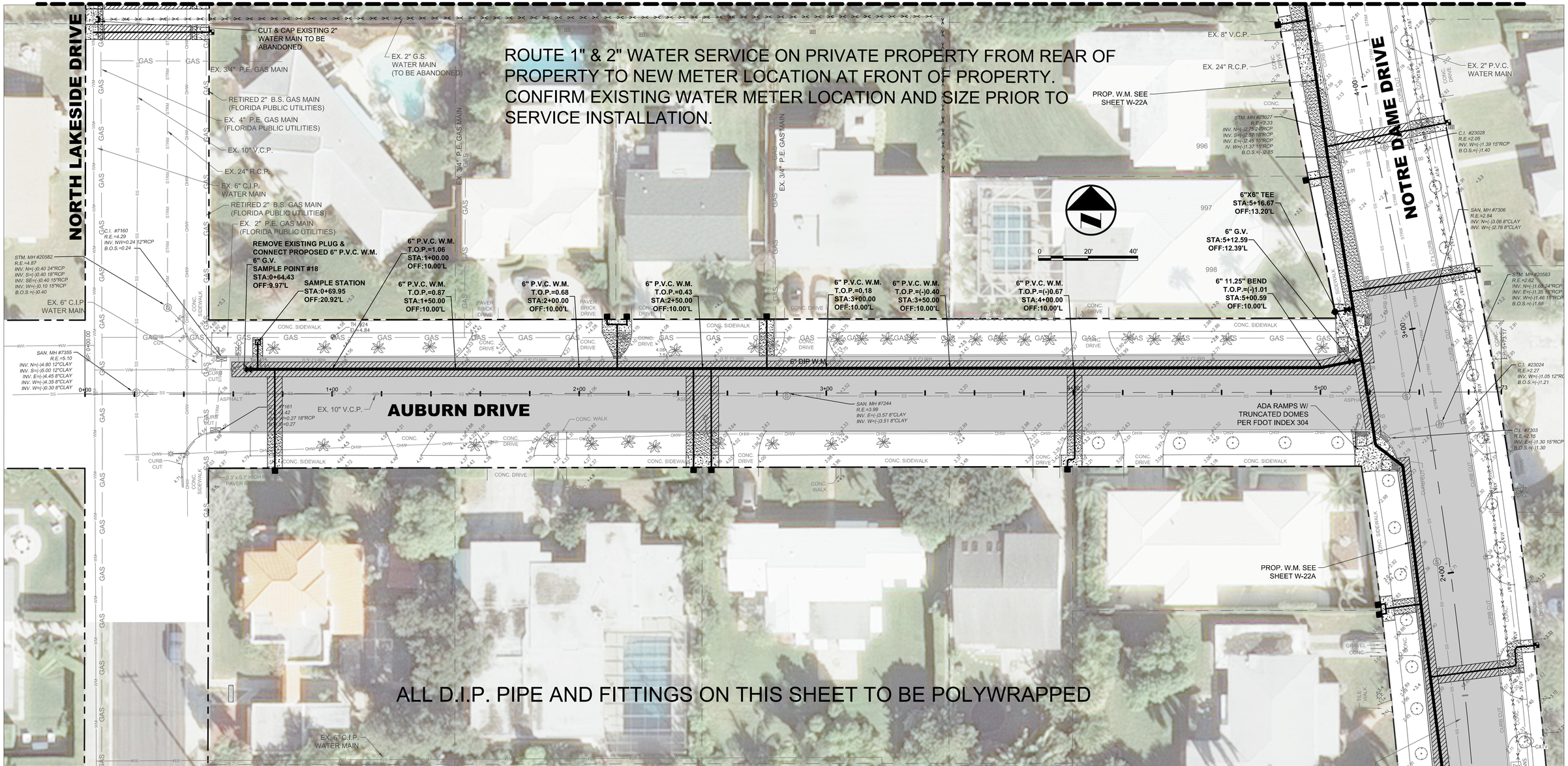
SHEET NO.
W-21

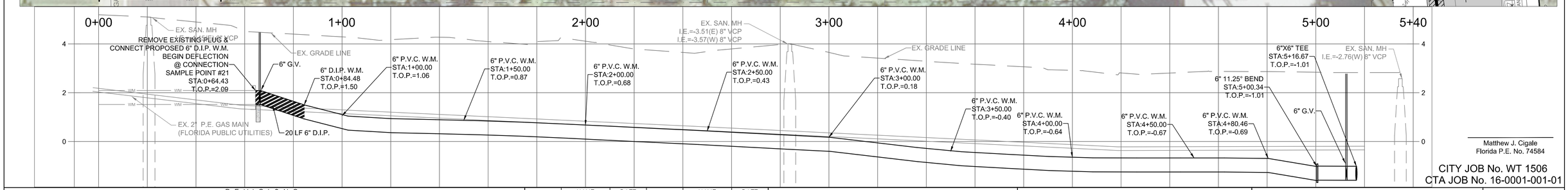
R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-21] Dec 22, 2016 9:21am KMENTING

MATCH LINE SEE SHEET W-21

ROUTE 1" & 2" WATER SERVICE ON PRIVATE PROPERTY FROM REAR OF PROPERTY TO NEW METER LOCATION AT FRONT OF PROPERTY. CONFIRM EXISTING WATER METER LOCATION AND SIZE PRIOR TO SERVICE INSTALLATION.

ALL D.I.P. PIPE AND FITTINGS ON THIS SHEET TO BE POLYWRAPPED





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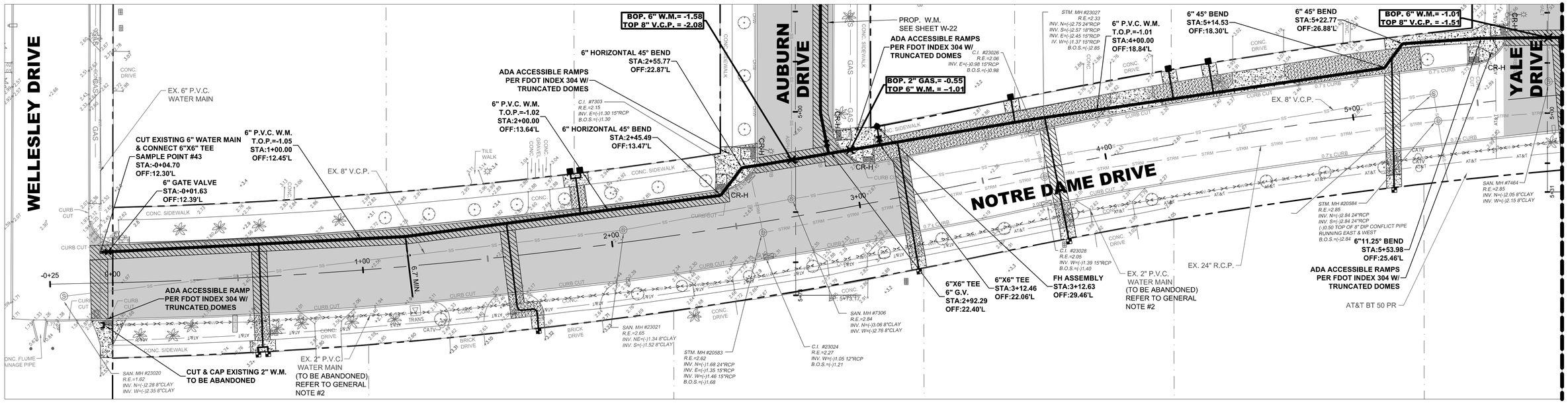
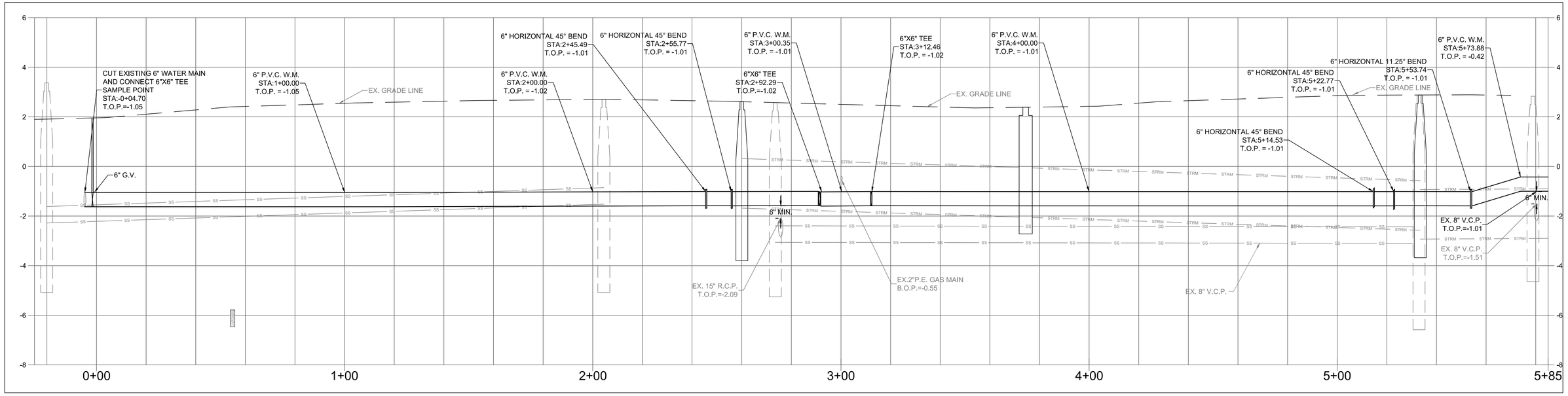
WATER MAIN PLAN

SHEET NO.
W-22

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-22] Dec 22, 2016 9:22am KMENTING





Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

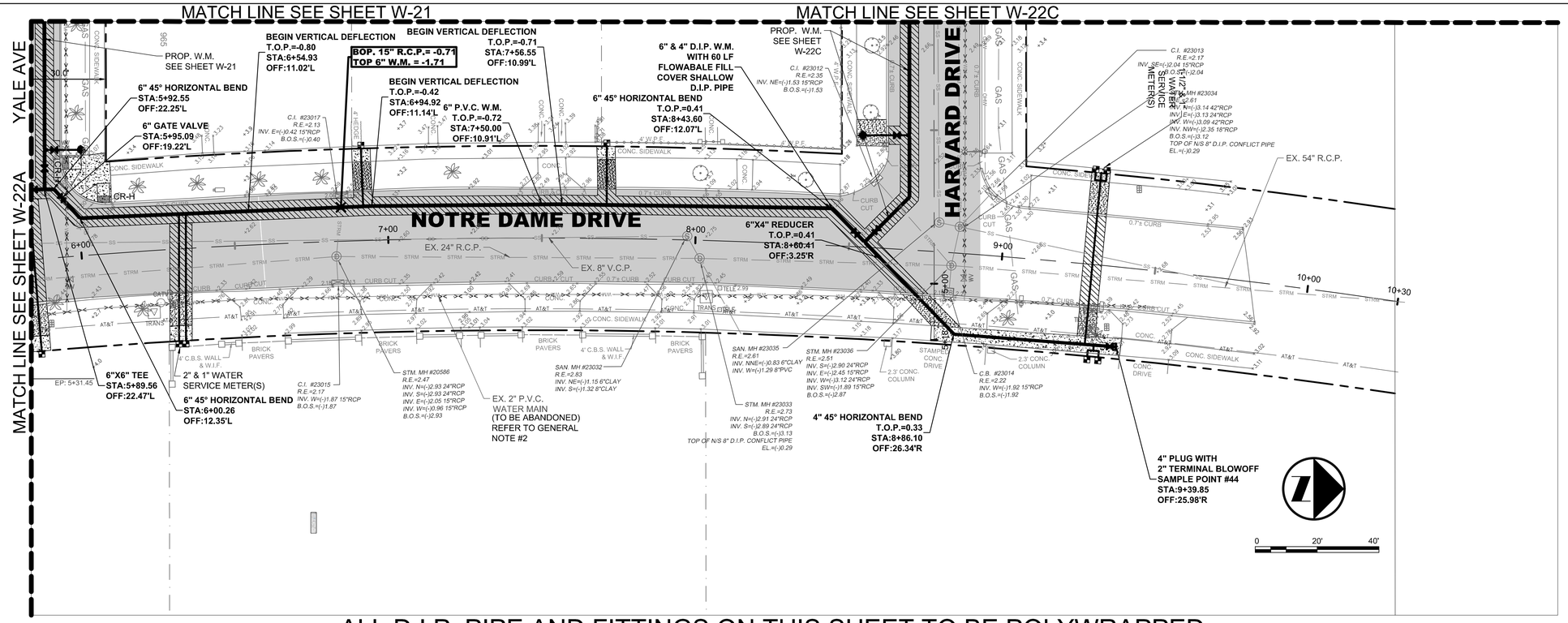
CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-22A

G:\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(1-23).dwg [W-22A] Dec 22, 2016 9:29am KMENTING



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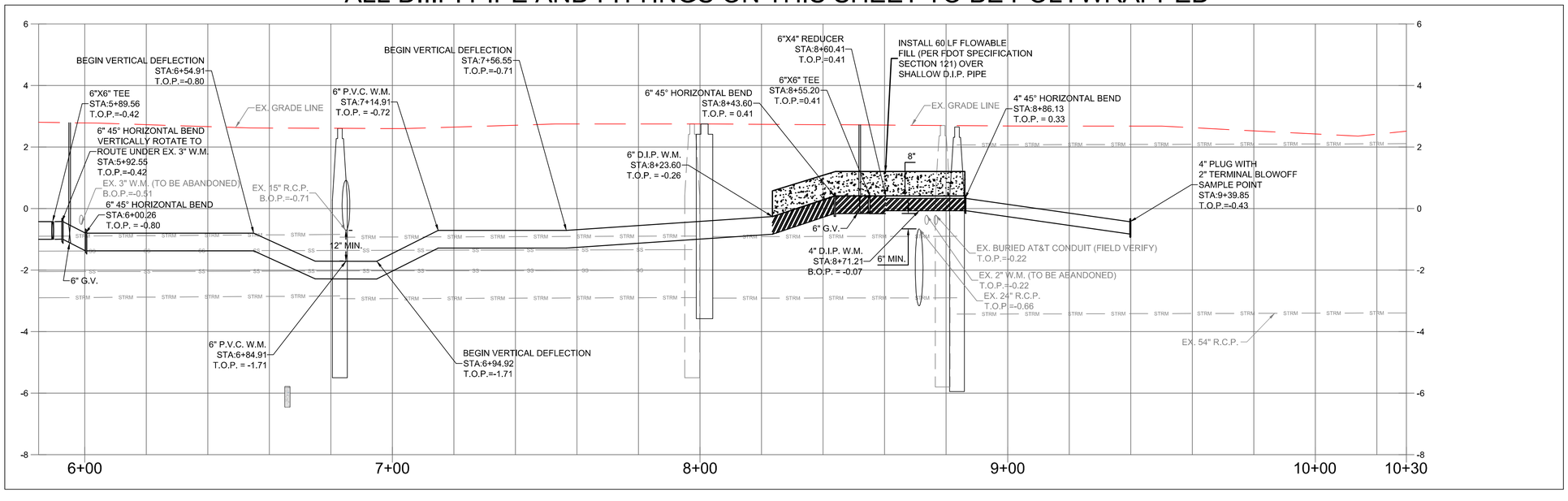

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-22B

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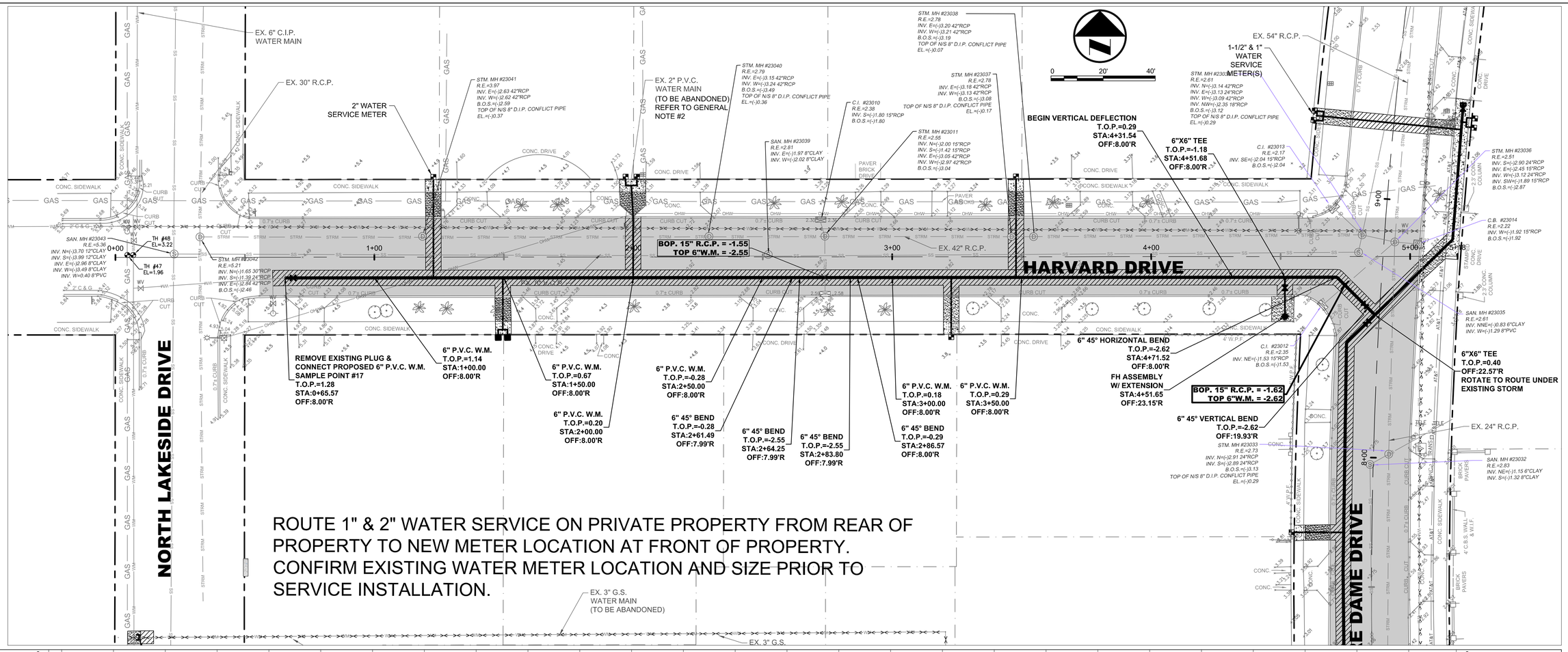
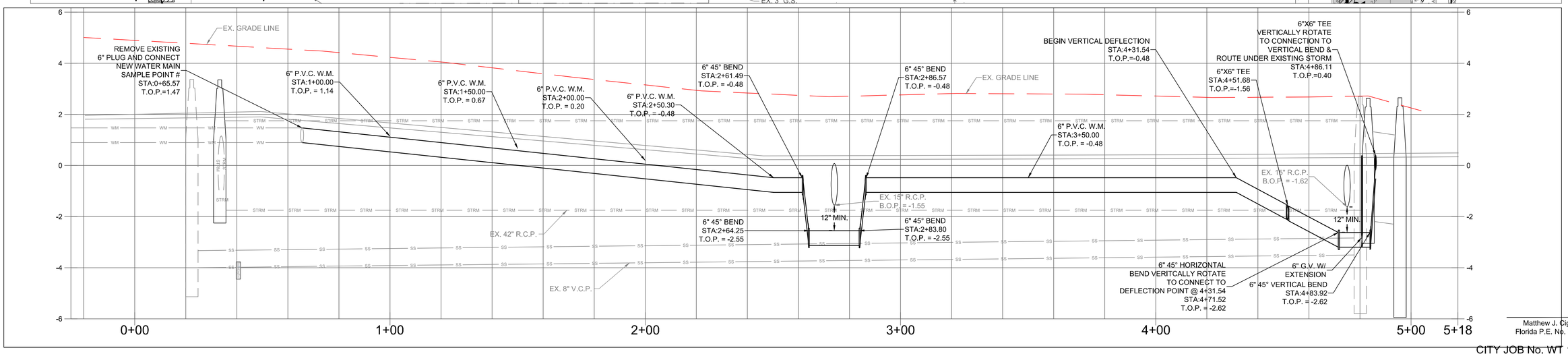


ROUTE 1" & 2" WATER SERVICE ON PRIVATE PROPERTY FROM REAR OF PROPERTY TO NEW METER LOCATION AT FRONT OF PROPERTY. CONFIRM EXISTING WATER METER LOCATION AND SIZE PRIOR TO SERVICE INSTALLATION.



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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-22C

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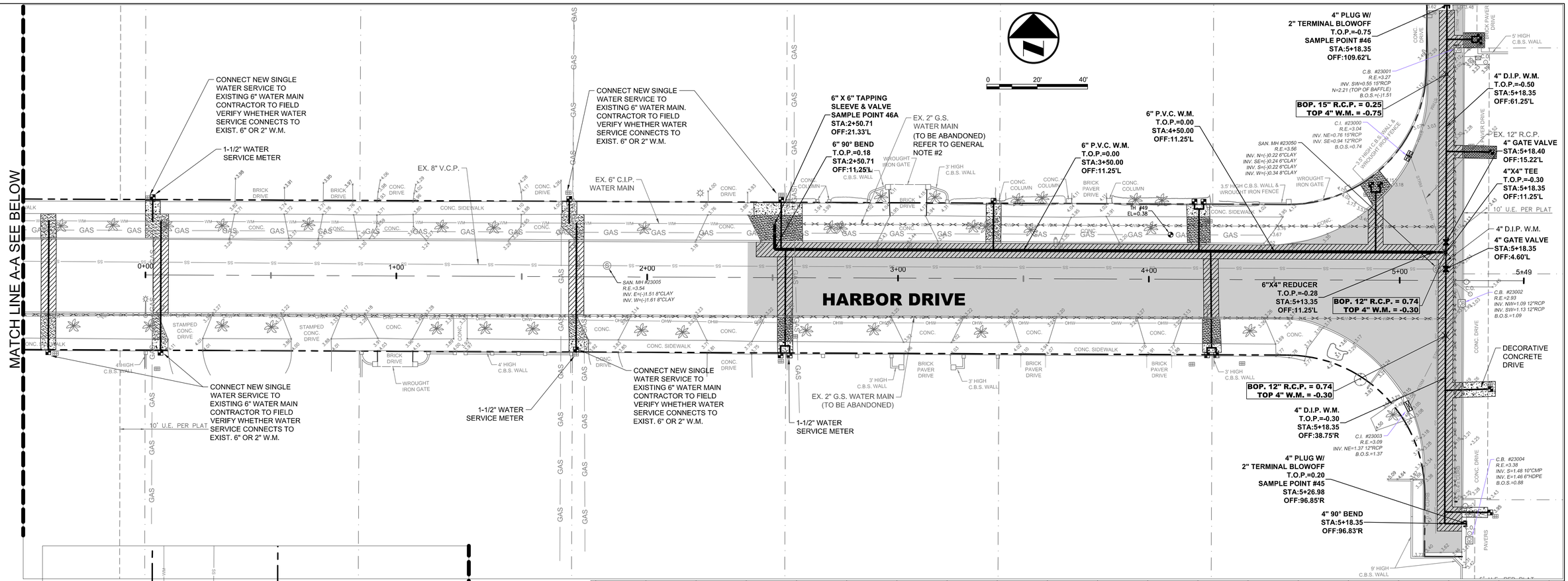

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2 INCH WATER MAIN REPLACEMENT
PHASE II
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WATER MAIN PLAN

SHEET NO.
W-23

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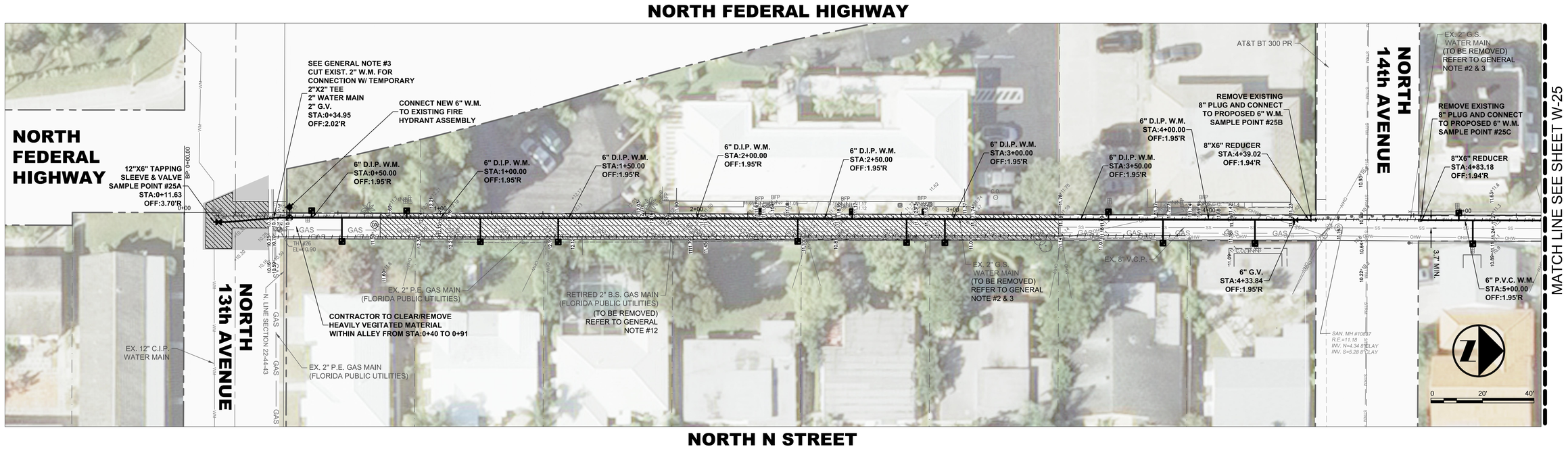

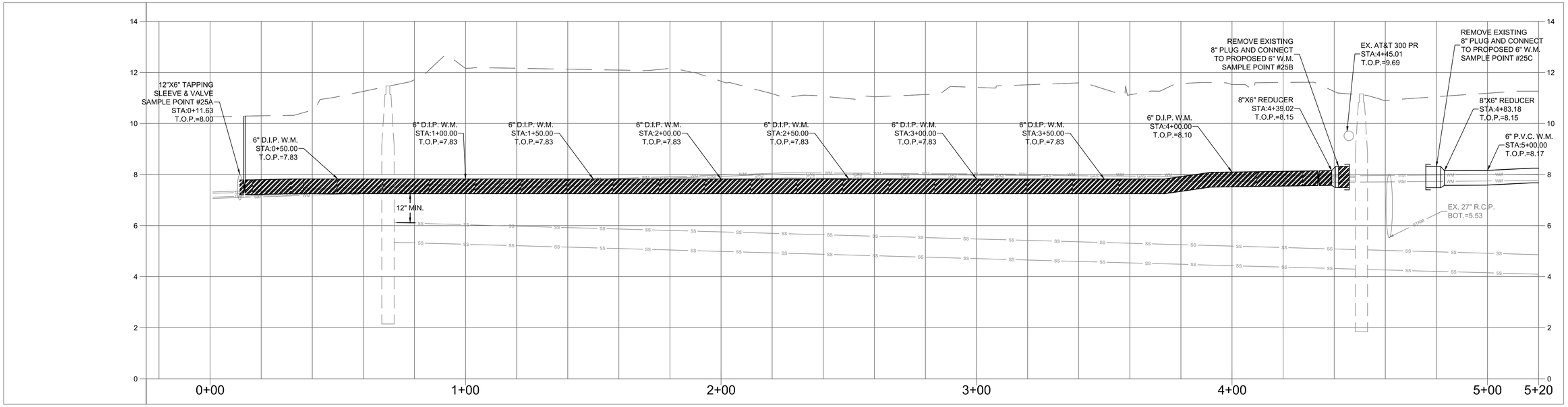

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-24

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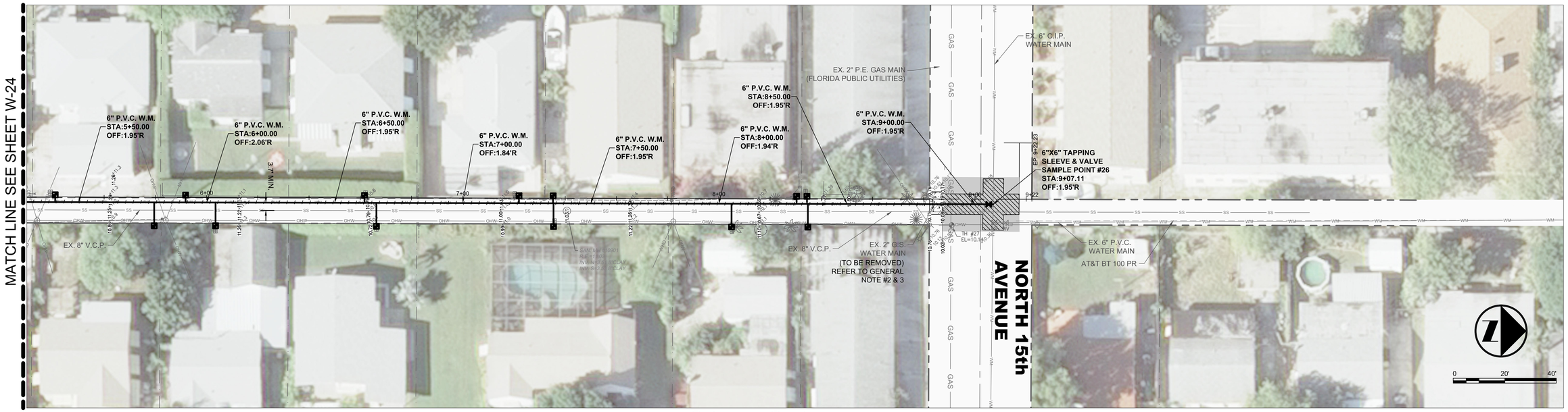
NORTH FEDERAL HIGHWAY



NORTH N STREET

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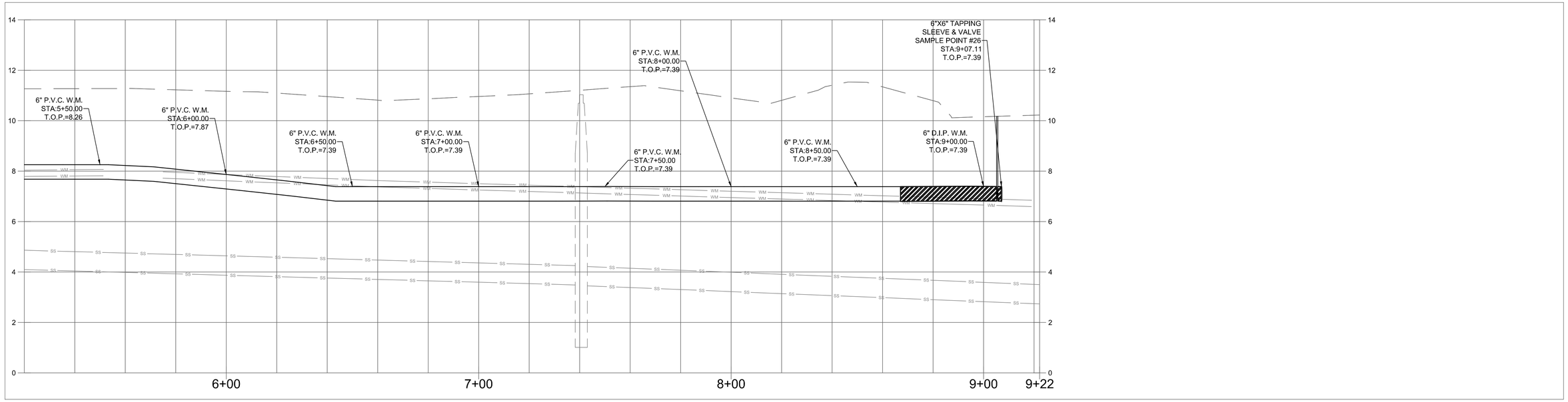

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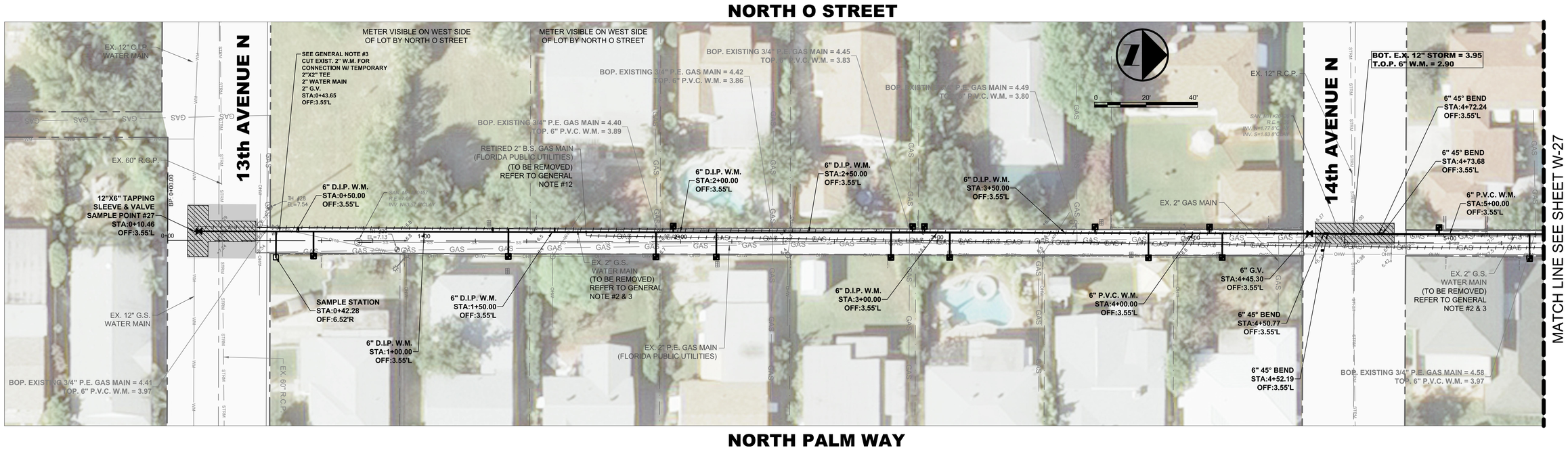
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-25

G:\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(24-41).dwg [W-25] Dec 22, 2016 10:31am EFRANCESCHI



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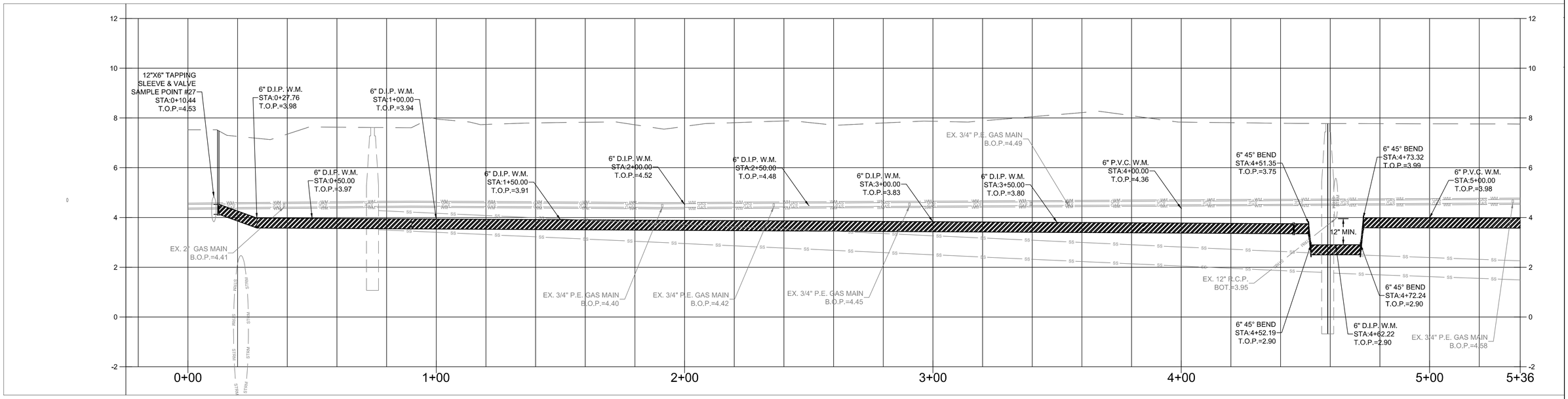

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-26

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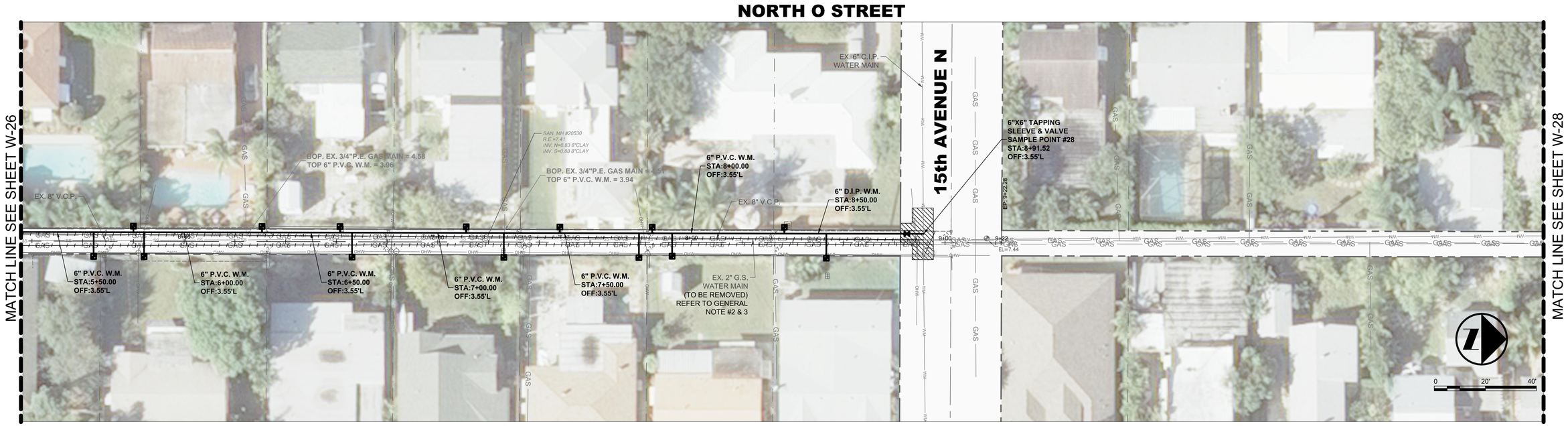

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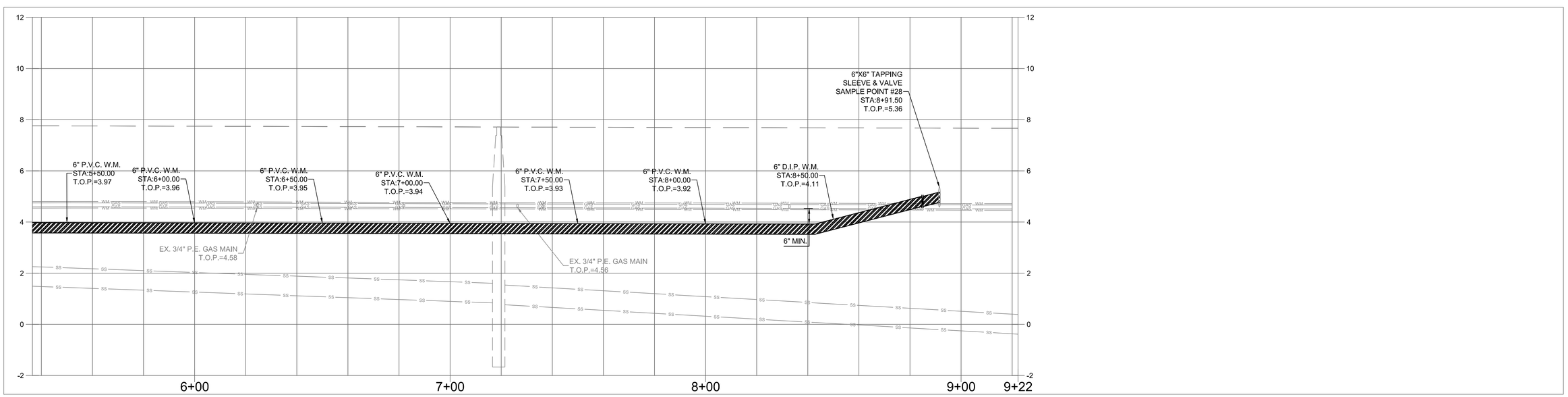

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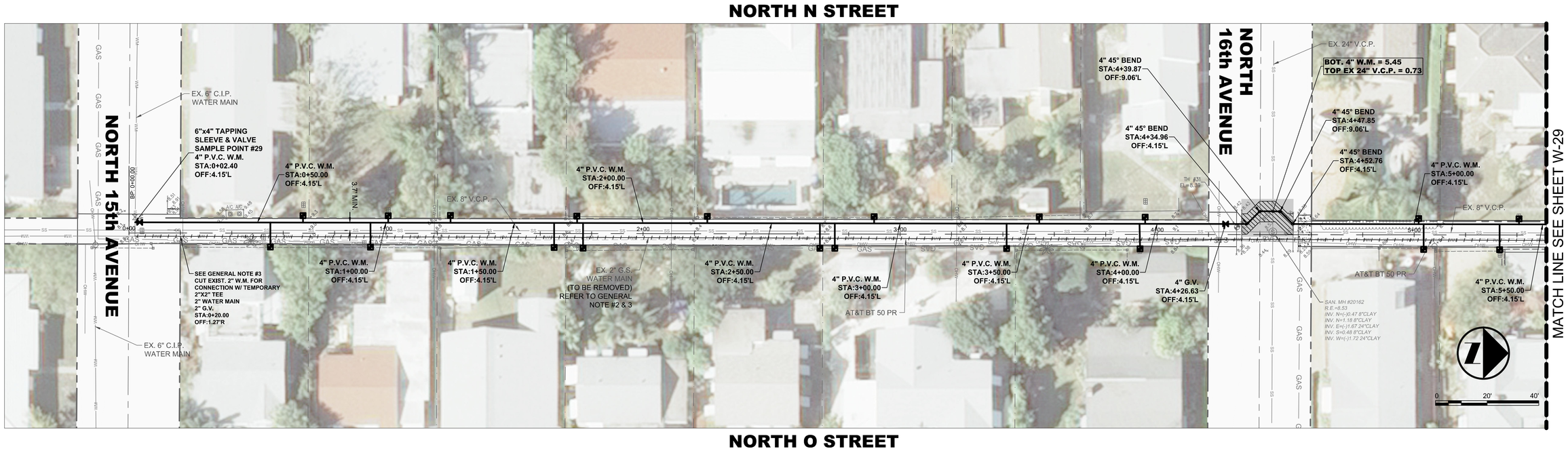
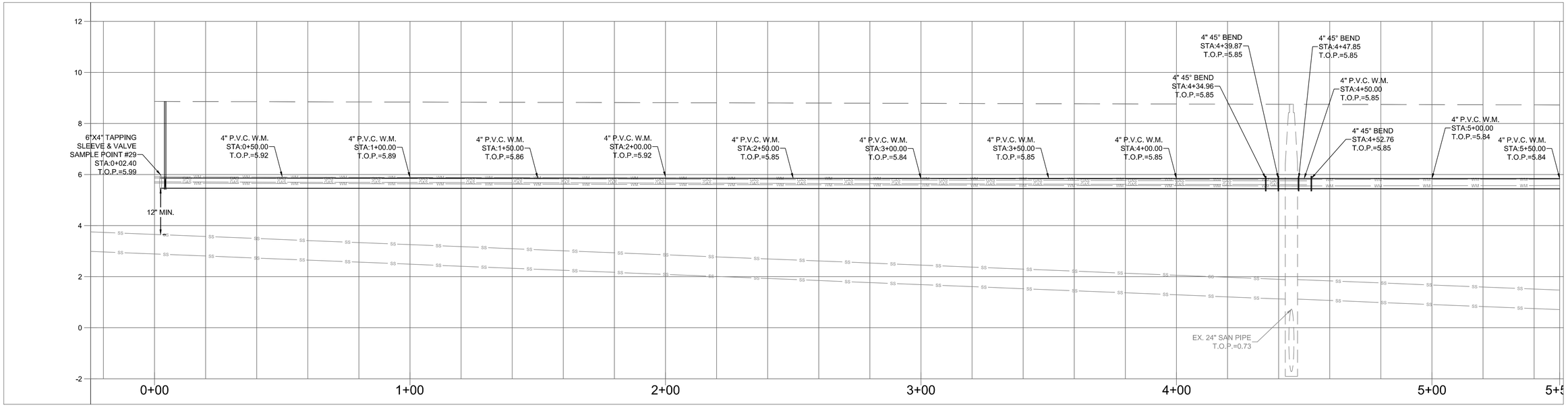
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-27

G:\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR(24-41).dwg [W-27] Dec 22, 2016 10:33am EFRANCESCHI





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2 INCH WATER MAIN REPLACEMENT
PHASE II
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WATER MAIN PLAN

SHEET NO.
W-28

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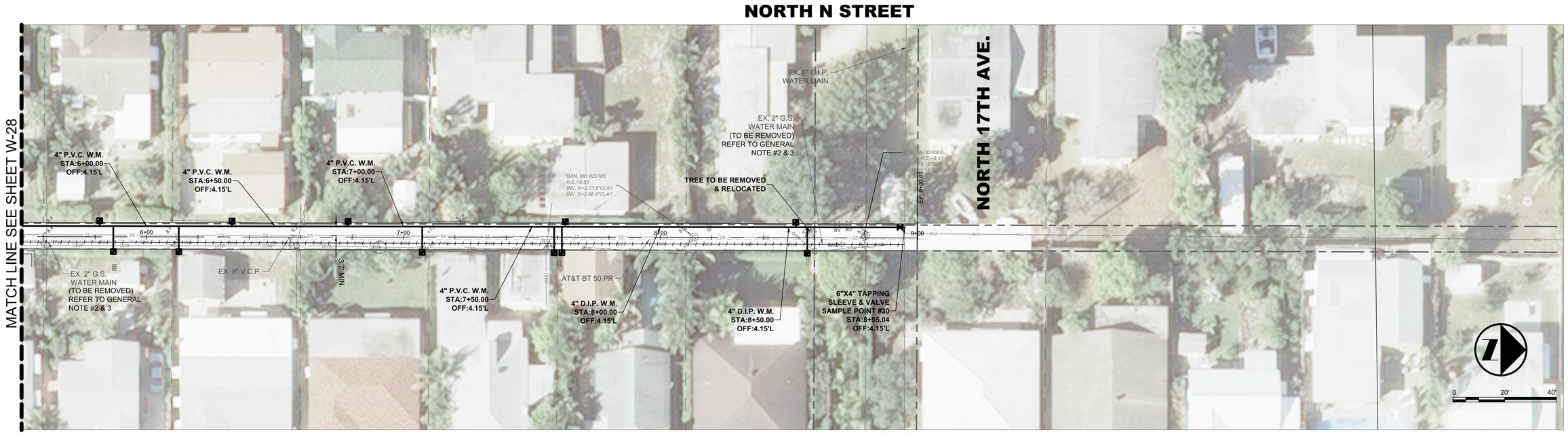

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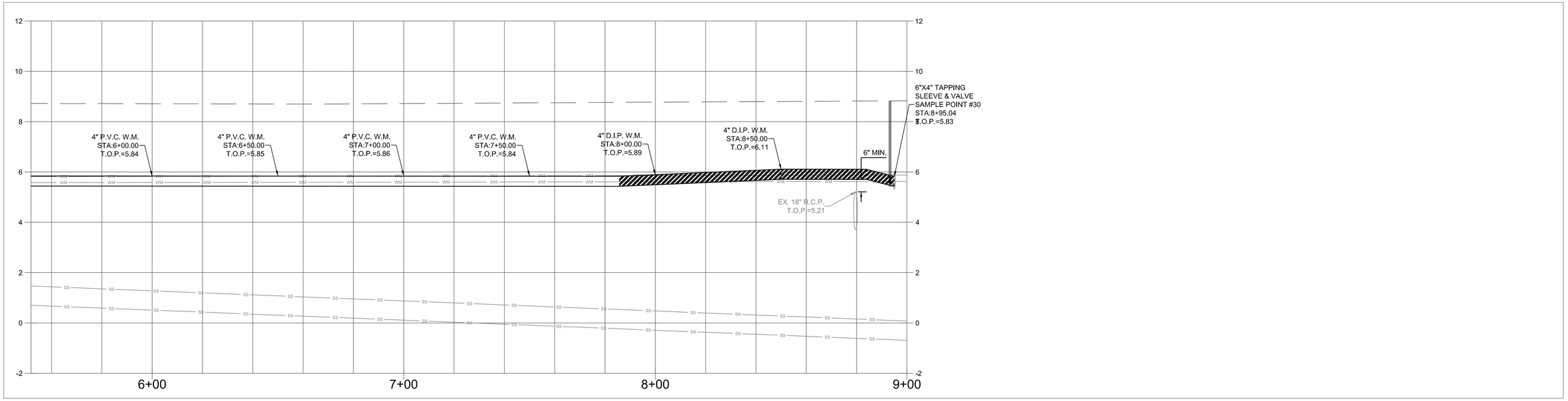

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2 INCH WATER MAIN REPLACEMENT
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WATER MAIN PLAN

SHEET NO.
W-29

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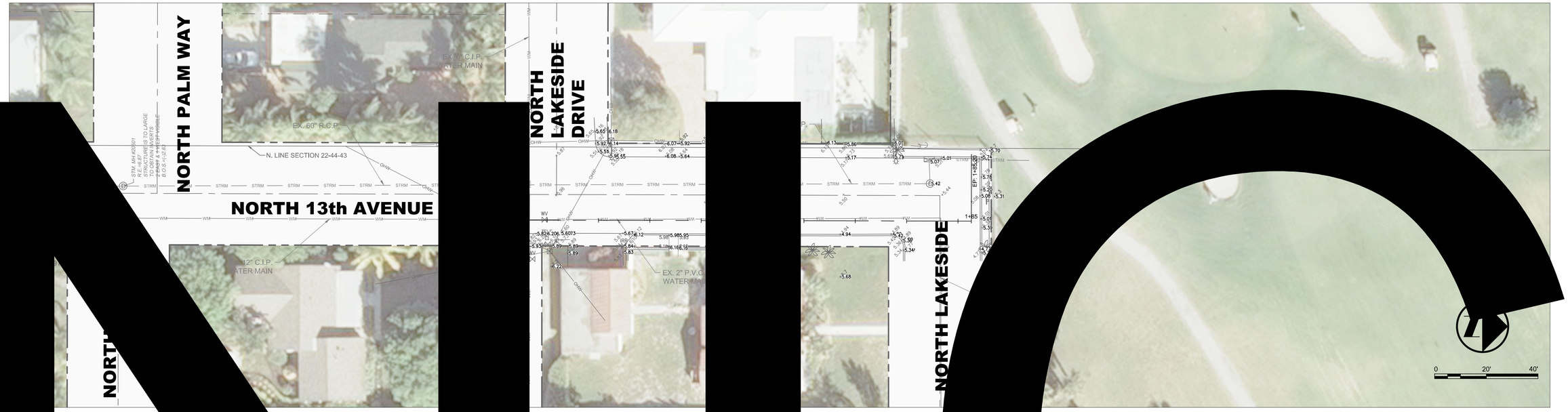

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PHASE II
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WATER MAIN PLAN

SHEET NO.
W-30

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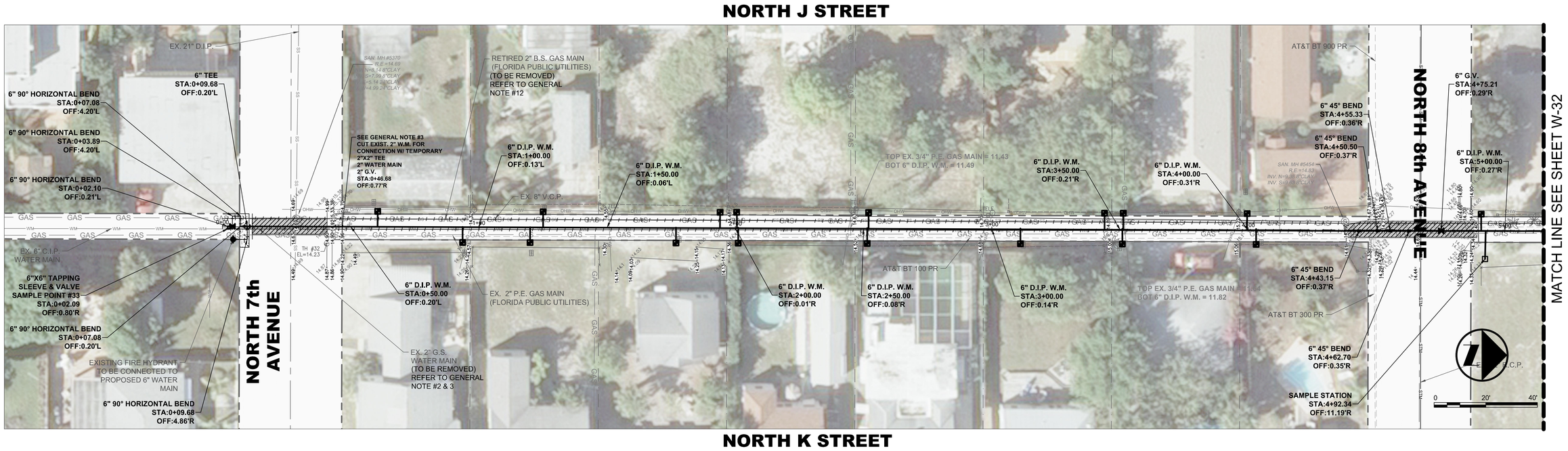

