

19127502

COH Project Number

CITY OF HOUSTON

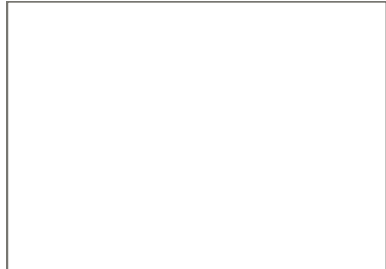
Building Code Enforcement

APPROVED
FOR BUILDING PERMIT ONLY
CITY OF HOUSTON
CODE ENFORCEMENT DIVISION

The owner is responsible for compliance with the Building Code. Such approved plans and specifications shall not be changed, modified or altered without authorization from the building official, and all work shall be done in accordance with the approved plans.

Jacalyn Barconey 2/4/2020

Structural



Electrical



Mechanical



Plumbing



Storm



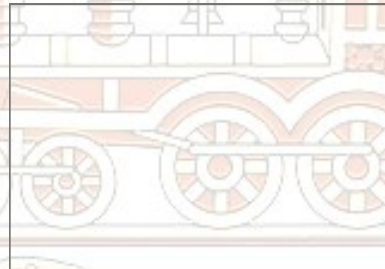
Traffic

RECOMMENDED APPROVAL
PLANNING AND
DEVELOPMENT DEPARTMENT
DEVELOPMENT SERVICES
Daniel Brassil 1/25/2020
LANDSCAPING NOT REQUIRED

Planning



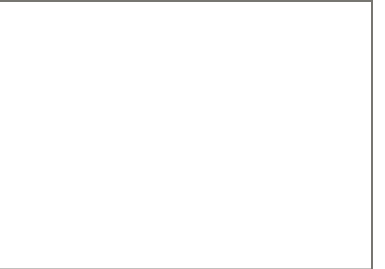
Utility Analysis



Airport (HAS)



Flood



Health



Health/Pool



Fire Marshal



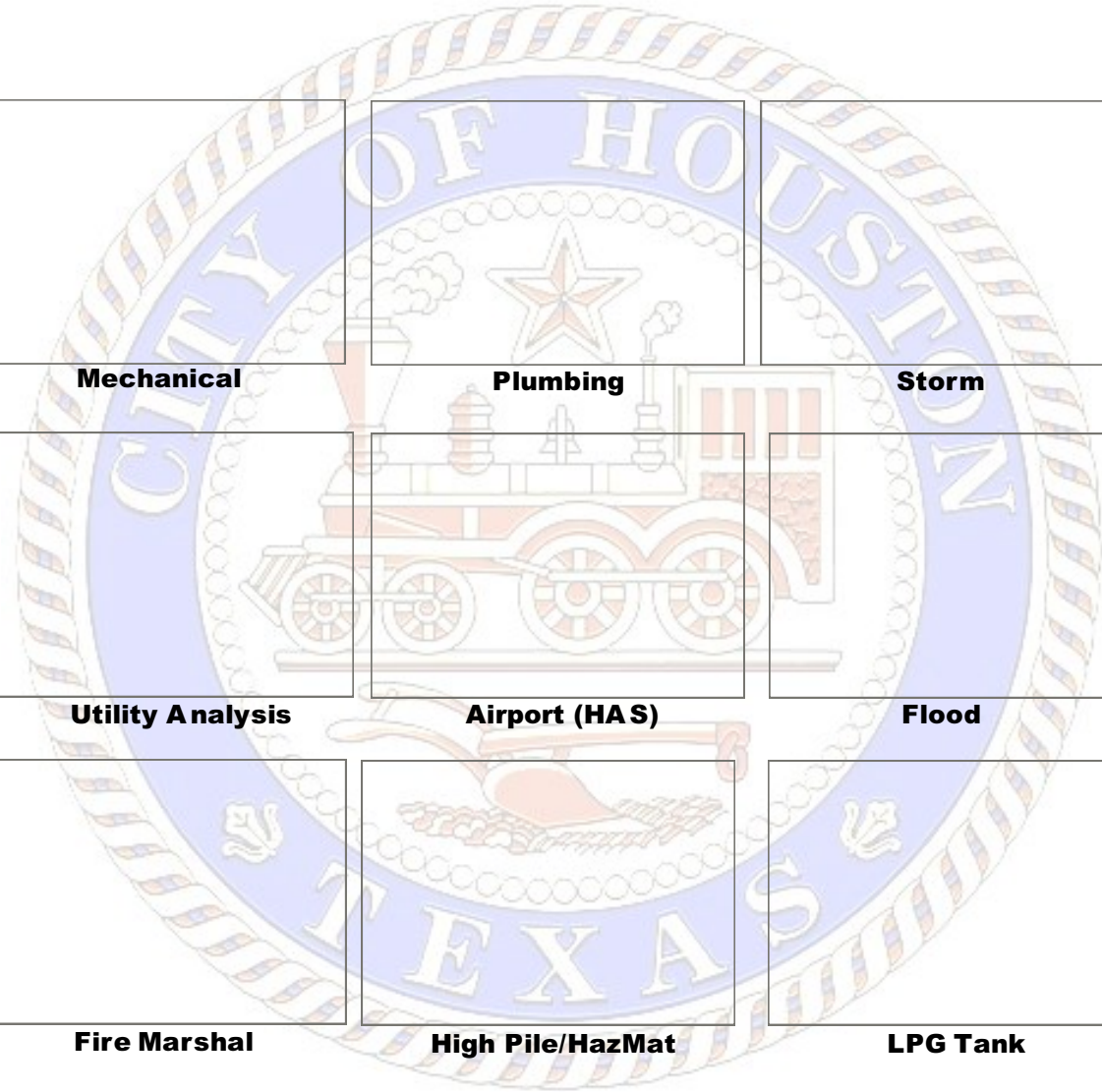
High Pile/HazMat



LPG Tank



Sprinkler





19127502

REVIEWED FOR COMPLIANCE

Performance of this review
does not relieve the applicant
from full responsibility to
comply with all applicable
codes, ordinances and
regulations 02/04/20



WALLING STREET ADDITION

915 WALLING STREET
HOUSTON, TX

D&Q
design

16018 AUTUMN FALLS LN.
HOUSTON, TEXAS 77095
MOBILE: (281) 818-5609

City of Houston Texas



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REVIEWED FOR COMPLIANCE

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D&Q
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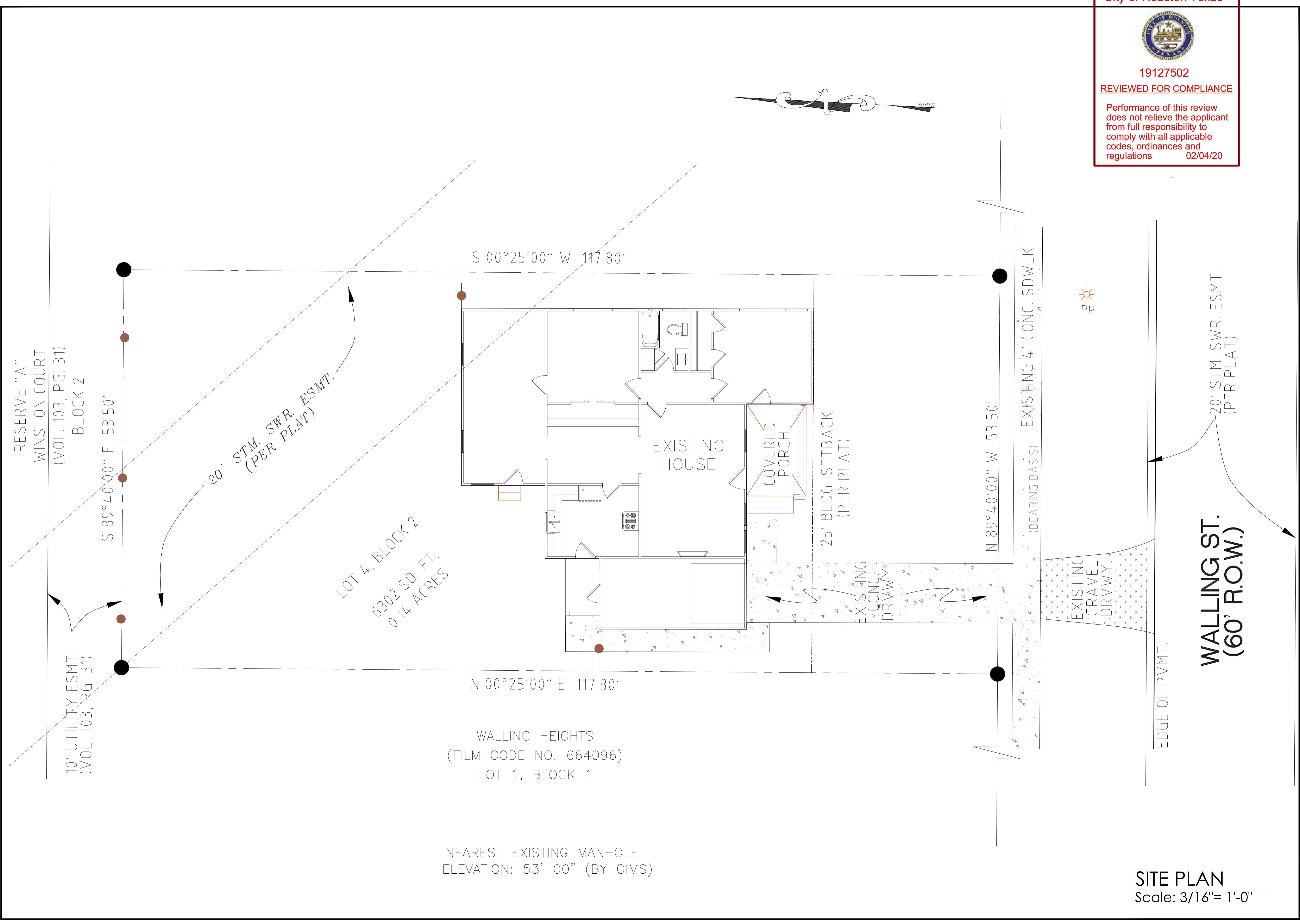
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MARK	DATE	DESCRIPTION
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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
EXISTING SITE PLAN

SHEET NO.
A0.1



WALLING HEIGHTS
 (FILM CODE NO. 664096)
 LOT 1, BLOCK 1

NEAREST EXISTING MANHOLE
 ELEVATION: 53' 00" (BY GIMS)

SITE PLAN
 Scale: 3/16" = 1'-0"

City of Houston Texas



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REVIEWED FOR COMPLIANCE

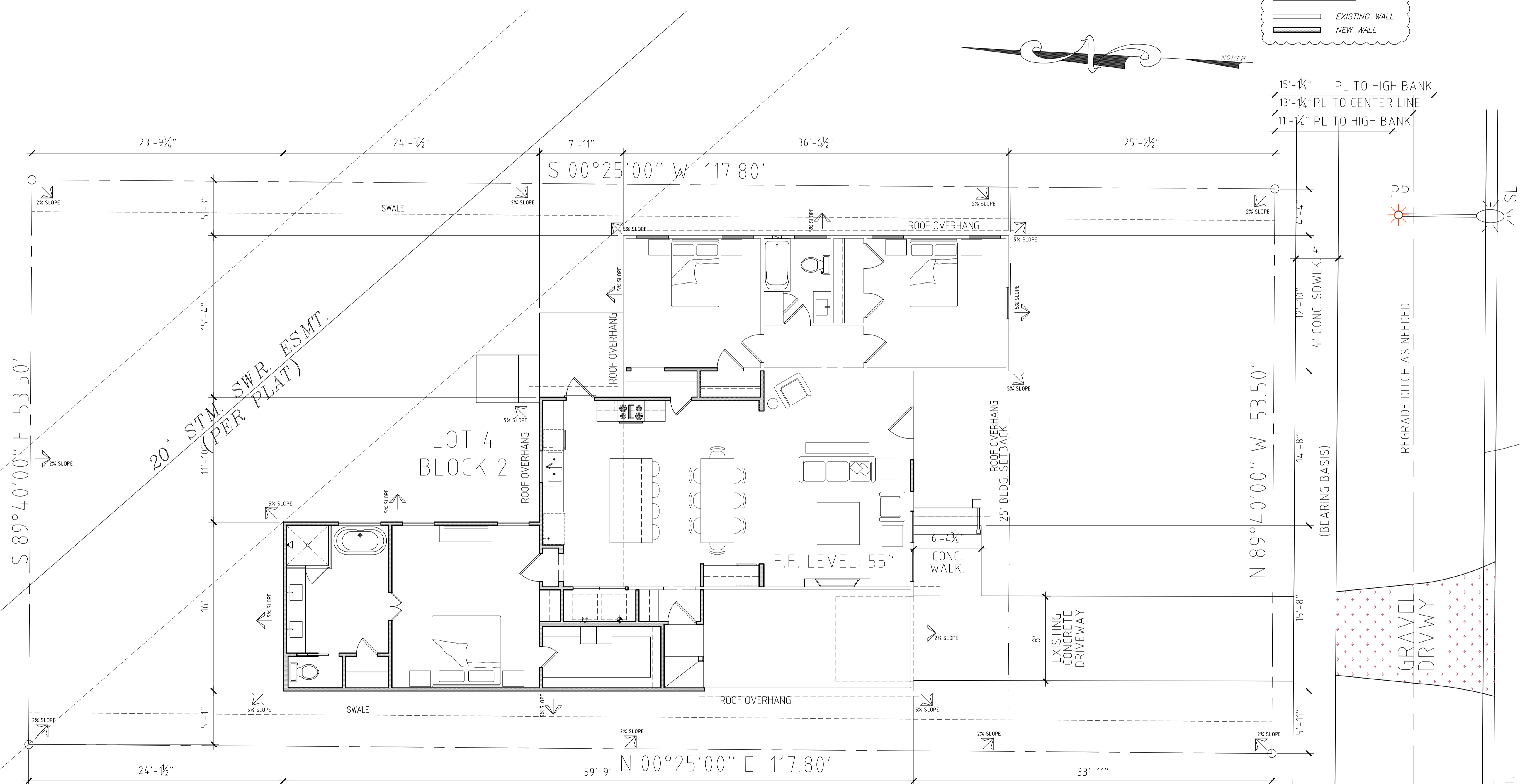
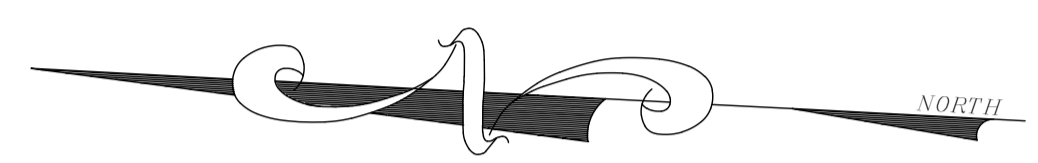
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WALL LEGEND

EXISTING WALL
 NEW WALL



LEGAL DESCRIPTION	
LOT 4, BLOCK 2 WALLING STREET ADDITION HOUSTON, TEXAS	
LOT COVERAGE CALCULATIONS	
LOT AREA	6,301 SQ. FT.
MAX FOOT PRINT	3,781 SQ. FT.
EXISTING FOOT PRINT	1,604 SQ. FT.
HOUSE ADDITION	676 SQ. FT.
DRIVEWAY & WALKWAY	299 SQ. FT.
TOTAL IMPERVIOUS AREA	2,579 SQ. FT.
IMPERVIOUS COVER %	4.1%

NEAREST EXISTING MANHOLE
 ELEVATION: 53' 00" (BY GIMS)

RECOMMENDED APPROVAL
PLANNING AND DEVELOPMENT DEPARTMENT
DEVELOPMENT SERVICES
 Daniel Brassil 1/25/2020
LANDSCAPING NOT REQUIRED

WALLING STREET ADDITION
 (60' R.O.W.)

SITE PLAN
 Scale: 3/16" = 1'-0"

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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
PROPOSED SITE PLAN

SHEET NO.
A0.2



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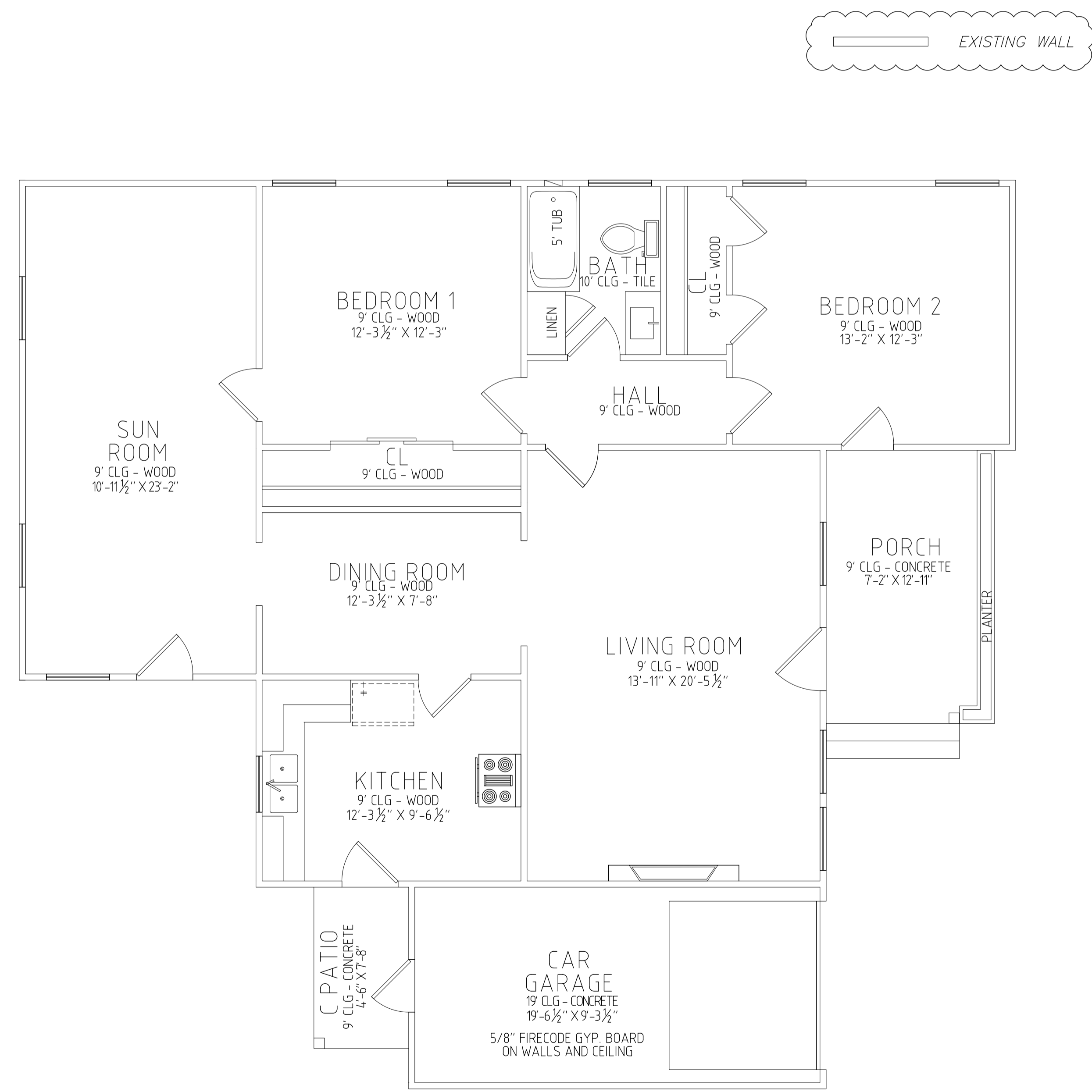
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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
 EXISTING FLOOR PLANS

SHEET NO.
 A1.1

AREA CALCULATIONS	
FIRST FLOOR:	1,292 SQ. FT.
TOTAL LIVING:	1,292 SQ. FT.
GARAGE	190 SQ. FT.
PORCH	93 SQ. FT.
COVERED PATIO	34 SQ. FT.
TOTAL COVERED AREA	1,609 SQ. FT.



EXISTING FIRST FLOOR PLAN
 Scale: 1/4" = 1'-0"



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AREA CALCULATIONS
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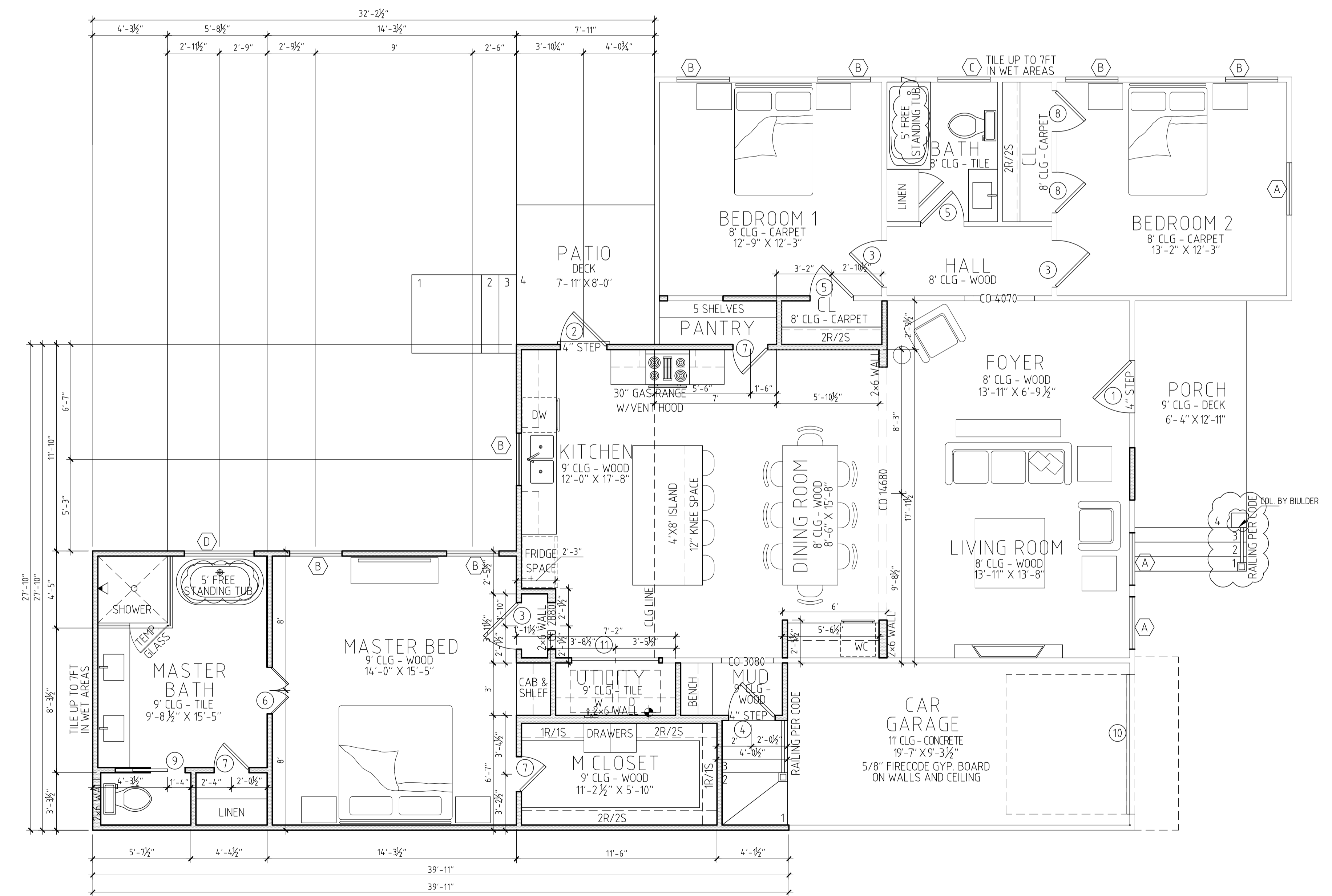
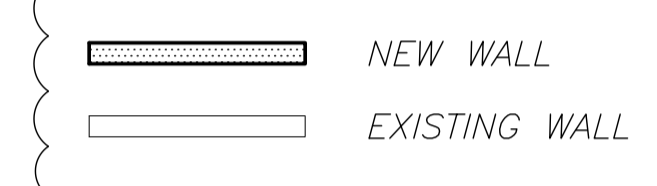
TOTAL LIVING:	1,906 SQ. FT.
EXISTING GARAGE	190 SQ. FT.
EXISTING PORCH	94 SQ. FT.
NEW PATIO	90 SQ. FT.
TOTAL COVERED AREA	2,280 SQ. FT.

