

ELECTRICAL ABBREVIATIONS	
NOTE: NOT ALL ABBREVIATIONS MAY BE USED.	
ABBREVIATION	DESCRIPTION
1P	1 POLE (2P, 3P, 4P, ETC.)
1PH	SINGLE-PHASE
2C	2 CONDUCTOR (3C, 4C, ETC.)
2W	2 WIRES (3W, 4W, ETC.)
3PH	THREE-PHASE
A	AMPERE
AC	AIR CONDITIONING UNIT
AE	ARCHITECT/ENGINEER
AV	AUDIO VISUAL
AC	ALTERNATING CURRENT
ACT	ABOVE COUNTERTOP
ADN	ADDITIONAL
ADJ	ADJACENT, ADJOINING
ADO	AUTOMATIC DOOR OPERATOR
AF	AMPERE FRAME OR AMP FUSE
AFC	AVAILABLE FAULT CURRENT
AFGI	ARC FAULT CIRCUIT INTERRUPTER
AFI	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ALT	ALTERNATE
AMB	AMBIENT
AMP	AMPLIFIER
APPROX	APPROXIMATELY
ARCH	ARCHITECT, ARCHITECTURAL
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BKR	BREAKER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
BYP	BYPASS
C	CONDUIT
C.O.	CONDUIT ONLY
CAP	CAPACITY
CATV	CATALOG
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCIV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CD	CONSTRUCTION DOCUMENTS
CFGI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFI	CONTRACTOR FURNISHED, OWNER INSTALLED
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CLG	CELLING
CMU	CONCRETE MASONRY UNIT
COAX	COAXIAL CABLE
COMB	COMBINATION
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUE, CONTINUATION
CONTR	CONTRACTOR
CP	CONTROL POWER TRANSFORMER
CR	CRITICAL
CR	COLOR RENDERING INDEX
CT	CURRENT TRANSFORMER
CTR	CENTER
CU	COPPER
DB	DEBT/BANK
DBA	DECIBEL
DC	DIRECT CURRENT
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIA	DIAMETER
DIAG	DIAGRAM
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DS	DISCONNECT SWITCH
DWG	DRAWING
E.O.	ELECTRICALLY OPERATED
EC	ELECTRICAL CONTRACTOR
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
EM	EMERGENCY
EMB	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
EPMS	ELECTRICAL POWER MANAGEMENT SYSTEM
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
EWI	ELECTRIC WATER HEATER
EXST	EXISTING

ELECTRICAL ABBREVIATIONS	
NOTE: NOT ALL ABBREVIATIONS MAY BE USED.	
ABBREVIATION	DESCRIPTION
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FAMP	FIRE ALARM ANNUNCIATOR PANEL
FASBP	FIRE ALARM BATTERY POWER SUPPLY PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FOOT CANDLE
FCU	FAN COIL UNIT
FXIT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE METALLIC CONDUIT
FLR	FLOOR
FLD	FLOODLIGHT
FLUOR	FLUORESCENT
FT	FEET OR FOOT
FU	FUSE
GGROUND	GROUND
GA	GALVANNEED
GAL	GALLON
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GEN	GENERATOR
GFGISIT	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUNDING
GTB	GROUND TERMINAL BOX
HI	HANDHOLE
HSA	HANDS-FREE AUTOMATIC
HP	HORSEPOWER
HRG	HIGH RESISTANCE GROUND
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HZ	HERTZ
IED	INFLUENT OUTLET
ICCB	INSULATED CASE CIRCUIT BREAKER
IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA
IG	INSULATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
J	JUNCTION BOX
KV	KILOVOLT
KWH	KILOVOLT AMPERE PER HOUR
KVA	KILOVOLT AMPERE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LAN	LOCAL AREA NETWORK
LCP	LIGHTING CONTROL PANEL
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LP	LIGHT POLE
LRA	LOCKED ROTOR AMPS
LRP	LIGHTING RELAY PANEL
LS	LIFE SAFETY
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
LTG	LIGHTNING
LTNS	LIGHTNING
LV	LOW VOLTAGE
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MAIN CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MESH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTOR
MSB	MAIN SWITCHBOARD
MT/ATO/MTG	MOUNT, MOUNTED, MOUNTING
MTR	MOTOR, MOTORIZED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT AMPERE
MW	MEGAWATT
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT OR N	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD
P	POLE
PA	PUBLIC ADDRESS
PS	PULL BOX OR PUSHBUTTON

ELECTRICAL ABBREVIATIONS	
NOTE: NOT ALL ABBREVIATIONS MAY BE USED.	
ABBREVIATION	DESCRIPTION
PF	POWER FACTOR
PH	PHASE
PV	POST INDICATOR VALVE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER POLE
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
QTY	QUANTITY
RCP	REFLECTED CEILING PLAN
RECP	RECEPTACLE
RIS	RIGID GALVANIZED STEEL
RMS	ROOT MEAN SQUARE
RTU	ROOM TOP UNIT
SA	SURGE ARRESTER
SCC	SHORT CIRCUIT CAPACITY
SEC	SECONDARY
SE	SQUARE FOOT (FEET)
SP	SPARE
SPD	SURGE PROTECTIVE DEVICE
SPR	SPECIFICATION
SPST	SINGLE POLE SINGLE THROW
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMBOLICAL
SYS	SYSTEM
TC	TIME CLOCK
TL	TWIST LOCK
TR	TAMPER RESISTANT
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP	TYPICAL
UC	UNDER COUNTER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTL	UTILITY
V	VOLT, VOLTAGE
VA	VOLT AMPERE
VAR	VOLT AMPERE REACTIVE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W	WITH
WO	WITHOUT
WG	WIRE GUARD
WH	WATER HEATER
WP	WATERPROOF
XPR	TRANSFER
XMR	TRANSFORMER

ELECTRICAL GENERAL NOTES																	
A.	UNLESS OTHERWISE INDICATED, MOUNTING ELEVATIONS ARE CENTERLINE ELEVATIONS.																
B.	CONDUIT HOMERUNS NOT OTHERWISE MARKED SHALL BE CONSIDERED 2"12 AND 1"12 GROUND IN 3/4" MIN. CONDUIT.																
C.	LIMIT VOLTAGE DROP TO 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS.																
D.	CONTRACTOR SHALL NOT BE PERMITTED TO CONSOLIDATE INDIVIDUAL BRANCH CIRCUIT HOMERUNS EXCEPT AS FOLLOWS: a. WHEN SHOWN ON DRAWINGS b. WITH PRIOR WRITTEN APPROVAL BY THE ENGINEER c. ABOVE ACCESSIBLE CEILING NEAR PANEL INDIVIDUAL 120V & 277V BRANCH CIRCUITS SHALL HAVE DEDICATED NEUTRAL CONDUCTORS. CONSOLIDATED HOMERUNS SHALL HAVE A MAXIMUM OF 3 SEPARATE PHASE CONDUCTORS.																
E.	CONDUIT AND CONDUCTOR SIZES AND QUANTITIES FOR FEEDERS AND BRANCH CIRCUITS WHICH ARE SHOWN ON RISER DIAGRAMS APPLY TO PLAN SHEETS.																
F.	ALL WALL AND FLOOR PENETRATIONS FOR CONDUIT INSTALLATION SHALL BE PROPERLY SEALED AND FIRE STOPPED.																
G.	ELECTRICAL GEAR SHALL BE NEMA 1 FOR INDOOR LOCATIONS AND NEMA 3R FOR EXTERIOR LOCATIONS UNLESS INDICATED OTHERWISE.																
H.	TRAVELERS FOR MULTIPLE LOCATION SWITCHING ARE NOT MARKED ON THE PLANS. CONTRACTOR SHALL PROVIDE QUANTITY OF CONDUCTORS REQUIRED FOR THE INDICATED SWITCHING.																
I.	CIRCUIT IDENTIFICATION SHALL BE AS FOLLOWS: A.2 INDICATES A CIRCUIT AT CIRCUIT 2 OF PANELBOARD 'A'. REFER TO PANEL SCHEDULE FOR BREAKER INFORMATION. A.5.1 INDICATES TWO CIRCUITS AT CIRCUITS 5 & 7 OF PANELBOARD 'A'. REFER TO PANEL SCHEDULE FOR BREAKER INFORMATION. J. SERIES OR CASCADED RATINGS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED.																
K.	NO WIRING DEVICES OR OUTLET BOXES SHALL BE INSTALLED BACK TO BACK. CONTRACTOR SHALL COORDINATE ALL RECEPTACLE MOUNTING HEIGHTS WITH APPROVED CASEWORK SHOP DRAWINGS PRIOR TO INSTALLATION OF AFFECTED RECEPTACLES.																
L.	WALL MOUNTED EXIT SIGNS INDICATED ABOVE DOORS SHALL BE CENTERED BETWEEN THE TOP OF DOOR FRAME AND CEILING IF VERTICAL DISTANCE BETWEEN THE TWO IS 24 INCHES OR LESS. OTHERWISE, MOUNT BOTTOM OF EXIT SIGN 6 INCHES ABOVE TOP OF DOOR FRAME.																
M.	COORDINATE LOCATIONS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND DETAILS. ARCHITECTURAL ELEVATIONS AND DETAILS TAKE PRECEDENCE OVER LOCATIONS SHOWN ON ELECTRICAL DRAWINGS.																
N.	DRAWINGS REPRESENT ELECTRICAL DESIGN INTENT. CONTRACTOR SHALL FURNISH, INSTALL AND SIZE ALL SLEEVES, HOLES, CORES, PATCHING, SLOTS, ANCHORS, BRACKETS, SUPPORTS, JUNCTION BOXES, PULLBOXES, AND OTHER APPURTENANCES NECESSARY TO EXECUTE THE CONTRACT DOCUMENTS COMPLETE. SOME OF THESE ITEMS MAY BE SHOWN ON THE DRAWINGS FOR CLARITY OR DESIGN PREFERENCE. HOWEVER, NOT ALL OF THE ITEMS, NECESSARY FOR COMPLETE EXECUTION AND INSTALLATION, ARE SHOWN.																
O.	THE RECOMMENDED CIRCUIT LENGTHS AND CIRCUIT LOADING SHALL NOT EXCEED THESE REQUIREMENTS WHEN INSTALLING THE EMERGENCY LIGHTING REMOTE HEADS. 24 VOLT WIRE SIZE: 14AWG. TOTAL WIRING LENGTHS IN FEET: <table border="1"> <tr><td>8</td><td>1,698</td></tr> <tr><td>16</td><td>754</td></tr> <tr><td>24</td><td>543</td></tr> <tr><td>32</td><td>377</td></tr> <tr><td>40</td><td>308</td></tr> <tr><td>48</td><td>271</td></tr> <tr><td>56</td><td>242</td></tr> <tr><td>64</td><td>194</td></tr> </table>	8	1,698	16	754	24	543	32	377	40	308	48	271	56	242	64	194
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64	194																



PROJECT
BASS PARK
FORT LAUDERDALE
PARKS BOND PROGRAM



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ISSUE/REVISION

NO.	DATE	DESCRIPTION
04/12/2024		BID DOCUMENTS
12/22/2023		BUILDING PERMIT
06/23/2023		CONSTRUCTION DOCUMENTS
10/12/2022		DESIGN DEVELOPMENT
07/15/2022		SCHEMATIC DESIGN

IR	DATE	DESCRIPTION
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PROJECT NUMBER

P12644

SHEET TITLE

ELECTRICAL NOTES AND ABBREVIATIONS

SHEET NUMBER

E001



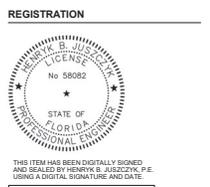
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PROJECT NUMBER
P12644
SHEET TITLE
ELECTRICAL SYMBOLS
SHEET NUMBER
E002

LIGHTING PLAN SYMBOLS	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
x \$Y	WALL SWITCH WITH COVERPLATE, STANDARD MOUNTING HEIGHT 48" A.F.F. : x INDICATES SWITCH AND LUMINAIRE GROUPS, Y INDICATES THE FOLLOWING: BLANK =SINGLE POLE 3 =THREE POLE (3-WAY) 4 =FOUR POLE (4-WAY) D =DIMMER SWITCH T =TIMER SWITCH WP =WEATHERPROOF SWITCH NOTE : MULTIPLE x (FOR EXAMPLE: x1, x2, x3) INDICATES MULTIPLE SWITCHES
\$3,D	WALL MOUNTED DIMMER SWITCH WITH "TRUE" 3-WAY DIMMING CAPABILITIES, STANDARD MOUNTING HEIGHT 48" AFF.
\$OS	WALL MOUNTED SENSOR, SINGLE SWITCHING CONTROL, STANDARD MOUNTING HEIGHT 48" AFF.
\$OSD	WALL MOUNTED SENSOR W/DIMMING, STANDARD MOUNTING HEIGHT 48" AFF.
\$T	WALL MOUNTED SWITCH WITH TIME SWITCH, REFER TO PLANS FOR TIMER TIME, STANDARD MOUNTING HEIGHT 48" AFF.
OC	CEILING MOUNTED OCCUPANCY SENSOR
DS	CEILING MOUNTED DAYLIGHT SENSOR
PC	PHOTOCELL SENSOR
EB	EMERGENCY BATTERY PACK (SEE LIGHTING FIXTURE SCHEDULE)
EA	WALL / CEILING MOUNTED EXIT SIGN (SEE LIGHTING FIXTURE SCHEDULE), DIRECTIONAL ARROW(S) AS INDICATED ON PLANS, SHADED AREA INDICATES ILLUMINATED FACE(S)
LF	LIGHTING FIXTURES CEILING MOUNTED (SEE LIGHTING FIXTURE SCHEDULE). CEILING MOUNTED DOWNLIGHT (SEE LIGHTING FIXTURE SCHEDULE). WALL MOUNTED (SEE LIGHTING FIXTURE SCHEDULE). EMERGENCY LIGHTING FIXTURE WITH BATTERY BACK-UP CAPABLE OF 90 MINUTE RUN TIME. (SEE LIGHTING FIXTURE SCHEDULE). CIRCUIT NUMBER $\frac{XX}{xy}$ SWITCH CONTROL FIXTURE TYPE
EW	EXTERIOR WALL MOUNTED (SEE LIGHTING FIXTURE SCHEDULE).
ST	STRIP FIXTURE (SEE LIGHTING FIXTURE SCHEDULE).
LP	LED POLE MOUNTED SITE LIGHTING FIXTURE. (SEE LIGHTING FIXTURE SCHEDULE).
LV	LED WALL MOUNTED VANTY LIGHT. (SEE LIGHTING FIXTURE SCHEDULE).
LD	LED PENDANT LIGHT. (SEE LIGHTING FIXTURE SCHEDULE).

ONE-LINE DIAGRAM SYMBOLS			
NOTE: NOT ALL SYMBOLS MAY BE USED.			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DISCONNECT SWITCH X INDICATES SIZE Y INDICATES NUMBER OF POLES IF OTHER THAN 3.		CIRCUIT BREAKER X INDICATES FRAME SIZE Y INDICATES TRIP RATING, Z INDICATES NUMBER OF POLES IF OTHER THAN 3.
	FUSED SWITCH X INDICATES SWITCH SIZE, Y INDICATES FUSE SIZE, Z INDICATES NUMBER OF POLES IF OTHER THAN 3.		DRAWOUT CIRCUIT BREAKER X INDICATES FRAME SIZE, Y INDICATES TRIP RATING, Z INDICATES NUMBER OF POLES IF OTHER THAN 3.
	TRANSFER SWITCH AMP RATING, NUMBER OF POLES, ETC. AS INDICATED OR SPECIFIED.		MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER X INDICATES CT RATIO, Y INDICATES FRAME SIZE.
	AUTOMATIC TRANSFER SWITCH WITH BYPASS ISOLATION, AMP RATING, NUMBER OF POLES, ETC. AS INDICATED OR SPECIFIED.		TRANSFORMER KVA, PRI & SEC VOLTAGE, RATINGS, ETC. AS INDICATED OR SPECIFIED.
	FUSED POTENTIAL TRANSFORMER		ISOLATION TRANSFORMER KVA, PRI & SEC VOLTAGE, RATINGS, ETC. AS INDICATED OR SPECIFIED.
	SURGE ARRESTER (QUANTITY OF 3 U.N.G.)		CURRENT TRANSFORMER
	EARTH GROUND		MOTOR CONTROLLER: XX INDICATES TYPE Y INDICATES NEMA SIZE (90,0,1,2,3,4,5, ETC)
	AMMETER SWITCH		NR=FULL VOLTAGE, NON-REVERSING STARTER R=FULL VOLTAGE, REVERSING STARTER SS=SOLID STATE STARTER VF=VARIABLE FREQUENCY DRIVE
	VOLTMETER SWITCH		EMERGENCY POWER OFF
	GROUND FAULT PROTECTOR		CONTROL PANEL
	SURGE PROTECTIVE DEVICE		AMMETER
	EXISTING WORK		DIGITAL MULTIFUNCTION METER
	EXISTING TO BE REMOVED		VOLTMETER
	EXISTING TO REMAIN		WATT METER
	NEW WORK		GENERATOR
			MOTOR (MHP)
			KEYED INTERLOCK
			PANELBOARD

POWER PLAN SYMBOLS	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	NORMAL POWER DUPLEX RECEPTACLE WITH COVERPLATE, NEMA 5-20R, STANDARD MOUNTING HEIGHT 18" A.F.F. UNLESS OTHERWISE NOTED. X INDICATES CIRCUIT NUMBER, Y INDICATES NON-STANDARD MOUNTING HEIGHT, AND Z INDICATES THE FOLLOWING: COPY = COPIER, MTD 42" A.F.F. REF = REFRIGERATOR, MTD 48" A.F.F. T = TAMPER RESISTANT TV = TELEVISION, MTD 22" A.F.F. U = USB UC = UNDER COUNTER V = VENDING, MTD 48" A.F.F. WP = WEATHER PROOF XX = MTD AT "XX" AFF
	GFCI RECEPTACLE INSTALLED IN READILY ACCESSIBLE LOCATION, SAME NOTATION AS ABOVE.
	DUPLEX RECEPTACLE, SAME NOTATION AS ABOVE.
	QUAD RECEPTACLE, SAME NOTATION AS ABOVE.
	SIMPLEX RECEPTACLE, SAME NOTATION AS ABOVE.
	SPECIAL RECEPTACLE, SAME NOTATION AS ABOVE.
	FLOOR BOX WITH FLUSH MOUNTED DEVICE
	CEILING MOUNTED DUPLEX RECEPTACLE
	JUNCTION BOX / EQUIPMENT CONNECTION
	1-PHASE MOTOR CONNECTION
	3-PHASE MOTOR CONNECTION
	MOTOR RATED SWITCH
	MANUAL MOTOR STARTER, TOGGLE TYPE, WITH THERMAL OVERLOAD DEVICE
	MAGNETIC STARTER
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH, # OF POLES, SWITCH, AND FUSE SIZE AS SHOWN
	COMBINATION MOTOR STARTER/DISCONNECT
	CONTROL STATION: SEE CONTROL DIAGRAMS OR PLAN SHEETS FOR TYPE AND QUANTITY OF DEVICES
	PANELBOARD (SIZED TO SCALE)
	POWER TRANSFORMER (SIZED TO SCALE)
	GROUND ROD
	GROUND BONDING POINT TO STEEL STRUCTURE, REBAR, PIPE, ETC.
	GROUNDING CONNECTION (TYPE AS SHOWN OR NOTED)
	CONDUIT CONCEALED IN WALLS OR ABOVE CEILING.
	UNDERGROUND OR UNDERSLAB CONDUIT
	BARE COPPER GROUND CONDUCTOR, SIZE AS SHOWN
	GROUND BAR
	MANHOLE: X INDICATES TYPE AS FOLLOWS P = POWER MANHOLE T = TELECOMMUNICATIONS MANHOLE

FIRE ALARM SYMBOLS	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	SMOKE DETECTOR
	DUCT SMOKE DETECTOR
	HEAT DETECTOR
	FIRE ALARM STROBE (WALL - MOUNTED) CANDELLAS NOTED BESIDE SYMBOL.
	MANUAL PULL STATION
	HORN/STROBE (WALL - MOUNTED)
	ADDRESSABLE INPUT MODULE
	WATER FLOW SWITCH
	VALVE TAMPER SWITCH
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR PANEL

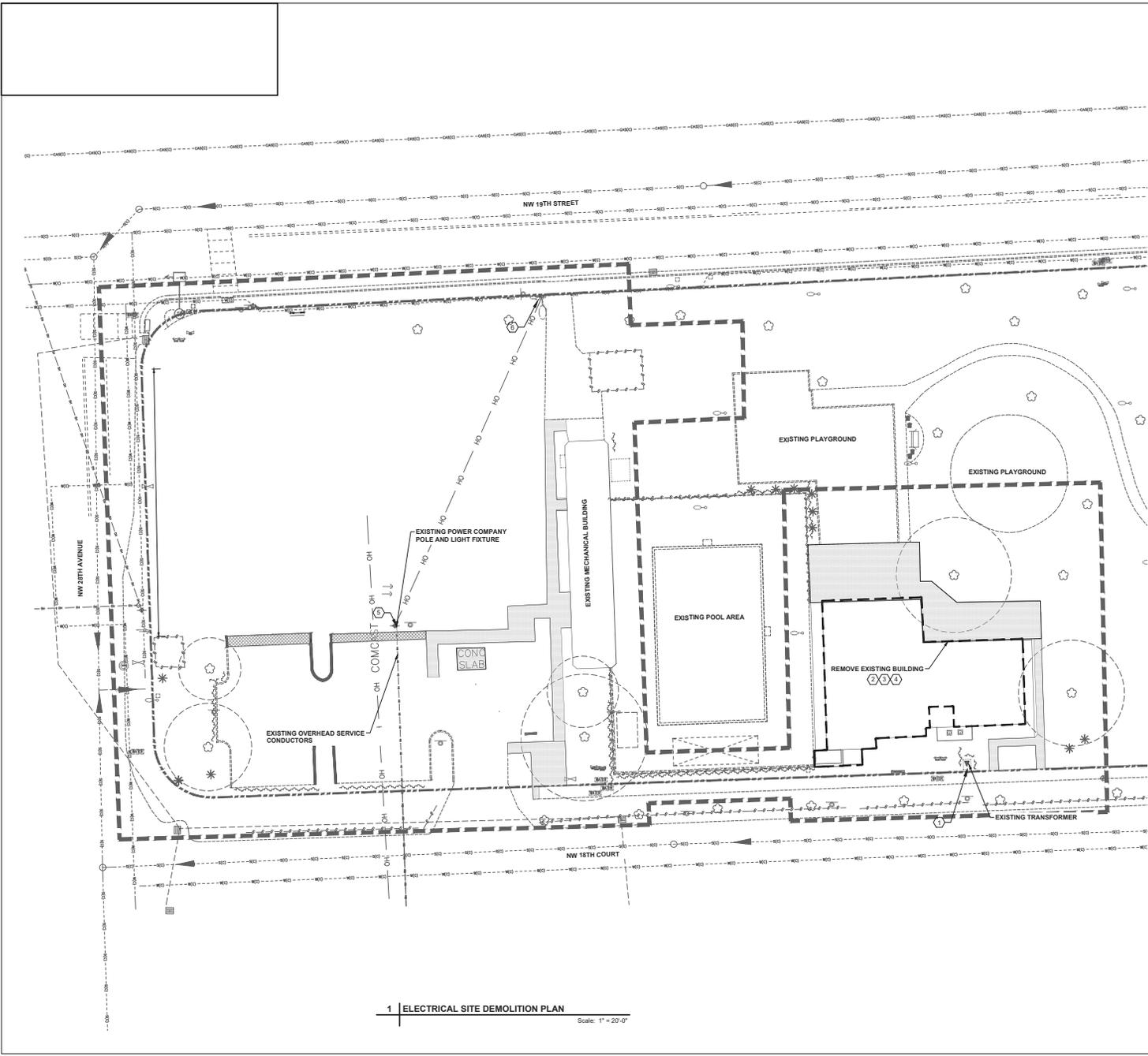
DATA / SYSTEMS SYMBOLS	
NOTE: NOT ALL SYMBOLS MAY BE USED.	
SYMBOL	DESCRIPTION
	ROUGH-IN FOR VOICE DATA DEVICE MOUNTED AT 18" A.F.F. UNLESS NOTED OTHERWISE
	DATA OUTLET FOR TV MOUNTED AT 54" A.F.F., UNLESS NOTED OTHERWISE
	TV OUTLET FOR TV MOUNTED AT 18" A.F.F., UNLESS NOTED OTHERWISE
	ROUGH-IN FOR PHONE MOUNTED AT 54" A.F.F., UNLESS NOTED OTHERWISE
	ROUGH-IN FOR DATA DEVICE - SPECIAL PURPOSE MOUNTED AT ELEVATION INDICATED.
	ROUGH-IN FOR ACCESS CONTROL, CREDENTIAL READER DEVICE MOUNTED AT 48" A.F.F., UNLESS NOTED OTHERWISE
	ROUGH-IN FOR ACCESS DOOR CONTACT
	ROUGH-IN FOR DOOR POSITION SWITCH
	ROUGH-IN FOR ELECTRIC STRIKE
	ROUGH-IN FOR INTERFACE MODULE
	ROUGH-IN FOR REQUEST TO EXIT DEVICE MOUNTED AT 48" A.F.F., UNLESS NOTED OTHERWISE
	ROUGH-IN FOR CCTV CAMERA DEVICE - COORDINATE MOUNTING HEIGHT WITH SYSTEM VENDOR PRIOR TO ROUGH-IN.

WHERE NOT INDICATED ON THE PLANS, BRANCH CIRCUIT CONDUCTORS AND CONDUITS SHALL BE SIZED, AT MINIMUM, BASED ON THE SCHEDULE BELOW. BRANCH CIRCUIT LENGTH SHALL BE LIMITED TO 75'-0" WHERE POSSIBLE. THE WIRING FOR ANY BRANCH CIRCUIT EXCEEDING 75'-0" IN LENGTH SHALL BE UPSIZED TO MAINTAIN +3% VOLTAGE DROP.

OCPD SIZE	BRANCH CIRCUIT WIRING MINIMUM REQUIREMENTS			CONDUIT SIZE	
	PHASE/NEUTRAL	GROUND	3W+GRD	4W+GRD	
20A	#12	#12	#12	3/4"	3/4"
30A	#10	#10	#10	3/4"	3/4"
40A	#8	#10	#10	3/4"	3/4"
55A	#6	#10	#10	3/4"	1"
60A	#4	#10	#10	1"	1-1/4"

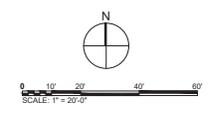
COORDINATE WITH AECOM ON LATEST ISSUE OF DRAWINGS BEFORE COMMENCEMENT OF CONSTRUCTION. NOTE: THE ELECTRONIC RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 610-9.0-04, F.A.C.

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1 ELECTRICAL SITE DEMOLITION PLAN
Scale: 1" = 20'-0"

- KEYED NOTES:**
- EXISTING PAD MOUNTED TRANSFORMER TO REMAIN.
 - ALL POWER CONNECTION TO ALL EQUIPMENT TO BE DISCONNECTED AND REMOVED EXCEPT ELECTRICAL EQUIPMENT IN THE ELECTRICAL ROOM UNLESS OTHERWISE NOTED.
 - ALL ELECTRICAL EQUIPMENT AND DEVICES IN THE BUILDING TO BE REMOVED FROM BUILDING EXCEPTED ELECTRICAL EQUIPMENT IN THE ELECTRICAL ROOM UNLESS OTHERWISE NOTED.
 - DISCONNECT AND REMOVE PANEL L AND P IN THE ELECTRICAL ROOM.
 - COORDINATE WITH POWER COMPANY FOR REMOVAL OR RELOCATION OF EXISTING UTILITY POLE, OVERHEAD SERVICE CONDUCTORS, POLE MOUNTED UTILITY TRANSFORMER, AND POLE MOUNTED LIGHT FIXTURE.
 - COORDINATE WITH POWER COMPANY AND OWNER TO ESTABLISH OWNERSHIP OF ELECTRICAL POLE AND POLE MOUNTED LIGHT FIXTURE. VERIFY REMOVAL, RELOCATION OR REUSE OF ELECTRICAL POLE AND POLE MOUNTED LIGHT FIXTURE. DISCONNECT FROM EXISTING SERVICE AND PREPARE FOR RECONNECTION TO NEW PANELS AS REQUIRED.



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 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM



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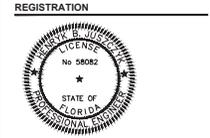
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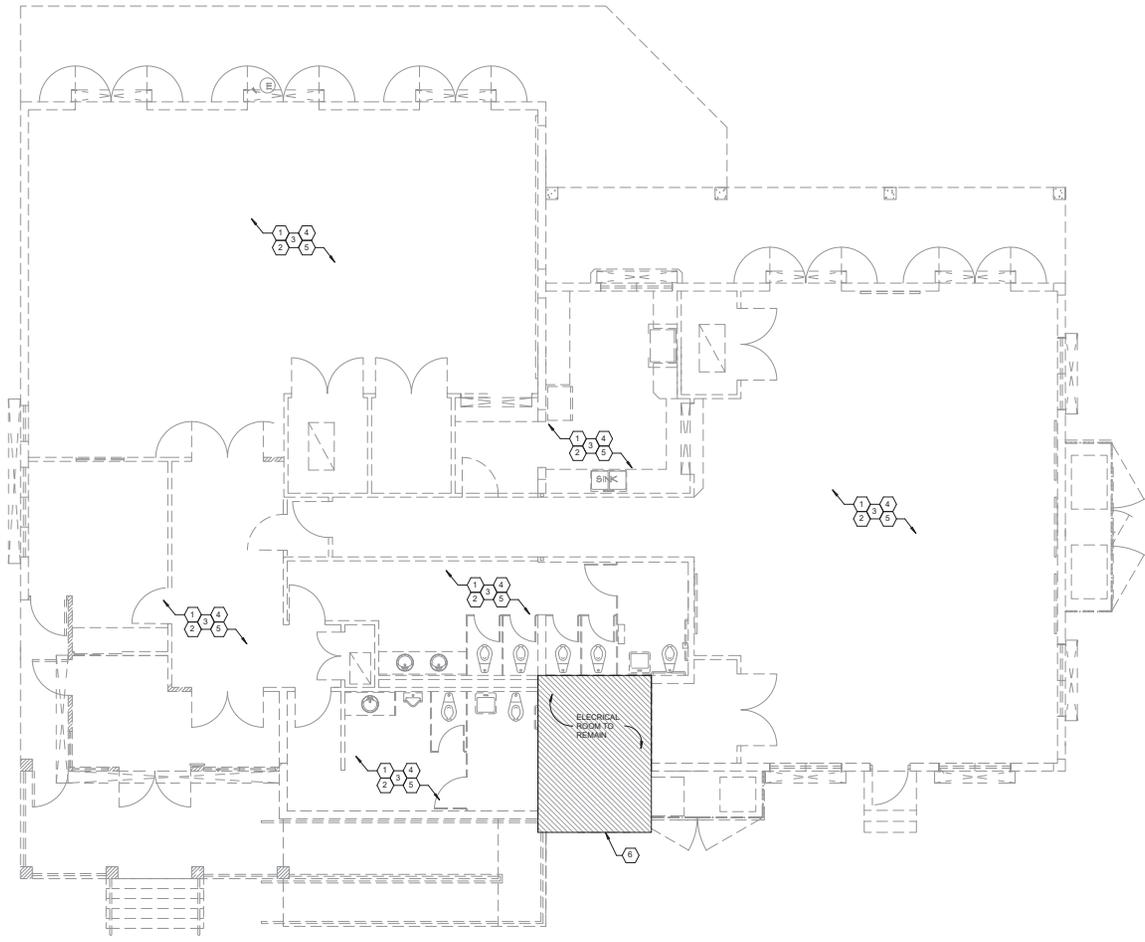
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05/23/2023	CONSTRUCTION DOCUMENTS
10/10/2022	DESIGN DEVELOPMENT
07/15/2022	SCHEMATIC DESIGN
IR	DATE DESCRIPTION

PROJECT NUMBER
 P12644

SHEET TITLE
 ELECTRICAL SITE
 DEMOLITION PLAN

SHEET NUMBER
 ED100



1 EXISTING COMMUNITY CENTER - DEMOLITION PLAN
 Scale: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

- A. REFER TO SHEET E001 FOR GENERAL NOTES.
- B. ALL DEMOLITION TO BE IN COMPLIANCE WITH BUILDING STANDARDS AND DESIGN PRACTICES.
- C. PRESERVE ALL CIRCUITS POWERING RECEPTACLE, LIGHTING, AND EQUIPMENT BEING REMOVED FOR REUSE IN NEW CONSTRUCTION.
- D. REUSE ANY RACEWAY AND BOXES FROM DEMOLISHED DEVICE LOCATION FOR NEW DEVICE IN CLOSE PROXIMITY.

KEYNOTES

TAG	DESCRIPTION
1	DISCONNECT AND REMOVE ALL LUMINAIRES AND LIGHTING CONTROLS. MAINTAIN ALL EXISTING LIGHTING BRANCH CIRCUITS FOR REUSE. REMOVE ANY CONDUIT, CONDUCTORS, AND JUNCTION BOXES WITHIN EXISTING TO REMAIN WALLS. NOT SHOWN FOR REUSE.
2	DISCONNECT AND REMOVE ALL RECEPTACLES. REMOVE ANY CONDUIT, CONDUCTORS, AND JUNCTION BOXES WITHIN EXISTING TO REMAIN WALLS. NOT SHOWN FOR REUSE.
3	DISCONNECT AND REMOVE HVAC POWER CONNECTIONS. MAINTAIN THESE BRANCH CIRCUITS FOR REUSE.
4	DISCONNECT AND REMOVE ALL FIRE ALARM DEVICES. TURN OVER TO OWNER. MAINTAIN FIRE ALARM CONDUITS, CONDUCTORS, AND CIRCUITS FOR REUSE.
5	DISCONNECT AND REMOVE ALL LOW VOLTAGE (AUDIOVISUAL AND COMMUNICATIONS) OUTLETS.
6	ELECTRICAL ROOM SHALL REMAIN. CIRCUITS SERVING THIS ROOM SHALL BE MAINTAINED DURING DEMOLITION. EXISTING CIRCUITS SERVING EQUIPMENT OUTSIDE OF THIS ROOM SHARED WITH EQUIPMENT INSIDE OF THIS ROOM SHALL BE CUT BACK TO THE NEAREST JUNCTION POINT WITHIN THE ROOM.



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PROJECT NUMBER

P12644

SHEET TITLE

ELECTRICAL DEMOLITION FLOOR PLAN

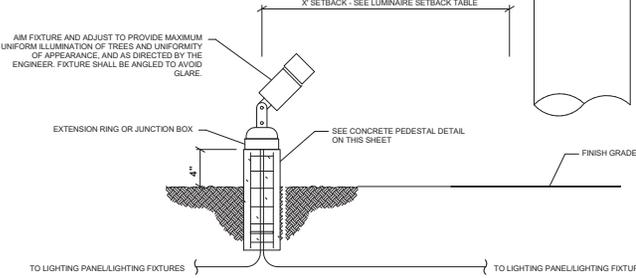
SHEET NUMBER

ED101

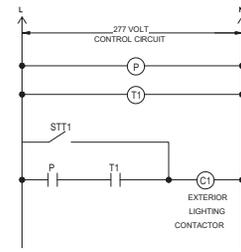
LUMINAIRE SETBACK	
LANDSCAPE TYPE	MIN. SETBACK FROM TRUNKS
NITIDA PALM	2

NOTE: STAKE LOCATIONS OF LANDSCAPE LIGHTING FOR APPROVAL BY ENGINEER AND LANDSCAPE ARCHITECT OF RECORD PRIOR TO INSTALLATION. UPON COMPLETION OF INSTALLATION, NIGHT TIME DEMONSTRATION SHALL BE SHOWN TO ENGINEER AND LANDSCAPE ARCHITECT OF RECORD FOR FINAL APPROVAL OF ULTIMATE ANGLE BASED ON TREE HEIGHT AND SIZE.

