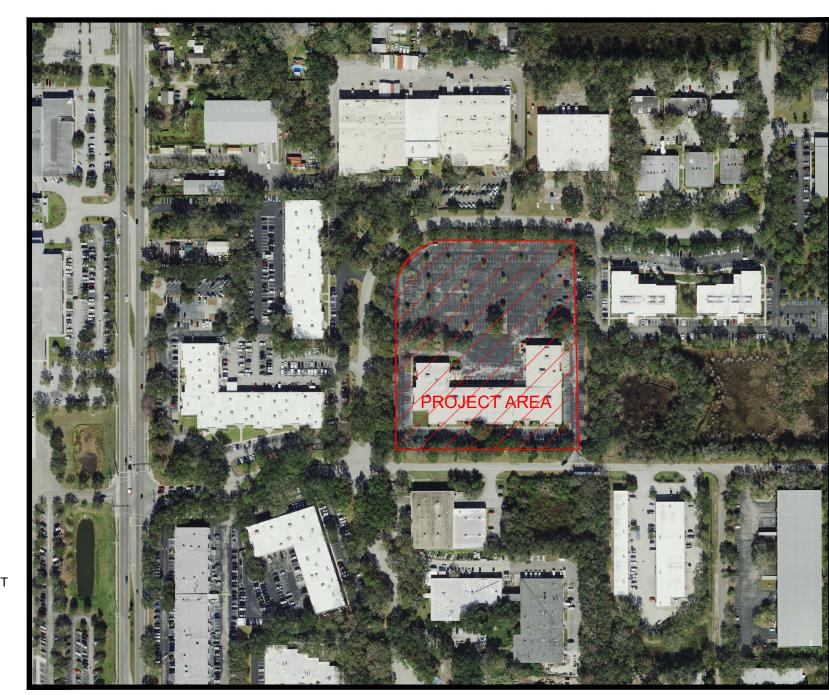
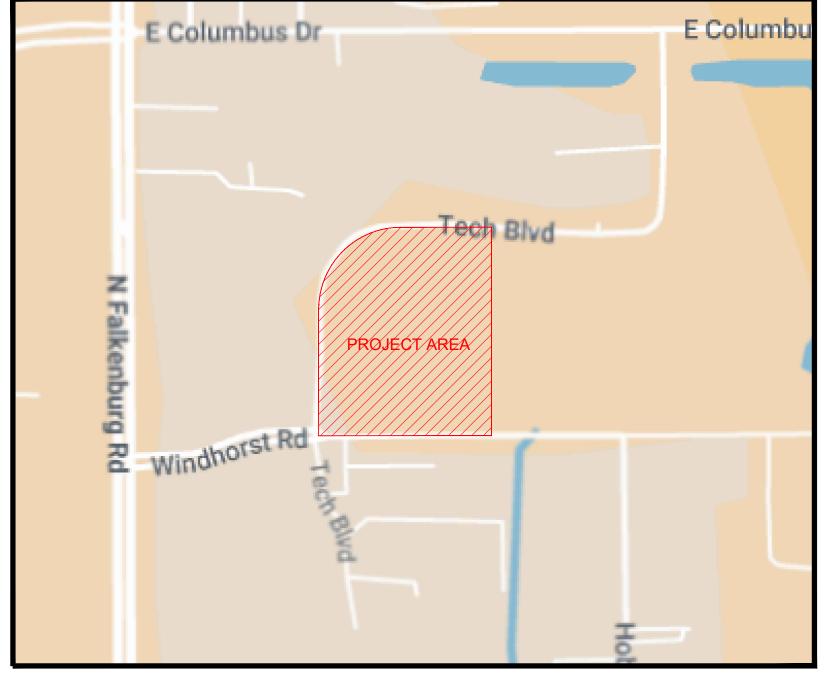
HCSO TRAINING ACADEMY

10210 WINDHORST ROAD TAMPA, HILLSBOROUGH COUNTY, FLORIDA 33619







SITE LOCATION MAP

PER FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), THE SITI IS LOCATED WITHIN FLOOD ZONE "X" (FLOOD INSURANCE RATE MAP

FLOOD ZONE INFORMATION

BOUNDARY AND TOPOGRAPHIC SURVEY

UTILITIES PROVIDERS

702 NORTH FRANKLIN STREET TEL: (813) 288-1111

WATER CITY OF TAMPA UTILITIES DEPARTMENT 306 EAST JACKSON STREET TAMPA, FLORIDA 33602 TEL: (813) 274-8211

TECO PEOPLES GAS 702 NORTH FRANKLIN STREET TAMPA, FLORIDA 33601 TEL: (813) 275-3700

CABLE SPECTURM 4400 DR MARTIN LUTHER KING JR BLVD TAMPA, FLORIDA 33614 TEL: (877) 897-7333

332 NORTH FALKENBURG ROAD

HILLSBOROUGH COUNTY FIRE RESCUE FIRE STATION #9 3225 NORTH FALKENBURG ROAD TAMPA, FLORIDA 33610 TEL: (813) 272-6600

TELEPHONE FRONTIER 610 EAST ZACK STREET

TAMPA, FLORIDA 33602

TEL: (800) 921-8101

TEL: (813) 272-6680

CONTRACTOR SHALL CALL

"SUNSHINE STATE ONE CALL" OF FLORIDA AT 1-800-432-4770 A MINIMUM OF 2 AND A MAXIMUM OF 5 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION.

OWNER:

HILLSBOROUGH COUNTY REAL ESTATE DEPT, PO BOX 1110 TAMPA, FLORIDA 33601 TEL: (813) 272-5810

ENGINEER:

HIGH POINT ENGINEERING, INC. 5005 W. LAUREL STREET, SUITE 201 TAMPA, FLORIDA 33607 TEL: (813) 644-8333 TEL: (813) 644-7000

SURVEYOR:

HILLSBOROUGH COUNTY, FLORIDA GEOSPATIAL SERVICES DIVISION SURVEY FIELD OFFICE 8420 SABAL INDUSTRIAL BLVD TAMPA, FLORIDA 33619 TEL: (813) 307-1050

DEVELOPER:

HILLSBOROUGH COUNTY SHERIFF'S OFFICE 2310 N. FALKENBURG ROAD TAMPA, FLORIDA 33619 TEL: (813) 247-8555

ARCHITECT:

HARVARD JOLLY/PBK ARCHITECTS 5201 W. KENNEDY BOULEVARD TAMPA, FLORIDA 33609 TEL: (813) 286-8206

SITE DATA TABLE					
SECTION 17, TOWNSHIP 29 S, RANGE 20 E TAMPA, HILLSBOROUGH COUNTY, FLORIDA FOLIO: 065682-0050					
DESCRIPTION EXISTING PROPOSED CODE REQUIREMEN					
ZONING:	"IPD-2 / M"	"IPD-2 / M"	"IPD-2 / M"		
FUTURE LAND USE:	"UMU-20"	"UMU-20"	"UMU-20"		
USAGE:	CALL CENTER	TRAINING ACADEMY			
SITE AREA:	366,505.58 S.F. (8.41 AC.)	366,505.58 S.F. (8.41 AC.)			
OFF-STREET PARKING:	601 SPACES	545 SPACES			

DRAWING INDEX

	DIAWING INDEA
SHEET No.	CONTENT
C-1	SITE DEVELOPMENT DATA
C-2.1	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
C-2.2	SITE CONSTRUCTION NOTES & SPECIFICATIONS
C-2.3	BOUNDARY & TOPOGRAPHIC SURVEY
C-3.1	DEMOLITION & TREE PROTECTION PLAN
C-3.2	DEMOLITION & TREE PROTECTION NOTES
C-4.1	SITE LAYOUT & PARKING PLAN
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C-5.1	UTILITIES PLAN
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C-6.1	SITE CONSTRUCTION NOTES AND DETAILS
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C-6.3	UTILITY NOTES AND DETAILS

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BRAULIO GRAJALES legistration No. Professional Engineer Sign Dat COPY OF THIS PLAN IS NOT VALID UNLESS SIGNED, SEALED AND DATED BY THE PROFESSIONAL ENGINEER



OP

SITE

GENERAL CONSTRUCTION NOTES:

1. THESE DRAWINGS SHALL NOT BE UTILIZED FOR CONSTRUCTION PRIOR TO OBTAIN THE PERMITS FROM THE CITY/COUNTY AND OTHER GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. THE CONTRACTOR SHALL ASSURE THAT CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED DRAWINGS.

2. THE CONTRACTOR SHALL READ AND UNDERSTAND THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AND REGULATORY AGENCIES, THE ENGINEER, AND THE ARCHITECT. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, AND SCHEDULE ANY NECESSARY INSPECTIONS ACCORDING TO AGENCY INSTRUCTIONS.

3. UNLESS OTHERWISE SPECIFIED, ALL WORK PERFORMED SHALL COMPLY WITH THE ORDINANCES AND REGULATIONS OF THE GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION OVER THE PROJECT. ALL CONSTRUCTION MATERIALS, MEANS, METHODS, PROCEDURES AND TECHNIQUES SHALL CONFORM TO CITY/COUNTY CONSTRUCTION STANDARDS, FDOT "STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" AND FDOT "SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

4. THE INFORMATION PROVIDED IN THESE CONSTRUCTION DOCUMENTS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING AND EVALUATING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY OR ALL INVESTIGATIONS AS DEEMED NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

5. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM A SITE RECONNAISSANCE PRIOR TO BIDDING THE WORK AND CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL SURFACE AND SUBSURFACE CONDITIONS EXISTING AT THE SITE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN ON THE CONSTRUCTION DOCUMENTS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

6. IMMEDIATELY UPON MOBILIZING TO THE SITE, THE CONTRACTOR (ACCOMPANIED BY THE OWNER AND ARCHITECT) SHALL PERFORM A SURVEY OF THE ENTIRE PROJECT AREA. THE CONTRACTOR SHALL SURVEY IN DETAIL USING WRITTEN AND PHOTOGRAPHIC MEANS, BUILDING(S) AND SITE AREAS THAT ARE NOT IN A FIRST CLASS CONDITION (SURFACES THAT ARE UNBROKEN, NON-CRACKED, NON-RUSTING, WITHOUT CHIPS, WITHOUT SPLINTERS, OF TEXTURE MATCHING ITS SURROUNDING, WITH NEW APPEARING FINISHES, AND OPERATING AS ORIGINALLY DESIGNED OR INTENDED TO OPERATE) SPECIALLY THOSE THAT WILL REMAIN IN THEIR EXISITING CONDITION AT THE END OF PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TO THE OWNER A COMPLETE PROJECT IN FIRST CLASS CONDITION, MEETING INDUSTRY WIDE STANDARDS IN QUALITY AND PERFORMANCE (REGARDLESS OF WHETHER AN AREA IS SPECIFICALLY IDENTIFIED WITHIN THE DRAWINGS AND SPECIFICATIONS OR NOT) UNLESS A PARTICULAR AREA HAS BEEN DESCRIBED IN THE WRITTEN AND PHOTOGRAPHIC DETAILS. SHOULD DURING THE COURSE OF THE WORK, ANY AREA OF THE BUILDING(S) AND/OR UTILITIES AND/OR THE SITE BECOME DAMAGED AND THAT AREA WAS NOT SPECIFICALLY CALLED OUT TO BE A PART OF THE CONSTRUCTION, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE THE DAMAGED AREA TO THE SATISFACTION OF THE ARCHITECT AND OWNER AT NO ADDITIONAL COST.

7. WHEN NECESSARY, THE CONTRACTOR SHALL COORDINATE AND SCHEDULE CONSTRUCTION ACTIVITIES WITH OTHER CONTRACTORS AND UTILITY COMPANIES (E.G., POWER, TELEPHONE, CABLE, GAS, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THE REQUIRED PERMITS TO PERFORM WORK WITHIN PUBLIC EASEMENTS AND RIGHT-OF-WAY AND ENSURE THAT ALL PERMITS ARE APPROVED PRIOR TO CONSTRUCTION.

8. THE CONTRACTOR SHALL USE THE BENCHMARK ELEVATION NOTED IN THE BOUNDARY AND TOPOGRAPHIC SURVEY TO REFERENCE ALL TEMPORARY BENCHMARKS, BASE LINES, GRADE POINTS AND PROPERTY MONUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REESTABLISH, IN THEIR ORIGINAL STATE, THE PROPERTY MONUMENTS DISTURBED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR IS FULLY RESPONSIBLE TO VERIFY AND CORRELATE IN THE FIELD ALL BASE LINES, ELEVATIONS, AND DIMENSIONS SHOWN IN THESE PLANS, AND REPORT TO THE ENGINEER IN WRITING ANY ERROR, OMISSION, OR DISCREPANCY BEFORE PERFORMING ANY WORK.

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAKE ADJUSTMENTS OF ANY CONFLICT SHOWN OR NOT SHOWN IN THESE PLANS WITH OTHER EXISTING SITE IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICTS OR DISCREPANCIES BEFORE PERFORMING ANY WORK IN THE CONFLICTING AREA.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE STAKE-OUT OF THE PROJECT SUCH AS BASE LINES, GRADES, SLOPES, UTILITY RELOCATIONS, OR ANY OTHER STAKE-OUT THAT MAY BE REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACT PRICE. ACTUAL CONDITIONS THAT DIFFER FROM THOSE SHOWN IN THESE PLANS SHALL NOT CONSTITUTE GROUNDS FOR AMENDMENTS TO THE CONTACT PRICE.

11. THE CONTRACTOR SHALL NOT COMMENCE THE CONSTRUCTION OF POTABLE WATER AND/OR SANITARY SEWER SYSTEMS PRIOR TO OBTAIN THE PERMIT(S) FROM THE FLORIDA DEPARTMENT OF HEALTH AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN FROM THE OWNER OR THE ENGINEER A COPY OF ALL PERTINENT PERMITS RELATED TO THIS PROJECT AND REVIEW THEM TO ASSURE THAT ALL CONDITIONS DESCRIBED ON THE PERMITS ARE IN COMPLIANCE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF THE UNDERGROUND WORK ASSOCIATED WITH THIS PROJECT. IT WILL BE NECESSARY TO IDENTIFY, EXAMINE, COORDINATE AND/OR ADJUST ACCORDINGLY THE PROPOSED LOCATIONS OF THE VARIOUS COMPONENTS OF THE UTILITIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT DRAWINGS SHOWING ADJUSTED PIPE SIZES, STRUCTURES, AND ELEVATIONS.

13. THE CONTRACTOR SHALL COORDINATE THE POINTS OF CONNECTIONS OF UTILITIES WITH DIFFERENT SUBCONTRACTORS. THE SITE CONTRACTOR SHALL BRING THE UNDERGROUND INFRASTRUCTURES (I.E. SANITARY SEWER, STORM SEWER, WATER LINES, FIRE LINES, ETC.) TO 5 FEET OUTSIDE THE BUILDING(S). THE PLUMBING CONTRACTOR SHALL CONNECT AND MEET THE INVERT ELEVATIONS OF SAID UTILITIES. ANY UTILITY WORK PERFORMED WITHIN 5' OF THE BUILDING SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL. STATE, AND LOCAL CODE OF ORDINANCE REQUIREMENTS.

14. TOPOGRAPHIC SURVEY AND LEGAL DESCRIPTIONS WERE PREPARED BY OTHERS AND ARE SHOWN HEREIN FOR INFORMATION PURPOSES ONLY. THE ENGINEER ASSUME NO RESPONSIBILITY FOR THEIR PREPARATION, COMPLETENESS NOR ACCURACY AND THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING SAID INFORMATION. PROPOSED LOCATIONS, ELEVATIONS, AND DIMENSIONS OF STRUCTURES AND OTHER SITE FEATURES ARE SHOWN IN ACCORDANCE TO THE SURVEY INFORMATION PROVIDED TO THE ENGINEER AT THE TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.

15. THE EXISTING UNDERGROUND UTILITY LINES SHOWN HEREON WERE TAKEN FROM DOCUMENTS FURNISHED BY OTHERS AND NOT FIELD VERIFIED. THE CONTRACTOR MUST USE SAID INFORMATION ONLY AS A GUIDE TO THE SUGGESTED LOCATION OF UNDERGROUND UTILITY SERVICES, INCLUDING BUT NOT LIMITED TO: POTABLE WATER LINES, SANITARY SEWER, STORM SEWER, GAS LINES, ELECTRICAL POWER, RECLAIMED WATER LINES, IRRIGATION LINES, TELEVISION CABLES, FIBER OPTIC CABLES, TELEPHONE CABLES, ALARM SYSTEM CABLES, SECURITY WIRING, SITE UNDERGROUND MECHANICAL, CONTROL SYSTEMS WIRING, SYSTEMS INCLUDING INSULATION, ETC. THE ENGINEER CANNOT GUARANTEE THE ACCURACY OF THE EXISTING UNDERGROUND UTILITY LINES NOR THAT ALL ARE SHOWN HEREON. THE CONTRACTOR SHALL DETERMINE THE SPECIFIC LOCATION AND CAREFULLY EXPOSE ALL UNDERGROUND UTILITY LINES IN COORDINATION WITH OWNER(S) TO THEIR SATISFACTION AND MAKE ADJUSTMENTS TO SAME IN THE EVENT THERE ARE CONFLICTS WITH NEW CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR, PER SPECIFICATIONS, ANY AND ALL DAMAGED UNDERGROUND UTILITY SERVICES AS LISTED ABOVE AT NO ADDITIONAL COST.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY ENVIRONMENTAL PROTECTION AGENCY PERMITTING WHEN REQUIRED

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GETTING A DEWATERING PLAN APPROVED BY THE WATER MANAGEMENT DISTRICT WHEN REQUIRED

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, REPAIRING AND/OR REINSTALLING DAMAGED OR DISTURBED EXISTING IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, SIDEWALKS, DUMPSTER PADS, FENCES, HAND RAILS, GATE VALVES, CLEANOUTS, FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS, ELECTRICAL, CABLE AND TELEPHONE BOXES, ELEVATED POWER AND TELEPHONE LINES, WATER, SANITARY, GAS AND STORMWATER PIPELINES, UNDERGROUND POWER, TELEPHONE AND CABLE LINES, IRRIGATION SYSTEMS AND CONTROLS, ETC.