DOOR SCHEDULE				
DOOR NO.	QTY.	WIDTH	HEIGHT	
1	1	3'-0"	6'-8"	EXTERIOR FRONT DOOR
2	1	2'-8"	6'-8"	EXTERIOR DOOR
3	3	2'-8"	6'-8"	INTERIOR DOOR
4	1	2'-8"	6'-8"	20 MIN. FIRE RATED/SELF CLOSING DOOR AT GARAGE
5	2	2'-6"	6'-8"	INTERIOR DOOR
6	1	2'-1'-4"	6'-8"	DOUBLE INTERIOR DOOR
7	3	2'-0"	6'-8"	INTERIOR DOOR
8	2	2'-4"	6'-8"	INTERIOR DOOR
9	1	2'-0"	6'-8"	POCKET INTERIOR DOOR
10	1	8'-0"	7'-0"	OVERHEAD GARAGE DOOR
11	1	2'-2'-6"	6'-8"	DOUBLE INTERIOR DOOR

WINDOW SCHEDULE				
MARK	QTY.	WIDTH	HEIGHT	DESCRIPTION
(A)	3	3'-0"	5'-0"	SINGLE HUNG WINDOW
(B)	7	3'-0"	4'-0"	SINGLE HUNG WINDOW
(C)	1	3'-0"	2'-0"	TRANSOM FIXED TEMPERED WINDOW
(D)	1	4'-0"	4'-0"	TRANSOM FIXED TEMPERED WINDOW

- × RECESS SUB-FLOOR FOR ALL TILED AREAS
- NOTE:
1. VERIFY WITH WINDOW MANUFACTURER FOR TRUE ROUGH OPENING SIZES.
 2. DOORS AND WINDOWS SELECTION BY BUILDER/OWNER.
 3. ALL WALL DIMENSIONS ARE TO FACE OF FRAMING.
 4. ALL DIMENSIONS TO DOORS AND WINDOWS ARE TO THE CENTER OF OPENING.
 5. 2X6 FRAMING AT PLUMBING WALLS.

WALL LEGEND



FIRST FLOOR PLAN
 Scale: 1/4" = 1'-0"

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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
 PROPOSED FLOOR PLANS

SHEET NO.
 A1.2



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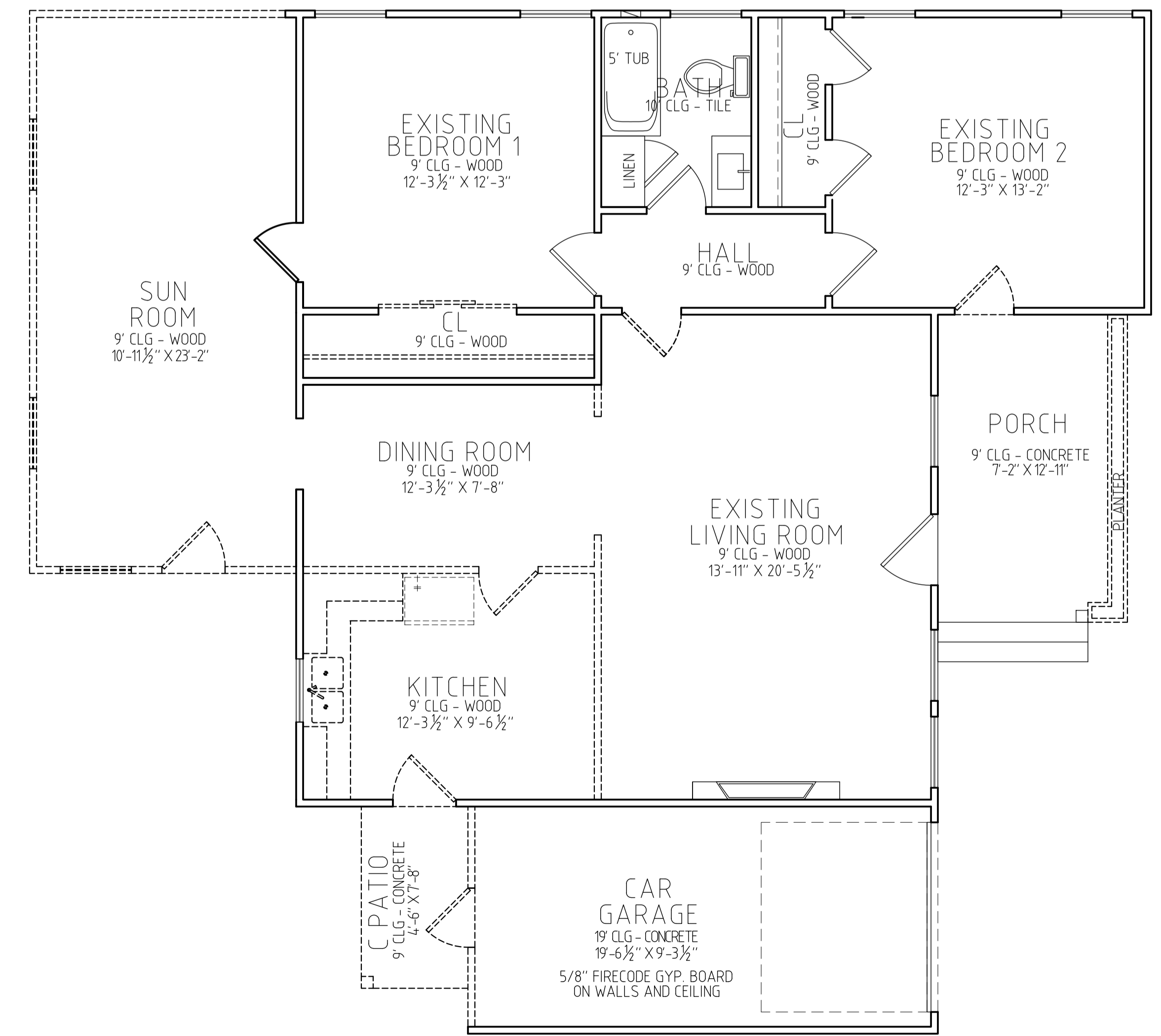
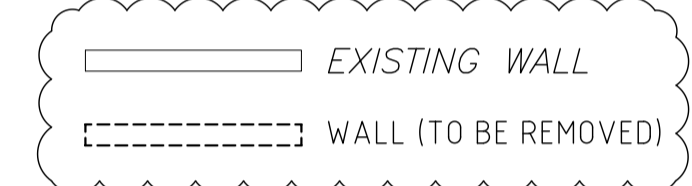
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DEMO FLOOR PLAN
Scale: 1/4" = 1'-0"

WALLING STREET ADDITION
915 WALLING STREET
HOUSTON, TX

SHEET TITLE
DEMO PLANS

SHEET NO.
A1.3



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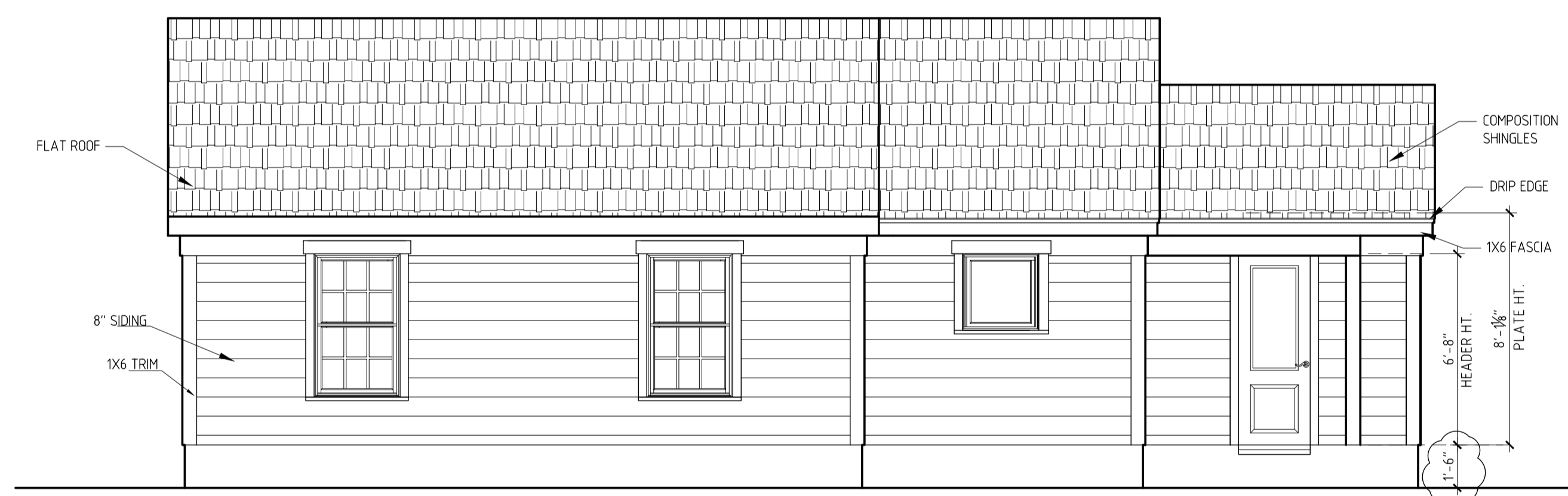
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WALLING STREET ADDITION
915 WALLING STREET
HOUSTON, TX

SHEET TITLE
EXISTING EXTERIOR ELEVATIONS

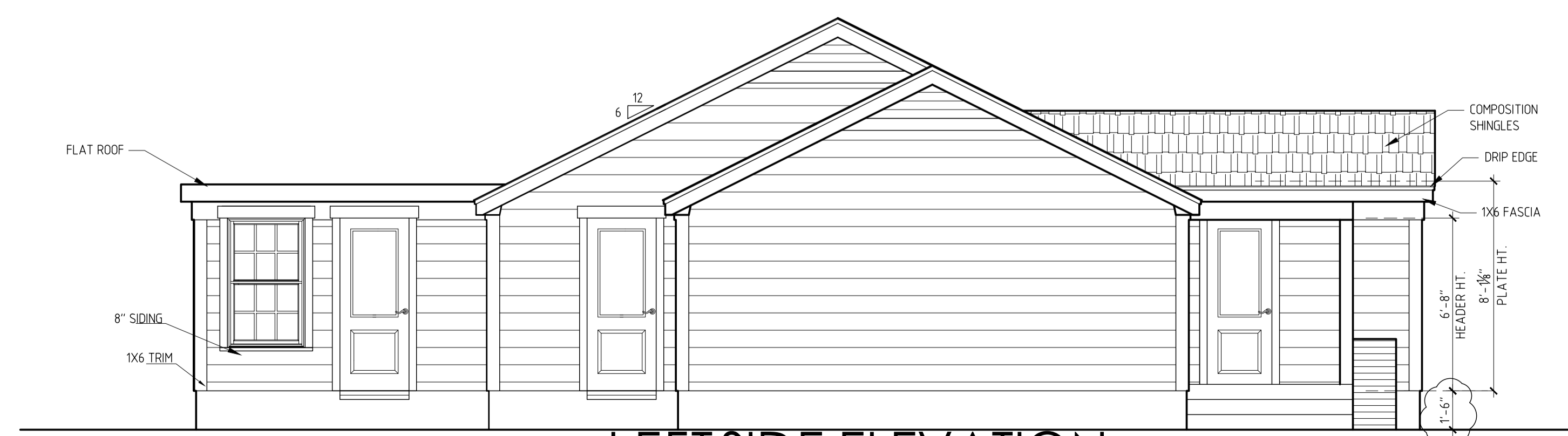
SHEET NO.
A2.1



REAR ELEVATION
Scale: 1/4" = 1'-0"



RIGHT SIDE ELEVATION
Scale: 1/4" = 1'-0"



LEFT SIDE ELEVATION
Scale: 1/4" = 1'-0"



FRONT ELEVATION
Scale: 1/4" = 1'-0"

City of Houston Texas



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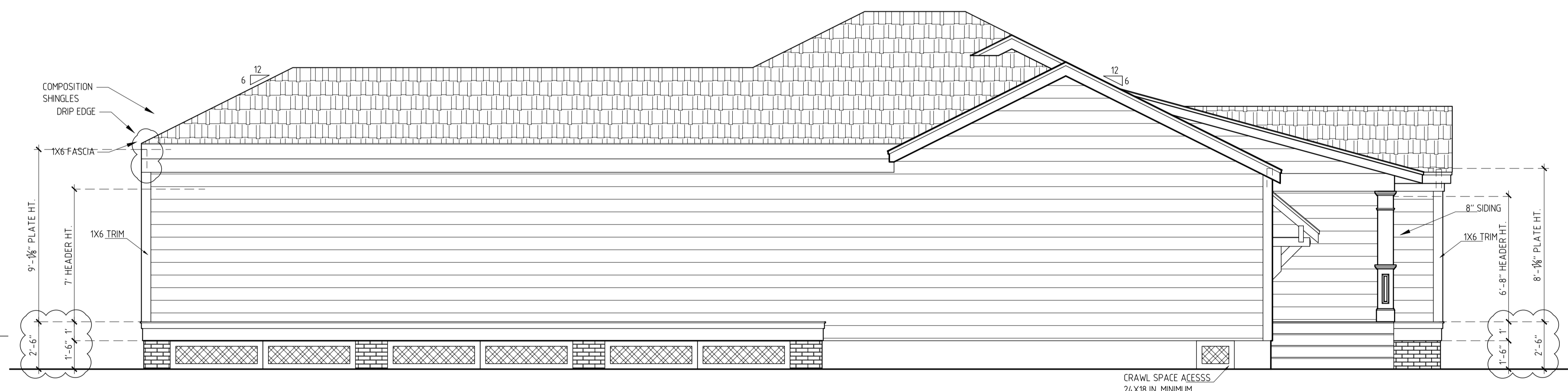
REAR SIDE ELEVATION
 Scale: 1/4" = 1'-0"



RIGHT SIDE ELEVATION
 Scale: 1/4" = 1'-0"



LEFT SIDE ELEVATION
 Scale: 1/4" = 1'-0"



FRONT ELEVATION
 Scale: 1/4" = 1'-0"



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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
PROPOSED EXTERIOR ELEVATIONS

SHEET NO.
A2.2

1. R807.1 ATTIC ACCESS ROUGH OPENING 30"x54". STAIR CAPACITY A MINIMUM OF 350 POUNDS CAPACITY

2. R302.5 DWELLING/GARAGE OPENING/PENETRATION PROTECTION. OPENINGS AND PENETRATIONS THROUGH THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE IN ACCORDANCE WITH SECTIONS R302.5.1 THROUGH R302.5.3.

R302.5.1 OPENING PROTECTION. OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 13/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 13/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH A SELF-CLOSING DEVICE.

R302.5.2 DUCT PENETRATION. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 28 GAGE (0.48 MM) SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

R302.5.3 OTHER PENETRATIONS. PENETRATIONS THROUGH THE SEPARATION REQUIRED IN SECTION R302.6 SHALL BE PROTECTED AS REQUIRED BY SECTION R302.1.1, ITEM 4.

R302.6 DWELLING/GARAGE FIRE SEPARATION. THE GARAGE SHALL BE SEPARATED AS REQUIRED BY TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. THIS PROVISION DOES NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL.

TABLE R302.6 DWELLING/GARAGE SEPARATION

SEPERATION BETWEEN THE RESIDENCE AND THE GARAGE SHALL BE MAINTAINED BY THE INSTALLATION OF 1/2" GYPSUM BOARD ON ALL COMMON WALLS AND 5/8" ON CEILING ON THE GARAGE SIDE. TYPE "X" GYPSUM BOARD FOR THE GARAGE CEILINGS BENEATH HABITABLE ROOMS SHALL BE INSTALLED PERPENDICULAR TO THE CEILING FRAMING AND SHALL BE FASTENED AT MAXIMUM 6 INCHES ON CENTER BY MINIMUM 1--7/8" 6d COATED NAILS OR EQUIVALENT DRYWALL SCREWS. (R702.3.5)

3. R302.5.1 OPENING PROTECTION. OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 13/8 INCHES (35 MM) IN THICKNESS, SOLID OR HONEYCOMB-CORE STEEL DOORS NOT LESS THAN 13/8 INCHES (35 MM) THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH A SELF-CLOSING DEVICE.

4. R312.2.1 WINDOW SILLS. IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES (1829 MM) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES (610 MM) ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4-INCH-DIAMETER (102 MM) SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES (610 MM) OF THE FINISHED FLOOR.

5. R302.7 UNDER-STAIR PROTECTION. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH (12.7 MM) GYPSUM BOARD.

6. R806.1 VENTILATION REQUIRED. ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATING OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATING OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR.

7. WOOD TO BE THIN SET ON APPROPRIATE BACKER BOARD.

8. GUTTERS AND DOWNSPOUTS AS REQUIRED

9. R702.3.8 WATER-RESISTANT GYPSUM BACKING BOARD. GYPSUM BOARD USED AS THE BASE OR BACKER FOR ADHESIVE APPLICATION OF CERAMIC TILE OR OTHER REQUIRED NONABSORBENT FINISH MATERIAL SHALL CONFORM TO ASTM C 1396, C 1178 OR C1278. USE OF WATER-RESISTANT GYPSUM BACKER BOARD SHALL BE PERMITTED ON CEILINGS WHERE FRAMING SPACING DOES NOT EXCEED 12 INCHES (305 MM) ON CENTER FOR 1/2-INCH (12.7 MM) OR 16 INCHES (406 MM) FOR 5/8-INCH-THICK (16 MM) GYPSUM BOARD. WATER-RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A CLASS 1 OR R VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT. CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS, SHALL BE SEALED AS RECOMMENDED BY THE MANUFACTURER.

R702.4.2 FIBER-CEMENT, FIBER-MAT REINFORCED CEMENTITIOUS BACKER UNITS, GLASS MAT GYPSUM BACKERS OR FIBER-REINFORCED GYPSUM BACKERS IN COMPLIANCE WITH ASTM C 1288, C 1325, C 1178 OR C 1278, RESPECTIVELY, AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN SHOWER AREAS.

10. R602.3 DESIGN AND CONSTRUCTION. EXTERIOR WALLS OF WOOD-FRAME CONSTRUCTION SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS CHAPTER AND FIGURES R602.3(1)

11. A LEVEL SERVICE SPACE A MIN. 30" DEEP AND 30" WIDE SHALL BE PRESENT ALONG ALL SIDES OF APPLIANCE(S) IN ATTIC WHERE ACCESS IS REQUIRED. PROVIDE AN UNOBSTRUCTED PASSAGEWAY LARGE ENOUGH TO ALLOW REMOVAL OF THE LARGEST APPLIANCE, BUT NOT LESS THAN 30" HIGH AND 22" WIDE AND NOT MORE THAN 20" IN LENGTH WHEN MEASURED ALONG THE CENTER LINE OF PASSAGEWAY FROM THE APPLIANCE TO THE PASSAGEWAY SHALL HAVE CONTINUOUS SOLID FLOORING IN ACCORDANCE WITH R501.1 AND M130.5 OF IRC 2012.

12. EVERY DWELLING UNIT TO HAVE KITCHEN & BATHROOM WITH HOT & COLD RUNNING WATER.

13. EVERY DWELLING UNIT TO HAVE HEATING FACILITIES

14. CROSS VENTILATION AT ENCLOSED ATTICS

15. THE SIZE, HEIGHT AND SPACING OF STUDS SHALL BE IN ACCORDANCE WITH TABLE R602.3(5) IRC 2012

16. WATER HEATERS AND STORAGE TANKS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION M1305 AND SHALL BE LOCATED AND CONNECTED TO PROVIDE ACCESS FOR OBSERVATION, MAINTENANCE, SERVICING AND REPLACEMENT.

17. R312.1.1 GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, RAMP AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES (762 MM) MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES (914 MM) HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

R312.1.2 HEIGHT. REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 36 INCHES (914 MM) HIGH MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE, ADJACENT FIXED SEATING OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS.

EXCEPTIONS:

1. GUARDS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT NOT LESS THAN 34 INCHES (864 MM) MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS

2. WHERE THE TOP OF THE GUARD ALSO SERVES AS A HANDRAIL ON THE OPEN SIDES OF STAIRS, THE TOP OF THE GUARD SHALL NOT BE LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM) MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.

R312.1.3 OPENING LIMITATIONS. REQUIRED GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT WHICH ALLOW PASSAGE OF A SPHERE 4 INCHES (102 MM) IN DIAMETER.

18. KITCHEN SINK WITH DISPOSAL.

19. R602.10 WALL BRACING. BUILDINGS SHALL BE BRACED IN ACCORDANCE WITH THIS SECTION OR, WHEN APPLICABLE, SECTION R602.12. WHERE A BUILDING, OR PORTION THEREOF, DOES NOT COMPLY WITH ONE OR MORE OF THE BRACING REQUIREMENTS IN THIS SECTION, THOSE PORTIONS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH SECTION R301.1.

20. R602.11 WALL ANCHORAGE. BRACED WALL LINE SILLS SHALL BE ANCHORED TO CONCRETE OR MASONRY FOUNDATIONS IN ACCORDANCE WITH SECTIONS R403.1.6 AND R602.11.1.

