GENERAL NOTES

1. THE NOTES ON THESE DRAWINGS ARE NOT INTENDED TO REPLACE THE SPECIFICATIONS. SEE SPECIFICATIONS FOR REQUIREMENTS IN ADDITION TO THE GENERAL NOTES. INCONSISTENCIES BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
2. ALL WORK SHALL COMPLY WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC) AND 2009 INTERNATIONAL EXISTING BUILDING CODE (IEBC).
   A. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL EQUIPMENT USED DOES NOT EXCEED EXISTING BUILDING DESIGN LOADS. MAXIMUM EQUIPMENT LOAD 8,000 LBS.
3. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS.
5. THE REPAIRS TO THIS STRUCTURE HAVE BEEN DESIGNED TO RE-ESTABLISH THE STRUCTURAL INTEGRITY OF THE STRUCTURE AFTER THE REPAIRS ARE COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND IT'S COMPONENTS DURING THE RESTORATION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, TEMPORARY PARTITIONS, VEHICLE AND PEDESTRIAN PROTECTION, GUYS OR TIE DOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF PROJECT.
6. SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE STRUCTURAL ENGINEER.
7. THE CONTRACTOR SHALL SUBMIT COMPLETE SUBMITTALS (AS NOTED IN THE SPECIFICATIONS) FOR ALL PARTS OF THE WORK INCLUDING DESCRIPTION OF SHORING AND CONSTRUCTION METHODS AND SEQUENCING, WHERE APPLICABLE. NO PERFORMANCE OF THE WORK INCLUDING, BUT NOT LIMITED TO, DEMOLITION OF EXISTING STRUCTURE OR FABRICATION OR ERECTION OF NEW STRUCTURAL ELEMENTS, SHALL COMMENCE WITHOUT REVIEW OF THE SHOP DRAWINGS BY THE STRUCTURAL ENGINEER
8. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO VEHICLES, PROPERTY AND PUBLIC CAUSED BY THEIR WORK.
10. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, LICENSES AND GOVERNMENT FEES AS REQUIRED. THE CITY WILL WAIVE PERMIT FEES FOR THIS PROJECT BUT PERMITS DO NEED TO BE APPLIED FOR. THE CONTRACTOR SHALL COMPLY WITH CODES, ORDINANCES, RULES, REGULATIONS, ORDERS AND OTHER LEGAL REQUIREMENTS OF THE PUBLIC AUTHORITY, WHICH BEAR ON THE PERFORMANCE OF THE WORK.
11. THE EXISTING BUILDING SHALL REMAIN IN OPERATION FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CONTROLS NECESSARY TO ALLOW FOR THE BUILDING OPERATIONS.
12. CONTRACTOR SHALL PROVIDE AND MAINTAIN REQUIRED DUST BARRIERS, BARRICADES, PROTECTION AND WARNING LIGHTS IN GOOD WORKING CONDITION UNTIL COMPLETION OF WORK REQUIRING SUCH PROTECTION AND THEN REMOVE THE SAME. ALL SIGNS, BARRIERS, AND BARRICADES SHALL COMPLY WITH FEDERAL STATE AND LOCAL LAWS AND REGULATIONS.
13. CONTRACTOR SHALL MAINTAIN PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIAL AND RUBBISH. PRECAUTIONS SHOULD BE TAKEN TO MINIMIZE DUST FROM ENTERING THE BUILDING. ALL DUST AND DEBRIS CREATED BY THE WORK WITHIN THE BUILDING SHALL BE REMOVED AND THE WORK AREAS CLEANED. CONTRACTOR TO HAVE DETAILED ENGINEERED CONTROLS TO CONTAIN DUST IN ALL WORK AREAS. CONTRACTOR SHALL ENSURE THAT THE WORK AREA AND SITE CONFORM WITH OSHA RESPIRABLE CRYSTALLINE SILICA IN CONSTRUCTION STANDARD, 29 CFR 1926.1153
14. ON DECK STORAGE OF DEBRIS WILL BE LIMITED AND SHALL BE REMOVED AT END OF EACH DAY.
15. CONTRACTOR SHALL DETERMINE THE NEED FOR ALL DISCONNECTION AND/OR TEMPORARY OR PERMANENT REROUTING OF EXISTING UTILITIES, INCLUDING ELECTRICAL AND PLUMBING AND COORDINATE WITH THE GARAGE OWNER/MANAGER.
16. IF WORK RESTRICTS ACCESS TO ANY MEANS OF EGRESS CONTRACTOR SHALL SUPPLY ALL TEMPORARY SIGNAGE, BARRIERS TO REDIRECT PATRONS TO THE NEAREST EXIT OR DOWN THE RAMP. A MINIMUM OF THREE STAIR TOWERS AND ONE ELEVATOR MUST REMAIN COMPLETELY ACCESSIBLE DURING THE WORK. IF ACCESS TO THE ELEVATORS ARE RESTRICTED AT ANY LEVEL PROVIDE SIGNAGE INDICATING NO ACCESSIBLE PARKING ON THAT LEVEL.
17. CONTRACTOR IS ALLOWED TO SHUT DOWN ONE STAIR TOWER AT A TIME. THE REMAINING THREE STAIR TOWERS MUST REMAIN OPERATIONAL UNLESS AN EXCEPTION IS GIVEN BY THE PARKING MANAGER.
18. 5 PARKING SPACES WILL BE MADE AVAILABLE TO THE CONTRACTOR MONDAY THROUGH FRIDAY. ADDITIONAL PARKING SPACES ARE AVAILABLE TO THE CONTRACTOR ON THE WEEKEND AND AT NIGHT. CONTRACTOR TO PROVIDE ALL TRAFFIC OPERATIONS AND PEDESTRIAN SIGNAGE DURING CONSTRUCTION.