19. THE CONTRACTOR SHALL LOCATE PROPERTY LINES AS REQUIRED TO AVOID ENCROACHMENT INTO ADJACENT PROPERTY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE OWNER CONCERNING LIMITS OF CONSTRUCTION, TRANSITIONS, PHASES, ETC. WHICH MAY NOT BE SHOWN ON THESE PLANS.

20. THE CONTRACTOR SHALL RESTORE TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS, ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THE WORK. ADDITIONAL COSTS ARE INCIDENTAL AND NO EXTRA COMPENSATION IS TO BE ALLOWED.

21. ALL UNDERGROUND UTILITIES MUST BE IN PLACE AND TESTED OR INSPECTED PRIOR TO SUBGRADE STABILIZATION, BASE AND PAVEMENT CONSTRUCTION.

22. ADJUSTMENTS OF WATER VALVES, WATER METERS, SANITARY MANHOLE TOPS, INLETS, JUNCTION BOX TOPS, ETC. SHALL BE INCLUDED IN THE CONTRACTOR'S BID AND NO CLAIM SHALL BE MADE AGAINST THE OWNER OR THE ENGINEER FOR THESE ADJUSTMENTS.

23. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER FOR APPROVAL ON ALL PRECAST AND MANUFACTURED ITEMS FOR THIS PROJECT. FAILURE TO OBTAIN APPROVAL BEFORE MANUFACTURE AND INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

24. THE CONTRACTOR SHALL NOTIFY THE UTILITY INSPECTORS 5 DAYS BEFORE CONNECTING TO ANY UTILITY LINE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT TO THE APPROPRIATE AGENCIES AT LEAST THREE (3) WEEKS PRIOR TO START OF CONSTRUCTION ALL REQUIRED SHOP DRAWINGS, CONTRACTOR'S LEGAL INFORMATION, STARTING DATE, SCHEDULE, MANAGEMENT OF TRAFFIC PLAN AND OTHER PERTINENT INFORMATION REQUIRED. ANY WORK PERFORMED WITHOUT PRESENCE OF THE AGENCY INSPECTOR, MAY BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

25. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A FLORIDA REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER TO PERFORM ALL SITE CONSTRUCTION QUALITY ASSURANCE AND QUALITY CONTROL TESTING, AND THIS COST SHALL BE INCLUDED AS PART OF THE CONTRACT PRICE. IN LOCATIONS WHERE THE CONSTRUCTION TAKES PLACE WITHIN PUBLIC RIGHT-OF-WAY, ALL SAMPLING AND TESTING SHALL BE IN ACCORDANCE WITH FDOT AND LOCAL AGENCY REQUIREMENTS.

26. THE CONTRACTOR SHALL FORWARD TO THE OWNER A COPY OF ALL COMPACTION AND ASPHALT MIX TEST RESULTS. THE TEST RESULTS SHALL BE CERTIFIED BY A MATERIAL/GEOTECHNICAL ENGINEER, IN WRITING, THAT ALL TESTING REQUIREMENTS, REQUIRED BY CITY/COUNTY AND/OR THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) AS WELL AS BY THE APPROVED CONSTRUCTION PLANS, ARE SATISFIED.

27. DEVIATIONS TO THESE PLANS AND SPECIFICATIONS WITHOUT CONSENT OF THE ENGINEER OR THE OWNER MAY BE A CAUSE FOR THE WORK TO BE UNACCEPTABLE. VALUE ENGINEERING SHALL RECEIVE WRITTEN APPROVAL FROM THE ENGINEER AND THE OWNER.

28. THE CONTRACTOR SHALL PROVIDE CERTIFIED AS-BUILT DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR. THE AS-BUILT DRAWINGS SHALL INCLUDE, BUT NOT LIMITED TO, ACCURATE HORIZONTAL AND VERTICAL LOCATION OF DETENTION / RETENTION BASIN(S) INCLUDING TOP OF BANK, TOE OF SLOPE, BOTTOM OF POND AND SIDE SLOPES, CONTROL STRUCTURE(S), DIMENSION AND INVERT ELEVATION OF WEIR, ORIFICE AND SKIMMER, INLET AND MANHOLE SIZES AND STORM PIPE INVERT ELEVATIONS, SIZE AND LOCATIONS OF ALL UTILITIES INCLUDING SANITARY SEWER AND WATER PIPES AND FITTINGS, STORM AND SANITARY SEWER SLOPES, CONCRETE PADS, SIDEWALKS, FINISHED FLOOR ELEVATION(S), GRADE BREAKS, ETC. THE CONTRACTOR SHALL PROVIDE FIVE COPIES OF THE CERTIFIED AS-BUILT DRAWINGS TO THE ENGINEER. THE AS-BUILT DRAWING SHALL BE SUFFICIENT IN DETAIL TO BE ACCEPTABLE BY GOVERNMENTAL AND REGULATORY AGENCIES HAVING JURISDICTION ON THE PROJECT.

29. CONTRACTOR SHALL PROVIDE SANITARY SEWER AND WATER MAIN SYSTEMS CERTIFIED AS-BUILT DRAWINGS INCLUDING SANITARY SEWER INFILTRATION / EXFILTRATION TEST RESULTS, WATER MAIN PRESSURE TEST RESULTS AND TWO (2) CONSECUTIVE DAYS BACTERIOLOGICAL SAMPLING RESULTS AT LEAST SIX (6) WEEKS PRIOR TO ANTICIPATED DATE OF CERTIFICATE OF COMPLETION APPLICATION.

30. SIGN MONUMENTS, WALLS AND FENCES REQUIRE SEPARATE PERMIT APPLICATION(S). ANY DEVIATIONS SHALL RECEIVE WRITTEN APPROVAL FROM THE OWNER.

31. WHEN NECESSARY, CONTRACTOR SHALL BE RESPONSIBLE FOR AN EASEMENT INSPECTION BY CITY/COUNTY ENGINEERING DEPARTMENT PRIOR TO CONCRETE POUR OF FOOTER/SLAB. CONTRACTOR SHALL STAKE ALL PROPERTY CORNERS AND EASEMENT LINES PRIOR TO EASEMENT INSPECTION.

32. ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST EDITION OF THE FLORIDA FIRE PREVENTION CODE, WHICH INCLUDES THE LATEST EDITIONS OF THE N.F.P.A. #1 FIRE PREVENTION CODE & 101 THE LIFE SAFETY CODE.

33. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE APPROVED PLANS AND PERMITS AT THE CONSTRUCTION SITE AT ALL TIMES.

GENERAL SAFETY NOTES:

1. THESE CONSTRUCTION PLANS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY IN ACCORDANCE WITH U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR MEANS, METHODS, PROCEDURES AND TECHNIQUES OF CONSTRUCTION SAFETY.

2. LABOR SAFETY REGULATIONS SHALL CONFORM TO THE PROVISIONS SET BY THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

3. DURING CONSTRUCTION, ALL SAFETY CONTROLS AND REGULATIONS ARE TO BE ENFORCED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PEDESTRIANS AND WORKERS.

4. THE MINIMUM STANDARDS IN "THE STATE OF FLORIDA, MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" SHALL BE FOLLOWED FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL DEVICES, WARNING DEVICES AND BARRIERS NECESSARY TO PROTECT THE PEDESTRIANS AND WORKMEN FROM HAZARDS WITHIN THE PROJECT LIMITS.

5. THE CONTRACTOR'S MAINTENANCE OF TRAFFIC PLAN SHALL BE SUBMITTED AND APPROVED BY APPLICABLE AGENCIES PRIOR TO START OF CONSTRUCTION.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ITS EMPLOYEES AND SUB CONTRACTORS WITH ADEQUATE INFORMATION AND TRAINING TO ENSURE THAT THEY COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS. CONTRACTOR SHALL REMAIN IN COMPLIANCE WITH ALL U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AS WELL AS THE ENVIRONMENTAL PROTECTION LAWS.

7. THE CONTRACTOR PERFORMING TRENCH EXCAVATION, IN EXCESS OF 5' FEET IN DEPTH, SHALL CONFORM TO THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RULES AND REGULATIONS FOR EXCAVATIONS SAFETY STANDARDS, 29 C.F.R., S.1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).

8. TO COMPLY WITH THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES, AFFILIATED OR NOT AFFILIATED TO THE "SUNSHINE STATE ONE CALL" OF FLORIDA CORPORATION, PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS AND/OR CLEARANCE OF EXISTING UNDERGROUND UTILITIES.