TYPICAL FOR EACH TREE UNLESS OTHERWISE NOTED. NOTE THAT ACTUAL QUANTITY OF LUMINAIRES VARIES FROM TREE TO TREE. REFER TO ELECTRICAL PLAN SHEETS FOR ACTUAL QUANTITY OF AESTHETIC LUMINAIRES AT EACH TREE LOCATION.

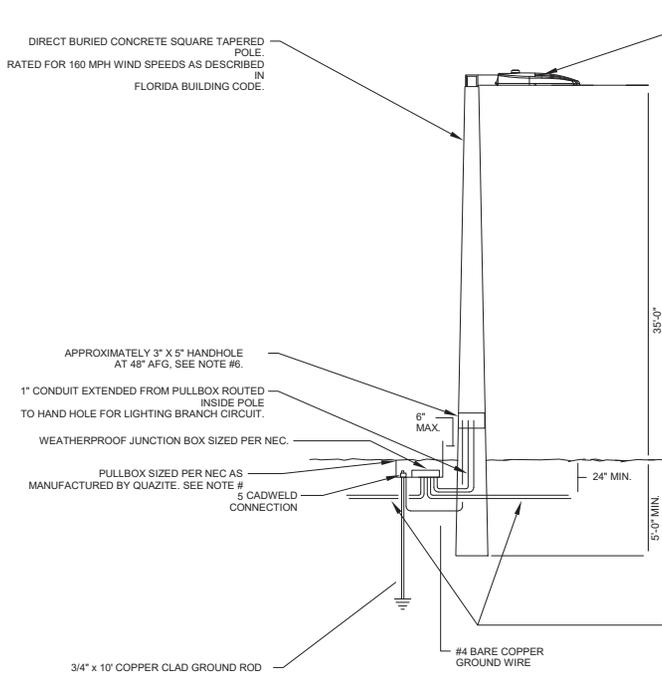


1 | LANDSCAPE LIGHTING - GROUND MOUNTED LUMINAIRES
 NTS



- GENERAL NOTES:
- LIGHT CONTROL SHALL BE PHOTOCELL "ON", TIMECLOCK "OFF".
 - MOUNT ALL COMPONENTS SHOWN IN A NEMA 3R MANUFACTURER MOUNTED STEEL BACK PLATE. ARRANGE ENCLOSURE TO HOUSE ALL COMPONENTS SHOWN. SUBMIT DIMENSIONED DETAIL OF ENCLOSURE SHOWING PLACEMENT OF TERMINAL STRIPS, TIMECLOCK, LIGHTING CONTACTOR, AND MAINTENANCE OVERRIDE SWITCH TO THE ELECTRICAL ENGINEER FOR APPROVAL.
 - LAMINATE ONE COPY OF THIS DETAIL AND SECURE IT TO THE INSIDE DOOR OF THE ENCLOSURE.
- ST1 = MAINTENANCE OVERRIDE SWITCH, PUSHBUTTON TIMER SWITCH (WATTSTOPPER TS-400 OR EQUAL) LOCATED INSIDE CONTACTOR CABINET.
- P = 277V PHOTOCELL, TORK, INTERMATIC, OR EQUAL. MOUNT ON SIDE OF CONTACTOR CABINET AND FACE NORTH.
- T1 = ASTRONOMICAL, 277V TIMECLOCK, TORK, INTERMATIC, OR EQUAL.
- C1 = 30A FULLY-RATED, 6-POLE NORMALLY OPEN ELECTRONICALLY HELD LIGHTING CONTACTOR WITH 277V HOLDING COIL. SQUARE-D TYPE 8903 OR EQUAL.

2 | PARKING LOT LIGHTING CONTROL CABINET DIAGRAM
 NTS



- DIRECT BURIED CONCRETE SQUARE TAPERED POLE, RATED FOR 160 MPH WIND SPEEDS AS DESCRIBED IN FLORIDA BUILDING CODE.
- APPROXIMATELY 3" X 5" HANDHOLE AT 48" AFG, SEE NOTE #6.
- 1" CONDUIT EXTENDED FROM PULLBOX ROUTED INSIDE POLE TO HAND HOLE FOR LIGHTING BRANCH CIRCUIT.
- WEATHERPROOF JUNCTION BOX SIZED PER NEC.
- PULLBOX SIZED PER NEC AS MANUFACTURED BY QUAZITE. SEE NOTE #6.
- 5" CADWELD CONNECTION
- 3/4" x 10" COPPER CLAD GROUND ROD
- #4 BARE COPPER GROUND WIRE
- 24" MIN.
- 5'-0" MIN.
- LENGTH AS REQUIRED TO SATISFY GENERAL NOTE #1 (5'-0" MINIMUM)
- CONDUIT TO ADDITIONAL POLES OR HOMERUNS. SEE ELECTRICAL SITE PLAN FOR SIZE AND NUMBER OF CONDUITS.
- GENERAL NOTES:
- CONTRACTOR TO SUBMIT DESIGN WIND LOAD CALCULATIONS CERTIFYING CONFORMANCE OF POLE ASSEMBLY AS DICTATED BY THE FLORIDA BUILDING CODE. EACH CALCULATION SHALL BE SIGNED AND SEALED BY A STATE OF FLORIDA LICENSED STRUCTURAL ENGINEER.
 - FURNISH AND INSTALL BUSSMAN "TRON" TYPE "HEB" IN-LINE WATERPROOF FUSE HOLDERS. FUSE WITH BUSSMAN TYPE "FNM" FUSES, FUSED AT 1.0A PER LIGHTING FIXTURE. LOCATE FUSES IN POLE HAND HOLE. PROVIDE SURGE PROTECTION DEVICE ON LOAD SIDE OF FUSES LOCATED IN POLE HANDHOLE.
 - COORDINATE ALL WORK WITH CIVIL AND LANDSCAPE SITE PLANS.
 - POLES SHALL BE FACTORY EQUIPPED WITH GROUNDING STUDS. EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED TO THE GROUND STUD.
 - PULLBOX MANUFACTURED BY QUAZITE W/ITER 22 DESIGN LOAD TO HAVE HEAVY-DUTY COPOLYMER FULL D.O.T. TRAFFIC RATED HANDHOLE WITH COVER (COVER TO READ "ELECTRICAL"), FURNISH AND INSTALL GRAVEL (1FT.) IN BOTTOM OF PULLBOX FOR DRAINAGE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FIELD COORDINATE LOCATION OF PULLBOXES.
 - ROUTE CONDUIT CONTINUOUS THRU POLE ASSEMBLY AND TERMINATE WITH INSULATION BUSHING AT HANDHOLE WINDOW.
 - CONTRACTOR TO STAKE LOCATIONS OF LIGHTING POLES USING CIVIL DRAWINGS FOR APPROVAL BY CIVIL AND OWNER PRIOR TO INSTALLATION.

3 | PARKING LOT POLE DETAIL
 NTS



PROJECT
**BASS PARK
 FORT LAUDERDALE
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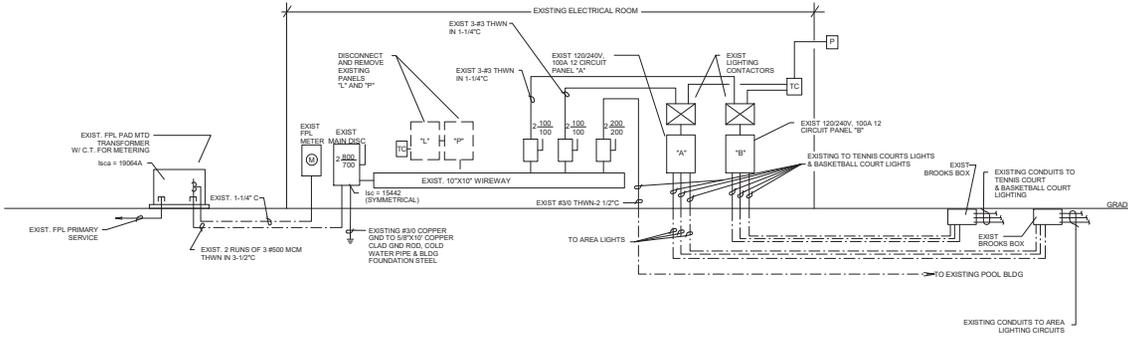
P12644

SHEET TITLE

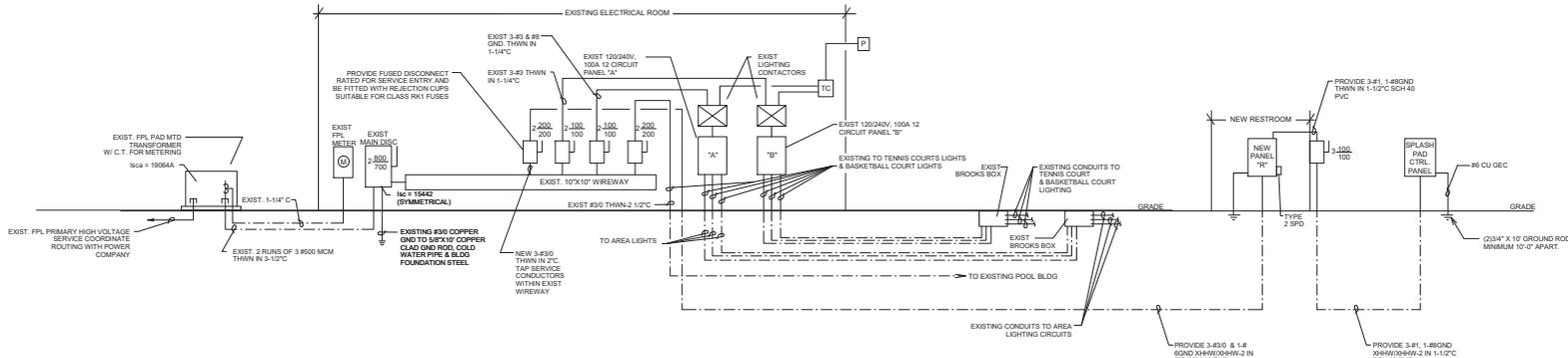
LIGHTING DETAILS

SHEET NUMBER

E501



1 DEMOLITION POOL ACCESS RISER DIAGRAM
NTS



2 NEW POOL ACCESS RISER DIAGRAM
NTS



PROJECT
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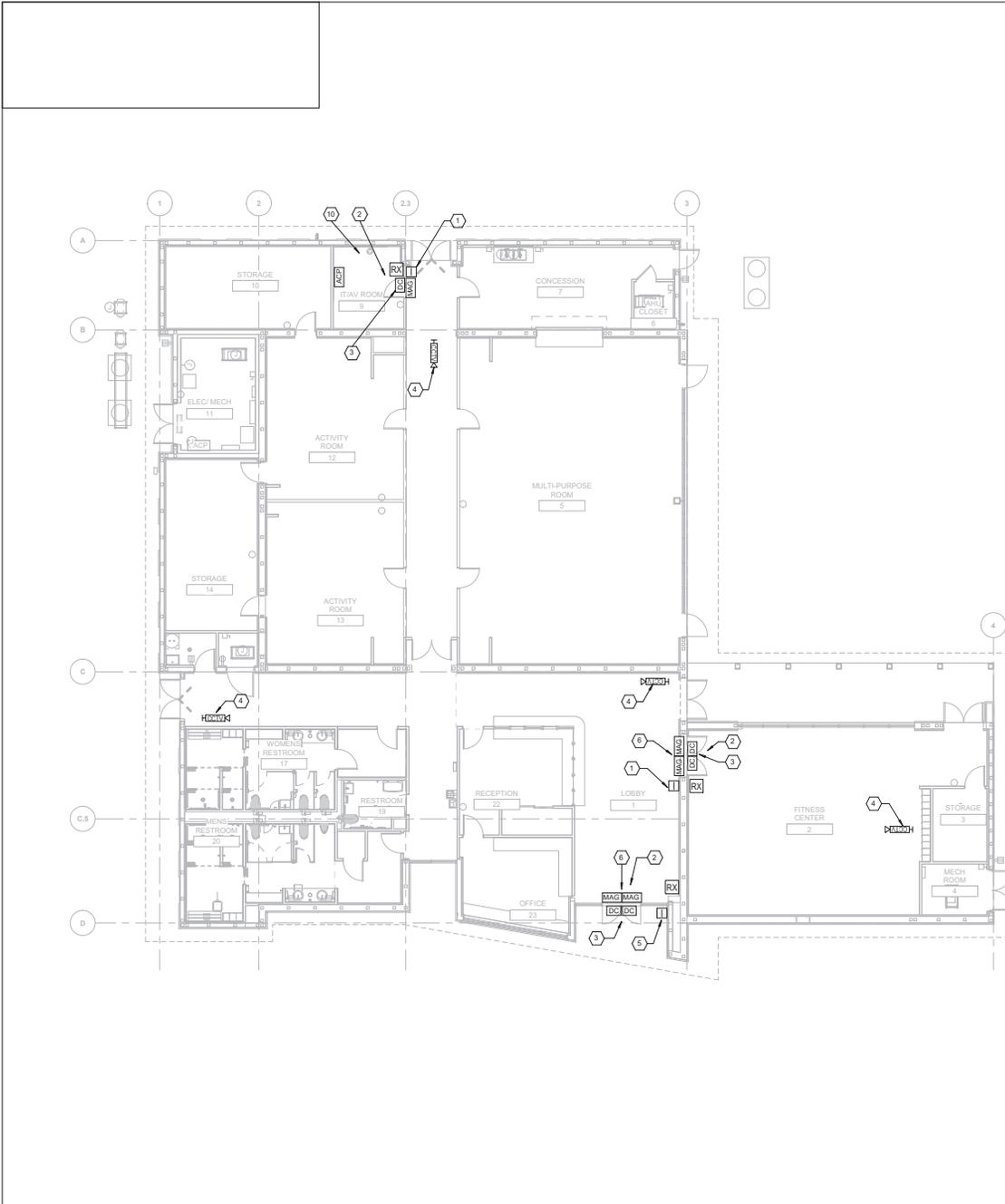
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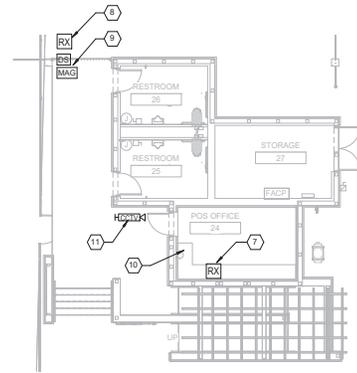
EXISTING POOL ACCESS RISER DIAGRAMS

SHEET NUMBER

E601



KEYNOTES	
TAG	DESCRIPTION
1	ROUGH IN 4" SQUARE BOX WITH SINGLE GANG DEVICE RING AT 48" AFF FOR CARD ACCESS READER. EXTEND CONDUIT TO TERMINAL CABINET ABOVE DOOR.
2	PROVIDE 12" W X 12" X 6" TERMINAL CABINET ABOVE DOOR ON SECURE SIDE. PROVIDE (1) 1-1/4" TO IT/AV ROOM 9 AT LOCATION SHOWN FOR RCP ACCESS CONTROL PANEL.
3	ROUGH IN (1) 3/4" INTO DOOR FRAME FOR DOOR CONTACT. EXTEND CONDUIT TO TERMINAL CABINET ABOVE DOOR.
4	CEILING MOUNTED FIXED IP DOME CAMERA. PROVIDE 2 PORT DATA OUTLET WITH 1" C EXTENDED TO IT/AV ROOM 9 WITH (2) CAT6 UTP CABLES. TERMINATE CABLES ON 48 PORT CAT6 PATCH PANEL.
5	ROUGH IN WEATHERPROOF 4" SQUARE BOX WITH SINGLE GANG DEVICE RING AT 48" AFF FOR CARD ACCESS READER. EXTEND CONDUIT TO TERMINAL CABINET ABOVE DOOR.
6	ROUGH IN (1) 3/4" INTO DOOR FRAME FOR MAGNETIC LOCKS. EXTEND CONDUIT TO TERMINAL CABINET ABOVE DOOR.
7	REQUEST TO EXIT BUTTON MOUNTED ABOVE COUNTER FOR REMOTE RELEASE OF PEDESTRIAN GATE. PROVIDE (1) 3/4" TO EQUIPMENT RACK BELOW COUNTER.
8	WEATHERPROOF REQUEST TO EXIT DEVICE MOUNTED ON PEDESTAL 4" BACK FROM GATE. EXTEND (1) 1" C UNDERGROUND TO EQUIPMENT RACK AT POS OFFICE 24.
9	MAGNETIC LOCK AND WIDE GAP GATE POSITION SWITCH ON PEDESTRIAN GATE. PROVIDE (1) 1" C UNDERGROUND TO EQUIPMENT RACK AT POS OFFICE OFFICE 24.
10	PROVIDE (1) 2" C UNDERGROUND FROM IT/AV ROOM 8 BACKBOARD TO POOL POS OFFICE UNDER COUNTER EQUIPMENT RACK LOCATION. PROVIDE (1) 12 STRAND UNDERGROUND RATED MULTIMODE FIBER OPTIC CABLE. TERMINATE BOTH ENDS ON RACK MOUNTED FIBER OPTIC PATCH PANEL.
11	WALL MOUNTED FIXED IP DOME CAMERA. PROVIDE 2 PORT DATA OUTLET WITH 1" C EXTENDED TO DATA RACK UNDER COUNTER AT POS OFFICE 24 WITH 12 CAT6 UTP CABLES. TERMINATE CABLES ON 24 PORT CAT6 PATCH PANEL.



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(R) DATE DESCRIPTION

PROJECT NUMBER

P12644

SHEET TITLE

SECURITY FLOOR PLANS

SHEET NUMBER

TY401

SIGN MATRIX

QTY	Sign Type	Context	Description	Sheet	
A Contemporary Site Identity					
0	A1	C	Site Identity - Large	Illuminated	N/A
1	A2	C	Site Identity - Medium	Illuminated	W102
0	A3	C	Site Identity - Small	Illuminated	N/A
B Contemporary Site Identity					
0	B1	C	Site Identity - Medium	Non-Illuminated	N/A
0	B2	C	Site Identity - Small	Non-Illuminated	N/A
C Contemporary Park Rules					
0	C1	C	Site Identity - Medium	Non-Illuminated	N/A
0	C2	C	Site Identity - Small	Non-Illuminated	N/A
D Contemporary Building Identity					
2	D1	C	Building Identity - Dimensional Letters	Non-Illuminated	W102
2	D2	C	Building Identity - Dimensional Letters	Non-Illuminated	W102, 201
0	D3	C	Building Identity - Dimensional Letters	Non-Illuminated	N/A
E Contemporary Directional Signs - Vehicular					
0	E1	C	Directional Signs - Vehicular Large	Non-Illuminated	N/A
0	E2	C	Directional Signs - Vehicular Small	Non-Illuminated	N/A
F Contemporary Directional Signs - Pedestrian					
0	F1	C	Directional Signs - Pedestrian Large	Non-Illuminated	N/A
0	F2	C	Directional Signs - Pedestrian Small	Non-Illuminated	N/A
G Tactile Room Identity					
6	G1		Room ID - Number only		W201
25	G2		Room ID - Name & number		W201
1	G3		Room ID - Men		W201
1	G4		Room ID - Women		W201
0	G5		Room ID - Restroom		N/A
0	G6		Room ID - Family Restroom		N/A
3	G7		Room ID - Accessible Restroom		W201
H Additional Signage (Pool Rules, Dog Park, Splash Pad Etc)					
1	H3		Pool Rules		W201
2	H4		Splash Pad Rules		W201

GENERAL NOTES

- CONTRACTOR MUST VISIT THE SITE TO ACQUAINT THEMSELVES WITH THE EXISTING CONDITIONS AND FIELD VERIFY ALL DIMENSIONS, UTILITIES, AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR MUST REVIEW THE CONTRACT DOCUMENTS, VERIFY DIMENSIONS, ELEVATIONS, FIELD CONDITIONS, AND CONFIRM THAT THE WORK IS BUILDABLE AS SHOWN. REPORT ANY CONFLICTS, DISCREPANCIES, OR OMISSIONS TO THE OWNER IN WRITING FOR CLARIFICATION PRIOR TO PERFORMING THE WORK IN QUESTION.
- ALL WORK MUST CONFORM TO THE CONTRACT DOCUMENTS, WHICH INCLUDES THE DRAWINGS AND WRITTEN SPECIFICATIONS.
- IT IS UNDERSTOOD THAT THE DESIGNER OF RECORD MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, AS TO FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS OR OPINIONS, EXCEPT THAT THESE INSTRUMENTS OR SERVICE HAVE BEEN PREPARED IN ACCORDANCE WITH THE CURRENT GENERALLY ACCEPTED PROFESSIONAL PRACTICES.
- ALL WORK IS TO BE PERFORMED IN A SAFE, ORDERLY MANNER WITHOUT DAMAGE TO THE BUILDINGS, SIDEWALKS, ROADS, OR ADJACENT PROPERTIES. ANY RESULTING DAMAGE OR LOSS MUST BE CORRECTED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK ON THE PROJECT. TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF ALL PERSONS AND PROTECT THEM AGAINST INJURY. PROTECT ALL PROPERTY AGAINST DAMAGE OR LOSS.
- COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY.
- "TYPICAL" OR "TYP" MEANS THAT THE CONDITIONS ARE REPRESENTATIVE THROUGHOUT UNLESS OTHERWISE NOTED.
- "SIMILAR" OR "SIM" MEANS COMPARABLE IN CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS AND ORIENTATION ON THE PLANS AND ELEVATIONS.
- "OPP" MEANS REVERSED OR OPPOSITE HAND FOR THE CONDITIONS NOTED.
- "NIC" OR "BY OTHERS" MEANS ITEMS OR WORK IS PROVIDED UNDER A SEPARATE CONTRACT.
- NOTES ON SPECIFIC DRAWINGS WILL TAKE PRECEDENCE OVER GENERAL NOTES IF CONFLICTS OCCUR.
- ALL SIGN MOUNTING TO COMPLY WITH CURRENT WIND LOAD REQUIREMENTS.
- ALL MESSAGES SHOWN ON THESE DRAWINGS ARE TO BE CONSIDERED PLACEHOLDERS AND MUST BE VERIFIED BY OWNER DURING THE SHOP DRAWING REVIEW PHASE.
- THESE DRAWINGS EXPRESS VISUAL DESIGN INTENT ONLY. FINAL ENGINEERING, MATERIALS, AND FABRICATION SHALL REMAIN THE RESPONSIBILITY OF THE FABRICATOR.
- THE CONTENT OF THIS DOCUMENT IS SUBJECT TO THE DESIGN INTENT REQUIREMENTS OUTLINED IN THE SPECIFICATIONS.

SHOP DRAWINGS

- REVIEW OF SHOP DRAWINGS IS LIMITED TO COMPLIANCE OF THE COMPLETED STRUCTURE WITH THE DESIGN CONCEPT AND INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DIMENSIONS, QUANTITIES, PERFORMANCE, SAFETY, COORDINATION WITH OTHER WORK, AND ALL OTHER REQUIREMENTS OF THE CONTRACT DOCUMENTS. REVIEW DOES NOT AUTHORIZE CHANGES TO CONTRACT.
- SHOP DRAWINGS MUST HAVE BEEN CHECKED BY, AND STAMPED WITH THE APPROVAL OF THE OWNER PRIOR TO BEGINNING ANY WORK. THE DATA SHOWN ON THE SHOP DRAWINGS MUST BE COMPLETE WITH RESPECT TO DIMENSIONS, DESIGN CRITERIA, AND CONTENT.

SIGN LOCATION NOTES

- EACH SIGN HAS BEEN ASSIGNED A UNIQUE SIGN NUMBER.
- ALL SIGN LOCATIONS MUST BE VERIFIED IN THE FIELD AND APPROVED BY OWNER PRIOR TO INSTALLATION. CONTRACTOR TO CALL OUT ANY CONFLICTS IN WRITING PRIOR TO FABRICATION.



PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

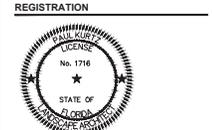


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DATE	DESCRIPTION
04/12/2024	BID DOCUMENTS
04/02/2024	BUILDING PERMIT RESUBMITTAL
12/22/2023	BUILDING PERMIT
09/29/2023	CONSTRUCTION DOCUMENTS
10/12/2022	DESIGN DEVELOPMENT
07/15/2022	SCHEMATIC DESIGN

PROJECT NUMBER
 P12644
SHEET TITLE
 SIGNAGE AND WAYFINDING
 GENERAL NOTES
SHEET NUMBER
 W001

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IR	DATE DESCRIPTION

PROJECT NUMBER
 P12644

SHEET TITLE
 GRAPHIC STANDARDS

SHEET NUMBER
 W002



WORK SANS REGULAR
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 abcdefghijklmnopqrstuvwxyz
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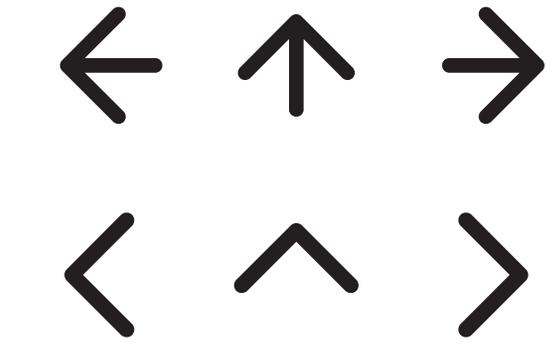
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1 **TYPESTYLE**
 Not to Scale

2 **LOGO**
 Not to Scale

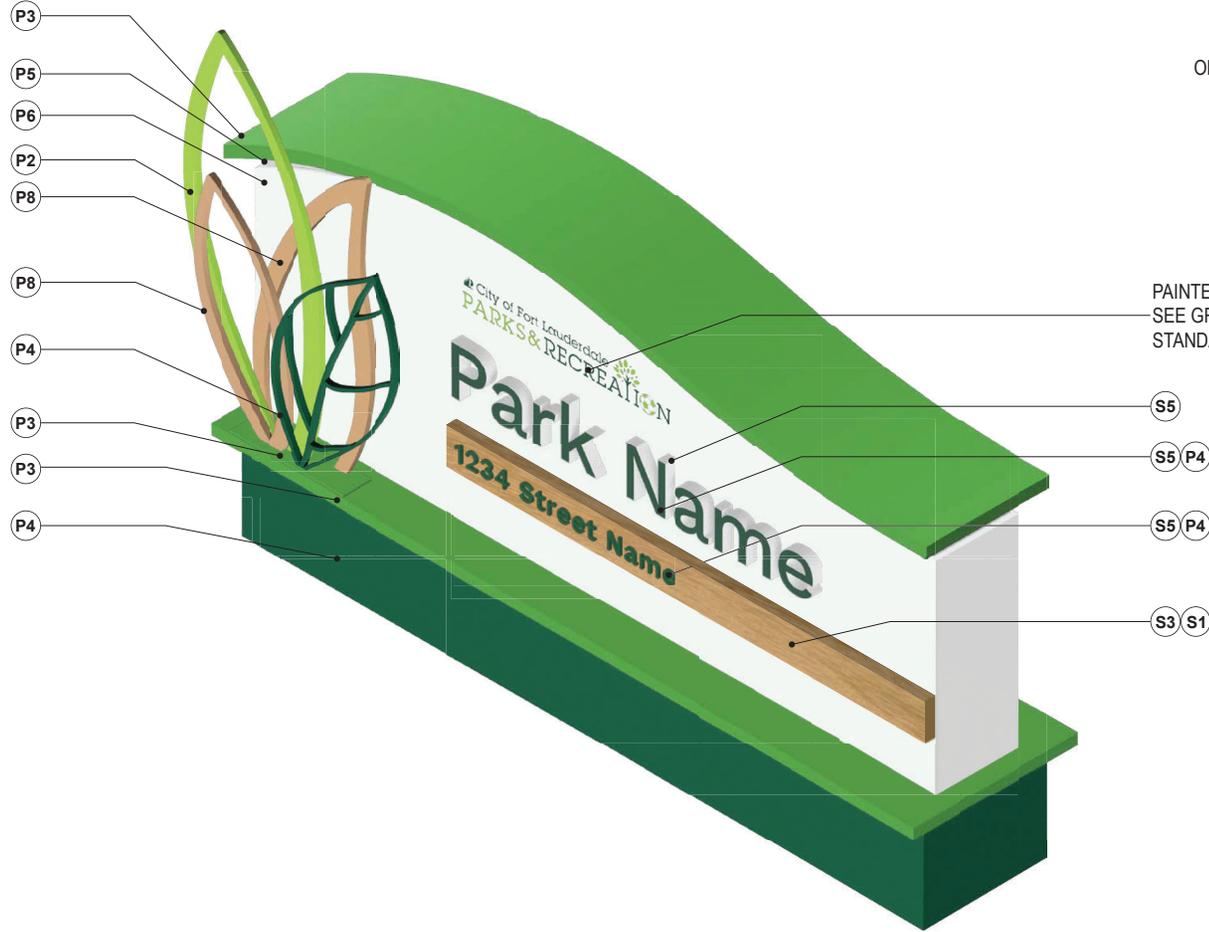
SUBSTRATES		PAINT		FILM	
ALL PAINT TO HAVE UV INHIBITOR AND ANTI-GRAFFITI CLEAR COAT					
S1 ALUMINUM	S5 WHITE TRANSLUCENT ACRYLIC	P1 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH MP 87478	P6 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH WHITE WONDER MP 33071	F1 3M™ PREMIUM PROTECTIVE OVERLAY FILM 116011500A	
S2 OOLITE STONE	S6 1/8" ZINC NATURAL FINISH	P2 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH MP 468	P7 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH BLACK IS BACK MP 59647	P2 3M™ SCOTCHLITE™ REFLECTIVE GRAPHIC FILM, GREEN 990CR-77	
S3 DIGITALLY PRINTED WOOD PATTERN WITH POWDER COAT FINISH SIMILAR TO DIRECT EMBED 283-7492-98		P3 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH MP 471	P8 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH WILDERNESS CABIN MP 7185	P3 3M™ CONTROLTAC™ GRAPHIC FILM L1180 FILM, WHITE U180-10	
S4 CORTEN STEEL OR SIMILAR FINISH		P4 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH MP 70743	P9 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH WILDERNESS CABIN MP 193	P4 3M™ SCOTCHCAL™ LUSTER OVERLAMINATE 8519 FILM, CLEAR 8519	
		P5 MATTHEWS ACRYLIC POLYURETHANE SATIN FINISH BRUSHED ALUMINUM MP 41342			

3 **MATERIALS AND FINISHES**
 Not to Scale



4 **ARROW**
 Not to Scale

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1

STANDARD SIGN FINISHES
1 1/2" x 1' 0"

PAINT BACKSIDE
OF ALL LEAVES THE
SAME COLOR AS
THE FRONT

PAINT BACKSIDE
OF ALL LEAVES THE
SAME COLOR AS
THE FRONT

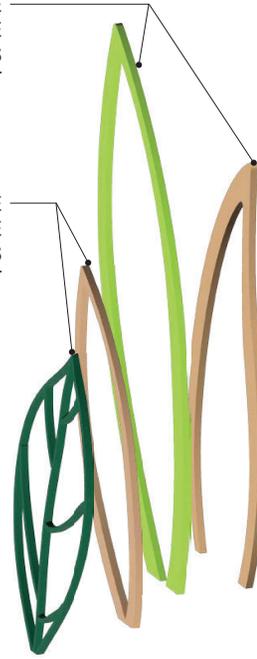
PAINTED LOGO
SEE GRAPHIC
STANDARDS

S5

S5 P4

S5 P4

S3 S1



ASSEMBLY ORDER



2

LEAF DETAIL ASSEMBLY
1 1/2" x 1' 0"

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FORT LAUDERDALE
PARKS BOND PROGRAM

CLIENT
PARKS & RECREATION
City of Fort Lauderdale

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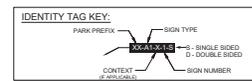
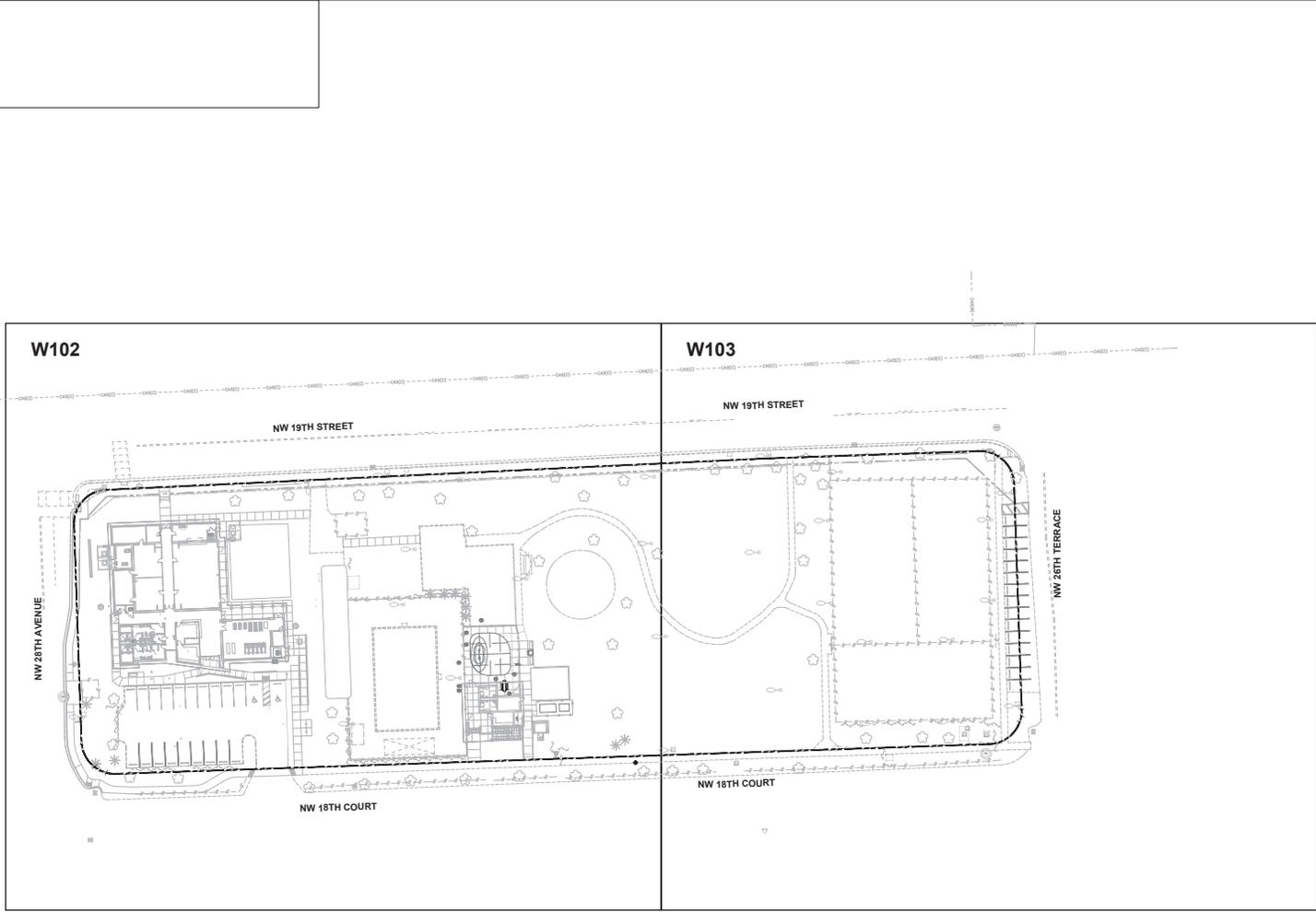
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07/15/2022	SCHEMATIC DESIGN
LR	DATE DESCRIPTION

PROJECT NUMBER
P12644

SHEET TITLE
STANDARD FINISHES

SHEET NUMBER
W003

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NOTE:
CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF EXISTING SIGNS THAT ARE BEING REPLACED.
POWER PROVIDED TO ILLUMINATED SIGN TYPE A2 WITHIN 10' OF LOCATION. POWER TO BE PROVIDED BY THE OWNER.
SEE DEMOLITION PLAN SHEET DL101 FOR REMOVAL INFORMATION.

