

I. APPLICABLE CODES

- A. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO CITY STANDARDS AND SPECIFICATIONS, AND ALL OTHER LOCAL, STATE AND NATIONAL CODES WHERE APPLICABLE. ALL CONSTRUCTION WITHIN FOOT R/W SHALL BE CONSTRUCTED PER FOOT MINIMUM STANDARDS. ALL CONSTRUCTION WITHIN BROWARD COUNTY R/W SHALL BE CONSTRUCTED PER BROWARD COUNTY MINIMUM STANDARDS.
- B. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF 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.), UNLESS OTHERWISE NOTED.
- D. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO CITY, BROWARD COUNTY AND/OR FOOT SPECIFICATIONS (WHICHEVER APPLIES).
- E. CITY, BROWARD COUNTY AND/OR FOOT SPECIFICATIONS SHALL DICTATE WHEN IN CONFLICT WITH ANY OF THE FOLLOWING SPECIFICATIONS.
- F. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLIANCE WITH THE STATE OF FLORIDA TRENCH SAFETY ACT.

II. PRECONSTRUCTION RESPONSIBILITIES

- A. 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, THE OWNER AND THE ENGINEER OF RECORD.
- B. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL OF FLORIDA CERTIFICATION NUMBER AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION, CALL 1-800-432-4770.
- C. ALL UTILITY EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION (IF REQUIRED).
- 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 FACILITIES SHOWN OR FOR ANY FACILITY NOT SHOWN. THE CONTRACTOR SHALL VERIFY, IF POSSIBLE, 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 PROBLEM.
- E. A SEPARATE CALCULATED SITE PLAN WILL BE REQUIRED PRIOR TO CONSTRUCTION TO VERIFY PROPOSED BUILDING, CURB, AND SITE WORK LOCATIONS.
- F. 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 GENERAL PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES THAT DISTURBS AN ACRE OR MORE OF LAND" FORM (DEP FORM 62-621.300(4)(B)) TO DEEP NOTICES CENTER. THE CONTRACTOR WILL BE RESPONSIBLE FOR: (1) IMPLEMENTATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE DEVELOPED PRIOR TO THE N.O.I. SUBMITTAL, AND (2) 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 DEEP TO DISCONTINUE PERMIT COVERAGE, SUBSEQUENT TO COMPLETION OF CONSTRUCTION. FOR ADDITIONAL INFORMATION SEE DEP WEBSITE: <http://www.dep.state.fl.us/water/stormwater/hpdes>. CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE A SWPPP AND SUBMIT TO THE ENGINEER FOR APPROVAL AND COMPLY WITH ALL PROVISIONS OF CHAPTER 62-621.
- G. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED DEWATERING PERMITS AND TREE REMOVAL / RELOCATION PERMITS.

III. INSPECTIONS

- A. THE CONTRACTOR SHALL NOTIFY THE CITY'S ENGINEERING DEPARTMENT, BROWARD COUNTY, THE ENGINEER OF RECORD, FOOT, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO THE INSPECTION OF THE FOLLOWING ITEMS, WHERE APPLICABLE:
- CLEARING AND FILLING
  - STORM DRAINAGE SYSTEM
  - SANITARY SEWER SYSTEM
  - WATER DISTRIBUTION SYSTEM
  - SUBGRADE
  - LIMEROCK BASE
  - ASPHALTIC CONCRETE / PAVEMENT BRICK COURSE
  - SIDEWALK
  - 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: SANITARY MANHOLES, STORM DRAIN MANHOLES, CATCH BASINS, FIRE HYDRANTS, PIPING, VALVES AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

V. TEMPORARY FACILITIES

- A. TEMPORARY FACILITIES:
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES, TELEPHONE SERVICE AND ELECTRICITY.
- B. TRAFFIC REGULATION:
- MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH M.U.T.C.D.
  - 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.
  - NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF THE CITY.
  - 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.