STANDARD SYMBOLS

EXISTING	DESCRIPTION	PROPOSED
EX. WM & BFP	METER AND BACK FLOW PREVENTOR	WM & BFP
⊗ ⊗ EX. DDCVA	DOUBLE DETECTOR CHECK VALVE ASSEMBLY	⊗ ⊗ DDCVA
EX.FHA	FIRE HYDRANT ASSEMBLY	FHA
EX. FDC	FIRE DEPARTMENT CONNECTION	FDC
EX. G.V.	GATE VALVE	G.V.
€	BLOW-OFF VALVE	€
(\$)	SANITARY SEWER MANHOLE	
© EX. C.O.	CLEANOUT	⊕ C.O.
~~~	SURFACE FLOW ARROW	~ <b>~►</b>
	GRATE INLET	
	CURB INLET	
©	STORM SEWER MANHOLE	©
	MITERED END SECTION	
	FLARED END SECTION	lacktriangle
EX.LP	LIGHT POLE	<b>★</b> LP
-	CONCRETE UTILITY POLE	<del>-</del>
—————————————————————————————————————	WOOD UTILITY POLE	-
$\leftarrow$	GUIDE WIRE	$\leftarrow$
0	BOLLARD	•
-0-	SIGNAGE	<del>-</del>
ρ	WHEEL STOP	_
\$	HANDICAP SPACE	Ġ.
	TRAFFIC MARKINGS	$\leftrightarrow$ $\rightarrow$
		11

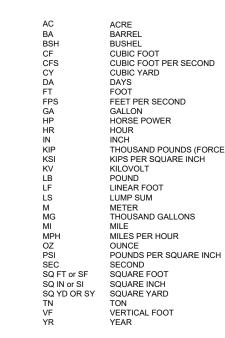
# LINETYPES

EXISTING	DESCRIPTION	PROPOSED
	■ PROPERTY LINE ■	
	CENTER LINE —	
	EDGE OF PAVEMENT —	
	WALL	
	WOOD FENCE —	
	CHAIN LINK FENCE —	
	BARB WIRE FENCE —	
N/A	SILT FENCE —	
	LOT LINE —	
XX.XX'		XX.XX'
700700	RIGHT OF WAY LINE —	
	SECTION LINE —	
EX. ST	STORM SEWER LINE -	ST
EX. CATV	CABLE TV LINE	CATV
EX. FO —	FIBER OPTIC LINE	FO —
EX. TEL -		TEL
EX. ELE		ELE
EX. OHP		——————————————————————————————————————
EX. UGP —		UGP
EX. REC		REC -
EX. IRR	<ul> <li>IRRIGATION WATER LINE</li> </ul>	
EX. FIRE	– FIRE LINE <del>–</del>	
EX. WM -	POTABLE WATER LINE —	
EX. SAN —	SANITARY SEWER LINE	SAN —
EX. FM	FORCE MAIN LINE	
EX. GAS —	GAS LINE —	GAS —
	EASEMENT LINE —	
JDJDJDJD	WETLAND LINE	JDJDJD
FLOOD ———FLOOD —	FLOOD ZONE LINE	N/A
75	CONTOUR LEVEL —	75
EA. R.L	RIDGE LINE -	N.L
	CONTOUR LEVEL —	

# **ABBREVIATIONS**

ABC	ASPHALT BASE COURSE	EL	ELEVATION	NHW	NORMAL HIGH WATER
ABS	ACRYLONITRITE-BUTADIENE-STYRENE PIPE	ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	NTS	NOT TO SCALE
A/C	AIR CONDITIONER	EOP	EDGE OF PAVEMENT	OD	OUTSIDE DIAMETER
ACCEL	ACCELERATION	EM	ELECTRIC METER	OHP	OVERHEAD POWER
ASPH	ASPHALT	EMBK	EMBANKMENT	PAVT	PAVEMENT
ASPH CONC	ASPHALTIC CONCRETE	EMUL	EMULSIFIED	PL	PROPERTY LINE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	ESMT	EASEMENT	PVC	POLYVINYL CHLORIDE PIPE
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND	EXCAV	EXCAVATION	Q	PEAK DISCHARGE or FLOW VOLUME (CFS
AAOITIO	TRANSPORTATION OFFICIALS	FAC	FLORIDA ADMINISTRATIVE CODE	RBAC	ROCK BASE ASPHALTIC CONCRETE
BFP	BACK FLOW PREVENTER	FC	FRICTION COURSE	RCP	REINFORCED CONCRETE PIPE
BOC	BACK OF CURB	FDC	FIRE DEPARTMENT CONNECTION	REQ	REQUIRED
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE	FDN	FOUNDATION	RPZ	REDUCED PRESSURE ZONE
BIT		FFE		R/W	RIGHT OF WAY
BL	BITUMINOUS	FES	FINISHED FLOOR ELEVATION FLARED END SECTION	R/W RR	RAILROAD
	BASE LINE				
BLKHD	BULKHEAD	FHA	FIRE HYDRANT ASSEMBLY	SAHM	SAND-ASPHALT HOT MIX
BLVD	BOULEVARD	FHWA	FEDERAL HIGHWAY ADMINISTRATION	SAN	SANITARY SEWER
BM	BENCH MARK	FM	FORCE MAIN	SBAC	SHELL BASE ASPHALTIC CONCRETE
BOT	BOTTOM	FO	FIBER OPTIC CABLE	SBRM	SAND BITUMINOUS ROAD MIX
BRG	BEARING	GD	GUTTER DRAIN	SCST	SAND-CLAY SURFACE TREATMENT
BT	BURRIED TELEPHONE CABLE OR DUCT	GI	GUTTER INLET	SHLDR	SHOULDER
BTFLY	BUTTERFLY	GIP	GALVANIZED IRON PIPE	SHW	SEASONAL HIGH WATER
BWF	BARBED WIRE FENCE	GM	GAS MAIN	ST	STRUCTURE
C&G	CURB AND GUTTER	GTTR	GUTTER	SUBS	SUBSOIL
CAP	CORRUGATED ALUMINUM PIPE	GUY	GUIDE WIRE	SUBGR	SUBGRADE
CBC	CONCRETE BOX CULVERT	HT	HEIGHT	TBO	TEMPORARY BLOW-OFF
CEM	CEMENT	H/W	HEADWALL	TBM	TEMPORARY BENCH MARK
CIP	CAST IRON PIPE	HS-20	AASHTO NEW TRUCK MODEL FOR BRIDGE EVALUATION	TCB	TEMPORARY CONCRETE BARRIER
CL	CENTER LINE	HWY	HIGHWAY	TCE	TEMPORARY CONSTRUCTION EASEMENT
CLF	CHAIN LINK FENCE	ID	INSIDE DIAMETER	TCP	TERRA COTTA PIPE
CM	CONCRETE MONUMENT	ΙE	INVERT ELEVATION	TEL	TELEPHONE
CMP	CORRUGATED METAL PIPE	IMC	INTERMEDIATE METAL CONDUIT	TOB	TOP OF BANK
CMPA	CORRUGATED METAL PIPE ARCH	ITE	INSTITUTE OF TRANSPORTATION ENGINEERS	TOP	TOP OF PIPE
CO	CLEANOUT	JB	JUNCTION BOX	TOS	TOE OF SLOPE
CONC	CONCRETE	JT	JOINT	TYP	TYPICAL
CP	CONCRETE PIPE	Ĺ	LENGTH	T/W	TOP OF WALL
CPE	CORRUGATED POLYETHYLENE PIPE	LBR	LIMEROCK BEARING RATIO	T&V	TAP AND VALVE
CSP	CORRUGATED STEEL PIPE	LFD	LOAD FACTOR DESIGN	U.D.	UNDERDRAIN
CT CT	CLEAR TRUNK	LRFD	LOAD RESISTANCE FACTOR DESIGN	UG	UNDERGROUND
CULV	CULVERT	M	MASS	USGS	US GEOLOGICAL SURVEY
DA	DRAINAGE AREA	MES	MITERED END SECTION	VCP	VITRIFIED CLAY PIPE
DBI	DITCH BOTTOM INLET	MH	MANHOLE	VOL	VOLUME
DD	DRY DENSITY	MHW	MEAN HIGH WATER	W/C	WATER-CEMENT RATIO
DECEL	DECELERATION	MON	MONUMENT	WB40	INTERMEDIATE SEMI TRAILER (40' WB)
DENS	DENSITY	MOT	MAINTENANCE OF TRAFFIC	WB50	LARGE SEMI TRAILER (50' WB)
DHW	DESIGN HIGH WATER	MP	MILE POST	WB60	TANDUM SEMI TRAILER (60' WB)
DIP	DUCTILE IRON PIPE	MSL	MEAN SEA LEVEL	WM	WATER MAIN
DT	DITCH	MTD	MOUNTED	WQT	WATER MAIN WATER QUALITY TREATMENT
DI	DROP INLET	N N	NORTH	WT	WATER QUALITY TREATMENT WATER TABLE
DIA	DIAMETER	NA or N/A	NOT AVALABLE or NOT APPLICABLE	WPF	WOOD PLANK FENCE
DLW	DESIGN LOW WATER	NAVD	NORTH AMERICA VERTICAL DATUM of 1988	XSEC	CROSS SECTION
DDCVA	DOUBLE DETECTOR CHECK VALVE ASSEMBLY	NGVD	NATIONAL GEODETIC VERTICAL DATUM of 1929	YI	YARD INLET

# UNITS OF MEASURE



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58626 BRAULIO GRAJALES

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SHEET: C-2.1

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# TESTING SCHEDULE

ITEM	TEST	TEST FREQUENCY
UTILITY TRENCH BACKFILL OVER PIPELINES AND AROUND STRUCTURES FROM RIGHT-OF-WAY LINE TO RIGHT-OF-WAY LINE AND IN STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DRY DENSITY OF SOIL (PROCTOR) AS DETERMINED BY AASHTO T-180 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	PER SOIL TYPE (SEE NOTES 1 AND 2)
UTILITY TRENCH BACKFILL OVER PIPELINES OUTSIDE THE RIGHT-OF-WAY AND IN NON-STRUCTURAL AREAS	OPTIMUM MOISTURE / MAXIMUM DRY DENSITY 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70)	PER SOIL TYPE (SEE NOTES 1 AND 2)
STABILIZED SUB GRADE	OPTIMUM MOISTURE / MAXIMUM DRY DENSITY MINIMUM LBR 40 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70), NO TOLERANCE	PER MATERIAL TYPE PER MATERIAL TYPE (SEE NOTE 3)
BASE (OTHER THAN SOIL CEMENT OR CRUSHED CONCRETE)	DRY MOISTURE / MAXIMUM DRY DENSITY MINIMUM LBR 100 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T180-57 (ASTM D1557-70) - NO TOLERANCE GRADATION, ATTERBERG LIMITS	PER SOURCE PER SOURCE EACH LIFT (SEE NOTE 3) PER SOURCE
CRUSHED CONCRETE BASE	MINIMUM LBR 150 ABRASION TEST BY USING LOS ANGELES MACHINE AS DETERMINED BY FM-1T096 100% OF MAXIMUM DRY DENSITY AS DETERMINED BY FM 5-515. NO TOLERANCE GRADATION, ATTERBERG LIMITS	PER MATERIAL TYPE PER MATERIAL TYPE EACH LIFT (SEE NOTE 3) PER SOURCE
SOIL CEMENT BASE (NO IN PLACE MIXING ALLOWED)	DESIGN MIX AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS  OPTIMUM MOISTURE / MAXIMUM DRY DENSITY  PROCTOR AS DETERMINED BY AASHTO T-134  COMPRESSIVE STRENGTH SPECIMENS AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS  (300 PSI AT 7 DAYS), (SEE NOTE 4)  TEST CORES AS DETERMINED BY PORTLAND CEMENT ASSOCIATION SPECIFICATIONS  (300 PSI AT 21 DAYS), (SEE NOTE 4)  98% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T134 - NO TOLERANCE	ONE PER MATERIAL TYPE ONE PER MATERIAL TYPE DAILY ONE PER MATERIAL TYPE ONE SET OF 3 SAMPLES PER MATERIAL TYPE PER ONE-HALF DAY (SEE NOTE 3) (SEE NOTE 3)
CONCRETE (SEE NOTE 5)	SLUMP TEST  COMPRESSIVE STRENGTH CYLINDERS  (MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 3,000 PSI), NO TOLERANCE  AIR CONTENT	ONE PER SET OF CYLINDERS ONE SET OF THREE (3) CYLINDERS FOR 100 CY OR FRACTION THEREOF ONE PER SET OF CYLINDERS
ASPHALTIC CONCRETE	AGGREGATE ANALYSIS DESIGN MIX BITUMEN CONTENT GRADATION STABILITY FLOW PROPERTIES OF IN-PLACE MATERIALS (MARSHALL TEST) THICKNESS MAXIMUM SPECIFIC GRAVITY 95% OF LAB DENSITY	ONE PER DESIGN ONE PER FDOT APPROVED TYPE ONE PER DAY UNLESS TONNAGE > 1,000 TON ONE PER DAY ONE PER DAY (SEE NOTE 3) ONE PER DAY (SEE NOTE 3)

1 TESTS SHALL BE LOCATED NO MORE THAN 200 FEET APART. TESTS SHALL BE PERFORMED ON EACH LIFT. FIELD DENSITIES SHALL BE TAKEN OVER ALL ROAD CROSSINGS. FIELD DENSITIES FOR SANITARY LINES SHALL BE STAGGERED TO INCLUDE RESULTS OVER SERVICE LATERALS. THERE SHALL BE A MINIMUM OF ONE (1) TEST SERIES FOR EACH 6 INCHES OF LIFT OVER PIPELINE BETWEEN MANHOLES. TESTS AROUND STRUCTURES SHALL BE SPIRALED IN 6 INCH LIFTS. TESTS AROUND BOX CULVERTS SHALL DONE ON BOTH SIDES EVERY LIFT.

2. FOR FLEXIBLE PIPE (CORRUGATED STEEL OR ALUMINUM), 95% OF MAXIMUM DENSITY (AASHTO-T99) PER FDOT SUPPLEMENTAL SPECIFICATIONS SUB ARTICLE 125-8.3.2 AS MODIFIED.

3. TESTS SHALL BE LOCATED NO MORE THAN 500 FEET APART. THERE SHALL BE NO LESS THAN ONE (1) TEST PER 5,000 SF

