CODE:

INTERNATIONAL RESIDENTIAL CODE 2006

DESIGN LOADS:

1. **ROOF LIVE LOADS** 20 PSF
2. **FLOOR LIVE LOADS** (INT'L RESIDENTIAL CODE–2006, TABLE R301.5)

EXTERIOR BALCONIES	60 PSF	SLEEPING ROOMS	30 PSF
DECKS	40 PSF	OTHER ROOMS	40 PSF
FIRE ESCAPES	40 PSF	ATTIC W/ STORAGE	20 PSF
STAIRS	40 PSF	ATTIC W/O STORAGE	10 PSF
GUARDRAILS & HANDRAILS	200 PSF *	GARAGE	50 PSF

× A SINGLE CONCENTRATED LOAD APPLIED IN ANY DIRECTION @ ANY POINT ALONG THE TOP.

3. **WIND LOADS**

BASIC WIND DESIGN VELOCITY 110 MPH (3–SECOND GUST WIND SPEED)
EXPOSURE: B IMPORTANCE FACTOR: 1

PLAN NOTES

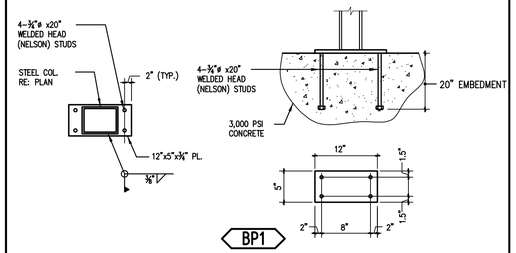
1. DESIGNATES ANCHOR (DEAD) END OF POST–TENSIONING TENDON.
2. DESIGNATES PULL END OF POST–TENSIONING TENDON.
3. DESIGNATES TENDON TO BE PULLED @ BOTH ENDS (DUE TO LENGTH).
4. ALL TENDONS ARE 1/2"ø, 7–WIRE 270K.
   MAX INTIAL PRESTRESS FORCE SHALL BE = 33K (0.8 FPU)
   MAX. ANCHORING FORCE SHALL BE = 28.9K (0.7 FPU)
5. DESIGNATES STEEL OR WOOD COLUMNS.
   RE: S2.01 & ARCH. DWGS. FOR EXACT LOCATION.
6. DESIGNATES SHEAR WALL HOLD–DOWN ANCHOR.
   RE: SHEET S2.01 FOR EXACT LOCATION.
7. RE: SHEET S2.1 FOR FOUNDATION DETAILS.
8. DESIGNATES LOCATION OF FIRST FLOOR WALLS.
9. DESIGNATES STEEL COLUMN & BASE PLATE.
   RE: FRAMING PLAN SHEET S1.2 FOR COL. SIZE &
   SHEET S2.1 FOR TYPICAL BASE PLATE DETAILS.
10. BP1 STEEL COLUMN BASE PLATE
    RE: DETAILS SHT. S2.1

GENERAL NOTES: COORDINATION W/ ARCH. DWGS.

1. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.
2. THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:
   A. ALL DIMENSIONS;
   B. SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
   C. CURBS AND VENEER LEDGES;
   D. CEILING HEIGHTS AND CEILING CONDITIONS;
   E. ROOF GEOMETRY AND SLOPES.

IMPORTANT NOTES ON SITE DRAINAGE:

1. SOILS AT THIS SITE CONTAIN CLAYS, AND VARIATIONS IN MOISTURE CONTENTS WILL PRODUCE VOLUMN CHANGES IN THE SOILS THAT MAY DETRIMENTAL TO THE SATISFACTORY PERFORMANCE OF THE FOUNDATION SYSTEM.
2. SITE DRAINAGE, ESPECIALLY AROUND SLAB EDGES, MUST BE WELL DEVELOPED, SO THAT SURFACE WATER IS POSITIVELY DIRECTED AWAY FROM SLAB EDGES. A MINIMUM OF 5% GRADE SLOPE MUST BE MAINTAINED AT ALL TIMES WITHIN 10 FEET OF ALL SLAB EDGES.
3. LOCALIZED PONDING OF WATER, DUE TO PLANTER BEDS, OR OTHER CAUSES, MUST BE PREVENTED DURING OR AFTER COMPLETION OF CONSTRUCTION, OR LANDSCAPING.
4. BUILDER SHALL ADVICE OWNER OF THESE SITE DRAINAGE REQUIREMENTS.



EMBEDDED BASE PLATE DETAIL

GENERAL NOTES FOR FOUNDATION SYSTEM

SOILS REPORT:

NO SOILS DATA WERE PROVIDED TO ENGINEER. ENGINEER SHALL NOT BE RESPONSIBLE FOR EXISTING SOIL PERFORMANCE UNDER NEW LOADS. BUILDER SHALL FIELD VERIFY EXISTING SOIL CONDITION AND INFORM ENGINEER OF ANY SUCH CONDITIONS THAT MAY BE UNSUITABLE FOR THE DETAILS SHOWN IN THESE DRAWINGS.

1. CONTRACTOR SHALL REVIEW & BECOME THOROUGHLY FAMILIAR W/ THE CONTENTS OF REFERENCED SOILS REPORT, WHICH WILL BE CONSIDERED AN INTEGRAL PART OF THE CONSTRUCTION DOCUMENTS. ANY PROBLEMS ARISING FROM THE CONTRACTOR'S LACK OF FAMILIARITY WITH SOILS REPORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. CONTRACTOR SHALL SHALL VERIFY ALL DIMENSIONS & ELEVATIONS W/ ARCHITECTURAL DRAWING BEFORE FABRICATION.

SUBGRADE PREPARATION AND FILL:

1. STRIP AREAS WITHIN BUILDING LINES TO REMOVE ALL VEGETATION, TOP SOIL AND DEBRIS.
2. FOLLOWING STRIPPING, PROOF ROLL EXPOSED SUBGRADE TO IDENTIFY WEAK OR SOFT AREAS. SUCH ZONES SHALL BE REMOVED AND REPLACED WITH SELECT FILL.
3. GRADE AREA TO PREVENT PONDING OF WATER. DO NOT ALLOW EXPOSED SUBGRADE TO DRY.
4. ALL FILL SHALL BE SELECT MATERIALS FOLLOWS:
   CLEAN SANDY CLAY, FREE OF ORGANIC MATTER
   PLASTICITY INDEX (PI) : 7 TO 20 % LIQUID LIMIT: 28 TO 40 %
5. FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFTS OF 8 INCHES AND COMPACTED TO AT LEAST 95% OF STANDARD PROCTOR (ASTM D698 MAXIMUM DRY DENSITY AT OR 2 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT.
6. **PROVIDE 4–8" LOOSE LIFTS OF COMPACTED FILL (TOTAL COMPACTED FILL THICKNESS = 24") AND 2" LEVELLING SAND. (NOTE THAT EXISTING GRADE MAY HAVE TO BE CUT TO ACHIEVE THE COMPACTED FILL DEPTH SPECIFIED HEREIN.)**
7. TESTING: ALL COMPACTED FILL SHALL BE TESTED BY A CERTIFIED TESTING AGENCY AT THE RATE OF ONE TEST PER 1,000 SQUARE FEET OF EACH LIFT.

HOW TO MINIMIZE CRACKING IN CAST–IN–PLACE CONCRETE SLAB:

1. USE SLUMP LESS THAN 5 INCHES (USE ADMIXTURES TO IMPROVE WORKABILITY AS REQUIRED.)
2. USE AS LARGE A SIZE OF COARSE AGGREGATE AS POSSIBLE IN THE CONCRETE DESIGN MIX.
3. DO NOT PERFORM FINISHING OPERATION WITH WATER PRESENT ON THE SURFACE, OR BEFORE THE CONCRETE HAS COMPLETED BLEEDING.
4. PLACE SAW–CUT JOINTS AS SHOWN IN DRAWINGS, IMMEDIATELY AFTER FINAL SET (AS SOON AS CONCRETE SURFACE CAN BE ACCESSED WITH NO RESULTING DAMAGE.)

IMPORTANT NOTES ON UTILITY TRENCHES:

1. TRENCH BACKFILL FOR UTILITIES SHOULD BE PROPERLY PLACED AND COMPACTED AS OUTLINED IN THE SOILS REPORT AND IN ACCORDANCE WITH REQUIREMENTS OF LOCAL JURISDICTION STANDARDS.
2. GRANULAR BEDDING BACKFILL IS COMMONLY USED FOR MOST UTILITY LINES. IF SO, THE BACKFILLED TRENCH SHOULD BE PREVENTED FROM BECOMING A CONDUIT AND ALLOWING AN ACCESS FOR SURFACE OR SUBSURFACE WATER TO TRAVEL TOWARD AND UNDER THE NEW FOUNDATION & SLAB SYSTEM. CONCRETE CUT–OFF COLLARS OR CLAY PLUGS SHOULD BE PROVIDED WHERE UTILITY LINES CROSS BUILDING LINES TO PREVENT WATER TRAVELING IN THE TRENCH BACKFILL AND ENTERING BENEATH THE STRUCTURES.

CONCRETE:

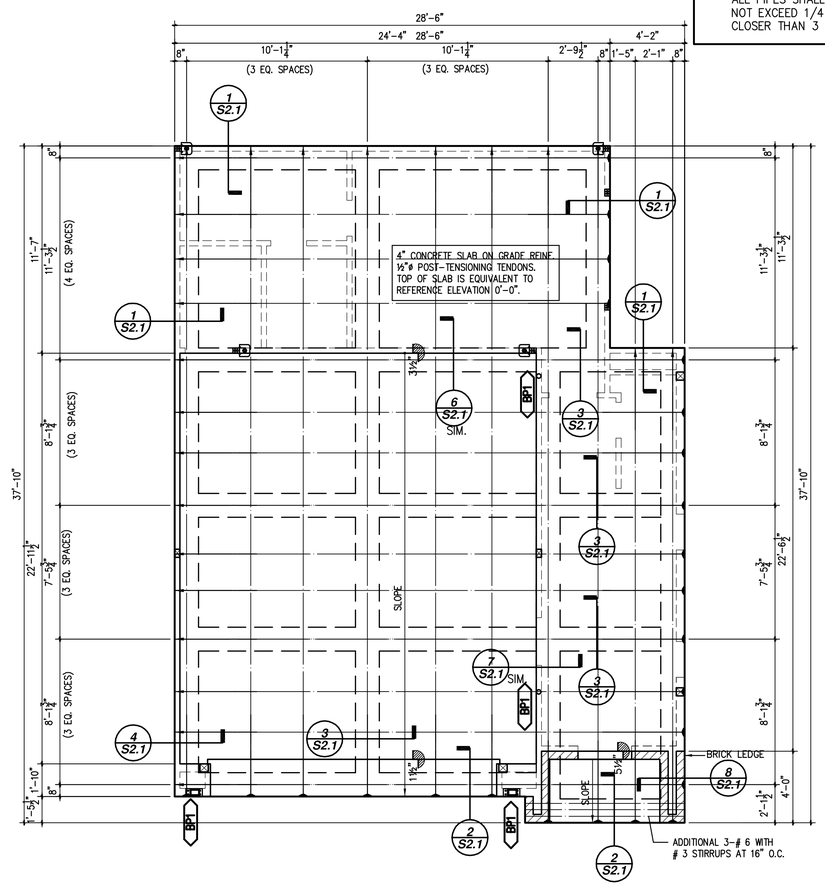
1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE "ACI STANDARD BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE: (ACI 318)".
2. NORMAL WEIGHT CONCRETE (W = 145 PCF) WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH (f'c) = 3000 PSI.
3. CONCRETE SHOULD BE PLACED IN THE FOOTING EXCAVATIONS AS SOON AS POSSIBLE BUT NO LATER THAN THREE HOURS AFTER EXCAVATION TO MINIMIZE THE POSSIBILITY OF CAVING OF DRILLED EXCAVATION WALLS.
4. CLEAN TOPS OF PIERS AND BOTTOM OF GRADE BEAM TRENCHES THOROUGHLY PRIOR TO PLACEMENT OF CONCRETE IN THE GRADE BEAMS.
5. SEE ARCHITECTURAL DRAWINGS FOR FLOOR ELEVATIONS, SLOPES AND THE LOCATION OF FLOOR DEPRESSIONS.

REINFORCING STEEL:

1. BARS – CONFORM TO ASTM A–615–GRADE 60.
2. WELDED WIRE FABRIC – CONFORM TO ASTM A–185 OR A–409, FURNISHED IN FLAT SHEETS AND MUST BE SUPPORTED ON CHAIRS SPACED 4'–0" O.C. MAXIMUM EACH WAY.
3. DETAILING – CONFORM TO ACI DETAILING MANUAL, 315–80.
   REINFORCING STEEL COVERAGE:
   FOOTINGS····· 3" BOTTOM AND SIDES
   GRADE BEAMS····· 1 1/2" TOP, 3" BOTTOM, 2" SIDES (3" SIDES IF EARTH FORMED)
   SLABS ON GRADE·· 1 1/4" TOP
   WALLS····· 1 1/2"
4. LAP CONTINUOUS REINFORCING STEEL 36 BAR DIAMETERS.
5. SLAB REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS, @ A 4'–0" MAXIMUM SQUARE GRID.
6. GRADE BEAM BOTTOM REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS @ 6'–0" MAXIMUM SPACING.

