GENERAL CONSTRUCTION

NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. TYPICAL DETAILS ARE TO BE ISED FOR ALL CONDITIONS WHERE THE DETAIL IS APPLICABLE, WHETHER OR NOT NOTED ON PLAN. TYPICAL DETAILS MAY BE SLIGHTLY ALTERED IF REQUIRED DUE TO PROJECT CONDITIONS, ONLY WHEN SUBMITTED AND THE ENGINEER'S APPROVAL IS OBTAINED PRIOR TO PERFORMING THE WORK ALL DIMENSIONS AND ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS. WITH THE EXCEPTION OF STRUCTURAL MEMBER SIZES, ARE GENERATED BY OTHER DISCIPLINES. ANY DIMENSIONS OR ELEVATIONS OMITTED OR NOT SHOWN ON THE STRUCTURAL DRAWINGS SHOULD BE OBTAINED FROM THE DRAWINGS OF THE OTHER DISCIPLINES. STRUCTURAL DRAWINGS ARE NOT "STAND-ALONE" DOCUMENTS AND SHOULD BE USED IN CONJUNCTION WITH, AND COORDINATED WITH THE SPECIFICATIONS, ARCHITECTURAL DRAWINGS AND ALL OTHER DISCIPLINE'S DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND ARCHITECT PRIOR TO

IF DIFFERENCES OCCUR WITHIN OR BETWEEN DRAWINGS AND SPECIFICATIONS REGARDING MATERIALS, STRENGTHS OR QUANTITIES, THE BETTER MATERIAL, HIGHER STRENGTH, AND GREATER QUANTITY INDICATED, SPECIFIED OR NOTED SHALL BE PROVIDED.

REPRODUCTIONS OF STRUCTURAL DRAWINGS FOR SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED, UNLESS WRITTEN APPROVAL IS REQUESTED BY THE CONTRACTOR AND IT IS GRANTED BY O'DONNELL & NACCARATO, INC.

5. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.

6. THESE DRAWINGS DO NOT DEFINE SCOPE OF CONTRACTOR OR SUBCONTRACTOR CONTRACTS.

AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOBSITE INCLUDING MEANS AND METHODS OF ONSTRUCTION AND SAFETY OF PERSONS AND PROPERTY. THE ENGINEER'S PRESENCE OR REVIEW OF WORK AT THE JOBSITE IS FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT ONLY AND IS NOT EVER TO BE CONSTRUED AS A REVIEW OF MEANS AND METHODS OF CONSTRUCTION AND

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ALLOWABLE CONSTRUCTION LOADS AND FOR PROTECTING THE COMPLETED OR INCOMPLETED STRUCTURAL FRAMING FROM DAMAGE DUE TO TEMPORARY CONSTRUCTION LOADINGS.

COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR ERRORS WILL BE AT THE CONTRACTOR'S EXPENSE. ANY APPROVED CONTRACTOR REQUESTED CHANGES TO THESE DRAWINGS WILL BE DONE AT NO COST TO THE OWNER. APPROVAL OF

CONTRACTOR REQUESTED CHANGES IN NO WAY STATES OR IMPLIES APPROVAL OF A CHANGE IN SCOPE OR CHANGE IN CONTRACT COST 1. UNLESS EXPLICITLY NOTED AS "ISSUED FOR BID", THESE DRAWINGS ARE NOT SUITABLE FOR OBTAINING BIDS FROM GENERAL OR SUBCONTRACTORS. BIDDING OF DRAWINGS PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID" IS DONE AT THE SOLE RISK OF THE BIDDING CONTRACTOR. ADDITIONS OR CORRECTIONS TO DRAWINGS THAT ARE BID PRIOR TO DESIGN COMPLETION AND "ISSUED FOR BID" WILL NOT BE ONSIDERED AS DESIGN ERRORS OR OMISSIONS. STRUCTURAL DESIGN, BY NATURE, CANNOT BE COMPLETE PRIOR TO COMPLETION OF ARCHITECTURAL AND MECHANICAL DRAWINGS

ALL REFERENCES TO WATER/DAMPROOFING, FIREPROOFING, AND UTILITIES ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY SEE ARCHITECTURAL DRAWINGS. SPECIFICATIONS, AND OTHER DOCUMENTS FOR ALL WATER/DAMPROOFING, FIREPROOFING AND UTILITIY DETAILS AND REQUIREMENTS. COORDINATE ALL UNDERGROUND UTILITY REQUIREMENTS WITH THE CIVIL/MEP DRAWINGS. ALL UTILITES SHALL BE ABOVE/BELOW FOOTING AND NOT LOCATED WITHIN THE FOOTINGS. NOTIFY ENGINEER OF RECORD IF OTHERWISE

3 IF THE EXISTING FIFLD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY. THE CONTRACTOR MUST PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. THIS SKETCH MUST BE SUBMITTED TO AND APPROVAL MUST BE GRANTED BY THE ENGINEER PRIOR TO PERFORMING THE WORK.