4. MAXIMUM STRENGTH LIMITS, AS ESTABLISHED BY SOILS TESTING COMPANY, SHALL NOT BE EXCEEDED.

5. APPLIES TO SITE CONCRETE SUCH AS CURBS, DRIVEWAYS, PADS AND SIDEWALKS.

### **CLEARING AND GRUBBING NOTES**

I. PRIOR TO SITE CLEARING AND GRUBBING, ALL TREES SHOWN TO REMAIN ON THE CONSTRUCTION PLANS SHALL BE PROTECTED IN ACCORDANCE WITH THE CITY / COUNTY TREE ORDINANCE AND DETAILS CONTAINED IN THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THESE TREES IN GOOD CONDITION. NO TREES SHOWN TO REMAIN SHALL BE REMOVED WITHOUT WRITTEN APPROVAL FROM THE OWNER.

2. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE PRIOR TO CONSTRUCTION IN ACCORDANCE, WITH THE GEOTECHNICAL INVESTIGATION REPORT. COPIES OF THE GEOTECHNICAL INVESTIGATION REPORT ARE AVAILABLE THROUGH THE OWNER. ANY QUESTION REGARDING SITE PREPARATION REQUIREMENTS DESCRIBED IN THE GEOTECHNICAL INVESTIGATION REPORT ARE TO BE DIRECTED TO THE GEOTECHNICAL ENGINEERING COMPANY THAT PREPARE THE REPORT

3. THE CONTRACTOR SHALL CLEAR AND GRUB, ONLY THOSE AREAS OF THE SITE NEEDED FOR CONSTRUCTION. DISTURBED AREAS SHALL BE SEEDED, MULCHED, OR PLANTED WITH APPROVED LANDSCAPE MATERIAL IMMEDIATELY AFTER CONSTRUCTION.

5. ONLY GRADING BY HAND IS PERMITTED WITHIN THE CANOPY / DRIP LINE OF TREES TO REMAIN.

4. UNLESS OTHERWISE DIRECTED, THE TOP 4" TO 6" OF SOIL REMOVED DURING CLEARING AND GRUBBING SHALL BE STOCKPILED AT A SITE DESIGNATED BY THE OWNER TO BE USED FOR LANDSCAPING PURPOSES.

### **PAVING AND GRADING NOTES**

1. ALL DELETERIOUS SUBSURFACE MATERIAL (I.E. MUCK, PEAT, BURIED DEBRIS) SHALL BE EXCAVATED IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS OR AS DIRECTED BY THE OWNER, OR THE GEOTECHNICAL ENGINEER. DELETERIOUS MATERIAL SHALL BE STOCKPILED OR REMOVED FROM THE SITE AS DIRECTED BY THE OWNER. EXCAVATED AREAS SHALL BE BACK FILLED WITH APPROVED MATERIALS AND COMPACTED AS SHOWN ON THESE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY PERMITS THAT ARE NECESSARY FOR REMOVING DELETERIOUS MATERIAL FROM THE SITE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXCAVATIONS AGAINST COLLAPSE AND SHALL PROVIDE BRACING, SHEETING OR SHORING AS NECESSARY. DEWATERING METHODS SHALL BE USED AS REQUIRED TO KEEP TRENCHES DRY WHILE PIPE AND APPURTENANCES ARE BEING PLACED.

3. CONTRACTOR SHALL SAW CUT, TACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT

4. CONTRACTOR SHALL PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION CONTRACTOR SHALL PLACE STRAW. MULCH OR OTHER SUITABLE MATERIAL IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR CITY / COUNTY AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR SHALL REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR CITY / COUNTY

5. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

6. THE CONTRACTOR SHALL STABILIZE BY SEED AND MULCH, SOD OR OTHER APPROVED MATERIALS AS REQUIRED ANY DISTURBED AREAS WITHIN ONE WEEK FOLLOWING CONSTRUCTION OF THE UTILITY SYSTEMS AND PAVEMENT AREAS. CONTRACTOR SHALL MAINTAIN SUCH AREAS UNTIL FINAL ACCEPTANCE BY OWNER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING APPLICABLE SOIL AND MATERIAL TESTING AND SUBMITTING TEST RESULTS TO OWNER'S ENGINEER ON A WEEKLY BASIS. SOIL TESTS ARE REQUIRED PURSUANT WITH THE TESTING SCHEDULE REQUIRED BY THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THIS SITE. UPON COMPLETION OF THIS WORK. THE CONTRACTOR SHALL SUBMIT TO THE OWNER CERTIFICATIONS SIGNED BY THE MATERIAL / GEOTECHNICAL ENGINEER STATING THAT ALL SOIL AND MATERIAL REQUIREMENTS HAVE BEEN MET.

8. A QUALIFIED TESTING LABORATORY SELECTED BY THE OWNER SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN PLACE MATERIALS AS REQUIRED BY THESE CONSTRUCTION DOCUMENTS AND THE VARIOUS AGENCIES HAVING JURISDICTION OVER THIS SITE. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THE REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF SAID

9. MIXING IN PLACE OF SOIL CEMENT SHALL NOT BE ALLOWED.

10. THE CONTRACTOR SHALL INSTALL EXTRA BASE MATERIAL WHEN THE DISTANCE BETWEEN THE PAVEMENT SURFACE AND THE TOP OF THE PIPE OR BELL IS LESS THAN TWELVE (12) INCHES.

11. ON-SITE PAVEMENT SHALL CONSIST OF 2" ASPHALT (TYPE SP-9.5) ON 6" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180.

12. CITY / COUNTY RIGHT-OF-WAY PAVEMENT SHALL CONSIST OF 1.5" FRICTION COURSE (TYPE FC-12.5) OVER 2" ASPHALT (TYPE SP-12.5) ON 12" LIMEROCK (100 LBR) OR CRUSHED PORTLAND CEMENT CONCRETE (150 LBR) BASE COMPACTED TO 100% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST OR 9" ASPHALT (TYPE SP 12 5) OVER 12" STABILIZED SUBGRADE (40 LBR) COMPACTED TO 98% OF MAXIMUM DENSITY FROM MODIFIED PROCTOR TEST PER ASTM D1557 / AASHTO T-180, UNLESS OTHERWISE SPECIFIED.

# IMPORTANT NOTES TO CONTRACTOR

1. UTILITIES SUCH AS FLORIDA POWER & LIGHT UNDERGROUND POWER CABLES, TECO PEOPLES GAS LINES, FRONTIER COMMUNICATION CABLES AND SPECTRUM COMMUNICATION CABLES, HILLSBOROUGH COUNTY PUBLIC UTILITIES POTABLE AND RECLAIMED WATER MAINS. HILLSBOROUGH COUNTY PUBLIC UTILITIES SANITARY SEWER LINES, ETC ARE BELIEVED TO BE WITHIN RIGHTS-OF-WAY AND MAY CONFLICT WITH THE PROPOSED UTILITY WORK. THERE IS NO GUARANTEE THAT THESE UTILITIES ARE LOCATED AS SHOWN OR THAT OTHER UTILITIES MAY NOT BE PRESENT. THE CONTRACTOR IS FULLY RESPONSIBLE WHEN USING THE INFORMATION CONTAINED IN THESE PLANS AND SHALL CONDUCT STUDIES, TESTS AND SURVEYS AS DEEMED NECESSARY TO MAKE THEIR OWN DETERMINATION AS TO THE ACTUAL VERTICAL AND HORIZONTAL LOCATION OF ALL UNDERGROUND FACILITIES PRIOR TO START OF CONSTRUCTION.

3. TO PREVENT DAMAGE TO UNDERGROUND UTILITIES AND DISRUPTION OF SERVICES, THE CONTRACTOR SHALL FIELD VERIFY EXACT SIZE, DEPTH, INVERT ELEVATION AND LOCATION OF ALL UTILITIES PRIOR TO START OF CONSTRUCTION. TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL PHYSICALLY EXPOSE ALL UTILITIES USING NONDESTRUCTIVE METHODS (I.E. VACUMM EXCAVATION).

4. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH OWNER'S ENGINEER WITH COMPLETE "AS-BUILT" INFORMATION CERTIFIED BY A REGISTERED LAND SURVEYOR. THIS "AS-BUILT INFORMATION SHALL BE PRODUCED WITH AND UPON COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH DISKS OF ALL DRAWINGS, ONE SET OF REPRODUCIBLE PLANS. AND FIVE SETS OF PLANS. THE "AS-BUILT" INFORMATION SHALL CLEARLY AND ACCURATELY REPRESENT ALL CONSTRUCTED ITEMS INCLUDING, BUT NOT LIMITED TO:

SEWER STRUCTURE BOTTOMS, TOPS, AND INVERTS.

A. ELEVATIONS OF ALL STORM SEWER OUTFALL STRUCTURES AND SANITARY

B. FIELD MEASURED LENGTHS OF PIPES FOR ALL INSTALLED UTILITIES, CONDUITS, SLEEVES, ETC.

C. LOCATIONS OF ALL STRUCTURES, PIPES, CONDUITS, SLEEVES, ETC.

D. CALCULATED SLOPE OF ALL SANITARY SEWER AND STORM SEWER LINES.

E. HORIZONTAL AND VERTICAL CONTROL OF ALL WATER MAIN FITTINGS AND APPURTENANCES, AND HORIZONTAL AND VERTICAL CONTROL ON THE TOP OF WATER MAINS AT ALL CROSSINGS, AND A MINIMUM OF EVERY 200 LINEAL FEET

F. HORIZONTAL AND VERTICAL CONTROL OF ALL TOP OF BANKS, TOE OF SLOPES, ALL GRADE BREAKS, BUILDINGS, PONDS, DITCHES, LITTORAL ZONES, ETC.

5. NO ENGINEER'S CERTIFICATIONS CAN BE SUBMITTED TO OBTAIN A CERTIFICATE OF OCCUPANCY UNTIL THE "AS-BUILT" INFORMATION IS RECEIVED, REVIEWED, AND APPROVED BY THE ENGINEER THE CONTRACTOR SHALL ALLOW THE ENGINEER A MINIMUM OF ONE WEEK TO COMPLETE THE REVIEW OF THE "AS-BUILT" INFORMATION UPON RECEIPT, PRIOR TO SUBMITTAL TO APPLICABLE

### WASTEWATER COLLECTION

CONSTRUCTION DOCUMENTS ARE APPROXIMATE

1. ALL SANITARY SEWER WORK SHALL CONFORM WITH APPLICABLE AGENCY STANDARDS AND SPECIFICATIONS.

2. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED

3. POINTS OF CONNECTION FOR THE SANITARY SEWER LINES SHALL BE COORDINATED WITH THE BUILDING PLUMBING PLANS. SANITARY SERVICE CONNECTION LOCATIONS SHOWN ON THESE

4. PRIOR TO COMMENCING WORK WHICH REQUIRES CONNECTING NEW SANITARY SEWER LINES TO EXISTING LINES OR APPURTENANCES, THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES NEAR THE POINT OF CONNECTION AND NOTIFY OWNER'S ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITH DESIGN INFORMATION SHOWN IN THESE PLANS. CONTRACTOR SHALL NOTIFY ENGINEER AND THE APPLICABLE AGENCIES AT LEAST 48 HOURS IN ADVANCE OF SCHEDULED WORK.

