

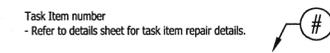
# GENERAL NOTES

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- I. DESIGN CRITERIA**
- A. GENERAL BUILDING CODE**  
The Contract Documents are based on the requirements of the City of Houston Building Code (2003 International Building Code with City of Houston Amendments).
- II. POST-TENSIONED CONCRETE**
- A. POST-TENSIONING SYSTEM TYPE**  
Post-tensioning reinforcement shall be unbonded unless shown otherwise on the drawings.
- B. POST-TENSIONING STEEL**  
Strand: ASTM A416 Low Relaxation Type, with a minimum ultimate strength based on nominal area of 270 ksi.
- C. POST-TENSIONED TENDON REPAIRS**
- Non-destructive testing: Locate existing PT tendons to be repaired along their entire length and adjacent reinforcement (PT and mild) by non-destructive techniques. Refer to Section "Post-Tensioned Concrete" for required information for Engineer's evaluation of non-destructive surveys.
  - Post-tensioned repairs: Refer to Task Item 9.4 and associated sub-task items for conceptual procedure to repair post-tensioned tendons. De-tensioning of existing PT tendons and splicing with new PT tendons shall be performed only by a qualified restoration contractor specialized in post-tensioned structures. Refer to project specifications of qualification requirements.
  - Safety: The contractor shall take all necessary precautions to prevent workers and public access to areas where post-tensioned slabs are being de-tensioned. Contractor shall barricade all areas of the garage in the vicinity of tendons being de-tensioned before de-tensioning any strand. The contractor shall ensure that de-tensioning and re-stressing operations are performed safely.
- III. STRUCTURAL STEEL**
- A. MATERIAL**
- Hot Rolled Structural Members. All hot rolled steel plates, shapes, sheet piling, and bars shall be new steel conforming to ASTM Specification A6.
  - ASTM Specification and Grade. Unless noted otherwise on the drawings, steel angles and plates shall conform to ASTM A36.
  - All steel shall be fireproofed in accordance with the specifications.
- B. WELDING**
- Unless noted otherwise, electrodes for welding shall conform to E70XX (SMAW), F7XX-E0XX (SAW), ER70S-X (GMAW), or E7XT-X (FCAW).
- IV. CONCRETE MASONRY**
- A. SCOPE**  
Repair of damaged concrete masonry shall be where indicated on the drawings. See architectural wall sections.
- B. Compressive Strength, Fm of Reinforced Masonry**
- | Class of Reinforced Masonry     | 28 Day Compressive Strength, Fm |
|---------------------------------|---------------------------------|
| a. Single Wythe Grouted Masonry | 1500 psi                        |
- V. MISCELLANEOUS**
- A. CONTRACT DOCUMENTS**
- It is the responsibility of the General Contractor to obtain all Contract Documents and latest addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication of any structural members, and erection in the field.
  - The contract structural drawings and specifications represent the finished structure, and, except where specifically shown, do not indicate the method or means of construction. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, techniques, and sequence.
- B. DRAWING CONFLICTS**  
The General Contractor shall compare the Architectural and Structural drawings and report any discrepancy between each set of drawings and within each set of drawings to the Architect and Engineer prior to the fabrication and installation of any structural members.
- C. EXISTING CONDITIONS**  
The General Contractor shall verify all dimensions and conditions of the existing building at the job site and report any discrepancies from assumed conditions shown on the drawings to the Architect and Engineer prior to the fabrication and erection of any members.
- D. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION**  
All structural elements of the project have been designed by the Structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together.
- E. CONFLICTS IN STRUCTURAL REQUIREMENTS**  
Where conflict exists among the various parts of the structural contract documents, structural drawings, general notes, and specifications, the strictest requirements, as indicated by the Engineer, shall govern.
- F. CONTRACTOR SUBSTITUTIONS**  
Any materials or products submitted for approval that are different from the material or products specified in the structural contract documents will be approved only if the following criteria are satisfied:
- A cost savings to the Owner is documented and submitted with the request.
  - The material or product has been approved by the International Conference of Building Officials (ICBO) and the ICBO report is submitted with the request.
- Submittals not satisfying the above criteria will not be considered.
- G. THE STRUCTURAL ENGINEER'S ROLE DURING CONSTRUCTION**
- The Engineer shall not have control nor charge of, and shall not be responsible for, construction means, methods, techniques, sequences, or procedures, for safety precautions and programs in connection with the work, for the acts or omission of the Contractor, Subcontractor, or any other persons performing any of the work, or for the failure of any of them to carry out the work in accordance with the contract documents.
  - Periodic site observation by field representatives of Walter P. Moore and Associates is solely for the purpose of becoming generally familiar with the progress and quality of the Work completed and determining, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the structural contract documents. This limited site observation should not be construed as exhaustive or continuous to check the quality or quantity of the work, but rather periodic in an effort to guard the Owner against defects or deficiencies in the work of the Contractor.
- H. MAINTENANCE STATEMENT**  
All structures require periodic maintenance to extend lifespan and to insure structural integrity from exposure to the environment. A planned program of maintenance shall be established by the building owner. This program shall include such items such as but not limited to painting of structural steel, protective coating for concrete, sealants, caulked joints, expansion joints, control joints, spalls and cracks in concrete, and pressure washing of exposed structural elements exposed to a salt environment or other harsh chemicals.
- VI. SUBMITTALS**
- A. SUBMITTAL LIST AND SCHEDULE**  
The General Contractor shall prepare a detailed list and schedule of all submittal items to be sent to the Structural Engineer prior to the start of construction. This list shall be updated and revised and kept current as the job progresses. The submittal list shall be organized as shown below:
- Manufacturers Literature for Products, Assemblies, and Hardware
  - Products, Assemblies and Hardware
  - Product Certifications, Mill Certificates, and Affidavits
  - Fireproofing of steel column jackets shop drawings for PT repairs.