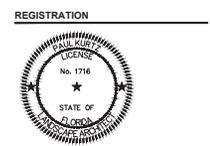


PROJECT
BASS PARK
FORT LAUDERDALE
PARKS BOND PROGRAM

CLIENT
PARKS & RECREATION
City of Fort Lauderdale

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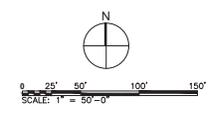
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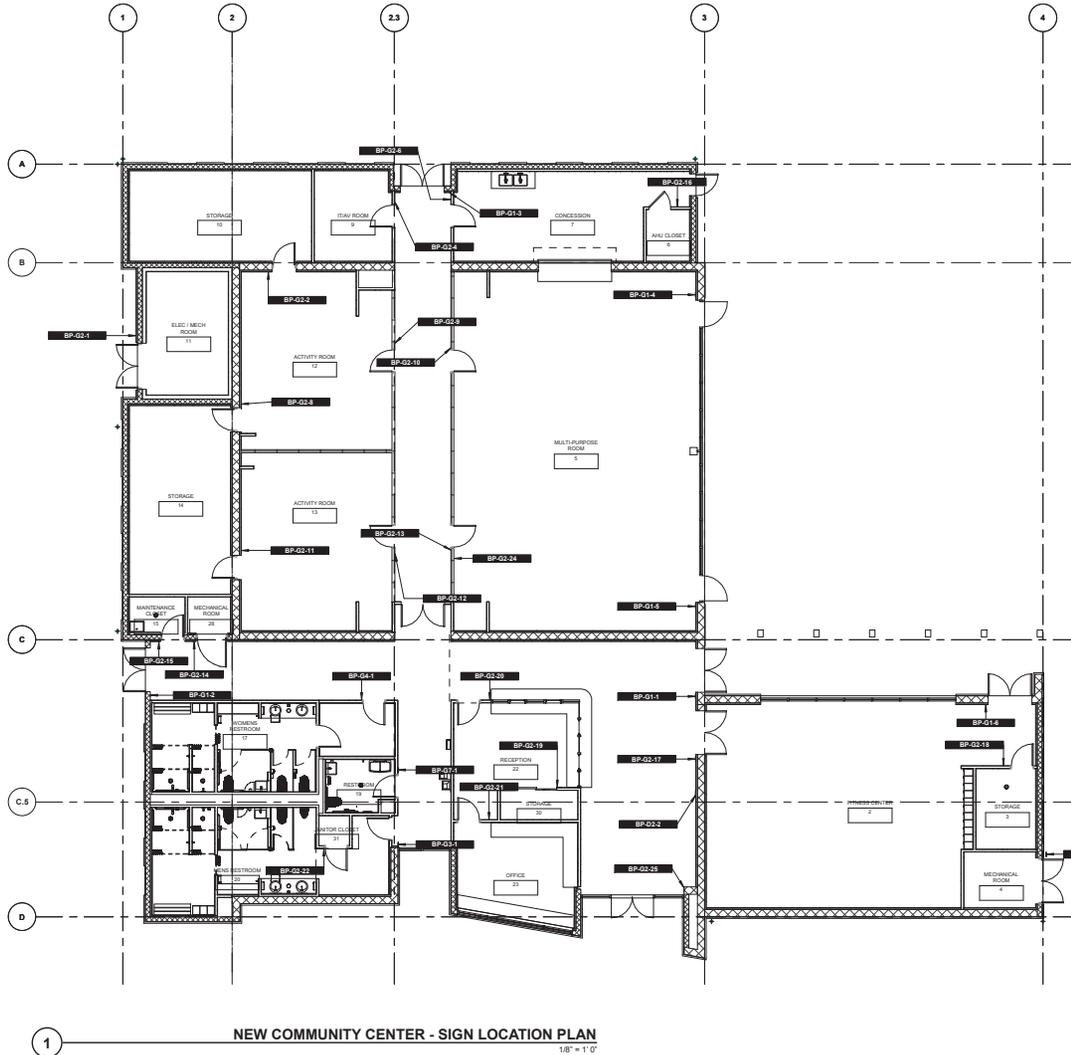
PROJECT NUMBER
P12644

SHEET TITLE
OVERALL SIGN LOCATION
PLAN

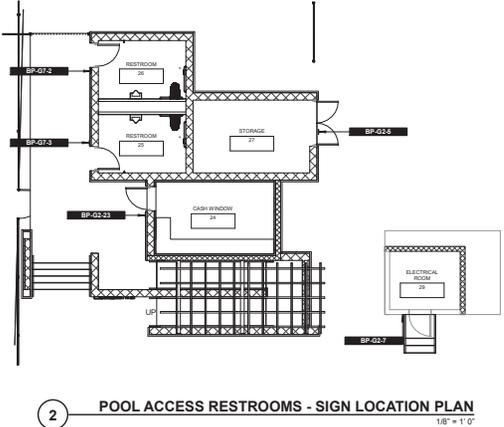
SHEET NUMBER
W101



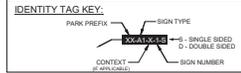
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NEW COMMUNITY CENTER - SIGN LOCATION PLAN
1/8" = 1' 0"



POOL ACCESS RESTROOMS - SIGN LOCATION PLAN
1/8" = 1' 0"



SIGNAGE SCHEDULE

Park	Sign Type	Sign No.	Message	Room No.
BP	G2	2	BASS PARK COMMUNITY CENTER	
BP	G1	1	EXIT	
BP	G1	2	EXIT	
BP	G1	3	EXIT	
BP	G1	4	EXIT	
BP	G1	5	EXIT	
BP	G1	6	EXIT	
BP	G2	1	ELEC / MECH ROOM	11
BP	G2	2	STORAGE	10
BP	G2	3	MECHANICAL ROOM	4
BP	G2	4	IT/AV ROOM	9
BP	G2	5	STORAGE	27
BP	G2	6	CONCRESSION	7
BP	G2	7	ELECTRICAL ROOM	29
BP	G2	8	STORAGE	14
BP	G2	9	ACTIVITY ROOM	12
BP	G2	10	MULTI-PURPOSE ROOM	5
BP	G2	11	STORAGE	14
BP	G2	12	ACTIVITY ROOM	13
BP	G2	13	MULTI-PURPOSE ROOM	5
BP	G2	14	MECHANICAL ROOM	28
BP	G2	15	MAINTENANCE CLOSET	15
BP	G2	16	AHU CLOSET	6
BP	G2	17	FITNESS CENTER	2
BP	G2	18	STORAGE	3
BP	G2	19	STORAGE	30
BP	G2	20	RECEPTION	22
BP	G2	21	OFFICE	23
BP	G2	22	JANITOR CLOSET	31
BP	G2	23	CASH WINDOW	24
BP	G2	24	MAXIMUM OCCUPANCY 109	
BP	G2	25	MAXIMUM OCCUPANCY 256	
BP	G3	1	MEN	21
BP	G4	1	WOMEN	18
BP	G7	1	RESTROOM	19
BP	G7	2	RESTROOM	26
BP	G7	3	RESTROOM	25



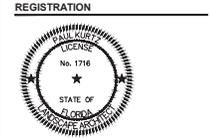
PROJECT
BASS PARK
FORT LAUDERDALE
PARKS BOND PROGRAM

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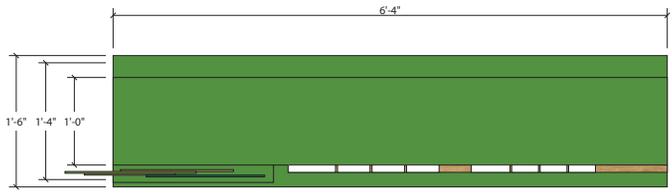
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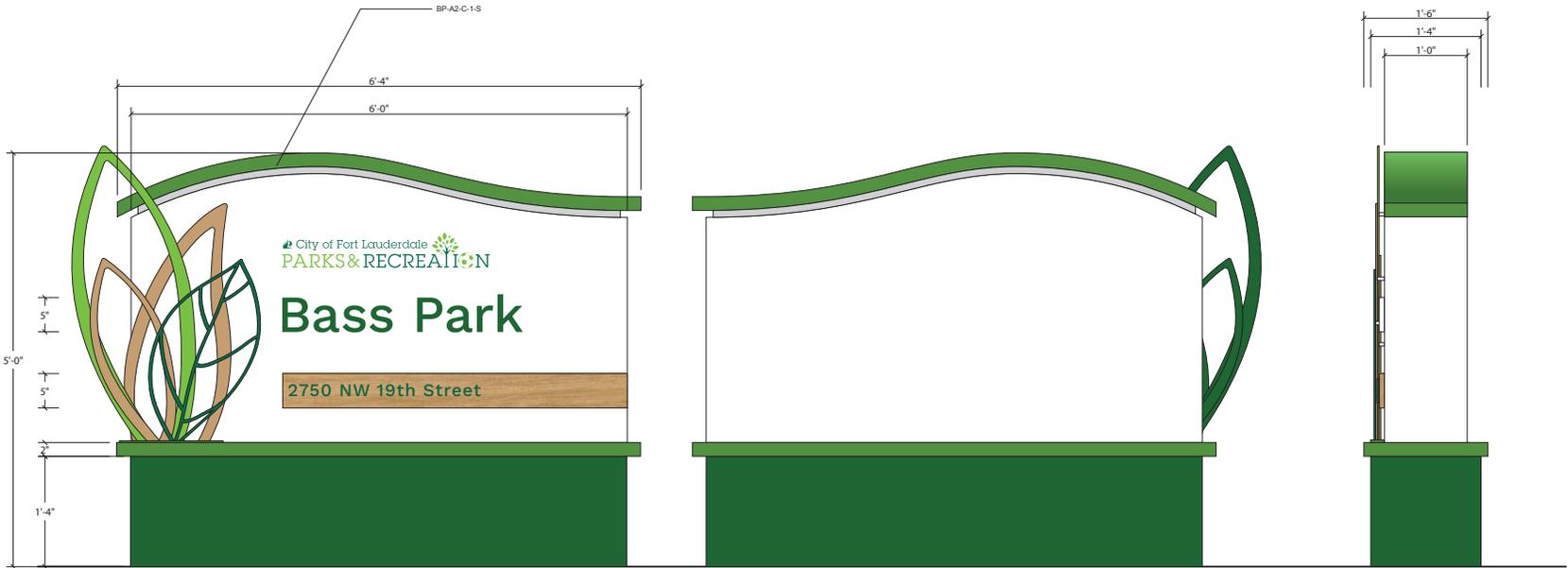
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07/15/2022	SCHEMATIC DESIGN

PROJECT NUMBER
P12644
SHEET TITLE
COMMUNITY CENTER
BUILDING SIGN
LOCATION PLAN
SHEET NUMBER
W201

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SIGN TYPE A2-C PLAN VIEW
1 1/2" = 1' 0"



SIGN TYPE BP-A2-C-1-S ELEVATION VIEW
1 1/2" = 1' 0"



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FORT LAUDERDALE
PARKS BOND PROGRAM

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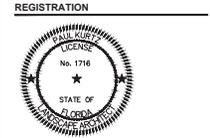
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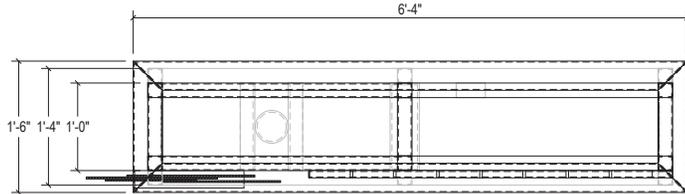
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PROJECT NUMBER
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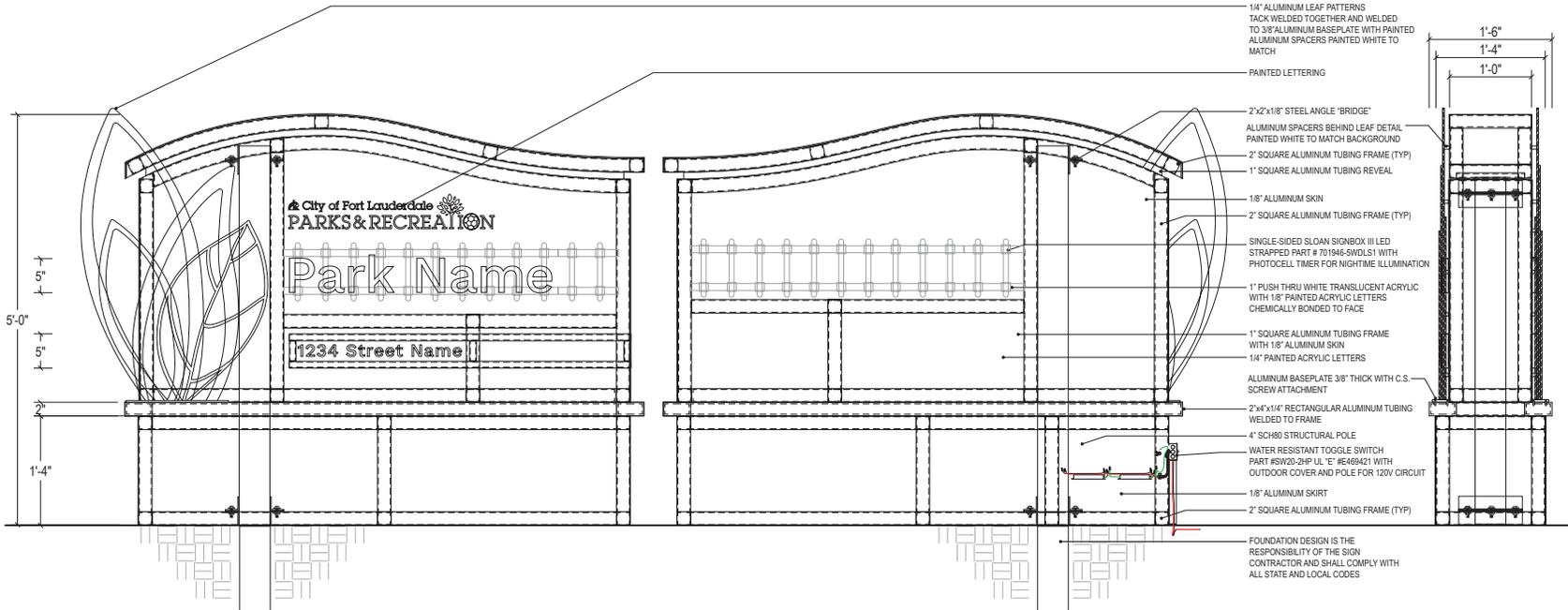
SHEET TITLE
SIGN TYPE A2-C
SINGLE SIDED

SHEET NUMBER
W301

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SIGN TYPE A2-C PLAN VIEW
 3" = 1'-0"



SIGN TYPE A2-C ELEVATION VIEW
 3" = 1'-0"

- 1/4" ALUMINUM LEAF PATTERNS TACK WELDED TOGETHER AND WELDED TO 3/8" ALUMINUM BASEPLATE WITH PAINTED ALUMINUM SPACERS PAINTED WHITE TO MATCH
- PAINTED LETTERING
- 2"x2"x1/8" STEEL ANGLE "BRIDGE"
- ALUMINUM SPACERS BEHIND LEAF DETAIL PAINTED WHITE TO MATCH BACKGROUND
- 2" SQUARE ALUMINUM TUBING FRAME (TYP)
- 1" SQUARE ALUMINUM TUBING REVEAL
- 1/8" ALUMINUM SKIN
- 2" SQUARE ALUMINUM TUBING FRAME (TYP)
- SINGLE-SIDED SLOAN SIGNBOX III LED STRAPPED PART # 701946-SWDL51 WITH PHOTOCELL TIMER FOR NIGHTTIME ILLUMINATION
- 1" PUSH THRU WHITE TRANSLUCENT ACRYLIC WITH 1/8" PAINTED ACRYLIC LETTERS CHEMICALLY BONDED TO FACE
- 1" SQUARE ALUMINUM TUBING FRAME WITH 1/8" ALUMINUM SKIN
- 1/4" PAINTED ACRYLIC LETTERS
- ALUMINUM BASEPLATE 3/8" THICK WITH C.S. SCREW ATTACHMENT
- 2"x4"x1/4" RECTANGULAR ALUMINUM TUBING WELDED TO FRAME
- 4" SCH80 STRUCTURAL POLE
- WATER RESISTANT TOGGLE SWITCH PART #SW20-2HP UL "E" #E469421 WITH OUTDOOR COVER AND POLE FOR 120V CIRCUIT
- 1/8" ALUMINUM SKIRT
- 2" SQUARE ALUMINUM TUBING FRAME (TYP)
- FOUNDATION DESIGN IS THE RESPONSIBILITY OF THE SIGN CONTRACTOR AND SHALL COMPLY WITH ALL STATE AND LOCAL CODES



PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

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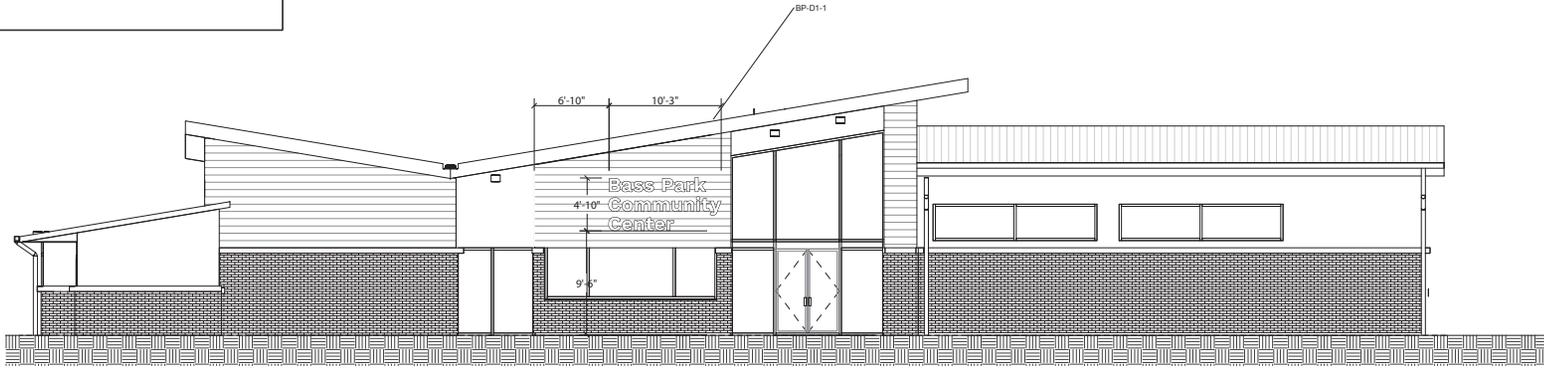
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07/15/2022	SCHEMATIC DESIGN
IR	DATE DESCRIPTION

PROJECT NUMBER
 P12644

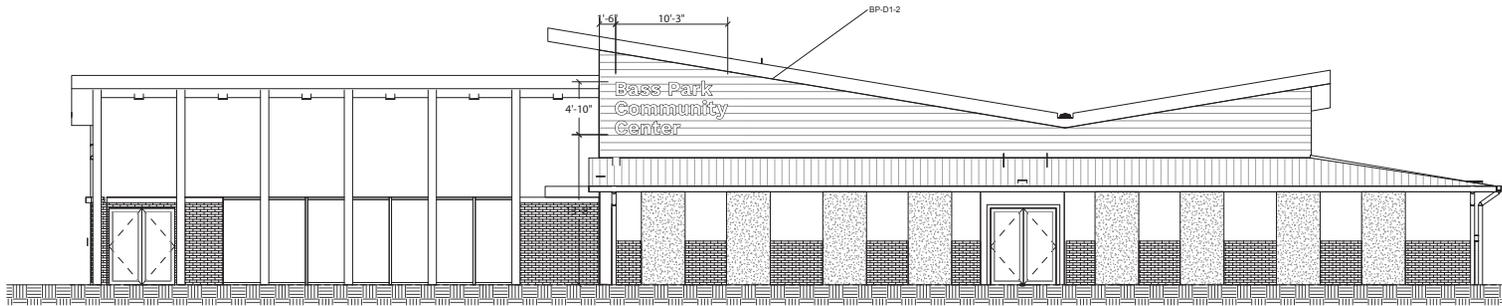
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 SIGN TYPE A2-C
 SINGLE SIDED
 DETAIL DRAWING
SHEET NUMBER
 W302

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SIGN TYPE D1 SOUTH ELEVATION VIEW
 3/16" = 1' 0"

1



SIGN TYPE D1 NORTH ELEVATION VIEW
 3/16" = 1' 0"

2

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PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

CLIENT



PRIME CONSULTANT

AECOM
 7650 W. COURTNEY CAMPBELL CAUSEWAY
 SUITE 700
 TAMPA, FL 33607
 813.281.7111 tel 813.287.8561 fax
 www.aecom.com

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AECOM Technical Services, INC
 7650 West Courtney Campbell Causeway
 Tampa, FL 33607-1462

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IR	DATE	DESCRIPTION
04/12/2024		BID DOCUMENTS
12/22/2023		BUILDING PERMIT
05/23/2023		CONSTRUCTION DOCUMENTS
10/10/2022		DESIGN DEVELOPMENT
07/15/2022		SCHEMATIC DESIGN

PROJECT NUMBER

P12644

SHEET TITLE

SIGN TYPE D1 ELEVATIONS

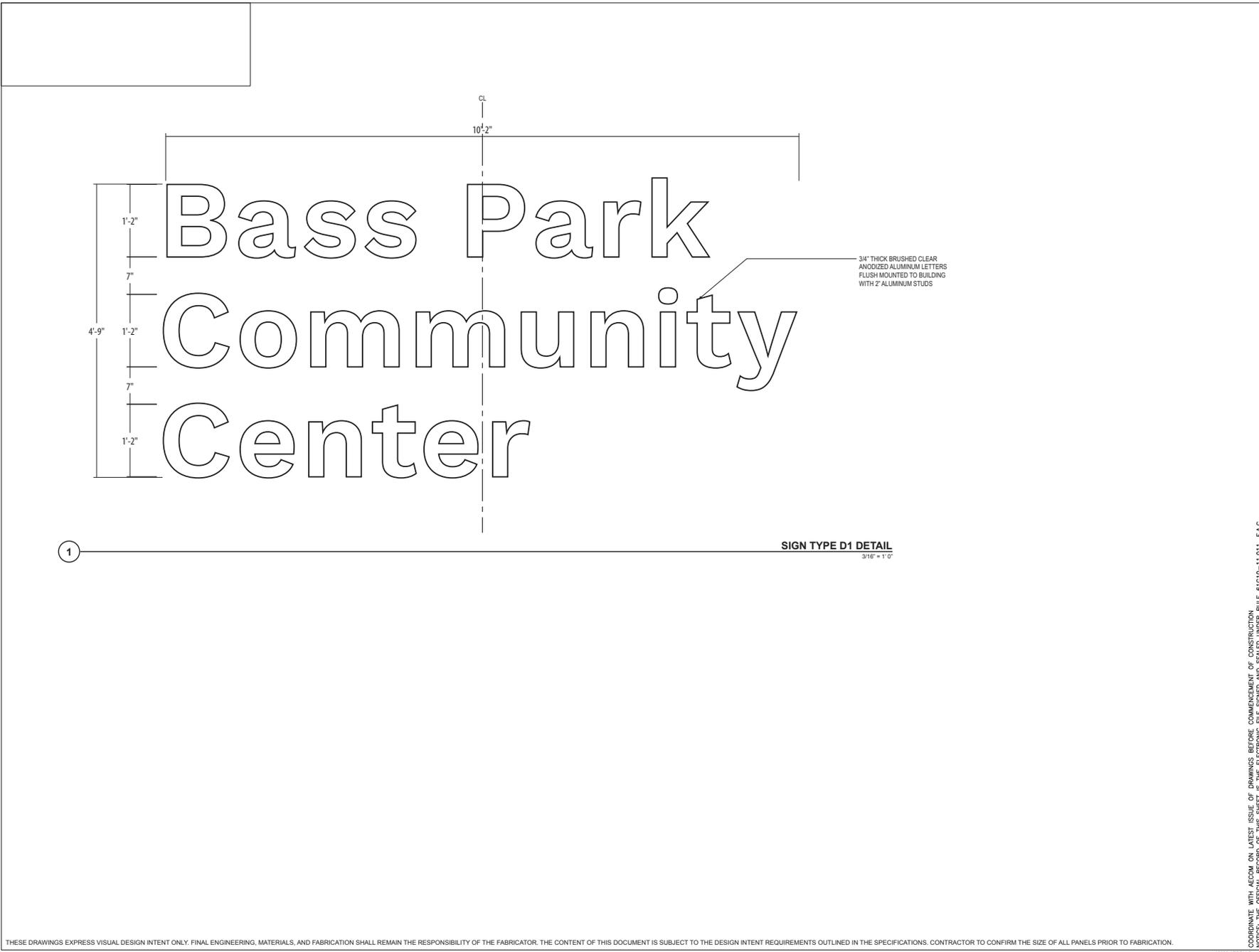
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Project Management Initials: _____ Designer: _____ Checker: _____ Approved: _____ ANS/D 24" x 36"

Last saved by: JOHN.ROULIE(2024-02-12) Last Printed: 2024-04-05
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SIGN TYPE D1 DETAIL
3/16" = 1" = 0



PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

CLIENT
PARKS & RECREATION
 City of Fort Lauderdale

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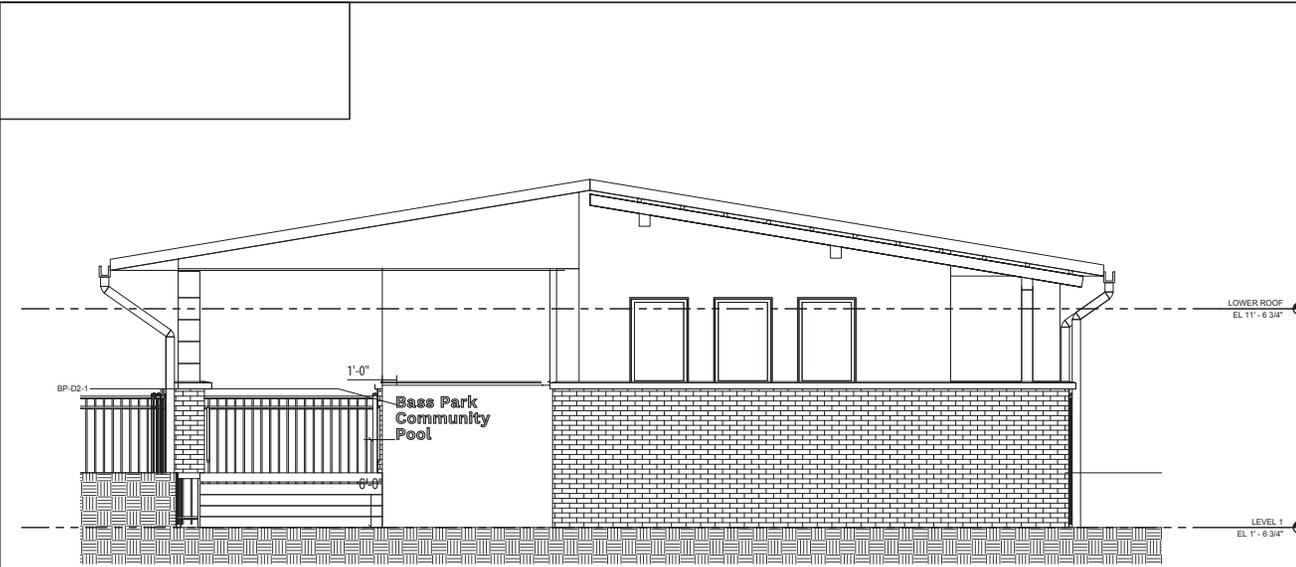
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 DETAIL DRAWING

SHEET NUMBER
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SIGN TYPE D2 SOUTH ELEVATION
 1/4" = 1'-0"



SIGN TYPE D2
 1 1/2" = 1'-0"



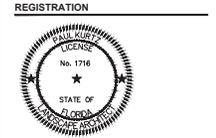
PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

CLIENT
PARKS & RECREATION
 City of Fort Lauderdale

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SHEET TITLE
 SIGN TYPE D2
 EXTERIOR ELEVATION

SHEET NUMBER
 W305

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PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM



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 City of Fort Lauderdale

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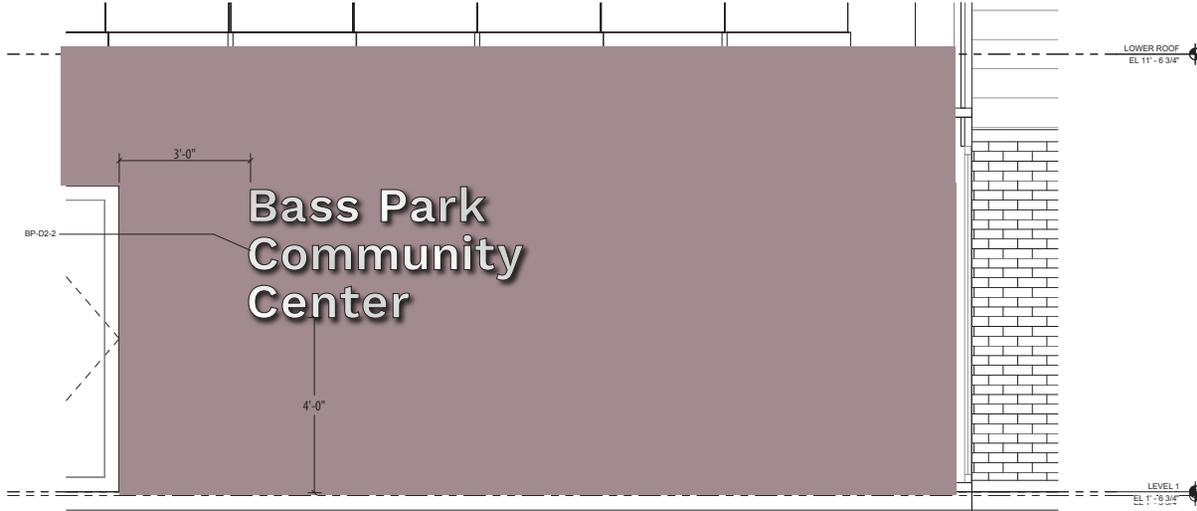
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12/22/2023	BUILDING PERMIT	
05/23/2023	CONSTRUCTION DOCUMENTS	
10/10/2022	DESIGN DEVELOPMENT	
07/15/2022	SCHEMATIC DESIGN	

PROJECT NUMBER
 P12644

SHEET TITLE
 SIGN TYPE D2
 INTERIOR ELEVATION

SHEET NUMBER
 W306

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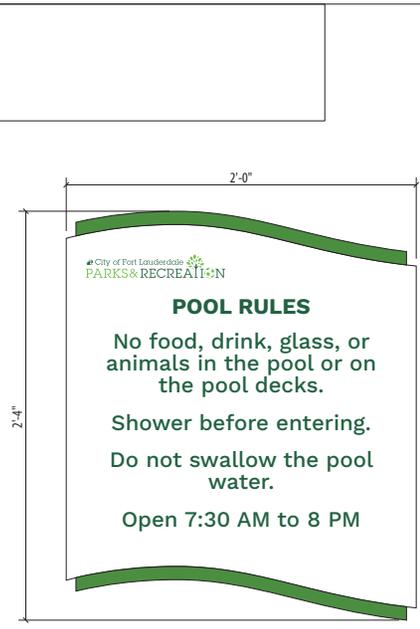


SIGN TYPE D2 INTERIOR ELEVATION VIEW
 3/4" = 1' 0"



SIGN TYPE D2
 1 1/2" = 1' 0"

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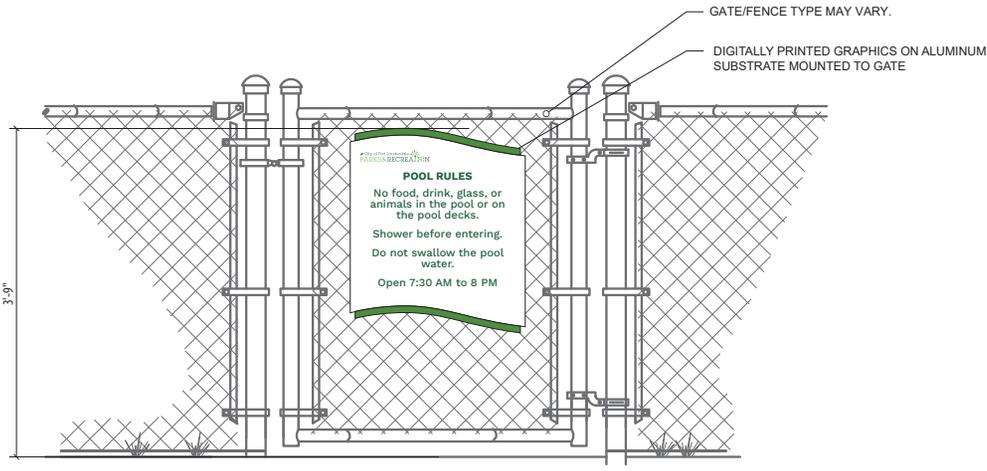
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Sign Number BP-H4-C-1

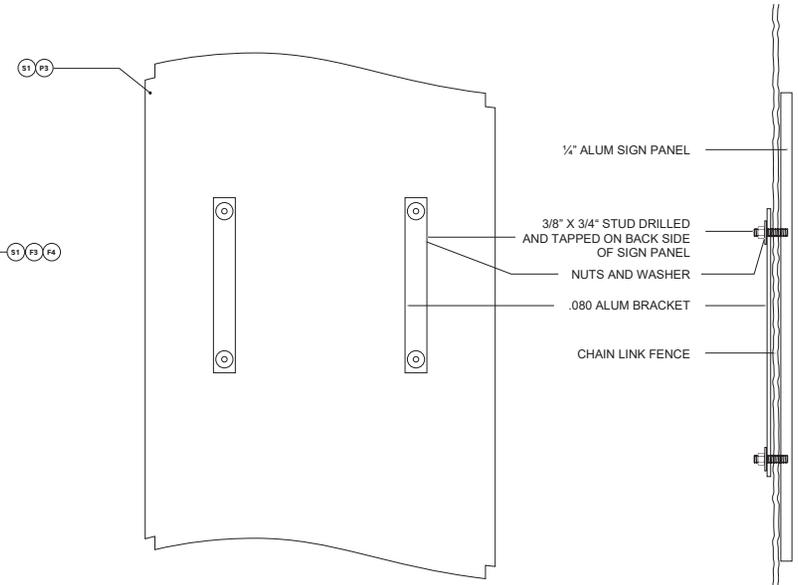
SIGN TYPE H3 & H4
3" = 1'0"

1



TYPICAL MOUNTING ELEVATION
NTS

2



- 1/4" ALUM SIGN PANEL
- 3/8" X 3/4" STUD DRILLED AND TAPPED ON BACK SIDE OF SIGN PANEL
- NUTS AND WASHER
- .080 ALUM BRACKET
- CHAIN LINK FENCE

FENCE MOUNTING DETAIL
3" = 1'0"

3



PROJECT
 BASS PARK
 FORT LAUDERDALE
 PARKS BOND PROGRAM

CLIENT
PARKS & RECREATION
 City of Fort Lauderdale
PRIME CONSULTANT
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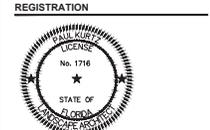
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07/15/2022	SCHEMATIC DESIGN
LR	DATE DESCRIPTION

PROJECT NUMBER
P12644

SHEET TITLE
SIGN TYPE H3 & H4

SHEET NUMBER
W307

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DIVISION 01 – GENERAL REQUIREMENTS

City of Fort Lauderdale Park Improvements

For

Bass Park



**Issued on Behalf of:
Parks and Recreation
701 South Andrews Avenue
Fort Lauderdale, Florida 33316**

**Sr. Procurement Specialist
Yesenia Pascual
Telephone: (954)828-5257
Ypascual@fortlauderdale.gov**

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SECTION 01001 - GENERAL REQUIREMENTS

PART 1 - PROJECT DESCRIPTION

1.1 GENERAL

- A. A brief description of the Work is stated in the INVITATION TO BID. To determine the full scope of the project or any particular part of the project, coordinate the applicable information in these Contract Documents and review the available project drawings.
- B. The Work under this Contract shall be performed by the Contractor as required by the City of Fort Lauderdale (City). Work will be authorized by a Notice to Proceed (NTP) issued to the Contractor. The Contractor shall complete all work within the number of calendar days stipulated in the Contract unless an extension in the time of completion is granted by the CITY'S PROJECT MANAGER, as stated in the Instructions to Bidders. Upon satisfactory completion of the work and compliance with applicable provisions in the Contract Documents, the Contractor will receive final payment for all work done.
- C. The following additional information, though not all-inclusive, is given to assist contractors in their evaluation of the work required to meet the project objectives.
- D. The Contractor shall become familiar with the existing operating conditions of the City's water system, sewage transmission system and pumping stations and take such into consideration in planning and scheduling work. No extra claims shall be made for work required to achieve conditions beyond those obtainable under normal operation of the existing transmission, collection and pumping facilities necessary to accomplish the Work.
- E. Contractor shall be required to submit a Maintenance of Traffic (MOT) plan for work in the county and state highways and City streets. Contractor shall coordinate with MOTs for nearby or highway work and obtain approval for all traffic control as required by the permits contained elsewhere in this Section.