PIPING PENETRATIONS:

1. ALL PIPING PENETRATIONS THROUGH EXTERIOR GRADE BEAMS SHALL BE SLEEVED WITH SCHEDULE 40 PIPE. SLEEVE SHALL BE 2 SIZES LARGE THAN PENETRATING PIPE. ALL PIPES SHALL BE LOCATED AT MID DEPTH OF GRADE BEAM. SLEEVE DIAMETER SHALL NOT EXCEED 1/4 OVERALL DEPTH OF GRADE BEAM. SPACING OF SLEEVES SHALL NOT BE CLOSER THAN 3 DIAMETERS ON CENTER.



FOUNDATION PLAN

GENERAL NOTES: POST TENSIONING

MATERIAL & EQUIPMENT:

1. TENDONS SHALL BE 1/2"ø, 7–WIRE, 270K STRAND, GREASED, W/ PLASTIC SHEATHING, CONFORMING TO "POST TENSIONING INSTITUTE (PTI) "GUIDE SPECIFICATIONS FOR POST TENSIONING MATERIAL". STRAND SHALL BE IN ACCORDANCE W/ ASTM A416.
2. TENDON SUPPLIER SHALL SHOW (GRAPHICALLY AT HIS OPTION) FINAL MINIMUM ELONGATION REQUIRED FOR EACH TENDON TO PROVIDE THE SPECIFIED FORCES, AND SHALL VERIFY THAT THE ELONGATION IS ATTAINABLE, CONSIDERING FRICTION & SEATING LOSS CHARACTERISTICS OF HIS MATERIAL.
3. TENDON SUPPORTS:
   A. MAXIMUM SPACING IN BOTH DIRECTIONS SHALL BE AS FOLLOWS:
      1/2"ø STRAND : 4'6" O.C.
      3/8"ø STRAND : 3'0" O.C.
   B. SUPPORTS SHALL BE DESIGNED NOT TO PENETRATE THE WATERPROOFING MEMBRANE DURING REINFORCEMENT OR CONCRETE PLACEMENT.
4. JACKS USED FOR STRESSING SHALL BE ACCOMPANIED BY CALIBRATION SHEETS CORRELATING HYDRAULIC PRESSURE TO TENDON FORCE.

INSTALLATION:

1. TENDON PLACEMENT TOLERANCES
   A. VERTICAL IN SLABS: (±) 1/2"
   B. VERTICAL & HORIZONTAL IN BEAMS: (±) 1/2"
   C. MAXIMUM HORIZONTAL TRANSITION IN SLAB: 12" (MAY BE REQUIRED TO AVOID PLUMBING LINES OR OTHER OBSTRUCTIONS. OBTAIN ENGINEER'S APPROVAL FOR LARGER TRANSITIONS.)
   D. MINIMUM RADIUS OF CURVATURE TO ACHIEVE VERTICAL OR HORIZONTAL TRANSITION
      1/2"ø STRAND = 60"
      3/8"ø STRAND = 80"
2. ANCHORAGE
   A. ALL DEAD–END & STRESSING–END ANCHORAGE LOCATIONS SHALL BE MARKED ON THE FORMS.
   B. HOLES SHALL BE DRILLED IN THE FORMS FOR STRAND & ANCHOR ASSEMBLY, AT STRESSING–END LOCATIONS.
   C. CONCRETE MUST BE CAREFULLY RODDED BEHIND ANCHORAGES (PARTICULARLY AT CONGESTED SLAB CORNERS) TO ACHIEVE ADEQUATE CONCRETE BEARING.
3. CONCRETE COVERAGE
   MINIMUM CONCRETE CLEAR COVER DIMENSIONS:
   A. BEAMS – BOTTOM: 3"; TOP: 2"; SIDES: 2"
   B. SLABS – BOTTOM: 1 1/2"; TOP: 1"
4. TENDON INSTALLATION
   A. ALL INTERSECTIONS BETWEEN TENDONS SHALL BE SECURED TO PREVENT MOVEMENT DURING CONCRETE PAVEMENT.
   B. ALL POST–TENSIONING & CONVENTIONAL REINFORCEMENT SHALL BE SECURED AND SUPPORTED TO MAINTAIN SPECIFIED TOLERANCES.
   C. WHERE TENDONS ARE DRAPED INTO THE BOTTOM OF BEAM, TOTAL DRAPE SHALL BE ACHIEVED WITHIN A HORIZONTAL DISTANCE NOT TO EXCEED TWO TIMES BEAM DEPTH.
   D. ALL BREAKS IN POST–TENSIONING SHEATHING MATERIAL SHALL BE REPAIRED WITH ADEQUATELY ADHERING TAPE PRIOR TO CONCRETE PLACEMENT.
   E. PLASTIC SHEATHING SHALL BE STRIPPED A MAXIMUM OF 6" BEHIND LINE END ANCHOR ASSEMBLY.
   F. TENDON SHEATHING & ANCHORAGE DEVICE INTERSECTION SHALL BE TAPED OR OTHERWISE PROTECTED TO PREVENT GROUT ENTRANCE INTO WEDGE HOLES DURING CONCRETING. AVOID EXCESSIVE TAPING THAT WOULD COMPROMISE POSITIVE ANCHORAGE BEARING ON CONCRETE. ANCHORS WITH POCKET FORMERS SHALL BE SECURELY FASTENED TO FORM BOARDS AND FIXED ANCHORS SHALL BE ATTACHED WITH 3/4" CLEARANCE FROM FORM BOARD.
   G. TENDONS IN EXCESS OF 100 FEET IN LENGTH SHALL BE STRESSED FROM BOTH ENDS.
5. CONCRETE PLACEMENT
   A. PLACEMENT & CURING SHALL CONFORM TO ACI 302 "RECOMMENDED PRACTICES FOR CONCRETE FLOOR & SLAB CONSTRUCTION."
   B. MAXIMUM SPACING OF CONCRUCTION JOINTS IS 100 FEET.
   C. CONCRETE MUST BE WELL CONSOLIDATED IN THE ANCHORAGE ZONES, PARTICULARLY AT CONGESTED SLAB CORNERS. EXTREME CARE MUST BE TAKEN TO PREVENT THE ENTRANCE OF CONCRETE PASTE (GROUT) INTO THE ANCHORAGE DEVICE.
   D. FORMS MAY BE REMOVED 24 HOURS AFTER CONCRETE PLACEMENT. NO HEAVY CONSTRUCTION LOADS MAY BE PLACED ON THE CONCRETE UNTIL AFTER STRESSING IS COMPLETED.
   E. CONCRETE AD MIXTURES SHALL NOT CONTAIN ANY CHEMICALS THAT MAY HAVE A HARMFUL EFFECT ON THE PRESTRESSING STEEL. CHLORIDE, SULPHATE, AND NITRATE SHALL NOT BE USED.
6. STRESSING
   A. STRESSING IS NOT PERMITTED UNTIL CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF 2,000 PSI (NORMALLY 10 DAYS AFTER PLACEMENT, UNLESS NON–CORROSIVE ACCELERATING ADMIXTURES ARE USED).
   B. PARTIAL STRESSING FOR SHRINKAGE CONTROL MAY BE APPLIED WITH ENGINEER'S PRIOR APPROVAL.
   C. PROJECTING ENDS OF STRANDS MAY BE BURNED OFF ONLY AFTER STRESSING HAS BEEN PROPERLY COMPLETED AND APPROVED BY OWNER'S REPRESENTATIVE. CLEARANCE FROM END OF STRAND TO EDGE OF CONCRETE SHALL BE APPROXIMATELY 1".
   D. STRESSING POCKETS SHALL BE GROUTED WITHIN SEVEN (7) DAYS OF FINAL STRESSING OPERATION.

NOTES ON PRESSURE–TREATED LUMBER:

1. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, OR EXPOSED TO WEATHER OR MOISTURE (SUCH AS PORCH & BALCONY FRAMING) SHALL BE PRESSURE–TREATED.
2. CURRENTLY, THE PRODUCT COMMONLY USED FOR PRESSURE TREATMENT IS ALKALINE COPPER QUATERNARY (ACQ). THIS MATERIAL IS EXTREMELY CORROSIVE. ONLY HOT–DIPPED GALVANIZED ANCHOR BOLTS, THRU BOLTS, NAILS, OR OTHER CORROSIVE–RESISTANT FASTENERS, SHALL BE USED WITH ACQ–TREATED LUMBER. FASTENER MANUFACTURER OR SUPPLIER SHALL BE CONSULTED ON THE SUITABILITY OF GALVANIZED FASTENER FOR USE WITH TREATED LUMBER.

STATE OF TEXAS
JAMEEL Z. HATTAB
65294
LICENSED
PROFESSIONAL ENGINEER
06/16/14

12" 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A
HOUSTON, TEXAS

JOB NO.
09055.119A

ISSUE
05/26/14

DRAWING NO.
S–1.1 OF 7

CODE:

INTERNATIONAL RESIDENTIAL CODE 2006

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EXPOSURE: B IMPORTANCE FACTOR: 1

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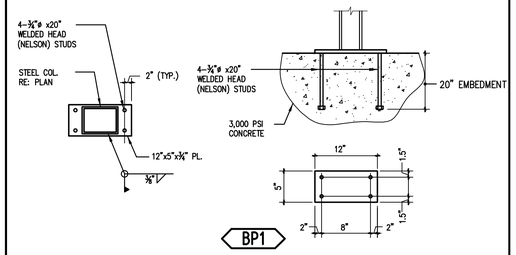

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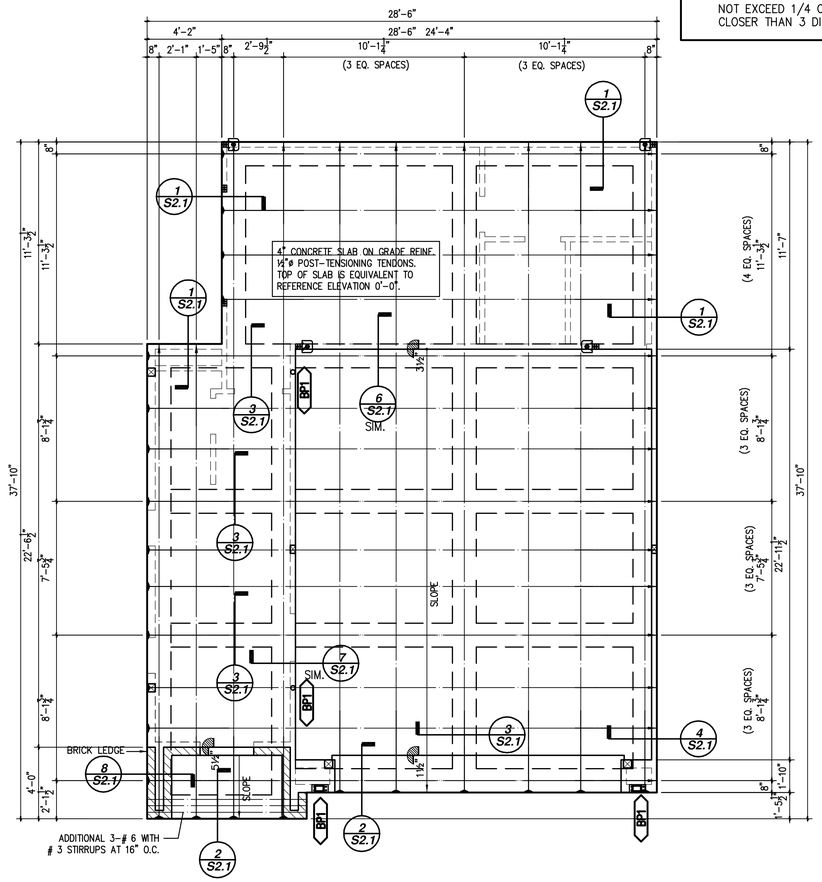
6. GRADE BEAM BOTTOM REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS @ 6'–0" MAXIMUM SPACING.

PIPING PENETRATIONS:

1. ALL PIPING PENETRATIONS THROUGH EXTERIOR GRADE BEAMS SHALL BE SLEEVED WITH SCHEDULE 40 PIPE. SLEEVE SHALL BE 2 SIZES LARGE THAN PENETRATING PIPE. ALL PIPES SHALL BE LOCATED AT MID DEPTH OF GRADE BEAM. SLEEVE DIAMETER SHALL NOT EXCEED 1/4 OVERALL DEPTH OF GRADE BEAM. SPACING OF SLEEVES SHALL NOT BE CLOSER THAN 3 DIAMETERS ON CENTER.



FOUNDATION PLAN

GENERAL NOTES: POST TENSIONING

MATERIAL & EQUIPMENT:

1. TENDONS SHALL BE 1/2"ø, 7–WIRE, 270K STRAND, GREASED, W/ PLASTIC SHEATHING, CONFORMING TO "POST TENSIONING INSTITUTE (PTI) "GUIDE SPECIFICATIONS FOR POST TENSIONING MATERIAL". STRAND SHALL BE IN ACCORDANCE W/ ASTM A416.
2. TENDON SUPPLIER SHALL SHOW (GRAPHICALLY AT HIS OPTION) FINAL MINIMUM ELONGATION REQUIRED FOR EACH TENDON TO PROVIDE THE SPECIFIED FORCES, AND SHALL VERIFY THAT THE ELONGATION IS ATTAINABLE, CONSIDERING FRICTION & SEATING LOSS CHARACTERISTICS OF HIS MATERIAL.
3. TENDON SUPPORTS:
   A. MAXIMUM SPACING IN BOTH DIRECTIONS SHALL BE AS FOLLOWS:
      1/2"ø STRAND : 4'6" O.C.
      3/8"ø STRAND : 3'0" O.C.
   B. SUPPORTS SHALL BE DESIGNED NOT TO PENETRATE THE WATERPROOFING MEMBRANE DURING REINFORCEMENT OR CONCRETE PLACEMENT.
4. JACKS USED FOR STRESSING SHALL BE ACCOMPANIED BY CALIBRATION SHEETS CORRELATING HYDRAULIC PRESSURE TO TENDON FORCE.