21. R302.11 FIRELOCKING. IN COMBUSTIBLE CONSTRUCTION, FIRELOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

FIRELOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:

1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.

1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET (3048 MM).

2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.

3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.

4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.

5. FOR THE FIRELOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1003.19.

6. FIRELOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

22. R310.1 EMERGENCY ESCAPE AND RESCUE REQUIRED. BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY EGRESS AND RESCUE OPENINGS SHALL BE PROVIDED IN EACH SLEEPING ROOM. WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED THEY SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES (1118 MM) MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM EDGE OF THE CLEAR OPENING. WHERE A DOOR OPENING HAVING A THRESHOLD BELOW THE ADJACENT GROUND ELEVATION SERVES AS AN EMERGENCY ESCAPE AND RESCUE OPENING AND IS PROVIDED WITH A BULKHEAD ENCLOSURE, THE BULKHEAD ENCLOSURE SHALL COMPLY WITH SECTION R310.3. THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTION R310.2. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.

EXCEPTION: BASEMENTS USED ONLY TO HOUSE MECHANICAL EQUIPMENT AND NOT EXCEEDING TOTAL FLOOR AREA OF 200 SQUARE FEET (18.58 M2).

R310.1.1 MINIMUM OPENING AREA. ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.530 M2).

R310.1.2 MINIMUM OPENING HEIGHT. THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24 INCHES (610 MM).

R310.1.3 MINIMUM OPENING WIDTH. THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20 INCHES (508 MM).

R310.1.4 OPERATIONAL CONSTRAINTS. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.

R311.2 EGRESS DOOR. AT LEAST ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED AND SHALL INCLUDE A MINIMUM CLEAR WIDTH OF 32 INCHES (813 MM) WHEN MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). THE MINIMUM CLEAR HEIGHT OF THE DOOR OPENING SHALL NOT BE LESS THAN 78 INCHES (1981 MM) IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE READILY OPERABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

R311.3 FLOORS AND LANDINGS AT EXTERIOR DOORS. THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A MINIMUM DIMENSION OF 36 INCHES (914 MM) MEASURED IN THE DIRECTION OF TRAVEL. EXTERIOR LANDINGS SHALL BE PERMITTED TO HAVE A SLOPE NOT TO EXCEED 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT).

23. R314.2 SMOKE DETECTION SYSTEMS. HOUSEHOLD FIRE ALARM SYSTEMS INSTALLED IN ACCORDANCE WITH NFPA 72 THAT INCLUDE SMOKE ALARMS, OR A COMBINATION OF SMOKE DETECTOR AND AUDIBLE NOTIFICATION DEVICE INSTALLED AS REQUIRED BY THIS SECTION FOR SMOKE ALARMS, SHALL BE PERMITTED. THE HOUSEHOLD FIRE ALARM SYSTEM SHALL PROVIDE THE SAME LEVEL OF SMOKE DETECTION AND ALARM AS REQUIRED BY THIS SECTION FOR SMOKE ALARMS, WHERE A HOUSEHOLD FIRE WARNING SYSTEM IS INSTALLED USING A COMBINATION OF SMOKE DETECTOR AND AUDIBLE NOTIFICATION DEVICE. IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY AND OWNED BY THE HOMEOWNER. THE SYSTEM SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION AND BE MAINTAINED IN ACCORDANCE WITH NFPA 72.

SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

1. IN EACH SLEEPING ROOM.

2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

3. ON EACH ADDITIONAL STORY OF THE BUILDING, INCLUDING BASEMENTS AND HABITABLE ATTICS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS, IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.

24. R315.2 CARBON MONOXIDE DETECTION SYSTEMS. CARBON MONOXIDE DETECTION SYSTEMS THAT INCLUDE CARBON MONOXIDE DETECTORS AND AUDIBLE NOTIFICATION APPLIANCES, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION FOR CARBON MONOXIDE ALARMS AND NFPA 720, SHALL BE PERMITTED. THE CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH UL 2075, WHERE A HOUSEHOLD CARBON MONOXIDE DETECTION SYSTEM IS INSTALLED, IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY, OWNED BY THE HOMEOWNER AND SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION.

EXCEPTION: WHERE CARBON MONOXIDE ALARMS ARE INSTALLED MEETING THE REQUIREMENTS OF SECTION R315.1, COMPLIANCE WITH SECTION 315.2 IS NOT REQUIRED.

R315.3 WHERE REQUIRED IN EXISTING DWELLINGS. WHERE WORK REQUIRING A PERMIT OCCURS IN EXISTING DWELLINGS THAT HAVE ATTACHED GARAGES OR IN EXISTING DWELLINGS WITHIN WHICH FUEL-FIRED APPLIANCES EXIST, CARBON MONOXIDE ALARMS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R315.1.

R315.4 ALARM REQUIREMENTS. SINGLE-STORY CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

25. R311.7 STAIRWAYS.

R311.7.1 WIDTH. STAIRWAYS SHALL NOT BE LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY AND THE MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 311/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (688 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.

THE MINIMUM HEADROOM IN ALL PARTS OF THE STAIRWAY SHALL NOT BE LESS THAN 6 FEET 8 INCHES (2032 MM) MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.

R311.7.3 VERTICAL RISE. A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE LARGER THAN 12 FEET (3658 MM) BETWEEN FLOOR LEVELS OR LANDINGS.

R311.7.4 THE WALKLINE ACROSS WINDER TREADS SHALL BE CONCENTRIC TO THE CURVED DIRECTION OF TRAVEL THROUGH THE TURN AND LOCATED 12 INCHES (305 MM) FROM THE SIDE WHERE THE WINDERS ARE NARROWER. THE 12-INCH (305 MM) DIMENSION SHALL BE MEASURED FROM THE WIDEST POINT OF THE CLEAR STAIR WIDTH AT THE WALKING SURFACE OF THE WINDER. IF WINDERS ARE ADJACENT WITHIN THE FLIGHT, THE POINT OF THE WIDEST CLEAR STAIR WIDTH OF THE ADJACENT WINDERS SHALL BE USED.

R311.7.5 STAIR TREADS AND RISERS SHALL MEET THE REQUIREMENTS OF THIS SECTION. FOR THE PURPOSES OF THIS SECTION ALL DIMENSIONS AND DIMENSIONED SURFACES SHALL BE EXCLUSIVE OF CARPETS, RUGS OR RUNNERS.

R311.7.5.1 THE MAXIMUM RISER HEIGHT SHALL BE 73/4 INCHES (196 MM). THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES (0.51 RAD) FROM THE VERTICAL. OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENING BETWEEN TREADS DOES NOT PERMIT THE PASSAGE OF A 4-INCH-DIAMETER (102 MM) SPHERE.

R311.7.5.2 THE MINIMUM TREAD DEPTH SHALL BE 10 INCHES (254 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM).

R311.7.5.2.1 WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 10 INCHES (254 MM) MEASURED BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AT THE INTERSECTIONS WITH THE WALKLINE. WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 6 INCHES (152 MM) AT ANY POINT WITHIN THE CLEAR WIDTH OF THE STAIR. WITHIN ANY FLIGHT OF STAIRS, THE LARGEST WINDER TREAD DEPTH AT THE WALKLINE SHALL NOT EXCEED THE SMALLEST WINDER TREAD BY MORE THAN 3/8 INCH (9.5 MM). CONSISTENTLY SHAPED WINDERS AT THE WALKLINE SHALL BE ALLOWED WITHIN THE SAME FLIGHT OF STAIRS AS RECTANGULAR TREADS AND DO NOT HAVE TO BE WITHIN 3/8 INCH (9.5 MM) OF THE RECTANGULAR TREAD DEPTH.

R311.7.5.3 NOSINGS. THE RADIUS OF CURVATURE AT THE NOSING SHALL BE NO GREATER THAN 9/16 INCH (14 MM). A NOSING NOT LESS THAN 3/4 INCH (19 MM) BUT NOT MORE THAN 11/4 INCHES (32 MM) SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8 INCH (9.5 MM) BETWEEN TWO STORIES, INCLUDING THE NOSING AT THE LEVEL OF FLOORS AND LANDINGS. BEVELING OF NOSINGS SHALL NOT EXCEED 1/2 INCH (12.7 MM).

R311.7.6 THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE MINIMUM WIDTH PERPENDICULAR TO THE DIRECTION OF TRAVEL SHALL BE NO LESS THAN THE WIDTH OF THE FLIGHT SERVED. LANDINGS OF SHAPES OTHER THAN SQUARE OR RECTANGULAR SHALL BE PERMITTED PROVIDED THE DEPTH AT THE WALK LINE AND THE TOTAL AREA IS NOT LESS THAN THAT OF A QUARTER CIRCLE WITH A RADIUS EQUAL TO THE REQUIRED LANDING WIDTH. WHERE THE STAIRWAY HAS A STRAIGHT RUN, THE MINIMUM DEPTH IN THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN 36 INCHES (914 MM).

R311.7.7 THE WALKING SURFACE OF TREADS AND LANDINGS OF STAIRWAYS SHALL BE SLOPED NO STEEPER THAN ONE UNIT VERTICAL IN 48 INCHES HORIZONTAL (2-PERCENT SLOPE).

R311.7.8 HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.

R311.7.8.1 HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP, SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM).

R311.7.8.2 HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT. FROM A POINT DIRECTLY ABOVE THE TREADS TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT, HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEVEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 11/2 INCH (38 MM) BETWEEN THE WALL AND THE HANDRAILS.

R311.7.8.3 GRIP-SIZE. ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.

1. TYPE I. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 11/4 INCHES (32 MM) AND NOT GREATER THAN 2 INCHES (51 MM). IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES (102 MM) AND GREATER THAN 61/4 INCHES (160 MM) WITH A MAXIMUM CROSS SECTION OF DIMENSION OF 21/4 INCHES (57 MM). EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH (0.25 MM).

2. TYPE II. HANDRAILS WITH A PERIMETER GREATER THAN 61/4 INCHES (160 MM) SHALL HAVE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL BEGIN WITHIN A DISTANCE OF 3/4 INCH (19 MM) MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND ACHIEVE A DEPTH OF AT LEAST 5/16 INCH (8 MM) WITHIN 2/8 INCH (22 MM) BELOW THE WIDEST PORTION OF THE PROFILE. THIS REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 3/8 INCH (10 MM) TO A LEVEL THAT IS NOT LESS THAN 13/4 INCHES (45 MM) BELOW THE TALLEST PORTION OF THE PROFILE. THE MINIMUM WIDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE 11/4 INCHES (32 MM) TO A MAXIMUM OF 23/4 INCHES (70 MM). EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH (0.25 MM).

R311.7.8.4 EXTERIOR WOOD/PLASTIC COMPOSITE HANDRAILS SHALL COMPLY WITH THE PROVISIONS OF SECTION R507.3.

R311.7.9 ILLUMINATION. ALL STAIRS SHALL BE PROVIDED WITH ILLUMINATION IN ACCORDANCE WITH SECTION R303.6.

R311.7.10.1 SPIRAL STAIRWAYS ARE PERMITTED, PROVIDED THE MINIMUM CLEAR WIDTH AT AND BELOW THE HANDRAIL SHALL BE 26 INCHES (660 MM) WITH EACH TREAD HAVING A 71/2-INCH (190 MM) MINIMUM TREAD DEPTH AT 12 INCHES (914 MM) FROM THE NARROWER EDGE. ALL TREADS SHALL BE IDENTICAL AND THE RISE SHALL BE NO MORE THAN 91/2 INCHES (241 MM). A MINIMUM HEADROOM OF 6 FEET 6 INCHES (1982 MM) SHALL BE PROVIDED.

R311.7.10.2 BULKHEAD ENCLOSURE STAIRWAYS. STAIRWAYS SERVING BULKHEAD ENCLOSURES, NOT PART OF THE REQUIRED BUILDING EGRESS, PROVIDING ACCESS FROM THE OUTSIDE GRADE LEVEL TO THE BASEMENT SHALL BE EXEMPT FROM THE REQUIREMENTS OF SECTIONS R311.3 AND R311.7 WHERE THE MAXIMUM HEIGHT FROM THE BASEMENT FINISHED FLOOR LEVEL TO GRADE ADJACENT TO THE STAIRWAY DOES NOT EXCEED 8 FEET (2438 MM) AND THE GRADE LEVEL OPENING TO THE STAIRWAY IS COVERED BY A BULKHEAD ENCLOSURE WITH HINGED DOORS OR OTHER APPROVED MEANS.

26. INTERIOR WALL COVERING. R702.3.1 MATERIALS. ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO ASTM C 22, C 475, C 514, C 1002, C 1047, C 1177, C 1178, C 1278, C 1396 OR C 1658 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION. ADHESIVES FOR THE INSTALLATION OF GYPSUM BOARD SHALL CONFORM TO ASTM C 557.

R702.3.2 WOOD FRAMING. WOOD FRAMING SUPPORTING GYPSUM BOARD SHALL NOT BE LESS THAN 2 INCHES (51 MM) NOMINAL THICKNESS IN THE LEAST DIMENSION EXCEPT THAT WOOD FURRING STRIPS NOT LESS THAN 1-INCH BY 2-INCH (25 MM BY 51 MM) NOMINAL DIMENSION MAY BE USED OVER SOLID BACKING OR FRAMING SPACED NOT MORE THAN 24 INCHES (610 MM) ON CENTER.

27. R703.6 EXTERIOR PLASTER. INSTALLATION OF THESE MATERIALS SHALL BE IN COMPLIANCE WITH ASTM C 926 AND ASTM C 1063 AND THE PROVISIONS OF THIS CODE.

28. R807.1 ATTIC ACCESS. BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES (762 MM) OR GREATER OVER AN AREA OF NOT LESS THAN 10 SQUARE FEET. THE NET CLEAR HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS OR ANY PERMANENT OBSTRUCTION TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS OR ANY PERMANENT OBSTRUCTION. THE ROUGH-FRAMED OPENING SHALL NOT BE LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION WHEN LOCATED IN A WALL. THE OPENING SHALL BE A MINIMUM OF 22 INCHES WIDE BY 30 INCHES HIGH (559 MM WIDE BY 762 MM HIGH). WHEN THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES (762 MM) AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.

29. R703.6.1 LATH. ALL LATH AND LATH ATTACHMENTS SHALL BE OF CORROSION-RESISTANT MATERIALS. EXPANDED METAL OR WOVEN WIRE LATH SHALL BE ATTACHED WITH 11/2-INCH-LONG (38 MM), 11 GAGE NAILS HAVING A 7/16-INCH (11.1 MM) HEAD, OR 7/8-INCH-LONG (22.2 MM), 16 GAGE STAPLES, SPACED AT NO MORE THAN 6 INCHES (152 MM), OR AS OTHERWISE APPROVED.

R703.6.2 PLASTER. PLASTERING WITH PORTLAND CEMENT PLASTER SHALL BE NOT LESS THAN THREE COATS WHEN APPLIED OVER METAL LATH OR WIRE LATH AND SHALL BE NOT LESS THAN TWO COATS WHEN APPLIED OVER MASONRY, CONCRETE, PRESSURE-PRESERVATIVE TREATED WOOD OR DECAY-RESISTANT WOOD AS SPECIFIED IN SECTION R317.1 OR GYPSUM BACKING. IF THE PLASTER SURFACE IS COMPLETELY COVERED BY VENEER OR OTHER FINISH MATERIAL OR IS COMPLETELY CONCEALED, PLASTER APPLICATION NEED BE ONLY TWO COATS, PROVIDED THE TOTAL THICKNESS IS AS SET FORTH IN TABLE R702.1(1).

ON WOOD-FRAME CONSTRUCTION WITH AN ON-GRADE FLOOR SLAB SYSTEM, EXTERIOR PLASTER SHALL BE APPLIED TO COVER, BUT NOT EXTEND BEYOND, LATH, PAPER AND SCREED.

THE PROPORTION OF AGGREGATE TO CEMENTITIOUS MATERIALS SHALL BE AS SET FORTH IN TABLE R702.1(3).

R703.6.2.1 WEEP SCREEDS. A MINIMUM 0.019-INCH (0.5 MM) (NO. 26 GALVANIZED SHEET GAGE), CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 31/2 INCHES (89 MM) SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C 926. THE WEEP SCREED SHALL BE PLACED A MINIMUM OF 4 INCHES (102 MM) ABOVE THE EARTH OR 2 INCHES (51 MM) ABOVE PAVED AREAS AND SHALL BE OF A TYPE THAT WILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED.

R703.6.3 WATER-RESISTIVE BARRIERS. WATER-RESISTIVE BARRIERS SHALL BE INSTALLED AS REQUIRED IN SECTION R703.2 AND, WHERE APPLIED OVER WOOD-BASED SHEATHING, SHALL INCLUDE A WATER-RESISTIVE VAPOR-PERMEABLE BARRIER WITH A PERFORMANCE AT LEAST EQUIVALENT TO TWO LAYERS OF GRADE D PAPER. THE INDIVIDUAL LAYERS SHALL BE INSTALLED INDEPENDENTLY SUCH THAT EACH LAYER PROVIDES A SEPARATE CONTINUOUS PLANE AND ANY FLASHING (INSTALLED IN ACCORDANCE WITH SECTION R703.6) INTENDED TO DRAIN TO THE WATER-RESISTIVE BARRIER IS DIRECTED BETWEEN THE LAYERS.

R703.7.4.1.1 VENEER TIES AROUND WALL OPENINGS. ADDITIONAL METAL TIES SHALL BE PROVIDED AROUND ALL WALL OPENINGS GREATER THAN 16 INCHES (406 MM) IN EITHER DIMENSION. METAL TIES AROUND THE PERIMETER OF OPENINGS SHALL BE SPACED NOT MORE THAN 3 FEET (914 MM) ON CENTER AND PLACED WITHIN 12 INCHES (305 MM) OF THE WALL OPENING.

R703.7.4.2 GROUT FILL. AS AN ALTERNATIVE TO THE AIR SPACE REQUIRED BY TABLE R703.7.4, GROUT SHALL BE PERMITTED TO FILL THE AIR SPACE. WHEN THE AIR SPACE IS FILLED WITH GROUT, A WATER-RESISTIVE BARRIER IS REQUIRED OVER STUDS OR SHEATHING. WHEN FILLING THE AIR SPACE, REPLACING THE SHEATHING AND WATER-RESISTIVE BARRIER WITH A WIRE MESH AND APPROVED WATER-RESISTIVE BARRIER OR AN APPROVED WATER-RESISTIVE BARRIER-BACKED REINFORCEMENT ATTACHED DIRECTLY TO THE STUDS IS PERMITTED.

R703.7.5 FLASHING. FLASHING SHALL BE LOCATED BENEATH THE FIRST COURSE OF MASONRY ABOVE FINISHED GROUND LEVEL ABOVE THE FOUNDATION WALL, BASE SLAB AND AT OTHER POINTS OF SUPPORT, INCLUDING STRUCTURAL FLOORS, SHELF ANGLES AND LINTELS WHEN MASONRY VENEERS ARE DESIGNED IN ACCORDANCE WITH SECTION R703.7. SEE SECTION R703.9 FOR ADDITIONAL REQUIREMENTS.

R703.7.6 WEEPHOLES. WEEPHOLES SHALL BE PROVIDED IN THE OUTSIDE WYTHE OF MASONRY WALLS AT A MAXIMUM SPACING OF 33 INCHES (838 MM) ON CENTER. WEEPHOLES SHALL NOT BE LESS THAN 3/16 INCH (5 MM) IN DIAMETER. WEEPHOLES SHALL BE LOCATED IMMEDIATELY ABOVE THE FLASHING.

WINDOW AND DOOR NOTES:

- CONTRACTOR SHALL REVIEW ALL DOOR AND WINDOW TRIM AND INSTALLATION DETAILS AND CONDITIONS PRIOR TO ROUGH FRAMING AND CUTTING OPENING.
- CONTRACTOR SHALL NOTIFY AN DESIGN DESIGN LLC OF ANY FIELD CONDITIONS THAT DO NOT PERMIT THE INSTALLATION OF ANY DOOR OR WINDOW UNIT DUE TO ANY CONFLICTS.
- CONTRACTOR SHALL COORDINATE THE NECESSARY ROUGH OPENING DIMENSIONS FOR THE SPECIFIC WALL ASSEMBLY AND THE DOOR AND WINDOW UNIT FOR INSTALLATION.
- ALL GLAZING SHALL BE 5/8 INCH THICK INSULATED WITH MULTI-LAYER LOW-E COATED GLAZE.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF FINISH HARDWARE WITH DOOR MANUFACTURER

6) ALL GLASS AND GLAZING SHALL CONFORM TO ALL APPLICABLE CODES

TRUSS SPECIFICATIONS:

- INSTALLING, SECURING, BRACING ETC., OF TRUSSES AS PER "TCPIA".
- ALL TRUSS SHOP DRAWINGS AND LAYOUTS TO BE APPROVED BY ENGINEER OF RECORD.
- MANUFACTURER'S NAME SHALL BE VISIBLE ON EACH TRUSS.
- FABRICATED TRUSSES IN JOGS WITH MEMBERS ACCURATELY CUT TO PROVIDE FULL CONTACT AT JOINTS.
- TRUSS FABRICATOR SHALL HAVE HIS PLANT INSPECTED FOUR TIMES PER YEAR BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH TPI REGULATIONS AND COPIES OF INSPECTIONS MADE AVAILABLE TO OWNERS UPON REQUEST.

STONE MASONRY WALLS:

- A VENEER TIES SHALL NOT BE LESS THAN NO.9 GAGE WIRE AND SHALL HAVE A HOOK EMBEDDED IN THE MORTAR JOINT. EACH TIE SHALL BE SPACED NOT MORE THAN 24 IN. O.C. HORIZONTALLY AND VERTICALLY AND SHALL SUPPORT NOT MORE THAN 2.67 SQFT OF WALL AREA.
- THE VENEER SHALL BE SEPARATED FROM THE SHEATHING BY AIR SPACE OF MINIMUM 1 IN. AND NO MORE THAN 4 IN.
- WEEPHOLES SHALL BE PROVIDED AT MAXIMUM SPACING OF 33 IN. SHOULD NOT BE LESS THAN 3/16 IN. IN DIAMETER AND SHALL BE LOCATED ABOVE THE FLASHING

STUCCO WALLS:

- WEEP SCREEDS: A MINIMUM OF NO. 26 GALVANIZED SHEET GAGE, CORROSION-RESISTANT WEEP SCREEDS, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3 1/2 IN. SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUDS WALL. THE WEEP SCREED SHALL BE PLACE A MINIMUM OF 4 INCHES ABOVE THE EARTH OR 2 INCHES ABOVE PAVED AREAS AND SHALL BE OF A TYPE THAT WILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER RESISTANCE BARRIER SHALL LAP THE ATTACHMENT FLANGE OF THE WEEP SCREED.

