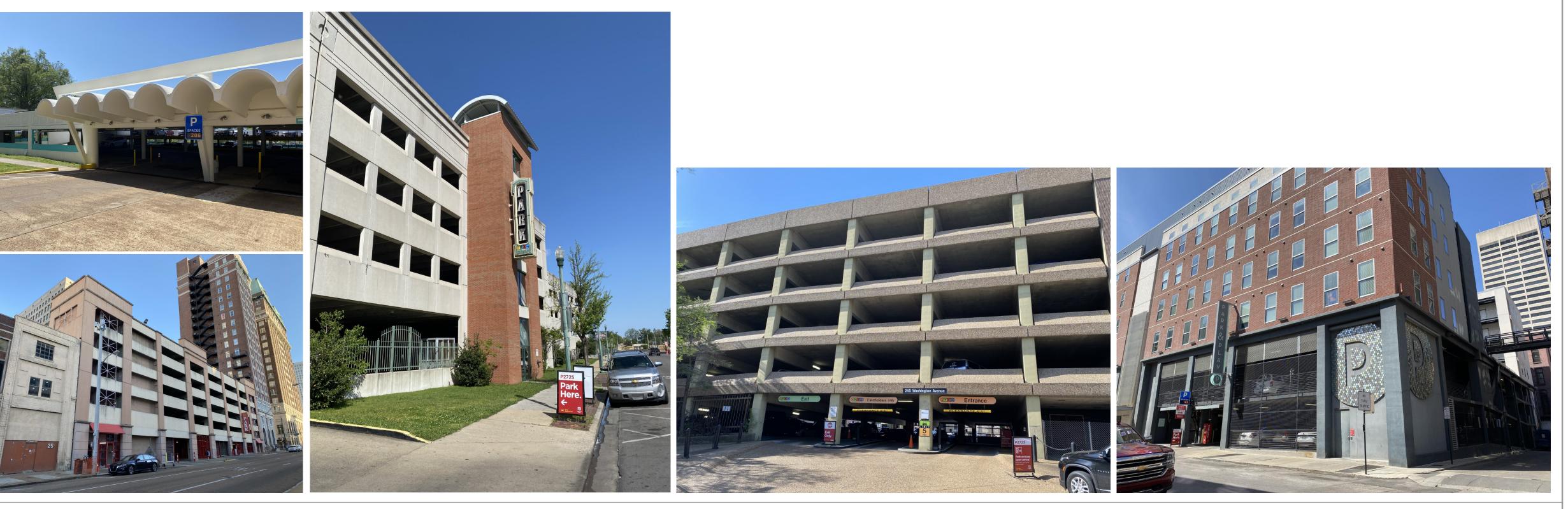
# MEMPHIS DOWNTOWN PARKING FACILITIES 2024 RESTORATION



DRA	WING LIST		
SHEET NO.	SHEET NAME	ISSUED FOR BID	ADDENDUM #01
R0.0	COVER SHEET	• >	• -
R0.1	RESTORATION GENERAL NOTES	•	•
R0.2	SCOPE OF WORK & BID QUANTITY TABLE	• (	
R1.1	CRIMINAL JUSTICE CENTER (CJC) GROUND & SECOND TIER RESTORATION PLAN	•	
R1.2	CRIMINAL JUSTICE CENTER (CJC) THIRD & FOURTH TIER RESTORATION PLAN	•	
R1.3	CRIMINAL JUSTICE CENTER (CJC) FIFTH & SIXTH TIER RESTORATION PLAN	•	
R1.4	CRIMINAL JUSTICE CENTER (CJC) SEVENTH & PARTIAL EIGHTH TIER RESTORATION PLAN	•	
R2.1	PEABODY FOURTH TIER RESTORATION PLAN	•	
R2.2	PEABODY TOP TIER RESTORATION PLAN	•	
R3.1	FIRST PLACE GROUND & SECOND TIER RESTORATION PLAN	•	
R3.2	FIRST PLACE THIRD & FOURTH TIER RESTORATION PLAN	•	
R3.3	FIRST PLACE FIFTH & SIXTH TIER RESTORATION PLAN	•	
R4.1	RESTORATION REPAIR DETAILS	٠	
R4.2	RESTORATION REPAIR DETAILS	•	
R4.3	RESTORATION REPAIR DETAILS	•	