INSTALLATION:

1. TENDON PLACEMENT TOLERANCES
   A. VERTICAL IN SLABS: (±) 1/2"
   B. VERTICAL & HORIZONTAL IN BEAMS: (±) 1/2"
   C. MAXIMUM HORIZONTAL TRANSITION IN SLAB: 12" (MAY BE REQUIRED TO AVOID PLUMBING LINES OR OTHER OBSTRUCTIONS. OBTAIN ENGINEER'S APPROVAL FOR LARGER TRANSITIONS.)
   D. MINIMUM RADIUS OF CURVATURE TO ACHIEVE VERTICAL OR HORIZONTAL TRANSITION
      1/2"ø STRAND = 60"
      3/8"ø STRAND = 80"
2. ANCHORAGE
   A. ALL DEAD–END & STRESSING–END ANCHORAGE LOCATIONS SHALL BE MARKED ON THE FORMS.
   B. HOLES SHALL BE DRILLED IN THE FORMS FOR STRAND & ANCHOR ASSEMBLY, AT STRESSING–END LOCATIONS.
   C. CONCRETE MUST BE CAREFULLY RODDED BEHIND ANCHORAGES (PARTICULARLY AT CONGESTED SLAB CORNERS) TO ACHIEVE ADEQUATE CONCRETE BEARING.
3. CONCRETE COVERAGE
   MINIMUM CONCRETE CLEAR COVER DIMENSIONS:
   A. BEAMS – BOTTOM: 3"; TOP: 2"; SIDES: 2"
   B. SLABS – BOTTOM: 1 1/2"; TOP: 1"
4. TENDON INSTALLATION
   A. ALL INTERSECTIONS BETWEEN TENDONS SHALL BE SECURED TO PREVENT MOVEMENT DURING CONCRETE PAVEMENT.
   B. ALL POST–TENSIONING & CONVENTIONAL REINFORCEMENT SHALL BE SECURED AND SUPPORTED TO MAINTAIN SPECIFIED TOLERANCES.
   C. WHERE TENDONS ARE DRAPED INTO THE BOTTOM OF BEAM, TOTAL DRAPE SHALL BE ACHIEVED WITHIN A HORIZONTAL DISTANCE NOT TO EXCEED TWO TIMES BEAM DEPTH.
   D. ALL BREAKS IN POST–TENSIONING SHEATHING MATERIAL SHALL BE REPAIRED WITH ADEQUATELY ADHERING TAPE PRIOR TO CONCRETE PLACEMENT.
   E. PLASTIC SHEATHING SHALL BE STRIPPED A MAXIMUM OF 6" BEHIND LINE END ANCHOR ASSEMBLY.
   F. TENDON SHEATHING & ANCHORAGE DEVICE INTERSECTION SHALL BE TAPED OR OTHERWISE PROTECTED TO PREVENT GROUT ENTRANCE INTO WEDGE HOLES DURING CONCRETING. AVOID EXCESSIVE TAPING THAT WOULD COMPROMISE POSITIVE ANCHORAGE BEARING ON CONCRETE. ANCHORS WITH POCKET FORMERS SHALL BE SECURELY FASTENED TO FORM BOARDS AND FIXED ANCHORS SHALL BE ATTACHED WITH 3/4" CLEARANCE FROM FORM BOARD.
   G. TENDONS IN EXCESS OF 100 FEET IN LENGTH SHALL BE STRESSED FROM BOTH ENDS.
5. CONCRETE PLACEMENT
   A. PLACEMENT & CURING SHALL CONFORM TO ACI 302 "RECOMMENDED PRACTICES FOR CONCRETE FLOOR & SLAB CONSTRUCTION."
   B. MAXIMUM SPACING OF CONCRUCTION JOINTS IS 100 FEET.
   C. CONCRETE MUST BE WELL CONSOLIDATED IN THE ANCHORAGE ZONES, PARTICULARLY AT CONGESTED SLAB CORNERS. EXTREME CARE MUST BE TAKEN TO PREVENT THE ENTRANCE OF CONCRETE PASTE (GROUT) INTO THE ANCHORAGE DEVICE.
   D. FORMS MAY BE REMOVED 24 HOURS AFTER CONCRETE PLACEMENT. NO HEAVY CONSTRUCTION LOADS MAY BE PLACED ON THE CONCRETE UNTIL AFTER STRESSING IS COMPLETED.
   E. CONCRETE AD MIXTURES SHALL NOT CONTAIN ANY CHEMICALS THAT MAY HAVE A HARMFUL EFFECT ON THE PRESTRESSING STEEL. CHLORIDE, SULPHATE, AND NITRATE SHALL NOT BE USED.
6. STRESSING
   A. STRESSING IS NOT PERMITTED UNTIL CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF 2,000 PSI (NORMALLY 10 DAYS AFTER PLACEMENT, UNLESS NON–CORROSIVE ACCELERATING ADMIXTURES ARE USED).
   B. PARTIAL STRESSING FOR SHRINKAGE CONTROL MAY BE APPLIED WITH ENGINEER'S PRIOR APPROVAL.
   C. PROJECTING ENDS OF STRANDS MAY BE BURNED OFF ONLY AFTER STRESSING HAS BEEN PROPERLY COMPLETED AND APPROVED BY OWNER'S REPRESENTATIVE. CLEARANCE FROM END OF STRAND TO EDGE OF CONCRETE SHALL BE APPROXIMATELY 1".
   D. STRESSING POCKETS SHALL BE GROUTED WITHIN SEVEN (7) DAYS OF FINAL STRESSING OPERATION.

NOTES ON PRESSURE–TREATED LUMBER:

1. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE, OR EXPOSED TO WEATHER OR MOISTURE (SUCH AS PORCH & BALCONY FRAMING) SHALL BE PRESSURE–TREATED.
2. CURRENTLY, THE PRODUCT COMMONLY USED FOR PRESSURE TREATMENT IS ALKALINE COPPER QUATERNARY (ACQ). THIS MATERIAL IS EXTREMELY CORROSIVE. ONLY HOT–DIPPED GALVANIZED ANCHOR BOLTS, THRU BOLTS, NAILS, OR OTHER CORROSIVE–RESISTANT FASTENERS, SHALL BE USED WITH ACQ–TREATED LUMBER. FASTENER MANUFACTURER OR SUPPLIER SHALL BE CONSULTED ON THE SUITABILITY OF GALVANIZED FASTENER FOR USE WITH TREATED LUMBER.

J. Hattab
STATE OF TEXAS
JAMEEL Z. HATTAB
85294
LICENSED
PROFESSIONAL ENGINEER
06/16/14

12" 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A-FLIP
HOUSTON, TEXAS

JOB NO. 09055.119AF
ISSUE 05/26/14
DRAWING NO. S–1.1 OF 7

FRAMING LEGEND

JOISTS

- J616 — 2x6 @ 16" O.C.
- J816 — 2x8 @ 16" O.C.
- J1016 — 2x10 @ 16" O.C.
- J2016 — 2-2x10 @ 16" O.C.
- J1216 — 2x12 @ 16" O.C.
- J2216 — 2-2x12 @ 16" O.C.
- J1212 — 2x12 @ 12" O.C.
- J2212 — 2-2x12 @ 12" O.C.

BEAM (BEAM JOIST)

- BJ208 — 2- 2x8
- BJ308 — 3- 2x8
- BJ210 — 2- 2x10
- BJ310 — 3- 2x10
- BJ212 — 2- 2x12
- BJ312 — 3- 2x12

MEMBER DESCRIPTION

- DB — DROP BEAM
- FB — FLUSH BEAM
- CNT — CANTILEVERED JOIST OR BEAM
- RSB — ROOF SUPPORTING BEAM
- UWA — UNDER WALL ABOVE
- UCA — UNDER COLUMN ABOVE
- TOP FB — TOP FLUSH BEAM

BEAM 2.0E PARALLAM BEAM (PSL) OR EQUAL

- BP309 — 3½"x9¼" PSL
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- BP714 — 7"x14" PSL
- BP716 — 7"x16" PSL
- BP718 — 7"x18" PSL

COLUMNS (STEEL COLUMNS)

- TS64 — TS 6"x4"x¼" STEEL TUBE
- STD3 — 3" STANDARD STEEL PIPE

MISCELLANEOUS

- BP1 — BASE PLATE RE: SHEET S2.1 FOR DETAILS
- MC1 — MOMENT CONNECTION RE: SHEET S2.3 FOR DETAILS
- W14x26 — 14x26 STEEL BEAM

COLUMNS (WOOD COLUMNS)

- C22x4 — 2-2x4 STUDS
- C32x4 — 3-2x4 STUDS
- C42x4 — 4-2x4 STUDS
- C22x6 — 2-2x6 STUDS
- C32x6 — 3-2x6 STUDS
- C42x6 — 4-2x6 STUDS
- WP44 — 4x4 WOOD POST
- WP46 — 4x6 WOOD POST
- WP66 — 6x6 WOOD POST
- WP88 — 8x8 WOOD POST

CONNECTORS

(SIMPSON STRONG-TIE OR EQUAL)

- BH1 — (HU 212(MAX)) BEAM HANGER
- BH2 — (HUC 212(MAX)) BEAM HANGER (CONCEALED FLANGE)
- BH3 — (LGU3.63-SDS) BEAM HANGER
- BH4 — (MGU5.50-SDS) BEAM HANGER
- BH5 — (HGU7.25-SDS) BEAM HANGER
- BH6 — (MGU3.63-SDS) BEAM HANGER
- BH7 — (HHGU5.50-SDS) BEAM HANGER
- BH8 — (HHGU7.25-SDS) BEAM HANGER
- BH9 — (HGLT) BEAM HANGER (OFFSET)
- BH10 — (HGLT) BEAM HANGER (OFFSET)
- STR1 — (H6) STWIST STRAP
- STR2 — (MSTA 24) STRAP
- WPC — (PC/EPC) WOOD POST CAP
- WPB — (ABU) WOOD POST BASE

IMPORTANT NOTE 1:

ALL EXTERIOR WALL SHALL BE SHEATED WITH ½" PLYWOOD OR OSB.

PLYWOOD SHEATHING BETWEEN FLOOR SHALL BE STRATTLED ACROSS THE FLOOR (RE: SHEET FRAMING DETAIL)

IMPORTANT NOTE 2:

ALL FIRST FLOOR LOAD BEARING WALLS SHALL BE 2x6 OR 2-2x4 @ 16" O.C. (U.O.N.)
(PROVIDE SOLID BLOCKING @ EVERY 4'-0")

IMPORTANT NOTE 3:

ALL WALLS AT 2-STORY OPEN AREA SHALL BE 2-2x6 BALLOON FRAME.

NOTES ON PRESSURE-TREATED LUMBER:

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KEYED PLAN NOTES

1. NON-LOAD BEARING WALLS (CONSTRUCT WALL AFTER INSTALLATION OF THE TRUSSES)
2. EXTEND TRUSSES TO EDGE OF FLOOR ABOVE.
3. BUILD-UP FLOOR AT ALL CROSS HATCHED AREA.
4. PROVIDE H2.5A SIMPSON STRAP AT EVERY JOISTS TO BEAM BELOW.
5. DROP TRUSSES AT BALCONY

GENERAL NOTES: PREFABRICATED WOOD FRAMING:

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWSE ON PLANS AND DETAILS.)

1. PREFABRICATED WOOD FRAMING MEMBERS INCLUDE WOOD TRUSSES, TRUSS-JOISTS, I-JOISTS OR OTHER SIMILAR PRODUCTS GENERALLY USED IN LIEU OF SOLID WOOD JOISTS.
2. DESIGN LOADS:
   ROOF LIVE LOAD = 20 PSF BALCONY LIVE LOAD = 60 PSF
   FLOOR LIVE LOAD = 40 PSF
3. TRUSSES MEMBERS SHALL BE DESIGNED AND DETAILED BY MANUFACTURER, UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER.
4. TRUSS MANUFACTURER AND/OR SUPPLIER MAY CHOOSE ENGINEERED LUMBER BEAMS IN LIEU OF TRUSSES UNDER LOAD-BEARING WALLS, OR OTHER LOCATIONS. IN THIS CASE, BEAM DESIGN SHALL BE BY TRUSS MANUFACTURER, WHO SHALL ALSO SPECIFY REQUIRED COLUMNS UNDER THESE BEAMS (RE: SCHEDULE ON SHEET S2.2).
5. TEMPORARY AND PERMANENT LATERAL BRACING OF ALL PREFABRICATED WOOD MEMBERS SHALL BE DESIGNED AND DETAILED BY MANUFACTURER.
   (NOTE: THIS REQUIREMENT IS PARTICULAR IMPORTANT FOR DEEP TRUSSED MEMBER.)
6. KEEP ALL PREFABRICATED WOOD MEMBERS ABSOLUTELY DRY & PROVIDE TEMPORARY SHORING WHERE SHEETROCK & OTHER HEAVY CONSTRUCTION MATERIALS ARE BEING TEMPORARILY STORED.
7. ALL FRAMING AT BALCONY SHALL BE PRESSURE TREATED LUMBER.

