M-DWASD AGREEMENT ID# 23172

ALL MATERIALS AND LABOR UNDER THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE

MIAMI-DADE WATER AND SEMER DEPARTMENT AND SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS AVAILABLE AND ON FILE WITH THE DEPARTMENT. SUBMIT SHOP DRAWINGS FOR ALL WATERIALS.

. ALL MAIN LINE VALVES SHALL BE INSTALLED COMPLETE WITH 10" RISER PIPES AND NO. 3 OR 53 VALVE BOXES FIRE HYDRANTS AND SERVICE VALVES SHALL BE INSTALLED COMPLETE WITH 6" RISER PIPES AND NO. 2 VALVE BOXES.

ALL FORCE MAIN SERVICE CONNECTIONS INTO PRESSURE TRANSMISSION MAINS SHALL HAVE A SHUT OFF VALVE AND

6. ALL WATER METERS WILL BE INSTALLED BY THE WIAMI-DADE WATER AND SEWER DEPARTMENT, PROVIDING THE

. FIRE HYDRANT REQUIREMENTS (NUMBER AND LOCATION) SHALL BE AS REQUIRED BY MIAMI-DADE COUNTY FIRE

DEPARTMENT OR THE APPROPRIATE FIRE AGENCY WITH INSTALLATION IN ACCORDANCE WITH DEPARTMENT STANDARDS. CONTRACTOR MUST CALL MOWASD INSPECTION DIVISION TO ARRANGE FOR A PRECONSTRUCTION MEETING 2 FULL BUSINESS DAYS PRIOR TO PROPOSED START OF CONSTRUCTION, CONTACT ONE CALL CENTER 48 HRS PRIOR TO

10. WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED AS COMPLETE UNTIL FINAL ACCEPTANCE OF THE SYSTEM BY THE DEPARTMENT AND UNTIL THE FOLLOWING DOCUMENTS ARE RECEIVED AND APPROVED BY THE DEPARTMENT:

"RECORD DRAWING" PRINTS (24"x 36") SHOWING SPECIFIC LOCATIONS, DEPTH, ETC. OF ALL WATER AND SEWER

11. ALL NEW CONNECTIONS FROM EXISTING DEPARTMENT MAINS TO BE MADE BY DEPARTMENT FORCES ONLY. THE CONTRACTOR TO EXCAVATE AT REQUIRED LOCATIONS, PROVIDE AND INSTALL MATERIAL WITH FITTINGS, PRICE TO TAP.

12. AN APPROVED PAVING AND DRAINAGE PLAN WUST BE SUBMITTED TO MDWASD FOR ALL NEW SUBDIVISIONS PRIOR TO APPROVAL OF WATER AND SEWER PERMIT PLANS, UPON REQUEST.

13. UNLESS OTHERWISE SPECIFIED, ALL TAPS 20 INCHES AND SMALLER FOR CONNECTIONS TO EXISTING MAINS WILL BE DONE BY DEPARTMENT FORCES, UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE PERMITTED TO TAP EXISTING MAINS IN THE SIZE RANGE SPECIFIED ABOVE. THE TAPPING SLEEVE AND TAPPING VALVE ARE FURNISHED AND INSTALLED BY THE CONTRACTOR UNDER THE SUPERVISION OF THE INSPECTOR.

1. AT THE COMPLETION OF ANY WATER AND SEWER JOB EITHER DONATION OR CONTRACT, THE CONTRACTOR SHALL

SURVEYOR AND MAPPER (QTY. OF PRINTS AS REQUIRED BY THE DEPARTMENT)

ZONE

d. THE WORDS "RECORD DRAWING" IN LARGE LETTERS

e. TITLE BLOCK WITH DEPARTMENT DS, DW OR ER NUMBER AND PERTINENT INFORMATION

f. PREFERRED SCALE TO BE 1" = 40" HORIZONTALLY AND 1" = 4" VERTICALLY*

g. STREET NOMENCLATURE

h. SEPARATE RECORD DRAWINGS FOR WATER AND SEWER

I. SEPARATE WATER AND SEWER PROFILE

2. "RECORD DRAWING" FORMAT:

3. WATER "RECORD DRAWINGS" MUST INCLUDE:

a. Record drawing prints which have been signed and sealed by a florida licensed professional

c. CADD FILE (DWG OR DXF) ROTATED AND TRANSLATED TO STATE PLANE COORDINATES NAD 83 FLORIDA EAST

I. SEPARALE WALLER AND SEWER PROFILE

j. STATIONING STARTING WITH 0+00 AT PERMANENT REFERENCE POINT (I.E. \mathbb{C}, \mathbb{S}_L, \mathbb{ETC.}) OR AS SHOWN ON DESIGN PERMIT PLANS, AND TO RUN CONTINUOUSLY TO END OF MAIN

k. EASEMENTS, IF ANY, TIED TO PERMANENT REFERENCE POINT

l. IDENTIFY ALL CONTROL LINES (I.E. BLOG. LINE, PROPERTY LINE, R/W, ETC.)

m. ALL "PROPOSED" INFORMATION TO BE REMOVED FROM PRINTS, LEAVING ONLY RECORD DRAWING INFORMATION

DETILE CETED IN DRAWINGS.

a. Plans showing pipe size, material and offset of main, deflections (if any), station of services,

h profile showing top of ground and top of pipe flevations at every 100° station and at any CHANGE IN GRADE (WITH CORRESPONDING STATION), PIPE SIZE AND PIPE MATERIALS REFERENCED TO PLAN.

b. The northerly and easterly coordinates on all field obtained measurements and provided on

INVERT, LABEL NORTH, SOUTH, ETC.), AND STATION STARTING AT 0+00 AT DOWNSTREAM MANHOLE.

ITEM

0.5

SHEET 2 OF 2

"RECORD DRAWING"

REQUIREMENTS

SEWER, LOCATION OF LATERALS WITH REFERENCE TO MANHOLE AND CLEANOUTS

ITEM

0.5

SHEET 1 OF 2

STANDARD REQUIREMENTS

WATER AND SEWER CONSTRUCTION

FACILITIES AS LOCATED BY A LICENSED SURVEYOR & MAPPER, ALONG WITH PRINTS OF "RECORD DRAWINGS" WHICH HAVE BEEN SIGNED AND SEALED BY A REGISTERED SURVEYOR & MAPPER. (No. OF PRINTS: 3-FOR WATER, 4-FOR GRAVITY SEWER AND 5-FOR FORCE MAIN OR PUMP STATION PROJECTS). Submitted of final CAD Files required.

5. ALL CRAVITY SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DEPARTMENT STANDARDS.

. COVER OVER WATER OR SEWER FORCE MAINS SHALL BE 4'-0" MIN.

EASEMENTS, IF REQUIRED CONTRACTOR'S WAIVER AND RELEASE OF LIEN

ABSOLUTE BILL OF SALE I. CONTRACTOR'S LETTER OF WARRANTY (I.E., LETTER AGREEMENT)

ii DEVELOPER'S CONTRACT BOND (I.E., CONTRACT AGREEMENT).

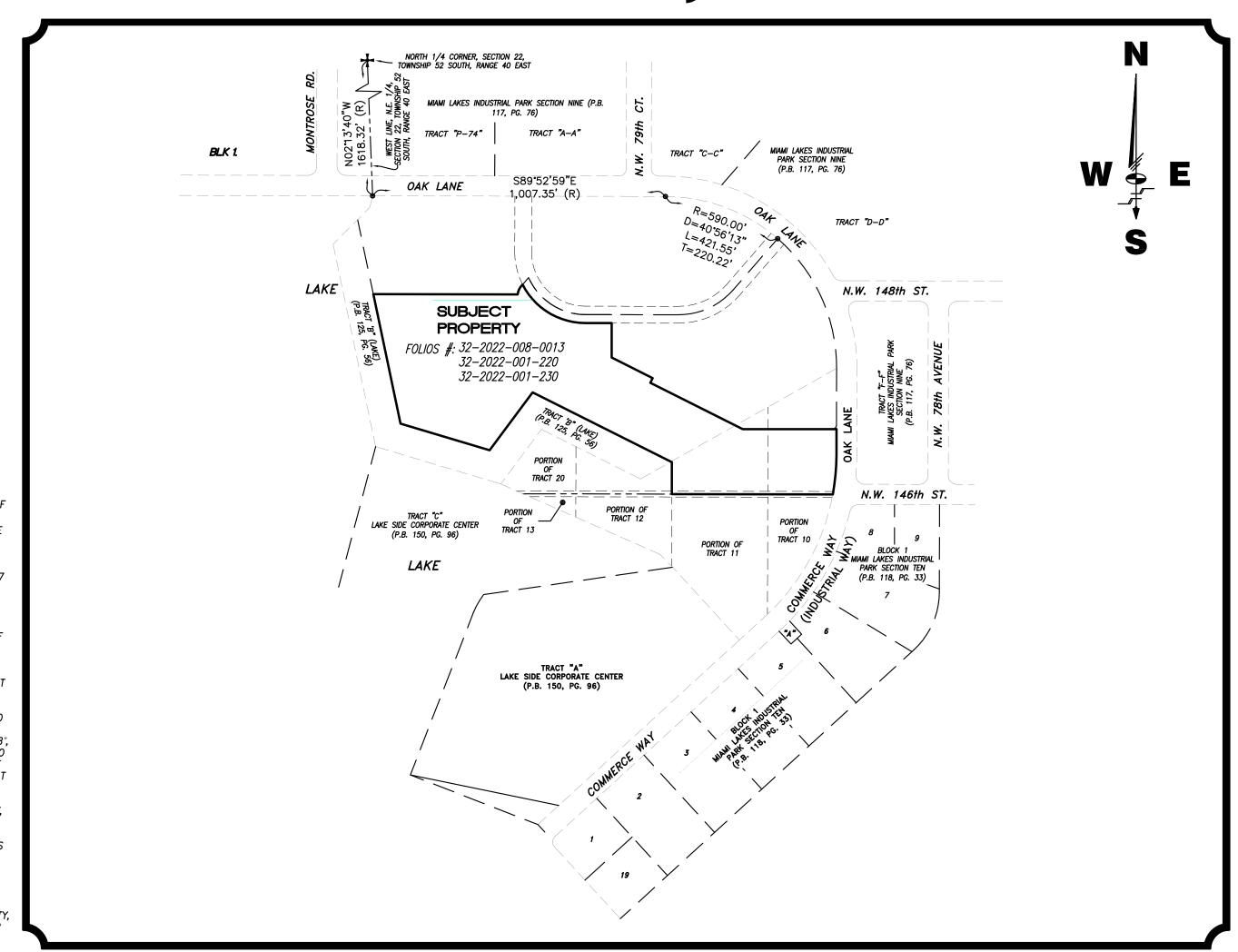
f. H.R.S. LETTER OF RELEASE REQUIRED FOR ALL WATER PROJECTS g. BILL OF SALE SKETCH (8½ x 11") FOR WATER AND SEWER, SEPARATELY

GOVERNORS SQUARE SR. COMMUNITY

TOWN OF MIAMI LAKES, FLORIDA SEC. 22, TWP. 52, RGE. 40

AKA THE RESIDENCES AT GOVERNORS SQUARE)

FEBRUARY, 2017



LOCATION SKETCH

SCALE: 1" = 300'

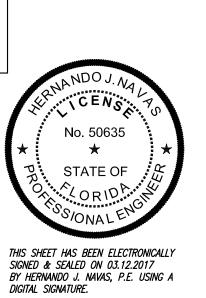
NOTE: ALL ELEVATIONS SHOWN ARE BASED ON NGVD 1929 DATUM

p r e p a r e d

SCHWEBKE-SHISKIN & ASSOCIATES, INC.