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DRAWING LIST			DRAWING LIST				
SHEET NO.	SHEET NAME	ISSUED FOR BID	ADDENDUM #01	SHEET NO.	SHEET NAME	ISSUED FOR BID	ADDENDUM #01
E1.0	GENERAL NOTES, SCHEDULES AND LEGENDS	•		FP0.1	GENERAL NOTES AND LEGEND	•	
E1.1	SHOPPERS LOWER TIER LIGHTING PLAN	•			CRIMINAL JUSTICE CENTER SECOND TIER PLAN -	•	
E1.2	SHOPPERS INTERMEDIATE & UPPER TIER LIGHTING PLAN	•			FIRE PROTECTION		
E2.0	GENERAL NOTES, SCHEDULES AND LEGEND	•					
E2.1	CRIMINAL JUSTICE CENTER GROUND & SECOND TIER LIGHTING PLAN	•					
E2.2	CRIMINAL JUSTICE CENTER THIRD & FOURTH TIER LIGHTING PLAN	•					
E2.3	CRIMINAL JUSTICE CENTER FIFTH & SIXTH TIER LIGHTING PLAN	•					
E2.4	CRIMINAL JUSTICE CENTER SEVENTH TIER LIGHTING PLAN	•					
E3.0	GENERAL NOTES, SCHEDULES AND LEGEND	•					
E3.1	PEABODY GROUND TIER LIGHTING PLAN	•					
E3.2	PEABODY SECOND TIER LIGHTING PLAN	•					
E3.3	PEABODY THIRD TIER LIGHTING PLAN	•					
E3.4	PEABODY FOURTH TIER LIGHTING PLAN	•					
E3.5	PEABODY FIFTH TIER LIGHTING PLAN	•					
E4.0	GENERAL NOTES, SCHEDULES AND LEGEND	•					
E4.1	FIRST PLACE GROUND & SECOND TIER LIGHTING PLAN	•					
E4.2	FIRST PLACE THIRD & FOURTH TIER LIGHTING PLAN	•					
E4.3	FIRST PLACE FIFTH & SIXTH TIER LIGHTING PLAN	•					
E5.0	GENERAL NOTES, SCHEDULES AND LEGEND	•					
E5.1	BARBORO FLATS LEVEL B3 TIER LIGHTING PLAN	•					
E5.2	BARBORO FLATS LEVEL B2 TIER LIGHTING PLAN	•					
E5.3	BARBORO FLATS LEVEL B1 TIER LIGHTING PLAN	•					
E5.4	BARBORO FLATS LEVEL 1 TIER LIGHTING PLAN	•					
E5.5	BARBORO FLATS LEVEL 1M TIER LIGHTING PLAN	•					
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#### Owner :

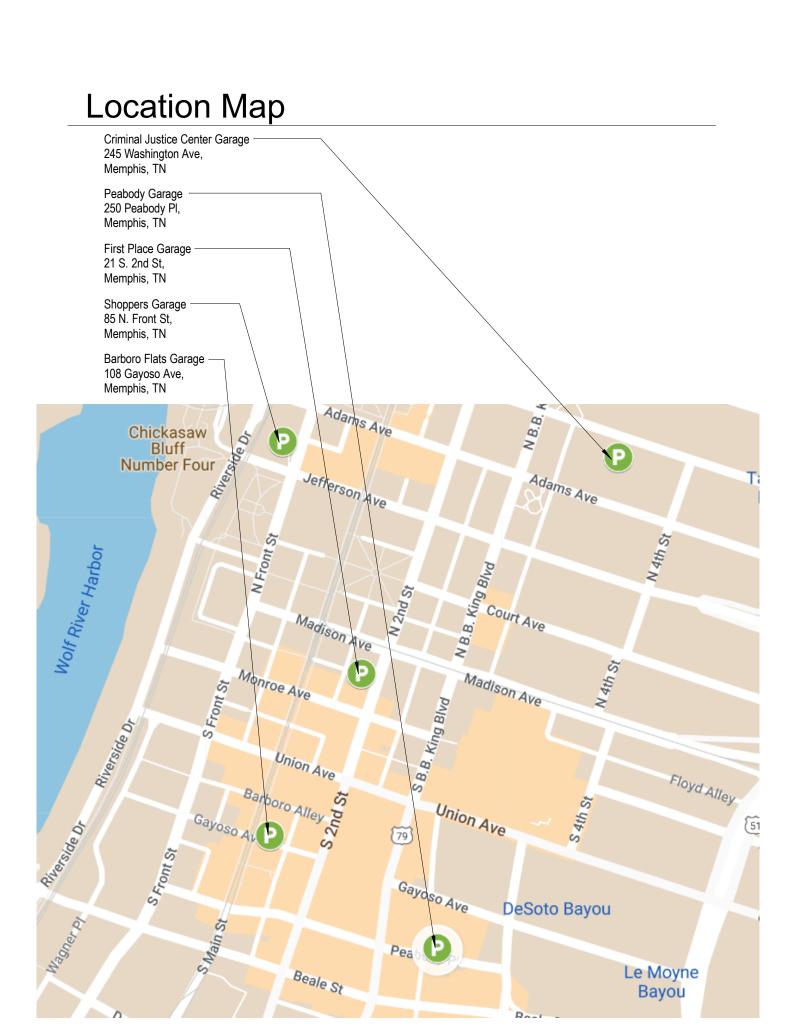
Downtown Mobility Commission 114 N. Main St. Memphis, TN 38103 T: (901) 575-0555 Contact: Ms. Lauren Bermudez, Transportation Manager

#### Structural Restoration Engineers

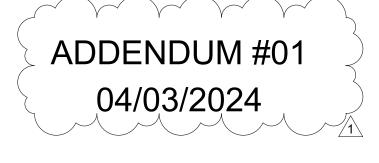
THA Consulting, Inc. 470 Norristown Road, Suite 200 Blue Bell, PA 19422 T: (484) 342-0200 Project Manager: Mr. Ryan Klass, E.I.T. Contact: (908) 936-1779 Principal In Charge: Mr. Kevin Carrigan, P.E. Contact: (484) 686-3993

## Mech/Elec/Plumb/FP Engineers

Chad Stewart & Associates, Inc. 9720 Village Circle Lakeland, TN 38002 T: (901) 260-7850 Contact: Mr. Chad Stewart, PE LEED AP