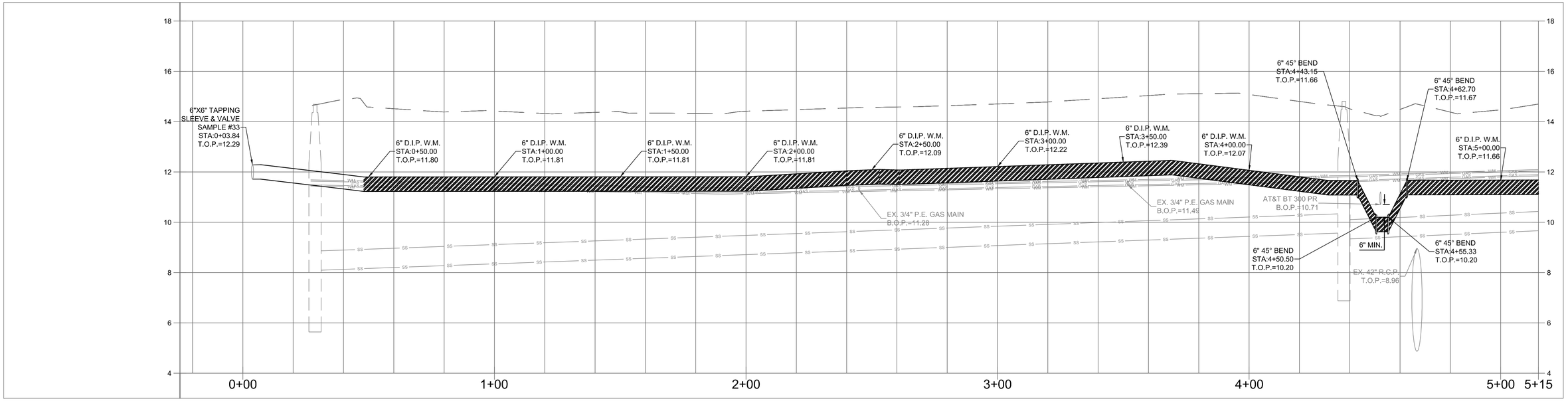

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WATER MAIN PLAN

SHEET NO.
W-31

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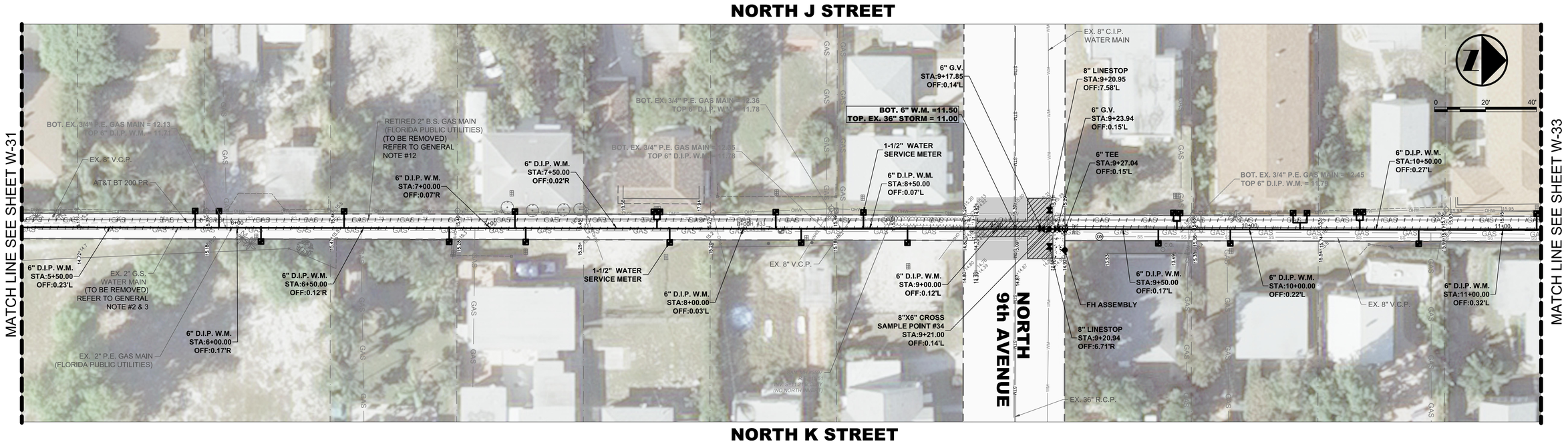

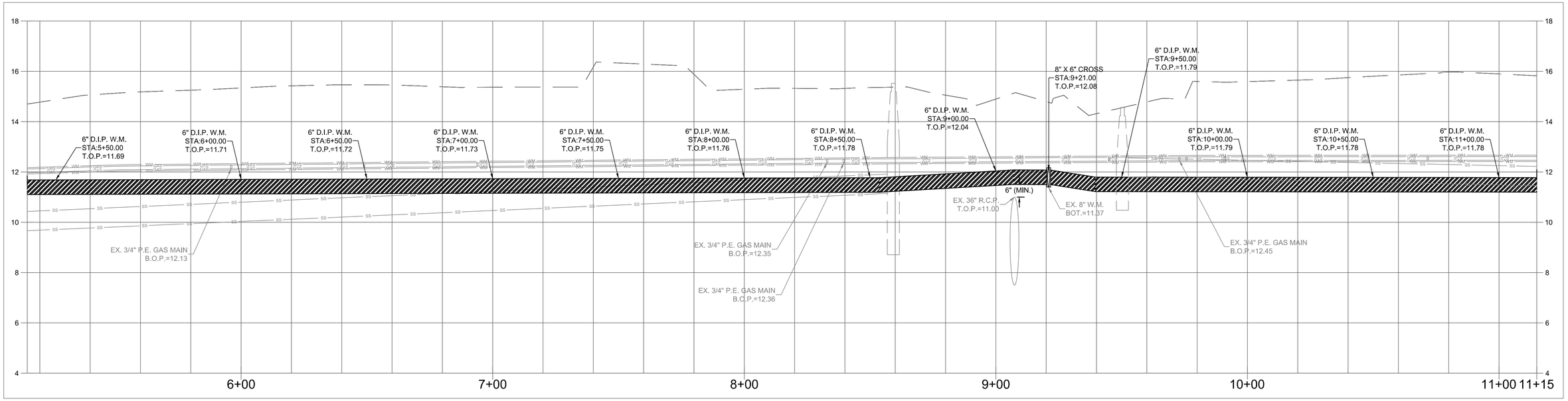

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SHEET NO.
W-32

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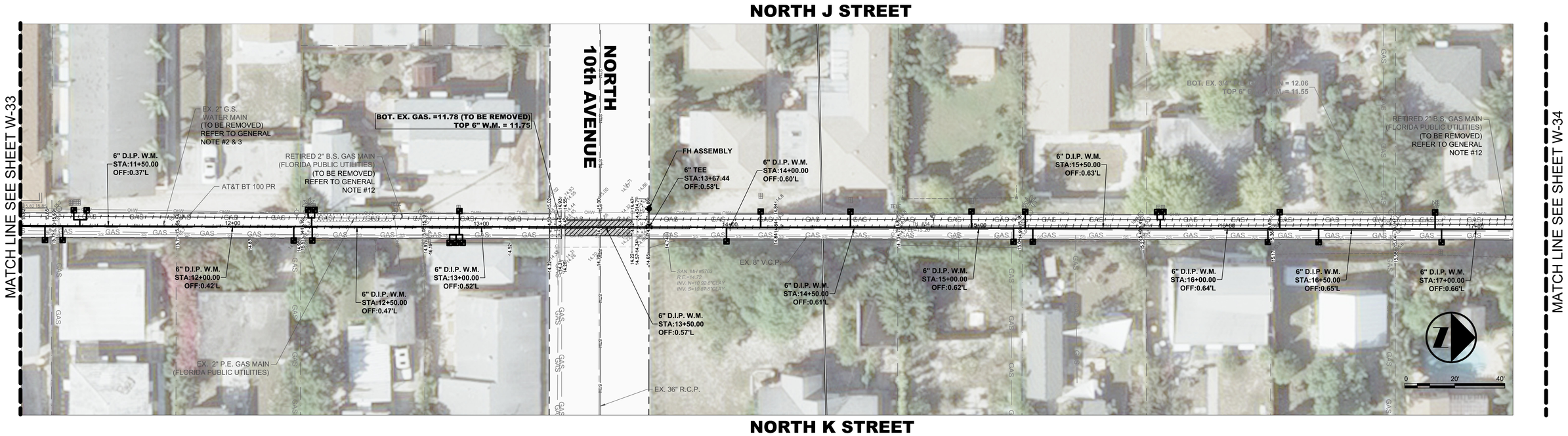

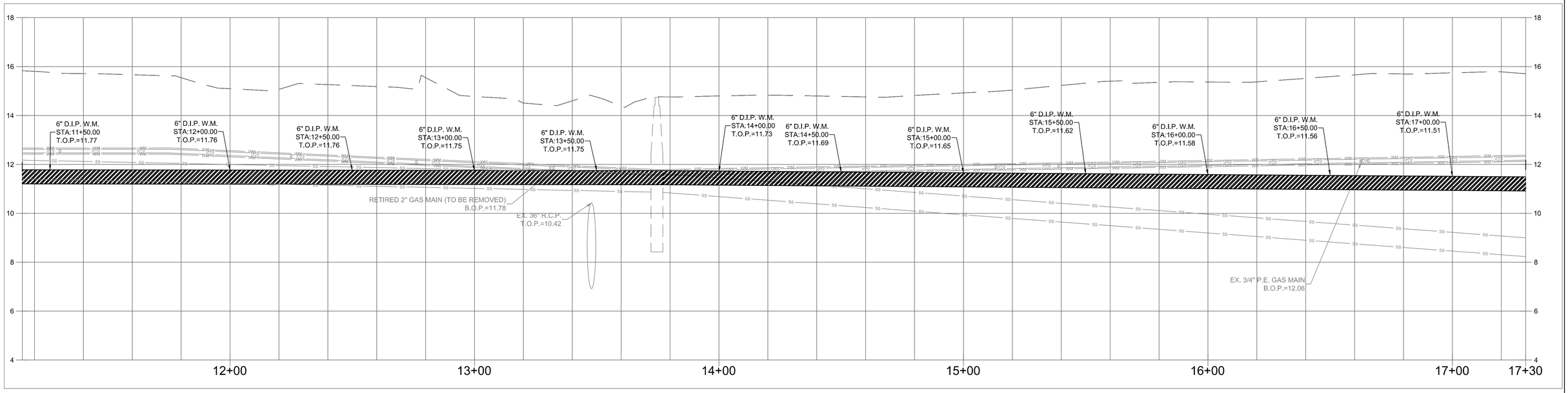

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
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CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-33

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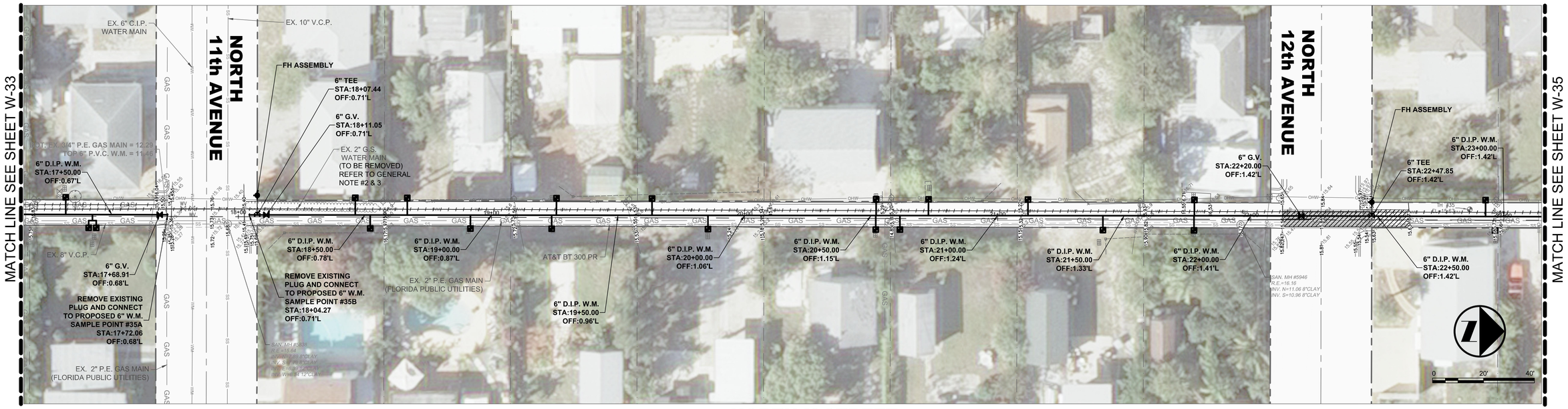

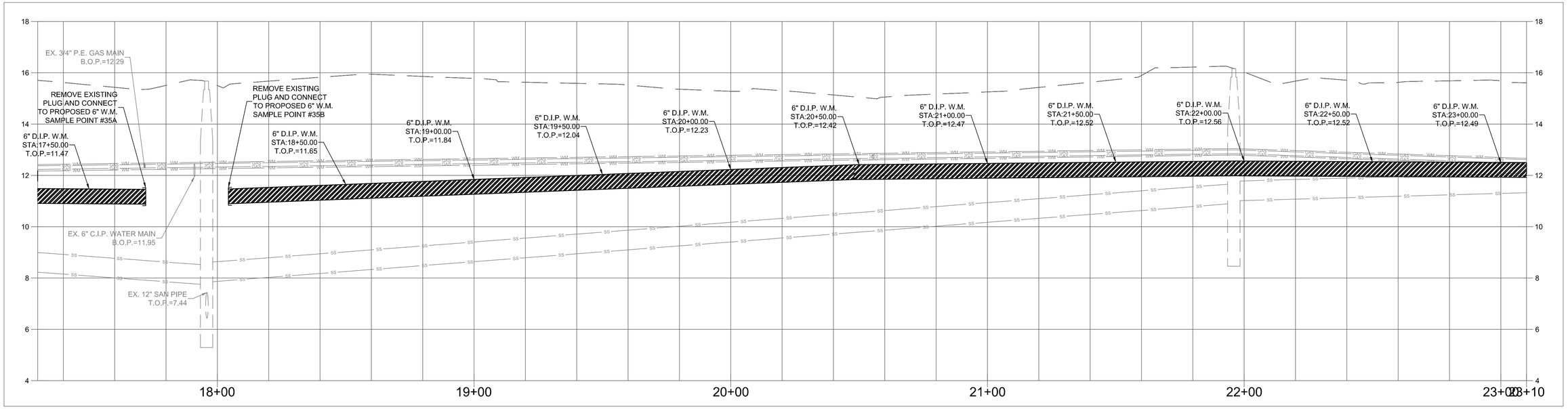

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-34

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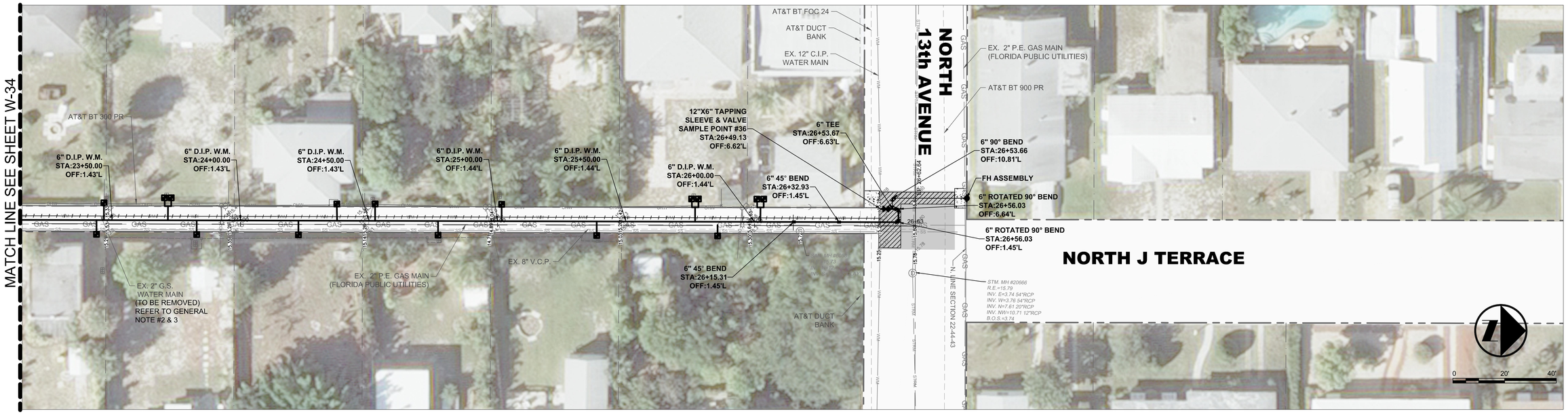

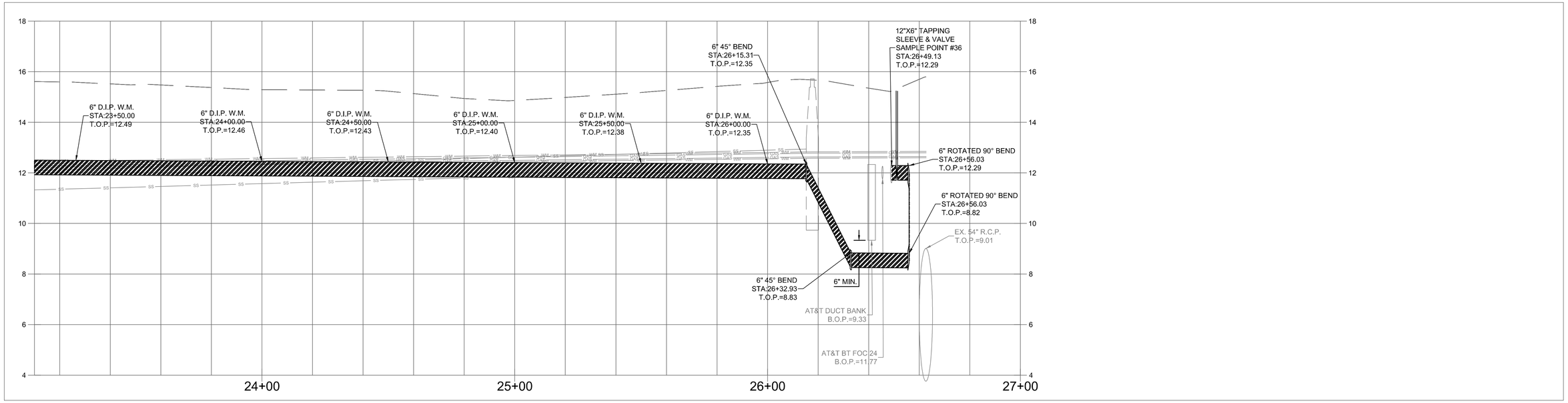

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WATER MAIN PLAN

SHEET NO.
W-35

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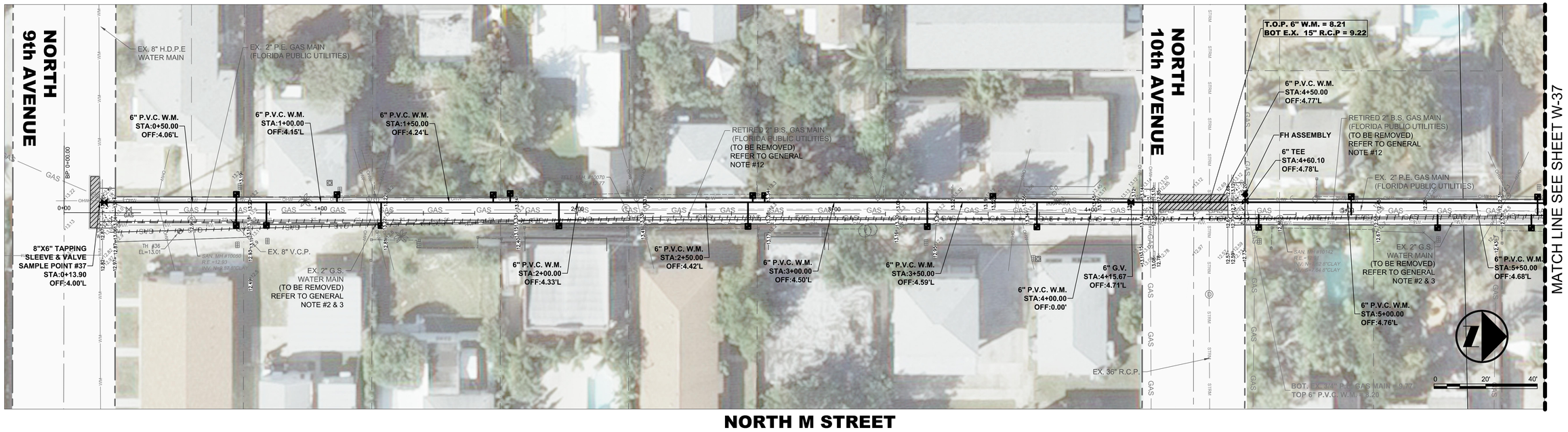

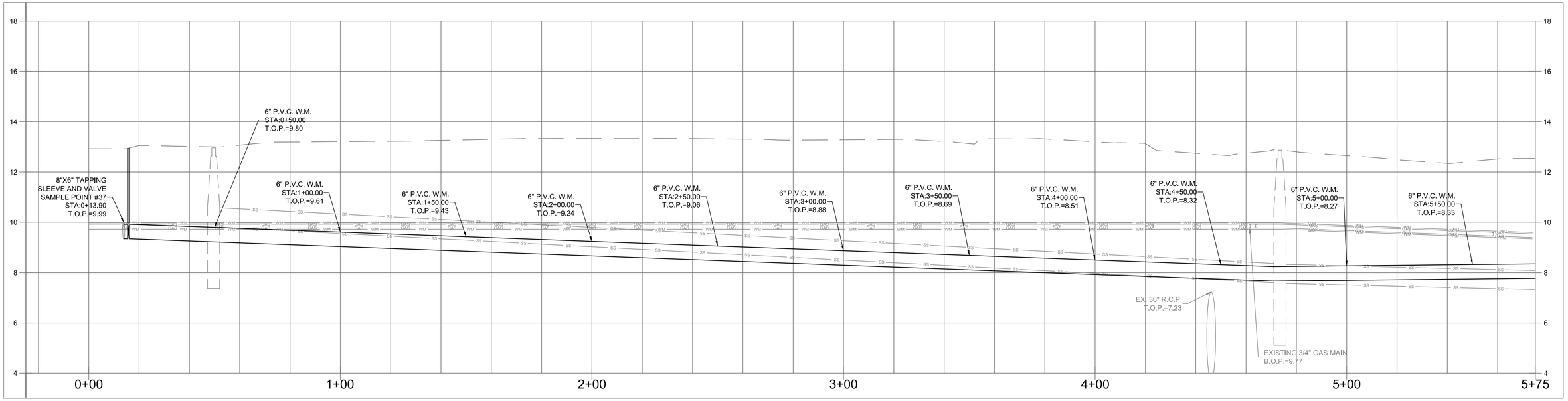

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PHASE II
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CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-36

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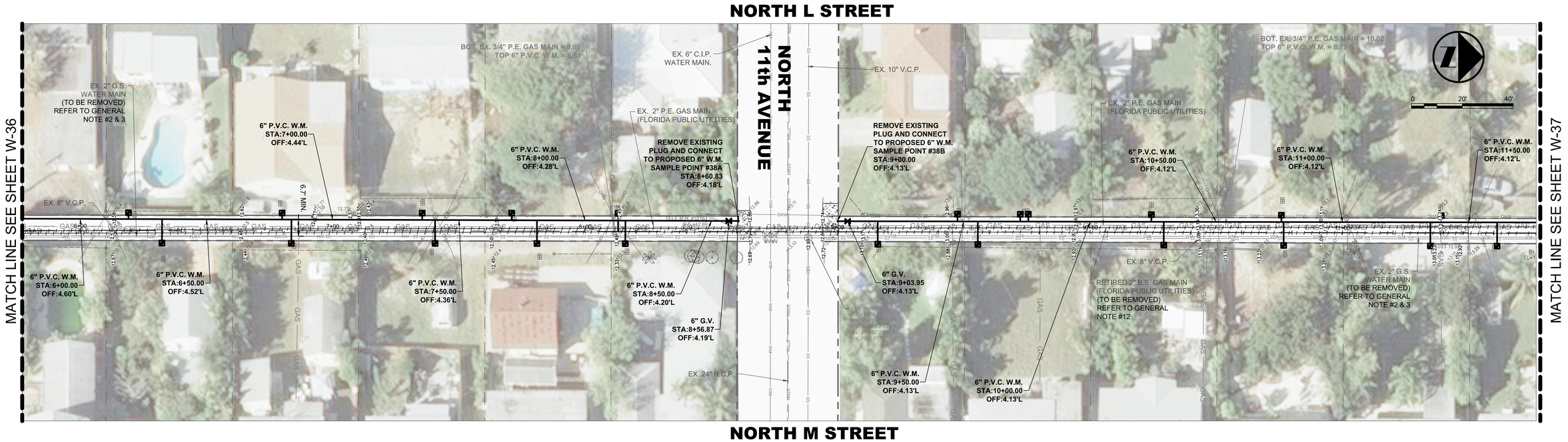

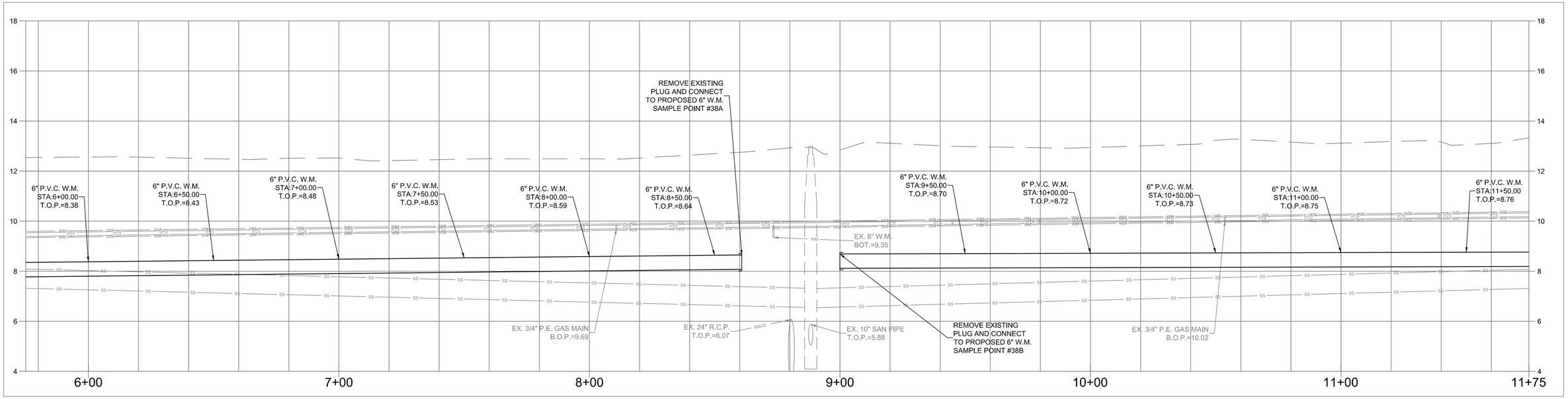

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WATER MAIN PLAN

SHEET NO.
W-37

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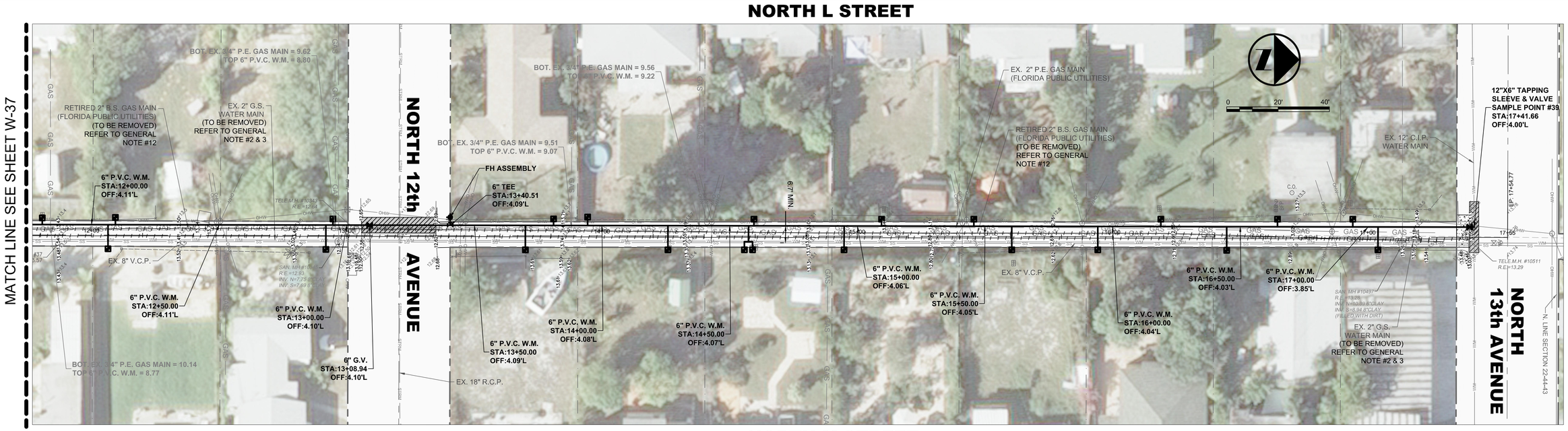

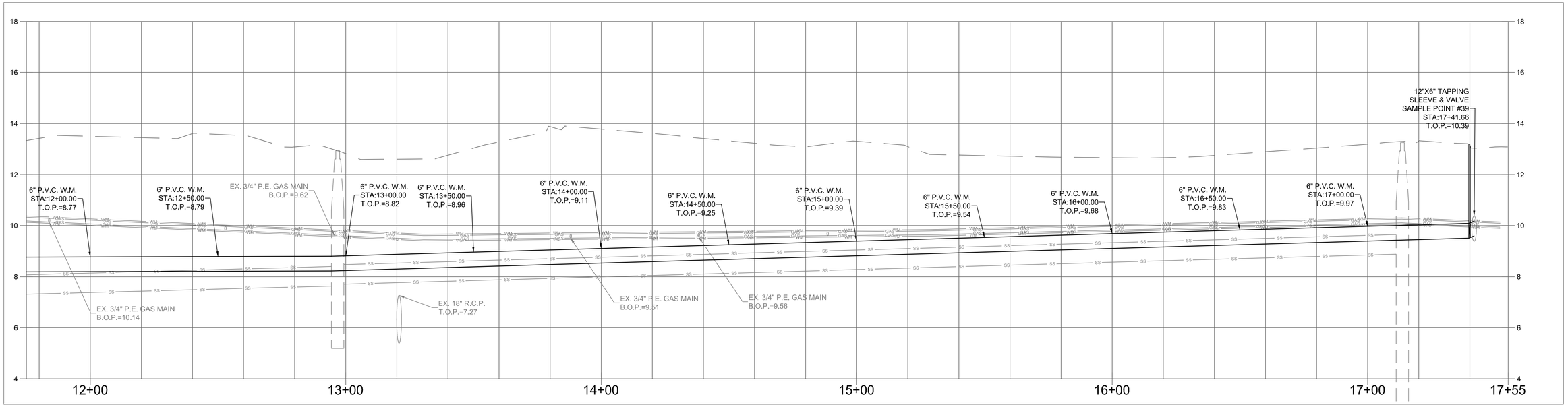

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-38

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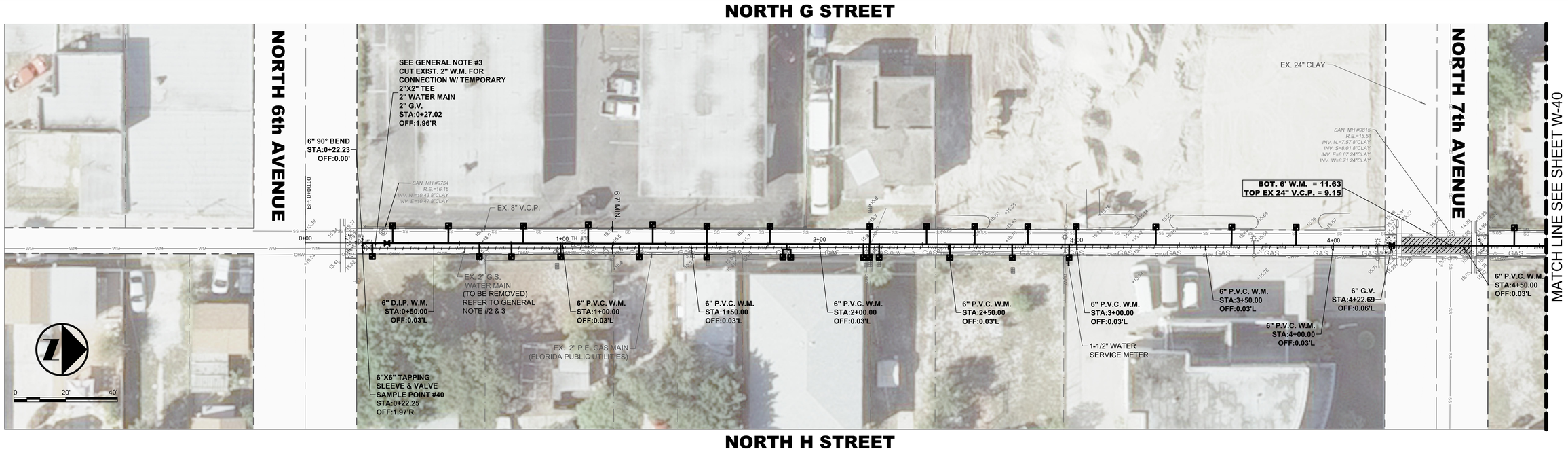

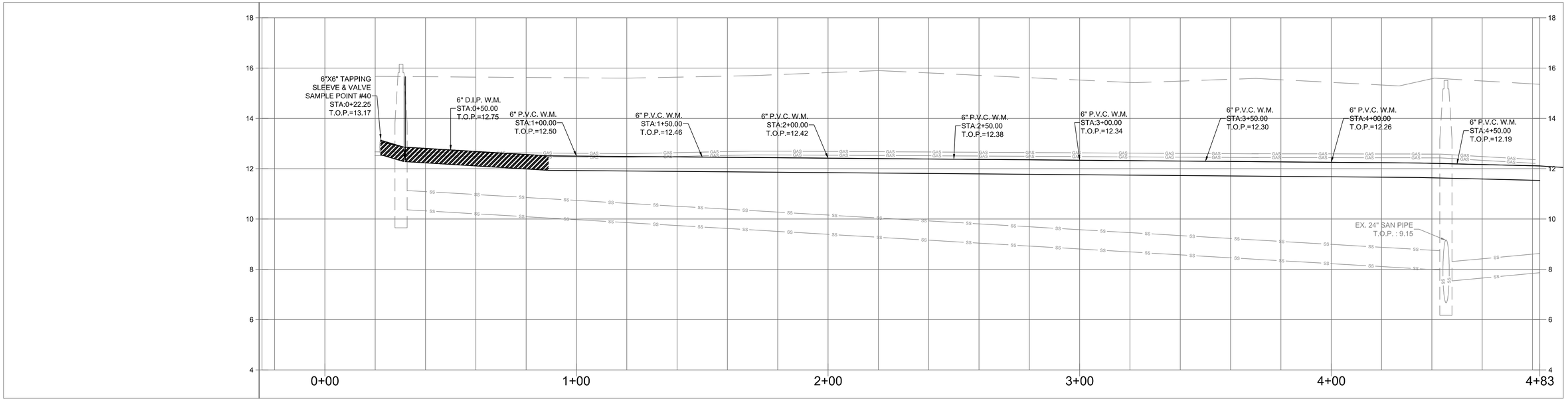

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WATER MAIN PLAN

SHEET NO.
W-39

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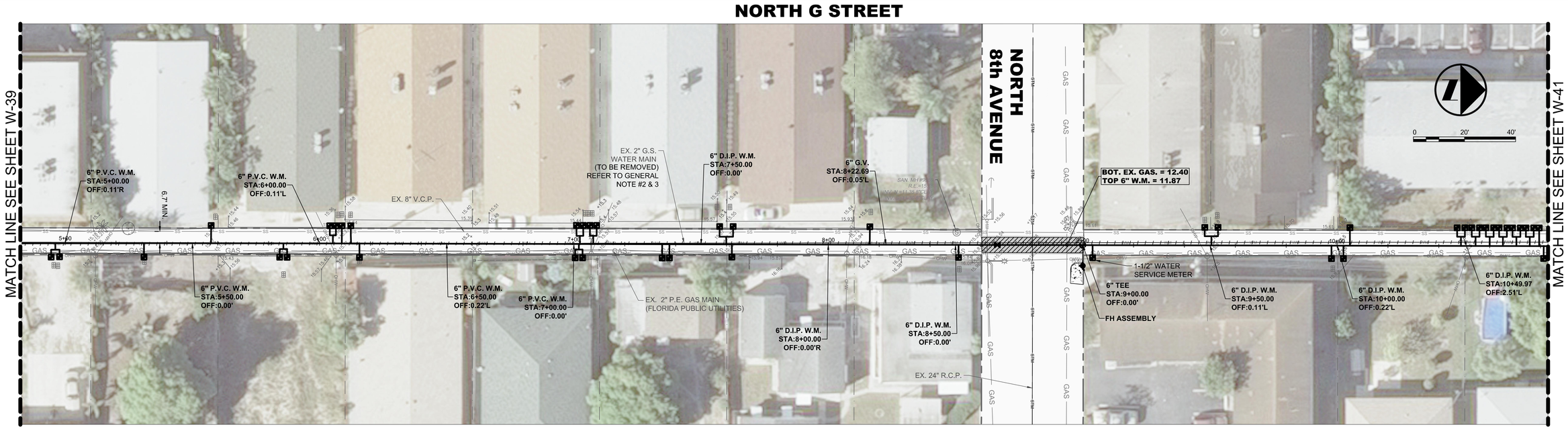

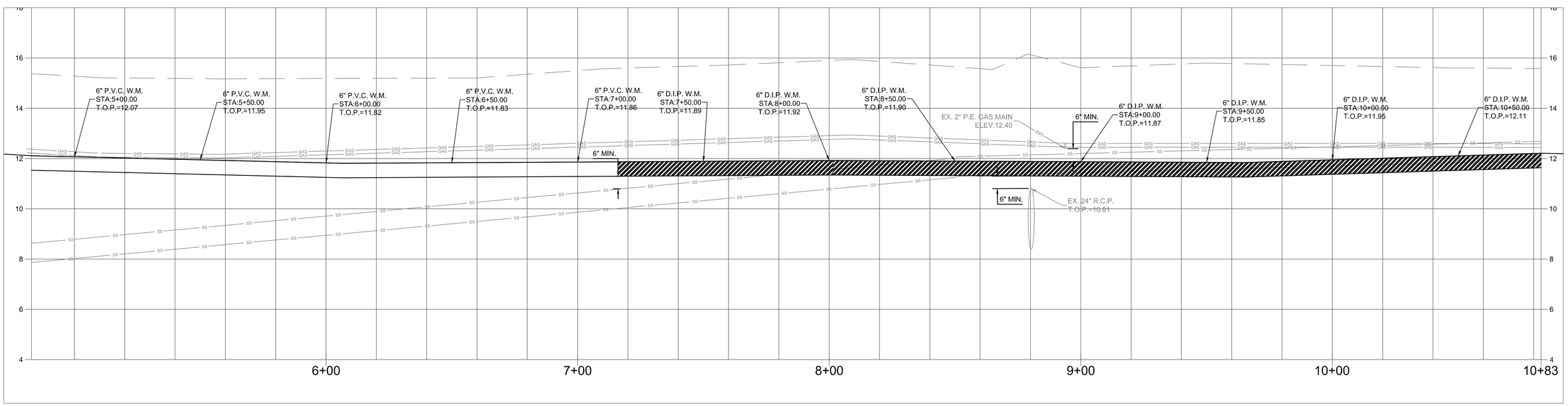

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2 INCH WATER MAIN REPLACEMENT
PHASE II
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CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-40

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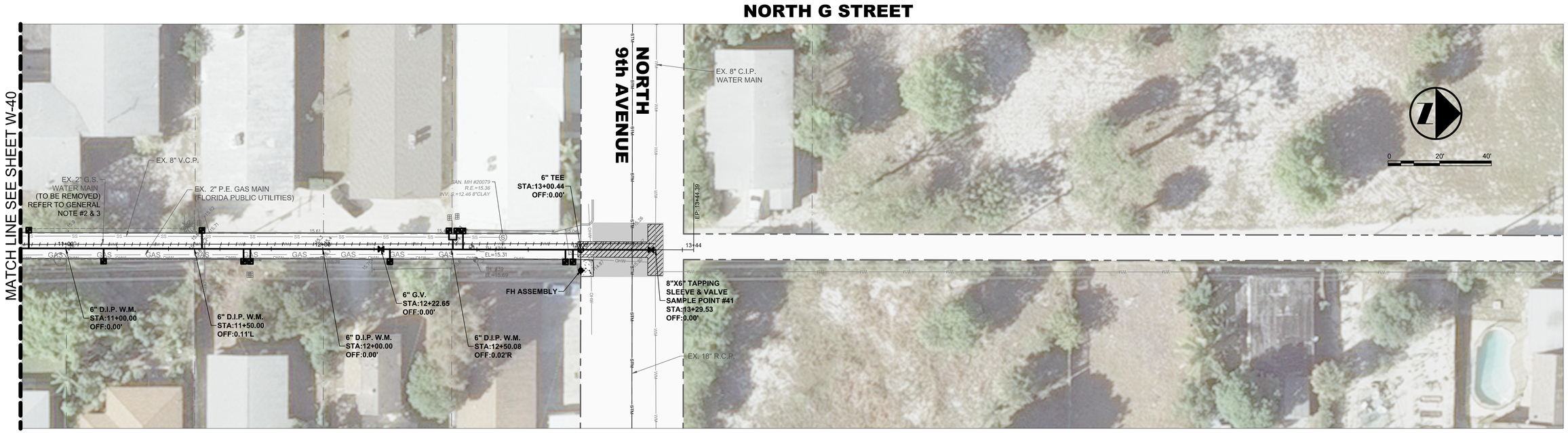

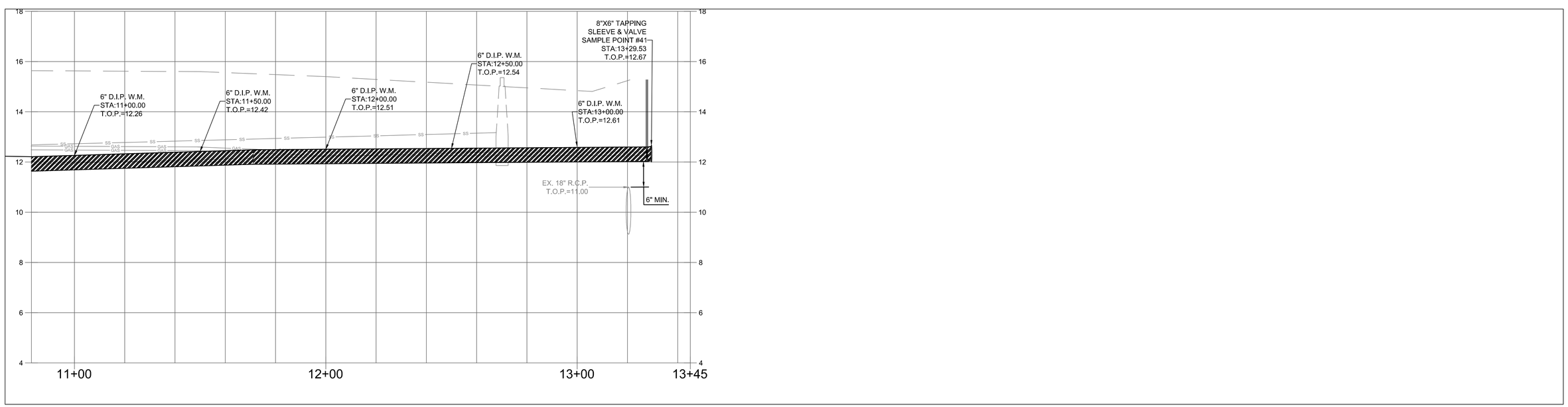

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2 INCH WATER MAIN REPLACEMENT
PHASE II
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CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-41

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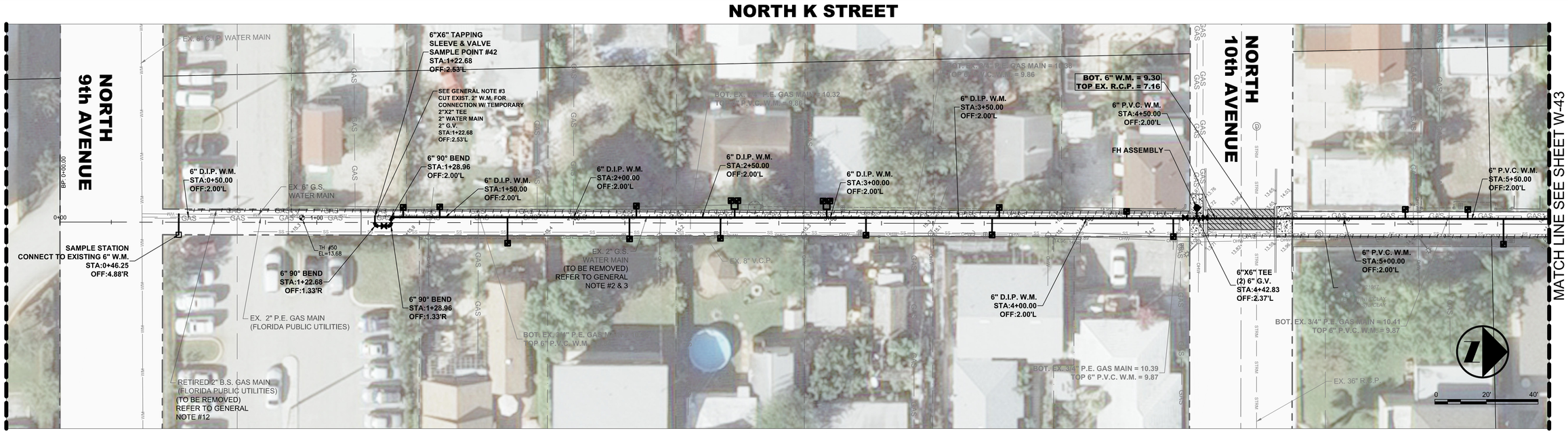

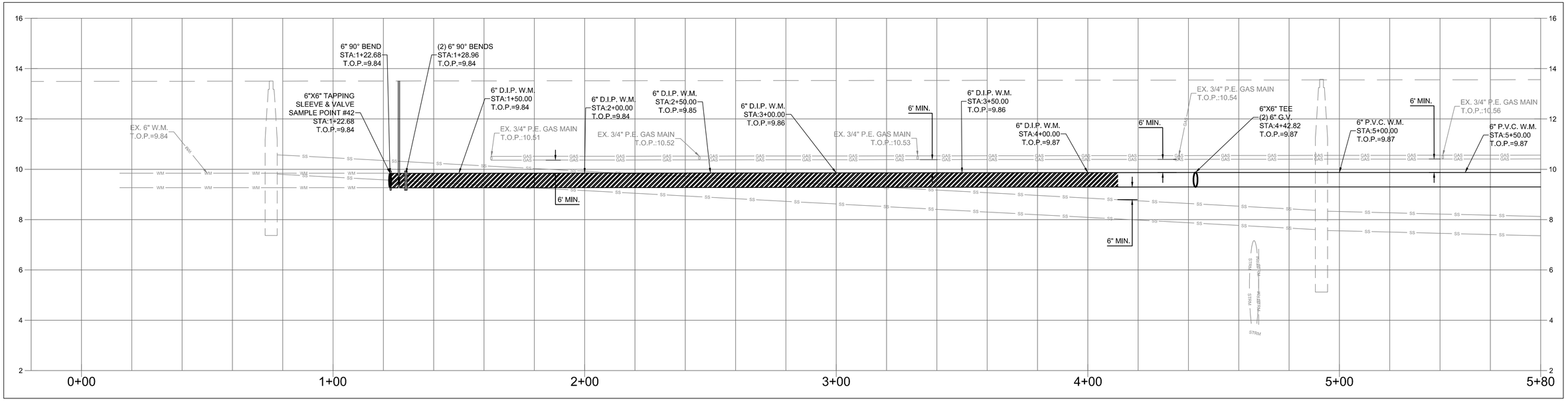

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2 INCH WATER MAIN REPLACEMENT
PHASE II
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CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-42

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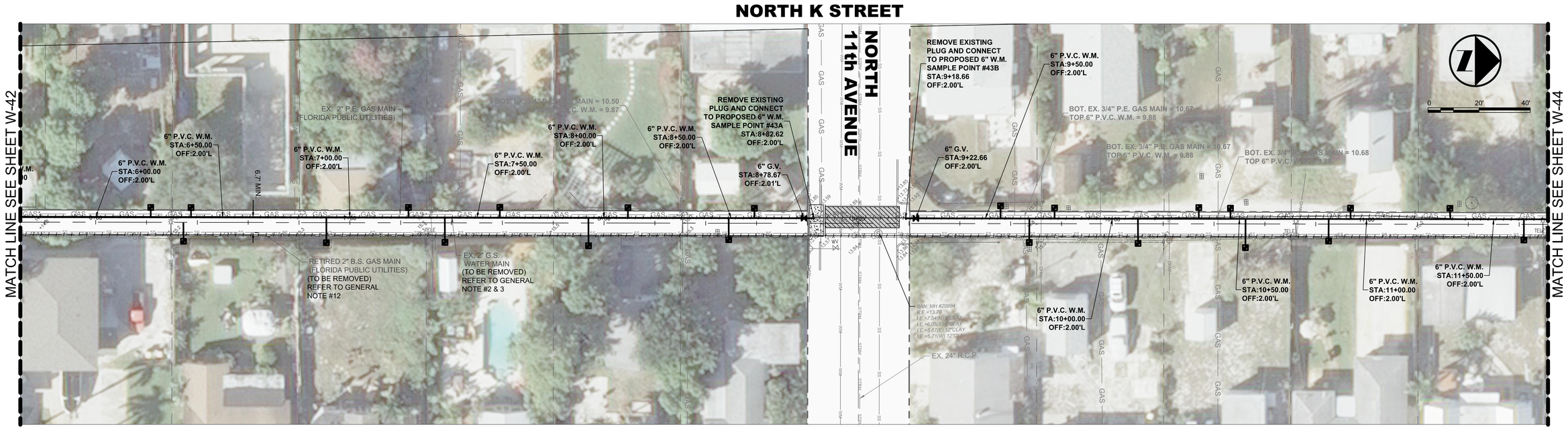

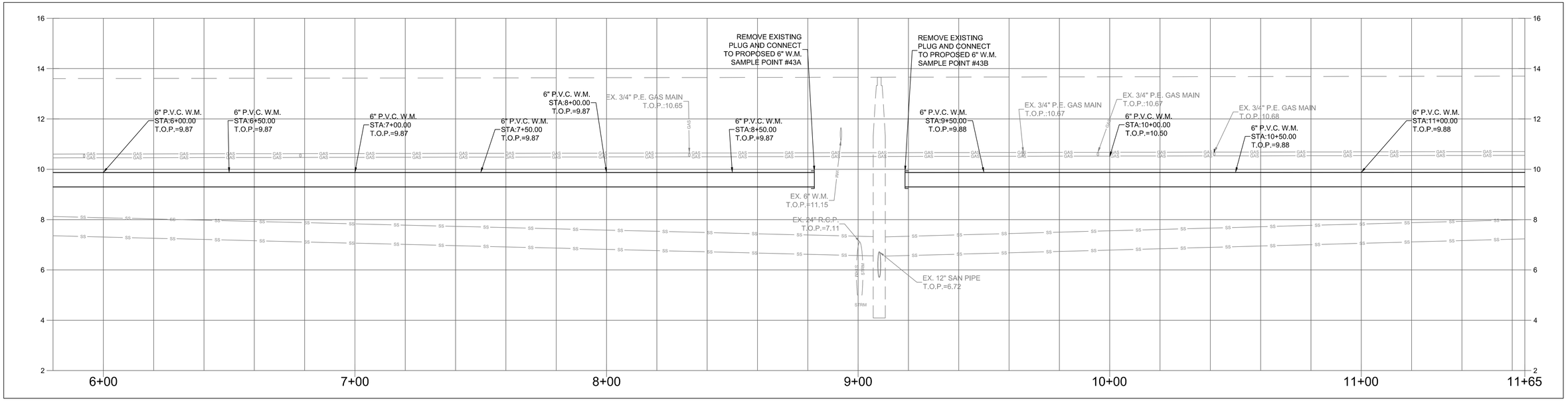

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2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER MAIN PLAN

SHEET NO.
W-43

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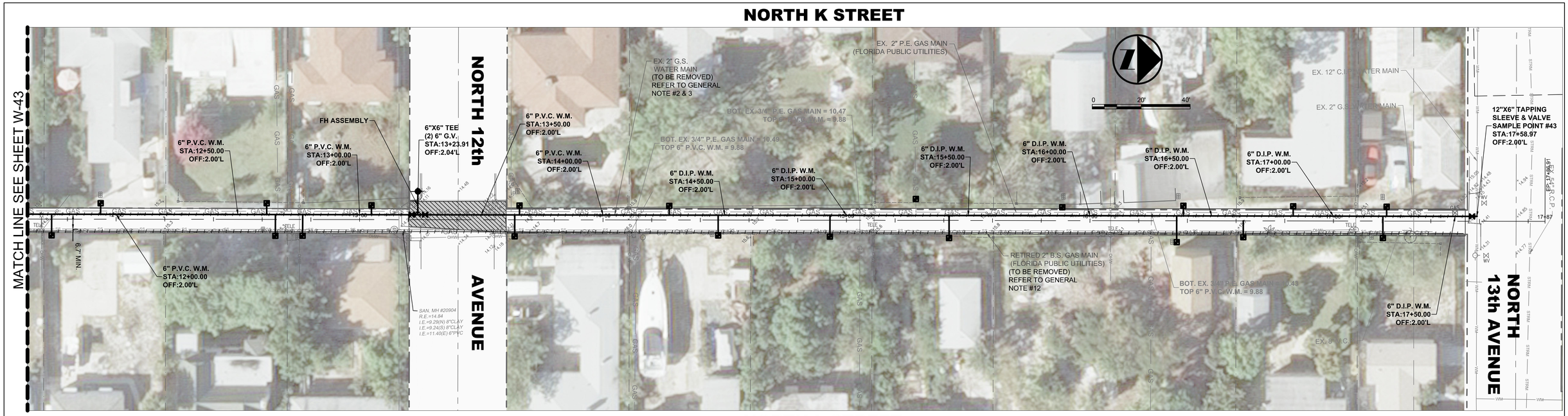

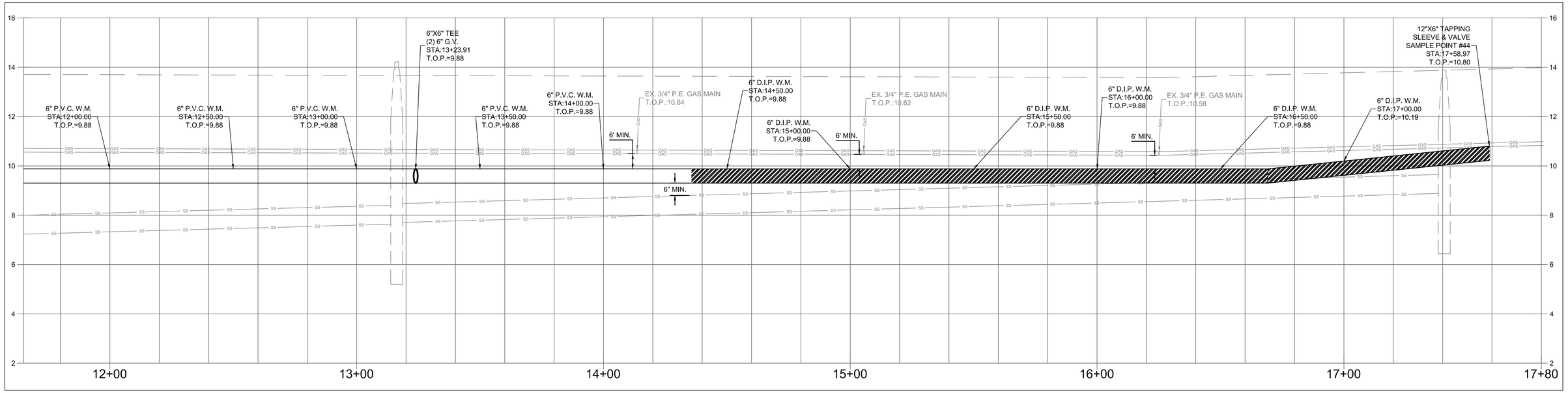

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WATER MAIN PLAN

SHEET NO.
W-44

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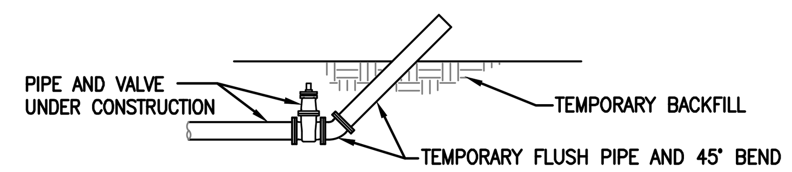
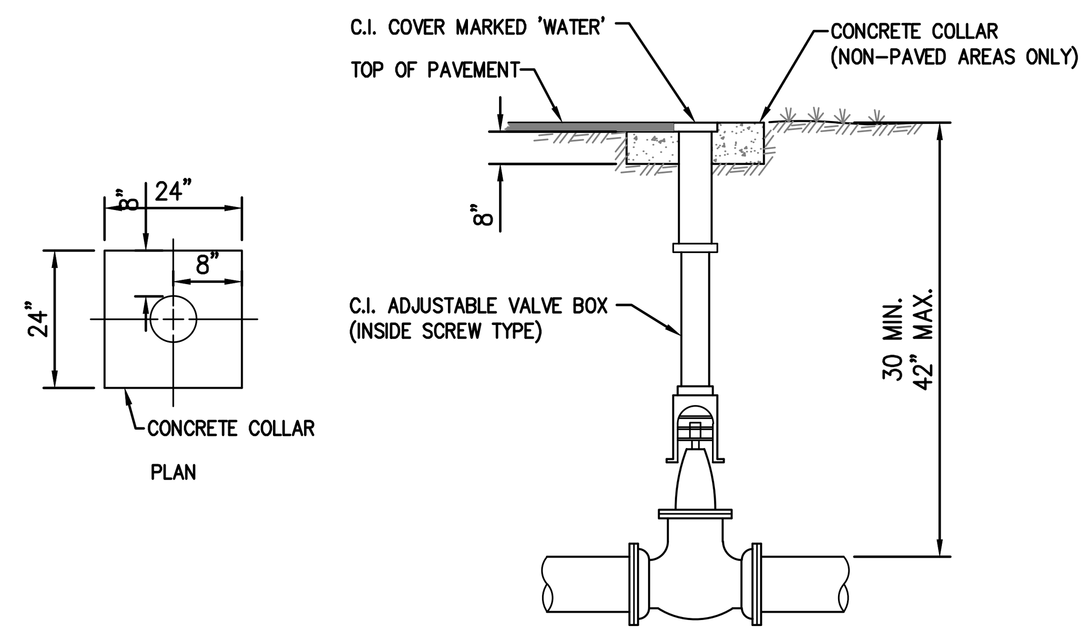


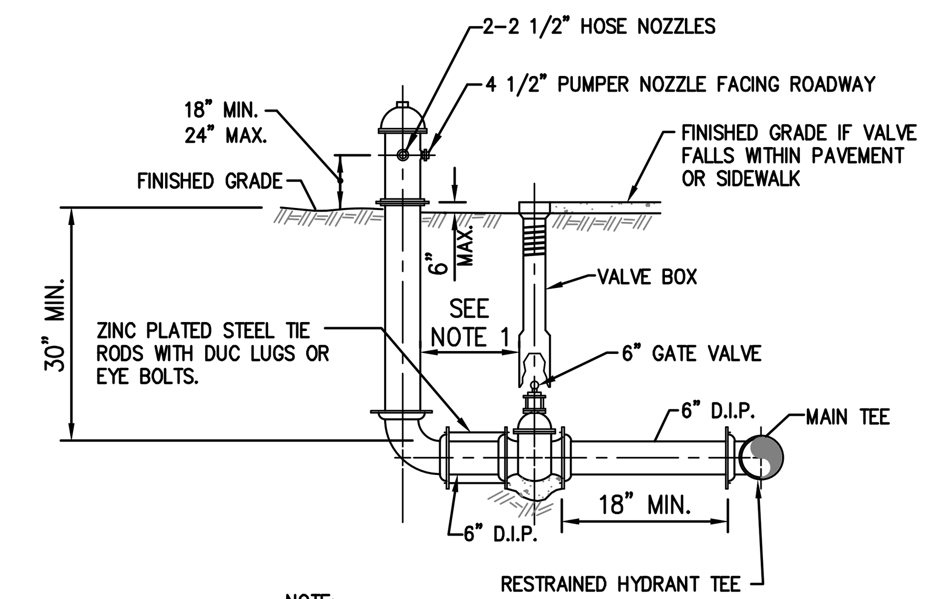
NOTES:

1. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE PIGGED. CANNON FLUSHING MAY BE USED IN ADDITION TO PIGGING ONLY WITH THE APPROVAL OF THE ENGINEER. CANNON FLUSHING SHALL ACHIEVE A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE, FITTINGS, ETC.
2. INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLICT PROPERTY DAMAGE.
3. BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
4. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION, THE CONTRACTOR SHALL PROPERLY NOTIFY THE ENGINEER OF SUCH INTENDED WATER USE.
5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED UTILITY PERSONNEL.
6. PIGGING AND FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE ENGINEER.
7. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY PIGGED AND FLUSHED, THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.