PART 2 - SEQUENCE OF OPERATIONS

2.1 SCHEDULING

- A. General: Prepare and submit schedule in accordance with the provisions of Section 01311 "Construction Progress Documentation".
- B. Plan the work and carry it out with minimum interference to the operation of the existing facilities. Prior to starting the work, confer with the CITY'S ENGINEER to develop an approved work schedule, which will permit the facilities to function normally as practical. It may be necessary to do certain parts of the construction work outside normal working hours in order to avoid undesirable conditions. The Contractor shall do this work at such times and at no additional cost to the City. Do not make connections between existing work and new work until necessary inspection and tests have been completed on the new work and it is found to conform in all respects to the requirements of the Contract Documents.
- C. No work shall be started until the Contractor has received Manufacturer's approved shop drawings, established material/delivery dates for all equipment, and received approval

of the construction schedule from the ENGINEER. The Contractor shall have sufficient manpower, equipment, and material to complete the project.

- D. No work shall commence without express consent of the CITY'S ENGINEER.
- E. If a privately owned staging area is required, no work shall commence until approval of the facility is obtained from City Planning and Zoning in accordance with Section 47-19.2 of the Unified Land Development Regulations. Submit a copy of the approval and agreement to the CITY'S ENGINEER.

2.2 MOBILIZATION AND DEMOBILIZATION

- A. Contractor shall be responsible for mobilization and demobilization of labor, materials and equipment. Payment for mobilization and demobilization shall be included in the lump sum price indicated in the Proposal for the project.

2.3 COORDINATION

- A. Contractor shall coordinate of separate activities in a manner that will provide the least interference with the Owner's operations and other contractors and utility companies working in the area, and in the interfacing and connection of the separate elements of the overall project work.
- B. If any difficulty or dispute should arise in the accomplishment of the above, the problem shall be brought immediately to the attention of the CITY'S ENGINEER.

2.4 OPERATION OF EXISTING SYSTEM PROHIBITED

- A. At no time is the Contractor to undertake to close off any utility lines or open valves or take any other action, which would affect the operation of existing systems. The City's operations crew will operate all valves. Provide at least one business day notice to City prior to any operations.

PART 3 - SITE CONDITIONS

3.1 SITE INVESTIGATION AND REPRESENTATION

- A. The Contractor acknowledges satisfaction as to the general nature and location of the work, the general and local conditions, particularly those bearing upon availability of transportation, availability of labor, water, electric power, roads, and uncertainties of weather, river stages, or similar physical conditions, the character of equipment and facilities needed preliminary to and during the prosecution of the work, and all other matters which can in any way affect the work or the cost thereof under this Contract.
- B. Failure by the Contractor to become acquainted with the physical conditions and all the available information will not relieve the Contractor from responsibility for properly estimating the difficulty or cost of successfully performing the Work.
- C. The Contractor warrants that as a result of examination and investigation of all the aforesaid data, the Contractor can perform the work in a good and workmanlike manner and to the satisfaction of the City. The City assumes no responsibility for any representations made by any of its officers or agents during or prior to the execution of this Contract, unless (1) such representations are expressly stated in the Contract; and (2) the Contract expressly provides that the responsibility therefore is assumed by the City.

3.2 INFORMATION ON SITE CONDITIONS

- A. General: Information obtained by the CITY'S ENGINEER regarding site conditions, subsurface information, groundwater elevations, existing construction of site facilities, as applicable, and similar data will be available for inspection at the office of the CITY'S ENGINEER upon request. Such information is offered as supplementary information only. The CITY'S ENGINEER does not assume any responsibility for the completeness or interpretation of such supplementary information.

3.3 UTILITIES

- A. The Contractor shall be responsible for determining and/or confirming, at his cost, the locations of all utilities within the project area, and shall be responsible for contacting each utility for location and notification prior to commencing work.
- B. The Contractor shall contact potentially affected utilities as provided in Section 01060 "Regulatory Requirements & Permits".
- C. The Contractor shall contact Sunshine State One Call at 811 or visit www.callsunshine.com at least 2 business days (10 business days for water crossings) prior to any excavation and make arrangements for locating all utilities in the project area.

3.4 CONTRACTOR'S RESPONSIBILITY FOR UTILITY PROPERTIES AND SERVICE

- A. Where the Contractor's operations could cause damage or inconvenience to utilities, telephone, television, power, water, or sewer systems, the operations shall be suspended until all arrangements necessary for the protection of these utilities and services have been made by the Contractor with the owner of the utility affected.
- B. Notify all utility offices, which are affected by the construction operation at least 2 business days in advance. Under no circumstances expose any utility without first obtaining permission from the appropriate agency. Once permission has been granted, locate, expose, and provide temporary support for all existing underground utilities.
- C. The Contractor shall be solely and directly responsible to the Owner and operators of such properties for any damage, injury, expense, loss, inconvenience, delay, suits, actions, or claims of any character brought because of any injuries or damage, which may result from the construction operations under this Contract.
- D. Neither the Owner nor its officers or agents shall be responsible to the Contractor for damages as a result of the Contractor's failure to protect utilities encountered in the Work.
- E. In the event of interruption to domestic water, sewer, storm drain, or other utility services as a result of accidental breakage due to construction operations, promptly notify the proper authority. Cooperate with said authority in restoration of service as promptly as possible and bear all costs of repair. In no case shall interruption of any water or utility service be allowed to exist outside working hours unless prior approval is granted.
- F. In the event the Contractor encounters water service lines or sewer laterals that interfere with trenching, he may, by obtaining prior approval of the property owner, and the CITY'S ENGINEER, cut the service, dig through, and restore the service with similar and equal materials at the Contractor's expense.

- G. The Contractor shall replace, at his own expense, all existing utilities or structures removed or damaged during construction, unless otherwise provided for in these Contract documents or ordered by the City's Engineer.
- H. Telephone and communications drops and signal systems may extend throughout the project area. Properly located cable, conduit, interface equipment, pull or junction boxes and other signal or systems equipment damaged by the Contractor shall be replaced at the Contractor's expense.
 - 1. Damaged cable shall be replaced as an entire run, from junction box to junction box.
 - 2. Notify Broward County Engineering two business days in advance of the need to remove traffic detection loops.
 - 3. Contractor shall verify marked cables and signal systems prior to excavation.

3.5 INTERFERING STRUCTURES

- A. Take necessary precautions to prevent damage to existing structures whether on the surface, aboveground, or underground.
- B. Protect underground and aboveground existing structures from damage, whether or not they lie within the limits of the easements obtained by the City. Where such existing fences, gates, sheds, buildings, or any other structure must be removed in order to properly carry out the construction, or are damaged during construction, restore to their original condition to the satisfaction of the property owner involved at the Contractor's own expense. Notify the City of any damaged underground structure, and make repairs or replacements before backfilling.
- C. Without additional compensation, the Contractor may remove and shall replace in a condition as good as or better than original, such small miscellaneous structures as fences, mailboxes, and signposts that interfere with the Contractor's operations.

3.6 EASEMENTS AND WORK ON PRIVATE PROPERTY

- A. Where portions of the work are located on public or private property, easements and permits will be obtained by the City, except as otherwise noted in these Specifications. Easements will provide for the use of property for construction purposes to the extent indicated on the easements. Copies of these easements and permits are available upon request to the City. It shall be the Contractor's responsibility to determine the adequacy of the easement obtained in every case and to abide by all requirements and provisions of the easement. The Contractor shall confine his construction operations to within the easement limits or street right-of-way limits or make special arrangements with the property owners or appropriate public agency for the additional area required. Any damage to property, either inside or outside the limits of the easements provided by the City or street rights-of-way, shall be the responsibility of the Contractor as specified herein. The Contractor shall provide immediate notice to the owner of any damage to fencing and provide temporary fencing as required to provide a functionally similar level of security. The Contractor shall remove, protect, and replace all fences or other items encountered on public or private property. Before final payment will be authorized by the City's Engineer, the Contractor will be required to furnish the City with written releases from property owners or public agencies where side agreements or special easements have been made by the Contractor or where the Contractor's

operations, for any reason, have not been kept within the construction right-of-way obtained by the City or the street right-of-way.

- B. The Contractor shall be responsible for all damage to private property where work related activities have occurred without proper easement or authorization. The City may withhold payment to the Contractor pending resolution of any claims by private owners.
- C. It is anticipated that the required easements and permits will be obtained before construction is started. However, should the procurement of any easement or permit be delayed, the Contractor shall schedule and perform the work around these areas until such a time as the easement or permit has been secured.
- D. Prior to removing an existing structure or item, provide written notice to the Owner at least 14 days in advance of the anticipated removal.
- E. The Contractor shall not engage in private construction activities within the project area without the presence of a contract with the private owner of the property containing a hold harmless clause protecting the City from any and all damages that occur during the performance of the privately authorized work.

PART 4 - SAFETY AND CONVENIENCE

4.1 SAFETY AND ACCESS

- A. The Contractor shall do all work necessary to protect the general public from hazards, including, but not limited to, surface irregularities or unramped grade changes in pedestrian sidewalk or walkway, and trenches or excavations in roadway. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the work. All barricades and signs shall be clean and serviceable, in the opinion of the City's Engineer.
- B. During construction, the Contractor shall construct and at all times maintain satisfactory and substantial temporary chain link fencing, solid fencing, railing, barricades or steel plates, as applicable, at all openings, obstructions, or other hazards in streets, sidewalks, floors, roofs, and walkways. All such barriers shall have adequate warning lights as necessary, or required, for safety. All lights shall be regularly maintained, and in a fully operational state at all times.
- C. The Contractor shall notify all residences and businesses of planned construction at least 5 (five) business days prior to the start of work in the block where they are located. Such notices shall be brochures or door-hangers with sufficient information to describe the extent and duration of the planned work. Notification activities shall be coordinated with the CITY'S ENGINEER.
- D. Homeowners and business owners shall be provided reasonable access. The Contractor shall provide temporary sidewalks, bridges or driveway access, including safe passage over open excavations as required.

4.2 ACCIDENT REPORTS

- A. In addition, the Contractor must promptly report in writing to the CITY'S ENGINEER all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses. If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to the ENGINEER.

- B. If a claim is made by anyone against the contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the CITY'S ENGINEER, giving full details of the claim.

4.3 SAFE ACCESS BY FEDERAL, STATE, AND LOCAL GOVERNMENT OFFICIALS

- A. Authorized representatives of the state, federal, or local governmental agencies, shall at all times have safe access to the work, and the Contractor shall provide proper facilities for such access and inspection.

4.4 PROTECTION OF PROPERTY

- A. Protect stored materials located adjacent to the proposed work. Notify property owners affected by the construction at least two business days in advance of the time construction begins. During construction operations, construct and maintain such facilities as may be required to provide access by all property owners to their property. No person shall be cut off from access to his residence or place of business for a period exceeding 2 hours, unless the Contractor has made special arrangements with the affected persons.
- B. The Contractor shall identify and isolate his active work zone in such a manner as to exclude all personnel not employed by him, the CITY'S ENGINEER, and the City.

4.5 FIRE PREVENTION AND PROTECTION

- A. The Contractor shall perform all work in a fire-safe manner. He shall supply and maintain on the site adequate fire-fighting equipment capable of extinguishing incipient fires. The Contractor shall comply with applicable federal, state, and local fire-prevention regulations. Where these regulations do not apply, applicable parts of the National Fire Prevention Standard for Safeguarding Building Construction Operations (NFPA No. 241) shall be followed.

4.6 ACCESS FOR POLICE, FIRE, AND POSTAL SERVICE

- A. Notify the fire department and police department before closing any street or portion thereof. No closing shall be made without the Owner's approval of MOT plan. Notify said departments when the streets are again passable for emergency vehicles. Do not block off emergency vehicle access to consecutive arterial crossings or dead-end streets, in excess of 300 linear feet, without special written permission from the fire department. Conduct operations with the least interference to fire equipment access, and at no time prevent such access. MOT plans that result in restricted access for emergency vehicles must be submitted and approved 2 weeks prior to the proposed closing with separate and specific notification made to the ENGINEER to provide for appropriate agency coordination.
- B. The Contractor shall leave a night emergency telephone number or numbers with the police department, the Engineer, and the Owner, so that contact may be made easily at all times in case of barricade and flare trouble or other emergencies.
- C. Maintain postal service facilities in accordance with the requirements of the U.S. Postal Service. Move mailboxes to temporary locations designated by the U.S. Postal Service, and at the completion of the work in each area, replace them in their original location and in a condition satisfactory to the U.S. Postal Service.

PART 5 - PRESERVATION, RESTORATION, AND CLEANUP

5.1 SITE RESTORATION AND CLEANUP

- A. At all times during the work, keep the premises clean and orderly, and upon completion of the Work, repair all damage caused by equipment and leave the project free of rubbish or excess materials of any kind.
- B. Stockpile excavated materials in a manner that will cause the least damage to adjacent lawns, grassed areas, gardens, shrubbery, or fences, regardless of whether these are on private property, or on state, county, or city rights-of-way. Remove all excavated materials from grassed and planted areas, and leave these surfaces in a condition equivalent to their original condition. Replace excavated areas, raked and graded to conform to their original contours.

5.2 FINISHING OF SITE, BORROW, AND STORAGE AREAS

- A. Upon completion of the project, all areas used by the Contractor shall be properly cleared of all temporary structures, rubbish, and waste materials and properly graded to drain and blend in with the abutting property. Areas used for the deposit of waste materials shall be finished to properly drain and blend with the surrounding terrain. Grassed areas shall be restored as specified.

5.3 HISTORIC PRESERVATION

- A. The Contractor shall coordinate with the historic preservation representative supplied by the owner for initial excavation operations. If the project work should uncover prehistoric or historic artifacts associated with Native American cultures, early colonial cultures, or American settlements, all project activities in the area shall cease immediately.
- B. All such discoveries shall be reported to the Division of Historical Resources. Review and Compliance Section at (800) 847-7278.
- C. Project activities in the affected area cannot resume without authorization from the Division of Historic Resources.

PART 6 - PERMITS

6.1 GENERAL

- A. City has prepared the following application for the Contractor to submit and obtain Permit:
 - 1. Need to start dry run process and input master permit number.
- B. Permits to be obtained by the Contractor include, but are not limited to the following:
 - 1. Local, County, and State contracting licenses as required.
 - 2. MOT approval from local, county, and state agencies as required.
 - 3. Broward County Planning and Environmental Regulation Division (BCPERD): Dewatering permit, including National Pollution Discharge Elimination System (NPDES) permit if required.
 - 4. Environmental Recourse Permit if necessary.
- C. The Contractor shall comply with all applicable permit conditions.

END OF SECTION 01001

SECTION 01005 - TECHNICAL PROVISIONS

PART 1 - GENERAL

1.1 SCOPE

- A. Work under this contract includes furnishing materials, labor, tools equipment, supervision and incidentals necessary to construct infrastructure improvements.

1.2 ITEMS SPECIFIED ON DRAWINGS

- A. Items of material, equipment, machinery and the like may be specified on the Drawings and not in the Technical Specifications. The CONTRACTOR shall provide such items in accordance with the General Notes on the Drawings.

1.3 FIELD LAYOUT OF THE WORK AND RECORD DRAWINGS

- A. After completion of construction, the CONTRACTOR shall provide three (3) sets of signed & sealed. As-Built Drawings with all the As-Built information; all locations, coordinates, dimensions and elevations of the constructed facilities, certified, signed and sealed thereon by a Land Surveyor registered in the State of Florida. All elevations shall refer to N.A.V.D. 88 (North American Vertical Datum of 1988) and all state plane coordinates shall be NAD 83 (with 1990 adjustment). The cost of such field layout and recording work shall be the responsibility of the CONTRACTOR. The As-Built utility information shall meet the requirements of the City of Fort Lauderdale and any other permitting agencies having jurisdiction on this project.

1.4 SALVAGE

- A. Any existing equipment or material, including but not limited to valves, pipes, fittings, couplings, etc., which is removed as a result of construction under this project may be designated as salvage by the CONTRACT ADMINISTRATOR, and if so, shall be delivered clean to the CITY at a location directed by the CONTRACT ADMINISTRATOR. Any equipment or material not worthy of salvaging shall be disposed of by the CONTRACTOR at a suitable location in accordance with all applicable regulations, ordinances and laws at no additional cost to the CITY.

1.5 POWER

- A. The CONTRACTOR shall furnish and pay for all electrical power required for the construction, testing and trial operation, prior to final acceptance by the CITY.

1.6 WATER SUPPLY

- A. All water required for testing, flushing, and construction shall be furnished by the CITY and paid for by the CONTRACTOR. The purchase price shall be the prevailing rate as published by the CITY. The quantity of water used shall be determined by reading the meter at the start and at the finish of construction. The CONTRACTOR shall make all arrangements and incur all expense involved in having the CITY provided with a vacuum relief or backflow preventer which shall meet the requirements of ASA A40.6, latest revision, and the local administrative authority.

1.7 MAINTENANCE

- A. The CONTRACTOR shall fully cooperate at all times with the CITY in order to maintain the operation of the existing water and/or sewer system with the least amount of interference and interruption possible. The schedule plans and work of the CONTRACTOR shall at all times be subject to alteration and revision if necessary for public health and safety considerations. The creation of a public nuisance will not be permitted.
- B. It may be necessary to interrupt the operation of the existing water and/or sewer system. In all cases where the CONTRACTOR must cause an interruption, CONTRACTOR shall prepare and submit to the CITY'S ENGINEER four (4) working days prior to commencing the work, a complete description of the proposed procedure and a time schedule, which CONTRACTOR will guarantee. At least forty-eight (48) hours prior to the time proposed for starting the work, the CITY'S ENGINEER will notify the CONTRACTOR whether or not the work will be permitted as proposed.
 - 1. The CITY'S ENGINEER reserves the right to require the CONTRACTOR to work 24 hours per day in all cases where, in ENGINEER'S opinion, interference with operation of the system may result in dangerous health hazards or offensive conditions.
 - 2. In no case will the CONTRACTOR be permitted to interfere with the existing system until all materials, supplies, equipment, tools and incidentals necessary to complete the work are on the site. Backup equipment on key equipment items shall be required on work necessitating interference with the existing system.

1.8 SITE RESTORATION

- A. The CONTRACTOR shall remove all excess material and shall clean up and restore the site to its original condition or better. All damage, as a result of work under this Contract, done to existing structures, pavement, driveways, paved areas, curbs and gutters, sidewalks, shrubbery, grass, trees, utility poles, utility pipe lines, conduits, drains, catch basins, flagstones, rocked, graveled, or stabilized areas of driveways, and including all obstructions not specifically named herein, shall be repaired, or replaced, as determined by the CITY'S ENGINEER. Site restoration shall be done in a timely manner as the work progresses. Site restoration work shall be completed on private property within 30 days after being disturbed.

1.9 SANITARY FACILITIES

- A. The CONTRACTOR shall provide temporary facilities at the site as directed by the CITY'S ENGINEER.

1.10 STANDARDS

- A. Wherever in these TECHNICAL SPECIFICATIONS or in the drawings name and/or number refer to certain standards or regulations, the applicable publication shall be the latest revision thereof. Reference by abbreviation is made in accordance with the Section 01070, "Abbreviations of Institutions."

1.11 QUALITY OF ITEMS

- A. All material furnished for this project shall be new and unused. Any material, which has become excessively weathered or damaged since manufacture, shall not be considered

as new. CITY'S ENGINEER shall be the sole judge as to what constitutes excessive weathering or damage.

1.12 TESTING

- A. The City of Fort Lauderdale Engineering Minimum Design and Construction Standards may require that materials and equipment supplied meet given standards and testing to demonstrate conformance to the standards is a part of those standards. The cost of these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.
- B. The CONTRACTOR shall select a recognized, independent testing laboratory to make tests on concrete, asphalt, soils and other materials for the construction phase, to test for conformity with the TECHNICAL SPECIFICATIONS, FDOT and BROWARD COUNTY Construction Standards, and any other applicable testing/Quality control standards as required by all permitting agencies having jurisdiction over this project. The CONTRACTOR shall supply the necessary samples for this testing without cost to the CITY. The costs for actual testing shall be paid by the CONTRACTOR and scheduling of all required tests will be the responsibility of the CONTRACTOR.
- C. Construction in areas where installation and restoration must satisfy the additional requirements of a local, state or federal authority may require testing to demonstrate conformance. The CONTRACTOR shall ascertain the extent of testing required by regulatory agencies within these areas. The CONTRACTOR is responsible for performing such tests, including but not limited to, tests of compaction, and all costs for these tests shall be the obligation of the CONTRACTOR and no extra charge shall be made to the CITY on account of such testing.

1.13 UTILITY CROSSINGS

- A. It is intended that wherever existing utilities must be crossed that the pipe may be deflected up to 75% of the manufacturer's recommended limits, but shall not exceed the allowable limits of the CITY. Adequate cover shall be used to adequately clear the obstruction. However, when in the opinion of the CITY'S ENGINEER, this procedure is not feasible CITY'S ENGINEER may direct the use of fittings to clear a utility crossing as detailed on the Drawings. The cost of such crossing including joint restraints shall be on the basis of the schedule of pay items applied.
- B. Deflections and adjustments of the proposed water and/or sewer mains to avoid all other existing utilities shall be verified/determined in the field during construction.

1.14 BASIS OF MEASUREMENT

- A. Where mains are to be paid for on a unit price per linear foot basis, the number of linear feet will be determined by measurement along the centerline of the pipe in place, including fittings. Square yardage will be determined by the actual number of square yards installed.

1.15 ADJUSTMENT AND RELOCATION OF EXISTING LINES

- A. When the drawings indicate that existing lines must be deflected, the pipe may be deflected up to 75% of the manufacturer's recommended limits but shall not exceed the allowable limits of the CITY. The CONTRACTOR will need to be directed by the ENGINEER. If the ENGINEER determines that the use of new pipe and fittings is required for deflection, the CONTRACTOR will be directed to use this method. The price

for either method shall be based upon the unit prices bid. This does not apply to connections to existing system (Paragraph 1.17, this Section).

1.16 CONNECTION TO EXISTING SYSTEM

- A. The CONTRACTOR shall perform all work necessary to locate, excavate and prepare for connection to the existing mains as shown on the Drawings. The cost of this work and for the actual connection to the existing main shall be based upon the unit prices for installing the pipe and appurtenances and shall not result in any additional cost to the CITY. The cost of ductile iron sleeves shall be included in the fittings unit price.
- B. Additional valves used for the CONTRACTOR's convenience shall not be considered as an extra cost payable by the CITY for the tie-in to the existing system.
- C. During all phases of the work, (i.e. installation, testing and restoration), the CONTRACTOR shall ensure at all times the safe operation of the existing water and/or sewage systems. Service to the customers shall be maintained with the least amount of interference and interruption as possible.

1.17 RELOCATIONS

- A. The CONTRACTOR shall be responsible for the relocation of structures that are shown on the drawings, including, but not limited to, light poles, signs, fences, piping, conduits and drains that interfere with the proposed positioning of the water/sewer mains. The cost of all such relocations shall be included in the prices bid for the appropriate items.

1.18 UTILITIES

- A. Existing utilities are shown on the Drawings insofar as information is reasonably available; however, it will be the responsibility of the CONTRACTOR to preserve all existing utilities whether shown on the Drawings or not. If utility conflicts are encountered by the CONTRACTOR during construction, CONTRACTOR shall give sufficient notice to the CITY so that they may make the necessary adjustments. Damage to any utility, which in the opinion of the CITY is caused by carelessness on the part of the CONTRACTOR, shall be repaired at the expense of the CONTRACTOR.

1.19 GUARANTEE

- A. The CONTRACTOR shall guarantee the equipment, material and labor performed under the Contract against any and all failures in proper use and operation for a period of one (1) year from date of written acceptance by the CITY.
- B. The CONTRACTOR shall also obtain warranties from manufacturers for each piece of equipment furnished so that the manufacturer's warranty fully covers the equipment for a period of one (1) year from the date of written acceptance by the CITY, unless otherwise specified in the specifications.

1.20 PERFORMANCE OF WORK

- A. The CONTRACTOR shall provide all personnel and equipment required to complete all work specified herein and on the Drawings. In an emergency situation, if the CITY determines that it must provide staff and/or equipment to assist the CONTRACTOR in the satisfactory performance of the Contract terms and conditions, the CONTRACTOR at the applicable prevailing wage rates shall reimburse the CITY.

- B. CONTRACTOR shall provide forty-eight (48) hours advance written notice to the CITY for approval of CONTRACTOR'S intention to work overtime on weekdays or to work on the weekends.

1.21 BARRICADING (SAFETY)

- A. The CONTRACTOR shall be responsible for the furnishing and maintaining of all required barricades, either the lighted or the reflector type, to ensure the public's safety during open trench work or for any other potentially unsafe or hazardous construction activities. Barricades shall be located and displayed in conformance with the most stringent regulations required by the governing agencies. All costs for barricading, including any permits, shall be the responsibility of the CONTRACTOR.
- B. All work in public rights-of-way and on private property shall be done in strict compliance with these specifications and Florida Department of Transportation Minimum Standards. Failure to so comply will result in cessation of operations and the removal of project related obstructions from the right-of-way until compliance is achieved.

1.22 EMERGENCY ACCESS AND SECURITY

- A. In order to provide protection to the workers and residents, the CONTRACTOR shall maintain emergency access to the property at all times during construction. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the CITY with signage indicating that this access way is to be used by emergency vehicles only.
- B. No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the ENGINEER, and it shall be the CONTRACTOR'S responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition, the CONTRACTOR shall provide a security guard at the site whenever the CONTRACTOR'S personnel are not present, 24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operating pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the CONTRACTOR shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The CONTRACTOR shall maintain and keep all safety barricades, signage, flashers, and detours, in operating condition. A copy of the approved MOT plans, and details, shall be on site at all times.
- C. All roads are to be maintained during the described construction as to always allow Emergency Access. This item will be paid for under the bid item for Mobilization as named in the Bid Schedule.

1.23 VIBRATORY COMPACTION

- A. The use of vibratory compaction equipment shall be limited to a total gross weight of three (3) tons. The use of vibratory equipment shall be limited to compacting backfill of utility trenches and subgrade of paved areas only. If approved in writing by the

ENGINEER, larger vibratory compaction equipment may be allowed if operated in a static mode only.

1.24 REPORTING OF DAMAGE CLAIMS

- A. The CONTRACTOR shall keep the CITY informed of any damage claims made against the CONTRACTOR during the construction period. All claims for automobile damage, property damage/bodily injury will be reported to the CONTRACT ADMINISTRATOR within 24 hours of receipt of notice. CONTRACTOR will conduct a timely investigation of the claim and determine if they will honor the claim and/or report to their insurance carrier. CONTRACTOR will advise the City of Fort Lauderdale in writing of their decision/referral to carrier.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01005

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SCOPE

A. Section Includes:

1. Project information.
2. Notice to Bidders.
3. Site Investigation.
4. Work By Others.
5. Work Sequence.
6. Work Schedule.
7. Computation Of Contract Time.
8. Contractor Use of Premises.
9. Pre-Construction Conference.
10. Utility Locations.
11. Line And Grade.
12. Protection And Restoration of Survey Monuments.
13. Equipment.
14. Storage Sites.
15. Ownership Of Existing Materials.
16. Excess Material.
17. Audio-Visual Preconstruction Record.
18. Environmental Protection.
19. Maintenance And Protection of Traffic
20. Maintenance And Protection of Existing Drainage System
21. Application For Payment for Stored Materials
22. Special Conditions for Construction by Other Agencies.
23. Specification and Drawing conventions.

1.2 PROJECT INFORMATION

A. Project Identification: Parks Bond and Parks Master Plan Design Implementation Services.

1. AECOM Project No. 60667503 Task Order No.6 - for the following parks:
 - a. Bayview (P12645).
 - b. Florence Hardy (P12651).
 - c. Mills Pond(P12663).
2. AECOM Project No. 60667539 - Task Order No.7 for the following parks:
 - a. Bass (P12644).
 - b. Hortt (P12655).
 - c. Riverside (P12668).
3. AECOM Project No. 60672854 – Task Order No. 8 - for the following parks:
 - a. Annie Beck (P12643).
 - b. Dottie Mancini (P12649).
 - c. Warfield (P12680).

4. AECOM Project No. 60672929 – Task Order No.12 – for Carter Park.
 5. AECOM Project No. 60686375 – Task Order No.13 - Holiday Park Design (P12633).
- B. Owner: Fort Lauderdale Public Works Department.
1. Owner's Representative: Marc Isaac.
- C. Architect: AECOM Technical Services, Inc..
1. Architect's Representative: Maria Rivera and John Crumpton.
- D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:
1. HAMMOND & ASSOCIATES.
 2. BCC ENGINEERING.
 3. CURTIS+ROGERS.
 4. PDS.
 5. GEOSOL.
 6. CORRADINO GROUP.

1.3 NOTICE TO BIDDERS

- A. The successful bidder, in order to be considered responsive, must possess the appropriate License as described in the Contract Documents.
- B. It should also be noted that the successful bidder will, at the time of the pre- construction conference, be required to show that each of the CONTRACTOR'S subcontractors is in compliance with the City's Code of Ordinances.

1.4 SITE INVESTIGATION

- A. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and all subcontractors have satisfied themselves to the nature and location of the work, the general and local conditions including, but not restricted to: those bearing upon transportation; disposal, handling and storage of materials; access roads to the site; the conformation and conditions of the work area; and the character of equipment and facilities needed preliminary to and during the performance of the work. Failure on the part of the CONTRACTOR to completely or properly evaluate the site conditions shall not be grounds for additional compensation.
- B. Soil boring information will not be furnished to the CONTRACTOR. The CONTRACTOR, by virtue of signing the Contract, acknowledges that CONTRACTOR and subcontractors have satisfied themselves as to the nature and extent of soil and (underground) water conditions on the project site. No additional payment will be made to the CONTRACTOR because of differences between actual conditions and those shown by the boring logs.

1.5 WORK BY OTHERS

- A. Concurrent Work by Other CONTRACTORS. The CONTRACTOR'S attention is directed to the fact that other CONTRACTORS may conduct work at the site during the performance of the WORK under this Contract. The CONTRACTOR shall conduct its operations so as to cause little or no delay to WORK of such other CONTRACTORS, and shall cooperate fully with such CONTRACTORS to provide continued safe access

to their respective portions of the site, as required to perform work under their respective contracts.

- B. Interference with Work on Utilities. The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.6 WORK SEQUENCE

- A. The CONTRACTOR shall schedule and perform the work in such a manner as to result in the least possible disruption to the public's use of the parking and park facilities, roadways, driveways, and utilities. Utilities shall include but not be limited to water, sewerage, drainage structures, ditches and canals, gas, electric, television and telephone. Prior to commencing with the WORK, CONTRACTOR shall perform a location investigation of existing underground utilities and facilities in accordance with Section 01530 entitled "Protection of Existing Facilities" and shall have obtained all required permits and permissions, CONTRACTOR shall also deliver written notice to the CITY, ENGINEER, ARCHITECT and property occupants (private and public) of all planned disruption to roadway, driveways, temporary displacement of fences, mailboxes, street signs and traffic signs, and utilities 72 hours in advance of disruption.

1.7 WORK SCHEDULE

- A. Time is of the essence in completing this project. Because time is of the essence the CONTRACTOR shall commit the necessary resources to this project to complete it in a timely manner. Those resources may include multiple working crews, working overtime, etc. Because time is of the essence, the CONTRACTOR'S construction progress will be monitored closely on a weekly basis. The Construction progress will be measured with the construction schedule submitted by the CONTRACTOR. If the ENGINEER/ARCHITECT determines that the CONTRACTOR does not meet the Critical Path Method (CPM) as specified in Section 01311 "Construction Progress Documentation", the CONTRACTOR will be required to commit those resources necessary to ensure the completion of the project in a timely manner including working overtime, adding other work crews, etc. All costs incurred to implement measure to complete the work in timely manner will be borne by the CONTRACTOR at no additional cost to the OWNER.

B. REQUIRED PERIODS OF WORK SUSPENSION

- 1. CONTRACTOR shall shut down operations for all City Holidays, terminating production work by noon on the day preceding the holiday (or the weekend before said holiday) and not resuming operations until the start of the following week (or the day after the holiday, whichever is later). The CONTRACTOR shall ensure that the site is restored per Sections 01001 and 01010 and all areas that are off limits to the public will be clearly delineated and protected. For a full list of holidays, please refer to the City; however these include, but are not limited to New Year's Eve and Day, Martin Luther King's Birthday, Memorial Day, the 4th of July, Labor Day, Thanksgiving Day and the day after Thanksgiving Day, Christmas Eve and Christmas.

2. The CONTRACTOR shall include these provisions in the schedule required in 01311 "Construction Progress Documentation" and there shall be no additional time granted for these work suspensions.
3. No additional compensation shall be granted for demobilization, cleaning and remobilization as a result of these work suspensions.
4. During the work suspensions, the CONTRACTOR shall remain liable for the safety and security of the project site and be available 24 hours per the Contract Documents. CONTRACTOR shall have personnel visit the site daily during these suspensions to ensure the safety and security of the site.

C. SCHEDULE

1. CONTRACTOR shall submit scheduling information for the work as required in Section 01311 "Construction Progress Documentation".
2. No separate payment shall be made for preparation and/or revision of the schedule.

- D. On-Site Work Hours: Work hours shall be defined at the pre-construction meeting and shall comply with all permit conditions. Except otherwise indicated, work shall be performed during normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Friday. Also, contractor must be aware of both residential and commercial surroundings (traffic and operations).

1.8 COMPUTATION OF CONTRACT TIME

- A. It is the CONTRACTOR'S responsibility to provide clear and convincing documentation to the ENGINEER/ARCHITECT as to the effect additional work will have with respect to additional contract time extension that may be justified. If additional quantities of work can be carried out concurrent with other existing construction activities without disrupting the critical path of the project, then no contract time extension will be granted. The CONTRACTOR is obligated to provide documentation to the ENGINEER/ARCHITECT if additional elements of work affect the critical path of the project. If work set forth in the original scope of the project is deleted, the contract time may be reduced. This contract is a calendar day contract. While the CONTRACTOR may be granted time to suspend work operations for vacations or holidays, contract time will not be suspended. During suspensions, the CONTRACTOR shall be responsible for all maintenance of traffic and liability without additional compensation from the CITY.

1.9 CONTRACTOR USE OF PREMISES

- A. The CONTRACTOR's use of the project site shall be limited to its construction operations. The CONTRACTOR will arrange for storage of materials and a copy of an agreement for use of other property shall be furnished to the ENGINEER/ARCHITECT.

1.10 PRE-CONSTRUCTION CONFERENCE

- A. After the award of Contract, a Pre-construction Work Conference will be held between the CONTRACTOR, the ENGINEER/ARCHITECT, the CITY, other interested Agencies, representatives of Utility Companies and others affected by the work. The ENGINEER/ARCHITECT will set the time and place of this conference. The CONTRACTOR shall bring to the conference a copy of the proposed work schedule for the approval by the ENGINEER/ARCHITECT of the proposed methods and manner of

executing the work including sequences of operation and time schedule. The work shall be performed in accordance with such schedule or approved amendments thereto.