IMPORTANT NOTE ON TEMPORARY & PERMANET BRACING:

THE FRAMING SYSTEM DETAILED AND SPECIFIED IN THESE DRAWINGS WILL PERFORM ITS INTENDED FUNCTION ONLY WHEN COMPLETE AND ALL ITS COMPONENTS ARE IN PLACE.

UNTIL COMPLETED, THE FRAMING SYSTEM OR PORTIONS THEREOF, MAY BE UNSTABLE OR EVEN UNSAFE UNDER CONSTRUCTION-RELATED LOADS, OR EXTERNAL FORCES (SUCH AS WIND), UNLESS THE SYSTEM IS ADEQUATELY BRACED AND/OR SHORED.

THE INSTALLATION OF SUFFICIENT TEMPORARY & PERMANENT BRACING AND SHORING THROUGHOUT CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR BUILDER.

PLAN NOTES

1. ALL CEILING JOISTS SHALL BE #3 S.Y.P. (U.O.N.)
2. ALL FLOOR JOISTS SHALL BE #2 S.Y.P. (U.O.N.)
3. ALL BEAMS & HEADERS SHALL BE #2 S.Y.P. (U.O.N.)
4. ALL CEILING BEAMS & HEADERS SHALLS BE 2-2x12 (U.O.N.)
5. ALL FLOOR BEAMS & HEADERS SHALL BE 2-2x12 (U.O.N.)
6. ALL WINDOWS & DOOR HEADERS ARE DROP BEAMS (U.O.N.)
7. TRUSS SUPPLIER MAY CHOOSE PARALLAM OR GLU-LAM BEAMS INSTEAD OF TRUSSES UNDER SOME LOAD BEARING WALLS. IN THIS CASE, BEAM DESIGN SHALL BE BY TRUSS MANUFACTURER, WHO SHALL ALSO DESIGNATE REQUIRED COLUMNS UNDER THESE BEAMS. (RE: COLUMN SCHEDULE ON SHEET S2.3).
8. ALL COLUMNS FROM FLOOR ABOVE MUST BE EITHER:
   A. SUPPORTED ON A BEAM @ THIS LEVEL.
   B. CONTINUED TO SLAB BELOW. (MATCH SIZES)
9. RE: SHEET S2.2 & S2.3 FOR ALL FRAMING NOTES, DETAILS, AND SCHEDULES.

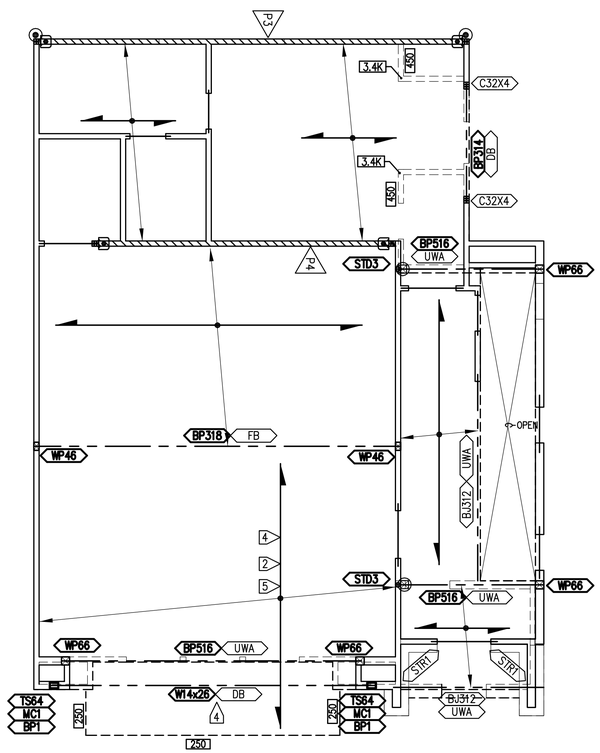
PLAN LEGEND

1. DESIGNATES LOCATION OF FLOOR WALLS BELOW
2. DESIGNATES DIRECTION OF FLOOR TRUSSES. IF ACTUAL DIRECTION DIFFERS, ENGINEER SHALL BE NOTIFIED BY TRUSS MANUFACTURER. **DEPTH OF TRUSS = 20" (U.O.N.)**
3. 150 — DESIGNATES LOADS ON FLOOR TRUSSES IMPOSED BY BEARING WALLS ABOVE IN ADDITION TO FLOOR LOADS (IN POUNDS PER LINEAR FOOT OF WALL LENGTH). **WHERE NOT SHOWN, USE 150 PLF.**
4. 1.7K — DESIGNATES CONCENTRATED LOADS IMPOSED ON FLOOR TRUSSES BY SECOND FLOOR CEILING BEAMS (IN KIPS).
5. DESIGNATES SHEAR WALL
6. X-BRACE — DESIGNATES X-BRACING (RE: SHEET S2.04 FOR DETAILS)
7. P1 — DESIGNATES SHEAR WALL TYPE. RE: SCHEDULE, NOTES, AND DETAILS ON SHEET S6-S7
8. DESIGNATES SHEAR WALL HOLD-DOWN ANCHOR OR STRAP.
9. DESIGNATES SHEAR WALL STRAP ANCHOR FROM FLOOR ABOVE.
10. DESIGNATES BEAM HANGER, IF NOT IDENTIFIED ON PLAN, USE TYPICAL HANGERS SPECIFIED IN GENERAL NOTES.
11. DESIGNATE STEEL OR WOOD COLUMNS.
12. DESIGNATE COL. FROM FLR. ABOVE.
    ALL COLUMNS FROM FLOOR ABOVE MUST BE EITHER:
    A. SUPPORTED ON A BEAM @ THIS LEVEL.
    B. CONTINUED TO SLAB BELOW. (MATCH SIZES)

14.. TRUSS MANUFACTURER SELECTION BY BUILDER.

GENERAL NOTES: COORDINATION W/ ARCH. DWGS.

1. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY PRIOR TO CONSTRUCTION, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS. DESCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER, PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.
2. THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:
   A. ALL DIMENSIONS;
   B. SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
   C. CURBS AND VENEER LEDGES;
   D. CEILING HEIGHTS AND CEILING CONDITIONS;
   E. ROOF GEOMETRY AND SLOPES.
3. IT'S THE OWNER'S RESPONSIBILITY TO HIRE A REPUTABLE CONTRACTOR WHO CAN COORDINATE BETWEEN ARCHITECTURAL & STRUCTURAL DRAWINGS FOR ACCURACY



FIRST FLOOR CEILING FRAMING PLAN

SCALE: 1/4"= 1'-0" (CEILING HEIGHT = 9'-1" U.O.N.)

STATE OF TEXAS
JAMEEL Z. HATTAB
85294
LICENSED
PROFESSIONAL ENGINEER
06/16/14

12" 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A
HOUSTON, TEXAS

JOB NO. 09055.119A
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DRAWING NO. S-1.2 OF 7

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3. BUILD-UP FLOOR AT ALL CROSS HATCHED AREA.
4. PROVIDE MSTC48 SIMPSON STRAP @ EACH SIDE.

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IMPORTANT NOTE ON TEMPORARY & PERMANET BRACING:

THE FRAMING SYSTEM DETAILED AND SPECIFIED IN THESE DRAWINGS WILL PERFORM ITS INTENDED FUNCTION ONLY WHEN COMPLETE AND ALL ITS COMPONENTS ARE IN PLACE.

UNTIL COMPLETED, THE FRAMING SYSTEM OR PORTIONS THEREOF, MAY BE UNSTABLE OR EVEN UNSAFE UNDER CONSTRUCTION-RELATED LOADS, OR EXTERNAL FORCES (SUCH AS WIND), UNLESS THE SYSTEM IS ADEQUATELY BRACED AND/OR SHORED.

THE INSTALLATION OF SUFFICIENT TEMPORARY & PERMANENT BRACING AND SHORING THROUGHOUT CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR BUILDER.

PLAN NOTES

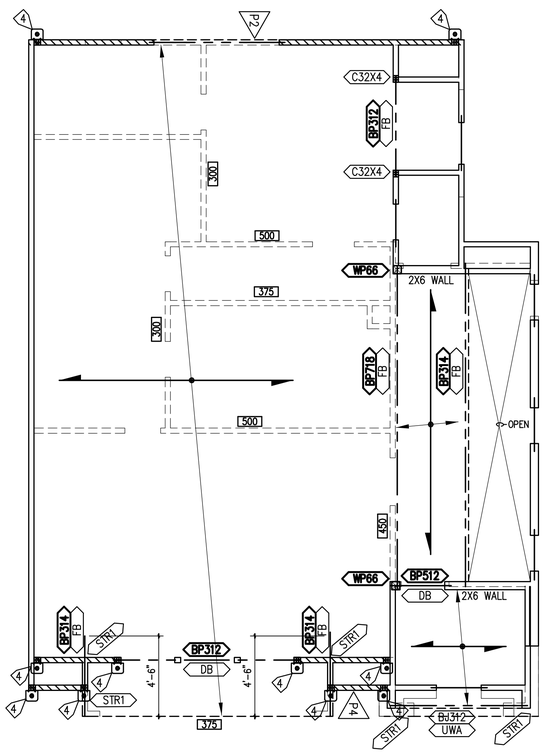
1. ALL CEILING JOISTS SHALL BE #3 S.Y.P. (U.O.N.)
2. ALL FLOOR JOISTS SHALL BE #2 S.Y.P. (U.O.N.)
3. ALL BEAMS & HEADERS SHALL BE #2 S.Y.P. (U.O.N.)
4. ALL CEILING BEAMS & HEADERS SHALLS BE 2-2x12 (U.O.N.)
5. ALL FLOOR BEAMS & HEADERS SHALL BE 2-2x12 (U.O.N.)
6. ALL WINDOWS & DOOR HEADERS ARE DROP BEAMS (U.O.N.)
7. TRUSS SUPPLIER MAY CHOOSE PARALLAM OR GLU-LAM BEAMS INSTEAD OF TRUSSES UNDER SOME LOAD BEARING WALLS. IN THIS CASE, BEAM DESIGN SHALL BE BY TRUSS MANUFACTURER, WHO SHALL ALSO DESIGNATE REQUIRED COLUMNS UNDER THESE BEAMS. (RE: COLUMN SCHEDULE ON SHEET S2.3).
8. ALL COLUMNS FROM FLOOR ABOVE MUST BE EITHER:
   A. SUPPORTED ON A BEAM @ THIS LEVEL.
   B. CONTINUED TO SLAB BELOW. (MATCH SIZES)
9. RE: SHEET S2.2 & S2.3 FOR ALL FRAMING NOTES, DETAILS, AND SCHEDULES.

PLAN LEGEND

1. DESIGNATES LOCATION OF FLOOR WALLS BELOW
2. DESIGNATES DIRECTION OF FLOOR TRUSSES. IF ACTUAL DIRECTION DIFFERS, ENGINEER SHALL BE NOTIFIED BY TRUSS MANUFACTURER. **DEPTH OF TRUSS = 20" (U.O.N.)**
3. 150 — DESIGNATES LOADS ON FLOOR TRUSSES IMPOSED BY BEARING WALLS ABOVE IN ADDITION TO FLOOR LOADS (IN POUNDS PER LINEAR FOOT OF WALL LENGTH). **WHERE NOT SHOWN, USE 150 PLF.**
4. 1.7K — DESIGNATES CONCENTRATED LOADS IMPOSED ON FLOOR TRUSSES BY SECOND FLOOR CEILING BEAMS (IN KIPS).
5. DESIGNATES SHEAR WALL
6. X-BRACE — DESIGNATES X-BRACING (RE: SHEET S2.04 FOR DETAILS)
7. P1 — DESIGNATES SHEAR WALL TYPE. RE: SCHEDULE, NOTES, AND DETAILS ON SHEET S6-S7
8. DESIGNATES SHEAR WALL HOLD-DOWN ANCHOR OR STRAP.
9. DESIGNATES SHEAR WALL STRAP ANCHOR FROM FLOOR ABOVE.
10. DESIGNATES BEAM HANGER, IF NOT IDENTIFIED ON PLAN, USE TYPICAL HANGERS SPECIFIED IN GENERAL NOTES.
11. DESIGNATE STEEL OR WOOD COLUMNS.
12. DESIGNATE COL. FROM FLR. ABOVE.
    ALL COLUMNS FROM FLOOR ABOVE MUST BE EITHER:
    A. SUPPORTED ON A BEAM @ THIS LEVEL.
    B. CONTINUED TO SLAB BELOW. (MATCH SIZES)
14.. TRUSS MANUFACTURER SELECTION BY BUILDER.

GENERAL NOTES: COORDINATION W/ ARCH. DWGS.

1. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY PRIOR TO CONSTRUCTION, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS. DESCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER, PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.
2. THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:
   A. ALL DIMENSIONS;
   B. SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
   C. CURBS AND VENEER LEDGES;
   D. CEILING HEIGHTS AND CEILING CONDITIONS;
   E. ROOF GEOMETRY AND SLOPES.
3. IT'S THE OWNER'S RESPONSIBILITY TO HIRE A REPUTABLE CONTRACTOR WHO CAN COORDINATE BETWEEN ARCHITECTURAL & STRUCTURAL DRAWINGS FOR ACCURACY



SECOND FLOOR CEILING FRAMING PLAN

SCALE: 1/4"= 1'-0" (CEILING HEIGHT = 10'-1" U.O.N.)