#### **GENERAL NOTES**

- A. GENERAL CONDITIONS
- 1. IT IS THE INTENT OF THE PLANS TO ADEQUATELY DESCRIBE AND INDICATE AREAS THAT REQUIRE RESTORATION WORK BASED ON A PRIORITIZED REPAIR PROGRAM THAT WILL EXTEND OVER MULTIPLE YEARS. IN THE EVENT IT BECOMES NECESSARY TO ALTER THE PLANS FOR THE BEST INTEREST OF THE PROJECT DUE TO CIRCUMSTANCES NOT KNOWN AT THE TIME OF SURVEY, WORK QUANTITIES MAY BE ADJUSTED IN ACCORDANCE WITH THE ENGINEER AND OWNER'S APPROVAL.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS PRIOR TO COMMENCING WORK AND SHALL REPORT IN WRITING TO THE ENGINEER ALL DISCREPANCIES WITH RESPECT TO PLANS & SPECIFICATIONS.
- 3. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL BRACING, SHEETING, AND SHORING AS REQUIRED. PROVIDE TEMPORARY SUPPORT WHERE REPAIR WORK WILL DEGRADE THE INTEGRITY OF THE STRUCTURE INCLUDING CONNECTIONS. SHORING SHALL BE DESIGNED, PREPARED, SIGNED, AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TENNESSEE, HIRED BY THE CONTRACTOR. SHORING ENGINEER SHALL FIELD VERIFY ALL DIMENSIONS, CONNECTION TYPES, ETC. AS NEEDED TO DETERMINE ALL APPLICABLE LOADING AND LOAD PATHS.
- CONTRACTOR IS REQUIRED TO INSTALL A TEMPORARY DUST ENCLOSURE AT EACH AREA OF WORK TO PREVENT DUST & ODOR MIGRATION. FOR BIDDING PURPOSES, ASSUME A CONTINUOUS PLASTIC SEAL AT THE PERIMETER OF EACH WORK AREA. ALL DUST/DEBRIS FROM THE WORK SHALL BE CLEANED/REMOVED PRIOR TO REMOVING TEMPORARY DUST ENCLOSURE.
- CONDUCT A PRECONSTRUCTION MEETING PRIOR TO COMMENCING WORK, HOLD PREINSTALLATION MEETINGS AS REQUIRED, AND HOLD REGULAR COORDINATION MEETINGS.
- 6. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY CONDITION WHICH MAY ENDANGER THE STABILITY AND STRUCTURAL INTEGRITY OF, CAUSE DISTRESS TO, OR COMPROMISE THE DURABILITY OF THE STRUCTURE.
- CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THE DRAWINGS. IN CASE OF CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS, AND STANDARDS OF ALL AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT.
- 9. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION AND SITE SAFETY.
- 11. IF THE BID SCHEDULE INCLUDES COLD WEATHER MONTHS, INCLUDE COLD WEATHER PROVISIONS AS REQUIRED TO COMPLETE THE WORK.
- 12. CONTRACTOR QUALIFICATION REQUIREMENTS:
- a. QUALIFIED BIDDERS SHOULD HAVE A MINIMUM OF, THREE (3) PARKING STRUCTURE RESTORATION PROJECTS WITH A MINIMUM OF OVER \$500,000 PROJECT COST
- PERFORMED IN THE LAST FIVE (5) YEARS. b. QUALIFIED BIDDERS SHALL INCLUDE A WRITTEN DOCUMENT REFERENCING PROJECT QUALIFICATION INFORMATION INCLUDING BUT NOT LIMITED TO SCOPE OF PROJECTS, CLIENT INFORMATION, PROJECT COSTS, REFERENCES, ETC. c. Qualified Bidders should have served as prime contractors and self  $\sim$
- , PERFORMED CONCRETE AND, WATERPROOFING REPAIRS/REPLACEMENT AT THE THREE  $\frac{3}{4}$ (3) REFERENCE PROJECTS. / 1 \*MINIMUM OF TWO (2) REFERENCED PROJECTS PERFORMED MUST INCLUDE POST-TENSION REPAIRS THAT WERE SELF PERFORMED OR COMPLETED BY QUALIFIED
- B. PHASING OF WORK & WORK RESTRICTIONS

SUBCONTRACTORS.