CONCRETE NOTES

1. CONCRETE WORK SHALL CONFORM TO "ACI MANUAL OF CONCRETE PRACTICE", LATEST EDITION. THIS PUBLICATION IS AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (248) 848-3800.
2. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
3. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 DEFORMED BARS AND SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 315, LATEST EDITION.
4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND BE PROVIDED IN FLAT SHEETS.
5. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
   A) CONCRETE SLABS: 1.5"
6. REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND AT INTERSECTIONS. PROVIDE LAPPED BARS AT NECESSARY SPLICES OR HOOKED BARS AT DISCONTINUOUS ENDS. PROVIDE TENSION LAP SPLICES PER THE SCHEDULE THIS DRAWING, FOR ALL REINFORCING UNLESS OTHERWISE SHOWN ON PLAN.
7. WELDING OF EXISTING REINFORCEMENT IS NOT PERMITTED. WELDING OF NEW BARS AS NOTED ON THE DRAWINGS SHALL BE PERMITTED WITH A706 REINFORCEMENT. WELDING OF BLACK BARS TO STAINLESS STEEL IS NOT PERMITTED.
8. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION OF REINFORCEMENT.
9. ALL ITEMS TO BE EMBEDDED INTO CONCRETE SHALL BE INSTALLED PRIOR TO PLACEMENT OF CONCRETE. PROVIDED ADDITIONAL REINFORCEMENT AND/OR TEMPLATES AS REQUIRED TO ENSURE THE CORRECT POSITIONS OF EMBEDMENTS. "WET SETTING" OF EMBEDMENTS INTO CONCRETE IS STRICTLY PROHIBITED. EMBEDMENTS INCLUDE, BUT NOT BY LIMITATION, REINFORCEMENT, REINFORCING DOWELS, EMBEDDED PLATES, ANCHOR RODS, ANCHOR INSERTS, SLEEVES LOAD TRANSFER PLATES, DIAMOND DOWELS AND SHELF BULK HEADS.

PRECAST CONCRETE TREAD NOTES

MATERIAL:
1. CONCRETE:
   1.1. f'c = 5,000 PSI MIN.
   1.2. AIR CONTENT = 6% +/-1%
   1.3. PROVIDE A MINIMUM OF ONE TEST RESULT FOR STRENGTH AND AIR.
2. REINFORCEMENT: GALVANIZED BARS CONFORMING WITH ASTM A 615, GRADE 60. PROVIDE MINIMUM TOP COVER OF 1 1/2"
3. CONNECTIONS: HOT DIPPED GALVANIZED PER ASTM A 123 OR ASTM A 153.
4. EMBEDMENTS: ALL EMBEDMENTS SHALL BE HOT DIPPED GALVANIZED OR NON-CORROSIVE MATERIAL.