PIGGING AND CANNON FLUSHING

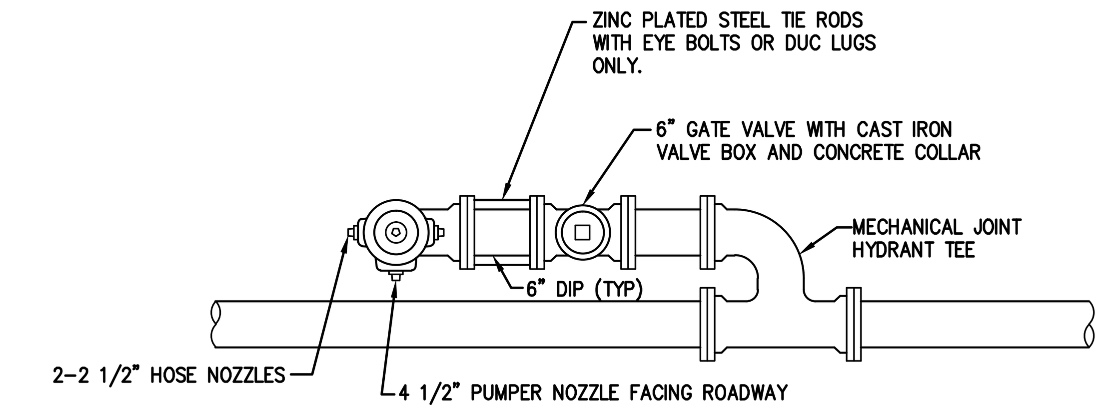


VALVE SETTING



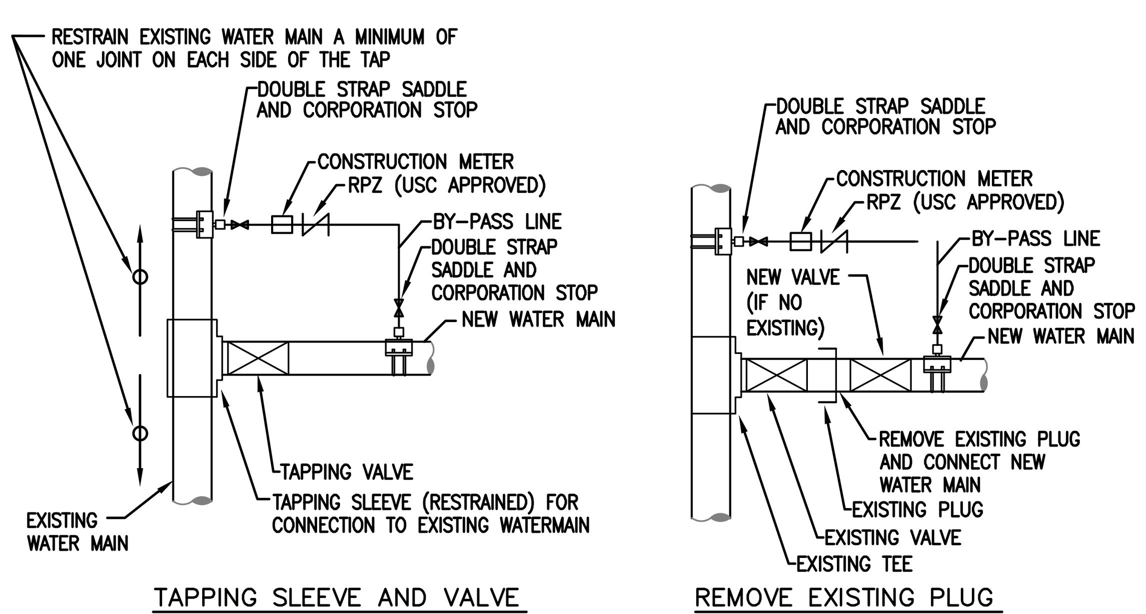
NOTE:
1. ON RUNS LONGER THAN 60' ANOTHER VALVE IS REQUIRED.
2. MEGALUGS REQUIRED ON ALL JOINTS.
3. BLUE RPM TO BE LOCATED WITHIN CENTERLINE OF ROADWAY

FIRE HYDRANT INSTALLATION



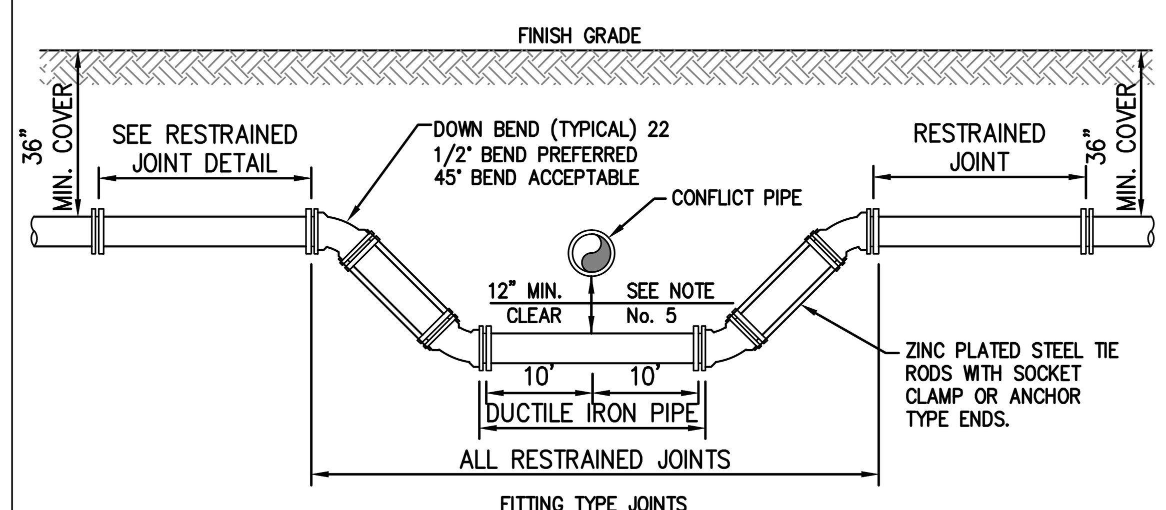
NOTE:
MEGALUGS REQUIRED ON ALL JOINTS.

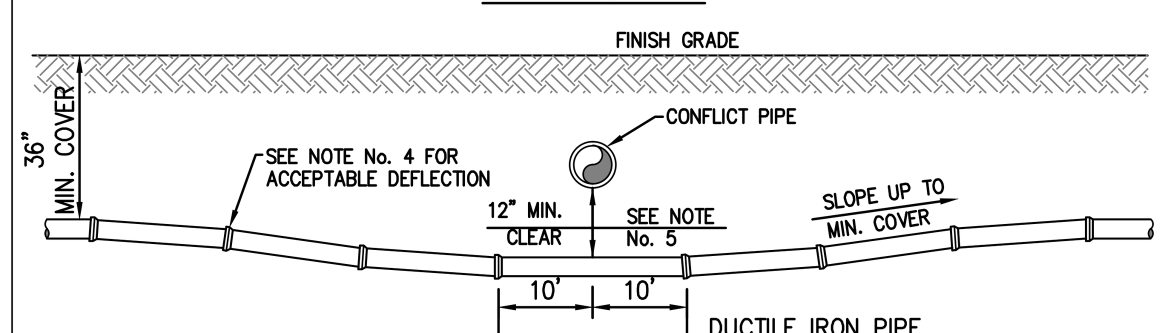
FIRE HYDRANT INSTALLATION PARALLEL TO WATERMAIN



1. PERFORM PRESSURE AND LEAKAGE TEST ON TAPPING SLEEVE AND TAPPING VALVE (WHEN USED) PRIOR TO MAKING TAP.
2. ALL WATER FOR FLUSHING, PRESSURE AND LEAKAGE TESTS, AND BACTERIOLOGICAL CLEARANCE MUST BE FROM THE "BY-PASS" LINE WITH CHECK VALVE IN PLACE.
3. DURING ALL PRESSURE AND LEAKAGE TESTS, BOTH CORPORATION STOPS ON THE "BY-PASS" LINE MUST BE CLOSED.
4. THE UTILITY COMPANY SUPPLYING THE WATER SHALL BE NOTIFIED BEFORE FILLING AND FLUSHING. ONLY THE UTILITY COMPANY SHALL OPERATE THE VALVES.
5. DOUBLE STRAP SADDLES ARE NOT REQUIRED WHEN CONNECTING TO DUCTILE IRON PIPE.
6. CONNECT PRESSURE TEST PUMP TO SERVICE LINE OR BLOWOFF. NO EXTRA TAPS ARE PERMITTED UNLESS NEITHER A SERVICE LINE OR BLOWOFF ARE PRESENT IN THE TEST SECTION.
7. WATERMAIN VALVES CANNOT BE OPENED UNTIL THE ENTIRE SYSTEM HAS BEEN CLEARED BY THE GOVERNING PERMITTING AGENCY.
8. REMOVE THE "BY-PASS" LINE AFTER THE MAIN HAS BEEN CLEARED. PLUG CORPORATION STOP WITH THREADED BRASS PLUG.
9. INSTALL ADJUSTABLE CAST IRON VALVE BOX ON THE VALVE.

CONNECTION TO EXISTING WATER MAIN



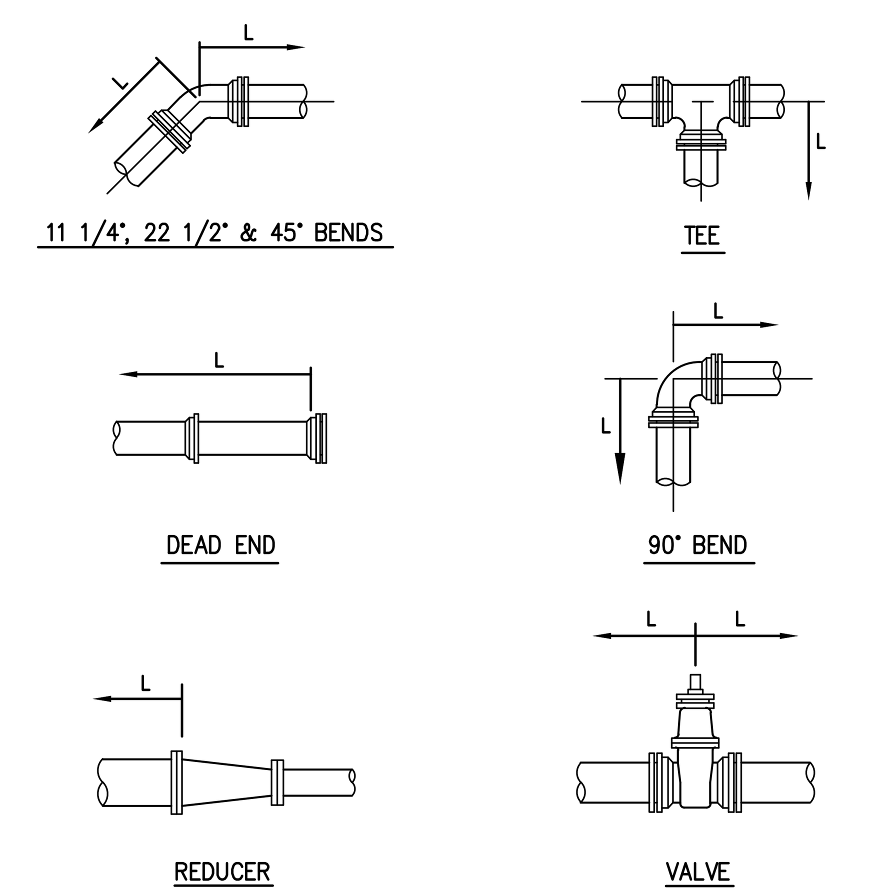


DEFLECTION TYPE JOINTS
PREFERRED METHOD

NOTES:

1. THERE SHALL BE, IN ALL CASES, A MINIMUM OF 12" SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.
2. WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
3. FITTINGS SHALL BE RESTRAINED WITH MEGALUGS AND TIE RODS BETWEEN OFFSET FITTINGS. THRUST BLOCKS SHALL ONLY BE USED WITH THE APPROVAL OF THE ENGINEER.
4. THE DEFLECTION TYPE CROSSING IS PREFERRED. SEE SPECIFICATIONS AND MANUFACTURER'S SUBMITTAL FOR MAXIMUM DEFLECTION ALLOWED.
5. A MINIMUM OF 12" VERTICAL SEPARATION BETWEEN WATER MAINS AND STORM SEWERS SHALL BE MAINTAINED. WHERE THIS IS NOT POSSIBLE WATER MAIN SHALL BE D.I.P. WITH NO LESS THAN 6" SEPARATION.

PRESSURE PIPE CONFLICT



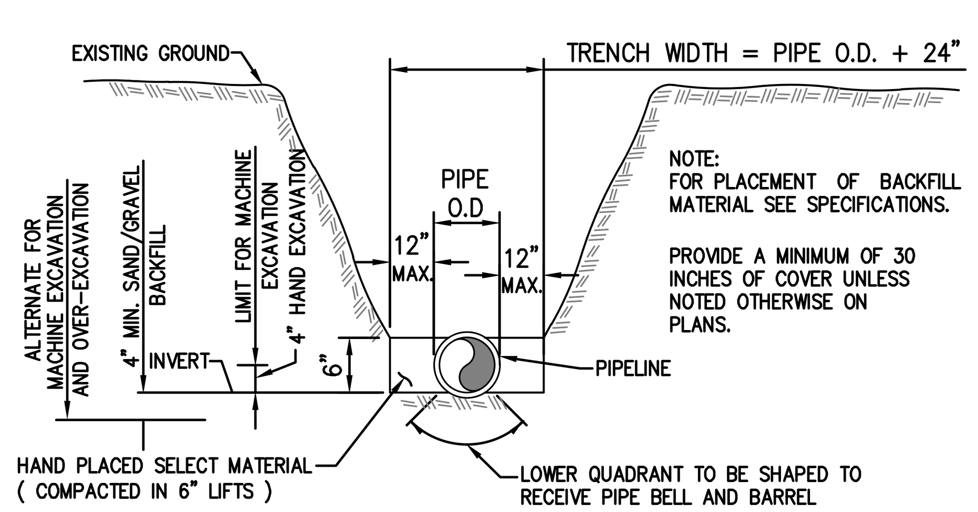
NOTES:

1. LENGTH 'L' IS IN FEET.
2. RESTRAINED LENGTHS ARE BASED ON THE FOLLOWING:
   .A. 150 PSI TEST PRESSURE
   .B. MIN. 30" COVER.
   .C. PVC – PIPE SIZES 4" – 12". PVC/DI
       DI – PIPE SIZES 4" – 48".
   .D. SANDY SOIL.
   .E. SAFETY FACTOR OF 1.5.
3. LENGTH 'L' SHOWN IN THE TABLE TO BE RESTRAINED IN THE DIRECTION OF THE ARROWS.

RESTRAINED PIPE JOINTS

FITTING TYPE		PIPE SIZE 4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"
90° HORIZ. BEND		17/14	24/20	31/25	36/30	42/35	40	44	49	53	61	71	80	89	96
45° HORIZ. BEND		7/6	10/8	13/11	15/12	18/15	16	18	20	22	25	29	33	37	40
22.5° HORIZ. BEND		3/3	5/4	6/5	7/6	8/7	8	9	10	10	12	14	16	18	19
11.25° HORIZ. BEND		2/1	2/2	3/3	4/3	4/3	4	4	5	5	6	7	8	9	10
45° VERT. OFFSET	UPPER BEND	19/12	27/17	35/22	42/27	50/32	36	40	44	48	55	67	77	86	95
	LOWER BEND	5/4	7/6	9/8	11/9	13/11	12	14	15	17	19	23	26	29	32
22.5° VERT. OFFSET	UPPER BEND	9/6	13/8	17/11	20/13	24/15	17	19	21	23	27	32	37	41	46
	LOWER BEND	2/2	3/3	4/4	5/4	6/5	6	7	7	8	9	11	13	14	15
11.25° VERT. OFFSET	UPPER BEND	5/3	6/4	8/5	10/6	12/7	9	10	11	12	13	16	18	21	23
	LOWER BEND	1/1	2/1	2/2	3/2	3/3	3	3	4	4	5	5	6	7	8
DEAD END AND INLINE VALVE		46/30	65/42	85/54	102/65	120/76	86	97	107	117	136	162	186	208	229
TEE (BRANCH RESTRAINT)	4"x	21/13	8/5	1/1	1/1	1/1	–	–	–	–	–	–	–	–	–
	6"x	–	39/25	30/19	20/13	10/7	1	1	1	1	1	1	–	–	–
	8"x	–	–	59/37	51/32	44/28	23	17	12	6	1	1	1	–	–
	10"x	–	–	–	75/47	69/44	40	35	31	26	17	1	1	–	–
	12"x	–	–	–	–	93/59	55	52	48	44	36	23	8	1	1
	14"x	–	–	–	–	–	69	66	63	59	53	41	29	15	1
	16"x	–	–	–	–	–	–	79	76	74	68	58	47	35	23
	18"x	–	–	–	–	–	–	–	89	86	81	73	63	53	42
	20"x	–	–	–	–	–	–	–	–	99	94	86	78	69	59
	24"x	–	–	–	–	–	–	–	–	–	117	111	104	97	88
	30"x	–	–	–	–	–	–	–	–	–	–	143	137	132	125
	36"x	–	–	–	–	–	–	–	–	–	–	–	167	162	157
	42"x	–	–	–	–	–	–	–	–	–	–	–	–	188	184
	48"x	–	–	–	–	–	–	–	–	–	–	–	–	–	209
REDUCER (LARGER PIPE RESTRAINT)	6"x	34/21	–	–	–	–	–	–	–	–	–	–	–	–	–
	8"x	61/39	34/23	–	–	–	–	–	–	–	–	–	–	–	–
	10"x	83/53	63/40	34/22	–	–	–	–	–	–	–	–	–	–	–
	12"x	104/66	87/55	64/40	59/37	–	–	–	–	–	–	–	–	–	–
	14"x	–	69	56	54	22	–	–	–	–	–	–	–	–	–
	16"x	–	82	71	69	41	22	–	–	–	–	–	–	–	–
	18"x	–	–	84	82	58	41	22	–	–	–	–	–	–	–
	20"x	–	–	–	95	73	58	41	22	–	–	–	–	–	–
	24"x	–	–	–	–	100	88	74	58	41	–	–	–	–	–
	30"x	–	–	–	–	134	125	114	102	88	57	–	–	–	–
	36"x	–	–	–	–	–	–	–	–	127	102	56	–	–	–
	42"x	–	–	–	–	–	–	–	–	159	138	101	54	–	–
	48"x	–	–	–	–	–	–	–	–	–	–	138	99	53	–

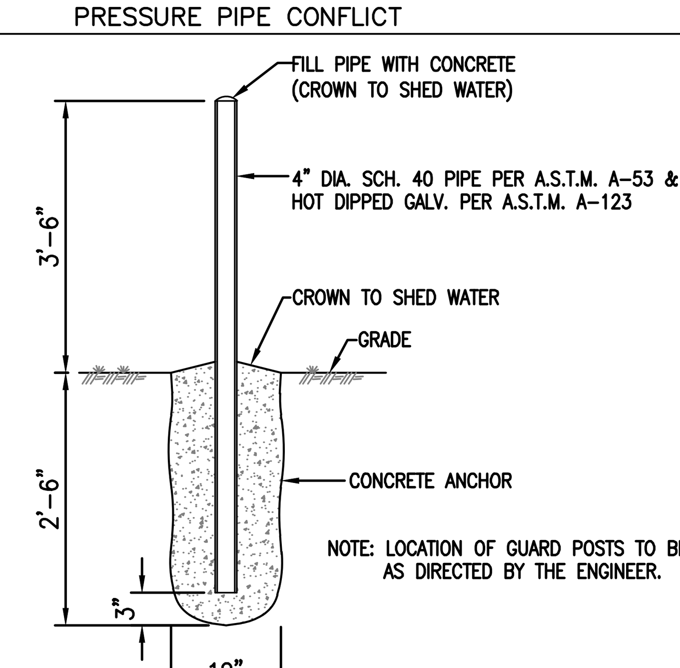
MECHANICAL THRUST RESTRAINT – MINIMUM PIPE LENGTHS



NOTE:
FOR PLACEMENT OF BACKFILL MATERIAL SEE SPECIFICATIONS.

PROVIDE A MINIMUM OF 30 INCHES OF COVER UNLESS NOTED OTHERWISE ON PLANS.

TRENCHING



NOTE: LOCATION OF GUARD POSTS TO BE AS DIRECTED BY THE ENGINEER.

GUARD POST

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

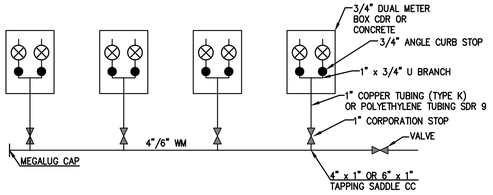
WATER DETAILS

SHEET NO.
WDET-1

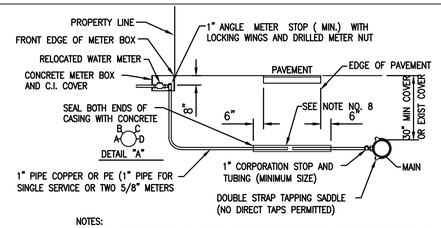
G:\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR-DETL.dwg [WDET-1] Dec 22, 2016 9:48am MCIGALE

TAPPING SADDLE 1" – JCM 402-CC
MULLERS PARTS MATERIAL OR A. Y. McDONALD ONLY

	MULLER
CORPORATION STOP	H-15008
CURB STOP	B-25170
ANGLE CURB STOP	H-14265
METER COUPLING – 3/4" OR 1"	H-10890
U-BRANCH CONNECTION – 1"x 3/4"x 6 1/2"	H-15365



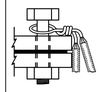
MULTIPLE WATER SERVICES

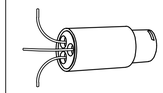


NOTES:
1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18". OFFSET AND AT 45° FROM THE CENTERLINE (ON MAINS WITH GREATER THAN 30" OF COVER. SEE DETAIL 'A').
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISH GRADE..
3. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS. POLYETHYLENE TUBING SHALL BE SDR 9, COPPER SIZE TUBING.
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL.
5. COPPER SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO ANGLE METER STOP WITH NO FITTINGS IN BETWEEN.
6. TAPPING SADDLES AND CORPORATION STOPS SHALL HAVE CC THREADS.
7. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
8. GALVANIZED CASING REQUIRED FOR JACK AND BORE IN MOST CASES, SCHEDULE 40 PVC MAY BE USED WITH THE APPROVAL OF THE ENGINEER . CASING SHOULD EXTEND SIX (6) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS
   A. 1" SERVICE USE 2" CASING
   B. 2" SERVICE USE 4" CASING
9. METER BOX TO BE SET DIRECTLY BEHIND EXISTING OR PROPOSED SIDEWALK WITH FRONT EDGE OF METER BOX INSTALLED DIRECTLY ON PROPERTY LINE (ON PRIVATE PROPERTY).
10. PIPING LAYOUT SHOWN IS TYPICAL FOR 2" SERVICE.

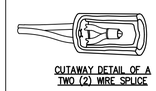
WATER SERVICE FOR 1" OR 2" PIPE

TO PUT CONTINUOUS TRACE WIRE UNDER BOLT, FIRST LOOSEN BOLT, THEN STRIP 3" MIN., WRAP ONCE AROUND BOLT, 1 TWIST, 2 WRAPS. DO "NOT CUT WIRE". TIGHTEN BOLT AFTER WRAPPING TRACE WIRE AROUND THE BOLT.

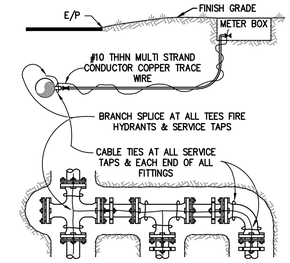




DETAIL OF THREE (3) WIRE SPLICE

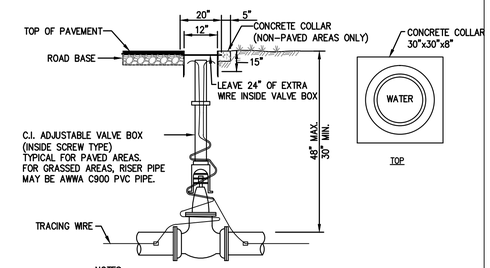


CUTAWAY DETAIL OF A TWO (2) WIRE SPLICE



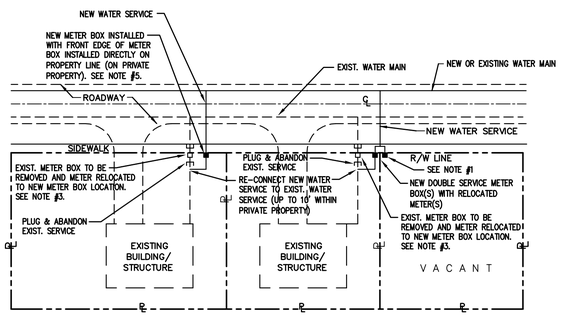
NOTES:
1. TRACE WIRE IS REQUIRED ON ALL NON METALLIC PIPE.
2. INCLUDE ALL COST OF MATERIAL & LABOR IN PRICE OF PIPE.
3. CONTRACTOR IS RESPONSIBLE FOR CONTINUITY OF ALL TRACE WIRE.
4. WIRE SPLICE CONNECTORS SHALL BE DRY-CON DIRECT BURY LUG BY KING INNOVATIONS, DS-500 DRI-SPLICE BY SPEARS OR DIRECT BURY PRODUCTS BY 3M

TRACE WIRE



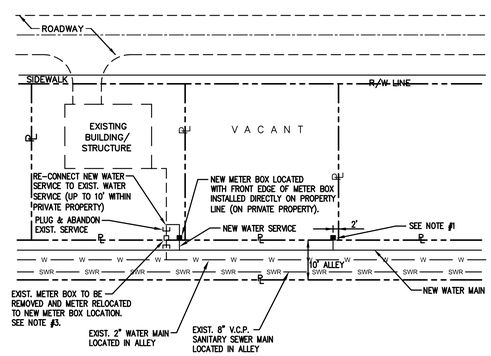
NOTES:
1. TOP OF LID MUST BE FLUSH WITH PAVEMENT OR CONCRETE COLLAR.
2. WHEN VALVE IS DEEPER THAN 36" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT TO 24" OF FINISHED GRADE. EXTENSION MUST BE SET SCREW TYPE AND ATTACHED TO OPERATING NUT.
3. OUTSIDE BOX SHALL BE UNITED STATES FOUNDRY NO. 7630 WITH TYPE FD LID. LID SHALL BE CAST WITH THE WORDS: "WATER" OR "RAW WATER".
4. USE NYLON CABLE TIES TO SECURE TRACE WIRE TO OUTSIDE OF VALVE EXTENSION AND CABLE TIE BEHIND EACH BELL.
5. SEE NOTES ON DETAIL NO. 3, THIS SHEET.

VALVE SETTING



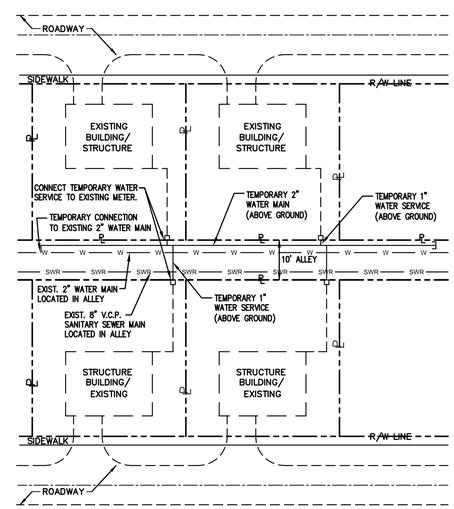
1. WATER SERVICES SHALL BE PROVIDED TO ALL VACANT LOTS AND SHALL BE ENDED WITH CURB STOPS SET WITHIN METER BOX.
2. SINGLE AND DOUBLE WATER SERVICES EXTENDING BENEATH THE ROADWAY TO SERVE TWO LOTS SHALL BE 2" IN DIAMETER.
3. EXISTING WATER METERS TO BE RELOCATED TO NEW METER BOX LOCATION, NEW METER BOXES SHALL BE PROVIDED AND EXISTING METER BOXES SHALL BE REMOVED. EXISTING METER BOXES MAY BE BURIED OR DIFFICULT TO FIND. CONTRACTOR SHALL MAKE EXPLORATIONS NECESSARY TO LOCATE METERS.
4. CONTRACTOR SHALL RECORD ADDRESS & METER READING PRIOR TO REMOVAL AND RELOCATION OF METER.
5. LOCATION OF NEW METER BOX TO BE DETERMINED IN FIELD. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING WATER METERS AND SERVICES PRIOR TO INSTALLATION OF NEW SERVICE FROM NEW WATER MAIN.
6. CONTRACTOR IS REQUIRED TO OBTAIN PLUMBING PERMIT FROM CITY OF LAKE WORTH BUILDING DEPARTMENT FOR NEW WATER SERVICE ROUTING ON PRIVATE PROPERTY.
7. CONTRACTOR SHALL RESTORE EXISTING DRIVEWAYS, WALKWAYS, SOD, WALLS, FENCES, ETC. ON PRIVATE PROPERTY AS A RESULT OF NEW WATER SERVICE CONNECTION TO EXISTING.
8. CONTRACTOR SHALL COORDINATE WITH CITY STAFF TO DETERMINE IF EXISTING WATER METER BOX IS IN NEED OF REPLACEMENT.

WATER SERVICE CONNECTION DETAIL (WITHIN ROAD RIGHT OF WAY)



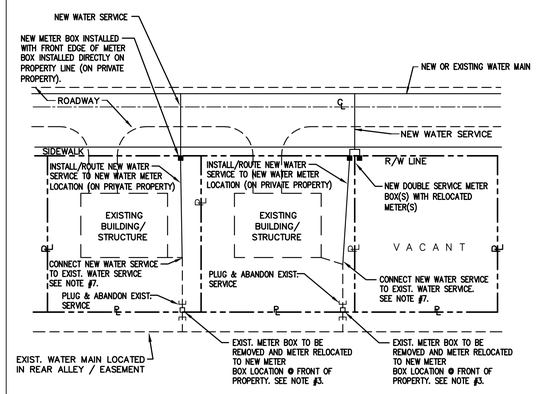
1. WATER SERVICES SHALL BE PROVIDED TO ALL VACANT LOTS AND SHALL BE ENDED WITH CURB STOPS SET WITHIN METER BOX.
2. SINGLE AND DOUBLE WATER SERVICES EXTENDING BENEATH THE ROADWAY TO SERVE TWO LOTS SHALL BE 2" IN DIAMETER.
3. EXISTING WATER METERS TO BE RELOCATED TO NEW METER BOX LOCATION, NEW METER BOXES SHALL BE PROVIDED AND EXISTING METER BOXES SHALL BE REMOVED. EXISTING METER BOXES MAY BE BURIED OR DIFFICULT TO FIND. CONTRACTOR SHALL MAKE EXPLORATIONS NECESSARY TO LOCATE METERS.
4. CONTRACTOR SHALL RECORD ADDRESS & METER READING PRIOR TO REMOVAL AND RELOCATION OF METER.
5. LOCATION OF NEW METER BOX TO BE DETERMINED IN FIELD. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING WATER METERS AND SERVICES PRIOR TO INSTALLATION OF NEW SERVICE FROM NEW WATER MAIN.
6. CONTRACTOR IS REQUIRED TO OBTAIN PLUMBING PERMIT FROM CITY OF LAKE WORTH BUILDING DEPARTMENT FOR NEW WATER SERVICE ROUTING ON PRIVATE PROPERTY.
7. CONTRACTOR SHALL RESTORE EXISTING DRIVEWAYS, WALKWAYS, SOD, WALLS, FENCES, ETC. ON PRIVATE PROPERTY AS A RESULT OF NEW WATER SERVICE CONNECTION TO EXISTING.
8. CONTRACTOR SHALL COORDINATE WITH CITY STAFF TO DETERMINE IF EXISTING WATER METER BOX IS IN NEED OF REPLACEMENT.

ALLEY WATER SERVICE CONNECTION DETAIL



1. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING, COORDINATING AND MAINTAINING TEMPORARY WATER MAIN AND TEMPORARY WATER SERVICES INCLUDING CONNECTING TEMPORARY WATER SERVICES TO EXISTING WATER METERS.
2. CONTRACTOR SHALL COORDINATE THE SHUTDOWN OF EXISTING WATER SERVICE WITH THE CITY OF LAKE WORTH AND THE AFFECTED RESIDENTS. OTHER THAN APPROVED SHUTDOWN HOURS BY THE CITY OF LAKE WORTH, EXISTING WATER SERVICES MUST BE MAINTAINED AND OPERATIONAL THROUGHOUT CONSTRUCTION.
3. EXISTING METER BOXES MAY BE BURIED OR DIFFICULT TO FIND. CONTRACTOR SHALL MAKE FIELD EXPLORATIONS NECESSARY TO LOCATE EXISTING WATER METERS.
4. CONTRACTOR TO MAKE NECESSARY RELOCATIONS/ADJUSTMENTS TO TEMPORARY WATER MAIN AND SERVICES (AS REQUIRED) IN ORDER TO FACILITATE CONSTRUCTION OF PROPOSED WATER AND SANITARY SEWER IMPROVEMENTS.

ALLEY TEMPORARY WATER SERVICE CONNECTION DETAIL



NOTES:
1. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING WATER METERS. EXISTING METER BOXES MAY BE BURIED OR DIFFICULT TO FIND. CONTRACTOR SHALL MAKE EXPLORATIONS NECESSARY TO LOCATE METERS.
2. LOCATION OF NEW METER BOX AT FRONT OF PROPERTY TO BE DETERMINED IN FIELD BY CONTRACTOR. CONTRACTOR TO DETERMINE NEW WATER SERVICE ROUTING TO FRONT OF PROPERTY (ON PRIVATE PROPERTY) PRIOR TO THE INSTALLATION OF NEW METER BOX AT FRONT OF PROPERTY.
3. EXISTING WATER METERS TO BE RELOCATED TO NEW METER BOX LOCATION, NEW METER BOXES SHALL BE PROVIDED AND EXISTING METER BOXES SHALL BE REMOVED AND DISPOSED OF.
4. CONTRACTOR SHALL RECORD ADDRESS & METER READING PRIOR TO REMOVAL AND RELOCATION OF METER.
5. CONTRACTOR IS REQUIRED TO OBTAIN PLUMBING PERMIT FROM CITY OF LAKE WORTH BUILDING DEPARTMENT FOR NEW WATER SERVICE ROUTING ON PRIVATE PROPERTY.
6. CONTRACTOR SHALL COMPLETELY RESTORE EXISTING PAVER/CONCRETE DRIVEWAYS, WALKWAYS, SOD, WALLS, FENCES, ETC. ON PRIVATE PROPERTY AS A RESULT OF NEW WATER SERVICE ROUTING TO THE FRONT OF THE PROPERTY.
7. CONTRACTOR TO PROPERLY GROUND THE EXISTING STRUCTURES ELECTRICAL SYSTEM, PER FBC.

WATER SERVICE CONNECTION DETAIL (ROUTING FROM REAR TO FRONT OF PROPERTY)

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

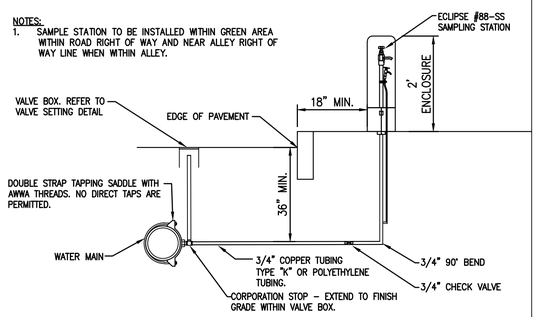
2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

WATER DETAILS

SHEET NO.
WDET-2

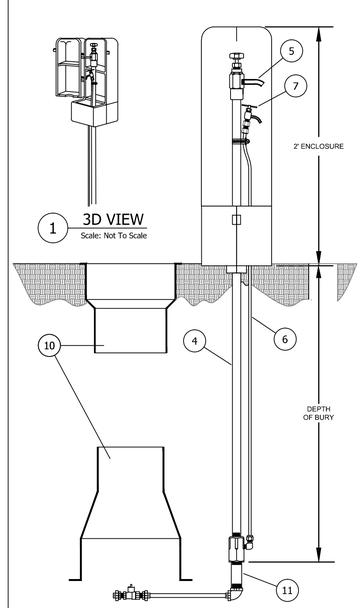
R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR-DETL.dwg [WDET-2] Dec 21, 2016 5:33pm MCIGALE

NOTES:
1. SAMPLE STATION TO BE INSTALLED WITHIN GREEN AREA WITHIN ROAD RIGHT OF WAY AND NEAR ALLEY RIGHT OF WAY LINE WHEN WITHIN ALLEY.

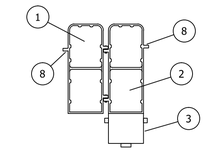


SAMPLING STATION DETAIL

#88-SS SAMPLING STATION SPEC SHEET



1 3D VIEW
Scale: Not To Scale



2 ENCLOSURE OPEN VIEW
Scale: 3/4"=1'-0"

SAMPLING STATION SHALL BE 3' BURY DEPTH, WITH A 3/4" FIP INLET, AND 7/16" UNTHREADED BLOW OFF AND SAMPLING BIBB.

STATION SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE ALUMINUM BOX WITH HINGED OPENINGS.

WHEN OPEN, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND ALL WATER FLOW SHALL PASS THRU AN ALL STAINLESS STEEL WATERWAY.

ALL WORKING PARTS SHALL BE OF STAINLESS STEEL AND SERVICABLE FROM ABOVE GROUND WITH NO DIGGING OR REPLACEMENT NEEDED.

A STAINLESS STEEL PET COCK WILL BE LOCATED BELOW THE SAMPLING BIBB TO ALLOW PUMPING OF ANY WATER REMAINING INSIDE THE STATION TO INSURE NON-FREEZING.

THE STATION SHALL BE MODEL #88-SS AS MANUFACTURED BY THE KUPFERLE FOUNDRY, ST. LOUIS MO. 63102 OR APPROVED EQUAL.

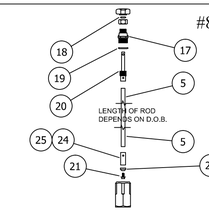
ITEM	ITEM / DESCRIPTION	NOTES
1	88 FRONT DOOR (COVER A)	
2	88 REAR DOOR (COVER B)	
3	88 BASE	2 PIECES
4	1/2" S.S. WATERWAY	
5	BLOW OFF & SAMPLING BIBB	
6	1/4" S.S. TUBING	
7	PET COCK	
8	LOCKING HOLE	
9	NOT USED	
10	VALVE BOX	
11	3/4" S.S. NIPPLE	

DATE	STATUS / REVISION	#88-SS SAMPLING STATION	SHEET 1 OF 1
DD/MM/YY	ISSUED FOR REFERENCE		

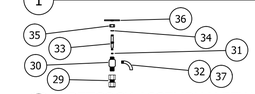
DRAWN DCL | APPROVED DCL | DATE 9/3/13 | SCALE 1-1/2"=1'

KUPFERLE Since 1857
2511 NORTH 9TH STREET
ST. LOUIS, MO 63102
1-800-231-3990
FAX 314-231-2820
www.hydrants.com

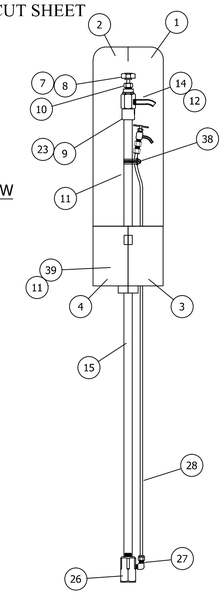
#88-SS SAMPLING STATION CUT SHEET



1 HEADSTOCK ASSEMBLY VIEW



2 PETCOCK ASSEMBLY VIEW



ITEM	ITEM / DESCRIPTION	NOTES	PART #
1	88 FRONT DOOR (COVER A)		88-1-A
2	88 REAR DOOR (COVER B)		88-1-B
3	88 FRONT BASE (COVER A)		88-2
4	88 REAR BASE (COVER B)		88-2
5	3/8" S.S. SOLID ROD		3/8SSR
6	NOT USED		
7	HANDLE ROD PIN	NOT SHOWN	66S14
8	KNOB		66S42
9	HEADSTOCK		66S11
10	PACKING NUT		66S15
11	U-BOLT FOR 1/2" PIPE	NOT SHOWN	66S20
12	PLASTIC NOZZLE CAP	NOT SHOWN	66S35
13	NOT USED		
14	NOZZLE		66S12
15	1/2" S.S. WATERWAY		1/2SSP
16	PIANO HINGE		66S21
17	HEADSTOCK TOP NUT		66S16
18	STEM O-RING		66S07
19	HEADSTOCK O-RING		66S09
20	COLD CLIMATE STEM		66S32
21	PLUNGER SCREW		66S28
22	SEAT RUBBER		66S27
23	THREADED PLUG	NOT SHOWN	66S31
24	PLUNGER		66S26
25	SPRING PIN	NOT SHOWN	66S30
26	INLET VALVE		66S25
27	S.S. 1/4" TUBEx1/8" MIP ELBOW		88-8-SS
28	S.S. 1/4" TUBING		88-7-SS
29	S.S. 1/4" TUBE x 1/8" FIP		66S33
30	PETCOCK BODY		66S01
31	PETCOCK O-RING 003 N 70		66S10
32	PETCOCK NOZZLE		66S05
33	PETCOCK PLUNGER		66S03
34	PETCOCK O-RING 008 N 70		66S08
35	PETCOCK NUT		66S02
36	PETCOCK ROD PIN		66S04
37	PETCOCK PLASTIC CAP	NOT SHOWN	66S22
38	HOSE CLAMP		66S34
39	MOUNTING ANGLE	NOT SHOWN	4 ALUM ANGLE

NOTE: RIVETS, NUTS, BOLTS, AND WASHERS NOT SHOWN

THIS DRAWING IS THE PROPERTY OF THE KUPFERLE FOUNDRY COMPANY. IT IS NOT TO BE USED OR DUPLICATED WITHOUT PERMISSION OF THE OWNER.

DATE	STATUS / REVISION	#88-SS SAMPLING STATION	SHEET 1 OF 1
DD/MM/YY	ISSUED FOR REFERENCE		

DRAWN DCL | APPROVED DCL | DATE 6/30/13 | SCALE 1-1/2"=1'

KUPFERLE Since 1857
2511 NORTH 9TH STREET
ST. LOUIS, MO 63102
1-800-231-3990
FAX 314-231-2820
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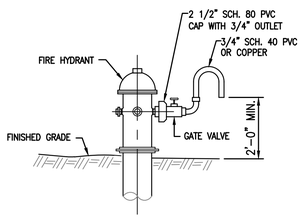
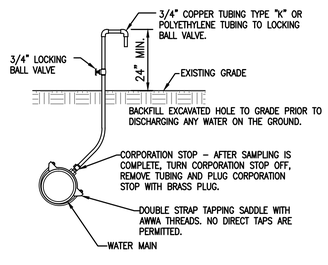
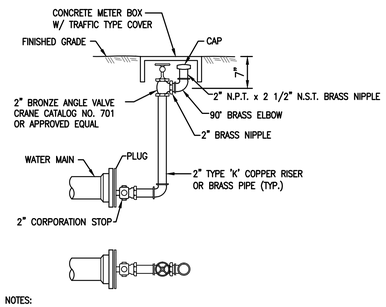


SAMPLE POINT ON FIRE HYDRANT



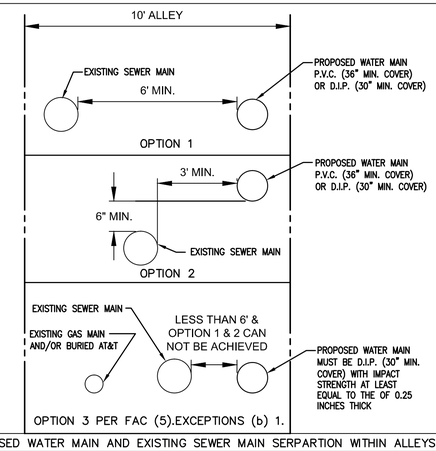
SAMPLING POINT



NOTES:

1. GALVANIZED PIPING AND FITTINGS SHALL NOT BE USED ON TEMPORARY OR PERMANENT BLOWOFFS.
2. MEGALUG RESTRAINED JOINTS REQUIRED ON WATERMAIN.

2" TERMINAL BLOWOFF



PROPOSED WATER MAIN AND EXISTING SEWER MAIN SERPARTION WITHIN ALLEYS

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

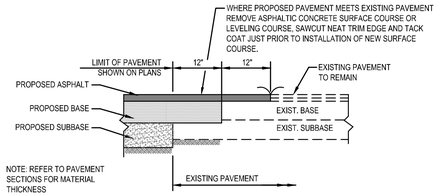
CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

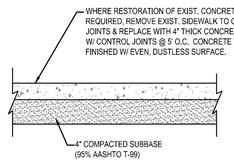
WATER DETAILS

SHEET NO.
WDET-3

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 Inch WM\Drawings\16-0001-001-01-WATR-DETL.dwg [WDET-3] Dec 22, 2016 9:52am MCIGALE



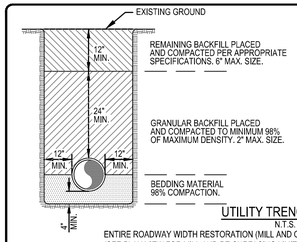
PAVEMENT CONNECTION DETAIL



CONCRETE SIDEWALK RESTORATION DETAIL

N.T.S.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	PAVEMENT CONNECTION AND SIDEWALK RESTORATION	19

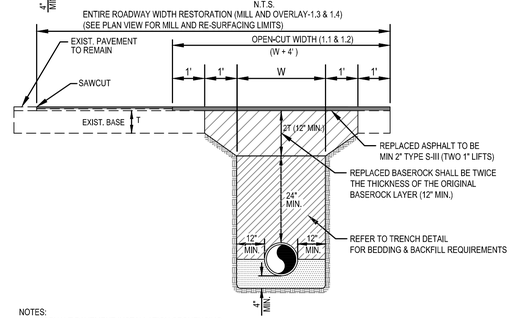


NOTES:

1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCK SHALL BE REMOVED.
2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIALS SUCH AS LARGER ROCK, MUCK AND DEBRIS.

UTILITY TRENCH DETAIL

N.T.S.

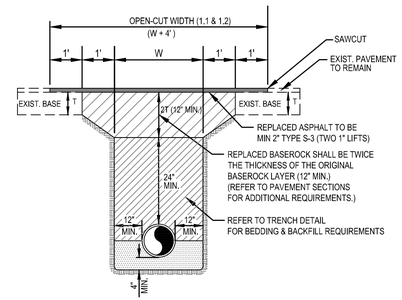


NOTES:

1. ASPHALT PAVEMENT INSTALLATION SEQUENCING:
   - 1.1. FIRST LIFT: 1" TYPE S-III ASPHALT. TACK COAT BETWEEN LIFTS. SHALL BE PAID UNDER PAVEMENT RESTORATION PAY ITEM.
   - 1.2. SECOND LIFT: 1" TYPE S-III ASPHALT. SECOND LIFT SHALL IMMEDIATELY FOLLOW FIRST LIFT IN ORDER TO MATCH EXISTING TOP OF ASPHALT ELEVATION. SHALL BE PAID UNDER PAVEMENT RESTORATION PAY ITEM.
   - 1.3. MILL 1" OF ENTIRE ROADWAY WIDTH-SEE PLAN VIEW FOR MILL & RE-SURFACE LIMITS (INCLUDES MILLING OF 2.2 SECOND LIFT) TO COMPLETE RESTORATION. TACK COAT BETWEEN LIFTS. SHALL BE PAID FOR UNDER MILL EXISTING ROADWAY ASPHALT PAY ITEM.
   - 1.4. FINAL LIFT (FRICTION COURSE) OF ENTIRE ROADWAY WIDTH-SEE PLAN VIEW FOR MILL & RE-SURFACE LIMITS. FINAL LIFT SHALL BE 1" TYPE S-III ASPHALT AND PAID UNDER THE ASPHALT OVERLAY PAY ITEM.
2. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE TRENCH SAFETY REGULATIONS.
3. FINISHED SURFACE SHALL HAVE SMOOTH FINISH & SHALL MATCH FLUSH TO SURROUNDING PAVEMENT.

