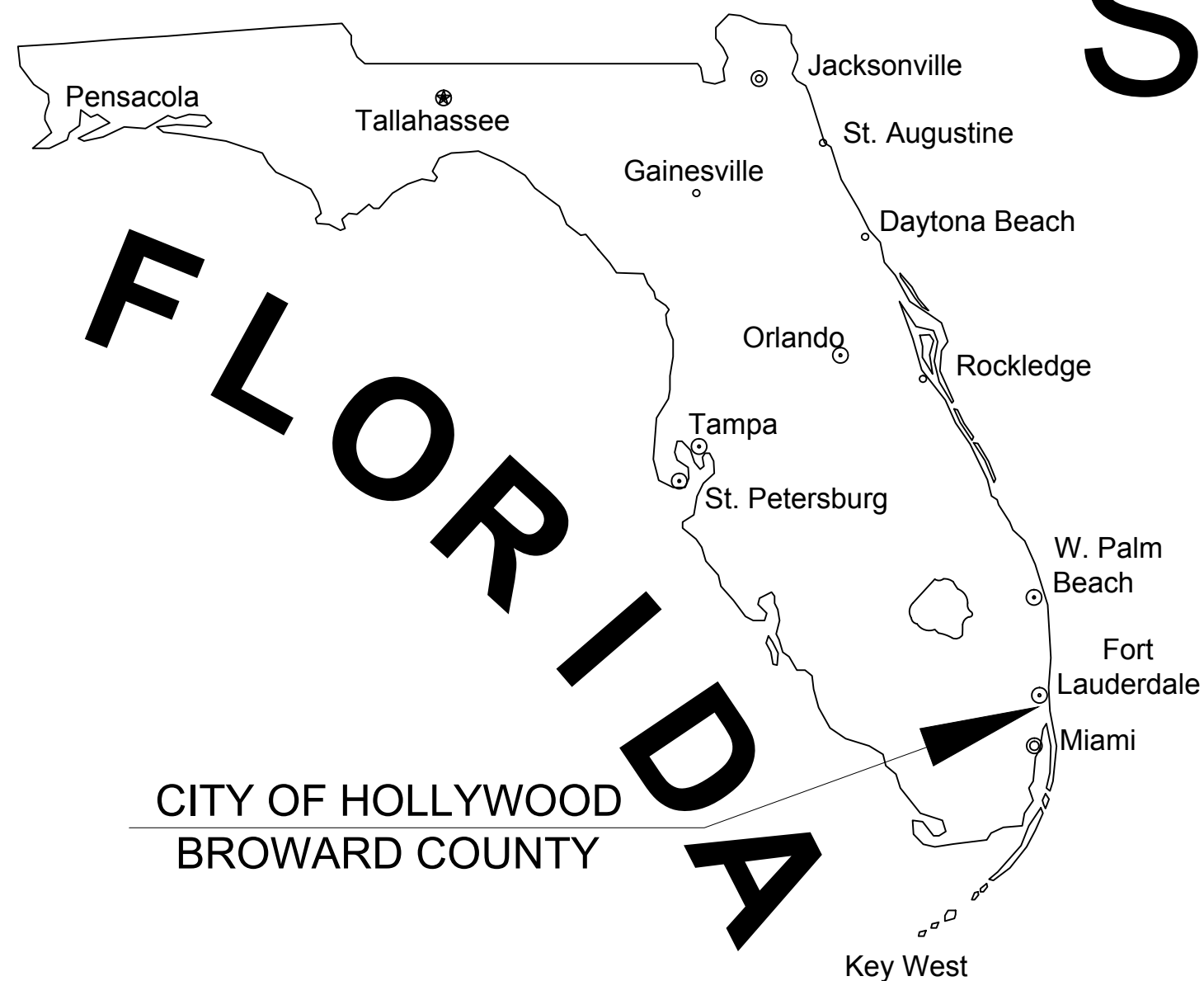


STAR TOWER HOLLYWOOD

410 NORTH FEDERAL HIGHWAY
CITY OF HOLLYWOOD
BROWARD COUNTY, FLORIDA

TAC SUBMITTAL #1: 07/03/2023
TAC MEETING #1: 07/17/2023

TAC SUBMITTAL #2: 09/13/2023
TAC MEETING #2: 10/02/2023



CITY OF HOLLYWOOD
BROWARD COUNTY

RELATIONSHIP BETWEEN
NGVD 1929 AND NAVD 1988

DATUM	DIFFERENCE	ELEV.
NGVD 1929	+1.51 FEET	9.55'
NAVD 1988	-1.51 FEET	8.04

ALL ELEVATIONS SHOWN ON THESE PLANS ARE
BASED ON NAVD 1988 DATUM

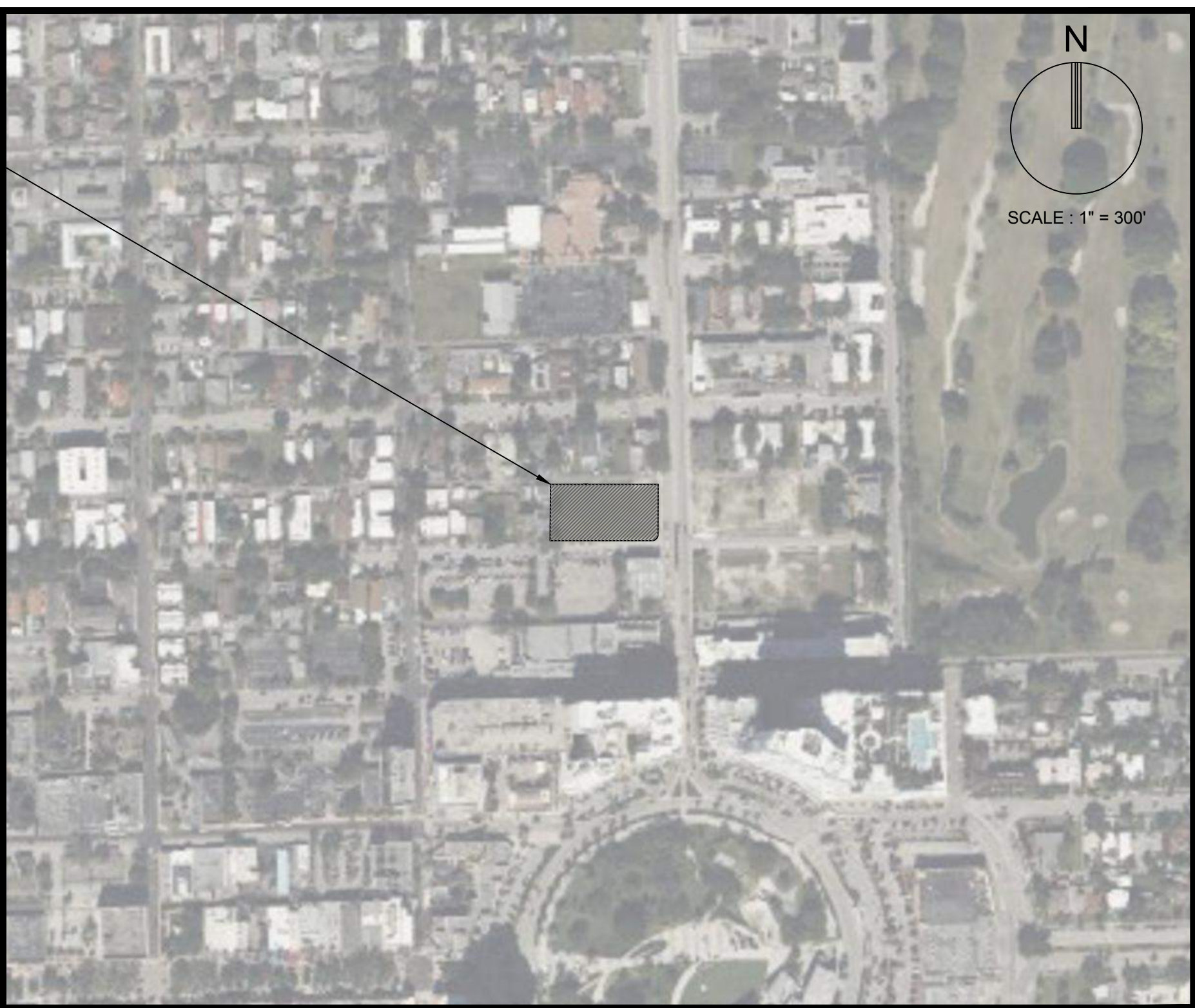
LAND DESCRIPTION:

LOTS 9,10,11,12,13,14 AND 15 LESS THE EAST 15.00 FEET AND THAT
PART INCLUDED IN THE EXTERNAL AREA FORMED BY A 15.00 FOOT
RADIUS ARC WHICH IS TANGENT TO THE SOUTH LINE OF SAID LOT
15 AND TANGENT TO A LINE WHICH IS 15.00 FEET WEST OF AND
PARALLEL TO THE EAST LINE OF SAID LOT 15, BLOCK 44, OF "TOWN
OF HOLLYWOOD", ACCORDING TO THE PLAT THEREOF, RECORDED
IN PLAT BOOK 1, PAGE 21, OF THE PUBLIC RECORDS OF BROWARD
COUNTY, FLORIDA.

FEMA FLOOD ZONE:

THE PROPERTY IS LOCATED WITHIN FLOOD ZONE X,
AS SHOWN ON F.I.R.M. NUM. 12011C0569H, BEARING A
MAP EFFECTIVE DATE OF 08/18/2014.

SITE LOCATION



LOCATION MAP

SECTION 15, TOWNSHIP 51S, RANGE 42E
FOLIO #5142-15-01-8240

INDEX OF SHEETS	
SHEET IDENTIFICATION	SHEET TITLE
GI-000	COVER SHEET
GI-001	LEGEND AND ABBREVIATIONS
GI-002	GENERAL CONSTRUCTION NOTES
GI-003	CONSTRUCTION SPECIFICATIONS
SP-101	SITE PLAN
SP-102	VEHICLE TRUCK TURN PLAN
CG-101	EROSION CONTROL PLAN
CG-501	EROSION CONTROL DETAILS
CD-101	DEMOLITION PLAN
CP-101	PAVING, GRADING, AND DRAINAGE PLAN
CP-301 - CP-302	CROSS SECTIONS
CP-501 - CP-504	PAVING, GRADING, AND DRAINAGE DETAILS
CU-101	WATER AND SEWER PLAN
CU-501 - CU-503	WATER AND SEWER DETAILS
CM-101	PAVEMENT MARKING AND SIGNAGE PLAN
CM-501 - CM-502	PAVEMENT MARKING AND SIGNAGE DETAILS

THESE PLANS MAY HAVE BEEN
REDUCED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN
OBTAINING SCALED DATA.



PREPARED FOR: BC ARCHITECTS
CLIENT: BC ARCHITECTS
ADDRESS: 75 VALENCIA AVENUE, STE.1000
CORAL GABLES, FL 33134



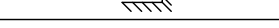
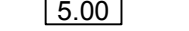
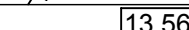
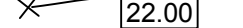
PROJECT No. 13778.00
11/16/2023

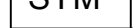
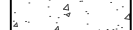
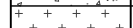
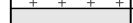
THOMAS F. DONAHUE, P.E.
FLORIDA REG. NO. 60529
(FOR THE FIRM)

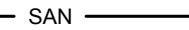
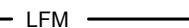
UTILITY STRUCTURES

SYMBOL		DESCRIPTION	
		FDOT C, D, E, F, G & FABRIC CATCH BASIN	
		NON-FDOT ROUND CB'S & MANHOLES, MDC STRUCTURE	
		FDOT CURB INLETS TYPE1-TYPE10	
		TRENCH DRAIN	
		PIPE CULVERT - MITERED END SECTION	
		STRAIGHT ENDWALL	
		PUMP STATION LOCATION AND NUMBER	
		GREASE TRAP SINGLE AND DOUBLE	
		SEPTIC TANK	
		SEPTIC DRAIN FIELD	
		DRAINAGE WELL, DRAIN C.B., CONTROL STRUCTURE	
		MONITORING WELL	
		WATER WELL	
		METER BOX WATER AND IRRIGATION	
		YARD DRAIN / 9" DECK DRAIN ROUND & SQUARE	
		CLEAN OUT 6", 4" & BOX	
		STORM STRUCTURE TABLE REFERENCE NUMBER	
		SEWER STRUCTURE TABLE REFERENCE NUMBER	
		SEWER STRUCTURE CALLOUT (SHOWN AS A CIRCLE CIRCUMSCRIBING THE STRUCTURE NUMBER.)	INDICATES STRUCTURE NUMBER, STATION & OFFSET, STRUCTURE SIZE & TYPE, RIM/GRATE ELEVATIONS & DIRECTION, PIPE SIZE & MATERIAL AS WELL AS ANY SPECIAL NOTES.
CONST. 4' Ø MAS RIM EL. = 10.00 N INV. EL. = 4.00 - XX" DIP E INV. EL. = 4.00 - XX" DIP S INV. EL. = 4.00 - XX" DIP W INV. EL. = 4.00 - XX" DIP			
		STORM STRUCTURE CALLOUT (SHOWN AS A HEXAGON CIRCUMSCRIBING THE STRUCTURE NUMBER.)	
CONST. 4' Ø CB RIM EL. = 10.50 (N) INV. EL. = 4.50 - XX" HDPE (E) INV. EL. = 4.50 - XX" HDPE (S) INV. EL. = 4.50 - XX" HDPE (W) INV. EL. = 4.50 - XX" HDPE			

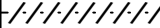
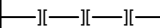
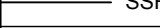
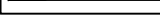
DESCRIPTION	ABBREVIATION
NO.	NO. NUMBER
O/S or OFF	O/S or OFF OFFSET
PB	PB PLAT BOOK
PC	PC POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
RSKV	RESILIENT SEAT GATE VALVE
RT	RIGHT
RW	RIGHT OF WAY
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOB	TOP OF BANK
TOS	TOP OF SLOPE
TSV	TAPPING SLEEVE AND VALVE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

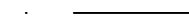
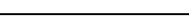
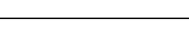
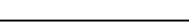
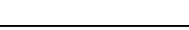
PAVING & GRADING	
SYMBOL	DESCRIPTION
	FLOW DIRECTIONAL ARROW
	ELEVATION CHANGE
	MAJOR / MINOR CONTOUR ELEVATION
	GRADE ELEVATION
	TOP OF CURB / PAVEMENT ELEVATION
	MATCH EXISTING GRADE
	SLOPE BANK
	DRIVEWAY TURNOUT IDENTIFICATION (FDOT INDEX 522-003) W/ DRIVE WIDTH
	SIDEWALK CURB RAMP (PER FDOT INDEX 522-002)
	SEAWALL

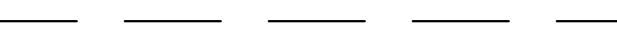
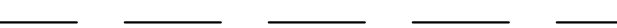
HATCH PATTERNS			
SYM	DESCRIPTION	SYM	DESCRIPTION
	CONCRETE AREA		BRICK PAVERS
	JOGGING PATH		SOIL TRACKING PREVENTION DEVICE
	PAVEMENT AREA		SAND (DETAIL / ELEVATION)
	BUILDING HATCH		EARTH (DETAIL / ELEVATION)
	MILLING AND RESURFACING		GRAVEL (DETAIL / ELEVATION)
	DETECTABLE WARNING PER FLORIDA CODE		GRASS AREA
	DEMOLITION AREA		ADA STRIPING

PROPOSED UTILITIES	
	WATER LINE
	SANITARY SEWER
	FORCE MAIN
	LOW PRESSURE FM
	STORM DRAIN
	PRESSURE STORM
	IRRIGATION
	RAW WATER
	RECLAIMED WATER
	GAS LINE

PAVEMENT MARKING	
	STRIPE SKIP 2-4
	STRIPE SKIP 3-9
	STRIPE SKIP 6-10
	STRIPE SKIP 10-30
	STRIPE SKIP 10-10-20
	STRIPE SKIP 2-2-2

GENERAL SITE	
	DEMOLITION
	TURBIDITY BARRIER
	PARKING STRIPING (SINGLE)
	FIRE TRUCK PATH
	SIGHT TRIANGLE
	BUILDING FOOTPRINT
	VEHICLE OVERHANG
	CONSTRUCTION LIMITS
	SILT FENCE
	SUPER SILT FENCE
	PARKING STRIPING (DOUBLE)

TOPO	
	BREAKLINE
	MAJOR CONTOUR
	MINOR CONTOUR
	TOP OF BANK
	TOE OF SLOPE
	EDGE OF WATER
	CENTERLINE OF SWALE

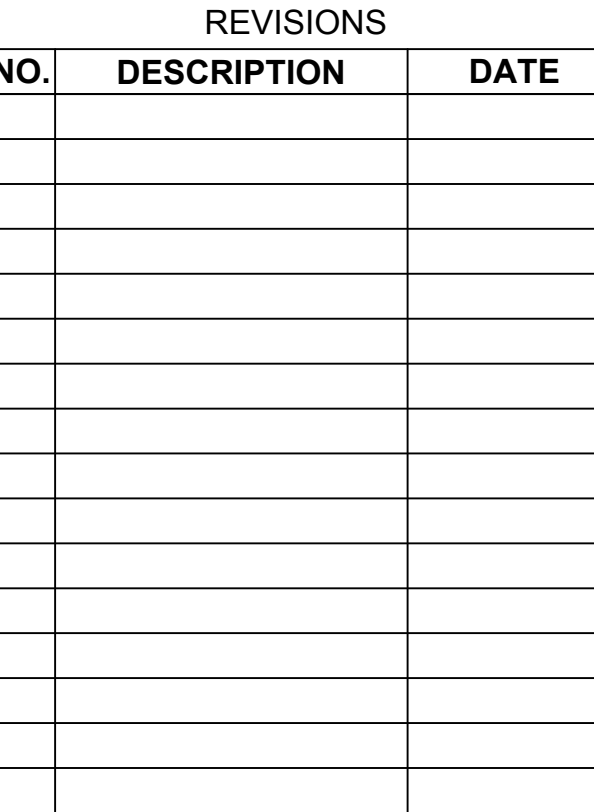
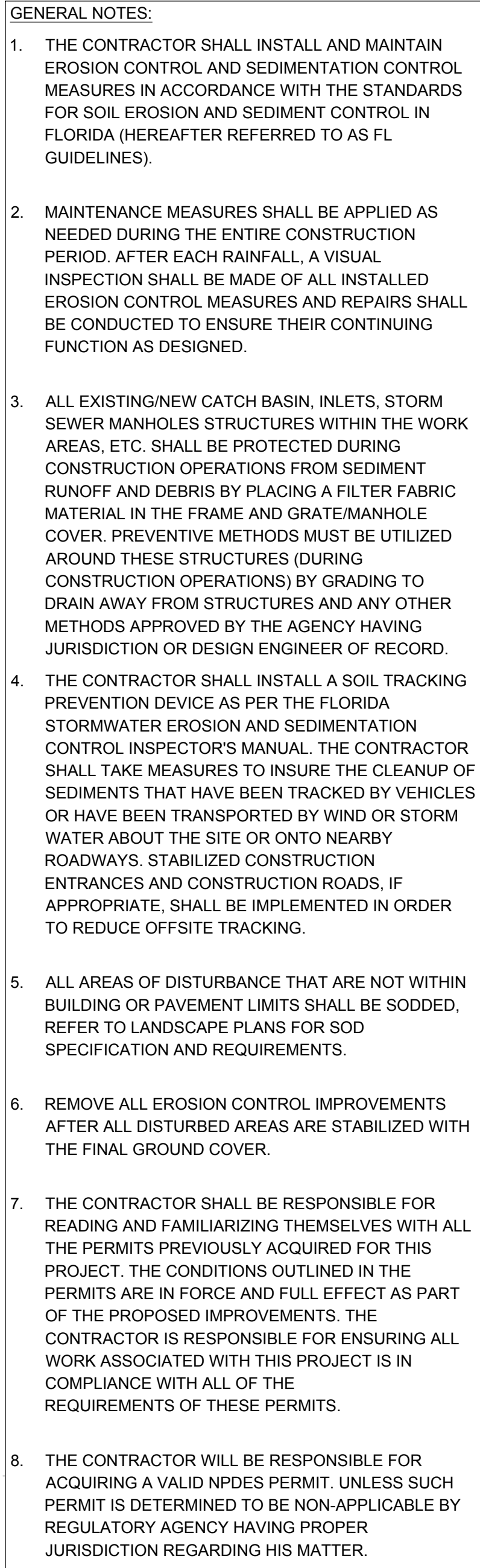
PROPOSED ENCUMBRANCES	
	PROPERTY LINE
	ROW LINE
	BUILDING SETBACK LINE
	BUFFER LINE
	EASEMENT LINE

Drawing name: K:\13778.00 - Star Tower Hollywood - 1817 Taylor Street Development LLC\Engineering\Cadd\13778.00 GI-0XX.dwg

STATUS: PRELIMINARY

	1	2	3	4	5
D	GENERAL NOTES				
	THIS CONSTRUCTION PROJECT MAY OR MAY NOT INCLUDE ALL ITEMS COVERED BY THESE NOTES AND SPECIFICATIONS, I.E. PAVING, GRADING, DRAINAGE LINES, WATER LINES, OR SANITARY SEWER LINES. SEE PLANS FOR DETAILED PROJECT SCOPE. NOTES AND SPECIFICATIONS ON THIS SHEET REFER TO PAVING, GRADING, DRAINAGE, WATER, AND SANITARY SEWER, AND ARE INTENDED FOR THIS PROJECTS SCOPE OF WORK AND FOR REFERENCE PURPOSES FOR OTHER WORK ITEMS THAT MAY BE REQUIRED DUE TO UNFORESEEN EXISTING CONDITIONS OR REQUIRED REMEDIAL WORK.				
	1. SPECIFIC SITE NOTES				
	1.1. COUNTY AND "CITY" IN THESE NOTES REFERS TO COUNTY AND CITY IN WHICH PROJECT RESIDES.				
	1.2. STATE IN THESE NOTES REFERS TO THE STATE OF FLORIDA.				
	1.3. EXISTING TOPOGRAPHIC INFORMATION IN THE PLANS IS BASED ON SURVEY DATA AND BEST AVAILABLE INFORMATION. SEE PROJECT SURVEY AND NOTES ON PLAN SHEETS REGARDING THE SOURCE OF THE TOPOGRAPHIC INFORMATION.				
	2. APPLICABLE CODES				
	2.1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY, COUNTY, AND ALL OTHER JURISDICTIONAL, STATE AND NATIONAL CODES WHERE APPLICABLE.				
	2.2. IN THE EVENT OF A CONFLICT BETWEEN THE GENERAL NOTES AND CONSTRUCTION SPECIFICATIONS IN THESE PLANS, AND THE CONTRACT DOCUMENTS AND SPECIFICATIONS IN THE SPECIFICATION BOOKLET, THE CONTRACTOR SHALL SUBMIT WRITTEN REQUEST FOR CLARIFICATION.				
	2.3. ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ALL STATE AND JURISDICTIONAL SAFETY AND HEALTH REGULATIONS.				
C	2.4. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH FEDERAL, STATE, COUNTY, AND CITY LAWS, CODES, AND REGULATIONS.				
	2.5. ALL HANDICAP ACCESSIBLE AREAS TO CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), STATE ADA CODES, AND FLORIDA BUILDING CODE ADA CODES LATEST EDITION.				
	2.6. TRENCH SAFETY ACT				
	2.6.1. ALL TRENCH EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 90-96 OF THE LAWS OF FLORIDA (THE TRENCH SAFETY ACT).				
	2.6.2. ALL TRENCH EXCAVATION IN EXCESS OF 5 FEET IN DEPTH SHALL BE UNDERTAKEN IN ACCORDANCE WITH O.S.H.A. STANDARD 29 CFR. SECTION 1926.650 SUBPART P.				
	2.6.3. THE CONTRACTOR SHALL SUBMIT WITH HIS CONTRACT A COMPLETED, SIGNED, AND NOTARIZED COPY OF THE TRENCH SAFETY ACT COMPLIANCE STATEMENT. THE CONTRACTOR SHALL ALSO SUBMIT A SEPARATE COST ITEM IDENTIFYING THE COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY CODES.				
	2.6.4. A TRENCH SAFETY SYSTEM, IF REQUIRED, SHALL BE DESIGNED BY THE EXCAVATION CONTRACTOR UTILIZING A SPECIALTY ENGINEER AS REQUIRED.				
	3. CONSTRUCTION NOTES:				
	3.1. CONTRACTOR SHALL TIE TO EXISTING GRADE BY EVENLY SLOPING FROM CLOSEST PROPOSED GRADE PROVIDED TO EXISTING GRADE AT LIMITS OF CONSTRUCTION, UNLESS OTHERWISE NOTED ON THE PLANS. IF NO LIMIT OF WORK LINE IS INDICATED, SLOPE TO ADJACENT PROPERTY LINE OR RIGHT-OF-WAY LINE, AS APPLICABLE.				
	3.2. UNLESS OTHERWISE INDICATED ON THE PLANS, ALL EXISTING MANHOLES, CATCH BASINS, METERS AND OTHER STRUCTURES, WHETHER INDICATED ON THE PLANS OR NOT SHALL BE ADJUSTED TO MATCH THE NEW GRADE, BY THE CONTRACTOR.				
B	3.3. THE CURB SHALL BE SLOPED TO ACCOMMODATE THE NEW PAVEMENT, CATCH BASIN AND GRATE, AND THE SURFACE FLOW PATTERN.				
	3.4. THE CONTRACTOR SHALL USE CARE WHEN CUTTING THE EXISTING ASPHALT PAVEMENT AND DURING EXCAVATIONS, SO THAT THE EXISTING CATCH BASINS AND GRATES THAT ARE TO REMAIN WILL NOT BE DAMAGED.				
	3.5. THE CONTRACTOR SHALL MAINTAIN THE ROADWAY SLOPE WHEN RESURFACING THE ROADWAY. THE EDGE OF PAVEMENT SHALL MATCH THE NEW GUTTER LIP PER FDOT INDEX 520-001.				
	3.6. THE NEW SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GIVEN ELEVATIONS AND AT THE PROPER SLOPES DEPICTED IN THE SPECIFICATIONS, DETAILS AND STANDARDS. EXISTING DRIVEWAYS AND OTHER FEATURES SHALL BE MATCHED WHEN POSSIBLE AS DIRECTED BY THE ENGINEER.				
	3.7. RADI SHOWN ARE TO THE EDGE OF PAVEMENT.				
	3.8. ALL BENCH MARK MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED AND REFERENCED BY THE CONTRACTOR IN THE SAME WAY AS PUBLIC LAND CORNERS.				
	3.9. ALL EXCESS MATERIAL IS TO BE DISPOSED BY THE CONTRACTOR WITHIN 72 HOURS.				
	3.10. IN AREAS WHERE THE BASE IS EXPOSED BY THE MILLING OPERATION, THE CONTRACTOR SHALL RESTORE THE BASE TO ITS ORIGINAL THICKNESS AND STRUCTURAL CAPACITY BEFORE PAVING OVER SUCH AREAS. THIS INCLUDES BUT IS NOT LIMITED TO RESTORING ORIGINAL DEGREE OF COMPACTION, MOISTURE CONTENT, COMPOSITION, STABILITY, AND INTENDED SLOPE. IF PAVING WILL NOT TAKE PLACE THE SAME DAY THE BASE IS EXPOSED AND REWORKED, THE BASE SHALL BE SEALED ACCORDING TO THE GOVERNING STANDARDS AND SPECIFICATIONS. ANY ADDITIONAL WORK RESULTING FROM THE CONTRACTOR'S FAILURE TO PROTECT THE EXPOSED BASE AS STATED ABOVE IN ORDER TO RESTORE THE ORIGINAL STRUCTURAL CAPACITY SHALL BE THE CONTRACTOR'S COST.				
	3.11. THE CONTRACTOR IS TO MAINTAIN EXISTING SIGNAGE DURING CONSTRUCTION OPERATIONS, IN ORDER TO FACILITATE EMERGENCY VEHICLE TRAFFIC.				
	A	3.12. THE TOPOGRAPHIC SURVEY INCLUDED WITH THIS SET OF PLANS REFLECTS PRE-DEMOLITION CONDITIONS AND DOES NOT REFLECT THE SITE CONDITIONS AFTER DEMOLITION. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE IN DETERMINING THE REQUIRED EARTHWORK FOR THE PROPOSED DEVELOPMENT OF THE SITE. THIS INCLUDES, BUT IS NOT LIMITED TO, ANY EXCAVATION/DREDOGE AND FILL ACTIVITIES REQUIRED AT ANY PHASE OF THE PROJECT. THE CONTRACTOR SHALL USE THE FINAL APPROVED (RELEASED FOR CONSTRUCTION) PLANS, SURVEYS, GEOTECHNICAL REPORTS, AND ANY OTHER AVAILABLE INFORMATION FOR DETERMINING THE AMOUNT OF EXCAVATION/DREDGING AND FILLING REQUIRED. ANY QUANTITIES INCLUDED IN THE APPROVED PERMITS WERE ESTIMATED BY THE ENGINEER FOR PURPOSES OF OBTAINING THE PERMIT AND UNDER NO CIRCUMSTANCES SHALL BE USED BY THE CONTRACTOR IN LIEU OF PERFORMING THEIR OWN EARTHWORK CALCULATIONS REQUIRED FOR COST ESTIMATING AND BIDDING THE PROJECT.			
3.13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND FAMILIARIZING THEMSELVES WITH ANY AND ALL AVAILABLE GEOTECHNICAL REPORTS PREPARED BY OTHERS AND/OR ANY RECOMMENDATIONS WRITTEN OR IMPLIED BY THE GEOTECHNICAL ENGINEER FOR THIS PROJECT. THE GEOTECHNICAL CONDITIONS AND RECOMMENDATIONS OUTLINED IN THESE REPORTS ARE IN FORCE AND IN FULL EFFECT AS PART OF THE PROPOSED IMPROVEMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL THE WORK ASSOCIATED WITH THIS PROJECT IS IN COMPLIANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. KEITH AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR THE SUITABILITY OR UNSUITABILITY OF THE SOILS ENCOUNTERED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE MEANS AND METHODS OF CONSTRUCTION USED CAN AND WILL ALLOW FOR THE SUCCESSFUL COMPLETION OF THE REQUIRED SITE IMPROVEMENTS.					
3.14. THE CONTRACTOR SHALL ENSURE THAT THE AVAILABLE GEOTECHNICAL INFORMATION IS SUFFICIENT FOR HIS COMPLETE UNDERSTANDING OF THE SOIL CONDITIONS FOR THE SITE. IF ADDITIONAL GEOTECHNICAL INVESTIGATION IS REQUIRED BY THE CONTRACTOR, THIS ADDITIONAL WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.					
3.15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RESTORATION OF EXISTING PAVEMENT, PIPES, CONDUITS, SPRINKLER HEADS, CABLES, ETC., AND LANDSCAPED AREAS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS AND SHALL RESTORE AT NO ADDITIONAL COST.					
3.16. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS ONTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH FOR PERFORMING THE CONTRACTED WORK, THE CONTRACTOR SHALL REQUEST, IN WRITING, PERMISSION FROM THE OWNER, CITY AND ENGINEER. THE CONTRACTOR SHALL PROVIDE THE OWNER, CITY AND ENGINEER WITH A COPY OF THE MATERIAL SAFETY DATA SHEET (MSDS) FOR EACH HAZARDOUS MATERIAL PROPOSED FOR USE. THE PROJECT ENGINEER SHALL COORDINATE WITH THE OWNER AND CITY PRIOR TO ISSUING WRITTEN APPROVAL TO THE CONTRACTOR.					
3.17. ANY KNOWN OR SUSPECTED HAZARDOUS MATERIAL FOUND ON THE PROJECT BY THE CONTRACTOR SHALL BE IMMEDIATELY REPORTED TO THE CITY AND/OR ENGINEER, WHO SHALL DIRECT THE CONTRACTOR TO PROTECT THE AREA OF KNOWN OR SUSPECTED CONTAMINATION FROM FURTHER ACCESS. THE CITY AND/OR ENGINEER ARE TO NOTIFY THE OWNER/ENGINEER OF THE DISCOVERY. THE OWNER/ENGINEER WILL ARRANGE FOR INVESTIGATION, IDENTIFICATION, AND REMEDIATION OF THE HAZARDOUS MATERIAL. THE CONTRACTOR SHALL NOT RETURN TO THE AREA OF CONTAMINATION UNTIL APPROVAL IS PROVIDED BY THE ENGINEER.					
3.18. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE CITY ENGINEERING INSPECTOR AND ENGINEER 48 HOURS IN ADVANCE OF THE EVENT TO NOTIFY THE CITY OF CONSTRUCTION START UP, OR TO SCHEDULE ALL REQUIRED TESTS AND INSPECTIONS INCLUDING FINAL WALK-THROUGHS.					
4. PRECONSTRUCTION RESPONSIBILITIES					
4.1. ALL UTILITY / ACCESS EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION.					
4.2. NO CONSTRUCTION MAY COMMENCE UNTIL THE APPROPRIATE PERMITS HAVE BEEN OBTAINED FROM ALL MUNICIPAL, STATE, COUNTY, AND FEDERAL AGENCIES AND A PRE-CONSTRUCTION MEETING HAS BEEN CONDUCTED.					
4.3. ALL REQUIRED GOVERNMENTAL AGENCY BUILDING PERMITS TO BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION ACTIVITY.					
4.4. CONTRACTOR TO COORDINATE CONSTRUCTION SCHEDULING FOR CONNECTION TO THE EXISTING WATER AND SEWER LINES WITH THE UTILITY DEPARTMENT THAT OWNS AND/OR MAINTAINS THE WATER AND SEWER LINES.					
4.5. PRIOR TO THE START OF CONSTRUCTION, THE OWNER SHALL SUBMIT AN NPDES CONSTRUCTION GENERAL PERMIT (CGP) "NOTICE OF INTENT (N.O.I.) TO USE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM CONSTRUCTION ACTIVITIES FORM (DEP FORM 62-621.300(4)(B)) TO FDEP NOTICES CENTER. THE CONTRACTOR WILL BE RESPONSIBLE FOR (1) IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) THAT WAS REQUIRED TO BE DEVELOPED PRIOR TO NOI 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 FDEP TO DISCONTINUE PERMIT COVERAGE, SUBSEQUENT TO COMPLETION OF CONSTRUCTION. FOR ADDITIONAL INFORMATION SEE FDEP WEBSITE: HTTP://FLORIDADEPT.GOV/WATER/STORMWATER.					
4.6. PRIOR TO CONSTRUCTION OR INSTALLATION, 5 SETS OF SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AS REQUIRED FOR THE FOLLOWING ITEMS LISTED BELOW, BUT NOT LIMITED TO:					
•DRAINAGE: CATCH BASINS, MANHOLES, HEADWALLS, GRATES/TOPS, YARD DRAINS.					
•WATER: FIRE HYDRANTS, VALVES, BACKFLOW PREVENTER, DDCV, METER BOX.					
•SEWER: MANHOLES, LIFT STATIONS (WETWELL, HATCHES, VALVES, PUMP DATA, ELECTRICAL PANEL).					
4.6.1. CATALOGUE LITERATURE SHALL BE SUBMITTED FOR DRAINAGE, WATER AND SEWER PIPES, FITTINGS, AND APPURTENANCES.					
4.6.2. PRIOR TO SUBMITTING SHOP DRAWINGS TO THE ENGINEER, THE CONTRACTOR SHALL REVIEW AND APPROVE THE DRAWINGS, AND SHALL NOTE IN RED ANY DEVIATIONS FROM THE ENGINEER'S PLANS OR SPECIFICATIONS.					
4.6.3. INDIVIDUAL SHOP DRAWINGS FOR ALL PRECAST STRUCTURES ARE REQUIRED. CATALOGUE LITERATURE WILL NOT BE ACCEPTED FOR PRECAST STRUCTURES.					
4.7. CONTRACTOR TO SUBMIT MAINTENANCE OF TRAFFIC PLAN(S) IN ACCORDANCE WITH FDOT AND COUNTY REQUIREMENTS, AND SUBMIT FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION.					
5. INSPECTIONS / TESTING:					
5.1. THE CONTRACTOR SHALL NOTIFY IN WRITING THE OWNER, CITY, COUNTY, ENGINEER OF RECORD, AND ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO REQUIRED INSPECTIONS OF THE FOLLOWING ITEMS, WHERE APPLICABLE:					
•CLEARING AND EARTHWORK					
•STORM DRAINAGE SYSTEMS					
•SANITARY SEWER SYSTEMS					
•WATER DISTRIBUTION SYSTEMS					
•SUBGRADE					
•LIMEROCK BASE					
•ASPHALT OR CONCRETE PAVEMENT					
•SIDEWALKS, CONCRETE FLATWORK/CURBING					
•LANDSCAPING					
•PAVEMENT MARKING AND SIGNAGE					
•SIGNALIZATION					
•SITE LIGHTING					
•ELECTRICAL AND COMMUNICATION LINES					
•UTILITY CONDUITS					
•IRRIGATION					
•FINAL					
5.2. THE OWNER, ENGINEER, AND JURISDICTIONAL PERMITTING AGENCIES MAY MAKE INSPECTIONS OF THE WORK AT ANY TIME. THE CONTRACTOR SHALL COOPERATE FULLY WITH ALL INSPECTIONS.					
5.3. TESTING - ALL TESTING REQUIRED BY THE PLANS AND SPECIFICATIONS SHALL BE PERFORMED BY A LICENSED / FDOT QUALIFIED TESTING COMPANY. REQUIRED TEST FOR ASPHALT AND LIMEROCK SHALL BE TAKEN AT THE DIRECTION OF THE ENGINEER OR THE JURISDICTIONAL GOVERNMENTAL AGENCY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.					
6. TEMPORARY FACILITIES					
6.1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES, COMMUNICATIONS, AND ELECTRICITY, FOR HIS OPERATIONS AND WORKS, COST INCLUDED UNDER MOBILIZATION.					
6.2. CONTRACTOR SHALL CONSTRUCT TEMPORARY FENCING TO SECURE CONSTRUCTION AREAS AT ALL TIMES, COST INCLUDED IN MOBILIZATION.					
6.3. CONTRACTOR TO OBTAIN A SECURE STAGING AREA AND OBTAIN ALL NECESSARY APPROVALS FROM THE OWNER.					
6.4. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN TEMPORARY LIGHTING AS REQUIRED TO LIGHT THE CONSTRUCTION PROJECT LIMITS AT ALL TIMES, TO AT LEAST THE SAME LIGHTING INTENSITY LEVELS AS THE EXISTING CONDITIONS.					
6.5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.					
7. PROJECT PROGRESS AND CLOSEOUT					
7.1. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE BROOM SWEEP CLEAN.					
7.2. THE CONTRACTOR SHALL RESTORE OR REPLACE ANY PUBLIC OR PRIVATE PROPERTY (SUCH AS HIGHWAY, DRIVEWAY, WALKWAY, AND LANDSCAPING), DAMAGED BY HIS WORK, EQUIPMENT, OR EMPLOYEES, TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF CONSTRUCTION. SUITABLE MATERIALS AND METHODS SHALL BE USED FOR SUCH RESTORATION.					
7.3. MATERIAL OR DEBRIS SHALL BE HAULED IN ACCORDANCE WITH NPDES PERMIT AND JURISDICTIONAL LAWS.					
7.4. ALL LAND SURVEY PROPERTY MONUMENTS OR PERMANENT REFERENCE MARKERS, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.					
7.5. ALL UNPAVED SURFACES DISTURBED AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE GRADED, SODDED, & RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED BEFORE THE CONSTRUCTION.					
8. PROJECT RECORD DOCUMENTS:					
8.1. DURING THE DAILY PROGRESS OF THE JOB, THE CONTRACTOR SHALL RECORD ON HIS SET OF CONSTRUCTION DRAWINGS THE LOCATION, LENGTH, MATERIAL AND ELEVATION OF ANY FACILITY NOT BUILT ACCORDING TO PLANS. THIS COPY OF THE "AS-BUILT" SHALL BE SUBMITTED TO ENGINEER FOR PROJECT RECORD.					
8.2. UPON COMPLETION OF DRAINAGE IMPROVEMENTS AND LIMEROCK BASE CONSTRUCTION (AT LEAST 48 HOURS BEFORE PLACING ASPHALT PAVEMENT) THE CONTRACTOR SHALL FURNISH THE ENGINEER OF RECORD "AS-BUILT" PLANS FOR THESE IMPROVEMENTS, SHOWING THE LOCATIONS AND PERTINENT GRADES OF ALL DRAINAGE INSTALLATIONS AND THE FINISHED ROCK GRADES OF THE ROAD CROWN AND EDGES OF PAVEMENT AT 50 FOOT INTERVALS, INCLUDING LOCATIONS AND ELEVATIONS OF ALL HIGH AND LOW POINTS.					
8.3. UPON COMPLETION OF CONSTRUCTION, AND PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD ONE COMPLETE SET OF ALL "AS-BUILT" CONTRACT DRAWINGS. THESE DRAWINGS SHALL BE MARKED TO SHOW "AS-BUILT" CONSTRUCTION CHANGES, DIMENSIONS, LOCATIONS, AND ELEVATIONS OF ALL IMPROVEMENTS.					
8.4. "AS-BUILT" DRAWINGS OF WATER LINES AND FORCE MAINS SHALL INCLUDE THE FOLLOWING INFORMATION:					
8.4.1. TOP OF PIPE ELEVATIONS EVERY 100 LF.					
8.4.2. LOCATIONS AND ELEVATIONS OF ALL FITTINGS INCLUDING BENDS, TEES, GATE VALVES, DOUBLE DETECTOR CHECK VALVES, FIRE HYDRANTS, AND APPURTENANCES.					
8.4.3. ALL CONNECTIONS TO EXISTING LINES.					
8.4.4. ENDS OF ALL WATER SERVICES AT THE BUILDINGS WHERE THE WATER SERVICE TERMINATES.					
8.5. "AS-BUILT" DRAWINGS OF GRAVITY SANITARY SEWER LINES SHALL INCLUDE THE FOLLOWING INFORMATION:					
8.5.1. RIM ELEVATIONS, INVERT ELEVATIONS, LENGTH OF PIPING BETWEEN STRUCTURES, AND SLOPES.					
8.5.2. THE STUB ENDS AND CLEANOUTS OF ALL SEWER LATERALS SHALL BE LOCATED HORIZONTALLY AND VERTICALLY.					
8.6. "AS-BUILT" DRAWINGS OF ALL DRAINAGE LINES SHALL INCLUDE THE FOLLOWING INFORMATION:					
8.6.1. RIM ELEVATION, INVERT ELEVATION, LENGTH OF PIPING BETWEEN STRUCTURES, AND CONTROL STRUCTURE ELEVATIONS IF APPLICABLE.					
8.6.2. THE SIZE OF THE LINES.					
8.6.3. DRAINAGE WELL STRUCTURE SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP OF CASING ELEVATION, TOP AND BOTTOM ELEVATIONS OF THE STRUCTURE AND BAFFLE WALLS, RIM ELEVATIONS AND PIPE INVERTS.					
8.7. "AS-BUILT" DRAWINGS OF CONSTRUCTION AREAS SHALL INCLUDE THE FOLLOWING:					
8.7.1. ROCK ELEVATIONS AT ALL HIGH, AND LOW POINTS, AND AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY.					
8.7.2. ROCK ELEVATIONS AND CONCRETE BASE ELEVATIONS SHALL BE TAKEN AT ALL LOCATIONS WHERE THERE IS A FINISH GRADE ELEVATION SHOWN ON THE DESIGN PLANS.					
8.7.3. ALL CATCH BASIN AND MANHOLE RIM ELEVATIONS.					
8.7.4. FINISH GRADE ELEVATIONS IN ISLAND AREAS.					
8.7.5. "AS-BUILT" ELEVATIONS SHALL BE TAKEN ON ALL PAVED AND UNPAVED SWALES, AT ENOUGH INTERMEDIATE POINTS TO CONFIRM SLOPE CONSISTENCY AND CONFORMANCE TO THE PLAN DETAILS.					
8.7.6. LAKE AND CANAL BANK "AS-BUILT" DRAWINGS SHALL INCLUDE A KEY SHEET OF THE LAKE FOR THE LOCATION OF CROSS SECTIONS. LAKE AND CANAL BANK CROSS SECTIONS SHALL BE PLOTTED AT A MINIMUM OF EVERY 100 LF, UNLESS OTHERWISE SPECIFIED. "AS-BUILT" DRAWINGS 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.					
8.7.7. RETENTION AREA "AS-BUILT" ELEVATIONS SHALL BE TAKEN AT THE BOTTOM OF THE RETENTION AREA AND AT THE TOP OF BANK. IF THERE ARE CONTOURS INDICATED ON THE DESIGN PLANS, THEN THEY SHALL BE INCLUDED IN "AS-BUILT" DRAWINGS AS WELL.					
8.8. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PREPARE "AS-BUILT" DRAWINGS ON FULL SIZE, 24" X 36" SHEETS. ALL "AS-BUILT" INFORMATION SHALL BE PUT ON THE LATEST ENGINEERING DRAWINGS. EIGHT (8) SETS OF BLUE OR BLACK LINE DRAWINGS SHALL BE SUBMITTED. THESE DRAWINGS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER OR LAND SURVEYOR.					
8.9. AN ELECTRONIC COPY OF THESE "AS-BUILT" DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN AUTOCAD, VERSION 2008 OR LATER.					
9. UTILITY NOTES					
9.1. CONTRACTOR IS RESPONSIBLE FOR UTILITY VERIFICATION PRIOR TO FABRICATION.					
9.2. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES.					
9.3. THE CONTRACTOR SHALL USE HAND DIGGING WHEN EXCAVATING NEAR EXISTING UTILITIES. EXTREME CAUTION SHALL BE EXERCISED BY THE CONTRACTOR WHILE EXCAVATING, INSTALLING, BACKFILLING OR COMPACTING AROUND THE UTILITIES.					
9.4. THE CONTRACTOR SHALL NOTIFY AND OBTAIN AN UNDERGROUND CLEARANCE FROM ALL UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN A SUNSHINE811.COM CERTIFICATION CLEARANCE NUMBER AND FIELD MARKINGS AT LEAST 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION.					
•PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH FLORIDA STATUTE 553.851 FOR THE PROTECTION OF UNDERGROUND GAS PIPELINES.					
9.5. FOR STREET EXCAVATION OR CLOSING OR FOR ALTERATION OF ACCESS TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL NOTIFY:					
•ROADWAY JURISDICTIONAL ENGINEERING / PUBLIC WORKS AUTHORITY.					
•COUNTY TRANSIT AUTHORITY					
•SCHOOL BOARD TRANSPORTATION AUTHORITY					
•JURISDICTIONAL FIRE DEPARTMENT DISPATCH					
•JURISDICTIONAL POLICE DEPARTMENT(S)					
9.6. THE CONTRACTOR SHALL USE EXTREME CAUTION WORKING UNDER, OVER, AND AROUND EXISTING ELECTRIC LINES. THE CONTRACTOR SHALL CONTACT THE ELECTRIC PROVIDER COMPANY TO VERIFY LOCATIONS, VOLTAGE, AND REQUIRED CLEARANCES, ONSITE, IN RIGHT-OF-WAYS, AND IN EASEMENTS, PRIOR TO ANY CONSTRUCTION IN THE VICINITY OF EXISTING LINES.					
9.7. LOCATION AND SIZE OF ALL EXISTING UTILITIES AND TOPOGRAPHY (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. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION (VERTICAL & HORIZONTAL) OF ANY EXISTING UTILITIES AND TOPOGRAPHY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS AND LOCATIONS OF ALL EXISTING FACILITIES, IN COORDINATION WITH ALL UTILITY COMPANIES, PRIOR TO BEGINNING ANY CONSTRUCTION OPERATIONS. IF AN EXISTING FACILITY IS FOUND TO CONFLICT WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE CONFLICT.					
9.8. THE CONTRACTOR SHALL COORDINATE THE WORK WITH OTHER CONTRACTORS IN THE AREA AND ANY OTHER UNDERGROUND UTILITY COMPANIES REQUIRED. THE CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING UTILITIES WITH APPLICABLE UTILITY COMPANIES.					
10. SIGNING AND PAVEMENT MARKINGS					
10.1. ALL SIGNING AND PAVEMENT MARKINGS INSTALLED AS PART OF THESE PLANS SHALL CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), COUNTY TRAFFIC DESIGN STANDARDS AND FDOT DESIGN STANDARDS AS A MINIMUM CRITERIA.					
10.2. MATCH EXISTING PAVEMENT MARKINGS AT THE LIMITS OF CONSTRUCTION.					
10.3. REMOVAL OF THE EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY WATER BLASTING OR OTHER APPROVED METHODS DETERMINED BY THE ENGINEER.					
10.4. INCORRECTLY PLACED PAINT OR THERMOPLASTIC PAVEMENT MARKINGS OVER FRICTION COURSE WILL BE REMOVED BY MILLING AND REPLACING THE FRICTION COURSE A MINIMUM WIDTH OF 18 IN AT THE CONTRACTOR'S EXPENSE. THE ENGINEER MAY APPROVE AN ALTERNATIVE METHOD IF IT CAN BE DEMONSTRATED TO COMPLETELY REMOVE THE MARKINGS WITHOUT DAMAGING THE ASPHALT.					
10.5. PLACE ALL RETRO-REFLECTIVE PAVEMENT MARKERS IN ACCORDANCE WITH FDOT STANDARD INDEX 706-001 AND / OR AS SHOWN IN THE PLANS.					
10.6. CAUTION SHOULD BE EXERCISED WHILE RELOCATING EXISTING SIGNS TO PREVENT UNNECESSARY DAMAGE TO SIGNS. IF THE SIGN IS DAMAGED BEYOND USE, AS DETERMINED BY THE ENGINEER, SIGNS SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.					
10.7. ALL EXISTING SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE REMOVED, STOCKPILED, AND RELOCATED BY THE CONTRACTOR. SIGN REMOVAL SHALL BE DIRECTED BY THE ENGINEER.					
10.8. RELOCATED SIGN SUPPORT SYSTEM MUST MEET THE CURRENT DESIGN STANDARD.					
10.9. THE CONTRACTOR SHALL PROVIDE AN INVENTORY OF EXISTING SIGNS TO REMAIN OR TO BE RELOCATED PRIOR TO STARTING THE JOB AND FORWARD THIS LIST TO THE ENGINEER. CONTRACTOR SHALL NOTIFY IF THERE ARE ANY MISSING OR DAMAGE SIGNS THAT THE PLANS SHOW TO REMAIN OR TO BE RELOCATED.					
10.10. ALL ROADWAY PAVEMENT MARKINGS SHALL BE THERMOPLASTIC IN ACCORDANCE WITH FDOT SPECIFICATIONS SECTION 711.					
10.11. HAND DIG THE FIRST FOUR FEET OF SIGN FOUNDATION.					
10.12. ALL SIGNS SHALL MEET ALL OF THE FOLLOWING:					
•MEET THE CRITERIA OUTLINED IN SECTION 2A.08 OF THE 2009 MUTCD					
•MEET THE SPECIFICATIONS OUTLINED IN SECTION 700 AND 994 OF THE LATEST FDOT STANDARD SPECIFICATIONS.					
•CONSIST OF MATERIALS CERTIFIED TO MEET THE RETROREFLECTIVE SHEETING REQUIREMENTS OUTLINED IN THE CURRENT VERSION OF ASTM D4956 FOR TYPE-XI RETROREFLECTIVE SHEETING MATERIALS MADE WITH PRISMS, EXCEPT FOR SCHOOL ZONE AND PEDESTRIAN SIGNS WHICH SHALL BE COMPRISED OF RETROREFLECTIVE FLUORESCENT YELLOW-GREEN SHEETING CERTIFIED TO MEET ASTM D4956 TYPE IV RETROREFLECTIVE SHEETING MATERIALS.					
•CONSIST OF RETROREFLECTIVE SHEETING MATERIALS THAT HAVE A VALID FDOT APPROVED PRODUCT LIST (APL) CERTIFICATION FOR SPECIFICATION 700 HIGHWAY SIGNING FOR FDOT SHEETING TYPE XI (OR TYPE IV FOR SCHOOL AND PEDESTRIAN SIGNS).					
10.13. PATCH ATTACHMENT HARDWARE, SUCH AS COUNTERSUNK SCREWS OR RIVET HEADS, WITH RETRO REFLECTIVE BUTTONS THAT MATCH THE COLOR AND SHEETING MATERIAL OF THE FINISHED SIGN PANEL INCLUDING THE BACKGROUND, LEGEND OR BORDER.					
10.14. ENSURE THE OUTSIDE CORNER OF SIGN IS CONCENTRIC WITH BORDER. ENSURE WHITE BORDERS ARE MOUNTED PARALLEL TO THE EDGE OF THE SIGN. ENSURE BLACK BORDERS ARE RECESSED FROM THE EDGE OF THE SIGN.					
10.15. LAYOUT PERMANENT FINAL STRIPING THAT LEAVES NO VISIBLE MARKS AT TIME OF FINAL ACCEPTANCE.					
PRELIMINARY PLAN NOT FOR CONSTRUCTION					
THESE PLANS ARE NOT FULLY PERMITTED AND ARE SUBJECT TO REVISIONS MADE DURING THE PERMITTING PROCESS.					
RESPONSIBILITY FOR THE USE OF THESE PLANS PRIOR TO OBTAINING PERMITS FROM ALL AGENCIES HAVING JURISDICTION OVER THE PROJECT WILL FALL SOLELY UPON THE USER.					
ISSUE DATE: 11/16/2023					
DESIGNED BY: VAC					
DRAWN BY: VAC					
CHECKED BY: CM					
BID-CONTRACT:					
CLIENT					
1817 TAYLOR DEVELOPMENT LLC					
PROJECT					
STAR TOWER HOLLYWOOD					
SHEET TITLE					
GENERAL CONSTRUCTION NOTES					
SHEET NUMBER G1-002					
PROJECT NUMBER 13778.00					
	1	2	3	4	5