FABRICATION:
1. PRECAST UNITS SHALL BE FABRICATED BY A CURRENT APA CERTIFIED PLANT.
2. EACH TREAD SHALL BE CAST WITH WOOSTER PRODUCTS TYPE 2318F NOSING WITH ABRASIVE FILLER. HOLD BACK 2" FROM EACH SIDE AND 1" FROM THE FRONT.
3. FINISH:
   3.1. TOP, BACK AND FRONT SURFACES TO RECEIVE FORM FINISH WITH MEDIUM EXPOSURE SAND BLAST.
   3.2. BOTTOM TO RECEIVE TROWEL FINISH WITH MEDIUM SAND BLAST.
   3.3. PROVIDED 1/4" RADIUS AT NOSING.

MASONRY NOTES

1. ALL MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.1-LATEST EDITION.
2. ALL CONCRETE MASONRY UNITS SHALL BE ASTM C90 GRADE N, TYPE I STANDARD WEIGHT BLOCKS INCLUDING STRETCHERS AND CORNER BLOCKS. MINIMUM PRISM STRENGTH OF BLOCK SHALL BE F'M = 1500 PSI IN 28 DAYS.
3. MORTAR SHALL CONFORM TO ASTM SPECIFICATION C270, TYPE M OR S
4. GROUT SHALL CONFORM TO ASTM-C476
5. REINFORCING FOR BOND BEAMS, LINTEL BLOCKS AND VERTICAL WALL REINFORCING SHALL BE BILLET STEEL CONFORMING TO ASTM A615, GRADE 60
6. HORIZONTAL JOINT REINFORCING SHALL BE DUR-O-WAL TRUSS DESIGN, STANDARD CLASS MILL GALVANIZED WITH 3/16" DIAMETER SIDE RODS AND 9 GAUGE CROSS TIES, U.N.O. REINFORCING SHALL BE PLACED IN NEW MASONRY WALLS AT EVERY SECOND BLOCK COURSE.
7. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND UNLESS OTHERWISE NOTED. PROVIDE FULL MORTAR COVERAGE ON ALL WEBS AND FACE SHELLS. PROVIDE CORNER BLOCKS AND END BLOCKS TO FINISH ALL 90 DEGREE CORNERS AND WALL OPENINGS.
8. DO NOT APPLY UNIFORM LOADING FOR AT LEAST 12 HOURS AFTER BUILDING MASONRY WALLS OR COLUMNS. DO NOT APPLY CONCENTRATED LOADS FOR AT LEAST 3 DAYS AFTER BUILDING MASONRY WALLS, LINTELS OR BEAMS.
9. STANDARD LAP LENGTH OF GRADE 60 MASONRY REINFORCING BARS SHALL BE 48 BAR DIAMETERS FOR BARS #5 AND SMALLER. PROVIDE MECHANICAL SPLICES RATED FOR 125% THE BAR YIELD STRENGTH FOR BARS #6 AND LARGER OR AS INDICATED ON DRAWINGS. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCEMENT.
10. CELLS TO BE GROUTED SHALL BE 2-CELL BLOCK. ALIGN CELLS TO MAINTAIN A CLEAR UNOBSTRUCTED, CONTINUOUS VERTICAL CHASE. CELLS MUST BE KEPT CLEAN OF PROTRUSIONS OR FINS OF MORTAR. FILL CELLS OF MASONRY UNITS AND WALL CAVITIES WHERE INDICATED WITH 2500 PSI GROUT. MAXIMUM GROUT LIFT WITHOUT CLEAN-OUTS SHALL BE 4'-0". HIGH LIFT GROUTING SHALL CONFORM TO CODE REQUIREMENTS WITH A MINIMUM CEMENT CONTENT OF 8 SACKS PER CUBIC YARD. SUPPORT ALL VERTICAL BARS IN CENTER OF GROUTED CELLS WITH VERTICAL BAR POSITIONER.