PAVEMENT OPEN-CUT DETAIL (PARALLEL UTILITY INSTALLATION)

N.T.S.



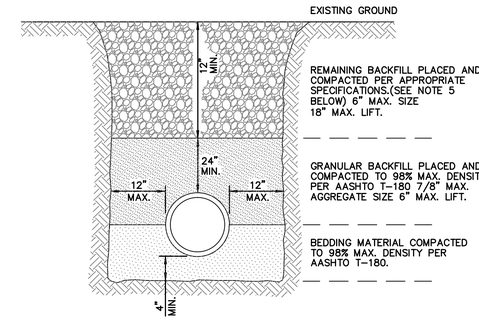
NOTES:

1. ASPHALT PAVEMENT INSTALLATION SEQUENCING:
   - 1.1. FIRST LIFT: 1" TYPE S-III ASPHALT. TACK COAT BETWEEN LIFTS. SHALL BE PAID UNDER PAVEMENT RESTORATION PAY ITEM.
   - 1.2. SECOND LIFT: 1" TYPE S-III ASPHALT. SECOND LIFT SHALL IMMEDIATELY FOLLOW FIRST LIFT IN ORDER TO MATCH EXISTING TOP OF ASPHALT ELEVATION. SHALL BE PAID UNDER PAVEMENT RESTORATION PAY ITEM.
2. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE TRENCH SAFETY REGULATIONS.
3. FINISHED SURFACE SHALL HAVE SMOOTH FINISH & SHALL MATCH FLUSH TO SURROUNDING PAVEMENT.

PAVEMENT OPEN-CUT/RESTORATION DETAIL (PERPENDICULAR UTILITY INSTALLATION)

N.T.S.

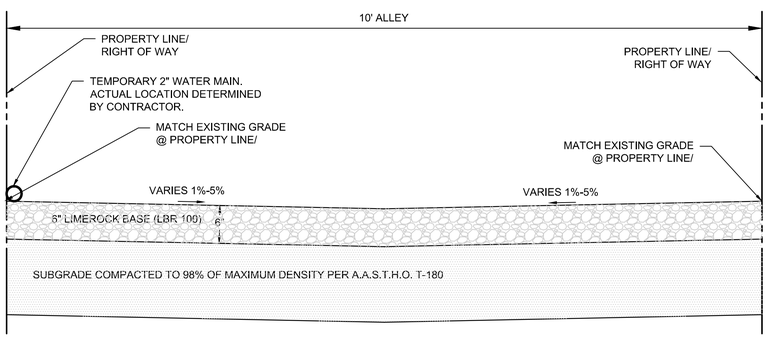
CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	UTILITY TRENCH AND PAVEMENT RESTORATION/OPEN-CUT	21



NOTES:

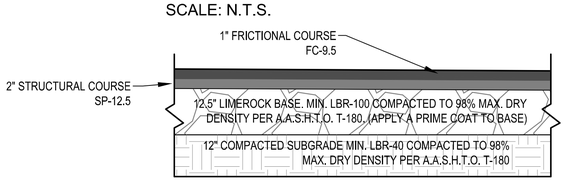
1. UNSUITABLE IN-SITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGE ROCKS SHALL BE REMOVED; BEDDING MATERIAL AND BACKFILL CONSISTING OF WASHED AND GRADED LIMEROCK 3/8" -7/8" SIZING.
2. THE PIPE AND/OR STRUCTURE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE AND/OR STRUCTURE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGE ROCK, MUCK, AND DEBRIS.
5. COMPACT BACKFILL TO 98% DENSITY UNDER PAVEMENT AND TO 95% DENSITY ELSEWHERE.(AASHTO T-180)
6. COMPACTION AND DENSITY TESTS SHALL BE COMPLETED DURING BACKFILL OPERATIONS, CONTRACTORS NOT FOLLOWING THIS PROCEDURE, FOR WHATEVER REASONS, SHALL BE REQUIRED TO RE-EXCAVATE THE AREA IN QUESTION, DOWN TO THE BEDDING MATERIAL, THEN BACKFILL FOLLOWING THE ABOVE PROCEDURES.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	TYPICAL BACKFILL DETAIL	22



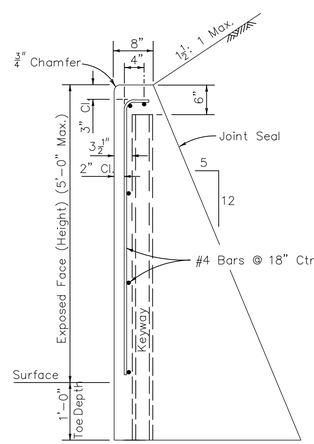
TYPICAL ALLEY SECTION

SCALE: N.T.S.

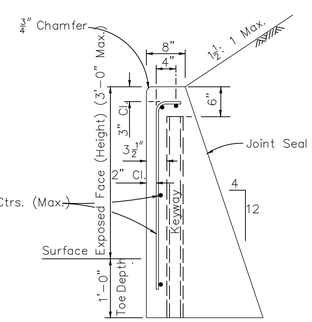


TYPICAL ROADWAY PAVEMENT SECTION WITHIN F.D.O.T. R.O.W.

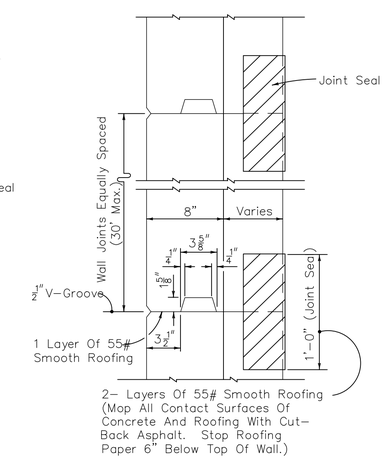
SCALE: N.T.S.



SECTION



SECTION



KEY DETAIL (TOP VIEW)

GRAVITY WALL

SCALE: N.T.S.

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

PAVING & GRADING DETAILS

SHEET NO.
PGDET-1

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR-DETL.dwg [PGDET-1] Dec 21, 2016 5:34pm MCIGALE

PAVEMENT MARKING SPECIFICATIONS

All Pavement markings to be installed per these typicals, plans and specifications, and as directed by the City Engineer and shall conform to the requirements of F.D.O.T. and the manual on uniform traffic control devices, (MUTCD).

PERMANENT MARKINGS

Installation:
- All markings shall be installed by the extruded method.
- Markings shall be free of weaves, bows, drips, drags, and other degrading items.
- Chalk shall be used for all layout markings

Materials:
- All materials shall be alkyd or hydrocarbon thermoplastic meeting all FDOT specifications.

Thickness:
- All markings shall be installed to yield 90 mils of material measured above the pavement surface.

Spheres:
- Reflective glass sheres are to be applied to all stripes and markings per FDOT specifications.

Alternate Material:
- STAYMARK marking tape, or equivalent may be used, as approved or directed by the City Engineer.

Layout:
- Layout shall be made using marking chalk.
- It is recommended that marking layout be inspected by the City Engineer prior to the placement of final markings.

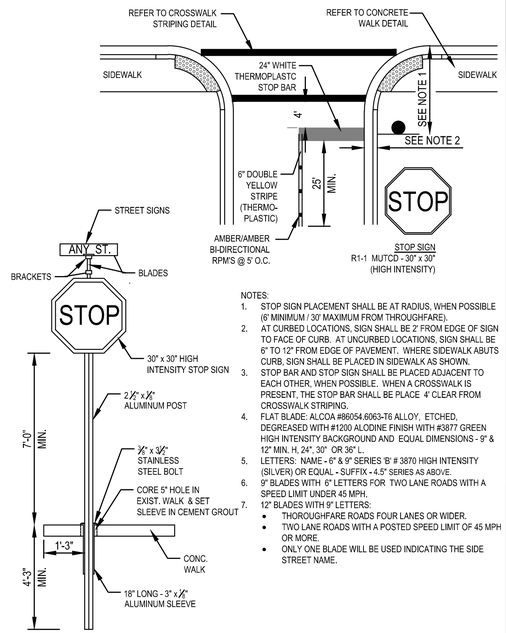
TEMPORARY MARKINGS

Temporary markings may be used only as specified in this section, or as approved or directed by the City Engineer.

Final Pavement Surface:
- Only foil backed marking tape is allowed.
- All tape shall be totally removed concurrent with permanent marking placement.

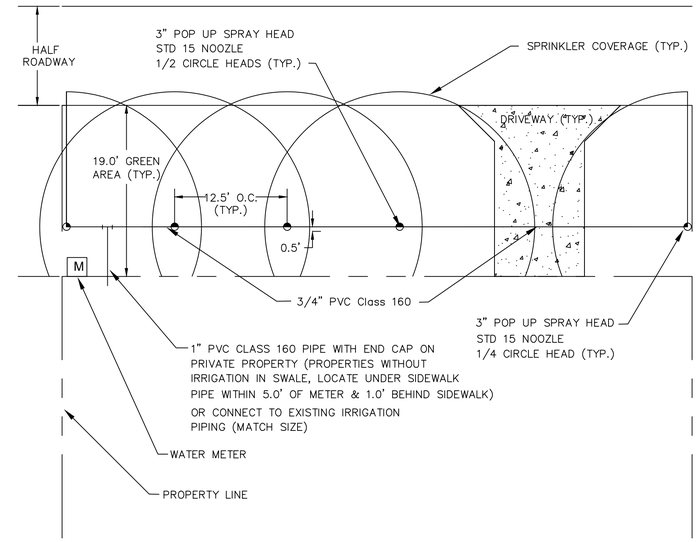
Other Pavement Surfaces:
- Intermediate pavement surfaces may be marked with FDOT approved materials, designs, and specifications.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	PAVEMENT MARKING SPECIFICATIONS	DETAIL NO. 13



NOTES:
1. STOP SIGN PLACEMENT SHALL BE AT RADIUS, WHEN POSSIBLE (6' MINIMUM / 30' MAXIMUM FROM THROUGHFARE).
2. AT CURBED LOCATIONS, SIGN SHALL BE 2' FROM EDGE OF SIGN TO FACE OF CURB. AT UNCURBED LOCATIONS, SIGN SHALL BE 6' TO 12' FROM EDGE OF PAVEMENT. WHERE SIDEWALK ABUTS CURB, SIGN SHALL BE PLACED IN SIDEWALK AS SHOWN.
3. STOP BAR AND STOP SIGN SHALL BE PLACED ADJACENT TO EACH OTHER, WHEN POSSIBLE. WHEN A CROSSWALK IS PRESENT, THE STOP BAR SHALL BE PLACE 4' CLEAR FROM CROSSWALK STRIPING.
4. FLAT BLADE: ALCOA #86054.6063-T6 ALLOY, ETCHED, DEGREASED WITH #1200 ALODINE FINISH WITH #3877 GREEN HIGH INTENSITY BACKGROUND AND EQUAL DIMENSIONS - 9" & 12" MIN. H, 24", 30" OR 36" L.
5. LETTERS: NAME - 6" & 9" SERIES 'B' # 3870 HIGH INTENSITY (SILVER) OR EQUAL - SUFFIX - 4.5" SERIES AS ABOVE.
6. 9" BLADES WITH 6" LETTERS FOR TWO LANE ROADS WITH A SPEED LIMIT UNDER 45 MPH.
7. 12" BLADES WITH 9" LETTERS:
   - THOROUGHFARE ROADS FOUR LANES OR WIDER.
   - TWO LANE ROADS WITH A POSTED SPEED LIMIT OF 45 MPH OR MORE.
   - ONLY ONE BLADE WILL BE USED INDICATING THE SIDE STREET NAME.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	STOP SIGN AND STOP BAR	DETAIL NO. 09



NOTES: 1. ALL JOINTS SHALL BE SOLVENT WELD
2. CORNER LOTS SHALL BE PAID FOR AS ONE (1) LOT

TYPICAL LOT IRRIGATION RESTORATION/INSTALLATION

N.T.S.

ALL PAVEMENT MARKINGS

All paved surfaces shall be properly marked prior to the hours of darkness.

RAISED PAVEMENT MARKERS

- R.P.M.s shall be installed on all lane lines and centerlines, spaced at 20' or 40'.
- R.P.M.s shall be a 4 x 4 type class "B" marker meeting F.D.O.T. specifications and shall be approved by the City Engineer prior to use.
- R.P.M.'s shall be installed using alkyd thermoplastic on asphalt and epoxy on concrete.

OTHER NOTES

- All Materials within right-of-way shall be thermoplastic and per F.D.O.T. specifications.
- Pavement marking within private parking lots may be painted according to F.D.O.T. specifications, except for all stop bars adjacent to public rifgt-of-way.

CITY OF LAKE WORTH PUBLIC SERVICES DEPARTMENT	PAVEMENT MARKING SPECIFICATIONS	DETAIL NO. 14

Matthew J. Cigale
Florida P.E. No. 74584

CITY JOB No. WT 1506
CTA JOB No. 16-0001-001-01

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DRAWN BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY:					

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

2 INCH WATER MAIN REPLACEMENT
PHASE II
PREPARED FOR:
CITY OF LAKE WORTH

PAVING & GRADING DETAILS

SHEET NO.
PGDET-2

R:\Engineering\2016\16-0001-001-01 Lake Worth-2 inch WM\Drawings\16-0001-001-01-WATR-DETL.dwg [PGDET-2] Dec 21, 2016 5:35pm MCIGALE

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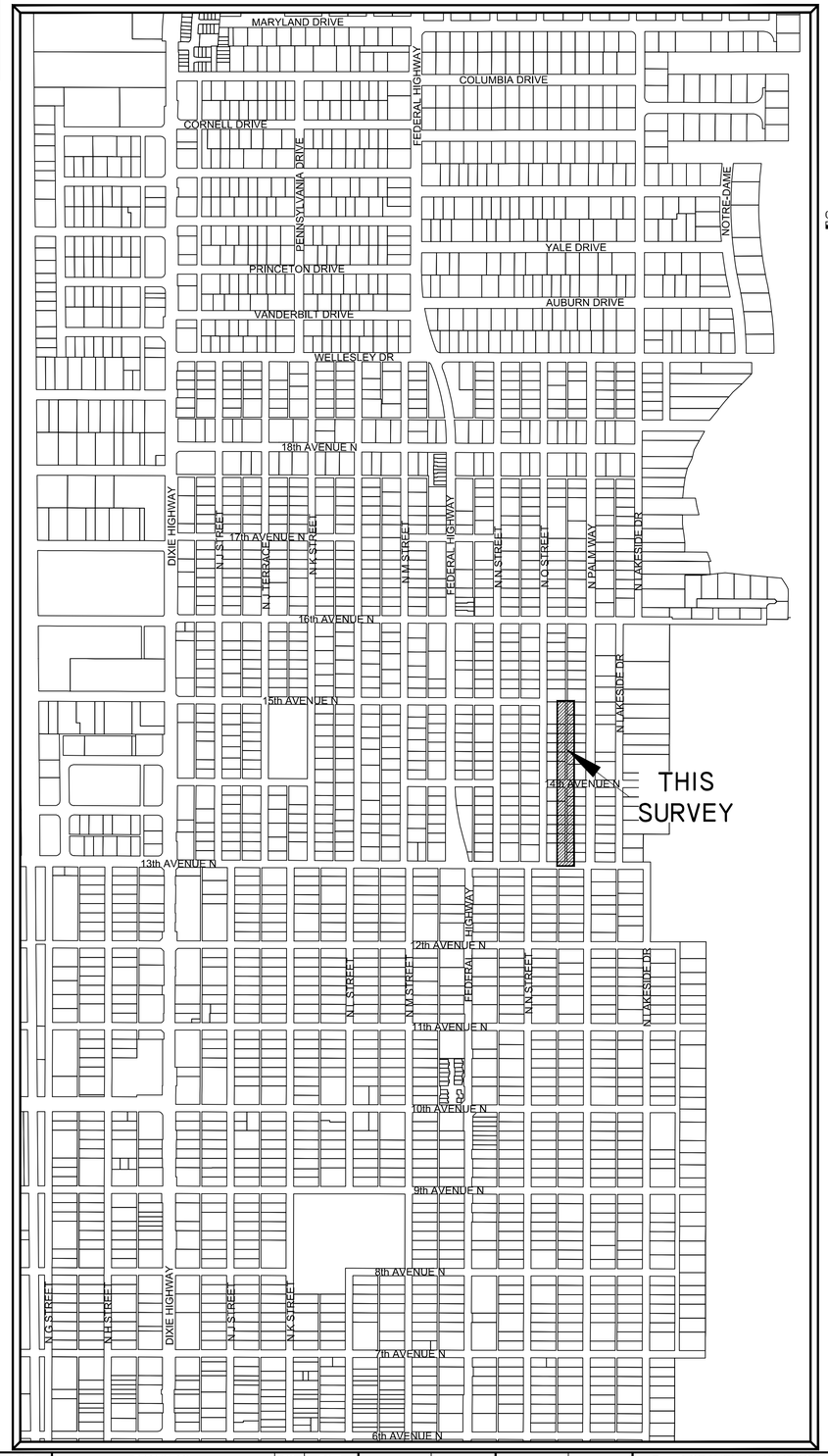

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS L AND M, TOGETHER WITH THE RIGHTS-OF-WAY FOR 13th AVENUE N. (TWENTY-THIRD AVENUE PER PLAT), 14th AVENUE N. (TWENTY-FOURTH AVENUE PER PLAT), AND THE ABANDONED RIGHT OF WAY FOR 15th AVENUE N. (TWENTY-FIFTH AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: APRIL 18, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/18/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	58-63

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. O STREET & N. PALMWAY

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [24-V-1] Dec 21, 2016 3:09pm TSHAHAN

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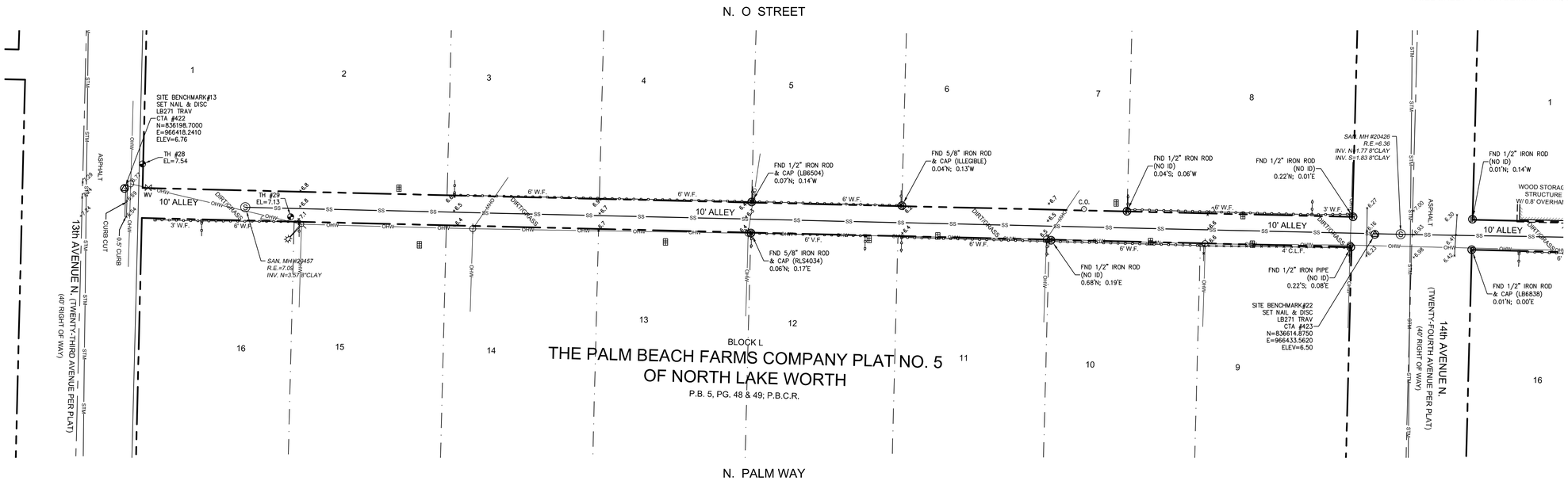
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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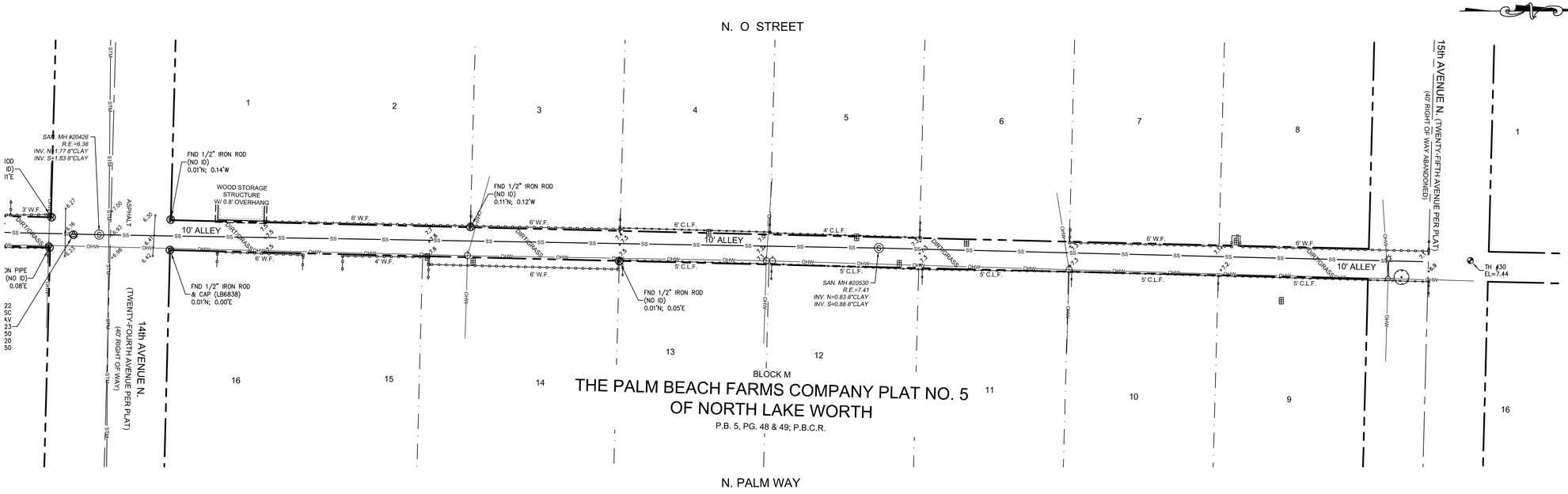
GRAPHIC SCALE IN FEET



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/12/16	CHECKED BY:	R.Y.
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. O STREET & N. PALMWAY

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

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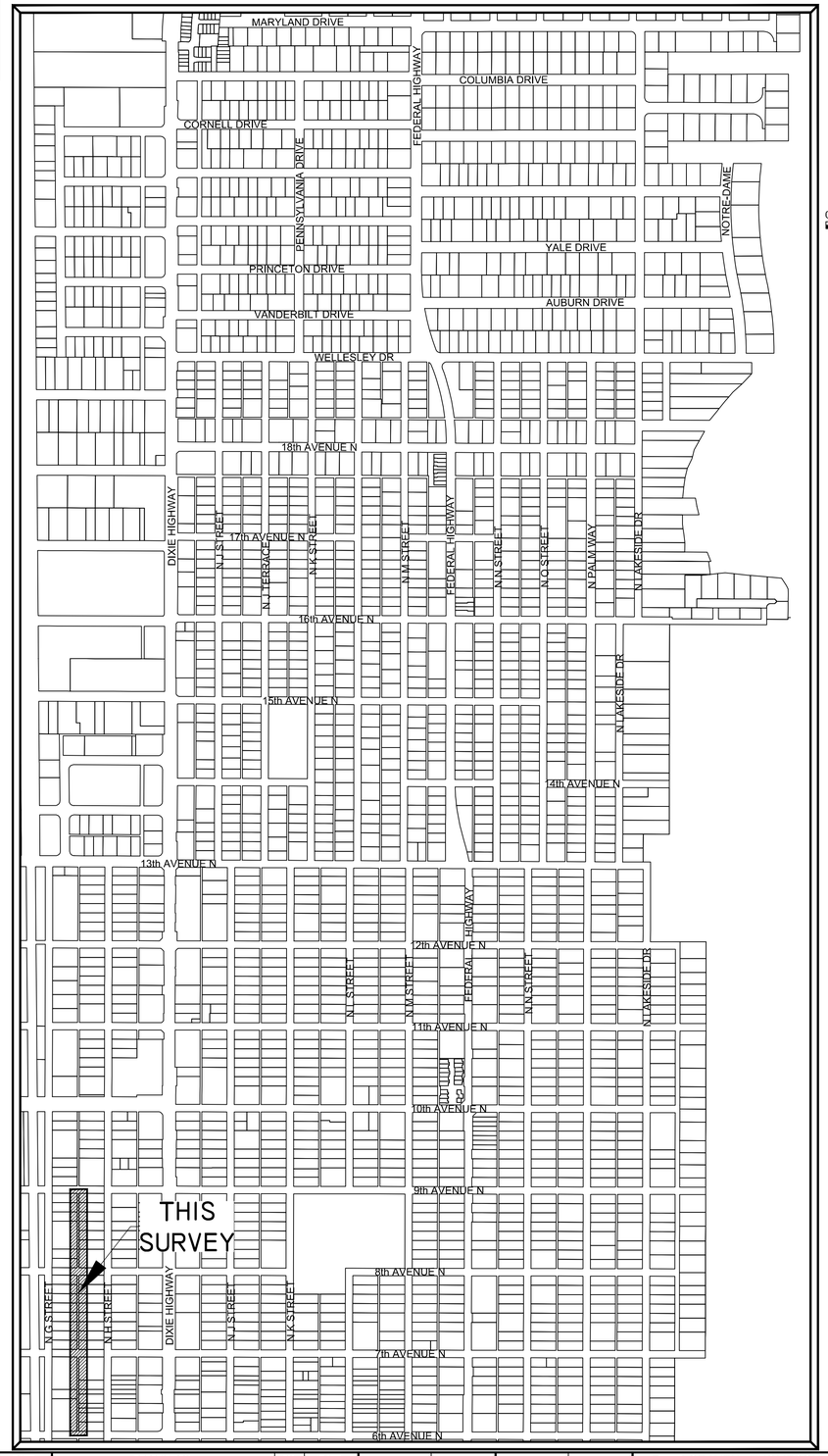

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEETS V-2 THRU V-4 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- A/C — AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BFP (NNN) — BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CB — CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DDCV — DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
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- D — STORM MANHOLE
- T — TELEPHONE MANHOLE
- TELE — TELEPHONE PEDESTAL
- TP — TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- W — WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YD — YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OHW — OVER HEAD WIRES
- SS — BURIED SANITARY SEWER PIPE
- STM — BURIED STORM SEWER PIPE
- +16.16 — HARD SURFACE ELEVATION
- +16.1 — GROUND SPOT ELEVATION

CONTROL LEGEND

- D•H — DRILL HOLE
- (P) — IRON PIPE
- (R) — IRON ROD
- (N) — NAIL&TAB
- △ — PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
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15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 184, 210, AND 248, TOGETHER WITH THE RIGHTS-OF-WAY FOR 6th AVENUE N. (16th AVENUE PER PLAT), 7th AVENUE N. (17th AVENUE PER PLAT), 8th AVENUE N. (18th AVENUE PER PLAT) AND 9th AVENUE N. (19th AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS CO PLAT NO 2, THE TOWNSITE OF LUCERNE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGES 29 THRU 40 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: APRIL 6, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/06/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	42-49

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. G STREET & N. H STREET

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

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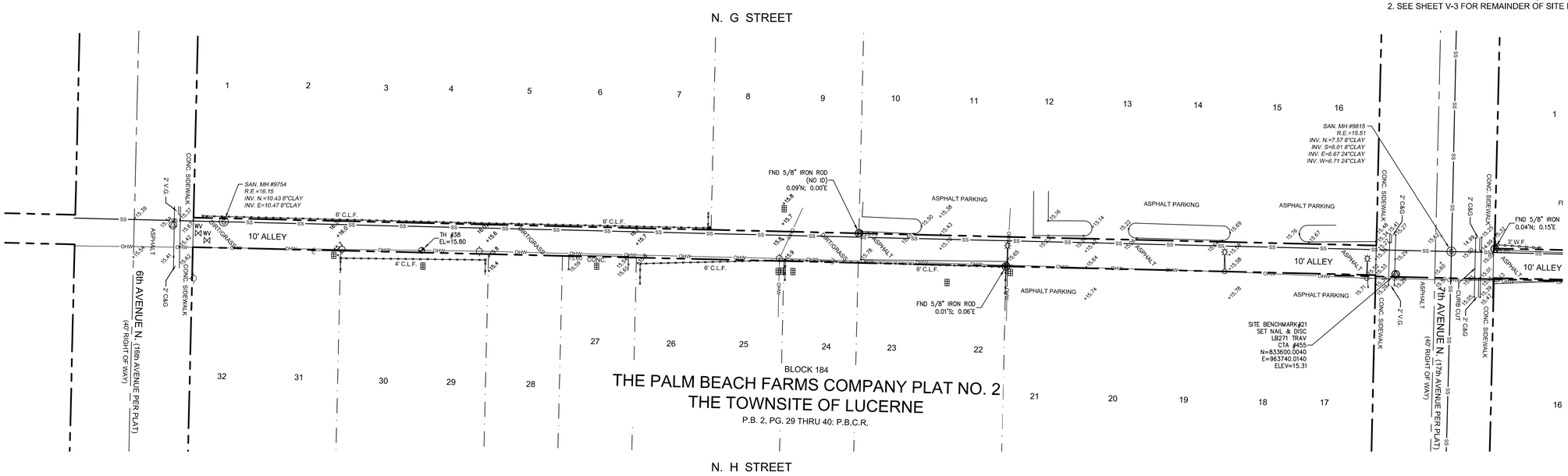
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

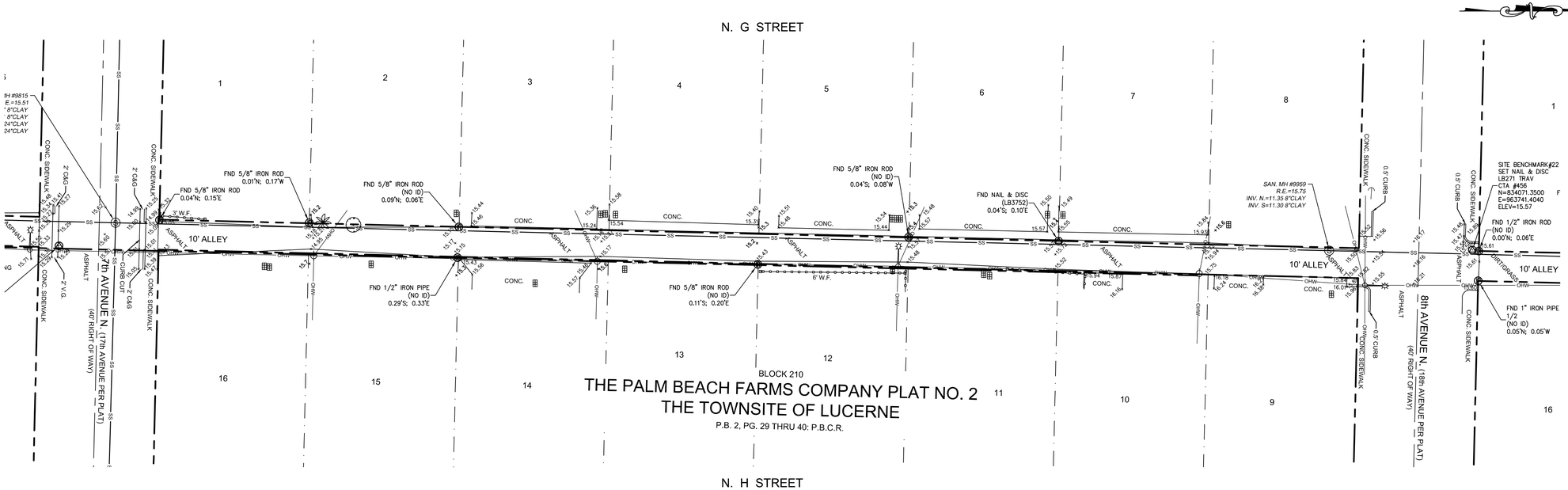
0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS.



0 20' 40'
GRAPHIC SCALE IN FEET



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/06/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. G STREET & N. H STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

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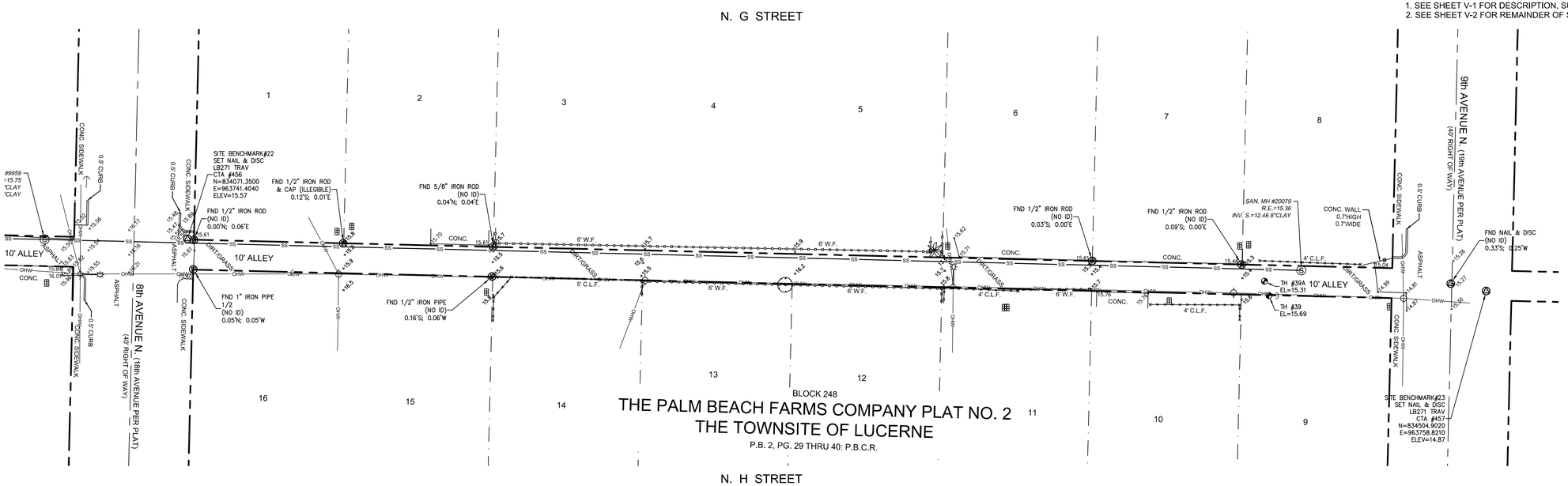
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-2 FOR REMAINDER OF SITE IMPROVEMENTS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/06/16	CHECKED BY:	R.Y.
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. G STREET & N. H STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3
SHEET 3 OF 3

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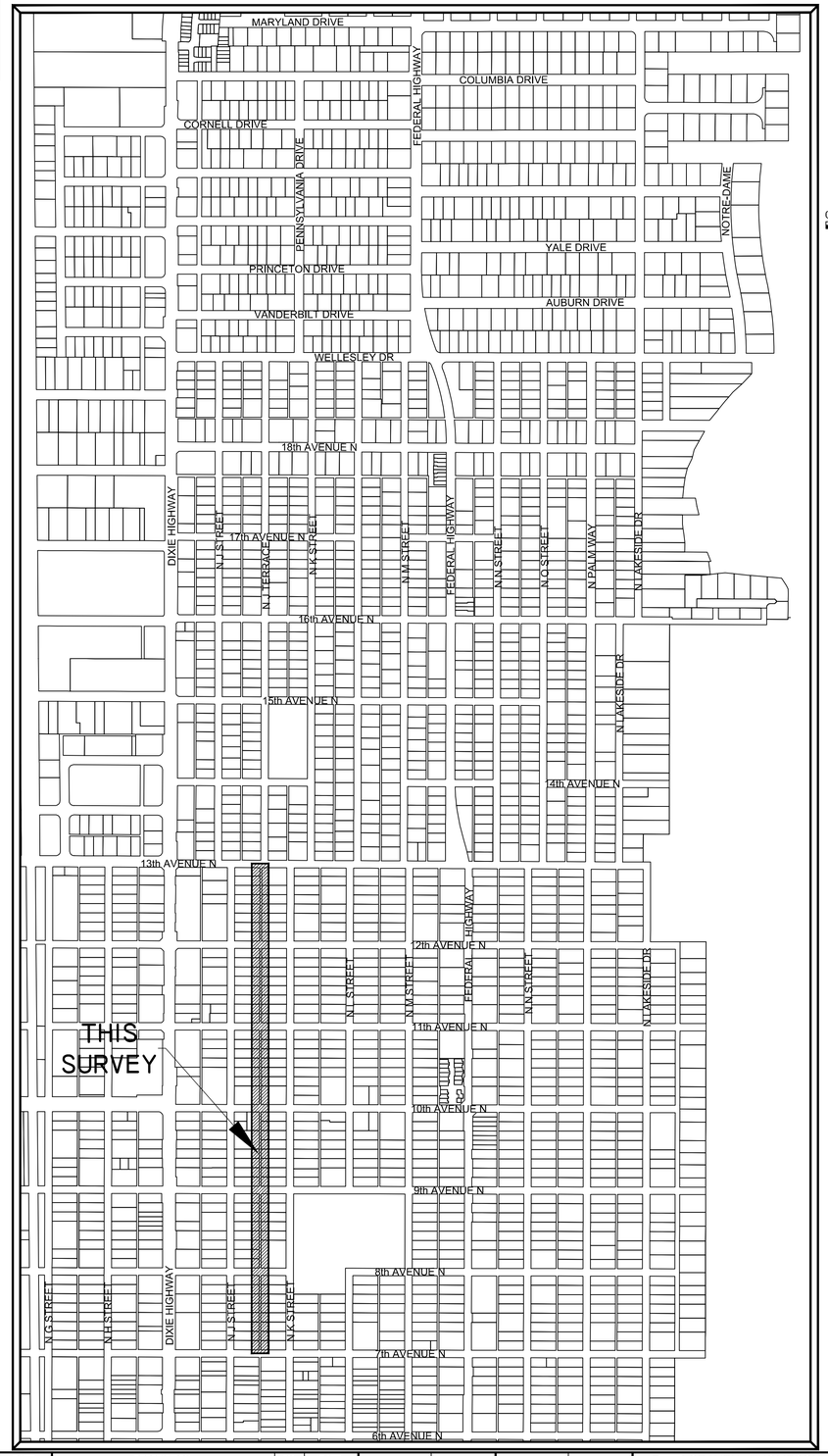

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEETS V-2 THRU V-4 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 4 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 216, 242, 280, 308, 346 AND 374, TOGETHER WITH THE RIGHTS-OF-WAY FOR 7th AVENUE N. (17th AVENUE PER PLAT), 8th AVENUE N. (18th AVENUE PER PLAT), 9th AVENUE N. (19th AVENUE PER PLAT), 10th AVENUE N. (20th AVENUE PER PLAT), 11th AVENUE N. (21st AVENUE PER PLAT), 12th AVENUE N. (22nd AVENUE PER PLAT) AND 13th AVENUE N. (23rd AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS CO PLAT NO 2, THE TOWNSITE OF LUCERNE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGES 29 THRU 40 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 1, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

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DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/01/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	14-36

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. J STREET & N. K STREET

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 4

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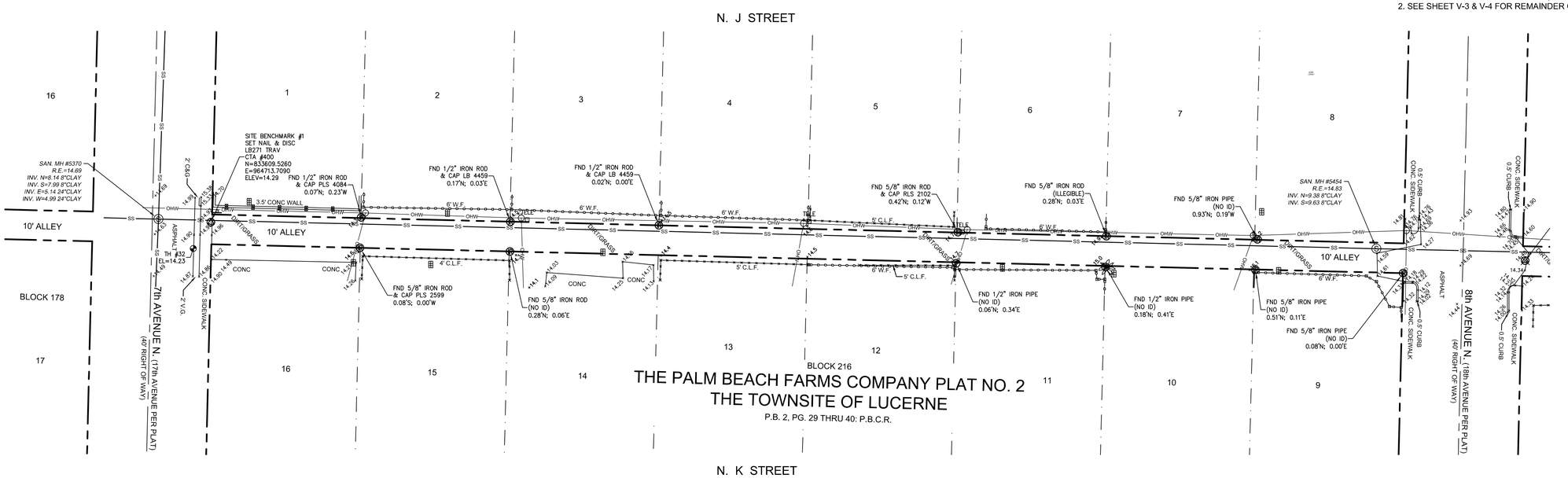
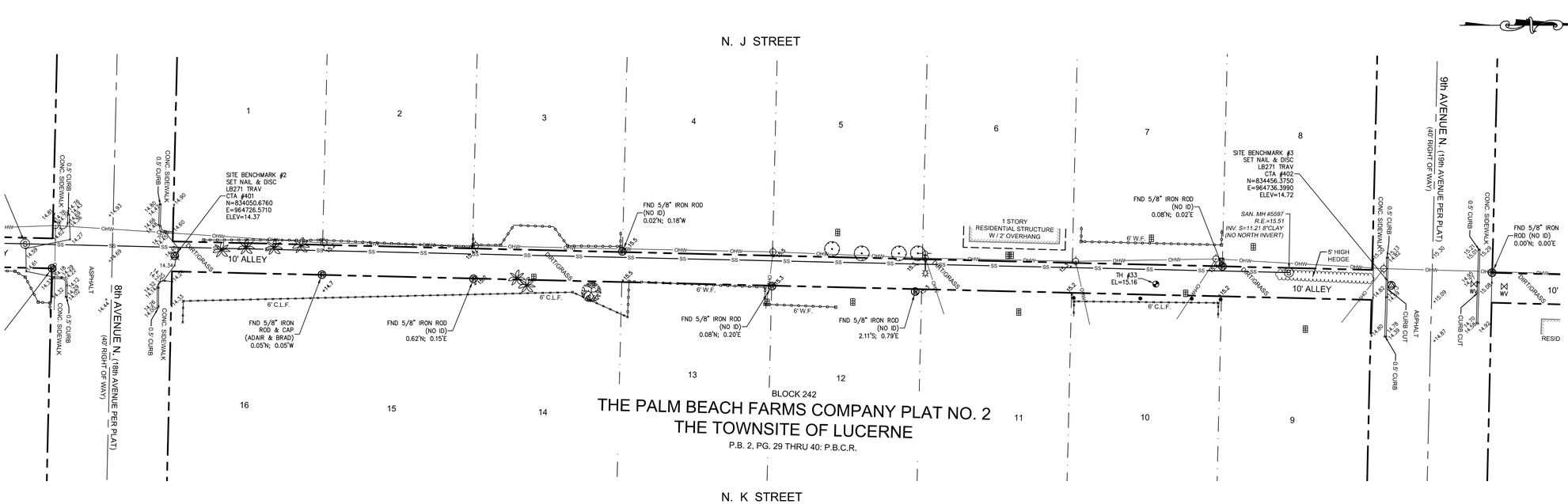
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 & V-4 FOR REMAINDER OF SITE IMPROVEMENTS.





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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. J STREET & N. K STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 4

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TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

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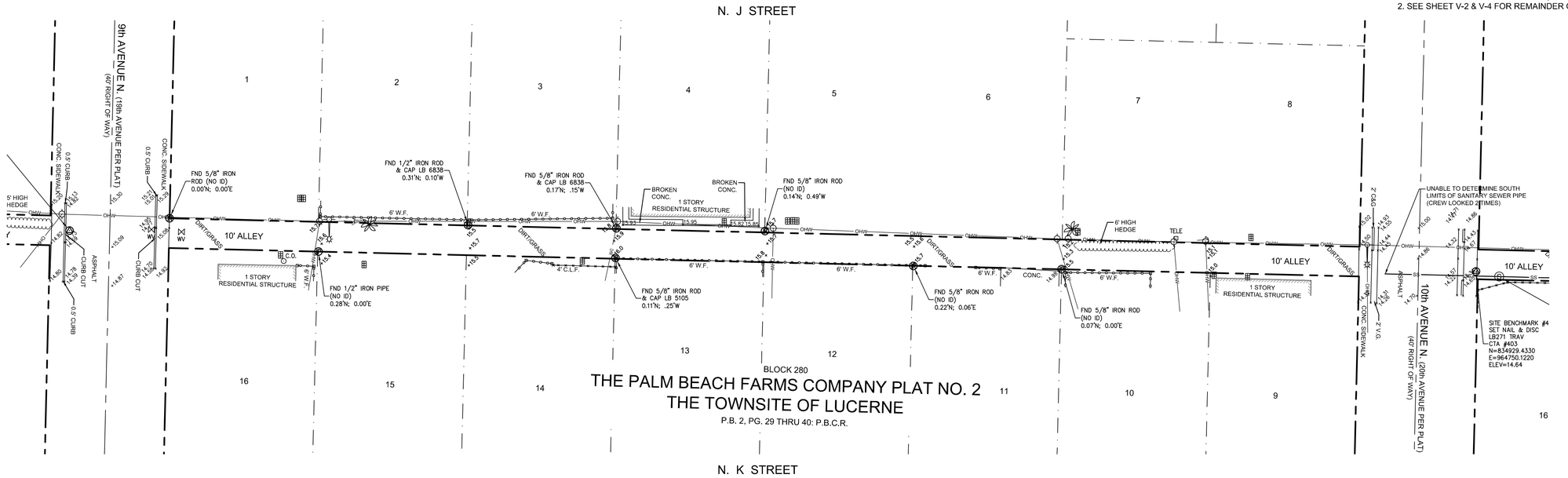
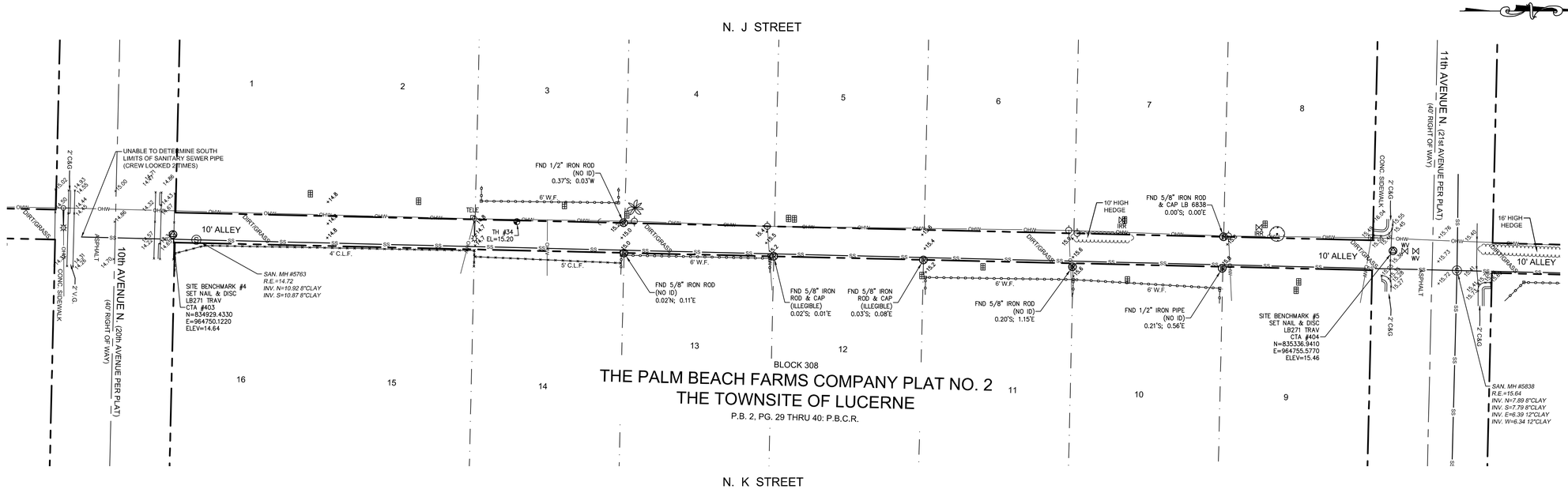


0 20' 40'
GRAPHIC SCALE IN FEET



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DATE:	03/01/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	14-36

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. J STREET & N. K STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3

SHEET 3 OF 4

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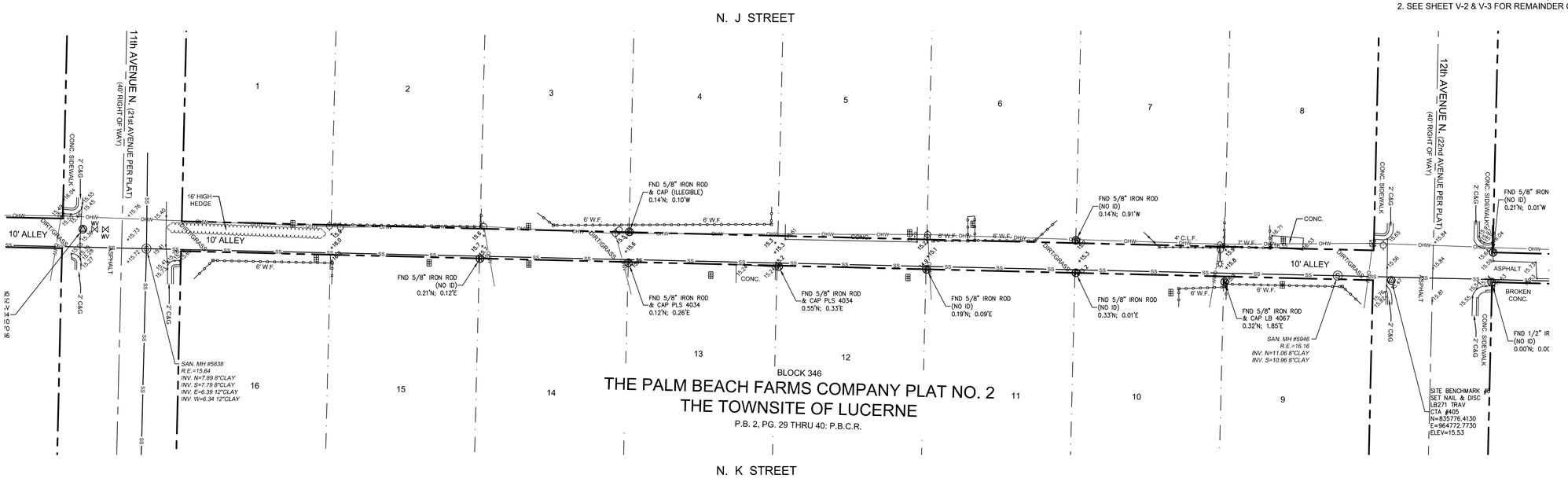
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

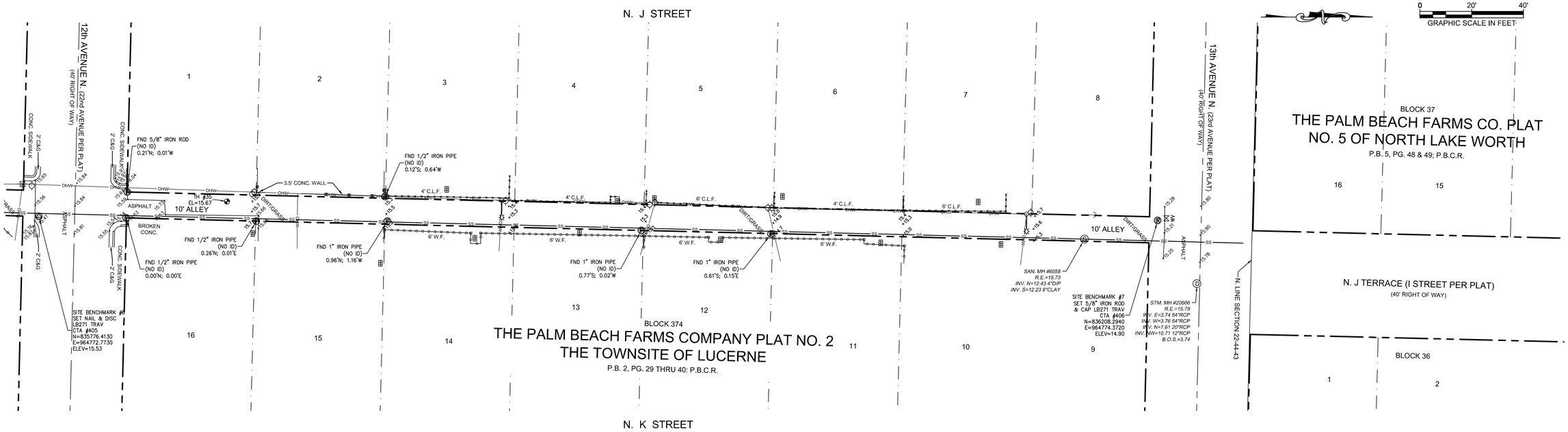
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-2 & V-3 FOR REMAINDER OF SITE IMPROVEMENTS.