LAND PLANNERS - ENGINEERS - LAND SURVEYORS (LB & CA#87)

3240 CORPORATE WAY, MIRAMAR, FL. 33025 TEL: (305)652-7010 FAX: (305)652-8284



CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY

PRINTED COPIES SHALL HAVE AN ORIGINA

ELECTRONIC COPIES.

FILE No. ML-1159

SHEET 1 OF 30

Sheet List Table SHEET TITLE **NUMBER** COVER SHEET OVERALL WATER AND SEWER PLAN WATER AND SEWER PLAN WATER AND SEWER PLAN WATER AND SEWER PLAN WATER MAIN PROFILE C-7 WATER MAIN PROFILE SANITARY SEWER, PROFILE SANITARY SEWER, PROFILE WATER AND SEWER DETAILS C-11 OVERALL PAVING, GRADING AND DRAINAGE PLAN PAVING, GRADING AND DRAINAGE PLAN C-13 PAVING, GRADING AND DRAINAGE PLAN C-14 OVERALL GRADING PLAN GRADING PLAN **GRADING PLAN** PAVING, GRADING AND DRAINAGE DETAILS C-17 PAVING, GRADING AND DRAINAGE DETAILS C-19 CROSS SECTIONS C-20 CROSS SECTIONS **CROSS SECTIONS** C-22 **CROSS SECTIONS** LAKE CROSS SECTIONS LAKE CROSS SECTIONS

PAVEMENT MARKING AND SIGNAGE PLAN

EROSION AND SEDIMENT CONTROL PLAN

EROSION AND SEDIMENT CONTROL DETAILS

EROSION AND SEDIMENT CONTROL DETAILS

st not part of M-DWASD approval

LEGAL DESCRIPTION: (PARENT TRACT & CUT-OUT PARCEL)

SITE GEOMETRIC PLAN

SITE GEOMETRIC PLAN

FOLLOWING DESCRIBED PARCEL, ACCORDING TO THE PLAT OF "CHAMBERS LAND COMPANY SUBDIVISION", AS RECORDED IN PLAT BOOK 2 AT PAGE 68 OF THE PUBLIC RECORDS

MINUTES OF SECONDS WEST, ALONG THE WEST RIGHT—OF—WAY LINE OF INDUSTRIAL WAY (COMMERCE WAY) AS SHOWN ON THE PLAT OF "MIAMLLAKES INDUSTRIAL PARK 5.00 FFET AND A CENTRAL ANCLE OF 90 DEGREES O7 MINUTES O1 SECONDS FOR AN ARC DISTANCE OF 23.59 FFET TO A POINT OF TANGENCY. THENCE WEST FOR 265.4' ONCAVE TO THE SOUTHWESTERLY, HAVING A RADIUS OF 20.00 FEET AND A CENTRAL ANGLE OF 70 DEGREES 09 MINUTES 13 SECONDS FOR AN ARC DISTANCE OF 24.49 TO A POINT OF TANGENCY: THENCE NORTH 63 DEGREES 22 MINUTES 29 SECONDS WEST, ALONG A LINE THAT IS 38.00 FEET NORTHEASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, A NORTHEASTERLY LINE OF TRACT "B", AS SHOWN ON THE SAID PLAT OF "MIAMI LAKES OFFICE PARK", FOR 561.93 FEET TO A POINT OF CURVATURE; THENCE NORTHWESTERLY, WESTERLY AND SOUTHWESTERLY, ALONG THE ARC OF A CIRCULAR CURVE TO THE LEFT, CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 15.00 FEET SECONDS WEST. ALONG A LINE THAT IS PARALLEL WITH AND 38.00 FEET NORTHWESTERLY OF. AS MEASURED AT RIGHT ANGLES TO. A NORTHWESTERLY LINE OF SAID TRACT OR 177.72 FEET TO A POINT OF CURVATURE: THENCE SOUTHWESTERLY, WESTERLY AND NORTHWESTERLY, ALONG THE ARC OF A CIRCULAR CURVE TO THE RIGHT. CONCAVE HE NORTHWEST, HAVING A RADIUS OF 90.00 FEET AND A CENTRAL ANGLE OF 70 DEGREES OO MINUTES OO SECONDS FOR AN ARC DISTANCE OF 109.96 FEET TO A POINT C TANGENCY; THENCE NORTH 73 DEGREES 22 MINUTES 29 SECONDS WEST, ALONG A LINE THAT IS PARALLEL WITH AND 38.00 FEET NORTHEASTERLY OF, AS MEASURED AT RIGH THE RIGHT, CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 90.00 FEET AND A CENTRAL ANGLE OF 61 DEGREES 30 MINUTES 00 SECONDS FOR AN ARC DISTANCE OF 96.60 FEET TO A POINT OF TANGENCY; THENCE NORTH 11 DEGREES 52 MINUTES 29 SECONDS WEST, ALONG A LINE THAT IS PARALLEL WITH AND 38.00 FEET NORTHEASTERL F, AS MEASURED AT RIGHT ANGLES TO, A NORTHEASTERLY LINE OF SAID TRACT "B", FOR 371.19 FEET; THENCE SOUTH 89 DEGREES 52 MINUTES 59 SECONDS EAST FOR 157.66 FEET TO A POINT ON THE NEXT DESCRIBED CIRCULAR CURVE, SAID POINT BEARS NORTH 82 DEGREES 33 MINUTES 49 SECONDS WEST FROM THE RADIUS POINT O SECONDS WEST FROM THE RADIUS POINT OF THE FOLLOWING DESCRIBED CIRCULAR CURVE: THENCE SOUTHEASTERLY. ALONG THE ARC OF SAID CIRCULAR CURVE TO THE L CONCAVE TO THE NORTHEAST, HAVING A RADIUS OF 243.00 FEET AND A CENTRAL ANGLE OF 62 DEGREES 48 MINUTES 30 SECONDS FOR AN ARC DISTANCE OF 266.38 FEE MINUTES 29 SECONDS EAST FOR 158.04 FEET; THENCE SOUTH 26 DEGREES 37 MINUTES 31 SECONDS WEST, AT RIGHT ANGLES TO THE LAST AND NEXT DESCRIBED COURSES, FOR 18.00 FEET; THENCE SOUTH 63 DEGREES 22 MINUTES 29 SECONDS EAST FOR 355.60 FEET; THENCE EAST FOR 307.37 FEET TO A POINT OF CURVATURE; THENCE EASTERLY AND NORTHEASTERLY, ALONG THE ARC OF A CIRCULAR CURVE TO THE LEFT, CONCAVE TO THE NORTHWEST, HAVING A RADIUS OF 15.00 FEET AND A CENTRAL ANGLE OF 89 DEGREES 52 MINUTES 59 SECONDS FOR AN ARC DISTANCE OF 23.53 FEET TO A POINT OF TANGENCY; SAID POINT BEING THE POINT OF BEGINNING, ALL LYING AND BEING IN THE NORTHEAST 1/4 OF SECTION 22, TOWNSHIP 52 SOUTH, RANGE 40 EAST, AND THE SOUTHEAST 1/4 OF SECTION 22 TOWNSHIP 52 SOUTH, RANGE 40 EAST,

NOT PART OF M-DWASD NOTES NOR APPROVAL

FLOOD CRITERIA NOTES (NOT A PART OF M-DWASD NOTES NOR APPROVAL) 1. MIAMI-DADE COUNTY FLOOD CRITERIA = 6.60' N.G.V.D.

2.FEMA FLOOD ELEVATION = FLOOD ZONE AE 6.0 PER COMMUNITY PANEL NO. 1206860112L MAP DATED ON 9/11/2009.

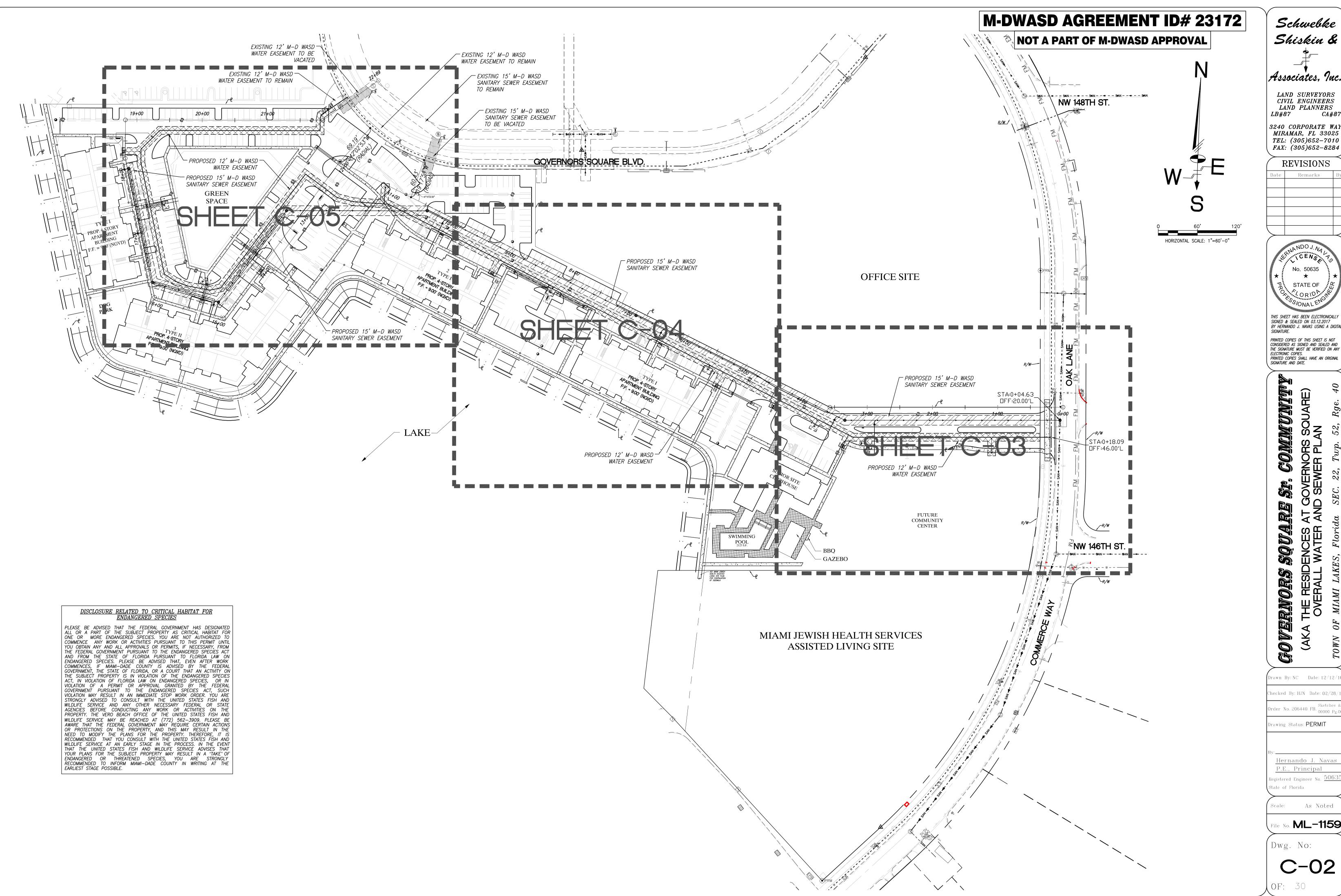
3.MIAMI-DADE COUNTY OCT. W.T. =3.40' N.G.V.D.