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WALLING STREET ADDITION
915 WALLING STREET
HOUSTON, TX

DESCRIPTION DATE MARK

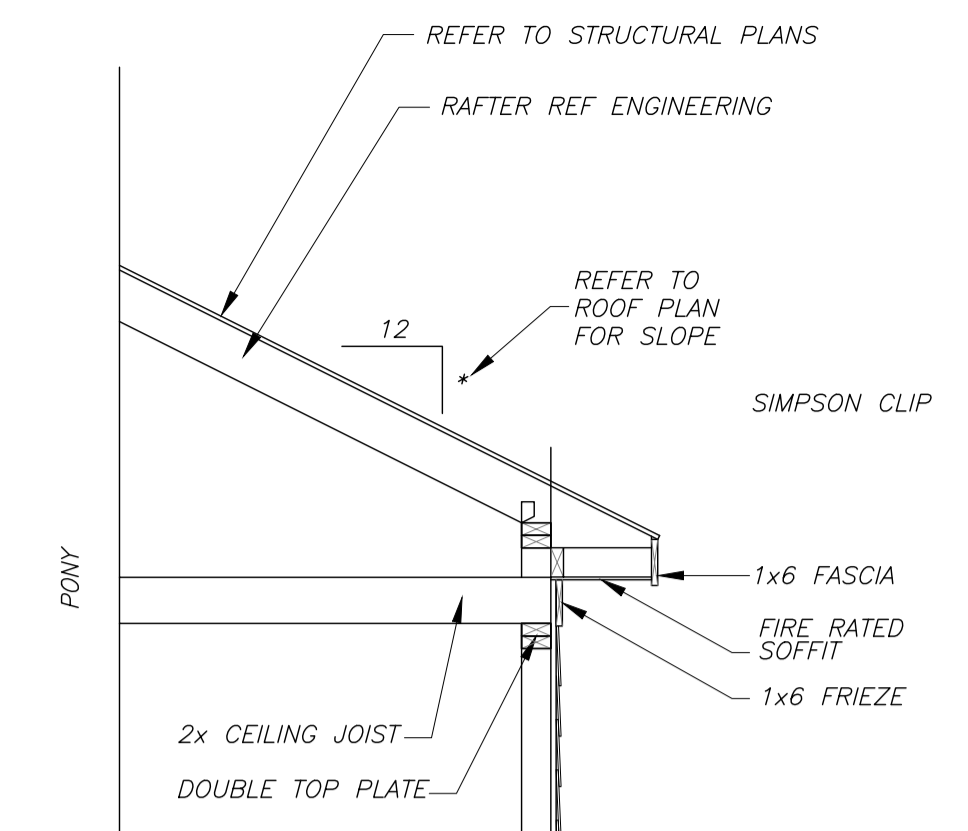
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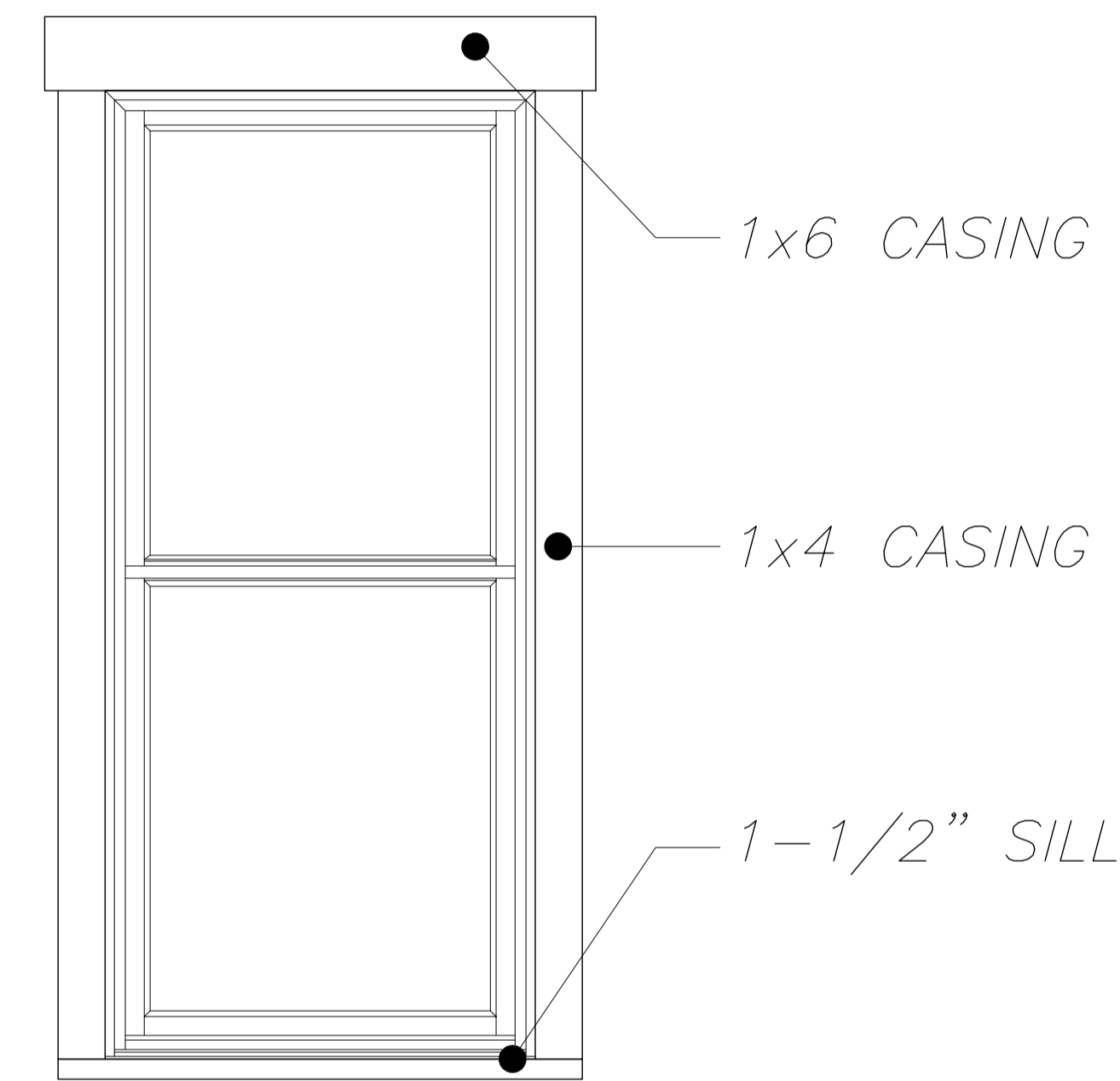


"SIMP" H-5 OR RSP4 A1 BOTTOM OF ALT. STUDS (NOT REQUIRED AT PLYW SHEAR PANEL LOCATIONS)
 CAULK UNDER SOLE PLATES, W.P. AT EXT. WALLS ONLY
 1/2" EXPANDED POLYSTYRENE INSULATION
 2x WOOD STUDS AT 16" O.C. (U.N.O.)
 2x PRESSURE TREATED WD. PLATE & ANCHOR BOLTS
 SEE STRUCTURAL PLANS

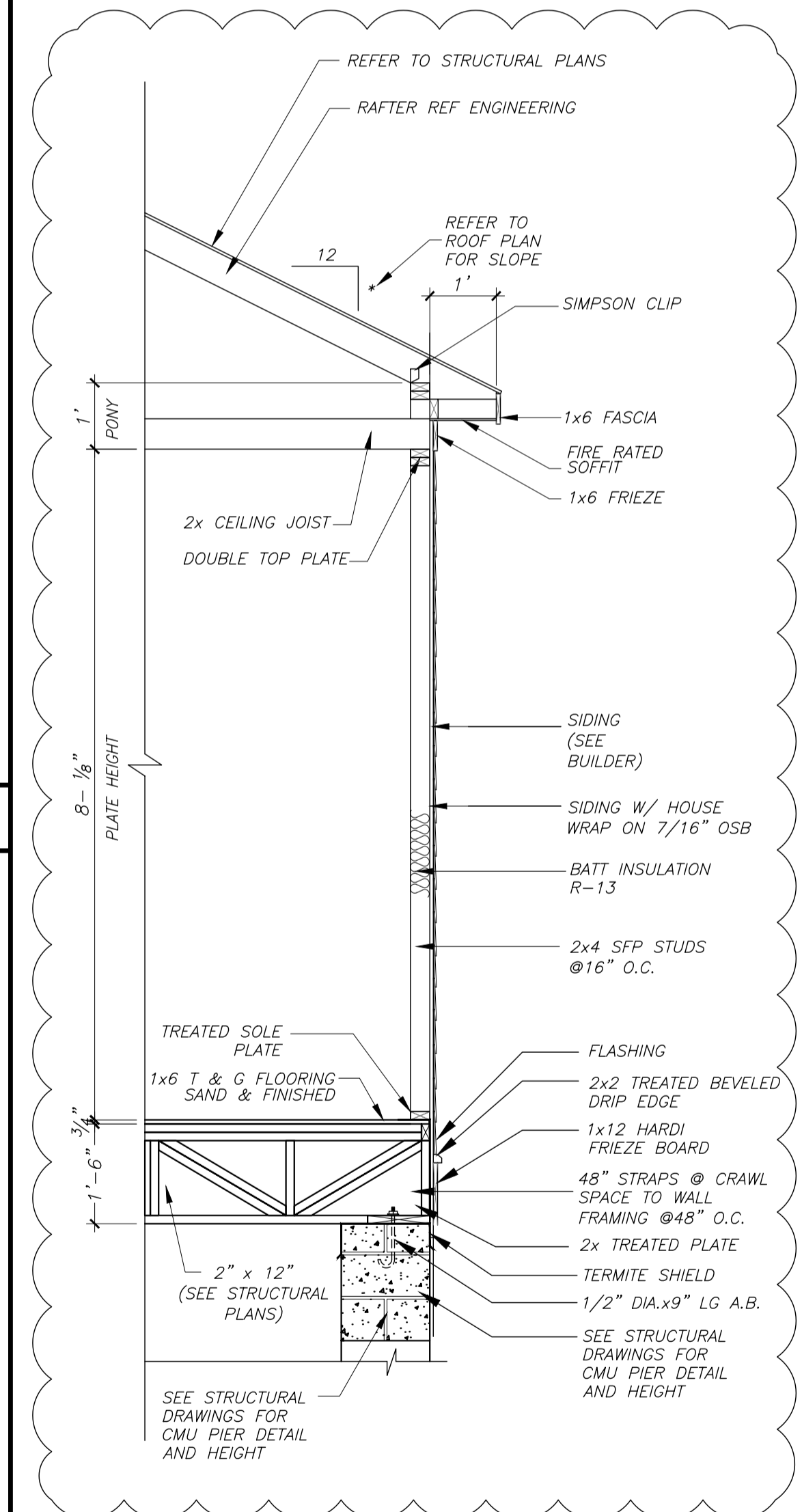
19127502
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 02/04/20



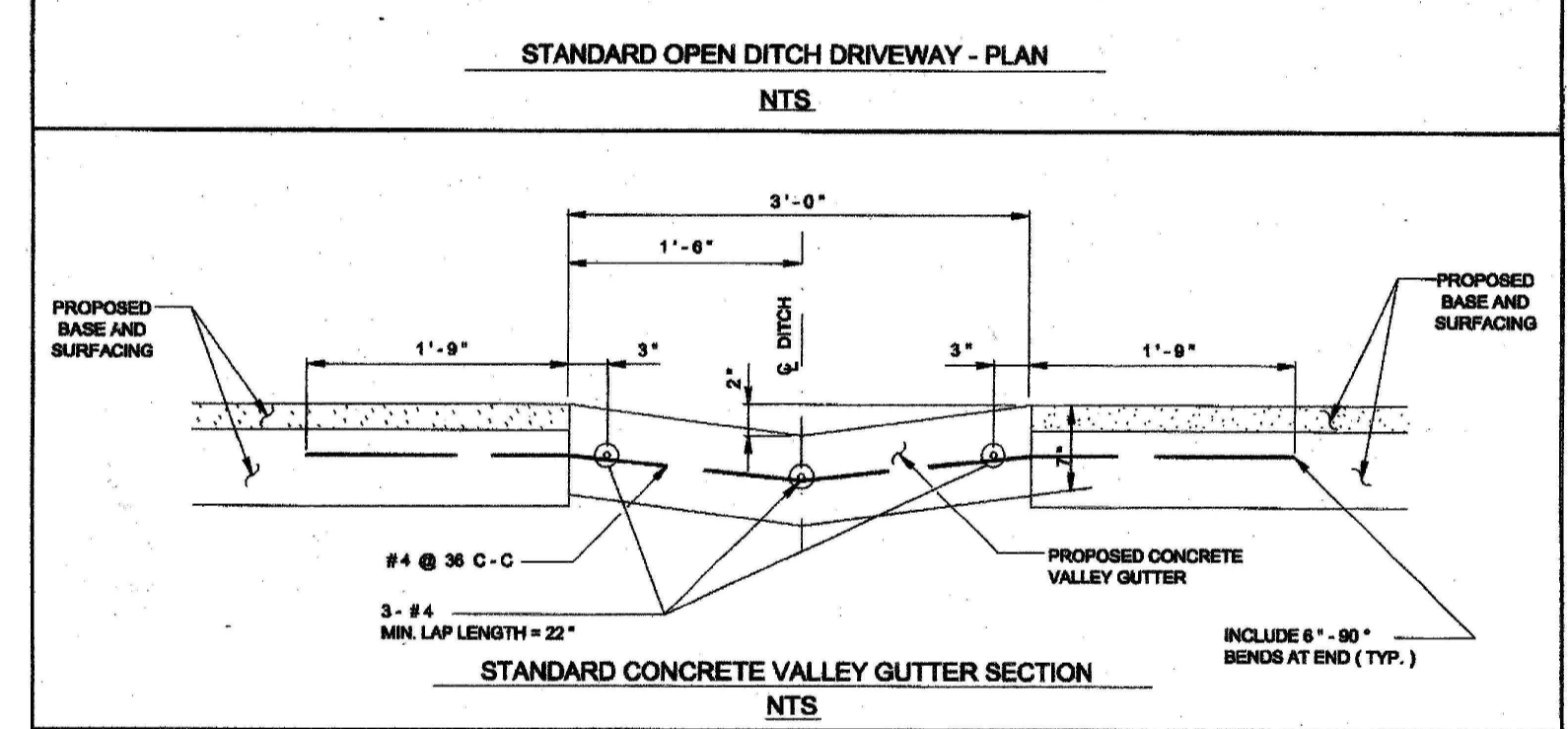
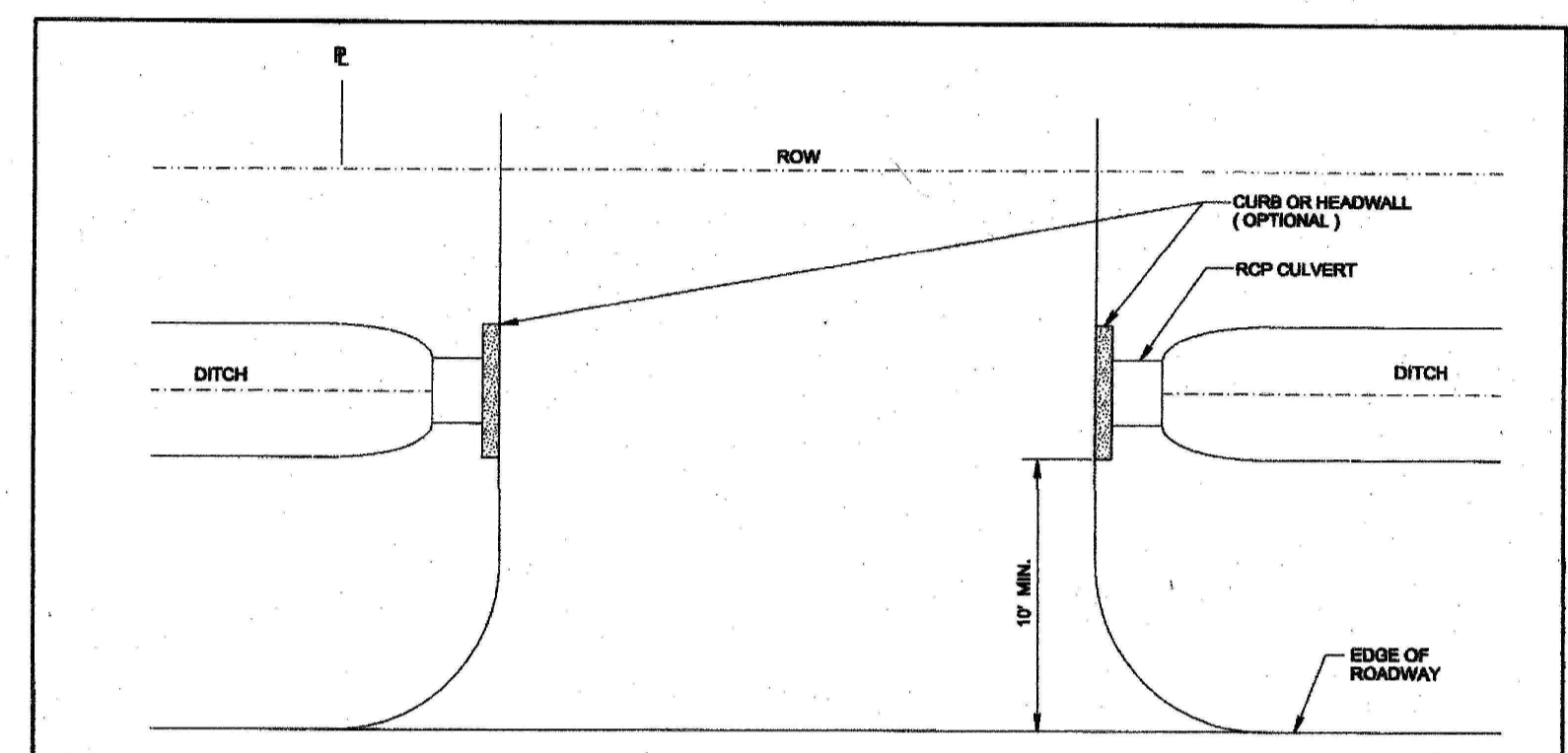
EAVE DETAIL 4 FOUNDATION 2



WINDOW DETAIL 3



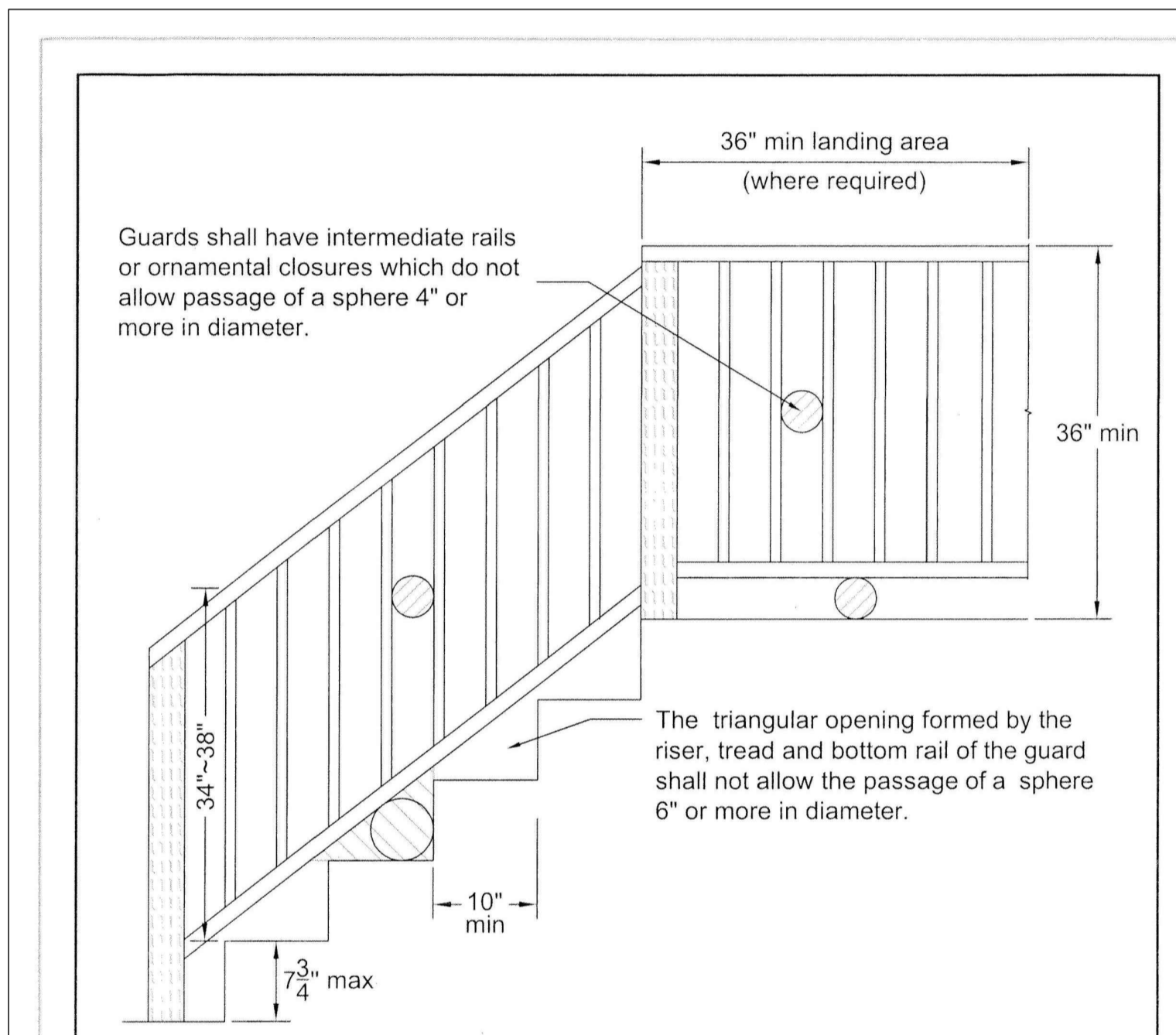
HOUSE SECTION 1



1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 24" DIAMETER MINIMUM.
3. SPACING OF TYPE "D-1" OR "D-1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02632-07 FOR TYPE "D" OR DRAWING NO. 02632-06 FOR TYPE "D-1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3-FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THE INSTALLATION OF DITCH CULVERTS TO BE IMPRACTICAL DUE TO INSUFFICIENT DEPTH. THE VALLEY GUTTER SECTION WILL BE CONSTRUCTED OF 5-1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS ON OPEN DITCH TYPE STREETS (NOT TO SCALE)
 APPROVED BY: [Signature] CITY ENGINEER
 APPROVED BY: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING
 EFF DATE: OCT-01-2009 DWG NO: 02754-02

CITY DETAILS 5



- Notes:
1. Individual stair treads shall be designed for a uniformly distributed live load of 40 psf or a 300 pound concentrated load acting over an area of 4 square inches, whichever produces the greater stress.
 2. Guardrails and handrails shall be designed for a single concentrated load of 200 pound applied in any direction at any point along the top.