PAINTING CMU MASONRY AND CONCRETE:

1. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMP, HUMIDITY, AND VENTILATION) WITHIN THE LIMITS RECOMMENDED BY THE MANUFACTURER FOR OPTIMUM RESULTS. DO NOT APPLY COATINGS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
2. PRIOR TO APPLICATION ALLOW CONCRETE TO CURE A MINIMUM OF 30 DAYS. THE PH OF THE SURFACE SHOULD BE BETWEEN 6 AND 9.
3. REMOVE ALL LOOSE PAINT, COATINGS AND OTHER MATERIALS FROM SURFACES THROUGH THE USE OF BLASTING AND GRINDING. PREPARE SURFACE USING A COMBINATION OF HAND AND POWER TOOLS TO ICRI 03732, CSP 1-3. SURFACES SHOULD BE THOROUGHLY CLEANED AND DRY. SURFACES MUST BE FREE OF LAITEANCE, CONCRETE DUST, DIRT, FORM RELEASE AGENTS, MOISTURE CURING MEMBRANES, LOOSE CEMENT AND HARDENERS. FILL BUG HOLES, AIR POCKETS AND OTHER VOIDS WITH PATCHING COMPOUND.
4. COMPLY WITH ALL MANUFACTURER RECOMMENDATIONS.
5. MANUFACTURERS: SHERWIN WILLIAMS, PPG PITTSBURGH PAINTS OR RD COATINGS. REFERENCE SPECIFICATIONS FOR APPROVED PRODUCTS.

PAINTING NEW & EXISTING STEEL

1. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMP, HUMIDITY, AND VENTILATION) WITHIN THE LIMITS RECOMMENDED BY THE MANUFACTURER FOR OPTIMUM RESULTS. DO NOT APPLY COATINGS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE MANUFACTURER'S ABSOLUTE LIMITS.
2. OLD COATINGS SHOULD BE TESTED FOR LIFTING. IF LIFTING OCCURS, REMOVE THE LIFTED COATING. REMOVE ALL CRACKED AND PEELING PAINT. PREPARE EXISTING PAINTED SURFACES ACCORDING TO PAINT ANUFACTURERS RECOMMENDATIONS.
3. PREP ALL EXPOSED STEEL TO SSPC-SP3 POWER TOOL CLEANING. CLEAN STEEL TO REMOVE ALL RUST AND CORROSION. NOTIFY ENGINEER OF SECTION LOSS OF STEEL ELEMENTS.
4. PRIOR TO COATING ALL SURFACES MUST BE DRY, CLEAN, FREE OF OIL, GREASE, FORM RELEASE AGENTS, CURING COMPOUNDS, LAITANCE, OTHER FOREIGN MATTER AND BE STRUCTURALLY SOUND.
5. COMPLY WITH ALL MANUFACTURERS RECOMMENDATIONS.
6. PRIMER, INTERMEDIATE AND TOP COAT ARE TO BE DIFFERENT COLORS SO OWNER'S REPRESENTATIVE CAN CONFIRM THAT EACH COAT HAS BEEN APPLIED.
7. MANUFACTURER: SHERWIN WILLIAMS, PPG PITTSBURGH PAINTS OR TNEMEC OR RD COATINGS. REFERENCE SPECIFICATIONS FOR APPROVED PRODUCTS.
8. STEEL PLATES, ANGLES, STAIR FRAMING AND MISCELLANEOUS ITEMS APPLY THREE COAT SYSTEM.