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- B. MANUFACTURERS LITERATURE**  
Submit two copies of manufacturers literature for all materials and products used in construction on the project.
- C. REPRODUCTION**  
The use of electronic files or reproductions of these contract documents by any contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies their acceptance of all information shown hereon as correct, and obligates themselves to any job expense, real or implied, arising due to any errors that may occur hereon.
- VII. DRAWING INTERPRETATION**
- A. STRUCTURAL ABBREVIATIONS**  
The following abbreviations are used on the structural drawings:
- @ AT  
 & AND  
 # NUMBER  
 Ø ROUND, DIAMETER  
 ADDL. ADDITIONAL  
 CSP CONCRETE SURFACE PREPARATION  
 CFRP CARBON FIBER REINFORCED POLYMER  
 CMU CONCRETE MASONRY UNIT  
 COL COLUMN  
 CONC CONCRETE  
 EA EACH  
 EJ EXPANSION JOINT  
 EXIST EXISTING  
 FV FIELD VERIFY  
 LONG LONGITUDINAL  
 MAX MAXIMUM  
 MIN MINIMUM  
 NSM NEAR SURFACE MOUNTED  
 OPNG OPENING  
 PT POST-TENSION(ED)  
 REINF REINFORCING  
 TO TOP OF  
 TYP TYPICAL
- B. TYPICAL DETAILS**  
Details labeled "Typical Details" on the drawings shall apply to all situations occurring on the project that are the same or similar to those specifically detailed. The applicability of the detail to its location on the plans can be determined by the title of the detail. Such details shall apply whether or not they are keyed in at each location. Decisions regarding applicability of Typical Details shall be determined by the Engineer.
- C. SYMBOLS AND NOTATIONS**
- Task Item number  
 - Refer to details sheet for task item repair details.