STANDARD DRAWING
 CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS & ENGINEERING
 RESIDENTIAL STAIR DETAILS
 1002 WASHINGTON AVE., HOUSTON, TEXAS 77002
 1 OF 1

CITY DETAILS

D&Q design
 14018 ALUTUM FALLS LN.
 HOUSTON, TEXAS 77095
 PHONE & FAX: (281) 815-3269
 MOBILE: (281) 818-5609

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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

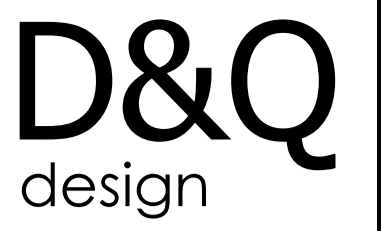
DETAILS & NOTES

SHEET NO.
 D1.2



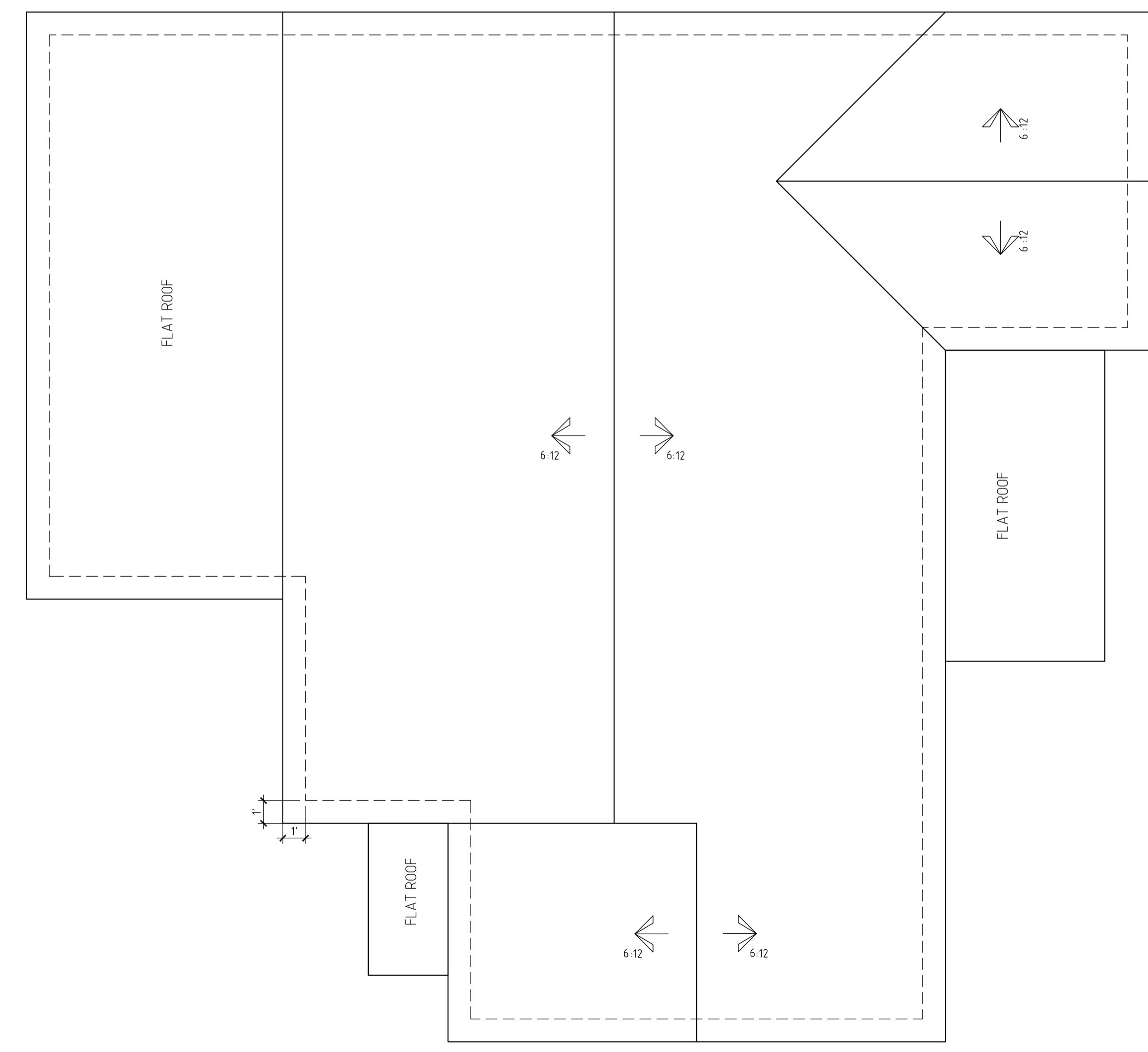
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EXISTING HOUSE ROOF PLAN
 Scale: 1/4" = 1'-0"

MARK	DATE	DESCRIPTION	MARK	DATE	DESCRIPTION
A	12/31/19	ISSUED FOR CONSTRUCTION			

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 DRAWN BY: PD

WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
EXISTING ROOF PLAN

SHEET NO.
A3.1

City of Houston Texas



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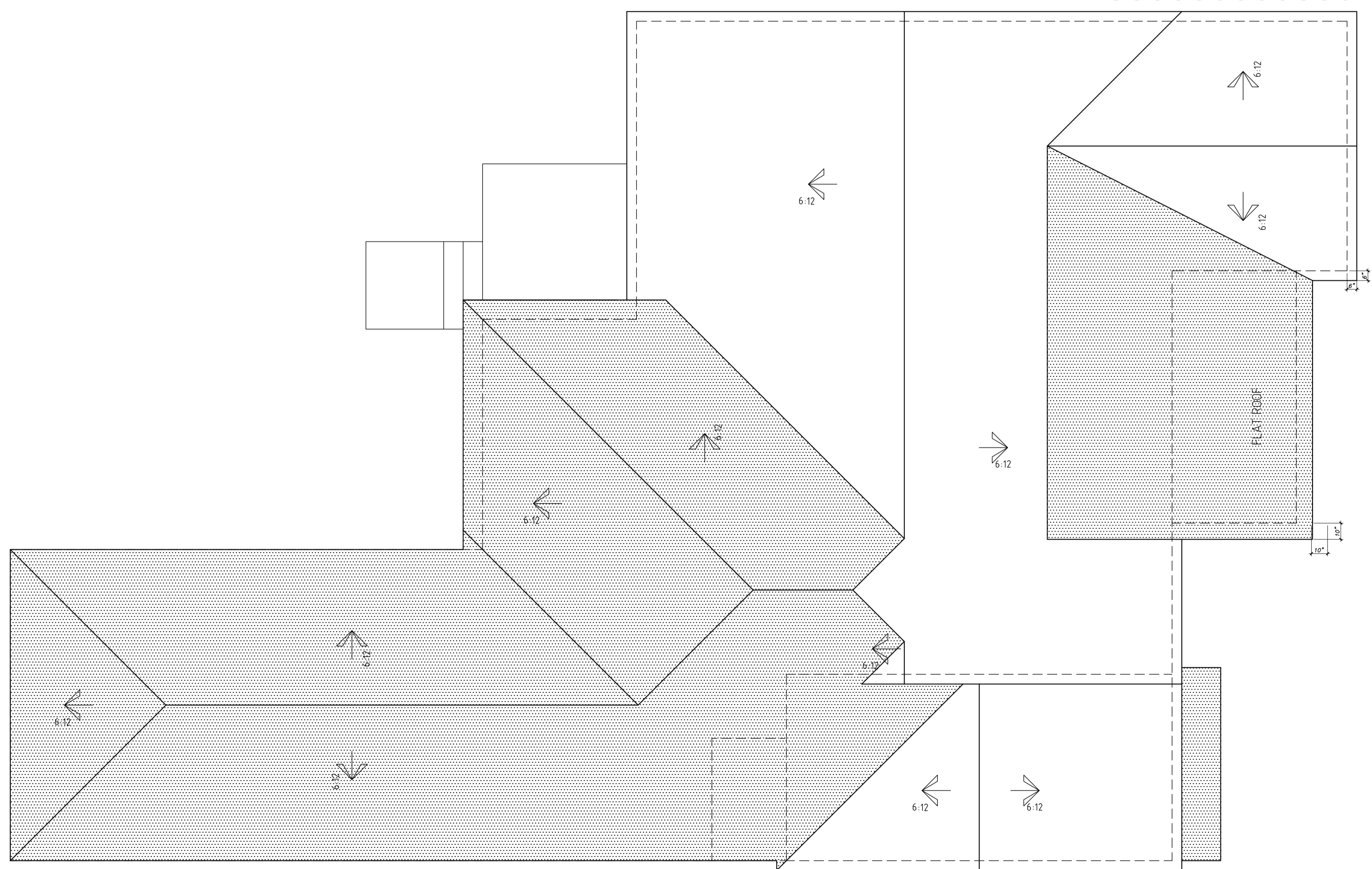
D&Q
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ROOF LEGEND

NEW ROOF
 EXISTING ROOF



ROOF PLAN
 Scale: 1/4" = 1'-0"

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A	12/31/19	ISSUED FOR CONSTRUCTION			

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WALLING STREET ADDITION
 915 WALLING STREET
 HOUSTON, TX

SHEET TITLE
PROPOSED ROOF PLAN

SHEET NO.
A3.2



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MARK	DATE	DESCRIPTION	MARK	DATE	DESCRIPTION
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WALLING STREET ADDITION
915 WALLING STREET
HOUSTON, TX

SHEET TITLE
LIGHTING PLAN

SHEET NO.
E1.1

ELECTRICAL LEGEND

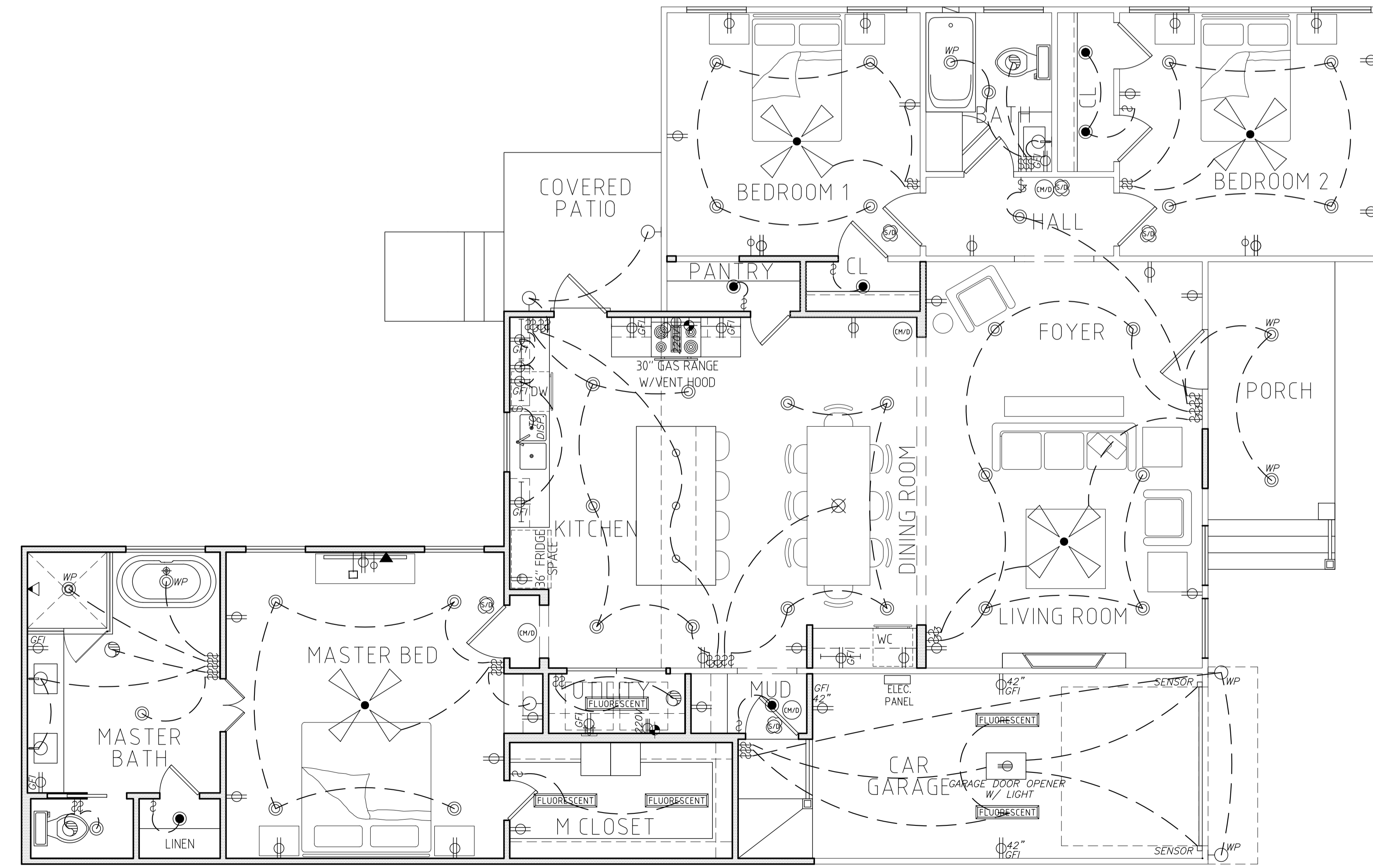
⊕ 110 VOLT RECEPTACLE	⊕ WP WATERPROOF RECEPTACLE	⊕ FLR IN FLOOR	⊕ GFI 110 VOLT W/ GROUND FAULT INTERRUPTER	⊕ 220V 220 VOLT RECEPTACLE	⊕ CABLE	⊕ GAS OUTLET	⊕ TELEPHONE OUTLET	⊕ JAMB SWITCH	⊕ FLOODS ON PHOTO CELL	⊕ UNDER CAB. STRIP LIGHT	⊕ HDMI CABLE	⊕ SINGLE POLE SWITCH	⊕ THREE WAY SWITCH	⊕ FOUR WAY SWITCH	⊕ DIMMER SWITCH	⊕ PENDANT LIGHT	⊕ HANGING LIGHT	⊕ 4" RECESSED CAN LIGHT	⊕ WP WATERPROOF RECESSED CAN LIGHT	⊕ SMOKE DETECTOR	⊕ CARBON MONOXIDE DETECTOR	⊕ HANGING GAS LIGHT	⊕ FAN	⊕ 42" OUTSIDE FAN	⊕ CEILING MOUNT FIXTURE	⊕ EXHAUST FAN	⊕ EXHAUST FAN W/ LIGHT KIT	⊕ WALL MOUNTED LIGHT	⊕ WALL MOUNTED PHOTO CELL LIGHT	⊕ HOSE BIB	⊕ FLUORESCENT FLUORESCENT FIXTURE	⊕ THERMOSTAT
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ELECTRICAL NOTES

- 1) GAS WATER HEATER
- 2) HARD WIRE HOUSE FOR SECURITY SYSTEM. SECURITY SYSTEM TO BE SELECTED BY OWNER
- 3) SECURITY SYSTEM WILL BE INSTALLED PRIOR TO APPLICATION OF DRY WALL AND ACCORDING TO MANUFACTURERS SPECS AS NEGOTIATED BY OWNER UNDER SEPARATE CONTRACT.
- 4) SMOKE DETECTORS TO BE HARDWIRED INTER-CONNECTED WITH BATTERY BACK-UP AS REQUIRED BY THE IRC.
- 5) MIN. 2 LIGHTS IN EACH ATTIC AREA.

BLOCK-OUT ALL SWITCHES FOR 1x8 TRIM

NOTE: SEE LANDSCAPE PLAN FOR OUTSIDE OUTLETS



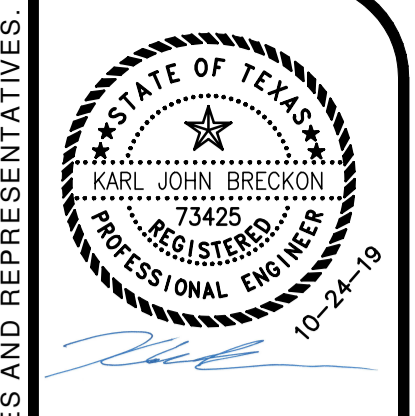
FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"

City of Houston Texas

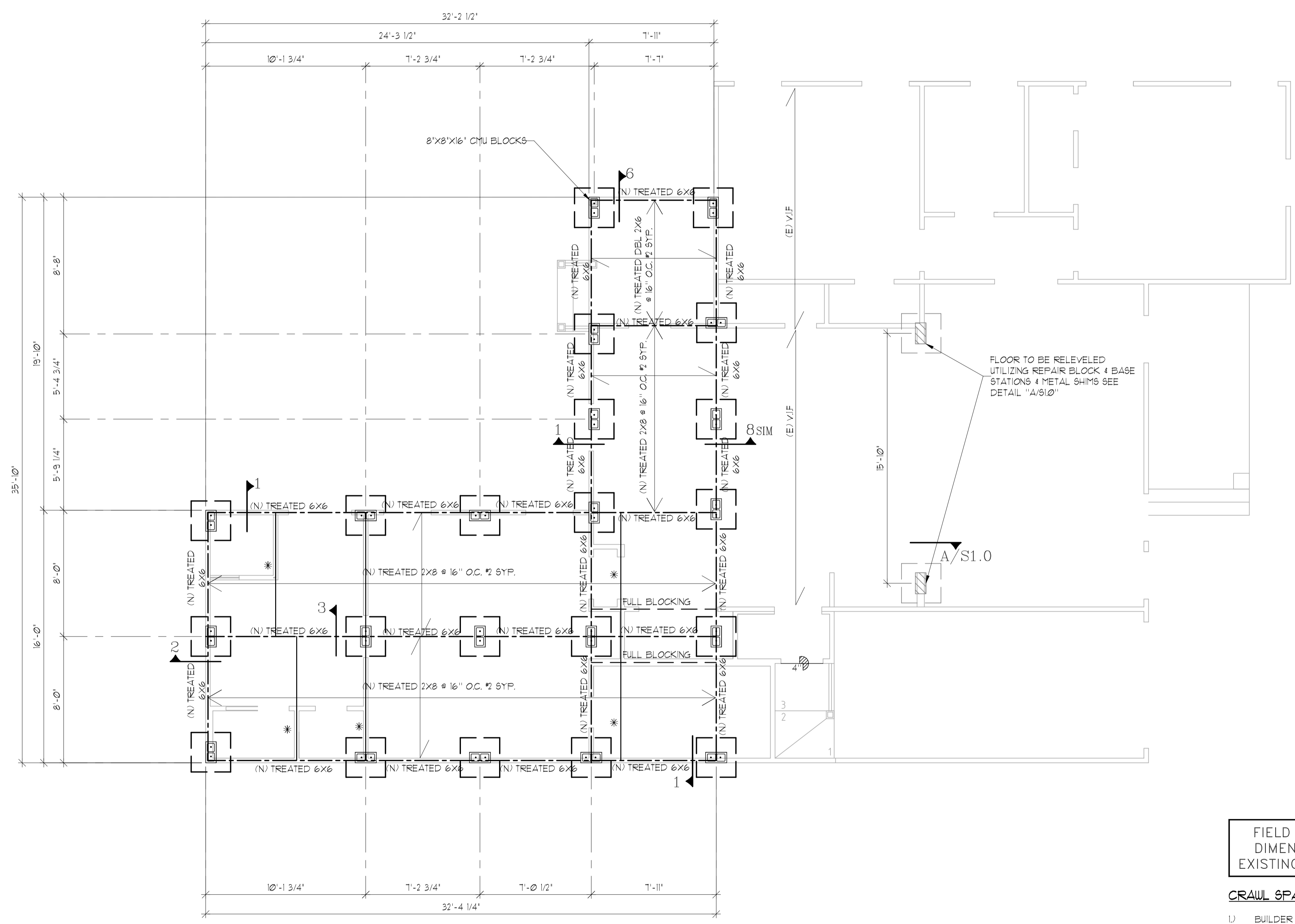


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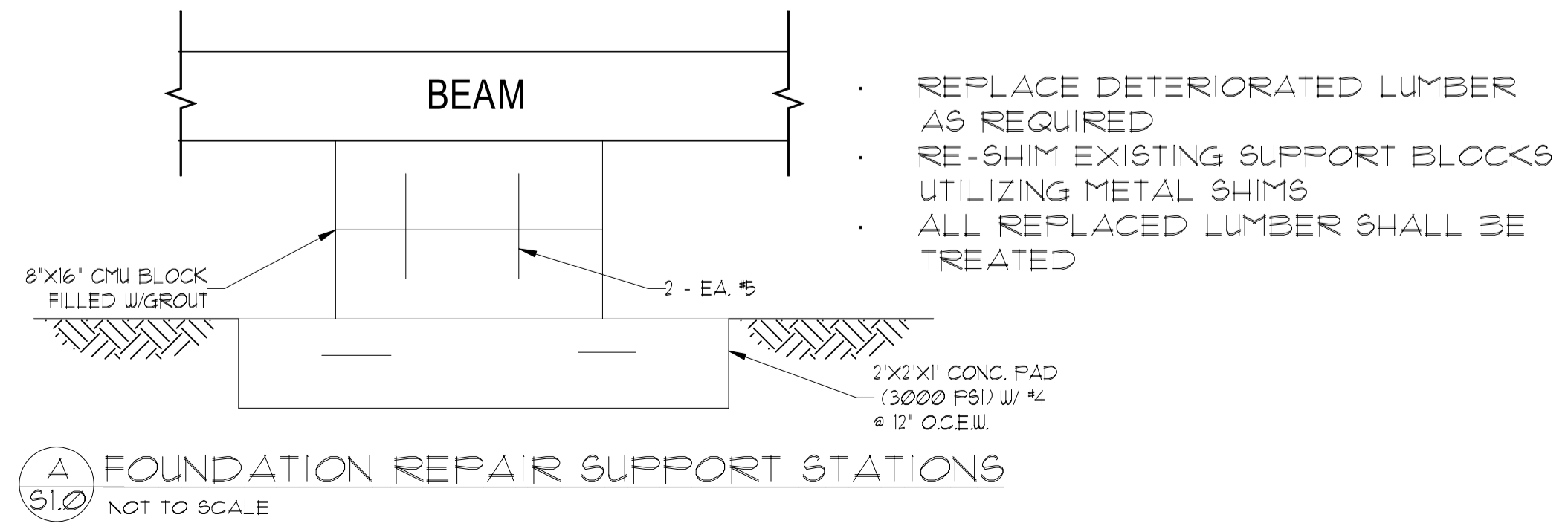
REPLACE ALL DETERIORATED LUMBER WITH TREATED LUMBER OF SAME SIZE/SPECIES



FIELD VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS.