C-25

C-26

C-27



Schwebke Shiskin & Associates, Inc. LAND SURVEYORS CIVIL ENGINEERS

LAND PLANNERS 3240 CORPORATE WAY MIRAMAR, FL 33025

FAX: (305)652-8284 REVISIONS

Remarks

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 03.12.2017 BY HERNANDO J. NAVAS USING A DIGITAL PRINTED COPIES OF THIS SHEET IS NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY

ELECTRONIC COPIES. PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE.

SOUA ernors

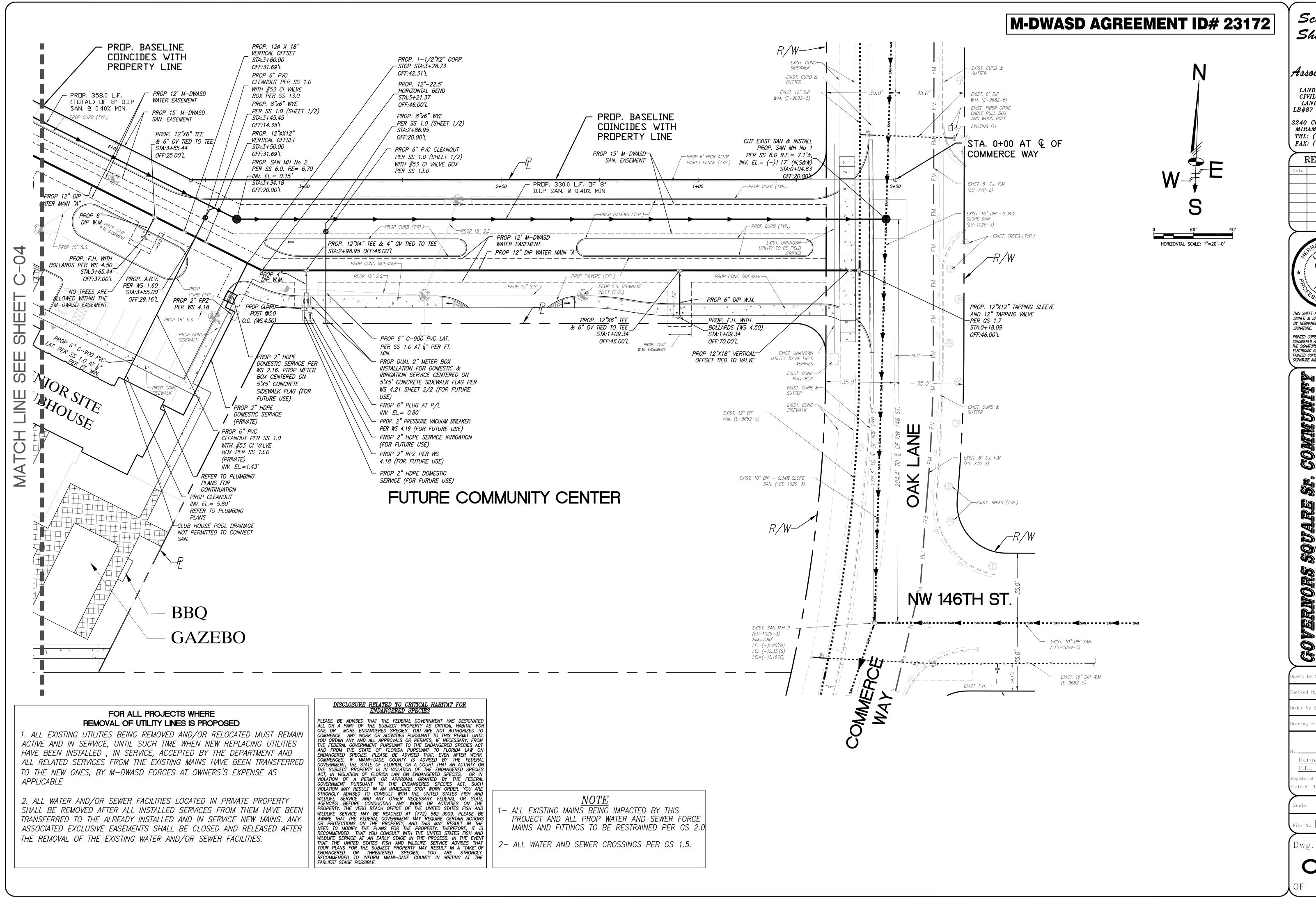
Drawn By: NC Date: 12/12/1 hecked By: HJN Date: 02/28/

rder No. 206440 FB. 00000 Pg. Prawing Status: PERMIT

Hernando J. Navas P.E., Principal

egistered Engineer No. <u>50635</u> atc of Florida

As Noted . ML-1159,



Schwebke Shiskin & _____ Associates, Inc.

Associates, Inc LAND SURVEYORS CIVIL ENGINEERS LAND PLANNERS

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS

Date Remarks

NO. 50635

*
STATE OF
ORIONAL EN

THIS SHEET HAS BEEN ELECTRONICALLY

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 03.12.2017
BY HERNANDO J. NAVAS USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS SHEET IS NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY

PRINTED COPIES OF THIS SHEET IS NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE.

AT GOVERNORS SQUARE)
SEWER PLAN

(AKA THE RESIDENCES AT GOVER WATER AND SEWER PROMISE AND SEVER PRO

ecked By: HJN Date: 02/28/17

der No. 206440 FB. Sketches & 00000 Pg.00

rawing Status: **PERMIT**

Hernando J. Navas
P.E., Principal
gistered Engineer No. 50635

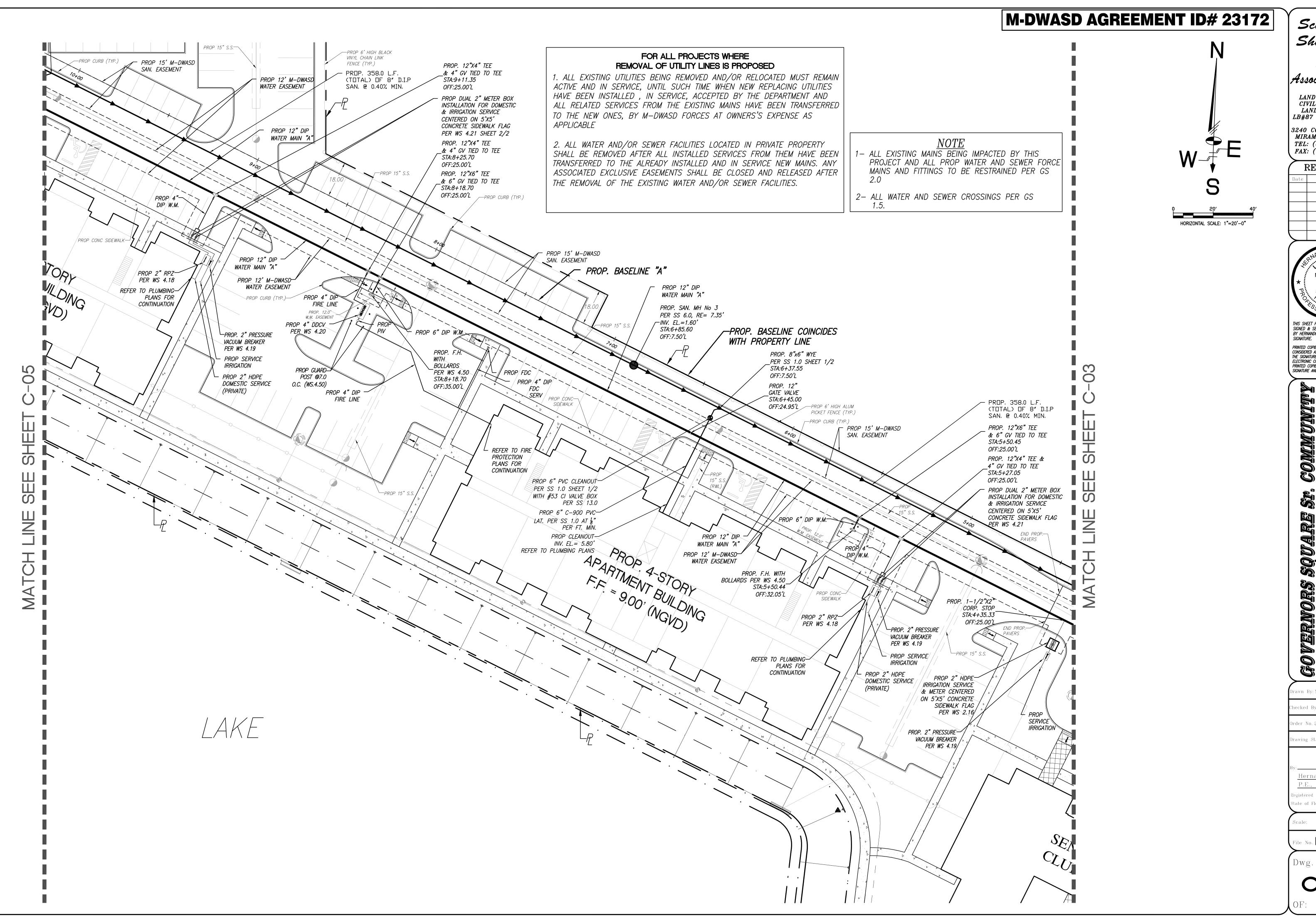
eate of Florida

Scale: As Noted

No. **ML-1159**

Dwg. No:

C-03



Schwebke Shiskin & Associates, Inc.

LAND SURVEYORS CIVIL ENGINEERS LAND PLANNERS

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS Remarks

No. 50635 STATE OF

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 03.12.2017 BY HERNANDO J. NAVAS USING A DIGITAL

PRINTED COPIES OF THIS SHEET IS NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.
PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE.