STATE OF TEXAS — JAMEEL Z. HATTAB — 85294 — LICENSED PROFESSIONAL ENGINEER — 06/16/14

12" 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A
HOUSTON, TEXAS

JOB NO. 09055.119A
ISSUE 05/26/14
DRAWING NO. S-1.3 OF 7

PLAN NOTES

1. ROOF FRAMING IS DESIGNED FOR COMPOSITION SHINGLE @ 4.0 PSF.
2. DESIGNATES BRACE (APPROXIMATELY IN THE INDICATED DIRECTION)
3. INDICATES A VERTICAL (OR NEARLY VERTICAL) BRACE TO SUPPORTING MEMBER BELOW.
4. BRACE SUPPORT DESIGNATION:
   (ALL BRACING TO WALLS UNLESS OTHERWISE NOTED)
   BM BRACE TO BEAM
   BS BRACE TO STRONGBACK
5. **ALL RAFTERS ARE 2x6 #3 S.Y.P. AT 19.2" O.C. U.O.N.**
6. PURLINS SHALL BE 2x6 CONTINOUS MEMBER.
7. DEPTH OF RIDGE BEAM, HIP OR VALLEY RAFTER:
   A. SHALL BE ONE SIZE WIDER THAN THE LARGEST RAFTER FRAMING INTO IT (EXAMPLE: 2x8 BEAM FOR 2x6 RAFTER);
   B. SHALL MATCH OR EXCEED THE CUT END OF THE RAFTER.
8. PROVIDE DOUBLE FRAMING @ EDGES OF ALL ROOF OPENINGS LARGER THAN 24".
9. PROVIDE DOUBLE RAFTERS UNDER ALL DORMER WALL (U.O.N.).
10. ROOF DECKING TO BE ½" C.D.X. WITH PANEL SPAN RATING OF 24–0. RE: GENERAL NOTES FOR OTHER REQUIREMENTS.
11. RAFTERS SHALL BE NAILED TO ADJACENT CEILING JOISTS TO FORM A CONTINOUS TIE BETWEEN EXTERIOR WALLS WHEN SUCH JOISTS ARE PARALLEL TO THE RAFTERS. WHERE NOT PARALLEL, RAFTER TIES SHALL BE SPACED NOT MORE THAN 48" O.C.
12. PROVIDE 2x6 COLLAR TIES AT EVERY OTHER RAFTER (UPPER ⅓ OF ROOF).
13. RE: ARCH. DWG'S FOR ROOF SLOPES & OTHER DATA NOT CONTAINED HEREIN.
14. RE: SHEETS S2.2 FOR FRAMING GENERAL NOTES, TYP. DETAILS & SCHEDULES.
15. = = = = DESIGNATES LOCATION OF FLOOR WALLS BELOW.

ROOF SLOPE = 4/12 (U.O.N.)
COORDINATE ROOF SLOPE & GEOMETRY W/ ARCH. DRAWINGS, WHICH TAKE PRECEDENCE OVER ANY SUCH INFORMATION SHOWN HEREIN.

GENERAL NOTES: COORDINATION W/ ARCH. DWGS.

1. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY PRIOR TO CONSTRUCTION, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS, DESCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER, PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.
2. THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:
   A. ALL DIMENSIONS;
   B. SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
   C. CURBS AND VENEER LEDGES;
   D. CEILING HEIGHTS AND CEILING CONDITIONS;
   E. ROOF GEOMETRY AND SLOPES.

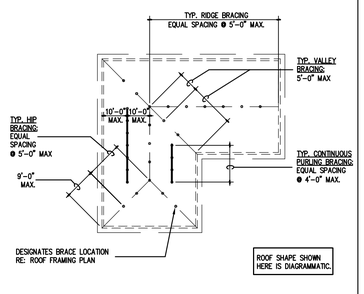
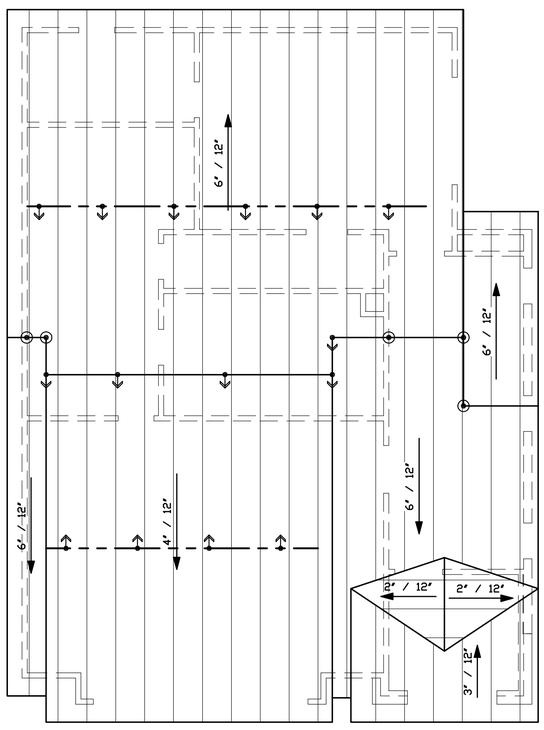


DIAGRAM: TYPICAL BRACE LOCATIONS
(NOT TO SCALE)



ROOF FRAMING PLAN

SCALE: 1/4"= 1'-0"

FRAMING LEGEND

BEAM (BEAM JOIST)
- BJ212 — 2– 2x12
- BJ312 — 3– 2x12

MEMBER DESCRIPTION
- DB — DROP BEAM
- UWA — UNDER WALLS ABOVE.
- RSB — ROOF SUPPORTING BEAM
- FB — FLUSH BEAM

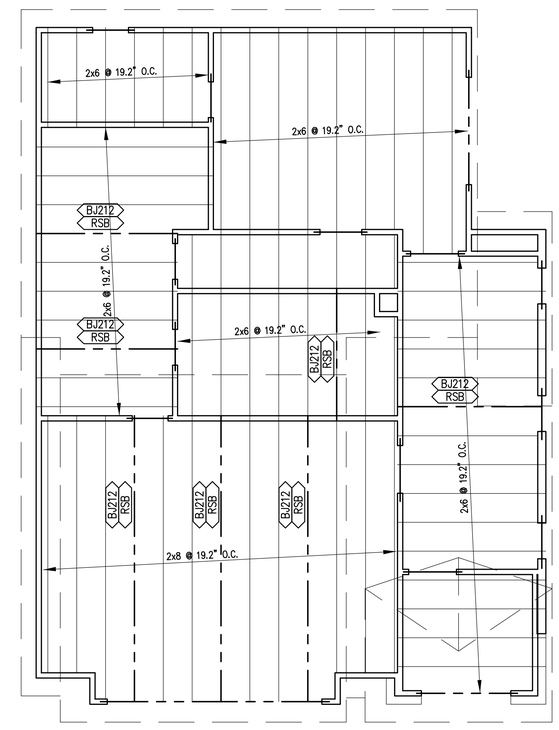
COLUMNS (WOOD COLUMNS)
- WP66 — 6x6 WOOD POST
- C32x6 — 3–2x6 STUDS
- WPC — (PC/EPC) WOOD POST CAP
- WPB — (ABU) WOOD POST BASE

GENERAL NOTES: COORDINATION W/ ARCH. DWGS.

1. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND STRUCTURAL DRAWINGS JOINTLY PRIOR TO CONSTRUCTION, TO ENSURE COORDINATION OF ALL PHASES OF CONSTRUCTION DESCRIBED IN THESE DRAWINGS, DESCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF BOTH ARCHITECT AND ENGINEER, PRIOR TO PROCEEDING WITH CONSTRUCTION WORK.
2. THE FOLLOWING ITEMS, IN PARTICULAR, HAVE TO BE CLOSELY COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS:
   A. ALL DIMENSIONS;
   B. SLAB AND FLOOR ELEVATIONS, SLOPES, AND LOCATION AND DIMENSIONS OF ANY RECESSES, INCLUDING THOSE INTENDED FOR SHOWERS, ELEVATORS, FLOORING MATERIALS, ETC.
   C. CURBS AND VENEER LEDGES;
   D. CEILING HEIGHTS AND CEILING CONDITIONS;
   E. ROOF GEOMETRY AND SLOPES.

PLAN NOTES

1. ALL CEILINGS JOISTS SHALL BE 2x6 @ 19.2" O.C. #3 S.Y.P. (U.O.N.)
2. ALL BEAMS & HEADERS SHALL BE #2 S.Y.P. (U.O.N.)
3. ALL CEILING BEAMS & HEADERS SHALLS BE 2–2x8 (U.O.N.)
4. DOUBLE ALL CEILING JOISTS UNDER MECHANICAL DECK AREA
5. PROVIDE DOUBLE FRAMING @ CEILING OPENINGS LARGER THAN 24" SQUARE (TYP. U.O.N.)
6. RE: SHEET S2.2 FOR ALL FRAMING NOTES, DETAILS, & SCHEDULES.
7. DESIGNATES BEAM HANGER. IF NOT IDENTIFIED ON PLAN, USE TYPICAL HNAGERS SPECIFIED IN GENERAL NOTES.
8. ☐ ☒ DESIGNATE STEEL & WOOD COLUMNS.



IMPORTANT NOTE 2:
ALL EXTERIOR WALL SHALL BE SHEATHED WITH ½" PLYWOOD OR OSB.

STATE OF TEXAS
JAMEEL Z. HATTAB
85294
LICENSED
PROFESSIONAL ENGINEER
06/16/14

THIRD FLOOR CEILING FRAMING PLAN

SCALE: 1/4"= 1'-0" (CEILING HEIGHT = 9'-1" U.O.N.)

12" 0' 5' 10'
SCALE: 1/4 INCH = 1 FOOT

PROPOSED NEW TOWNHOMES
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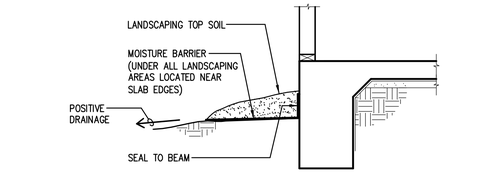
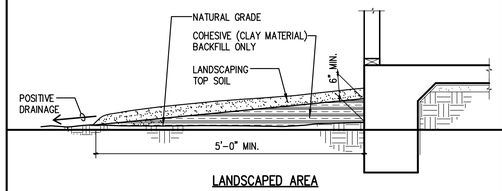
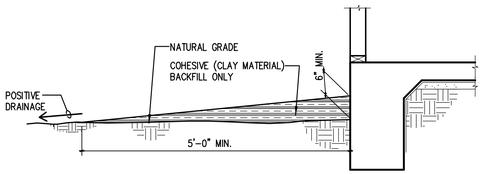


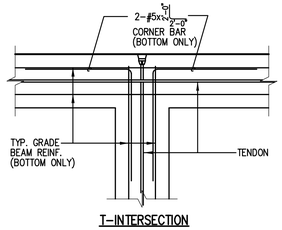


LANDSCAPED AREA

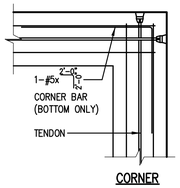


NON-LANDSCAPED AREA

TYPICAL GRADE PREPARATION & DRAINAGE DETAILS

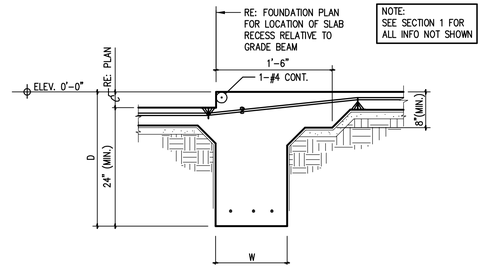


T-INTERSECTION

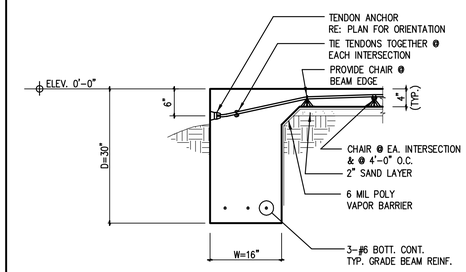


CORNER

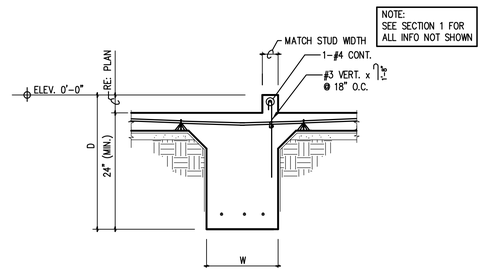
TYPICAL CORNER BAR DETAILS @ GRADE BEAM W/ BOTTOM REINF.