4. SUBMIT SHOP DRAWINGS SUCH THAT BY THE TIME THEY ARE RECEIVED BY O'DONNELL & NACCARATO, INC., THERE WILL BE AT LEAST 14 DAYS REFORE REVIEWED SUBMITTALS WILL BE NEEDED. ANY REVIEW THAT IS REQUIRED MORE EXPEDIENTLY WILL BE AT THE CONTRACTOR'S EXPENSE. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL CERTIFYING THAT HE HAS VERIFIED ALL FIELD MEASUREMENTS. CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND OMPLIANCE WITH THE CONTRACT DOCUMENTS. IF REVIEW OF AN INCOMPLETE SHOP DRAWING IS REQUIRED, THAT SHOP DRAWING SHALL BE CLEARLY MARKED AS INCOMPLETE. THE AREA THAT NEEDS TO BE REVIEWED SHALL BE CLEARLY NOTED WITH AN EXPLANATION FOR THE REASON

IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY FOUNDATION/BASEMENT WALL. IF THE CONTRACTOR EEMS IT NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THEN 8'-0", THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND, AT HIS OWN EXPENSE, PROVIDE ADEQUATE SUPPORTS OR WALL BRACES TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT. 16. SIZE AND/OR LOCATION OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC. SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO COORDINATE ALL CONTRACT DOCUMENTS TO DETERMINE THE SIZE AND/OR LOCATION OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, DEPRESSIONS, ETC. 17. SIZE AND/OR LOCATION OF EXISTING STRUCTURES AND UTILITIES SHOWN ON THE STRUCTURAL DOCUMENTS ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY BY FIELD MEASUREMENTS/INVESTIGATION THE SIZE AND/OR LOCATION OF ALL EXISTING STRUCTURES AND UTILITIES.

THE CONTRACTOR SHALL SUBMIT SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED SHOWING DESIGNS OF METAL STAIRS, METAL RAILINGS AND CONNECTIONS TO STRUCTURE TAKING INTO ACCOUNT THE VERTICAL AND LATERAL LOADS STATED IN THE GOVERNING CODES. WHERE HEADERS OR OTHER TYPES OF STRUCTURAL MEMBERS HAVE BEEN DESIGNATED ON THE STRUCTURAL CONTRACT DOCUMENTS TO SUPPORT THE STAIRS. THE CONNECTIONS FROM THE STAIRS SHALL BE DESIGNED SO THAT NO ECCENTRIC OR TORSIONAL FORCES ARE IMPOSED ON THESE STRUCTURAL MEMBERS. IF ECCENTRIC ONNECTIONS ARE USED, CONTRACTOR SHALL PROVIDE BRACING ELEMENTS FOR ALL SUPPORTING STEEL TO ELIMINATE THE TORSIONAL EFFECTS OF THE ECCENTRIC CONNECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING ALL EMBEDDED ITEMS AND HARDWARE AS REQUIRED PER THE STAIR DESIGN.

19. STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS. 10. EXACT LOCATIONS OF ROOF PENETRATIONS TO BE COORDINATED BY THE GENERAL CONTRACTOR BETWEEN STEEL/JOIST/DECK/HVAC SUBCONTRACTORS SEE DETAIL FOR ROOF FRAME REQUIREMENTS.

STRUCTURAL SPECIAL INSPECTIONS

WITH THE FOLLOWING REQUIREMENTS

THE QUALIFIED AGENCY RETAINED BY THE OWNER FOR THESE SPECIAL INSPECTION SERVICES SHALL BE APPROVED BY THE OWNER, THE RCHITECT, AND THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION. AN OUTLINE OF THE SCOPE OF SERVICES TO BE PERFORMED BY THE INSPECTING AGENCY IS TO BE SUBMITTED PRIOR TO THE START OF CONSTRUCTION. IN ACCORDANCE WITH SECTION 1704 OF THE INTERNATIONAL RUIL DING CODE, AND ALL APPLICABLE STATE AND LOCAL REQUIREMENTS, AN INDEPENDENT APPROVED AGENCY SHALL MAKE PERIODIC AND/OR CONTINUOUS INSPECTIONS OF THE CONSTRUCTION PROGRESS IN ACCORDANCE

STEEL CONSTRUCTION TABLE 1704.3 CONCRETE CONSTRUCTION TABLE 1704 4 TABLE 1704.5.1 & 1704.5.3 MASONRY CONSTRUCTION **TABLE 1704.7** PILE FOUNDATION TABLE 1704.9

FOUNDATIONS

PERFORM ALL SITE PREPARATION AND EXCAVATION WORK IN STRICT ACCORDANCE WITH THE SOILS REPORT PREPARED BY EARTH ENGINEERING INC., DATED JULY 18, 2014 (EEI PROJ. No. 27165.J0).

EXCAVATE THE BUILDING SITE TO THE DEPTH AND EXTENT INDICATED IN THE SOILS REPORT. ALL SUBGRADES SHALL BE APPROVED IN BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 3 FEET BELOW EXTERIOR FINISH GRADE. ALL FOOTING ELEVATIONS SHOWN ON PLAN ARE THE BEST APPROXIMATIONS BASED ON AVAILABLE DATA. GENERAL CONTRACTOR MAY ALTER FOOTING ELEVATIONS FOR REASONS. INCLUDING, BUT NOT LIMITED TO, REVISED GEOTECHNICAL OR CIVIL INFORMATION, UNFORESEEN CONDITIONS, ACTUAL INVERT ELEVATIONS, CONSTRUCTABILITY, ETC. CONTRACTOR SHALL NOTIFY ARCHITECT AND OBTAIN WRITTEN APPROVAL PRIOR TO ANY MODIFICATIONS.

INSTALL PILES IN ACCORDANCE WITH A SUITABLE DYNAMIC FORMULA TO BE SELECTED BY THE SOILS ENGINEER. THE INSPECTION OF THE INSTALLATION OF PILES SHALL BE SUPERVISED AND CERTIFIED BY A REGISTERED SOILS ENGINEER.