- 1. BIDDERS SHALL INCLUDE A PRELIMINARY SITE UTILIZATION / PHASING PLAN WITH THEIR BID.
- 2. THE SUCCESSFUL CONTRACTOR SHALL SUBMIT COMPOSITE SITE UTILIZATION/PHASING PLANS FOR APPROVAL PRIOR TO MOBILIZATION. THE CONTRACTOR SHALL COORDINATE CLOSELY WITH THE ENGINEER AND THE OWNER WHILE DEVELOPING, MAINTAINING, AND REVISING THE PLANS AS NECESSARY. THE GARAGE WILL BE PARTIALLY OCCUPIED BY VEHICLES AND PEDESTRIANS DURING CONSTRUCTION. THE COMPOSITE PLANS SHALL SHOW TEMPORARY FACILITIES, TEMPORARY UTILITY AND CONNECTIONS, STAGING AND STORAGE AREAS, DELIVERIES, SITE ACCESS, TEMPORARY VEHICLE AND PEDESTRIAN CIRCULATION, CONSTRUCTION PHASING, SHORING, TEMPORARY FENCING, BARRICADES, SIGNAGE, FLAGMEN, ETC.
- THE INTENT OF THE CONTRACTOR'S PHASING PLAN SHOULD BE TO DIVIDE THE WORK INTO THE LEAST NUMBER OF PHASES WHILE MAINTAINING VEHICLE ACCESSIBILITY TO ALL AREAS THAT ARE NOT BEING WORKED ON. THE SUCCESSFUL CONTRACTOR IS RESPONSIBLE FOR INCORPORATING ALL REQUIREMENTS AND SUBMITTING THE COMPOSITE SITE UTILIZATION/PHASING PLANS.
- ALL WORK CAN BE COMPLETED DURING THE DAY, UNLESS NOTED OTHERWISE BY THE OWNER OR GARAGE OPERATOR OR BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. COMPLY WITH WORK HOUR RESTRICTIONS AND NOISE ORDINANCE OF THE AUTHORITY HAVING JURISDICTION.
- ONE ELEVATOR MUST REMAIN IN SERVICE AND BE ACCESSIBLE AT ALL TIMES, UNLESS AN ALTERNATE ACCESSIBILITY PLAN IS SUBMITTED TO AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- 6. STAIR TOWERS MUST REMAIN IN SERVICE AND BE ACCESSIBLE AT ALL TIMES, UNLESS AN ALTERNATE MEANS OF EGRESS PLAN IS SUBMITTED TO AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- THE MAXIMUM NUMBER OF SPACES THE CONTRACTORS MAY TAKE OUT OF SERVICE DURING NORMAL BUSINESS HOURS AND WEEKENDS, WITH THE EXCEPTION OF EVENTS, ARE AS FOLLOWS:

125 SPACES

150 SPACES

300 SPACES

- A. SHOPPERS PARKING GARAGE
- B. CRIMINAL JUSTICE CENTER PARKING GARAGE PEABODY PARKING GARAGE
- FIRST PLACE PARKING GARAGE
- (130 SPACES E. BARBORO FLATS PARKING GARAGE 20 SPACES
- 8. COMPLY WITH LIMITATIONS ON USE OF PUBLIC STREETS AND WITH OTHER REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
- 9. THE CONTRACTOR SHOULD COORDINATE THE SHUTDOWN OF AREAS FOR THE APPLICATION OF WATERPROOFING TRADE MATERIALS WITH THE EXTENDED WEATHER FORECAST TO AVOID WEATHER-RELATED DELAYS.
- 10. PARKING AND PEDESTRIAN ACCESS AT THE LEVEL BELOW DEMOLITION WORK AND/OR STRUCTURAL REPAIRS SHALL BE TAKEN OUT OF SERVICE UNTIL REPAIRS ARE COMPLETE. PARKING AND PEDESTRIAN ACCESS AT THE LEVEL BELOW WATERPROOFING WORK SHALL BE TAKEN OUT OF SERVICE UNTIL WORK IS COMPLETE. UNLESS CONTRACTOR TAKES APPROPRIATE ACTIONS TO PROTECT PEDESTRIANS AND VEHICLES FROM HARM/DAMAGE.
- 11. REFER TO SPECIFICATION SECTION 011000 ("SUMMARY") FOR ADDITIONAL REQUIREMENTS AND RESTRICTIONS.
- C. MEASUREMENT AND RECORD DRAWINGS
- 1. DO NOT SCALE DRAWINGS. VERIFY ALL DRAWING DIMENSIONS IN THE FIELD.
- 2. CONTRACTOR SHALL MEASURE TO THE NEAREST INCH AND RECORD THE REPAIR AREAS AND QUANTITIES PERFORMED.
- ELECTRONIC COPIES OF THE DRAWINGS SHOWING THE ACTUAL SHAPE, LOCATION, AND SIZE OF THE REPAIRS AND A REPAIR TABULATION SPREADSHEET SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER AT THE END OF EACH PHASE OF THE PROJECT AND WITH EACH PAYMENT APPLICATION.
- 4. AT THE PROJECT CONCLUSION, SUBMIT ONE SET OF REPRODUCIBLE RECORD DRAWINGS IN A NEAT AND ORDERLY FASHION TO THE OWNER & ENGINEER SHOWING ALL REPAIRS PERFORMED. PROVIDE ONE HARD COPY AND AN ELECTRONIC COPY IN CAD OR PDF FORMAT