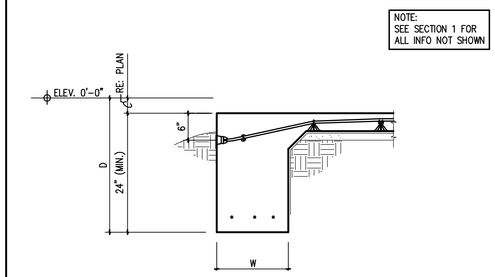
6 SECTION: TYPICAL GRADE BEAM @ SLAB RECESS



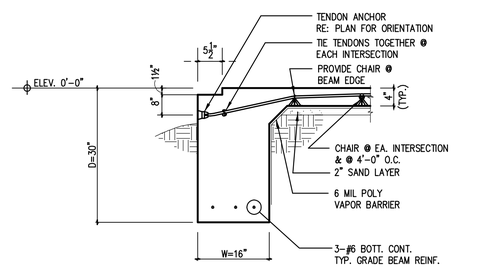
1 SECTION: TYPICAL GRADE BEAM



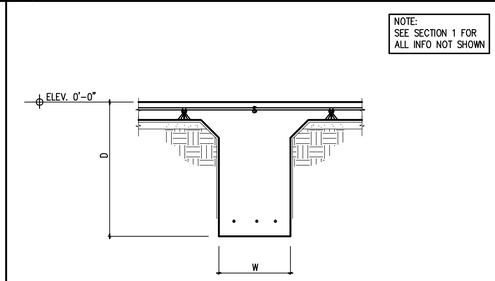
7 SECTION: TYPICAL INTERIOR GRADE BEAM @ STUBWALL CURB



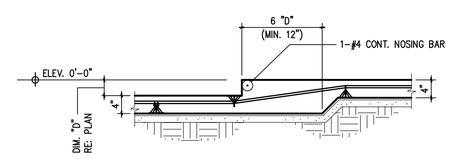
2 SECTION: TYPICAL GRADE BEAM @ DROPPED SLAB



8 SECTION: TYPICAL GRADE BEAM WITH BRICK LEDGE

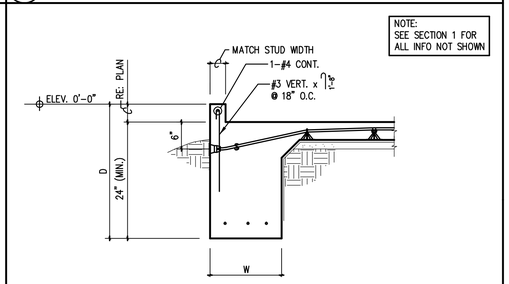


3 SECTION: TYPICAL INTERIOR GRADE BEAM

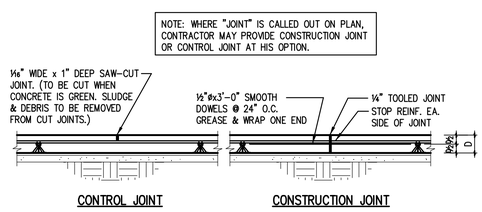


RECESS 8" OR LESS

TYPICAL SLAB RECESS DETAIL



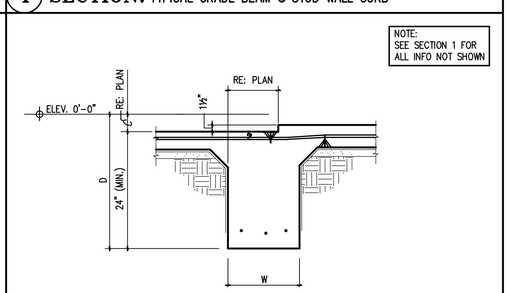
4 SECTION: TYPICAL GRADE BEAM @ STUD WALL CURB



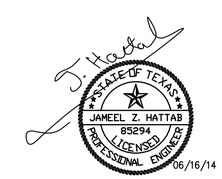
CONTROL JOINT

CONSTRUCTION JOINT

TYPICAL SLAB JOINT DETAILS



5 SECTION: TYPICAL GRADE BEAM @ INTERIOR GARAGE ENTRY



PROPOSED NEW TOWNHOMES

2410 ST.CHARLES-PLAN A
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GENERAL NOTES FOR WOOD FRAMING

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.)

TIMBER GRADES

ROOF RAFTERS: —— NO. 3 SOUTHERN YELLOW PINE (SYP) OR EQUAL
CEILING AND FLOOR JOISTS: —— NO. 2 SOUTHERN YELLOW PINE (SYP) OR EQUAL
BEAMS & HEADERS: —— NO. 2 SOUTHERN YELLOW PINE (SYP) OR EQUAL
STUDS: —— STUD GRADE (SYP) OR EQUAL
WOOD POSTS: —— NO. 2 SYP, SURFACE GREEN.

JOISTS

1. JOIST BLOCKING
   A) JOISTS SHALL BE LATERALLY SUPPORTED AT EACH END AND AT EACH SUPPORT BY SOLID BLOCKING EXCEPT WHERE THE ENDS OF JOISTS ARE NAILED INTO A HEADER, BAND OR RIM JOIST OR TO AN ADJOINING STUD. SOLID BLOCKING SHALL NOT BE LESS THAN TWO INCHES IN THICKNESS AND SHALL MATCH THE DEPTH OF THE JOIST.
   B) PROVIDE SOLID BLOCKING UNDER ALL BEARING WALLS PERPENDICULAR TO THE DIRECTION OF THE JOISTS.
   C) PROVIDE DOUBLE JOISTS UNDER ALL BEARING WALLS PARALLEL TO THE DIRECTION OF THE JOISTS.
2. JOIST BRIDGING
   PROVIDE BRIDGING AT ALL FLOOR JOISTS AT SPACING NOT TO EXCEED 8'–0".
3. JOIST HOLES AND NOTCHES
   A) NOTCHES IN TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED ONE SIXTH (1/6) THE JOIST DEPTH AND SHALL NOT BE LOCATED WITHIN MIDDLE THIRD OF THE SPAN.
   B) HOLES SHALL NOT BE CLOSER THAN 2" TO TOP OR BOTTOM OF JOIST, THE DIAMETER OF ANY HOLE SHALL NOT EXCEED ONE FOURTH (1/4) THE JOIST DEPTH UNLESS APPROVED BY THE ENGINEER.

BEAMS AND HEADERS

1. AT BEAMS MADE UP OF A NUMBER OF 2x JOISTS, EACH JOIST WILL BEAR ON A WALL STUD (I.E. NUMBER OF WALL STUDS SHALL MATCH NUMBER OF JOISTS BEARING ON THESE STUDS). THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.
2. ALL BEAMS MADE UP OF A NUMBER OF 2x JOISTS SHALL BE FASTENED AS FOLLOWS: FOR THE MAXIMUM HORIZONTAL SPACING OF BOLTS:
   2–2x12 —— 16d NAILS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
   3–2x12 —— 20d NIALS @ 12" TOP & BOTTOM, STAGGER, EA. FACE
   4–2x12 (OR MORE) —— 5/8" ø BOLTS @ 12" TOP & BOTTOM, STAGGER
   BOLTS SHALL BE 5/8"ø, LOCATED 2" MINIMUM FROM BEAM EDGES AND SHALL BE STAGGERED IN TOP AND BOTTOM ROWS. PROVIDE STANDARD WASHERS @ EACH FACE.
3. ALL DOOR AND WINDOW HEADERS (OR HEADERS AT ANY OTHER OPENING) THAT ARE NOT SPECIFIED ON PLANS SHALL BE AS FOLLOWS:
   FLOOR FRAMING: 2–2X12
   CEILING FRAMING: 2–2X8
4. MINIMUM BEARING OF ANY BEAM OR HEADER AT A STUD WALL IS 3–1/2"

STUD WALLS

1. STUDS SHALL BE AS FOLLOWS:
   2x4 @ 16" — AT ALL FLOORS IN ONE– OR TWO– STORY STRUCTURES (U.O.N.)
   2–2x4 OR 2x6 @ 16" — AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY BELOW A THIRD FLOOR (U.O.N.)
   3–2x4 OR 2–2x6 @ 16" — AT ALL STUD WALLS AT FIRST FLOOR AREAS DIRECTLY BELOW A FOUTH FLOOR (U.O.N.)
2. PROVIDE A MINIMUM OF TWO (2) STUDS AT EACH SIDE OF OPENINGS LARGER THAN 4'–0", FULL HEIGHT OF WALL (KING STUDS).
3. MAXIMUM STUD WALL HEIGHT SHALL BE AS FOLLOWS:
   2x4 STUDS @ 16" ⅝o.c. 10'–0"
   2x6 STUDS @ 16" ⅝o.c. 13'–0"
   2x8 STUDS @ 16" ⅝o.c. 16'–0"
4. BLOCKING & LATERAL BRACING:
   A. PROVIDE BLOCKING AND/OR TEMPORARY CROSS BRACING AS REQUIRED TO ENSURE STUD STRAIGHTNESS ACCORDING TO SPECIFIED TOLERANCES.
   B. MAXIMUM TOLERANCE FOR STUD STRAIGHTNESS IN EITHER DIRECTION IS 1/4 INCH PER TEN (10) FEET OF STUD HEIGHT.
   C. MINIMUM BLOCKING:
      1 ROW FOR STUD HEIGHT UP TO 9'–0";
      2 ROWS FOR STUD HEIGHT UP TO 15'–0";
      3 ROWS FOR STUD HEIGHT OVER 15'–0".

ROOF DECK:

1. MINIMUM THICKNESS SHALL BE 1/2" THICK. MATERIAL SHALL BE CDX PLYWOOD OR EQUAL.
2. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD.
3. MINIMUM NAILING SHALL BE AS REQUIERD BY THE BUILDING CODE.
4. PLYWOOD CLIP'S SHALL BE INSTALLED @ ROOF DECKING TO RESULT IN A 1/8" GAP BETWEEN ALL PANEL EDGES. PROVIDE 1 CLIP PER SPAN (JOIST SPACING). CLIPS SHALL BE SIMPSON PSCL, OR APPROVED EQUAL, TO MATCH CORRESPONDING PLYWOOD THICKNESS.

PLYWOOD FLOOR DECK:

1. PLYWOOD SHALL BE 1–1/8" THICKNESS AND SHALL BE RATED STURO–I–FLOOR (2–4–1) EXPOSURE 1.
2. LAY PANELS IN A STAGGARED PATTERN.
3. BLOCK ALL EDGES W/ 2–2x4 BLOCKING.
4. GLUE & NAIL TO FRAMING MEMBERS AS FOLLOWS:
   A. GLUE SHALL CONFORM TO APA SPECIFICATION AF6–01, APPLIED IN A CONTINUOUS BEAD & IN ACCORDANCE WITH THE MANUFATURER'S RECOMMENDATIONS.
   B. ALL NAILS SHALL BE 8¹⁄₁₆ RING OR SCREW SHANK. NAIL SPACING SHALL BE 4" O.C. @ PANEL EDGES & 12" O.C. @ INTERMEDIATE SUPPORTS.

CONNECTORS

1. CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG–TIE COMPANY, INC., DUBLIN, CA. OR APPROVED EQUAL. NAIL ALL NAIL HOLES.
2. CONNECTORS SHALL BE THE MANUFACTURER–DESIGNATED SIZE FOR FRAMED MEMBERS, AND SHALL BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. ALL NAIL & BOLT HOLES SHALL BE ENGAGED, WITH MANUFACTURER–DESIGNATED FASTENERS.
4. CONNECTORS SHALL BE INSTALLED AT THE ENDS OF ALL JOISTS & BEAMS FRAMING INTO OTHER (SUPPORTING) MEMBERS (UNLESS OTHERWISE NOTED).
5. THE FOLLOWING CONNECTORS SHALL BE PROVIDED AND SHALL BE CONSIDERED THE MINIMUM:
   SAWN–LUMBER JOISTS —— U SERIES
   I–JOISTS —— IUS SERIES
   MULTIPLE–JOIST/BEAMS —— HUS SERIES
   PSL & LVL BEAMS —— LBV SERIES
   LSL (GLU–LAM) BEAMS —— HGUS SERIES

FASTENERS

1. BOLTS
   A. USE ASTM A–307 BOLTS, WITH STANDARD WASHERS AT ALL CONTACT SURFACES.
   B. PROVIDE 1/2"ø x 0'–10" LONG ANCHOR BOLTS @ 3'–0" O.C. AT ALL EXTERIOR WALL SILL PLATES, WITH 2" PROJECTION AND 1" THREAD.
   C. ALL BOLTS, NUTS, AND WASHERS EXPOSED TO WEATHER SHALL BE GALVANIZED.
   D. ALL BOLTS, NUTS, AND WASHERS IN CONTACT W/ TREATED WOOD SHALL BE GALVANIZED.
2. ADHESIVE ANCHORS
   A. USE HILTI–HIT RE500 ANCHORS, OR APPROVED EQUAL.
   B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.
3. POWDER–ACTUATED PINS
   A. USE HILTI X–EDNI (0.145" SHANK) OR APPROVED EQUAL.
   B. INSTALL IN STRICT ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS.

HURRICANE CLIPS:

ALL HURICANE CLIP AND NAILS IN CONTACT WITH PRESSURE TREATED WOOD MEMBER SHALL BE GALVANIZED.

MISCELLANEOUS:

ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE TREATED LUMBER.