TASK ITEM	DESCRIPTION
1.1	PROJECT MOBILIZATION
2.1	CONCRETE CURB REPAIR
2.3	PARITAL DEPTH CONCRETE FLOOR REPAIR
2.4	FULL DEPTH CONCRETE FLOOR REPAIR
3.2	CONCRETE BEAM REPAIR
3.6	CONCRETE WALL REPAIR
3.7	CONCRETE SOFFIT REPAIR
4.1	CONCRETE COLUMN REPAIR
4.2	CONCRETE BUMPER WALL REPAIR
6.1	EXPANSION JOINT REPLACEMENT - PREFORMED NEOPRENE
6.2	EXPANSION JOINT REPLACEMENT - PRECOMPRESSED (PEDESTRIAN TRAFFIC)
6.3	EXPANSION JOINT REPLACEMENT - PRECOMPRESSED (VERTICAL JOINT)
6.4	EXPANSION JOINT COVER PLATE REINSTALLATION
6.5	EXPANSION JOINT REPLACEMENT - ELASTOMERIC CONCRETE EDGED
6.6	EXPANSION JOINT REPLACEMENT - ADHERED EXTRUDED RUBBER
7.1	CRACK REPAIR
7.2	JOINT SEALANT REPLACEMENT
7.3	JOINT SEALANT REPLACEMENT AT SKYLIGHTS
7.5	COVE SEALANT
7.6	EPOXY INJECTION
7.7	URETHANE INJECTION
7.8	TRAFFIC TOPPING - NEW SYSTEM
8.1	CMU TUCKPOINTING
8.2	CMU REPLACEMENT
9.0	EXPLORATORY PT TENDON EXCAVATION
9.1	CLEAN AND COAT PT TENDON OR MILD REINFORCING
9.2	CLEAN AND PROTECT PT TENDON ANCHOR
9.3A	PT TENDON REPAIR - SCENARIO A
9.3B	PT TENDON REPAIR - SCENARIO B
9.3C	PT TENDON REPAIR - SCENARIO C
9.3D	PT TENDON REPAIR - SCENARIO D
9.3E	PT TENDON REPAIR - SCENARIO E
9.3F	PT TENDON REPAIR - SCENARIO F
9.4	PT BUTTON-HEAD TO MONOSTRAND SPLICE
9.5	POUR STRIP BOTTOM SLAB REPAIR
10.1	CLEAN AND FIREPROOF STEEL COLUMN JACKET
10.2	REPLACE DETERIORATED PLATES
10.3	REPLACE DETERIORATED ANGLES
10.4	CLEAN AND COAT CORRODED METAL STAIR
11.1	RETIGHTEN PEDESTRIAN BARRIER CABLES
11.2	HANDRAIL CONNECTION REPAIR (INSIDE STAIRWELL)

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SHEET INDEX	
SHEET NUMBER	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	PLAN - STREET LEVEL - TASK ITEM REPAIRS
4	PLAN - CIVIC CENTER GARAGE - GREEN LEVEL - TASK ITEM REPAIRS
5	PLAN - CIVIC CENTER GARAGE - GREEN LEVEL - PT TENDONS REPAIRS
6	PLAN - CIVIC CENTER GARAGE - ORANGE LEVEL - TASK ITEM REPAIRS
7	PLAN - CIVIC CENTER GARAGE - ORANGE LEVEL - PT TENDONS REPAIRS
8	PLAN - CIVIC CENTER GARAGE - PURPLE LEVEL - TASK ITEM REPAIRS
9	PLAN - SMALL TRANQUILITY GARAGE - BLUE LEVEL - TASK ITEM REPAIRS
10	PLAN - SMALL TRANQUILITY GARAGE - BROWN LEVEL - TASK ITEM REPAIRS
11	PLAN - SMALL TRANQUILITY GARAGE - GREY LEVEL - TASK ITEM REPAIRS
12	PLAN - LARGE TRANQUILITY GARAGE - YELLOW LEVEL - TASK ITEM REPAIRS
13	PLAN - LARGE TRANQUILITY GARAGE - AQUA LEVEL - TASK ITEM REPAIRS
14	PLAN - LARGE TRANQUILITY GARAGE - PINK LEVEL - TASK ITEM REPAIRS
15	TASK ITEM REPAIR DETAILS
16	TASK ITEM REPAIR DETAILS
17	PT TENDON REPAIR - REPAIR DETAILS
18	PT TENDON REPAIRS - PARTIAL PLANS AND REPAIR DETAILS
19	PT TENDON REPAIRS - PARTIAL PLANS AND REPAIR DETAILS
20	PT TENDON REPAIRS - PARTIAL PLANS AND REPAIR DETAILS

<p><b>WALTER P MOORE</b></p> <p>WALTER P. MOORE AND ASSOCIATES, INC.                  1381 MCHEMNEY, SUITE 1100                  HOUSTON, TEXAS 77010-8032                  PHONE: 713.630.7300 FAX: 713.630.7399</p>	<p>Walter P. Moore and Associates, Inc.                  TBPE Firm Registration No. 1856</p> <p>MARK ERIK WILLIAMS                  LICENSED PROFESSIONAL ENGINEER                  04/13/10</p>
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**CITY OF HOUSTON**  
BUILDING SERVICES DEPARTMENT

THEATER DISTRICT PARKING -  
STRUCTURAL ASSESSMENT  
AND REPAIRS DRAWINGS FOR  
BIDDING AND CONSTRUCTION

**GENERAL NOTES**

FILE NO. C62164
WBS NO. B-000087-0002-4
DRAWING SCALE
VERT. AS SHOWN HORIZ. AS SHOWN
CITY OF HOUSTON PM
JAMES REDDINGTON, JR.
SHEET NO. <b>2</b> OF <b>20</b>