	1	2	3	4	5
	CONSTRUCTION SPECIFICATIONS				
	SECTION 20 - GENERAL SPECIFICATIONS PAVING GRADING DRAINAGE AND EARTHWORK				
	20. GENERAL				
	20.1. IT IS THE INTENT OF THESE SPECIFICATIONS TO DESCRIBE THE MINIMUM ACCEPTABLE TECHNICAL REQUIREMENTS FOR THE MATERIALS AND WORKMANSHIP FOR CONSTRUCTION OF SITE IMPROVEMENTS FOR THIS PROJECT. SUCH IMPROVEMENTS MAY GENERALLY INCLUDE, BUT NOT TO BE LIMITED TO, CLEARING, GRADING, PAVING, REMOVAL OF EXISTING PAVEMENT STORM DRAINAGE, WATER LINES AND SANITARY SEWERS.				
	20.2. IT IS THE INTENT THAT THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION: (CURRENT EDITION) TOGETHER WITH "SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (CURRENT EDITION), AND THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (CURRENT EDITION) BE USED WHERE APPLICABLE FOR THE VARIOUS WORK, AND THAT WHERE SUCH WORDING THEREIN REFERS TO THE STATE OF FLORIDA AND ITS DEPARTMENT OF TRANSPORTATION AND PERSONNEL, SUCH WORDING IS INTENDED TO BE REPLACED WITH THE WORDING WHICH WOULD PROVIDE PROPER TERMINOLOGY; THEREBY MAKING SUCH "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" TOGETHER WITH THE "FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS" AS THE "STANDARD SPECIFICATIONS" FOR THIS PROJECT. IF WITHIN A PARTICULAR SECTION, ANOTHER SECTION, ARTICLE OR PARAGRAPH IS REFERRED TO, IT SHALL BE PART OF THE STANDARD SPECIFICATIONS ALSO. THE CONTRACTOR SHALL ABIDE BY ALL LOCAL AND STATE LAWS, REGULATIONS AND BUILDING CODES WHICH HAVE JURISDICTION IN THE AREA.				
	20.3. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT AND PERFORM ALL OPERATIONS REQUIRED TO COMPLETE THE CONSTRUCTION OF A PAVING AND DRAINAGE SYSTEM AS SHOWN ON THE PLANS, SPECIFIED HEREIN, OR BOTH. IT IS THE INTENT TO PROVIDE A COMPLETE AND OPERATING FACILITY IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE CONSTRUCTION DRAWINGS. THE MATERIAL AND EQUIPMENT SHOWN OR SPECIFIED SHALL NOT BE TAKEN TO EXCLUDE ANY OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK.				
	20.4. ALL LABOR, MATERIALS, AND METHODS OF CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE PLANS AND CONSTRUCTION SPECIFICATIONS AND THE MINIMUM ENGINEERING AND CONSTRUCTION STANDARDS ADOPTED BY THE UNIT OF GOVERNMENT WHICH HAS JURISDICTION AND RESPONSIBILITY FOR THE CONSTRUCTION, WHERE CONFLICTS OR OMISSIONS EXIST, THE JURISDICTIONAL GOVERNMENT ENGINEERING DEPARTMENTS' STANDARDS SHALL GOVERN. SUBSTITUTIONS AND DEVIATIONS FROM PLANS AND SPECIFICATIONS SHALL BE PERMITTED ONLY WHEN WRITTEN APPROVAL HAS BEEN ISSUED BY THE ENGINEER.				
	20.5. GUARANTEE - ALL MATERIALS AND EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR UNDER THIS CONTRACT, SHALL BE GUARANTEED FOR A PERIOD OF (L) ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE THEREOF, AGAINST DEFECTIVE MATERIALS, DESIGN AND WORKMANSHIP. UPON RECEIPT OF NOTICE FROM THE OWNER OF FAILURE OF ANY PART OF THE GUARANTEED EQUIPMENT OR MATERIALS, DURING THE GUARANTEE PERIOD, THE AFFECTED PART OR MATERIALS SHALL BE REPLACED PROMPTLY WITH NEW PARTS OR MATERIALS BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER. IN THE EVENT THE CONTRACTOR FAILS TO MAKE NECESSARY REPLACEMENT OR REPAIRS WITHIN (7) SEVEN DAYS AFTER NOTIFICATION BY THE OWNER, THE OWNER MAY ACCOMPLISH THE WORK AT THE EXPENSE OF THE CONTRACTOR.				
	21. EARTHWORK				
	21.1. ALL AREAS WITHIN THE PROJECT LIMITS SHALL BE CLEARED AND GRUBBED PRIOR TO CONSTRUCTION. THIS SHALL CONSIST OF THE COMPLETE REMOVAL AND DISPOSAL OF ALL TREES, BRUSH, STUMPS, ROOTS, GRASS, WEEDS, RUBBISH AND ALL OTHER OBSTRUCTIONS RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE EXISTING GROUND TO A DEPTH OF 1'. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 110 OF THE STANDARD SPECIFICATIONS.				
	21.2. NONE OF THE EXISTING LIMEROCK MATERIAL FROM DEMOLISHED PAVEMENT IS TO BE INCORPORATED IN THE NEW LIMEROCK BASE, UNLESS NOTED IN PLANS. THE EXISTING LIMEROCK MATERIAL FROM DEMOLISHED PAVEMENT MAY BE INCORPORATED INTO THE STABILIZED SUBGRADE / SUBBASE, OR STABILIZED SHOULDER.				
	21.3. FILL MATERIAL SHALL BE CLASSIFIED AS A-1, A-3, OR A-2-4 IN ACCORDANCE WITH AASHTO M-145 AND SHALL BE FREE FROM VEGETATION AND ORGANIC MATERIAL. NOT MORE THAN 12% BY WEIGHT OF FILL MATERIAL SHALL PASS THE NO. 200 SIEVE.				
	21.4. ALL FILL MATERIAL IN AREAS NOT TO BE PAVED SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.				
	21.5. ALL MATERIAL OF CONSTRUCTION SHALL BE SUBJECT TO INSPECTION AND TESTING TO ESTABLISH CONFORMANCE WITH THE SPECIFICATIONS AND SUITABLY FOR THE USES INTENDED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS PRIOR TO THE TIME HE WILL BE READY FOR AN INSPECTION OR TEST. THE CONTRACTOR SHALL FOLLOW CITY AND COUNTY INSPECTION PROCEDURES. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PHASE OF WORK DEPENDENT ON AN INSPECTION OR TEST OF AN EARLIER PHASE OF WORK, PRIOR TO THAT TEST OR INSPECTION PASSING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED MATERIAL TEST RESULTS TO THE ENGINEER OF RECORD PRIOR TO THE RELEASE OF FINAL CERTIFICATION BY THE ENGINEER. TEST RESULTS MUST INCLUDE, BUT MAY NOT BE LIMITED TO, DENSITIES FOR SUBGRADE AND LIMEROCK, UTILITIES, EXCAVATION, ASPHALT GRADATION REPORTS, CONCRETE CYLINDERS, ETC.				
	21.6. WHEN MUCK, CLAY, ROCK, OR ANY OTHER MATERIAL THAT IS UNSUITABLE IN ITS ORIGINAL POSITION ARE ENCOUNTERED BENEATH PROPOSED PAVEMENT AND SIDEWALK AREAS, THE UNSUITABLE MATERIALS SHALL BE COMPLETELY REMOVED FROM BENEATH THE PAVEMENT AND SIDEWALK AREAS AND (10) TEN FEET BEYOND THE EDGE OF PAVEMENT. ALL SUCH UNSUITABLE MATERIAL REMOVED BY THE SUBSOIL EXCAVATION, SHALL BE REPLACED WITH ACCEPTABLE EMBANKMENT MATERIAL, AS SPECIFIED IN THE STANDARD SPECIFICATIONS.				
	21.7. WHEN MUCK, CLAY, HARD PAN OR ANY OTHER MATERIAL THAT IS UNSUITABLE IN ITS ORIGINAL POSITION, ARE ENCOUNTERED BENEATH PROPOSED DRAINAGE SWALES OR DRY RETENTION AREAS, THE UNSUITABLE MATERIALS SHALL BE COMPLETELY REMOVED FROM BENEATH THE DRAINAGE SWALES AND DRY RETENTION AREAS. ALL SUCH UNSUITABLE MATERIAL REMOVED BY THE SUBSOIL EXCAVATION, SHALL BE REPLACED WITH COARSE SAND, OR OTHER SUITABLE GRANULAR MATERIAL, AS SPECIFIED IN THE STANDARD SPECIFICATIONS.				
	21.8. ALL UNDERGROUND UTILITIES AND DRAINAGE INSTALLATIONS SHALL BE IN PLACE PRIOR TO SUBGRADE COMPACTION AND PAVEMENT CONSTRUCTION.				
	21.9. GROUND ADJACENT TO ROADWAY/PAVEMENT HAVING RUNOFF SHALL BE GRADED (2) TWO INCHES LOWER THAN THE EDGE OF PAVEMENT TO ALLOW				
	FOR THE PLACEMENT OF SOD.				
	21.10. SITE GRADING ELEVATIONS SHALL BE WITHIN 0.1' OF THE REQUIRED ELEVATION FOR NON PAVED AREAS AND ALL AREAS SHALL BE GRADED TO DRAIN WITHOUT PONDING.				
	21.11. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, FILL, EMBANKMENT AND GRADING TO ACHIEVE THE PROPOSED PLAN GRADES INCLUDING TYPICAL ROAD SECTIONS, SIDE SLOPES AND CANAL SECTIONS. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 120 OF THE STANDARD SPECIFICATIONS. IF FILL MATERIAL IS REQUIRED IN EXCESS OF THAT GENERATED BY THE EXCAVATION, THE CONTRACTOR SHALL SUPPLY THIS MATERIAL AS REQUIRED FROM OFF-SITE.				
	21.12. A 2" BLANKET OF TOP SOIL SHALL BE PLACED OVER ALL AREAS TO BE SODDED OR SEEDED AND MULCHED WITHIN THE PROJECT LIMITS UNLESS OTHERWISE INDICATED ON THE PLANS.				
	21.13. SOD SHALL BE ST. AUGUSTINE UNLESS OTHERWISE INDICATED ON THE PLANS, AND SHALL BE PLACED ON THE GRADED TOP SOIL AND WATERED TO INSURE SATISFACTORY CONDITION UPON FINAL ACCEPTANCE OF THE PROJECT.				
	22. DRAINAGE				
	22.1. INLETS - ALL INLETS SHALL BE THE TYPE DESIGNATED ON THE PLANS, AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 425 OF THE STANDARD SPECIFICATIONS. ALL INLETS AND PIPE SHALL BE PROTECTED DURING CONSTRUCTION TO PREVENT SILTATION IN THE DRAINAGE SYSTEMS BY WAY OF TEMPORARY PLUGS AND PLYWOOD OR PLASTIC COVERS OVER THE INLETS. THE ENTIRE DRAINAGE SYSTEM SHALL BE CLEANED OF ALL DEBRIS PRIOR TO FINAL ACCEPTANCE.				
	22.2. PIPE SPECIFICATIONS: THE MATERIAL TYPE IS SHOWN ON THE DRAWINGS BY ONE OF THE FOLLOWING DESIGNATIONS:				
	• RCP = REINFORCED CONCRETE PIPE, ASTM DESIGNATION C-76, SECTION 941 OF THE STANDARD SPECIFICATIONS. • CMP = CORRUGATED METAL (ALUMINUM) PIPE, ASTM DESIGNATION M-196. • CMP (SMOOTH LINED) = CORRUGATED METAL ALUMINUM PIPE, (SMOOTH LINED) ASTM DESIGNATION M-196. • SCP = SLOTTED CONCRETE PIPE, SECTIONS 941 AND 942, OF THE STANDARD SPECIFICATIONS. • PVC = POLYVINYL CHLORIDE PIPE. • PCMP = PERFORATED CMP, SECTION 945, OF THE STANDARD SPECIFICATIONS • CORRUGATED HIGH DENSITY POLYETHYLENE PIPE (HDPE) (12 INCHES TO 60 INCHES), SHALL MEET THE REQUIREMENTS OF FDOT SPECIFICATION SECTION 948-2.3.				
	22.3. PIPE BACKFILL - REQUIREMENTS FOR PIPE BACKFILL CROSSING ROADS OR PARKING AREAS SHALL BE AS DEFINED IN THE SECTION 125-8, OF THE STANDARD SPECIFICATIONS. PIPELINE BACKFILL SHALL BE PLACED IN 6 INCH LIFTS AND COMPACTED TO 100% OF THE STANDARD PROCTOR (AASHTO T-99 SPECIFICATIONS)				
	22.4. LOCATION OF DRAINAGE STRUCTURES SHALL GOVERN, AND PIPE LENGTH MAY HAVE TO BE ADJUSTED TO ACCOMPLISH CONSTRUCTION AS SHOWN ON THESE PLANS.				
	22.5. DISTANCE AND LENGTHS SHOWN ON PLANS AND PROFILE DRAWINGS ARE REFERENCED TO THE INNER WALLS OF STRUCTURES.				
	22.6. FILTER FABRIC SHALL BE MIRAFI, TYPAR OR EQUAL CONFORMING TO SECTION 885 OF THE STANDARD SPECIFICATIONS.				
	23. ASPHALT PAVING				
	23.1. WHERE NEW ASPHALT MEETS EXISTING ASPHALT, THE EXISTING ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE. PRIOR TO REMOVING CURB OR GUTTER, THE ADJACENT ASPHALT SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE.				
	23.2. INTERNAL ASPHALT PAVING CONSTRUCTED ON EXISTING SANDY SOILS SHALL BE CONSTRUCTED WITH A 12" SUBGRADE, COMPACTED TO A MINIMUM DENSITY OF 100% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99. THE COMPACTED SUBGRADE SHALL BE CONSTRUCTED IN THE LIMITS SHOWN ON THE PLANS. ALL SUBGRADE SHALL HAVE AN LBR OF 40 UNLESS OTHERWISE NOTED.				
	23.3. ASPHALTIC CONCRETE SURFACE COURSE SHALL BE CONSTRUCTED TO THE LIMITS SHOWN ON THE PLANS. THE SURFACE COURSE SHALL CONSIST OF THE THICKNESS AND TYPE ASPHALTIC CONCRETE AS SPECIFIED IN THE PLANS. ALL ASPHALTIC CONCRETE SHALL BE IN ACCORDANCE WITH SECTIONS 320, 327, 330, 334, 336, 337, 337, 338, 339 AND 341 OF THE STANDARD SPECIFICATIONS.				
	23.4. LIMEROCK BASE SHALL BE PREPARED, COMPACTED AND GRADED AND SHALL BE IN ACCORDANCE WITH SECTION 200 OF THE STANDARD SPECIFICATIONS. ALL LIMEROCK SHALL BE COMPACTED TO 98% PER AASHTO T-180 AND HAVE NOT LESS THAN 70% OF CARBONATES OF CALCIUM AND MAGNESIUM UNLESS OTHERWISE DESIGNATED. THE ENGINEER SHALL INSPECT THE COMPLETED BASE COURSE AND THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES AND CLEAN THE BASE COURSE PRIOR TO THE PLACEMENT OF THE PRIME COAT. A TACK COAT WILL ALSO BE REQUIRED IF THE ENGINEER FINDS THAT THE PRIMED BASE HAS BECOME EXCESSIVELY DIRTY OR THE PRIME COAT HAS CURED TO THE EXTENT OF LOSING BOUNDING EFFECT PRIOR TO PLACEMENT OF THE ASPHALTIC CONCRETE SURFACE COURSE. THE PRIME AND TACK COATS SHALL BE IN ACCORDANCE WITH SECTION 300 OF THE STANDARD SPECIFICATIONS.				
	23.5. LIMEROCK BASE MATERIAL SHALL BE PLACED IN MAXIMUM 6" LIFTS. BASES GREATER THAN 6" SHALL BE PLACED IN TWO EQUAL LIFTS. IF, THROUGH FIELD TESTS, THE CONTRACTOR CAN DEMONSTRATE THAT THE COMPACTION EQUIPMENT CAN ACHIEVE DENSITY FOR THE FULL DEPTH OF A THICKER LIFT, AND IF APPROVED BY THE ENGINEER, THE BASE MAY BE CONSTRUCTED IN SUCCESSIVE COURSES OF NOT MORE THAN 8 INCHES (200 MM) COMPACTED THICKNESS.				
	23.6. ASPHALT EDGES THAT ARE NOT CURBED SHALL BE SAW CUT TO PROVIDE A STRAIGHT EVEN LINE TO THE DIMENSIONS SHOWN ON PLANS.				
	24. CONCRETE CONSTRUCTION				
	24.1. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH SECTION 522 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 522-001. CONCRETE SIDEWALK SHALL BE 4" THICK, UNLESS OTHERWISE NOT AND CONSTRUCTED ON COMPACTED SUBGRADE, WITH 1/2" EXPANSION JOINTS PLACED AT A MAXIMUM OF 75', UNLESS OTHERWISE NOTED ON PLANS. CRACK CONTROL JOINTS SHALL BE 5' ON CENTER. ALL CONCRETE SIDEWALKS THAT CROSS DRIVEWAYS SHALL BE 6" THICK, UNLESS OTHERWISE NOTED ON PLANS.				
	24.2. SIDEWALK CURB RAMPS SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 522-002.				
	24.3. CONCRETE CURB SHALL BE CONSTRUCTED TO THE LIMITS SHOWN ON THE PLANS. THE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS AND SHALL BE IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS. CONCRETE CURBING SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 520-001.				
	SECTION 30 - WATER DISTRIBUTION AND SANITARY SEWER FORCE MAINS.				
	30. MATERIALS:				
	NOTE: IF MATERIALS LIST HERE ON ARE IN CONFLICT WITH UTILITY OWNER, MATERIAL OWNER REQUIREMENTS SHALL GOVERN.				
	30.1. ALL WATER MAIN PIPE, INCLUDING FITTINGS, SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE. SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.				
	30.2. DUCTILE IRON PIPE FOR WATER DISTRIBUTION MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C151/A21.51 LATEST REVISION, "DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS" WITH A MINIMUM WALL THICKNESS OF CLASS 51 (PRESSURE CLASS 350) UNLESS OTHERWISE NOTED IN THE PLANS. DUCTILE IRON PIPE SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.4 LATEST REVISION. THE PIPE SHALL BE ADAPTED FOR USE WITH CLASS 250 FITTINGS FOR ALL SIZES. WATER MAIN SHALL BE COLORED BLUE IN ACCORDANCE WITH FLORIDA STATE STATUTES.				
	30.3. DUCTILE IRON PIPE FOR SEWAGE FORCE MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C151/A21.51 LATEST REVISION, "DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS" WITH A MINIMUM WALL THICKNESS OF CLASS 51 (PRESSURE CLASS 350) UNLESS OTHERWISE NOTED IN THE PLANS. DUCTILE IRON PIPE SHALL BE INTERIOR CERAMIC EPOXY LINED AND EXTERIOR COATED WITH THE MANUFACTURER'S COATING SYSTEM (PROTECTO 401 CERAMIC EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 40 MILS AND AN OUTSIDE COATING OF EITHER COAL TAR EPOXY OR ASPHALT). CEMENT MORTARED LININGS ARE NOT APPROPRIATE FOR THIS APPLICATION.				
	30.4. ALL PIPE & FITTINGS ON THE LIFT STATION SITES SHALL BE DUCTILE IRON CONFORMING TO THE SAME SPECIFICATIONS AS ABOVE FOR SEWAGE FORCE MAINS EXCEPT THAT FLANGED DUCTILE IRON PIPE & FITTINGS SHALL BE USED INSIDE VALVE PITS AND WET WELLS. FLANGED PIPE AND FITTINGS SHALL CONFORM TO ANSI/AWWA C115/A21.15 LATEST REVISION AND ANSI/AWWA C110/A21.10 LATEST REVISION. THE FOLLOWING THICKNESS CLASSES SHALL BE ADHERED TO: 4" - 12" - CLASS 52, 14" & LARGER - CLASS 51.				
	30.5. PVC PRESSURE PIPE FOR SIZES 4" THROUGH 12" AND SHALL CONFORM TO ANSI/AWWA STANDARD C900 LATEST REVISION. PVC PRESSURE PIPE SHALL BE MADE FROM CLASS 12454-A OR CLASS 12454-B VIRGIN MATERIAL AND CONFORM WITH THE OUTSIDE DIAMETER OF CAST IRON PIPE WITH A MINIMUM WALL THICKNESS OF DR SERIES 18. ULTRA VIOLET DEGRADATION OR SUN BLEACHED PIPE WILL BE CAUSE FOR REJECTION. WATER MAIN SHALL BE COLORED BLUE IN ACCORDANCE WITH FLORIDA STATE STATUTES. FORCE MAIN SHALL BE IMPREGNATED WITH GREEN PIGMENT. REUSE MAIN SHALL BE IMPREGNATED WITH PURPLE PIGMENT.				
	30.6. DUCTILE IRON FITTINGS FOR WATER DISTRIBUTION MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C110/A21.10 LATEST REVISION. FITTINGS 4" AND LARGER SHALL BE CEMENT LINED AND SEAL COATED IN ACCORDANCE WITH ANSI/AWWA STANDARD C104/A21.4 LATEST REVISION. WATER MAIN FITTING SHALL BE COLORED BLUE IN ACCORDANCE WITH FLORIDA STATE STATUTES.				
	30.7. CAST IRON AND DUCTILE IRON FITTINGS FOR SEWAGE FORCE MAINS SHALL CONFORM TO ANSI/AWWA STANDARD C110/A21.10 LATEST REVISION. FITTINGS 4" AND LARGER SHALL BE COATED IN ACCORDANCE WITH THE REQUIREMENTS OF DUCTILE IRON PIPE FOR SEWAGE FORCE MAINS.				
	30.8. JOINTS FOR BELL AND SPIGOT DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO ANSI/AWWA STANDARD C111/A21.11 LATEST REVISION. MECHANICAL JOINT OR PUSH-ON JOINT TO BE RUBBER GASKET COMPRESSION-TYPE. SPECIAL FITTINGS AND JOINTS SHALL BE CONSIDERED FOR SPECIFIC INSTALLATION SUBJECT TO THE APPROVAL OF THE ENGINEER.				
	30.9. JOINTS FOR PVC PRESSURE PIPE SHALL BE BELL AND SPIGOT PUSH-ON RUBBER GASKET TYPE ONLY. NO SOLVENT WELD OR THREADED JOINTS WILL BE PERMITTED.				
	30.10. WATER DISTRIBUTION SYSTEM RESTRAINT: ALL FITTINGS AND SPECIFIC PIPE JOINTS SHALL BE RESTRAINED AS OUTLINED BELOW:				
	• JOINT RESTRAINT • PUSH-ON P.V.C. EBAA IRON SERIES 1600 • PUSH-ON DIP EBAA IRON SERIES 1700 • TR-FLEX BY U.S. PIPE OR • FLEX RING BY AMERICAN • FITTINGS W/ DIP EBAA IRON SERIES 1100 MEGALUG • FITTINGS W/ P.V.C. EBAA IRON SERIES 2000 MEGALUG • LENGTH OF RESTRAINED PIPE SHALL BE AS INDICATED ON RESTRAINED JOINT PIPE DETAIL. (SEE WATER & SEWER DETAIL SHEET)				
	30.11. SEWAGE FORCE MAIN SYSTEM RESTRAINT: ALL FITTINGS AND SPECIFIC PIPE JOINTS SHALL BE RESTRAINED AS OUTLINED BELOW				
	• JOINT RESTRAINT • PUSH-ON P.V.C. EBAA IRON SERIES 1600 • PUSH-ON DIP EBAA IRON SERIES 1700 • TR-FLEX BY U.S. PIPE OR • FLEX RING BY AMERICAN • FITTINGS W/ DIP EBAA IRON SERIES 1100 MEGALUG • FITTINGS W/ P.V.C. EBAA IRON SERIES 2000 MEGALUG • LENGTH OF RESTRAINED PIPE SHALL BE AS INDICATED ON RESTRAINED JOINT PIPE DETAIL. (SEE WATER & SEWER DETAIL SHEET)				
	30.12. WATER DISTRIBUTION VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509 LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.				
	30.12.1.1. GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2361/2362, AMERICAN 250 LINE OR CLOW F-6100, CONFORMING TO ANSI/AWWA C500 LATEST REVISION OR APPROVED EQUAL.				
	30.12.1.2. TAPPING VALVES SHALL BE MUELLER T-2361/2362 OR APPROVED EQUAL.				
	30.12.1.3. GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS OR APPROVED EQUAL.				
	30.13. TAPPING SLEEVES SHALL BE MUELLER H615, CLOW F- 2505 OR APPROVED EQUAL.				
	30.14. VALVE BOXES SHALL BE U.S. FOUNDRY 7500 OR APPROVED EQUAL PAINTED BLUE WITH THE DESIGNATION "WATER".				
	30.15. RETAINER GLANDS FOR DIP SHALL CONFORM TO ANSI/AWWA C111/A21.11 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 F-1058, STANDARD FIRE PROTECTION EQUIPMENT COMPANY OR APPROVED EQUAL.				
	30.16. DRESSER COUPLINGS SHALL BE REGULAR BLACK COUPLINGS WITH PLAIN GASKETS FOR GALVANIZED STEEL PIPE. THEY SHALL BE DRESSER STYLE 90. NO SUBSTITUTIONS ALLOWED.				
	30.17. FIRE HYDRANTS SHALL BE MUELLER CENTURION TRAFFIC TYPE A-423 WITH 5 1/4" INTERNAL VALVE OPENING OR APPROVED EQUAL. 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 LATEST REVISION. FIRE HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH NFPA #291 OR PER AGENCY STANDARDS HAVING JURISDICTION. BLUE RAISED REFLECTIVE PAVEMENT MARKER (RPM) SHALL BE USED TO IDENTIFY FIRE HYDRANT LOCATION, THE PLACEMENT OF THE RPM TO BE AT THE CENTERLINE OF THE OUTSIDE ROADWAY LANE.				
	30.18. SEWAGE FORCE MAIN VALVES SHALL BE PLUG VALVES WHICH SHALL BE OF THE NON-LUBRICATED, ECCENTRIC TYPE WITH RESILIENT FACED PLUGS. PORT AREAS FOR VALVES 20 INCHES AND SMALLER SHALL BE AT LEAST 80% OF FULL PIPE AREA. PORT AREA OF VALVES 24 INCHES AND LARGER SHALL BE AT LEAST 70% OF FULL PIPE AREA. THE BODY SHALL BE OF SEMI-STEEL (ASTM A-126 C1.8) AND SHALL HAVE BOLTED BONNET WHICH GIVES ACCESS TO THE INTERNALS OF THE VALVE. SEATS SHALL BE WELDED OVERLAY OF HIGH NICKEL CONTENT OR A STAINLESS STEEL PLATE LOCKED IN THE BODY CAVITY. IF A PLATE IS USED, IT SHALL BE REPLACEABLE THROUGH THE BONNET ACCESS. BEARINGS SHALL BE PERMANENTLY LUBRICATED OF STAINLESS STEEL, BRONZE OR TEFLON LINED, FIBER GLASS BACKED DURALON. BEARING AREAS SHALL BE ISOLATED FROM THE FLOW WITH GRIT SEALS. VALVES SHALL HAVE PACKING BONNETS WHERE THE SHAFT PROTRUDES FROM THE VALVE AND THE PACKING SHALL BE SELF-ADJUSTING CHEVRON TYPE WHICH CAN BE REPLACED WITHOUT REMOVING THE BONNET. ALL NUTS, BOLTS, SPRINGS AND WASHERS SHALL BE STAINLESS STEEL.				
	30.19. PLUG VALVES SHALL BE DESIGNED FOR A WORKING PRESSURE OF 150 PSI THE VALVE AND ACTUATOR SHALL BE CAPABLE OF SATISFACTORY OPERATION IN EITHER DIRECTION OF FLOW AGAINST PRESSURE DROPS UP TO AND INCLUDING 100 PSI (FOR PLUG VALVES OVER 12" IN DIAMETER). VALVES SHALL BE BUBBLE TIGHT IN BOTH DIRECTIONS AT 100 PSI DIFFERENTIAL. PLUG VALVES OVER 12" IN DIAMETER SHALL HAVE WORM GEAR OPERATORS. THE OPERATING MECHANISM SHALL BE FOR BURIED SERVICE WITH A 2 INCH SQUARE OPERATING NUT.				
	30.20. PLUG VALVES ARE TO BE INSTALLED WITH THE SEAT POINTED TOWARDS THE UPSTREAM FLOW, WHEN SPECIFIED.				
	30.21. SWING CHECK VALVES FOR WATER, SEWAGE, SLUDGE, AND GENERAL SERVICE SHALL BE OF THE OUTSIDE LEVER AND SPRING OR WEIGHT TYPE, IN ACCORDANCE WITH ANSI/AWWA C 508 LATEST REVISION SWING-CHECK VALVES FOR WATERWORKS SERVICE, 2" THROUGH 24" NPS, UNLESS OTHERWISE INDICATED, WITH FULL-OPENING PASSAGES, DESIGNED FOR A WATER-WORKING PRESSURE OF 150 PSI THEY SHALL HAVE A FLANGED COVER PIECE TO PROVIDE ACCESS TO THE DISC.				
	30.22. HIGH DENSITY POLYETHYLENE PIPE (HDPE) FOR WATER DISTRIBUTION MAINS SHALL CONFORM TO AWWA C906 STANDARD, LATEST REVISION. PIPES SHALL BE COLOR-CODED BLUE, MINIMUM 40 FEET STANDARD LENGTHS.				
	31. SERVICE CONNECTION:				
	31.1. SERVICE SADDLES SHALL BE FUSION BONDED PLASTIC COATED DUCTILE IRON (ASTM A536) WITH STAINLESS STEEL STRAPS, SADDLES SHALL BE DOUBLE STRAP TYPE.				
	31.2. SERVICE LINES SHALL BE POLYETHYLENE (PE 3408), 200 P.S.I RATED, DR9. PIPE JOINTS SHALL BE OF THE COMPRESSION TYPE TOTALLY CONFINED GRIP SEAL AND COUPLING NUT.				
	31.3. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY FORD BALCORP, CATALOG # 1100 OR APPROVED EQUAL.				
	31.4. CURB STOPS SHALL BE FORD V63-44W-X" LATEST REVISION OR APPROVED EQUAL.				
	31.5. METER STOPS SHALL BE 90 DEGREE LOCKWING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE FV63-777W" LATEST REVISION WITH 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 FORD OR APPROVED EQUAL.				
	32. INSTALLATION:				
	32.1. WHERE RESTRAINED PIPE JOINTS ARE REQUIRED DUE TO FITTINGS, APPURTENANCES, ETC., PIPE MATERIAL SHALL BE DIP				
	32.2. ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION "GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEM," AND ANSI/AWWA C605-XX LATEST REVISION STANDARD.				
	32.3. ALL DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/ C600-XX LATEST REVISION.				
	32.4. ALL WATER MAINS SHALL TYPICALLY BE LAID WITH A MINIMUM 36" COVER FOR PVC AND 30" COVER FOR DIP.				
	32.5. DETECTOR TAPE SHALL BE LAID 18 INCHES ABOVE ALL WATER AND SEWER LINES. A 14 GAUGE MULTI-STRAND WIRE SHALL BE ATTACHED TO ALL NONCONDUCTIVE WATER MAINS TO FACILITATE LOCATION. AN EXTRA 4 FEET OF WIRE SHALL BE PROVIDED AT ALL VALVES, BLOW-OFFS, HYDRANTS, ETC. THE WIRE SHALL BE TESTED FOR CONTINUITY AT THE PRESSURE TEST.				
	32.6. PIPE DEFLECTION SHALL NOT EXCEED 50% OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE MANUFACTURER.				
	32.7. A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED. BACKFILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.				
	32.8. ALL VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "WATER" OR "SEWER", AS APPLICABLE, CAST IN THE COVER. U.S. FOUNDRY OR APPROVED EQUAL.				
	33. TESTING:				
	33.1. BEFORE ANY PHYSICAL CONNECTIONS AND ACCEPTANCE FOR OPERATION TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE FLUSHED, PRESSURE TESTED AND DISINFECTED. COPIES OF PASSING BACTERIOLOGICAL RESULTS AND PRESSURE TEST RESULTS MUST BE SUBMITTED TO, AND APPROVED BY, THE ENGINEER, UTILITY OWNER, AND HEALTH DEPARTMENT. HYDROSTATIC TESTING OF NEW MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-05 (HYDROSTATIC TEST). THE PRESSURE TEST SHALL NOT VARY MORE THAN 5 PSI DURING THE				
	TEST. THE ALLOWABLE LEAKAGE DURING THE PRESSURE TEST SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA: L = (SD(P1/2)/148,000.				
	IN WHICH L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR, S EQUALS LENGTH OF PIPE (LINEAR FEET), D EQUALS NOMINAL DIAMETER OF PIPE (INCHES) AND P EQUALS THE AVERAGE TEST PRESSURE (POUNDS PER SQUARE INCH GAUGE). MAXIMUM LENGTH OF TEST PIPE SECTION SHOULD BE 2000 FEET. THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C651-05 (WATER MAIN BACTERIOLOGICAL TESTS).				
	33.2. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF THE UTILITY OWNER AND THE ENGINEER OF RECORD.				
	33.3. FOR WATER DISTRIBUTION PIPES, SAMPLING POINTS SHALL BE PROVIDED BY THE CONTRACTOR AT THE LOCATIONS SHOWN ON THE PLANS.				
	33.4. FOR WATER DISTRIBUTION PIPES, DISINFECTION AND BACTERIOLOGICAL TESTING SHALL BE IN ACCORDANCE WITH ANSI/AWWA C651-14 (WATER MAIN BACTERIOLOGICAL TESTS). MAXIMUM DISTANCE BETWEEN SAMPLING POINTS SHALL BE AS FOLLOWS:				
	• TRANSMISSION MAINS: EVERY 1200 FEET • BRANCH MAINS: EVERY 1000 FEET • ISOLATED MAINS < 1000 FEET: 2 SAMPLE POINTS • ISOLATED MAINS > 1000 FEET: 3 SAMPLE POINTS				
	SECTION 40 - GRAVITY SANITARY SEWER COLLECTION SYSTEM				
	40. GENERAL:				
	40.1. MANHOLE, VALVE BOX, METER BOX AND OTHER STRUCTURE RIM ELEVATIONS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE ADJUSTED TO CONFORM TO PLAN GRADES PROPOSED IN THESE PLANS. IF NO OTHER INDIVIDUAL COST ITEM IS INCLUDED IN THE CONTRACT SCHEDULE FOR A PARTICULAR STRUCTURE ADJUSTMENT.				
	40.2. DISTANCE AND LENGTHS SHOWN ON PLANS AND PROFILE DRAWINGS ARE REFERENCED TO THE CENTER OF STRUCTURES.				
	41. MATERIALS:				
	NOTE: IF MATERIALS LIST HERE ON ARE IN CONFLICT WITH UTILITY OWNER, MATERIAL OWNER REQUIREMENTS SHALL GOVERN.				
	41.1. ALL PVC SEWER PIPE AND FITTINGS SHALL BE NON-PRESSURE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D 3034, SDR 26, WITH PUSH-ON RUBBER GASKET JOINTS.				
	41.2. DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA C151/A21.51-XX LATEST REVISION, "DUCTILE IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS" WITH WALL THICKNESS CLASS 51 FOR 8" AND ABOVE, CLASS 52 FOR 4" AND 6", UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DUCTILE IRON PIPE SHALL BE EPOXY LINED OR COATED WITH THE MANUFACTURER'S COATING SYSTEM AS APPROVED BY THE ENGINEER OF RECORD AND THE LOCAL MUNICIPALITY OR UTILITY OWNER. IN EITHER CASE, THE ENGINEER'S REVIEW AND APPROVAL IS REQUIRED FOR EITHER ALTERNATIVE PRIOR TO CONSTRUCTION. CEMENT MORTARED LININGS ARE NOT APPROPRIATE FOR THIS APPLICATION.				
	41.3. ALL DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA STANDARD C110/A21.10-XX LATEST REVISION. ALL FITTINGS AND ACCESSORIES SHALL BE EPOXY LINED AND AS MANUFACTURED OR SUPPLIED BY THE PIPE MANUFACTURER OR APPROVED EQUAL.				
	41.4. MANHOLES SHALL BE PRECAST PER ASTM C 478 AND IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.				
	41.5. MANHOLES ARE TO BE SEALED WITH TYPE II SULPHATE RESISTANT CEMENT OR APPROVED EQUAL - NO MOLDING PLASTER.				
	41.6. JOINTS FOR BELL AND SPIGOT DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO ANSI/AWWA STANDARD C111/A21.11-XX LATEST REVISION. MECHANICAL JOINT OR PUSH-ON JOINT TO BE RUBBER GASKET COMPRESSION- TYPE.				
	41.7. PVC CLEAN-OUTS TO HAVE SCREW TYPE ACCESS PLUG. LONG RADIUS WYE CONNECTIONS AND FITTINGS SHALL BE USED IN ORDER TO ACCESS CLEAN-OUT OPERATIONS.				
	41.8. CLEANOUTS SHALL BE INSTALLED AT ALL SEWER SERVICES EXCEEDING 75' IN LENGTH (EVERY 75') WITH A CLEAN OUT AT THE PROPERTY LINE, EASEMENT LINE, OR 5' FROM A BUILDING. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE BUILDING CLEANOUT (5' FROM THE BUILDING) AND ELEVATION OF THE END OF THE SEWER SERVICE WITH THE BUILDING PLUMBING CONTRACTOR. CLEANOUTS SHALL BE THE SAME SIZE AS THE SERVICE LATERAL IN WHICH THEY ARE INSTALLED.				
	42. INSTALLATION:				
	42.1. 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."				
	42.2. DIP SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C-600-XX LATEST REVISION.				
	42.3. PIPE TO MANHOLE CONNECTION TO BE FERNCO NEOPRENE BOOT COUPLINGS WITH STAINLESS STEEL ACCESSORIES OR APPROVED EQUAL.				
	42.4. MANHOLES SHALL BE SET PLUMB TO LINE AND GRA				