1.11 UTILITY LOCATIONS

- A. As far as possible, all existing utility lines in the project area have been shown on the plans. However, the CITY does not guarantee that all lines are shown, or that said lines are in their true location. It shall be the CONTRACTOR'S responsibility to identify and locate all underground or overhead utility lines or equipment affected by the project. No additional payment will be made to the CONTRACTOR because of discrepancies in actual and plan location of utilities and damages suffered as a result thereof.
- B. The CONTRACTOR shall notify each utility company involved at least thirty (30) days prior to the start of construction to arrange for positive underground location, relocation or support of its utility where that utility may be in conflict with or endangered by the proposed construction. The CONTRACTOR shall pay for relocation of water mains or other utilities for the convenience of the CONTRACTOR. The CONTRACTOR shall pay for all charges by utility companies for temporary support of its utilities. All costs of permanent utility relocations to avoid conflict shall be the responsibility of the CONTRACTOR and the utility company involved.
- C. The CONTRACTOR shall schedule and coordinate their work in such a manner that they are not delayed by the utility companies relocating or supporting their utilities. No compensation will be paid to the CONTRACTOR for any loss of time or delay.
- D. All overhead, surface, and underground structures and/or utilities encountered are to be carefully protected from damage or displacement. All damage to said structures and/or utilities is to be completely repaired within a reasonable time; needless delay will not be tolerated. The CITY reserves the right to remedy any damage by ordering outside parties to make repairs at the expense of the CONTRACTOR. All repairs made by the CONTRACTOR are to be made to the satisfaction of the utility owner and shall be inspected by a representative of the utility owner and the ENGINEER.
- E. The CONTRACTOR should be aware of the Sunshine State One Call Center, which has a free locating service for CONTRACTORS and excavators. Within forty-eight hours before excavating, dial toll free 1-800-432-4770, and a locator will be dispatched to the work location. CONTRACTOR shall reasonably notify other utility companies not notified by Sunshine State One Call Center.
- F. The permits listed below will be obtained for the project by the CITY prior to beginning construction. The CONTRACTOR is responsible for compliance with any and all permit conditions. In the event that the CITY must obtain permits in addition to those listed below, the CONTRACTOR shall not have any claim for damages arising from any delay caused by the CITY'S obtaining said additional permits.
 - 1. TBD
- G. Permits to be obtained by the CONTRACTOR include, but are not limited to the following:
 - 1. Local, county and State contracting licenses.

1.12 LINE AND GRADE

- A. The ENGINEER has provided vertical and horizontal control for layout of the work in the form of benchmarks and reference points located adjacent to the work. From these controls provided, the CONTRACTOR shall develop and make all detailed surveys needed for construction as-built purposes and shall establish all working points, lines and elevations necessary to perform the work. A Professional Land Surveyor registered in the State of Florida shall supervise this surveying work.

1.13 PROTECTION AND RESTORATION OF SURVEY MONUMENTS

- A. The CONTRACTOR shall carefully protect from disturbance all survey monuments, stakes and bench marks, whether or not established by CONTRACTOR, and shall not remove or destroy any surveying point until it has been properly witnessed by the ENGINEER. All major survey monuments that have been damaged by the CONTRACTOR such as section corners, 1/4 section corners; property corners or block control points shall be replaced at the CONTRACTOR'S expense with markers of a size and type approved by the ENGINEER. The replacement shall be under the supervision of a Florida Registered Land Surveyor where directed by the ENGINEER.

1.14 EQUIPMENT

- A. All equipment necessary and required for the proper construction of all facilities shall be on the construction site, in first-class working condition.

1.15 STORAGE SITES

- A. The CONTRACTOR shall furnish, at CONTRACTOR's expense, properly zoned areas suitable for field office, material storage and equipment service and storage. No material may be stored in the public right of way without prior authorization by the agency having jurisdiction. The CONTRACTOR shall keep these areas in a clean and orderly condition so as not to cause a nuisance or sight obstruction to motorists or pedestrians.

1.16 OWNERSHIP OF EXISTING MATERIALS

- A. All materials removed or excavated from the job site shall remain the property of the CITY until released by the Contract Administrator, at which time it shall become the property of the CONTRACTOR, who shall dispose of it in a manner satisfactory to the ENGINEER/ARCHITECT.

1.17 EXCESS MATERIAL

- A. Upon direction of the ENGINEER, all vegetation, debris, concrete or other unsuitable materials shall be disposed of in areas provided by the CONTRACTOR and approved by the ENGINEER. Any excess material desired to be retained by the CITY shall be delivered by the CONTRACTOR to a designated area within a 5-mile radius of the project, at no extra cost to the CITY.

1.18 AUDIO-VISUAL PRECONSTRUCTION RECORD

- A. General
 - 1. Prior to beginning the work, the CONTRACTOR shall have a continuous color audio-video recording taken along the entire length of the project to serve as a record of preconstruction conditions. No construction shall begin prior to review

and approval of the video covering the construction area by the ENGINEER/ARCHITECT. The ENGINEER/ARCHITECT shall have the authority to reject all or any portion of the videos not conforming to the specifications and order that it be redone at no additional charge. The CONTRACTOR shall reschedule unacceptable coverage within five days after being notified. The ENGINEER/ARCHITECT shall designate those areas, if any, to be omitted from or added to the audio-video coverage.

1.19 ENVIRONMENTAL PROTECTION

- A. The CONTRACTOR shall furnish all labor and equipment and perform all work required for the prevention of environmental pollution during and as a result of the work under this contract. For the purpose of this contract, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life, affect other species of importance to man, or degrade the utility of the environment for aesthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, land and involves noise, solid waste management and management of radiant energy and radioactive materials, as well as other pollutants. Environmental pollution prevention shall be in accordance with NPDES requirements with no additional cost to the CITY.

1.20 MAINTENANCE AND PROTECTION OF TRAFFIC

- A. The CONTRACTOR shall provide all necessary traffic control devices in order to redirect, protect, warn or maintain existing vehicular and pedestrian traffic during the course of construction.
 - 1. Construction Phasing Requirements
 - a. Contractor shall arrange the schedule to maintain minimum of 11' travel lane for each direction at all time.

B. TRAFFIC CONTROL

- 1. The CONTRACTOR is required to submit a conceptual Traffic Control Plan at the Pre-Construction Conference. This preliminary plan should identify the phases of construction that the CONTRACTOR plans to proceed with and identify traffic flows during each phase. The ENGINEER will have ten (10) days to notify the CONTRACTOR of any comments. Once the conceptual plan for maintaining traffic has been approved, the CONTRACTOR will be required to submit a detailed plan showing each phase's Maintenance and Protection Plan prior to starting construction of any phase.
- 2. The "Maintenance of Traffic" plan shall include pedestrian traffic as well as vehicular traffic. It shall be the responsibility of the CONTRACTOR for any necessary Construction, Pavement Marking and Signage or any Pedestrian Signalization and/or Signal Modification to accommodate an alternate safe walk route.
- 3. The CONTRACTOR, at all times, shall conduct the work in such a manner as to insure the least obstruction to traffic as is practical. Convenience of the general public and of the residents adjacent to the work shall be provided for in a satisfactory manner, as determined by the ENGINEER.
- 4. Sidewalks, gutters, drains, fire hydrants and private drives shall, insofar as practical, be kept in condition for their intended uses. Fire hydrants on or adjacent

to the work shall be kept accessible to fire apparatus at all times, and no material or obstruction shall be placed within twenty (20) feet of any such hydrant.

5. All existing stop and street name signs will be maintained as long as deemed necessary by the ENGINEER.
6. The CONTRACTOR shall furnish a sufficient number of protective devices to protect and divert the vehicular and pedestrian traffic from working areas closed to traffic, or to protect any new work. Failure to comply with this requirement will result in the ENGINEER shutting down the work until the CONTRACTOR provides the necessary protection.
7. Any time traffic is diverted for a period of time that will exceed one-work day temporary pavement markings will be required. Existing pavement markings that conflict with the new work zone traffic pattern must be obliterated. Painting over existing pavement markings (black out) is not permitted.

1.21 MAINTENANCE AND PROTECTION OF EXISTING DRAINAGE SYSTEM

- A. It shall be the responsibility of the contractor to maintain positive drainage on the surface and to ensure that the existing underground drainage system continues to function as intended during the construction. The contractor shall follow the plans to ensure that existing catch basins and manholes are being protected during the entire phase of construction.

1.22 APPLICATION FOR PAYMENT FOR STORED MATERIALS

- A. Application for payment for stored materials may not be made by the CONTRACTOR.

1.23 SPECIAL CONDITIONS FOR CONSTRUCTION BY OTHER AGENCIES

- A. It will be the CONTRACTOR'S responsibility to coordinate construction schedules with other contractors so as to minimize disruptions, and inconveniences. The project site shall be safe at all times for construction workers and marina visitors.

1.24 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

- B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.
- C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- D. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings and published as part of the U.S. National CAD Standard.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01010

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUBMITTALS

- A. See Section 01340 "Submittal Procedures", and all other references to document submittals. Submittals shall include, but are not limited to:
 - 1. Schedule of Values: Submit schedule on OWNER's form.
 - 2. Application for Payment.
 - 3. Final Application for Payment.

1.2 SCHEDULE OF VALUES

- A. Prepare a schedule of values for the Work.

- B. Lump Sum Work:
 - 1. Contractor to provide a detailed schedule of values (SOV) included in conformed Bid Form.
 - 2. List Bonds and insurance premiums, mobilization, demobilization, facility startup, and contract closeout separately.
 - 3. Break down by Divisions 2 through 33 with appropriate subdivision of each Specification.
- C. An unbalanced or front-end loaded schedule will not be acceptable.
- D. The owner's representative will review and provide comments on the SOV. Contractor must complete changes to SOV as per comments provided and no pay app shall be submitted for payment until final approval of SOV as approved by the owner.
- E. Lump sum line items on the approved SOV must be provided separately and with detailed descriptions to justify monthly requirements. The descriptions must be quantifiable for tracking and validation purposes. These line items do not release the contractor from the overall lump sum contract.
- F. Summation of the complete schedule of values representing all the Work shall equal the Contract Price.

1.3 APPLICATION FOR PAYMENT

- A. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of CONTRACTOR.
- B. Use detailed Application for Payment Form provided by OWNER.
- C. Include accepted schedule of values for each portion of Work and the unit price breakdown for the Work to be paid on unit price basis, and a listing of OWNER-selected equipment, if applicable, and allowances, as appropriate.
- D. Preparation:

1. Round values to nearest dollar.
2. List each Change Order and Written Amendment executed prior to date of submission as separate line item. Totals to equal those shown on the Transmittal Summary Form.
3. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form, a listing of materials on hand as applicable, and such supporting data as may be requested by OWNER.

1.4 MEASUREMENT - GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and Specifications as specified in National Institute of Standards and Technology, Handbook 44.
- B. Whenever pay quantities of material are determined by weight, material shall be weighed on scales furnished by CONTRACTOR and certified accurate by state agency responsible. Weight or load slip shall be obtained from weigher and delivered to CONSTRUCTION MANAGER or OWNER's representative at point of delivery of material.
- C. If material is shipped by rail, car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by CONSTRUCTION MANAGER. Each vehicle shall bear a plainly legible identification mark.
- E. Materials that are specified for measurement by the cubic yard measured in the vehicle shall be hauled in vehicles of such type and size that actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. Vehicles shall be loaded to at least their water level capacity. Loads hauled in vehicles not meeting above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.
- F. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities.
- G. Units of measure shown on Bid Form shall be as follows, unless specified otherwise. All methods of measurement shall be approved by the CONSTRUCTION MANAGER.

<u>Item</u>	<u>Method of Measurement</u>
AC	Acre - Field Measure
CY	Cubic Yard - Field Measure within limits specified or shown, or measured in vehicle by volume, as specified
EA	Each - Field Count
GAL	Gallon - Field Measure
HR	Hour

LB	Pound(s) - Weight Measure by Scale
LF	Linear Foot - Field Measure
LS	Lump Sum - Unit is one; no measurement will be made
SF	Square Foot
SY	Square Yard
TON	Ton - Weight Measure by Scale (2,000 pounds)

1.5 PAYMENT

A. General:

1. Progress payments will be made monthly.
2. The date for CONTRACTOR's submission of monthly Application for Payment.

1.6 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

A. Payment will not be made for following:

1. Loading, hauling, and disposing of rejected or unused material.
2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
3. Rejected loads of material, including material rejected after it has been placed by reason of failure of CONTRACTOR to conform to provisions of Contract Documents.
4. Material not unloaded from transporting vehicle.
5. Defective Work not accepted by OWNER.
6. Material remaining on hand after completion of Work.

1.7 MOBILIZATION

- A. See Section 01505 "Mobilization", for payment limitations. All environmental compliance matters except for erosion control system shall be included in Mobilization.
- B. Payment for mobilization will be made at an allowance price named in the Bid Schedule. Payment for mobilization will be made in equal monthly amounts during the duration of the original contract time.

1.8 MAINTENANCE OF TRAFFIC (M.O.T.)

- A. See Section 01570 "Traffic Regulations", and all other references to traffic control and maintenance, as well as parking control and maintenance in this document and any regulatory requirements.
- B. Payment for maintenance of traffic will be made at an allowance price named in the Bid Schedule. Payment for maintenance of traffic and parking activities will be made in equal monthly amounts during the duration of the original contract time.

1.9 HARDSCAPE DEMOLITION

- A. Measurement for payment to remove and dispose of existing hardscape elements will be based on a lump sum inclusive of all work on the Demolition drawings.

- B. This lump sum for removal and disposal of existing hardscape elements as indicated on the Design Drawings shall constitute full compensation for the removal and disposal of all concrete, asphalt or structures. This includes, but is not limited to sidewalks, curbs, aprons, concrete collars, brick pavers, and all other miscellaneous concrete as directed by the ENGINEER/LANDSCAPE ARCHITECT. Existing structures will not be compensated under this line item.

1.10 PAVING AND DRAINAGE

- A. Measurement for payment to furnish and install drainage structures, inlets or top slabs, connections, and paving in addition to all required connections, modifications and cleaning of drainage facilities will be based on the line items provided for each item of work for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing, modifying or cleaning all drainage appurtenances in the design drawings which price shall constitute full compensation for the completed installation of the structure including but not limited to excavation, backfill, compaction, modifications, disposal, cleaning, all required dewatering and full compliance with the Trench Safety Act.

1.11 WATER AND SEWER

- A. Measurement for payment to furnish and install all water and sewer items will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all water and sewer items shall constitute full compensation for the completed installation of the structure including but not limited to excavation, backfill, compaction, modifications, disposal, cleaning, all required dewatering and full compliance with the Trench Safety Act.

1.12 STRUCTURES

- A. Measurement for payment to furnish and install all shade structures and other structures, will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing shade structures and other structures shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.13 AMENITIES

- A. Measurement for payment to furnish and install all amenities will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all amenities shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.14 LANDSCAPING

- A. Measurement for payment to furnish and install trees, sod, groundcover and irrigations will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all trees, sod, groundcover and irrigations, shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.15 ELECTRICAL

- A. Measurement for payment to furnish and install all electrical equipment and conduits will be lump sum for all work to be performed on the applicable drawings, all in accordance with the requirements of the Contract Documents.
- B. Payment for furnishing and installing all electrical equipment and conduits shall constitute full compensation for the completed installation of the structure including but not limited to excavation, dewatering, backfill, compaction, modifications, disposal and cleaning.

1.16 PERMIT FEES

- A. Measurement for payment for permit fees will be based upon the actual permit fees required by the CONTRACTOR from the various agencies having jurisdiction for construction of the project, all in accordance with the Contract Documents. The allowance for permit fee amounts shown on the bid schedule is an estimate of permit fees required for the project and is a cost pass through item. The permit fees are based on allowances and OWNER will reconcile the actual cost with the CONTRACTOR by change order. The CONTRACTOR shall produce documentation upon request verifying actual cost. Only permit fees substantiated and approved by the ENGINEER will be paid as part of this bid item.
- B. Because payment for permit fees will be paid as part of this bid item, payment for permit fees will not be paid as part of mobilization.

1.17 CONSIDERATION FOR INDEMNIFICATION (OWNER/ENGINEER)

- A. Measurement for payment for indemnification of the OWNER and ENGINEER/ARCHITECT will be based upon the sum named for such work, all in accordance with the requirements of the contract documents.
- B. Payment will be twenty-five dollars for consideration for indemnification named in the bid schedule and shall constitute full compensation for indemnifying the OWNER and ENGINEER as specified in the contract documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01025

SECTION 01031 - ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. Coordinate work of trades and schedule elements of alterations and renovation work by procedure and methods to expedite completion of the work.
- B. In addition to demolition and that specifically shown, cut, move or remove items necessary to provide access or to allow alterations and new work to proceed. Include such items as:
 - 1. Repair or removal of hazardous or unsanitary conditions.
 - 2. Removal of abandoned items and items serving no useful purpose, such as abandoned piping, conduit and wiring.
 - 3. Removal of unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals and deteriorated concrete, shall be removed from the site expeditiously.
 - 4. Cleaning of surfaces and removal of surface finished as needed to install new work and finishes.
 - 5. Protection as required for existing trees to remain.
 - 6. For purposes of all existing underground utilities work, coordinate as required by use of special telephone number shown on engineering drawings.
 - 7. Site storage for all existing benches, signals, signs, light poles, fire hydrants, manhole covers and grates to be relocated.
- C. Patch, repair and refinish existing items to remain, to the specified condition for each material, with a professional transition to adjacent new items of construction.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 DEFINITIONS

- A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.
- B. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.
- C. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.
- D. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

- E. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.
- F. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.
- G. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.
- H. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.
- I. Retain: To keep an element or detail secure and intact.
- J. Strip: To remove existing finish down to base material unless otherwise indicated.

1.4 COORDINATION

- A. Alteration Work Subschedule: A construction schedule coordinating the sequencing and scheduling of alteration work for entire Project, including each activity to be performed, and based on Contractor's Construction Schedule. Secure time commitments for performing critical construction activities from separate entities responsible for alteration work.
 - 1. Schedule construction operations in sequence required to obtain best Work results.
 - 2. Coordinate sequence of alteration work activities to accommodate the following:
 - a. Owner's continuing occupancy of portions of existing building.
 - b. Owner's partial occupancy of completed Work.
 - c. Other known work in progress.
 - d. Tests and inspections.
 - 3. Detail sequence of alteration work, with start and end dates.
 - 4. Utility Services: Indicate how long utility services will be interrupted. Coordinate shutoff, capping, and continuation of utility services.
 - 5. Equipment Data: List gross loaded weight, axle-load distribution, and wheel-base dimension data for mobile and heavy equipment proposed for use in existing structure. Do not use such equipment without certification from Contractor's professional engineer that the structure can support the imposed loadings without damage.

1.5 PROJECT MEETINGS FOR ALTERATION WORK

- A. Preliminary Conference for Alteration Work: Before starting alteration work, conduct conference at Project site.
 - 1. Attendees: In addition to representatives of Owner, Architect, and Contractor, testing service representative, specialists, and chemical-cleaner manufacturer(s) shall be represented at the meeting.
 - 2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:
 - a. Alteration Work Subschedule: Discuss and finalize; verify availability of materials, specialists' personnel, equipment, and facilities needed to make progress and avoid delays.
 - b. Fire-prevention plan.

- c. Governing regulations.
 - d. Areas where existing construction is to remain and the required protection.
 - e. Hauling routes.
 - f. Sequence of alteration work operations.
 - g. Storage, protection, and accounting for salvaged and specially fabricated items.
 - h. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
 - i. Qualifications of personnel assigned to alteration work and assigned duties.
 - j. Requirements for extent and quality of work, tolerances, and required clearances.
 - k. Embedded work such as flashings and lintels, special details, collection of waste, protection of occupants and the public, and condition of other construction that affects the Work or will affect the work.
3. Reporting: Record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

1.6 MATERIALS OWNERSHIP

- A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.
 1. Carefully dismantle and salvage each item or object in a manner to prevent damage and protect it from damage, then promptly deliver it to Owner where directed at Project site.

1.7 INFORMATIONAL SUBMITTALS

- A. Alteration Work Subschedule:
 1. Submit alteration work subschedule within 30 days of date established for commencement of alteration work.
- B. Preconstruction Documentation: Show preexisting conditions of adjoining construction and site improvements that are to remain, including finish surfaces, that might be misconstrued as damage caused by Contractor's alteration work operations.
- C. Alteration Work Program: Submit 30 days before work begins.
- D. Fire-Prevention Plan: Submit 30 days before work begins.

1.8 QUALITY ASSURANCE

- A. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.
 1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.

2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.
 - B. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.
 - C. Safety and Health Standard: Comply with ANSI/ASSP A10.6.
- 1.9 STORAGE AND HANDLING OF SALVAGED MATERIALS
- A. Salvaged Materials:
 1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
 2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area designated by Owner.
 5. Protect items from damage during transport and storage.
 - B. Salvaged Materials for Reinstallation:
 1. Repair and clean items for reuse as indicated.
 2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
 3. Protect items from damage during transport and storage.
 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.
- 1.10 FIELD CONDITIONS
- A. Survey of Existing Conditions: Record existing conditions that affect the Work by use of measured drawings and preconstruction photographs.
 1. Comply with requirements specified in Section 01380 "Construction Photographs."
 - B. Discrepancies: Notify Architect of discrepancies between existing conditions and Drawings before proceeding with removal and dismantling work.
- 1.11 ALTERATIONS, CUTTING AND PROTECTION
- A. Assign the work of moving, removal, cutting, patching and protection to trades qualified to perform the work in a manner to cause least damage to each type of work, and provide means of returning surfaces to appearance of new work.
 - B. Perform cutting and removal work to remove minimum necessary, and in a manner to avoid damage to adjacent work.
 1. Cut finish surfaces such as paving, masonry, tile, plaster or metals, by methods to terminate surfaces in a straight line at a natural point of division.
 - C. Perform cutting and patching as specified in Section 01045 "Cutting and Patching".

- D. Protect existing finishes, equipment, and adjacent work which are scheduled to remain, from damage.
 - 1. Protect existing and new work from weather and extremes of temperature.

PART 2 - PRODUCTS

2.1 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

- A. General Requirements that work be complete:
 - 1. Provide same products or types of construction as that in existing structure, as needed to patch, extend or match existing work.
 - a. Contract Documents will not define products or standards of working conduct present in existing construction; CONTRACTOR shall determine products in inspection and any necessary testing by use of the existing as a sample of comparison.
 - 2. Presence of a product, finish, or type of construction, requires that patching, extending or matching shall be performed as necessary to make work complete and consistent to existing identical standards of quality.

PART 3 - EXECUTION

3.1 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.
 - 1. Use only proven protection methods, appropriate to each area and surface being protected.
 - 2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
 - 3. Erect temporary barriers to form and maintain fire-egress routes.
 - 4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
 - 5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
 - 6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
 - 7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.

3.2 PROTECTION FROM FIRE

- A. General: Follow fire-prevention plan and the following:
 - 1. Comply with NFPA 241 requirements unless otherwise indicated.
 - 2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
 - 3. If combustible material cannot be removed, provide fire blankets to cover such materials.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.
- B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.
- C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.
- D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.
- E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 PERFORMANCE

- A. Patch and extend existing work using skilled mechanics who are capable of matching existing quality. Quality of patched or extended work shall be not less than that specified for new work.

3.5 DAMAGED SURFACES

- A. Patch and replace any portion of an existing finished surface with the exception of concrete curb or gutter which is found to be damaged, lifted, discolored, or shows other imperfections. Damaged curbing shall be replaced in sections as directed by the engineer.
 - 1. Provide adequate support of substrate prior to patching the finish.
 - 2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
 - 3. When existing surface finish cannot be matched, refinish entire surface to nearest intersections.

3.6 TRANSITION FROM EXISTING TO NEW WORK

- A. When new work abuts or is finished flush with existing work, make a smooth transition. Patched work shall match existing adjacent work in texture and appearance so that the patch of transition is invisible at a distance of five feet.
 - 1. When finished surfaces are cut in such a way that a smooth transition with new work is not possible, terminate existing surface in a neat manner along a straight line at a natural line of division, and provide trim appropriate to finished surface.

3.7 CLEANING

- A. Perform periodic and final cleaning as specified in Section 01710.

1. Clean Owner-occupied areas daily.
 2. Clean spillage, overspray, and heavy collection of dust in OWNER occupied areas immediately.
- B. At completion of work of each trade, clean area and make surfaces ready for work of successive trades.
- C. At completion of alterations work in each area, provide final cleaning and return space to a condition suitable for use by OWNER.

3.8 GENERAL ALTERATION WORK

- A. Have specialty work performed only by qualified specialists.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs. Comply with requirements in Section 01380 "Construction Photographs."
- D. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.
- E. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.
1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 01031

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Informational
 - 1. Statement of Qualification (SOQ) for land surveyor or civil engineer.
 - 2. Statement of Qualification (SOQ) for professional videographer.
- B. Photographs
 - 1. Color Prints
 - a. Submit two copies within 5 days of being taken.
 - 2. Video Recordings
 - a. Submit two copies within 5 days of being taken.

1.2 UTILITY NOTIFICATION AND COORDINATION

- A. Coordinate the Work with various utilities within Project limits. Notify applicable utilities prior to commencing Work.
- B. Contact the City of Fort Lauderdale Public Services Department at 954-828-8000 for water and sewer utility locations.
- C. Contact Sunshine State One Call at 1-800-432-4770 at least 2 business days prior to any excavation.
- D. If damage occurs, or if conflicts or emergencies arise during Work, contact the appropriate utility.
 - 1. Electricity Company: Florida Power and Light.
 - a. Contact Person: Trouble Center (or police/fire – 911).
 - b. Telephone: (954)321-2056
 - 2. Telephone Company: AT&T Distribution
 - a. Contact Person: Otis Keeve
 - b. Telephone: 954-723-2540
 - 3. Water and Sewer Department: Fort Lauderdale Public Services Department.
 - a. Contact Person: Emergency Hotline.
 - b. Telephone: 954-828-8000
 - 4. Gas Company: TECO Peoples Gas
 - a. Contact Person: Danny Rivera / Max Chamorro
 - b. Telephone: (954)931-9742 / (954)453-0812
 - 5. Telecom: Comcast.
 - a. Contact: John Matonti
 - b. Telephone: 954-447-8486

6. Telecom: Hotwire
 - a. Contact: Walter Sancho-Davila
 - b. Telephone: 954-699-0900
7. Broward County Traffic Engineering Division (For Traffic Signal Communications Systems Underground Cable and Traffic Loops):
 - a. Contact: Tony Casas
 - b. Telephone: (954)847-2752

1.3 PROJECT MEETINGS

A. General

1. Contract: Schedule physical arrangements for meetings throughout progress of Work, prepare meeting agenda with City/Construction Manager and Contractor input and distribute with written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies minutes after each meeting to participants and parties affected by meeting decisions.
2. Representatives of City/Construction Manager, Contractor, and Subcontractors shall attend meetings as needed.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner/Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Responsibilities and personnel assignments.
 - b. Tentative construction schedule.
 - c. Critical work sequencing and long lead items.
 - d. Designation of key personnel and their duties.
 - e. Lines of communications.
 - f. Use of web-based Project software.
 - g. Procedures for processing field decisions and Change Orders.
 - h. Procedures for RFIs.
 - i. Procedures for testing and inspecting.
 - j. Procedures for processing Applications for Payment.
 - k. Distribution of the Contract Documents.
 - l. Submittal procedures.
 - m. Preparation of Record Documents.
 - n. Use of the premises and existing building.
 - o. Work restrictions.
 - p. Working hours.
 - q. Owner's occupancy requirements.
 - r. Responsibility for temporary facilities and controls.

- s. Procedures for moisture and mold control.
 - t. Procedures for disruptions and shutdowns.
 - u. Construction waste management and recycling.
 - v. Parking availability.
 - w. Office, work, and storage areas.
 - x. Equipment deliveries and priorities.
 - y. First aid.
 - z. Security.
 - aa. Progress cleaning.
- 1) Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
- 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect/Construction Manager of scheduled meeting dates.
 - 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Possible conflicts.
 - i. Compatibility requirements.
 - j. Time schedules.
 - k. Weather limitations.
 - l. Manufacturer's written instructions.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities and controls.
 - q. Space and access limitations.
 - r. Regulations of authorities having jurisdiction.
 - s. Testing and inspecting requirements.
 - t. Installation procedures.
 - u. Coordination with other work.
 - v. Required performance results.
 - w. Protection of adjacent work.
 - x. Protection of construction and personnel.
 - 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.

5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to Project closeout.
 2. Attendees: Authorized representatives of Owner/Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of Record Documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for delivery of material samples, attic stock, and spare parts.
 - f. Requirements for demonstration and training.
 - g. Preparation of Contractor's punch list.
 - h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - i. Submittal procedures.
 - j. Owner's partial occupancy requirements.
 - k. Installation of Owner's furniture, fixtures, and equipment.
 - l. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of Owner/ Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required

to ensure that current and subsequent activities will be completed within the Contract Time.

- 1) Review schedule for next period.
- b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site use.
 - 8) Temporary facilities and controls.
 - 9) Progress cleaning.
 - 10) Quality and work standards.
 - 11) Status of correction of deficient items.
 - 12) Field observations.
 - 13) Status of RFIs.
 - 14) Status of Proposal Requests.
 - 15) Pending changes.
 - 16) Status of Change Orders.
 - 17) Pending claims and disputes.
 - 18) Documentation of information for payment requests.
4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
 - a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- F. Coordination Meetings: Conduct Project coordination meetings at monthly intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
 1. Attendees: In addition to representatives of Owner/ Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss

whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

- b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
- c. Review present and future needs of each contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site use.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of RFIs.
 - 14) Proposal Requests.
 - 15) Change Orders.
 - 16) Pending changes.

G. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

H. Other Meetings

- 1. In accordance with the Contract Documents and as may be required by the City and Engineer/Architect.

1.4 FACILITY OPERATIONS

- A. Continuous operation of City's facilities is of critical importance. Schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified.
- B. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of City's operations.
- C. When necessary, plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items to maintain continuous operations of City's facilities.
- D. Do not close lines, open or close valves, or take other action which would affect the operation of existing systems, except as specifically required by the Contract Documents and after authorization by City and Engineer. Such authorization will be considered within 48 hours after receipt of Contractor's written request.
- E. Provide 7 days advance written request for approval of need to shut down a process or facility to City/Construction Manager.

- F. Power outages will be considered upon 48 hours written request to City. Describe the reason, anticipated length of time, and areas affected by the outage. Provide temporary provisions for continuous power supply to critical facility components.
- G. Do not proceed with Work affecting a facility's operation without obtaining City's advance approval of the need for and duration of such Work.
- H. Relocation of Existing Facilities:
 - 1. During construction, it is expected that minor relocations of Work will be necessary.
 - 2. If Contractor determines that in order to expedite construction of new water and or sewer mains it would be necessary to temporarily remove and replace existing water services and/or sewer service connections, he will be responsible for the removal and replacement of such service connections at his own cost and effort. The City will not provide additional compensation for any costs associated with such effort. All labor and material costs associated with means and methods of construction will be compensated as part of the bid item(s) cost submitted by the Contractor. Additionally, the Contractor will have to coordinate and inform utility owner(s) and any City resident(s) impacted by such activities and must repair such utilities in a timely manner to minimize disruption of service.
 - 3. Provide complete relocation of existing structures and Underground Facilities, including piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, traffic loop detectors and other necessary items.
 - 4. Use only new materials for relocated facility. Match materials of existing facility, unless otherwise shown or specified.
 - 5. Perform relocations to minimize downtime of existing facilities.
 - 6. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by City.

1.5 BYPASS PUMPING

- A. Where the Work includes connections or modifications to existing sanitary sewer systems, wastewater flows shall be controlled through the pipeline sections and pump stations where work is being performed. Under no circumstances, can portions of the system be removed from service for periods of time in excess of that approved by the City. The Contractor shall be responsible to assess conditions and capacities of the existing sewer lines and pump stations in order to implement an acceptable bypass plan at no additional cost to the City. Bypass pumping will be required for all sewers and pump station construction that would result in shutdown of existing facilities. The Contractor shall supply the necessary pumps, conduits, and other equipment to not only divert flow around the pump station, manhole, or pipe section in which work is to be performed, but also to transmit the flow in downstream sewer lines and/or pump stations without surcharge. The bypass systems shall be of sufficient capacity to handle existing flows plus additional flows that may occur during periods of high tide or rainfall. Emergency backup pumping capability must be available in addition to the primary bypass system. The Contractor will be responsible for furnishing the necessary labor, power, and supervision to set up and operate the pumping and bypass systems. When pumping is in operation, all engines shall be equipped in a manner to keep the pump noise to a minimum and to comply with applicable noise ordinances.

- B. Contractor shall be responsible for any damage to properties or buildings connected to the sewer system, and to the pipeline, which result from the flow control activities.
- C. Contractor shall submit a bypass pumping plan for all proposed bypass pumping operations.

1.6 PHYSICAL CONDITIONS

- A. Exercise reasonable care to verify locations of existing subsurface structures and underground facilities.
- B. Thoroughly check immediate and adjacent areas subject to excavation by visual examination (and by electronic metal and pipe detection equipment, as necessary) for indications of subsurface structures and underground facilities.
- C. Make exploratory excavations where existing underground facilities or structures may potentially conflict with proposed underground facilities or structures. Conduct exploratory excavations in presence of Engineer and sufficiently ahead of construction to avoid possible delays to Contractor's Work.

1.7 ADJACENT FACILITIES AND PROPERTIES

- A. Examination
 - 1. After Effective Date of the Agreement and before Work at site is started, Contractor, City/Construction Manager, and affected property owners and utility owners shall make a thorough examination of pre-existing conditions including existing buildings, structures, and other improvements in vicinity of Work, as applicable, which could be damaged by construction operations.
 - 2. Periodic reexamination shall be jointly performed to include, but not limited to, cracks in structures, settlement, leakage, and similar conditions.
- B. Documentation
 - 1. Record and submit documentation of observations made on examination inspections in accordance with paragraphs Construction Photographs and Audio-Video Recordings.
 - 2. Upon receipt, Engineer will review, sign, and return one record copy of documentation to Contractor to be kept on file in field office.
 - 3. Such documentation shall be used as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and is for the protection of adjacent property owners, Contractor, and City.

1.8 CONSTRUCTION PHOTOGRAPHS

- A. Photographically document all unique portions of the construction including tie-ins to existing pipelines or facilities, crossings of existing utilities, buried valve and piping intersections, and other work items that will not otherwise be visible after completion of construction.
- B. Film or file handling and development shall be done by a commercial laboratory.
- C. City and Engineer shall have the right to select the subject matter and vantage point from which photographs are to be taken.

- D. Construction Progress Photos
 - 1. Photographically demonstrate progress of construction, showing every aspect of site and adjacent properties as well as interior and exterior of new or impacted structures.
 - 2. Monthly: Take 24 exposures digital photographs of comparable quality, unless otherwise approved by the PCM.

1.9 AUDIO-VIDEO RECORDINGS

- A. Prior to beginning Work on construction site or of a particular area of the Work, and again within 10 days following date of Substantial Completion, videotape construction site and property adjacent to construction site.
- B. In the case of preconstruction recording, no Work shall begin in the area prior to City/Construction Manager's review and approval of content and quality of video for that area.
- C. Particular emphasis shall be directed to physical condition of existing vegetation, structures, and pavements within pipeline alignment and areas adjacent to and within the right-of-way or easement, and on Contractor storage and staging areas.
- D. City/Construction Manager and Engineer shall have right to select subject matter and vantage point from which videos are to be taken.
- E. Videotaping shall be by a professional commercial videographer, experienced in shooting construction videos.
- F. Video Format and Quality
 - 1. Video
 - a. Produce bright, sharp, and clear images with accurate colors, free of distortion and other forms of picture imperfections.
 - b. Electronically, and accurately display the month, day, year, and time of day of the recording.
 - 2. Audio
 - a. Audio documentation shall be done clearly, precisely, and at a moderate pace.
 - b. Indicate date, Project name, and a brief description of the location of taping, including
 - 1) Facility name;
 - 2) Street names or easements;
 - 3) Addresses of private property; and
 - 4) Direction of coverage, including engineering stationing, if applicable.
- G. The Following Shall be Included with the Video Documentation
 - 1. Coverage is required within and adjacent to the rights-of-way, easements, storage, and staging areas where the work is being constructed.
 - 2. Documentation of the conditions of the adjacent properties or any affected structures as a result of the impending construction.
 - 3. Certification as to date work done and by whom.