CRAWL SPACE NOTES:

- BUILDER MUST VERIFY ALL PONY WALL LOCATIONS, RAISE, DROPS, INSERTS, AND BLOCKOUTS INSURE DIMENSIONS AGREE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
- DUE TO DIMENSIONAL DISCREPANCIES AND/OR OMISSIONS IN ARCHITECTURAL DRAWINGS SOME DIMENSIONS MAY NOT AGREE WITH FLOOR PLAN. BUILDER SHALL BE RESPONSIBLE FOR FINAL VERIFICATION OF ALL DIMENSIONS. IF IT IS DETERMINED THAT ANY DIMENSIONS ON THIS FOUNDATION DO NOT CONFORM WITH THE ARCHITECTURAL PLAN, THEN BEC ENGINEERS & CONSULTANTS SHOULD BE NOTIFIED AND ALLOWED TO REVIEW THE DRAWING AND MAKE REVISIONS AS REQUIRED.
- SOLID BLOCKING REQUIRED BELOW ALL FIRST FLOOR WALLS, WHICH RUN PERPENDICULAR TO FLOOR JOIST SPAN.
- BEAR ALL BEAMS ON MULTIPLE WALL STUDS GLUED AND NAILED TO ACT AS A SINGLE UNIT. NUMBER OF STUDS AT EACH END MUST EQUAL BEAM WIDTH UNO.
- ALL MULTIPLE STUD SUPPORT COLUMNS SHOULD BE CONTINUOUS OR BE CONTINUOUSLY SUPPORTED FROM SUPPORTED MEMBERS, THROUGH THE WALL SYSTEM, TO THE FOUNDATION SYSTEM.
- TERMITE AND INSECT SHIELD PROTECTION AS PER CODE REQUIREMENTS.
- ← SPAN DIRECTION
 - = FIRST FLOOR ABOVE
 - ↔ = DENOTES FOUNDATION LEVEL FRAMING (CRAWL SPACE) AREA 2' SYP 2X12 @ 16" O.C. 4 USE TREATED 2" SYP JOISTS IN PORCH AREA UNO.
 - * = DOUBLE UNDER WALL ABOVE (UW/A)
- SEE SHEET S1.0 FOR CRAWLSPACE DETAILS
- ▨ EXISTING FOOTING



CRAWLSPACE PLAN
SCALE 1/4" = 1'-0" FOR 24X36

FOUNDATION REPAIR SUPPORT STATIONS
S1.0 NOT TO SCALE

NO	DATE	ISSUES/REVISIONS
A	10/22/2019	ISSUED FOR REVIEW
0	10/24/2019	ISSUED FOR PERMIT

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3200 Wilcrest Dr., Suite 440 | Houston, Texas 77042
PH: 832.746.0274 | FAX: 832.746.0274

D&Q ASSOCIATES, LLC

915 WALLING STREET,
HOUSTON, TEXAS 77009

REF#: 19-1208-0014
DRN: JJ CHK: KB DES: TS

FOUNDATION PLAN

SHEET NO. **S1.0**

I:\2019\1208 - D&Q Associates\0014 - 915 Walling Street\Structural Drawings\CAD\Rev0-10-24-19\19-1208-0014-915 Walling St-Struct-Rev0-10-24-19

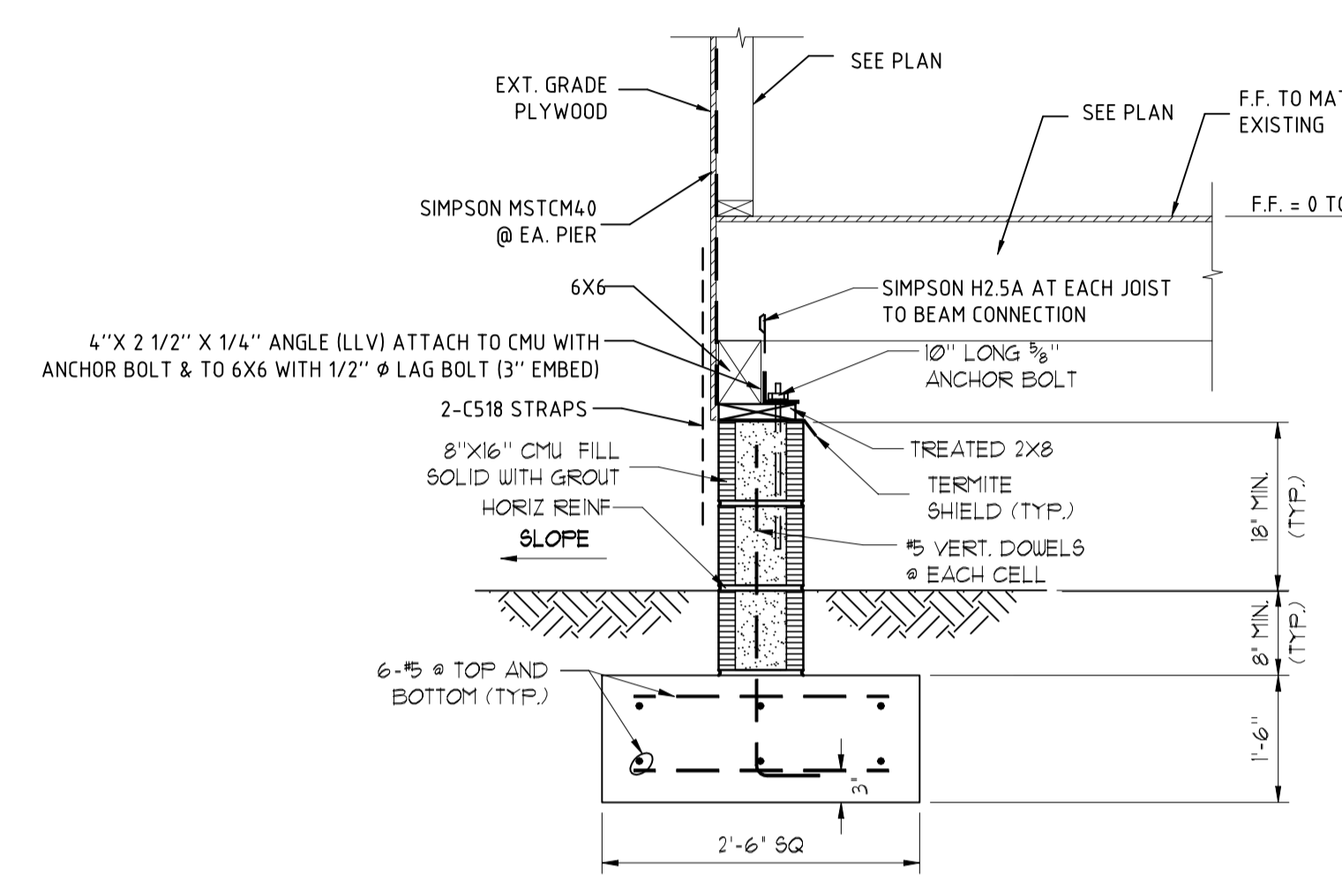
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City of Houston Texas

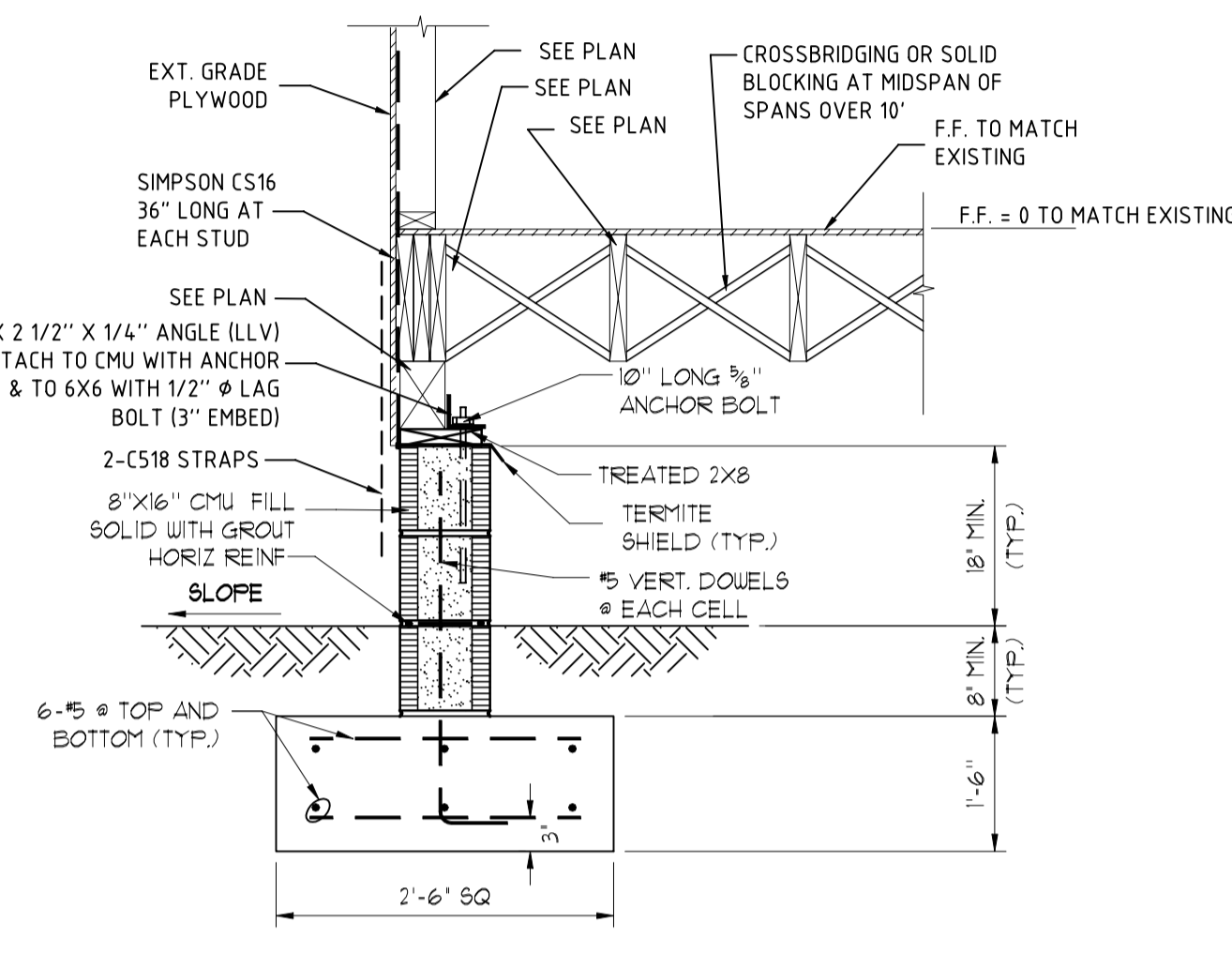


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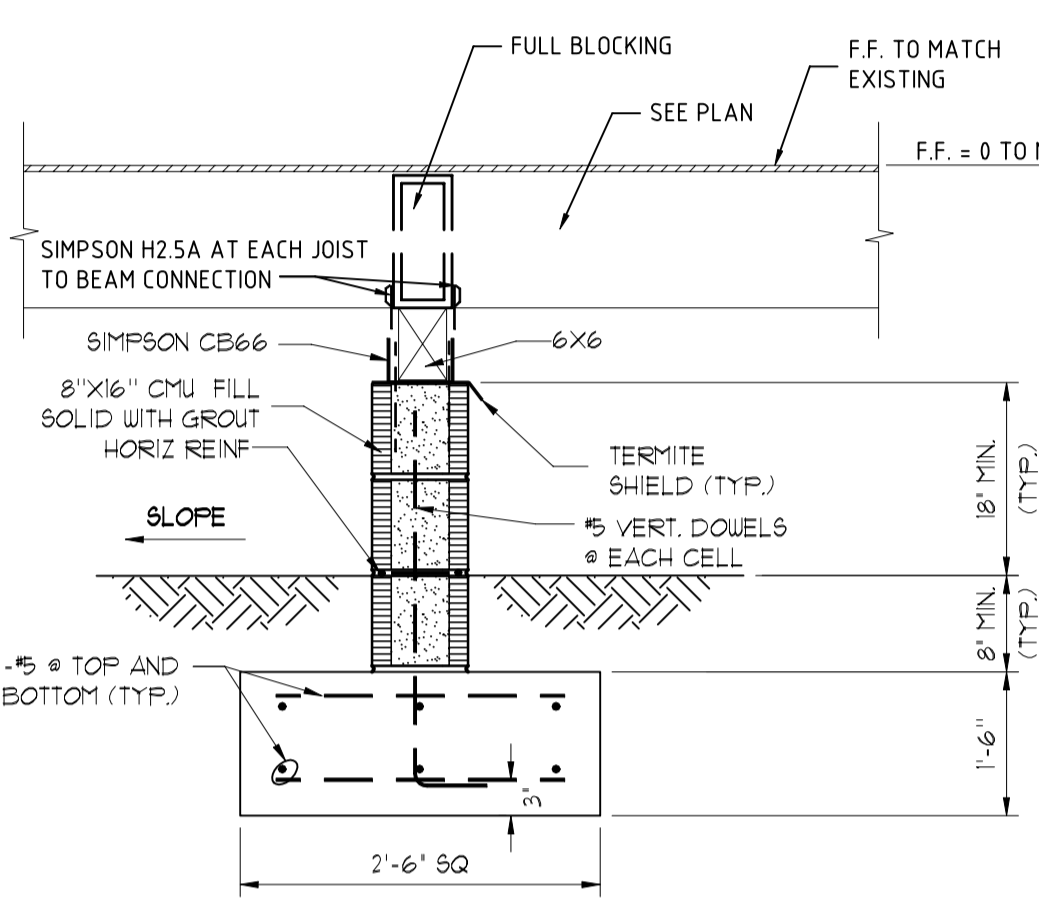
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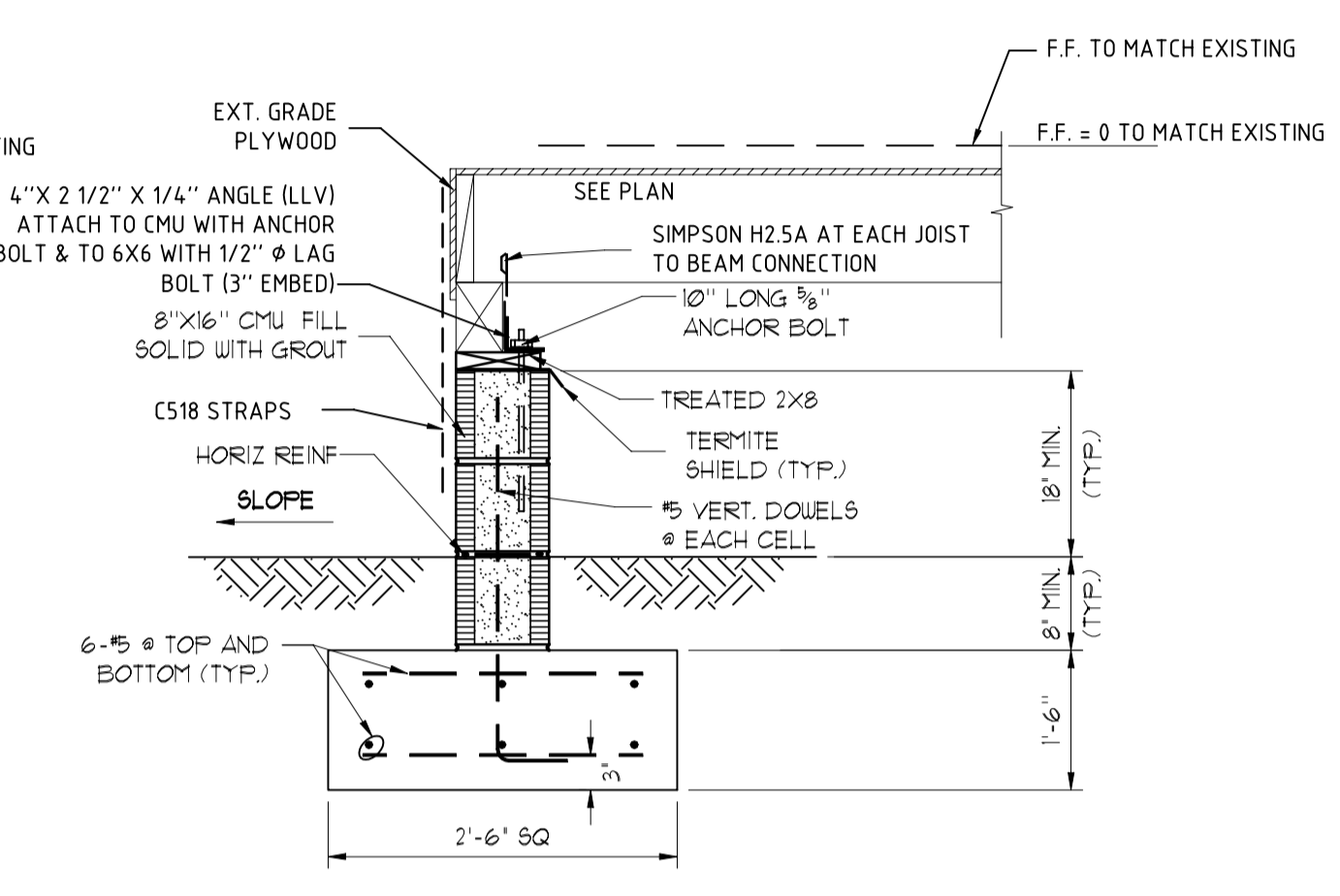
1 SECTION
 S2.0 SCALE: 3/4"=1'-0"



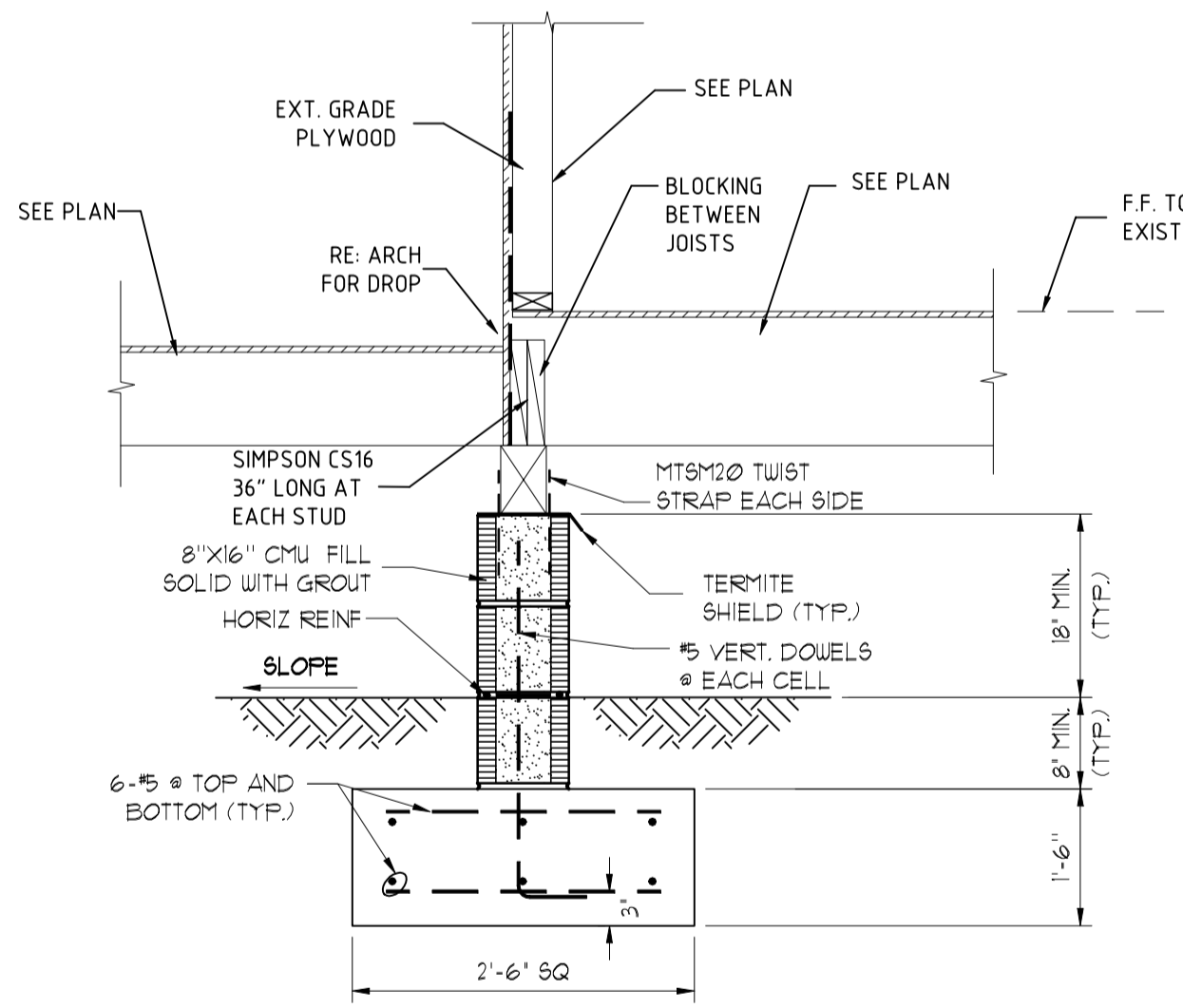
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 S2.0 3/4"=1'-0"