**THESE PLANS ARE NOT FULLY PERMITTED
AND ARE SUBJECT TO REVISIONS MADE
DURING THE PERMITTING PROCESS.**

ISSUE DATE: 11/16/2023

DESIGNED BY: VAC

DRAWN BY: VAC

CHECKED BY: CM

BID-CONTRACT:

CLIENT

PROJECT

SHEET TITLE

**SHEET
NUMBER** **CP-101**

PROJECT NUMBER	13778.00
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Plotted by: vcastillo On 11/16/2023 2:52 PM

Drawing name: K:\13778.00 - Star Tower Hollywood - 1817 Taylor Street Development LLC\Engineering\Cadd\13778.00 CG-101.dwg

STATUS: PRELIMINARY

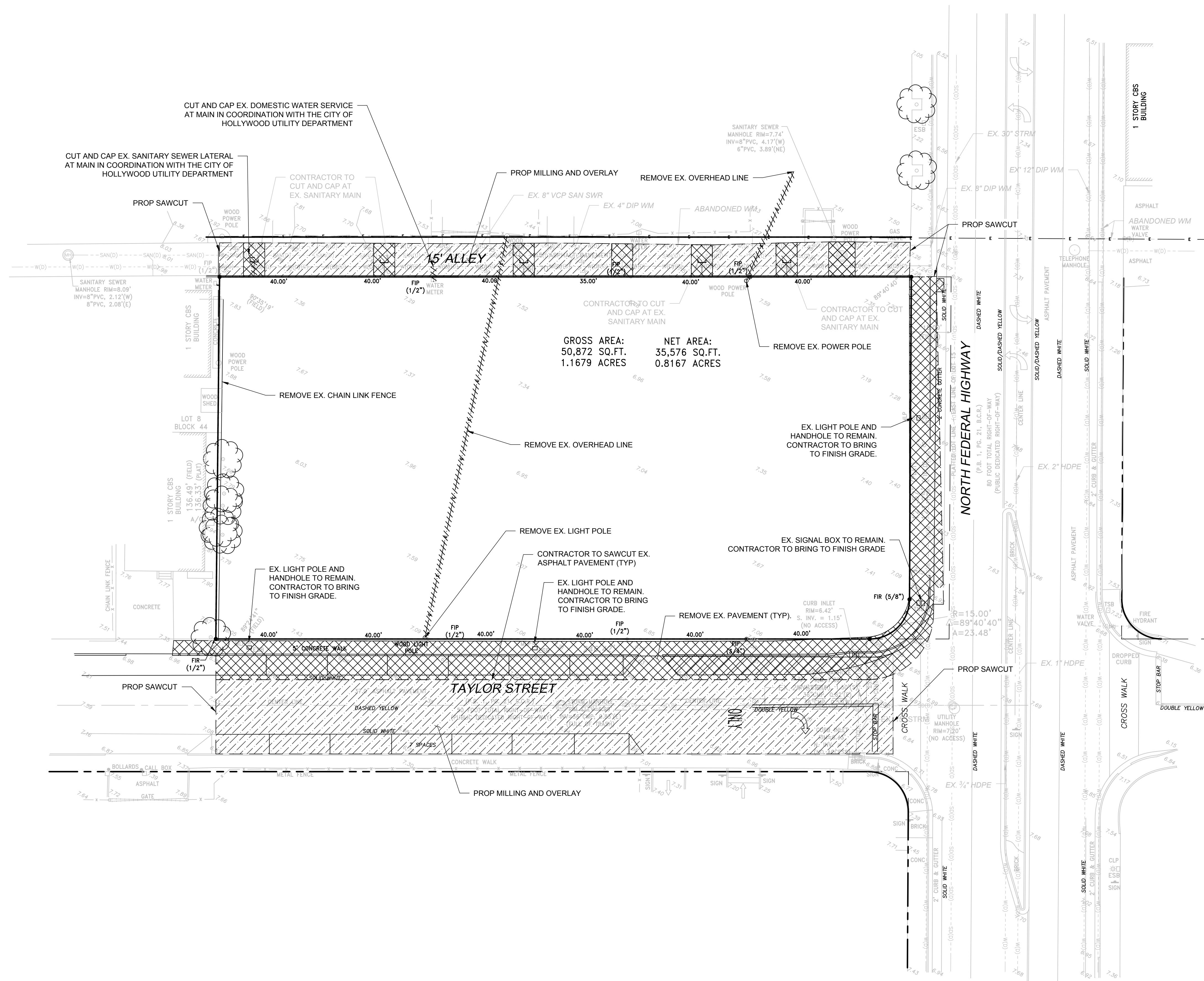


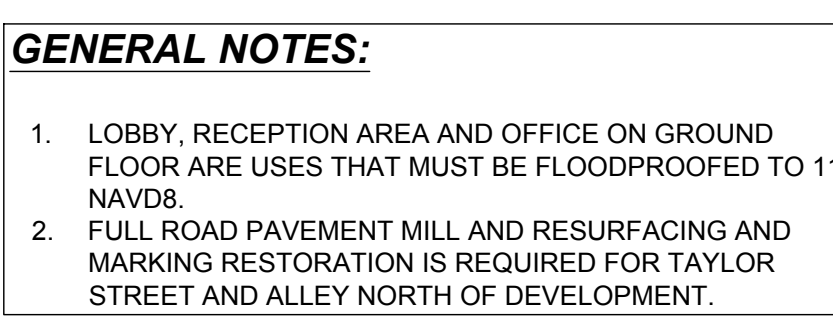
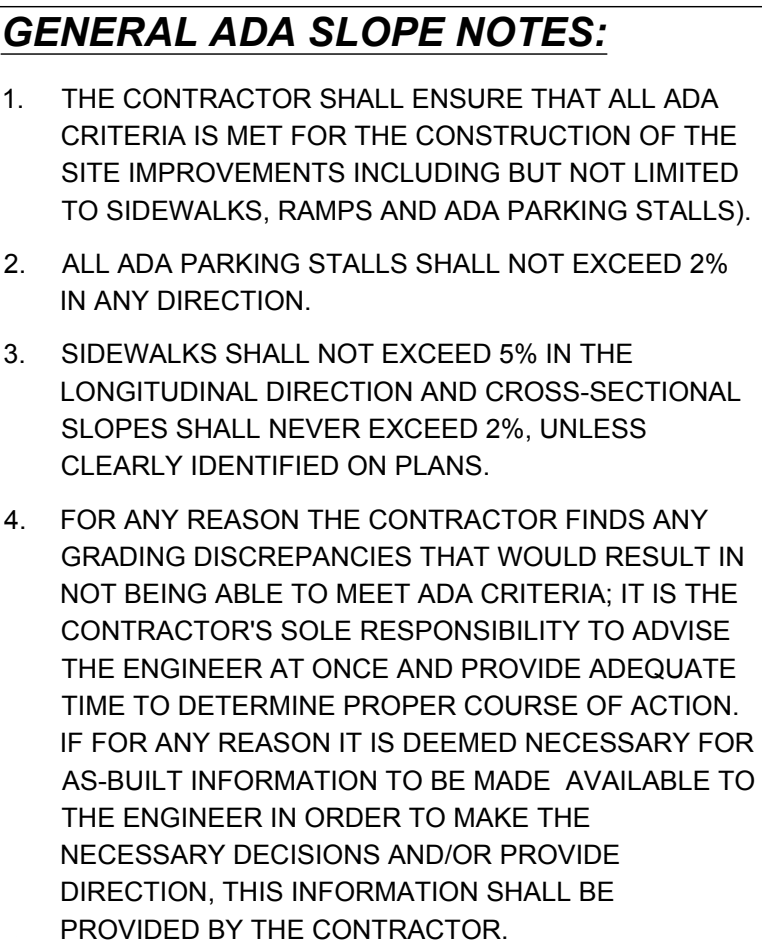
- **TREE PROTECTION PLAN:**
 - FOR EXISTING TREES ON SITE, INDICATE THE LOCATION OF TREES/PALMS ON THE SURVEY AND PROVIDE A CORRESPONDING LIST OF TREE NUMBER, BOTANICAL NAME, COMMON NAME, OVERALL HEIGHT, TRUNK DBH FOR TREES, CLEAR TRUNK FOR PALMS, CONDITION %, AND INDICATE THAT ALL EXISTING TREES/PALMS ARE TO BE PROTECTED AND WILL REMAIN ON SITE.
 - PROVIDE TREE PROTECTION BARRICADE DETAIL FOR EXISTING TREES ON SITE TO REMAIN. THIS BARRICADE MUST BE INSTALLED PRIOR TO THE BEGINNING OF PROPOSED WORK.
 - FOR TREES THAT MUST BE REMOVED TO ACCESS DEMO AREAS, OBTAIN PERMIT FOR TREE REMOVAL.

BID-CONTRACT:

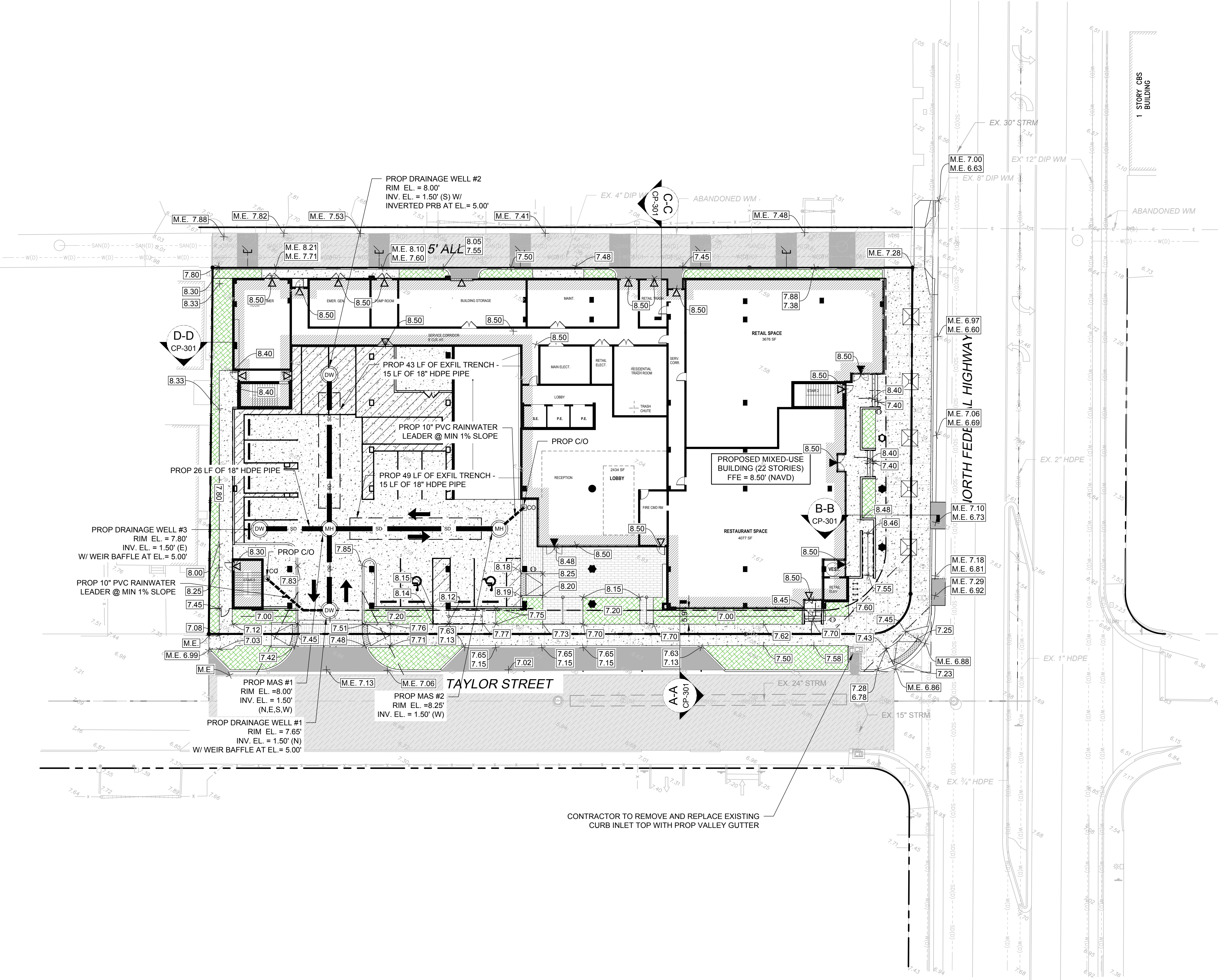
PROJECT NUMBER	13778.00
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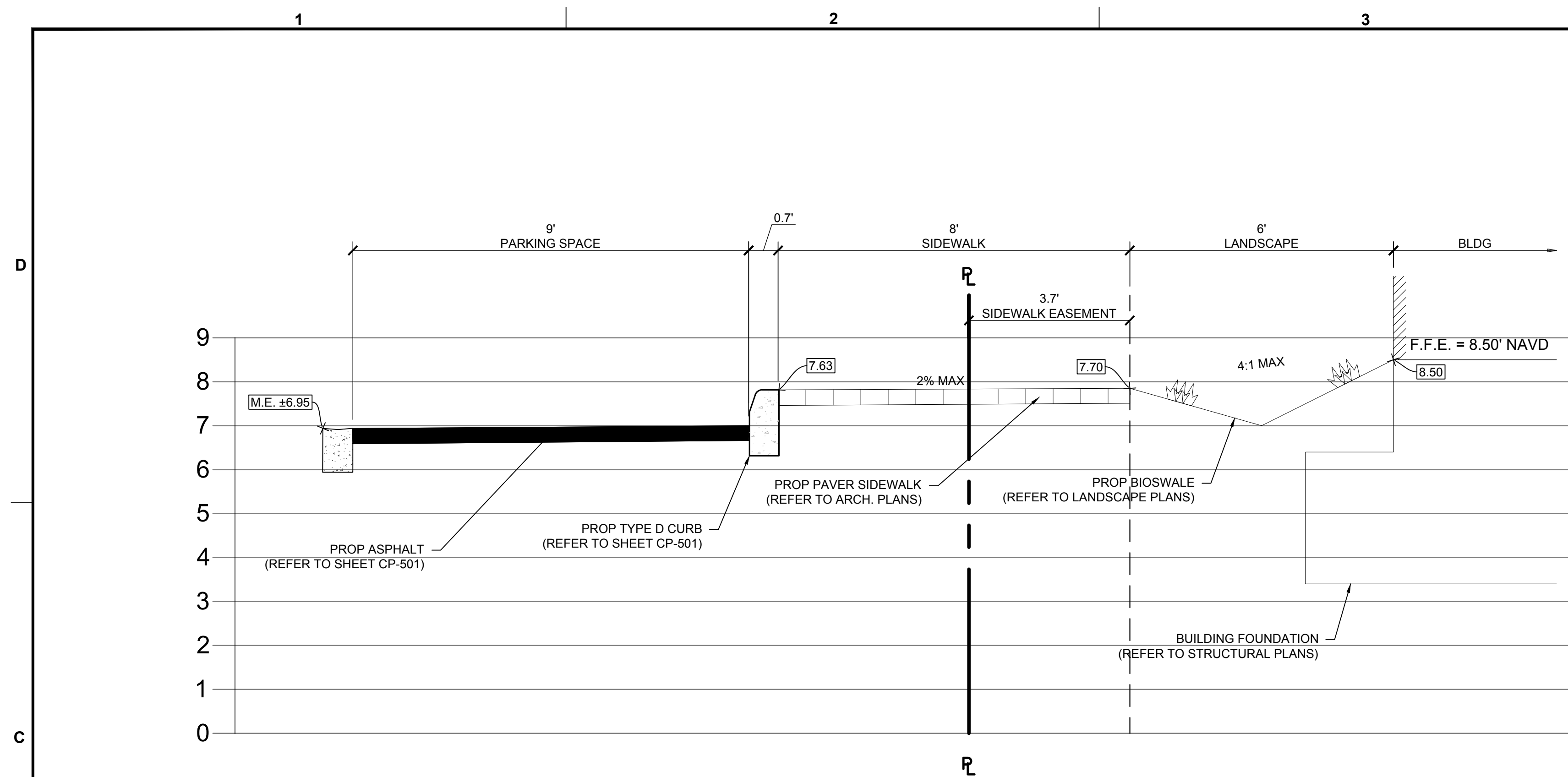
STATUS: PRELIMINARY



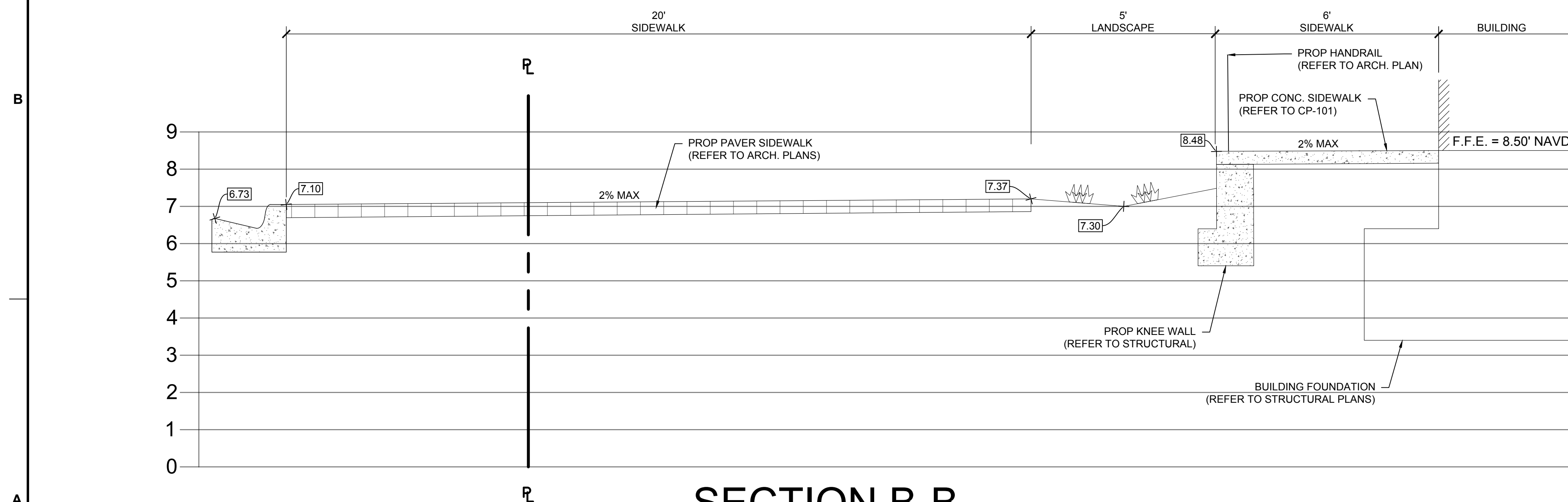


NOTE:
ELEVATIONS SHOWN HEREON ARE IN FEET AND BASED ON
THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 1988)





SECTION A-A
SCALE: N.T.S.



SECTION B-B

SCALE: N.T.S.



**301 East Atlantic Blvd.
Pompano Beach, FL 33060
PH: (954) 788-3400**

Florida Engineering Business License: CA7928
Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC26000457

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PRELIMINARY PLAN
NOT FOR CONSTRUCTION

**THESE PLANS ARE NOT FULLY PERMITTED
AND ARE SUBJECT TO REVISIONS MADE
DURING THE PERMITTING PROCESS.**

**RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.**

ISSUE DATE: 11/16/2023

DESIGNED BY: VAC

DRAWN BY: VAC

CHECKED BY:	CM
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BID-CONTRACT:

THOMAS F. DONAHUE, P.E.
FLORIDA REG. NO. 60529
(FOR THE FIRM)

CLIENT

**1817 TAYLOR
DEVELOPMENT LLC**

PROJECT

**STAR TOWER
HOLLYWOOD**

SHEET TITLE

CROSS SECTIONS

**SHEET
NUMBER** **CP-301**

PROJECT NUMBER	13778.00
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Drawing name: K:\13778.00 - Star Tower Hollywood - 1817 Taylor Street Development LLC\Engineering\Cadd\13778.00 CP-301.dwg

STATUS: PRELIMINARY



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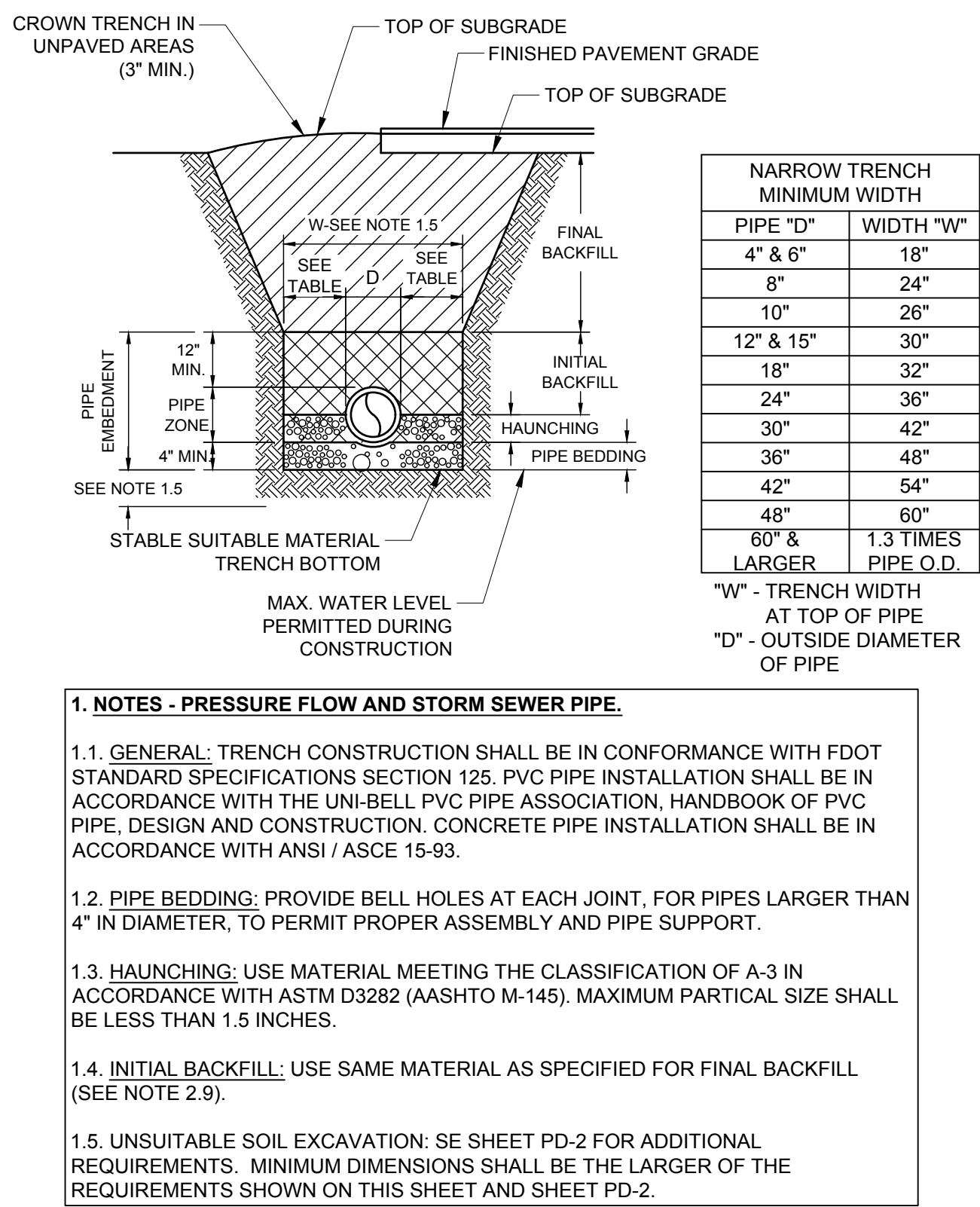


1 ASPHALT PAVEMENT DETAIL NOT TO SCALE

PROJECT NUMBER	13778.00
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PIPE SIZE	PIPE OD		"A" MIN. HOLE DIA.	MIN. DISTANCE PIPE INVERT TO STRUCTURE INVERT
	A-PROFILE	H-PROFILE		
12"	14.5"	N/A	19.5"	3.7"
15"	17.6"	N/A	23.00"	4.0"
18"	21.2"	N/A	26.50"	4.2"
24"	27.8"	N/A	33.25"	4.5
30"	35.1"	N/A	40.50"	5.2"
36"	41.1"	41.1"	47.00"	5.5"
42"	47.7"	48.0"	53.00"	5.7"
48"	53.6"	54.0"	59.00"	5.7"
60"	66.3"	67.3"	72.00"	6.4"



2. GENERAL NOTES:

2.1. **TRENCH WALLS - EXCAVATE** TRENCH TO ENSURE SIDES WILL BE STABLE UNDER WORKING CONDITIONS. TRENCH WALLS TO BE SLOPED OR SUPPORTED IN ACCORDANCE WITH THE CHAPTER 90-96 OF THE LAWS OF FLORIDA (THE TRENCH SAFETY ACT) AND FEDERAL OSHA STANDARD CFR SECTION 1926.650 SUBPART - P.