5. SANITARY / STORM SEWERS, SANITARY / STORMWATER FORCE MAINS AND RECLAIMED WATER MAINS SHOULD ALWAYS CROSS UNDER WATER MAINS. EXISTING OR PROPOSED SANITARY / STORMWATER SEWERS SANITARY / STORMWATER FORCE MAINS AND RECLAIMED WATER MAINS CROSSING NEW OR RELOCATED WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 12 INCHES EXCEPT FOR GRAVITY OR VACUUM-TYPE SANITARY SEWER AND STORM SEWER, THEN 6 INCHES IS THE MINIMUM SEPARATION AND 12 INCHES IS PREFERRED, BETWEEN THE INVERT OF THE WATER MAIN AND THE CROWN OF THE LOWER PIPE WHENEVER POSSIBLE. WHERE SANITARY / STORMWATER FORCE MAINS AND RECLAIMED WATER MAINS MUST CROSS WATER MAINS WITH LESS THAN 12 INCHES VERTICAL DISTANCE, BOTH THE SANITARY / STORMWATER FORCE MAINS AND RECLAIMED WATER MAINS, AND THE WATER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AT THE CROSSING. (DIP IS NOT REQUIRED IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED). 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 LEAK FREE AND MECHANICALLY RESTRAINED. A MINIMUM VERTICAL CLEARANCE OF 6 INCHES MUST BE MAINTAINED AT THE CROSSING. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SANITARY / STORMWATER FORCE MAINS AND RECLAIMED WATER MAINS PIPE JOINTS AND THE WATER MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING)

6. A MINIMUM 6-FOOT, AND PREFERABLY 10-FOOT, HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALL ATIONS. WHENEVER POSSIBLE. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 6-FOOT HORIZONTAL SEPARATION. THE WATER MAIN MUST BE LAID IN A SEPARATE TRENCH OR ON AN LINDISTURBED. EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER OR FORCE MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 6 INCHES IN PARALLEL INSTALLATIONS. THE WATER MAIN SHALL BE CONSTRUCTED OF DIP AND THE SEWER OR THE FORCE MAIN SHALL BE CONSTRUCTED OF DIP (DIP IS NOT REQUIRED FOR WATER IF IT IS NOT AVAILABLE IN THE SIZE PROPOSED). THE WATER MAIN SHOULD ALWAYS BE ABOVE THE SEWER. JOINTS ON THE WATER MAIN SHALL BE LOCATED AS FAR APART AS POSSIBLE FROM THE JOINTS ON THE SEWER OR FORCE MAIN (STAGGERED JOINTS).

ALL SANITARY SEWER MAINS, LATERALS AND FORCE MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER, UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DRAWINGS.

8. ALL SANITARY SEWER COVERS SHALL BE TRAFFIC RATED FOR AASHTO HS-20 TRUCK LOADING.

9. ALL SANITARY SEWER MAINS AND SERVICE LATERALS SHALL BE CONSTRUCTED OF POLYVINYL CHLORIDE (PVC) PIPE S.D.R. 26. UNLESS OTHERWISE INDICATED IN THE CONSTRUCTION DRAWINGS. ALL SANITARY SEWER PIPES SHALL BE GREEN COLOR.

10. POLYVINYL CHLORIDE PIPE AND FITTINGS SHALL CONFORM WITH A.S.T.M. SPECIFICATIONS D-3034 FOR S.D.R. 26. INSTALLATION SHALL BE IN STRICT ACCORDANCE TO ASTM D2321 SPECIFICATIONS AND CONFORM TO CITY / COUNTY CONTRACT SPECIFICATIONS AND STANDARDS

11. ALL DUCTILE IRON PIPE SHALL BE CLASS 52 IN ACCORDANCE TO ANSI A 21.50 (AWWA C 150) AND ANSI A 21.51 (AWWA C 151).

12. ALL ON SITE DUCTILE IRON PIPE SHALL RECEIVE INTERIOR AND EXTERIOR BITUMINOUS COATING IN ACCORDANCE WITH ANSI A 21.6, A 21.8, OR A 21.51. DUCTILE IRON PIPE AND FITTINGS FOR GRAVITY SEWER SHALL CONFORM TO CITY / COUNTY CONTRACT SPECIFICATIONS AND STANDARDS.

13. AT LEAST 3 WEEKS PRIOR TO ANY CONSTRUCTION, THE DEVELOPER'S REPRESENTATIVE SHALL CONTACT THE PLANNING DIVISION'S FIELD INSPECTOR. 306 EAST JACKSON STREET. TAMPA. FLORIDA 33602 (PHONE 813-274-8070), AND SUPPLY THE FIELD INSPECTOR WITH FURTHER CONSTRUCTION INFORMATION THIS INFORMATION SHOULD INCLUDE ALL REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STARTING DATE, PROJECT SCHEDULE, AND OTHER INFORMATION REQUIRED BY THE PLANNING DIVISION. IT IS IMPERATIVE THAT THE CONTRACTOR BE FULLY INFORMED OF THE NOTIFICATION AND SUBMITTAL REQUIREMENTS OUTLINED IN THE APPROVAL FOR CONSTRUCTION LETTER ISSUED BY THE DEPARTMENT. FAILURE TO COMPLY WITH ALL DEPARTMENT REQUIREMENTS COULD DELAY PROCESSING OF THE CERTIFICATE OF OCCUPANCY FOR THE PROJECT. ALSO, THE PLANNING DIVISION OFFICE SHOULD BE CONTACTED BY TELEPHONE FIVE DAYS PRIOR TO THE ACTUAL START OF FIELD OPERATIONS IN ORDER TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL, FAILURE TO CONTACT THE PLANNING DIVISION AT THE SPECIFIED TIMES COULD INVALIDATE DEPARTMENT APPROVAL

14. THE CONTRACTOR SHALL PERFORM AN INFILTRATION / EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE WITH CITY OF TAMPA REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD

15. ONE OR MORE OF THE FOLLOWING CERTIFICATES / SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTION, WILL BE REQUIRED:

AND SUBMITTED TO THE CITY OF TAMPA WASTEWATER DEPARTMENT FOR APPROVAL.

DUCTILE IRON PIPE (DIP) OR POLY-VINYL CHLORIDE (PVC) CERTIFICATE OF MANUFACTURE MANHOLE SHOP DRAWINGS AND CONCRETE STRENGTH REPORT

FRAME AND COVER SHOP DRAWINGS FI FXIBI F COUPLING SHOP DRAWINGS

CASING PIPE CERTIFICATE

JACKING PIT DETAIL CRUSHED STONE SUBMITTAL

VALVE SHOP DRAWING MANHOLE DROP CONNECTION DETAIL

THESE ITEMS MUST BE SUBMITTED, REVIEWED, AND APPROVED PRIOR TO STARTING

16. THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN

(1) FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL

AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED ALL NECESSARY TESTING COMPLETED AND CERTIFIED

(4) PAYMENT OF ALL CAPACITY FEES

(5) ISSUANCE OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (F.D.E.P.) CERTIFICATION OF COMPLETION APPROVAL (IF APPLICABLE)

17. ALL SANITARY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACK FILL. CONTRACTOR TO NOTIFY THE ENGINEER AND APPLICABLE AGENCIES 5 DAYS IN ADVANCE TO SCHEDULE INSPECTIONS.

18. ALL PVC SANITARY FORCE MAIN SHALL BE CONSTRUCTED BY AWWA C900, DR18, GREEN PVC PIPE WITH A MAGNETIC TAPE A MINIMUM OF 4" WIDE PLACE 18 INCH BELOW THE PROPOSED GRADE ALL WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL CONFORM WITH FDOT STANDARDS. THE LOCAL FDOT DISTRICT'S ENGINEER SHALL BE NOTIFIED  $\,\,$ 5 DAYS PRIOR TO STARTING WORK AND AGAIN IMMEDIATELY UPON COMPLETION.

19. THE CONTRACTOR SHALL PERFORM AT HIS OWN EXPENSE A MANHOLE INSPECTION AND TEST FOR WATERTIGHTNESS OR DAMAGE PRIOR TO PLACING INTO SERVICE. ALL SANITARY SEWER MANHOLES TO BE CONSTRUCTED IN UNPAVED AREAS SHALL HAVE WATER TIGHT RING AND

20. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS UTILITY AGENCIES AND OBTAINING ALL INFORMATION AVAILABLE TO SHOW UTILITIES ADJACENT TO THE PROPOSED

21. ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THE PROJECT.

22. THE SANITARY SEWER COLLECTION SYSTEM SHALL NOT BE PLACED INTO SERVICE UNTIL APPROVAL FOR CONNECTION IS OBTAINED FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S ENGINEER SANITARY SEWER SYSTEM AS-BUILT INFORMATION AT LEAST SIX (6) WEEKS PRIOR TO ANTICIPATED DATE OF CERTIFICATE OF COMPLETION APPLICATION. FAILURE TO OBTAIN EPC APPROVAL PRIOR TO PLACING THE SYSTEM IN OPERATION MAY RESULT IN SUBSTANTIAL FINES.

# **CITY OF TAMPA WATER DEPARTMENT NOTES**

A. WATER SERVICE SHALL BE PROVIDED BY THE CITY OF TAMPA. B. ALL WORK TO BE PERFORMED ON EXISTING OR ON FUTURE WATER FACILITIES TO BE OWNED AND MAINTAINED BY THE CITY OF TAMPA SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CITY OF TAMPA WATER DEPARTMENT TECHNICAL MANUAL. ALL CONSTRUCTION DETAILS AND STANDARDS DESCRIBED THERE WITHIN SHALL BE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.

C.CONSTRUCTION OF ANY WATER INSTALLATIONS TO BE OWNED AND MAINTAINED BY THE CITY OF TAMPA SHALL BE COORDINATED WITH THE CITY OF TAMPA CONSTRUCTION ENGINEERING & INSPECTIONS DIVISION (CEI) PRIOR TO THE START OF CONSTRUCTION. A MEETING MAY BE SCHEDULED BY EMAILING CAD-DEVELOPER@TAMPAGOV.NET A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE INTENDED CONNECTION DATE TO COORDINATE AND SCHEDULE THE TAP WITH THE CITY. THE EMAIL MUST HAVE "REQUEST PRECON FOR UTL-XX-XXXXXXX" IN THE SUBJECT LINE FOR THE EMAIL TO BE FORWARDED TO THE CORRECT STAFF MEMBERS. IF YOU DO NOT RECEIVE A RESPONSE TO YOUR EMAIL REQUEST AFTER 3 DAYS, THEN CONTACT THE CELERONT OFFICE AT (813) 635-3400

D.PRIOR TO THE PRE-CONSTRUCTION MEETING WITH THE CITY OF TAMPA REGARDING THE PUBLIC WATER FACILITIES, THE CONTRACTOR SHALL OBTAIN THE LATEST EDITION OF THE CITY OF TAMPA WATER DEPARTMENT TECHNICAL MANUAL. ALL PRIVATELY INSTALLED PUBLIC FACILITIES. INCLUDING CONSTRUCTION. MATERIALS. AND WORKMANSHIP. ARE TO CONFORM WITH THE SPECIFICATIONS OUTLINED IN THE DEPARTMENT'S TECHNICAL MANUAL. IN THE EVENT OF A DISCREPANCY, THE MOST STRINGENT CRITERIA SHALL APPLY.

E.BENDS SHALL BE INSTALLED ON ALL WATER MAINS AS NECESSARY TO MAINTAIN PROPER ALIGNMENT. JOINT DEFLECTIONS SHALL BE IN ACCORDANCE WITH AWWA C-600 (LATEST EDITION) EXCEPT DEFLECTIONS ALLOWED SHALL BE LESS 80% OF THE DEFLECTION VALUES GIVEN IN THE AWWA DEFLECTION TABLE

F. VALVES ON EXISTING CITY OF TAMPA WATER MAINS ARE TO BE OPERATED BY CITY PERSONNEL G.FIRE HYDRANT ASSEMBLIES TO BE OWNED AND MAINTAINED BY THE CITY SHALL BE 5 1/4" DNS. H. ALL FIRE HYDRANT ASSEMBLIES AND FIRE LINE DOUBLE DETECTOR CHECK VALVES WHICH ARE

TO BE PRIVATELY OWNED AND MAINTAINED SHALL BE PAINTED RED