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10' WIDE ALLEY LYING BETWEEN
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TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-4

SHEET 4 OF 4

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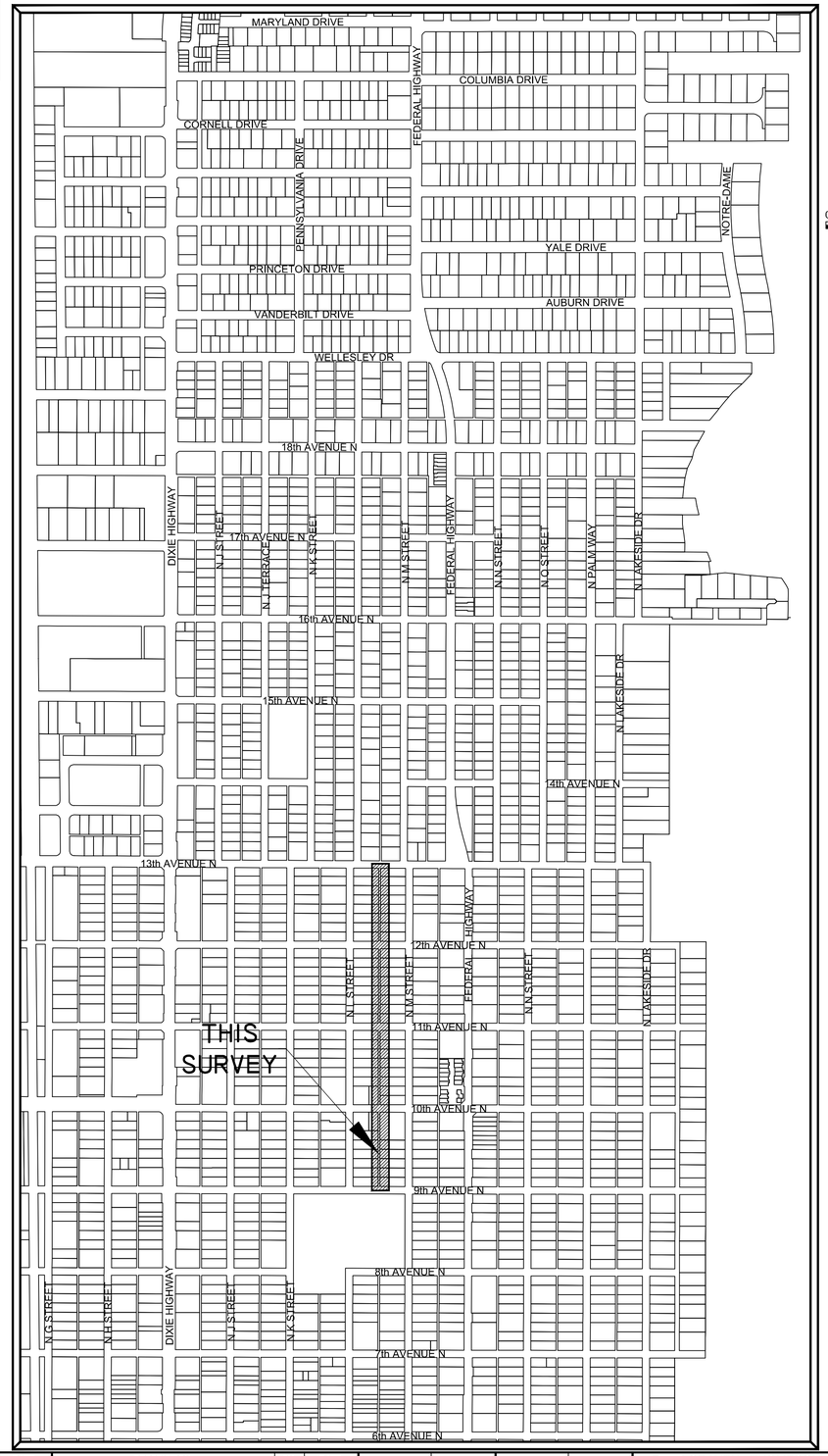

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEETS V-2 AND V-3 FOR SITE IMPROVEMENTS.

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 3 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 284, 304, 350, AND 370, TOGETHER WITH THE RIGHTS-OF-WAY FOR 9th AVENUE N. (19th AVENUE PER PLAT), 10th AVENUE N. (20th AVENUE PER PLAT), 11th AVENUE N. (21st AVENUE PER PLAT), 12th AVENUE N. (22nd AVENUE PER PLAT) AND 13th AVENUE N. (23rd AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS CO PLAT NO 2, THE TOWNSITE OF LUCERNE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGES 29 THRU 40 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN FEBRUARY, 2016.

LAST DATE OF FIELD WORK: FEBRUARY 25, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	02/25/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	11-33

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. L STREET & N. M STREET

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

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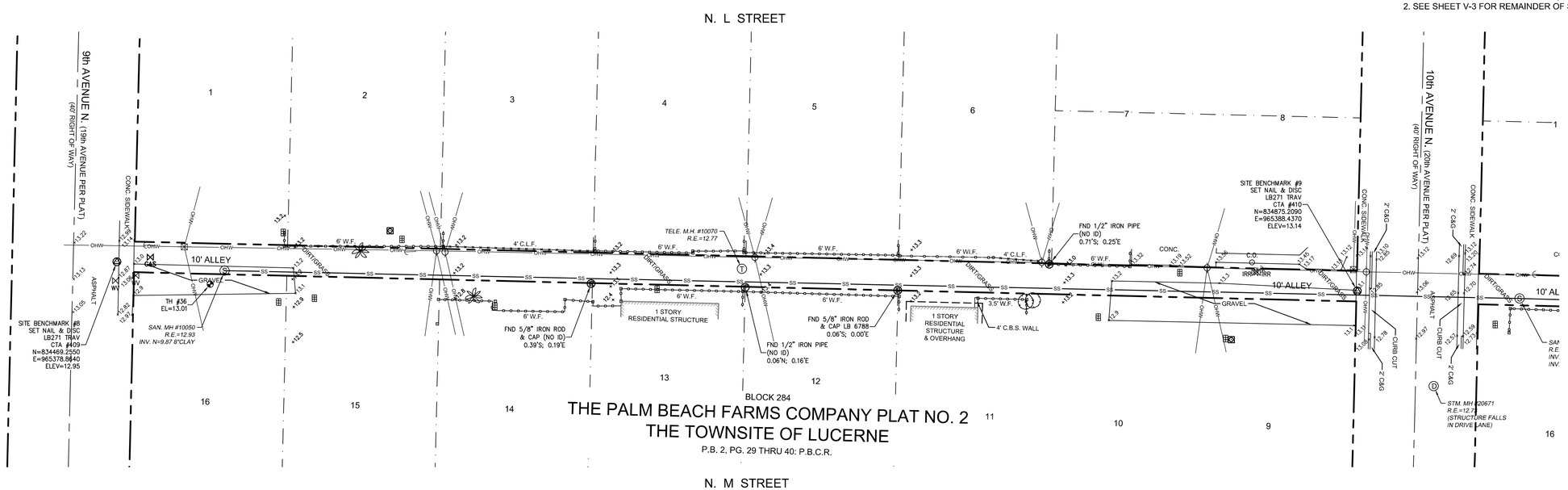
TOPOGRAPHIC SURVEY

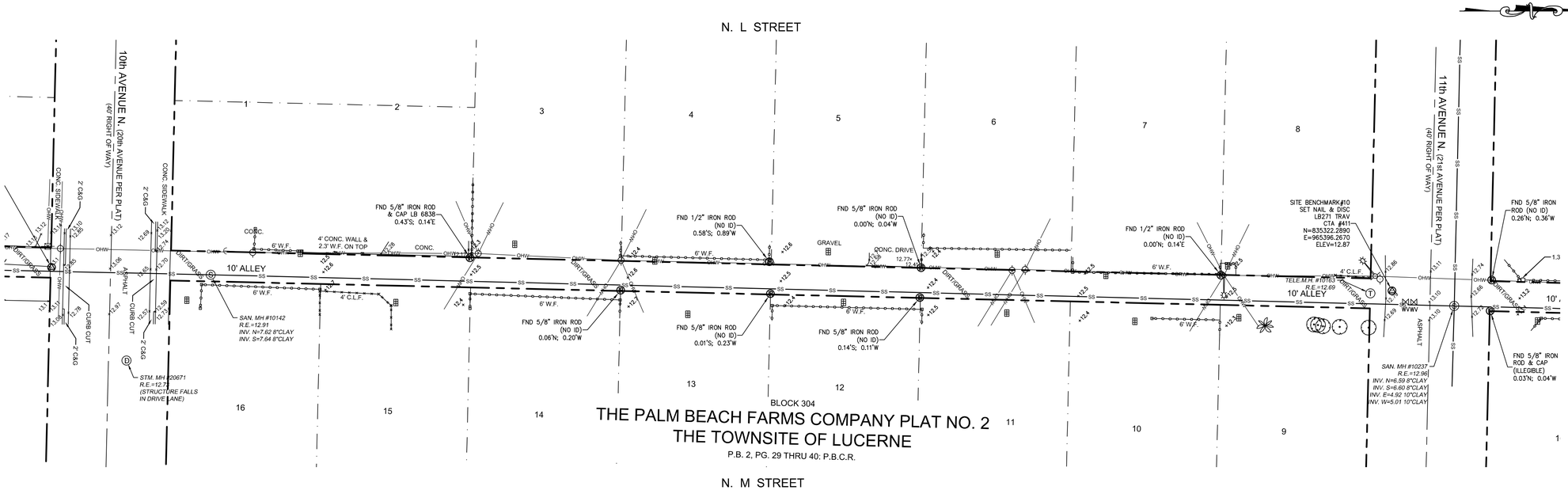
0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS.



0 20' 40'
GRAPHIC SCALE IN FEET



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10' WIDE ALLEY LYING BETWEEN
N. L STREET & N. M STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
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PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

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TOPOGRAPHIC SURVEY

0 20' 40'
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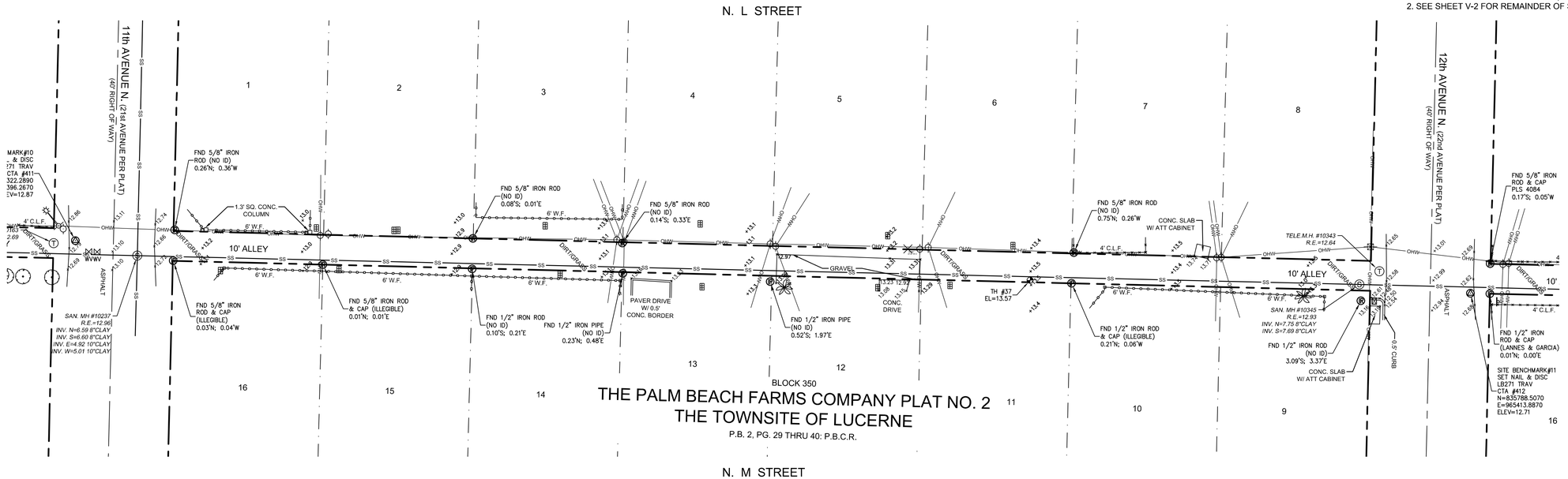
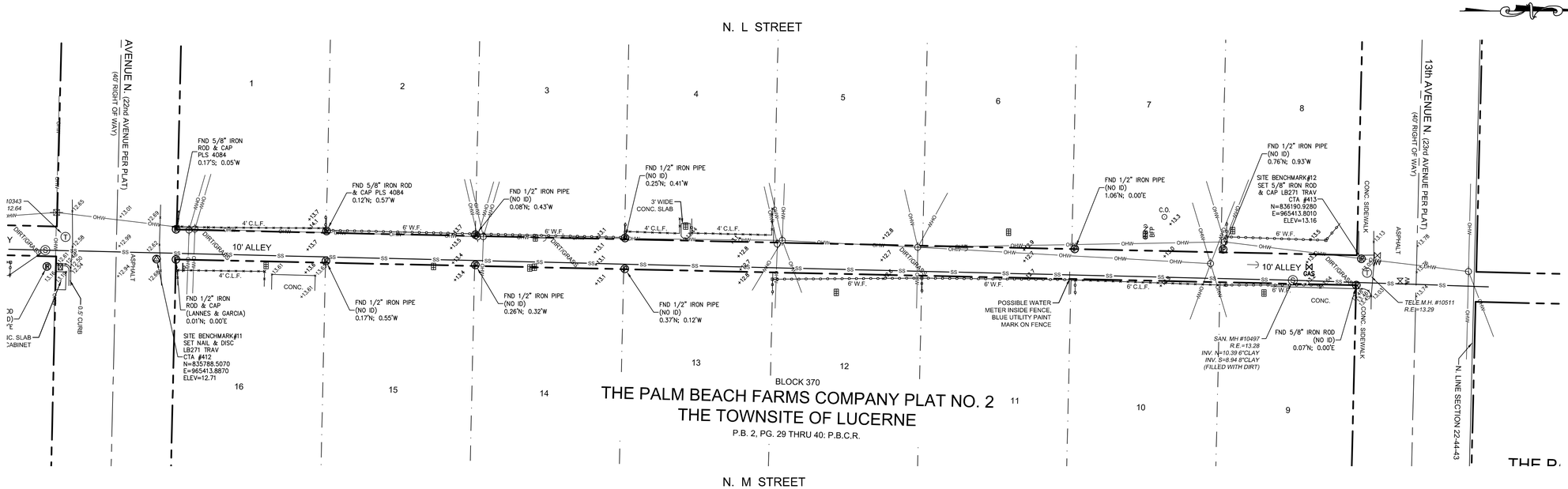


0 20' 40'
GRAPHIC SCALE IN FEET



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TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3

SHEET 3 OF 3

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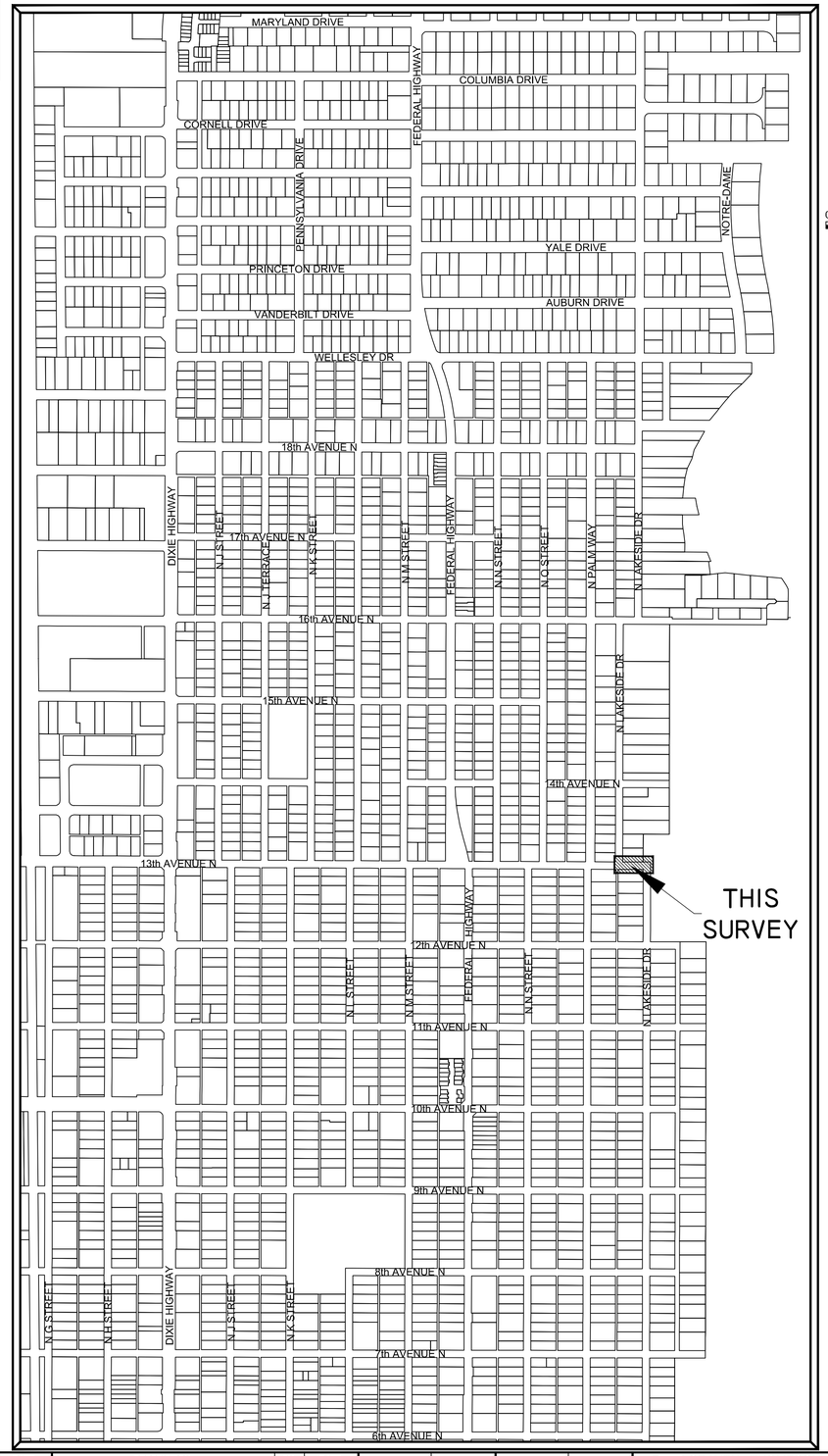

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

GPS FIELD PROCEDURES:

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2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR 13th AVENUE N. (23rd AVENUE PER PLAT) LYING EAST OF THE WEST RIGHT OF WAY LINE OF N LAKESIDE DRIVE THAT LIES NORTH OF SAID 13th AVENUE N. AND LYING WEST OF THE EAST RIGHT OF WAY LINE OF N LAKESIDE DRIVE THAT LIES SOUTH OF SAID 13th AVENUE N., ALL LYING WITHIN THE PALM BEACH FARMS CO PLAT NO 2, THE TOWNSITE OF LUCERNE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGES 29 THRU 40 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN FEBRUARY, 2016.

LAST DATE OF FIELD WORK: FEBRUARY 26, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	02/26/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	34-36

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR 13th AVENUE N.
AT N. LAKESIDE DRIVE

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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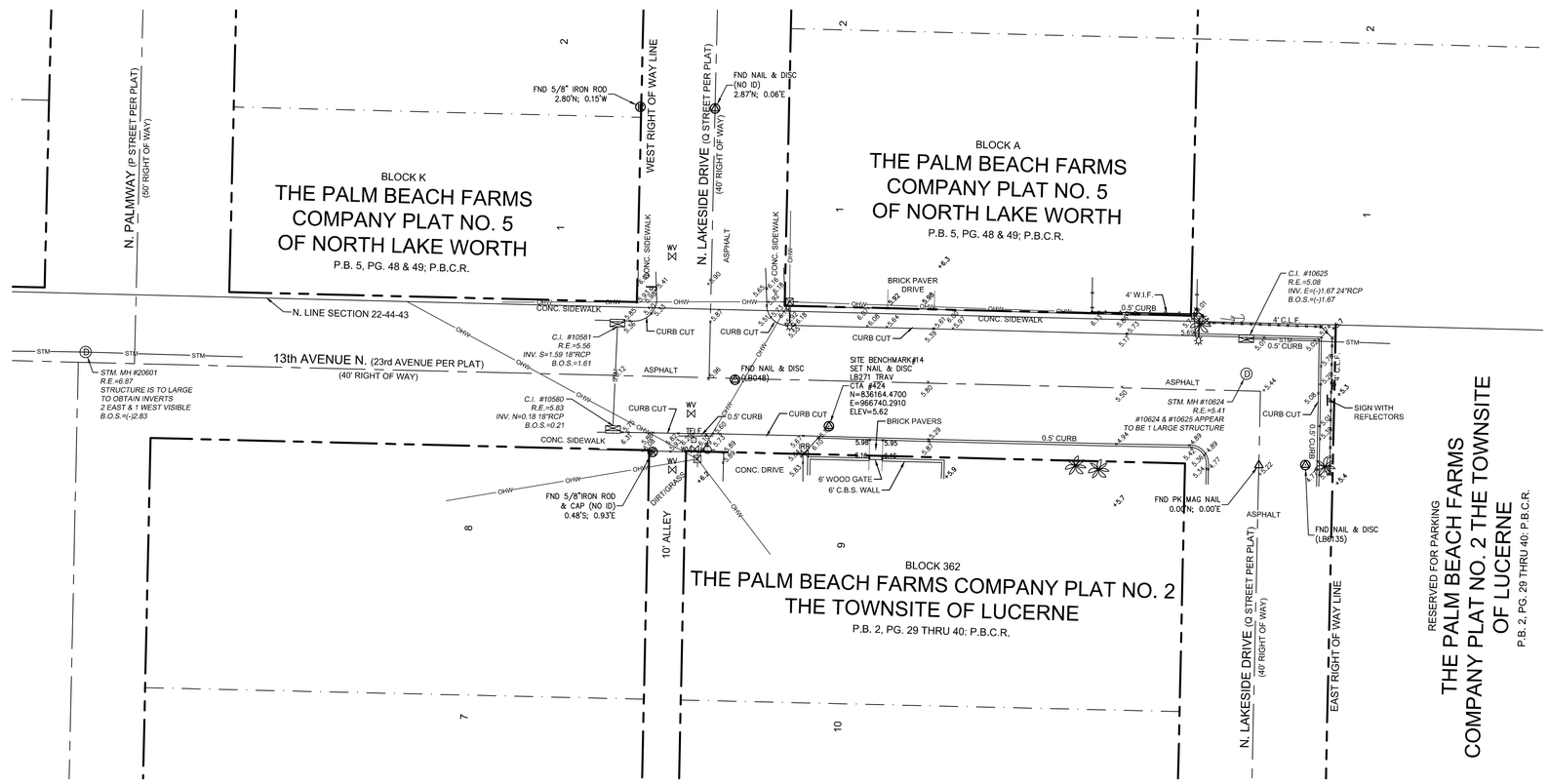
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	02/26/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	34-36

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR 13th AVENUE N.
AT N. LAKESIDE DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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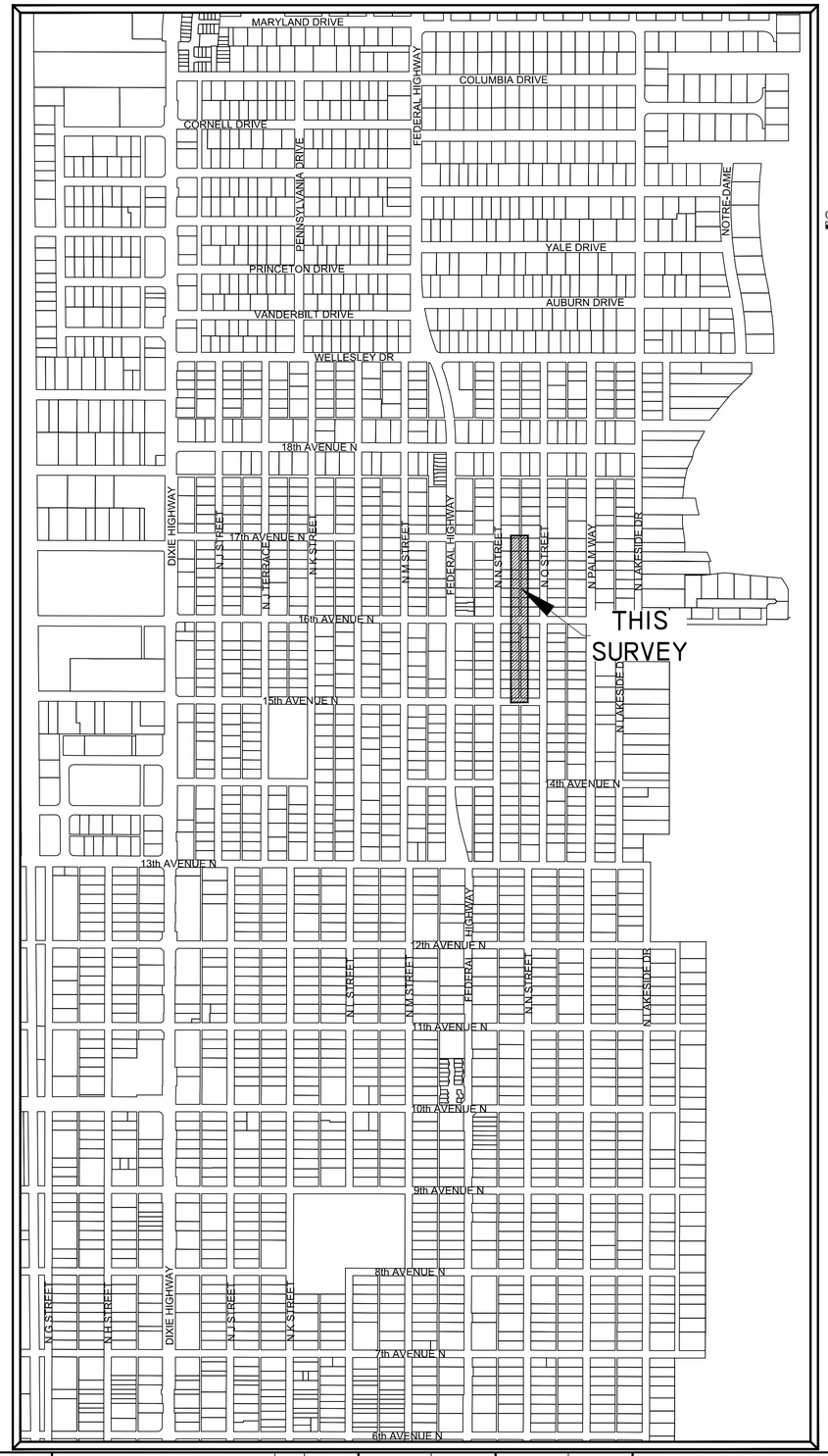
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.



TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- A/C — AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BFP (NN) — BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CB — CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DDCV — DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS — GAS VALVE
- GREASE TRAP MH
- IRR — IRRIGATION CONTROL VALVE
- LP — LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- CO — SANITARY CLEAN OUT
- S — SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- D — STORM MANHOLE
- T — TELEPHONE MANHOLE
- TELE — TELEPHONE PEDESTAL
- TP — TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- W — WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YD — YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OHW — OVER HEAD WIRES
- SS — BURIED SANITARY SEWER PIPE
- STM — BURIED STORM SEWER PIPE
- +16.16 — HARD SURFACE ELEVATION
- +16.1 — GROUND SPOT ELEVATION

CONTROL LEGEND

- D•H — DRILL HOLE
- (P) — IRON PIPE
- (R) — IRON ROD
- (N) — NAIL&TAB
- △ — PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 3 AND 4, TOGETHER WITH THE RIGHTS-OF-WAY FOR 15th AVENUE N. (TWENTY-FIFTH AVENUE PER PLAT), 16th AVENUE N. (TWENTY-SIXTH AVENUE PER PLAT), AND THE ABANDONED RIGHT OF WAY FOR 17th AVENUE N. (TWENTY-SEVENTH AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: APRIL 9, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/09/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	50-54

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. N STREET & N. O STREET

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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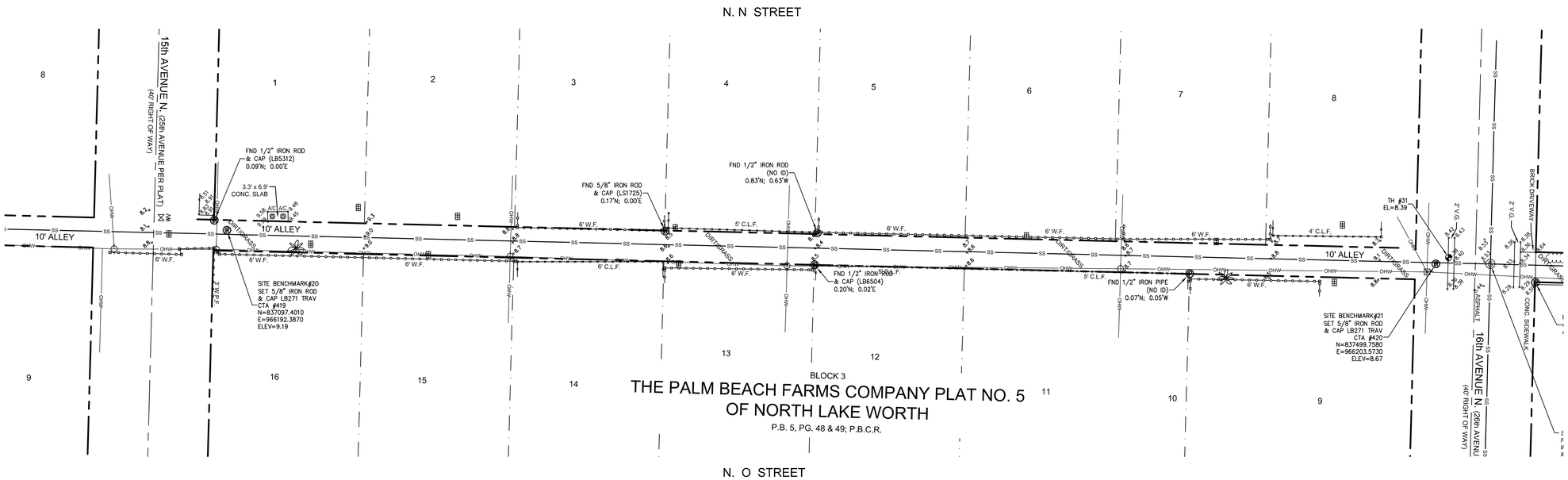
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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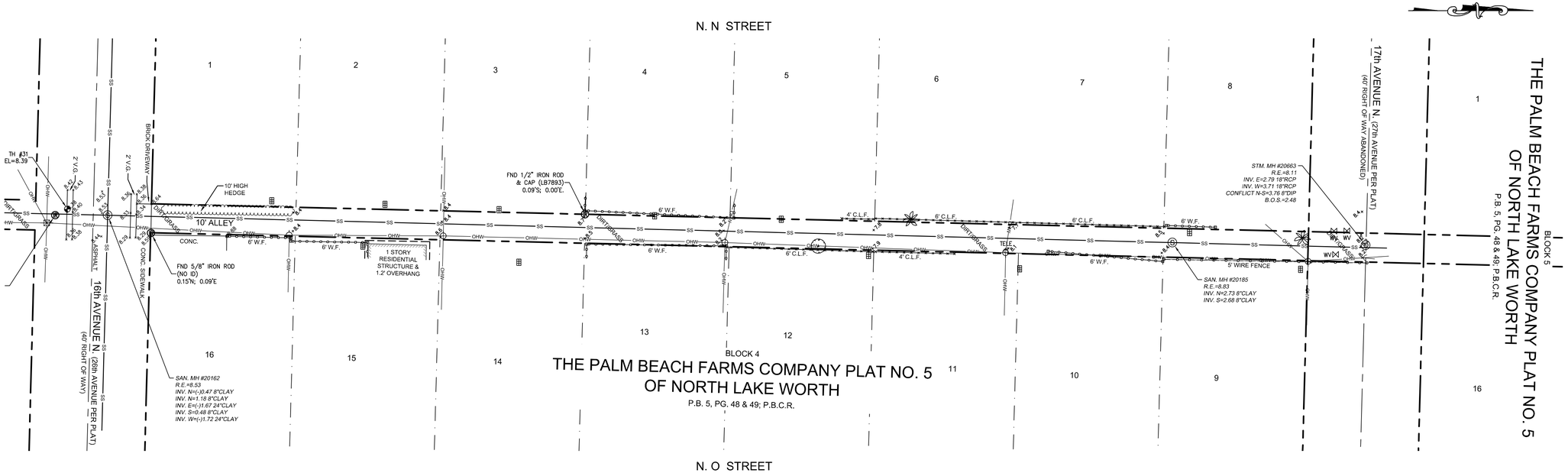

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/09/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	50-54

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. N STREET & N. O STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

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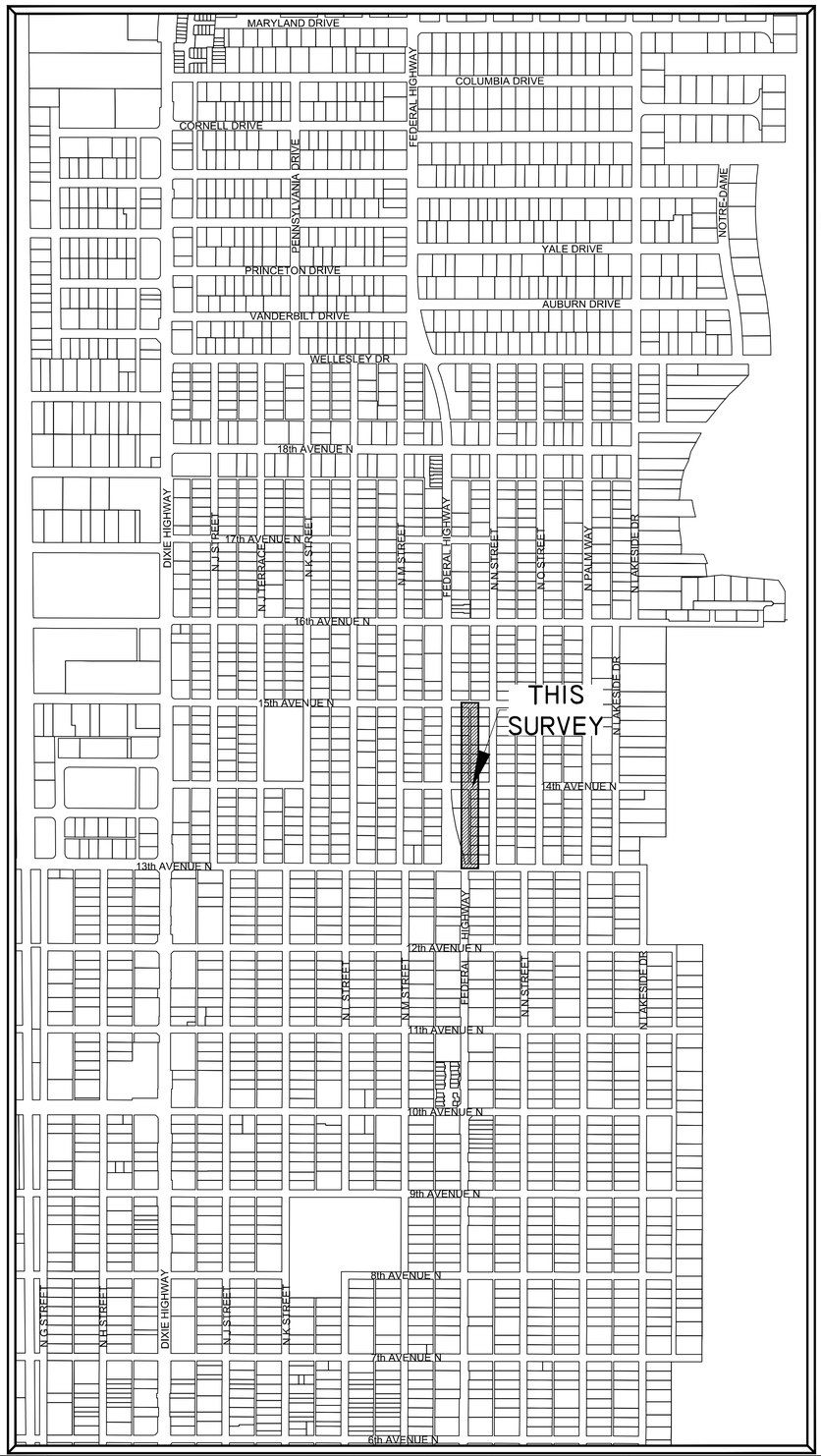

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- A/C — AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BFP (NN) — BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CB — CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DDCV — DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS — GAS VALVE
- GREASE TRAP MH
- IRR — IRRIGATION CONTROL VALVE
- LP — LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- CO — SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELE — TELEPHONE PEDESTAL
- TH — TEST HOLES
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- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- W — WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YD — YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OHW — OVER HEAD WIRES
- SS — BURIED SANITARY SEWER PIPE
- STM — BURIED STORM SEWER PIPE
- +16.16 — HARD SURFACE ELEVATION
- +16.1 — GROUND SPOT ELEVATION

CONTROL LEGEND

- D•H — DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET, SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES" TOTAL STATION AND "TDS" DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 12 AND 11, TOGETHER WITH THE RIGHTS-OF-WAY FOR 13th AVENUE N. (23rd AVENUE PER PLAT), 14th AVENUE N. (TWENTY-FOURTH AVENUE PER PLAT), AND 15th AVENUE N. (TWENTY-FIFTH AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 1, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/01/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	37-43

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. FEDERAL HIGHWAY & N. N STREET

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

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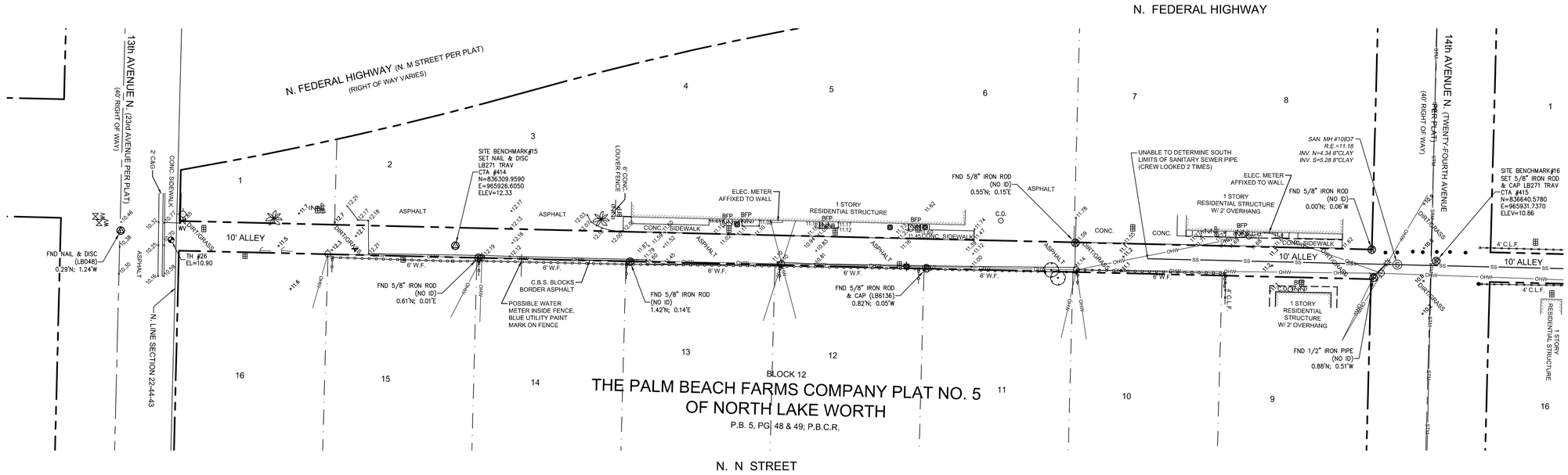
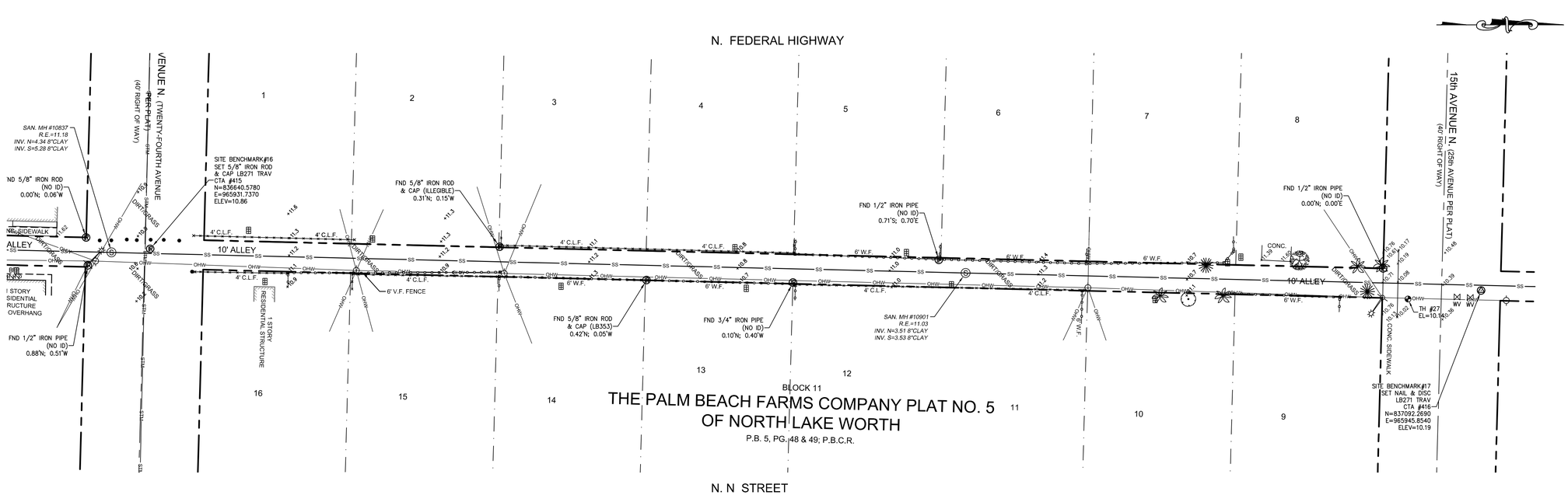
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.





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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. FEDERAL HIGHWAY & N. N STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

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SHEET NAME V-2

SHEET 2 OF 2

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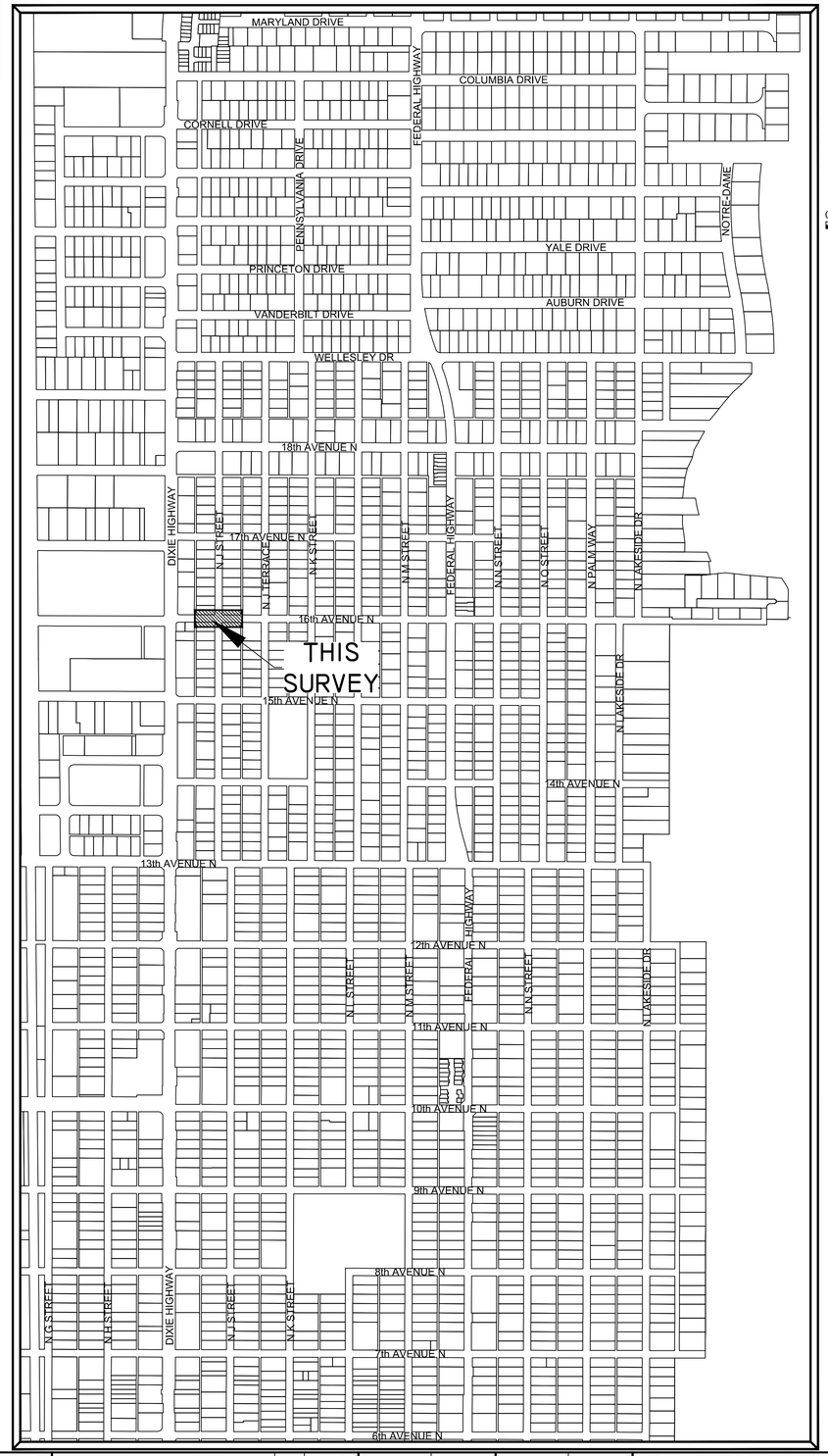

TOPOGRAPHIC SURVEY

0 400' 800'

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8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR 16th AVENUE N. (TWENTY-SIXTH AVENUE PER PLAT) LYING EAST OF THE WEST LINE OF THE 10 FOOT WIDE DEDICATED ALLEY LYING WEST OF LOT 16, BLOCK 45, AND LYING WEST OF THE EAST LINE OF THE 10 FOOT WIDE DEDICATED ALLEY LYING EAST OF LOT 1, BLOCK 45, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 1, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/01/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	37-38

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR 16th AVENUE N.
LYING 125' ON EACH SIDE OF N. J STREET

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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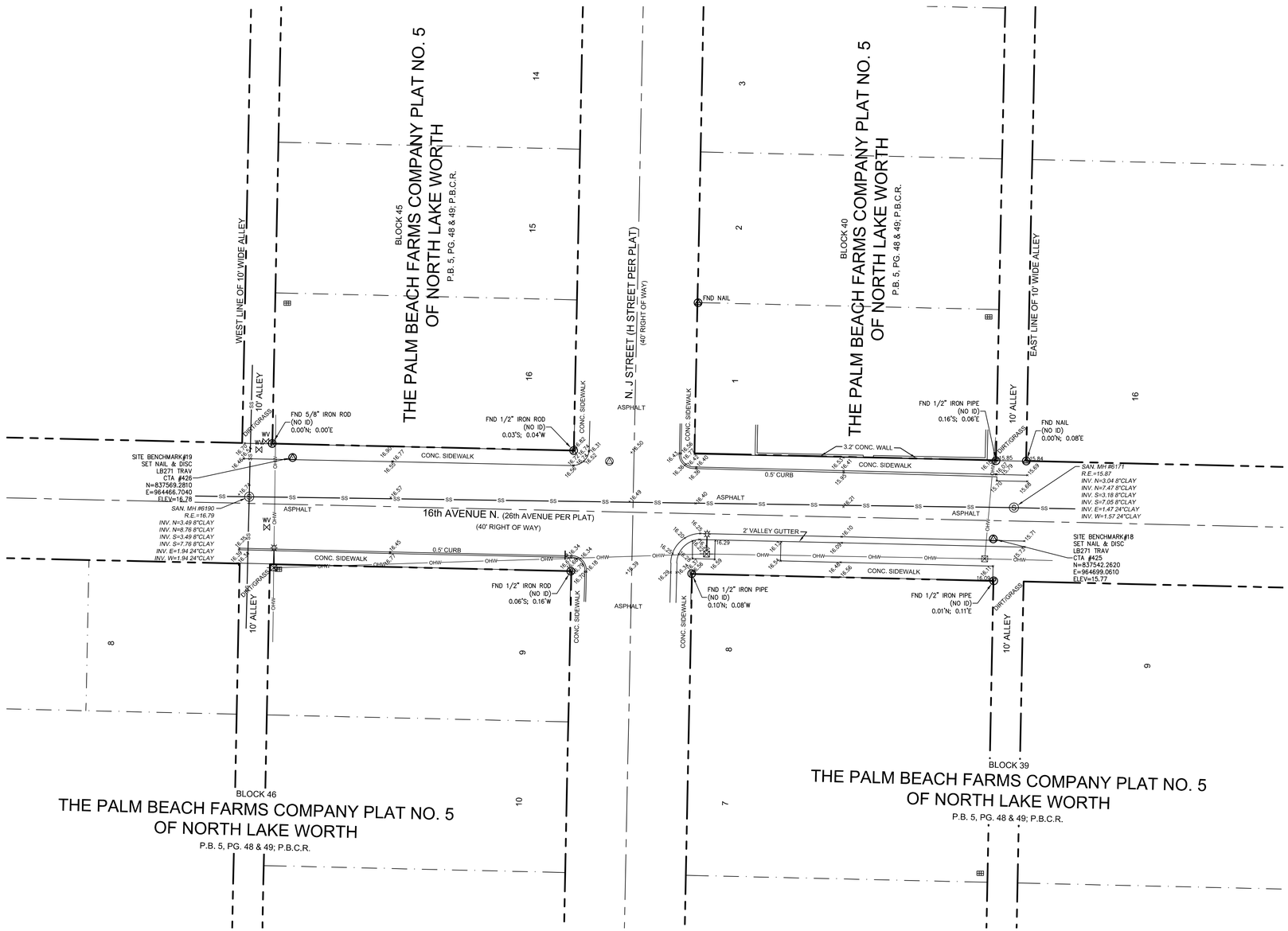
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/01/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	37-38

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR 16th AVENUE N.
LYING 125' ON EACH SIDE OF N. J STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

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NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
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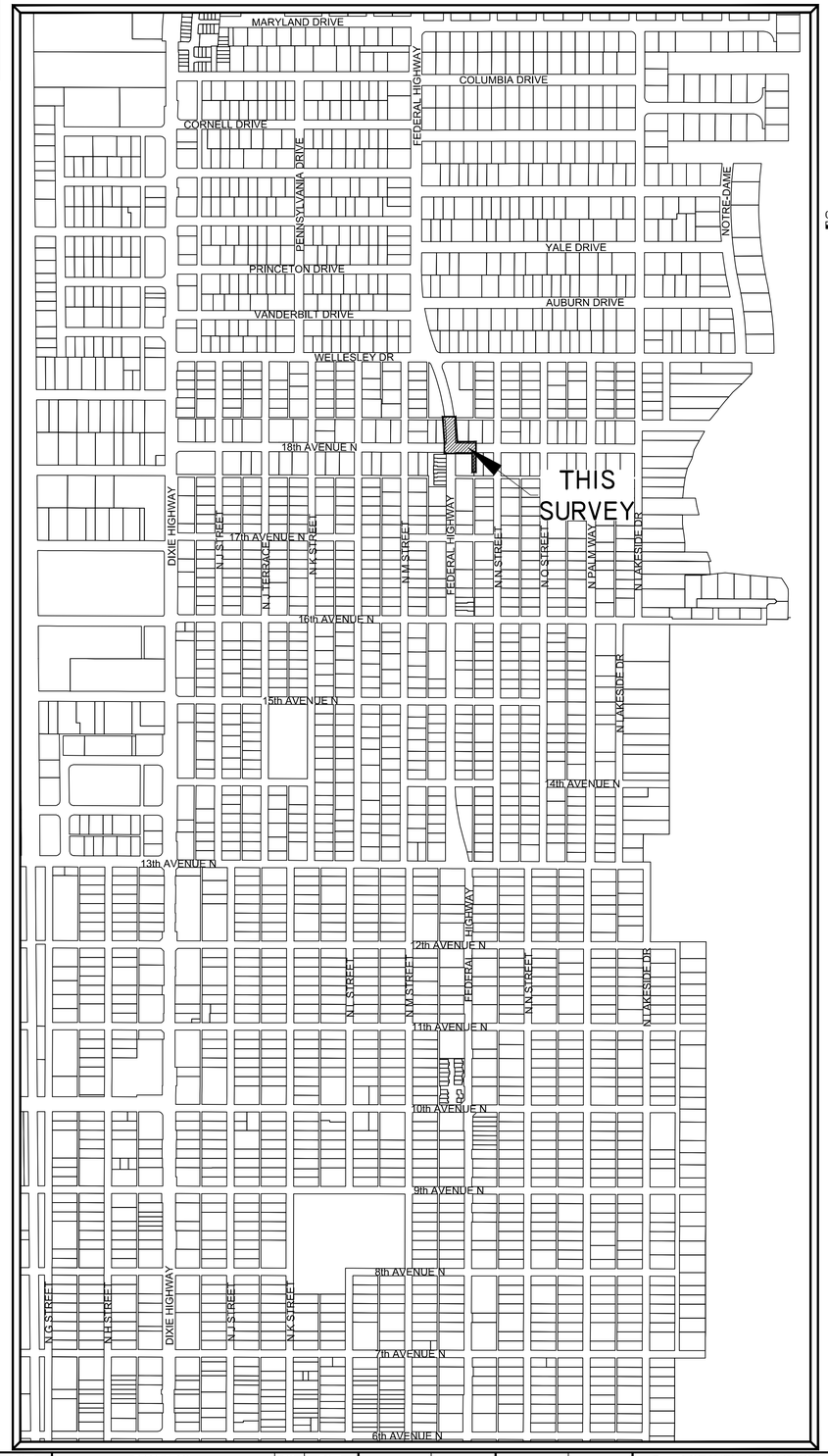