VI. WATER DISTRIBUTION SYSTEM

- A. BROWARD COUNTY HEALTH DEPT. & CITY STANDARDS AND SPECIFICATIONS SHALL GOVERN & SUPERCEDE ALL OTHER REQUIREMENTS FOR WATERMAIN CONSTRUCTION.
- B. SEPARATION OF WATER AND SEWER MAINS
- SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS SHOULD CROSS UNDER WATER MAINS WHENEVER POSSIBLE. SANITARY SEWERS, STORM SEWERS, AND FORCE MAINS CROSSING WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE.

- WHERE SANITARY SEWERS, STORM SEWERS, OR FORCE MAINS MUST CROSS A WATER MAIN WITH LESS THAN 18 INCHES VERTICAL DISTANCE, BOTH THE SEWER AND THE WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. SUFFICIENT LENGTHS OF DIP MUST BE USED TO PROVIDE A MINIMUM SEPARATION OF 10 FEET BETWEEN ANY TWO JOINTS. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT ALL CROSSINGS.
- ALL CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIVALENT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).
- WHERE A NEW PIPE CONFLICTS WITH AN EXISTING PIPE WITH LESS THAN 18 INCHES VERTICAL CLEARANCE, THE NEW PIPE SHALL BE CONSTRUCTED OF DIP, AND THE CROSSING SHALL BE ARRANGED TO MEET THE REQUIREMENTS ABOVE.
- A MINIMUM 10-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
- IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10-FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
- WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SANITARY SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP WITH A MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).
- CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL EXISTING FACILITIES DURING CONSTRUCTION.

C. MATERIALS:

- ALL PIPE LARGER THAN 12" DIAMETER MUST BE DUCTILE IRON (MIN. CLASS 50), 8" AND 10" DIP (MIN. CLASS 50) 4" AND 6" DIP (MIN. CLASS 50). ALL DUCTILE IRON PIPE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA C151/A21.51-02 AND CEMENT MORTAR LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03. SEE CITY AND BROWARD COUNTY STANDARDS & SPECIFICATIONS FOR FURTHER D.I.P. REQUIREMENTS.
- FITTINGS SHALL BE COMPACT DUCTILE IRON MECHANICAL JOINT TYPE AND SHALL BE CLASS 350 THROUGH 24" CONFORMING TO ANSI/AWWA C-153/A21.51-00 SPECIFICATIONS. ALL DUCTILE IRON PIPE SHALL BE CEMENT LINED AND SEAL COATED PER ANSI/AWWA C104/A21.4-03.
- VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 150 PSI AND CONFORMING TO ANSI/AWWA C509-01 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
  - GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2370-20, RESILIENT SEATED GATE VALVES SHALL BE AMERICAN APT2002 LINE OR CLOW F-6100, CONFORMING TO ANSI/AWWA C500-02. SEE BROWARD COUNTY, AND CITY CONSTRUCTION STANDARDS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - TAPPING VALVES SHALL BE MUELLER H615 OR APPROVED EQUAL.
  - GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS. NO SUBSTITUTIONS ALLOWED.
- TAPPING SLEEVES SHALL BE MUELLER H615, CLOW F-2505 OR APPROVED EQUAL. SEE BROWARD COUNTY, AND CITY CONSTRUCTION STANDARDS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- VALVE BOXES SHALL BE US FOUNDRY SERIES 7500 OR APPROVED EQUAL.
- RETAINER GLANDS SHALL CONFORM TO ANSI/AWWA C111/A21.11-00 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING. CLOW CORPORATION MODEL T-1058, STANDARDS ARE PROTECTION EQUIPMENT COMPANY OR APPROVED EQUAL.
- DRESSER COUPLINGS SHALL BE REGULAR BLACK COUPLINGS WITH PLAIN GASKETS FOR GALVANIZED STEEL PIPE. THEY SHALL BE DRESSER STYLE 90. NO SUBSTITUTIONS ALLOWED.
- FIRE HYDRANTS SHALL BE MUELLER CENTURION TRAFFIC TYPE A-423 WITH 5 1/4" INTERNAL VALVE OPENING OR APPROVED EQUAL. MAIN VALVE OPENING TO BE DETERMINED BY THE WATER DIVISION. PUMPER NOZZLE TO BE 18" FROM FINISHED GRADE. ALL HYDRANTS TO BE INSTALLED WITH CONTROL VALVE. RETAINER GLANDS ARE PREFERRED FOR RESTRAINING. FIRE HYDRANT SHALL COMPLY WITH ANSI/AWWA C502-05. SEE BROWARD COUNTY AND CITY CONSTRUCTION STANDARDS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