6. PILING CONTRACTOR SHALL PERFORM A PILE LOAD TEST IN ACCORDANCE WITH THE SOILS REPORT AND ASTM D1143.

ALL AUGERCAST PILES SHALL BE AS SPECIFIED IN THE SOILS REPORT AND SHALL HAVE A CAPACITY TO SUPPORT A NET DESIGN DOWNWARD I OAD OF 83 TONS, A NET DESIGN LIPLIET LOAD OF 2.2 TONS AND A DESIGN LATERAL LOAD OF 2.3 TONS. PILE SUPPLIER TO PROVIDE SIGNED AND SEALED ENGINEERING CALCULATIONS AND DETAILING SHOWING THAT THE PILE DESIGN IS ABLE TO RESIST THE SPECIFIED LOADS. GENERAL CONTRACTOR SHALL PROVIDE A FINAL REPORT CONSISTING OF THE FOLLOWING ITEMS: COMPLETE DRIVING RECORDS, CERTIFIED PILE LOCATION PLAN PREPARED BY A REGISTERED LAND SURVEYOR, TIP ELEVATIONS, PILE OUT OF PLUMB, BLOW COUNTS, AND A COMMENTARY ON DRIVING PROBLEMS SUCH AS SUSPECTED BENDING, TWISTING AND OUT-OF-PLUMB. REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO CONCRETE PLACEMENT FOR PILE CAPS AND GRADE BEAMS.

DO NOT BACKFILL ANY BASEMENT WALLS WITH AN UNBALANCED HEIGHT OF SOIL GREATER THAN THREE FEET UNTIL ELEVATED FLOOR IS IN-PLACE AND THE WALL HAS REACHED ITS DESIGN STRENGTH OR THE WALLS ARE ADEQUATELY BRACED.

PIER ON THE EXPOSED FACE OF THE WALL. JOINTS SHALL BE FILLED WITH AN APPROVED SEALANT.

EXPOSED CONCRETE/CMU WALLS SHALL HAVE CONTROL JOINTS AT 30 FEET MAXIMUM ON CENTER UNLESS NOTED OTHERWISE. WALLS WITH

INTEGRAL COLUMN PIERS OR PILASTERS SHALL BE POURED MONOLITHICALLY AND SHALL HAVE A FORMED CONTROL JOINT ON ONE SIDE OF EACH

REINFORCING STEEL SHALL BE WITHIN TOLERANCES SET FORTH IN ACI 117, AND HAVE THE SPECIFIED CLEAR COVER, UNLESS NOTED OTHERWISE ON DRAWINGS CONCRETE POURED AGAINST EARTH CONCRETE EXPOSED TO EARTH OR WEATHER: #5 OR SMALLER #6 OR LARGER CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: COLUMNS (TIES AND MAIN REINFORCING) SLABS, WALLS, JOISTS: #14 OR #18 BARS #11 OR SMALLER BEAMS (STIRRUPS AND MAIN REINFORCING)

CLEAR COVER SHALL BE CLEARLY SHOWN ON ALL REINFORCING BAR DETAIL DRAWINGS. ALL CONCRETE SHALL BE READY-MIX AND HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF:

BASEMENT WALLS/RETAINING WALLS GRADE BEAMS/PILE CAPS 4 000 PSI PIERS-MATCH WALL STRENGTH (MINIMUM OF 3.000 PSI) SLAB-ON-GRADE 3.500 PSI PARKING SLAB-ON-GRADE CONCRETE SLABS ON METAL DECK 3,500 PSI

OR AS SHOWN ON DRAWINGS.

CONCRETE TO HAVE A MINIMUM OF 500 LBS. OF CEMENT PER CUBIC YARD. SLUMP (AT POINT OF CONCRETE PLACEMENT) SHALL BE 3 INCH MINIMUM AND 6 INCH MAXIMUM. CONCRETE EXPOSED TO WEATHER SHALL HAVE 5 PERCENT AIR ENTRAINMENT. CONCRETE NOT EXPOSED TO WEATHER SHALL NOT CONTAIN AN AIR-ENTRAINING AGENT. SUBMIT MIX DESIGNS FOR REVIEW.

NORMAL-WEIGHT CONCRETE TO BE GIVEN A HARD-TROWELED FINISH SHALL NOT CONTAIN AN AIR-ENTRAINING AGENT. TOTAL AIR CONTENT FOR THIS CONCRETE SHOULD NOT EXCEED 3 PERCENT (AT POINT OF CONCRETE PLACEMENT). ALL CONCRETE WORK SHALL COMPLY WITH THE THE ACI DETAILING MANUAL (ACI 315), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).

ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A615 GRADE 60 EXCEPT #14 BARS AND LARGER WHICH SHALL CONFORM TO ASTM A615 GRADE 75. WWF SHALL COMPLY WITH ASTM A185. DEVELOPMENT LENGTHS, NOTED AS Ld ON DRAWINGS, AND SPLICE/LAP LENGTHS OF ALL REINFORCING STEEL TO BE PER DETAIL WITH NOTES ENTITLED "TABLE OF DEVELOPMENT AND LAP SPLICE LENGTH". LAP SPLICES OF #14 BARS AND LARGER ARE NOT PERMITTED. THESE BARS MUST BE

MECHANICALLY COUPLED WITH DEVICES RATED TO DEVELOP 125% OF Fy OF THE BAR. SUBMIT PRODUCT DATA FOR ENGINEERING APPROVAL. LAP ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, ETC. AS REQUIRED BY ALL TRADES BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL CONSULT THE ARCHITECTURAL MECHANICAL AND FLECTRICAL DRAWINGS. AS WELL AS THE STRUCTURAL DRAWINGS FOR THE LOCATION, NUMBER, AND SIZE OF ALL OPENINGS, SLEEVES, ETC. HOWEVER, OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE INSTALLED ONLY AFTER APPROVAL BY THE STRUCTURAL ENGINEER IS OBTAINED. DRAWINGS SHALL BE SUBMITTED FOR REVIEW SHOWING LOCATIONS AND DIMENSIONS OF ALL OPENINGS SLEEVES, ETC. IN CAST-IN-PLACE CONCRETE SLABS, BEAMS, WALLS, COLUMNS, AND FOUNDATIONS. THESE DRAWINGS SHALL BE COORDINATED BY THE CONTRACTOR. OPENINGS AND SLEEVES THROUGH CAST-IN-PLACE CONCRETE FRAMING IS PROHIBITED EXCEPT WHERE THOSE SLEEVES AND OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS OR WHERE THEY ARE SHOWN ON THE APPROVED SLEEVE AND OPENING DRAWINGS THAT