NAILING SCHEDULE (FLOOR & ROOF DECK)

DECK TYPE & THICKNESS	NAIL SIZE	NUMBER OR NAILING PATTERN
PLYWOOD OR PARTICLE BOARD		6" O.C. @ PANEL EDGES 10" O.C. @ INTERMEDIATE SUPPORTS TYPICAL (TYPICAL)
1/2" OR LESS	8D COMMON OR EQUAL	
19/32" THRU 3/4"	8D COMMON OR EQUAL	
7/8" THRU 1" (FLR.)	8D COMMON OR EQUAL	
1 1/8" THRU 1 1/4" (FLR.)	10D COMMON OR EQUAL	

NAILING SCHEDULE (FRAMING MEMBERS)

CONNECTED MEMBERS	NAIL SIZE	NUMBER OR NAILING PATTERN
BRIDGING TO JOIST	8D COMMON	2 TOE NAIL EA. END
SOLE PLATE TO JOIST OR BLOCKING.	16D COMMON	@ 16" O.C. FACENAIL.
TOP PLATE TO STUD	16D COMMON	2 END NAIL.
STUD TO SOLE PLATE.	8D COMMON OR16D COMMON	4 TOE NAIL. 2 END NAIL
DOUBLE STUDS.	16D COMMON	@ 24" FACE NAIL.
DOUBLED TOP PLATES.	16D COMMON	@ 16" FACE NAIL.
TOP PLATES: LAPS & INTERSECTIONS.	16D COMMON	2 FACE NAIL.
CONTINUOUS HEADER, TWO PIECE.	16D COMMON	@ 16" FACE NAIL ALONG EA. EDGE.
CEILING JOISTS TO PLATE.	8D COMMON	3 TOE NAIL.
CONTINUOUS HEADER TO STUD.	8D COMMON	4 TOE NAIL.
CEILING JOISTS, LAPS OVER PARTITIONS.	16D COMMON	3 FACE NAIL.
CEILING JOISTS TO PARALLEL RAFTERS.	16D COMMON	3 FACE NAIL.
RAFTER TO PLATE.	8D COMMON	3 TOE NAIL.
1" BRACE TO EACH STUD & PLATE.	8D COMMON	2 FACE NAIL.
BUILT UP CORNER STUDS.	16D COMMON	@ 24" FACE NAIL.
CONTINUOUS HEADER, 3 OR MORE PIECE & BUILT UP GIRDERS OR BEAMS.	BOLTS	RE: GEN. NOTES.

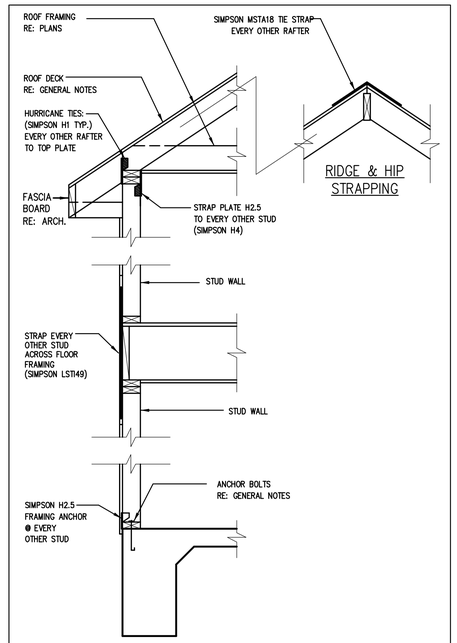
NAILING SCHEDULE (WALL SHEATHING AND SIDING)

SHEATHING TYPE & THICKNESS	FASTNER SIZE & TYPE	NAILING PATTERN
PLYWOOD & PARTICLE BOARD		6" O.C. @ PANEL EDGES 12" O.C. @ INTERMEDIATE SUPPORTS
LESS THAN 1/2"	6D COMMON OR EQUAL	
1/2" THRU 3/4"	8D COMMON OR EQUAL	
FIBERBOARD		3" O.C. @ PANEL EDGES 6" O.C. @ INTERMEDIATE SUPPORTS
1/2" OR LESS	6D COMMON OR EQUAL	
25/32"	8D COMMON OR EQUAL	
GYPSUM SHEATHING		4" O.C. @ EDGES 8" O.C. @ INTERMEDIATE SUPPORTS
1/2" OR 5/8"	12 GA. (4) OR EQUAL	
GYPSUM WALLBOARD		7" O.C. @ CEILINGS 8" O.C. @ WALLS
1/2"	1 3/8" DRYWALL NAILS	
5/8"	1 1/2" DRYWALL NAILS	
PANEL SIDING (TO FRAMING)		1 EACH PANEL
1/2" OR LESS	6D COMMON OR EQUAL	
5/8"	8D COMMON OR EQUAL	

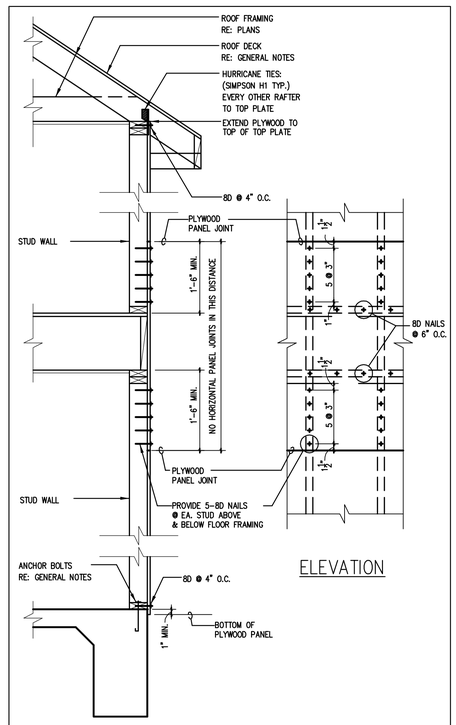
NOTES ON "NAILING––WALL SHEATHING & SIDING"

1. CORROSION–RESISTANT SIDING OR CASING NAILS CONFORMING TO THE REQUIREMENTS OF IRC
2. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH DIAMETER HEAD AND 1 1/2–INCH IN LENGTH FOR 1/2–INCH SHEATHING AND 1 3/4–INCH LENGTH FOR 25/32–INCH SHEATHING CONFORMIMG TO THE REQUIREMENTS OF IRC
3. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1 1/8–INCH LENGTH FOR 1/2–INCH SHEATHING AND 1 1/2–INCH LENGTH FOR 25/32–INCH SHEATHING CONFORMING TO THE REQUIREMENTS OF IRC
4. CORROSION–RESISTANT, LARGE HEAD.

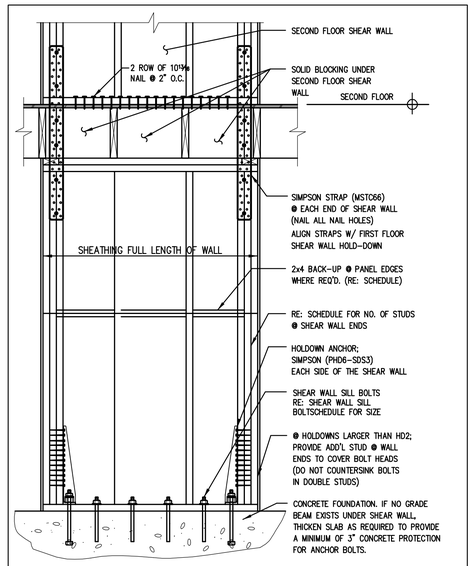
TYPICAL NAILING SCHEDULE



TYPICAL WIND STRAPPING DETAILS
(METAL STRAPPING OPTION)



TYPICAL WIND STRAPPING DETAILS
(PLYWOOD OPTION)



TYPICAL SHEAR WALL DETAILS
(W/ 2ND FLOOR STRAPPING OPTION)

SHEAR WALL SCHEDULE

MARK	SHEATHING MATERIAL ③④	BLOCKING ①	NAILING PATTERN ②③④	STUD POST EACH END ⑤	HOLD-DOWN MARK ⑥	HOLD-DOWN BOLT ø
P1	3/8" PLYWOOD C–C	YES	8D COMMON @ 6"	2–2x4	PHD2–SDS3	⅝"
P2	3/8" PLYWOOD C–C	YES	8D COMMON @ 4"	2–2x4	PHD2–SDS3	⅝"
P3	1/2" PLYWOOD C–C	YES	10D COMMON @ 4"	2–2x4	PHD5–SDS3	⅝"
P4	1/2" PLYWOOD C–C	YES	10D COMMON @ 3"	2–2x4	PHD6–SDS3	⅞"
P5	5/8" PLYWOOD C–C	YES	10D COMMON @ 2"	3–2x4	HDQ8–SDS3	⅞"
G1	1/2" GYPBOARD	NO	5D COOLER @ 7"	2–2x4	PHD2–SDS3	⅝"
G2	1/2" GYPBOARD	YES	5D COOLER @ 4"	2–2x4	PHD2–SDS3	⅝"
G3	5/8" GYPBOARD	YES	6D COOLER @ 4"	2–2x4	PHD2–SDS3	⅝"

SHEAR WALL SILL BOLTS SCHEDULE

MARK	SILL PLATE BOLTING FOR SHEAR WALL ⑦	MIN. EMBEDMENT
P1	½"ø @ 2'–6" O.C.	6"
P2	½"ø @ 2'–0" O.C.	6"
P3	⅝"ø @ 2'–0" O.C.	6"
P4	⅝"ø @ 1'–6" O.C.	6"
P5	⅝"ø @ 1'–0" O.C.	6"

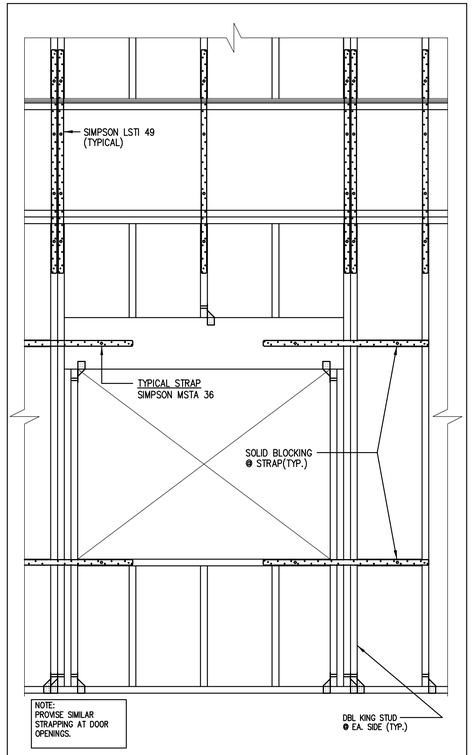
SHEAR WALL NOTES:

1. WHERE "BLOCKING" IS INDICATED, PROVIDE 2x4 BACK–UP AT ALL GYPBOARD OR PLYWOOD PANEL EDGES.
2. NAILING PATTERN APPLIES AT ALL PANEL EDGES. AT INTERMEDIATE SUPPORTS, PROVIDE NAILING @ 12" O.C. USING CORRESPONDING NAIL SIZE.
3. SHEATHING MATERIAL AND NAILING PATTERN APPLY TO ONE SIDE OF SHEAR WALL ONLY.
4. WHERE A SHEAR WALL IS CALLED OUT ON A PLAN, PROVIDE SCHEDULED SHEATHING MATERIAL AND NAILING FOR THE FULL LENGTH OF THAT WALL.
5. PROVIDE SCHEDULED STUDS AT EACH END OF SHEAR WALL OR SEGMENT THEREOF.
6. HOLD–DOWN CONNECTORS:
   A) CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG–TIE COMPANY, INC., SAN LEANDRO, CA. OR APPROVED EQUAL.
   B) THE FOLLOWING SUBSITUTIONS MAY BE MADE:

HOLDDOWN MARK	SUBSITUTION	
	@ SLAB / FOUDATION	@ FLOOR FRAMING
PHD2–SDS 3	HD2A OR STHD10 OR HTT16	HST2 OR MSTC40
PHD5–SDS 3	HD5A OR STHD14 OR HTT22	HST3 OR MSTC52
PHD6–SDS 3	HD6A OR HTT22	HST3 OR MSTC66

   C) ALL HOLD–DOWNS MUST BE INSTALLED IN STRICT ADHERENCE TO MANUFACTURER'S INSTRUCTIONS, USING BOLT & NAIL NUMBERS, SIZES & LENGTHS AS SPECIFIED BY MANUFACTURER.
7. WHERE PLYWOOD IS SHOWN ON BOTH FACES OF A SHEAR WALL:
   A) DOUBLE STUDS OR 3" WIDE STUDS MUST BE USED.
   B) STAGGER PLYWOOD JOINTS AT WALL FACES.
   C) USE 4x4 WOOD POSTS @ EA. END TO BOLT HOLD–DOWNS.
   D) PROVIDE DOUBLE 2x SILL PLATE W/ 1/2"ø ANCHOR BOLTS @ 24" c. IN ADDITION TO HOLD–DOWN ANCHOR BOLTS.
8. BOLTS SPECIFIED FOR THIS TABLE MUST BE A490 RATED BOLTS

TYPICAL SHEAR WALL DETAILS

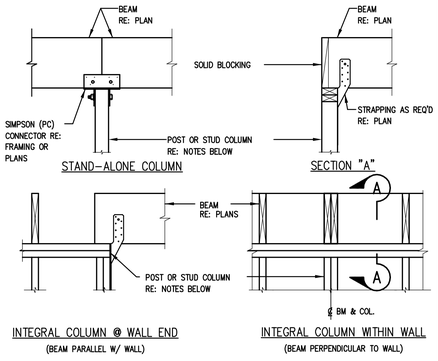


STRAPPING REQUIREMENTS FOR ALL WALL OPENINGS

J. Hattab
STATE OF TEXAS
JAMEEL Z. HATTAB
85294
LICENSED
PROFESSIONAL ENGINEER
06/16/14

PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A
HOUSTON, TEXAS

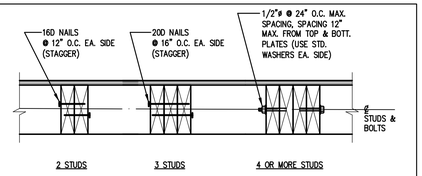
JOB NO.	09055.119A
ISSUE	05/26/14
DRAWING NO.	S–2.2 OF 7



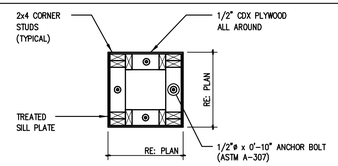
NOTES:

1. ALL BEAMS MADE UP OF MULTIPLE 2x MEMBERS SHALL BE SUPPORTED @ EA. END BY A POST EQUAL IN THICKNESS TO THE BEAM (MIN.) I.E. 2-2x12 BEAM SHALL REQUIRE 2-2x STUD POST (MIN.) SOLID SAWN LUMBER MAY BE SUBTITUTED FOR BUILT-UP POSTS.
2. PARALLEL STRAND LUMBER (PSL) AND LAMINATED LUMBER (LSL & LVL) BEAMS & HEADERS SHALL BE SUPPORTED AT EACH END AS FOLLOWS:
   3 1/2" WIDE MEMBERS UP TO 12" DEPTH.....3-2x STUDS OR 4x6 POST (U.O.N.)
   5 1/2" WIDE MEMBERS UP TO 12" DEPTH.....4-2x STUDS OR 4x6 POST (U.O.N.)
   7" WIDE MEMBERS UP TO 12" DEPTH.....5-2x STUDS OR 4x6 POST (U.O.N.)
   MAX. COLUMN OR POST HEIGHT: 9'-0" RE: PLANS OR CONSULT ENGINEER FOR LARGER HEIGHTS.