4. All videos shall be keyed to the construction drawings, provided with an index and a written narrative.
 - H. Preconstruction and Post-Construction Videos Shall be Submitted as follows:
 1. Preconstruction videos shall be presented to the City at the preconstruction conference.
 2. Post-construction videos shall be submitted prior to final project closeout. This submittal is contingent to final payment.
 - I. Payment for the work in this Section will be included as part of the lump sum price for mobilization/demobilization.
- 1.10 REFERENCE POINTS, SURVEYS, AND RECORD DRAWINGS
- A. Location and elevation of benchmarks are shown on Drawings.
 - B. Contractor's Responsibilities:
 1. Provide all survey efforts required to layout the Work.
 2. Check and establish exact location of existing facilities prior to construction of new facilities and any connections thereto.
 3. In event of discrepancy in data or benchmarks, request clarification before proceeding with Work.
 4. Retain a professional land surveyor or civil engineer registered in the State of Florida who shall perform or supervise all surveying necessary for construction staking and layout and obtaining record information for as-built and record drawing preparation.
 5. Maintain complete accurate log of survey Work as it progresses as a Record Document. The Contractor is responsible for the quality control of horizontal location and vertical elevations of the installed project.
 6. On request of City/Construction Manager, submit documentation.
 7. Provide competent employee(s), tools, stakes, and other equipment and materials as City/Construction Manager may require to:
 - a. Establish control points, lines, and easement boundaries.
 - b. Check layout, survey, and measurement Work performed by others.
 - c. Measure quantities for payment purposes.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CUTTING, FITTING, AND PATCHING

- A. Cut, fit, adjust, or patch Work and work of others, including excavation and backfill as required, to make Work complete.
- B. Obtain prior written authorization of Engineer before commencing Work to cut or otherwise alter:
 1. Structural or reinforcing steel, structural column or beam, elevated slab, trusses, or other structural member.

2. Weather - or moisture-resistant elements.
 3. Efficiency, maintenance, or safety of element.
 4. Work of others.
- C. Refinish surfaces to provide an even finish.
1. Refinish continuous surfaces to nearest intersection.
 2. Refinish entire assemblies.
 3. Finish restored surfaces to such planes, shapes, and textures that no transition between existing work and Work is evident in finished surfaces.
 - a. Restore existing work, Underground Facilities, and surfaces that are to remain in completed Work including concrete-embedded piping, conduit, and other utilities as specified and as shown.
 - b. Make restorations with new materials and appropriate methods as specified for new Work of similar nature; if not specified, use recommended practice of manufacturer or appropriate trade association.

END OF SECTION 01040

SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall be responsible for all cutting, fitting and patching, including attendant excavation and backfill, required to complete the work or to:
 - 1. Make its several parts fit together properly.
 - 2. Uncover portions of the work to provide for installation of ill-timed work.
 - 3. Remove and replace defective work.
 - 4. Remove and replace work not conforming to requirements of Contract Documents.
 - 5. Remove samples of installed work as specified for testing.
 - 6. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 SUBMITTALS

- A. Submit a written request to ENGINEER well in advance of executing any cutting or alteration, which affects:
 - 1. Work of the OWNER or any separate CONTRACTOR.
 - 2. Structural value of integrity of any element of the project.
 - 3. Integrity of effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
 - 1. Identification of the project.
 - 2. Description of the affected work.
 - 3. The necessity for cutting, alteration or excavation.
 - 4. Effect on work of OWNER or any separate CONTRACTOR, or on structural or weatherproof integrity of project.
 - 5. Description of proposed work
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Trades who will execute the work.
 - c. Products proposed to be used.
 - d. Extent of refinishing to be done.
 - 6. Alternatives to cutting and patching.
 - 7. Cost proposal, when applicable.
 - 8. Written permission of any separate CONTRACTOR whose work will be affected.

- C. Should conditions of work or the schedule indicate a change of products from original installation, CONTRACTOR shall submit request for substitution as specified in Section 01600 "Material and Equipment".
- D. Submit written notice to ENGINEER designating the date and time the work will be uncovered.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with specifications and standards for each specific product involved.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering the work, inspect conditions affecting installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions affecting installation of products, or performance of work.

3.2 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of work.
- B. Provide devices and methods to protect other portions of project from damage.
- C. Provide protection from elements for that portion of the project, which may be exposed by cutting and patching, work, and maintain excavations free from water.

3.3 PERFORMANCE

- A. Execute cutting and demolition by methods, which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
- B. Execute excavating and backfilling by methods, which will prevent settlement or damage to other work.
- C. Employ original Installer or Fabricator to perform cutting and patching for:
 - 1. Weather-exposed or moisture-resistant elements.
 - 2. Sight-exposed finished surfaces.
- D. Execute fitting and adjustment of products to provide a finished installation to comply with specified product, functions, tolerances and finishes.
- E. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.
- F. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.

- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

END OF SECTION 01045

SECTION 01050 - PROJECT MANAGEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Special Project Procedures
 - 3. Administrative and supervisory personnel.
 - 4. Requests for Information (RFIs).
- B. Related Sections include the following:
 - 1. Section 01200, "Project Meetings"
 - 2. Section 01311, "Construction Progress Documentation"
 - 3. Section 01340, "Submittal Procedures"
 - 4. Section 01780, "Contract Closeout "

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Memoranda:

1. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - a. Prepare similar memoranda for City and separate contractors if coordination of their Work is required.

C. Administrative Procedures:

1. Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - a. Preparation of Contractor's Construction Schedule.
 - b. Preparation of the Schedule of Values.
 - c. Installation and removal of temporary facilities and controls.
 - d. Delivery and processing of submittals.
 - e. Progress meetings.
 - f. Project closeout activities.

1.5 SUBMITTALS

A. Key Personnel Names

1. Within 5 days of notice to proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site including:
 - a. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers.
 - b. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.

1.6 SPECIAL PROJECT PROCEDURES

A. Discrepancies, Errors

1. Should discrepancies or errors appear in the drawings or specifications concerning materials, workmanship, or quantity of work to be performed, the Contractor will be required to immediately notify the City before proceeding with the work.
2. If the Contractor fails to notify the City and proceeds with the work, Contractor will be required to correct the errors at his/her own expense. In the event of a conflict between the drawings and specifications, the City will decide on the way to perform the work or supply the materials.

B. Dimensions and Measurements

1. The figured dimensions on the drawings or notes including dimensions shall be used for construction instead of measurements of the drawings by scale. No scale measurements shall be used as a dimension for construction.

2. Dimensions on all drawings as well as the detail drawings themselves are subject in every case to measurements of adjacent or previously completed work. All such measurements necessary shall be taken before undertaking any work dependent upon such data.
 3. Field verification of dimensions on plans is mandatory since actual locations, distances, and levels will be governed by actual field conditions.
- C. Discrepancies or Inconsistencies:
1. Should any discrepancy or inconsistency appear between larger and smaller scale drawings in any of the divisions of the specifications or in any of the contract documents, such discrepancy shall be immediately submitted to the City for correction before proceeding with the work in question. In no case shall the Contractor make any alterations, erasures, changes or modifications in the drawings or specifications.
 - a. Should it appear that any of the work as specified or shown by the drawings is not sufficiently detailed or explained, the Contractor shall apply to the City for such further details or information as may be necessary for full understanding of the work in question.
 - b. The data set forth in these specifications and indicated on the drawings are as accurate as can be obtained, but their extreme accuracy is not guaranteed. Final application thereto shall be determined on the job as conditions may demand and subject to the approval of the City.
- D. Plans and Specifications Acknowledgment by Subcontractors and Suppliers
1. All Subcontractors and Suppliers must submit, through the General Contractor to the City's Engineer, a statement on their individual letterhead stationary, signed and sealed with their corporate seal, or a notarized statement on their letterhead stationery in the absence of a corporate seal, that the individual Subcontractor or Supplier:
 - a. Has received or reviewed a FULL set of approved plans and specifications for the project,
 - b. Is aware that items concerning their particular trade may be shown and/or detailed in other trades or sections of the plans and specifications, and
 - c. Will comply with said plans, specifications and all applicable codes and permit requirements.
- E. In the event a Subcontractor or Supplier notes a mistake or details appear incomplete, or if there are questions or concerns with the plans and specifications, the Subcontractor or Supplier will immediately notify the General Contractor. No work will proceed until such conflicts or questions are resolved in writing.
- F. The Subcontractor will not be permitted to start work, nor will any Shop drawings/submittals be accepted for review from a supplier until this letter of acknowledgment is received and approved by the General Contractor and City's Engineer. Also, the City will not process any pay request for the work of any Subcontractor or Supplier whose acknowledgment letter is not on file with the City.

1.7 COORDINATION DRAWINGS

- A. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
1. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 2. Coordinate the addition of trade-specific information to coordination drawings in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 3. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 4. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 5. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 6. Indicate required installation sequences.
 7. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms, showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.

7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
 - c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
 - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.
10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 01340 "Submittal Procedures."

C. Coordination Drawing Process: Prepare coordination drawings in the following manner:

1. Schedule submittal and review of Fire Sprinkler, Plumbing, HVAC, and Electrical Shop Drawings to make required changes prior to preparation of coordination drawings.
2. Commence routing of coordination drawing files with HVAC Installer, who will provide drawing plan files denoting approved ductwork. HVAC Installer will locate ductwork and piping on a single layer, using orange color. Forward drawings to Plumbing Installer.
3. Plumbing Installer will locate plumbing and equipment on a single layer, using blue color.
4. Fire Sprinkler Installer will locate piping and equipment, using red color. Fire Sprinkler Installer shall forward drawing files to Electrical Installer.
5. Electrical Installer will indicate service and feeder conduit runs and equipment in green color. Electrical Installer shall forward drawing files to Communications and Electronic Safety and Security Installer.
6. Communications and Electronic Safety and Security Installer will indicate cable trays and cabling runs and equipment in purple color. Communications and Electronic Safety and Security Installer shall forward completed drawing files to Contractor.
7. Contractor shall perform the final coordination review. As each coordination drawing is completed, Contractor will meet with Architect to review and resolve conflicts on the coordination drawings.

1.8 REQUESTS FOR INTERPRETATION (RFIs)

A. General:

1. Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

- a. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 - b. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI:
1. Include a detailed, legible description of item needing interpretation and the following:
 - a. City Project Number
 - b. City Project Name.
 - c. Date.
 - d. Name of Contractor.
 - e. RFI number, numbered sequentially.
 - f. Specification Section number and title and related paragraphs, as appropriate.
 - g. Drawing number and detail references, as appropriate.
 - h. Field dimensions and conditions, as appropriate.
 - i. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - j. Contractor's signature.
 - k. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - 1) Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
 - l. Identify each page of attachments with the RFI number and sequential page number.
- C. Software-Generated RFIs
1. Software-generated form with substantially the same content as indicated above.
 - a. Word Template is available upon request from the City's Engineer's Office.
 - b. Attachments shall be electronic files in Adobe Acrobat PDF format.
- D. Engineer's Action. Engineer will review each RFI, determine action required, and return it. Allow seven working days for Engineer's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Engineer's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Engineer's action may include a request for additional information, in which case Engineer's time for response will start again.

3. Engineer's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 10 days of receipt of the RFI response.
- E. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within seven days if Contractor disagrees with response.
- F. RFI Log.
 1. Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log bi-weekly. Include the following:
 - a. Project name.
 - b. Name and address of Contractor.
 - c. RFI number including RFIs that were dropped and not submitted.
 - d. RFI description.
 - e. Date the RFI was submitted.
 - f. Date Engineer's response was received.
 - g. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01050

SECTION 01060 - REGULATORY REQUIREMENTS & PERMITS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall comply with all building codes appropriate to the project, including those of:
 - 1. National Electric Code.
 - 2. Florida Building Code. (Latest Revision)
- B. CONTRACTOR shall comply with these codes, laws, regulations, rules, directives of all agencies, boards, districts, and governmental bodies having jurisdiction.
- C. CONTRACTOR shall obtain and pay the cost of all building permits, fees, tie-in or connection charges associated with the project.
- D. The CONTRACTOR shall obtain construction permits from Broward County Planning and Environmental Regulation Division license(s), Florida Department of Environmental Protection, Fort Lauderdale Building Department and file a NOI with FDEP for NPDES compliance. Fort Lauderdale Building Permit will be available for pickup by CONTRACTOR once Notice to Proceed has been granted.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 MEASUREMENT AND PAYMENT

- A. CONTRACTOR shall be reimbursed for permit fees as described in Section 01025.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01060

SECTION 01070 - ABBREVIATIONS OF INSTITUTIONS

PART 1 - GENERAL

1.1 GENERAL

- A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various international, national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these Specifications, the following acronyms or abbreviations, which may appear in these Specifications, shall have the meanings indicated herein.

1.2 ABBREVIATIONS

AAMA	Architectural Aluminum Manufacturer's Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGMA	American Gear Manufacturers Association
AHAM	Association of Home Appliance Manufacturers
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	American Standards Association
ASAE	American Society of Agricultural Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers

ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials & Code Administrators International
BCPERD	Broward County Planning and Environmental Regulation Division
BCHCED	Broward County Highway Construction and Engineering Division
BCHD	Broward County Health Department
BCTED	Broward County Traffic Engineering Division
BCWRMD	Broward County Water Resource Management Division
BCWWS	Broward County Water & Wastewater Services Division
BHMA	Builders Hardware Manufacturer's Association
CBM	Certified Ballast Manufacturers
CEMA	Conveyors Equipment Manufacturer's Association
CGA	Compressed Gas Association
CLFMI	Chain Link Fence Manufacturer's Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcing Steel Institute
DIPRA	Ductile Iron Pipe Research Association
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
EPA	Environmental Protection Agency
FBC	Florida Building Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FM	Factory Mutual System
FPL	Florida Power & Light
FS	Federal Specifications
HI	Hydraulics Institute

IAPMO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IME	Institute of Makers of Explosives
IP	Institute of Petroleum (London)
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
MBMA	Metal Building Manufacturer's Association
MPTA	Mechanical Power Transmission Association
MSS	Manufacturers Standardization Society
MTI	Marine Testing Institute
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NCCLS	National Committee for Clinical Laboratory Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLGI	National Lubricating Grease Institute
NMA	National Microfilm Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastics Pipe Institute
RCRA	Resource Conservation and Recovery Act
RIS	Redwood Inspection Service
RVIA	Recreational Vehicle Industry Association
RWMA	Resistance Welder Manufacturer's Association
SAE	Society of Automotive Engineers

SAMA	Scientific Apparatus Makers Association
SB	Southern Bell
SFWMD	South Florida Water Management District
SMA	Screen Manufacturers Association
SMACCNA	Sheet Metal and Air Conditioning Contractors National Association
SPI	Society of the Plastics Industry, Inc.
SPIB	Southern Pine Inspection Bureau
SPR	Simplified Practice Recommendation
SSA	Swedish Standards Association
SSBC	Southern Standard Building Code, Southern Building Code Congress
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
TAPPI	Technical Association of the Pulp and Paper Industry
TFI	The Fertilizer Institute
UL	Underwriters Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WEF	Water Environment Federation
WIC	Woodwork Institute of California
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01070

SECTION 01090 - REFERENCE STANDARDS

PART 1 - GENERAL

1.1 GENERAL

A. Titles of Sections and Paragraphs

1. Captions accompanying specification sections and paragraphs are for convenience of reference only, and do not form a part of the Specifications.

B. Applicable Publications

1. Whenever in these Specifications references are made to published specifications, codes, standards, or other requirements, it shall be understood that wherever no date is specified, only the latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the WORK is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes. No requirements set forth herein or shown on the Drawings shall be waived because of any provision of, or omission from, said standards or requirements.

C. Specialists, Assignments

1. In certain instances, specification text requires (or implies) that specific work is to be assigned to specialists or expert entities, who must be engaged for the performance of that work. Such assignments shall be recognized as special requirements over which the CONTRACTOR has no choice or option. These requirements shall not be interpreted so as to conflict with the enforcement of building codes and similar regulations governing the WORK; also they are not intended to interfere with local union jurisdiction settlements and similar conventions. Such assignments are intended to establish which party or entity involved in a specific unit of work is recognized as "expert" for the indicated construction processes or operations. Nevertheless, the final responsibility for fulfillment of the entire set of contract requirements remains with the CONTRACTOR.

1.2 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- ##### A.
- Without limiting the generality of other requirements of the Specifications, all work specified herein shall conform to or exceed the requirements of applicable codes and the applicable requirements of the following documents.

- ##### B.
- References herein to "Building Code" shall mean "Florida Building Code". References to "Mechanical Code" or "Uniform Mechanical Code," "Plumbing Code" or "Uniform Plumbing Code," "Fire Code" or "Uniform Fire Code," shall mean Uniform Mechanical Code, Uniform Plumbing Code and Uniform Fire Code of the International Conference of the Building Officials (ICBO). "Electric Code" or "National Electric Code (NEC)" shall mean the National Electric Code of the National Fire Protection Association (NFPA). The latest edition of the codes as approved by the Municipal Code and used by the local agency as of the date that the WORK is advertised for bids, as adopted by the agency having jurisdiction, shall apply to the WORK herein, including all addenda, modifications, amendments, or other lawful changes thereto.

- C. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER/ARCHITECT for clarification and directions prior to ordering or providing any materials or furnishing labor. The CONTRACTOR shall bid for the most stringent requirements.
- D. The CONTRACTOR shall construct the WORK specified herein in accordance with the requirements of the Contract Documents and the referenced portions of those referenced codes, standards, and specifications listed herein.
- E. References herein to "OSHA Regulations for Construction" shall mean Title 29, Part 1926, Construction Safety and Health Regulations, Code of Federal Regulations (OSHA), including all changes and amendments thereto.
- F. References herein to "OSHA Standards" shall mean Title 29, Part 1910, Occupational Safety and Health Standards, Code of Federal Regulations (OSHA), including all changes and amendments thereto.

1.3 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format. The Specifications are organized into Divisions and Sections using the CSI/CSC's "MasterFormat" numbering system.
 - 1. Section Identification
 - a. The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 - 2. Division 01
 - a. Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content
 - 1. The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - a. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 - b. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

- 1) The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 REGULATIONS RELATED TO HAZARDOUS MATERIALS

- A. The CONTRACTOR is responsible that all work included in the Contract Documents, regardless if shown or not, shall comply with all EPA, OSHA, RCRA, NFPA, and any other Federal, State, and Local Regulations governing the storage and conveyance of hazardous materials, including petroleum products.
- B. Where no specific regulations exist, all chemical, hazardous, and petroleum product piping and storage in underground locations must be installed with double containment piping and tanks, or in separate concrete trenches and vaults, or with an approved lining which cannot be penetrated by the chemicals, unless waived in writing by the OWNER.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01090

SECTION 01152 - APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 01 Section "Alteration Project Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 01 Section "Measurement and Payment" for administrative requirements governing use of unit prices.
 - 3. Division 01 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values. A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
 - 1. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - 2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 3. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. For items stored off-site include evidence of insurance or bonded warehousing.
 - 4. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 5. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 6. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.

7. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as General Condition's expense, at Contractor's option.
8. Schedule Updating. Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.4 APPLICATIONS FOR PAYMENT

- A. The General Contractor must meet with the City Representative and Architect on or about the 25th of each month. This date shall be the last day for any activity to be considered for payment for that pay period. The City Representative will go over the pay items and agree on the quantities and the dollar amounts of the work completed during the month. A copy of the agreed amounts will be signed by the parties and a copy will be left with each representative.
- B. The General Contractor will make up a partial pay request using the City-supplied forms and submit the request to the City Representative before the first of the upcoming month.
- C. Each pay request must be accompanied by an update construction schedule. Schedule must include a narrative of the work that has been completed, work that is expected to be completed through the next payment application period, activities throughout the critical path until final completion and any affected activities on the critical path with the recovery plan.
- D. Each pay request must be accompanied by a partial release of lien by the General Contractor and by all Subcontractors, suppliers, and for all labor.
- E. For each payment application requesting payment for undergrounding allowance for undergrounding work for overhead utilities, written authorization of payment from each utility being requested must be received with payment application.
- F. For the final pay request, the General Contractor will be required to submit FINAL release of liens for ALL Subcontractors, suppliers, etc., and for ALL labor BEFORE FINAL PAYMENT WILL BE MADE.
- G. No partial payments, after the first payment, will be made until all partial release of liens are submitted for the preceding month's billing, as described.
- H. Each Application for Payment shall be consistent with previous applications and payments as certified by and paid for by City.
- I. Payment Application Forms: Use City Form "PERIODIC ESTIMATE FOR PARTIAL PAYMENT" as form for Applications for Payment.
 1. Application Preparation. Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. City will return incomplete applications without action.
 2. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

- J. Release of Lien. With each Application for Payment, submit release of lien from every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial release of lien on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit final release of lien.
 3. City reserves the right to designate which entities involved in the Work must submit release of lien forms.
- K. Initial Application for Payment. Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Products list.
 5. Submittals Schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. Copies of building permits.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
 9. Initial progress report.
 10. Report of preconstruction conference.
- L. Final Payment Application. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Evidence that claims have been settled.
 5. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01152

SECTION 01230 - ALTERNATES

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the PROCUREMENT AND CONTRACTING REQUIREMENTS and all Sections within DIVISION 01, GENERAL REQUIREMENTS, which are made a part of this Section of the Specifications.

1.2 SUMMARY

- A. A. For each of the alternates Scheduled at the end of this Section, state the amount in the proposal to be added to or deducted from the Contract Sum for the work.

1.3 ALTERNATES

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Owner's option and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents. Selection may occur prior to the Contract Date, or may, by the Agreement, be deferred for possible selection at a subsequent date.
- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each alternate is complete and properly interfaced with work of each selected alternate.
- C. Provide written proposals for each alternate on the Form of Proposal for Owner's consideration. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, and other costs including cost of interfacing and coordinating the alternate with related and adjacent work.
- D. Selection of Alternates: Selection of alternates to be included in the work will be by the Owner.
- E. Notification: Immediately following award of Contract, prepare and distribute to each entity a notification of status of each alternate. Indicate which alternates have been accepted, rejected, or deferred for consideration at a later date. Include full description of negotiated modifications to alternates, if any.

1.4 DESCRIPTION OF ALTERNATES

- A. Alternates shall include the following:
 - 1. Bid Alternate 1: Fitness Station
 - a. Equipment - Fitness Station Equipment - 1 LS
 - b. Exterior Improvements - Paving Type K - 668 SF
 - c. Exterior Improvements - Header Curb - 75 LF
 - 2. Bid Alternate 2: Interactive Water Feature
 - a. Specialties - Signage Type H3 - 1 EA
 - b. Signage Type H4 - 1 EA

- c. Interactive Water Feature Equipment - 1 LS
- d. Pedestrian Gate - 2 EA
- e. Paving Type A Slip Resistant 5* colored Concrete - 837 SF
- f. Electrical Equipment System - 1 LS

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01230

SECTION 01311 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Submittals Schedule.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Field condition reports.
 - 7. Special reports.
- B. Related Sections include the following:
 - 1. Section 01152 – Applications for Payment
 - 2. Section 01050 – Project Management
 - 3. Section 01340 – Submittal Procedures
 - 4. Section 01380 – Construction Photographs
 - 5. Section 01400 – Quality Control

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity. An activity that precedes another activity in the network.
 - 3. Successor Activity. An activity that follows another activity in the network.
- B. CPM. Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path. The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event. The starting or ending point of an activity.
- E. Float. The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either City or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Fragment. A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- G. Milestone. A key or critical point in time for reference or measurement.
- H. Network Diagram. A graphic diagram of a network schedule, showing activities and activity relationships.
- I. Resource Loading. The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. Submittals Schedule. Submit three copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Engineer's final release or approval.
- B. Preliminary Construction Schedule. Submit three opaque copies.
1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- C. Preliminary Network Diagram. Submit three opaque copies, large enough to show entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule. Submit three opaque copies of initial schedule, large enough to show entire schedule for entire construction period.
- E. CPM Reports. Concurrent with CPM schedule, submit three copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
1. Activity Report. List of all activities sorted by activity number and then early start date, or actual start date if known.
 2. Logic Report. List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
 3. Total Float Report. List of all activities sorted in ascending order of total float.
- F. Daily Construction Reports. Submit two copies at monthly intervals.
- G. Material Location Reports. Submit two copies at monthly intervals.

- H. Field Condition Reports. Submit two copies at time of discovery of differing conditions.
- I. Special Reports. Submit two copies at time of unusual event.

1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 - 2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 20 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
 - 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Final Completion.
- C. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
 - 1. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following: The schedule shall clearly indicate the critical path and all activities associated with it. The dependencies shall be clearly delineated.
 - 2. All activities with a time duration exceeding five (5) days shall be shown as separate items.
 - 3. Include procurement process activities for the following long lead items and major items as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.

4. Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 5. Where materials require more than one (1) week fabrication or order time, this order/fabrication time shall be shown.
- D. Constraints. Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. City-Furnished Products. Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 2. Work Restrictions. Show the effect of the following items on the schedule:
 - a. Use of premises restrictions.
 - b. Environmental control.
 3. Work Stages. Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Fabrication.
 - e. Sample testing.
 - f. Deliveries.
 - g. Installation.
 - h. Tests and inspections.
 - i. Adjusting.
 - j. Curing.
- E. Milestones. Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, Final Completion, and Certificate of Occupancy.
- F. General conditions activities included on the schedule of values that are paid upfront by the contractor, such as bonds and insurances, shall be requested for payment after the SOV has been approved as described in 01025. Receipts and backup should be provided to match the requested amounts.
- G. The total dollar amount of additional general conditions activities included on the schedule of values such as MOT, mobilization(s), erosion control should up to 10% of the total contract amount. Any other dollar amount should be applied to each individual construction activity within the schedule of values. Active general conditions activities throughout the life of the project should be paid proportionately monthly, if applicable.
- H. The contractor must provide a detailed base-line time schedule to be reviewed, and subsequent revised monthly schedules showing at minimum: tied predecessors, tied successors, order within the critical or non-critical path, and floating time, when applicable. Construction general conditions activities such as MOT, mobilizations, erosion control activities included on the schedule of values should also be part of the of the time schedule.

- I. Review. The schedule shall be reviewed by owner's representative and comments will be provided. Contractor to complete revisions to the schedule as per comments. No pay app to be submitted for payment before owner's final approval of the schedule.
- J. Contract Modifications. For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.
- K. Computer Software. Prepare schedules using a program that has been developed specifically to manage construction schedules.

2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule. Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 10 days of date established for the Notice to Proceed. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- B. Preparation. Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.

2.4 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
 - 1. List of subcontractors at Project site.
 - 2. List of separate contractors at Project site.
 - 3. Approximate count of personnel at Project site.
 - 4. Equipment at Project site.
 - 5. Material deliveries.
 - 6. High and low temperatures and general weather conditions.
 - 7. Accidents.
 - 8. Meetings and significant decisions.
 - 9. Unusual events (refer to special reports).
 - 10. Stoppages, delays, shortages, and losses.
 - 11. Emergency procedures.
 - 12. Orders and requests of authorities having jurisdiction.
 - 13. Change Orders received and implemented.
 - 14. Construction Change Directives received and implemented.
 - 15. Services connected and disconnected.
 - 16. Equipment or system tests and startups.
 - 17. Partial Completions and occupancies.
 - 18. Substantial Completions authorized.
- B. Material Location Reports. At weekly intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site.
- C. Field Condition Reports. Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

- A. General. Submit special reports directly to City within one day of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events. When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise City in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer, City Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01311

SECTION 01312 - FIELD ENGINEERING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR shall provide and pay for field Engineering and Survey services required for the project.
- B. CITY PROJECT MANAGER will identify existing control points and property line corner stakes indicated on the DRAWINGS, as required.

1.2 QUALIFICATIONS OF SURVEYOR

- A. Qualified Registered Professional Surveyor & Mapper, acceptable to CITY PROJECT MANAGER.

1.3 SURVEY REFERENCE POINTS

- A. CITY PROJECT MANAGER will provide basic horizontal and vertical control points for the construction project including:
 - 1. Permanent coordinate reference points with horizontal and vertical control, located and staked as shown on the plans.
- B. The CONTRACTOR shall locate and protect control points prior to starting site construction WORK, and preserve all permanent reference points during construction.
 - 1. Make no changes or relocations without prior written notice to CITY PROJECT MANAGER.
 - 2. Report to CITY PROJECT MANAGER when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - 3. CONTRACTOR's surveyor shall replace project control points which may be lost or destroyed.
 - a. Establish replacements based on original survey control.

1.4 PROJECT SURVEY REQUIREMENTS

- A. CONTRACTOR's surveyor shall establish a minimum of two permanent benchmarks on site, referenced to data established by survey control points.
- B. CONTRACTOR shall establish lines and levels, locate and lay out, prepare a HORIZONTAL AND VERTICAL CONTROL PLAN for the purpose of construction staking by instrumentation and similar appropriate means:
 - 1. Stakes for grading and fill placement.
 - 2. Controlling lines and levels as required.
- C. From time to time, verify layouts by same methods.
- D. Horizontal and vertical control plan shall be made available to CITY PROJECT MANAGER in ACAD 2017 format or most current release.

- E. Any plan released to the CONTRACTOR via electronic media is for as-built use only. They have not been geometrically calculated by a Surveyor. This applies to all aspects of the plans including, but not limited to, right-of-way, road utilities and drainage.

1.5 RECORDS

- A. Maintain a complete, accurate log of all control and survey WORK as it progresses.
- B. On completion of construction WORK, prepare a certified survey showing all dimensions, locations and elevations of project.

1.6 SUBMITTALS

- A. Submit name and address of Professional Surveyor & Mapper and Professional Engineer to CITY PROJECT MANAGER.
- B. On request of CITY PROJECT MANAGER, submit documentation to verify accuracy of field Engineering WORK.
- C. Submit certificate signed by Registered Engineer or Professional Surveyor & Mapper certifying that elevation and locations of WORK are in conformance, or non-conformance, with Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01312

SECTION 01340 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Section 01152, Applications for Payment
 - 2. Section 01050, Project Management
 - 3. Section 01311, Construction Progress Documentation
 - 4. Section 01380, Construction Photographs
 - 5. Section 01400, Quality Control
 - 6. Section 01720, Project Record Documents
 - 7. Section 01780, Contract Closeout
 - 8. Divisions 02 through 33 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that requires Engineer's/Architect's responsive action.
- B. Informational Submittals. Written and graphic information and physical samples that does not require Engineer's/Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. City reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Submittals Schedule. Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- C. Processing Time. Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No

extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review. Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review. If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review. Allow 10 days for review of each resubmittal.
- D. Identification. Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by City.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date
 - c. Name and address of Contractor.
 - d. Name and address of subcontractor.
 - e. Name and address of supplier.
 - f. Name of manufacturer.
 - g. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
 - j. Location(s) where product is to be installed, as appropriate.
 - k. General Contractor's stamp of approval must be on all submittals, indicating that the Contractor has reviewed and approved prior to submitting to the City.
- E. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless Engineer observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.

- g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Transmittal number, numbered consecutively.
 - k. Remarks.
 - l. Signature of transmitter.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
- 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked "Approved as submitted" or "Approved as noted".
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, Fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals with mark indicating "Approved as submitted" or "Approved as noted" by Engineer.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General. Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data. Collect information into a single submittal for each element of construction and type of product or equipment.
- 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
 - 4. Submit Product Data before or concurrent with Samples.

5. Number of Copies. Submit five copies of Product Data, unless otherwise indicated. Engineer will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings. Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
1. Preparation. Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams. Differentiate between manufacturer-installed and field-installed wiring.
 2. Sheet Size. Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches (750 by 1000 mm).
 3. Number of Copies. Submit five opaque copies of each submittal. City will retain three copies; remainder will be returned.
- D. Samples. Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification. Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition. Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

- a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as City's property, are the property of Contractor.
4. Samples for Initial Selection. Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples. Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. City will return submittal with options selected.
5. Samples for Verification. Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples. Submit three sets of Samples. City will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule or List. As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product.
 2. Number and name of room or space.
 3. Location within room or space.
 4. Number of Copies. Submit five copies of product schedule or list, unless otherwise indicated. City will return two copies.
 - a. Mark up and retain one returned copy as a Project Record Document.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Construction Manager's action.
- G. Submittals Schedule. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. Application for Payment. Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Schedule of Values. Comply with requirements specified in Division 01 Section "Payment Procedures."

- J. Subcontract List. Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
 2. Number of Copies. Submit four copies of subcontractor list, unless otherwise indicated. City will return two copies.
 - a. Mark up and retain one returned copy as a Project Record Document.

2.2 INFORMATIONAL SUBMITTALS

- A. General. Prepare and submit Informational Submittals required by other Specification Sections.
1. Number of Copies. Submit two copies of each submittal, unless otherwise indicated. City will not return copies.
 2. Certificates and Certifications. Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports. Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Coordination Drawings. Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- C. Contractor's Construction Schedule. Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- D. Installer Certificates. Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- E. Product Certificates. Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- F. Material Certificates. Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- G. Material Test Reports. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- H. Field Test Reports. Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- I. Insurance Certificates and Bonds. Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- J. Construction Photographs. Comply with requirements specified in Section 01380.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Approval Stamp. Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S/ARCHITECT'S ACTION

- A. General. Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals. Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Approved as submitted
 - 2. Approved as noted
 - 3. Revise and resubmit
 - 4. Rejected.
- C. Informational Submittals. Engineer/Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01340

SECTION 01380 - CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.1 GENERAL

- A. Employ competent photographer to take construction record photographs periodically, monthly at a minimum, during course of the work.

1.2 RELATED REQUIREMENTS

- A. Section 01010: Summary of Work.
- B. Section 01720: Project Record Documents.

1.3 PHOTOGRAPHY REQUIRED

- A. Provide photographs taken on cutoff date for each scheduled application for Payment.
- B. Provide photographs taken at each major stage of construction.
- C. Provide photographs taken of change order work.

1.4 COSTS OF PHOTOGRAPHY

- A. CONTRACTOR shall pay costs for specified photography and prints.
 - 1. Parties requiring additional photography or prints will pay photographer directly.

1.5 DIGITAL PHOTOGRAPHY

- A. At OWNER and ENGINEER's/ARCHITECT's discretion, digital photography may be used for all construction photographs except aerial progress photographs.

PART 2 - PRODUCTS

2.1 PRINTS

- A. Resolution:
 - 1. Minimum 5.0 Megapixels.

PART 3 - EXECUTION

3.1 TECHNIQUE

- A. Factual presentation.
- B. Correct exposure and focus.
 - 1. High resolution and sharpness.
 - 2. Maximum depth-of-field.
 - 3. Minimum distortion.

3.2 VIEWS REQUIRED

- A. Photograph from locations to adequately illustrate condition of construction and state of progress.
- B. Photographs shall include aerial photographs showing the entire construction area.

END OF SECTION 01380

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, City or authorities having jurisdiction are not limited by provisions of this Section.

1.2 DEFINITION

- A. Specific quality control requirements for the WORK are indicated throughout the Contract and Permit Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.
- B. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- C. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- D. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
 - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).
- E. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
 - 1. Mockups are used for one or more of the following:

- a. Verify selections made under Sample submittals.
 - b. Demonstrate aesthetic effects.
 - c. Demonstrate the qualities of products and workmanship.
 - d. Demonstrate successful installation of interfaces between components and systems.
 - e. Perform preconstruction testing to determine system performance.
2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
 3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- F. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- G. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- H. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- J. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- K. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect or Construction Manager.

1.3 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to

Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.4 CONFLICTING REQUIREMENTS

- A. **Conflicting Standards and Other Requirements:** If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 INFORMATIONAL SUBMITTALS

- A. **Contractor's Quality-Control Plan:** For quality-assurance and quality-control activities and responsibilities.
- B. **Qualification Data:** For Contractor's quality-control personnel.
- C. **Reports:** Prepare and submit certified written reports and documents as specified.
- D. **Permits, Licenses, and Certificates:** For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.6 REPORTS AND DOCUMENTS

- A. **Test and Inspection Reports:** Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, telephone number, and email address of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, telephone number, and email address of technical representative making report.
2. Statement on condition of substrates and their acceptability for installation of product.
3. Statement that products at Project site comply with requirements.
4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
6. Statement of whether conditions, products, and installation will affect warranty.
7. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Name, address, telephone number, and email address of factory-authorized service representative making report.
2. Statement that equipment complies with requirements.
3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
4. Statement of whether conditions, products, and installation will affect warranty.
5. Other required items indicated in individual Specification Sections.