HAVE BEEN SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. SAW-CUTTING, CORING, OR DRILLING OF SLEEVES OR OPENING THROUGH

PREVIOUSLY CAST CONCRETE IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER. 6. FOR GRADE BEAMS LAP ALL TOP STEEL AT MID-SPAN AND LAP BOTTOM STEEL OVER SUPPORT.

LOCATION OF CONSTRUCTION JOINTS IN THE STRUCTURAL SLAB SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER CONSTRUCTION JOINTS IN STRUCTURAL SLABS AND GRADE BEAMS SHALL BE AT MID-SPAN AND KEY JOINTED WITH REINFORCING CONTINUOUS ACROSS JOINT. CONSTRUCTION JOINTS IN SLABS ON METAL DECK SHALL OCCUR MIDWAY BETWEEN BEAMS AT END THIRD OF GIRDER SPAN. LIGHTWEIGHT CONCRETE SHALL BE USED FOR FRAMED FLOORS AS NOTED ON THE DRAWINGS. TOTAL AIR CONTENT AT POINT OF CONCRETE PLACEMENT SHALL BE LIMITED TO 5.5 PERCENT (PLUS OR MINUS 1.5 PERCENT) FOR HARD TROWELED FINISHED AREAS. THIS CONCRETE IS TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND AN IN-PLACE DRY DENSITY OF 107 - 113 POUNDS PER CUBIC FOOT OR PER THE REQUIREMENTS SET FORTH IN THE FIRE RATING SPECIFICATIONS.

SUBMIT ALL REINFORCING SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION.

10. FOR CONCRETE SLABS ON METAL DECK, FLOORS SHALL BE POURED TO THE THICKNESS SHOWN ON DOCUMENTS, NOT TO A LEVEL LINE. 11. THE CONTRACTOR SHALL INSTALL FLOOR LEVELING MATERIAL AND PERFORM OTHER CORRECTIVE MEASURES IN ALL AREAS, INCLUDING BUT NOT LIMITED TO, AREAS WHERE FLOOR FINISH PROVISIONS DO NOT COMPLY WITH THE FLATNESS AND LEVELNESS REQUIREMENTS. NOTE: UNLESS NOTED OTHERWISE, THE CALCULATED CENTER OF BAY DEFLECTION DUE TO DEAD LOADS ONLY, MEASURED ON A DIAGONAL DIMENSION BETWEEN COLUMNS, IS APPROXIMATELY 3/16" PER 10'-0" LENGTH.

THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF

13. RIGID INSULATION USED AS FLOOR FILL SHALL BE STYROFOAM HIGHLOAD 40 EXTRUDED POLYSTYRENE INSULATION (40 PSI COMPRESSIVE STRENGTH) ASTM C578, TYPE VI MANUFACTURED BY DOW CHEMICAL COMPANY, OR APPROVED EQUAL

THE DESIGN, FABRICATION AND ERECTION OF PRECAST CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND THE LATEST PCI CODE. PRECAST MANUFACTURER SHALL BE PCI APPROVED. PRECAST MANUFACTURER SHALL SUBMIT DRAWINGS AND CALCULATIONS, BOTH OF WHICH MUST BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. PRECAST CONCRETE PLANK SHALL BE DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS INCLUDING PARTITION LOADS. FOR LOCATION OF PARTITIONS. SEE ARCHITECTURAL DRAWINGS.

IF SHIMS ARE REQUIRED AT PRECAST PLANK BEARING, THEY MUST BE CONTINUOUS FOR THE FULL WIDTH OF THE PLANK. POINT SHIMMING IS NOT ACCEPTABLE. USE KORALATH SHIMS OR APPROVED EQUAL. 4. PRECAST CONCRETE MEMBERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5.000 PSI.

PRECAST MANUFACTURER SHALL COORDINATE WITH OTHER TRADES AND ALL CONTRACT DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS. PRECAST MANUFACTURER SHALL DESIGN, PROVIDE, AND INSTALL ALL HANGERS, INSERTS, ATTACHMENTS AND APPURTENANCES AS

ALL OPENINGS IN PRECAST CONCRETE MUST BE PROVIDED BY OR APPROVED IN WRITING BY PRECAST MANUFACTURER. NO REINFORCING IN PRECAST CONCRETE IS TO BE CUT WITHOUT PRIOR APPROVAL OF PRECAST MANUFACTURER. ANY OPENINGS SHOWN ON STRUCTURAL DRAWINGS ARE FOR ILLUSTRATIVE PURPOSES ONLY. QUANTITIES, SIZES AND LOCATIONS OF ALL PROPOSED CORES/OPENINGS, INCLUDING BUT NOT LIMITED TO OPENINGS FOR SHAFTS AND PIPES, ARE TO BE OBTAINED FROM OTHER DOCUMENTS.