- D. GENERAL PREPARATION FOR CONCRETE REPAIRS
- 1. THE DRAWINGS INDICATE THE AREAS THAT HAVE BEEN DETERMINED TO REQUIRE REPAIR PER FIELD SURVEYS. CONTRACTOR SHALL SOUND SURFACES WITH HAMMER, ROD, CHAIN, OR APPROPRIATE TOOLS TO DETECT DELAMINATIONS AND SPALLS. ALL SUPPORTED STRUCTURAL ELEMENTS WITHIN THE GARAGE SHALL BE SOUNDED. THE LIMITS OF THE DELAMINATIONS SHALL BE MARKED FOR DEMOLITION. PRIOR TO REMOVAL, LIMITS OF REPAIR AREA SHALL BE REVIEWED BY ENGINEER IN THE FIELD. REPAIR QUANTITIES THAT DEVIATE FROM THAT SHOWN ON PLAN SHALL BE REPORTED IN WRITING TO THE ENGINEER AND OWNER FOR APPROVAL.
- 2. SAWCUT PERIMETER OF REPAIR AREA EDGES TO AVOID FEATHERED EDGES. REMOVE SPALLED AND UNSOUND CONCRETE WITHIN MARKINGS. EXTEND REPAIR AREAS WITH THE APPROVAL OF ENGINEER AND OWNER IF ADDITIONAL UNSOUND CONCRETE IS ENCOUNTERED. THE REPAIR EDGE SHALL BE EXTENDED A MINIMUM OF THREE INCHES BEYOND THE EXTENT OF CORRODED REINFORCING STEEL.
- 3. ALL REINFORCING IN GOOD CONDITION (SECTION LOSS LESS THAN 20%) WITHIN THE REPAIR AREA SHALL BE UNDERCUT PER DETAIL 9/R4.1, SANDBLASTED CLEAN, AND TREATED WITH CORROSION INHIBITING COATING MATERIALS PER SPECIFICATIONS. ALL REINFORCING WITH SECTION LOSS GREATER THAN 20% WITHIN THE REPAIR AREA SHALL BE REPLACED WITH EQUAL REINFORCEMENT; DEVELOP TENSILE STRENGTH OF REPLACEMENT REINFORCEMEN BY SPLICING TO REINFORCING IN "GOOD CONDITION" OR BY DOWELING INTO SOUND CONCRETE AT PERIMETER OF REPAIR AREA USING ADHESIVE EPOXY ANCHORING SYSTEM.
- 4. WATERBLAST OR SANDBLAST THE CAVITY SURFACES TO REMOVE ALL DEBRIS AND CONTAMINANTS. AIRBLAST AS THE FINAL STEP TO REMOVE REMAINING DEBRIS.
- E. CONCRETE REMOVAL
- CHIPPING HAMMERS SHALL BE SIZED SO THAT THE UNSOUND CONCRETE CAN BE REMOVED AN EFFICIENT MANNER WITHOUT DAMAGING THE ADJACENT SOUND CONCRETE. DO NOT CU INTO OR DAMAGE EMBEDDED REINFORCING AND OTHER EMBEDDED ITEMS SUCH AS CONDUITS.
- CHIPPING SHALL CONTINUE UNTIL ALL UNSOUND CONCRETE HAS BEEN REMOVED PER REPAIR DETAIL SHEET NOTES.
- F. CONCRETE (FOR REPAIRS GREATER THAN 3 INCHES THICK)
- 1. CONCRETE SHALL MEET THE FOLLOWING CRITERIA:
  - 28 DAY COMPRESSIVE DESIGN STRENGTH: 5000 PSI (MIN.)
  - MAXIMUM W/C RATIO OF 0.4
  - PORTLAND CEMENT CONCRETE (REGULAR OR HI-EARLY), TYPE I OR III
  - AGGREGATE TO CONFORM TO ASTM C33
  - AGGREGATE: #8, 1/2 INCH (MAXIMUM AGGREGATE SIZE)
  - SUPERPLASTICIZED
  - AIR ENTRAINED: 6 1/2 ± 1 1/2%
  - SLUMP: 4±1 INCH (BEFORE ADDING SUPERPLASTICIZER)
  - SYNTHETIC FIBER: 1.5 LB./C.Y. OF CONCRETE, MINIMUM
  - 3 GAL. OF CALCUIM NITRITE CORROSION INHIBITOR PER CU. YD. OF CONC.
- 2. CONTRACTOR SHALL SUBMIT MIX DESIGN FOR ENGINEER'S APPROVAL. ADMIXTURES SHALL
- NOT BE CHANGED FROM THE APPROVED MIX DESIGN WITHOUT THE ENGINEER'S APPROVAL.
- 3. CONFORM TO THE REQUIREMENTS OF ACI 301 AND ACI 318, LATEST EDITION.
- 4. THE FIELD QUALITY CONTROL TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY HIRED BY OWNER:
  - AIR ENTRAINMENT AND SLUMP TESTS FOR EVERY BATCH
- COMPRESSION STRENGTH TESTS ON EVERY 50 C.Y. POUR AND IN ACCORDANCE WITH ACI 318, LATEST EDITION.
- 5. APPLY ACCEPTABLE BONDING AGENT PRODUCTS PER SPECIFICATION SECTION 033000 & SECTION 039300. DO NOT ALLOW TO DRY BEFORE PLACING CONCRETE.
- 6. CONCRETE SHALL BE CONSOLIDATED AND CURED PER SPECIFICATIONS. IF CURING COMPOUND IS USED, IT SHALL BE REMOVED BY WATER-BLASTING OR SHOT-BLASTING PRIOR TO THE APPLICATION OF SURFACE WATERPROOFING MEASURES.
- 7. FOR CONCRETE REPAIRS LESS THAN OR EQUAL TO 3 INCHES THICK, USE CEMENTITIOUS PATCHING MATERIAL PER SPECIFICATION SECTION 039300.
- G. REINFORCEMENT
- 1. ALL NEW REINFORCEMENT SHALL COMPLY WITH ASTM A615 GR. 60.
- 2. WELDED WIRE FABRIC SHALL BE PER ASTM A185 OR A497. USE MATS ONLY, ROLL STOCK IS NOT PERMITTED.
- 3. ALL REINFORCING SHALL HAVE THE MINIMUM COVER PER ACI 318, LATEST EDITION.
- 4. ALL EXISTING EXPOSED STEEL SHALL BE COATED WITH CORROSION INHIBITING TREATMENT IN ACCORDANCE WITH SPECIFICATION SECTION 039300.
- H. EMBEDDED GALVANIC ANODES
- 1. REFER TO CONCRETE REPAIR DETAILS SUCH AS TYPE PFR & FFR FOR LOCATIONS WHERE ANODES ARE REQUIRED. REFER TO SPECIFICATION SECTION 039300 FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL ONLY ORDER 25% OF REQUIRED ANODES AT BEGINNING OF PROJECT ONCE SUBMITTAL HAS BEEN APPROVED BY ENGINEER. ENGINEER WILL GIVE DIRECTION FOR THE CONTRACTOR TO ORDER ADDITIONAL ANODES AFTER THEIR USE AND NECESSITY HAS BEEN IDENTIFIED DURING THE EARLY STAGES OF THE REPAIR WORK. CONTRACTOR TO INFORM ENGINEER IF A LONG LEAD TIME IS EXPECTED ON THE ANODE ORDERS.
- ADHESIVE ANCHORS / DOWEL AND MECHANICAL ANCHORS INSTALLED IN CONCRETE OR MASONRY AS REQUIRED
- 1. MECHANICAL ANCHORS SHALL BE HILTI KWIK BOLT TZ OR EQUAL, U.N.O.
- 2. ADHESIVE ANCHORS / DOWELS SHALL BE HILTI HIT HY 200 OR EQUAL, U.N.O.
- 3. ANCHORS, WASHERS, AND NUTS SHALL BE HOT DIP GALVANIZED OR TYPE 316 STAINLESS STEEL AND MUST BE SELECTED TO ASSURE COMPATIBILITY WITH THE BASE MATERIAL AND PREVENT CORROSION DUE TO DISSIMILAR METALS.
- 4. WHEN INSTALLING ANCHORS / DOWELS IN EXISTING CONCRETE OR MASONRY, EXERCISE CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING.
- PREPARATION AND INSTALLATION OF THE ANCHORS / DOWELS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS. INCLUDE COST OF MANUFACTURER REPRESENTATIVE'S SUPERVISION DURING PREPARATION, INSTALLATION, AND PULL TESTS. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE A REPORT OF THEIR OBSERVATIONS, ANY CORRECTIVE ACTIONS THAT WERE REQUIRED AND IF THE PREPARATION, INSTALLATION, AND PULL TESTS ARE IN CONFORMANCE WITH THE MANUFACTURER'S WRITTEN REQUIREMENTS.