I. FOR ANY NEW, ADJUSTED, OR RELOCATED FIRE HYDRANT ASSEMBLY, HYDRANT EXTENSIONS ARE NOT PERMITTED. FIRE HYDRANT ASSEMBLY INSTALLATIONS MUST CONFIRM WITH THE WATER DEPARTMENT STANDARD. IF A NEW, ADJUSTED, OR RELOCATED FIRE HYDRANT ASSEMBLY IS NOT PROPERLY SIZED, A NEW HYDRANT MUST BE ORDERED AT THE DEVELOPER'S

J. THE DEVELOPER SHALL BE RESPONSIBLE TO LOCATE ALL EXISTING PUBLIC WATER SERVICE LINES NO LONGER TO BE SERVING THE PARCEL. THESE SERVICE LINES ARE TO BE REMOVED,

AND CUT & CAPPED AT THE PUBLIC WATER MAIN BY THE DEVELOPER. K.THE DEVELOPER SHALL INSTALL AND TEST ALL BACKFLOW PREVENTION ASSEMBLY(IES) IN ACCORDANCE WITH THE CITY'S CROSS CONNECTION CONTROL AND PREVENTION MANUAL. A COPY MAY BE FOUND ONLINE AT WWW.TAMPAGOV.NET/WATER, A HOLD ON THE CERTIFICATE OF OCCUPANCY SHALL REMAIN UNTIL THE INSTALLATION OF THE ASSEMBLY(IES) ARE INSPECTED AND APPROVED BY THE WATER DEPARTMENT. TO SCHEDULE AN INSPECTION OF THE BACKFLOW PREVENTION ASSEMBLY(IES), PLEASE CONTACT THE FIELD QUALITY SECTION AT (813) 231-5266 OR FIELDQUALITY@TAMPAGOV.NET.

L. THE RELIEF VALVE OF ANY INSTALLED REDUCED PRESSURE PRINCIPLE ASSEMBLY SHALL BE INSTALLED A MINIMUM OF 12 INCHES ABOVE THE GRADE OR THE FLOODPLAIN ELEVATION. WHICHEVER IS HIGHER. THE INSTALLATION SHALL BE MADE SO THAT NO PART OF THE UNIT CAN BE SUBMERGED.

# PIPE CLEARANCES

A.ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES AND SHALL MAINTAIN A MINIMUM OF THREE (3) FEET HORIZONTAL SEPARATION FROM OTHER UTILITIES EXCEPT STORM, WASTEWATER, AND GAS WHICH SHALL MAINTAIN TEN (10) FEET HORIZONTAL SEPARATION, UNLESS OTHERWISE NOTED B. WATER MAINS SHALL CROSS ABOVE OTHER PIPES. WHEN WATER MAINS CROSS ANOTHER UTILITY. 18" OF OUTSIDE-TO-OUTSIDE VERTICAL SEPARATIONS SHOULD BE PROVIDED. IN CASES

WHERE THE PREFERRED SEPARATION MAY NOT BE MET, A MINIMUM OF 12" OF OUTSIDE-TO-OUTSIDE VERTICAL SEPARATION MUST BE PROVIDED. C.ALL WATER MAIN CROSSINGS WILL OTHER UTILITIES SHALL BE ARRANGED SO THAT THE JOINTS OF THE CROSSING PIPES ARE EQUIDISTANT FROM THE POINT OF CROSSING (PIPES CENTERED ON THE CROSSING).

D.CLEARANCE BETWEEN ALL TREES AND WATER MAINS SHALL MEET CITY OF TAMPA PARKS DEPARTMENT LATEST REQUIREMENTS. NO TREE SHALL BE PLANTED WITHIN 10 FEET OF INSTALLED OR EXISTING WATER MAINS.

ALL VALVES SHALL BE RIGHT HAND (CLOCKWISE) OPEN. ALL DUCTILE IRON PIPE (DIP) FITTINGS AND APPURTENANCES SHALL UTILIZE POLYWRAP. ALL HARDWARE SHALL BE, AT MINIMUM, 304 STAINLESS STEEL, UNLESS OTHERWISE NOTED. ALL BELOW GROUND BENDS SHALL BE MECHANICAL JOINT.

ALL VALVES AND FITTINGS SHALL BE RESTRAINED CONCRETE THRUST BLOCKS SHALL NOT BE USED TO PROVIDE THRUST RESTRAINT. RESTRAINT OF PUSH-ON DIP (OTHER THAN FOR FITTINGS AND VALVES) SHALL BE WITH APPROVED. PUSH-ON "GRIPPER-TYPE" RESTRAINTS. FITTINGS AND VALVES SHALL BE CONNECTED TO PIPE WITH MEGA LUGS. OR APPROVED EQUAL

G. ALL POTABLE WATER SERVICE LATERALS, AIR RELEASE VALVES, AND TEMPORARY SAMPLE POINTS SHALL BE CONSTRUCTED OF BLUE SDR-9 HIGH DENSITY POLYETHYLENE (HDPE) TUBING ALL HOPE TURING SHALL BE INSTALLED WITHIN A CASING AS DEFINED IN THE SPECIFICATIONS AND DETAILS OF THE CITY OF TAMPA WATER DEPARTMENT TECHNICAL MANUAL.

# DIRECTIONAL DRILLING

A. HORIZONTAL ALIGNMENT SHALL BE AS SHOWN ON THE DRAWINGS. THE PIPE SHALL HAVE A MINIMUM 48-INCH COVER. THE MAXIMUM DEPTH SHALL BE DETERMINED BASED ON 36-INCH MINIMUM CLEARANCE UNDER WATER OR GAS LINES AND 24-INCH CLEARANCE UNDER ALL OTHER EXISTING OR PROPOSED UTILITIES TO BE CROSSED. COMPOUND CURVATURES MAY BE USED. BUT SHALL NOT EXCEED THE MAXIMUM DEFLECTIONS AS SET FORTH BY THE HDPE PIPE MANUFACTURE OR AWWA STANDARDS, WHICHEVER IS STRICTER.

B. ENTRY ANGLE SHALL BE 12° - 14° IDEAL (NOT TO EXCEED 15°). EXIT ANGLE SHALL BE 6° - 12° TO FACILITATE "PULL-BACK". ENTRY AND EXIT ANGLES ARE DEFINED AS ANGLES FROM THE HORIZONTAL.

A BORING LOG FOR THE VERTICAL AND HORIZONTAL ALIGNMENTS OF THE DIRECTIONAL DRILLED PIPES SHALL BE PROVIDED AND SUBMITTED ALONG WITH THE AS-BUILT PACKAGE.

RESTORATION

APPLICABLE).

A. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS. CONNECTIONS, AND VALVES SHALL BE PROPERLY PRESSURE TESTED, WITNESSED, AND ACCEPTED BY THE CITY. PRESSURE TEST TO BE PERFORMED IN ACCORDANCE WITH CITY OF TAMPA WATER DEPARTMENT SPECIFICATIONS, CONTRACTOR TO NOTIFY THE ASSIGNED CITY INSPECTOR A MINIMUM OF THREE (3) WORKING DAYS IN ADVANCE OF PERFORMING TESTS. CONTRACTOR SHALL PRESSURE TEST WATER MAINS AT A MINIMUM OF 150 PSI FOR A PERIOD OF TWO (2) HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS. B. ALL SAMPLE, PRESSURE TEST, AND CHLORINATION POINT PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CLOSED AND

PLUGGED AT THE MAIN C. CONTRACTOR SHALL PERFORM DISINFECTION AND HIRE INDEPENDENT FIRMS TO CONDUCT

BACTERIOLOGICAL TESTING AS DEFINED IN F.A.C. 62-55.340. CONTRACTOR SHALL SUPPLY THE CITY WITH AS-BUILTS AND SAMPLE RESULTS NECESSARY TO OBTAIN DEP CLEARANCES.

# ROADWAY RESTORATION SHALL BE IN CONFORMANCE WITH CORRESPONDING

JURISDICTIONS LATEST STANDARDS. B. ALL ASPHALT OPEN CUTS WITHIN CITY RIGHT-OF-WAY SHALL BE FULLY MILLED AND OVERLAYED FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT PER THE WATER DEPARTMENT'S STANDARD DETAIL. C. DISTURBANCE TO ANY PROPERTY, PUBLIC OR PRIVATE, AS PART OF THE CONSTRUCTION OF PUBLIC WATER FACILITIES, SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

# CERTIFICATE OF OCCUPANCY

THE CITY OF TAMPA WATER DEPARTMENT'S HOLD ON THE CERTIFICATE OF OCCUPANCY WILL NOT BE RELEASED UNTIL ALL CLOSEOUT REQUIREMENTS SET FORTH BY CITY OF TAMPA WATER DEPARTMENT AND CONSTRUCTION ENGINEERING & INSPECTIONS DIVISION HAVE BEEN SATISFIED. THESE REQUIREMENTS MAY INCLUDE, BUT NOT BE LIMITED TO:

A. FINAL INSPECTION IN CONJUNCTION WITH THE CONSTRUCTION ENGINEERING & INSPECTIONS DIVISION PERSONNEL COMPLETED AND APPROVED. B. AS-BUILTS. BOTH HARD COPIES AND PDF. HAVE BEEN RECEIVED AND ACCEPTED. ALL RECORD DRAWINGS MUST CONFIRM WITH THE LATEST VERSION OF THE WATER DEPARTMENT'S

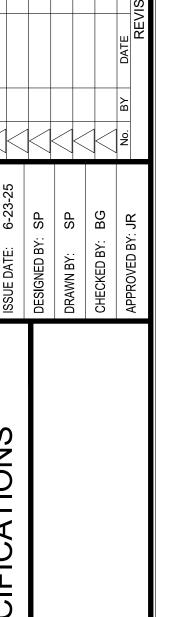
WATER PIPE NETWORK AS BUILT REQUIREMENTS MANUAL. C. ALL NECESSARY TESTING COMPLETED AND CERTIFIED PAYMENT OF ALL CITY OF TAMPA WATER DEPARTMENT FEES.

ISSUANCE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION / HILLSBOROUGH COUNTY HEALTH DEPARTMENT CERTIFICATION OF COMPLETION APPROVAL (IF APPLICABLE). F. RECEIPT AND ACCEPTANCE OF ALL REQUIRED EASEMENT DEDICATION DOCUMENTS (IF APPLICABLE) G. RECEIPT AND ACCEPTANCE OF ALL REQUIRED TRANSFER OF OWNERSHIP DOCUMENTS (IF

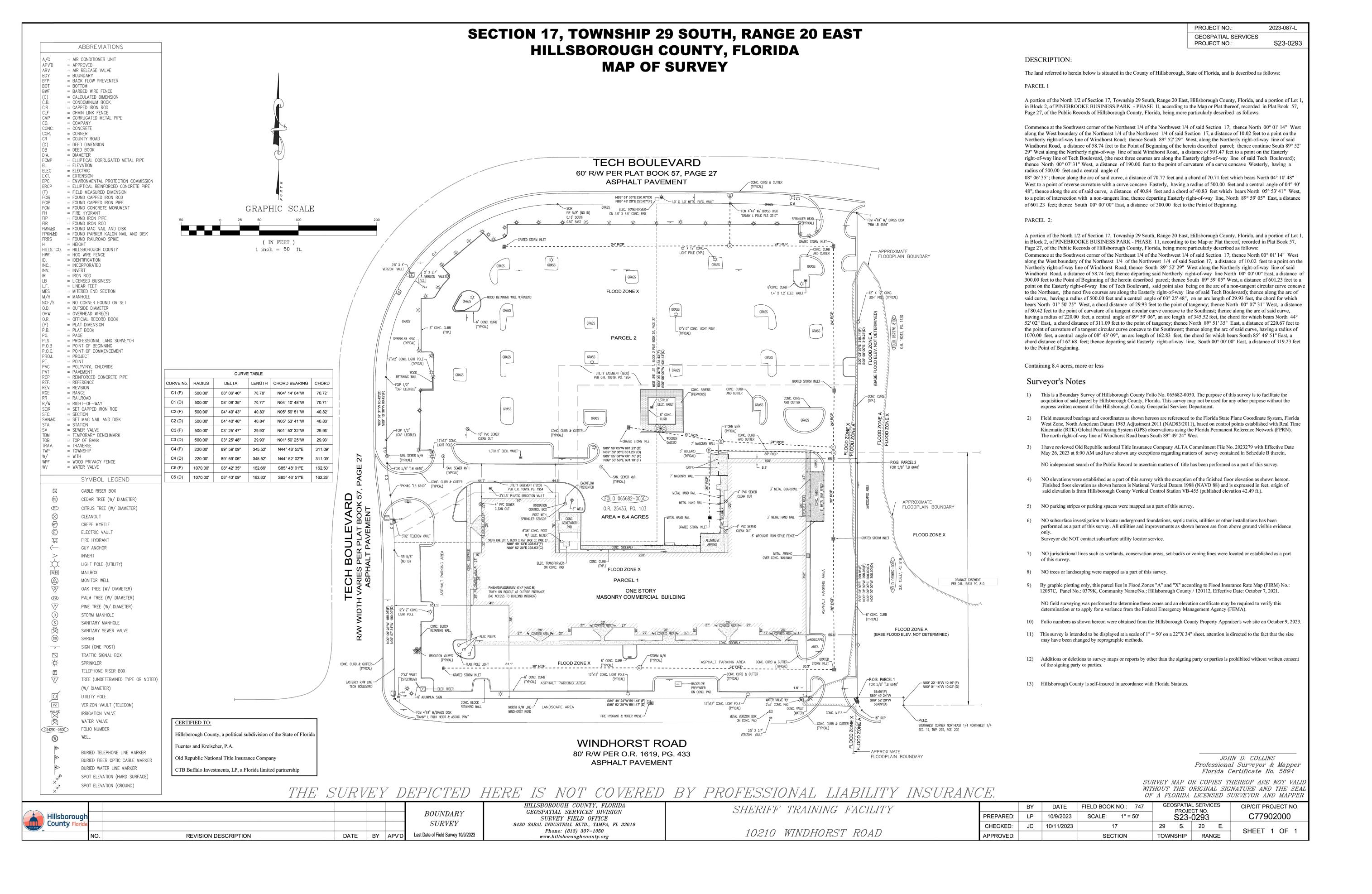
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BRAULIO GRAJALES
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BY THE PROFESSIONAL ENGINEER

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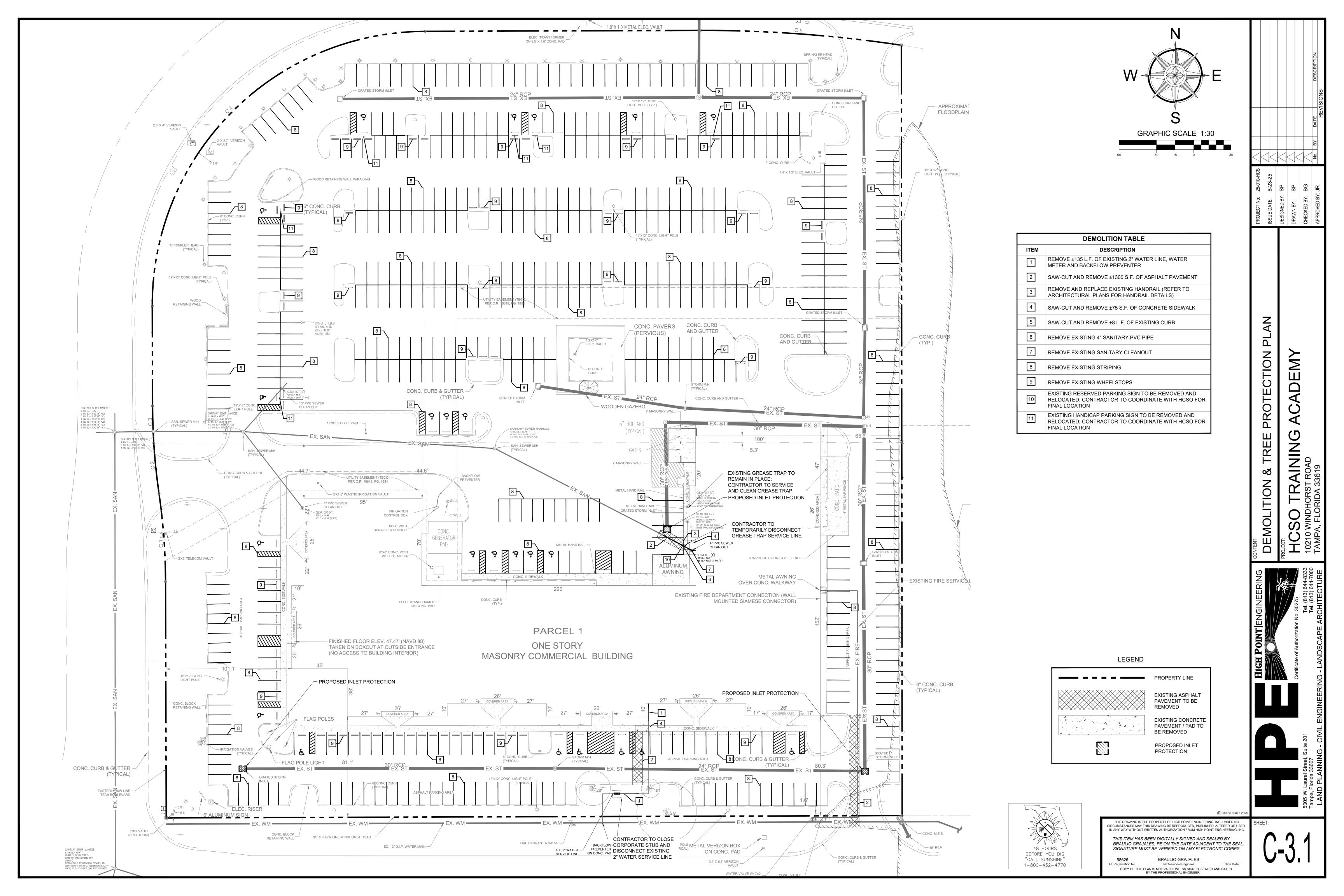
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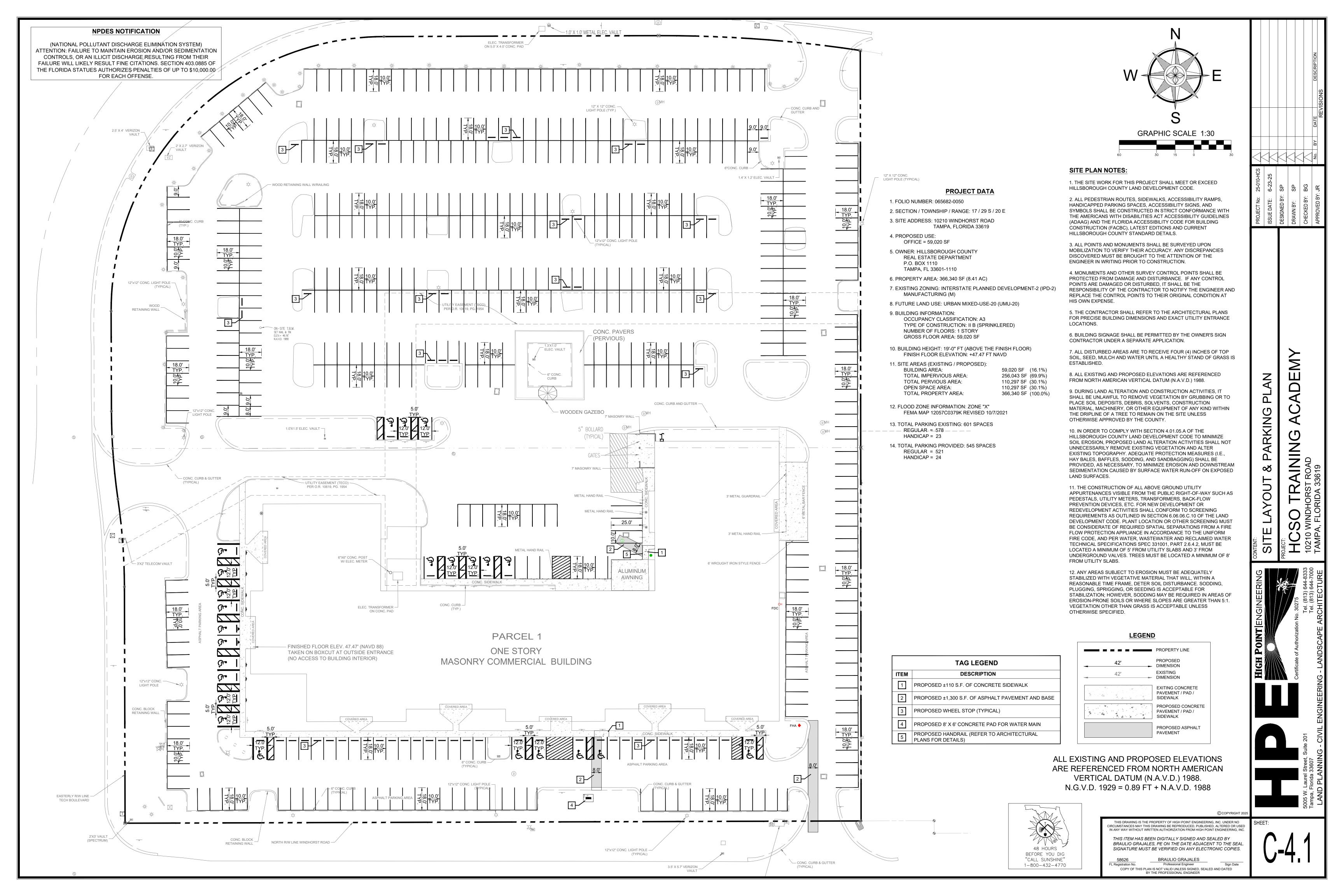
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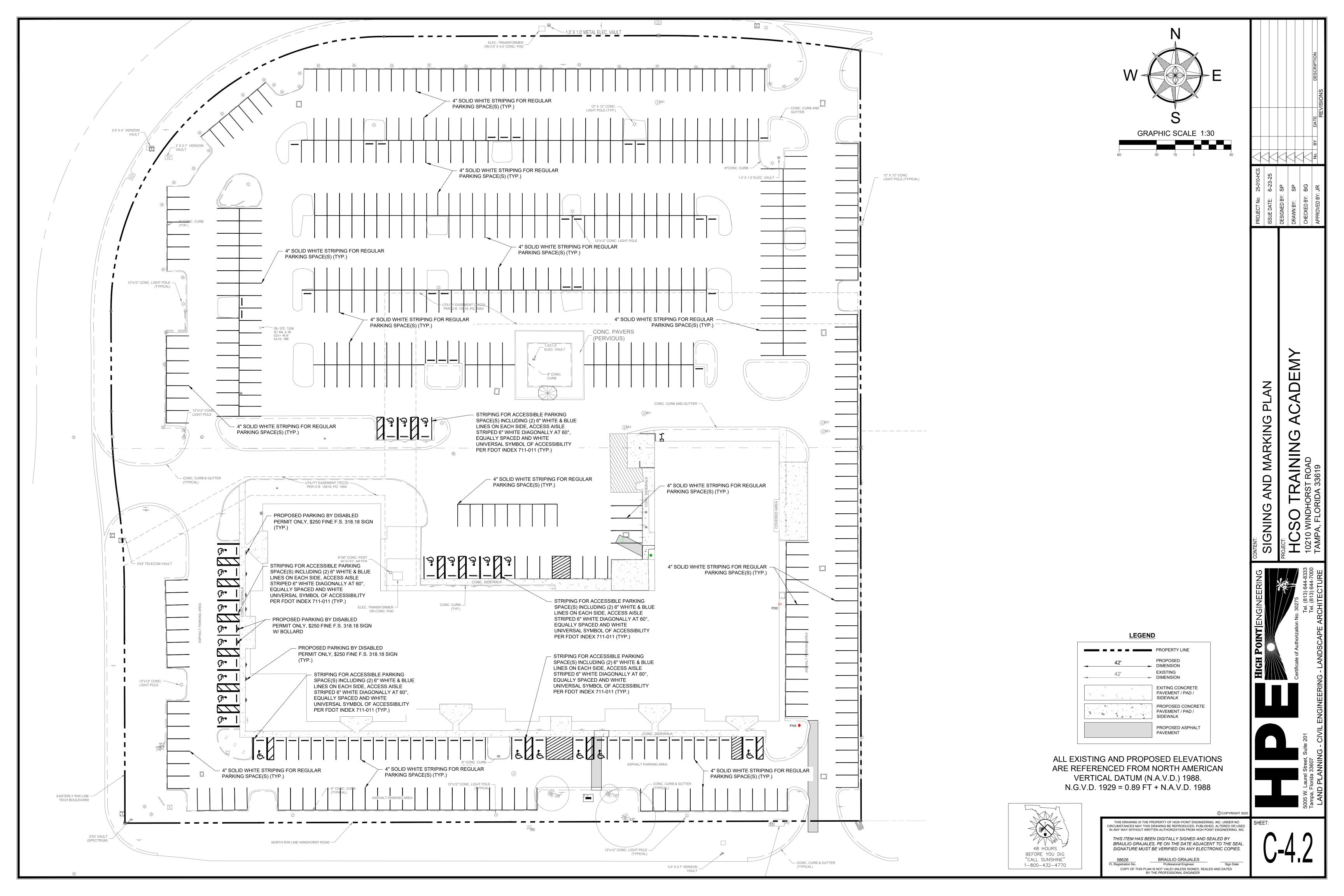
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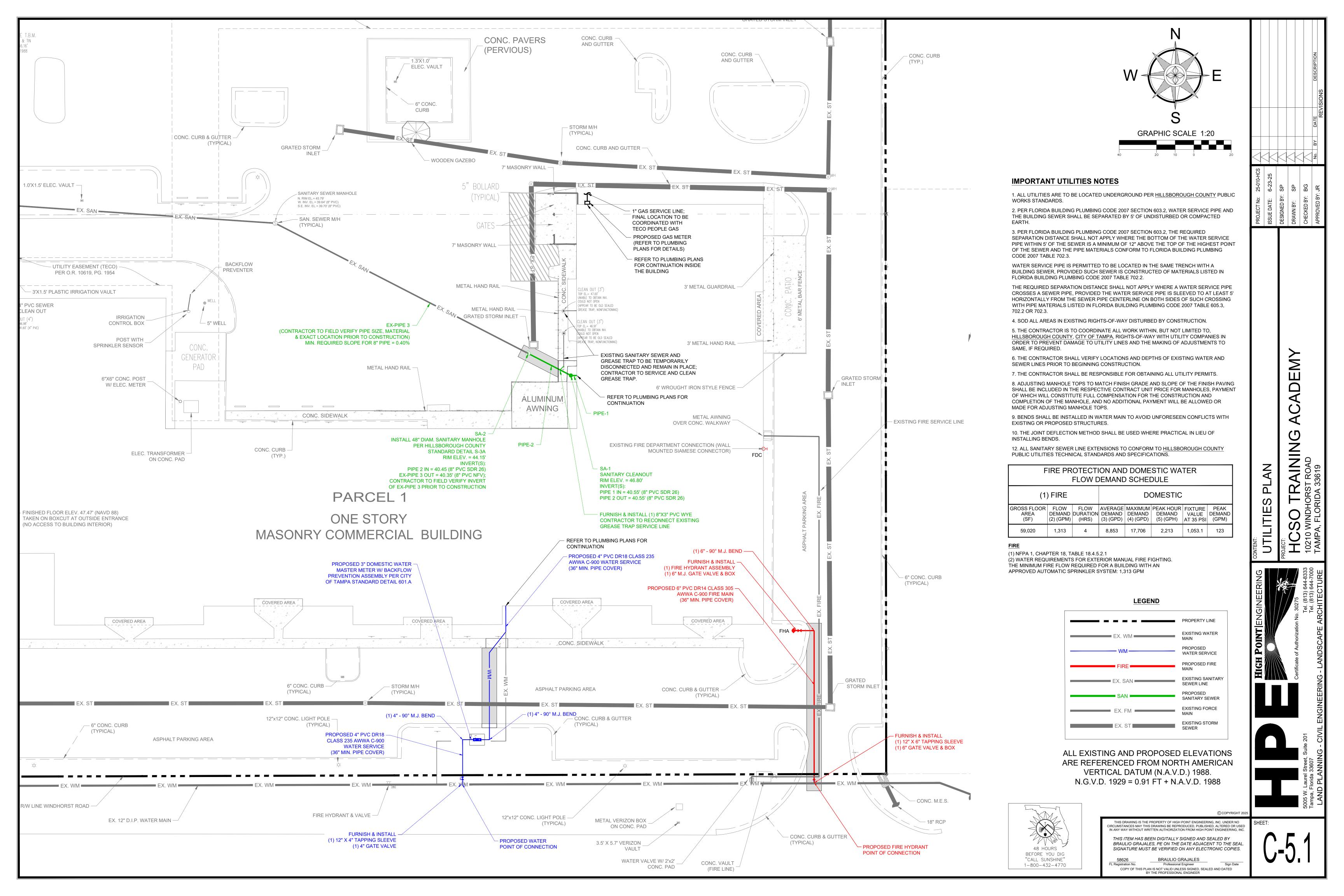
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### **SECTION 4.0 SPECIFICATIONS FOR WASTEWATER SYSTEMS DESIGN**

# 4.1 GENERAL

- 4.1.1 The following specifications cover the general design, review of plans and specifications, and acceptance of wastewater collection systems, wastewater pumping stations, wastewater force mains, wastewater line extensions and all appurtenant items which are to be owned and maintained by Hillsborough County.
- 4.1.2 The Public Utilities Water Resources Department (WRD) Technical Specifications 333001 "Gravity Wastewater Sewers and Appurtenances", 333002 "Wastewater Force Mains and Appurtenances", and 333003 "Wastewater Pumping Stations", provides additional clarification regarding design details, materials of construction, installation, and acceptance requirements. If further clarification is needed, contact the Site Engineering Review Section of the Development Services Department (DSD) or the Utility Design Section of WRD.
- 4.1.3 All improvements and modifications made to the Hillsborough County wastewater system must be done in accordance with plans approved by the Site Engineering Review Section of DSD. Material and workmanship must comply with Public Utilities Technical Specifications 333001, 333002, and

### 4.2 PLANS PREPARATION

- 4.2.1 All sanitary wastewater collection systems, wastewater pumping stations, wastewater transmission force mains, wastewater line extensions, and all appurtenant items must be designed in accordance with the applicable regulations of Hillsborough County, Hillsborough County Department of Health, the Florida Department of Environmental Protection, and the standard established herein.