7. PRECAST MANUFACTURER IS TO OBTAIN ALL ARCHITECTURAL PRECAST CONCRETE DIMENSIONS FROM ARCHITECTURAL DOCUMENTS. PRECAST MANUFACTURER TO COORDINATE QUANTITIES AND LOCATIONS OF ALL CONNECTIONS (GRAVITY AND LATERAL) FOR ARCHITECTURAL PRECAST CONCRETE WITH MANUFACTURER OF SUPPORT MATERIAL (STEEL, CONCRETE, ETC.), BASED ON GENERAL GUIDELINES AS SHOWN ON

WELD PLATES AND OTHER EMBEDDED ITEMS AS SHOWN ON STRUCTURAL DRAWINGS ARE FOR DESIGN INTENT ONLY. PRECAST MANUFACTURER IS RESPONSIBLE FOR QUANTITY AND LOCATION OF THEIR ITEMS

10. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF

ALL PRECAST CONCRETE SHOP DRAWINGS.

ALL STEEL ERECTION DRAWINGS SHOP DRAWINGS.

ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE. ALL CONNECTIONS, INCLUDING AT HSS SECTIONS, SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE LATEST AISC CODE. UNLESS INDICATED OTHERWISE ON CONTRACT DOCUMENTS, IN ADDITION TO THE SHEAR CONNECTION, INCLUDE AS A MINIMUM, 4X4X3/8 ANGLES TOP AND BOTTOM OR ENDPLATE AT ALL HSS BEAMS/GIRDERS TO COLUMN CONNECTIONS. ALL WIDE FLANGE SHAPES SHALL BE ASTM A992. ALL OTHER STRUCTURAL STEEL SHALL BE ASTM

ALL STEEL RECTANGULAR/SQUARE HOLLOW STRUCTURAL SECTIONS SHALL BE ASTM A500 GRADE C. FY = 50 KSL. ALL STEEL ROUND HOLLOW STRUCTURAL SECTIONS SECTIONS SHALL BE ASTM A500 GRADE C. FY = 46 KSI. ALL STEEL SHALL HAVE A SHOP COAT OF RUST INHIBITIVE PAINT DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED-ON FIREPROOFING OR CONCRETE ENCASEMENT, AS NOTED ON ARCHITECTURAL DOCUMENTS. ORIENT ALL MILL CAMBER UPWARD DURING FABRICATION AND ERECTION. ALL STEEL SHALL BE THOROUGHLY CLEANED IN ACCORDANCE WITH SSPC-

ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE". AWS D1.1 LATEST EDITION. TO PERFORM THE TYPE OF WORK REQUIRED. UNLESS OTHERWISE NOTED, ALL CONNECTIONS SHALL BE BOLTED WITH MINIMUM 3/4-INCH DIAMETER A325 OR A490 HIGH STRENGTH BEARING TYPE BOLTS OR WELDED. THE FABRICATOR IS RESPONSIBLE FOR THE SELECTION, DESIGN, AND DETAILING OF ALL CONNECTIONS NOT FULLY DETAILED ON THE CONTRACT DRAWINGS. MEMBER SIZES INDICATED ON THE DRAWINGS ARE BASED ON MEMBER BEHAVIOR AWAY FROM CONNECTIONS. USE FULL DEPTH DOUBLE ANGLE CONNECTIONS WITH CLIP ANGLES TOP AND/OR BOTTOM ON ALL GIRDER AND BEAM CONNECTIONS

UNLESS OTHERWISE NOTED. DETAILS INDICATED ON DRAWINGS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. DETAILS INDICATED ON DRAWINGS ARE NOT INTENDED TO CONVEY COMPLETE CONNECTOR SIZES, PLATE SIZES, WELD SIZES, NUMBER OF BOLTS, OR ANY OTHER SPECIFIC INFORMATION THAT IS OBTAINED THROUGH DESIGNING OF AN INDIVIDUAL CONNECTION FOR A GIVEN SET OF LOADS. THESE DETAILS DO NOT SHOW ERECTION AIDS. PROVIDE ERECTION AIDS AS REQUIRED AND REMOVE THEM AFTER WORK IS COMPLETE.

TO COLUMNS AT LOCATIONS AS SHOWN ON DRAWINGS. BOLTS SHALL BE AT 3-INCH O/C VERTICALLY. ALL GRAVITY MOMENT CONNECTIONS SHALL BE

4. ALL ANCHOR RODS TO BE ASTM F1554 GRADE 36, UNLESS NOTED OTHERWISE. 5. ALL ALUMINUM AND STEEL MEMBERS SHALL BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.

BOLTED WITH MINIMUM 3/4-INCH DIAMETER A325 OR A490 HIGH STRENGTH SLIP CRITICAL BOLTS OR WELDED.

ALL STEEL WELDING RODS SHALL BE E70XX.

SUBMIT ALL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO ANY FABRICATION. SHOP DRAWINGS SHALL SHOW COMPLETE BOLTING AND WELDING INFORMATION, BOTH SHOP AND FIELD. ALL WELDING INFORMATION SHALL USE AMERICAN WELDING SOCIETY SYMBOLS. SHOP OR FIELD SPLICING OF ANY STRUCTURAL STEEL SECTION WHERE NOT DETAILED ON THE CONTRACT DOCUMENTS IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD

8. CONNECTIONS FOR ALL NON-COMPOSITE AND COMPOSITE BEAM/GIRDERS NOT CONNECTED TO COLUMNS SHALL BE DESIGNED FOR A MINIMUM UNFACTORED REACTION OF 20 KIPS, UNLESS NOTED GREATER ON DRAWINGS.