- 6. FIELD QUALITY CONTROL
- a. OWNER WILL ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM THE FIELD TESTS AND INSPECTIONS.
- b. ANCHORS AND DOWELS INSTALLED HORIZONTALLY, IN OVERHEAD, OR UPWARDLY INCLINED ORIENTATIONS, OR ANY ANCHOR OR DOWEL THAT RESISTS SUSTAINED TENSION LOADS
- b.1. PROVIDE CONTINUOUS SPECIAL INSPECTIONS. b.2. PERFORM PROOF PULL TESTS ON 50% OF ANCHORS AND DOWELS.
- c. PROOF PULL TEST LOAD SHALL BE THE MEAN ULTIMATE ANCHOR TENSION STRENGTH. COORDINATE TESTING REQUIREMENTS WITH MANUFACTURER'S REPRESENTATIVE.
- J. STRUCTURAL STEEL
- 1. MATERIAL PROPERTIES STRUCTURAL STEEL: (U.N.O.)

Ή	TYPE	<u>Fy, PSI</u>	ASTM NO.
NT	W-SHAPE	50,000	A992
l.	CONNECTION STEEL	36,000	A36
	STEEL PIPES	35,000	A53, GRADE B
	COLD FORMED STEEL	33,000	A924
ED IN	WELDING ELECTRODES	E70XX	AWS D1.1, D1.6 OR D19.0
UT	HIGH STRENGTH BOLTS	120,000 (Fu, PSI)	A325
	STRUCTURAL TUBES	46,000	A500, GRADE B

- 1. STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC "STEEL CONSTRUCTION MANUAL", LATEST EDITION.
- 2. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO ANY FABRICATION.

ALLOWED IN THE SHEAR PLANE, U.N.O.