- 4.2.2 When a wastewater main will serve existing or future developments beyond the borders of the proposed site, the County may request oversizing. If the County determines that a line needs to be "Oversized", the procedures for sizing and reimbursement, as outlined in Appendix 3, must be
- 4.2.3 The wastewater collection system or wastewater transmission system or any portion thereof, which is to become the property and sole responsibility of Hillsborough County WRD, must be designed and constructed within a public right-of-way or easement (design exception) which may be used for said purpose. Refer to the Hillsborough County Public Works Transportation Technical Manual Drawings, latest edition, for Recommended Utility Locations, TS-1.

### 4.3 PLANS REVIEW

4.3.1 For subdivision development, the Developer must comply with the procedures and requirements set forth in Article VI, Part 6.02.00 of the County's Land Development Code. For site developments, the Developer must comply with the procedures and requirements set forth in Article VI, Part 6.03.00 of the County's Land Development Code. The placement of appurtenances in Hillsborough County right-of-way must be as required in the Utility Accommodation Guide and Rights of Way Use Procedures Manual.

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# SECTION W-20 - MAINTAINING EXISTING SANITARY SEWER IN **OPERATION**

## **W-20.01 General**

It shall be the Contractor's responsibility to preserve all existing sanitary sewer services without interruption while performing the work included in this project. The Contractor shall furnish all labor, materials, and equipment required to bypass wastewater flow around the working area to an acceptable point of discharge. Also, if deemed necessary by the engineer, the contractor will be responsible to provide necessary noise suppression devices to minimize bypass pump noise.

The Contractor shall not be permitted to pump or otherwise direct the flow of sanitary sewage into storm sewers, streams, or other open channels or onto streets or alleys at any time during the course of the work.

# W-20.02 Bypass Pumping

The Contractor shall submit the proposed plan to the Engineer for approval prior to proceeding with the work. All required agency approvals and permits shall be the responsibility of the Contractor. The hydraulic design of the bypass pumping arrangement shall be the sole responsibility of the Contractor.

Pumping equipment shall be of a type suitable for pumping raw unscreened sewage over an indefinite period without clogging or requiring shutdown for routine maintenance. Bypass pumping shall be continuous during the entire length of time each portion of the work is being accomplished. The Contractor shall submit drawings and equipment specifications, detailing the proposed pumping equipment and the method of installation, to the Engineer for approval.

The Contractor shall possess at least one (1) backup pump, no smaller than the largest pump in use, on site for every 1 to 3 bypass pumps in operation. An additional backup pump shall be required on site for each increment of 3 pumps in operation as illustrated on the following table:

Operating Bypass Pumps	Required Backup Pumps On Site
1 - 3	1
4 - 6	2
7 - 9	3

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Water, Wastewater, and Reclaimed Water Technical Manual



4.3.2 The Developer or authorized representative must submit plans and associated documentation in accordance with the procedures and requirements set forth in Article VI, Part 6.03.00 of the County's Land Development Code. The Site Engineering Review Section will either accept or reject the plans with notations for corrections required. All plans must comply with the requirements of Section 2.0 of the Hillsborough County Public Utilities Water, Wastewater, and Reclaimed Water Technical Manual.

### 4.4 PROJECT ACCEPTANCE

Following completion of construction and testing, the Developer's Engineer of Record must submit certified "Record" drawings and the Asset Data spreadsheet with the "as-built" information shown on the original design as outlined in Section 1.6 and Section 2.4. Information required on a "Record" drawing of a typical wastewater collection system is shown in Figure 4-1.

## 4.5 SYSTEM DESIGN AND FLOW CRITERIA

- 4.5.1 General: The provisions of this section set forth the general requirements for design and installation of wastewater collection/transmission systems and facilities. The Engineer must comply with all the requirements of the Florida Department of Environmental Protection in addition to the criteria contained herein.
- 4.5.2 Siting Requirements: Pump Stations must be sited to consider the potential for damage or interruption of operation because of flooding. Pump station structures and electrical and mechanical equipment must be designed to be protected from physical damage by the 100-year flood. Pump stations must be designed to remain fully operational and accessible during the 25- year flood unless lesser flood levels are appropriate based on local considerations, but not less than the 10-year flood. [62-604.400(2) (e), F.A.C.]
- 4.5.3 Flow Criteria: Flow estimates for design must be calculated based on full or projected ultimate development. The average daily flow (ADF) for single family or master-metered residences must be the per unit demand factors contained in the most current Hillsborough County Utility Rate Resolution. Industrial and commercial design flows for sanitary wastewater must be in accordance with Table 1 of the County's Utility Rate Resolution. Wastewater gravity collection systems, pumping stations, and force mains must be designed for average daily flow times the appropriate peak factor as shown in Table 4-1. If the County determines that a line needs to be "Oversized", the procedures for sizing and reimbursement, as outlined in Appendix 3, must be followed.

### **Table 4-1: Wastewater Flow Peaking Factors**

Average Flow (MGD)	Peak Factor	Average Flow (MGD)	Peak Factor
010	3.00	.70180	2.65
.10120	2.95	.80190	2.60
.20130	2.90	.901 - 1.0	2.55
.30140	2.85	1.01 - 2.0	2.50
.40150	2.80	2.01 - 4.0	2.25
.50160	2.75	>4.0	2.00
.60170	2.70		

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## SECTION W-20 - MAINTAINING EXISTING SANITARY SEWER IN **OPERATION**

## **W-20.03 Connections**

All house laterals and connections to lateral sewers shall be maintained in operation without leakage or backup during the work.

# W-20.04 Street Closures

The Contractor shall be responsible for coordination of maintenance of traffic and all street closures with the City of Tampa, Department of Public Works; Hillsborough County, Superintendent of Maintenance; and the State of Florida, Department of Transportation.

# **W-20.05 Cleanup**

When the repair or reconstruction has been completed, all temporary connections and bulkheads shall be removed. Sewers shall be cleaned of all settled solids.

* * *

Water, Wastewater, and Reclaimed Water Technical Manual

- 4.5.4 Connection Feasibility: If you are not required to connect to sewer per the Hillsborough County Land Development Code, the development will be evaluated for consideration of a septic system based on the availability criteria defined in Chapter 381 of Florida Statute.
- 4.5.5 Gravity Collection System 4.5.5.1 Minimum Size of Gravity Mains: Gravity mains must be sized to accommodate peak flow (ref. 4.5.3) when flowing 1/2 full. No gravity sewer main shall be less than eight
  - 4.5.5.2 Alignment: All gravity mains must be laid with straight alignment between manholes.
- 4.5.6 Wastewater Manholes
- 4.5.6.1 Manholes must be installed at the end of each line, at all changes in grade, size or alignment, and at all gravity main collection intersections. The distance between manholes must not be greater than 400 feet unless prior approval is obtained from the County. Cleanouts may be used only for special conditions and must not be substituted
  - 4.5.6.2 Design: The minimum diameter of manholes must be no less than 48 inches. A minimum access diameter of 24 inches must be provided. The minimum depth of manholes is five
- 4.5.7 Force Main

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- 4.5.7.1 Minimum Size of Force Mains: The Developer must install the largest size force main that will maintain a minimum velocity of two feet per second (fps). The minimum size force main constructed within County Road right-of-way or dedicated easements must not be less than four inches in diameter