ALL LINTELS AND SHELF ANGLES WITHIN EXTERIOR WALLS SHALL BE HOT DIP GALVANIZED. ANY POINTS OF WELDING SHALL BE TOUCHED UP IN THE FIELD WITH A ZINC-RICH PAINT BY THE STEEL ERECTOR. 10. ALL EXPOSED STEEL (INCLUDING BUT NOT LIMITED TO DUNNAGE FRAMING, SCREEN WALL FRAMING, CANOPY FRAMING, ETC.) SHALL BE HOT

DIP GALVANIZED. ANY POINTS OF WELDING SHALL BE TOUCHED UP IN THE FIELD WITH A ZINC-RICH PAINT BY THE STEEL ERECTOR. 11. SPANDREL ANGLE AT PERIMETER EDGE OF FLOOR SLAB/ROOF SHALL BE ADJUSTABLE. SHIP ANGLE LOOSE AND SET WITH STRING LINE IN FIELD FOR VERTICAL AND HORIZONTAL ALIGNMENT AFTER STEEL IS FULLY ERECTED TO A MAXIMUM TOLERANCE OF 1/4 INCH HORIZONTAL PER BAY/PER FLOOR AND MUST BE SET PLUMB BY STEEL ERECTOR PRIOR TO STUD ERECTION. ANGLE MUST BE INSTALLED IN ONE LENGTH PER BAY. SEE TYPICAL SPANDREL ANGLE DETAIL

PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF CONCENTRATED LOADS INCLUDING BEAMS SUPPORTING COLUMNS OR RUNNING OVER THE TOPS OF COLUMNS, OR OTHER BEAMS. MINIMUM STIFFENER PLATE THICKNESS SHALL BE 3/8 INCH OR FLANGE THICKNESS OF COLUMN ABOVE OR BELOW OR BEAM WEB THICKNESS ABOVE OR BELOW, WHICHEVER IS GREATER. 13. ALL POST-INSTALLED EXPANSION ANCHORS FASTENED INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ WITH MATERIAL TYPE, DIAMETER, AND EMBEDMENT PER DOCUMENTS, UNLESS NOTED OTHERWISE. ALL POST-INSTALLED ADHESIVE ANCHORS FASTENED INTO CONCRETE AND REINFORCING BAR DOWELING INTO CONCRETE SHALL USE HILTI HIT-RE 500V3 EPOXY ADHESIVE ANCHORING SYSTEM IN HAMMER-DRILLED HOLES WITH ROD TYPE, DIAMETER, EMBEDMENT AND SPACING/EDGE DISTANCE PER DOCUMENTS, UNLESS NOTED OTHERWISE. ALL PIPING RUNS LARGER THAN 4" DIAMETER SHALL BE HUNG DIRECTLY FROM STEEL BEAMS AND NOT THE CONCRETE SLAB/METAL DECK SYSTEM. ANY SUPPLEMENTAL STEEL REQUIRED FOR BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, PLUMBING, ETC.) IS NOT BY O'DONNELL &

15. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF

STEEL ROOF DECK SHALL BE 1 1/2" 22 GAGE TYPE B METAL DECK, AND AS SHOWN ON DRAWINGS, GRADE 33 (MINIMUM FY = 33 KSI) AS MANUFACTURED BY CANAM OR APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. ROOF DECK FÁBRICATION AND INSTALLATION MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS. SUSPENDED CEILINGS, LIGHT FIXTURES, DUCTS, PIPES, OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL DECK. ATTACH TYPE B METAL ROOF DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS (4 WELDS PER 36" WIDE SHEET PER SUPPORT). FASTEN SIDE JOINTS TOGETHER WITH #10 SELF DRILLING SCREWS, OR WELD, AT MID - SPAN BETWEEN SUPPORTS. INCREASE FASTENER SIZE AND/OR DECREASE FASTENER SPACING AS REQUIRED PER FACTORY MUTUAL REQUIREMENTS IF ROOF ASSEMBLY IS REQUIRED TO USE WELDING WASHERS ON ALL CONNECTIONS OF STEEL DECK WITH METAL THICKNESS LESS THAN 22 GAGE TO STRUCTURAL STEEL IN AREAS OF WARPED ROOF DECK USE. SELF DRILLING SCREWS FOR CONNECTIONS OF STEEL ROOF DECK TO STRUCTURAL STEEL SUPPORTS. SCREW SIZES SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS, ATTACH DECK TO ALL SUPPORTING MEMBERS. FLOOR DECK SHALL BE GALVANIZED 3" - 20 GAGE LOK-FLOOR COMPOSITE METAL DECK AS SHOWN ON DRAWINGS AND AS MANUFACTURED BY CANAM OR APPROVED EQUAL. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. FLOOR DECK FABRICATION AND INSTALLATION MUST COMPLY WITH STEEL DECK INSTITUTE STANDARDS. ALL FLOOR DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS. COMPOSITE SHEAR STUDS SHALL BE WELDED THROUGH STEEL DECK. SHEAR STUDS SHALL BE HEADED STUDS MADE FROM LOW CARBON STEEL, FY=60 KSI, CONFORMING TO ASTM A108 AND SHALL BE INSTALLED IN ACCORDANCE WITH AWS D1 FLOORS HAVE BEEN DESIGNED AS COMPOSITE BEAM AND COMPOSITE DECK. BEAM/DECK SHORING IS NOT REQUIRED UNLESS NOTED OTHERWISE ON DRAWINGS. LARGE DEAD LOAD DEFLECTIONS ARE ANTICIPATED IN UNCAMBERED MEMBERS. THE CONTRACTOR MAY, AT HIS/HER OPTION AND COST. UTILIZE BEAM AND/OR DECK SHORING. 8. ATTACH LOK-FLOOR COMPOSITE METAL DECK TO STRUCTURAL STEEL SUPPORTS WITH 5/8" DIAMETER PUDDLE WELDS (4 WELDS PER 36" WIDE