STRUCTURAL STEEL NOTES

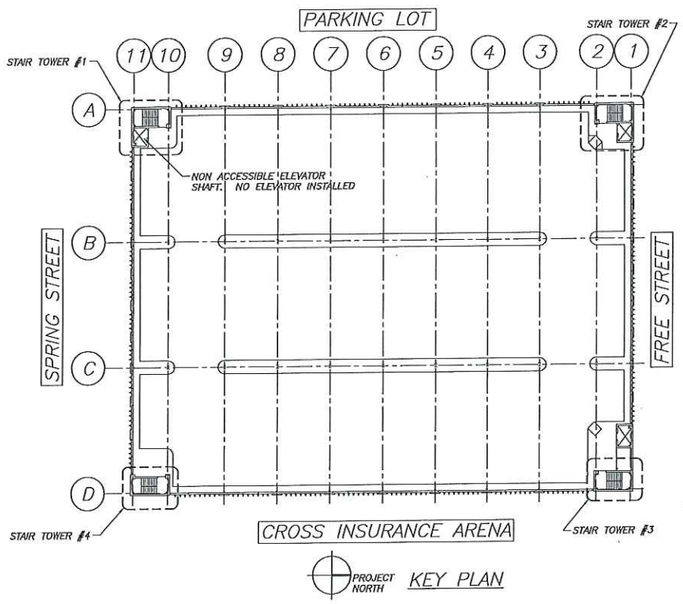
1. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATIONS, AND ERECTION OF STRUCTURAL STEEL" LATEST EDITION, AND THE "CODE OF STANDARD PRACTICE", LATEST EDITION.
2. STRUCTURAL STEEL: STEEL PLATES, SHAPES, AND BARS, CONFORM TO ASTM A36 UNLESS NOTED OTHER WISE (U.N.O.). STRUCTURAL STEEL SHAPES DESIGNATED ON THE DRAWINGS FOR WIDE-FLANGE SECTIONS: ASTM A992 (ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED MARCH, 1997)
3. STRUCTURAL TUBING: CONFORM TO ASTM A500 GRADE B46 KSI.
4. WHERE WELDING IS INDICATED, ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST EDITION. ELECTRODES SHALL CONFORM TO AWS A5.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN)
5. PROVIDE ALL MISCELLANEOUS ANGLES, PLATES, ANCHOR BLOTS ETC., SHOWN ON ARCHITECTURAL DRAWINGS FOR SUPPORT OF BLOCKING, PARAPETS, FINISHES, ETC. COORDINATE WITH MISCELLANEOUS METAL FABRICATOR TO ENSURE COMPLETE COVERAGE OF ALL ITEMS.
7. ALL FASTENERS AND BOLTS SHALL BE HOT-DIPPED GALVANIZED.
8. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123 UNLESS OTHERWISE NOTED.

FABRICATION

1. SHOP ASSEMBLY: PRE-ASSEMBLE ITEMS IN THE SHOP TO GREATEST EXTENT POSSIBLE. DISASSEMBLE UNITS ONLY AS NECESSARY FOR SHIPPING AND HANDLING LIMITATIONS. USE CONNECTIONS THAT MAINTAIN STRUCTURAL VALUE OF JOINED PIECES. CLEARLY MARK UNITS FOR REASSEMBLY AND COORDINATED INSTALLATION.
2. CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A RADIUS OF APPROXIMATELY 1/32 INCH, UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
3. FORM BENT-METAL CORNERS TO SMALLEST RADIUS POSSIBLE WITHOUT CAUSING GRAIN SEPARATION OR OTHERWISE IMPAIRING WORK.
4. FORM EXPOSED WORK TRUE TO LINE AND LEVEL WITH ACCURATE ANGLES AND SURFACES AND STRAIGHT EDGES.
5. WELD CORNERS AND SEAMS CONTINUOUSLY TO COMPLY WITH THE FOLLOWING:
   A. USE MATERIALS AND METHODS THAT MINIMIZE DISTORTION AND DEVELOP STRENGTH AND CORROSION RESISTANCE OF BASE METALS.
   B. OBTAIN FUSION WITHOUT UNDERCUT OR OVERLAP.
   C. REMOVE WELDING FLUX IMMEDIATELY.
   D. AT EXPOSED CONNECTIONS, FINISH EXPOSED WELDS AND SURFACES SMOOTH AND BLENDED SO NO ROUGHNESS SHOWS AFTER FINISHING AND CONTOUR OF WELDED SURFACE MATCHES THAT OF ADJACENT SURFACE.
6. PROVIDE FOR ANCHORAGE OF TYPE INDICATED; COORDINATE WITH SUPPORTING STRUCTURE. SPACE ANCHORING DEVICES TO SECURE METAL FABRICATIONS RIGIDLY IN PLACE AND TO SUPPORT INDICATED LOADS.

ABBREVIATIONS:

ABV – ABOVE
CIP – CAST-IN-PLACE CONCRETE
CJ – CONTROL/CONSTRUCTION JOINT
CMU – CONCRETE MASONRY UNIT
CONC – CONCRETE
EA – EACH
EX – EXISTING
OH – OVERHEAD
PC – PRECAST CONCRETE
PL – PLATE
STL– STEEL
TRDS – TREADS
TYP – TYPICAL



BECKER
STRUCTURAL ENGINEERS
75 York Street, Portland, Maine 04101
207.879.1838 • beckerstructural.com

Rev No	Date	Issued For
1	11/30/17	FOR BID

SPRING STREET PARKING GARAGE
PORTLAND, MAINE
STAIR REPAIRS
GENERAL NOTES

Designed JMM	Scale AS NOTED
Drawn RJB	Date 11/30/17
Checked JMM	Becker Job Number 4198

S0