D. SERVICE CONNECTION:

- SERVICE SADDLES SHALL BE STAINLESS STEEL STRAPS. SADDLES SHALL BE TYPE 1. ALL SERVICE SADDLES SHALL CONFORM TO ANSI/AWWA C111/A21.11-00 AND ASTM A-588.
  - SERVICE LINES SHALL BE POLYETHYLENE (3408), 250 PSI RATED, SDR9. PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY COATED GRIP SEAL AND COUPLING NUT.
  - CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY MUELLER B-2500B OR APPROVED EQUAL.
  - CURB STOPS SHALL BE MUELLER H10203 OR APPROVED EQUAL.
  - METER STOPS SHALL BE LOCKWING TYPE AND SHALL BE OF BRONZE CONSTRUCTION. ALL 12" OR LARGER INCH ASTM B-62. METER STOPS SHALL BE CLOSED BOTTOM DESIGN AND RESILIENT "O" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.
- E. INSTALLATION:
- ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION'S "GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEM". SEE BROWARD COUNTY AND CITY CONSTRUCTION STANDARDS & SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION.
  - ALL WATER MAINS SHALL BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" FOR DIP.
  - NO CONNECTIONS TO EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS & BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO THE CITY OR BROWARD COUNTY BEACH AND PUBLIC HEALTH UNIT.

VII. GRAVITY SEWER COLLECTION SYSTEM:

- A. CITY AND BROWARD COUNTY EPD CONSTRUCTION STANDARDS & SPECIFICATIONS SHALL GOVERN & SUPERCEDE ALL OTHER REQUIREMENTS FOR SANITARY SEWER CONSTRUCTION.
- B. GENERAL:
- DISTANCE AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- C. MATERIALS:
- ALL SEWER PIPE AND FITTINGS SHALL BE PVC PIPE CONFORMING TO ASTM D 3034, SDR-35 WITH PUSH-ON RUBBER GASKET JOINTS, UNLESS OTHERWISE NOTED, OR DUCTILE IRON PIPE SHALL BE (MIN. CLASS 50) 4" AND 6" DIP (MIN. CLASS 50) INDICATED ON THE DRAWINGS.
  - MANHOLES SHALL BE PRECAST PER ASTM C 478 WITH 4,000 PSI CONCRETE AND GRADE 60 STEEL. MONOLITHICALLY POURED BASES ONLY.
  - MANHOLES ARE TO BE SEALED WITH ANTI-HYDRO CEMENT OR APPROVED EQUAL - NO MOLDING PLASTER.
- D. INSTALLATION:
- PVC SEWER PIPE SHALL BE LAID IN ACCORDANCE WITH ASTM D 2321 AND THE UNI-BELL PLASTIC PIPE ASSOCIATION'S "RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE."
  - DUCTILE IRON PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION.
  - PVC MANHOLE ADAPTOR SHALL BE GROUTED TO EACH PIPE CONNECTION INTO A MANHOLE WALL.
  - MANHOLES SHALL BE SET PLUMB TO LINE AND GRADE ON FIRM SUBGRADE PROVIDING UNIFORM BEARING UNDER THE BASE.
  - ALL OPENINGS AND JOINTS SHALL BE SEALED WATER TIGHT.
  - THE ENTIRE INSIDE AND OUTSIDE OF THE MANHOLES SHALL BE PAINTED WITH TWO COATS OF DIFFERENT COLORS (8 MILS EACH) OF KOPPERS 300-M BITUMASTIC PAINT OR ENGINEER'S APPROVED EQUAL.
- E. TESTING:
- AFTER CONSTRUCTION OF THE SEWER SYSTEM, THE ENGINEER MAY REQUIRE A VISUAL INFILTRATION AND/OR EXFILTRATION TEST TO BE PERFORMED ON THE ENTIRE SYSTEM OR ANY PART THEREOF.
  - AN AIR TEST MAY BE SUBSTITUTED FOR THE WATER EXFILTRATION TEST, UPON APPROVAL OF THE ENGINEER.
  - MANHOLE LEAKAGE TEST SHALL NOT EXCEED FOUR GALLONS PER DAY PER UNIT. NO VISIBLE LEAKAGE ALLOWED.
  - SEWER PIPE LEAKAGE ALLOWABLE SHALL NOT EXCEED 150 GALLONS PER 100 LINEAR FEET PER INCH DIAMETER PER MILE IN A TWO HOUR TEST PERIOD FOR ANY SECTION TESTED. NO VISIBLE LEAKAGE SHALL BE ALLOWED.
  - ALL SEWER PIPE SHALL BE VIDEO RECORDED AND GIVEN TO CITY FOR REVIEW AND APPROVAL AT THE CONTRACTORS EXPENSE.
  - SEE BROWARD COUNTY AND CITY CONSTRUCTION STANDARDS & SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.