2.2. **Dewatering:** WHEN RUNNING OR STANDING WATER OCCURS IN THE TRENCH BOTTOM, OR THE TRENCH BOTTOM DISPLAYS A "QUICK" CONDITION, WATER SHALL BE REMOVED TO BELOW THE PIPE INVERT BY A SUITABLE MEANS, UNTIL THE PIPE IS BACKFILLED TO A SUFFICIENT HEIGHT TO PREVENT PIPE FLOATATION.

2.3. **MINIMUM TRENCH WIDTH:** PROVIDE A TRENCH WIDTH SUFFICIENT, BUT NO WIDER THAN NECESSARY, TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING BACKFILL MATERIAL. SEE TABLE FOR MINIMUM TRENCH WIDTHS. WHERE SOIL CONDITIONS REQUIRE TRENCH WALLS TO BE SUPPORTED, MINIMUM WIDTH SHALL BE BETWEEN INNER FACE OF TRENCH SUPPORTS.

2.4. **MOVABLE SHEETING, TRENCH BOXES OR SHIELDS:** WHEN MOVABLE TRENCH SUPPORT IS USED, THE MINIMUM DISTANCE BETWEEN INNER FACE OF TRENCH SUPPORT, AND THE OUTER PIPE WALL, SHALL BE AT LEAST ONE PIPE DIAMETER OR 2 FEET WHICH EVER IS GREATER.

2.5. **PREPARATION OF TRENCH BOTTOM:** TRENCH BOTTOM SHALL BE PREPARED TO PROVIDE A FIRM STABLE UNIFORM FOUNDATION THE FULL LENGTH OF THE PIPE. IF UNSUITABLE MATERIAL IS ENCOUNTERED AT BOTTOM OF TRENCH, CONTINUE TO EXCAVATE TILL SUITABLE MATERIAL IS ENCOUNTERED. IF DEPTH TO SUITABLE MATERIAL IS GREATER THAN 2 FEET BELOW BOTTOM OF TRENCH, NOTIFY ENGINEER OF SUCH CONDITION BEFORE CONTINUING FURTHER TRENCH EXCAVATION.

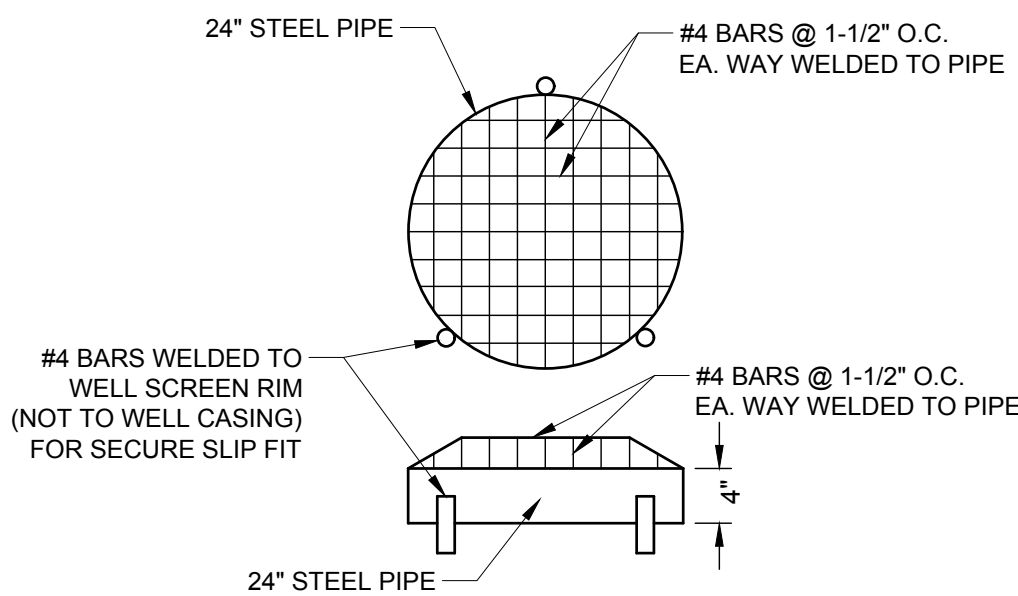
2.6. **PIPE BEDDING:** BEDDING MATERIAL SHALL CONFORM TO ASTM D-2321, AND MEET THE REQUIREMENTS OF FOOT SPECIFICATION SECTION 125-8 BACKFILLING. FOR PVC AND OTHER "FLEXIBLE" PIPES: EXCAVATE 4" BELOW PROPOSED OUTSIDE BOTTOM OF PIPE, BACKFILL AND COMPACT WITH SPECIFIED BEDDING MATERIAL TO PROPER GRADE.

2.7. **HAUNCHING:** MATERIAL SHALL MEET AND BE INSTALLED AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS OF FOOT SPECIFICATION SECTION 125-8 BACKFILLING. PLACE AND CONSOLIDATE MATERIAL UNDER THE PIPE HAUNCH, UP TO THE PIPE SPRINGLINE. FOR THE FULL WIDTH OF THE TRENCH, BEFORE PLACING AND COMPACTING THE REMAINDER OF THE EMBEDMENT IN THE PIPE ZONE. HAUNCHING MATERIAL SHALL BE PLACED AND CONSOLIDATED BY HAND SHOVEL, SLICING ALONG HAUNCH OF PIPE AND BY WATERING (JETTING OR PUDDLING) OR HAND TAMPING. MECHANICAL COMPACTION IS NOT TO BE USED WITHIN 1 PIPE DIAMETER OR 2 FEET, WHICH EVER IS GREATER, EITHER SIDE OF THE OUTSIDE WALL OF THE PIPE.

2.8. **INITIAL BACKFILL:** SHALL EXTEND FROM THE SPRINGLINE OF THE PIPE TO 1 FOOT ABOVE THE TOP OF THE PIPE. MATERIAL SHALL BE PLACED AND CONSOLIDATED AS SPECIFIED FOR THE HAUNCHING MATERIAL.

2.9. **FINAL BACKFILL:** MATERIAL SHALL MEET AND BE INSTALLED AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS OF FOOT SPECIFICATION SECTION 125-8 BACKFILLING. SELECT BACKFILL MEETING THE CLASSIFICATION OF A-1, A-3, OR A-2-4 IN ACCORDANCE WITH ASTM D3282 (ASHTO M-145) THE MATERIAL MUST NOT CONTAIN MUCK, STUMPS, ROOTS, BRUSH, VEGETABLE MATTER, RUBBISH, CONSTRUCTION DEBRIS OR OTHER MATERIAL THAT WILL NOT COMPACT INTO A SUITABLE EMBANKMENT. MATERIAL MUST HAVE MAXIMUM PARTICLE SIZE AS FOLLOWS: WITHIN 12" OF TOP OF SUBGRADE - 3/12"; 12" TO 24" BELOW TOP OF SUBGRADE - 6"; GREATER THAN 24" BELOW TOP OF SUBGRADE - 12" OR COMPACTED THICKNESS OF LAYER BEING PLACED, WHICH EVER IS LESS. FINAL BACKFILL MAY BE NATIVE MATERIAL MEETING THE SPECIFIED REQUIREMENTS. UNLESS OTHERWISE NOTED.

2.10. **COMPACTION TESTING:** COMPACTION PERCENTAGES SHOWN FOR TRENCH SECTION BACKFILL MATERIAL REFER TO ASTM - D698 (ASHTO - T-99, STANDARD PROCTOR), COMPACTION PERCENTAGES FOR LIMEROCK BASE COURSE MATERIAL REFER TO ASTM - D1557 (ASHTO - T-180, MODIFIED PROCTOR).



NOTES:

- REFER TO SHEET CP-101 DRAINAGE STRUCTURE TABLE FOR DRAINAGE WELLS 1-3, INVERT ELEVATIONS, DIRECTION, AND PIPE SIZES.
- WELL BOX REINFORCEMENT SHALL BE DESIGNED BY PRE CASTER TO MEET FOOT STANDARDS AND SPECIFICATIONS.
- 24" DIAMETER WELL, CONTRACTOR TO DEVELOP WELL CAPABLE OF DISCHARGING 300 GPM PER FOOT OF HEAD. FINAL WELL DIMENSIONS TO BE DETERMINED BY A LICENSED WELL CONTRACTOR. FINAL DEPTH OF CASING TO BE FIELD DETERMINED BY WELL CONTRACTOR. THE WELL CASING SHALL PENETRATE A ZONE CONTAINING A MINIMUM OF 10,000 mg/L TOTAL DISSOLVED SOLIDS (TDS).
- DRAINAGE WELL TO BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE REGULATORY STANDARDS AND PERMITS.
- LIDS TO BE BOLTED DOWN (PENTA HEAD BOLTS, 4 ON INNER COVER AND 4 ON OUTER COVER).
- THE CONTRACTOR IS SOLELY RESPONSIBLE TO PREVENT ANY FLUID FROM DISCHARGING INTO THE DRAINAGE WELL WITHOUT WRITTEN AUTHORIZATION FROM FDEP TO USE THE WELL.
- THE WELL CASING SHALL BE 24" DIAMETER AND IN ACCORDANCE WITH RULE 62-532.500(1)(A), FAC WHICH SPECIFIES ALL WELL CASING SHALL BE NEW AND CONFORM TO AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) A53/A53M-99b, A135-01, A252-98, A589-96, OR AMERICAN PETROLEUM INSTITUTE (API) 5L-2000. REFER TO RULE FOR MORE DETAILS.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR CONDUCTING THE WELL TEST AND SATISFACTORILY DISPOSING OF THE WATER PUMPED FROM THE WELL. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE CITY, ENGINEER AND/OR REGULATORY AGENCIES PRIOR TO THE START OF THE TEST.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE NECESSARY WELL DRILLING PERMITS AND COMPLY WITH ALL PROVISIONS THEREOF. THIS SHALL INCLUDE (BUT NOT LIMITED TO) SECURING THE FINAL CONSTRUCTION/CLEARANCE PERMIT FOR A CLASS V WELL BY COMPLETING AND PROCESSING THE REQUIRED APPLICATION FORM (62-528.900.3) THROUGH FDEP. IN ADDITION, THE CONTRACTOR IS REQUIRED TO PREPARE/PROVIDE THE REASONABLE ASSURANCE REPORT IN ACCORDANCE WITH FDEP REQUIREMENTS. THE CONTRACTOR SHALL HIRE A QUALIFIED FLORIDA LICENSED PROFESSIONAL GEOLOGIST/ENGINEER WITH THE REQUIRED HYDROGEOLOGICAL EXPERTISE TO DEVELOP THIS REPORT AND PROVIDE THE NECESSARY SIGNED AND SEALED COPIES.

NOT TO SCALE

DRAINAGE WELL TABLE							
STR. DESCRIPTION	RIM EL.	INSIDE DIMENSIONS	ASSUMED WELL CAPACITY	INVERTS EL.	INVERTED BAFFLE/WEIR EL.	COORDINATES (LATITUDE/LONGITUDE) DMS	COMMENTS
DRAINAGE WELL #1	7.70'	60" Ø	300 GPM	1.50' (N) 5.00' (E)	5.00'	N 024°21'00.10" / W 082°56'08.31"	WATERTIGHT (REFER DETAIL)
DRAINAGE WELL #2	8.00'	60" Ø	300 GPM	1.50' (S)	5.00'	N 024°21'01.28" / W 082°56'08.91"	WATERTIGHT (REFER DETAIL)
DRAINAGE WELL #3	8.18'	60" Ø	300 GPM	1.50' (E)	5.00'	N 024°21'00.39" / W 082°56'09.17"	WATERTIGHT (REFER DETAIL)

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STATUS: PRELIMINARY

STATUS: PRELIMINARY



- THE INFORMATION PROVIDED IN THESE DRAWINGS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH BIDS WILL BE BASED.
2. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO APPLICABLE STANDARDS AND SPECIFICATIONS OF THE CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES, ENGINEERING AND CONSTRUCTION SERVICES DIVISION (ECSO), AND ALL OTHER LOCAL, STATE AND NATIONAL CODES, WHERE APPLICABLE.
3. LOCATIONS, ELEVATIONS, SIZES, MATERIALS, ALIGNMENTS, AND DIMENSIONS OF EXISTING FACILITIES, UTILITIES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, AND DO NOT PURPORT TO BE ABSOLUTELY CORRECT. ALSO, THERE MAY HAVE BEEN OTHER IMPROVEMENTS, UTILITIES, ETC., WITHIN THE PROJECT AREA WHICH WERE CONSTRUCTED AFTER THE PREPARATION OF THESE PLANS AND/OR THE ORIGINAL SITE SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND OTHER FEATURES AFFECTING HIS/HER WORK PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICT BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR ANY FACILITIES SHOWN OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL WORK AS NEEDED TO AVOID CONFLICT WITH EXISTING UTILITIES (NO ADDITIONAL COST SHALL BE PAID FOR THIS WORK). EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE RESPECTIVE UTILITY OWNER.
4. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITIES TO ARRANGE FOR THE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT, AND TO ENSURE THAT EXISTING UTILITIES ARE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS APPROVED OTHERWISE BY THE UTILITY OWNER.
6. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY CASTINGS INCLUDING VALVE BOXES, MANHOLES, HAND-HOLES, PULL-BOXES, STORMWATER INLETS, AND SIMILAR STRUCTURES IN CONSTRUCTION AREA TO BE OVERLAIN WITH ASPHALT PAVEMENT.
7. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL APPLICABLE CONSTRUCTION AND ENVIRONMENTAL PERMITS PRIOR TO THE START OF CONSTRUCTION.
8. THE CONTRACTOR SHALL NOTIFY ECSO AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
9. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND INSTALLATION OF THE PROPOSED IMPROVEMENTS, SHOP DRAWINGS SHALL BE SUBMITTED TO ECSO IN ACCORDANCE WITH THE CONTRACT DOCUMENTS' REQUIREMENTS, FOR APPROVAL. IN ADDITION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY OTHER AGENCY SHOP DRAWING APPROVAL, IF REQUIRED.
10. THE CONTRACTOR SHALL NOTIFY ECSO IMMEDIATELY FOR ANY CONFLICT ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
11. ELEVATIONS SHOWN ARE IN FEET AND ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

1. THE CITY OF HOLLYWOOD SHALL NOT PROVIDE STAGING / STORAGE AREA, CONTRACTOR SHALL SECURE STAGING / STORAGE AREA AS NECESSARY FOR CONSTRUCTION WORK.
13. CONTRACTOR SHALL HAUL AWAY EXCESSIVE STOCKPILE OF SOIL FOR DISPOSAL EVERY DAY. NO STOCKPILE SOIL IS ALLOWED TO BE LEFT ON THE CONSTRUCTION SITE OVER NIGHT.
14. CONTRACTOR SHALL CLEAN / SWEEP THE ROAD AT LEAST ONCE DAY OR AS REQUIRED BY THE ENGINEER.
15. CONTRACTOR SHALL PROTECT CATCH BASINS WITHIN / ADJACENT TO THE CONSTRUCTION SITE AS REQUIRED BY NPDES REGULATIONS.
16. THE CITY OF HOLLYWOOD HAS A NOISE ORDINANCE (CHAPTER 100) WHICH PROHIBITS EXCAVATION AND CONSTRUCTION BEFORE 8:00 A.M. AND AFTER 6:00 P.M., (MONDAY THROUGH SATURDAY AND ALL DAY SUNDAY.
17. SUITABLE EXCAVATED MATERIAL SHALL BE USED IN FILL AREAS. NO SEPARATE PAY ITEM FOR THIS WORK, INCLUDE COST IN OTHER ITEMS.
18. ALL ROAD CROSSINGS ARE OPEN CUT AS PER THE REQUIREMENTS OF THE ECSD UNLESS OTHERWISE NOTED ON THE DRAWINGS.
19. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZING EARTH, DRIVEWAYS, PARKING LOTS, SIDEWALKS, ETC. TO SATISFY THE INSTALLATION OF THE PROPOSED IMPROVEMENTS WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY ECSD FIELD ENGINEER.
20. THE CONTRACTOR SHALL NOT ENCRoACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL OR EQUIPMENT. IN CASE WORK ON PRIVATE PROPERTY IS NEEDED, A CITY OF HOLLYWOOD "RIGHT OF ENTRY" FORM MUST BE SIGNED BY PROPERTY OWNER AND THE DIRECTOR OF PUBLIC UTILITIES. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCESS AT ALL TIMES TO PRIVATE HOMES/BUSINESSES.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE, REMOVAL OR MODIFICATION, CAUSED TO ANY IRRIGATION SYSTEM (PRIVATE OR PUBLIC) ACCIDENTALLY OR PURPOSELY. THE CONTRACTOR SHALL REPLACE ANY DAMAGED, REMOVED OR MODIFIED IRRIGATION PIPIES, SPRINKLER HEADS OR OTHER PERTINENT APPURTENANCES TO MATCH OR EXCEED EXISTING CONDITIONS AT NO ADDITIONAL COST TO THE CITY.
22. MAIL BOXES, FENCES OR OTHER PRIVATE PROPERTY DAMAGED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE REPLACED TO MATCH OR EXCEED EXISTING CONDITION.
23. CONTRACTOR SHALL PROVIDE MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT STANDARDS AND CITY OF HOLLYWOOD DEPARTMENT OF PUBLIC UTILITIES STANDARDS.
24. NO TREES ARE TO BE REMOVED OR RELOCATED WITHOUT PRIOR APPROVAL FROM THE ECSD FIELD ENGINEER.
25. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE NECESSARY TREE REMOVAL OR RELOCATION PERMITS FROM THE CITY OF HOLLYWOOD BUILDING DEPARTMENT FOR TREES LOCATED IN THE PUBLIC RIGHT OF WAY.
26. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND AUTHORITIES HAVING JURISDICTION. ANY DISCREPANCIES BETWEEN THESE PLANS AND APPLICABLE REGULATORY STANDARDS / REQUIREMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF ECSD.

27. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF AND MAKING THE REPAIRS TO EXISTING PAVEMENT, SIDEWALKS, PIPES, CONDUITS, CURBS, CABLES, ETC., WHETHER OR NOT SHOWN ON THE PLANS DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS AND/OR THOSE OF HIS SUBCONTRACTORS, AND SHALL RESTORE THEM PROMPTLY AT NO ADDITIONAL EXPENSE TO THE OWNER. CONTRACTOR SHALL REPORT ANY DAMAGE TO SIDEWALK, DRIVEWAY, ETC., PRIOR TO BEGINNING WORK IN ANY AREA.
28. WHERE NEW PAVEMENT MEETS EXISTING, CONNECTION SHALL BE MADE IN A NEAT STRAIGHT LINE AND FLUSH WITH EXISTING PAVEMENT TO MATCH EXISTING CONDITIONS.
29. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR LEAVE EXCAVATED TRENCHES, OR PARTS OF, EXPOSED OR OPENED AT THE END OF THE WORKING DAY, WEEKENDS, HOLIDAYS OR OTHER TIMES, WHEN THE CONTRACTOR IS NOT WORKING, UNLESS OTHERWISE DIRECTED. ALL TRENCHES SHALL BE COVERED, FIRMLY SECURED AND MARKED ACCORDINGLY FOR PEDESTRIAN / VEHICULAR TRAFFIC.
30. ALL EXCAVATED MATERIAL REMOVED FROM THIS PROJECT SHALL BE DISPOSED OFF THE PROPERTY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
31. ALL DUCTILE IRON PRODUCTS SHALL BE DOMESTIC MADE HEAVY DUTY CLASSIFICATION SUITABLE FOR HIGHWAY TRAFFIC LOADS, OR 20,000 LB.
32. ALL GRASSED AREAS AFFECTED BY CONSTRUCTION SHALL BE RE-SODDED.
33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION, INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL AND SAFETY DEVICES, IN ACCORDANCE WITH SPECIFICATIONS OF THE LATEST REVISION OF FDOT DESIGN STANDARDS. IN ADDITION, THE CONTRACTOR IS RESPONSIBLE FOR THE RESETTING OF ALL TRAFFIC CONTROL AND INFORMATION SIGNAGE REMOVED DURING THE CONSTRUCTION PERIOD.
34. EXCAVATED OR OTHER MATERIAL STORED ADJACENT TO OR PARTIALLY UPON A ROADWAY PAVEMENT SHALL BE ADEQUATELY MARKED FOR TRAFFIC SAFETY AT ALL TIMES.
35. TEMPORARY PATCH MATERIAL MUST BE ON THE JOB SITE WHENEVER PAVEMENT IS CUT, OR THE CITY'S INSPECTOR WILL SHUT THE JOB DOWN.
36. CONTRACTOR MUST PROVIDE FLASHER ARROW SIGNAL FOR ANY LANE THAT IS CLOSED OR DIVERTED.
37. CONTRACTOR SHALL NOTIFY LAW ENFORCEMENT AND FIRE PROTECTION SERVICES TWENTY-FOUR (24) HOURS IN ADVANCE OF TRAFFIC DETOUR IN ACCORDANCE WITH SECTION 336.07 OF FLORIDA STATUTES.
38. CONTRACTOR TO RESTORE PAVEMENT TO ORIGINAL CONDITION AS REQUIRED.
39. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING DEWATERING PER SPECIFICATION SECTION 02140 DEWATERING.

THE CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO UTILITY COMPANIES TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT UTILITIES NOTIFICATION CENTER AT 811 OR 1-800-432-4770 (SUNSHINE ONE-CALL OF FLORIDA).

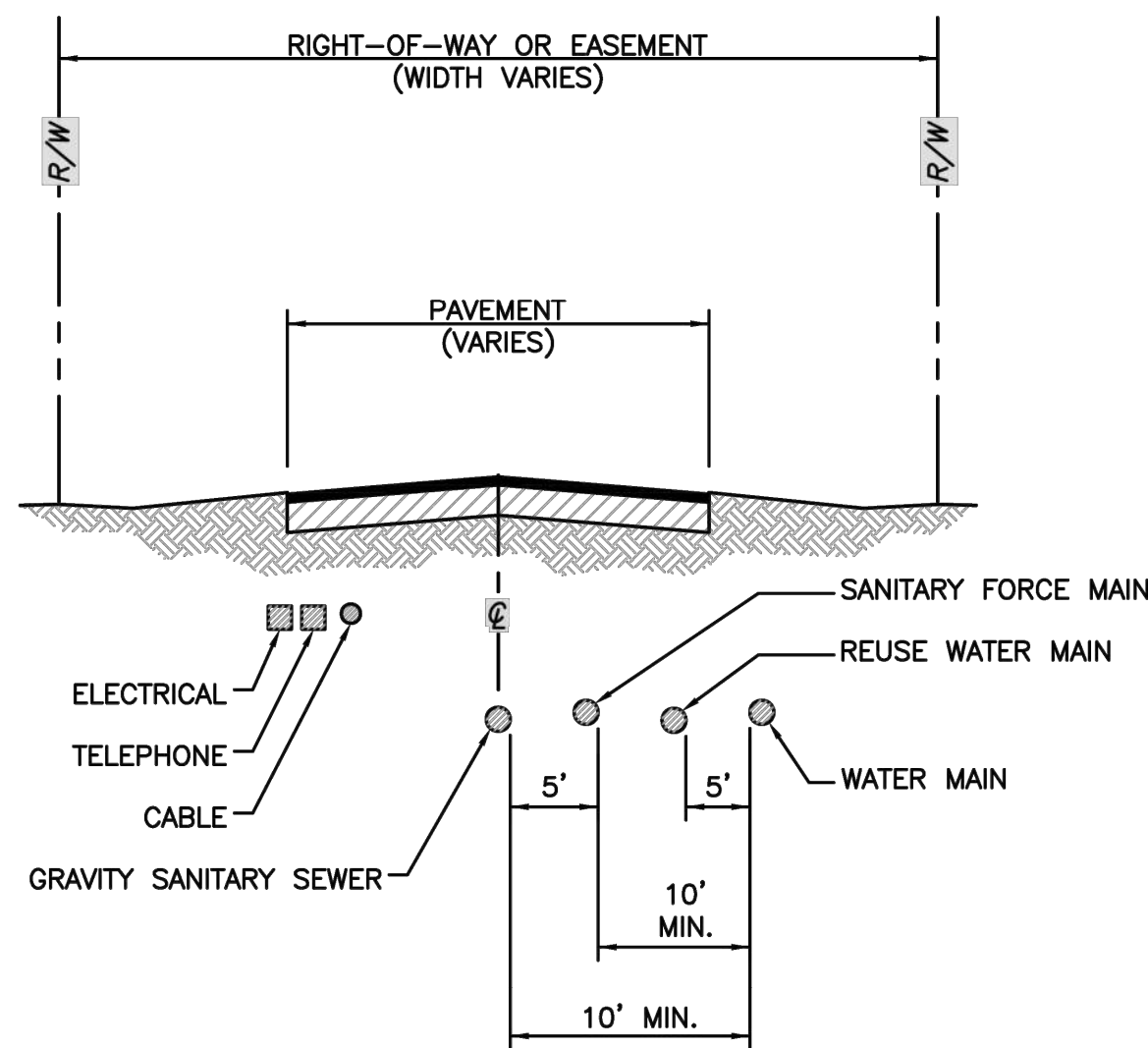
The logo for Sunshine 811.com is enclosed in a black rectangular border. At the top, a black banner contains the text "Always call 811 two full business days before you dig" in white. Below the banner, the text "Sunshine811.com" is displayed in a large, bold, black serif font. Underneath the text is a stylized graphic of a hand holding a shovel, with the hand in black and the shovel head in white.

41. WHEN PVC PIPE IS USED, A METALLIZED MARKER TAPE SHALL BE INSTALLED CONTINUOUSLY 18" ABOVE THE PIPE. THE MARKER TAPE SHOULD BE IMPRINTED WITH A WARNING THAT THERE IS BURIED PIPE BELOW. THE TAPE SHALL BE MAGNA TEC, AS MANUFACTURED BY THOR ENTERPRISES INC. OR APPROVED EQUAL.

42. ALL CONNECTIONS TO EXISTING MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WATER CONNECTIONS SHALL BE METERED, AND THE COST OF WATER AND TEMPORARY METER SHALL BE BORNE BY THE CONTRACTOR.

43. A COMPLETE AS-BUILT SURVEY SHALL BE ACCURATELY RECORDED OF THE UTILITY SYSTEM DURING CONSTRUCTION. AS-BUILT SURVEY SHALL BE SUBMITTED TO ECSD SIGNED AND SEALED BY A FLORIDA REGISTERED SURVEYOR PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF PROJECT. THE COST OF SIGNED AND SEALED AS-BUILTS SHALL BE COVERED IN OVERALL BID. THE AS-BUILT SURVEY SHALL INCLUDE:

- a. PLAN VIEW SHOWING THE HORIZONTAL LOCATIONS OF EACH MANHOLE, INLET, VALVE, FITTING, BEND AND HORIZONTAL PIPE DEFLECTIONS WITH COORDINATES AND IN REFERENCE TO A SURVEY BASELINE OR RIGHT-OF-WAY CENTERLINE.
- b. THE PLAN VIEW SHALL ALSO SHOW SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERTS (GRAVITY MAINS) AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG PIPE. THE PLAN VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
- c. THE PLAN VIEW SHALL ALSO SHOW THE HORIZONTAL SEPARATION FROM UNDERGROUND UTILITIES IMMEDIATELY ADJACENT OR PARALLEL TO THE NEW MAIN.
- d. PROFILE VIEW WITH SPOT ELEVATIONS OF THE TOP OF THE MAIN (WATER MAIN AND FORCE MAIN) OR PIPE INVERT (GRAVITY MAIN) AND OF THE FINISHED GRADE OR MANHOLE RIM DIRECTLY ABOVE THE MAIN AT INTERVALS NOT TO EXCEED 100 FEET AS MEASURED ALONG THE MAIN. THE PROFILE VIEW SHALL ALSO INCLUDE SPOT ELEVATIONS AT EACH MANHOLE, INLET, VALVE, FITTING, BEND AND VERTICAL PIPE DEFLECTION.
- e. THE PROFILE VIEW SHALL SHOW ALL UNDERGROUND UTILITIES CROSSING THE NEW MAIN AND THE VERTICAL SEPARATION PROVIDED BETWEEN THAT UNDERGROUND UTILITY AND THE NEW MAIN.
- f. ALL CADD FILES MUST BE CREATED FOLLOWING THE CITY OF HOLLYWOOD "SURVEY / AS-BUILT CAD DRAWING STANDARDS"

STATIIS: PREI IMINARY

OTHER PIPE	HORIZONTAL SEPARATION	CROSSING (1), (4)	JOINT SPACING @ CROSSING (FULL JOINT CENTERED) (8)
STORM SEWER, STORM WATER FORCE MAIN, RECLAIMED WATER (2)	3 ft minimum	12 INCH IS THE MINIMUM except for storm sewer, then 6 inches is the minimum and 12 inch is preferred	Alternate 3 ft minimum WATER MAIN
GRAVITY SANITARY SEWER, (3) SANITARY SEWER FORCE MAIN, RECLAIMED WATER	10 ft preferred 6 ft minimum	12 INCH IS THE MINIMUM except for gravity sewer, then 6 inches is the minimum and 12 inch is preferred	Alternate 6 ft minimum WATER MAIN
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 ft minimum	_____	_____

1. WATER MAIN SHALL CROSS ABOVE OTHER PIPE, WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
2. RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-510, F.A.C.
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. 18" VERTICAL MINIMUM SEPARATION REQUIRED BY CITY OF HOLLYWOOD, UNLESS OTHERWISE APPROVED.
5. A MINIMUM 12 FOOT VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN ANY TYPE OF SEWER AND WATER MAIN IN PARALLEL INSTALLATIONS WHENEVER POSSIBLE.
6. IN CASES WHERE IT IS NOT POSSIBLE TO MAINTAIN A 10 FOOT HORIZONTAL SEPARATION, THE WATER MAIN MUST BE LAID IN A PARALLEL TRENCH WITHIN 18 INCHES OF THE GROUND SURFACE LOCATED ON ONE SIDE OF THE SEWER OR WATER MAIN AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
7. WHERE IT IS NOT POSSIBLE TO MAINTAIN A VERTICAL DISTANCE OF 18 INCHES IN A PARALLEL INSTALLATIONS, THE WATER MAIN SHALL BE CONSTRUCTED TO CROSS THE SEWER AT AN ANGLE OF 90 DEGREES. THE MINIMUM VERTICAL DISTANCE OF 6 INCHES. THE WATER MAIN SHALL 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).
8. ALL JOINTS ON THE WATER MAIN WITHIN 20 FEET OF THE CROSSING MUST BE MECHANICALLY RESTRAINED.

Diagram illustrating the cross-section of a trench and its surrounding layers:

- TOP LAYER:** BOTTOM OF ROADWAY BASE OR EXISTING GROUND
- GENERAL BACKFILL:** SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN THICKNESS. EACH LAYER SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY.
- ELECT BACKFILL:** SHALL BE PLACED IN LAYERS NOT TO EXCEED 6" IN THICKNESS. EACH LAYER SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY.
- INITIAL BACKFILL:** (Indicated by a bracket on the left side of the trench).
- HAUNCHING:** (Indicated by a bracket on the left side of the trench).
- PIPE:** 6" MIN (Indicated by a bracket on the left side of the trench).
- BEDDING MATERIAL:** PLACED UP TO SPRINGLINE OF PIPE (SEE NOTE 1 BELOW).
- FOR PAVEMENT RESTORATION:** REFER TO FDOT, BROWARD COUNTY PUBLIC WORKS, OR CITY OF HOLLYWOOD PAVEMENT RESTORATION DETAILS.
- TRENCH WIDTH:**
 - PIPE O.D. + 2' MAXIMUM
 - PIPE O.D. + 1' MINIMUM
- VARIABLES:** VARIES (Indicated by a bracket on the right side of the trench).

NOTES:

1. WHEN PIPE INSTALLATION IS ABOVE THE GROUND WATER TABLE ELEVATION, OR WHENEVER BEDDING COPPER PIPE UNDER ANY CONDITION, BEDDING MATERIAL SHALL BE CLEAN SANDY SOIL. IF AVAILABLE WITHIN THE LIMITS OF CONSTRUCTION, IMPROVED BEDDING MATERIAL SHALL BE USED. BEDDING SHALL BE 150 MM (6 INCHES) OF CRUSHED LIMEROCK, CRUSHED STONE SHALL CONSIST OF HARD, DURABLE, SUB-ANGULAR PARTICLES OF PROPER SIZE AND GRADATION, AND SHALL BE FREE FROM ORGANIC MATERIAL, GOOD, TRASH, SAND, LOAM, CLAY, EXCESS FINE, AND OTHER DELETERIOUS MATERIALS.
2. ALL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY BEFORE ANY PIPE IS LAID. FOR ADDITIONAL INFORMATION, SEE SPECIFICATION SECTION 02222, "EXCAVATION AND BACKFILL FOR UTILITIES".
3. DENSITY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-180 AND ASTM D-1557.
4. BACKFILL TO COMPLY WITH FDOT DESIGN STANDARD 125-B.

PLAN

CONCRETE THRUST BLOCK

VISQUEEN

EXIST. MAIN

NEW MAIN

STEEL TAPPING SLEEVE

TAPPING VALVE

SAW-CUT AND MATCH EXISTING PAVEMENT

24"x24"x8" THICK CONCRETE IN UNPAVED AREAS ONLY

FINISHED GRADE OR PAVEMENT

24"x24"x8" THICK CONCRETE COLLAR 1" BELOW GRADE ALL AROUND FOR PAVED AREAS ONLY

OPERATING NUT TO BE WITHIN 24" OF INST. EXTENSION IF REQUIRED

6" MIN.