SHEET PER SUPPORT). FASTEN SIDE JOINTS WITH #10 SELF-DRILLING SCREW, OR WELD, AT 3'-0" ON-CENTER MAXIMUM BETWEEN SUPPORTS. NO CONDUIT SHALL BE PLACED WITHIN CONCRETE SLABS ON METAL DECK WITHOUT COMPLIANCE WITH THE LATEST VERSION OF THE DESIGN. MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND OBTAIN WRITTEN

10. THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF ALL DECK LAYOUT SHOP DRAWINGS.

<u>MASONRY</u>

MASONRY UNITS SHALL BE TYPE N-1 MEDIUM WEIGHT ASTM C90 SOLID (GREATER THAN OR EQUAL TO 75 PERCENT SOLID MATERIAL) OR ASTM C90 HOLLOW GROUTED SOLID BELOW GRADE, ASTM C90 HOLLOW ABOVE GRADE WITH MINIMUM COMPRESSIVE STRENGTH OF 1900 PSLEXCEPT STAIRTOWERS AND ELEVATOR SHAFTS WHICH ARE TO BE C90 HOLLOW GROUTED SOLID FOR FULL HEIGHT. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR. CONSTRUCT COLUMN PIERS INTEGRALLY WITH FOUNDATION WALLS AND CONTINUE WALL REINFORCEMENT THROUGH THE PIER. GROUT COLUMN PIERS AND WALLS MONOLITHICALLY.

FOLLOWING ARE THE BLOCK STRENGTHS REQUIRED ASTM C90 SOLID 1900 PSI ON GROSS AREA OF INDIVIDUAL UNITS. ASTM C90 HOLLOW 1900 PSI ON NET AREA OF INDIVIDUAL UNITS.

IVANY 3000 PSI ON NET AREA OF INDIVIDUAL UNITS.

ALL MORTAR SHALL BE ASTM C270 TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS EXCEPT IVANY BLOCK WHICH SHALL BE LAID USING ASTM C270 TYPE M MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.

4. GROUT SHALL BE A HIGH SLUMP MIX IN ACCORDANCE WITH ASTM SPECIFICATION C476 HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. LAID UP MASONRY DESIGN F'M IS 1500 PSI FOR STANDARD CONCRETE MASONRY AND AND 2800 PSI FOR IVANY. IVANY COMPRESSIVE STRENGTH TO BE DETERMINED BY PRISM TEST METHOD IN ACCORDANCE WITH ASTM C1314.

IVANY BLOCK UNITS SHALL BE MANUFACTURED BY FIZZANO BROTHERS OR APPROVED EQUAL. 7. VERTICAL REINFORCING SHALL BE ASTM A615, GRADE 60 DEFORMED BARS. MINIMUM LAP SPLICE LENGTHS TO BE PER TABLE 1 (U.N.O. ON PLANS) AND SHALL BE AS FOLLOWS:

TABLE 1

FOR EPOXY-COATED BARS, MULTIPLY THESE VALUES BY 1.5. MECHANICAL SPLICING DEVICES WHICH ARE RATED TO DEVELOP 125 PERCENT OF FY OF THE BAR MAY BE SUBSTITUTED. SUBMIT PRODUCT DATA FOR ENGINEERING APPROVAL. ALL CONCRETE MASONRY SHALL BE CONSTRUCTED AND ERECTED IN ACCORDANCE WITH THE LATEST ACI MASONRY CODE (ACI 530/ASCE 5/TMS 402) AND SPECIFICATIONS (ACI 530.1/ASCE 6/TMS 602) AND INSPECTED BY A QUALIFIED ENGINEER. PROVIDE HOT-DIPPED GALVANIZED TRUSS TYPE OR LADDER TYPE HORIZONTAL JOINT REINFORCEMENT, MINIMUM 9 GA, AT 16 INCHES ON CENTER VERTICAL IN ALL MASONRY WALLS. SPACE HORIZONTAL JOINT REINFORCEMENT AT 8 INCHES ON CENTER IN ALL PARAPETS. USE SHOP FABRICATED SPECIAL PIECES AT ALL CORNERS AND TEES.

LIGHTGAGE METAL FRAMING

LIGHTGAGE METAL STUD DESIGNATION SHOWN ON STRUCTURAL DRAWINGS ASSUME MARINO WARE AS A DESIGN BASIS. MANUFACTURER MUST SUBMIT LITERATURE INDICATING THAT THE MEMBERS SUPPLIED PROVIDE EQUIVALENT STRENGTH AND STIFFNESS. MANUFACTURER AND/OR SUPPLIER TO PREPARE INFORMATION INDICATING CAPACITY OF MEMBERS, FRAMING DETAILS, CONNECTIONS, BRACING, BRIDGING AND ALL OTHER APPURTENANCES OF MEMBERS TO CONFORM TO LOAD CRITERIA AS DIRECTED BY CONTRACTOR/CONSTRUCTION MANAGER. ROOF TRUSSES ARE TO BE DESIGNED FOR THE METAL STUD SUPPLIER BY A PROFESSIONAL ENGINEER AND SIGNED AND SEALED CALCULATIONS AND SHOP DRAWINGS ARE TO BE SUBMITTED FOR REVIEW, INDICATING CAPACITY MEMBERS, FRAMING DETAILS, CONNECTIONS, BRACING, BRIDGING AND ALL OTHER APPURTENANCES OF MEMBERS TO CONFORM TO LOAD CRITERIA

ALL LINTELS INDICATED ON DRAWINGS AS METAL STUD LINTELS ARE TO BE PROVIDED BY STUD MANUFACTURER/SUPPLIER.