1.7 QUALITY ASSURANCE

A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
 - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.8 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
 - 2. Payment for these services will be made from testing and inspection allowances specified in Section 012100 "Allowances," as authorized by Change Orders.
 - 3. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
 - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 2. Engage a qualified testing agency to perform quality-control services.

- a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Testing Agency Responsibilities: Cooperate with Architect, or Construction Manager, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, or Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform duties of Contractor.
- D. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01340 "Submittal Procedures."
- E. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- F. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.

5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspection equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.9 INSPECTION AT PLACE OF MANUFACTURE

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER/ARCHITECT at the place of manufacture.
- B. The presence of the ENGINEER/ARCHITECT at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for furnishing products, materials, and equipment, which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR, and said duty shall not be avoided by any act or omission on the part of the ENGINEER/ARCHITECT.

1.10 SAMPLING AND TESTING

- A. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER/ARCHITECT reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER/ARCHITECT to require the removal or correction and reconstruction of any such work in accordance with the General Conditions.

1.11 INSPECTION AND TESTING LABORATORY SERVICE

- A. Inspection and testing laboratory service shall comply with the following:
 1. CONTRACTOR shall appoint, employ, and pay for services of an independent firm to perform inspection and testing.
 2. The independent testing firm will perform inspections, testings and other services specified in individual specification sections and as required by the ENGINEER/ARCHITECT or OWNER.

3. Reports will be submitted to the ENGINEER/ARCHITECT in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
4. The CONTRACTOR shall cooperate with the OWNER and independent testing firm and furnish samples of materials, design mix, equipment, tools, storage and assistance as requested.
5. The CONTRACTOR shall notify ENGINEER/ARCHITECT and any applicable permitting agencies 48 hours prior to the expected time for operations requiring inspection and laboratory testing services, so they can be present at the time of testing
6. Retesting required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the ENGINEER/ARCHITECT. The CONTRACTOR shall bear all costs from such retesting at no additional cost to the OWNER.
7. For samples and tests required for CONTRACTOR'S use, the CONTRACTOR shall make arrangements with an independent firm for payment and scheduling of testing. The cost of all sampling and testing shall be included in the Contract Price.
8. CONTRACTOR shall bear all costs incurred should the materials for testing not be ready for testing at time specified/scheduled by CONTRACTOR for test.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Inspection. The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation, and reject damaged and defective items.
- B. Measurements. The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. Manufacturer's Instructions. Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01045 "Cutting and Patching."

- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

SECTION 01410 - TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. CONTRACTOR will employ and pay for the services of an Independent Testing laboratory to perform all required testing: (All required testing services under the Contract and Permit Documents shall be provided by the CONTRACTOR through an independent testing firm.
1. CONTRACTOR shall cooperate with the laboratory to facilitate the execution of its required services.
 2. Employment of the laboratory by the CONTRACTOR for specific testing shall in no way relieve the CONTRACTOR's obligations to perform the work of the Contract as specified.
 3. The tests to be provided by the CONTRACTOR shall include, but not be limited to, the following
 - a. Density
 - b. Proctor
 - c. Limerock Bearing Ratio (LBR)
 - d. Carbonate Content
 - e. Gradation
 - f. Plastic Index and Liquid Limit
 - g. Organic Content
 - h. Concrete Compressive Strength and Slump
 - i. Asphalt Extraction
 - j. Any other tests as required to satisfy an permitting agency requirements.
- B. CONTRACTOR shall pay for all required testing, including bacteriological testing.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals of public authorities.

1.3 QUALIFICATION OF LABORATORY

- A. Meet "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.
- B. Meet basic requirements of ASTM E-329.
- C. Authorized to operate in the state in which the project is located.
- D. Submit copy of report of inspection of facilities made by Materials Reference Laboratory of Natural Bureau of Standards during the most recent tour of inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- E. Testing Equipment
 1. Calibrated at reasonable intervals by devices of accuracy traceable to either:

- a. National Bureau of Standards.
- b. Accepted values of natural physical constants.

1.4 LABORATORY DUTIES

- A. Cooperate with OWNER's Representative and CONTRACTOR; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
 - 1. Comply with specified standards.
 - 2. Ascertain compliance of materials with requirements of Contract Documents.
- C. Promptly notify OWNER's Representative and CONTRACTOR of observed irregularities of deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to OWNER's Representative, OWNER, CONTRACTOR, and one copy to Record Document File. Each report shall include:
 - 1. Date issued.
 - 2. Project title, OWNER'S project number and Parcel number.
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather conditions.
 - 7. Date of test.
 - 8. Identification of fill product and specification section.
 - 9. Location of sample or test in the project area (i.e. station and offset or other relevant dimensioning).
 - 10. Type of inspection or test.
 - 11. Results of tests and compliance with Contract Documents.
 - 12. Interpretation of test results, when requested by OWNER's Representative.
- E. Perform additional tests as required by the OWNER's Representative.

1.5 LIMITATION OF AUTHORITY OF TESTING LABORATORY

- A. Laboratory is not authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of Contract documents.
 - 2. Approve or accept any portion of the work.
 - 3. Perform any duties of the CONTRACTOR.

1.6 CONTRACTOR'S RESPONSIBILITIES

- A. Cooperate with laboratory personnel and provide access to work.
- B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.
- C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other material mixes, which require control by the Testing Laboratory.
- D. Furnish copies of Products test reports as required.
- E. Furnish incidental labor and facilities:

1. To provide access to work to be tested.
 2. To obtain and handle samples at the project site or at the source of the product to be tested.
 3. To facilitate inspections and tests.
 4. For storage of test samples.
- F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.
1. When tests or inspections cannot be performed after such notice, reimburse OWNER for laboratory personnel and travel expenses incurred due to CONTRACTOR's negligence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01410

SECTION 01505 - MOBILIZATION

PART 1 - GENERAL

1.1 GENERAL

- A. Mobilization shall include the obtaining of all permits; moving onto the site of all equipment; temporary buildings, and other construction facilities; and implementing security requirements; all as required for the proper performance and completion of the WORK. Mobilization shall include the following principal items:
1. Moving on to the site of all CONTRACTOR's equipment required for first month operations.
 2. Installing temporary construction power, wiring, and lighting facilities.
 3. Developing construction water supply.
 4. Providing field office trailers for the CONTRACTOR, complete with all specified furnishings and utility services including telephones, telephone appurtenances, and copying machine.
 5. Providing all on-site communication facilities, including telephones and radio pagers.
 6. Providing on-site sanitary facilities and potable water facilities.
 7. Arranging for and erection of CONTRACTOR's work, site access, and storage.
 8. Obtaining all required permits (including Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) permits as needed).
 9. Having all OSHA required notices and establishment of safety programs.
 10. Having the CONTRACTOR's superintendent at the job site full time.
 11. Submitting initial submittals.
 12. Audio-Visual preconstruction record as described in Section 01010.
 13. Project identification and signs.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PAYMENT FOR MOBILIZATION

- A. The CONTRACTOR's attention is directed to the condition that no payment for mobilization or any part thereof will be approved for payment under the Contract until all mobilization items listed in Paragraph 1.01.A. above have been completed as specified.

END OF SECTION 01505

SECTION 01510 - TEMPORARY UTILITIES

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Types. The types of utility services required for general temporary use at the project site include the following:
1. Water service (potable for certain uses)
 2. Storm sewer
 3. Sanitary sewer
 4. Electric power service
 5. Telephone service
- B. It shall be the CONTRACTOR's responsibility to provide equipment that is adequate for the performance of the WORK under this Contract within the time specified. All equipment shall be kept in satisfactory operating condition, shall be capable of safety and efficiently performing the required WORK, and shall be subject to inspection and approval by the OWNER's representative at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the OSHA Standards for Construction.

1.2 JOB CONDITIONS

- A. Scheduled Uses. The CONTRACTOR shall, in conjunction with establishment of job progress schedule, establish a schedule for implementation and termination of service for each temporary utility or facility; at earliest feasible time, and when acceptable to OWNER and ENGINEER/ARCHITECT change over from use of temporary utility service to permanent service.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION OF POWER DISTRIBUTION SYSTEM

- A. Power. The CONTRACTOR shall provide all necessary power required for its operations under the Contract, and shall provide and maintain all temporary power lines required to perform the WORK in a safe and satisfactory manner.

3.2 INSTALLATION OF LIGHTING

- A. Construction Lighting. All WORK conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper WORK and to afford adequate facilities for inspection and safe working conditions.

3.3 WATER SUPPLY

- A. General. The OWNER will furnish reasonable quantities of water required by the CONTRACTOR in performance of the WORK under the Contract; however, the CONTRACTOR shall provide all facilities necessary to convey the water from the

OWNER-designated source to the points of use in accordance with the requirements of the Contract Document. The CONTRACTOR shall pay all permit and water charges.

- B. Potable Water. All drinking water on the site during construction shall be furnished by the CONTRACTOR and shall be bottled water or water furnished in acceptable metal dispensers. Notices shall be posted conspicuously throughout the site warning the CONTRACTOR's personnel that piped water may be contaminated.
- C. Water Connections. The CONTRACTOR shall not make connection to, or draw water from, any fire hydrant or pipeline without first obtaining permission of the authority having jurisdiction over the use of said fire hydrant or pipeline and from the agency owning the affected water system. For each such connection made, the CONTRACTOR shall first attach to the fire hydrant or pipeline a valve and a meter, if required by the said authority, of a size and type acceptable to said authority and agency. The CONTRACTOR shall pay all permit and water charges.
- D. Removal of Water Connections. Before final acceptance of the WORK on the project, all temporary connections and piping installed by the CONTRACTOR shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the ENGINEER and to the agency owning the affected utility.

3.4 INSTALLATION OF SANITARY FACILITIES

- A. Toilet Facilities. Fixed or portable chemical toilets shall be provided wherever needed for the use of CONTRACTOR's employees. Toilets at construction job sites shall conform to the requirements of Subpart D, Section 1926.51 of the OSHA Standards for Construction.
- B. Sanitary and Other Organic Wastes. The CONTRACTOR shall establish a regular daily collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the CONTRACTOR or organic material wasted from any other source related to the CONTRACTOR's operations shall be disposed of away from the site in a manner satisfactory to the ENGINEER and in accordance with all laws and regulations pertaining thereto.

3.5 INSTALLATION OF FIRE PROTECTION

- A. Fire Protection. The construction of the WORK shall be connected with the CONTRACTOR's water supply system and shall be adequately protected against damage by fire. Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the WORK, and responsible persons shall be designated and instructed in the operation such fire apparatus so as to prevent or minimize the hazard of fire. The CONTRACTOR's fire protection program shall conform to the requirements of Subpart F of the OSHA Standards for Construction.

3.6 INSTALLATION OF COMMUNICATIONS

- A. Telephone Services. The CONTRACTOR shall provide and maintain at all time during the progress of the WORK not less than one telephone in good working order, at its own field construction office, at or near the site of the WORK included in the Contract. Each such telephone shall be connected to an established exchange for toll service and with all other telephones utilized by the CONTRACTOR.

- B. Telephone Use. The CONTRACTOR shall permit the ENGINEER/ARCHITECT, the OWNER, or their authorized representatives or employees free and unlimited use of said telephone facilities for all calls that do not involve published toll charges. Calls originated by the ENGINEER/ARCHITECT, the OWNER, their authorized representatives or employees who involve toll or the CONTRACTOR at the rates charged by the telephone company shall bill message unit charge to the OWNER.

END OF SECTION 01510

SECTION 01520 - CONSTRUCTION AIDS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Furnish, install and maintain required construction aids, remove on completion of work.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 CONSTRUCTION AIDS

- A. Provide construction aids and equipment required by personnel and to facilitate execution of the work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment.
 - 1. Refer to respective sections for particular requirements for each trade.
 - 2. Provide protective coverings for finished surfaces.
- B. Maintain facilities and equipment in first-class condition.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Consult with OWNER's Representative, review site conditions and factors which affect construction procedures and construction aids including adjacent properties and public facilities which may be affected by execution of the work.

3.2 GENERAL

- A. Comply with applicable requirements specified in sections of Division 2 through 4 (as applicable).
- B. Relocate construction aids as required by progress of construction, by storage or work requirements, and to accommodate legitimate requirements of OWNER and other Contractors employer at the site.

3.3 REMOVAL

- A. Completely remove temporary materials, equipment and services:
 - 1. When construction needs can be met by use of permanent construction.

2. At completion of project.
- B. Clean, repair damage caused by installation or by use of temporary facilities.
1. Remove foundations and underground installations for construction aids.
 2. Grade areas of site affected by temporary installations to required elevations and slopes, and clean the area.
- C. Restore permanent facilities used for temporary purposes to specified condition.

END OF SECTION 01520

SECTION 01530 - PROTECTION OF EXISTING FACILITIES

PART 1 - GENERAL

1.1 GENERAL

- A. The CONTRACTOR shall protect all existing utilities and improvements not designated for removal and shall restore damaged or temporarily relocated utilities and improvements to a condition equal to or better than they were prior to such damage or temporary relocation, all in accordance with requirements of the Contract Documents.
- B. The CONTRACTOR shall verify the exact locations and depths of all utilities shown and the CONTRACTOR shall make exploratory excavations of all utilities that may interfere with the WORK. All such exploratory excavations shall be performed as soon as practicable after award of the contract and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's work. When such exploratory excavations show the utility location as shown to be in error, the CONTRACTOR shall so notify the ENGINEER.
- C. The number of exploratory excavations required shall be that number which is sufficient to determine the alignment and grade of the utility.

1.2 RIGHTS-OF-WAY

- A. The CONTRACTOR shall not do any work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified by the ENGINEER that the OWNER has secured authority from the proper party. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin work, if required by said party, and shall remove, shore, support or otherwise protect such pipeline, transmission line, ditch, fence, or structure or replace the same. When two or more contracts are being executed at one time on the same or adjacent land in such manner that work on one contract may interfere with that on another, the OWNER shall determine the sequence and order of the WORK. When the territory of one contract is the necessary or convenient means of access for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the OWNER to the CONTRACTOR so desiring, to the extent, amount, in the manner, and at the times permitted. No such decision as to the method or time of conducting the WORK or the use of territory shall be made the basis of any claim for delay or damage, except as provided for temporary suspension of the WORK in the General Conditions of the Contract.

1.3 PROTECTION OF STREET OR ROADWAY MARKERS

- A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. All survey markers or points disturbed by the CONTRACTOR shall be accurately restored after all streets or roadway resurfacing has been completed.

1.4 RESTORATION OF PAVEMENT

- A. General. All paved areas including asphaltic concrete berms cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing adjacent undisturbed areas, except where specific resurfacing requirements have been called for in the Contract Documents or in the requirements of the agency issuing the permit. All temporary and permanent pavement shall conform to the requirements of the affected pavement OWNER. All pavements which are subject to partial removal shall be neatly saw cut in straight lines.
- B. Temporary Resurfacing. Wherever required by the public authorities having jurisdiction, the CONTRACTOR shall place temporary surfacing promptly after backfilling and shall maintain such surfacing for the period of time fixed by said authorities before proceeding with the final restoration of improvements.
- C. Permanent Resurfacing. In order to obtain a satisfactory junction with adjacent surfaces, the CONTRACTOR shall saw cut back and trim the edge so as to provide a clean, sound, vertical joint before permanent replacement of an excavated or damaged portion of pavement. Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in straight lines. All pavement restoration and other facilities restoration shall be constructed to finish grades compatible with adjacent undisturbed pavement.
- D. Restoration of Sidewalks or Private Properties. Wherever sidewalks or private properties and driveways have been removed for purposes of construction, the CONTRACTOR shall place suitable temporary sidewalks or driveways promptly after backfilling and shall maintain them in satisfactory condition for the period of time fixed by the authorities having jurisdiction over the affected portions before proceeding with the final restoration or, if no such period of times is so fixed, the CONTRACTOR shall maintain said temporary sidewalks or driveways until the final restoration thereof has been made. The CONTRACTOR shall restore all private properties within thirty (30) days after a complaint is received by the OWNER.

1.5 EXISTING UTILITIES AND IMPROVEMENTS

- A. General. The CONTRACTOR shall protect all Underground Utilities and other improvements which may be impaired during construction operations. It shall be the CONTRACTOR's responsibility to ascertain the actual location of all existing utilities and other improvements that will be encountered in its construction operations, and to see that such utilities or other improvements are adequately protected from damage due to such operations. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.
- B. Utilities to be Moved. In the case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the OWNER to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the ENGINEER a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.
- C. Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement which is indicated,

the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the ENGINEER and the OWNER of the facility. In all cases of such temporary removal or relocation, restoration to former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

- D. OWNER's Right of Access. The right is reserved to the OWNER and to the OWNERS of public utilities and franchises to enter at any time upon any public street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.
- E. Underground Utilities Indicated. Existing utility lines that are indicated or the locations of which are made known to the CONTRACTOR prior to excavation and that are to be retained, and all utility lines that are constructed during excavation operations shall be protected from damage during excavation and backfilling and, if damaged, shall be immediately repaired or replaced by the CONTRACTOR.
- F. Underground Utilities Not Indicated. In the event that the CONTRACTOR damages any existing utility lines that are not indicated or the locations of which are not made known to the CONTRACTOR prior to excavation, a written report thereof shall be made immediately to the ENGINEER. If directed by the ENGINEER, repairs shall be made by the CONTRACTOR under the provisions for changes and extra work contained in the General Conditions.
- G. All costs of locating, repairing damage not due to failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not shown in the Contract Documents with reasonable accuracy, and for equipment on the project which was actually working on that portion of the work which was interrupted or idled by removal or relocation of such utility facilities, and which was necessarily idled during such work will be paid for as extra work in accordance with the provisions of the General Conditions.
- H. Approval of Repairs. All repairs to a damaged utility or improvement are subject to inspection and approval by an authorized representative of the utility or improvement OWNER and the ENGINEER before being concealed by backfill or other work.
- I. Maintaining in Service. All oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the ENGINEER are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.
- J. Existing Water Services. CONTRACTOR shall protect and provide temporary support for existing water services. Any water service damaged by the CONTRACTOR shall be replaced at the CONTRACTOR's expense, with a new water service complete with new water main tap.

1.6 TREES WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

- A. General. The CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the jurisdictional agency or OWNER. All existing trees and shrubs which are damaged during construction shall be trimmed or replaced by the CONTRACTOR or a certified tree company under permit from the jurisdictional agency and/or the OWNER. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.
- B. Trimming. Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. All cuts over 1-1/2 inches in diameter shall be coated with an asphaltic emulsion material.
- C. Replacement. The CONTRACTOR shall immediately notify the jurisdictional agency and/or the OWNER if any tree is damaged by the CONTRACTOR's operations. If, in the opinion of said agency or the OWNER, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree at CONTRACTOR's own expense. The tree shall be of a like size and variety as the tree damaged, or, if of a smaller size, the CONTRACTOR shall pay to the OWNER of said tree a compensatory payment acceptable to the tree OWNER, subject to the approval of the jurisdictional agency or OWNER. The size of the trees shall be not less than 1-inch diameter nor less than 6 feet in height.

1.7 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way the CONTRACTOR shall notify the respective authorities representing the OWNERS or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said OWNERS or agencies can be present during such work if they so desire. The CONTRACTOR shall also notify the Sunshine State One Call Center 1-800-432-4770 at least 2 days, but no more than 14 days, prior to such excavation.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.

2.2 FENCING

- A. Materials to CONTRACTOR's option, minimum fence height = 6 feet.

2.3 BARRIERS

- A. Materials to CONTRACTOR's option, as appropriate to serve required purpose.

PART 3 - EXECUTION

3.1 GENERAL

- A. Install facilities of a neat and reasonable uniform appearance, structurally adequate for required purposes.
- B. Maintain barriers during entire construction period.
- C. Relocate barriers as required by progress of construction.

3.2 TREE AND PLANT PROTECTION

- A. Preserve and protect existing trees and plants adjacent to work areas.
- B. Consult with OWNER's Representative and remove agreed-on roots and branches which interfere with work.
 - 1. Employ qualified tree surgeon to remove branches, and to treat cuts.
- C. Protect root zones of trees and plants.
 - 1. Do not allow vehicular traffic and parking.
 - 2. Do not store materials or products.
 - 3. Prevent dumping of refuse or chemically injurious materials or liquids.
 - 4. Prevent puddling or continuous running water.
- D. Carefully supervise all work to prevent damage.
- E. Replace trees and plants which are damaged or destroyed due to work operations under this contract.

3.3 REMOVAL

- A. Completely remove barricades, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by OWNER's Representative.
- B. Clean and repair damage caused by installation, fill and grade areas of the site to required elevations and slopes, and clean the area.

END OF SECTION 01530

SECTION 01550 - SITE ACCESS AND STORAGE

PART 1 - GENERAL

- A. HIGHWAY LIMITATIONS:
- B. The CONTRACTOR shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the site of the WORK. It shall be the CONTRACTOR's responsibility to construct and maintain any haul roads required for its construction operations.

1.2 TEMPORARY CROSSINGS:

- A. General. Continuous, unobstructed, safe, and adequate pedestrian and vehicular access shall be provided to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, service stations, motels, fire and police stations, and hospitals. Safe and adequate public transportation stops and pedestrian crossings at intervals not exceeding 300 feet shall be provided. The CONTRACTOR shall cooperate with parties involved in the delivery of mail and removal of trash and garbage so as to maintain existing schedules for such services. Vehicular access to residential driveways shall be maintained to the property line except when necessary construction precludes such access for reasonable periods of time.
- B. Temporary Bridges. Wherever necessary, the CONTRACTOR shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the CONTRACTOR shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the ENGINEER prior to excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation. Temporary bridges or steel plates for street and highway crossing shall conform to the requirements of the authority having jurisdiction in each case, and the CONTRACTOR shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.
- C. Street Use. Nothing herein shall be construed to entitle the CONTRACTOR to the exclusive use of any public street, alleyway, or parking area during the performance of the WORK hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of utility companies or other agencies in such streets, alleyways, or parking areas. No street shall be closed to the public without first obtaining permission of the ENGINEER and proper governmental authority. Where excavation is being performed in primary streets or highways, one lane in each direction shall be kept open to traffic at all times unless otherwise indicated. Toe boards shall be provided to retain excavated material if required by the ENGINEER or the agency having jurisdiction over the street or highway. Fire hydrants on or adjacent to the WORK shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to assure the use of sidewalks and the proper functioning of all gutters, storm drain inlets, and other drainage facilities.
- D. Traffic Control
 - 1. For the protection of traffic in public or private streets and ways, the CONTRACTOR shall provide, place, and maintain all necessary barricades, traffic cones, warning signs, lights, and other safety devices in accordance with the

requirements of Broward County and the "Manual of Uniform Traffic Control Devices, Part VI - Traffic Controls for Street and Highway Construction and Maintenance Operations," published by U.S. Department of Transportation, Federal Highway Administration (ANSI D6.1).

2. The CONTRACTOR shall take all necessary precautions for the protection of the WORK and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The CONTRACTOR shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of the Florida Department of Transportation.
 3. The CONTRACTOR shall submit 3 copies of a traffic control plan to the ENGINEER for approval a minimum of 2 weeks prior to construction. The ENGINEER reserves the right to observe these traffic control plans in use and to make any changes as field conditions warrant. Any changes shall supersede these plans and be done solely at the CONTRACTOR's expense.
 4. The CONTRACTOR shall remove traffic control devices when no longer needed, repair all damage caused by installation of the devices, and shall remove post settings and backfill the resulting holes to match grade.
- E. Temporary Driveway Closure. The CONTRACTOR shall notify the OWNER or occupant (if not Owner-occupied) of the closure of the driveways to be closed more than one eight-hour work day at least 3 working days prior to the closure. The CONTRACTOR shall minimize the inconvenience and minimize the time period that the driveways will be closed. The CONTRACTOR shall fully explain to the OWNER/occupant how long the work will take and when closure is to start. Total closure time shall not exceed 5 days.

1.3 CONTRACTOR'S WORK AND STORAGE AREA:

- A. The CONTRACTOR shall designate and arrange for the use of a portion of the property, adjacent to the WORK for its exclusive use during the term of the Contract as a storage and shop area for its construction operations relative to this Contract.
- B. The CONTRACTOR shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the WORK.
- C. The CONTRACTOR shall construct and use a separate storage area for hazardous materials used in constructing the WORK.
 1. For the purpose of this paragraph, hazardous materials to be stored in the separate area are all products labeled with any of the following terms: Warning, Caution, Poisonous, Toxic, flammable, Corrosive, Reactive, or Explosive. In addition, whether or not so labeled, the following materials shall be stored in the separate area: diesel fuel, gasoline, new and used motor oil, hydraulic fluid, cement, paints and paint thinners, two-part epoxy coatings, sealants, asphaltic products, glues, solvents, wood preservatives, sand blast materials, and spill absorbent.
 2. Hazardous materials shall be stored in groupings according to the Material Safety Data Sheets.
 3. The CONTRACTOR shall develop and submit to the ENGINEER a plan for storing and disposing of the materials above.

4. The CONTRACTOR shall obtain and submit to the ENGINEER a single EPA number for wastes generated at the site.
5. The separate storage area shall meet all the requirements of all authorities having jurisdiction over the storage of hazardous materials.
6. All hazardous materials which are delivered in containers shall be stored in the original containers until use. Hazardous materials which are delivered in bulk shall be stored in containers which meet the requirements of authorities having jurisdiction.

1.4 PARKING:

- A. The CONTRACTOR shall:
 1. Provide temporary parking areas for ENGINEER/ARCHITECT and OWNER's use.
 2. The CONTRACTOR shall direct its employees to park in designated areas secured by the CONTRACTOR.
 3. Traffic and parking areas shall be maintained in a sound condition, free of excavated material, construction equipment, mud, and construction materials. The CONTRACTOR shall repair breaks, potholes, low areas which collect standing water, and other deficiencies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01550

SECTION 01560 - TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Provide and maintain methods, equipment, and temporary construction, as necessary, to provide controls over environmental conditions at the construction site and related area under CONTRACTOR's control; remove physical evidence of temporary facilities at completion of work.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 NOISE CONTROL

- A. Provide all necessary requirements for noise control during the construction period.
 - 1. Noise procedures shall conform to all applicable OSHA requirements and local ordinances having jurisdiction on the work.
 - 2. Noise levels during nighttime hours shall not exceed 55 db measured at the property line of a residence.

1.4 DUST CONTROL

- A. Provide positive methods and apply dust control materials to minimize raising dust from construction operations and provide positive means to prevent air-borne dust from dispersing into the atmosphere.

1.5 WATER CONTROL

- A. Provide methods to control surface water to prevent damage to the project, the site, or adjoining properties.
 - 1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
- B. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface and water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the site or to adjoining areas.

1.6 PEST CONTROL

- A. Provide pest control as necessary to prevent infestation of construction or storage area.
 - 1. Employ methods and use materials which will not adversely affect conditions at the site or on adjoining properties.
 - 2. Should the use of pesticides be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to ENGINEER. Clearly indicate:

- a. The area or areas to be treated.
 - b. The pesticide to be used, with a copy of the manufacturer's printed instructions.
 - c. The pollution preventative measures to be employed.
- B. The use of any pesticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.7 RODENT CONTROL

- A. Provide rodent control as necessary to prevent infestation of construction or storage area.
- 1. Employ methods and use materials, which will not adversely affect conditions at the site or on adjoining properties
 - 2. Should the use of rodenticide be considered necessary, submit an informational copy of the proposed program to OWNER with a copy to OWNER's Representative. Clearly indicate:
 - a. the area or areas to be treated.
 - b. the rodenticide to be used, with a copy of the manufacturer's printed instructions.
 - c. the pollution preventative measures to be employed.
- B. The use of any rodenticide shall be in full accordance with the manufacturer's printed instructions and recommendations.

1.8 DEBRIS CONTROL

- A. Maintain all areas under CONTRACTOR's control free of extraneous debris.
- B. Initiate and maintain a specific program to prevent accumulation of debris at construction site, storage and parking area, or along access roads and haul routes.
- 1. Provide containers for deposit of debris as specified in Section 01710 - Cleaning.
 - 2. Prohibit overloading of trucks to prevent spillage on access and haul routes.
 - 3. Provide periodic inspection of traffic areas to enforce requirements.
- C. Schedule periodic collections and disposal of debris as specified in Section 01710 - Cleaning.
- 1. Provide additional collections and disposal of debris whenever the periodic schedule is to prevent accumulation.

1.9 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide equipment and personnel, perform emergency measures required to contain any spillage, and to remove contaminated soils or liquids.
- 1. Excavate and dispose of any contaminated earth off-site and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.

1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams or in sanitary or storm sewers.
 - D. Provide systems for control of atmospheric pollutants.
 1. Prevent toxic concentrations of chemicals.
 2. Prevent harmful dispersal of pollutants into the atmosphere.
- 1.10 EROSION CONTROL
- A. Plan and execute construction and earthwork, by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas to prevent erosion and sedimentation.
 1. Hold the areas of bare soil exposed at one time to a minimum
 2. Provide temporary control measures such as berms, dikes and drains.
 3. Provide silt screens as required preventing surface water contamination.
 - B. Construct fills and waste areas by selective placement to eliminate surface silts or clays, which will erode.
 - C. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.
 - D. All erosion control procedures must comply with the National Pollutant Discharge Elimination System (NPDES).
- 1.11 TEMPORARY TREE AND PLANT PROTECTION
- 1.12 GENERAL PROVISIONS
- A. Attention is directed to the PROCUREMENT AND CONTRACTING REQUIREMENTS and all Sections within DIVISION 01, GENERAL REQUIREMENTS, which are made a part of this Section of the Specifications.
- 1.13 WORK INCLUDED
- A. Protection of existing trees and plants from damage as a result of the Construction Manager's operations including, but not limited to:
 1. Tree protection fencing.
 2. Root pruning and construction pruning.
 3. Fencing of areas designated for tree removals by the Owner.
 - B. Refer to "Tree Protection and Relocation Notes" included on the Drawings.
- 1.14 RELATED REQUIREMENTS
- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
 1. Section 02200, SITE PREPARATION.
 2. Section 311300, SELECTIVE TREE REMOVAL AND TRIMMING' Includes stump removal of trees removed by the Owner in designated fenced areas.

3. Section 312300, SITE EXCAVATING, BACKFILLING AND COMPACTING: Excavation and backfill.
4. Section 329300, PLANTING: New plant material.
5. Section 329600, TRANSPLANTING.

1.15 REFERENCED STANDARDS

- A. Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.
 1. American National Standards Institute (ANSI): Z133.1
 2. Safety Requirements for Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush.
 3. International Society of Arboriculture (ISA): Guide for Establishing Values of Trees and Other Plants
 4. National Arborist Association (NAA): Ref. 1
 5. Pruning Standards for Shade Trees

1.16 SUBMITTALS

- A. Prepare and submit drawings indicating the extent of tree protection fencing required.
- B. Proposed methods, and schedule for effecting tree and plant protection shall be submitted for approval.
- C. Proposed methods, materials, and schedule for root pruning, construction pruning, and tree fertilization by Certified Arborist shall be submitted for approval.
- D. Certified Arborist Qualifications shall be submitted for Architect's review and approval.

1.17 QUALITY ASSURANCE

- A. Work of this section shall be completed by a professional ISA Certified Arborist with a minimum five years experience, who has successfully completed an exam and education program equal to the International Society of Arboriculture (ISA) Certification Program, sponsored by the International Society of Arboriculture 2009, P.O. Box 3129, Champaign, IL 61826 (217) 355-9411; Email: isa@isa-arbor.com.
- B. Arborist shall have the following minimum qualifications:
 1. Membership in:
 - a. NAA – National Arborist Association
 - b. ISA – International Society of Arborists
 2. Meet state requirements for insurance.
 3. Licenses for application and use of pesticides.

1.18 DAMAGE PENALTIES

- A. Certain specimen trees within the construction areas and in other key locations will be identified by the Owner and the Architect, and marked with red tags. Loss of any of these

trees will result in fines assessed at \$10,000 per tree. Damage to all other trees on the property will be assessed at the rate of \$200 per inch caliper of the tree.

- B. A fine of \$1,000 will be levied against the Construction Manager for each incident of construction inside tree protection areas.
- C. Damages to trees, shrubs, and other vegetation will be assessed by the Architect and Owner in accordance with the ISA Guide.
- D. Trees or roots visibly damaged will cause the Owner to withhold from the Construction Manager an assessed amount conforming to the requirements stipulated above for a period of two years. After that period the impact of the damage to any tree will be assessed accordingly.
- E. If any trees or shrubs designated to be saved are damaged and replacement is required, a number and diameter of trees or shrubs of the same species and variety, as specified by the Owner and Architect, shall be furnished and planted by the Construction Manager. The total inch diameter of the replacement trees or shrubs shall equal the diameter of the tree or shrub to be replaced.

PART 2 - PRODUCTS

2.1 TREE PROTECTION FENCING

- A. Tree protection fencing, including fencing of areas designated for tree removals by the Owner, shall be the following:
 - 1. Polyethylene mesh fencing, chain link fencing, or other Owner approved material; height as indicated on the Drawings.
 - 2. Fabric shall be fluorescent orange, high density polyethylene 1-1/2 in. square mesh.
 - 3. Stakes shall be pressure treated pine.
- B. Stakes for fencing shall be driven into the ground, except above utility locations where surface anchors shall be used. Posts shall be spaced 16 ft. on center maximum.
- C. For fencing within the drip line of trees, surface mounted post anchors may be acceptable. Review with Architect and arborist and obtain written approval prior to installing. Post installation shall not damage tree root systems.

2.2 ROOT PRUNING

- A. Peat moss and mulch materials shall be as specified under Section 329300, PLANTING.
- B. Liquid fertilizer to be applied to root pruned and construction pruned trees shall be Peters M-77 Sequestered-Chelated Soluble Fertilizer manufactured by W.R. Grace and Co., Cambridge, MA 02140, Gold Start Liquid Fertilizer, manufactured by Nutra-Flo Company, 1919 Grand Ave, Sioux City, IA 51106-5708; Phone: 712-277-2011; 800-831-4815; Fax: 712-279-1946; Agro- Culture Liquid Fertilizer, manufactured by Agro-Culture Liquid Fertilizers, 3055 W. M-21, P.O. Box 150, St. Johns, Michigan 48879; 1-800-678-9029, or approved equal. Liquid fertilizer shall be approved by Certified Arborist.
- C. Dormant oil spray shall be a dormant miscible spray equal to Sunspray, Scalecide, or Volck Oil.

- D. Insecticide shall be Isotox manufactured by Ortho; QuickPRO, manufactured by Monsanto; LESCO Sevin Brand SL, #019106, manufactured by LESCO, or approved equal. Insecticide shall be approved by Certified Arborist.

PART 3 - EXECUTION

3.1 MEASUREMENT AND PAYMENT

- A. There shall be no special measurement or payment for the work under this section; it shall be included in the price of all other work.

3.2 PROTECTION FOR EXISTING TREES TO BE PRESERVED:

- A. All trees to be preserved on the property shall be protected against damage from construction operations.
 - 1. Includes associated understory.
- B. Only those trees located within the limits of improvements to be constructed as indicated, shall be removed.
 - 1. All trees to remain shall be flagged for review after the location of improvements to be constructed are staked in the field.
 - 2. Any tree to be removed shall be reviewed by the Architect and Owner for approval prior to removal.
 - 3. Trees to be preserved are represented by a solid line. Trees to be removed are represented by a dashed or ghosted line. Trees to be planted are graphically differentiated from existing trees.
 - 4. Obtain approval of installation of tree barricade fencing from Owner and Architect prior to the initiation of any removal of vegetation and construction.
- C. Erect fencing and armor protection prior to beginning any clearing, demolition or construction activity, and unless otherwise instructed, maintain in place until construction is completed.
 - 1. Tree protection barricade shall be erected at the edge of the dripline where possible; in extreme circumstances and with the approval of the Architect, fencing may be located at the edge of the root protection zone.
 - a. For trees 10-inch caliper and less, the minimum distance the barrier shall be erected is ten (10) feet from the trunk of tree or clump of trees.
 - 2. Trees immediately adjacent to and within one hundred feet (100) of any construction activities are to be protected by barricade fencing; subject to approval of the Architect and Owner.
 - 3. Trees exposed to construction activity within the dripline or within twenty-five (25) feet of any construction activity are to have trunks protected with tree armor in addition to barricade fencing.
 - 4. The tree protection barricade shall be placed before any excavating or grading is begun and maintained in repair for the duration of the construction work unless otherwise directed.