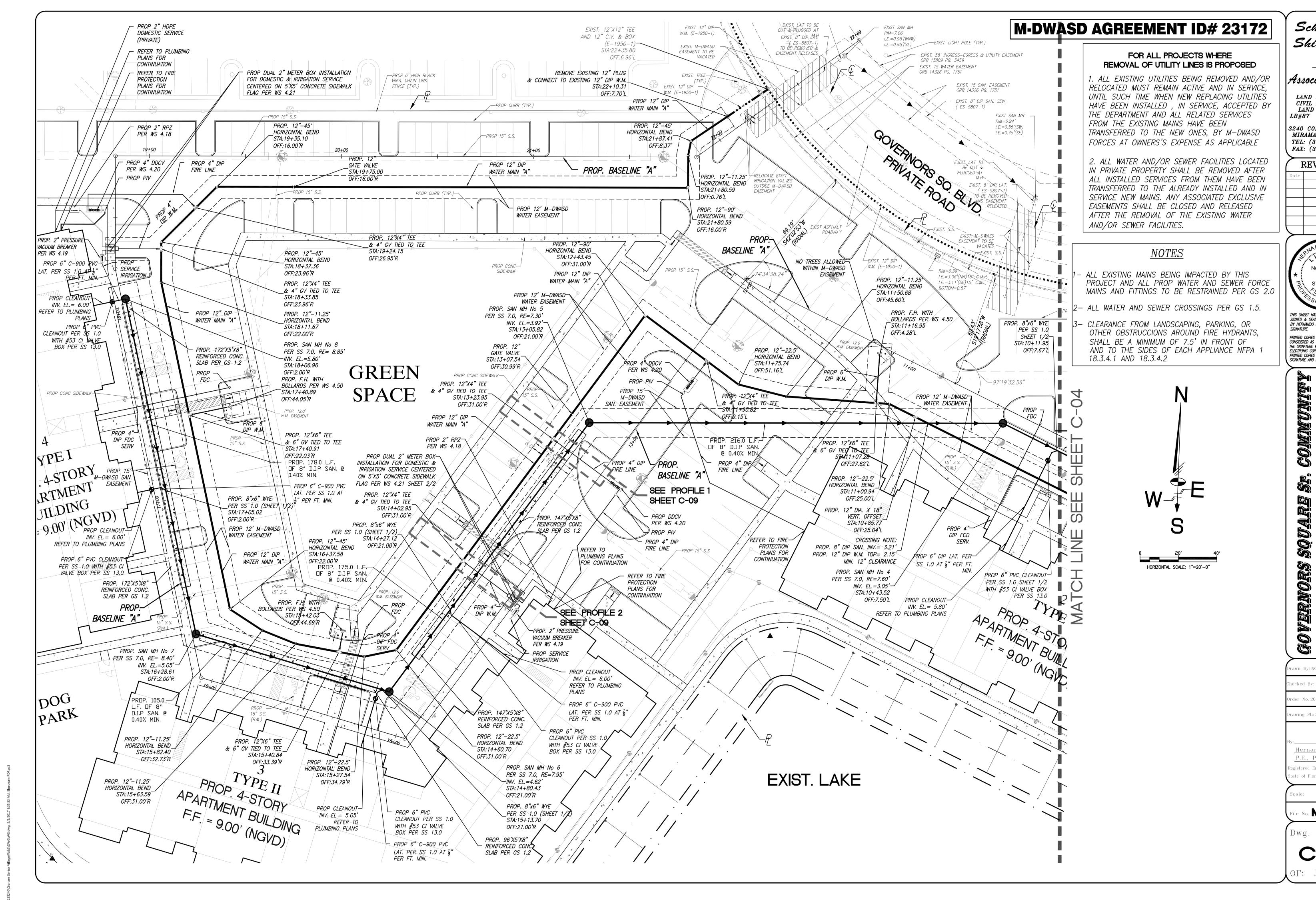
awn By: NC Date: 12/12/ ecked By: HJN Date: 02/28/

rder No. 206440 FB. $\frac{\text{Sketches}}{00000 \text{ Pg}}$

awing Status: PERMIT

P.E., Principal

ML-1159



Schwebke Shiskin &

Associates, Inc.

LAND SURVEYORS CIVIL ENGINEERS LAND PLANNERS

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS

No. 50635 STATE OF

NORIO!

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 03.12.2017 BY HERNANDO J. NAVAS USING A DIGITA

PRINTED COPIES OF THIS SHEET IS NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE.

GOVE WER F AT (SE)

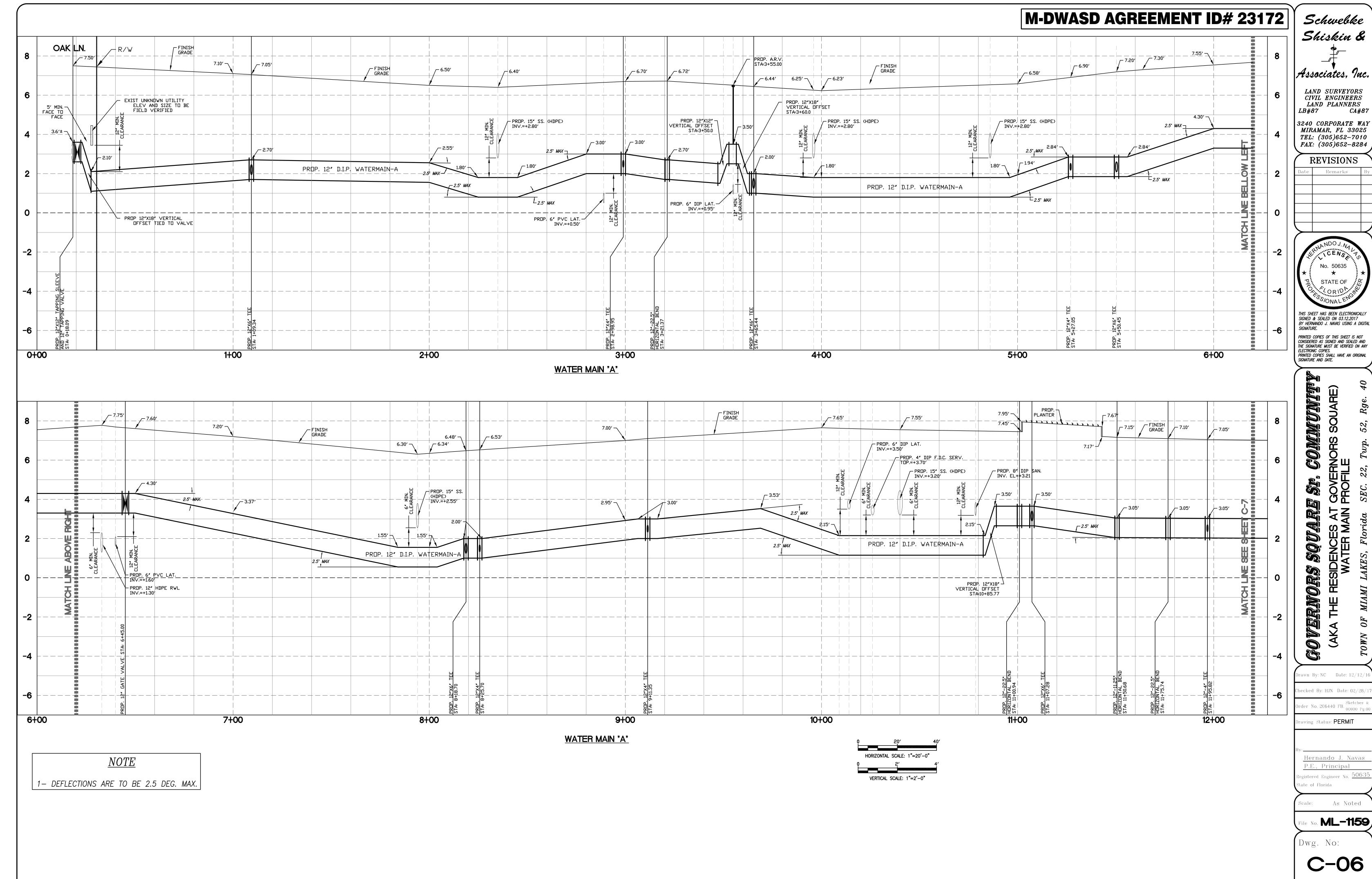
awn By: NC Date: 12/12 ecked By: HJN Date: 02/28 order No. 206440 FB. Sketches 00000 P

rawing Status: PERMIT

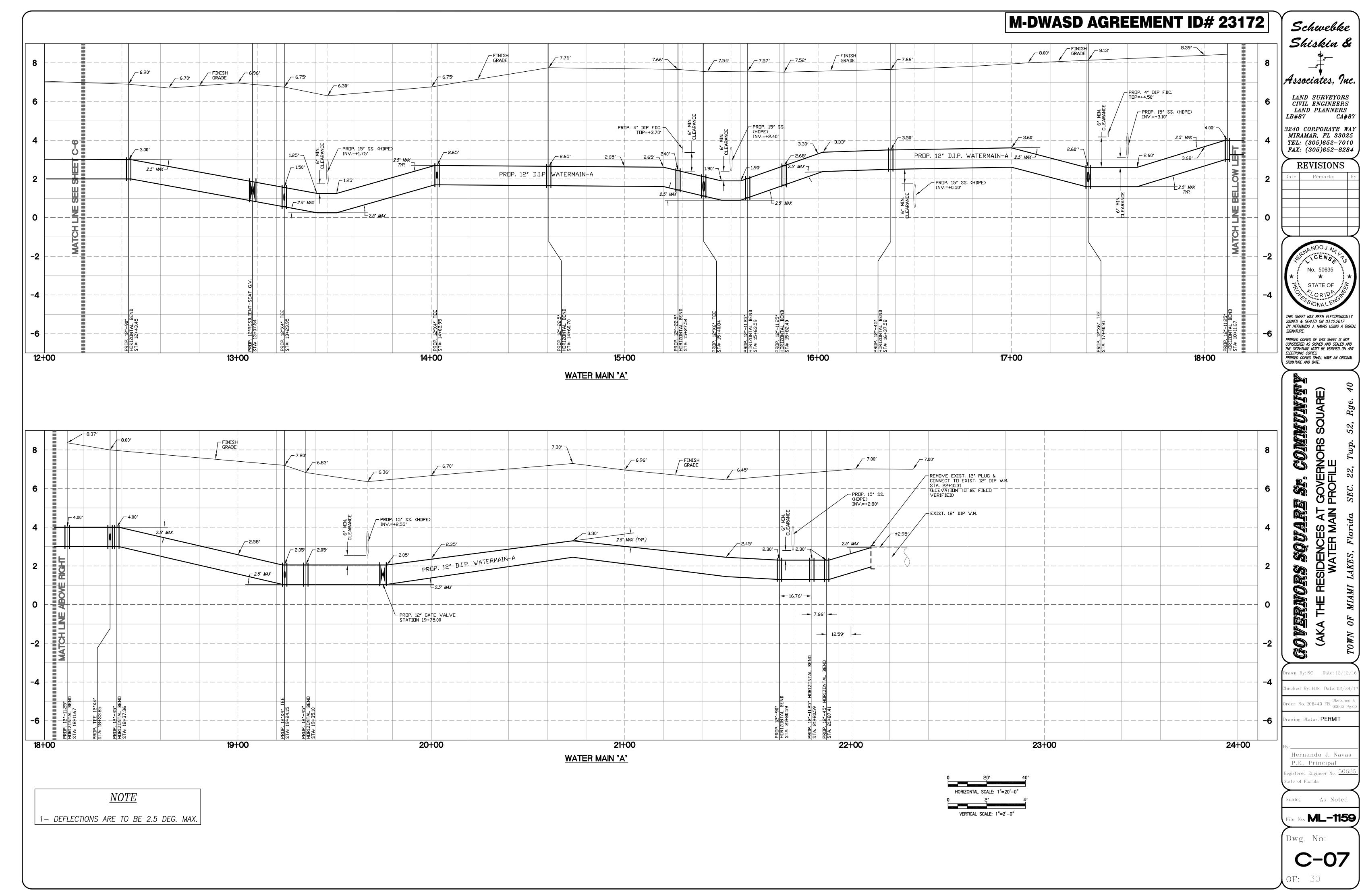
Hernando J. Nava P.E., Principal ate of Florida