VALVE BOX (REFER TO STANDARD DETAIL G-05)

TAPPING VALVE

VISQUEEN

CONCRETE THRUST BLOCK

EXIST. POTABLE WATER AND/OR SANITARY SEWAGE FORCE MAIN

STEEL TAPPING SLEEVE

CONCRETE BLOCK OR BRICK OVER COMPACTED SOIL TO MAINTAIN TAPPING VALVE STABLE AND LEVEL WITH MAIN BEING TAPPED

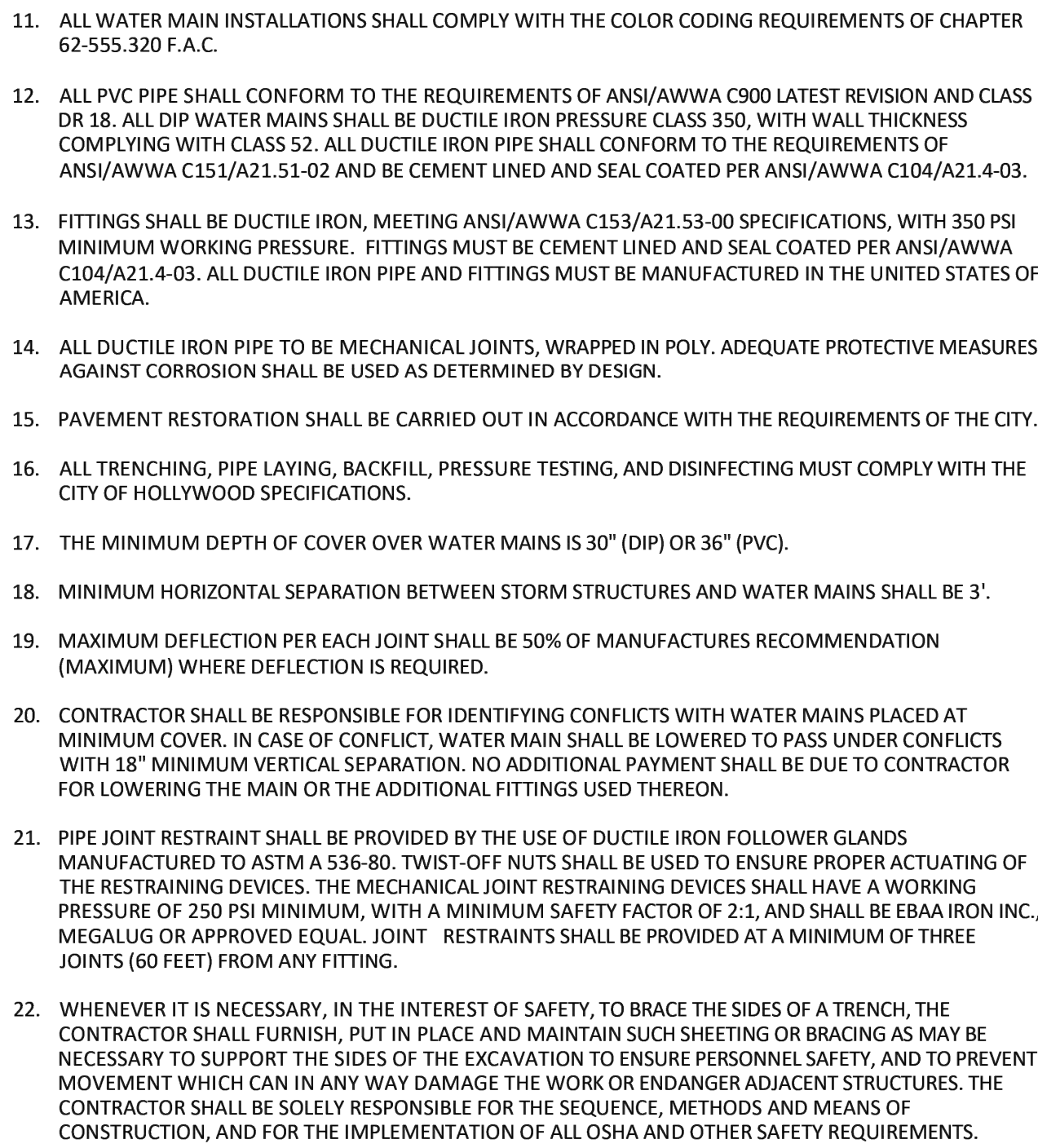
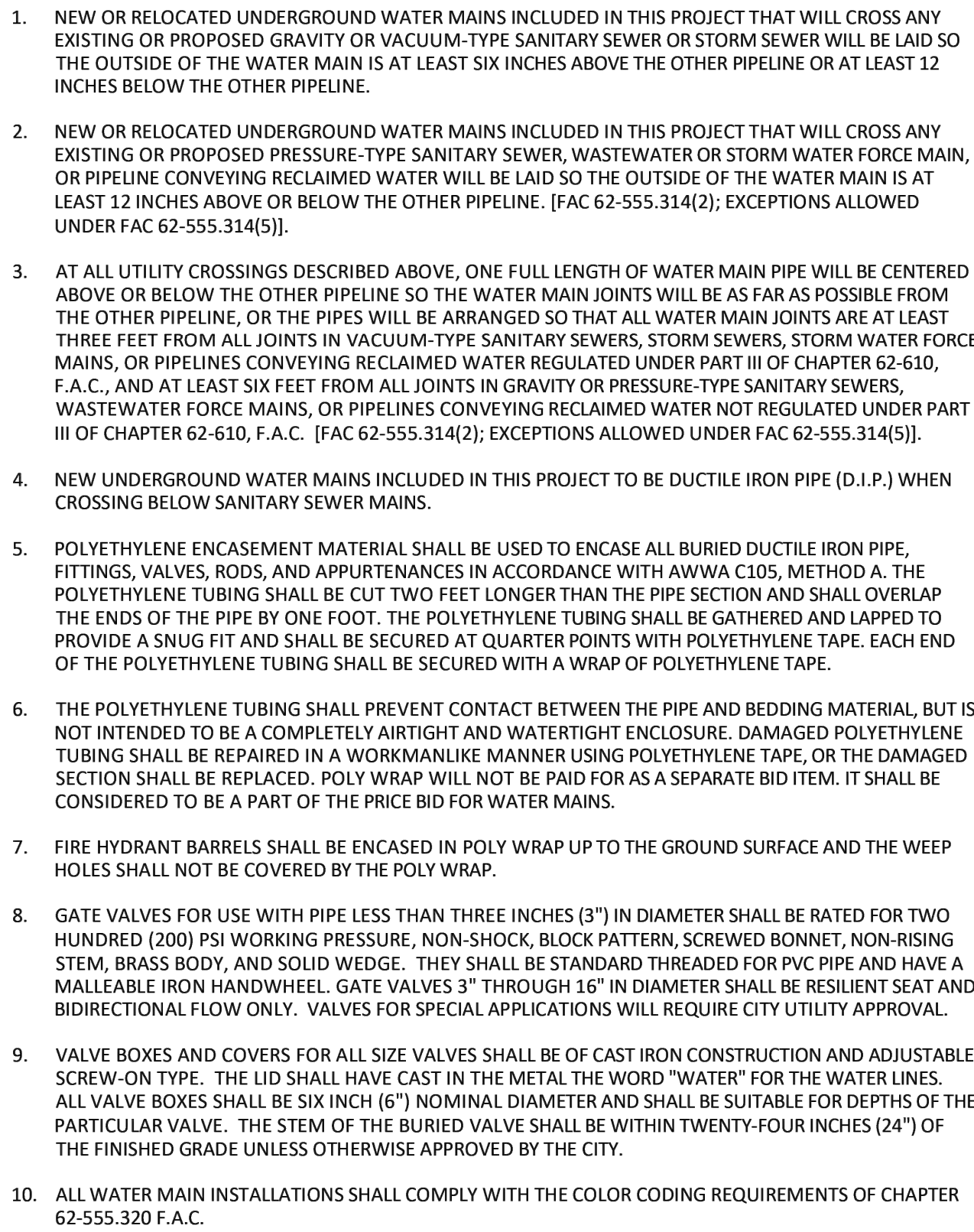
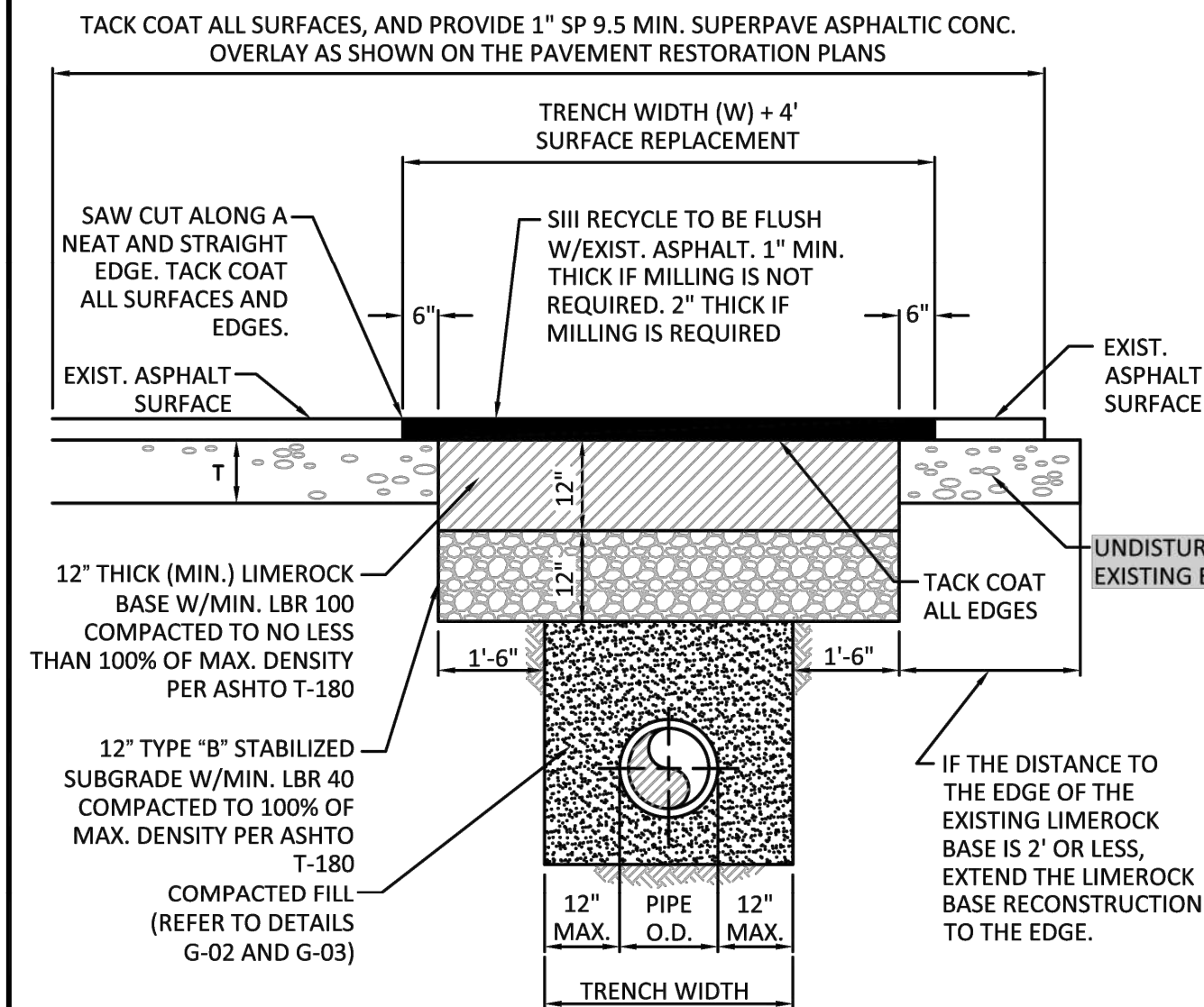
ELEVATION

NOTES:

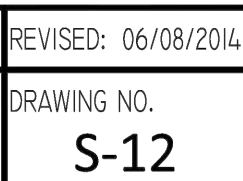
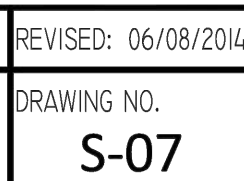
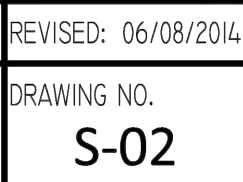
1. NOTIFY THE CITY OF HOLLYWOOD 48 HOURS IN ADVANCE OF PROPOSED TAP.
2. TAPPING MUST BE DONE IN THE PRESENCE OF AN AUTHORIZED CITY REPRESENTATIVE.
3. TEMPORARY THRUS BLOCKS TO BE INSTALLED AND REMAIN IN PLACE DURING TAPPING OPERATIONS.
4. FOR SEWAGE FORCE MAINS, REFER TO DETAIL OF PRIVATE FORCE MAIN TIE-IN AT PROPERTY LINE.
5. FOR WATER MAINS, A GATE VALVE OF SAME DIAMETER SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF THE TAPPING VALVE.

1

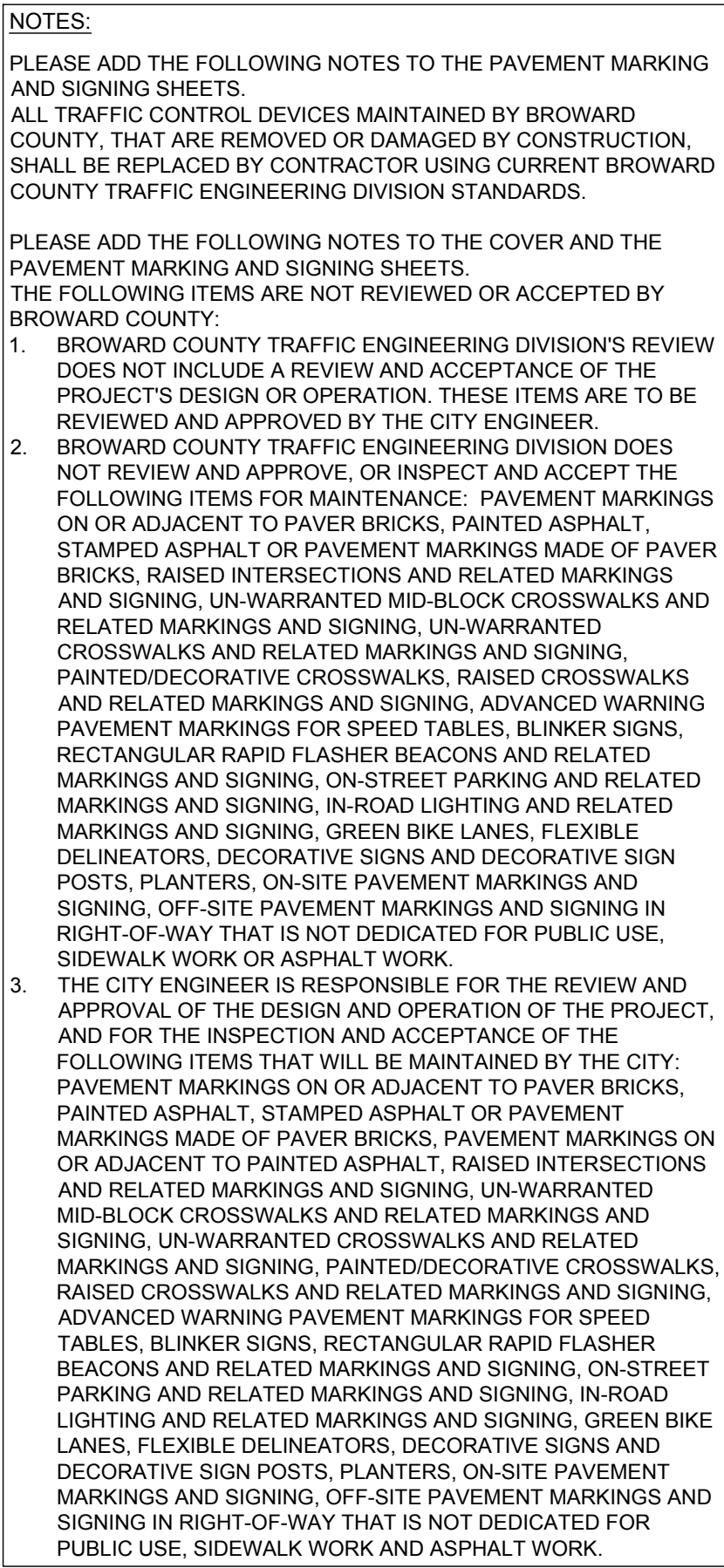
1. THE ABOVE DETAILS APPLY ONLY TO ASPHALT PAVEMENT RESTORATION OVER UTILITY TRENCHES CUT WITHIN CITY OF HOLLYWOOD RIGHTS-OF-WAY. FOR PAVEMENT RESTORATION WITHIN BROWARD COUNTY OR FDOT RIGHTS-OF-WAY REFER TO THE CORRESPONDING DETAILS FOR THOSE AGENCIES.
2. LIMEROCK BASE MATERIAL SHALL HAVE A MINIMUM L.B.R. OF 100 AND A MINIMUM CARBONATE CONTENT OF 70%. REPLACED BASE MATERIAL OVER TRENCH SHALL BE A MINIMUM OF 12" THICK.
3. LIMEROCK BASE MATERIAL SHALL BE PLACED IN 12" MAXIMUM (LOOSE MEASUREMENT) THICKNESS LAYERS WITH EACH LAYER THOROUGHLY ROLLED OR TAMPED AND COMPACTED TO 100% OF MAXIMUM DENSITY, PER AASHTO T-180, PRIOR TO THE PLACEMENT OF THE SUCCEEDING LAYERS.
4. STABILIZED SUBGRADE MATERIAL SHALL BE GRANULAR AND SHALL HAVE A MINIMUM L.B.R. OF 40.
5. BACKFILL SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH THE PIPE LAYING CONDITION TYPICAL SECTIONS IN DETAILS G-02 AND G-03, AND THE SPECIFICATIONS, BUT TESTING WILL BEGIN 12" ABOVE THE INSTALLED FACILITY.
6. ALL EDGES AND JOINTS OF EXISTING ASPHALT PAVEMENT SHALL BE SAW CUT TO STRAIGHT LINES, PARALLEL TO OR PERPENDICULAR TO THE ROADWAY, PRIOR TO THE RESURFACING.
7. RESURFACING MATERIAL SHALL BE FDOT SUPERPAVE, AND SHALL BE APPLIED A MINIMUM OF TWO INCHES IN THICKNESS.
8. MILL AND BUTT JOINT TO EXISTING PAVEMENT.
9. IF THE TRENCH IS FILLED TEMPORARILY, IT SHALL BE COVERED WITH A 2" ASPHALTIC CONCRETE PATCH TO KEEP THE FILL MATERIAL FROM RAVELING UNTIL REPLACED WITH A PERMANENT PATCH.
10. REFER TO SPECIFICATIONS FOR DETAILED PROCEDURES.
11. WHERE THE UTILITY TRENCH CROSSES EXISTING ASPHALT DRIVEWAYS, THE LIMEROCK BASE THICKNESS MAY BE A MINIMUM OF 6 INCHES THICK. REGARDLESS OF THE EXTENT OF IMPACT, THE ENTIRE DRIVEWAY SURFACE BETWEEN THE EDGE OF THE ROADWAY PAVEMENT AND PROPERTY LINE OR FRONT OF SIDEWALK SHALL BE OVERLAID USING 2-INCH THICK MINIMUM ASPHALTIC CONCRETE SURFACE COURSE WHERE INDICATED ON THE PLANS OR AS DIRECTED BY THE CITY/ENGINEER.



REVISED: 06/08/2014
DRAWING NO. S-01



PROJECT NUMBER	13778.00
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SHEET NUMBER	CM-101
PROJECT NUMBER	13778.00

STATUS: PRELIMINARY

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

**RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.**

DESIGNED BY: VAC

CHECKED BY:	CM
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CLIENT

1817 TAYLOR

PROJECT

STAR TOWER

SHEET TITLE

PAVEMENT

SIGNAGE

DETAILS

SHEET CM 501

PROJECT	13778.00
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STATIIS: PRELIMINARY

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**

THESE PLANS ARE NOT FULLY PERMITTED
AND ARE SUBJECT TO REVISIONS MADE
DURING THE PERMITTING PROCESS.

RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.

DESIGNED BY:	VAC
--------------	-----

CHECKED BY: _____ CM _____

--	--

THOMAS F. DONAHUE, P.E.

(FOR THE FIRM)

SECRET

DEVELOPMENT LLC

PROJECT

STAR TOWER

HOLLYWOOD

SHEET TITLE

PAVEMENT

MARKING AND SIGNAGE

DETAILS

SHEET
NUMBER **CM-502**

PROJECT NUMBER	13778.00
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STORMWATER MANAGEMENT REPORT

STAR TOWER HOLLYWOOD

13778.00

November 16, 2023



THOMAS F. DONAHUE, P.E.
FLORIDA REG. NO. 60529
(FOR THE FIRM)

 **KEITH**
Engineering Inspired Design.

Florida Engineering Business License: CA7928
Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC26000457
301 E. Atlantic Boulevard, Pompano Beach, FL 33060
954-788-3400

www.KEITHteam.com

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INTRODUCTION

I. PROJECT LOCATION

The proposed Star Tower Hollywood project site is located at 410 North Federal Highway within the City of Hollywood, Broward County, Florida and is further identified as folio #5142 15 01 8240.



II. PROJECT DESCRIPTION

A. Existing Conditions

The existing property encompasses a vacant site of approximately 0.82-acres total. The stormwater runoff generated from the site is drained by natural percolation. The remainder sheet flows into the existing adjacent roadways, Taylor Street and N Federal Highway. No existing Environmental Resource Permit (ERP) through either South Florida Water Management District (SFWMD) or Broward County is available.

B. Proposed Conditions

The proposed development is comprised of a multi-residential high rise, consisting of 248 units, 6 levels of parking, 4,077 SF of restaurant area, 3,676 SF of retail space and additional supporting amenities. The stormwater runoff generated from the development will be routed into 125 LF of exfiltration trench to achieve water quality treatment prior to discharging into (2) drainage wells. The stormwater runoff generated from the roof will be discharged directly into Drainage Well #1 since water quality treatment is not required.

STORMWATER MANAGEMENT DESIGN CRITERIA

The development's proposed stormwater management system design is based on the Broward County Resilient Environment Department (BCRED) and South Florida Water Management Division's (SFWMD) ERP Handbook.

I. SFWMD / BCRED CRITERIA

A. Datum Reference

All elevation information provided in this stormwater report, the proposed plans and the boundary and topographic survey references the North America Vertical Datum of 1988 (NAVD88).



B. Surface Waters/Wetland Impacts

No surface waters or wetlands are within or adjacent to this project.

C. Site Contamination

KEITH did not find existing site contamination records.

D. Hydraulic Conductivity

KEITH adopted geotechnical information from a nearby project site where an exfiltration test report performed by Langan Engineering and Environmental Services (dated 10/28/19) determined the hydraulic conductivity. According to the geotechnical report, a K value of 3.19×10^{-5} cfs/ft² – ft of head will be used for the design. Refer to **Appendix H** for reference geotechnical report.

E. Ground Soil Storage

The pre-development and post-development will utilize the Flatwoods Soil Type based on the USDA and Broward County Land Use Plan Soils Map. Refer to **Appendix F**.

F. Time of Concentration/Unit Hydrograph

The design for the pre-development and post-development will both utilize as time of concentration (TC) of **10 minutes** and the **Santa Barbara Unit Hydrograph**.

G. Salt Water Intrusion

The site is located within the salt water intrusion limits; therefore, a drainage well can be incorporated into the design. The design will use three (3) wells, capable of handling **300 gpm / ft-head**, based on the adjacent injection wells within the area. Refer to **Appendix I** for additional information. Weirs will be placed at elevation 5.00-ft NAVD to provide the necessary water quality prior to discharging into the well.

WATER QUANTITY

The proposed development contains a mixed-use building consisting of 248 residential units, 6 floor levels of parking, 4,077 SF of restaurant area, 3,676 SF of retail space and additional supporting amenities, such as a pool deck. The areas requiring water quality treatment (pool deck) will be routed directly into an exfiltration trench system to achieve water quality treatment. The areas not requiring treatment (roofs) will be routed directly into drainage wells. The drainage wells are designed to handle 300 gpm/ft of head of stormwater runoff, which is sufficient to handle the runoff from the roof. Refer to **Appendix K** for additional information regarding the drainage well calculations.

A. Design Rainfall

The design rainfalls are based on the NOAA Atlas 14 Point Precipitation Frequency Estimated which are included as **Appendix B**. Below is a summary of the design rainfalls for the Project:

Table 1 – Design Rainfall

Design Storm	Rainfall (Inches)
5-year, 1-day	7.40
25-year, 3-day	13.40
100-year, 3-day	18.10

B. Perimeter Berm Elevation

The Pre vs Post Development for the 25Yr-72Hr flood routing demonstrates that the post-development stages are lower than the pre-development stages; therefore, the minimum perimeter elevation for this



storm event is not required by BCRED. Refer to pre-development calculations in **Appendix J** and post-development calculations in **Appendix K**.

C. Finish Floor Elevation

Minimum Finished Floor Elevations (FFE) for the proposed building were evaluated based on the higher of four criteria:

1. ASCE/SEI 24-05 - FEMA Base Flood Elevations (BFE) + 1-foot

For buildings located in the special flood hazard area, the minimum elevation requirements in the Florida Building Code shall be to or above the FEMA base flood elevation (BFE) plus one (1) foot.

The site is located within FEMA Flood Zone X per **FIRM Panel #12011C0569H** dated 08/18/14. Zone X does not require a minimum FFE criteria since this area is higher than the elevation of the 0.2% annual chance floor. Refer to **Appendix B**.

2. 6" above the adjacent crown of road (City of Hollywood)

The roadway adjacent to the east of the property (N Federal Highway) has an elevation of 7.61', which requires the minimum FFE to be designed at 8.11-ft NAVD. The roadway south of the property (Taylor St) has an elevation of 7.59', which requires the minimum FFE to be designed at 8.09-ft NAVD.

3. Max stage of 100-year, 72-hour storm event with zero discharge (DFE)

The peak stage for the 100Yr-72Hr storm event (**8.39-ft NAVD**) is not to exceed the minimum proposed FFE. The pre-development max stage is (**8.40-ft NAVD**).

WATER QUALITY

SFWMD water quality detention/retention (pre-treatment) criteria required for this project will be the greater of the following quantities:

1. 1" times the total area basin
2. 2.5" times the percent impervious area

The site will be observed as one basin, providing the necessary exfiltration trenches, where required, to meet the minimum required water quality volumes of the basin.

Refer to Table 2 – Summary of Water Quality Treatment Volume for the provided water quality volumes. For further breakdown of the Water Quality and Exfiltration trench calculations, refer to **Appendix K**.

Table 1 – Summary of Water Quality Treatment Volume

Water Quality Volume		Exfiltration Trench
Required (ac-ft)	Provided (ac-ft)	Provided (ft)
0.045	0.080	125

A. DRAINAGE DESIGN

The stormwater runoff volume from the site will be handled through drainage well discharge on-site. The drainage wells are designed using the following criteria and parameters:

- The proposed discharge rate was assumed based on an adjacent well design per existing permit, set at 300 GMP/ft of head. Refer to **Appendix I**.



- Maximum elevation of 8.00-ft NGVD (6.5 NAVD).
 - Discharge begins in drainage well at a minimum of 2 feet above the high groundwater table (1.5'+2'=3.5' NAVD88) in order to overcome the fresh water/saltwater density differential.
- See Table 3 below for the gravity drainage well design parameters:

Table 3 – Drainage Well Design Parameters

DRAINAGE WELL DESIGN PARAMETERS		
Well Capacity (gpm cfs/ft head)	No. Wells Proposed	Total Discharge (cfs)
300 gpm/ ft head	3	6.02

CONCLUSION

The stormwater management system is designed to withstand different storm events through exfiltration trench and gravity drainage wells. The proposed improvements reduce the overall peak stages within the post-development conditions highlighted in Table 4 below. The majority of the runoff is generated from the building footprint and will be served by one (1) gravity drainage well. The runoff generated from the pool deck will be handled through 125 LF of exfiltration trench and two (2) drainage wells.

The required stormwater runoff requiring to be stored into the drainage wells was determined based on the rational method. The development is able to mitigate the runoff generated due to the proposed improvements.

Table 4 – Drainage Well Discharge Table

Stage (ft)	Discharge per Well (cfs)			Total Discharge (cfs)
	DW #1	DW #2	DW #3	
1.50	0.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00
4.00	0.33	0.33	0.33	1.00
4.50	0.67	0.67	0.67	2.01
5.00	1.00	1.00	1.00	3.00
5.50	1.34	1.34	1.34	4.01
6.00	1.67	1.67	1.67	5.01
6.50	2.01	2.01	2.01	6.03
7.00	2.01	2.01	2.01	6.03
7.50	2.01	2.01	2.01	6.03



The peak storages calculated for the pre vs post development shows no adverse effects from the proposed development as shown in Table 5 below. As shown, each stage is lower in the post-development conditions compared to the pre-development conditions. The use of drainage wells significantly reduces the peak stages for the post-development conditions.

Table 5 – Summary of Stages & Discharges

Storm Event	Pre-development Peak Stage (ft - NAVD)	Post-development Peak Stage (ft - NAVD)
5yr-24hr Routing	7.54	5.99
25yr-72hr Routing	8.05	8.04
100yr-72hr Routing	8.40	8.39

Water treatment is necessary only for the runoff collected from the pool deck. The length and dimensions of the exfiltration trench sections are shown on sheets CP-101 of the engineering plans included with this report. An overview of the treatment volume is outlined in the table below.

Table 6 – Summary of Water Quality Treatment Volume

Water Quality Treatment Volume		Exfiltration Trench Length
Required (ac-ft)	Proposed (ac-ft)	Proposed (ft)
0.045	0.080	125



APPENDICES



Appendix A – Aerial Map





Appendix B – FEMA Flood Map



National Flood Hazard Layer FIRMette

80°8'56"W 26°1'9"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

Without Base Flood Elevation (BFE)
Zone A, V, AE
With BFE or Depth Zone AE, AO, AH, VE, AR
Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X

Future Conditions 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee, See Notes, Zone X

Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

NO SCREEN
Area of Minimal Flood Hazard Zone X
Effective LOMRs

Area of Undetermined Flood Hazard Zone D

OTHER AREAS

GENERAL STRUCTURES
Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance

Water Surface Elevation

Coastal Transect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

OTHER FEATURES

Digital Data Available
No Digital Data Available
Unmapped

MAP PANELS



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/27/2023 at 5:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



80°8'56"W 26°1'9"N 1:6,000 0 250 500 1,000 1,500 2,000 Feet

Basemap Imagery Source: USGS National Map 2023

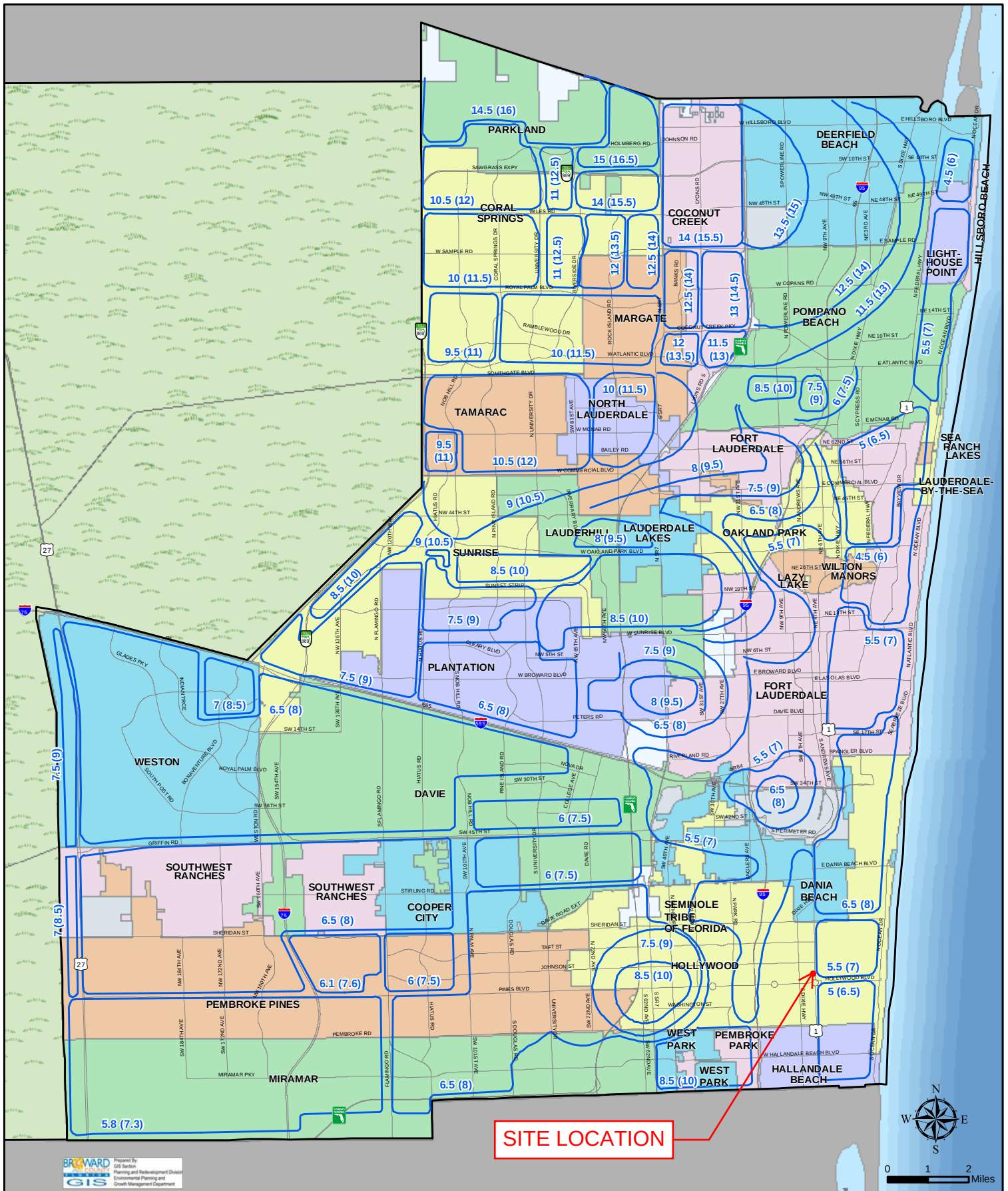
Appendix C – October High Groundwater Table





Appendix D – Broward County Flood Criteria Map





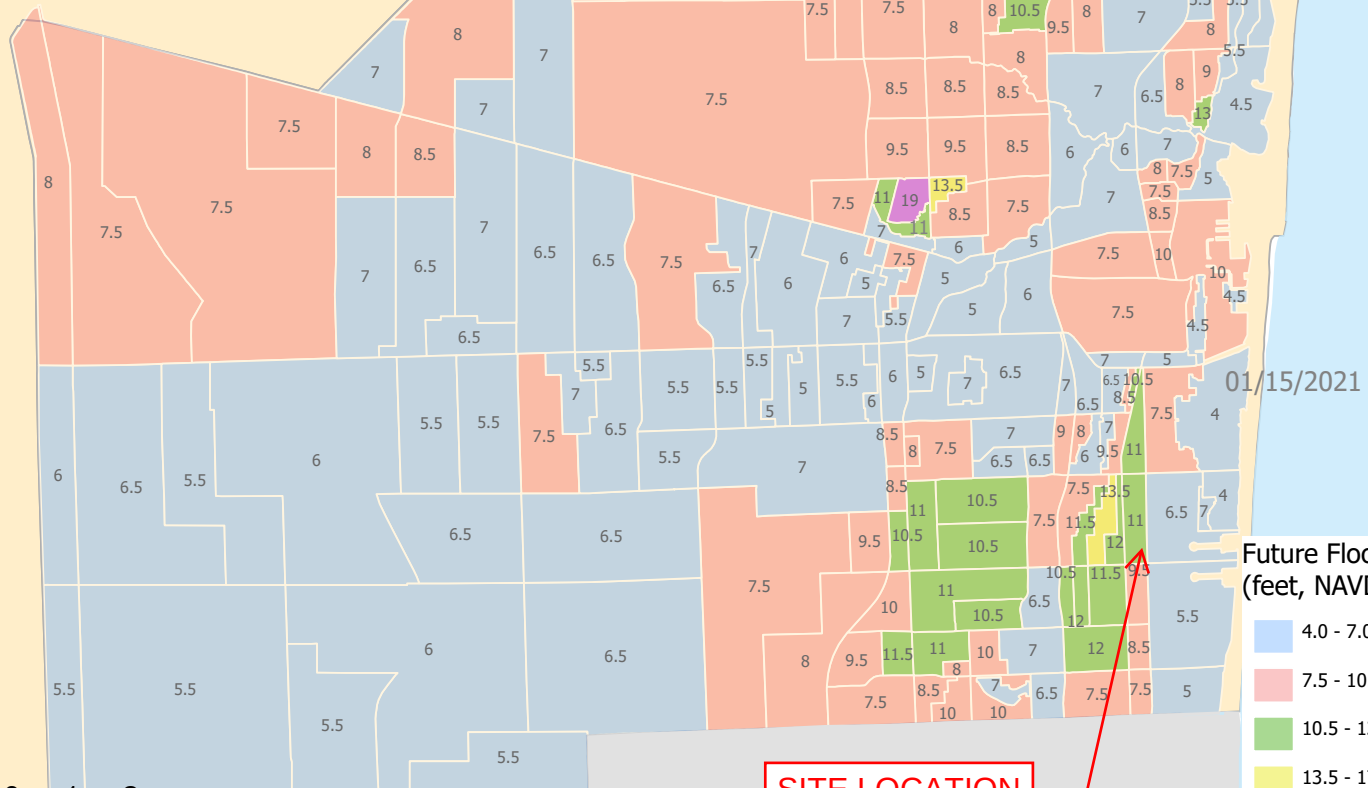
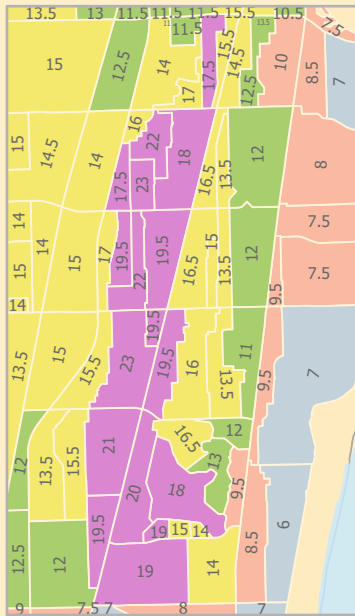
SITE LOCATION

100 Year Flood Contours NAVD (NGVD)
Example: 6.5 (8)

This map is for conceptual purposes only and should not be used for legal boundary determinations.

Elevations converted from NGVD to NAVD using the FEMA approved conversion factor for Broward County of (-)1.5, based on 1997 FEMA Flood Data

Plate WM 13.1 Future Conditions



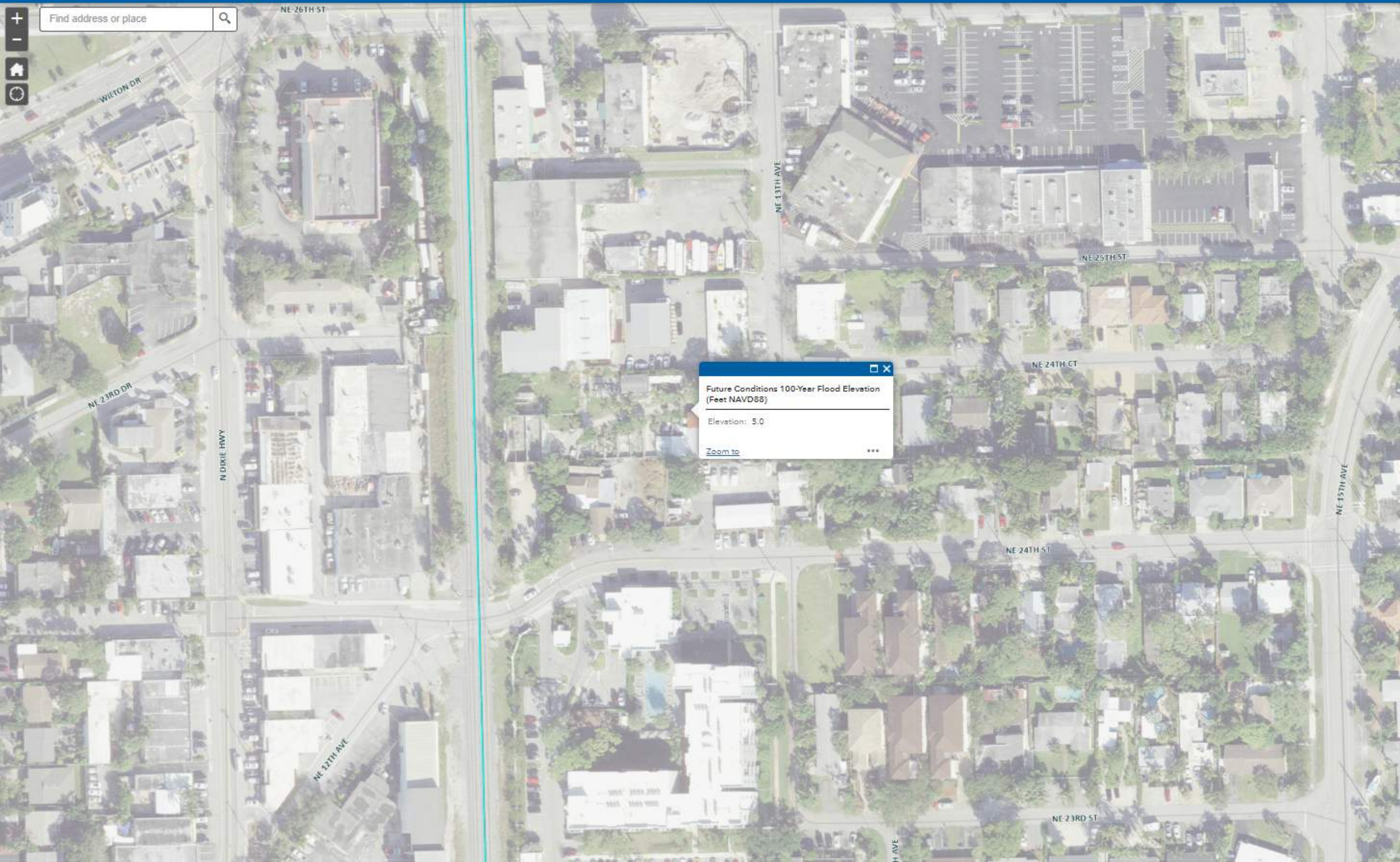
01/15/2021

Future Flood Elevation
(feet, NAVD 1988)

- 4.0 - 7.0
- 7.5 - 10.0
- 10.5 - 13.0
- 13.5 - 17.0
- 17.5 - 23.0

The Future Conditions 100-Year Flood Elevation Map is intended to advance the resiliency efforts in Broward County by setting the foundation to improve standards for flood protection. The flood elevation mapping results (representing a 1% annual chance during years 2060-2069) are intended to serve as the basis for establishing future finished floor elevations for new buildings and major redevelopments in the County. The map was developed through integrated hydrologic modeling of surface and groundwater, incorporating future land use changes, projected sea level rise, rainfall intensification, and seasonal high tide to predict future flood conditions.

Future Conditions 100-Year Flood Map 2060



Find address or place



NE 26TH ST

WILTON DR

NE 23RD DR

N DIXIE HWY

NE 22TH AVE

NE 13TH AVE

NE 25TH ST

NE 24TH CT

NE 24TH ST

NE 15TH AVE

NE 23RD ST

Future Conditions 100-Year Flood Elevation
(Feet NAVD88)

Elevation: 5.0

[Zoom to](#)

...