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 50.0 FOOT WIDE RIGHT-OF-WAY FOR 18th AVENUE N. (TWENTY-EIGHTH AVENUE PER PLAT), LYING ADJACENT TO LOTS 15 AND 16, BLOCK 7, AND LOTS 7 AND 8, BLOCK 8, TOGETHER WITH THE EAST 10.0 FEET OF SAID LOT 8, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA. ALSO TOGETHER WITH THAT PORTION OF THE 50.0 FOOT WIDE RIGHT-OF-WAY FOR U.S. HIGHWAY NO. 1 (FEDERAL HIGHWAY) LYING NORTH OF THE SOUTH RIGHT-OF-WAY LINE FOR SAID 18th AVENUE N. AND LYING SOUTH OF THE NORTH LINE FOR THAT CERTAIN 10.0 FOOT WIDE ALLEY LYING NORTH OF SAID LOT 15.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 11, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/11/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	53; 60-62

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR N. FEDERAL HIGHWAY, 18th AVENUE N. & A 10' WIDE ALLEY

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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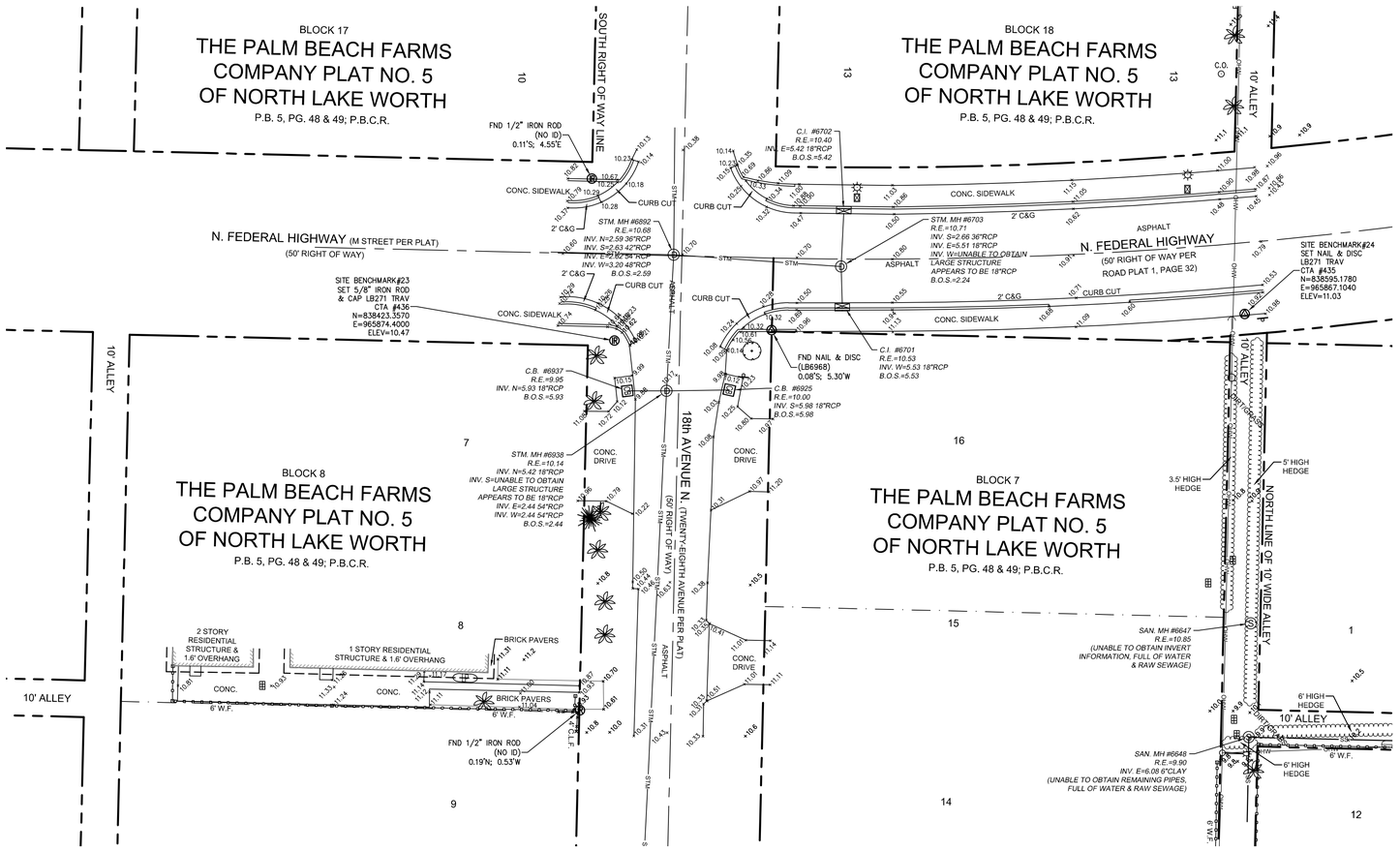
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR N. FEDERAL HIGHWAY,
18th AVENUE N. & A 10' WIDE ALLEY

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

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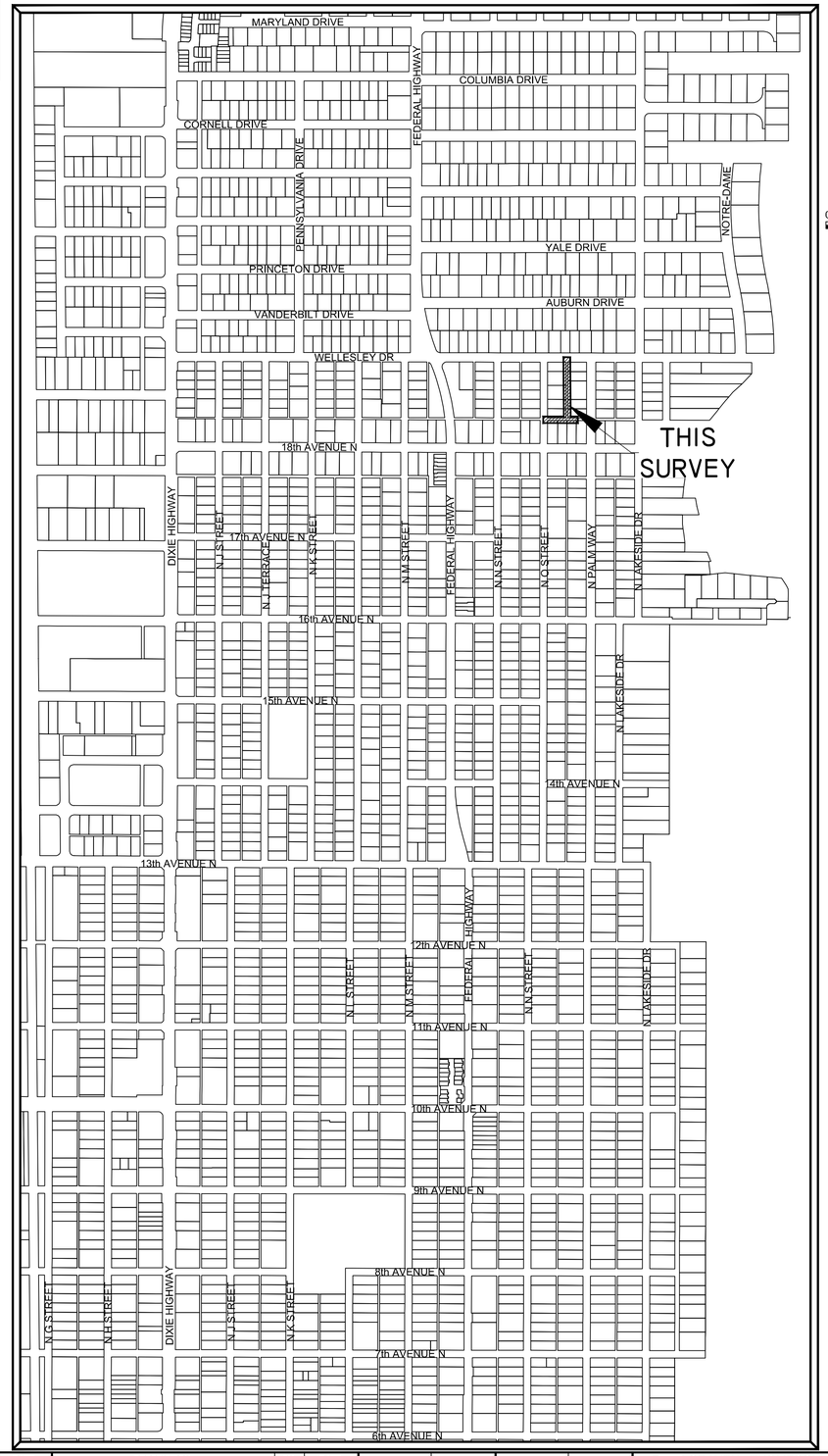

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
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- GAS VALVE
- GREASE TRAP MH
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- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
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6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK Q, ADJACENT TO LOTS 1 THRU 12, 14, 15 AND 16, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) AND N. O STREET (N STREET PER PLAT), LYING ADJACENT TO SAID ALLEY, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 2, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/02/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	44-46

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK Q
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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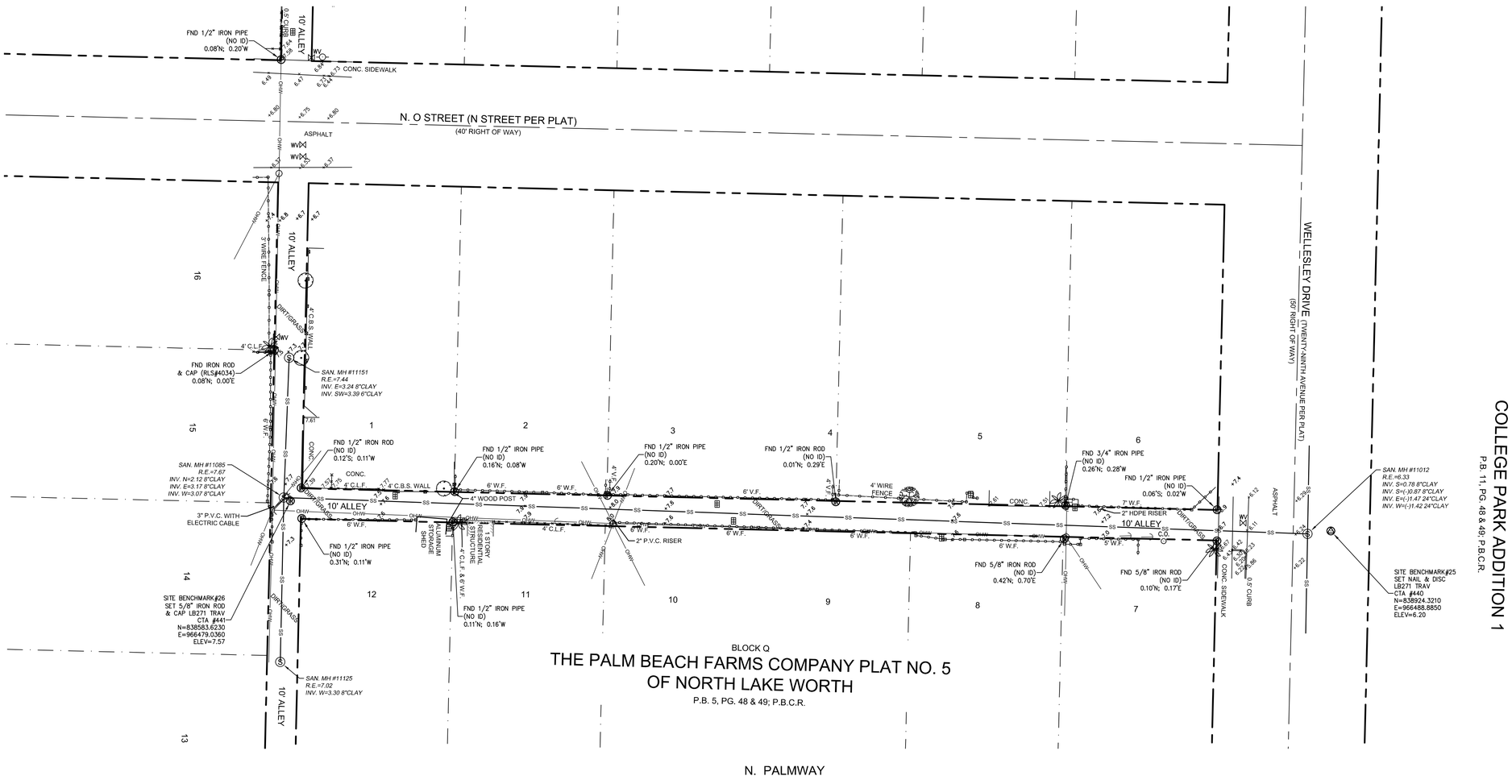
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/02/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	44-46

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK Q
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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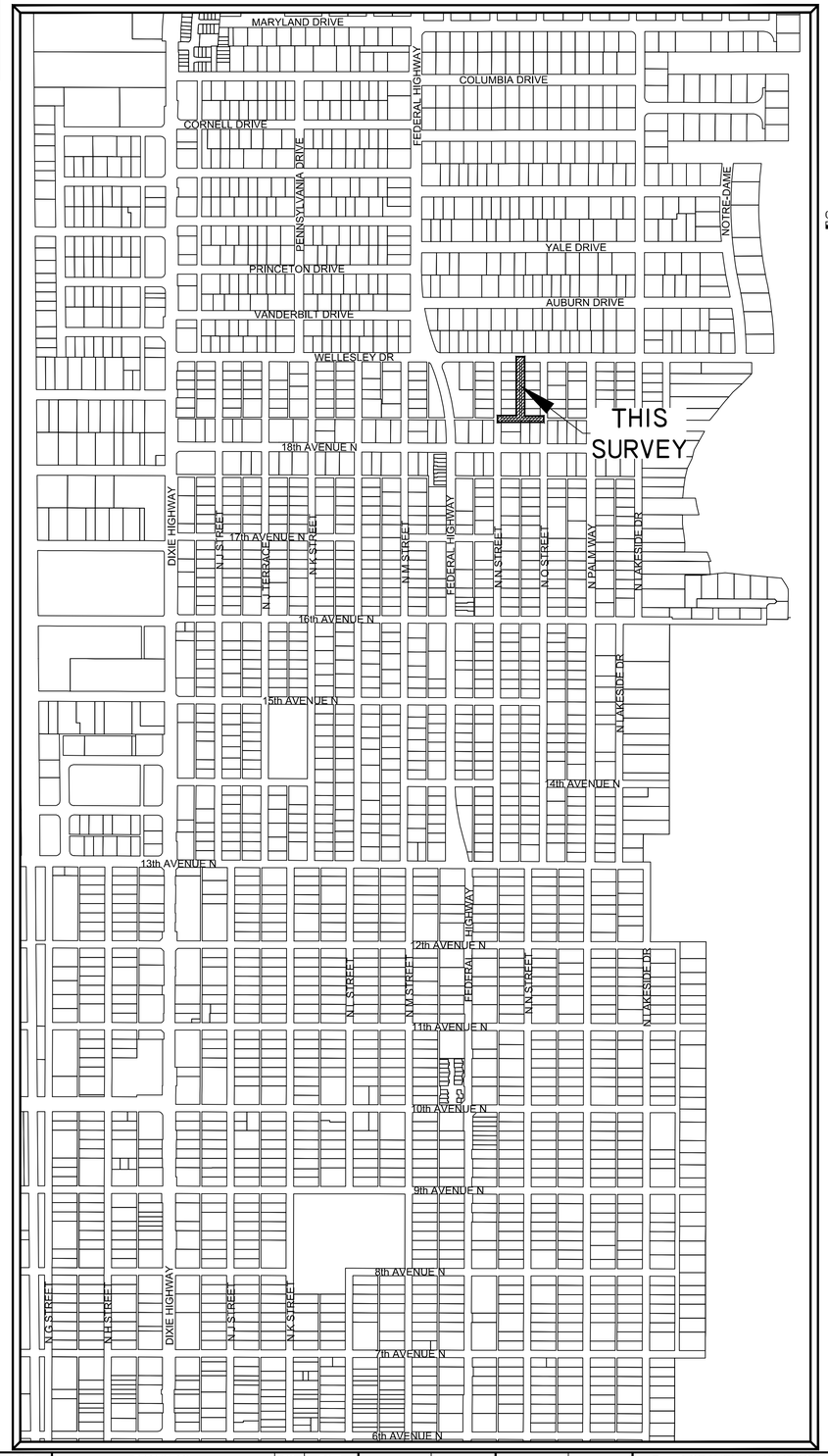

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
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- PKNAIL.SPIKE

ABBRIVIATION LEGEND

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C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
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CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
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F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

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17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 6, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT), N. O STREET (N STREET PER PLAT) AND N. N STREET (M STREET PER PLAT), LYING ADJACENT TO SAID ALLEY, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 2, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/02/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	44-46

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 6
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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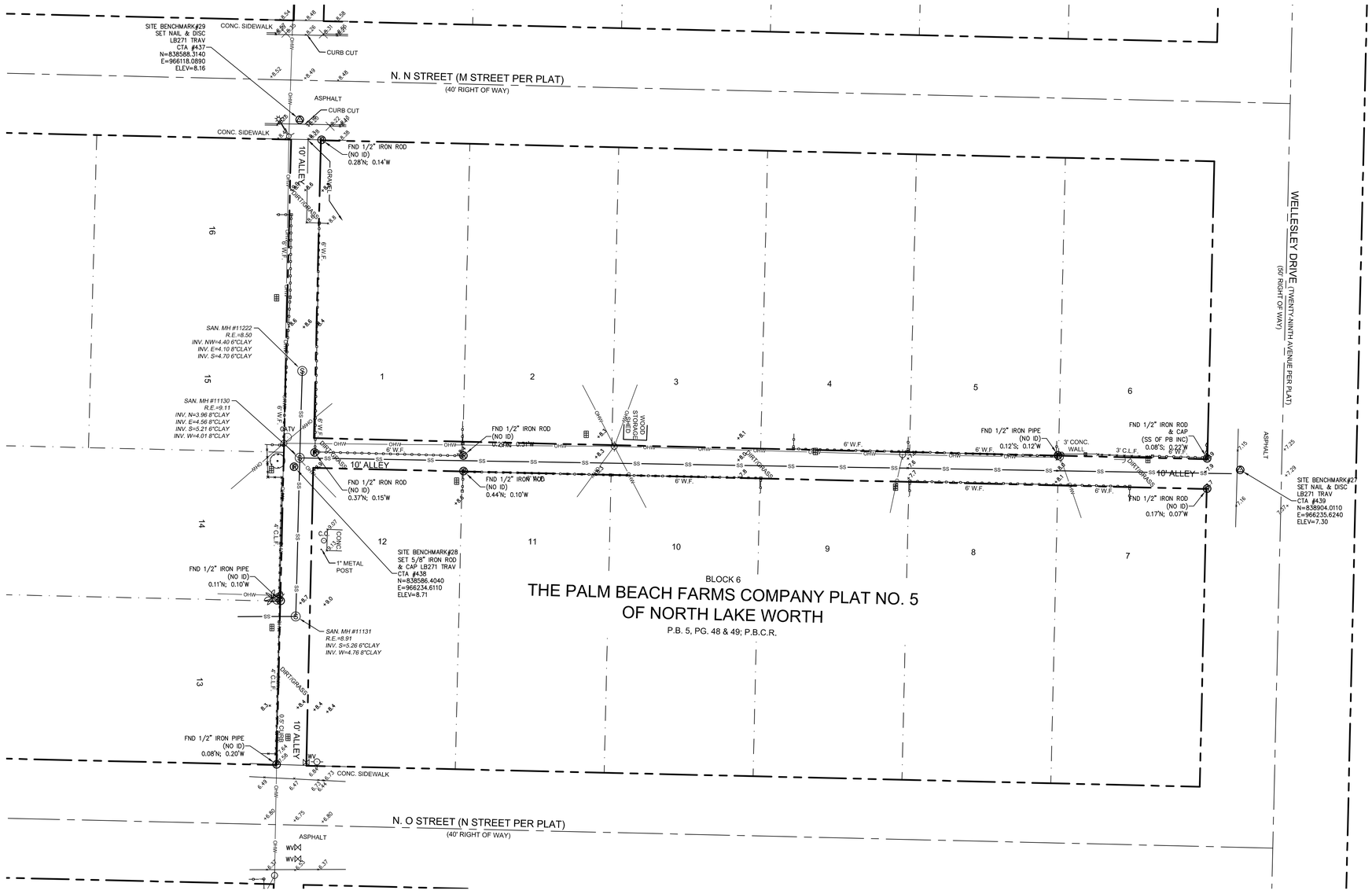
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/02/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	44-46

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 6
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
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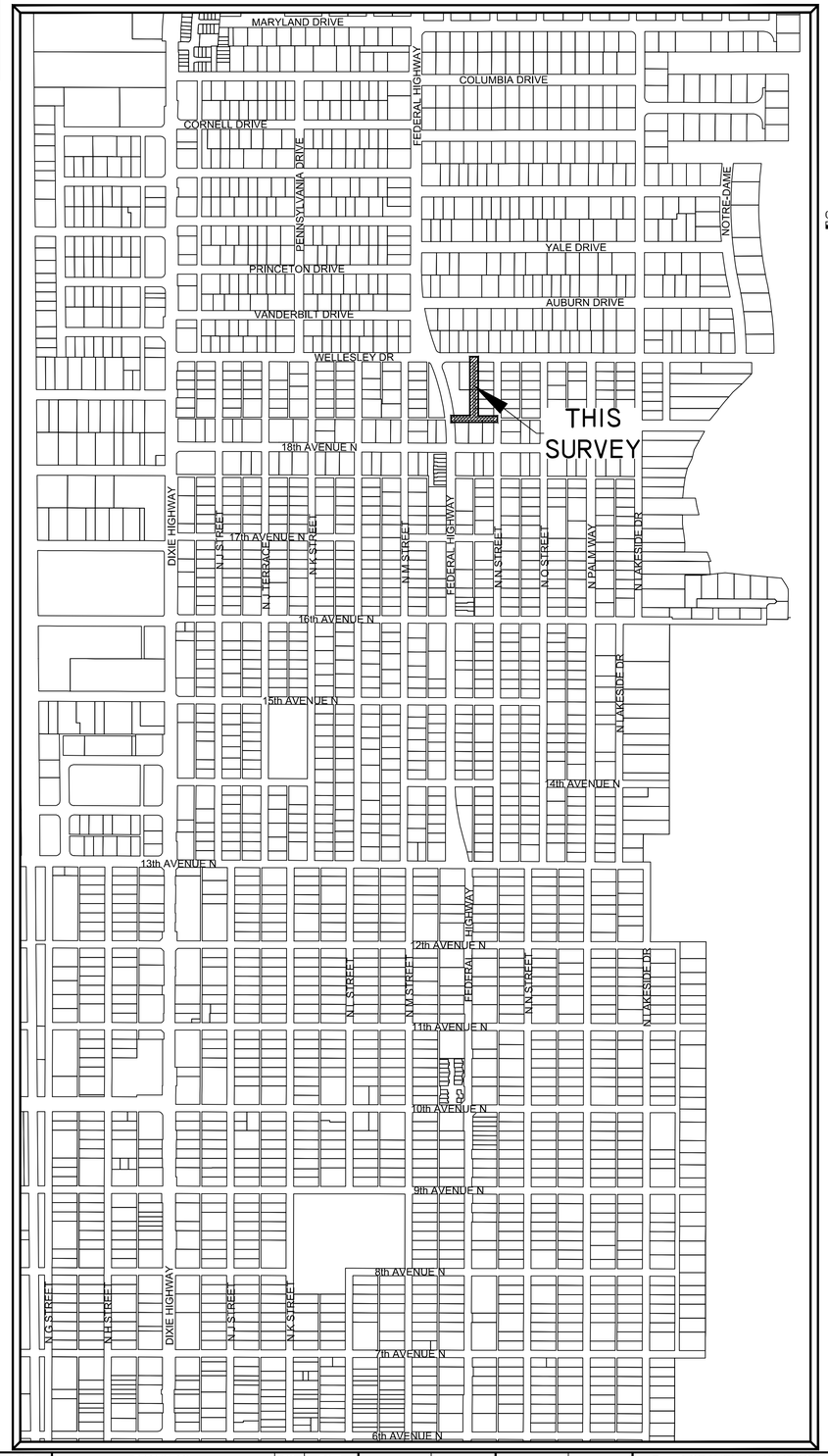

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
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- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
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- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
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- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 7, LYING ADJACENT TO LOTS 1 THRU 3, AND LOTS 7 THRU 16, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) AND N. N STREET (M STREET PER PLAT), LYING ADJACENT TO SAID ALLEY, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49, TOGETHER WITH THAT PORTION OF THE 50 FOOT RIGHT-OF-WAY FOR NORTH FEDERAL HIGHWAY, AS RECORDED IN ROAD PLAT 1, PAGE 32 LYING ADJACENT TO SAID LOT 16, ALSO TOGETHER WITH THE 10 FOOT WIDE PLATTED ALLEY LYING ADJACENT TO LOT 2, A PLAT OF CHARLES W. WRIGHT SUBDIVISION, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 68, PAGE 58, ALL OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 14, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/14/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	53-66

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 7
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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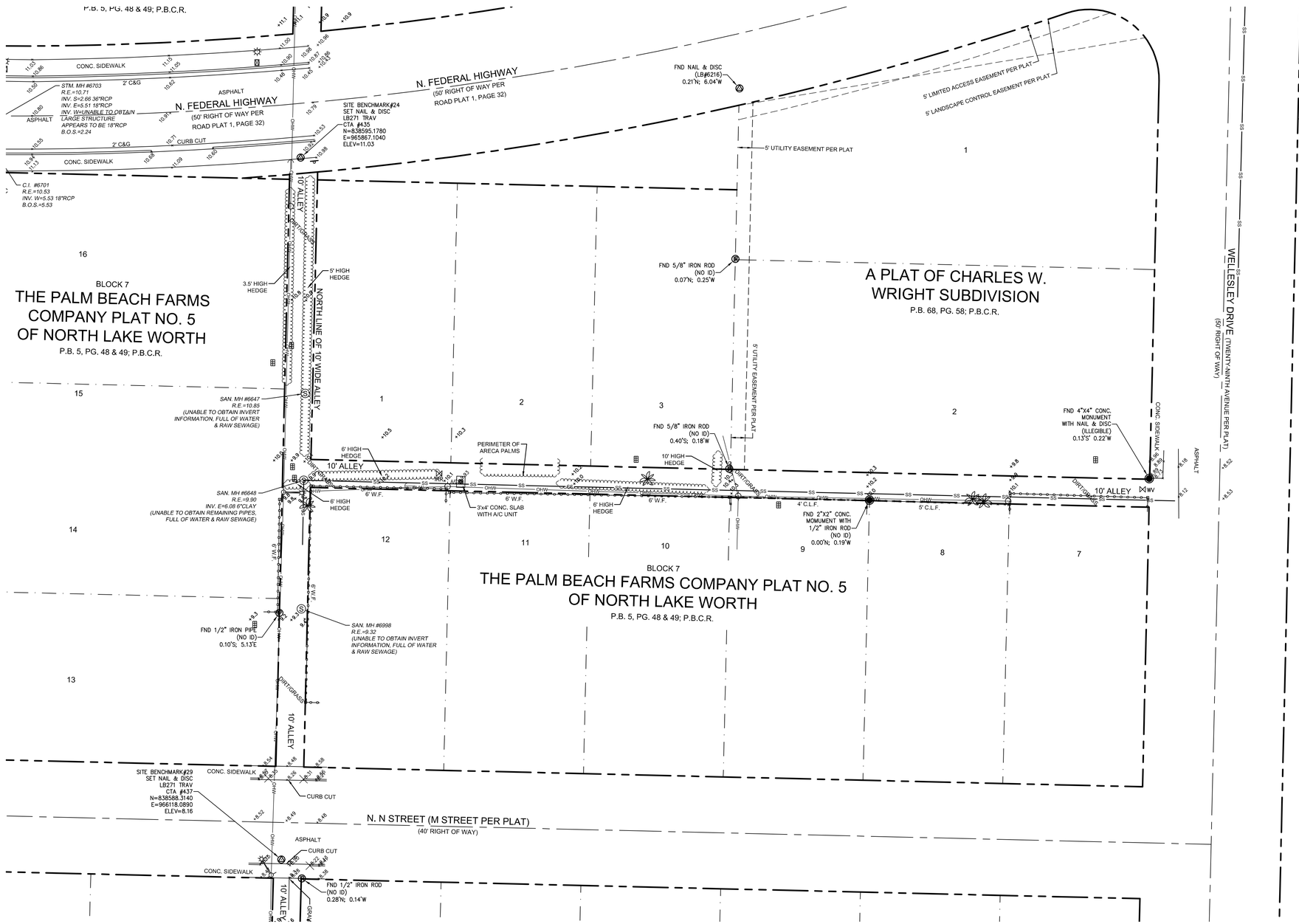
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 7
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2
SHEET 2 OF 2

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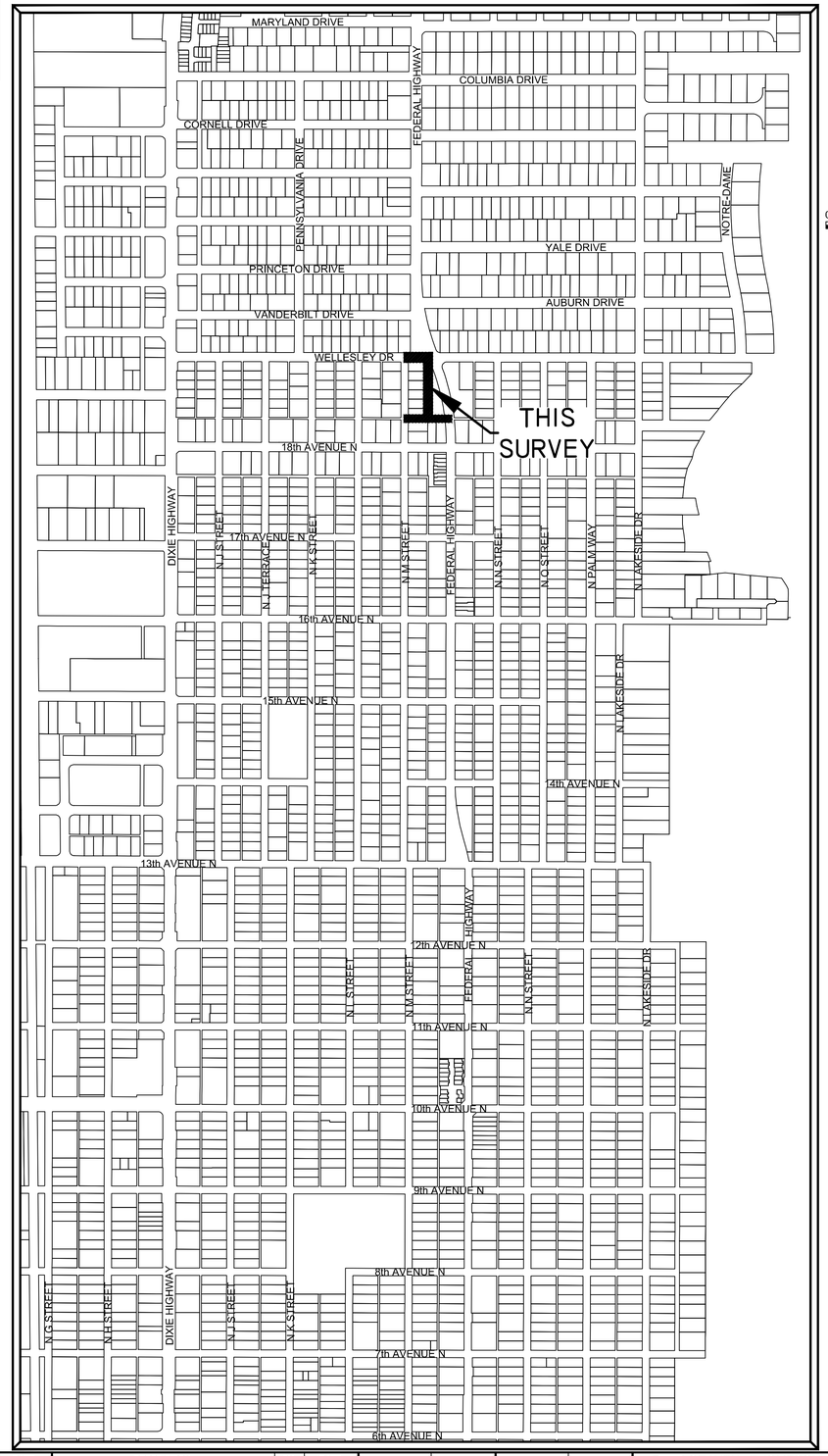

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

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SYMBOL LEGEND

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- AIR RELEASE VALVE
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11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 18, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY AND LYING ADJACENT TO LOT 6 OF SAID BLOCK 18, TOGETHER WITH THAT PORTION OF N. M STREET (L STREET PER PLAT), LYING ADJACENT TO SAID ALLEY, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49, TOGETHER WITH THAT PORTION OF THE 50 FOOT RIGHT-OF-WAY FOR NORTH FEDERAL HIGHWAY, AS RECORDED IN ROAD PLAT 1, PAGE 32 LYING ADJACENT TO SAID ALLEY, ALL OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 09, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/09/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	53-59; 63-66

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 18
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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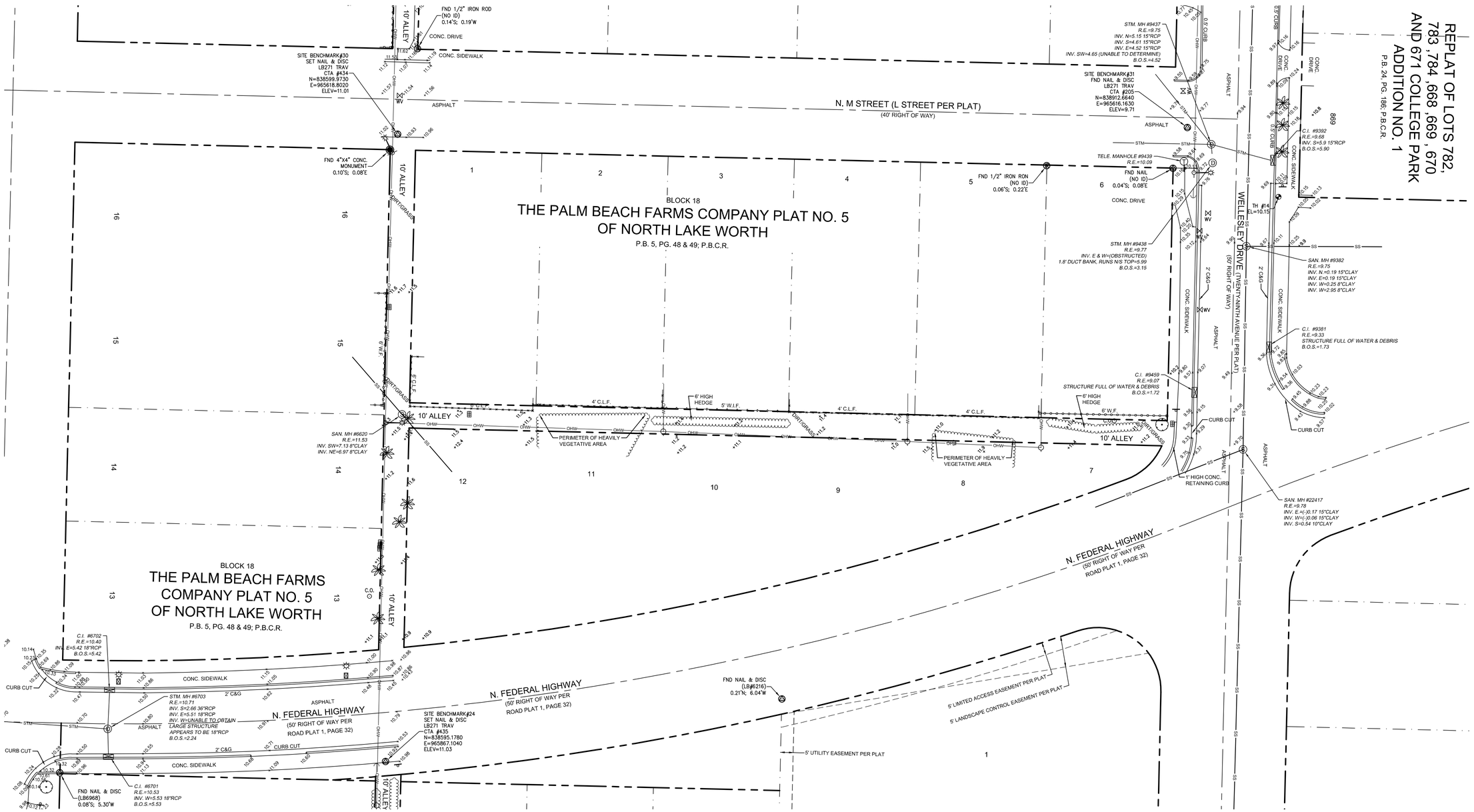
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/09/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2738
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCK 18
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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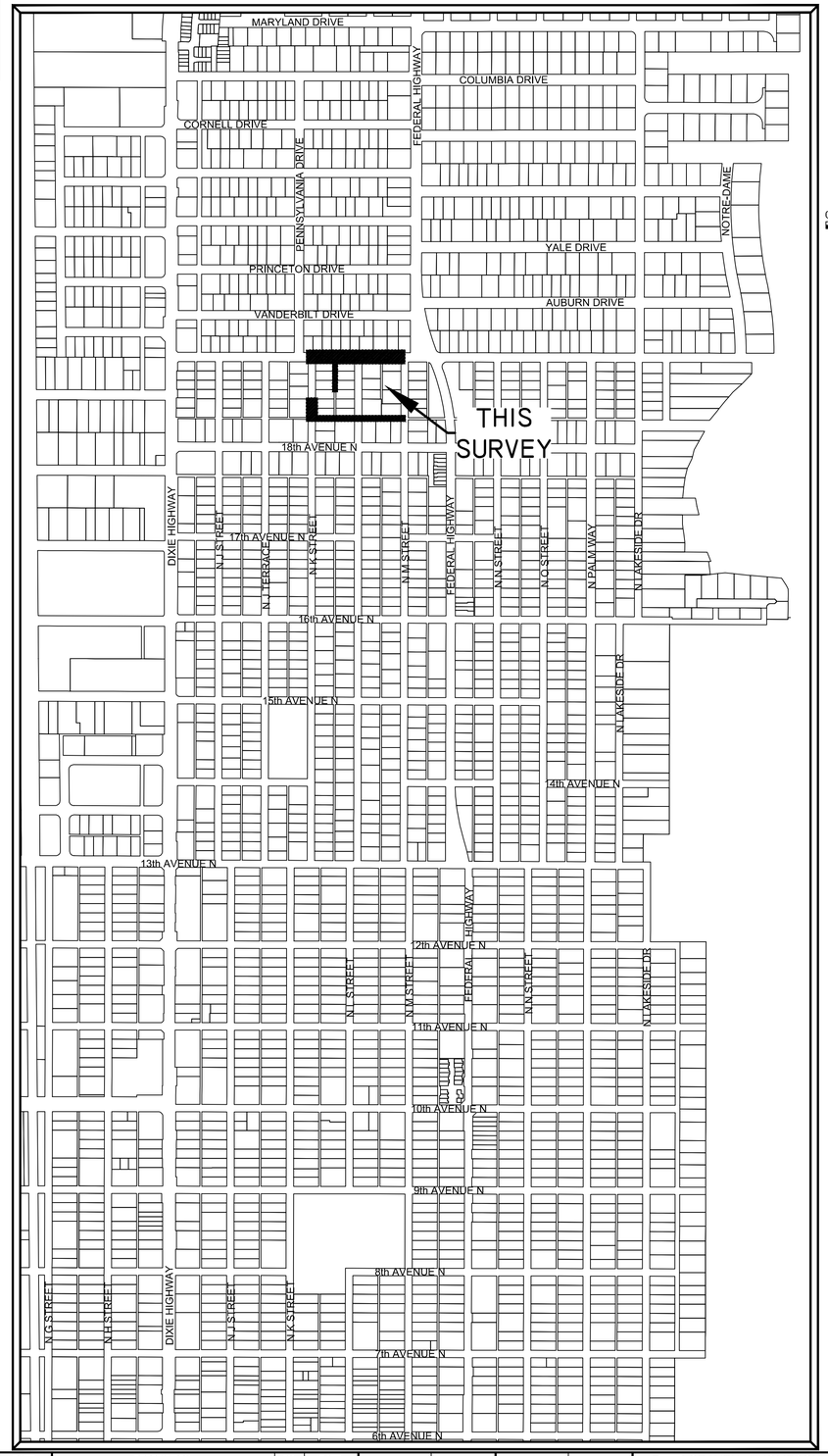

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEETS V-2 & V-3 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET, SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
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12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 3 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 19, LYING ADJACENT TO LOTS 1 AND LOTS 12 THRU 16, TOGETHER WITH THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 30, LYING ADJACENT TO LOT 1, LOTS 4 THRU 9 AND LOTS 12 THRU 16, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) LYING ADJACENT TO SAID BLOCKS 19 AND 30, ALSO TOGETHER WITH THAT PORTION OF N. K STREET (J STREET PER PLAT) LYING ADJACENT TO BLOCKS 30 AND 31, ALSO TOGETHER WITH THAT PORTION OF N. L STREET (K STREET PER PLAT) LYING ADJACENT TO THE 10 FOOT WIDE PLATTED ALLEY OF SAID BLOCKS 19 AND 30, ALSO TOGETHER WITH THAT PORTION OF N. M STREET (L STREET PER PLAT) LYING ADJACENT TO THE 10 FOOT WIDE PLATTED ALLEY OF SAID BLOCK 19, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 09, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

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DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/09/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	45-48

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCKS 19 & 30
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

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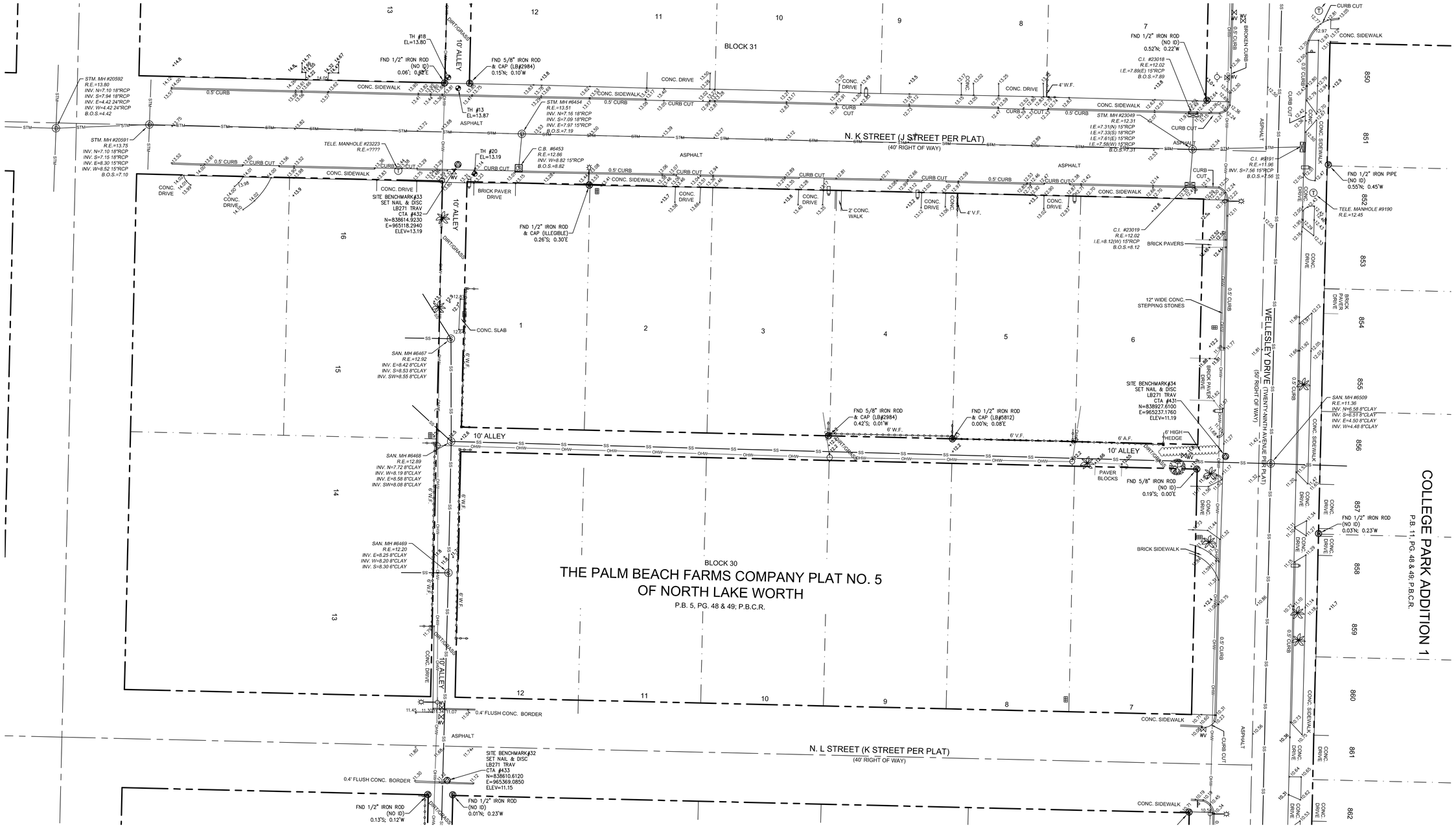
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS.



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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCKS 19 & 30
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

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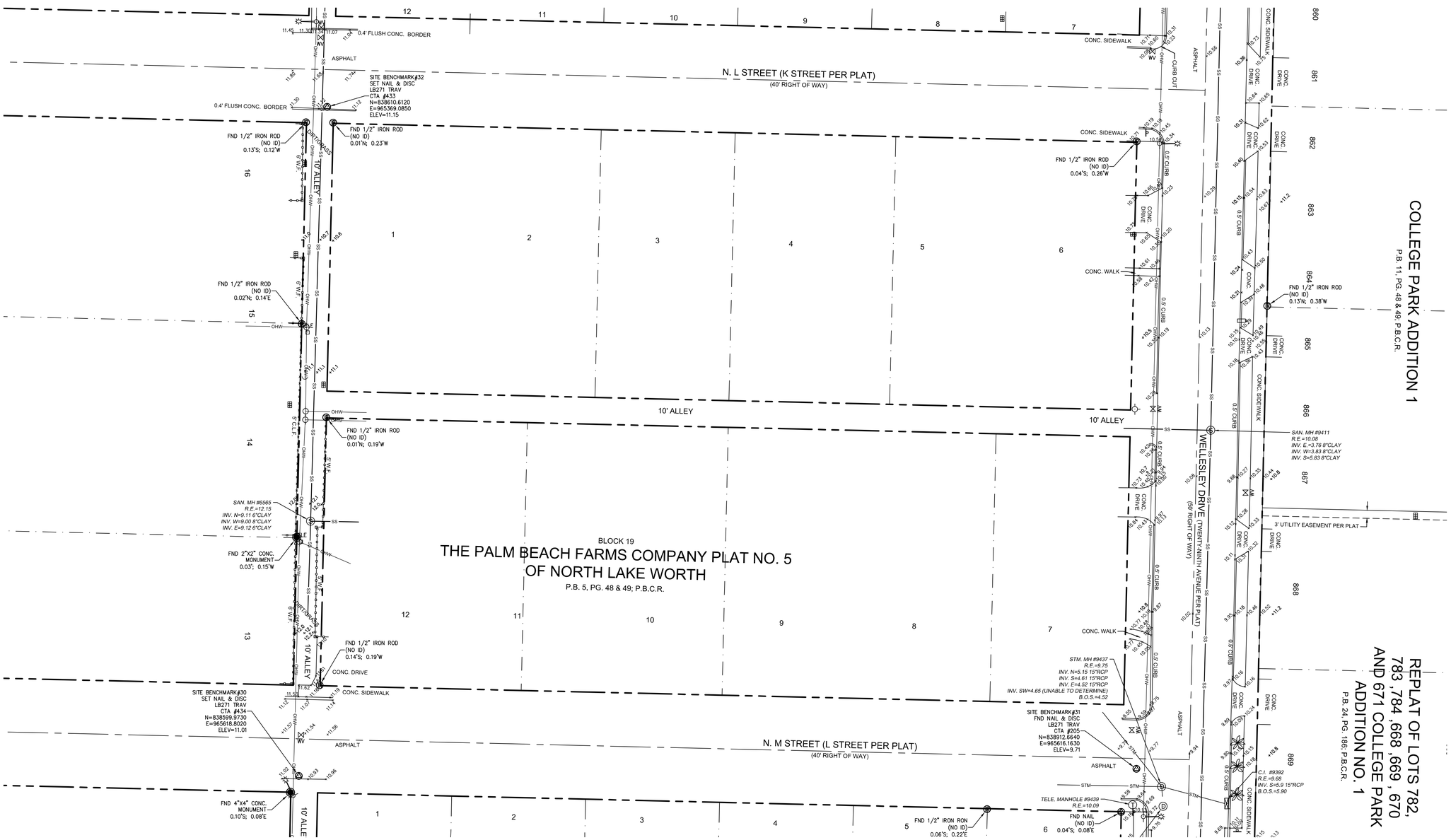
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-2 FOR REMAINDER OF SITE IMPROVEMENTS.



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10' WIDE ALLEY LYING WITHIN BLOCKS 19 & 30
THE PALM BEACH FARMS COMPANY PLAT NO. 5

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3

SHEET 3 OF 3

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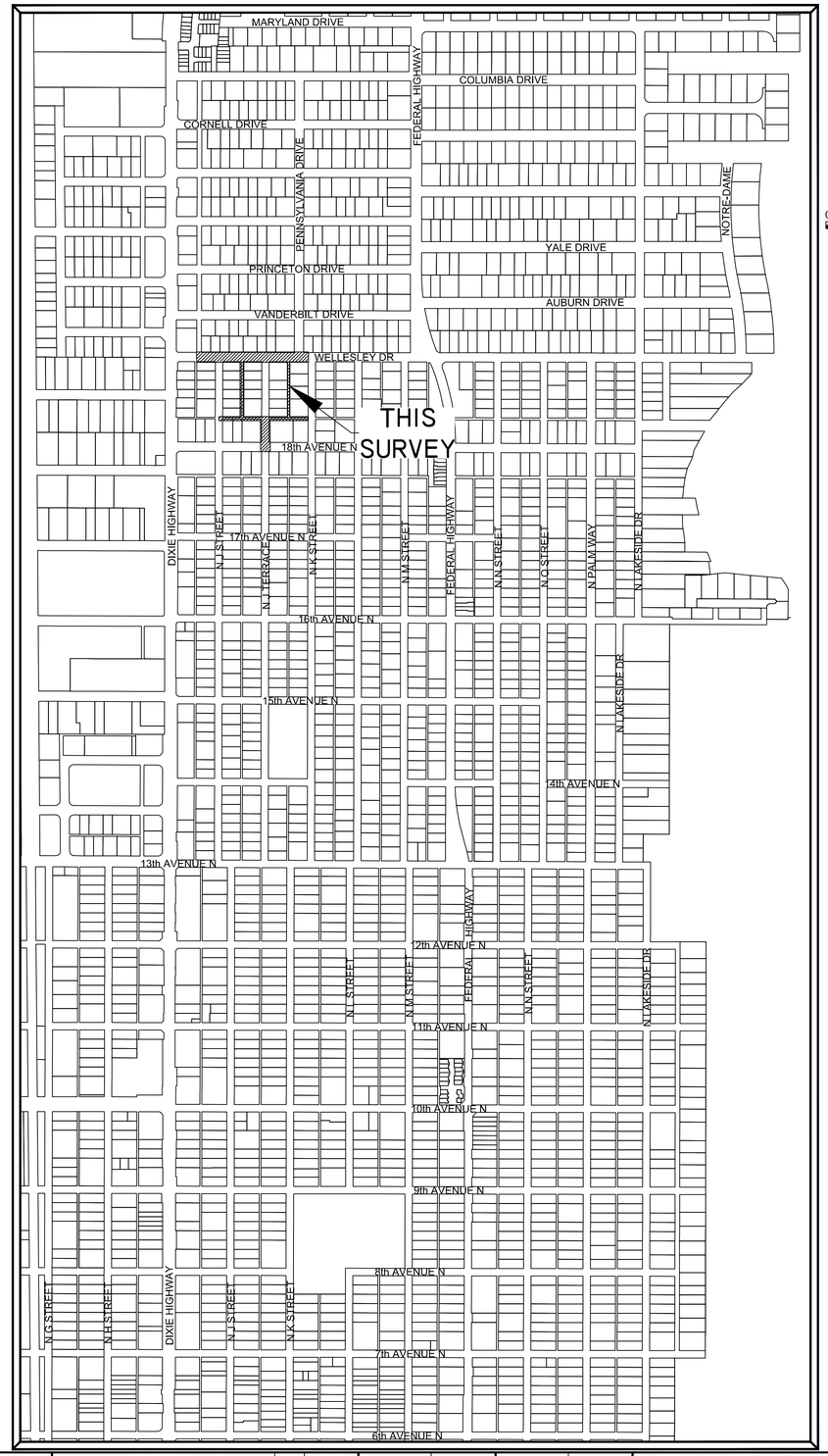

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 & V-3 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- A/C — AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BFP (NN) — BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CB — CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DDCV — DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
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- ELECTRICAL PULL BOX
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- FIRE HYDRANT
- GAS MARKER
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- GAS — GAS VALVE
- GREASE TRAP MH
- IRR — IRRIGATION CONTROL VALVE
- LP — LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- CO — SANITARY CLEAN OUT
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- SIGN
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- SHADE TREE
- GUARDRAIL
- OHW — OVER HEAD WIRES
- SS — BURIED SANITARY SEWER PIPE
- STM — BURIED STORM SEWER PIPE
- +16.16 — HARD SURFACE ELEVATION
- +16.1 — GROUND SPOT ELEVATION

CONTROL LEGEND

- D•H — DRILL HOLE
- (P) — IRON PIPE
- (R) — IRON ROD
- (N) — NAIL&TAB
- △ — PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
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TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 3 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCKS 31 AND 42, TOGETHER WITH THE RIGHTS-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) LYING ADJACENT TO SAID BLOCKS 31 AND 42, AND LYING ADJACENT TO LOT 7, BLOCK 43, ALSO TOGETHER WITH THAT PORTION OF N. J TERRACE (1 STREET PER PLAT) LYING ADJACENT TO SAID ALLEY'S OF BLOCKS 42 AND BLOCK 31, AND LYING ADJACENT TO LOT 13 OF SAID BLOCK 42 AND LOT 16 OF SAID BLOCK 31, TOGETHER WITH THE SOUTHERLY EXTENSION OF SAID N. J TERRACE TO THE NORTH LINE OF BLOCKS 32 AND 41, ALL LYING WITHIN THE PALM BEACH FARMS COMPANY PLAT NO. 5 OF NORTH LAKE WORTH, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 48 AND 49, ALSO TOGETHER WITH THE RIGHT-OF-WAY FOR WELLESLEY DRIVE (TWENTY-NINTH AVENUE PER PLAT) LYING ADJACENT TO LOTS 830 THRU 848, COLLEGE PARK ADDITION 1, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGE 48, ALL OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 03, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/03/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738 2743
DRAWN BY:	T.S.	PAGE(S):	39-44, 49-52 76-77

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING WITHIN BLOCKS 31, 42 & 43
THE PALM BEACH FARMS COMPANY PLAT NO. 5

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

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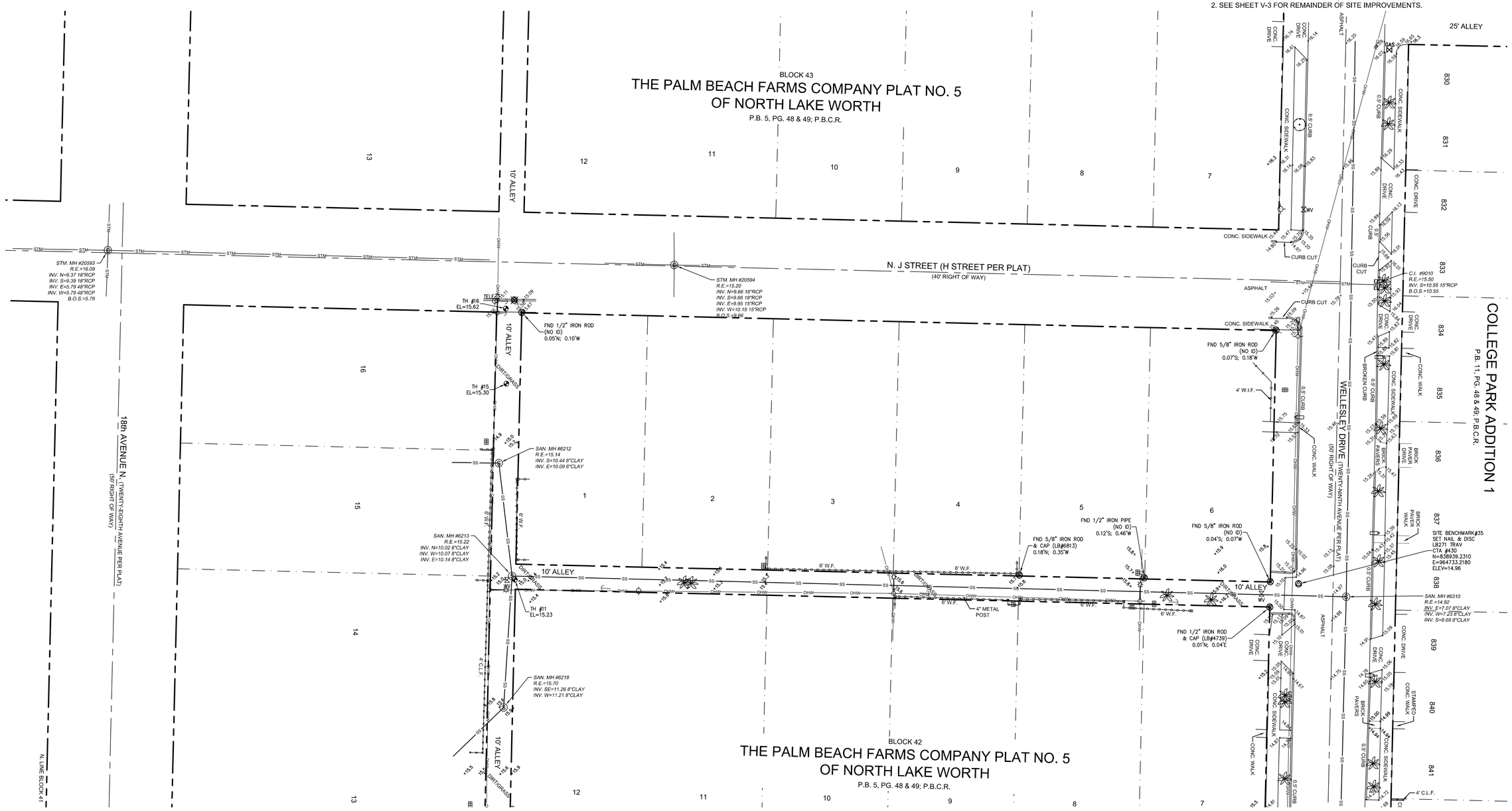
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS.