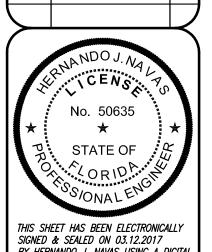
As Noted

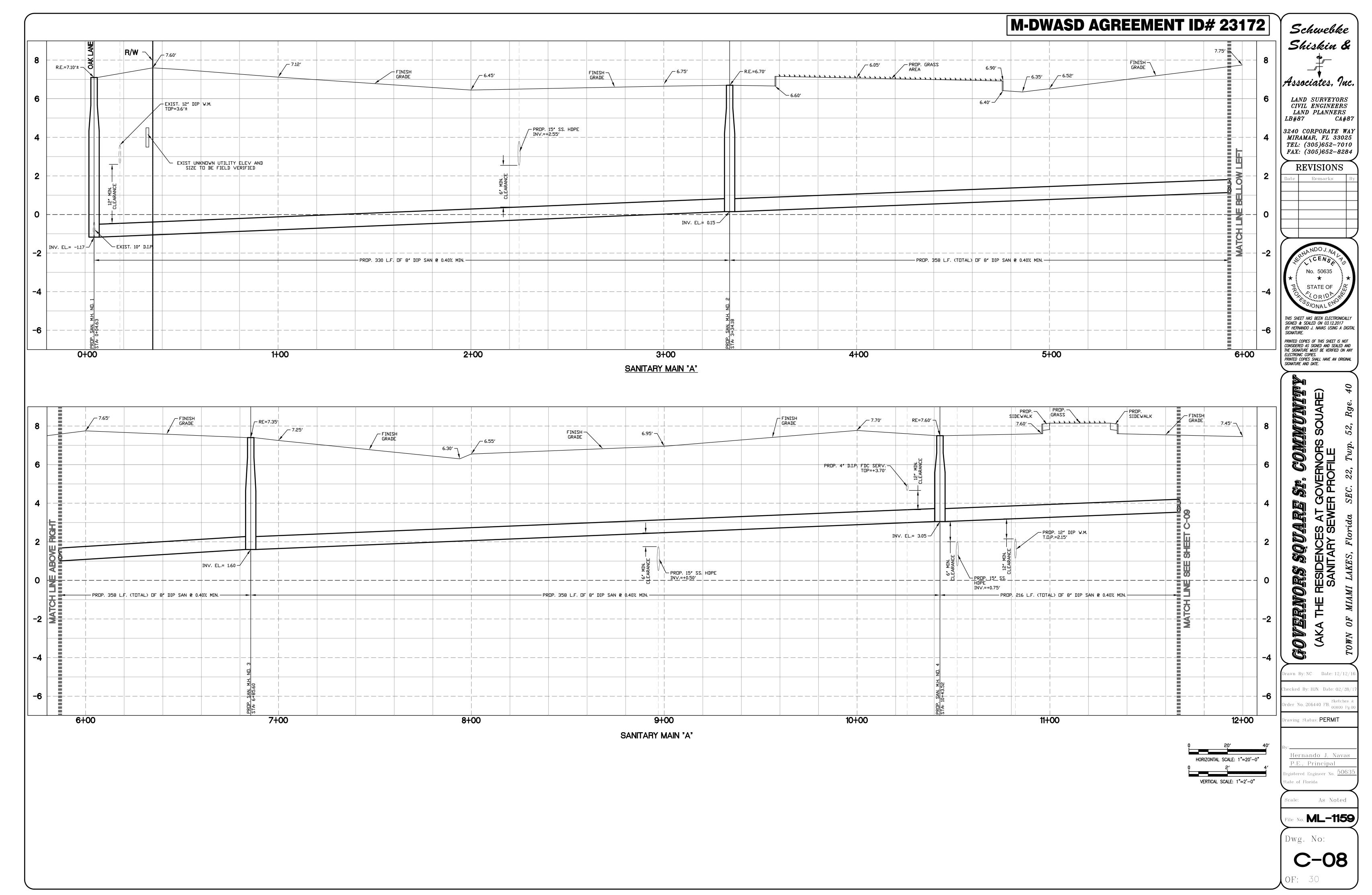
ML-1159



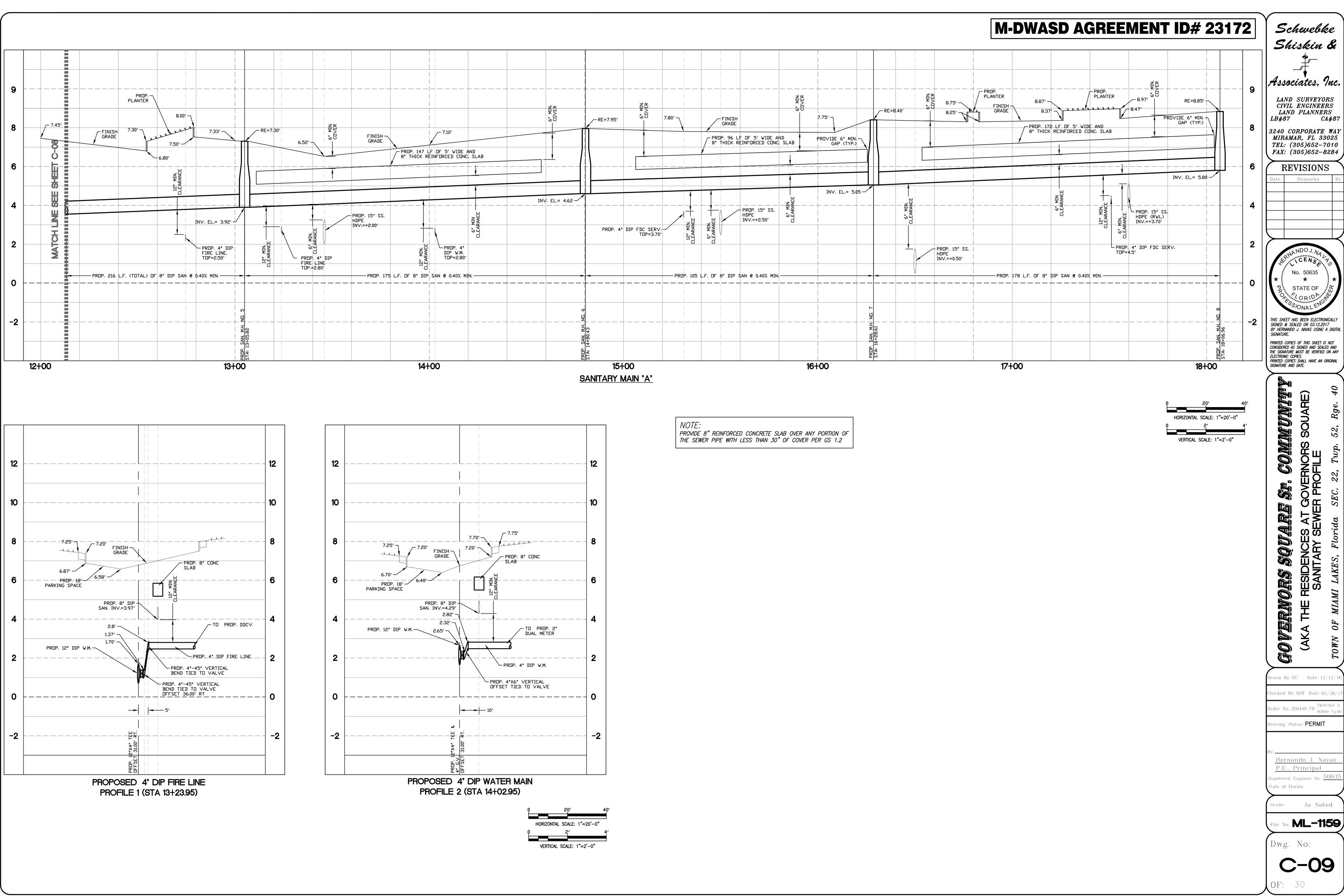
: 30





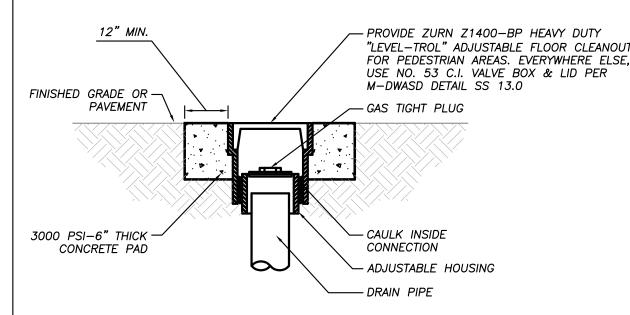


(S\DWG\WS,dwg, 5/4/2017 1:19:30 PM, Bluebeam PDF.pc3

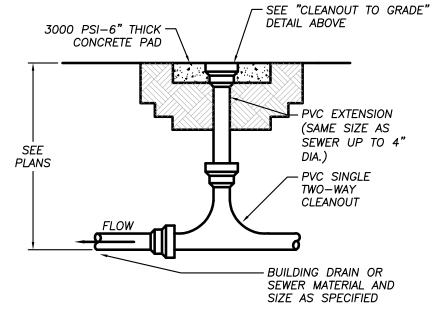


RER-DERM NOTES ON WATER-SEWER INSTALLATION (NOT PART OF M-DWASD NOTES NOR APPROVAL)