Appendix E – Precipitation Frequency Data Table





NOAA Atlas 14, Volume 9, Version 2
Location name: Hollywood, Florida, USA*
Latitude: 26.0146°, Longitude: -80.1436°
Elevation: 7 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffrey Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.550 (0.442-0.691)	0.638 (0.513-0.803)	0.784 (0.628-0.989)	0.906 (0.721-1.15)	1.08 (0.829-1.41)	1.21 (0.910-1.60)	1.34 (0.978-1.82)	1.48 (1.04-2.06)	1.66 (1.12-2.38)	1.80 (1.18-2.62)
10-min	0.805 (0.647-1.01)	0.935 (0.751-1.18)	1.15 (0.919-1.45)	1.33 (1.06-1.68)	1.58 (1.21-2.06)	1.77 (1.33-2.34)	1.96 (1.43-2.67)	2.16 (1.52-3.02)	2.43 (1.64-3.49)	2.63 (1.73-3.84)
15-min	0.982 (0.789-1.23)	1.14 (0.915-1.43)	1.40 (1.12-1.77)	1.62 (1.29-2.05)	1.92 (1.48-2.51)	2.16 (1.63-2.86)	2.39 (1.75-3.25)	2.64 (1.85-3.68)	2.96 (2.00-4.26)	3.21 (2.11-4.69)
30-min	1.58 (1.27-1.98)	1.84 (1.48-2.31)	2.27 (1.82-2.87)	2.64 (2.10-3.34)	3.14 (2.42-4.11)	3.54 (2.67-4.69)	3.93 (2.87-5.35)	4.34 (3.04-6.06)	4.88 (3.30-7.02)	5.29 (3.49-7.74)
60-min	2.16 (1.74-2.72)	2.50 (2.01-3.14)	3.08 (2.47-3.88)	3.60 (2.86-4.56)	4.36 (3.39-5.76)	4.99 (3.78-6.67)	5.65 (4.14-7.74)	6.36 (4.48-8.95)	7.35 (4.99-10.6)	8.14 (5.37-11.9)
2-hr	2.75 (2.22-3.43)	3.16 (2.55-3.94)	3.89 (3.13-4.87)	4.56 (3.65-5.74)	5.58 (4.37-7.36)	6.44 (4.92-8.60)	7.37 (5.45-10.1)	8.38 (5.95-11.8)	9.82 (6.72-14.2)	11.0 (7.30-16.0)
3-hr	3.07 (2.49-3.82)	3.51 (2.84-4.37)	4.34 (3.50-5.42)	5.13 (4.11-6.42)	6.36 (5.02-8.41)	7.42 (5.70-9.91)	8.59 (6.38-11.7)	9.88 (7.06-13.9)	11.8 (8.08-16.9)	13.3 (8.85-19.2)
6-hr	3.58 (2.91-4.42)	4.14 (3.37-5.12)	5.22 (4.23-6.47)	6.25 (5.04-7.78)	7.87 (6.26-10.4)	9.29 (7.18-12.3)	10.8 (8.12-14.8)	12.6 (9.04-17.6)	15.1 (10.4-21.6)	17.2 (11.5-24.7)
12-hr	4.02 (3.29-4.93)	4.82 (3.94-5.92)	6.27 (5.11-7.72)	7.61 (6.17-9.41)	9.65 (7.68-12.6)	11.4 (8.83-15.0)	13.3 (9.96-17.9)	15.3 (11.1-21.2)	18.2 (12.7-25.9)	20.6 (13.9-29.5)
24-hr	4.52 (3.72-5.52)	5.55 (4.56-6.78)	7.37 (6.03-9.01)	8.99 (7.33-11.0)	11.4 (9.10-14.7)	13.4 (10.4-17.5)	15.6 (11.7-20.8)	17.9 (12.9-24.5)	21.1 (14.7-29.7)	23.7 (16.1-33.6)
2-day	5.24 (4.34-6.35)	6.38 (5.27-7.73)	8.37 (6.90-10.2)	10.2 (8.32-12.4)	12.8 (10.3-16.4)	15.0 (11.8-19.4)	17.4 (13.2-23.0)	19.9 (14.5-27.1)	23.4 (16.5-32.7)	26.3 (18.0-37.0)
3-day	5.85 (4.85-7.05)	6.96 (5.77-8.40)	8.94 (7.38-10.8)	10.7 (8.82-13.0)	13.4 (10.8-17.1)	15.7 (12.3-20.2)	18.1 (13.8-23.9)	20.7 (15.1-28.0)	24.3 (17.2-33.9)	27.3 (18.8-38.3)
4-day	6.39 (5.31-7.69)	7.46 (6.19-8.98)	9.38 (7.76-11.3)	11.1 (9.17-13.5)	13.8 (11.1-17.6)	16.0 (12.6-20.6)	18.4 (14.1-24.3)	21.1 (15.5-28.5)	24.8 (17.6-34.4)	27.8 (19.2-38.9)
7-day	7.80 (6.51-9.33)	8.79 (7.32-10.5)	10.6 (8.80-12.7)	12.3 (10.1-14.8)	14.8 (12.0-18.8)	17.0 (13.5-21.8)	19.4 (14.9-25.4)	22.0 (16.3-29.6)	25.7 (18.4-35.6)	28.8 (19.9-40.1)
10-day	8.99 (7.52-10.7)	10.0 (8.37-11.9)	11.9 (9.90-14.2)	13.6 (11.3-16.3)	16.2 (13.2-20.4)	18.4 (14.6-23.4)	20.8 (16.0-27.1)	23.4 (17.4-31.4)	27.1 (19.4-37.3)	30.2 (21.0-41.9)
20-day	12.1 (10.2-14.3)	13.6 (11.4-16.1)	16.2 (13.6-19.2)	18.4 (15.3-21.9)	21.5 (17.5-26.6)	24.1 (19.1-30.1)	26.6 (20.6-34.2)	29.4 (21.8-38.8)	33.1 (23.8-44.9)	36.0 (25.2-49.6)
30-day	14.6 (12.3-17.2)	16.6 (14.0-19.6)	19.8 (16.6-23.4)	22.5 (18.8-26.7)	26.1 (21.2-31.9)	28.9 (22.9-35.8)	31.6 (24.4-40.2)	34.4 (25.6-45.0)	38.0 (27.3-51.2)	40.7 (28.6-55.9)
45-day	17.7 (15.0-20.8)	20.2 (17.1-23.8)	24.2 (20.4-28.6)	27.4 (23.0-32.4)	31.5 (25.5-38.1)	34.5 (27.4-42.5)	37.3 (28.8-47.1)	40.1 (29.8-52.0)	43.4 (31.2-58.0)	45.7 (32.3-62.6)
60-day	20.3 (17.3-23.8)	23.3 (19.7-27.3)	27.8 (23.5-32.7)	31.4 (26.4-37.0)	35.8 (29.0-43.0)	38.9 (30.9-47.6)	41.7 (32.2-52.3)	44.3 (33.0-57.2)	47.3 (34.1-62.9)	49.3 (34.9-67.2)
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.										

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PF graphical

Appendix F – Soil Map



BROWARD COUNTY LAND USE PLAN

Natural Resource Map Series- Eastern Broward County: Soils

Legend

Coastal Ridge Soils

- Paola - Urban Land - St. Lucie Association
- Palm Beach - Urban Land - Beaches Association

Low Ridge Knolls and Flatwoods Soils

- Dade - Urban Land Association
- Duette - Urban Land - Pomello Association
- Immokalee - Urban Land - Pompano Association
- Immokalee - Urban Land Association

Low Flatwoods, Sloughs and Marshes Soils

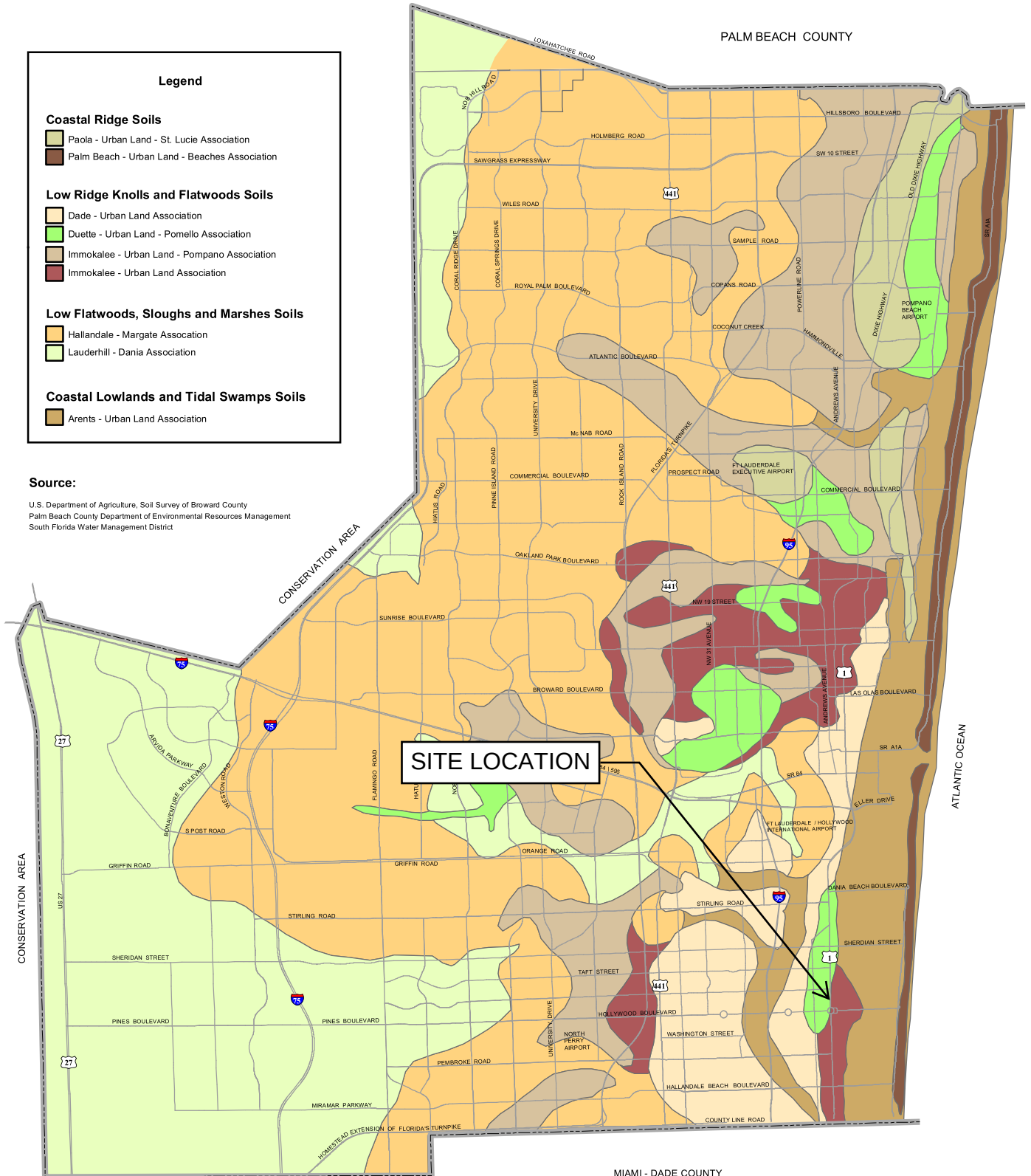
- Hallandale - Margate Association
- Lauderhill - Dania Association

Coastal Lowlands and Tidal Swamps Soils

- Arents - Urban Land Association

Source:

U.S. Department of Agriculture, Soil Survey of Broward County
Palm Beach County Department of Environmental Resources Management
South Florida Water Management District



MIAMI - DADE COUNTY



Appendix G – Saline Intrusion Map



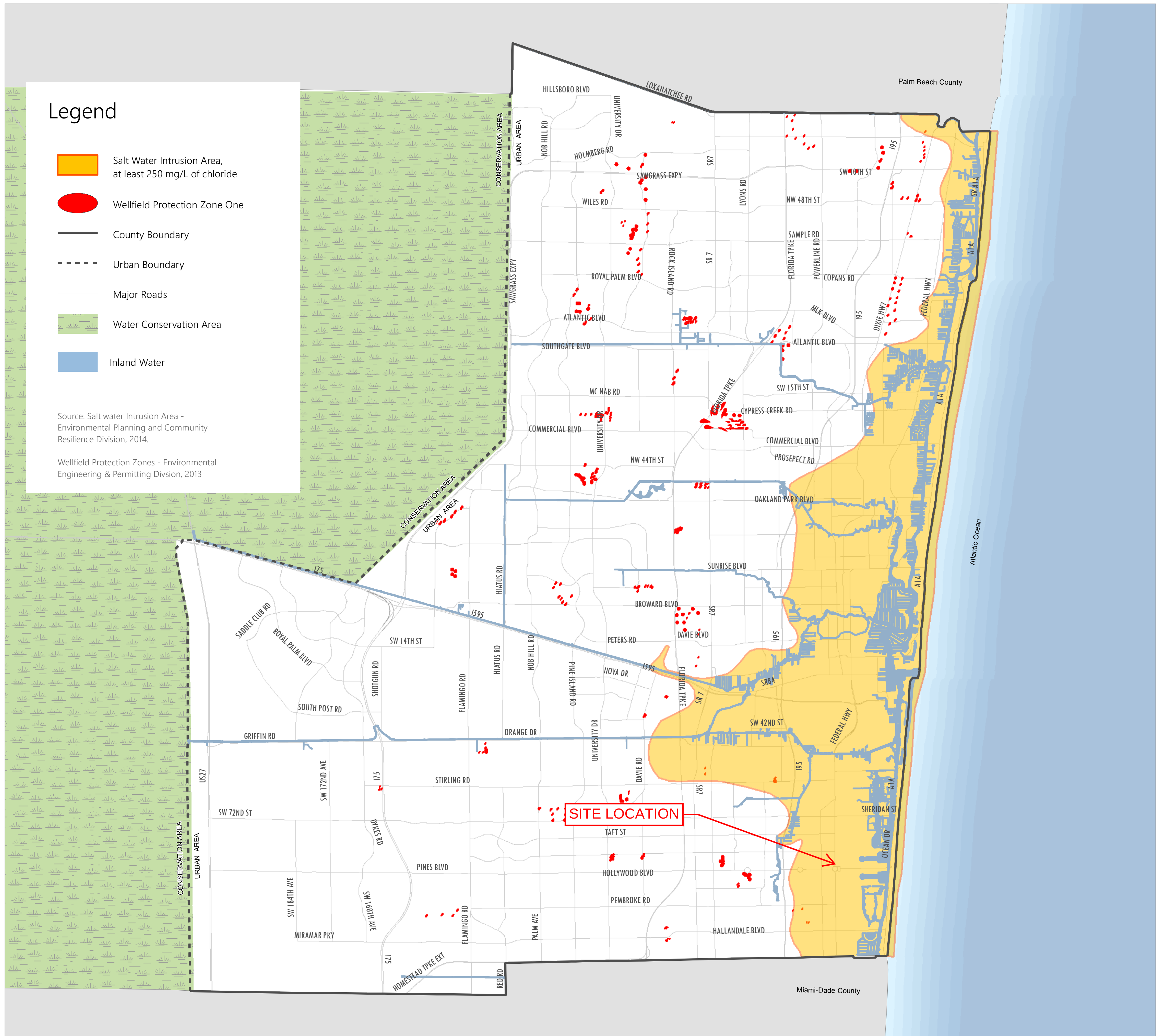
DELINEATION OF SALTWATER INTRUSION

Legend

-  Salt Water Intrusion Area, at least 250 mg/L of chloride
-  Wellfield Protection Zone One
-  County Boundary
-  Urban Boundary
-  Major Roads
-  Water Conservation Area
-  Inland Water

Source: Salt water Intrusion Area - Environmental Planning and Community Resilience Division, 2014.

Wellfield Protection Zones - Environmental Engineering & Permitting Division, 2013



This map is for conceptual purposes only and is not intended for legal boundary determinations.

Appendix H – Reference Geotechnical Report



DUE DILIGENCE GEOTECHNICAL ENGINEERING STUDY

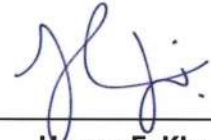
**PARC PLACE
1747 Van Buren Street
Hollywood, Florida**

Prepared For:

**BTI Partners
401 East Las Olas Boulevard
Suite 1870
Fort Lauderdale, FL 33020**

Prepared By:

**Langan Engineering and Environmental Services, Inc.
15150 N.W. 79th Court, Suite 200
Miami Lakes, Florida 33016
FL Certificate of Authorization No. 00006601**



**Hanna F. Khouri
Project Manager**



**Roger A. Archabal, P.E.
Principal / Vice-President
Professional Engineer License No. 48404**

**28 August 2019
330061201**

LANGAN

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INTRODUCTION

This report presents the results of our due diligence geotechnical engineering study performed for the proposed Parc Place Towers development ("the Project") located at 1747 Van Buren, Hollywood, Florida. The purpose of this study was to: (1) obtain information regarding site-specific subsurface conditions, (2) understand the existing site conditions relative to the proposed development, (3) evaluate potential foundation support alternatives for the proposed structures, and (4) develop preliminary recommendations for foundation support, site preparation, and earthwork related construction activities. This work was performed in general accordance with our 22 July 2019 proposal, which was authorized by Mr. Joshua Breakstone.

Our understanding of the existing site conditions is based on the recently performed limited field investigation, and from review of nearby projects performed by Langan.

We were provided with a preliminary architectural plans for the new proposed development. These plans and reports include:

- A set of preliminary architectural plans for the new development, prepared by MODIS Architects, LLC with a date of 26 June 2019; and
- A survey map of the existing structures, prepared by Cousins Surveyors & Associates, Inc. and with a latest revised date of 11 August 2017.

All elevations given in this report, if not specified, are in feet and refer to the National American Vertical Datum of 1929 (NAVD).

SITE DESCRIPTION

The subject property consists of distinct Parcels (identified as 1 through 7 on the Cousins survey) and is owned by MG3 Hollywood LLC. The parcels are bound by Van Buren Street to the south, South Federal Highway to the west, South Young Circle to the northwest, Harrison Street to the north, and South 17th Avenue to the east. A Site and Vicinity Map plan is provided as Figure 1.

The property's multiple parcels encompass approximately 2 acres. The parcels are currently occupied by varied improvements including the following: the Hollywood Bread Building and parking garage on the south and west side, several one-story to two-story vacant buildings along the north and east sides, asphalt parking and drives outside the buildings, concrete sidewalks drives outside the buildings and limited green space. The existing site grades are relatively flat and range typically between approximately el +5 and el +7 ft.

PROPOSED CONSTRUCTION

Our understanding of the proposed development is based on the aforementioned MODIS preliminary architectural concept dated 26 June 2019. The project will consist of the demolition of all structures within the aforementioned parcels. The existing Home Tower and the existing Charter School located within and around the parcels are not part of the proposed development and will remain.

On the western Parcels (1-3, 6), the proposed development consists of the construction of a 25-story tower, a 12-story tower, atop a 9-story parking podium with a pool deck. On the eastern Parcels (4-5), the development consists of a previously approved parking garage (approximately 10 to 12 stories).

We assume that finished site grades will remain around el +6 to +7 in order to match existing grade. We anticipate finished floor elevations will be on the order of 1 to 2 ft above finished site grade. A structural engineer was not engaged at the time of this due diligence work; hence, we estimated the structural loading.

Our preliminary foundation recommendations are based on an assumed structural floor load of about 150 to 200 pounds per square foot (psf) as well as column spacing of about 30 ft by 30 ft for the tower structures and about 60 ft by 20 ft for the parking garage structure. We estimated that maximum column loads for the 25-story tower structure will be on the order of 3500 to 4000 kips (1750 to 2000 tons); the 12-story tower structure will be in the order of 1500 to 2000 kips (750 to 1000 tons); the 9-story parking podium structure will be in the order of 1200 to 1600 kips (600 to 800 tons); and the 10 to 12-story parking garage structure will be in the order of 1800 to 2200 kips (900 to 1100 tons).

SUBSURFACE INVESTIGATION

Field Investigation

Langan performed the subsurface investigation between 5 and 7 August 2019. The site investigation consisted of one Standard Penetration Tests (SPT) boring and one percolation test. Approximate locations of the test boring and percolation test are shown on Figure 2. The boring and exfiltration test locations were marked in the field by our representative by estimating right angles with reference to the lot boundaries and existing site features. The ground surface elevation at the boring location was estimated from the field survey. The test boring and percolation test were performed by specialty drilling subcontractor under the direction and observation of a Langan engineer.

Test Boring

One test boring was drilled to 150 feet below ground surface. The boring was advanced using rotary drilling techniques, stabilized with drilling mud and casing. Split-spoon sampling was typically done continuously in the upper 12 ft and at 5 ft intervals thereafter. Continuous sampling was performed in selected borings to better delineate changes in strata or the vertical extent of weak zones within the subsurface materials. The soil samples were visually examined and classified by Langan's geotechnical engineers both in the field and in our office. Detailed subsurface descriptions and information are presented on the test boring log attached in Appendix A.

Percolation Test

One percolation test (identified as P1) was performed at the project site. The location of this percolation test is attached in Figure 2. The percolation test was performed in a borehole drilled to depths of 10 ft. The test was done in accordance with the South Florida Water Management District (SFWMD)'s Constant-Head Open-Hole method in order to obtain representative SFWMD "k-value" which will be used for the storm drainage design at the site. Detailed percolation test results are summarized in Appendix B.

SUBSURFACE CONDITIONS

General Subsurface Conditions

The soil boring (designated as SB-1) from our recent site investigation revealed subsurface conditions consisting of the following strata:

Stratum 1 – Pavement and Surface Fill

The majority of the site, outside of the existing buildings, is covered by asphalt pavement for the driveways access or on-grade parking lots. Several small areas of the site are covered by landscaping and concrete sidewalks/drives. The surficial material encountered during our site investigation, consisted of approximately 1 inch of asphalt followed by about 4 inches of limerock base course fill. Below this, there is apparent fill or reworked natural soils consisting of black medium to fine sand. The N-value in this stratum was 14 blows per foot (bpf).

Stratum 2 – Upper Sand

Beneath Stratum 1, an upper sand stratum was encountered consisting of gray to brown fine to medium sand. The thickness of this stratum was about 4½ feet and it extended to about the 6½ ft depth (el 0.0). This stratum is very loose to loose with N-values varying between 3 and 9 blows per foot bpf (average N-value of about 6 bpf).

Stratum 3 –Upper Cemented Sand and Sand

Underlying Stratum 2, Stratum 3 consists of tan to white and light brown cemented sand with varying fraction of sand. The top of this stratum was encountered at about the 6½ ft depth (el 0.0) and its thickness was about 16½ feet. The cemented sand was generally very soft to soft in relative hardness with a range of SPT N-values of between 4 bpf and 8 bpf.

Stratum 4 – Intermediate Sand

Stratum 4 consists of a 15 ft thick very loose to medium dense fine sand. The top of this stratum was encountered at about the 23 ft depth (el -16.5) and extended to about the 38 ft depth (el -31.5). This stratum was very loose in relative density with a range of SPT N-values from weight of hammer (WOH) to 3 bpf, and averaged 1 bpf.

Stratum 5 –Intermediate Cemented Sand and Sand

Beginning at about the 38 ft depth (el -31.5), cemented sand and sand was encountered and extended to the 86½ ft depth (el -80). This stratum is somewhat erratic between the 38 and 48 ft depths with N-values varying between 8 and 28 bpf. Below 48 ft and continuing to about 86½ ft, the cemented sand becomes more competent with N-values ranging from refusal (greater than 50 bpf) to 17 bpf, but typically greater than 25 bpf. This stratum is considered moderately hard to hard. Discrete isolated voidy conditions were found in this stratum.

Stratum 6 – Lower Sand

Stratum 6 consists of an approximately 10 ft thick loose to medium dense fine to coarse sand. The top of this stratum was encountered at about the 86½ ft depth (el -80.0) and extended to the 96½ ft depth (el -90.0). SPT N-values ranged from 7 to 10 bpf.

Stratum 7 – Lower Cemented Sand and Sand

Below the lower sand stratum, cemented sand and sand was encountered and continued to the termination depths of the borings. This stratum is somewhat erratic between the 96½ and 116 ft depths with N-values varying between 4 and 18 bpf. Below the 116 ft depth, the cemented sand becomes competent with N-values generally at refusal (greater than 50 bpf) with isolated values at 11 and 38 bpf. This stratum is considered hard to moderately hard.

Groundwater

Groundwater, at the time of our investigation, was measured during the initial drilling and after completion of the drilling at the test boring location. Groundwater was measured at depth of 6.0 ft below existing grade. This depth equates to groundwater elevation of el +0.5. Based on our experience, the typical groundwater levels in the project vicinity area range between el 0 to el +3 NGVD. Changes in groundwater elevations should be expected due to seasonal fluctuations based on precipitation.

PRELIMINARY FOUNDATION EVALUATIONS

Our subsurface investigation of the site revealed subsurface conditions consistent with the general geology of the area based on our previous nearby studies. The geotechnical considerations identified for supporting the

buildings associated with the proposed development are:

- The presence of the weak upper cemented sand layer (Stratum 3);
- The presence of the very loose to loose upper sand (Stratum 4);
- Competent zones of cemented sand in the intermediate depth range (Stratum 5 below 48 ft);
- The thickness, relative density and consistency of the lower sand layer (Stratum 6)
- The very hard competent lower cemented sand (Stratum 7)

The upper strata (Stratum 1 through Stratum 4) are weak and erratic and not suitable for support of the proposed towers and parking garage structures without significant settlements or ground improvement along with large shallow foundations. Effective and efficient pile foundation bearing support for the structures could be achieved in Stratum 5 which begins below the 48 ft depth (el -41.5). The upper strata, however, would be suitable for support of a slab on-grade or for foundations of light structure, after the proper surficial compaction. Theoretically, soil improvement, such as vibro-replacement (stone columns), could be performed to increase the stability of Strata 1 through Strata 4 for support of the shorter tower and parking garage structure. However, based on our experience, the cost of soil improvement combined with the cost of the very large shallow foundations would not be an economically beneficial alternative compared to deep foundation support with auger cast-in-place (ACIP) piles.

Stratum 5 consist of moderately hard to very hard interbedded Cemented Sand, Sandstone and Sand. Pile foundations embedded between el -55 and el -60 could provide cost-effective and efficient bearing support for the proposed towers and parking garage structures. Based on the boring performed on site, the relatively competent character of the Stratum 5 cemented sand and the relatively thin and suitably dense condition of the lower Stratum 6 sand layer, we expect tolerable settlement (less than 2 to 3 inches) for the proposed structures with piles embedded within Stratum 5. However, in the final geotechnical study, if the deeper soil conditions prove to be erratic in the Stratum 5 bearing layer as well as the Stratum 6 lower sand, settlement of the taller 25-story tower may not be tolerable (greater than 5 to 6 inches), necessitating deeper foundations for this structure. The final geotechnical study will need to confirm the uniformity of support within Stratum 5 as well as the thickness and relative density of the Stratum 6 sand.

Stratum 7 consists of a relatively homogenous medium to hard cemented layer. Pile foundations appropriately penetrating this stratum could also be used for support of the proposed 25-story tower should the final geotechnical study show erratic characteristics in Strata 5 and 6 lower. In this case, settlement would be limited to under about 1 to 2 inches.

PRELIMINARY FOUNDATION RECOMMENDATIONS

Based on our knowledge of the area and the limited due diligence study, we preliminary recommend that the proposed towers and parking garage structures be supported on high capacity, intermediate length 16, 18, and 24-in-diameter augercast piles. The following piles design criteria can be used, subject to modification as necessary per the additional final exploration borings, test piles and pile load tests. Pile grout compressive strength of at least 8000 psi was assumed.

9-Story Parking Podium (outside tower footprints)

Pile Size and Type:	16-in-dia augercast
Compression Capacity:	200 to 240 tons
Uplift Capacity:	100 to 120 tons
Lateral Capacity:	5 tons
Approximate Pile Tip elevation:	el -55 to el -60

12-Story Tower & Independent 10 to 12-Story Parking Garage Structure

Pile Size and Type:	18-in-dia augercast
Compression Capacity:	300 to 335 tons
Uplift Capacity:	150 to 200 tons
Lateral Capacity:	6 tons
Approximate Pile Tip elevation:	el -55 to el -60

25-Story Tower

Pile Size and Type:	24-in-dia augercast
Compression Capacity:	500 to 540 tons
Uplift Capacity:	250 to 300 tons
Lateral Capacity:	8 tons
Approximate Pile Tip elevation:	el -55 to el -60 if uniform subsurface conditions found or el -125 to el -130 if erratic conditions found

- Assumes about ½ inch lateral deflection. If additional lateral capacity is required, piles on a 1H:6H batter could be used.*
- Assumes minimum 20 ft socket into Stratum 5.*
- Assumes minimum 20 ft socket into Stratum 5 for uniform soil conditions and 10 to 15 ft into Stratum 7 if erratic conditions are encountered.*

Ground Floor Slab

Since only granular and cemented soils were encountered at the project site, the ground floor slab can be designed as a conventional slab-on-grade after the slab subgrade is prepared, as discussed herein. After completion of surface proof-rolling / compaction and pile cap/grade beam construction, the area for ground floor slab plus 3 ft beyond in each direction can be raised with the engineered fill to about 4 inches below the slab bottom. The top 4 inches of the slab subgrade should consist of crushed limestone or No. 57 stone to create a stable slab subgrade surface. Compaction should be applied to the slab subgrade with either a roller or a heavy plate compactor to achieve 95% of the material's maximum dry density as determined by the Modified Compaction Test, ASTM D1557. Engineered fill should be placed in maximum 12 inch thick lifts and compacted as previously stated.

OTHER CONSIDERATIONS

Site Preparation (including Removal of Existing Structures)

Numerous existing structures and ground features will be demolished in order to allow for the new development. The demolition debris, including all existing foundation elements (footings), floor slabs, utilities, sidewalks/walkways, parking lot pavements, piles etc. should be completely removed to allow for unobstructed construction of future foundations and utilities.

We suggest that any available foundation plans of the existing structures scheduled for demolition should be reviewed and compared to the proposed foundation plans to identify any potential conflicts between the proposed foundations and the existing foundations.

Once the debris and foundation elements have been removed, the bottom of the exposed excavations should be checked by a Langan engineer. All surface grass, vegetation, topsoil and pavement should also be stripped to the sand or limerock fill. Cleared or stripped areas should be proofrolled with a 5-ton (static drum weight) vibratory roller. Subsequently, if required, engineered fill shall be used to bring the site to the finish floor or pavement subgrade elevation.

Footing Subgrade Preparation

Lightweight surficial elements

After excavating to the required footing elevation, if the exposed bearing subgrade surface is the Stratum 2-Upper Sand or engineered fill, the subgrade material should be compacted to at least 95% of the material's maximum dry density as determined by the Modified Proctor Compaction Test (ASTM D1557).

Engineered Fill

The on-site Strata 1 and 2 fine sand generated from the site earthwork activities can be reused as engineered fill. If imported fill is required, it should consist of inorganic granular soils free of deleterious materials with no more than 10 percent passing the No. 200 sieve and should be approved by a Langan geotechnical engineer. All limestone material used as engineered fill should be crushed into fragments not larger than 3 inches. All imported material shall be certified as environmentally free of contamination.

Engineered fill will be necessary in specific areas to raise grades at the site and to backfill below or around footings and grade beams or to support slabs-on-grade. The fill materials must be placed under the observation of a Langan geotechnical engineer, who will be testing each compacted layer of soil. The fill should be placed in lifts of no greater than 12 inches thick, and each lift should be compacted with either a 5-ton vibratory roller or a heavy plate compactor to 95% of the material's maximum dry density as determined by ASTM D1557. In restricted areas where a small compactor or a plate compactor must be used, the lift thickness should be reduced to 6 to 9 inches, as directed by the Langan geotechnical engineer.

Backfilling Over Utility Lines

All utilities should be installed in accordance with the Broward County Public Works specifications as well as the civil engineering drawings and specifications. When backfilling over any utility line, the fill should be placed in lifts and compacted to the compaction requirements mentioned above. The loose lift thickness is expected to vary between 6 inches and 12 inches, based on the compaction equipment used by the contractor. Final lift thickness should be determined once the type of equipment to be used is known. The backfill material to be used over utility lines should consist of sand, or on-site crushed limerock (if placed in a dry condition). If crushed limerock is used, the limerock should not exceed 3 inches in size. Additionally, all backfill should meet the requirements of the pipe manufacturer's specifications.

Construction Excavation and Dewatering

All construction excavations should meet the Occupational Safety and Health Administration (OSHA) requirements. Based on the borings and test pits, a sloped open-cut excavation should be sufficient for the construction of shallow foundations at the site. Where stable limestone is present, the cemented character of the material should allow for near vertical construction excavations within the stratum. This should be verified by Langan's field geotechnical engineer. This option may preclude the need for forming of many of the footing foundations by using the limestone excavation wall as the form. This will provide a cost benefit for the project. To minimize construction excavations, the bottom of the foundation elements (footings) should be kept as high as possible.

Pre-Construction Conditions Documentation

The subject site is surrounded by existing buildings on the south, west, east and north sides. A pre-construction conditions documentation should be performed to record the existing conditions of the adjacent structures and ground features prior to construction at the subject site. The pre-construction conditions documentation would involve visually inspecting and videotape documenting the structures; measuring and photographing observable existing cracks, deterioration, or other signs of distress; and establishing crack reference lines and locations of elevation control points. We recommend that this pre-construction conditions documentation be done by our

firm to ensure proper documentation procedures are followed. The pre-construction documentation would provide valuable information of the existing conditions of the structures adjacent to the proposed development. In addition, it would serve as a qualitative record document of the existing conditions of the adjacent structures prior to the start of construction.

Additional Test Borings for Final Geotechnical Study

In order to prepare the final geotechnical engineering report with efficient foundation recommendations, additional test borings will need to be performed once the demolition is completed and access to the demolished site locations are made available. At this time, we anticipate about 9 to 10 test borings, ranging in depth between 80 ft and 150 ft deep, will need to be performed.

LIMITATIONS

The preliminary evaluations and recommendations given in this report are based on our engineering judgment as to the appropriate foundation support systems and required site preparation procedures for the proposed development. They are based on subsurface conditions inferred from the test boring performed on site, experience on nearby projects and on the available development information. The due diligence report has been prepared to assist the owner, contractor and design-team members in their preliminary due diligence effort. Any changes in structures or locations should be brought to our attention so that we may determine how such changes may affect our recommendations.

FL Certificate of Authorization No. 6601

\\langan.com\data\FTL\data2\330061201\Project Data_Discipline\Geotechnical\Reports\2019-08-12 BTI Hollywood GES (HK).docA

FIGURES



NOTE:

1. LOCATION BOUNDARIES ARE APPROXIMATE..
2. AERIAL FROM 2018, FROM GOOGLE EARTH.

LANGAN

Parkside Corporate Ctr, 15150 NW 79th Court, Suite 200
Miami Lakes, FL 33016

T: 786.264.7200 F: 786.264.7201 www.langan.com

Langan Engineering, Environmental, Surveying and
Landscape Architecture, D.P.C. S.A

Langan Engineering, Environmental, Surveying and
Landscape Architecture, D.P.C.

Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.

Langan International LLC
Collectively known as Langan

FL CERTIFICATE OF AUTHORIZATION No. 00006601

Project

PARC PLACE

1747 VAN BUREN STREET

HOLLYWOOD

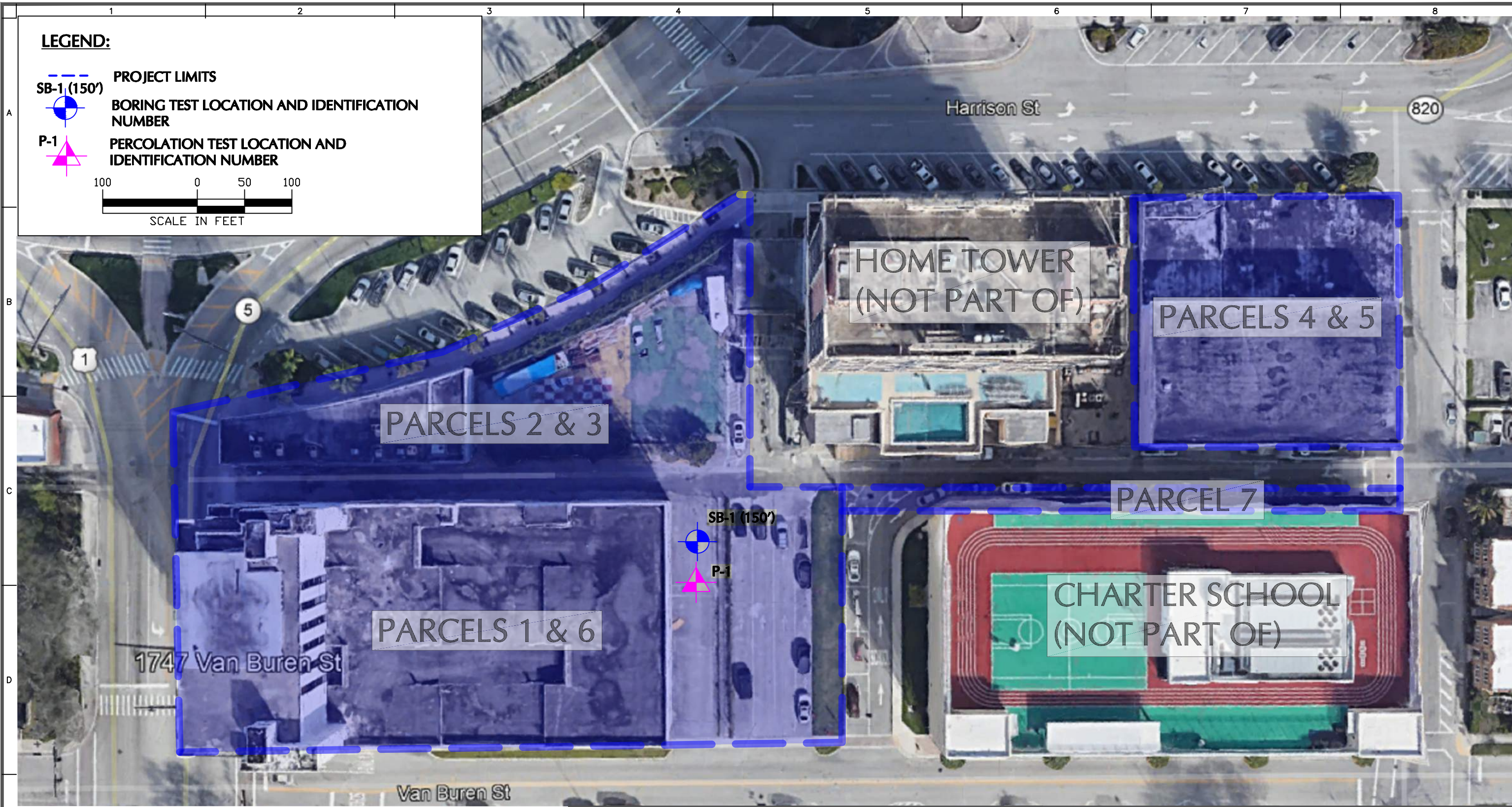
BROWARD **FLORIDA**

Drawing Title

SITE VICINITY

MAP

Project No. 330061201	FIG.1
Date AUGUST 2019	
Scale 1"=550'	
Drawn By HK	
Checked By RA	Sheet 1 of 1



NOTE:

- BORING AND PERCOLATION LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
- AERIAL FROM 2018, FROM GOOGLE EARTH.