ALL STEEL STUDS SHALL BE HOT-DIPPED GALVANIZED (G 60) IN ACCORDANCE WITH ASTM A924. STEEL STUDS SHALL BE DESIGNED MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND SHALL COMPLY WITH ASTM A653 & C955. ALL STUDS, JOISTS, AND ACCESSORIES SHALL HAVE THE FOLLOWING MATERIAL STRENGTHS:

54 MILS (16 GAGE) AND HEAVIER - FY = 50KSI 33 MILS, 43 MILS (20 GAGE, 18 GAGE RESPECTIVELY) - FY = 33KSI.

10. AS A MINIMUM, ALL CORES CONTAINING VERTICAL REINFORCING ARE TO BE GROUTED SOLID.

ALL WELDING OF LIGHT GAGE STEEL FRAMING MUST BE DONE BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.3, SPECIFICATION FOR

MAKE CONNECTIONS WITH SELF-TAPPING SCREWS OR WELDING SO THAT THE CONNECTIONS MEET OR EXCEED THE DESIGN LOADS. ALWAYS USE WELDS WHERE SHOWN ON DRAWINGS

6. CUT ALL LIGHT GAGE STEEL FRAMING MEMBERS WITH SAWS OR SHEARS. FLAME CUTTING IS NOT PERMITTED.

THE LIGHT GAGE STEEL FRAMING SUPPLIER AND ERECTOR SHALL HAVE A MINIMUM 5 YEARS EXPERIENCE IN THE FABRICATION AND ERECTION OF LIGHT GAGE STEEL FRAMING SYSTEMS.

THE CONTRACTOR SHALL DELIVER TO THE ENGINEER, AT THE END OF THE JOB, ONE (1) ELECTRONIC VERSION OF THE FINAL FIELD COPIES OF ALL TRUSS LAYOUT SHOP DRAWINGS.

1. ALL STRUCTURAL WOOD FRAMING SHALL BE HEM FIR #2 MINIMUM, STRESS GRADE LUMBER, OR APPROVED EQUAL

THE UNADJUSTED MINIMUM ALLOWABLE PROPERTIES ARE AS FOLLOWS:

AS SPECIFIED IN THE GOVERNING BUILDING CODE.

COINCIDE WITH A CONNECTION LINE BETWEEN FLOORS.

ALL STRUCTURAL WOOD FRAMING SHALL BE GRADED AND STAMPED BY AN ACCREDITED GRADING AGENCY IN ACCORDANCE WITH THE ALL CONNECTIONS FOR WOOD MEMBERS NOT SPECIFICALLY NOTED ON DOCUMENTS SHALL NOT BE LESS THAN THE NUMBER AND SIZE OF NAILS

2. ALL WOOD FRAMING AND WOOD FRAMING CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND CODES AS SPECIFIED BELOW:

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION: TIMBER CONSTRUCTION MANUAL NATIONAL FOREST AND PAPER ASSOCIATION/AMERICAN WOOD COUNCIL: NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. AMERICAN WOOD-PRESERVERS ASSOCIATION STANDARDS. NATIONAL LUMBER MANUFACTURERS ASSOCIATION: NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENINGS ALL WOOD FRAMING CONNECTIONS SHALL BE MADE USING PREFABRICATED CONNECTORS. PROVIDE STAINLESS STEEL FASTENERS, ANCHORS AND CONNECTORS WITH TREATED WOOD. TOE-NAILING IS NOT PERMITTED UNLESS NOTED OTHERWISE IN THE GOVERNING BUILDING CODE. SUBMIT MANUFACTURER'S DATA FOR REVIEW. FASTENERS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE OR APPROVED EQUAL. NAIL PLIES OF BUILT-UP HEADERS, BEAMS, AND STUDS/POSTS TOGETHER WITH TWO ROWS OF 10D NAILS AT 12" SPACING, UNLESS NOTED PROVIDE MINIMUM CONTINUOUS SOLID BLOCKING OR CROSS-BRIDGING LINES AT 8'-0" O/C MAXIMUM SPACING FOR ALL WOOD JOISTS. PROVIDE ADDITIONAL X-BRIDGING AS REQUIRED BY FABRICATOR. PROVIDE A MINIMUM OF ONE LINE OF BLOCKING/CROSS BRIDGING FOR ALL SPANS.

PROVIDE PRESSURE TREATED OR WOLMANIZED LUMBER WHERE LUMBER IS IN CONTACT WITH CONCRETE AND/OR GROUTED MASONRY OR IS WOOD ROOF DECK SHALL BE NOMINAL 5/8" DOUGLAS FIR/LARCH T & G LOCK-DECK AS MANUFACTURED BY SHELTON LAM & DECK OR APPROVED THE MINIMUM ALLOWABLE PROPERTIES FOR WOOD DECKING ARE AS FOLLOWS:

PROVIDE STRUCTURAL PLYWOOD SHEATHING OR APPROVED EQUAL AT ALL SIDES OF CORNERS FOR WIND BRACING. CONNECTIONS OF

PLYWOOD SHALL COMPLY WITH APA NAILING REQUIREMENTS FOR PLYWOOD SHEAR WALLS. NO MORE THAN 50% OF WALL SHEATHING JOINTS MAY

ALL JOINTS IN SHEATHING SHALL BE STAGGERED. FOR ROOF SHEATHING, USE PANEL CLIPS, TONGUE & GROOVE, OR LUMBER BLOCKING EDGE SUPPORTS AS RECOMMENDED BY APA. NAILING SHALL COMPLY WITH APA REQUIREMENTS FOR PLYWOOD FLOOR/ROOF DIAPHRAGMS, UNLESS NOTED OTHERWISE ON DRAWINGS

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MARK REVISIONS DATE CONTRACTOR. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE CONSTRUCTION

DO NOT SCALE FROM DRAWINGS.

FILENAME: CHECKED: 06/18/18

CONSTRUCTION SET

GENERAL NOTES

ISSUED FOR CONSTRUCTION

10/26/18