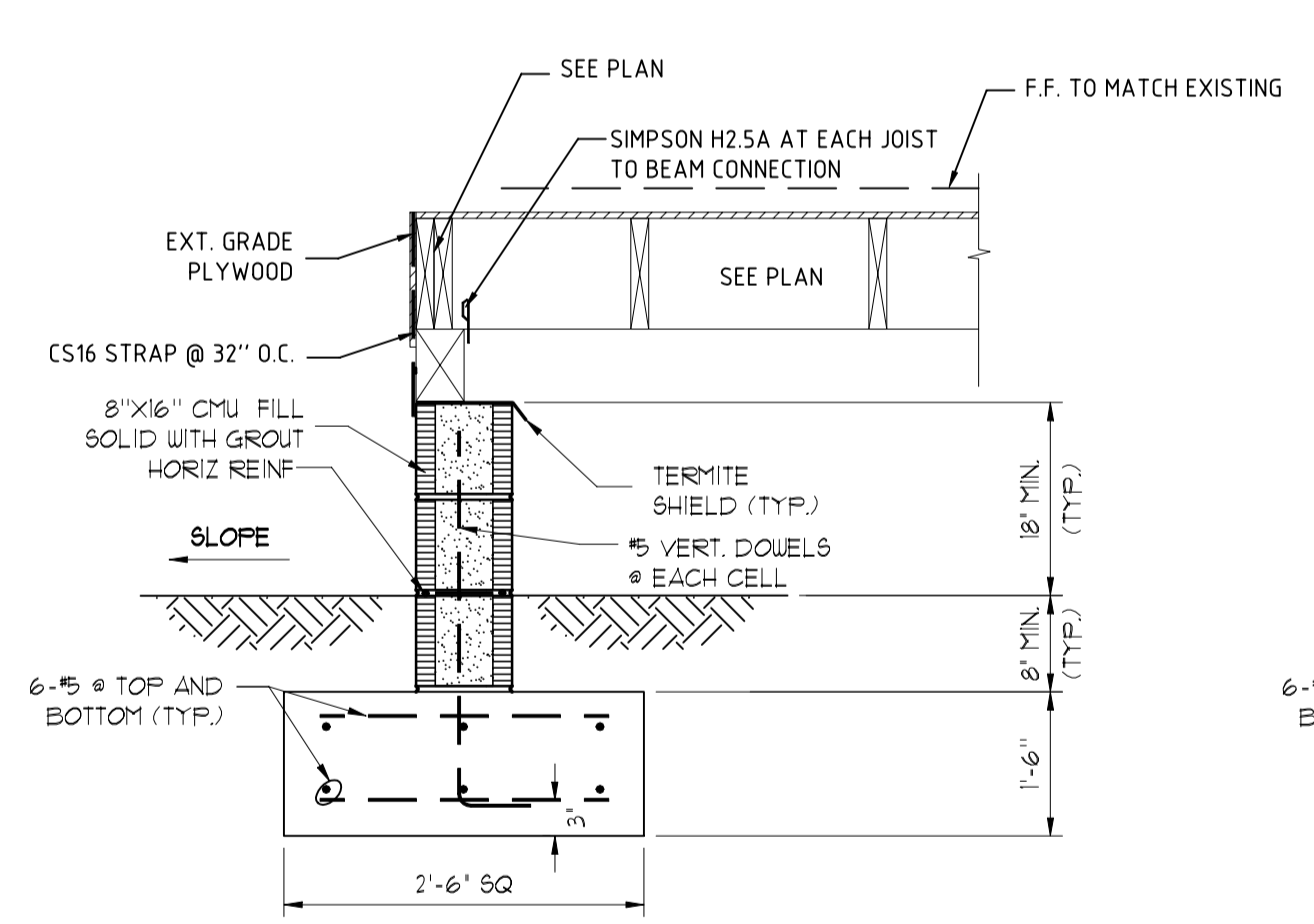
3 SECTION
 S2.0 3/4"=1'-0"



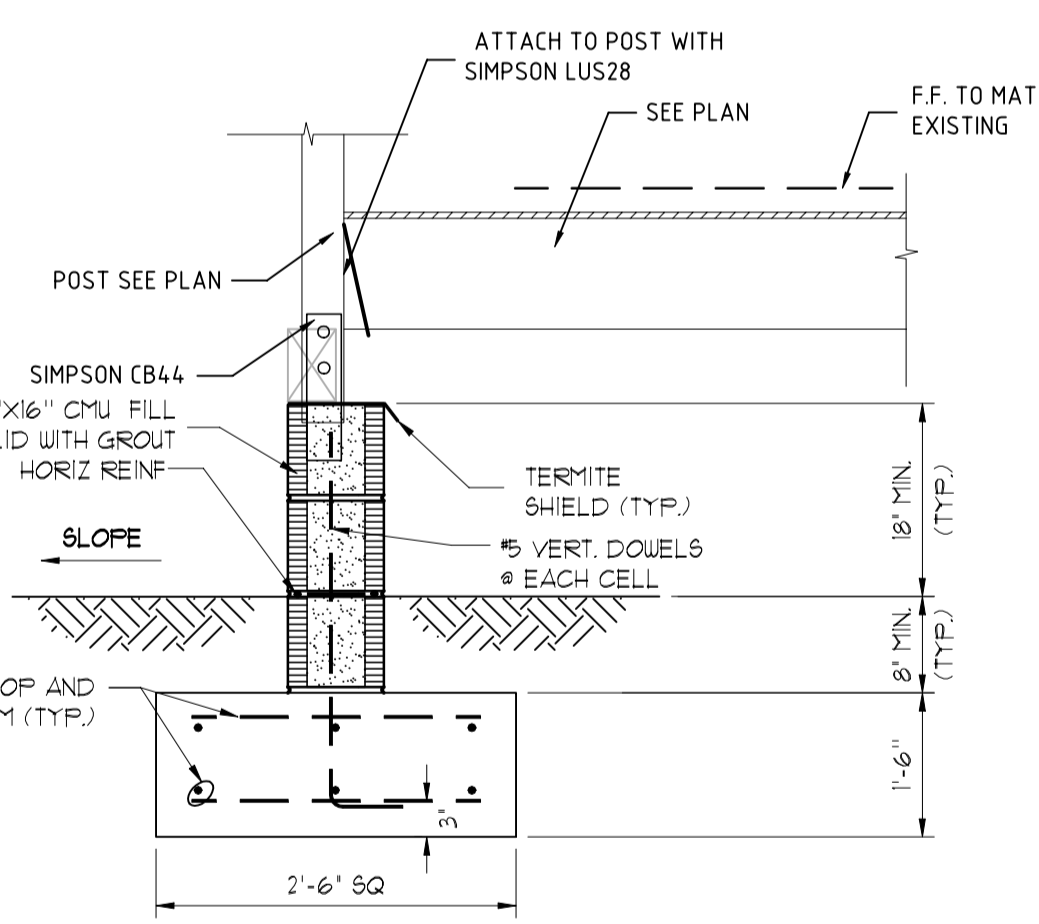
4 SECTION
 S2.0 3/4"=1'-0"



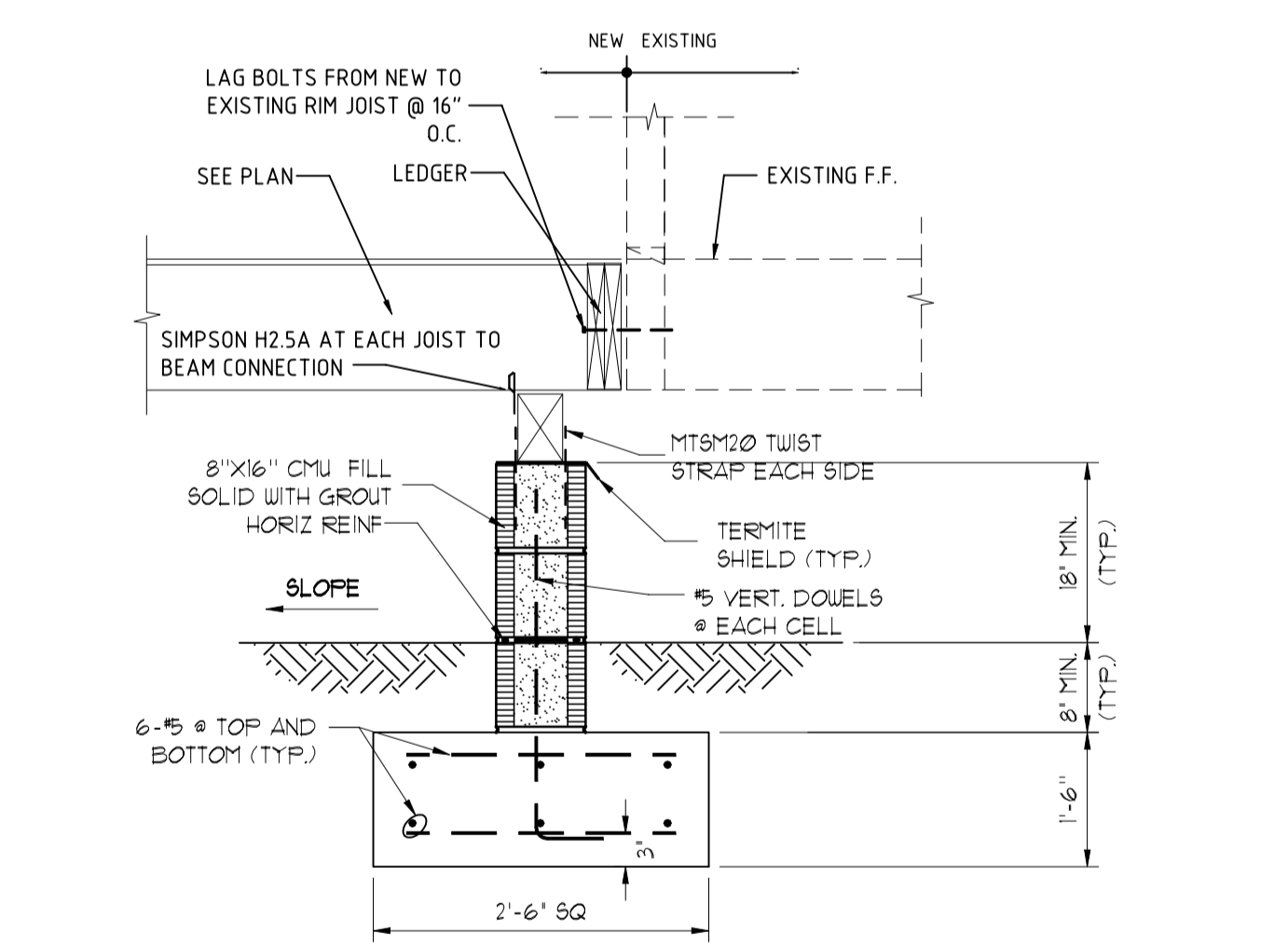
5 SECTION
 S2.0 SCALE: 3/4"=1'-0"



6 SECTION
 S2.0 3/4"=1'-0"



7 SECTION
 S2.0 3/4"=1'-0"



8 SECTION
 S2.0 3/4"=1'-0"

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 3200 Wilcrest Dr., Suite 440 | Houston, Texas 77042
 PH: 832.924.2724 | FAX: 832.924.2724

D&Q ASSOCIATES, LLC
 915 WALLING STREET,
 HOUSTON, TEXAS 77009

REF #: 19-1208-0014
 DRN: JJ CHK: KB DES: TS
FOUNDATION DETAILS SHEET
 SHEET NO. **S2.0**

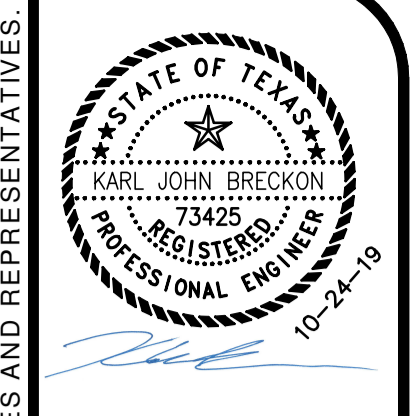
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City of Houston Texas



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 PH: 281.460.2724 | FAX: 281.460.2724

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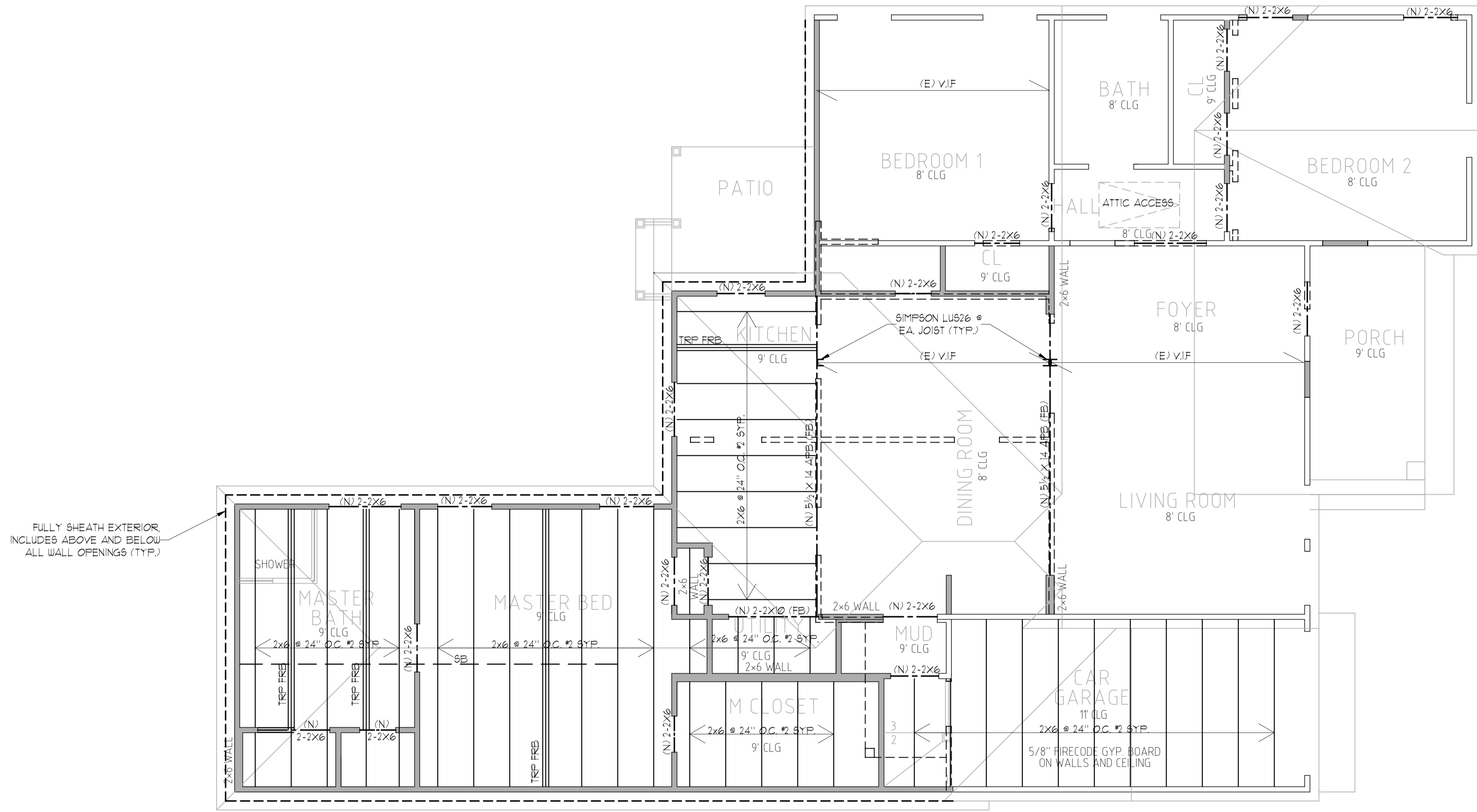
915 WALLING STREET,
 HOUSTON, TEXAS 77009

REF# 19-1208-0014
 DRN: JJ CHK: KB DES: TS

1ST FLOOR FRAMING PLAN

SHEET NO. **S3.0**

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FULLY SHEATH EXTERIOR, INCLUDES ABOVE AND BELOW ALL WALL OPENINGS (TYP.)

FIRST LEVEL CEILING FRAMING PLAN
 SCALE 1/4" = 1'-0" FOR 24x36

LEGEND

	= EXISTING WALL TO REMAIN
	= EXISTING WALL TO BE REMOVED
	= NEW WALL
	= BRICK VENEER
	= NEW BEAMS
	= ASSUMED SPAN DIRECTION
(N)	= NEW STRUCTURAL FRAMING
(E)	= EXISTING STRUCTURAL FRAMING

FIELD VERIFY ALL DIMENSIONS WITH EXISTING CONDITIONS.

TEMPORARY BRACING REQUIRED PRIOR TO REMOVAL OF ALL LOAD BEARING WALLS

CONTRACTOR NOTE:
 CONTRACTOR SHALL KEEP AND/OR RESTORE ALL EXISTING PURLINS AND BRACES TO THE NEAREST EXISTING BEAM OR LOAD BEARING WALL OR NEW BEAM

FIRST LEVEL NOTES:

- ALL ROOF LEVEL CEILING JOISTS ARE TO BE #2 SYP. UNO. ALL ROOF LEVEL CEILING JOISTS ARE TO BE 2 X 6'S @ 24" O.C. UNO. (MAX. SPAN = 12'-0")
- ALL ANTHONY POWER BEAMS ARE AS MANUFACTURED BY ANTHONY FOREST PRODUCTS CO. EQUIVALENT PRODUCT MAY BE SUBSTITUTED WITH ENGINEER'S APPROVAL.
- REFER TO SHEET S40 AND S41 FOR WINDSTORM HOLD DOWN AND SHEAR WALL LOCATIONS AND DETAILS. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH 1/2" PLYWOOD. INTERIOR WALLS TO BE SHEATHED ARE INDICATED BY A DASHED LINE WITH 'SW' OR 'SW' REF. SHEARWALL DIAGRAMS, DETAILS, AND NOTES ON DETAIL SHEET FOR NAILING PATTERN, ETC. OSB BOARD WITH EQUIVALENT STRUCTURAL PROPERTIES MAY BE SUBSTITUTED WITH ENGINEER'S APPROVAL.
- BEAR ALL BEAMS ON MULTIPLE WALL STUDS GLUED AND NAILED TO ACT AS A SINGLE UNIT. NUMBER OF STUDS AT EACH END MUST EQUAL BEAM WIDTH UNLESS NOTED OTHERWISE.
- ALL 'BEAMS' TO BE FLUSH WHERE REQUIRED TO MAINTAIN PROPER CEILING LINE. IF CONDITIONS ALLOW, BEAM MAY BE DROPPED FOR BOTTOM CHORD BEARING TRUSS.
- ALL EXTERIOR WALLS ARE 2 X 4 OR 2 X 6 STUDS @ 16" O.C. UNO.
- ALL FIRST FLOOR INTERIOR WALL STUDS ARE A MINIMUM OF 2 X 4'S @ 16" O.C. UNO.
- ALL FIRST FLOOR HEADERS ARE 2 - 2 X 12 #2 SYP. OR 3-2 X 12 FOR 2X6 WALLS. U.N.O. (USE 1/2" PLYWOOD SPACER BETWEEN MEMBERS.)
- SOLID BLOCKING REQUIRED BELOW ALL SECOND FLOOR WALLS WHICH RUN PERPENDICULAR TO FLOOR JOIST SPAN.
- ALL OPEN WEB FLOOR TRUSSES (DESIGN BY MANUFACTURE) DESIGN FOR LIVE LOAD OF 40 PSF. PLUS WALL LOAD: DL+200 PLF LL+100 PLF UNO. ▲ = POINT LOADS (KIPS)
- NO TRUSS OR BEAM ALLOWED AT CENTER LINE OF TUB OR TOILET OR SHOWER DRAINS
- ABBREVIATIONS:
 TRP = TRIPLE
 FRB = FOR ROOF BRACE
 (FB) = FLUSH BEAM
 (DB) = DROP BEAM
 PLF = POUNDS PER LINEAR FOOT
 T.C.B. = TOP CHORD BEARING
 B.O.B = BOTTOM OF BEAM
 T.O.B = TOP OF BEAM
 B.O.J = BOTTOM OF JOIST
 T.O.J = TOP OF JOIST
 U.W.A = UNDER WALL ABOVE
 UNO. = UNLESS NOTED OTHERWISE

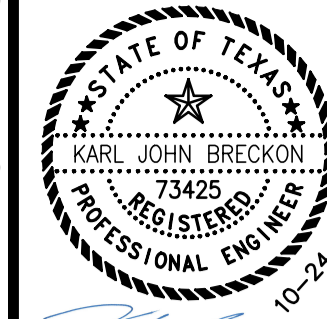
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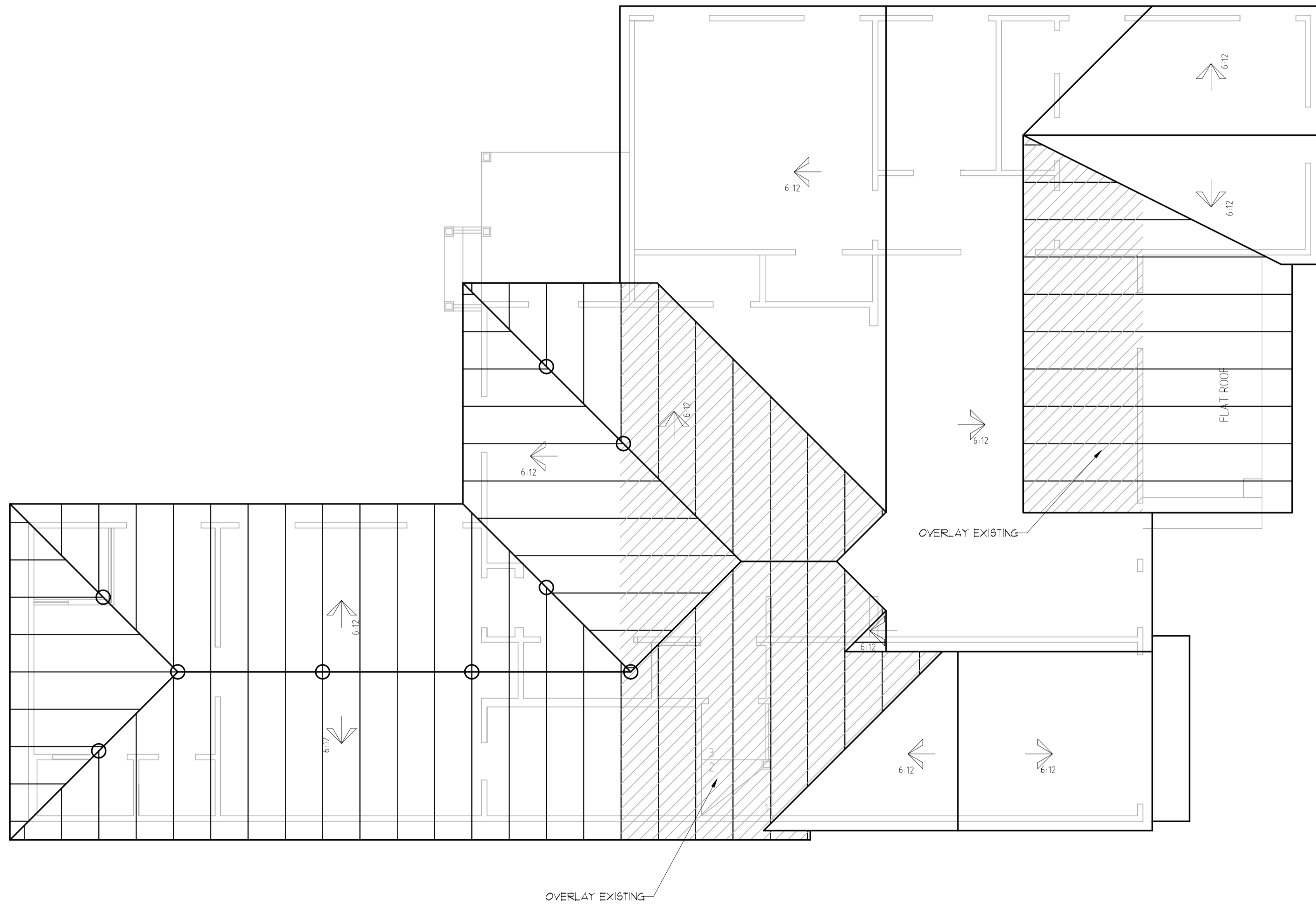
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 BEC ENGINEERS AND CONSULTANTS, LLC
 3200 Wilcrest Dr., Suite 440 | Houston, Texas 77042
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D&Q ASSOCIATES, LLC
 915 WALLING STREET,
 HOUSTON, TEXAS 77009