- 1. A HORIZONTAL DISTANCE OF AT LEAST 6 FEET, AND PREFERABLY 10 FEET (OUTSIDE TO OUTSIDE), SHALL BE MAINTAINED BETWEEN GRAVITY OR PRESSURE SEWER PIPES AND WATER PIPES. THE MINIMUM HORIZONTAL SEPARATION CAN BE REDUCED TO 3 FEET FOR VACUUM-TYPE SEWERS OR FOR GRAVITY SEWERS WHERE THE BOTTOM OF THE SEWER PIPE IS AT LEAST 6 INCHES BELOW THE BOTTOM OF THE WATER PIPE. WHEN THE ABOVE SPECIFIED HORIZONTAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWS IF: a. THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI.
- THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE. c. THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER PIPE.
- 2. A VERTICAL DISTANCE OF AT LEAST 12 INCHES (OUTSIDE TO OUTSIDE) SHALL BE MAINTAINED BETWEEN ANY WATER AND SEWER MAINS WITH SEWER PIPES PREFERABLY CROSSING UNDER WATER MAINS. THE MINIMUM VERTICAL SEPARATION CAN BE REDUCED TO 6 INCHES FOR VACUUM-TYPE SEWERS OR FOR GRAVITY SEWERS WHERE THE SEWER PIPE IS BELOW THE WATER MAIN. THE CROSSING SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST 6 FEET FROM ALL JOINTS IN GRAVITY AND PRESSURE SEWER PIPES. THIS DISTANCE CAN BE REDUCED TO 3 FEET FOR VACUUM-TYPE SEWERS. WHEN THE ABOVE SPECIFIED VERTICAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, SMALLER SEPARATIONS ARE ALLOWED IF:
 - a. THE SEWER PIPES ARE DESIGNED AND CONSTRUCTED EQUAL TO THE WATER PIPE AND PRESSURE TESTED AT 150 PSI. b. THE SEWER IS ENCASED IN A WATERTIGHT CARRIER PIPE OR CONCRETE.
- 3. AIR RELEASE VALVES SHALL BE PROVIDED AT HIGH POINTS OF NEW FORCE MAIN SANITARY SEWERS.
- 4. GRAVITY SANITARY SEWERS CONSTRUCTED WITHIN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE C-900 PVC OR DUCTILE IRON PIPE. THE MAXIMUM ALLOWABLE EXFILTRATION RATE OF GRAVITY SANITARY SEWERS CONSTRUCTED IN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE: a. RESIDENTIAL LAND USES. FIFTY (50) GALLONS PER INCH PIPE DIAMETER PER DAY, BASED ON A MINIMUM TWO (2) HOUR TEST HAVING A MINIMUM OF TWO (2) FEET OF POSITIVE HEAD ABOVE
- THE CROWN OF THE PIPE. b. NON—RESIDENTIAL LAND USES. TWENTY (20) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY, BASED ON A MINIMUM TWO (2) HOUR TEST HAVING A MINIMUM OF TWO (2) FEET OF POSITIVE HEAD ABOVE THE CROWN OF THE PIPE.
- c. ANY OBSERVED LEAKS OR ANY OBVIOUSLY DEFECTIVE JOINTS OR PIPES SHALL BE REPLACED EVEN WHEN THE TOTAL LEAKAGE IS BELOW THAT ALLOWED.
- 5. THE MAXIMUM ALLOWABLE EXFILTRATION RATE OF GRAVITY SANITARY SEWERS CONSTRUCTED OUTSIDE A PUBLIC WELLFIELD PROTECTION AREA SHALL BE ONE HUNDRED (100) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY, BASED ON A MINIMUM TWO (2) HOUR TEST HAVING A MINIMUM OF TWO (2) FEET OF POSITIVE HEAD ABOVE THE CROWN OF THE PIPE. ANY OBSERVED LEAKS OR ANY OBVIOUSLY DEFECTIVE JOINTS OR PIPES SHALL BE REPLACED EVEN WHEN THE TOTAL LEAKAGE IS BELOW THAT ALLOWED.
- 6. FORCE MAIN SANITARY SEWERS CONSTRUCTED WITHIN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE DUCTILE IRON, C-900 PVC, HDPE OR REINFORCED CONCRETE PRESSURE SEWER PIPES.
- 7. THE MAXIMUM ALLOWABLE EXFILTRATION/LEAKAGE RATE OF FORCE MAIN SANITARY SEWERS SHALL BE: a. DUCTILE IRON, C-900 PVC, HDPE AND PVC PIPE. THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AMERICAN WATER WORKS ASSOCIATION STANDARD (AWWAS) C600-82 AT A TEST PRESSURE OF 100 PSI FOR A DURATION OF NOT LESS THAN TWO (2) HOURS.
- b. REINFORCED CONCRETE PRESSURE PIPE. HALF (1/2) THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AWWA C600-82 AT A TEST PRESSURE OF 100 PSI FOR A DURATION OF NOT LESS THAN TWO (2) HOURS. c. ANY OBSERVED LEAKS OR ANY OBVIOUSLY DEFECTIVE JOINTS OR PIPES SHALL BE REPLACED EVEN WHEN THE TOTAL LEAKAGE IS BELOW THAT ALLOWED.
- 8. THE CONTRACTOR SHALL VERIFY NATURE, DEPTH, AND CHARACTER OF EXISTING UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- 9. IN NO CASE SHALL A CONTRACTOR INSTALL UTILITY PIPES, CONDUITS, CABLES, ETC. IN THE SAME TRENCH ABOVE AN EXISTING WATER OR SEWER PIPE EXCEPT WHERE THEY CROSS.
- 10. IF ANY AREA OF THE WORK SITE IS FOUND TO CONTAIN BURIED SOLID WASTE AND/OR GROUND OR GROUND WATER CONTAMINATION, THE FOLLOWING SHALL APPLY:
- a. ALL WORK IN THE AREA SHALL FOLLOW ALL APPLICABLE SAFETY REQUIREMENTS (E.G., OSHA, ETC.) AND NOTIFICATION MUST BE PROVIDED TO THE APPROPRIATE AGENCIES.
- b. IMMEDIATELY NOTIFY THE ENVIRONMENTAL MONITORING AND RESTORATION DIVISION (EMRD). THE EMRD CAN BE CONTACTED AT (305) 372-6700.
- c. IF CONTAMINATED SOILS AND/OR BURIED SOLID WASTE MATERIAL IS EXCAVATED DURING CONSTRUCTION, THEN THEY REQUIRE PROPER HANDLING AND DISPOSAL IN ACCORDANCE WITH THE LOCAL, STATE AND FEDERAL REGULATIONS. BE ADVISED THAT THE LANDFILL OWNER/OPERATOR IS THE FINAL AUTHORITY ON DISPOSAL AND MAY HAVE REQUIREMENTS BEYOND THOSE PROVIDED BY HEREIN. IF DISPOSAL WITHIN A MIAMI—DADE COUNTY OWNED LANDFILL (CLASS I LANDFILL) IS APPROPRIATE AND SELECTED, PLEASE CONTACT THE MIAMI—DADE COUNTY DEPARTMENT OF SOLID WASTE MANAGEMENT
- d. THE REUSE OF CONTAMINATED SOILS THAT ARE NOT RETURNED TO THE ORIGINAL EXCAVATION REQUIRES PRIOR APPROVAL OF A SOIL MANAGEMENT PLAN FROM THE ENVIRONMENTAL MONITORING AND RESTORATION DIVISION. THE EMRD CAN BE CONTACTED AT (305) 372-6700.



CLEANOUT TO GRADE (NOT PART OF M-DWASD NOTES OR APPROVAL)



EXTERIOR CLEANOUT (NOT PART OF M-DWASD NOTES OR APPROVAL)

<u>ENGINEER'S NOTES</u> (NOT PART OF M-DWASD NOTES NOR APPROVAL)

- 1. ALL MATERIALS AND LABOR UNDER THIS PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE MIAMI-DADE WATER AND SEWER AUTHORITY AND SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS AVAILABLE AND ON FILE WITH MIAMI—DADE WATER AND SEWER DEPARTMENT (AUTHORITY).
- 2. THE LOCATIONS OF THE EXISTING UTILITIES. SHOWN ON THE DRAWINGS, ARE BASED UPON THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER AND ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF THE UTILITIES LOCATED IN THE AREA OF THE PROPOSED WORK, PRIOR TO COMMENCING CONSTRUCTION (I.E., UNDERGROUND ELECTRIC, TELEPHONE, WATER, ETC.). THE ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE LOCATION OF ALL EXISTING UTILITIES OR FOR THOSE NOT SHOWN ON
- 3. COVER OVER WATER MAINS SHALL BE A MINIMUM OF 4'-0" UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- 4. ALL WATER MAIN LINE VALVES SHALL BE INSTALLED COMPLETE WITH 10" RISER PIPES AND NO. 3 VALVE BOXES. FIRE HYDRANTS AND SERVICE VALVES SHALL BE INSTALLED COMPLETE WITH 6" RISER PIPES AND NO.2 VALVE BOXES.
- 5. ALL WATER METERS WILL BE INSTALLED BY THE MIAMI-DADE WATER AND SEWER AUTHORITY, PROVIDING THE APPROPRIATE CHARGES HAVE BEEN PREPAID. THE METER BOX AND SERVICE PIPING SHALL BE INSTALLED BY THE CONTRACTOR.
- 6. FIRE HYDRANT REQUIREMENTS (NUMBER AND LOCATION) SHALL BE AS REQUIRED BY DADE COUNTY FIRE DEPARTMENT OR THE APPROPRIATE FIRE AGENCY WITH INSTALLATION IN ACCORDANCE WITH AUTHORITY STANDARDS.
- 7. THE MIAMI-DADE WATER AND SEWER AUTHORITY AND THE ENGINEER MUST BE NOTIFIED 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 8. ALL WATER MAINS SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA STANDARD C-651, LATEST REVISION. THE CONTRACTOR SHALL CONTACT THE LOCAL HEALTH DEPARTMENT AND REQUEST BACTERIOLOGICAL SAMPLES BE OBTAINED WITH COPIES BEING FORWARDED TO THE
- 9. AUTHORITY PERSONNEL WILL INSPECT ALL FACILITIES APPROVED BY THE AUTHORITY. THE OTHER PERMITTING AGENCIES SHALL INSPECT ALL FACILITIES APPROVED BY THEM AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THEIR STANDARDS AND REQUIREMENTS.
- 10. WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED AS COMPLETE UNTIL FINAL ACCEPTANCE OF THE SYSTEM BY MIAMI-DADE WATER AND SEWER AUTHORITY AND UNTIL THE FOLLOWING DOCUMENTS ARE RECEIVED AND APPROVED BY THE AUTHORITY: 1) EASEMENTS, IF REQUIRED BY THE OWNER
 - 2) CONTRACTOR'S WAIVER AND RELEASE OF LIEN 3) ABSOLUTE BILL OF SALE

AT (305) 594-6666 FOR INFORMATION.