- 4.5.7.2 System Design: Force mains must be sized to carry the full development peak flow (ref. Section 4.5.3) from all connected pumping stations within the designated stations service area. Each force main system should be capable of transporting the peak flow from each pump station operating simultaneously without producing excessive pressure, i.e., not to exceed 100 feet Total Dynamic Head (TDH) anywhere in the system.
- 4.5.7.3 Cover, as measured from finished grade to the top of the pipe, must not be less than 48
- 4.5.7.4 When automatic air release valves are required, the depth of cover **of the entire line** must be increased to 52-inches(min.).
- 4.5.7.5 Valve Locations: New force mains connecting to existing force mains must include a shutoff plug valve at the point of connection. The distance between in-line (isolation) valves must not exceed 1,000 feet.
- 4.5.8 Wastewater Pumping Stations 4.5.8.1 Flows: Wastewater pumping stations must be designed to accommodate the full
- development flow from all contributing areas at peak flow computed in accordance with the "Flow Criteria" set forth in Section 4.5.3. 4.5.8.2 Design: Wet well diameter must be six feet or greater and sized to both maximize holding

time and minimize pump starts. Wet well depths must not exceed 25 feet.

4.5.9 Connection of Single Family Homes Using Individual Grinder Pumps: Per BOCC Policy 09.07.03.03, grinder pumps may be used for single family home connections to allow single family

homes to be constructed in infill areas where sewage service is reasonably economically available only by the use of grinder pumps through a pressure force main to WRD mains. This policy is applicable only under the following conditions:

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- 4.5.9.1 This exception to the standard gravity sewer/pumping station/force main systems, described in this manual, applies to existing lots to be developed for single family homes and to larger lots being subdivided into no more than five single family lots. 4.5.9.2 The requirement for the property owner, and all future owners, to operate and maintain
- the system will be noted on the deed of each property and on the appropriate plat, when 4.5.9.3 All pressure pipe, in the right-of-way, must be gasketed PVC pipe, restrained as necessary. Glued fittings or glued joints are not allowed. Connection to a WRD force main

must be a tee with in-line and branch plug valves.

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BRAULIO GRAJALES

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Joint Spacing @ Crossings Other Pipe **Horizontal Separation** Crossings (1) (Full Joint Centered) Alternate 3 ft. minimum Water Main Water Main 12 inches is the minimum, Water Main Storm Sewer, 3 ft. minimum except for storm sewer, then Stormwater Force Main, 6 inches is the minimum and Reclaimed Water (2) 12 inches is preferred Alternate 3 ft. minimum Water Main Water Main Water Main 10 ft. preferred 12 inches preferred **Vacuum Sanitary Sewer** 3 ft. minimum 6 inches minimum Alternate 6 ft. minimum Water Main Water Main **Gravity or Pressure** Water Main 10 ft. preferred 12 inches is the minimum, Sanitary Sewer, 6 ft. minimum (3) except for gravity sewer, then Sanitary Sewer Force Main, 6 inches is the minimum and Reclaimed Water (4) 12 inches is preferred

Page |4-3

LOCATION OF PUBLIC WATER SYSYEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

October 2023

10 ft. minimum Disposal System (1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.

(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.

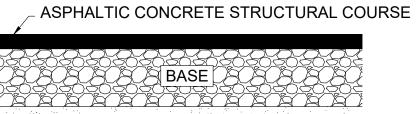
On-Site Sewage Treatment &

(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.

(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer - This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

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SUBGRADE

NOTES:

2" TYPE SP-9.5 ASPHALTIC CONCRETE STRUCTURAL COURSE ASPHALT FIELD COMPACTED TO 95% OF LABORATORY MAXIMUM DENSITY PER SPECIFIC GRAVITY (Gmm) METHOD

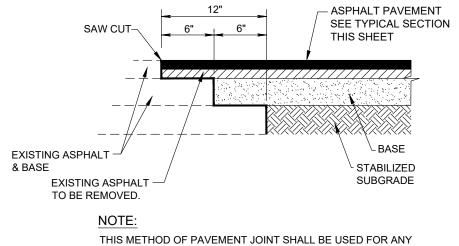
BASE 6" LIMEROCK (LBR 100) OR CRUSHED PORTLAND CEMENT CONCRETE (LBR 150) BASE FROM FDOT APPROVED SOURCES AND MEETING ALL THE REQUIREMENTS OF FDOT STANDARD SPECIFICATIONS SECTION 204 COMPACTED TO 100% OF

SUBGRADE 12" STABILIZED SUBGRADE (LBR 40) COMPACTED TO 98% OF MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

# ON-SITE FLEXIBLE PAVEMENT SECTION

MAXIMUM DENSITY PER ASTM D1557 / AASHTO T-180

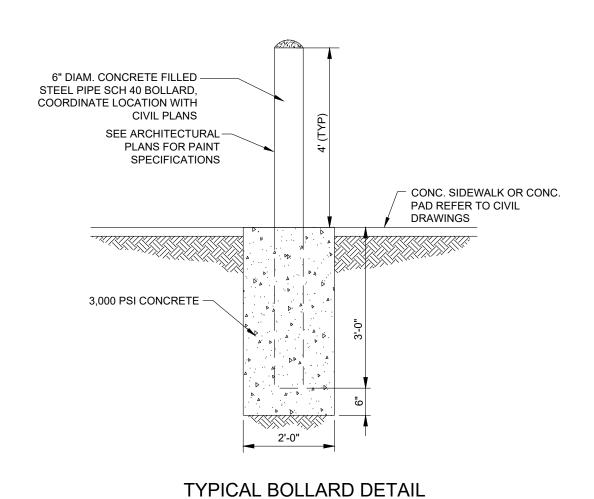
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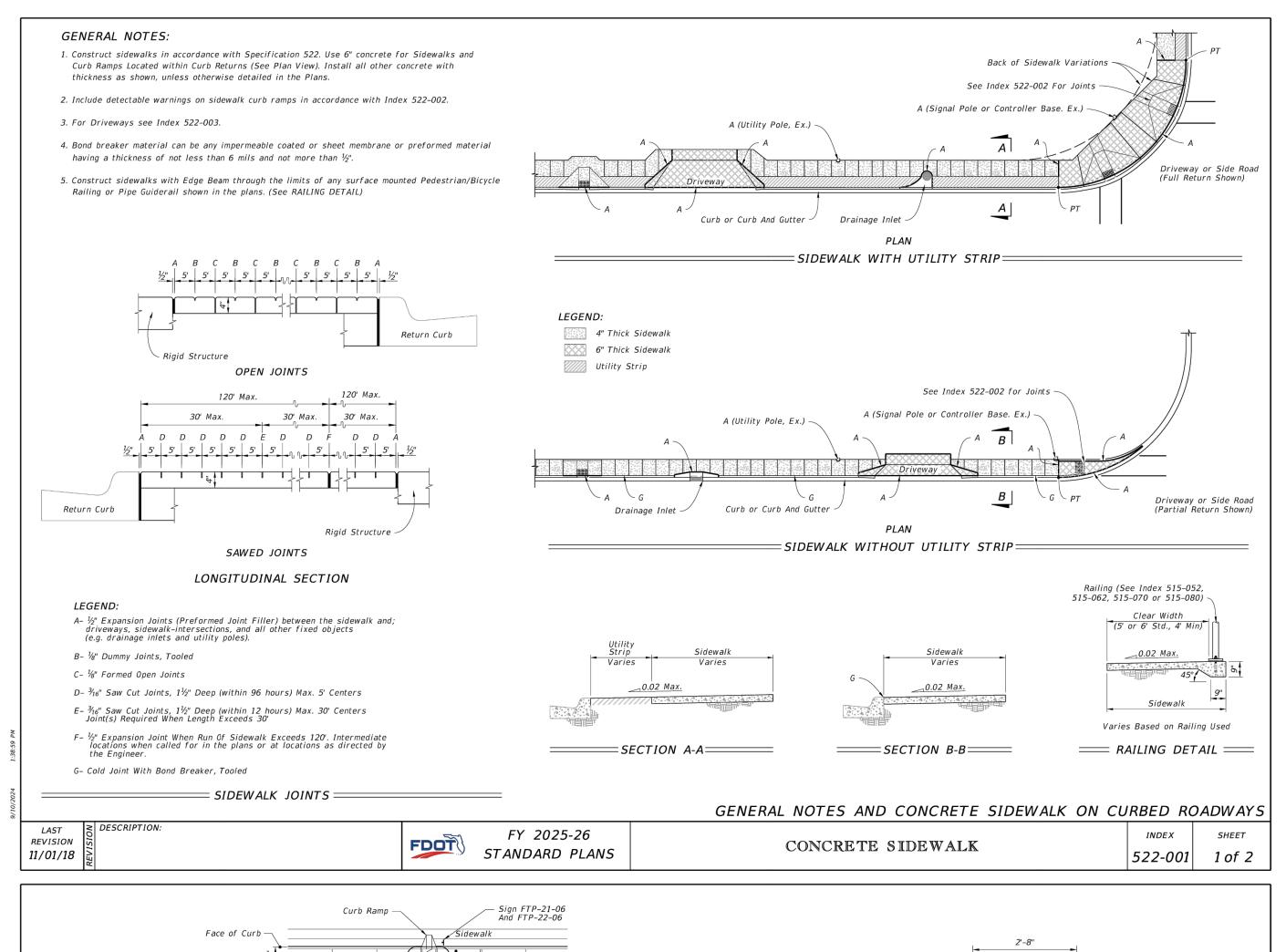
APPLICATION OR CONSTRUCTION WHERE PROPOSED PAVEMENT AND BASE WILL BE CONNECTED TO EXISTING.

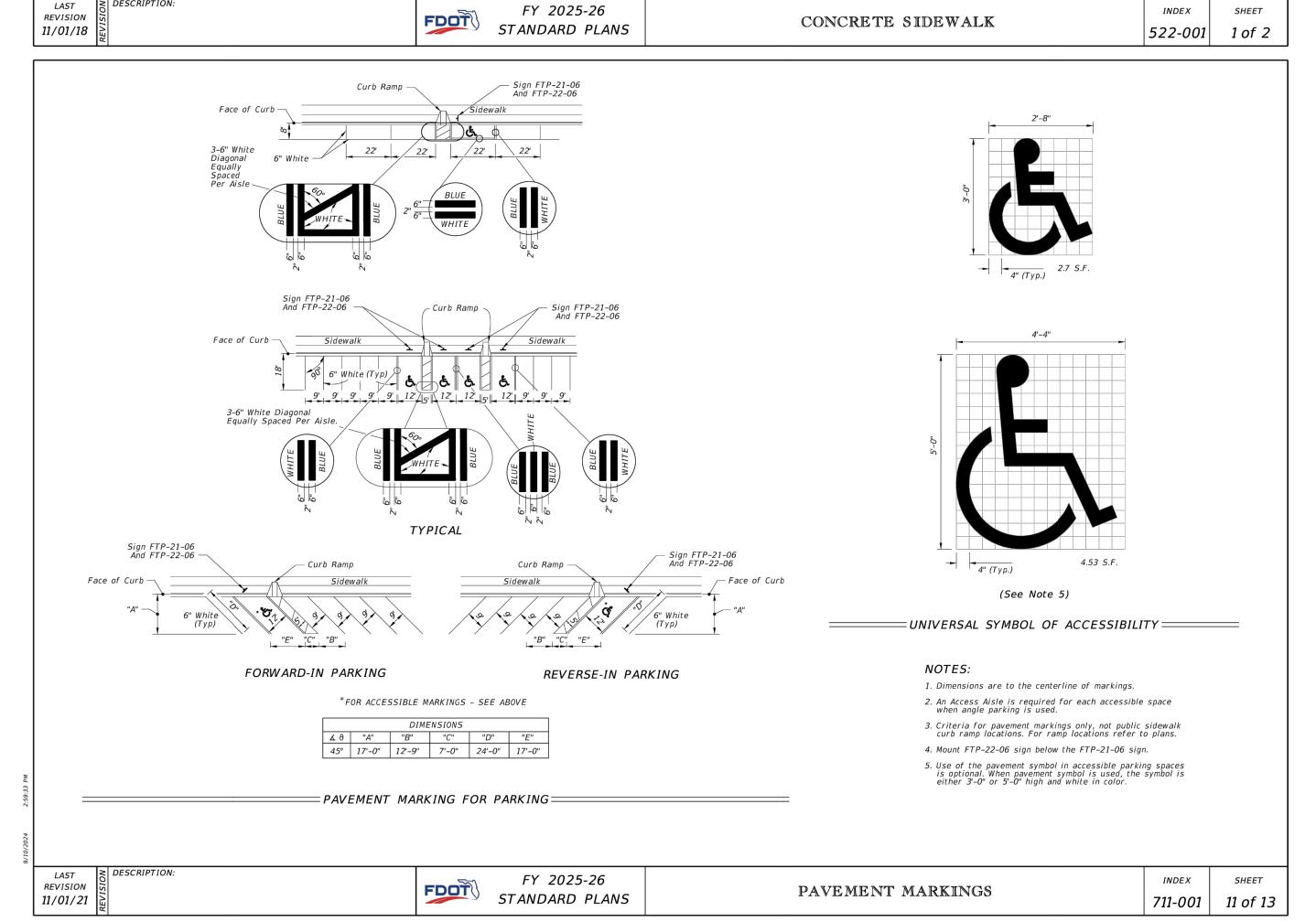
ASPHALT PAVEMENT CONNECTION TO **EXISTING PAVEMENT** 

N.T.S.



N.T.S.





TAIL DE AND EM AD NOTE ICTION NING A CONSTRU SITE © COPYRIGHT 202 SHEET:

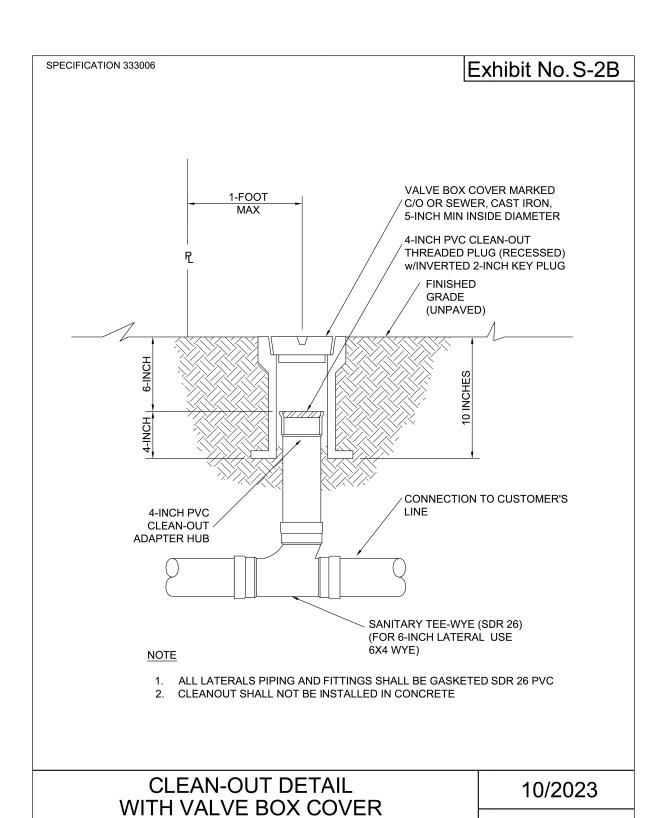
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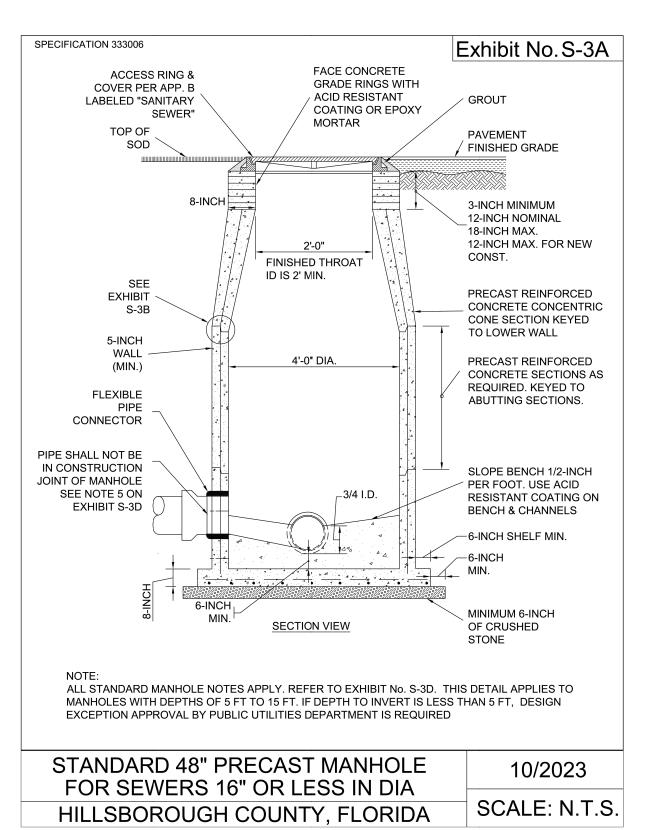
BRAULIO GRAJALES

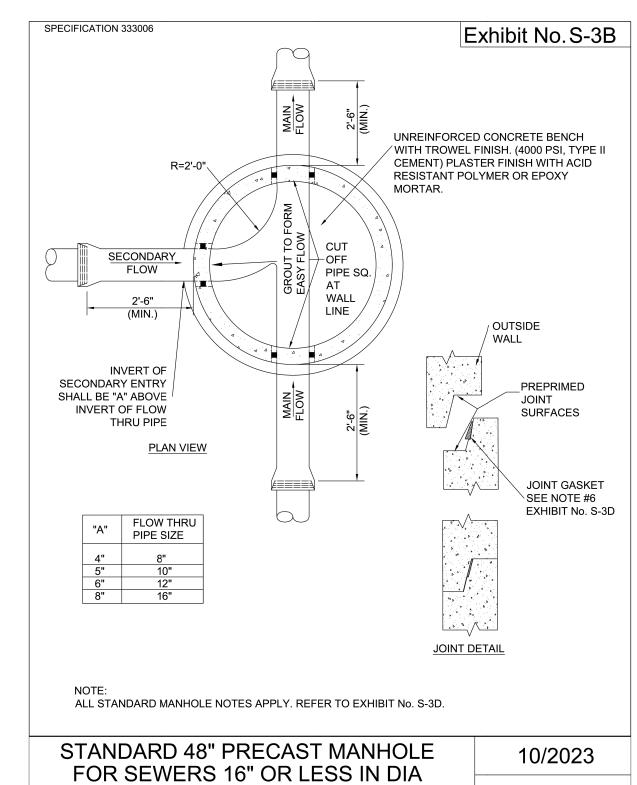
Registration No. Professional Engineer Sign Dat

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BY THE PROFESSIONAL ENGINEER

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HILLSBOROUGH COUNTY, FLORIDA

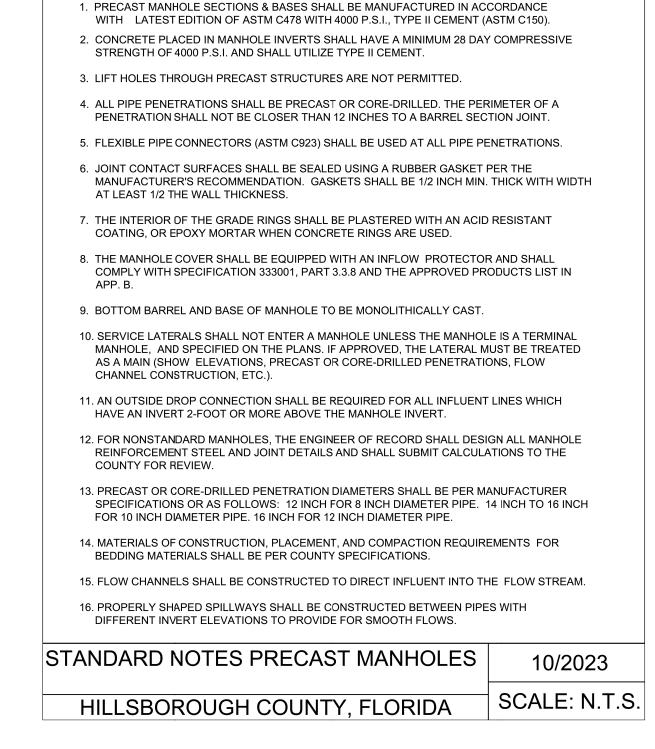
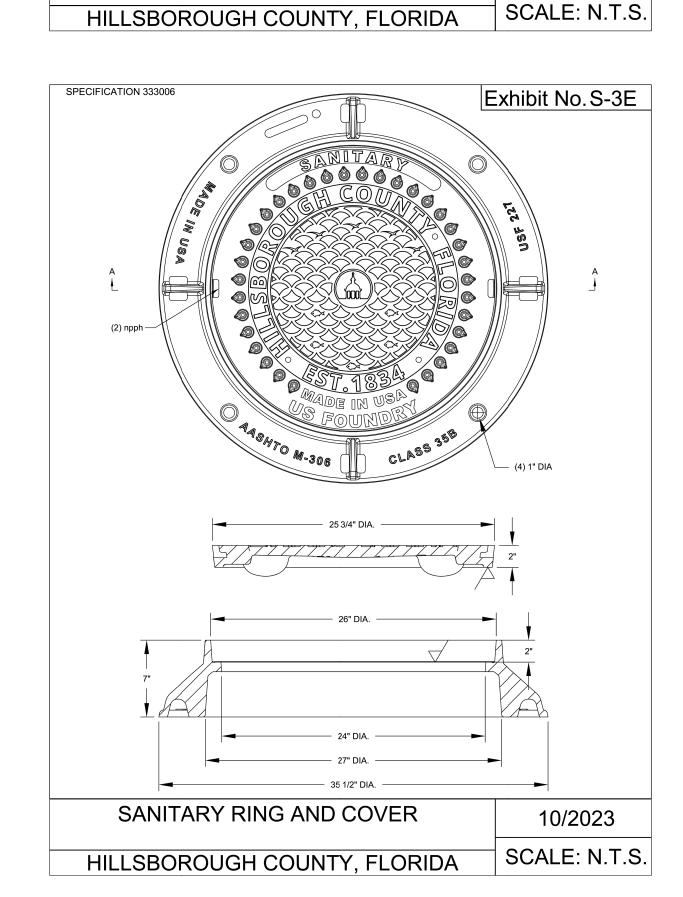
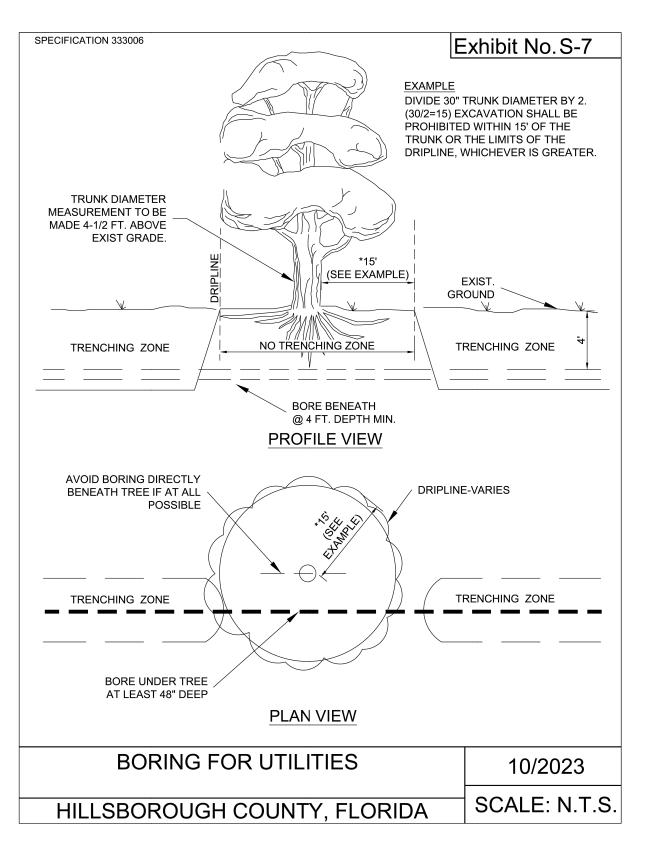
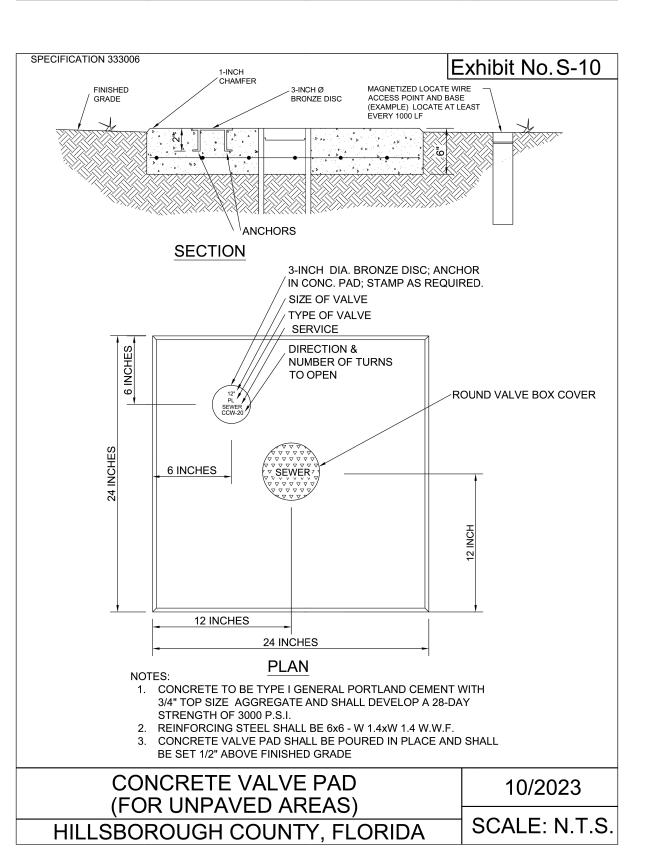


Exhibit No. S-3D

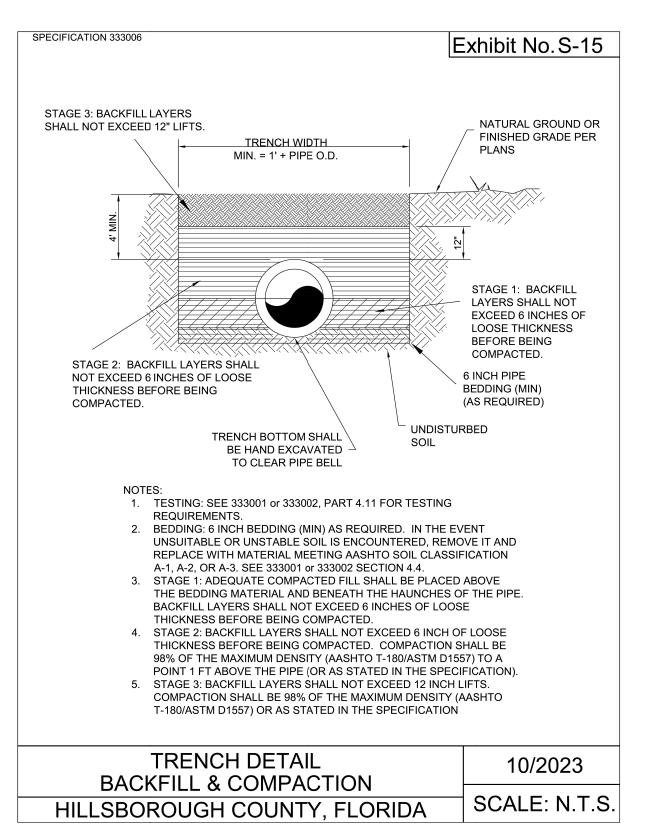
SPECIFICATION 333006







SCALE: N.T.S.



V. Laurel Street, Suite 201

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 58626
 BRAULIO GRAJALES

 Registration No.
 Professional Engineer
 Sign Da

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C-6.2

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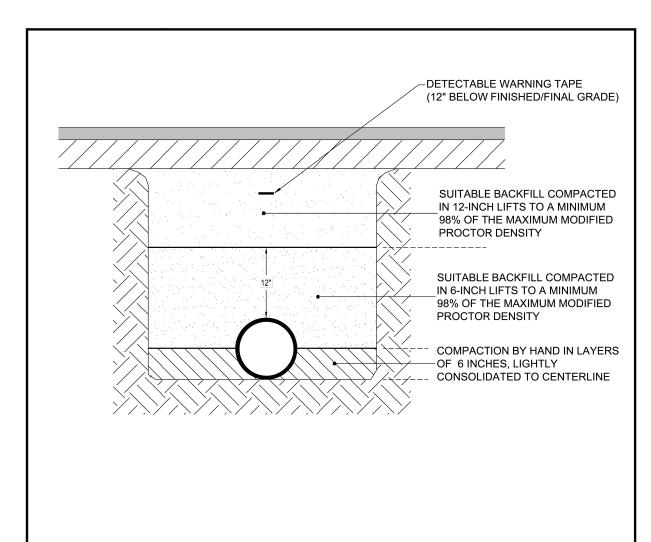
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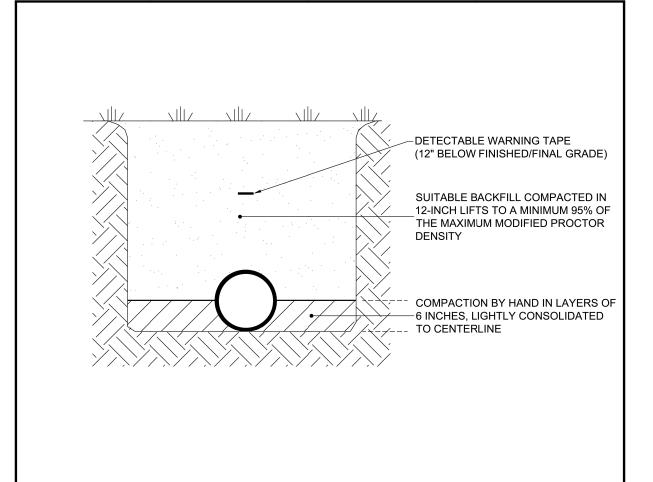
NOTE

UTILIT



- TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
- THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
- 3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
- NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.

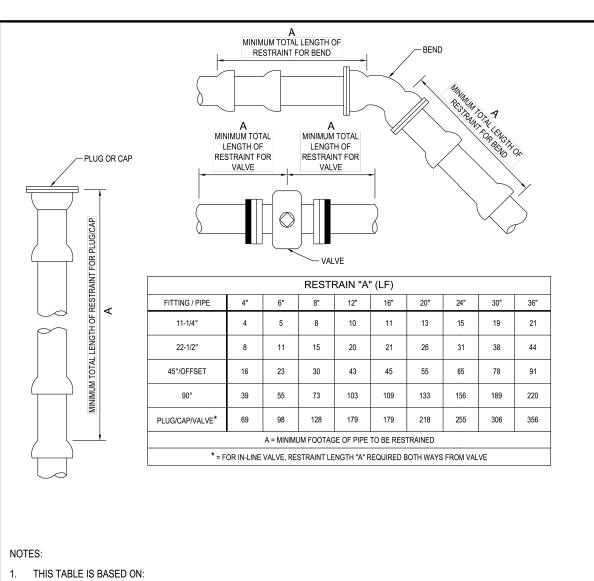
TCity of	LAST REVISION	
Water Department	MAY 2021	TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS



2.01A

- 1. TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE
- 2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY
- 3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
- 4. NON-PAVED AREA IS A PERVIOUS AREA. IF ANY PART OF THE TRENCH IS WITHIN A CONCRETE OR ASPHALT CURB, SIDEWALK, DRIVEWAY, OR ROADWAY, THEN STANDARD DETAIL 2.01 APPLIES.

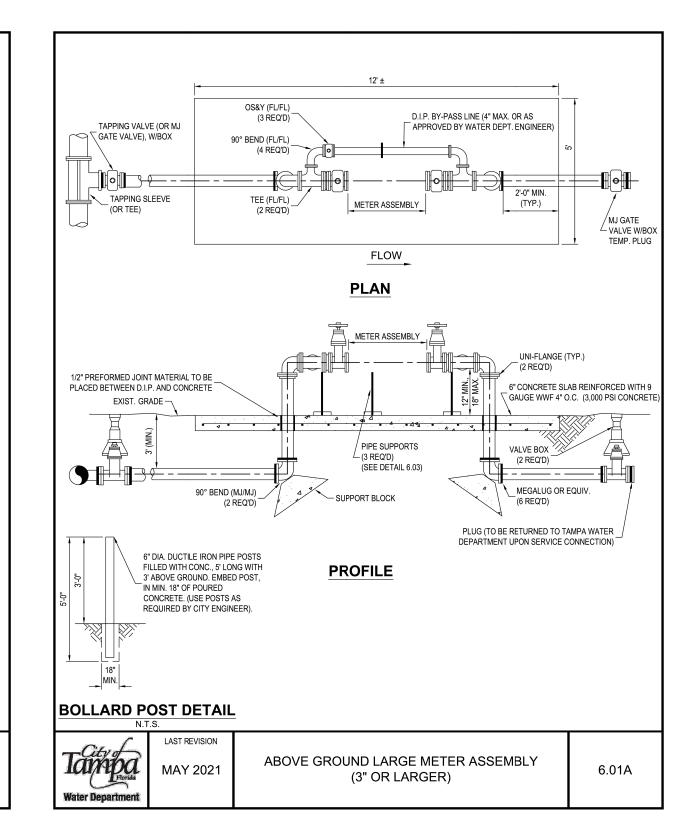
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Cx. L	LAST REVISION		
Tampa Florida Water Department	MAY 2021	TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS	2.02

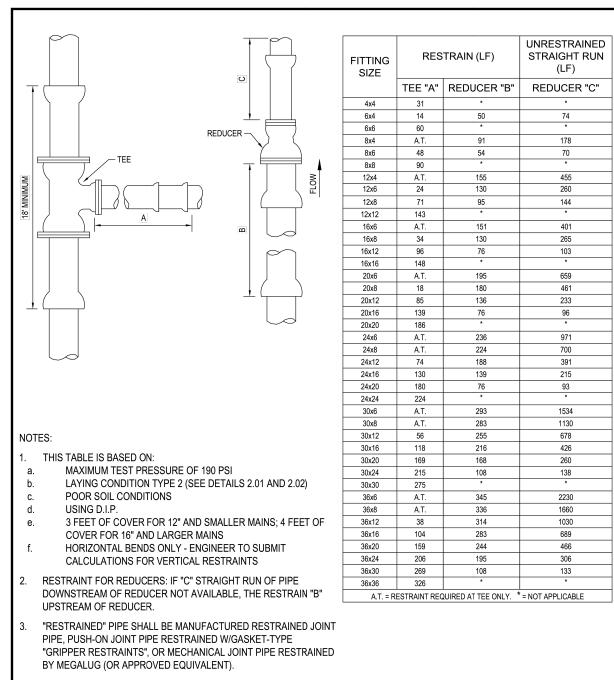


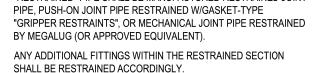
- MAXIMUM TEST PRESSURE OF 190 PSI
- LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02) POOR SOIL CONDITIONS
- 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
- "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).

3. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.				
-City of	LAST REVISION			

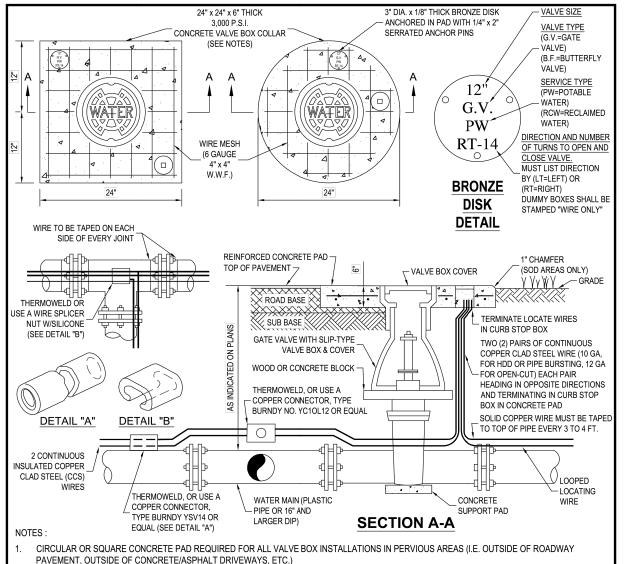
0.4.	LAST REVISION		
Tampa	MAY 2021	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES	2.11
Water Department			







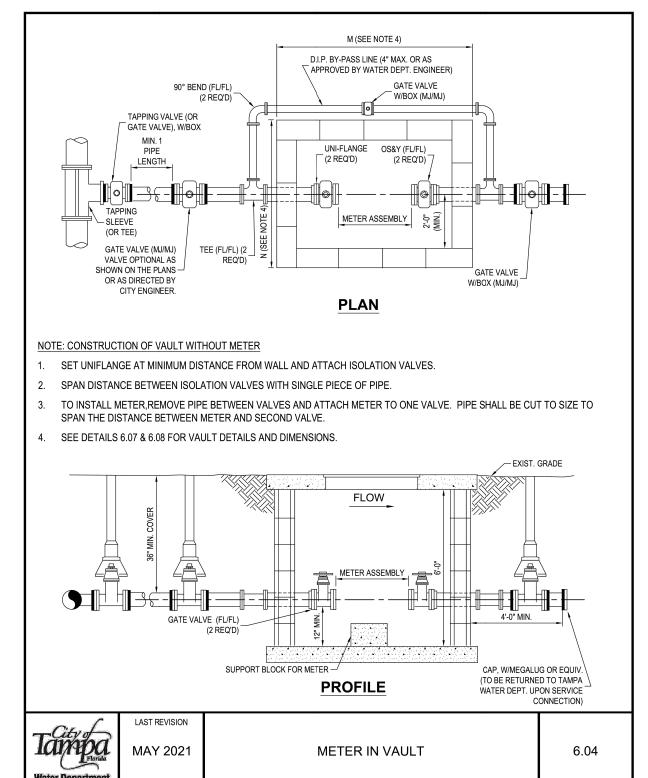
SINEE BE NESTIVINED AGGORDINGET.					
City	LAST REVISION				
Tampa Florida Water Department	MAY 2021	RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS	2.12A		

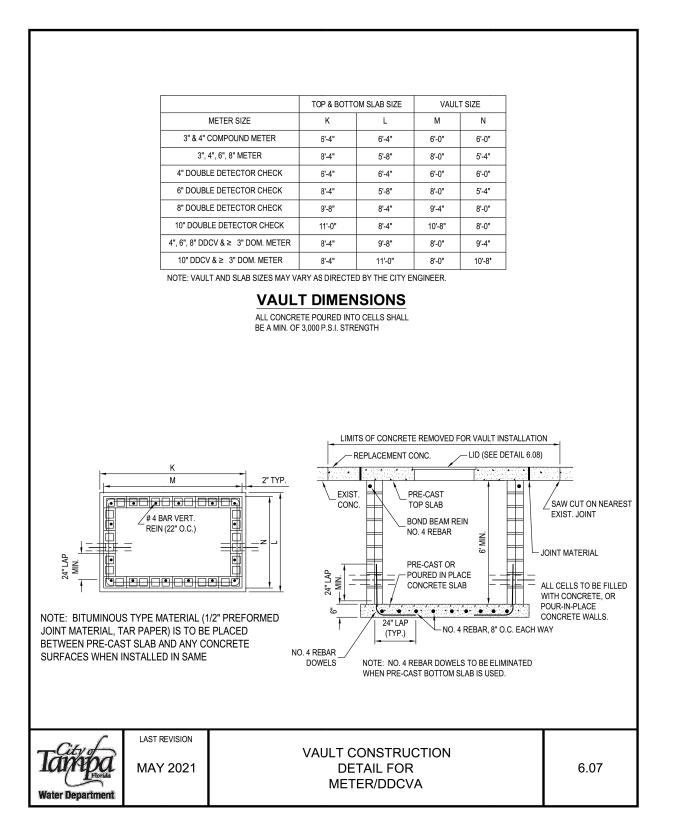


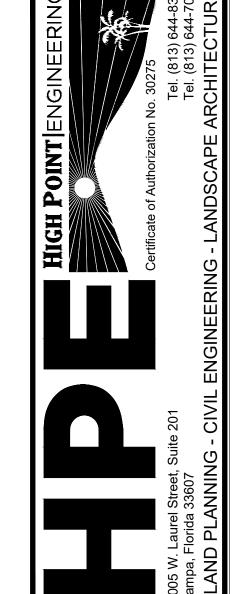
PAVEMENT, OUTSIDE OF CONCRETE/ASPHALT DRIVEWAYS, ETC.)

- CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL AS MAY BE DIRECTED BY THE
- DEPARTMENT.
- "BLUE" WATER VALVE LOCATE MARKERS REQUIRED FOR ALL VALVE INSTALLATIONS. EMBED BRONZE VALVE INFO DISK INTO CONCRETE VALVE BOX COLLAR.
- ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
- IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.

BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.						
ALL CONNECTIONS SHALL BE SEALED WITH A BITUMINOUS COATING FOR CORROSION PROTECTION.						
City of Florida r Department	LAST REVISION MAY 2021	VALVE INSTALLATION W/VALVE BOX & PAD FOR PLASTIC PIPE WITH DOUBLE COPPER TRACER WIRE ON PIPE	3.02			







AD

NOTE

UTILITY

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