- 3. ALL EXTERIOR STEEL MEMBERS AND CONNECTIONS SHALL BE PAINTED WITH RUST-INHIBITING PRIMER OR HOT-DIP GALVANIZED, AND PAINTED PER SPECIFICATIONS. DO NOT GALVANIZE OR PAINT SURFACES TO BE FIELD WELDED. TOUCH UP ALL FIELD WELDS WITH RUST-INHIBITING PRIMER OR GALVANIZING REPAIR PAINT AND PAINT PER SPECIFICATIONS. REFER TO AWS D19.0 FOR ADDITIONAL INFO.
- 4. BOLTED CONNECTIONS:
- a. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIA. ASTM A325 BOLTS WITH ASTM F436 WASHERS AND ASTM A563 NUTS, U.N.O.
- b. ALL HIGH-STRENGTH BOLT CONNECTIONS SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL JOINT USING ASTM A325 BOLTS" AS ENDORSED BY AISC.
- c. HIGH-STRENGTH BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS
- d. HIGH-STRENGTH BOLTS SHALL BE SNUG-TIGHTENED, UNLESS REQUIRED BY AISC SPECIFICATIONS TO BE FULLY PRETENSIONED OR NOTED AS PRETENSIONED ON THE DRAWINGS. PRETENSION BOLTS WITH A CALIBRATED TORQUE WRENCH OR BY THE "TURN OF THE NUT" METHOD.
- 5. ALL WELDING SHALL CONFORM TO AWS D1.1 OR AWS D19.0 (GALVANIZED STEEL), LATEST EDITION.
- K. SEALANT
- 1. REFER TO SPECIFICATION SECTIONS 079020 FOR ACCEPTABLE JOINT SEALANTS.
- 2. REMOVE AND PROPERLY DISPOSE OF EXISTING SEALANT AND APPLY NEW SEALANT TO MATCH EXISTING COLOR. SAMPLES SHALL BE PROVIDED FOR ENGINEER'S & OWNER'S REVIEW AND APPROVAL.
- 3. JOINT EDGES SHALL BE WATER-BLASTED, SANDBLASTED, OR OTHERWISE CLEANED AND PREPARED PRIOR TO THE SEALANT APPLICATION.
- 4. PRIMER SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS PRIOR TO APPLICATION OF NEW SEALANT.
- L. EXPANSION JOINT SYSTEMS
  - 1. REFER TO SPECIFICATION SECTION 079020 FOR ACCEPTABLE EXPANSION JOINT SYSTEM AND INSTALLATION PROCEDURES.
  - 2. JOINT EDGES AND BLOCKOUTS SHALL BE SANDBLASTED OR PREPARED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS PRIOR TO THE EXPANSION JOINT APPLICATION.
- M. PAINTING
- 1. TRAFFIC MARKING PAINT (LINE STRIPING AND TRAFFIC ARROWS)
  - a. CONTRACTOR SHALL REPLACE ALL TRAFFIC MARKINGS (LINE STRIPING AND TRAFFIC ARROWS) THAT ARE WITHIN THE REPAIR WORK. THE CONTRACTOR SHALL DOCUMENT THE EXISTING LAYOUT PRIOR TO CONSTRUCTION. AND AT THE COMPLETION OF REPAIRS PROVIDE THE TRAFFIC MARKINGS TO MATCH SIZE AND LOCATION. REMOVE EXISTING PAINT BY SHOT-BLASTING.
- N. MECHANICAL/ELECTRICAL/PLUMBING/FIRE PROTECTION SYSTEMS, EQUIPMENT, & SERVICES (MEP&FP SES)
- 1. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING MEP&FP SES. CONTRACTOR SHALL REVIEW ALL REPAIR AREAS PRIOR TO COMMENCING EACH PHASE OF THE WORK AND NOTIFY ENGINEER IF REMOVAL. REPLACEMENT OR RELOCATION OF MEP&FP SES IS NECESSARY TO COMPLETE THE WORK. IF MEP&FP WORK IS NECESSARY, INCLUDE THE PROPOSED SCOPE AND ESTIMATED COST. APPROVED MEP&FP WORK SHALL BE PERFORMED BY THE CONTRACTOR OR ITS APPROVED SUBCONTRACTOR AND BILLED AGAINST THE MEP&FP SES ALLOWANCE.
- 2. EMBEDDED CONDUITS WITHIN REPAIR AREA SHALL BE LOCATED, MARKED, AND DE-ENERGIZED PRIOR TO DEMOLITION.
- 3. SPECIAL CARE SHALL BE TAKEN TO PREVENT CLOGGING EXISTING DRAINS.
- 4. AFTER WORK IS COMPLETE, CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY EXISTING DRAIN SYSTEMS THAT HAVE BEEN CLOGGED BY CONSTRUCTION ACTIVITIES.

- O. EXAMINATION PRIOR TO CUTTING, DRILLING, AND CORING THROUGH STRUCTURE
- 1. DO NOT CUT, DRILL, OR CORE THROUGH ANY STRUCTURAL ELEMENT WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER, U.N.O.
- 2. THE CONTRACTOR SHALL SCAN THE CONCRETE AT ALL LOCATIONS OF PROPOSED CUTS AND PENETRATIONS TO LOCATE AND MARK ALL EMBEDDED OBJECTS INCLUDING, BUT NOT LIMITED TO, REINFORCING, PRESTRESS OR POST-TENSION STRANDS, CONNECTIONS, ELECTRICAL CONDUIT, AND ANY OTHER HARDWARE/EQUIPMENT. SCANNING SHALL BE PERFORMED BY A CERTIFIED TECHNICIAN USING A PACHOMETER OR GROUND PENETRATING RADAR TYPE SCANNER. CALIBRATE THE SCANNER AT THE BEGINNING OF EACH SHIFT AND WHEN CONDITIONS CHANGE. LOCATE AT LEAST THREE REINFORCING BARS USING THE SCANNER. AND HAMMER DRILL TEST HOLES TO DETERMINE DEPTH OF COVER. CALIBRATE SCANNER USING THE DEPTH OF COVER MEASUREMENTS.
- 3. ADJUST LOCATIONS OF CUTS AND PENETRATIONS AS REQUIRED TO AVOID EMBEDDED OBJECTS.
- 4. SUBMIT SCANNING REPORT(S), INCLUDING PHOTOGRAPHS AND SCALED DRAWINGS AND/OR SKETCHES TO ENGINEER FOR APPROVAL. ALLOW SEVEN DAYS FOR ENGINEER TO REVIEW AND APPROVE OR COMMENTS ON THE PROPOSED CUTS AND PENETRATIONS. ADJUST THE LOCATIONS AS DIRECTED BY THE ENGINEER.
- 5. USE HAMMER DRILLS WHEN POSSIBLE; DO NOT CORE DRILL UNLESS THE SCANNING OPERATION HAS CLEARLY SHOWN THAT THE AREA IS FREE OF EMBEDDED OBJECTS.
- 6. DO NOT CUT THROUGH OR DAMAGE THE EMBEDDED OBJECTS INCLUDING, BUT NOT LIMITED TO, REINFORCING, PRESTRESS OR POST-TENSION STRANDS, CONNECTIONS, ELECTRICAL CONDUIT, AND ANY OTHER HARDWARE/EQUIPMENT.
- P. ABBREVIATIONS