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T: 786.264.7200 F: 786.264.7201 www.langan.com

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Project

PARC PLACE

**1747 VAN BUREN STREET
HOLLYWOOD**

BROWARD FLORIDA

Drawing Title

**BORING AND
PERCOLATION
LOCATION
PLAN**

Project No. 330061201	Drawing No.
Date AUGUST 2019	FIG.2
Scale 1"=100'	
Drawn By HK	
Checked By RA	Sheet 1 of 1

APPENDIX A

LOG OF BORING

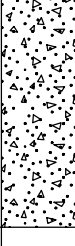
PROJECT Parck Place	PROJECT NO. 330061201		
LOCATION 1747 Van Buren Street, Hollywood, FL	ELEVATION AND DATUM Approx. +6.5 [ft, NGVD]		
DRILLING EQUIPMENT MCE-55	DATE STARTED 8/4/19	DATE FINISHED 8/5/19	COMPLETION DEPTH 150 ft.
SIZE AND TYPE OF BIT 2 1/4", 2 3/4"	NUMBER OF SAMPLES 36	DIST. -	CORE -
CASING DIAMETER (in) 2 3/4"	CASING DEPTH(ft) 148	WATER LEVEL (ft.) 6	UNDIST. -
SAMPLER 2" OD Split Spoon	DRILLING FOREMAN Carlos Molinares		
SAMPLER HAMMER Automatic Hammer	WEIGHT(lbs) 140	DROP(in) 30	INSPECTING ENGINEER Ruben Ponciano

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV (in)	PENETR. RESIST	BL/6in	N-VALUE BLOWS PER FT	
+6.5	Asphalt (1 inch)			S1	SS	18	5	6	14	
	Tan LIMEROCK (4 inches)						8			
	Black fine to medium SAND (Possible Fill)						8			
+4.5			2	S2	SS	14	4	4	9	
	Light gray fine to medium SAND						5	4		
								4		
	Dark brown fine to medium SAND, trace organic silt		4	S3	SS	16	4	2	3	
							1	1		
								1		
0.0	Tan CEMENTED SAND		6	S4	SS	12	1	2	4	
							2	3		
								3		
	Light brown to brown CEMENTED SAND, some fine sand, trace silt		8	S5	SS	13	2	3	8	
							5	5		
			10							
			12							
	Light brown to brown CEMENTED SAND, some fine sand, trace silt		14	S6	SS	12	6	4	7	
							3	2		
			16							
			18							
	Tan to white CEMENTED SAND, some sandy silt		20	S7	SS	13	5	4	7	
							3	5		
			22							
-16.5	Light brown fine to medium SAND, trace cemented sand		24	S8	SS	5	3	2	3	
							1	2		
								2		
			26							
			28							
	White to tan SAND, some shell fragments and limestone			S9	SS	12	1	1	1	
							WOH/12"			

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PROJECT		PROJECT NO.									
Parck Place		330061201									
LOCATION		ELEVATION AND DATUM									
1747 Van Buren Street, Hollywood, FL		Approx. +6.5 [ft, NGVD]									
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT			
-80.0	Light gray CEMENTED SAND, some fine to medium sand		66							Advanced casing to 68 ft Moderate drilling No circulation	
			68	S18	SS	12	17 20 20	40			
			70								
			72								Advanced casing to 73 ft Easy drilling No circulation
	74		S19	SS	8	7 WOH/18" WOH					
	76		S20	SS	19	10 13 15 14	28				
	78								Advanced casing to 78 ft No circulation		
	80		S21	SS	14	8 7 11 13	18				
	82									Advanced casing to 83 ft Easy drilling No circulation	
	84		S22	SS	13	11 9 8 11	17				
	86								Advanced casing to 88 ft Easy drilling No circulation		
	88		S23	SS	12	4 5 5 4	10				
90								Advanced casing to 93 ft Easy drilling No circulation			
92										No water sample. Too sandy Advanced casing to 98 ft Easy drilling No circulation	
94	S24		SS	17	7 3 4 3	7					
96									Light gray CEMENTED SAND and SAND		
98	S25		SS	16	5 5 6 7	11					

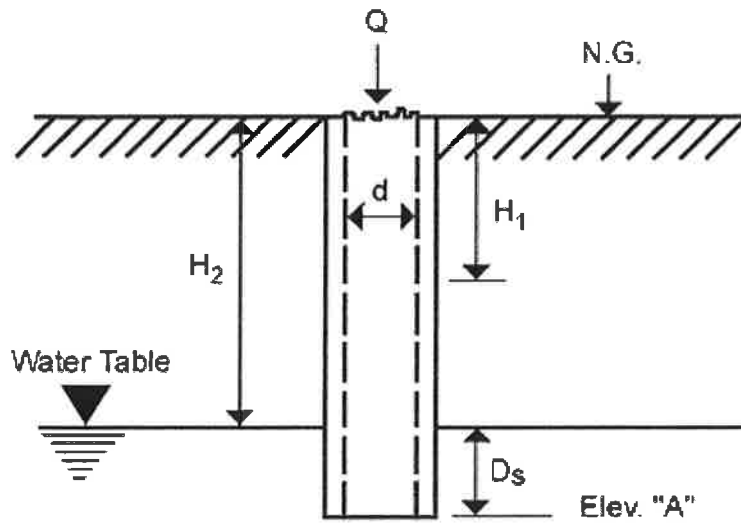
PROJECT			PROJECT NO.						
Parck Place			330061201						
LOCATION			ELEVATION AND DATUM						
1747 Van Buren Street, Hollywood, FL			Approx. +6.5 [ft, NGVD]						
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
-109.5	Light gray CEMENTED SAND and SAND, trace limestone fragments		102						Advanced casing to 103 ft Easy drilling No circulation
			104	S26	SS	18	14 9 9 15	18	
			106						
	No recovery		108				1 2 5 7	7	Advanced casing to 108 ft Easy drilling No circulation
			110	S27	SS	0			
	Light gray CEMENTED SAND and SAND		112				5 8 5 11	13	Advanced casing to 113 ft Easy drilling No circulation
			114	S28	SS	16			
	Light gray CEMENTED SAND and SAND		116				7 3 1 1	4	Advanced casing to 118 ft
			118	S29	SS	5			
	Light gray CEMENTED SAND, trace fine to medium sand		120						Advanced casing to 123 ft Easy to moderate drilling No circulation
			122						
			124	S30	SS	2	52/3"	52/3"	
	Light gray CEMENTED SAND, some fine to medium sand		126						Advanced casing to 128 ft Easy drilling No circulation
			128						
	Light gray CEMENTED SAND and fine to medium SAND		130				4 3 8 50/5"	11	Advanced casing to 133 ft Hard drilling No circulation
			132	S31	SS	10			
	Light brown CEMENTED SAND		134						
				S32	SS	18	14 30 20 49	50	
			</						

PROJECT Parck Place			PROJECT NO. 330061201							
LOCATION 1747 Van Buren Street, Hollywood, FL			ELEVATION AND DATUM Approx. +6.5 [ft, NGVD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT		
-143.5	White to tan CEMENTED SAND, trace sand, some sea shells		136						Advanced casing to 138 ft Moderate drilling No circulation	
			138	S34	SS	12	14 18 20 52/5'	38		
			140							
	Tan CEMENTED SAND		142						Advanced casing to 143 ft Moderate drilling No circulation	
			144	S35	SS	1	50/2"	50/2"		
			146							
	Tan CEMENTED SAND		148	S36	SS	2	50/2"	50/2"	Advanced casing to 148 ft Moderate drilling No circulation	
			150							
	SB-1 terminated at 150 ft			150						
				152						
				154						
				156						
				158						
				160						
				162						
				164						
				166						
				168						

APPENDIX B

PERCOLATION TEST LOG

USUAL OPEN-HOLE TEST



$$K = \frac{4Q}{\pi d (2H_2^2 + 4H_2D_s + H_2d)}$$

K = Hydraulic Conductivity (cfs/ft.² – ft. head)

Q = "Stabilized" Flow Rate (cfs)

d = Diameter of Test Hole (feet)

H₂ = Depth to Water Table (feet)

D_s = Saturated Hole Depth (feet)

Elev. "A" = Proposed Trench Bottom Elev. (ft. – NGVD)

H₁ = Average Head on Unsaturated Hole Surface (ft. head)

Figure F-1

TABLE 1
SUMMARY OF PERCOLATION TEST RESULTS
Parc Place
1747 Van Buren Street
Hollywood, Florida
330061201

Test No.	Date Performed	Approximate Ground Surface Elevation (NGVD,Feet)	Diameter of Test Hole (Inches)	Depth of Hole (Feet)	Depth to Water Table before Test (Feet)	Depth to Water Table during Test (Feet)	Water Head above Water Table During Test (H2) (Feet)	Saturated Hole Depth, Ds (Feet)	Average Flow Rate, Q (GPM)	K, Hydraulic Conductivity (cfs/ft ² - ft head)
P1	8/7/2019	+6.5	5.0	10.0	6.0	0.0	6.0	4.0	0.8	3.19E-05

Notes:

- (1) The hydraulic conductivity values were calculated based on the South Florida Water Management Districts' USUAL OPEN HOLE CONSTANT HEAD percolation test procedure as shown on the following page.
- (2) The approximate percolation test location is shown on Figure 2.

Appendix I – Existing Adjacent Drainage Well Capacities



[illegible]

Appendix J – Pre-Development Calculations



Project: Star Tower Hollywood
 Flood Routing Description:

Date: 06/28/2023

Client : Job Number: 13778.00
 Design Engineer :
 Project Address / Location : City: Hollywood County: Broward State: Florida
 Section/Township/Range:
 Surfacewater License:
 FEMA FIRM Information:
 Project Description:

Total Drainage Basin: 0.816 Acres

Hydrogeologic Information :

Table 1.	1 Day Storm Event			3 Day Storm Event		
RAINFALL DATA	Rainfall Inches	Runoff Inches	Runoff Ac-Ft	Rainfall Inches	Runoff Inches	Runoff Ac-Ft
100 Year Return Period	15.6	9.67	0.658	18.1	11.94	0.812
25 Year Return Period				13.4	7.72	0.525
10 Year Return Period	9.0	4.06	0.276	12.2	6.70	0.456
5 Year Return Period	7.4	2.84	0.193	10.0	4.87	0.331
3 Year Return Period						
5 Yr Return Period - 1 Hr	3.2	0.40	0.027			

Runoff estimation - USDA SCS formula

$$\text{Runoff (in)} Q = \frac{(P-0.2S)^2}{P+0.8S}$$

Where: P = accumulated rainfall (in.)
 S = Soil Storage Value

Table 2. SUMMARY OF FLOOD ROUTING	Agency maps	SBUH Calculated with Q-1 Day Storm	SBUH Calculated with Q-3 Day Storm	SBUH Calculated *Zero Q-3 Day Storm	Calc. 5Yr 1 hour Peak Stage (ft)
		Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)
100 Year Return Period		8.21	0.00	8.40	0.00
25 Year Return Period				8.05	0.00
10 Year Return Period		7.67	0.00	7.95	0.00
5 Year Return Period		7.54	0.00	7.75	0.00
3 Year Return Period					

For 5 yr - 1 hr rainfall, Calculate 5 yr Vol by subtracting Exfil vol in inches from 5 yr 1 h rainfall, then calc Runoff using SCS formula. From stage storage table find Zero Discharge Stage. Uses Max. Elev of Lookup Stage or highest top of EXFIL trench. If exfil vol exceeds 5 year 1 hour vol. Uses Max. Elev of highest top of EXFIL trench

* Zero Q indicates there is no offsite discharge included in the calculations (only Exfil Trench and Wells). Hypothetical stage calc. for PRE-POST Analysis.

Table 3. WATER QUALITY STORAGE REQUIREMENTS:		
Based on Total Drainage Basin Acreage	Ac-Ft	
1" x Basin Area	0.068	
2.5" x WQPI x (Basin Area) = 0.00 Inches	0.000	
Required Wet Detention (Total basin incl Offsite)		
0.5" Pretreatment-Com. Prjs.,x(Basin Area - water area)	0.034	
Credit for Inlets in Grass Areas, GAC=0.2" x (TDA)	0.014	N

Table 4. WATER QUALITY STORAGE SOURCE	Basin Storage Elev. (Ac-Ft)	WQ Eq WDV (Ac-Ft)	WQ Eq WDV Inches
Retention (RV) @			
Dry Det. (DDV) @			
Wet Det. (WDV) @			
Equiv WDV=WDV+RV/.5+DDV/.75)		0.000	
Exfil Trench Storage	0.000	0.000	
Total WQ EQ WDV - Provided		0.000	
Total WQ EQ WDV - Required		0.068	1.00

Exfil Vol. in Stage Storage =

(Ac-Ft)	(Inches)
0.000	0.00

Project: Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client : Job Number: 13778.00

Total Drainage Basin: 0.816 Acres

Water Table Elevation = 1.50 Feet

Time of Conc. (hr.) = 0.17

Calculated weighted soil (s) = 6.75 Soil Storage Value (S) = Storage under pervious area / Total Area

Calculated CN value 59.7 Soil Storage under pavement and buildings is not considered in computations

Y	Y/N -Do you want to limit the Exfiltration Trench Vol. to a maximum of 3.28" over the site?
N	Y/N -Deduct EXFIL Vol. from Rainfall amount rather than include Vol. in Stage Storage table
Y	Y/N -Use EXFIL Vol. in Stage Storage, up to Water Quality Vol., without safety Factor of 2.

Table 16. STAGE STORAGE TABLE

Stage Elevation (feet)	Storage (Ac-ft)	Storage (CF)
1.50	0.000	0
2.00	0.000	0
2.50	0.000	0
3.00	0.000	0
3.50	0.000	0
4.00	0.000	0
4.50	0.000	0
5.00	0.000	0
5.50	0.000	0
6.00	0.000	0
6.50	0.000	0
7.00	0.016	688
7.50	0.169	7,371
8.00	0.486	21,162
8.50	0.894	38,922
9.00	1.302	56,694
9.50	1.710	74,467
10.00	2.118	92,239
10.50	2.526	110,012

Compacted Ground storage table				
Depth to water table (Ft)	1.00	2.00	3.00	4.00
Ground storage(In)	0.45	1.88	4.05	6.75
Mean depth to ground water table (ft)=	5.91 (Pervious Area)			
Soil Storage Type	Ground Storage Values (In Inches)			
Depth to Ground Water (Ft)	1	2	3	4
* Depressional	0.45	1.58	3.3	5.1
Flatwoods	0.45	1.88	4.05	6.75
Coastal Type	0.45	1.88	4.95	8.18
* (Low Flatwoods & Costal Lowlands)				
Ground Storage Values reflect 25% reduction of Available Storage, to take into account compaction of native soils.				

Project: Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Table 17. SITE ACREAGE INFORMATION

	Input Information							Imperv. Paved Acres	Perv. Acres	Bldgs. Acres	Non Bldgs. Acres	Water Lake Acres	Perv. Area Avg. El.	perv. acres * avg el
	LAND USES	Acres	High Elev.	Low Elev.	% Imperv. Paved	% Bldgs.	% Water							
	BASIN TOTALS / AVERAGE	0.816	8.03	1.50	0.00	0.00	0.00	0.00	0.82	0.00	0.82	0.00	7.41	
1	Pervious/Landscape	0.816	8.03	6.78	0	0	0	0.00	0.82	0.00	0.82	0.00	7.41	6.
2														
3														
4														
5														
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	BASIN SUBTOTALS / AVG	0.816	8.03	6.78	0.00	0.00	0.00	0.00	0.82	0.00	0.82	0.00	7.41	6.

Table 18. UNDERGROUND STORAGE INFORMATION

Underground Storage		Area (SF)	Top Elev	Bottom Elev	% Voids									
1	Underground Storage 1													
2	Underground Storage 2													
3	Underground Storage 3													
4	Underground Storage 4													
5	Underground Storage 5													
	BASIN TOTALS / AVERAGE	0.816	8.03	1.50	0.00	0.00	0.00	0.00	0.82	0.00	0.82	0.00	7.41	6.
	Basin % Imper. for Water Quality Purposes =		0.00											
	Basin % Impervious (incl. Bldg., No lakes)=		0.00											

Project: Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Detail - Stage - Storage Information

Table 19. STAGE - STORAGE INFORMATION		Surface storage (Ac-Ft)												
LAND USES	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.
	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
Total Surface Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.169	
Underground Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Exfil Trench Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
TOTAL Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.169	
1 Pervious/Landscape	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.169	
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Total Surface Storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.17	
Underground Storage		1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
1 Underground Storage 1														
2 Underground Storage 2														
3 Underground Storage 3														
4 Underground Storage 4														
5 Underground Storage 5														
Total Underground Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exfil Trench Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.169	
Stage Elevation	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	

Appendix K – Post-Development Calculations



Project: Star Tower Hollywood
Flood Routing Description:

Date: 06/28/2023

Client :
Design Engineer :
Project Address / Location : City: Hollywood County: Broward State: Florida
Section/Township/Range:
Surfacewater License:
FEMA FIRM Information:
Project Description:

Job Number: 13778.00

Total Drainage Basin: 0.816 Acres

Hydrogeologic Information :

Table 1.	1 Day Storm Event			3 Day Storm Event		
RAINFALL DATA	Rainfall Inches	Runoff Inches	Runoff Ac-Ft	Rainfall Inches	Runoff Inches	Runoff Ac-Ft
100 Year Return Period	15.6	15.17	1.032	18.1	17.67	1.202
25 Year Return Period				13.4	12.97	0.882
10 Year Return Period	9.0	8.57	0.583	12.2	11.79	0.802
5 Year Return Period	7.4	6.95	0.473	10.0	9.59	0.652
3 Year Return Period						
5 Yr Return Period - 1 Hr	3.2	1.64	0.111			

Runoff estimation - USDA SCS formula

$$\text{Runoff (in)} Q = \frac{(P-0.2S)^2}{P+0.8S}$$

Where: P = accumulated rainfall (in.)
S = Soil Storage Value

Table 2. SUMMARY OF FLOOD ROUTING	Agency maps	SBUH Calculated with Q-1 Day Storm		SBUH Calculated with Q-3 Day Storm		SBUH Calculated *Zero Q-3 Day Storm		Calc. 5Yr 1 hour Peak Stage (ft)
		Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	
100 Year Return Period		8.56	6.02	8.39	6.02	8.39	6.02	Zero Q
25 Year Return Period				8.04	5.86	8.04	5.86	(Water Budget)
10 Year Return Period		8.06	6.00	7.33	5.31	7.33	5.31	
5 Year Return Period		5.99	4.99	5.70	4.41	5.70	4.41	7.92
3 Year Return Period								

For 5 yr - 1 hr rainfall, Calculate 5 yr Vol by subtracting Exfil vol in inches from 5 yr 1 h rainfall, then calc Runoff using SCS formula. From stage storage table find Zero Discharge Stage. Uses Max. Elev of Lookup Stage or highest top of EXFIL trench. If exfil vol exceeds 5 year 1 hour vol. Uses Max. Elev of highest top of EXFIL trench

* Zero Q indicates there is no offsite discharge included in the calculations (only Exfil Trench and Wells). Hypothetical stage calc. for PRE-POST Analysis.

Table 3. WATER QUALITY STORAGE REQUIREMENTS:		
Based on Total Drainage Basin Acreage	Ac-Ft	
1" x Basin Area	0.068	
2.5" x WQPI x (Basin Area) 2.20 Inches	0.143	
Required Wet Detention (Total basin incl Offsite)		
0.5" Pretreatment-Com. Prjs.,x(Basin Area - water area)	0.032	
Credit for Inlets in Grass Areas, GAC=0.2" x (TDA	0.008	N

Project:

Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Total Drainage Basin:

0.816 Acres

Water Table Elevation =

1.50

Feet

Time of Conc. (hr.) =

0.17

Calculated weighted soil (s)

0.36

Soil Storage Value (S) = Storage under pervious area / Total Area

Calculated CN value

96.5

Soil Storage under pavement and buildings is not considered in computations

Y

Y/N -Do you want to limit the Exfiltration Trench Vol. to a maximum of 3.28" over the site?

N

Y/N -Deduct EXFIL Vol. from Rainfall amount rather than include Vol. in Stage Storage table

Y

Y/N -Use EXFIL Vol. in Stage Storage, up to Water Quality Vol., without safety Factor of 2.

Table 16. STAGE STORAGE TABLE

Stage Elevation	Storage	Storage	Compacted Ground storage table				
(feet)	(Ac-ft)	(CF)	Depth to water table (Ft)	1.00	2.00	3.00	4.00
1.50	0.000	0	Ground storage(In)	0.45	1.88	4.05	6.75
2.00	0.007	292	Mean depth to ground water table (ft)=	6.00	(Pervious Area)		
2.50	0.013	583	Soil Storage Type	Ground Storage Values (In Inches)			
3.00	0.020	875	Depth to Ground Water (Ft)	1	2	3	4
3.50	0.027	1,166	* Depressional	0.45	1.58	3.3	5.1
4.00	0.033	1,458	Flatwoods	0.45	1.88	4.05	6.75
4.50	0.040	1,750	Coastal Type	0.45	1.88	4.95	8.18
5.00	0.047	2,041	* (Low Flatwoods & Costal Lowlands)				
5.50	0.054	2,333	Ground Storage Values reflect 25% reduction of Available Storage,				
6.00	0.060	2,624	to take into account compaction of native soils.				
6.50	0.067	2,916					
7.00	0.074	3,208					
7.50	0.086	3,739					
8.00	0.116	5,062					
8.50	0.180	7,834					
9.00	0.385	16,763					
9.50	0.590	25,693					
10.00	0.795	34,623					
10.50	1.000	43,553					

Project:

Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Table 17. SITE ACREAGE INFORMATION

Input Information								Imperv. Paved Acres	Perv. Acres	Bldgs. Acres	Non Bldgs. Acres	Water Lake Acres	Perv. Area Avg. El.	perv. acres * avg el
LAND USES		Acres	High Elev.	Low Elev.	% Imperv. Paved	% Bldgs.	% Water							
BASIN TOTALS / AVERAGE								0.816	8.50	1.50	40.07	49.75	4.78	0.33
1	Pool	0.039	8.50	8.50	0	0	100	0.00	0.00	0.00	0.04	0.04	0.00	0.
2	Pervious/Landscape	0.044	8.00	7.00	0	0	0	0.00	0.04	0.00	0.04	0.00	7.50	0.
3	Impervious	0.111	8.50	7.50	100	0	0	0.11	0.00	0.00	0.11	0.00	0.00	0.
4	Building	0.406	8.50	8.50	0	100	0	0.00	0.00	0.41	0.00	0.00	0.00	0.
5	Pool Deck	0.216	8.50	8.50	100	0	0	0.22	0.00	0.00	0.22	0.00	0.00	0.
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BASIN SUBTOTALS / AVG		0.816	8.50	7.00	40.07	49.75	4.78	0.33	0.04	0.41	0.41	0.04	7.50	0.

Table 18. UNDERGROUND STORAGE INFORMATION

Underground Storage		Area (SF)	Top Elev	Bottom Elev	% Voids									
1	Underground Storage 1													
2	Underground Storage 2													
3	Underground Storage 3													
4	Underground Storage 4													
5	Underground Storage 5													
BASIN TOTALS / AVERAGE		0.816	8.50	1.50	40.07	49.75	4.78	0.33	0.04	0.41	0.41	0.04	7.50	0.
Basin % Imper. for Water Quality Purposes =			88.14											
Basin % Impervious (incl. Bldg., No lakes)=			94.34											

Project:

Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Table 20. SOIL - STORAGE INFORMATION
Detail - Soil Storage Information

	LAND USES	Depth to Water Table	Ground Storage Under Pervious	
			Inches	Ac-Ft
	TOTAL/AVERAGE		6.75	0.02
1	Pool	0.00	0.00	0.000
2	Pervious/Landscape	6.00	6.75	0.025
3	Impervious	0.00	0.00	0.000
4	Building	0.00	0.00	0.000
5	Pool Deck	0.00	0.00	0.000
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	TOTAL/AVERAGE		6.75	0.025

Soil Storage Value (S) = Storage under pervious area / Total Area
Soil Storage under pavement and buildings is not considered in computations

S=	0.36397059
----	------------

Project:Star Tower HollywoodDate: 06/28/2023

Flood Routing Description:
Client :

Joh Number: 13778.00

Table 21. STAGE / DISCHARGE DATA TABLE

Drainage Basin:		Receiving Water Body:		Runoff Formula:															
SFWMD allowable discharge:	CFS	Project Acreage :	0.82	Q=Allowable runoff (CFS)															
Historic/Prev. Permit Discharge =	CFS			CSM=Cubic Feet per Sec. per Sq. Mile															
Stage / Discharge Data Table																			
Stage (feet)	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50
On-Site (Well Discharge)	0.00	0.00	0.00	0.00	0.00	1.00	2.01	3.01	4.01	5.01	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02
Total Discharge (Includes Well) (CFS)	0.00	0.00	0.00	0.00	0.00	1.00	2.01	3.01	4.01	5.01	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02

Discharge Structure Description:
Notes

Project:

Star Tower Hollywood

Date: 06/28/2023

Flood Routing Description:

Client :

Job Number: 13778.00

Design Engineer :

Project Address / Location :

City: Hollywood County: Broward State: Florida

Section/Township/Range:

Surfacewater License:

FEMA FIRM Information:

Project Description:

Total Drainage Basin:

0.255 Acres

Hydrogeologic Information :

Table 1.	1 Day Storm Event			3 Day Storm Event		
RAINFALL DATA	Rainfall Inches	Runoff Inches	Runoff Ac-Ft	Rainfall Inches	Runoff Inches	Runoff Ac-Ft
100 Year Return Period	15.6	15.60	0.332	18.1	18.10	0.385
25 Year Return Period				13.4	13.40	0.285
10 Year Return Period	9.0	8.99	0.191	12.2	12.22	0.260
5 Year Return Period	7.4	7.37	0.157	10.0	10.02	0.213
3 Year Return Period						
5 Yr Return Period - 1 Hr	3.2	0.75	0.016			

Runoff estimation - USDA SCS formula

Runoff (in) Q=

(P-0.2S)^2

P+0.8S

Where: P = accumulated rainfall (in.)

S = Soil Storage Value

Table 2. SUMMARY OF FLOOD ROUTING	Agency maps	SBUH Calculated with Q-1 Day Storm		SBUH Calculated with Q-3 Day Storm		SBUH Calculated *Zero Q-3 Day Storm		Calc. 5Yr 1 hour Peak Stage (ft)
		Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	Peak Stage(ft)	Peak Q (CFS)	
100 Year Return Period		9.59	0.00	9.80	0.00	5.04	3.10	Zero Q
25 Year Return Period				9.41	0.00	4.68	2.36	(Water Budget)
10 Year Return Period		9.04	0.00	9.31	0.00	4.40	1.80	
5 Year Return Period		8.91	0.00	9.13	0.00	4.29	1.59	5.00
3 Year Return Period								

* Zero Q indicates there is no offsite discharge included in the calculations (only Exfil Trench and Wells). Hypothetical stage calc. for PRE-POST Analysis.

Table 3. WATER QUALITY STORAGE REQUIREMENTS:		
Based on Total Drainage Basin Acreage	Ac-Ft	
1" x Basin Area	0.021	
2.5" x WQPI x (Basin Area) @ 2.50 Inches	0.045	
Required Wet Detention (Total basin incl Offsite)		
0.5" Pretreatment-Com. Prjs.,x(Basin Area - water area)	0.009	
Credit for Inlets in Grass Areas, GAC=0.2" x (TDA	0.004	N

Table 4. WATER QUALITY STORAGE SOURCE	Basin Storage Elev.	(Ac-Ft)	WQ Eq WDV (Ac-Ft)	WQ Eq WDV Inches
Retention (RV) @				
Dry Det. (DDV) @				
Wet Det. (WDV) @				
Equiv WDV=WDV+RV/.5+DDV/.75)			0.000	
Exfil Trench Storage	0.030		0.059	2.78
Total WQ EQ WDV - Provided			0.059	2.78
Total WQ EQ WDV - Required			0.045	2.12

Exfil Vol. in Stage Storage =

(Ac-FT)	(Inches)
0.052	2.45

Project: Star Tower Hollywood

Date: 06/28/2023

WATER QUALITY

Flood Routing Description:

Client :

Job Number: 13778.00

Total Drainage Basin: 0.255 Acres

Water Table Elevation = 1.50 Feet

Time of Conc. (hr.) = 0.17

Calculated weighted soil (s) = 0.00 Soil Storage Value (S) = Storage under pervious area / Total Area

Calculated CN value 100.0 Soil Storage under pavement and buildings is not considered in computations

Y	Y/N -Do you want to limit the Exfiltration Trench Vol. to a maximum of 3.28" over the site?
N	Y/N -Deduct EXFIL Vol. from Rainfall amount rather than include Vol. in Stage Storage table
Y	Y/N -Use EXFIL Vol. in Stage Storage, up to Water Quality Vol., without safety Factor of 2.

Table 16. STAGE STORAGE TABLE

Stage Elevation (feet)	Storage (Ac-ft)	Storage (CF)	Depth to water table (Ft)	1.00	2.00	3.00	4.00
			Ground storage(In)	0.45	1.88	4.05	6.75
1.50	0.000	0	Mean depth to ground water table (ft)=	0.00 (Pervious Area)			
2.00	0.004	189					
2.50	0.009	378	Soil Storage Type	Ground Storage Values (In Inches)			
3.00	0.013	567	Depth to Ground Water (Ft)	1	2	3	4
3.50	0.017	756	* Depressional	0.45	1.58	3.3	5.1
4.00	0.022	945	Flatwoods	0.45	1.88	4.05	6.75
4.50	0.026	1,134	Coastal Type	0.45	1.88	4.95	8.18
5.00	0.030	1,323	* (Low Flatwoods & Costal Lowlands)				
5.50	0.035	1,512	Ground Storage Values reflect 25% reduction of Available Storage,				
6.00	0.039	1,701	to take into account compaction of native soils.				
6.50	0.043	1,890					
7.00	0.048	2,079					
7.50	0.052	2,268					
8.00	0.052	2,268					
8.50	0.052	2,268					
9.00	0.180	7,822					
9.50	0.307	13,376					
10.00	0.435	18,930					
10.50	0.562	24,483					

Project: Star Tower Hollywood

Date: 06/28/2023

WATER QUALITY

Flood Routing Description:

Client :

Job Number: 13778.00

Table 17. SITE ACREAGE INFORMATION

	Input Information							Imperv. Paved Acres	Perv. Acres	Bldgs. Acres	Non Bldgs. Acres	Water Lake Acres	Perv. Area Avg. El.	perv. acres * avg el
	LAND USES	Acres	High Elev.	Low Elev.	% Imperv. Paved	% Bldgs.	% Water							
	BASIN TOTALS / AVERAGE	0.255	8.50	1.50	84.71	0.00	15.29	0.22	0.00	0.00	0.26	0.04	0.00	
1	Pool	0.039	8.50	8.50	0	0	100	0.00	0.00	0.00	0.04	0.04	0.00	0.
2	Pool Deck	0.216	8.50	8.50	100	0	0	0.22	0.00	0.00	0.22	0.00	0.00	0.
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	BASIN SUBTOTALS / AVG	0.255	8.50	8.50	84.71	0.00	15.29	0.22	0.00	0.00	0.26	0.04	0.00	0.

Table 18. UNDERGROUND STORAGE INFORMATION

	Underground Storage	Area (SF)	Top Elev	Bottom Elev	% Voids									
1	Underground Storage 1													
2	Underground Storage 2													
3	Underground Storage 3													
4	Underground Storage 4													
5	Underground Storage 5													
	BASIN TOTALS / AVERAGE	0.255	8.50	1.50	84.71	0.00	15.29	0.22	0.00	0.00	0.26	0.04	0.00	0.
	Basin % Imper. for Water Quality Purposes =		100.00											
	Basin % Impervious (incl. Bldg., No lakes)=		100.00											

Project: Star Tower Hollywood

Date: 06/28/2023

WATER QUALITY

Flood Routing Description:

Client :

Job Number: 13778.00

Detail - Stage - Storage Information

Table 19. STAGE - STORAGE INFORMATION		Surface storage (Ac-Ft)												
LAND USES	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.	Elev.
	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	
Total Surface Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Underground Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exfil Trench Storage	0.000	0.004	0.009	0.013	0.017	0.022	0.026	0.030	0.035	0.039	0.043	0.048	0.052	
TOTAL Storage	0.000	0.004	0.009	0.013	0.017	0.022	0.026	0.030	0.035	0.039	0.043	0.048	0.052	
1 Pool	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2 Pool Deck	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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Total Surface Storage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Underground Storage		1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
1 Underground Storage 1														
2 Underground Storage 2														
3 Underground Storage 3														
4 Underground Storage 4														
5 Underground Storage 5														
Total Underground Storage	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Exfil Trench Storage	0.000	0.004	0.009	0.013	0.017	0.022	0.026	0.030	0.035	0.039	0.043	0.048	0.052	
TOTAL Storage	0.000	0.004	0.009	0.013	0.017	0.022	0.026	0.030	0.035	0.039	0.043	0.048	0.052	
Stage Elevation	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	

Project: Star Tower Hollywood

Date: 06/28/2023

WATER QUALITY

Flood Routing Description:

Client : Job Number: 13778.00

Table 20. SOIL - STORAGE INFORMATION

Detail - Soil Storage Information

	LAND USES	Depth to Water Table	Ground Storage Under Pervious	
			Inches	Ac-Ft
	TOTAL/AVERAGE		0.00	0.00
1	Pool	0.00	0.00	0.000
2	Pool Deck	0.00	0.00	0.000
3				
4				
5				
6				
7				
8				
9				
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	TOTAL/AVERAGE		0.00	0.000

Soil Storage Value (S) = Storage under pervious area / Total Area

Soil Storage under pavement and buildings is not considered in computations

S= 0

Project: Star Tower Hollywood

Date: 06/28/2023

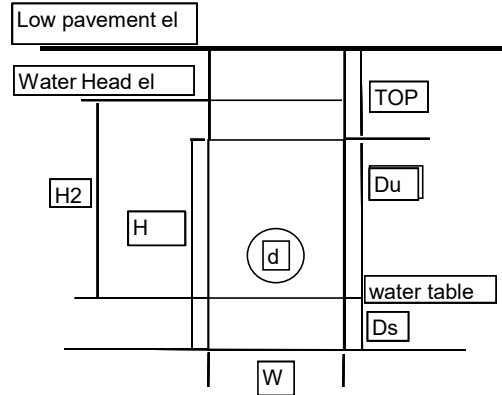
Flood Routing Description:

Client :

Job Number: 13778.00

Table 22-1 EXILTRATION TRENCH -1 INFORMATION

INPUT INFORMATION	
Trench Width (Ft) (W)	8.00
Trench Height (Ft) (H)	7.00
Diameter of Pipe (inches) (d)	18
Invert of Pipe (Ft) (IE)	1.5
Top of trench elevation	5
Low pavement elevation	7.7
Water Head elevation (Ft)	7.50
Avg. Hydraulic Conductivity (Cfs/Ft^2) (k)	3.19E-05



Length of Exfiltration trench Provided (Ft) (L)	92
Water table elevation (Ft)	1.50
Trench Data	
Depth To Top Of Trench (Ft) (TOP)	2.50
Bottom of trench elevation	-2.00
Saturated Trench Depth (Ds)	3.50
Non-Saturated Trench Depth (Du)	3.50
Depth To Water Table or Trench Bottom (Ft) (H2)	6.00
Trench Storage Begins at Higher of Water Table or Trench Bot. Elev.	1.50

= Water head El - Top of Trench El.
 = Top of Trench El. - Trench Height (H)
 = Trench Height below water Table
 = Trench depth above water Table
 = Water head El to the water table or bottom of trench

Trench Volumes Stored & Exfiltrated in 1 hour (CF)

1 Hr. Vol by exfil SFWMD Eq.7 (Du > Ds and W < 2H) (CF)	2,576
1 Hr. Vol by exfil SFWMD Eq.8 (Du < Ds or W > 2H) (CF)	0
This Trench Volume with Safety Factor of 2 (V(trnSF))	1,288
Max. Vol allowed in Exfil (3.28" = 0.273 Ac-Ft / Ac) (Val) (CF)	3,036
Total EXFIL Vol Provided ALL EXFIL Trenches (Vtot) (CF)	1,288
Equivalent Wet Detention Vol:50% credit ALL EXFIL (Vwteq) (CF)	2,576
Total System ALL EXFIL WQ Equivalent Wet Det. Vol Provided	2,576
Total System ALL EXFIL Volume Used in Stage-Storage	2,268

Note: 3630 in Eqn. is conversion factor from (Ac-In) to (CF)-> (43560 SF/Ac)(1FT/12In)

$$V_{trn} = 3630 * L * [k * ((H2 * W) + (2 * H2 * Du) - Du^2 + (2 * H2 * Ds)) + ((1.39 * 10^{-4}) * (W * Du))]]$$

$$V_{trn} = 3630 * L * [k * ((2 * H2 * Du) - Du^2 + (2 * H2 * Ds)) + ((1.39 * 10^{-4}) * (W * Du))]]$$

$$V(trnSF) = V_{trn} / (\text{Safety Factor of 2})$$

$$V_{tot} = V_{design} + V_{sto}$$

$$V_{tot} = V_{design} + V_{sto}$$

$$V_{wteq} = V_{tot} * 2$$

CF	0.059	Ac-Ft
CF	0.052	Ac-Ft

0.030	Ac-Ft	0.35	Ac-In
0.070	Ac-Ft	0.84	Ac-In
0.030	Ac-Ft	0.35	Ac-In
0.059	Ac-Ft	0.71	Ac-In

NOTE: This line is Sum of all Exfiltration Trenches

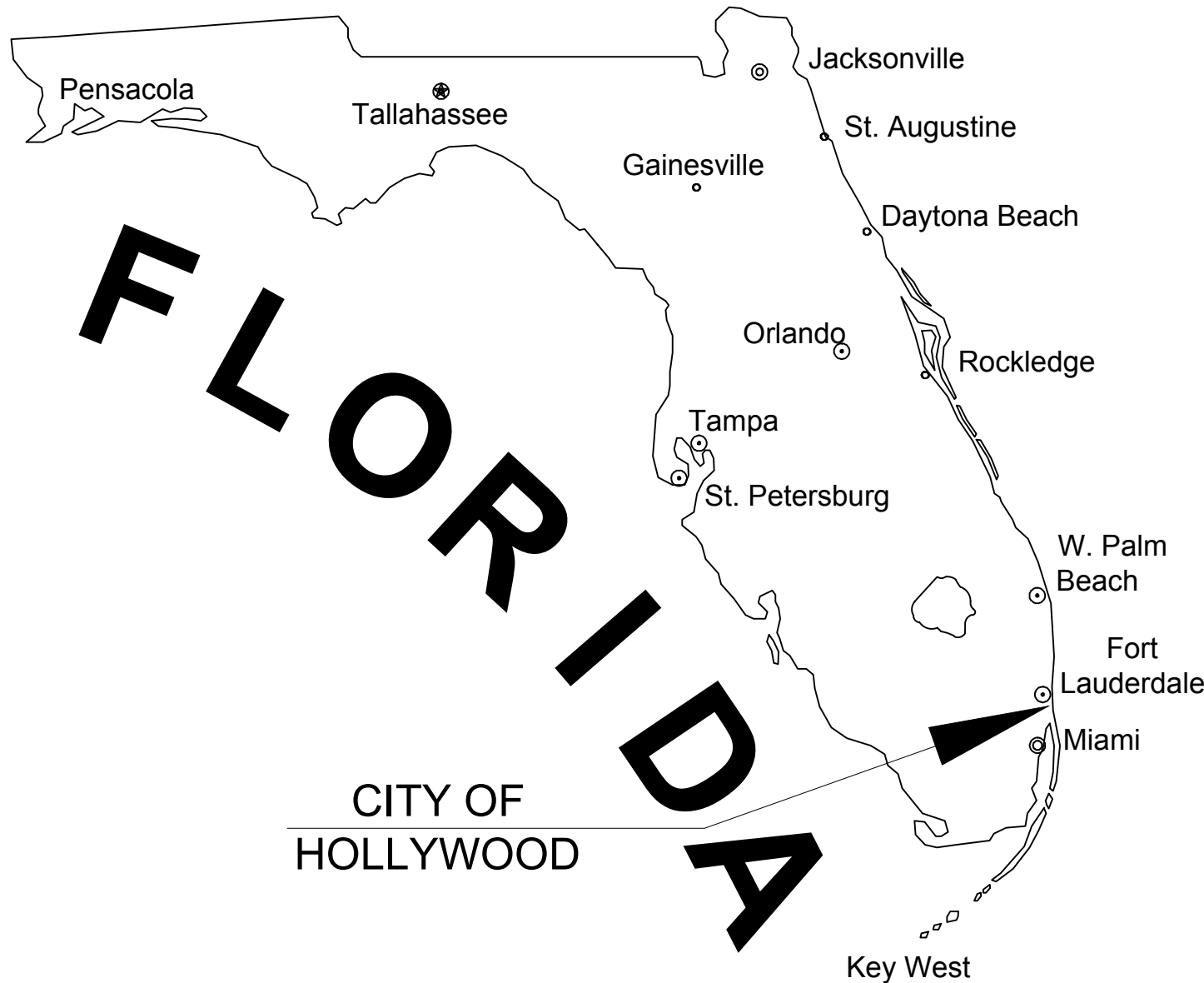
NOTE: This line is Sum of all Exfiltration Trenches

NOTE: For Exfiltration Trench design, a factor of safety of 2 is used for WQ in all conditions (WQ vol & above WQ vol), per the "New" SFWMD formula.