VIII. STORM DRAINAGE:

- A. GENERAL:
- DISTANCES AND LENGTHS SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- B. MATERIALS:
- REINFORCED CONCRETE PIPE (R.C.P.) SHALL MEET THE REQUIREMENTS OF ASTM C-76, LATEST REVISION. RUBBER GASKETS OR OTHER MANUFACTURER SUPPLIED JOINT SEALER SHALL BE USED, FOR ADDITIONAL REQUIREMENTS SEE BROWARD COUNTY'S AND THE CITY'S STANDARDS AND SPECIFICATIONS.
  - ALL DRAINAGE CATCH BASINS AND STRUCTURES SHALL BE PRECAST CONCRETE AS MANUFACTURED BY U.S. PRECAST CORPORATION, UNLESS OTHERWISE NOTED ON THE PLANS. THE MINIMUM WALL AND SLAB THICKNESS SHALL BE 8 INCHES AND THE MINIMUM REINFORCING SHALL BE AS INDICATED ON THE STRUCTURE DETAIL. CONCRETE SHALL BE MINIMUM OF 400PSI AT 28 DAYS.
- C. INSTALLATION
- PIPE SHALL BE PLACED ON A MINIMUM OF 8" STABLE GRANULAR MATERIAL FREE OF ROCK FORMATION AND OTHER FOREIGN FORMATIONS, AND CONSTRUCTED TO A UNIFORM GRADE AND LINE.
  - BACKFILL MATERIAL SHALL BE WELL GRADED GRANULAR MATERIAL WELL TAMPED IN LAYERS NOT TO EXCEED 6 INCHES TO A HEIGHT OF 12 INCHES ABOVE PIPE AS SHOWN ON THE PLANS.
  - PROVIDE A MINIMUM PROTECTIVE COVER OF 18 INCHES OVER STORM SEWER AND AVOID UNNECESSARY CROSSING BY HEAVY CONSTRUCTION VEHICLES DURING CONSTRUCTION.
  - THE CONTRACTOR SHALL NOTIFY THE CITY'S ENGINEERING DEPARTMENT AT LEAST 7 DAYS PRIOR TO THE START OF THE CONSTRUCTION AND INSPECTION.