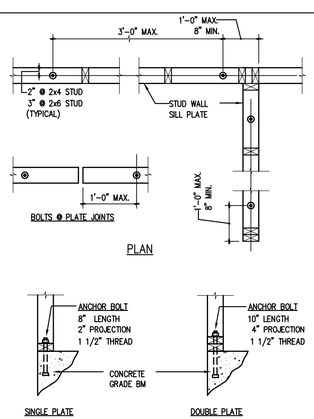
TYPICAL WOOD COLUMN DETAILS



MULTIPLE-STUD COLUMNS DETAILS



TYPICAL BUILD-UP EXTERIOR COLUMN DETAIL



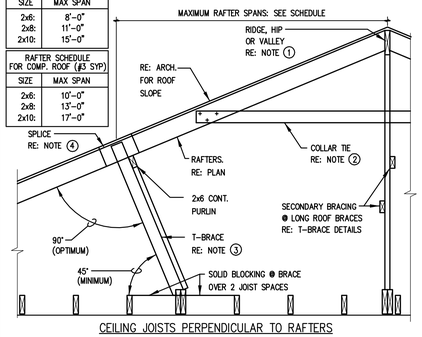
IMPORTANT NOTES:
PRIOR TO CONCRETE PLACEMENT, CONTRACTOR SHALL:
1. PREDETERMINE ANCHOR BOLT LAYOUT CONSISTENT W/ WALL GEOMETRY & THESE DETAILS;
2. PROVIDE CLEAR MARKINGS ON FORM BOARD TO DESIGNATE BOLT LOCATIONS, FOR EASE OF INSTALLATION.

NOTES:
1. ALL BOLTS ARE ⅝"ø J-BOLT, CONFORMING TO ASTM A-307. PROVIDE 1" DIAMETER STANDARD WASHERS @ ALL BOLTS.
2. STAGGER DOUBLE PLATE JOINTS A MINIMUM OF 2'-0"
3. ALL ANCHOOR BOLTS IN CONTACT WITH PRESSURE TREATED WOOD MEMBER SHALL BE GALVANIZED.

TYPICAL SOLE PLATE ANCHOR BOLT DETAILS

RAFTER SCHEDULE FOR TILE ROOF (#3 SYP)	
SIZE	MAX SPAN
2x6:	8'-0"
2x8:	11'-0"
2x10:	15'-0"

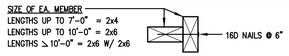
RAFTER SCHEDULE FOR COMP. ROOF (#3 SYP)	
SIZE	MAX SPAN
2x6:	10'-0"
2x8:	13'-0"
2x10:	17'-0"



CEILING JOISTS PERPENDICULAR TO RAFTERS

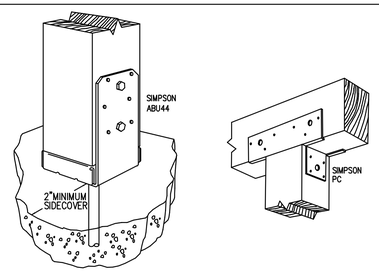
DETAIL KEYED NOTES

1. RIDGE BEAM, HIP RAFTER, OR VALLEY RAFTER
   DEPTH SHALL BE THE LARGER OF THE FOLLOWING:
   A. ONE SIZE DEEPER THAN THE LARGEST RAFTER FRAMING INTO IT (2 x LUMBER)
   B. DEPTH OF CUT END OF RAFTER.
2. COLLAR TIES
   2x6; LOCATED @ UPPER ONE THIRD (1/3) OF ROOF @ EVERY OTHER RAFTER
3. T-BRACE
   A. RE: TYPICAL DETAILS BELOW
   B. MAXIMUM SPACING AS FOLLOWS:
      4'-0" @ 2x6 CONT. PURLIN
      5'-0" @ RIDGE BEAM, HIP OR VALLEY RAFTER
   C. BRACE SHALL BEAR ON AN INTERIOR WALL, BEAM OR STRONG-BACK (DOUBLE, 2 SIZES LARGER THAN JOIST) RE: FRAMING PLAN.
4. RAFTER & RIDGE SPLICES
   A. LOCATE SPLICE OVER A PURLIN, OR PROVIDE ADDITIONAL BRACE @ SPLICE
   B. MINIMUM LAP = 12" NAIL W/ 6-16 d NAILS.



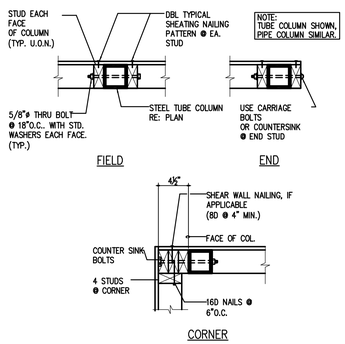
TYPICAL ROOF T-BRACE DETAILS

TYPICAL ROOF BRACING DETAILS

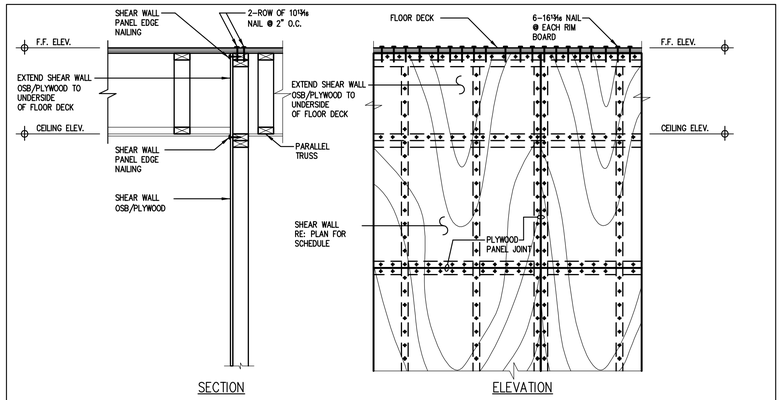


WOOD POST BASE (ABU) WOOD POST CAP (PC)

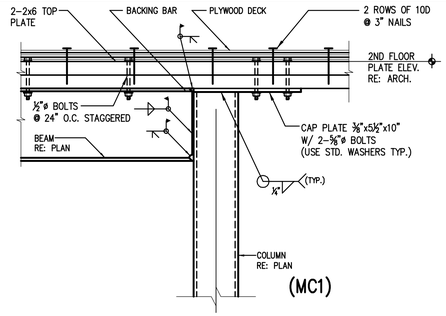
SIMPSON BASE AND POST CAP CONNECTION DETAILS



TYPICAL STUDS TO STEEL COLUMN DETAILS

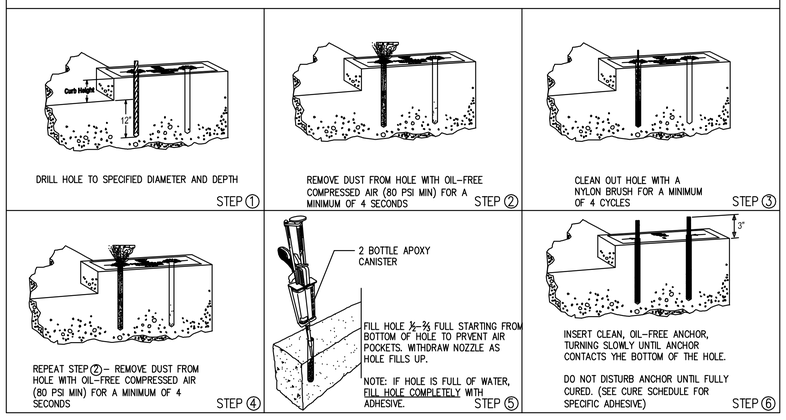


1 SECTION: INTERIOR SHEAR WALL CONNECTION DETAIL (TRUSS PARALLEL TO WALL)



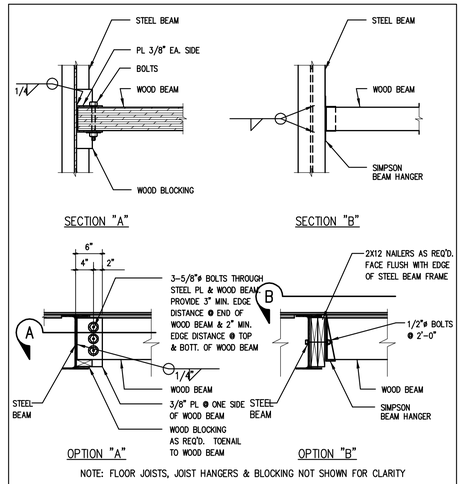
TYPICAL MOMENT CONNECTION AT (FLUSH) BEAM DETAIL

ADHESIVE ANCHORING INSTRUCTIONS



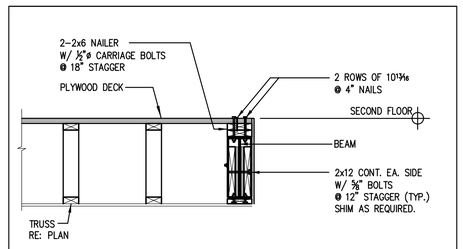
GENERAL NETES: STRUCTURAL AND MISC. STEEL

1. CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS:
   STRUCTURAL & MISC. SHAPES: ASTM A-36
   PIPE COLUMNS: ASTM A-53-B
   TUBE COLUMNS: ASTM A-500-B
2. ALL DETAILING SHALL BE IN CONFORMANCE WITH THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
3. UNLESS NOTED OTHERWISE, PROVIDE FRAMED BEAM CONNECTIONS IN ACCORDANCE WITH PART 4, AISC MANUAL - 3/4" ASTM A-307 BOLTS. DESIGN FOR SHEARS IN TABLES FOR ALLOWABLE LOADS ON BEAMS, PART 2.
4. FIELD CONNECTIONS SHALL BE EQUIVALENT TO STANDARD BOLTED CONNECTIONS USING 3/4" ASTM A-307 BOLTS UNLESS OTHERWISE SHOWN. IF CONNECTION BOLTS ARE IN SINGLE SHEAR, BOLTS SHALL BE PLACED IN TWO VERTICAL ROWS. CONNECTIONS SHALL BE BOLTED OR WELDED - SEE DETAILS.
5. WELDING SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELDS NOT CALLED OUT ON DRAWINGS SHALL BE 1/4" CONTINUOUS FILLET WELDS. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX.
6. ALL WELDING SHALL PERFORMED BY CERTIFIED WELDERS.
7. ANCHOR BOLTS SHALL CONFORM TO ASTM A-307 FOR HEADED A.B. AND A-36 FOR UNHEADED AND HOOKED A.B., AND SHALL BE SET USING RIGID TEMPLATES.
8. PROVIDE TEMPORARY BRACING & SHORING FOR ALL STEEL FRAMING AS REQ'D TO ENSURE STABILITY DURING CONSTRUCTION. NOTE THAT STEEL FRAMING MEMBERS MAY NOT BE STABLE DURING CONSTRUCTION UNTIL PERMANENTLY CONNECTED WITHIN THE OVERALL STRUCTURE.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSION, ELEVATION AND REVIEW THESE DRAWINGS BEFORE FABRICATION OR ORDERING MATERIALS.

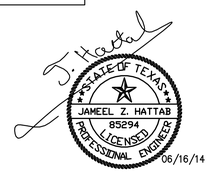


NOTE: FLOOR JOISTS, JOIST HANGERS & BLOCKING NOT SHOWN FOR CLARITY

WOOD @ STEEL BEAM CONNECTION DETAILS



2 SECTION: MOMENT FRAMING CONNECTION



PROPOSED NEW TOWNHOMES
2410 ST.CHARLES-PLAN A
HOUSTON, TEXAS

JOB NO.	09055.119A
ISSUE	05/26/14
DRAWING NO.	S-2.3 OF 7