Select on the Stage-Storage tab, whether to use the safety factor for the Exfil trench, up to the required WQ amount, in the flood routing Stage-Storage volumes.

Because of the built in safety factor of only using the trench discharge for one hour during the 72 hour storm event, some Agencies allow the use of the Exfiltration trench volume, up to the required Water Quality Volume, without a safety factor of 2, for use in storm routing calculations.

STAR TOWER HOLLYWOOD
TECHNICAL ADVISORY COMMITTEE
LANDSCAPE DRAWINGS
JULY 3RD, 2023



INDEX OF SHEETS					
SHEET IDENTIFICATON	SHEET TITLE				
LANDSCAPE					
CVR-000	COVER SHEET	■	■	■	■
LD-101	TREE DISPOSITION PLAN	■	■	■	■
LH-001	GENERAL NOTES, LEGEND, & SCHEDULE	■	■	■	■
LH-101	HARDSCAPE PLAN	■	■	■	■
LH-501	HARDSCAPE DETAILS	■	■	■	■
LP-001	PLANTING NOTES	■	■	■	■
LP-101	PLANTING PLAN	■	■	■	■
LP-501	PLANTING DETAILS	■	■	■	■
LI-101	IRRIGATION PLAN	■	■	■	■
LI-501	IRRIGATION DETAILS	■	■	■	■
LL-101	EXTERIOR LIGHTING & PHOTOMETRICS PLAN	■	■	■	■

TAC SUBMITTAL - 07/03/2023
FINAL TAC - P&Z - 09/13/2023
FINAL TAC - P&Z - 11/16/2023

TECHNICAL ADVISORY SUBMITTAL:
JULY 3RD. 2023

TECHNICAL ADVISORY REVIEW:
JULY 17TH, 2023

FINAL TAC - PLANNING & ZONING
RESUBMITTAL:
NOVEMBER 16TH, 2023

410 N. FEDERAL HIGHWAY, HOLLYWOOD
BROWARD COUNTY, FLORIDA 33020

PREPARED FOR:
1817 TAYLOR DEVELOPMENT LLC.

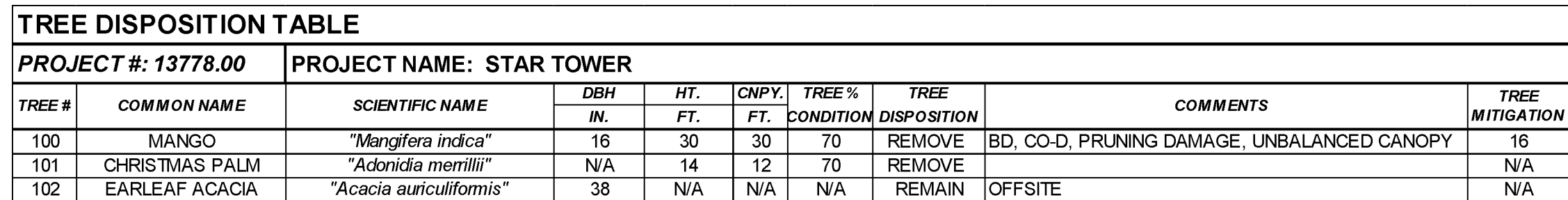


PROJECT No. 13778.00
JULY 3RD, 2023

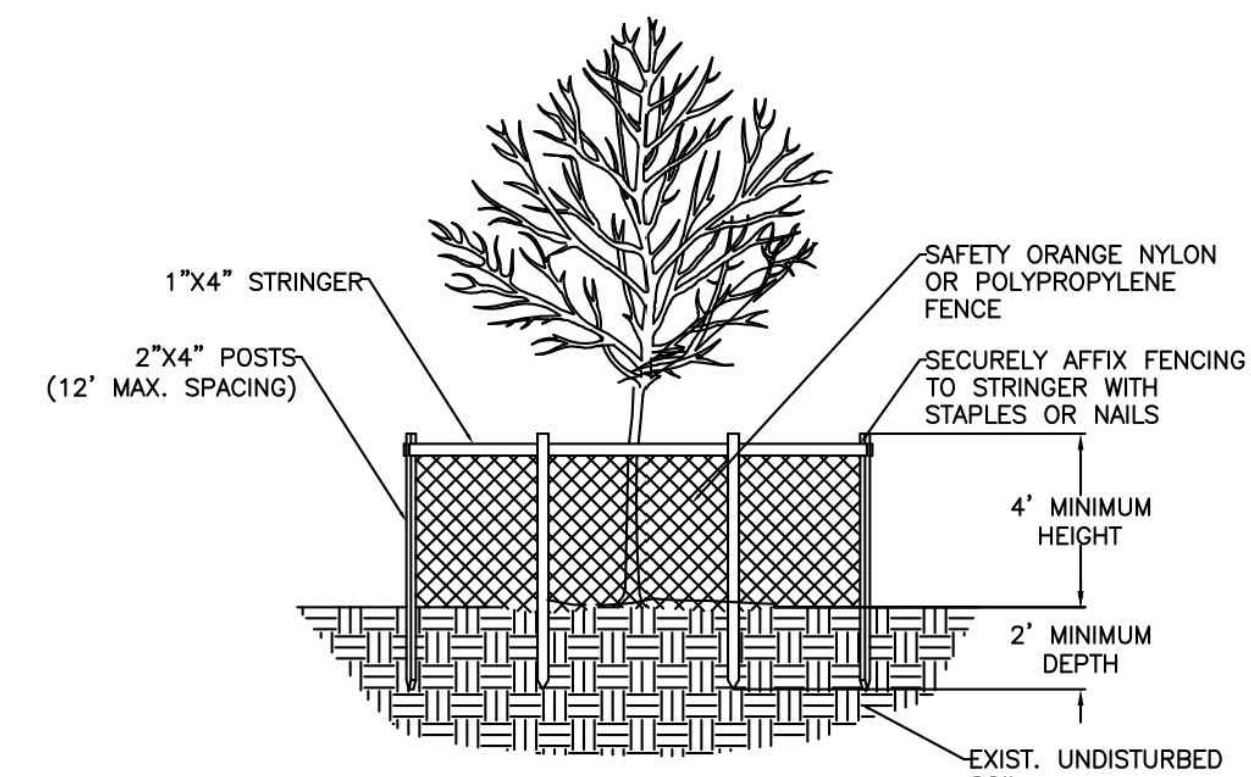
PAUL H. WEINBERG, R.L.A.
FLORIDA REG. NO. LA6666804
(FOR THE FIRM)

THESE PLANS MAY HAVE BEEN
REDUCED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN
OBTAINING SCALED DATA.

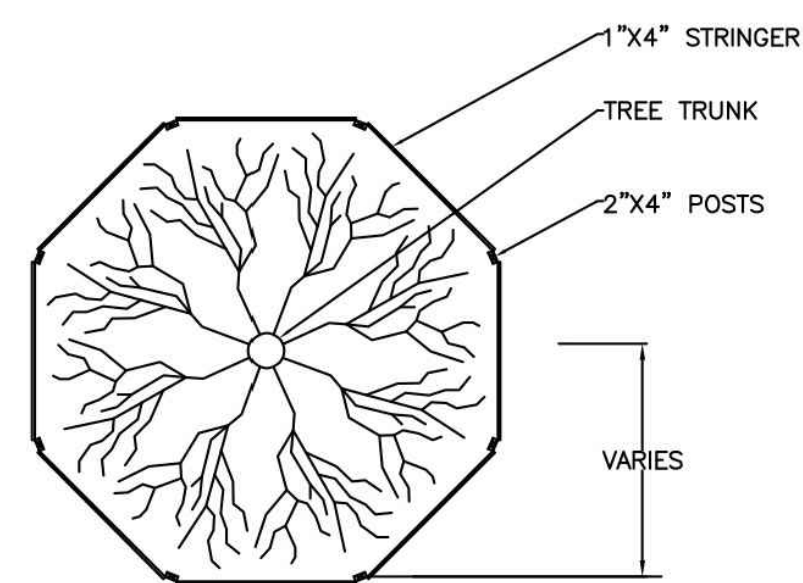




TREE MITIGATION TABLE	
1	Total Palms to be removed
16	Total DBH to be removed



SECTION



TOP VIEW

- NOTES:
1. BARRICADE CIRCLE TO BE CENTERED ON TREE TRUNK(S). FOR GROUPS OF TREES, PLACE BARRICADES BETWEEN TREES AND CONSTRUCTION ACTIVITY.
 2. TREE PROTECTION BARRICADES SHALL BE LOCATED TO PROTECT EXISTING, RELOCATED AND NEW TREES AND CONSTRUCTION ACTIVITIES. THE PROTECTIVE BARRIER SHALL BE PLACED AROUND THE TREE AT A DISTANCE OF 6 FEET FROM THE TREE TRUNK OR AT THE CANOPY DRIP LINE, WHICHEVER IS GREATER OR AS SHOWN ON LANDSCAPE PLAN.

CITY OF HOLLYWOOD TREE PROTECTION

PLAN / SECTION

NOT TO SCALE

TREE DISPOSITION LEGEND

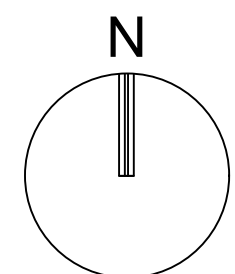
SYMBOL	DESCRIPTION
	EXISTING TREE / PALM TO REMAIN (NO SYMBOL) TO BE PROTECTED DURING CONSTRUCTION NO RELOCATIONS ARE ANTICIPATED AS OF DRAWINGS DATED 11/19/2023
	EXISTING TREE / PALM TO RELOCATE. REFER TO LANDSCAPE PLAN FOR NEW LOCATION
	EXISTING TREE / PALM TO REMOVE. REMOVE ALL CAT 1 INVASIVE EXOTICS. (EX: BRAZ. PEPPER)
XXX-xx	EXISTING TREE / PALM NUMBER. REFER TO TREE DISPOSITION TABLE ON THIS SHEET

TREE DISPOSITION NOTES

1. EXISTING TREES TO REMAIN SHALL BE TRIMMED PER ANSI-A300 STANDARDS, REMOVING WEAKEST RUBBING BRANCHES AND DEAD BRANCHES, BUT RETAINING 80% OF FOLIAGE. LARGE TREES SHALL HAVE LOWER BRANCHES CLEARED UP TO 8'.
2. SYMBOLS MAY BE SHOWN OFFSET FROM ACTUAL TREE LOCATION FOR CLARITY.
3. CONTACT LANDSCAPE ARCHITECT /ISA CERTIFIED ARBORIST FOR CLARIFICATION ON ANY DISCREPANCIES.
4. TRIALING AND ANY NECESSARY ROOT PRUNING SHALL BE PERFORMED OR SUPERVISED BY A CERTIFIED ARBORIST.
5. ALL TREE WORK REQUIRE PERMITTING BY A REGISTERED COUNTY TREE TRIMMER.
6. BUBBLERS SHALL BE PROVIDED FOR ALL RELOCATED TREES AND PALMS.
7. REMOVAL OF ANY TREES OR PALMS WILL REQUIRE A WRITTEN "TREE REMOVAL PERMIT" FROM THE LOCAL GOVERNING AGENCY PRIOR TO REMOVAL. CONFIRM WITH LOCAL GOVERNING AGENCY THAT TREES CLASSIFIED AS NUISANCE/EXOTIC INVASIVE MAY BE EXEMPT.
8. ALL TREES AND PLANT MATERIAL TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION. REFER TO THE PROTECTION DETAIL. THE CONTRACTOR SHALL TAKE EXTRA CAUTION TO PREVENT ANY DAMAGE TO THE TRUNK, ROOT ZONES AND GRADE.
9. ALL CATEGORY 1 EXOTIC/INVASIVE TREES TO BE REMOVED PER LOCAL ORDINANCE.

ADDITIONAL CITY OF HOLLYWOOD NOTE:

1. NO TREE REMOVAL OR PLANTING ALLOWED UNTIL SUB-PERMITTS ARE FULLY APPROVED BY CITY.



GRAPHIC SCALE

SCALE: 1" = 20'

NOTE: PRINTED DRAWING SIZE
MAY HAVE CHANGED FROM
ORIGINAL. VERIFY SCALE USING
BAR SCALE ABOVE.



**301 East Atlantic Blvd.
Pompano Beach, FL 33060
PH: (954) 788-3400**

Florida Engineering Business License: CA7928
Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC2600045

REVISIONS

[illegible]

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

**THESE PLANS ARE NOT FULLY PERMITTED
AND ARE SUBJECT TO REVISIONS MADE
DURING THE PERMITTING PROCESS.**

**RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.**

ISSUE DATE: 06/30/2023

DESIGNED BY: CP

DRAWN BY: CP, RP

CHECKED BY: KS, PW

BID-CONTRACT:

PAUL H. WEINBERG, PLA
FLORIDA REG. NO. LA6666804
(FOR THE FIRM)

CLIENT

**1817 TAYLOR
DEVELOPMENT LLC**

PROJECT

**STAR TOWER
HOLLYWOOD**

**410 N. FEDERAL HWY
HOLLYWOOD, FL
33020**

SHEET TITLE

TREE DISPOSITION PLAN

**SHEET
NUMBER** **LD-101**

PROJECT NUMBER	13778.00
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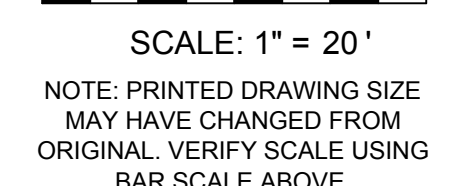
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Plotted by: cphillips On 11/16/2023 12:29 PM

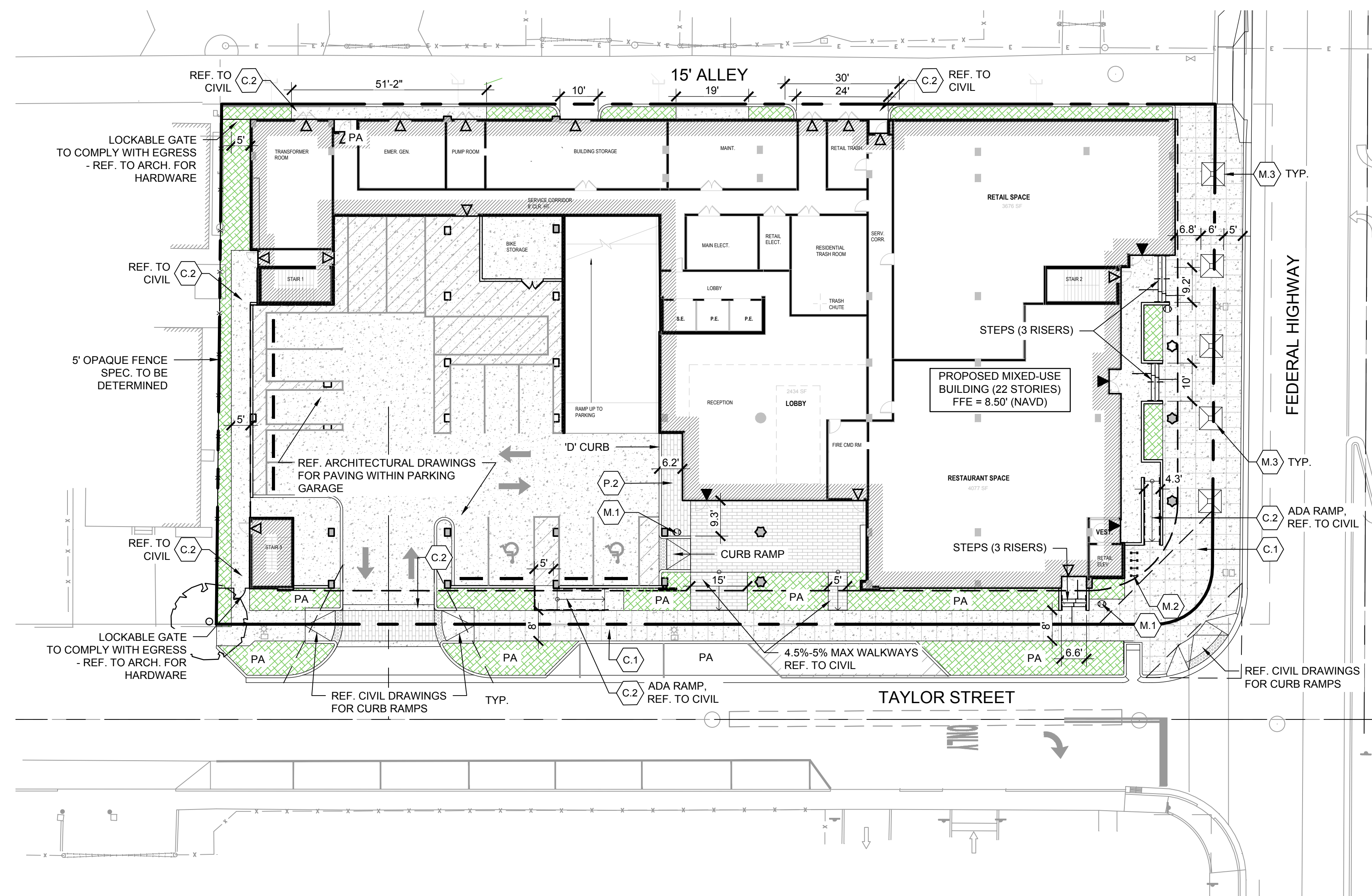
**RESPONSIBILITY FOR THE USE OF THESE
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USER.**

BID-CONTRACT:

	TREE GRATE - OBLIO 6"X6" HEEL PROOF - 71.88"X71.88"x1.25"	ALUMINUM TEXTURE
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STATUS: PRELIMINARY



[illegible]

**301 East Atlantic Blvd.
Pompano Beach, FL 33060
PH: (954) 788-3400**

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Florida Surveyor and Mapper Business License: LB6860
Florida Landscape Architecture Business License: LC26000457

REVISIONS		
NO.	DESCRIPTION	DATE
	TAC - P&Z	09/13/2023
	FINAL TAC - P&Z	11/15/2023

PRELIMINARY PLAN
NOT FOR CONSTRUCTION

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ISSUE DATE: 06/30/2023

DESIGNED BY: CF

DRAWN BY: CP, RF

CHECKED BY: KS, PW

BID-CONTRACT:

PAUL H. WEINBERG, PLA
FLORIDA REG. NO. LA6666804
(FOR THE FIRM)

CLIENT

**1817 TAYLOR
DEVELOPMENT LLC**

PROJECT

**STAR TOWER
HOLLYWOOD**

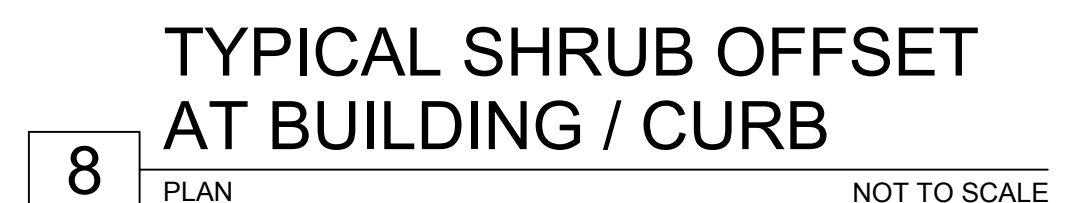
**410 N. FEDERAL HWY
HOLLYWOOD, FL
33020**

SHEET TITLE

PLANTING NOTES

SHEET **LP-001**

PROJECT NUMBER	13778-00
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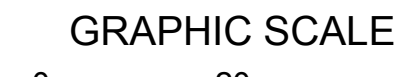
STATISTICS: DPEI IMINAPV



TAYLOR STREET

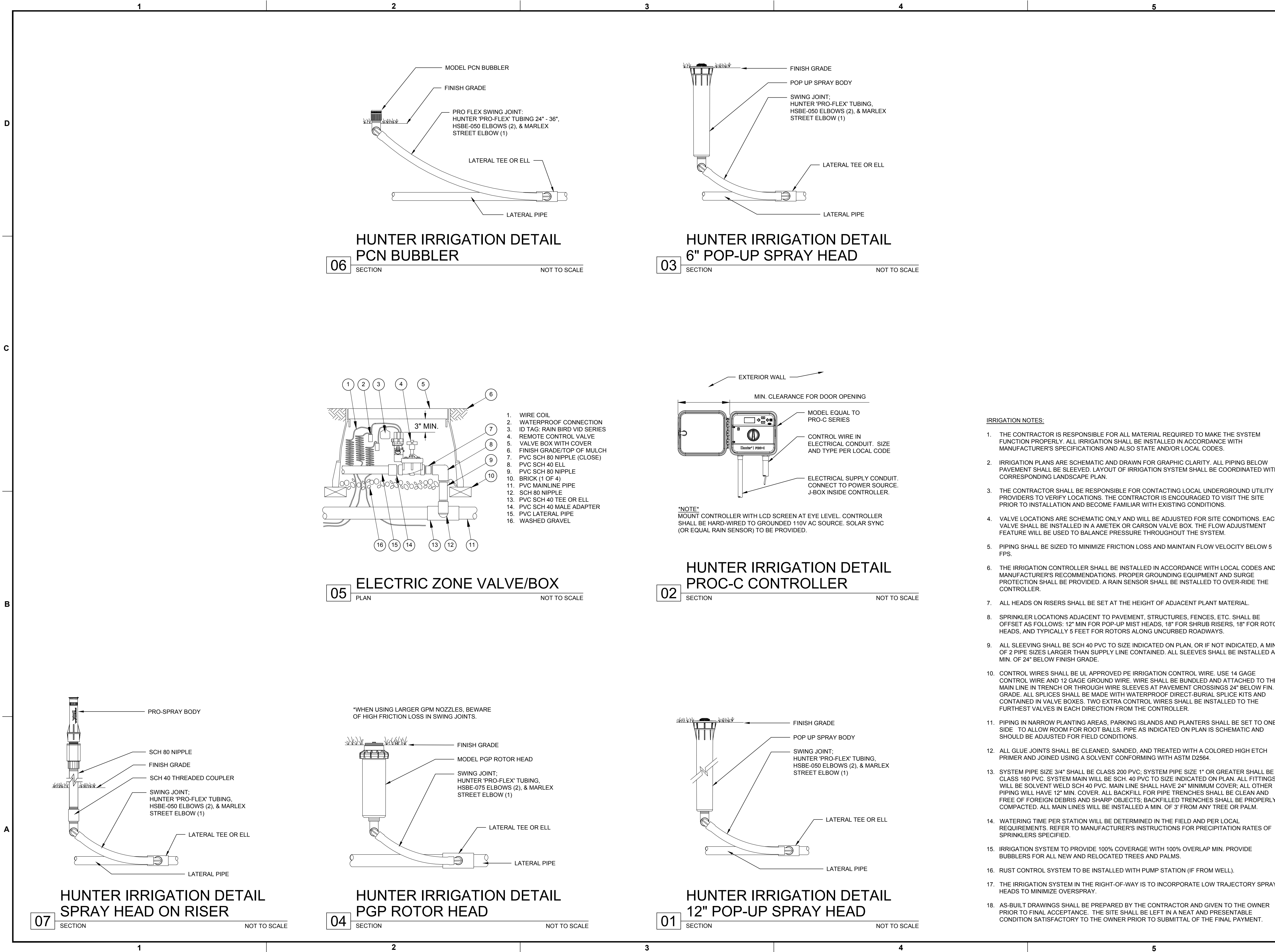
FEDERAL HIGHWAY

IRRIGATION SCHEDULE



PROJECT NUMBER	13778.00
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STATUS: PRELIMINARY



REVISIONS		
NO.	DESCRIPTION	DATE
	TAC - P&Z	09/13/2023
	FINAL TAC - P&Z	11/15/2023

**PRELIMINARY PLAN
NOT FOR CONSTRUCTION**
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RESPONSIBILITY FOR THE USE OF THESE
PLANS PRIOR TO OBTAINING PERMITS FROM
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USER.

ISSUE DATE:	06/30/2023
DESIGNED BY:	CP
DRAWN BY:	CP, RP
CHECKED BY:	KS, PW
BID-CONTRACT:	

PAUL H. WEINBERG, PLA
FLORIDA REG. NO. LA666804
(FOR THE FIRM)

CLIENT

**1817 TAYLOR
DEVELOPMENT LLC**

PROJECT

**STAR TOWER
HOLLYWOOD**

**410 N. FEDERAL HWY
HOLLYWOOD, FL
33020**

SHEET TITLE	
IRRIGATION DETAILS	
SHEET NUMBER	LI-501
PROJECT NUMBER	13778.00

- IRRIGATION NOTES:
- THE CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL REQUIRED TO MAKE THE SYSTEM FUNCTION PROPERLY. ALL IRRIGATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND ALSO STATE AND/OR LOCAL CODES.
 - IRRIGATION PLANS ARE SCHEMATIC AND DRAWN FOR GRAPHIC CLARITY. ALL PIPING BELOW PAVEMENT SHALL BE SLEEVED. LAYOUT OF IRRIGATION SYSTEM SHALL BE COORDINATED WITH CORRESPONDING LANDSCAPE PLAN.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOCAL UNDERGROUND UTILITY PROVIDERS TO VERIFY LOCATIONS. THE CONTRACTOR IS ENCOURAGED TO VISIT THE SITE PRIOR TO INSTALLATION AND BECOME FAMILIAR WITH EXISTING CONDITIONS.
 - VALVE LOCATIONS ARE SCHEMATIC ONLY AND WILL BE ADJUSTED FOR SITE CONDITIONS. EACH VALVE SHALL BE INSTALLED IN A AMETEK OR CARSON VALVE BOX. THE FLOW ADJUSTMENT FEATURE WILL BE USED TO BALANCE PRESSURE THROUGHOUT THE SYSTEM.
 - PIPING SHALL BE SIZED TO MINIMIZE FRICTION LOSS AND MAINTAIN FLOW VELOCITY BELOW 5 FPS.
 - THE IRRIGATION CONTROLLER SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS. PROPER GROUNDING EQUIPMENT AND SURGE PROTECTION SHALL BE PROVIDED. A RAIN SENSOR SHALL BE INSTALLED TO OVER-RIDE THE CONTROLLER.
 - ALL HEADS ON RISERS SHALL BE SET AT THE HEIGHT OF ADJACENT PLANT MATERIAL.
 - SPRINKLER LOCATIONS ADJACENT TO PAVEMENT, STRUCTURES, FENCES, ETC. SHALL BE OFFSET AS FOLLOWS: 12" MIN FOR POP-UP MIST HEADS, 18" FOR SHRUB RISERS, 18" FOR ROTOR HEADS, AND TYPICALLY 5 FEET FOR ROTORS ALONG UNCURBED ROADWAYS.
 - ALL SLEEVING SHALL BE SCH 40 PVC TO SIZE INDICATED ON PLAN, OR IF NOT INDICATED, A MIN. OF 2 PIPE SIZES LARGER THAN SUPPLY LINE CONTAINED. ALL SLEEVES SHALL BE INSTALLED A MIN. OF 24" BELOW FINISH GRADE.
 - CONTROL WIRES SHALL BE UL APPROVED PE IRRIGATION CONTROL WIRE. USE 14 GAGE CONTROL WIRE AND 12 GAGE GROUND WIRE. WIRE SHALL BE BUNDLED AND ATTACHED TO THE MAIN LINE IN TRENCH OR THROUGH WIRE SLEEVES AT PAVEMENT CROSSINGS 24" BELOW FIN. GRADE. ALL SPLICES SHALL BE MADE WITH WATERPROOF DIRECT-BURIAL SPLICE KITS AND CONTAINED IN VALVE BOXES. TWO EXTRA CONTROL WIRES SHALL BE INSTALLED TO THE FURTHEST VALVES IN EACH DIRECTION FROM THE CONTROLLER.
 - PIPING IN NARROW PLANTING AREAS, PARKING ISLANDS AND PLANTERS SHALL BE SET TO ONE SIDE TO ALLOW ROOM FOR ROOT BALLS. PIPE AS INDICATED ON PLAN IS SCHEMATIC AND SHOULD BE ADJUSTED FOR FIELD CONDITIONS.
 - ALL GLUE JOINTS SHALL BE CLEANED, SANDED, AND TREATED WITH A COLORED HIGH ETCH PRIMER AND JOINED USING A SOLVENT CONFORMING WITH ASTM D2564.
 - SYSTEM PIPE SIZE 3/4" SHALL BE CLASS 200 PVC; SYSTEM PIPE SIZE 1" OR GREATER SHALL BE CLASS 160 PVC. SYSTEM MAIN WILL BE SCH. 40 PVC TO SIZE INDICATED ON PLAN. ALL FITTINGS WILL BE SOLVENT WELD SCH 40 PVC. MAIN LINE SHALL HAVE 24" MINIMUM COVER; ALL OTHER PIPING WILL HAVE 12" MIN. COVER. ALL BACKFILL FOR PIPE TRENCHES SHALL BE CLEAN AND FREE OF FOREIGN DEBRIS AND SHARP OBJECTS; BACKFILLED TRENCHES SHALL BE PROPERLY COMPACTED. ALL MAIN LINES WILL BE INSTALLED A MIN. OF 3' FROM ANY TREE OR PALM.
 - WATERING TIME PER STATION WILL BE DETERMINED IN THE FIELD AND PER LOCAL REQUIREMENTS. REFER TO MANUFACTURER'S INSTRUCTIONS FOR PRECIPITATION RATES OF SPRINKLERS SPECIFIED.
 - IRRIGATION SYSTEM TO PROVIDE 100% COVERAGE WITH 100% OVERLAP MIN. PROVIDE BUBBLERS FOR ALL NEW AND RELOCATED TREES AND PALMS.
 - RUST CONTROL SYSTEM TO BE INSTALLED WITH PUMP STATION (IF FROM WELL).
 - THE IRRIGATION SYSTEM IN THE RIGHT-OF-WAY IS TO INCORPORATE LOW TRAJECTORY SPRAY HEADS TO MINIMIZE OVERSPRAY.
 - AS-BUILT DRAWINGS SHALL BE PREPARED BY THE CONTRACTOR AND GIVEN TO THE OWNER PRIOR TO FINAL ACCEPTANCE. THE SITE SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE OWNER PRIOR TO SUBMITTAL OF THE FINAL PAYMENT.

[illegible]

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**RESPONSIBILITY FOR THE USE OF THESE
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ALL AGENCIES HAVING JURISDICTION OVER
THE PROJECT WILL FALL SOLELY UPON THE
USER.**

ISSUE DATE:	06/30/2023
-------------	------------

DESIGNED BY: CP

DRAWN BY: CP, RP

CHECKED BY:	KS, PW
-------------	--------

BID-CONTRACT:

PAUL H. WEINBERG, PLA
FLORIDA REG. NO. LA6666804
(FOR THE FIRM)

CLIENT

**1817 TAYLOR
DEVELOPMENT LLC**

PROJECT

**STAR TOWER
HOLLYWOOD**

**410 N. FEDERAL HWY
HOLLYWOOD, FL
33020**

SHEET TITLE

EXTERIOR LIGHTING & PHOTOMETRICS PLAN

SHEET
NUMBER **LL-101**

PROJECT NUMBER	13778.00
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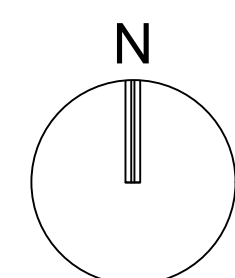
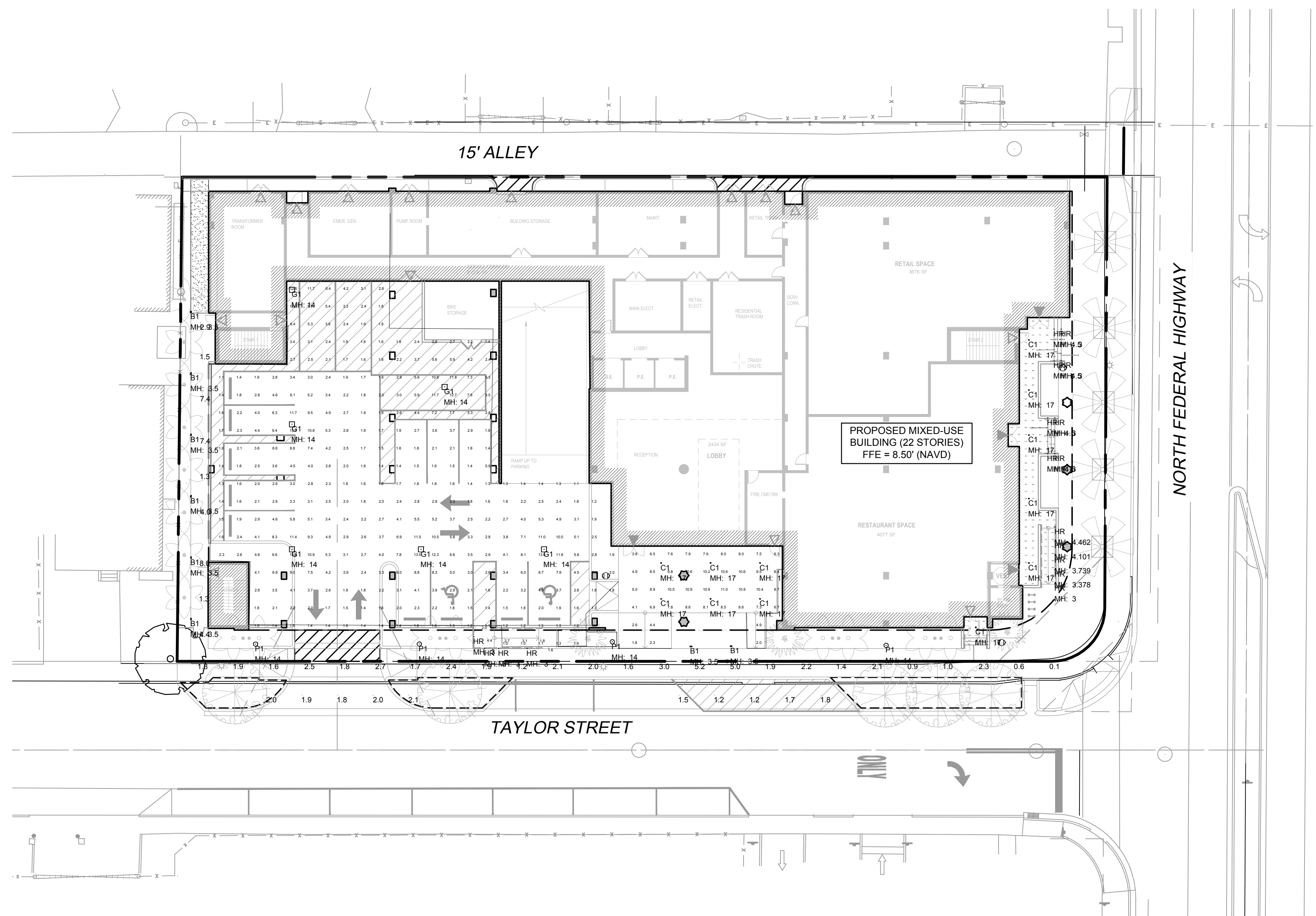
STATUS: PRELIMINARY

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
EASTERN RAMP_Planar	8.62	10.9	6.4	1.35	1.70
EASTERN TERRACE_Top	7.47	13.9	4.2	1.78	3.31
ENTRY PLAZA	6.86	11.0	0.9	7.62	12.22
GARAGE L1	3.89	13.8	0.9	4.32	15.33
NORTHWEST EGRESS	3.42	7.4	1.3	2.63	5.69
SHOOTHWEST EGRESS	4.57	8.0	1.3	3.52	6.15
SIDEWALK	2.04	5.2	0.1	20.40	52.00
SOUTH WEST GARAGE RAMP	2.60	4.4	1.6	1.63	2.75
NORTH EASTERN STAIR	9.51	15.1	4.9	1.94	3.08
ON STREET PARKING	1.44	2.1	0.3	4.80	7.00
SOUTH EASTERN RAMP	8.00	10.9	4.2	1.90	2.60
SOUTH EASTERN STAIR	9.40	13.8	5.3	1.77	2.60
SOUTH STAIR	4.85	5.4	4.4	1.10	1.23

Luminaire Schedule						
Symbol	Qty	Label	Description	Lum. Watts	Total Watts	LLF
	7	B1	LANDSCAPE FORMS BW101-T4-30K-UV1	8.0059	56.041	0.900
	7	G1	BEGHELLI BS400LEDH0WT30120-277V	60	420	1.000
	17	HR	WAGNER LULRxx30KA3	2.89	49.13	1.000
	4	P1	LANDSCAPE FORMS AC-048L3-035F-30K	57.28	229.12	0.900

NOTES:

3. THE MAXIMUM LIGHT LEVEL ALONG THE NORTHERN AND AND WESTERN PROPERTY LINES IS TO BE 0.5 FOOT-CANDLE
4. SITE LIGHTING IDENTIFIED HERE IS FOR FIXTURE SPECIFICATION AND LOCATION ONLY. ELECTRICAL ENGINEER TO PROVIDE ALL ELECTRICAL REQUIREMENTS INCLUDING CIRCUITRY.



GRAPHIC SCALE

SCALE: 1" = 20'

NOTE: PRINTED DRAWING SIZE
MAY HAVE CHANGED FROM
ORIGINAL. VERIFY SCALE USING
BAR SCALE ABOVE.