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TOPOGRAPHIC SURVEY
PREPARED FOR:
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SHEET NAME V-2
SHEET 2 OF 3

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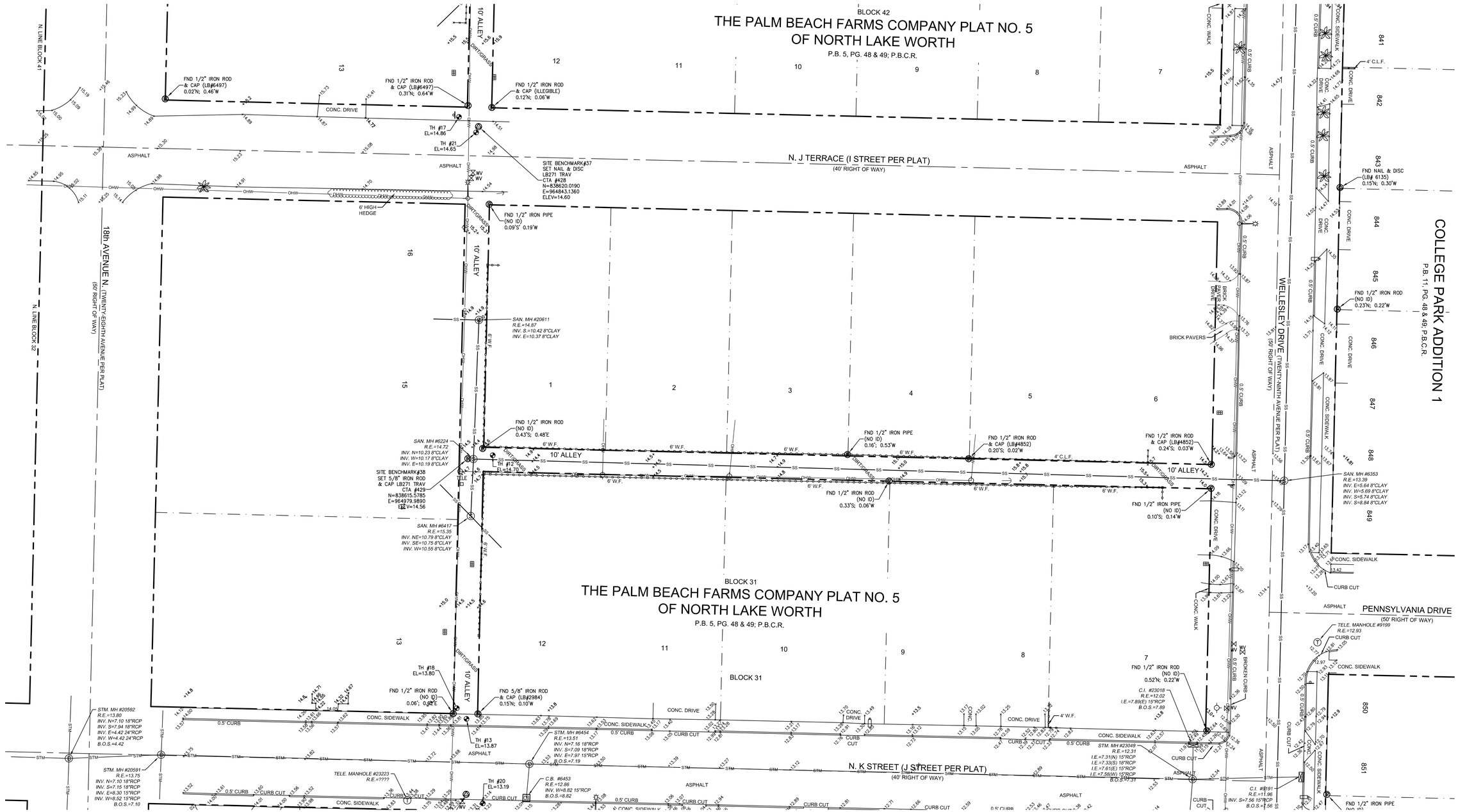

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TOPOGRAPHIC SURVEY
PREPARED FOR:
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SHEET NAME V-3
SHEET 3 OF 3

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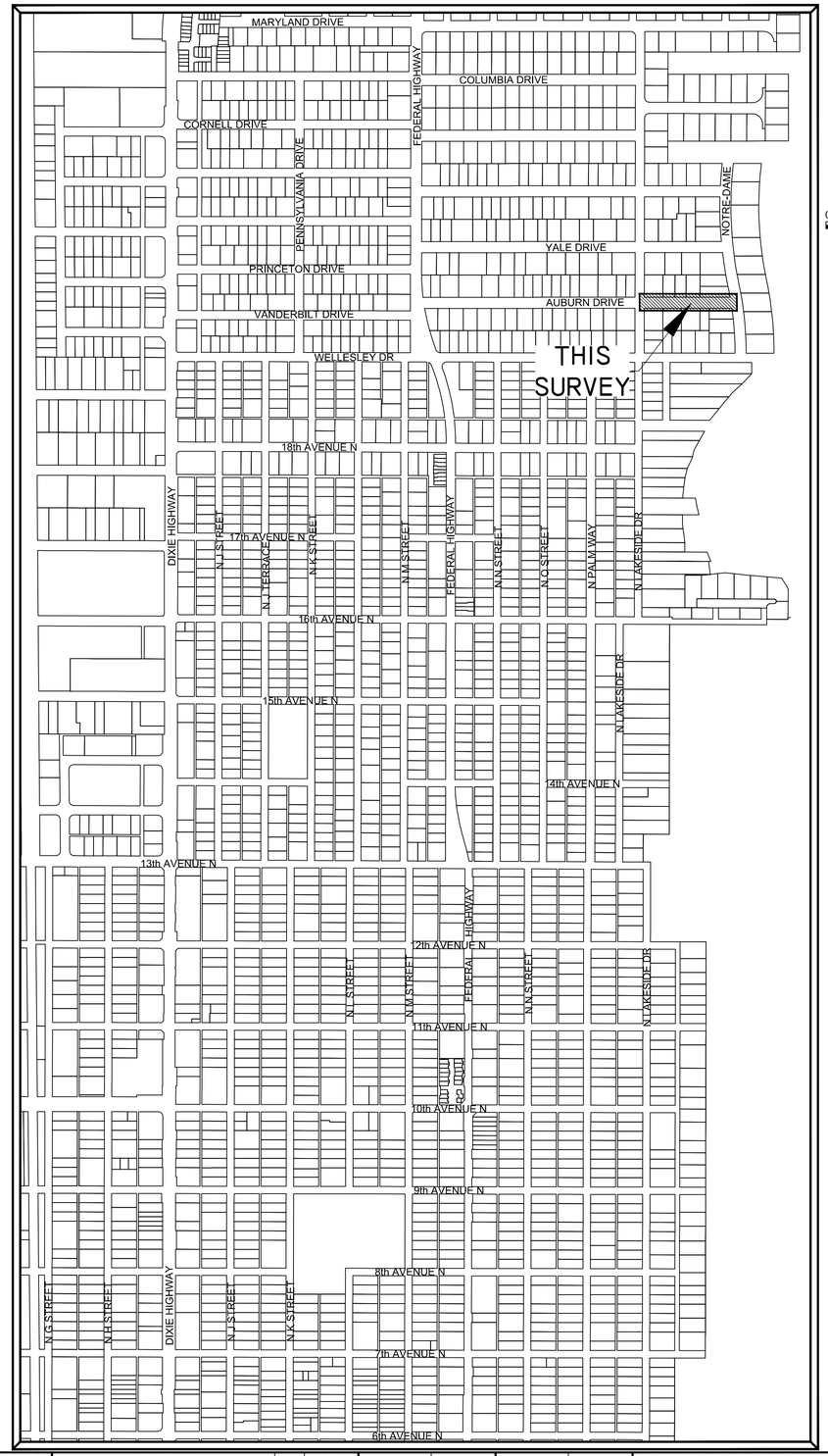

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9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR AUBURN DRIVE LYING EAST OF THE CENTERLINE OF N. LAKESIDE DRIVE ("Q" STREET PER PLAT), AND LYING WEST OF THE CENTERLINE OF NOTRE-DAME DRIVE (NOTRE-DAME BOULEVARD PER PLAT), ALL LYING WITHIN THE PLAT OF COLLEGE PARK ADDITION 2, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 12, PAGES 20 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 15, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/15/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	67-72

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR AUBURN DRIVE
FROM N. LAKESIDE DRIVE TO NOTRE-DAME DRIVE

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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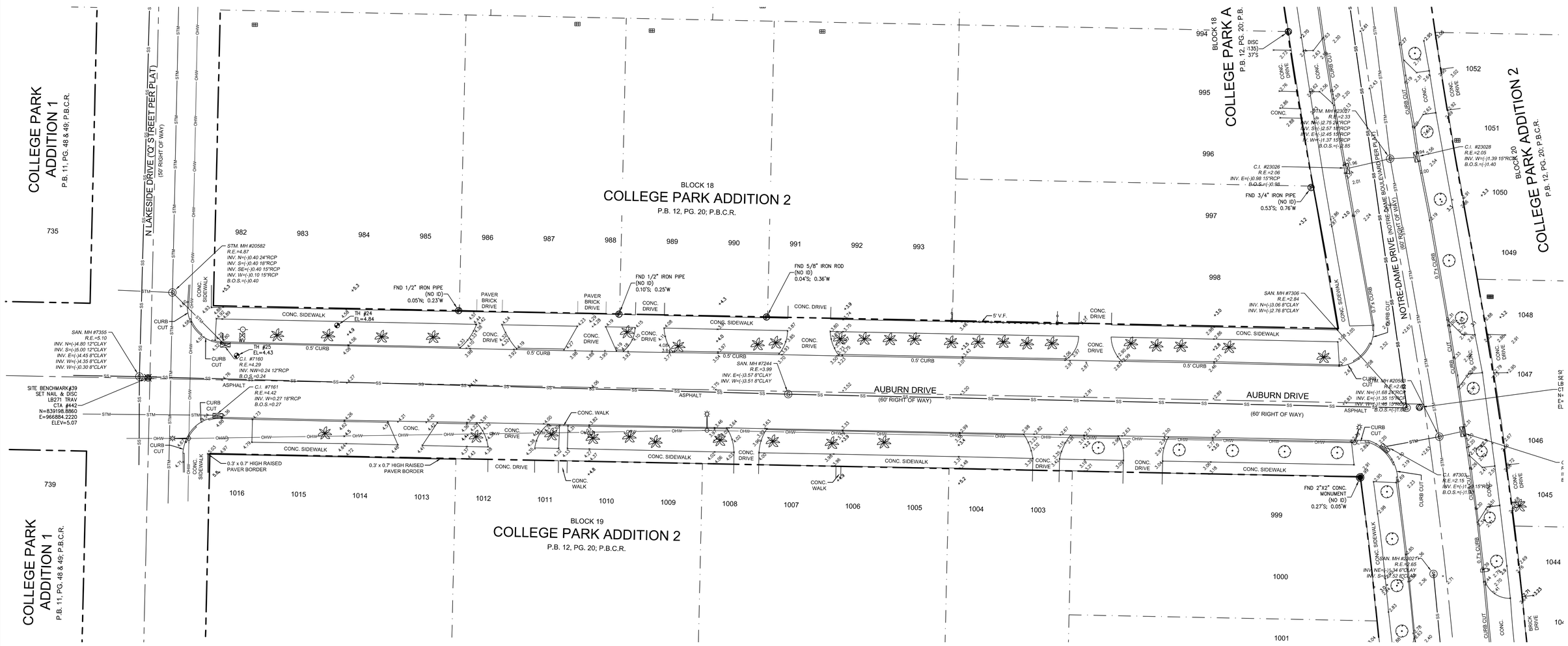
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/15/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2738
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR AUBURN DRIVE
FROM N. LAKESIDE DRIVE TO NOTRE-DAME DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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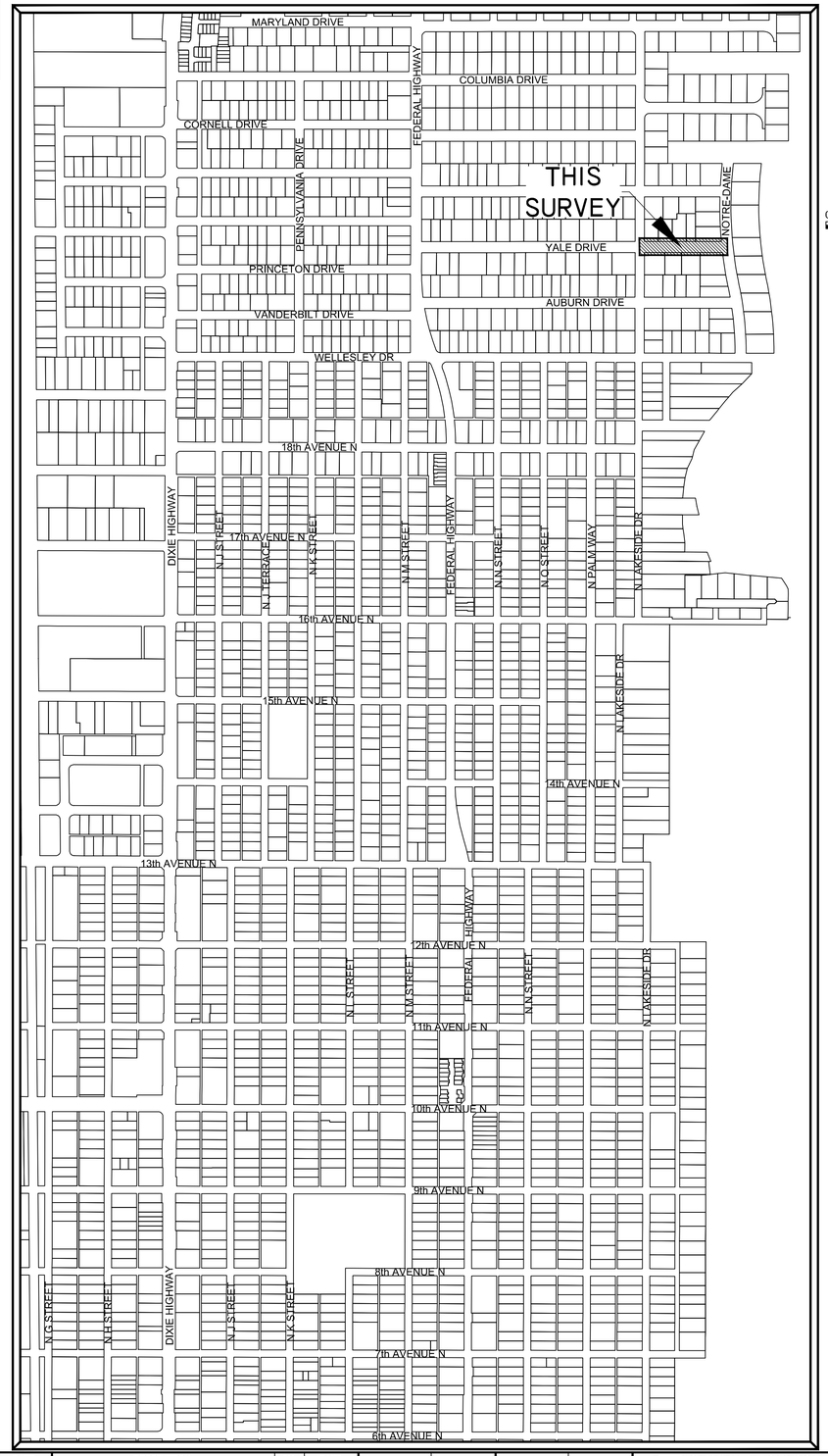

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR YALE DRIVE LYING EAST OF THE CENTERLINE OF N. LAKESIDE DRIVE ("Q" STREET PER PLAT), AND LYING WEST OF THE CENTERLINE OF NOTRE-DAME DRIVE (NOTRE-DAME BOULEVARD PER PLAT), ALL LYING WITHIN THE PLAT OF COLLEGE PARK ADDITION 2, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 12, PAGES 20 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 17, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/17/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2738
DRAWN BY:	T.S.	PAGE(S):	73-78

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FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR YALE DRIVE
FROM N. LAKESIDE DRIVE TO NOTRE-DAME DRIVE

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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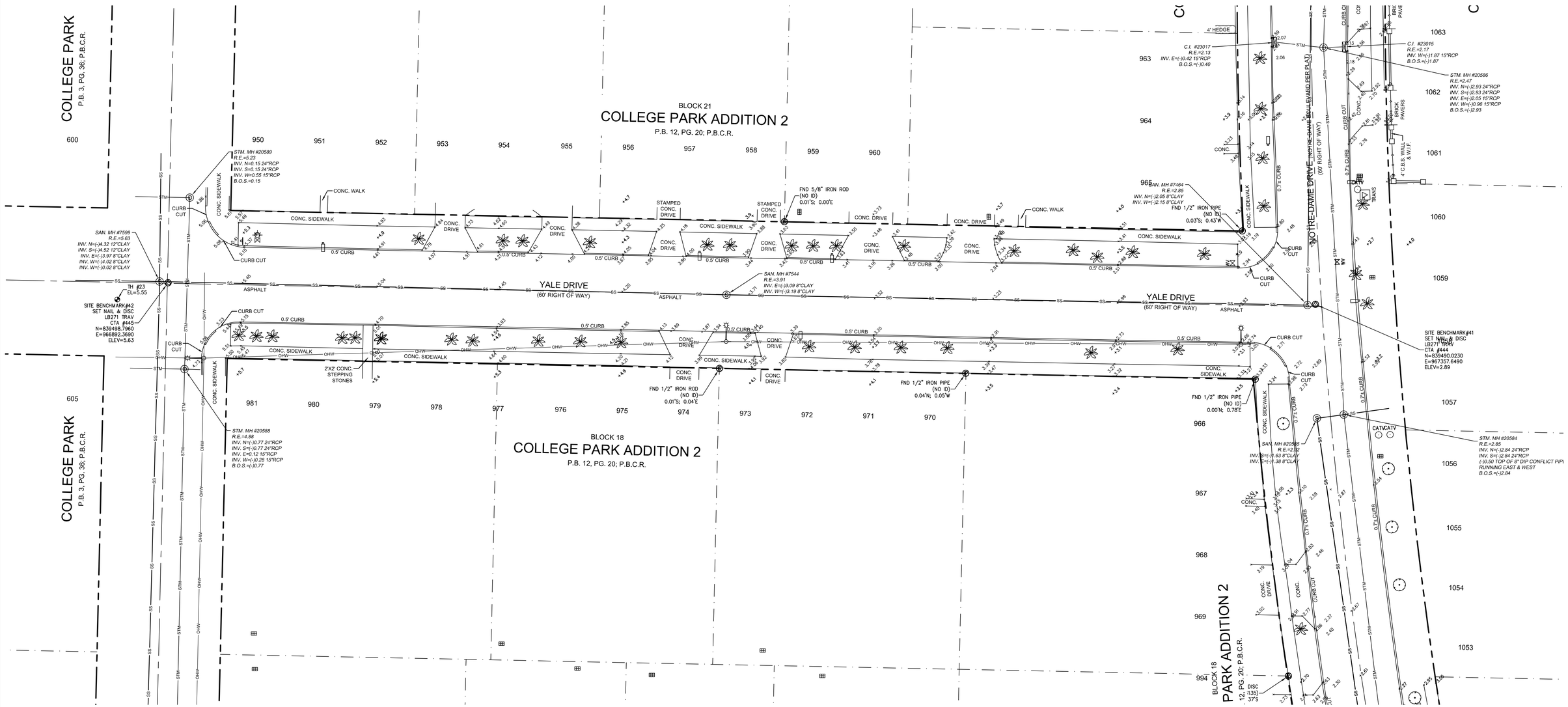
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR YALE DRIVE
FROM N. LAKESIDE DRIVE TO NOTRE-DAME DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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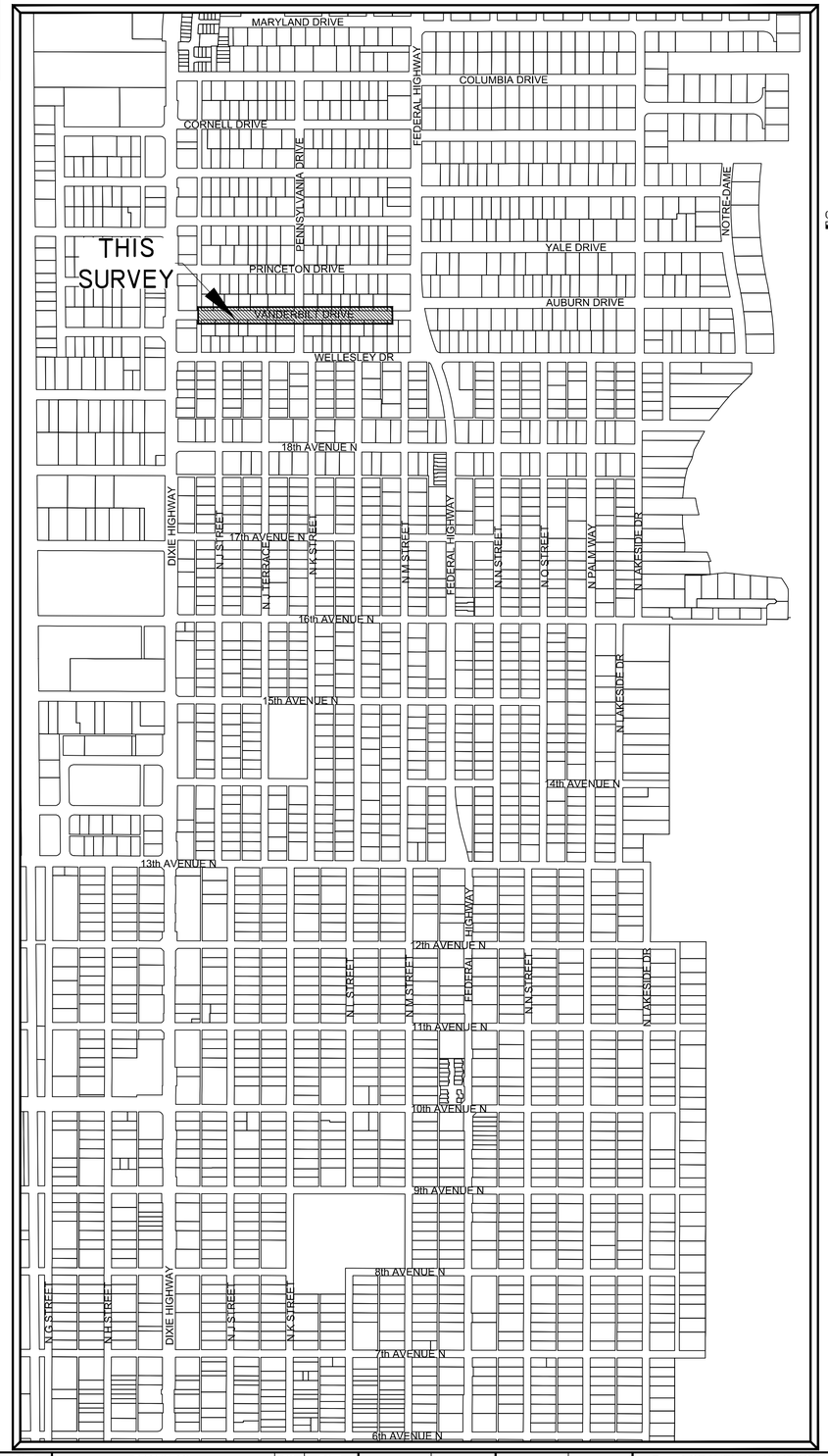

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 AND V-3 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
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- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 3 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE: LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR VANDERBILT DRIVE LYING EAST OF THE 25 FOOT WIDE ALLEY LYING ADJACENT TO LOTS 650 AND 822, AND LYING WEST OF THE EAST LINE OF LOTS 687 AND 785, ALL LYING WITHIN THE PLAT OF COLLEGE PARK ADDITION 1, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 11, PAGES 48 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 21, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/21/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	1-11

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR VANDERBILT DRIVE
LYING 525' ON EACH SIDE OF PENNSYLVANIA DRIVE

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [3-V-1] Dec 21, 2016 3:16pm TSHAHAN

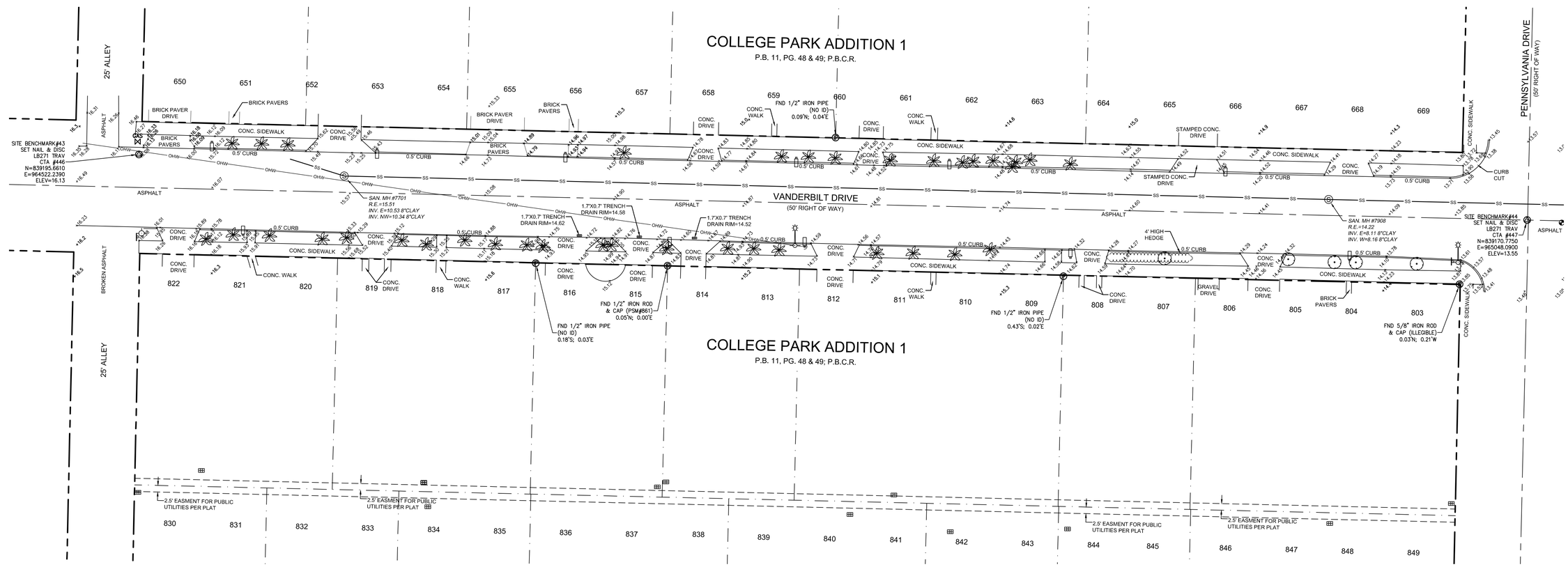
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/21/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	1-11

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR VANDERBILT DRIVE
LYING 525' ON EACH SIDE OF PENNSYLVANIA DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

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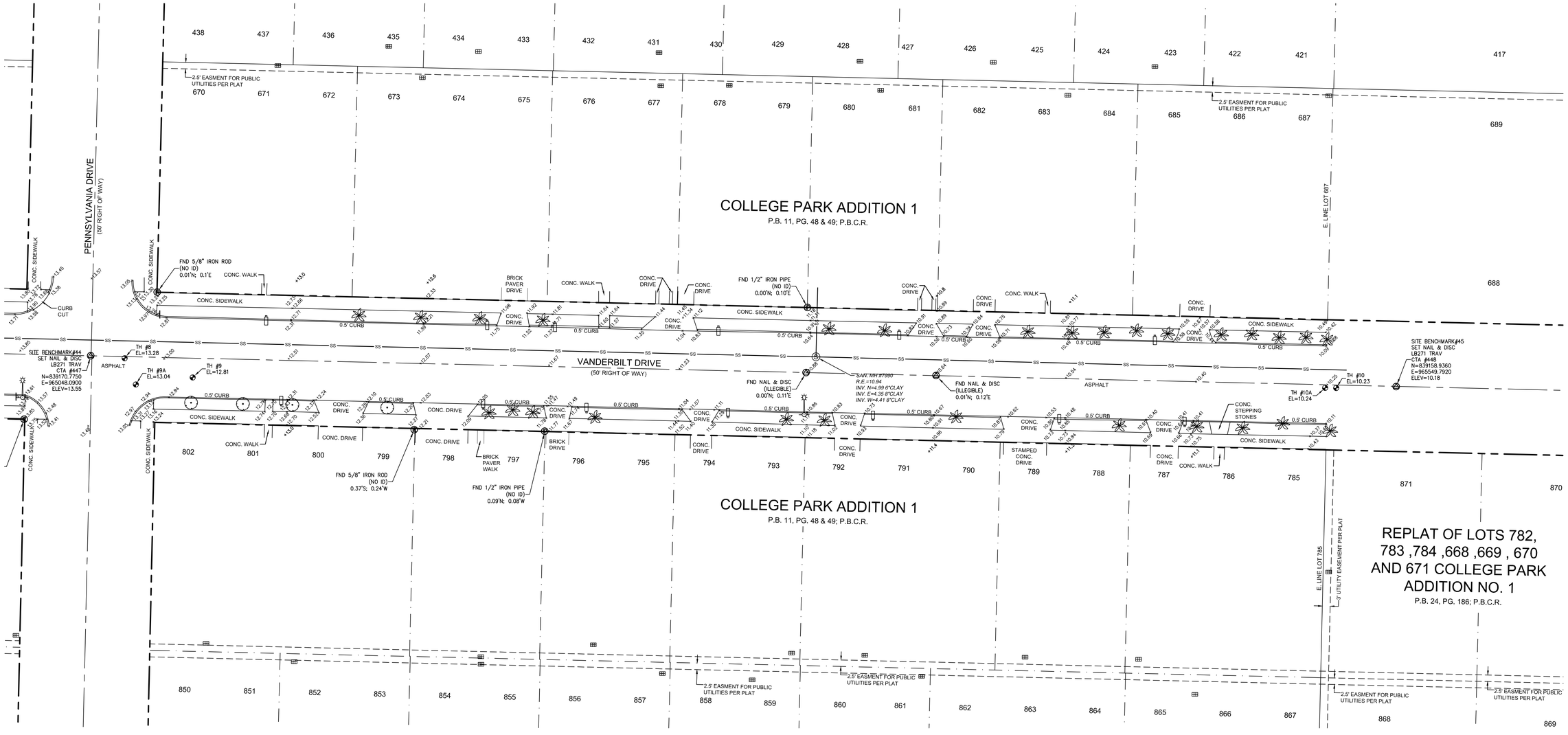
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-2 FOR REMAINDER OF SITE IMPROVEMENTS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/21/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	1-11

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR VANDERBILT DRIVE
LYING 525' ON EACH SIDE OF PENNSYLVANIA DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3
SHEET 3 OF 3

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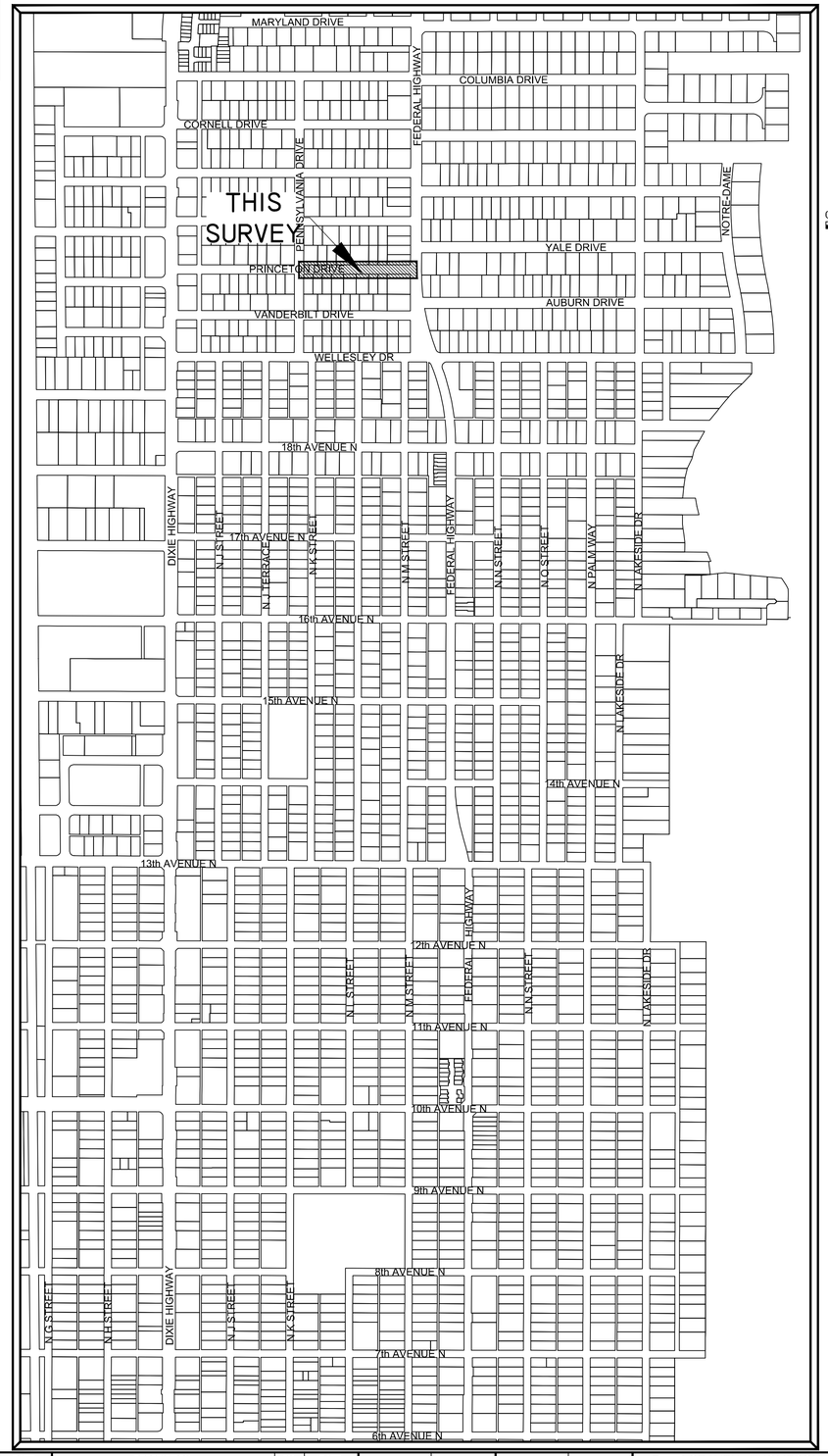

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

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C.B.S.	CONCRETE BLOCK STRUCTURE
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17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR PRINCETON DRIVE LYING EAST OF THE CENTERLINE OF PENNSYLVANIA DRIVE, AND LYING WEST OF THE CENTERLINE OF N. FEDERAL HIGHWAY; ALL LYING WITHIN THE PLAT OF COLLEGE PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 36 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: APRIL 4, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/04/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	34-40

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR PRINCETON DRIVE
PENNSYLVANIA DRIVE TO N. FEDERAL HIGHWAY

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

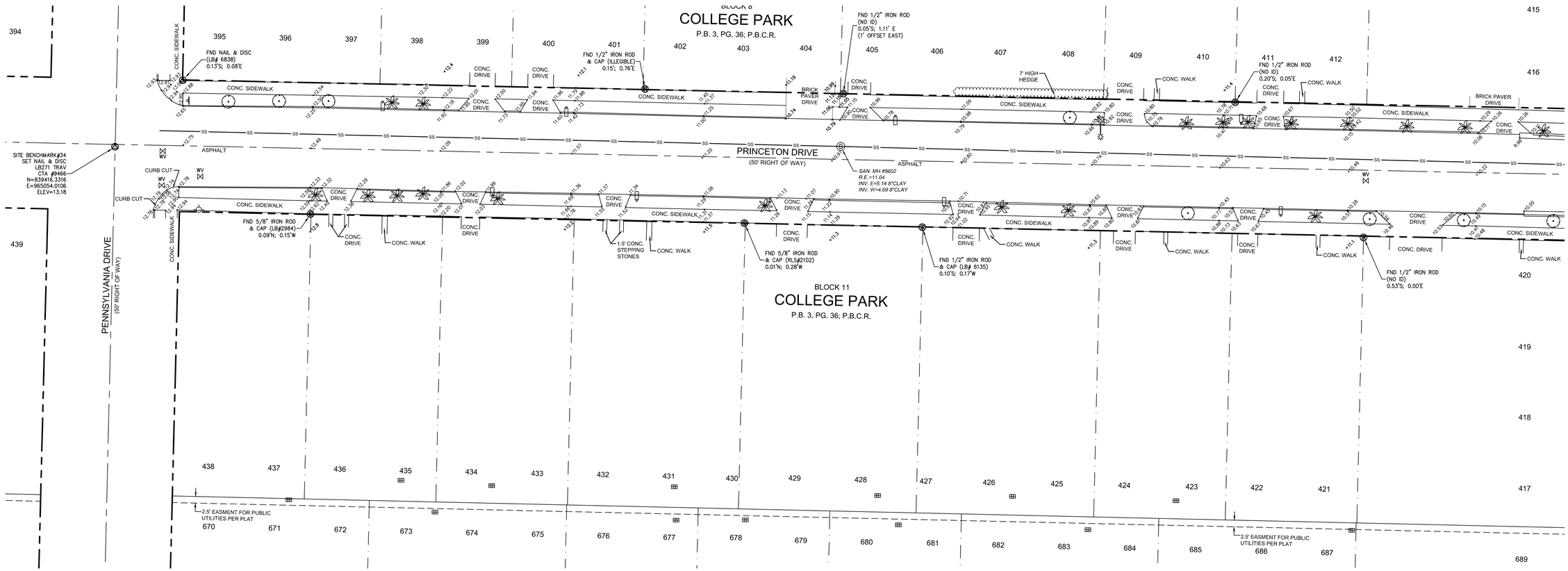
C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [PRINCE-V-1] Dec 21, 2016 3:17pm TSHAHAN

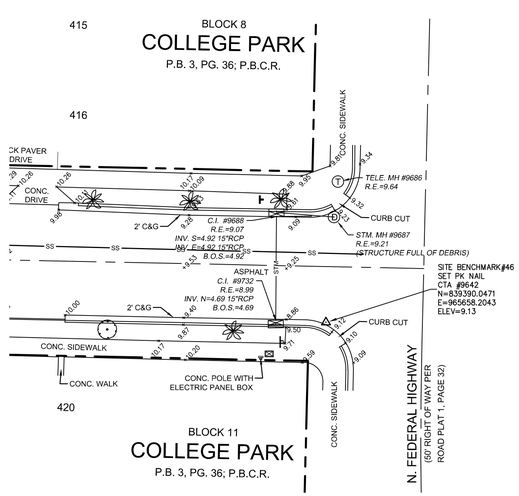
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

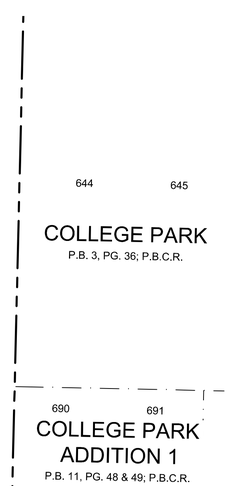
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.







DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/04/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	34-40

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR PRINCETON DRIVE
PENNSYLVANIA DRIVE TO N. FEDERAL HIGHWAY

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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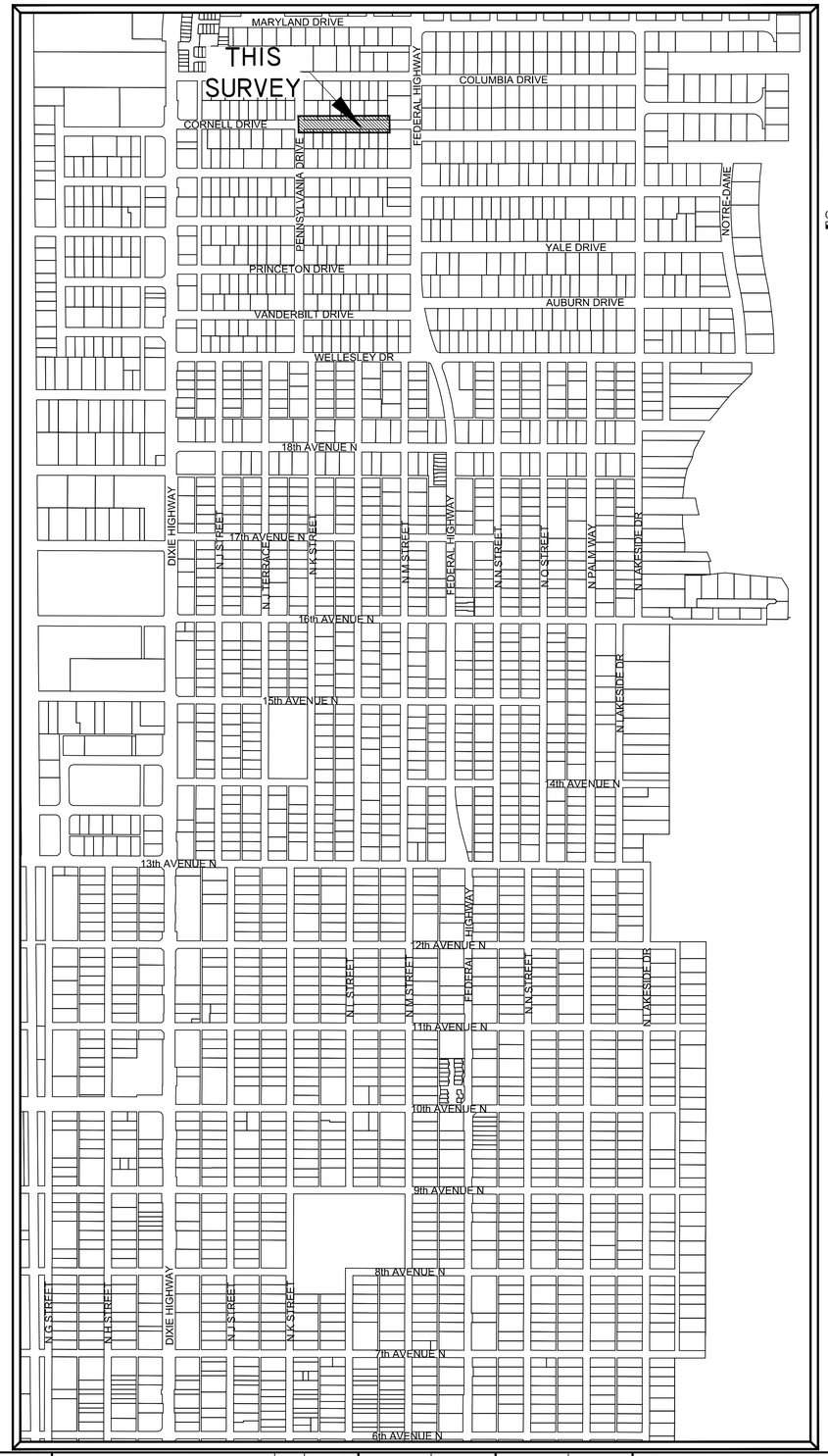

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
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- METAL LIGHT POLE
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- SANITARY CLEAN OUT
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- TELEPHONE PEDESTAL
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- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
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- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR CORNELL DRIVE LYING EAST OF THE CENTERLINE OF PENNSYLVANIA DRIVE, AND LYING WEST OF THE EAST LINE OF LOT 136, BLOCK 3 AND LOT 145, BLOCK 4, ALL LYING WITHIN THE PLAT OF COLLEGE PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 36 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 23, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

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DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/23/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	12-15

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR CORNELL DRIVE
PENNSYLVANIA DRIVE TO E. LINE LOTS 136 & 145

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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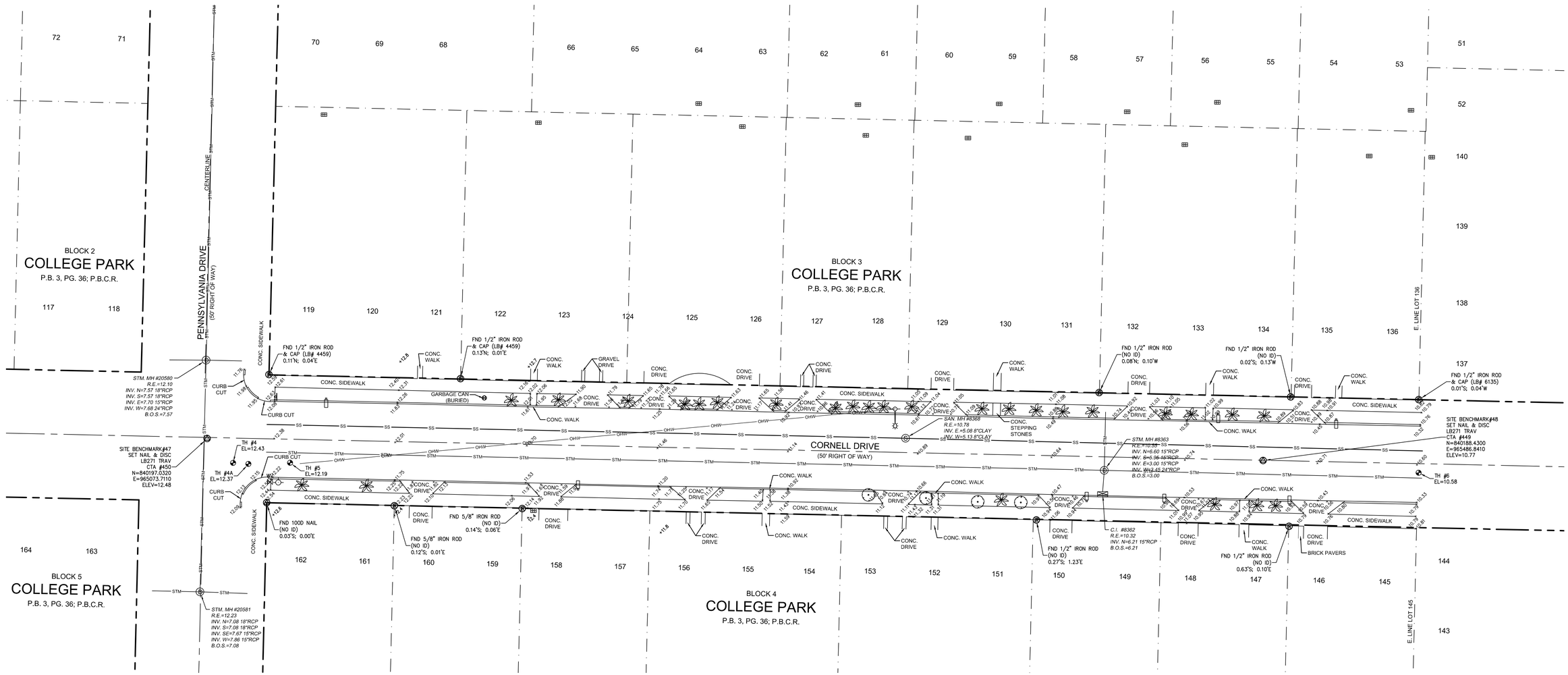
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



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THE RIGHT OF WAY FOR PRINCETON DRIVE
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TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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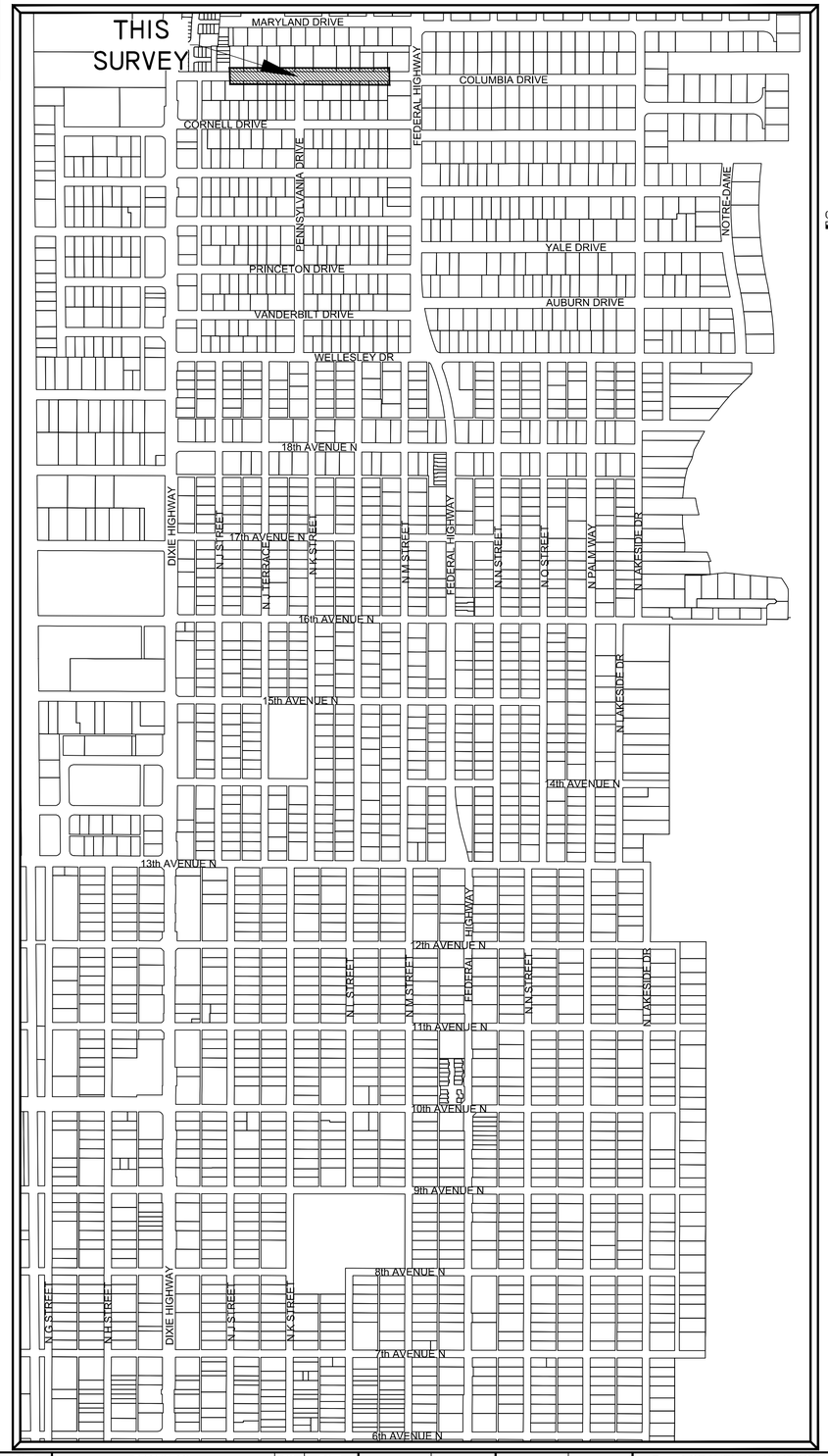

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

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SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
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C&G	CURB & GUTTER
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CONC.	CONCRETE
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GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
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LS	LAND SURVEYOR
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(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
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SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHT OF WAY FOR COLUMBIA DRIVE LYING EAST OF THE WEST LINE OF LOT 88, BLOCK 2, AND LYING WEST OF THE EAST LINE OF LOT 53, BLOCK 3, ALL LYING WITHIN THE PLAT OF COLLEGE PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 3, PAGE 36 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN MARCH, 2016.