IX. PAVING

- A. GENERAL:
- BROWARD COUNTY AND THE CITY'S CONSTRUCTION STANDARDS & SPECIFICATIONS SHALL GOVERN.
  - ALL MUCK AND YIELDING MATERIAL WITHIN THE LIMIT OF CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH CLEAN FILL MATERIAL WHICH SHALL BE COMPACTED AND SHAPED TO CONFORM TO THE REQUIRED SECTION. COMPACTED AREAS, AS SHOWN ON THE PLANS AND OR AS DETERMINED BY THE ENGINEER, SHALL BE COMPACTED TO NOT LESS THAN 98% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE, AS DETERMINED BY AASHTO T-180, LATEST REVISION. AREAS TO BE STABILIZED, AS DETERMINED BY THE ENGINEER, SHALL HAVE A MINIMUM LBR=40.
  - ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF LIMEROCK BASE.
  - ALL EXISTING PAVEMENT, CUT OR DAMAGED BY CONSTRUCTION, SHALL BE PROPERLY RESTORED AT THE CONTRACTOR'S EXPENSE.
  - WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAW CUT.
- B. MATERIALS:
- BASE COURSE SHALL BE CRUSHED LIMEROCK WITH A MINIMUM OF 70% CARBONATES OF CALCIUM AND MAGNESIUM.
  - ASPHALT SURFACES SHALL BE TYPE S-III ASPHALTIC CONCRETE, UNLESS OTHERWISE NOTED ON THE PLANS, AND SHALL BE A MINIMUM OF 1-1/2" THICK.
  - MINIMUM SIDEWALK CONSTRUCTION SHALL BE 4 INCH THICK CONCRETE, MINIMUM 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 5 FOOT O.C. WITHIN 48 HOURS OF PLACING, EXPANSION JOINTS SHALL BE 20 FOOT O.C.
  - CURBS AND GUTTERS: CONCRETE 3000psi COMPRESSIVE STRENGTH AT 28 DAYS. SAWCUT CONSTRUCTION JOINTS 10 FOOT O.C. WITHIN 48 HOURS OF PLACING.
  - REINFORCED CONCRETE SLABS SHALL BE CONSTRUCTED OF CLASS I CONCRETE WITH A MINIMUM STRENGTH OF 3,000 PSI AND SHALL BE REINFORCED WITH A 6" x 6" NO. 6 GAUGE WIRE MESH.
- C. INSTALLATION:
- SUBGRADE FOR PAVEMENT AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE MAXIMUM DENSITY (AASHTO T-99C), AND SHALL HAVE A MINIMUM LBR 40.
  - BASE COURSE MATERIAL FOR PAVED AREAS SHALL BE A MINIMUM OF 8" AND SHALL BE CONSTRUCTED IN TWO FOUR-INCH LIFTS.
  - BASE COURSE MATERIAL FOR CURBS AND GUTTERS SHALL BE A MINIMUM THICKNESS OF 6 INCH.
  - BASE COURSE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND SHALL HAVE A MINIMUM LBR OF 100.
  - INSTALLATION OF THE WEARING SURFACE SHALL CONFORM WITH THE REQUIREMENTS OF THE D.O.T. STANDARD SPECIFICATIONS FOR TYPE S-III ASPHALTIC CONCRETE.
- D. TESTING

X. DEWATERING

- WHERE DEWATERING IS REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS SO AS TO COMPLY WITH ANY AND ALL CITY, COUNTY, STATE AND FEDERAL DEWATERING REGULATIONS. CONTRACTOR MAY CONTACT THE BROWARD COUNTY DEPARTMENT OF PLANNING AND ENVIRONMENTAL PROTECTION AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR FURTHER INFORMATION.

XI. PAVEMENT MARKING AND SIGNAGE

- ALL PAVEMENT MARKINGS AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," LATEST EDITION; AND BROWARD COUNTY TRAFFIC ENGINEERING STANDARDS (CURRENT EDITION). STANDARDS SPECIFICATIONS FOR PAVEMENT MARKING REQUIREMENTS.