5. No material shall be stored or construction operation shall be carried on within the tree protection barricade.
 6. Tree protection barricade shall remain until all work is completed.
 7. Remove tree protection barricade at commencement of finish grading.
 8. Remove tree armor immediately prior to Substantial Completion.
- D. Protect tree trunk with tree armor to a height of 8' or to the limits of lower branching (when exposed to construction activity within the drip line) with 2x4's butted side to side completely around trunk.
1. Wire wrap do not nail, around trees.
- E. Protect trees that are to remain, whether within barricade fencing or not, from the following:
1. Compaction of root area by equipment or material storage; construction materials shall not be stored closer to trees than the farthest extension of their limbs (dripline).
 2. The proposed finished grade within the root protection zone of any preserved tree shall not be raised or lowered more than three (3) inches.
 - a. Retaining methods can be used to protect and/or provide lateral support to the area outside the root protection zone.
 3. Trunk damage by moving equipment, material storage, nailing or bolting.
 4. Strangling by tying ropes or guy wires to trunks or large branches.
 5. Poisoning by pouring solvents, gas, paint, etc., on or around trees and roots.
 6. Cutting on roots by excavating, ditching, etc.
 - a. Prior to excavation within the tree drip lines or the removal of trees adjacent to other trees that are to remain, make a clean cut between the disturbed and undisturbed root zones with a rock saw or similar equipment to minimize root damage.
 - b. Refer to EXCAVATION AROUND TREES for additional information.
 7. Damage of branches by improper pruning.
 8. Drought from failure to water or by cutting or changing normal drainage pattern past roots. Construction Manager shall provide means as necessary to ensure positive drainage.
 9. Changes of soil pH factor by disposal of lime base materials such as concrete, plaster, lime treatment at pavement subgrade, etc. When installing concrete adjacent to the root zone of a tree, use a minimum 6 mil. plastic vapor barrier behind the concrete to prohibit leaching of lime into the soil.
 10. Do not cut roots 3/4" in diameter or over without approval of Owner's Representative. All excavation and earthwork within the PRZ of trees shall be done by hand.
 11. Protect all existing trees near areas to be stabilized from underground contaminations by placing a 6 mil. Plastic film barrier along exposed vertical cut extending a minimum 12" into undisturbed subgrade below depth of stabilization.

12. No vehicular traffic shall occur within the drip line of any tree; including parking of vehicles.
 13. No soil shall be spread, spoiled or otherwise disposed of under any tree within the PRZ.
- F. Any damage done to existing tree crowns or root systems shall be repaired by the Arborist to the satisfaction of the Architect and Owner's Representative.
1. Broken branches shall be cut cleanly.
 2. Any roots cut shall be cut cleanly with a saw other means approved by the Architect and Owner's Representative.
- G. Damages to trees caused through negligence of Construction Manager or his employees will be assessed by Owner and Project Arborist as described in Paragraph 1.06.

3.3 PROTECTED ROOT ZONE:

- A. The PROTECTED ROOT ZONE (PRZ).
1. No disturbance shall occur closer to the tree than one-half the radius of the PRZ or within five (5) feet of the tree whichever is greater.

3.4 PROTECTED ROOT ZONE IMPACTS:

- A. Those trees to remain which have some encroachment on their protected root zone shall have the following maximum allowable impacts:
1. Minimum Protection Criteria 'A': No disturbance of natural grade, e.g. trenching or excavation, can occur closer to the tree than one-half the radius of the PRZ or within five (5) feet of the tree whichever is greater.
 2. Minimum Protection Criteria 'B': No cut or fill greater than three (3) inches will be located closer to the tree trunk than $\frac{1}{2}$ the PRZ radius distance.
- B. Trees impacted shall have a minimum of a six (6) inch layer of mulch placed and maintained over the root protection zone and the undisturbed area within the dripline.
1. Immediate pruning and fertilization shall occur per the pruning and fertilization sections of this specification.
 2. Provide water in a slow drip manner to impacted trees as approved by the Architect and Owner's Representative.
 3. Provide water to apply equivalent to 1 inch once per week to deeply soak in over the area within the dripline of the tree during periods of hot, dry weather.
 4. Spray tree crowns periodically to reduce dust accumulation on the leaves.

3.5 EXCAVATING AROUND TREES

- A. Excavate within the dripline of trees only where required and when absolutely necessary.
1. Any excavation within the PRZ of trees shall be under the direction of the Arborist.
 2. Arborist shall be at site at all times while excavation is occurring within the PRZ.
 3. Air spade all removals within the PRZ.
 4. Refer to PROTECTED ROOT ZONE.

- B. When excavating for new construction is required within the PRZ, air spade and hand excavate to minimize damage to root systems.
 - 1. Use narrow tine spading forks and comb soil to expose roots.
 - 2. Relocate roots back into backfill areas wherever possible.
 - 3. If large main lateral roots are encountered, expose beyond excavation limits as required to bend and relocate without breaking.
 - 4. If root relocation is not practical, clean cut roots approximately three (3) inches back from new construction.
- C. Where existing grade is above new finish grade, carefully excavate within the dripline to the new finish grade.
 - 1. Carefully hand excavate an additional six (6) inches below the finish grade.
 - 2. Use narrow tine spading forks to comb the soil to expose the roots, and prune the exposed root structure as recommended by the Arborist.
 - 3. Keep the exposed roots damp.
 - 4. Treat the cut roots as specified and as recommended by the Arborist.
 - 5. After pruning and treatment of the root structure is complete, backfill to finish grade with eight (8) inches of approved plant mix, or structural soil.
- D. Where noted on plan, use airspade to expose roots for required cutting to accommodate hardscape elements. Architect to verify all cuts prior to proceeding.
- E. Temporarily support and protect roots against damage until permanently relocated and covered with recommended landscape material.

3.6 INSTALLATION OF FENCING

- A. Prior to start of demolition work and clearing and grubbing operations, tree protection fencing shall be installed in accordance with the following:
 - 1. Fencing shall be installed at the tree protection areas indicated on the Drawings.
 - 2. Fencing shall be installed a minimum of 15 ft. beyond the drip line of trees to be protected, unless otherwise approved by the Architect.
- B. Tree protection fencing to be installed over utility locations shall be installed using surface anchors. No poles or stakes shall be driven into the ground at these locations.

3.7 ROOT PRUNING

- A. Where construction will within drip line of existing trees designated to remain, roots shall be pruned.
- B. All root pruning shall be done by Certified Arborist only. Air spade is the preferred tool for root pruning. Trenching, vibrating plow, and stump grinding are NOT suitable means for root pruning.
- C. Roots greater than 1 in. diameter shall be pruned by means of a hand saw, or other approved means.
- D. Install root protection measures as prescribed by Certified Arborist.

3.8 CONSTRUCTION PRUNING

- A. Construction pruning shall conform to NAA Ref.1 for Class IV - Crown Reduction Pruning. Work shall conform to the requirements of ANSI Z133.1, and shall be reviewed in the field with the Architect and Certified Arborist prior to start of work.

3.9 FERTILIZATION AND INSECT SPRAYING

- A. Root pruned and construction pruned tree shall be treated with liquid fertilizer, dormant oil spray, and insecticide as prescribed by Certified Arborist.
- B. Liquid fertilizer shall be applied at a rate recommended by the manufacturer and as required by NAA Ref. 2.
- C. Dormant oil spray shall be applied in early spring before buds begin to swell at a rate recommended by the manufacturer.
- D. Insecticide spray shall be applied twice to root pruned trees following application of dormant oil spray. Spray insecticide at rates recommended by spray manufacturer at intervals appropriate for effective insect control.

3.10 REMOVAL OF PROTECTION

- A. All protection shall remain in place throughout the construction period. Remove protection devices only after written permission has been granted by the Architect.

END OF SECTION 01560

SECTION 01570 - TRAFFIC REGULATIONS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Provide, operate and maintain equipment, services and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow to provide safe and expeditious movement of traffic through and on haul routes, at site entrances, in construction zones, on-site access roads, and parking areas including driving and/or walking public.
- B. Remove temporary equipment and facilities when no longer required, restore grounds to original, or specified conditions.
- C. The requirements specified herein are in addition to the plan for Maintenance of Traffic as specified in Section 01500.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 TRAFFIC SIGNALS AND SIGNS

- A. Provide and operate traffic control and directional signals or signs required to direct and maintain an orderly flow of traffic in all areas under CONTRACTOR's control, or affected by CONTRACTOR's operations.

1.4 FLAGPERSON

- A. Provide qualified and suitably equipped flag-person when construction operations encroach on traffic lanes, as required for regulation of traffic.

1.5 FLARES AND LIGHTS

- A. Provide flares and lights during periods of low visibility:
 - 1. To clearly delineate traffic lanes and to guide traffic.
 - 2. For use of flag-person in directing traffic.
- B. Provide illumination of critical traffic and parking areas.
 - 1. Maintain free vehicular access to and through parking areas.
 - 2. Prohibit parking on or adjacent to access roads, or in non-designated areas.

1.6 HAUL ROUTES

- A. Consult with OWNER and governing authorities, establish public thorough fares which will be used as haul routes and site access.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to expedite traffic flow, to minimize interference with normal public traffic.

1.7 EMERGENCY ACCESS

- A. In order to provide protection to the workers and residents, the Contractor shall maintain emergency access to all adjacent properties at all times during construction. If a road is required to be closed to vehicular traffic and the distance of the closure exceeds 150 feet between stabilized surfaces, or prevents access to properties for a distance that exceeds 150 feet, the Contractor shall provide a 10 foot wide stabilized access way on one side of the trench capable of supporting a Fire Truck. Contractor shall also provide stabilized access ways across the trench or un-stabilized area a minimum of 6 feet in width at a spacing not to exceed 100 feet capable of supporting foot traffic. These access ways shall be protected and delineated with lighted barricades or other such devices as approved by the regulatory agency. Both ends of the emergency access way shall be blocked in accordance with the MOT permit approved by the City of Fort Lauderdale and FDOT with signage indicating that this access way is to be used by emergency vehicles only.

No trenches or holes shall be left open after working hours. In the event a trench must be left open after hours, it shall be done so only with the express written permission from the Engineer, and it shall be the Contractor's responsibility to provide proper protection of the open trench or hole as required by the regulatory agency. In addition the Contractor shall provide a security guard at the site whenever the Contractor's personnel are not present, 24 hours per day/ 7 days per week. It shall be the Security Guard's responsibility to protect the open trench or hole from trespassers and to direct emergency personnel on site. The Security Guard shall not have any other responsibilities such as operation pumps or equipment but shall be dedicated to protecting the trench or open hole. The Security Guard shall be equipped with a wireless telephone capable of calling 911 to report an emergency and shall keep that telephone on their person at all times. In addition to this provision the contractor shall maintain trench safety and comply with current OSHA regulations and the Trench Safety Act. The contractor shall maintain and keep all safety barricades, signage, flashers, and detours, in operation condition. A copy of the approved MOT plans, and details, shall be on site at all times.

- B. Measurement and payment for security guard services shall be included in the utility pipe installation unit price. Measurement for temporary emergency access ways will be paid for under the specified line item at the unit price described in the bid schedule.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01570

SECTION 01590 - PROJECT SIGN

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Contractor shall furnish two 4' x 8' sign, below is a sample, not specific to the project.
- B. Sign shall be made to be weather resistant and on display for entire length of contract.
- C. Shop drawings must be submitted prior to sign construction.
- D. The exact style and design of the sign will be provided during the preconstruction meeting.



- E. See Page 2, "Construction Sign Request Form", for information on the sign for this Project.

END OF SECTION 01590

Construction Sign Request Form

Title (Bold):

[Redacted]

Title (Not Bold):

[Redacted]

What's Happening?

[Redacted]

Benefits:

[Redacted]

Number of Neighbors Benefitted:

[Redacted]

Cost:

[Redacted]

Month and Year of Expected Completion:

[Redacted]

Contractor:

[Redacted]

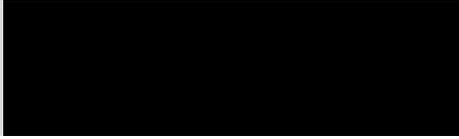
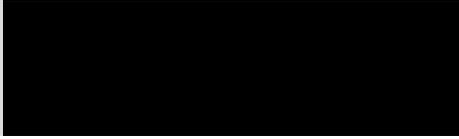
Phone: 954-828-8000

We're Working On:

[Redacted]

Project Manager Signature

Date



Senior Project Manager Signature

Date



SECTION 01600 - MATERIAL AND EQUIPMENT

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Material and equipment incorporated into the work:
 - 1. Conform to applicable specifications and standards.
 - 2. Comply with size, make, type and quality specified, or as specifically approved in writing by the OWNER's Representative.
 - 3. Manufactured and fabricated products:
 - a. Design, fabricate and assemble in accord with the best engineering and shop practices.
 - b. Manufacture like parts of duplicate units to standard sizes and gauges to be interchangeable.
 - c. Two or more items of the same kind shall be identical, by the same manufacturer.
 - d. Products shall be suitable for service conditions.
 - e. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved in writing.
 - 4. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 MANUFACTURER'S INSTRUCTIONS

- A. When Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, including two copies to OWNER's Representative. Maintain one set of complete instructions at the job site during installation and until completion.
- B. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
 - 1. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with OWNER's Representative for further instructions.
 - 2. Do not proceed with work without clear instructions.
- C. Perform work in accord with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.

1.4 TRANSPORTATION AND HANDLING

- A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site. Products shall be delivered to the job site on an "as needed" basis.
 - 1. Deliver products in undamaged condition, in manufacturers' original containers or packaging, with identifying labels intact with legible markings.
 - 2. Immediately upon delivery, inspect shipments to assure compliance with requirements of Contract Documents and approved submittals, and that products are properly protected and undamaged.
 - 3. Pipe and materials shall not be strung out along installation routes for longer than two (2) weeks prior to installation.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage to products or packaging.
- C. Coordinate deliveries to avoid conflict with Work and conditions at site:
 - 1. Work of other contractors, or OWNER.
 - 2. Limitations of storage space.
 - 3. Availability of equipment and personnel for handling products.
 - 4. OWNER's use of premises.
- D. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.
- E. Partial deliveries of component parts of equipment shall be clearly marked to identify the equipment, to permit easy accumulation of parts and to facilitate assembly.
- F. Immediately on delivery, inspect shipment to assure:
 - 1. Product complies with requirements of Contract Documents and reviewed submittals.
 - 2. Quantities are correct.
 - 3. Containers and packages are intact, labels are legible.
 - 4. Products are properly protected and undamaged.
- G. Provide equipment and personnel necessary to handle products, including those provided by OWNER, by methods to prevent soiling or damage to products or packaging.
- H. Provide additional protection during handling as necessary to prevent scraping, marring or otherwise damaging products or surrounding surfaces.
- I. Handle products by methods to prevent bending or overstressing.
- J. Lift heavy components only at designated lifting points.

1.5 STORAGE

- A. Store products in accord with manufacturer's instructions, with seals and labels intact and legible.
 - 1. Store products subject to damage by the elements in weather-tight enclosures.
 - 2. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
 - 3. Store unpacked products on shelves, in bins or in neat piles, accessible for inspection.

B. Exterior Storage

1. Provide substantial platforms, blocking or skids to support fabricating products above ground, prevent soiling or staining.
 - a. Cover products, subject to discoloration or deterioration from exposure to the elements, with impervious sheet coverings. Provide adequate ventilation to avoid condensation.
2. Store loose granular materials on solid surface such as paved areas, or provide plywood or sheet materials to prevent mixing with foreign matter.
 - a. Provide surface drainage to prevent flow or ponding of rainwater.
 - b. Prevent mixing of refuse or chemically injurious materials or liquids.

1.6 MAINTENANCE OF STORAGE

- A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:
 1. State of storage facilities is adequate to provide required conditions.
 2. Required environmental conditions are maintained on continuing basis.
 3. Surfaces of products exposed to elements are not adversely affected.
 - a. Any weathering of products, coatings and finishes is not acceptable under requirements of Contract Documents.
- B. Mechanical and electrical equipment which requires servicing during long term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.7 PROTECTION AFTER INSTALLATION

- A. Provide protection of installed products to prevent damage from subsequent operations. Remove when no longer needed, prior to completion of work.
- B. Control traffic to prevent damage to equipment and surfaces.
- C. Provide coverings to protect finished surfaces from damage.
 1. Cover projections, wall corners, and jambs, sills and soffits of openings, in areas used for traffic and for passage of products in subsequent work.
 2. Protect finished floors and stairs from dirt and damage.
 - a. In areas subject to foot traffic, secure heavy paper, sheet goods, or other materials in place.
 - b. For movement of heavy products, lay planking or similar materials in place.
 - c. Cover wall and floor surfaces in the vicinity of construction personnel activities and all finished surfaces used by construction personnel.
- D. Waterproofed surfaces
 1. Prohibit use of surfaces for traffic of any kind, and for storage of any products.
 2. When some activity must take place in order to carry out the Contract, obtain recommendations of installer for protection of surface.
 - a. Install recommended protection; remove on completion of that activity.
 - b. Restrict use of adjacent unprotected areas.
- E. Lawns and landscaping

1. Prohibit traffic of any kind across planted lawn and landscaped areas.
- F. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

1.8 SUBSTITUTIONS AND PRODUCT OPTIONS

A. Limitations on substitutions.

1. During bidding period, Instructions to Bidders govern times for submitting requests for substitutions under requirements specified in this section.
2. Substitutions will not be considered when indicated on shop drawings or product data submittals without separate formal request, when requested directly by Subcontractor or supplier, or when acceptance will require substantial revision of Contract Documents.
3. Substitute products shall not be ordered or installed without written acceptance.
4. Only one (1) request for substitution for each product will be considered. When substitution is not accepted, provide specified product.

B. Products List

1. Within 15 days after Contract Date submit to ENGINEER/Architect a complete list of major products proposed to be used, with the name of the manufacturer and the installing Subcontractor.

C. Contractors Options

1. For products specified only by reference standard, select any product meeting that standard.
2. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named or approved equal, which complies with the Specifications.
3. For products specified by naming one or more products or manufacturers and "or approved equal," CONTRACTOR must submit a request as for substitutions for any product or manufacturer not specifically named.

D. Substitutions for Cause:

1. For a period of 15 days after Contract Date, ENGINEER/Architect will consider written request from CONTRACTOR for substitution of products.
2. Identify product by specification Section and Article Numbers. Provide manufacturer's name and address, trade name of product, and model or catalog number. List fabricators and suppliers as appropriate.
3. List similar projects using product, dates of installation, and names of ENGINEER/Architect and OWNER.
4. List availability of maintenance services and replacement materials.
5. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate, including:
 - a. Comparison of the qualities and performance of the proposed substitution with that specified.
 - b. Changes required in other elements of the work because of the substitution.
 - c. Effect on the construction schedule.
 - d. Cost data comparing the proposed substitution with the product specified.
 - e. Any required license fees or royalties.

- f. Availability of maintenance services, and source of replacement materials.
 6. The burden of proof as to the type, function, and quality of any such substitute material or equipment shall be upon the CONTRACTOR.
 7. The ENGINEER/Architect will be the sole judge as to the type, function, and quality of any such substitute material or equipment and the ENGINEER's decision shall be final.
 8. The ENGINEER/Architect may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute.
 9. The OWNER may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.
 10. Acceptance by the ENGINEER/Architect of a substitute item proposed by the CONTRACTOR shall not relieve the CONTRACTOR of the responsibility for full compliance with the Contract Documents and for adequacy of the substitute item.
 11. The CONTRACTOR shall be responsible for resultant changes and all additional costs which the accepted substitution requires in the CONTRACTOR work, the work of its Subcontractors and of other Contractors, and shall effect such changes without cost to the OWNER.
- E. Substitutions for Convenience: Not allowed unless otherwise indicated.
- F. Contractors Representation:
1. A request for a substitution constitutes a representation that CONTRACTOR:
 - a. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
 - b. Will provide the same guarantees or bonds for the substitution as for the product specified.
 - c. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
 - d. Waives all claims for additional costs, under CONTRACTOR'S responsibility, which may subsequently become apparent.
- G. Submittal Procedures:
1. Submit three (3) copies of request for substitution.
 2. ENGINEER/Architect will review requests for substitutions with reasonable promptness, and notify CONTRACTOR, in writing, of the decision to accept or reject the requested substitution.
 3. During the bidding period, ENGINEER/Architect will record acceptable substitutions in Addenda.
 4. After award of Contract, ENGINEER/Architect will notify CONTRACTOR, in writing, of decision to accept or reject requested substitutions in Addenda.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01600

SECTION 01710 - CLEANING

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by the General Conditions.

1.2 RELATED REQUIREMENTS

- A. All applicable sections of the Specifications.
- B. Conditions of the Contract.

1.3 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 DURING CONSTRUCTION

- A. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulation of waste material, rubbish and windblown debris, resulting from Construction Work.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.
- D. The OWNER's Representative reserves the right to direct the CONTRACTOR to remove waste materials
- E. Mechanical Sweeping. CONTRACTOR shall maintain on site a mechanical sweeping device for removing debris from existing, temporary and permanent pavement.

3.2 DUST CONTROL

- A. Perform operations so that dust and other contaminants resulting from Construction Work operations will not cause any damages or maintenance problems to adjacent properties.

- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.3 FINAL CLEANING

- A. Employ skilled workmen for final cleaning.
- B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.
- C. Polish glossy surfaces to a clear shine.
- D. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- E. Prior to final completion, or OWNER occupancy, CONTRACTOR shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify the entire work is clean.
- F. All storage and staging areas shall be cleaned and returned to prior conditions or better as per requirements of this section.

END OF SECTION 01710

SECTION 01720 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.

1.3 SUBMITTALS

- A. Record Drawings. Comply with the following:
 - 1. Number of Copies. Submit one set of marked-up Record Prints.
- B. Record Specifications. Submit one copy of Project's Specifications, including addenda and contract modifications.
- C. Record Product Data. Submit one copy of each Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints. Maintain one set of black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - 2. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - 3. Accurately record information in an understandable drawing technique.
 - 4. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 - a. Document with photographs.
 - 5. Content. Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.

- b. Revisions to details shown on Drawings.
 - c. Depths of foundations.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Changes made by Change Order or Work Change Directive.
 - i. Changes made following Engineer's written orders.
 - j. Details not on the original Contract Drawings.
 - k. Field records for variable and concealed conditions.
 - l. Record information on the Work that is shown only schematically.
6. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
 7. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 8. Mark important additional information that was either shown schematically or omitted from original Drawings.
 9. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
 10. Immediately before inspection for Certificate of Substantial Completion, review marked-up Record Prints with Engineer. Make corrections where required.
- B. Format. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints. Organize Record Prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
 2. Identification. As follows:
 - a. Project number.
 - b. Project name.
 - c. Date.
 - d. Designation "PROJECT RECORD DRAWINGS."
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation. Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.

5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation. Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 2. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording. Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples. Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Engineer's reference during normal working hours.
- C. Record Documents of water, sewer and drainage must be provided for the General Contractor by a Professional Land Surveyor and must be satisfactory for approval by the OWNER and shall comply with the latest approved version of the CADD City Standards.
- D. Final pay request will not be processed until Record Documents have been completed and submitted to the City.

END OF SECTION 01720

SECTION 01780 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUBMITTALS

A. Informational Submittals:

1. Submit prior to application for final payment.
 - a. Record Documents.
 - b. As-built drawings (signed and sealed hardcopies and electronic format – PDF and CAD files)
 - c. Special Bonds, Special Guarantees, and Service Agreements.
 - d. Consent of Surety to Final Payment.
 - e. Releases or Waivers of Liens and Claims.
 - f. Releases from Agreements.
 - g. Final Application for Payment: Submit in accordance with procedures and requirements stated in Section 01025 "Measurement and Payment".
 - h. Spare Parts, Special Tools and Extra Materials: As required by individual Specification sections.

B. Subcontractor Identification Form:

1. Submit form with final pay request.
2. Submit a separate form for each subcontractor used.
3. For Capital Improvement Projects, submit form along with final pay request to the PCM.
4. Form is attached as a Supplement to this Section.

1.2 RECORD DOCUMENTS

A. Quality Assurance:

1. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
2. Accuracy of Records:
 - a. Coordinate changes within record documents, making legible and accurate entries on each sheet of Drawings and other documents where such entry is required to show change.
 - b. Purpose of Project record documents is to document factual information regarding aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.
3. Make entries within 24 hours after receipt of information that a change in the Work has occurred.
4. Prior to submitting each request for progress payment, request PCM's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in a deferral by PCM to recommend whole or any part of Contractor's Application for Payment, either partial or final.

1.3 RELEASES FROM AGREEMENTS

- A. Furnish Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction right-of-way.
- B. In the Event Contractor is Unable to Secure Written Releases:
 - 1. Inform PCM of the reasons.
 - 2. Owner or its representatives will examine the site, and Owner will direct Contractor to complete the Work that may be necessary to satisfy terms of the side agreement or special easement.
 - 3. Should Contractor refuse to perform this Work, Owner reserves right to have it done by separate contract and deduct cost of same from Contract Price, or require Contractor to furnish a satisfactory Bond in a sum to cover legal claims for damages.
 - 4. When Owner is satisfied that the Work has been completed in agreement with Contract Documents and terms of side agreement or special easement, right is reserved to waive requirement for written release if:
 - a. Contractor's failure to obtain such statement is due to grantor's refusal to sign, and this refusal is not based upon any legitimate claims that Contractor has failed to fulfill terms of side agreement or special easement, or
 - b. Contractor is unable to contact or has had undue hardship in contacting grantor.

1.4 AS-BUILT DRAWINGS

- A. Quality Assurance:
 - 1. As-built drawings must meet all minimum City of Fort Lauderdale CAD standards and be submitted in the latest version of AutoCAD available at the time the contract is signed.
 - 2. As-built drawings will be submitted in both electronic and hard copy forms as follow:
 - a. 3 hard copy sets of as-builts will be submitted on 24x36 paper signed, sealed, and dated by a Florida Professional Licensed Surveyor (PLS).
 - b. 1 CD or jump drive which will include both DWG files for the package and a PDF document including the surveyors signature and seal.
 - 3. As-built drawings will include the following:
 - a. PLS name, business name, license numbers, address, and telephone number
 - b. The following statement must be included:
 - 1) "I hereby certify that the as-built location information of the potable water, reclaimed water, wastewater and drainage facilities shown on these drawings conforms to the minimum technical standards for land surveying in the State of Florida, Chapter 5J-17.050(10)(i) (Florida Administrative Code), as adopted by the Department of Agriculture and Consumer Services, Board of Professional Surveyors and Mappers, and that said as-builts are true and correct to the best of our knowledge and belief."

- c. As-built drawings will contain the information on the design drawings (plan and profile views) plus document changes between the design and construction including correcting all information that is incorrect due to changes during construction. Incorrect or no longer relevant information will be erased or struck through. All location changes constructed materially different (one-tenth foot horizontal, one tenth vertical) than the design location will have their design location struck through and will be redrafted at the constructed location. Design drawing dimensioning will be corrected as necessary.
- d. Drawing will be a complete set including cover sheet, index, and any other sheets included in the approved design set. Standard detail sheets are not necessary.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 MAINTENANCE OF RECORD DOCUMENTS

A. General:

- 1. Promptly following commencement of Contract Times, secure from Engineer, at no cost to Contractor, one complete set of Contract Documents. Drawings will be full size.
- 2. Delete Engineer title block and seal from all documents.
- 3. Label or stamp each record document with title, "RECORD DOCUMENTS," in neat large printed letters.
- 4. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded. Contractor is responsible for maintaining up-to-date "red-lined" markups, on site, of all changes including revised locations of buried features and provides access to the City for review at any time.
- 5. All piping inserts, fittings, and valve locations shall be located by a Florida Licensed Surveyor in accordance with City of Fort Lauderdale surveying standards and per NAVD 88. Contractor shall provide adequate notice to the surveyor to ensure that all locations are accessible, prior to backfill.

B. Preservation:

- 1. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- 2. Make documents and Samples available at all times for observation by PCM or Engineer.

C. Making Entries on Drawings:

- 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - a. Color Coding:
 - 1) Green when showing information deleted from Drawings.
 - 2) Red when showing information added to Drawings.

- 3) Blue and circled in blue to show notes.
 2. Date entries.
 3. Call attention to entry by “cloud” drawn around area or areas affected.
 4. Legibly mark to record actual changes made during construction, including, but not limited to:
 - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
 - b. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - e. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, Written Amendment, and Engineer's written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.
 5. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - a. Clearly identify the item by accurate notes such as “cast iron drain,” “galv. water,” and the like.
 - b. Show, by symbol or note, vertical location of item (“under slab,” “in ceiling plenum,” “exposed,” and the like).
 - c. Make identification so descriptive that it may be related reliably to Specifications.
- D. Coordination with Florida Licensed surveyor:
1. Contractor shall not cover any bends, valves, or fittings installed until they have been located by the survey crews for the purpose of preparing as-built and/or Record Drawings.
 2. If the above conditions are not met, for any reason, Contractor shall bear the cost of potholing the constructed installation to allow for the locations.

3.2 FINAL CLEANING

- A. At completion of the Work or of a part thereof and immediately prior to Contractor's request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor's notice of completion, clean entire site or parts thereof, as applicable.
1. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to Owner and PCM.
 2. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.
 3. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.
 4. Clean all windows.

5. Clean and wax wood, vinyl, or painted floors.
 6. Broom clean exterior paved driveways and parking areas.
 7. Hose clean sidewalks, loading areas, and others contiguous with principal structures.
 8. Rake clean all other surfaces.
 9. Replace air-handling filters and clean ducts, blowers, and coils of ventilation units operated during construction.
 10. Leave water courses, gutters, and ditches open and clean.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.
- C. Meet all requirements of Section 02575, Surface Restoration.

3.3 SUPPLEMENTS

- A. The supplements listed below, following "END OF SECTION," are part of this Specification.
1. Subcontractor Identification Form (See next page).

END OF SECTION 01780



SUBCONTRACTOR IDENTIFICATION FORM

This form shall be completed by all City of Fort Lauderdale Prime Contractors who subcontracted out any portion of his/her City contract. The form shall be forwarded to the City of Fort Lauderdale's Public Services Department (Engineering and Architectural Services) with the prime contractor's final pay request. A separate form is to be completed and submitted for each subcontractor. Please telephone (954) 761-5057 or 761-5083, if you have any questions regarding this form.

1) CITY OF FORT LAUDERDALE PROJECT NO.

2) PROJECT DESCRIPTION

3) SUBContractor

_____ *Business Name*

_____ *Address*

_____ *Telephone & Fax Nos.*

_____ *Email Address/Company Website (if applicable)*

4) SUBCONTRACTOR'S PRINCIPAL OFFICER

5) CLASSIFICATION OF WORK SUBCONTRACTED OUT ____

6) COST OF WORK SUBCONTRACTED OUT ____

7) Please check the item(s) which properly identify the ownership status of the subcontractor's

Subcontractor firm is not a MBE or WBE

Subcontractor firm is a MBE, as at least 51 percent is owned and operated by one or more socially and economically-disadvantaged individuals:

American Indian Asian Black Hispanic White

Subcontractor firm is a WBE, as at least 51 percent is owned and operated by one or more women.

American Indian Asian Black Hispanic White

8) PRIME Contractor ____

**NAME & TITLE OF PRIME CONTRACTOR'S REPRESENTATIVE COMPLETING
THIS FORM**
(Please Print)

(Telephone No.)

(Fax No.)

(Email Address)

SIGNATURE _____ **DATE** _____
Prime Contractor's Representative

VOL 2 OF 2

TECHNICAL SPECIFICATIONS

PROJECT MANUAL TABLE OF CONTENT
For

**CITY OF FORT LAUDERDALE PARKS BOND AND
PARKS MASTER PLAN DESIGN IMPLEMENTATION
SERVICES**

For

BASS PARK

Task Order No. 07 - P12644

AECOM Project No: 60667539

Bid Set

August 23, 2024

SEAL PAGES

For

Parks Bond and Parks Master Plan Design Implementation Services

For

Bass Park Project Manual

AECOM Project No: 60667539

Task Order No. 07 - P12644

<p><u>Prime Consultant: AECOM</u></p>	
<p>Structural:</p> <p>Professional Engineer, State of Florida: Daniel M. Coughlin License No.: 66619</p>	<p>Digitally signed by Daniel M Coughlin Date: September 26, 2024</p> 

Architectural:

Registered Architect, State of Florida:
Zachary Nawrocki
License No.: AR97651

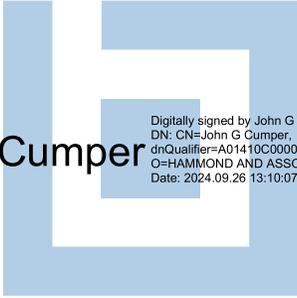


Zachary Nawrocki
THIS ITEM HAS BEEN
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SEALED BY ZACHARY
NAWROCKI, RA USING A
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DATE. PRINTED COPIES OF
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SEALED AND THE SIGNATURE
MUST BE VERIFIED ON ANY
ELECTRONIC COPIES.
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Electrical:

Professional Engineer, State of Florida:
Henryk B. Juszczuk
License No.: 58082

Digitally signed by
Henryk B Juszczuk
Date: 2024.09.26
13:56:11-04'00'

<p><u>Consultants:</u></p>	
<p>HVAC, Fire Protection and Plumbing: Hammond & Associates</p>	
<p>Professional Engineer, State of Florida: John Gray Cumper License No. 53273</p>	<p>John G Cumper</p>  <p>Digitally signed by John G Cumper DN: CN=John G Cumper, dnQualifier=A01410C000018C2234F10B00094256, O=HAMMOND AND ASSOCIATES, C=US Date: 2024.09.26 13:10:07-04'00'</p>

<p>Civil: bcc engineering</p>	
<p>Professional Engineer, State of Florida: Roberto Lamazares License No. 87238</p>	<p>Roberto Lamazares</p>  <p>Digitally signed by Roberto Lamazares DN: CN=Roberto Lamazares, dnQualifier=A01410D0000018A8AE1B09600017D7E, O=Florida, C=US Date: 2024.09.26 16:14:57-04'00'</p>
<p>END OF SEAL PAGES</p>	

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Section 01010 "Summary of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Section 01045 "Cutting and Patching" for cutting and patching procedures.
3. Section 01031 "Alteration Project Procedures" for general protection and work procedures for alteration projects.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.4 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's building manager's on-site operations are uninterrupted.
 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 3. Coordination for shutoff, capping, and continuation of utility services.
 4. Use of stairs.
 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by salvage and demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.
- D. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

1. Before selective demolition, Owner will remove the following items:
 - a. Any property that is not bolted or otherwise attached to the structure within the affected area.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 1. Hazardous materials will be removed by Owner before start of the Work.
 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- D. Storage or sale of removed items or materials on-site is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 WARRANTY

- A. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

1.10 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs or video.
 - 1. Inventory and record the condition of items to be removed and salvaged.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off utilities with utility companies.
 - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.3 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."

- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.

- C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 - 5. Maintain fire watch during and for at least one hours after flame-cutting operations.
 - 6. Maintain adequate ventilation when using cutting torches.

7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
10. Dispose of demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.7 SELECTIVE DEMOLITION SCHEDULE

- A. Remove: Demolished masonry and gypsum board assembly materials.
- B. Remove and Reinstall: Affected doors, door hardware, door frames, electrical components within the scope of work and, flooring material if possible. If flooring material cannot be salvaged then replace in kind.
- C. Existing to Remain: Everything not within the scope of demolition work.

END OF SECTION 024119