A.B.	ANCHOR BOLTS	H.A.S.	HEADED ANCHOR STUDS
A.F.F.	ABOVE FINISHED FLOOR	H.M.	HOLLOW METAL
ALT.	ALTERNATE	HOR.	HORIZONTAL
ARCH.	ARCHITECT	HT.	HEIGHT
BET.	BETWEEN	H.V.A.C.	
BIT.	BITUMINOUS		CONDITIONING
BOTT.	BOTTOM	I.D.	INSIDE DIAMETER
BRG.	BEARING	INFO.	INFORMATION
C.I.P.	CAST-IN-PLACE	INSUL.	INSULATION
C.J.	CONTROL JOINT / CONSTRUCTION	INT.	INTERIOR
0.0.	JOINT	INV.	INVERT
CL./CLR.		JT.	JOINT
C.M.	CONSTRUCTION MANAGER	LBS.	POUNDS
C.M.U.	CONCRETE MASONRY UNIT	LIN.	LINEAL
COL.	COLUMN	MAX.	MAXIMUM
CONC.	CONCRETE	MECH.	
CONN.	CONNECTION	MFR.	MANUFACTURER
CONT.	CONTINUOUS	MIN.	MINIMUM
CONTR.		MISC.	MISCELLANEOUS
D.B.A.	DEFORMED BAR ANCHOR	MSB	MEDIUM SAND BLAST
DET.	DETAIL	MSB MTL.	MEDIUM OF NO BENOT
DIA.	DIAMETER	(N)	NEW
DIM.	DIMENSION	N.F.	
DN.	DOWN	N.I.C.	NOT IN CONTRACT
D.O.	DOOR OPENING	NOM. N.S.N.S. N.T.S.	NOMINAL
DWG(S).	DRAWING(S)	N.S.N.S.	NON-SHRINK, NON-STAIN
(E)	EXISTING	N.T.S.	NOT TO SCALE
ÈÁ.	EACH	O.C., O/C	ON CENTERS
E.B.F.	ELEVATION BOTTOM OF FOOTING	O.D.	OUTSIDE DIAMETER
	ELEVATION BOTTOM OF PIER	0.H.	OPPOSITE HAND
E.F.	EACH FACE	P/C	PRECAST CONCRETE
		PL.	PLATE
E.F.G.			
E.J.	EXPANSION JOINT ELEVATION	PSI	POUNDS PER SQUARE INCH
EL./ELEV.	ELEVATION	PSF	POUNDS PER SQUARE FOOT
ELEC.		P/T	
E.T.B.		R.D.	
E.T.C.	ELEVATION TOP OF PILE OR DRILLED	REINF.	REINFORCEMENT/REINFORCING
	PIER CAP	REQ'D	REQUIRED
E.T.F.	ELEVATION TOP OF FOOTING	RM.	ROOM
	ELEVATION TOP OF LEDGE	R.O.	ROUGH OPENING
E.T.P.		SCHED.	SCHEDULE
	ELEVATION TOP OF PRECAST	SECT.	SECTION
E.T.S.		SHT.	
	ELEVATION TOP OF SLAB		SHEET
E.T.W.		SIM.	SIMILAR
E.W	EACH WAY	S.O.G.	SLAB-ON-GRADE
E.W.E.F.	EACH WAY, EACH FACE	SPECS.	SPECIFICATIONS
E.W.P.	ELEVATION WORKING POINT	SQ.	SQUARE
EXIST.	EXISTING	S.S.	STAINLESS STEEL
EXT.	EXTERIOR	STD.	STANDARD
F.D.	FLOOR DRAIN	STL.	STEEL
F.E.	FIRE EXTINGUISHER	T & B	TOP AND BOTTOM
F.F.	FAR FACE	T.B.D.	TO BE DETERMINED
FDN.	FOUNDATION	TYP.	TYPICAL
FIN.	FINISH	U.N.	UNLESS NOTED
FL./FLR.	FLOOR	VERT.	VERTICAL
FTG.	FOOTING	V.I.F.	VERIFY IN FIELD
GA.	GAUGE	W/	WITH
GALV.	GALVANIZED	W/O	WITHOUT
G.B.	GRADE BEAM	W.P.	WORKING POINT
G.C.	GENERAL CONTRACTOR	WT.	WEIGHT
GR.	GRADE	WWF	WELDED WIRE FABRIC
G.W.B.	GYPSUM WALL BOARD	WWR	
0.11.0.			



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PROFESSIONAL SEAL

CONSULTANT

PROJECT NO. ATL23110.01

PROJECT

## **MEMPHIS** DOWNTOWN PARKING **FACILITIES**

2024 RESTORATION

SUBMISSIONS / REVISIONS 04/03/2024 ADDENDUM #01

NO.	DES	SCRIPTION	DATE
1	Addend	lum #01	04/03/2024
		DRAWN:	DJB
		REVIEWED:	SHH
		DATE:	04/03/2024
SHE	ET TITLE:		

**RESTORATION GENERAL NOTES** 

SHEET NO.