CITY REFERS TO: CITY OF POMPANO BEACH

XII. PROJECT CLOSEOUT

- A. CLEANING UP:
- DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEANUP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED, PAVEMENT BRICK, AND CONCRETE AREAS SHALL BE SWEEP BROOM CLEAN.
  - 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.
  - 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.
- B. ALL PROJECT 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.
- C. 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.

XIII. ENGINEER'S AS BUILT REQUIREMENTS

- DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON THEIR SET OF CONSTRUCTION DRAWINGS THE EXACT LOCATION, LENGTH, MATERIAL, AND ELEVATION OF ANY FACILITY NOT BUILT EXACTLY ACCORDING TO PLANS.
- AS BUILTS OF WATER LINES SHALL INCLUDE THE FOLLOWING:
  - TOP OF PIPE ELEVATIONS EVERY 100 LINEAR FEET.
  - LOCATIONS AND ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, ETC.
  - ALL TIE INS TO EXISTING LINES SHALL BE AS BUILT.
  - THE TERMINATION OF ALL WATER SERVICES SHALL BE SHOWN.
- AS BUILTS OF ALL THE GRAVITY SANITARY SEWER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
  - RIMS, INVERTS, AND LENGTH OF PIPING BETWEEN STRUCTURES, AS WELL AS PIPE SLOPES.
  - LOCATION OF ALL STUB ENDS OF ALL SEWER LATERALS INVERT ELEVATIONS AND LOCATION OF ALL CLEAN OUTS
  - LIFT STATION AS BUILTS SHALL CONSIST OF THE TOP OF WET WELL ELEVATION, INVERT ELEVATIONS OF THE INCOMING LINE, BOTTOM OF THE WET WELL AND AS BUILTS OF THE COMPOUND AREA
- FORCE MAIN AS BUILTS SHALL BE PREPARED THE SAME AS THE WATER MAIN AS BUILTS DESCRIBED ABOVE
- AS BUILTS OF ALL DRAINAGE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:
  - RIMS, INVERTS, AND LENGTH OF PIPING BETWEEN STRUCTURES, AND WEIR ELEVATIONS WHERE APPLICABLE
  - THE SIZE OF THE PIPING SHALL BE VERIFIED BY THE SURVEY FIELD CREW AT THE TIME OF AS BUILT
  - DRAINAGE WELL STRUCTURE AS BUILTS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP OF CASING ELEVATION, TOP AND BOTTOM ELEVATIONS OF THE BAFFLE WALLS, RIM ELEVATIONS, AND INVERTS OF PIPING
- ALL ROCK AS BUILTS FOR PARKING LOT AREAS SHALL CONSIST OF THE FOLLOWING INFORMATION:
  - ROCK ELEVATIONS AT ALL HIGH AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY
  - ROCK AS BUILTS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISHED GRADE ELEVATION SHOWN ON THE DESIGN PLANS
  - WHERE THERE IS A FINISHED GRADE ELEVATION SHOWN ON THE DESIGN PLANS
  - AS BUILTS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SVALES, PRIOR TO PLACEMENT OF ASPHALT OR TOPSOIL, OR SOD, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLANS
- LAKE AND CANAL BANK AS BUILTS SHALL INCLUDE A KEY SHEET OF THE LAKE FOR THE LOCATIONS OF CRACK SECTIONS. LAKE AND CANAL BANK CROSS SECTIONS SHALL BE PLOTTED AT A MINIMUM OF EVERY 100 LINEAR FEET UNLESS OTHERWISE SPECIFIED. AS BUILTS SHALL CONSIST OF THE LOCATION AND ELEVATION OF THE TOP OF BANK EDGE OF WATER AND THE DEEP CUT LINE, WITH THE DISTANCE BETWEEN EACH SHOWN ON THE DRAWING.
- RETENTION AREA AS BUILT ELEVATIONS SHALL BE TAKEN AT THE BOTTOM OF THE RETENTION AREA AND AT THE TOP OF BANK, AS BUILT OF CONTOURS SHALL BE SHOWN, WHERE APPLICABLE.
- UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE RECORD DRAWINGS, ON FULL SIZE REPRODUCIBLE MATERIAL, ONE SET OF REPRODUCIBLE RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD, ALONG WITH EIGHT SETS OF BLUE OR BLACK LINE DRAWINGS. THESE DRAWINGS SHALL BE TAKEN WITH A GPS CAMERA THAT AUTOMATICALLY GEOTAGS THE PICTURE. A MAXIMUM OF SIX PHOTOGRAPHS PER SHEET IS ACCEPTABLE. EACH PHOTOGRAPH SHALL HAVE A MINIMUM SIZE OF 8"x10". PHOTOGRAPHS SHALL HAVE A DENSITY OF 3.0 MEGAPIXEL OR GREATER. PLOT RESOLUTION IS TO BE MINIMUM 300 DOTS PER INCH. PHOTOGRAPHS SHALL NORMALLY BE TAKEN FROM A POINT BETWEEN FOUR FEET (4') AND SIX FEET (6') ABOVE THE SUBJECT INFRASTRUCTURE AND SHALL SHOW GOOD DETAIL IN BOTH SHADOW AND SUNLIT AREAS. INCLUDE A KEY SHEET OF THE DRAWING TO BE TAKEN WITH A GPS CAMERA THAT INDICATE THE DEPTH OR SEPARATION OF THE UTILITIES. A SYMBOL (I.E. AN ARROW) IS TO BE USED IN THE PLAN VIEWS INDICATING THE LOCATION AND DIRECTION OF VIEW FOR EACH PHOTOGRAPH SUBMITTED. THE SYMBOL MUST INCLUDE THE PHOTOGRAPH NUMBER. A CAPTION UNDER EACH PHOTOGRAPH SHALL INCLUDE THE FOLLOWING INFORMATION:
  - PHOTOGRAPH NUMBER
  - PHOTOGRAPH DESCRIPTION
  - DATE OF PHOTOGRAPH
  - LOCATION AND DIRECTION OF VIEW (FOR EXAMPLE 201 NW 34 STREET
  - STATE PLANE COORDINATES