- 4) CONTRACTOR'S MAINTENANCE BOND
- 5) "AS-BUILT" MYLAR, 24"X36": SHOWING T.O.P. ELEVATIONS AT 100' STATIONS; FINISH GRADE ELEVATIONS AT 200' STATIONS; OFFSET FROM R/W OR PL; STATION AND LENGTH OF SERVICES; THE POINT OF CONNECTION TO EXIST. MAINS TIED TO CENTER LINE OF EXIST. ROADS; ETC. FOR ALL WATER FACILITIES; RIM AND INVERT ELEVATIONS FOR ALL MANHOLES; DISTANCE AND SLOPE BETWEEN MANHOLES; SERVICE LOCATION AND LENGTHS; OFFSETS FOR MANHOLES FROM R/W OR PL FOR THE SEWER FACILITIES; AS LOCATED BY A LICENSED SURVEYOR; ALONG WITH THREE (3) PRINTS OF THE "AS-BUILT" WHICH HAS BEEN SEALED BY THE SURVEYOR.
- 11. ALL CONNECTIONS FROM EXISTING AUTHORITY MAINS TO BE MADE BY AUTHORITY FORCES ONLY. THE CONTRACTOR TO EXCAVATE AT REQUIRED LOCATIONS AND PROVIDE MATERIAL WITH FITTINGS.
- 12. IF A VERTICAL DISTANCE BETWEEN THE WATER AND SEWER MAINS IS LESS THAN 18 INCHES WHEN A WATER MAIN CROSSES OVER A SEWER MAIN, OR ANY TIME A WATER MAIN CROSSES UNDER A SEWER MAIN, THE SEWER SHALL BE D.I.P. FOR A DISTANCE OF 20 FEET CENTERED ON THE CROSSING.
- 13. MAINTAIN 10 FEET HORIZONTAL DISTANCE BETWEEN THE WATER AND SEWER MAINS, AS A MINIMUM.
- 14. CONTRACTOR WILL BE REQUIRED TO OBTAIN THE LATEST PAVING AND DRAINAGE PLAN PREPARED BY SCHWEBKE—SHISKIN AND ASSOCIATES, INC. AND HAVE IT AVAILABLE AT THE JOB SITE FOR THE USE OF MIAMI—DADE WATER AND SEWER AUTHORITY PERSONNEL.
- 15. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH AWWA STANDARD C-600, LATEST REVISION, AND APPLYING THE FOLLOWING FORMULA:
- $L = [SD*(P^{1})]/148,000$

COUNTY CODE.

- L = LEAKAGE IN GALLONSS = LENGTH OF PIPE IN FEET
- D = DIAMETER OF PIPE IN INCHESP = AVERAGE TEST PRESSURE IN LBS. PER SQ. IN.
- 16. ALL WATER METERS AND SERVICE LINES THAT WILL BE CONNECTED TO EXISTING WATER MAINS WILL BE INSTALLED BY AUTHORITY
- PERSONNEL.
- 17. IN THE EVENT UNSUITABLE MATERIAL IS ENCOUNTERED AT THE DEPTH OF THE PROPOSED WATER AND SEWER FACILITIES, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD FOR PROPER DIRECTION PRIOR TO CONTINUANCE OF CONSTRUCTION.
- 18. ALL VALVE BOXES AND MANHOLE RIMS SHALL BE SET TO MATCH THE PROPOSED GRADES AS PER THE PAVING AND DRAINAGE PLAN PREPARED BY SCHWEBKE-SHISKIN & ASSOCIATES, INC.
- 19. ALL WATER AND SEWER SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MIAMI—DADE WATER AND SEWER AUTHORITY STANDARDS.
- 20. ALL SEWERS INSTALLED WITHIN THE CONE OF INFLUENCE SHALL NOT EXFILTRATE AT THE RATE IN EXCESS OF 100 GALLONS PER DAY PER INCH DIA. PER MILE AND ALL CONSTRUCTION SHALL BE IN CONFORMITY WITH ALL REQUIREMENTS OF SECTION 24-12.1 OF THE DADE
- 21. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND CHAPTER 90-86 (CS/BS 2626) THE FLORIDA TRENCH SAFETY ACT SHALL BE STRICTLY OBSERVED.
- 22. ALL ELEVATIONS ON THE PLANS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM (NGVD).
- 23. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY TO HIS EMPLOYEES AND SUBCONTRACTORS FOR THEIR USE DURING CONSTRUCTION.
- 24. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHT—OF—WAY SHALL BE IN ACCORDANCE WITH THE DADE COUNTY PUBLIC WORKS DEPARTMENT STANDARDS.

SELECT MATERIAL IN LAYERS NOT ALL SOLID PIPE O EXCEED 12". EACH COMPACTED -JOINTS SHALL BE WRAPPED WITH FILTER FABRIC O 98% OF MAXIMUM DENSITY UNDER STRUCTURES OR PAVED AREAS AND 95% ELSEWHERE. -BACKFILL CONSOLIDATED TO CENTERLINE OF PIP FLAT OR RESTORED TRENCH BOTTOM (FOR UNSUITABLE —

1. BEDDING MATERIAL WHEN NECESSARY, SHALL BE CLEAN SANDY SOIL WHENEVER AVAILABLE WITHIN THE LIMITS OF CONSTRUCTION. IMPORTED BEDDING SHALL BE WELL GRADED 3/4" MAX. SIZED CRUSHED LIMEROCK. ALL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY BEFORE ANY PIPE IS LAID.

W=TRENCH WIDTH D=DIAMFTER

2. DENSITY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-180 AND ASTM D-3017.

PIPE O.D. + 2' MAXIMUM

TRENCH DETAIL N.T.S.

NOT PART OF WASD APPROVAL

NOTE: NOT A PART OF M-DWASD NOTES OR APPROVAL

CONTRACTOR TO COORDINATE ALL WORK TO BE DONE BY M-DWASD FORCES AT OWNERS EXPENSE. COORDINATION INCLUDES, BUT IS NOT LIMITED TO THE

- FOLLOWING: 1. DEALING WITH M-DWASD OFFICIALS AT THE BEGINING OF THE PROJECT TO ENSURE THAT THE M—DWASD WORK WILL NOT IMPACT THE PROJECT SCHEDULE.
- 2. OBTAINING ANY CHECKS OR OTHER FORMS OF PAYMENT FROM THE DEVELOPER.
- 3. PROVIDING THE OWNER AND ENGINEER OF RECORD WITH M-DWASD'S ANTICIPATED WORK SCHEDULE.

DEPARTMENT OF HEALTH (NOT PART OF M-DWASD NOTES NOR APPROVAL)

WATER MAIN HORIZONTAL SEPARATIONS

- 1. SEPARATIONS SHALL BE MEASURED OUTSIDE EDGE TO OUTSIDE EDGE.
- 2. BETWEEN WATER MAINS AND STORM SEWERS, STORMWATER FORCE MAINS, OR RECLAIMED WATER LINES, <u>SHALL BE 3 FT. MINIMUM.</u>
- 3. BETWEEN WATER MAINS AND VACUUM TYPE SEWER <u>PREFERABLY 10 FT. AND AT LEAST 3 FT. MINIMUM</u>.
- 4. GRAVITY OR PRESSURE SANITARY SEWERS, WASTEWATER FORCE MAINS OR RECLAIMED WATER PREFERABLY 10 FT. AND AT LEAST 6 FT. DISTANCE BETWEEN WATER MAIN AND GRAVITY SEWER MAY BE REDUCED TO 3 FT. WHERE <u>BOTTOM</u> OF WATER MAIN IS <u>AT LEAST 6 INCHES ABOVE TOP OF SEWER</u>
- 5. <u>10 FT. MINIMUM TO ANY PART</u> OF ON-SITE SEWER TREATMENT OR DISPOSAL SYSTEM.

WATER MAIN VERTICAL SEPARATIONS

- 1. SEPARATIONS BETWEEN WATER MAINS AND VACUUM TYPE SEWER, OR STORM SEWERS TO BE PREFERABLY 12 INCHES, OR AT LEAST 6 INCHES ABOVE, OR AT LEAST 12 INCHES IF BELOW.*
- 2. PRESSURE SANITARY SEWER, WASTEWATER, OR STORMWATER FORCE MAIN, OR RECLAIMED WATER, AT LEAST 12 INCHES ABOVE OR BELOW.*
- *NOTE: CENTER ONE FULL LENGTH OF WATER MAIN PIPE AT CROSSINGS; ALTERNATIVELY ARRANGE PIPES SO JOINTS ARE AT LEAST 3 FEET FROM JOINTS IN VACUUM, STORMWATER, OR STORMWATER FORCE MAINS. AT LEAST 6 FEET FROM JOINTS IN GRAVITY OR PRESSURE SEWERS, WASTEWATER FORCE MAINS, OR RECLAIMED WATER

ALL WATER MAINS 24 INCHES IN DIAMETER OR LESS, SHALL BE BLUE IN COLOR OR HAVE A 2 INCH WIDE BLUE STRIPE PAINTED ALONG THE CENTERLINE OF THE PIPE.

M-DWASD AGREEMENT ID# 23172



LAND SURVEYORS CIVIL ENGINEERS LAND PLANNERS *LB#87*

*3240 CORPORATE WA*Y MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS Remarks



PRINTED COPIES OF THIS SHEET IS NOT Considered as Signed and Sealed and THE SIGNATURE MUST BE VERIFIED ON ANY

DIGITAL SIGNATURE.

BY HERNANDO J. NAVAS, P.E. USING A

SIGNATURE AND DATE. ШΩ A P W)