LAST DATE OF FIELD WORK: MARCH 23, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	03/23/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	12-15

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR COLUMBIA DRIVE
FROM W. LINE LOT 88 BLK 2 TO E LINE LOT 53 BLK 3

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

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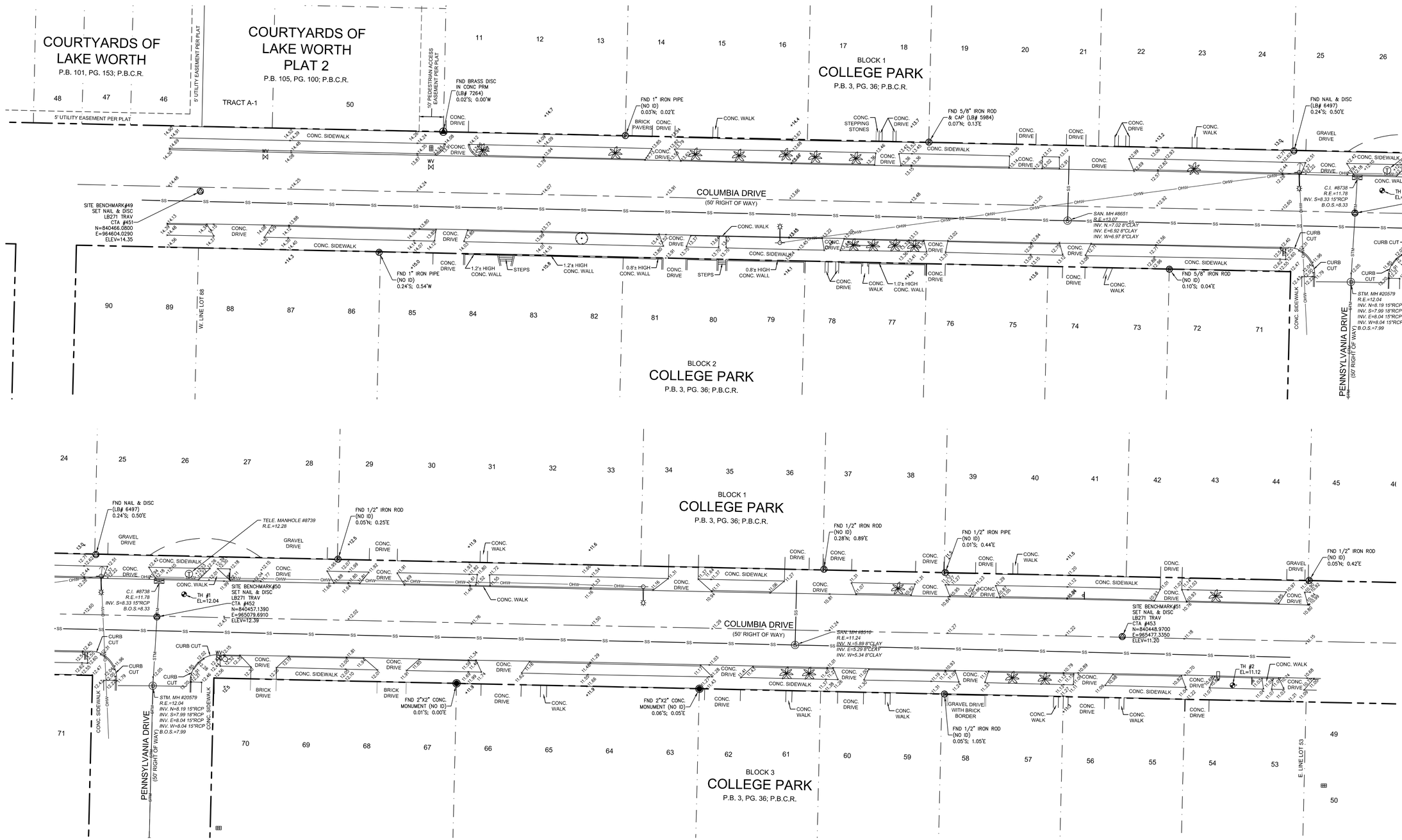
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	04/04/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2743
DRAWN BY:	T.S.	PAGE(S):	34-40

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR PRINCETON DRIVE
FROM W. LINE LOT 88 BLK 2 TO E LINE LOT 53 BLK 3

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

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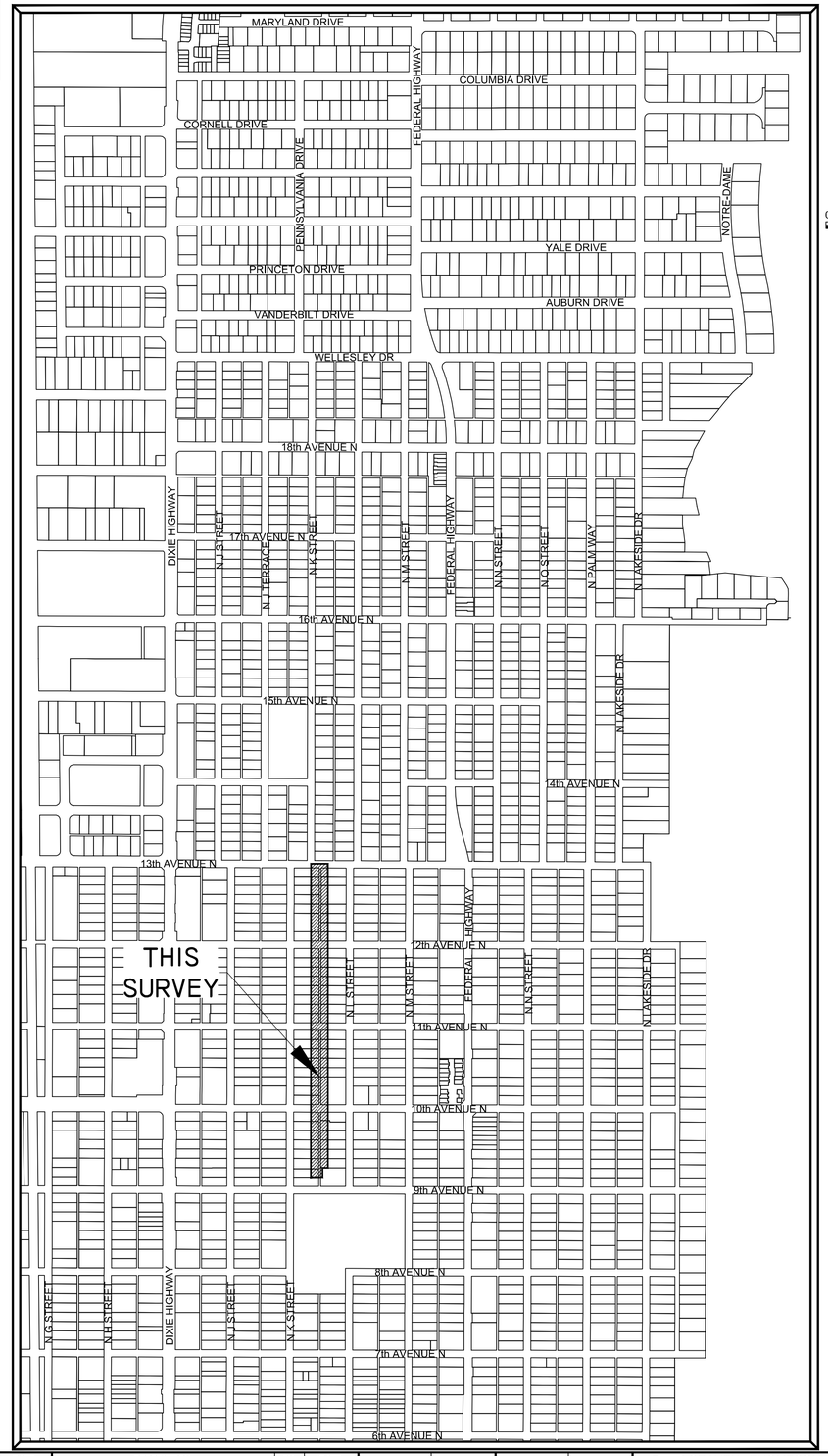
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.



TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEETS V-2 AND V-3 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEAROH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
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9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 3 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY'S LYING WITHIN BLOCKS 372, 348, AND 306, TOGETHER WITH THAT PORTION OF THE 10 FOOT WIDE PLATTED ALLEY LYING WITHIN BLOCK 282 AND LYING NORTH OF THE NORTH LINE OF LOTS 1 AND 16 OF SAID BLOCK 282, TOGETHER WITH THE RIGHTS-OF-WAY FOR 10th AVENUE N. (20th AVENUE PER PLAT), 11th AVENUE N. (21st AVENUE PER PLAT), 12th AVENUE N. (22nd AVENUE PER PLAT) AND 13th AVENUE N. (23rd AVENUE PER PLAT) LYING ADJACENT TO SAID ALLEY'S, ALL LYING WITHIN THE PALM BEACH FARMS CO PLAT NO 2, THE TOWNSITE OF LUCERNE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGES 29 THRU 40 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN FEBRUARY, 2016.

LAST DATE OF FIELD WORK: AUGUST 17, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	08/17/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740; 2768
DRAWN BY:	T.S.	PAGE(S):	70-77; 13-15, 17

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. L STREET & N. M STREET

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [3SUP-V-1] Dec 21, 2016 3:18pm TSHAHAN

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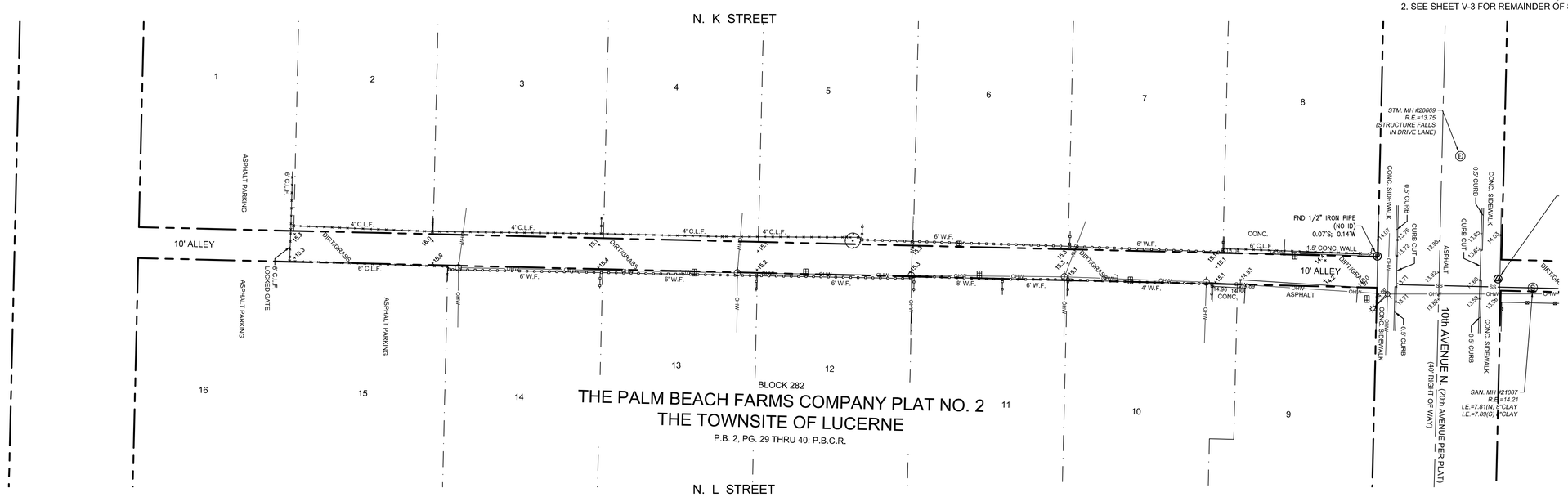
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

TOPOGRAPHIC SURVEY

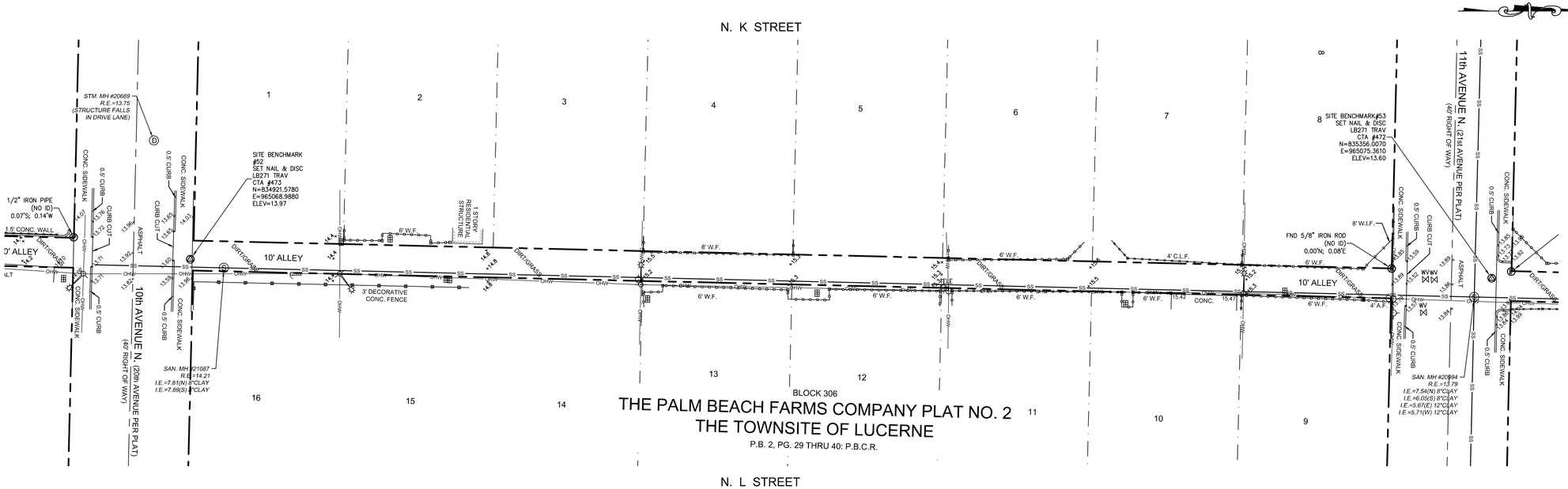
0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-3 FOR REMAINDER OF SITE IMPROVEMENTS.



0 20' 40'
GRAPHIC SCALE IN FEET



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	08/17/16	CHECKED BY:	R.Y.
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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. K STREET & N. L STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [35UP-V-2] Dec 21, 2016 3:18pm TSHAHAN

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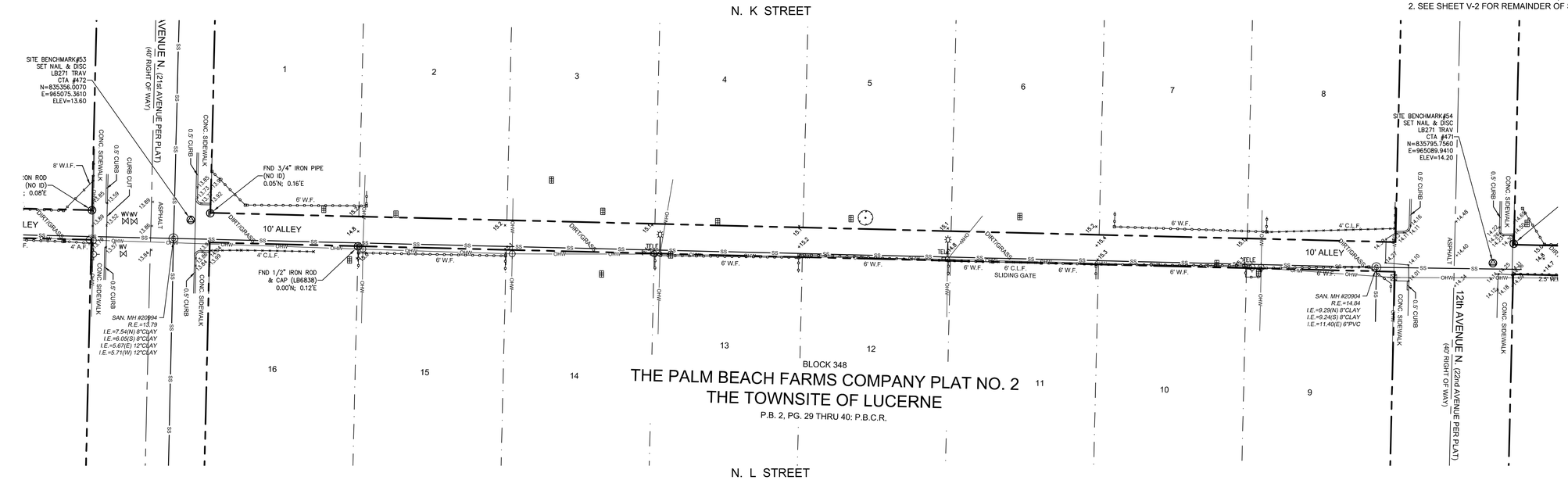
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

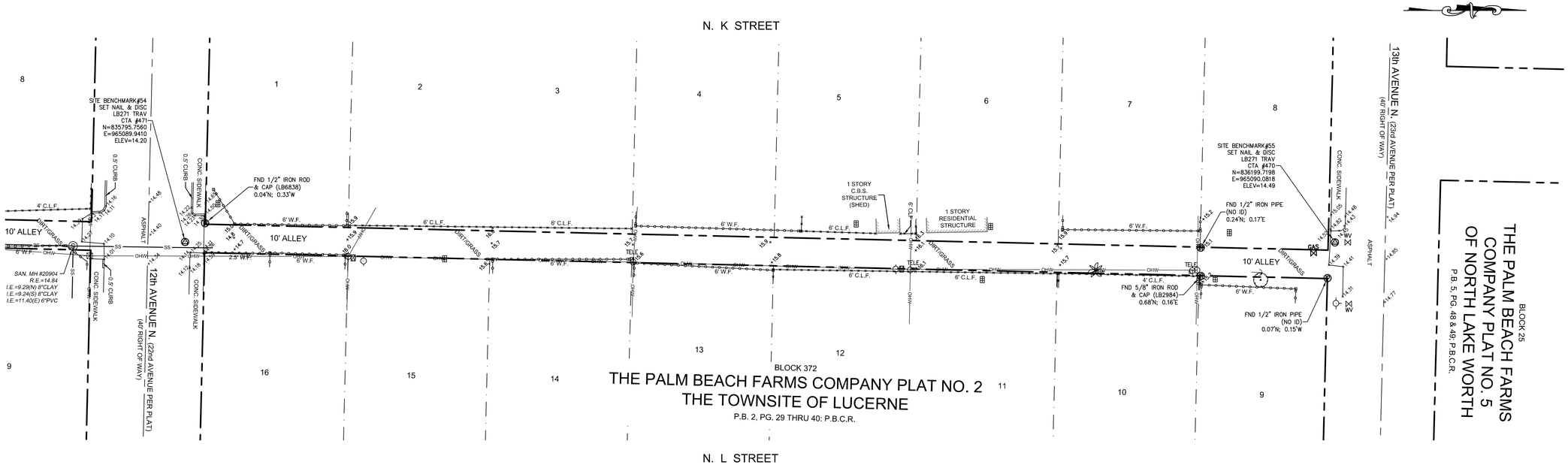
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.
2. SEE SHEET V-2 FOR REMAINDER OF SITE IMPROVEMENTS.



0 20' 40'
GRAPHIC SCALE IN FEET



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	08/17/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2740; 2768
DRAWN BY:	T.S.	PAGE(S):	70-77; 13-15, 17

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ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114

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2 INCH WATERMAIN REPLACEMENT-PHASE II
10' WIDE ALLEY LYING BETWEEN
N. K STREET & N. L STREET

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3

SHEET 3 OF 3

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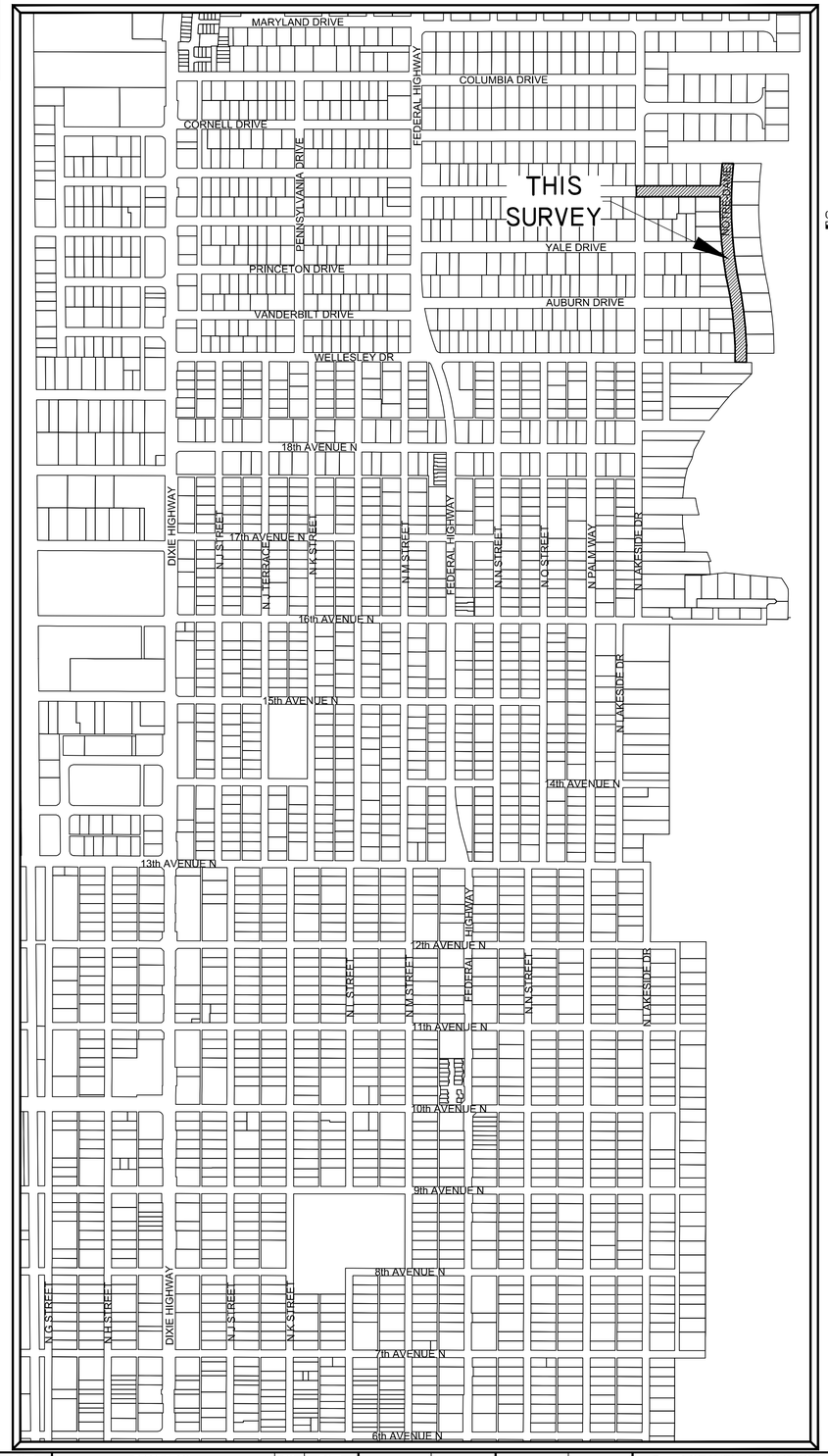

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

1. SEE SHEET V-2 FOR SITE IMPROVEMENTS.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

GPS FIELD PROCEDURES:

THE HORIZONTAL CONTROL SURVEY DATA SHOWN HEREON IS BASED ON STATE PLANE COORDINATE SYSTEM (FLORIDA EAST ZONE), NORTH AMERICAN DATUM OF 1983/1990 (NAD 83/90), AND WAS OBTAINED BY UTILIZING A TRIMBLE R8 GNSS ROVER, AS OPERATED BY CRAVEN THOMPSON AND ASSOCIATES (CTA) AND THE "TRIMBLE VRS" REAL TIME KINEMATICS STATE-WIDE GPS NETWORK OPERATED BY TRIMBLE. THE GPS DATA HAS BEEN PROCESSED WITH A LEAST SQUARE ADJUSTMENT BASED ON A HORIZONTAL BEST FIT MODEL USING THIRTY MINUTE REDUNDANT OBSERVATIONS WITH TRIMBLE BUSINESS CENTER SOFTWARE ON NATIONAL GEODETIC SURVEY CONTROL MONUMENTS:

1. RUSK (PID AD8537)
2. 06-78E-07 (PID AD7887) AND A CONTINOUSLY OPERATING BASE STATION OPERATED BY TRIMBLE NAVIGATION:
3. TRIMBLE VRS BASE STATION (PIRS 185987612310)

TRIMBLE BASE STATION PRS 185987612310 WAS UTILIZED IN THE PROCESSING OF THE GPS DATA AND LIES WITHIN 7 MILES OF THE SITE. ALL GPS OBSERVATIONS HAD AT LEAST 12 SATELLITES BEING OBSERVED WITH A MAXIMUM HORIZONTAL PRECISION ERROR OF 0.058 +/- FEET. THIS MEETS OR EXCEEDS THE MINIMUM RELATIVE DISTANCE ACCURACY OF 1 FOOT IN 10,000 FEET AS REQUIRED FOR COMMERCIAL/HIGH RISK CLASSIFICATION, AS REQUIRED BY THE FLORIDA STANDARDS OF PRACTICE (5J-170.052 F.A.C.)

SURVEYOR'S NOTES:

1) THE BEARINGS SHOWN HEREON ON ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NAD 83 (2011) EXPRESSED IN U.S. SURVEY FEET.
2) THE LEGAL DESCRIPTION SHOWN HEREON WAS PREPARED BY THIS OFFICE.
3) THE RIGHT-OF WAY LINES AND OWNERSHIP LINES (LOT LINES) SHOWN HEREON ARE BASED ON INFORMATION OBTAINED FROM THE CITY OF LAKE WORTH PROPERTY APPRAISERS OFFICE,
4) BOUNDARY CORNERS SHOWN HEREON WERE NOT SET. SAID CORNERS FOR THIS TOPOGRAPHIC SURVEY WERE LOCATED BY REDUNDANT MEASUREMENTS FROM HORIZONTAL CONTROL POINTS REFERENCED TO THE GPS CONTROL POINTS LISTED ABOVE.
5) ALL EASEMENTS SHOWN HEREON ARE PER THE RECORD PLAT UNLESS OTHERWISE NOTED.
6) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH, THEREFORE ONLY THOSE EASEMENTS ON THE RECORD PLAT ARE SHOWN UNLESS OTHERWISE NOTED. INFORMATION REGARDING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WAS NOT PROVIDED TO OR PURSUED BY THE UNDERSIGNED. ENCUMBRANCES OTHER THAN SHOWN HEREON MAY EXIST. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
7) THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO SHOW THE RELATIONSHIP BETWEEN THE EXISTING IMPROVEMENTS SHOWN HEREON AND THE DEDICATED RIGHTS-OF-WAY FOR ENGINEERING DESIGN PURPOSES.
8) THIS SURVEY MEETS AND EXCEEDS THE LINEAR CLOSURE OF 1 IN 10,000 FEET FOR COMMERCIAL/HIGH RISK SURVEYS AS DEFINED IN THE FLORIDA STANDARDS OF PRACTICE (5J-17.051, 5J-17.052 AND 5J-17.053, F.A.C.). THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE WAS FOUND TO EXCEED THIS REQUIREMENT.
9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
10) THE TOPOGRAPHICAL MEASUREMENTS SHOWN HEREON WERE OBTAINED USING A "LEICA TC-700 SERIES"TOTAL STATION AND "TDS"DATA COLLECTION SOFTWARE. THE ACCURACY OF CONTROL SURVEY DATA HAS BEEN VERIFIED BY REDUNDANT MEASUREMENTS OR TRAVERSE CLOSURES.
11) THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF CITY OF LAKE WORTH FOR THE EXPRESS PURPOSES STATED HEREON AND/OR CONTAINED IN THE CONTRACT WITH THE AFOREMENTIONED CLIENT FOR THIS PROJECT. REUSE OF THIS SURVEY FOR PURPOSES OTHER THAN WHICH IT WAS INTENDED, WITHOUT WRITTEN PERMISSION, WILL BE AT THE RE-USERS SOLE RISK AND WITHOUT LIABILITY TO THE SURVEYOR. NOTHING SHOWN HEREON SHALL BE CONSTRUED TO GIVE RIGHTS OR BENEFITS TO ANYONE OTHER THAN THOSE CERTIFIED TO.
12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHTS-OF-WAY FOR NOTRE DAME DRIVE LYING ADJACENT TO BLOCKS 19, 18, 21, 22 AND 20, TOGETHER WITH THE RIGHTS-OF-WAY FOR HARVARD DRIVE, LYING ADJACENT TO SAID BLOCKS 21 AND 22, ALL LYING WITHIN COLLEGE PARK ADDITION 2, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 12, PAGE 20 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN SEPTEMBER, 2016.

LAST DATE OF FIELD WORK: SEPTEMBER 20, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	09/20/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740
DRAWN BY:	T.S.	PAGE(S):	58-68

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR NOTRE DAME DRIVE
FROM 19th AVENUE N. TO HARVARD DRIVE

COVER SHEET
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 3

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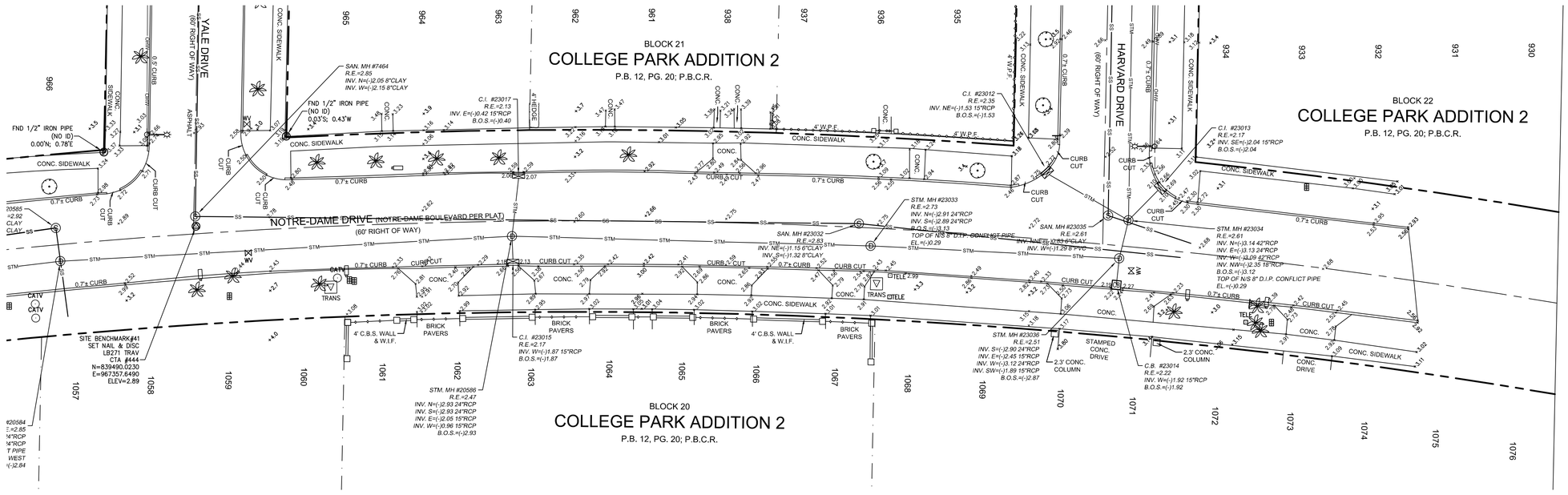
TOPOGRAPHIC SURVEY

0 20' 40'
GRAPHIC SCALE IN FEET

NOTE:
1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.



DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	09/20/16	CHECKED BY:	R.Y.
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR NOTRE DAME DRIVE
FROM 19th AVENUE N. TO HARVARD DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 3

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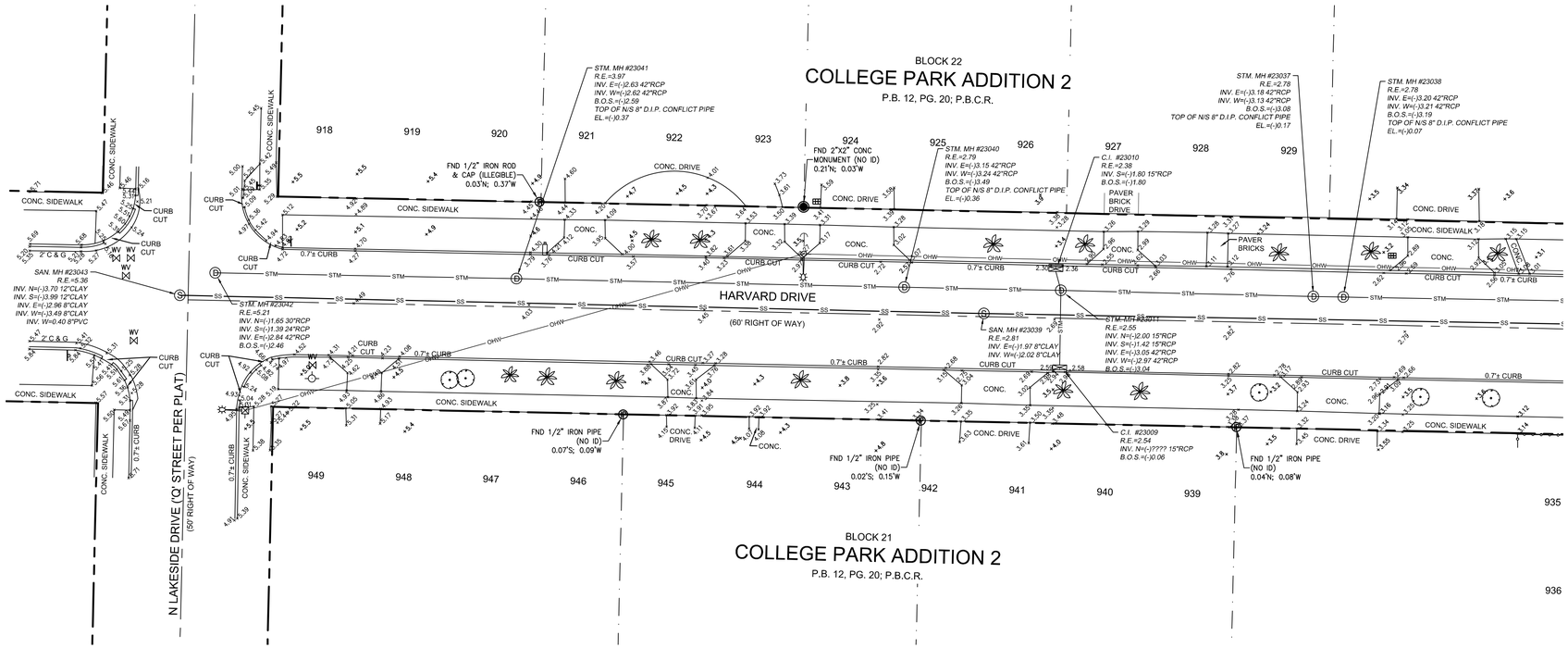

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR HARVARD DRIVE
FROM N. LAKESIDE DRIVE TO NOTRE-DAME DRIVE

TOPOGRAPHIC SURVEY
PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-3

SHEET 3 OF 3

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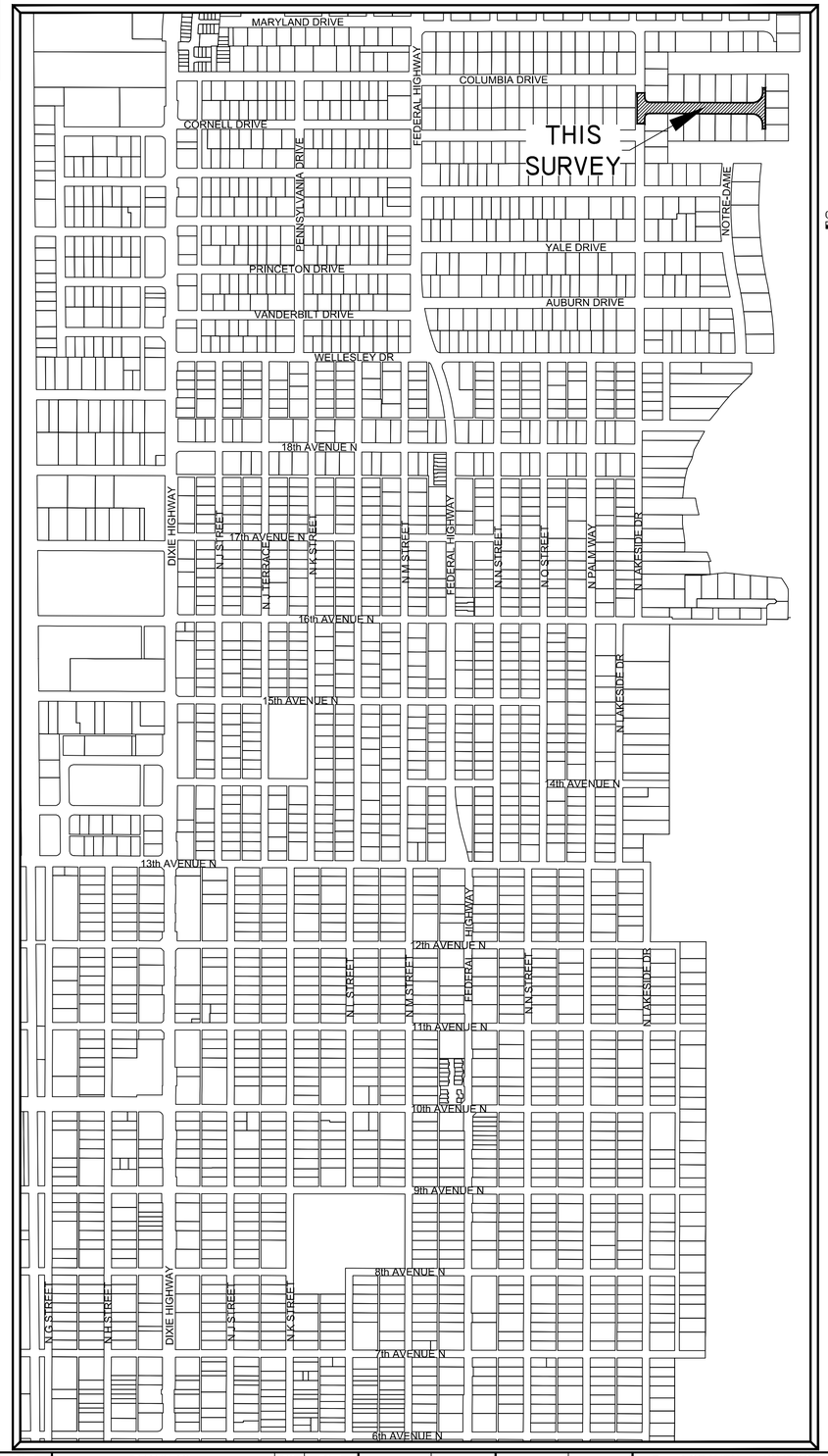

TOPOGRAPHIC SURVEY

0 400' 800'

NOTE:

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GPS FIELD PROCEDURES:

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9) THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. UNDERGROUND UTILITIES, FOUNDATIONS OR OTHER BURIED ENCROACHMENTS WERE NOT LOCATED IN CONNECTION WITH THIS SURVEY UNLESS OTHERWISE NOTED.
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12) THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. THE HORIZONTAL FEATURES SHOWN HEREON ARE PLOTTED TO WITHIN 1/20 OF THE MAP SCALE. HORIZONTAL FEATURE LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SIZE OR SHAPE OF THE FEATURE.
13) ADDITIONS AND DELETIONS TO SURVEY MAPS AND REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE UNDERSIGNED. THIS DOCUMENT CONSISTS OF 2 SHEETS AND EACH SHEET SHALL NOT BE CONSIDERED FULL, VALID AND COMPLETE UNLESS ATTACHED TO THE OTHERS.
14) TREE SIZES AND TYPES ARE NOT DETERMINED. EXACT SPECIES SHOULD BE DETERMINED BY A LICENSED BOTANIST, DENDROLOGIST OR OTHER PROFESSIONAL WITH SUCH CAPACITY.
15) THE ELEVATIONS SHOWN HEREON ARE FOR THE PURPOSE OF INDICATING THE GROUND ELEVATION ONLY AT THE POSITION SHOWN AND IN NO WAY INDICATE ELEVATIONS AT ANY OTHER POINT THAN THAT SHOWN HEREON AND DO NOT DETERMINE SUBSURFACE CONDITIONS.
16) THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND REFERENCED TO THE FOLLOWING BENCHMARK, PALM BEACH COUNTY BRASS DISK STAMPED "FEC 6TH", ELEVATION = 17.309. A PALM BEACH COUNTY BRASS DISK SET IN CONCRETE. LOCATED 29.4' WEST OF THE WEST RAIL OF THE RAILROAD TRACKS, 52' SOUTH OF THE CENTERLINE OF 6TH AVENUE SOUTH, 4' SOUTH OF A CONCRETE SIDEWALK, 3' NORTH OF A WOODEN POWER POLE WITH A WITNESS SIGN NAILED TO IT AND .5' BELOW THE LEVEL OF THE RAILROAD TRACKS.
17) ALL DOCUMENTS ARE RECORDED IN THE PUBLIC RECORDS OF PALM BEACH COUNTY FLORIDA UNLESS OTHERWISE NOTED.

SYMBOL LEGEND

- AIR CONDITIONING UNIT
- AIR RELEASE VALVE
- ANCHOR
- BACK FLOW PREVENTER
- BIKE RACK
- BOLLARD
- CATV PEDESTAL
- CATCH BASIN
- CONCRETE POST
- CONCRETE POWER POLE
- DOUBLE DETECTOR CHECK VALVE
- DECORATIVE/YARD LIGHT POLE
- ELECTRICAL OUTLET
- ELECTRICAL PULL BOX
- ELECTRICAL METER
- FIRE HYDRANT
- GAS MARKER
- GAS METER
- GAS VALVE
- GREASE TRAP MH
- IRRIGATION CONTROL VALVE
- LP GAS TANK
- MAILBOX
- METAL LIGHT POLE
- MONITORING WELL
- PARK BENCH
- PEDESTRIAN SIGNAL
- PIPE
- SANITARY CLEAN OUT
- SANITARY MANHOLE
- SIAMESE VALVE
- SIGN
- SPOT-FLOOD LIGHT
- STORM MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- TEST HOLES
- TRAFFIC POLE
- TRAFFIC PULL BOX
- TRASH CAN
- BLOW-OFF VALVE
- WATER METER
- WATER VALVE
- WOOD POST
- WOOD LIGHT POLE
- WOOD TELEPHONE POLE
- YARD DRAIN
- PALM TREE
- SHADE TREE
- GUARDRAIL
- OVER HEAD WIRES
- BURIED SANITARY SEWER PIPE
- BURIED STORM SEWER PIPE
- +16.16 HARD SURFACE ELEVATION
- +16.1 GROUND SPOT ELEVATION

CONTROL LEGEND

- DRILL HOLE
- IRON PIPE
- IRON ROD
- NAIL&TAB
- PKNAIL.SPIKE

ABBRIVIATION LEGEND

B.O.S.	BOTTOM OF STRUCTURE
C.B.	CATCH BASIN
C.B.S.	CONCRETE BLOCK STRUCTURE
C.I.	CURB INLET
C&G	CURB & GUTTER
C.L.F.	CHAIN LINK FENCE
CONC.	CONCRETE
E-	EASTING
ELEC.	ELECTRIC
ELEV.	ELEVATION
F.E.C.R.	FLORIDA EAST COAST RAILWAY
F.B.	FINISHED FLOOR
FND.	FOUND
GR. MH	GREASE MANHOLE
I.E.	INVERT ELEVATION
LB	LICENSED BUSINESS
LS	LAND SURVEYOR
N-	NORTHING
(NO ID)	NO IDENTIFICATION
P.B.	PLAT BOOK
P.B.C.R.	PALM BEACH COUNTY RECORDS
PG.	PAGE
R.C.P.	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
SAN. MH	SANITARY MANHOLE
STM. MH	STORM MANHOLE
TRAV.	TRAVERSE
TR. DN.	TRENCH DRAIN
(TYP.)	TYPICAL
V.F.	VINYL FENCE
W.F.	WOOD FENCE
W.I.F.	WROUGHT IRON FENCE
W.P.F.	WOOD PICKET FENCE

DESCRIPTION:

ALL OF THAT PORTION OF THE PLATTED RIGHTS-OF-WAY FOR HARBOR DRIVE LYING EAST OF THE CENTERLINE OF N. LAKESIDE DRIVE ('Q' STREET PER PLAT), ALL LYING WITHIN HARBOR ESTATE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 24, PAGE 143 OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

SAID LANDS SITUATE, LYING AND BEING IN THE CITY OF LAKE WORTH, PALM BEACH COUNTY, FLORIDA.

SURVEYOR'S CERTIFICATE:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY AND OTHER PERTINENT DATA SHOWN HEREON, OF THE ABOVE DESCRIBED PROPERTY WAS MADE ON THE GROUND, CONFORMS TO THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA, AS OUTLINED IN CHAPTER 5J-17, (FLORIDA ADMINISTRATIVE CODE) AS ADOPTED BY THE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN SEPTEMBER, 1981, AS AMENDED, PURSUANT TO CHAPTER 472.027, FLORIDA STATUTES AND THAT SAID SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AS SURVEYED UNDER MY DIRECTION IN OCTOBER, 2016.

LAST DATE OF FIELD WORK: OCTOBER 17, 2016

CRAVEN THOMPSON & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB271

THOMAS C. SHAHAN-FOR THE FIRM
PROFESSIONAL SURVEYOR & MAPPER NO. 4387
STATE OF FLORIDA

THIS SURVEY MAP AND REPORT OR COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OR A UNIQUE ELECTRONIC SIGNATURE OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER UNDER CHAPTER RULES 5J-17.061 & 5J-17.062 FLORIDA ADMINISTRATIVE CODE.

DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	10/17/16	CHECKED BY:	R.Y.
SCALE:	N/A	FIELDBOOK:	2740 2768
DRAWN BY:	T.S.	PAGE(S):	58-62; 69 16; 22-25

CRAVEN • THOMPSON AND ASSOCIATES, INC.
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FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. C000114
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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR HARBOR DRIVE
LYING EAST OF N. LAKESIDE DRIVE ('Q' STREET)

COVER SHEET

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-1

SHEET 1 OF 2

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [HARVARD-V-1] Dec 21, 2016 3:20pm TSHAHAN

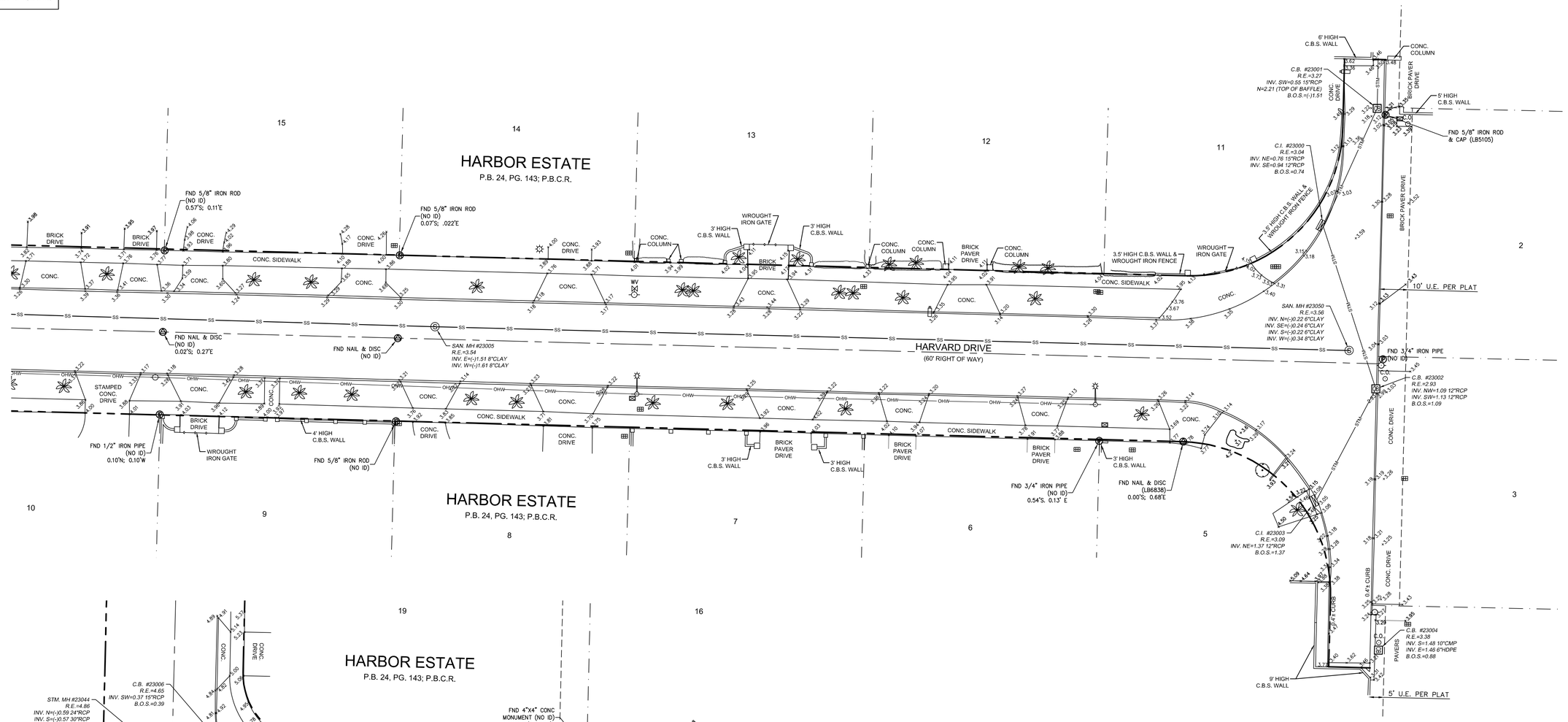
NOTE: The undersigned and CRAVEN THOMPSON & ASSOCIATES, INC. make no representations or guarantees as to the information reflected hereon pertaining to easements, right-of-way, set back lines, reservations, agreements and other similar matters, and this instrument is not intended to reflect or set forth all such matters. Such information should be obtained and further, confirmed by others through appropriate title verification.
NOTE: Lands shown hereon were not abstracted for right-of-way and/or easements of record.

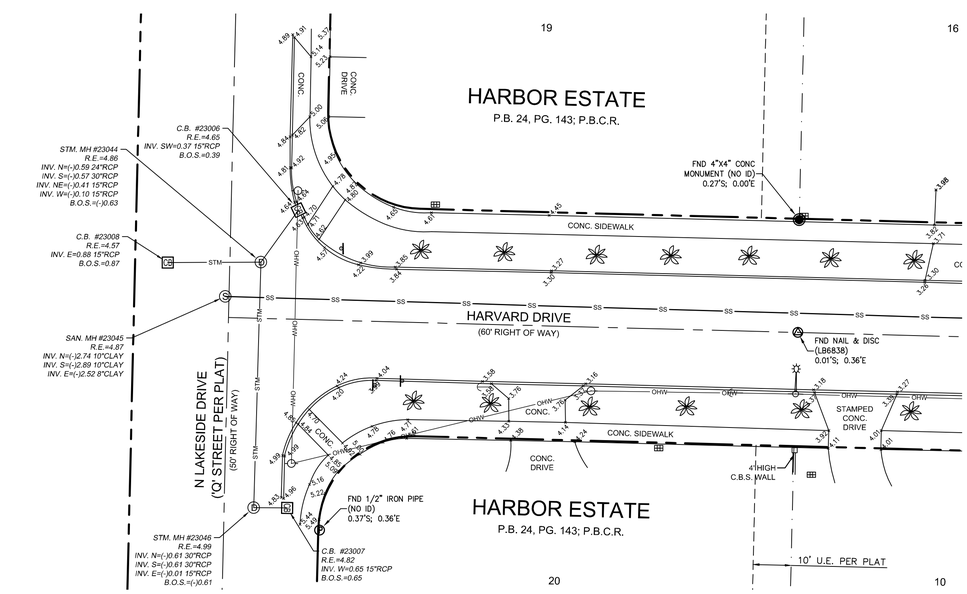
TOPOGRAPHIC SURVEY

NOTE:

1. SEE SHEET V-1 FOR DESCRIPTION, SURVEYOR'S NOTES, CERTIFICATION AND LEGENDS.

0 20' 40'
GRAPHIC SCALE IN FEET





DESCRIPTION:	BY:	DATE:	DESCRIPTION:	BY:	DATE:

DATE:	10/17/16	CHECKED BY:	R.Y.
SCALE:	1"=20'	FIELDBOOK:	2740 2768
DRAWN BY:	T.S.	PAGE(S):	58-62; 69 16; 22-25

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2 INCH WATERMAIN REPLACEMENT-PHASE II
THE RIGHT OF WAY FOR HARBOR DRIVE
LYING EAST OF N. LAKESIDE DRIVE ('Q' STREET)

TOPOGRAPHIC SURVEY

PREPARED FOR:
CITY OF LAKE WORTH

PROJECT NO. 16-0001-001

SHEET NAME V-2

SHEET 2 OF 2

C:\Users\tshahan\appdata\local\temp\AcPublish_13148\Basecalc.dwg [HARVARD V-2] Dec 21, 2016 3:20pm TSHAHAN