ALL PHOTOGRAPHS INCLUDED IN THE RECORD DRAWINGS WILL ALSO BE PROVIDED TO WWS IN JPEG FORMAT ON CD OR DVD MEDIA. THE CD OR DVD WILL BE LABELED WITH THE WWS PROJECT NAME AND NUMBER. INDIVIDUAL PHOTOS WILL BE NAMED USING THE SAME PHOTOGRAPH NUMBER CONTAINED IN THE RECORD DRAWINGS.

OWNER | DEVELOPER:



DESIGN + BUILD CONTRACTOR:



DESIGN CONSULTANT:

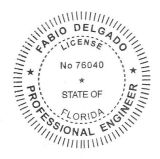


ARCHITECT OF RECORD:

RUBEN J. PUJOL

ARCHITECT  
A.I.A. AR#0010458 N.A.C.A.  
12237 SW 204 TER  
MIAMI, FL 33177  
PH: (305)968-2155

SIGN AND SEAL:



Digitally signed by Fabio J Delgado De Michele  
Date: 2023.06.16 18:23:58 -0400

REVISIONS/COMMENTS:

PROJECT:

324 HAUS

MIXED USE | FLEX BUILDING

324 NW 6TH STREET  
POMPANO BEACH, FL 33060

PROJECT NO.: 22-031

DRAWN BY:

DATE: JULY-2022

SHEET NAME:

GENERAL NOTES  
AND  
SPECIFICATIONS

SHEET NUMBER:

10-12  
PZ22-12000032  
07/19/2023