Shecked By: HJN Date: 02/28/

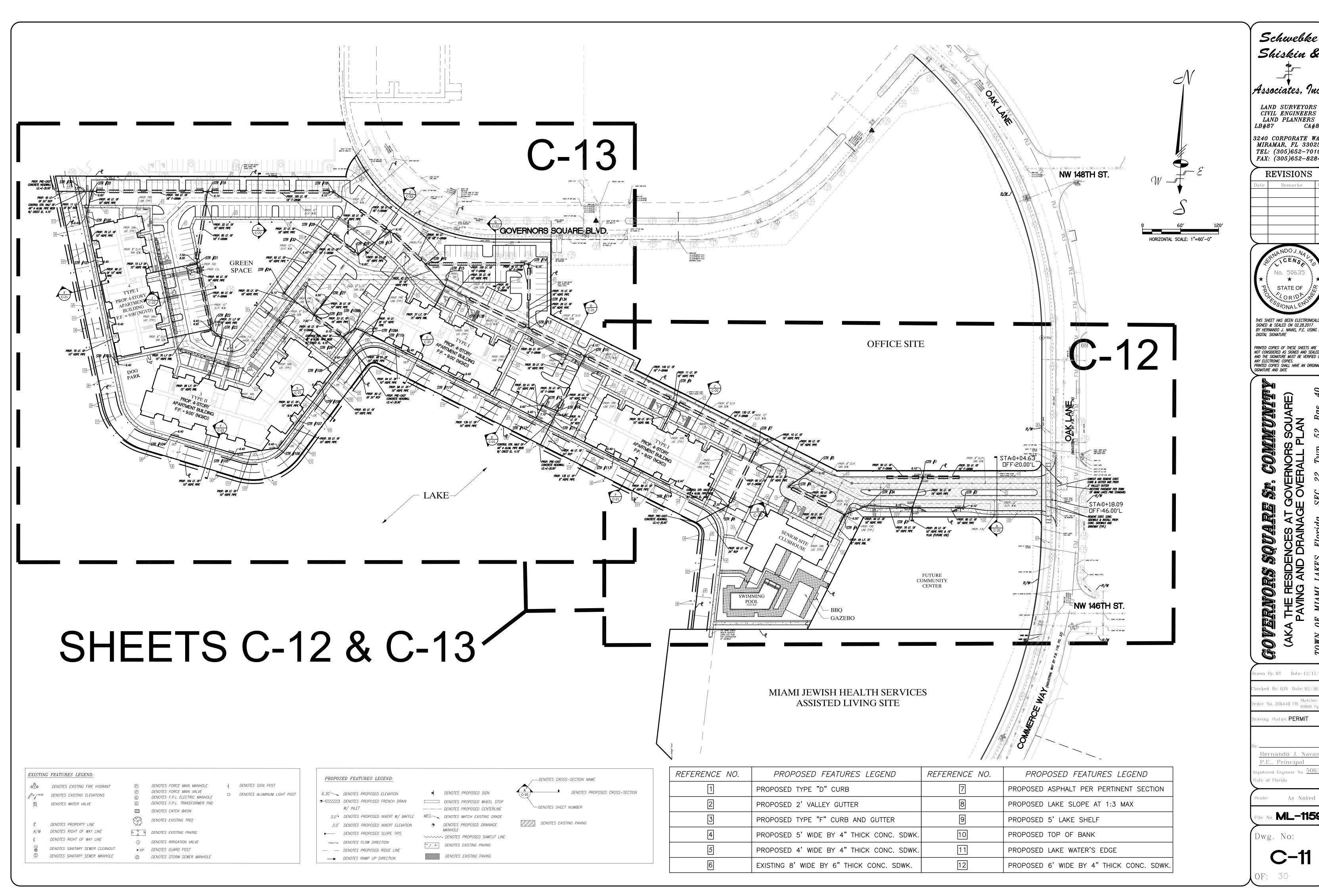
Order No. 206440 FB. 00000 Pg.C

Drawing Status: PERMIT

Hernando J. Navas P.E., Principal

Registered Engineer No. 50635 State of Florida

> As Noted Scale: File No. **ML-1159**



Schwebke Shiskin &

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 02.28.2017 BY HERNANDO J. NAVAS, P.E. USING A DIGITAL SIGNATURE

rawn By: MT Date: 12/12/1

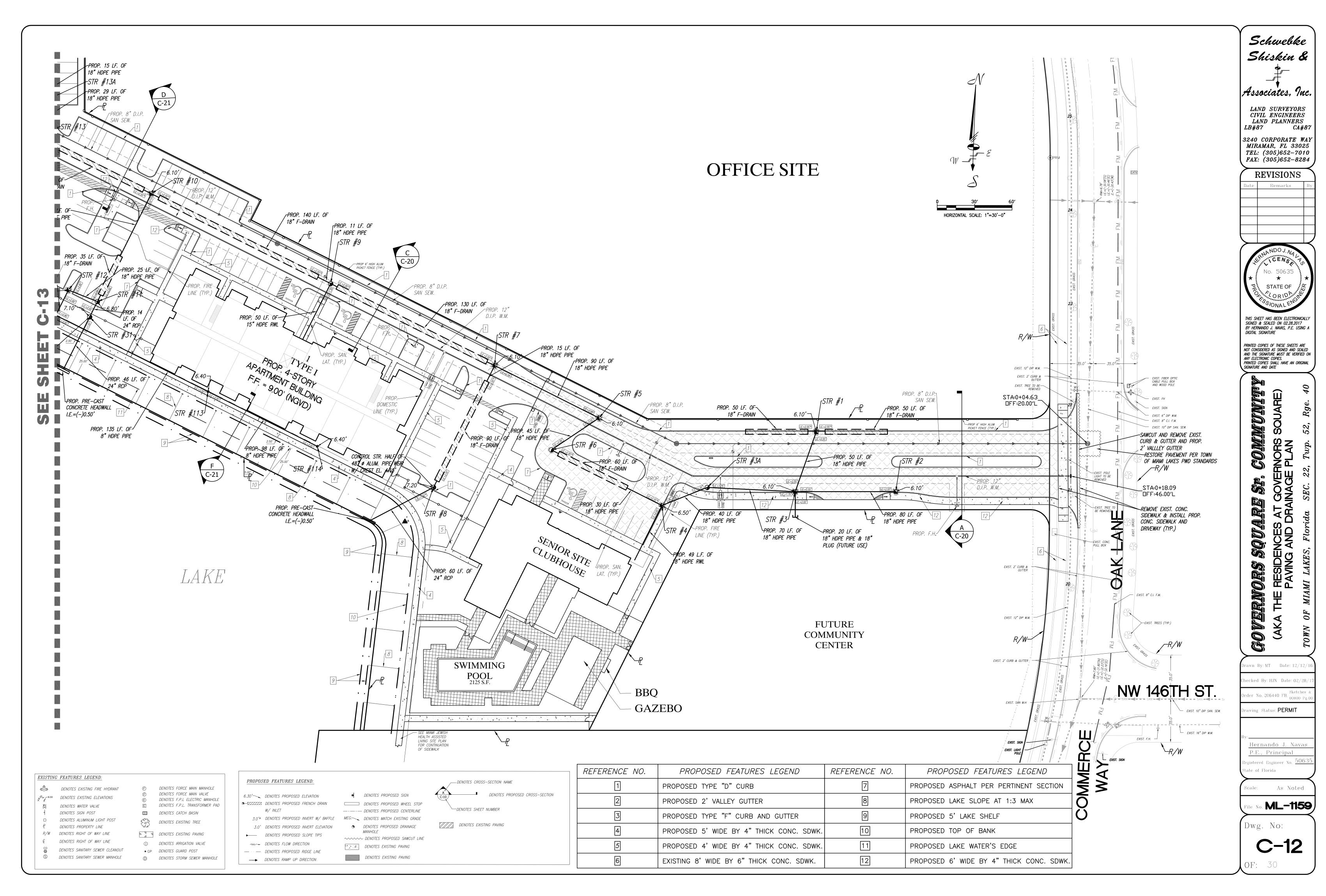
ecked By: HJN Date: 02/28 Order No. 206440 FB. $\frac{\text{Sketches}}{00000 \text{ Pg}}$

gistered Engineer No. 5063

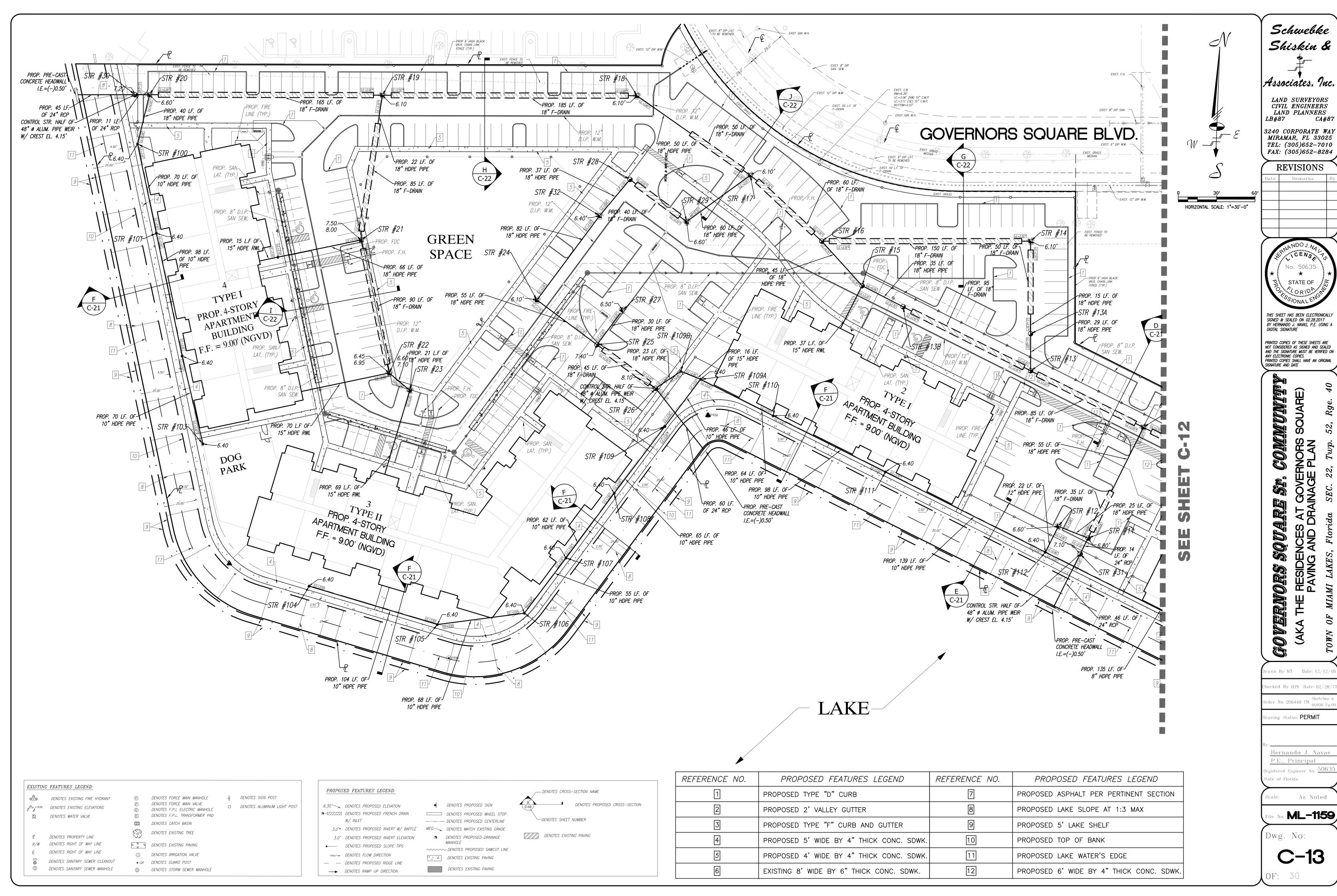
As Noted

ML-1159

C-11



nior Village\P&D\DWG\P&D.dwg, 5/5/2017 9:40:00 AM, Bluebeam PDF.pc



Shiskin &

LAND SURVEYORS CIVIL ENGINEERS

3240 CORPORATE WAY MIRAMAR, FL 33025 TEL: (305)652-7010 FAX: (305)652-8284

REVISIONS

THIS SHEET HAS BEEN ELECTRONICALLY SIGNED & SEALED ON 02.28.2017 BY HERNANDO J. NAVAS, P.E. USING A

PRINTED COPIES OF THESE SHEETS ARE NOT CONSIDERED AS SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES. PRINTED COPIES SHALL HAVE AN ORIGINAL SIGNATURE AND DATE

awn By: MT Date: 12/12/ hecked By: HJN Date: 02/28 Order No. 206440 FB. Sketches 00000 Pg

rawing Status: PERMIT

Hernando J. Navas

As Noted