REF# 19-1208-0014
 DRN: JJ CHR: KB DES: TS
ROOF FRAMING PLAN
 SHEET NO. **S3.1**



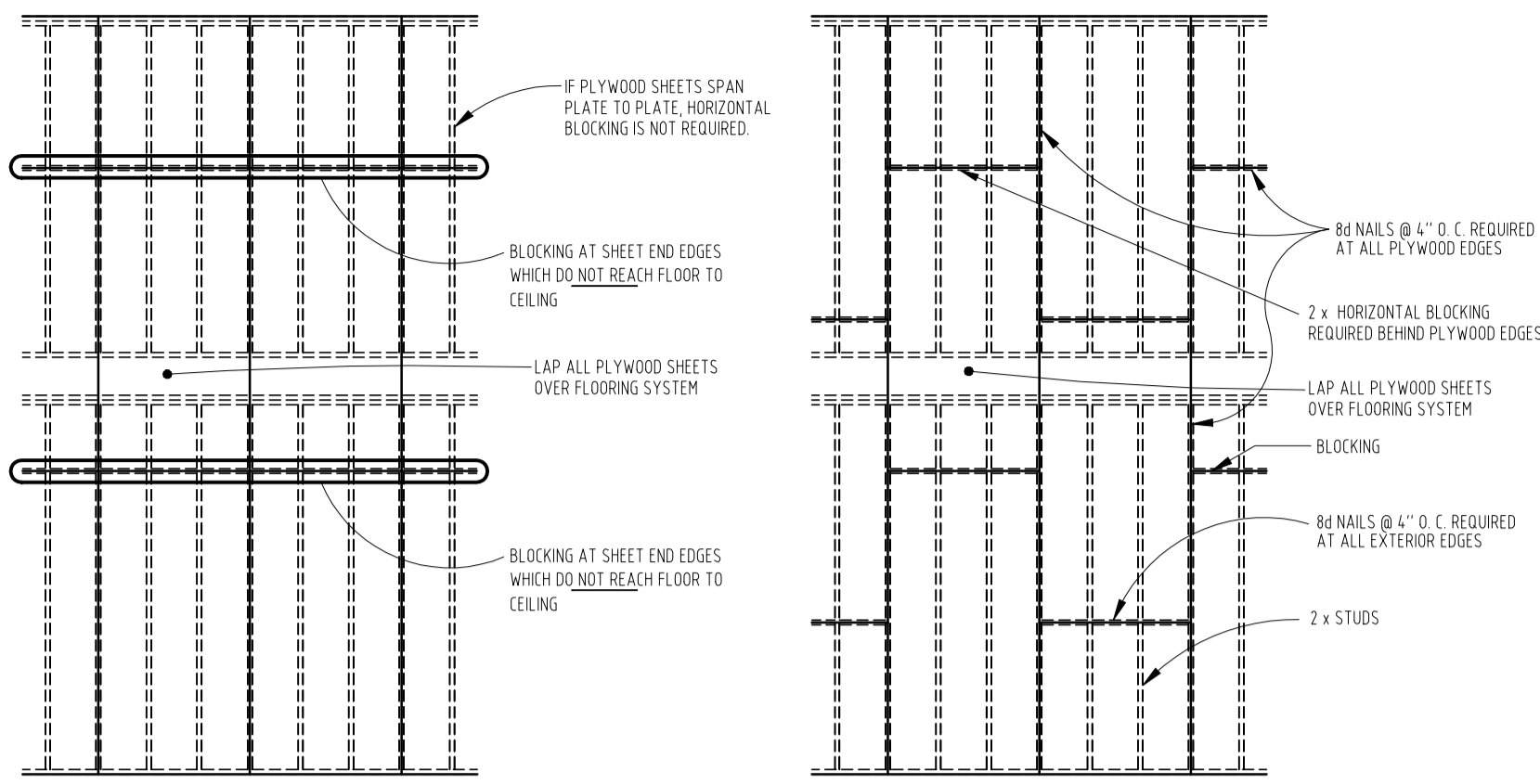
ROOF LEVEL NOTES:

- ALL FRAMING TO BE #2 SYP, UNLESS NOTED OTHERWISE.
- ALL RAFTERS TO BE 2x6 @ 24" O.C. UNO, MAXIMUM SPAN 10'-1".
- ALL HIP, VALLEY AND RIDGE MEMBERS ARE TO BE #2 SYP, ONE NOMINAL SIZE LARGER THAN THE SUPPORTED MEMBERS, UNO.
- SEE ARCHITECTURAL DRAWINGS FOR ROOF PITCH AND FLATE HEIGHTS.
- DO NOT BRACE ROOF FRAMING DIRECTLY TO CEILING JOISTS UNO, ON PLAN.
- ATTACH RAFTERS TO TOP PLATES WITH SIMPSON HI OR H2.5 HURRICANE TIES AT EVERY OTHER ROOF RAFTER UNO.
- ALL ROOF DECKING TO BE 1/2" CDX PLYWOOD OR APPA RATED EQUAL SHEATHING. STANDARD NAILING WITH 8d NAILS SHOULD BE 6" O.C. AT PLYWOOD EDGES AND 10" O.C. AT INTERIOR SUPPORTS. AROUND ROOF PERIMETER AND ROOF RIDGE, A STRIP AREA 5' WIDE SHOULD BE NAILED WITH 8d NAILS @ 4" O.C. ON THE ROOF EDGE AND ALL PLYWOOD SHEET EDGES AND 6" O.C. AT INTERIOR FRAMING SUPPORTS. USE "H" CLIP SPACERS WHEN APPLYING DECK.
- PLACE COLLAR TIES @ EVERY OTHER RAFTER UNO.
- 2x8 FURLIN SUPPORTED AT 4'-0" O.C. MAXIMUM. ALL MULTIPLE JOISTS AND BEAMS USED TO SUPPORT FURLIN BRACES MUST BE BRACED AT THE TOP EDGE TO PREVENT ROLLOVER OR LATERAL SWAY.
- 2-2x4 TEE BRACE UP TO 8'-0" LONG.
 2-2x6 TEE BRACE OVER 8'-0" LONG.
 BRACING LOCATIONS FOR TEE BRACE BRACE DOWN TO NEAREST WALL (OR FLOAT BEAM, IF SHOWN) AT MAX. 45° FROM VERTICAL.
- RAFTER ENDS ON OPPOSITE SIDES OF THE HIP, AND VALLEY MEMBERS MAY BE STAGGERED NO MORE THAN 3" FOR OPPOSING RAFTERS. RAFTER ENDS ON OPPOSITE SIDES OF RIDGE MEMBERS SHOULD BE DIRECTLY OPPOSITE OF EACH OTHER.

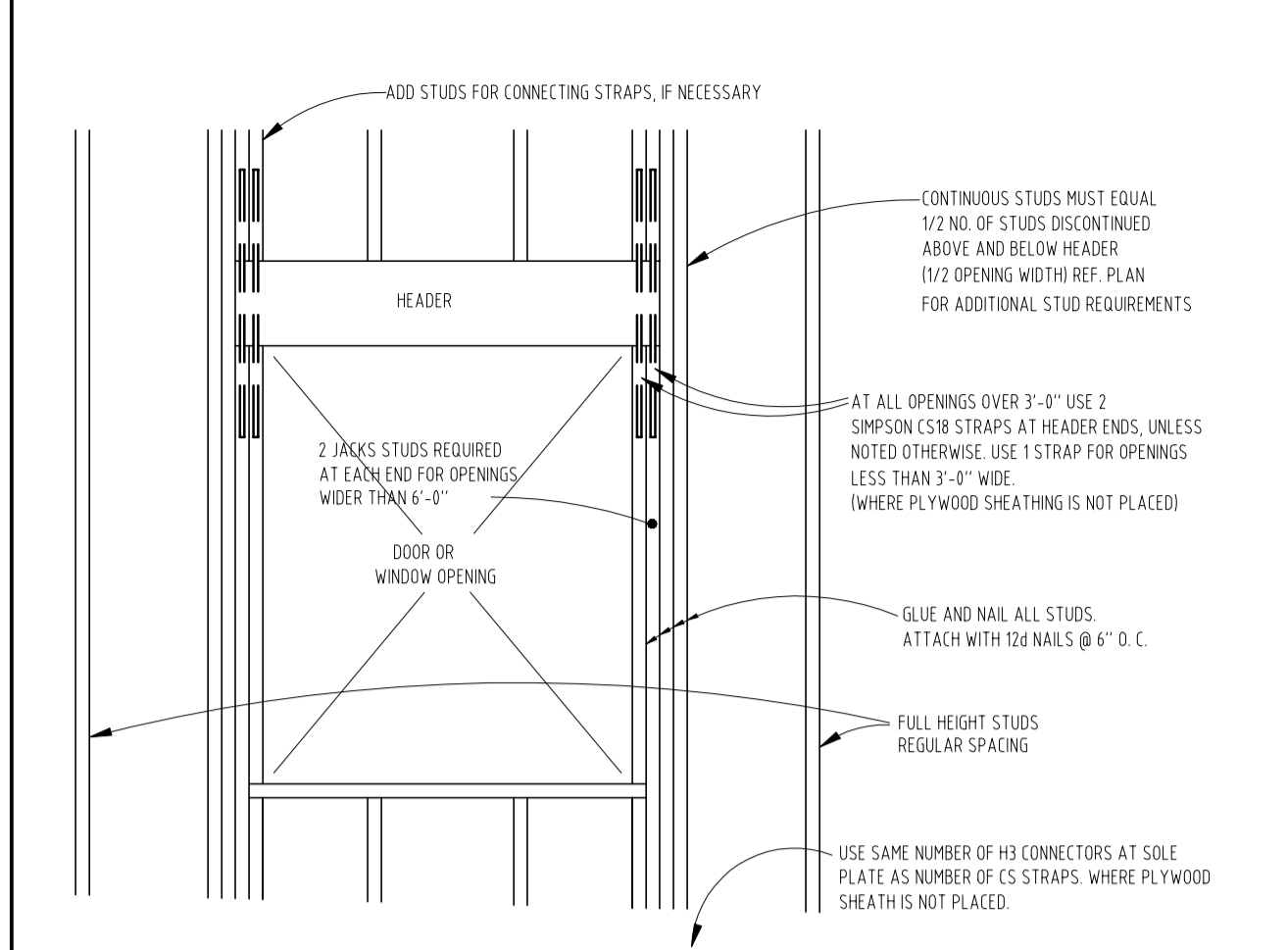
ROOF FRAMING PLAN

SCALE 1/4" = 1'-0" FOR 24X36

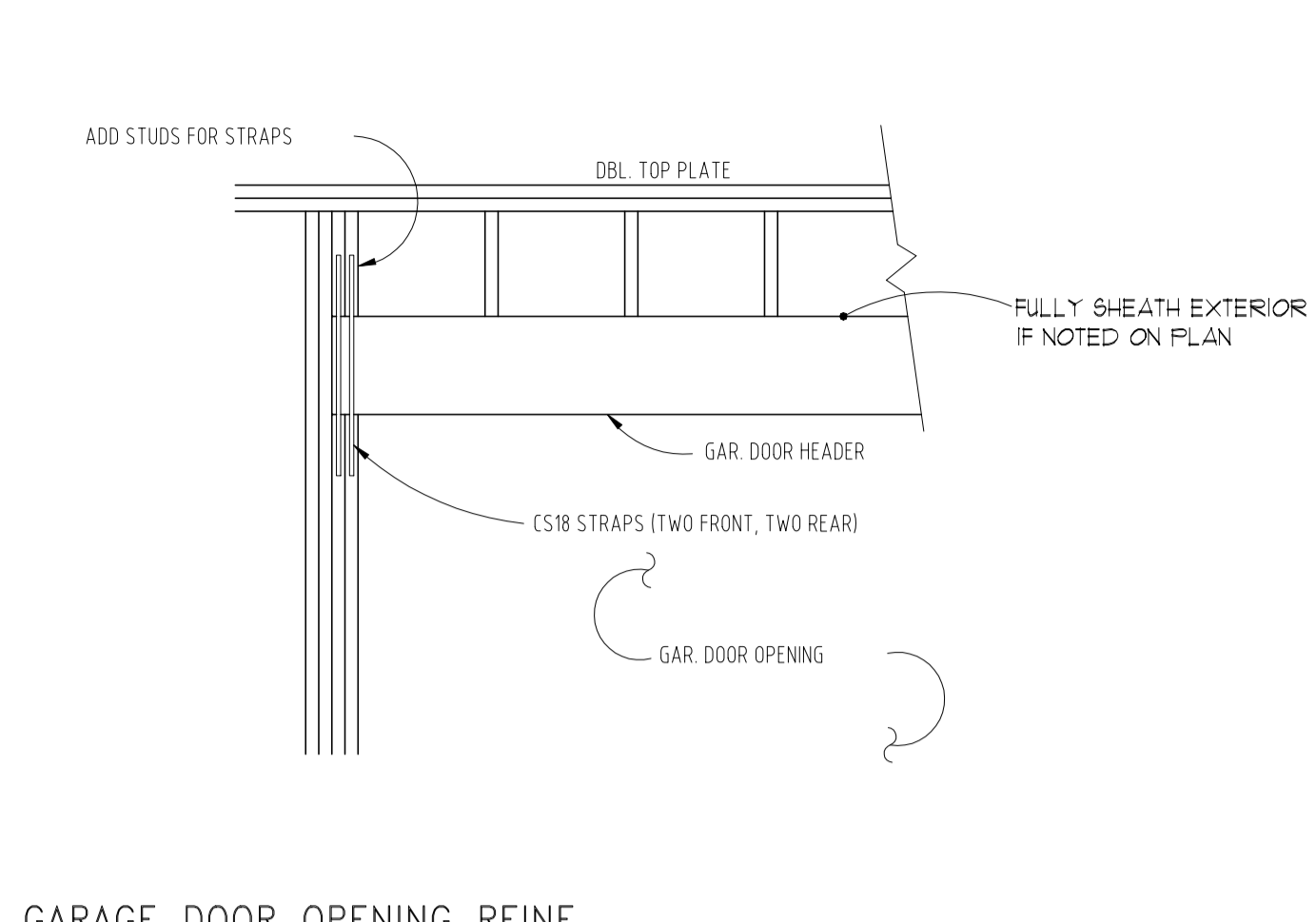
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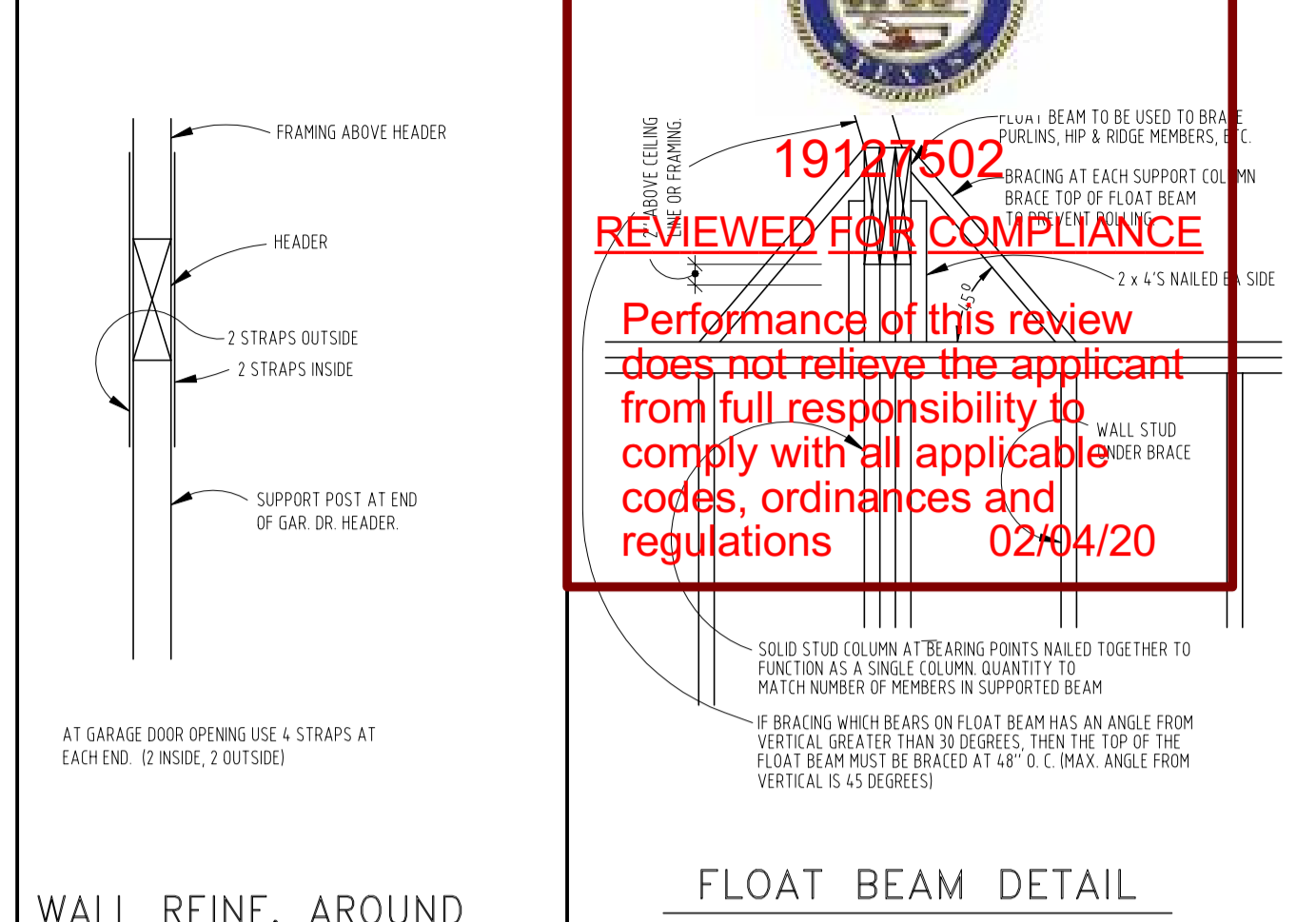
PLYWOOD BLOCKING AND NAILING PATTERN FOR EXTERIOR WALLS



WALL REINF. AROUND WINDOW OPENINGS



GARAGE DOOR OPENING REINF.



WALL REINF. AROUND GARAGE DOOR OPENINGS

City of Houston Texas

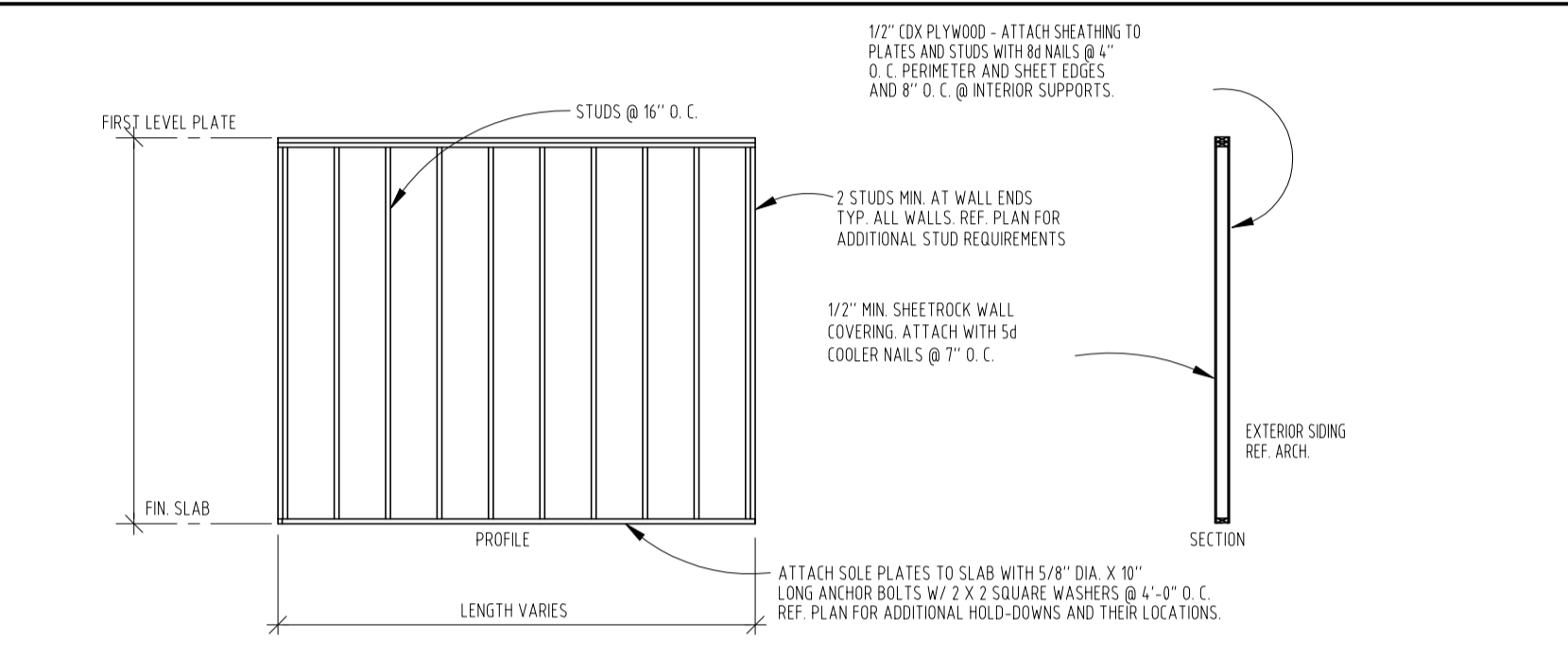
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REVIEWED FOR COMPLIANCE

Performance of this review does not relieve the applicant from full responsibility to comply with all applicable codes, ordinances and regulations 02/04/20

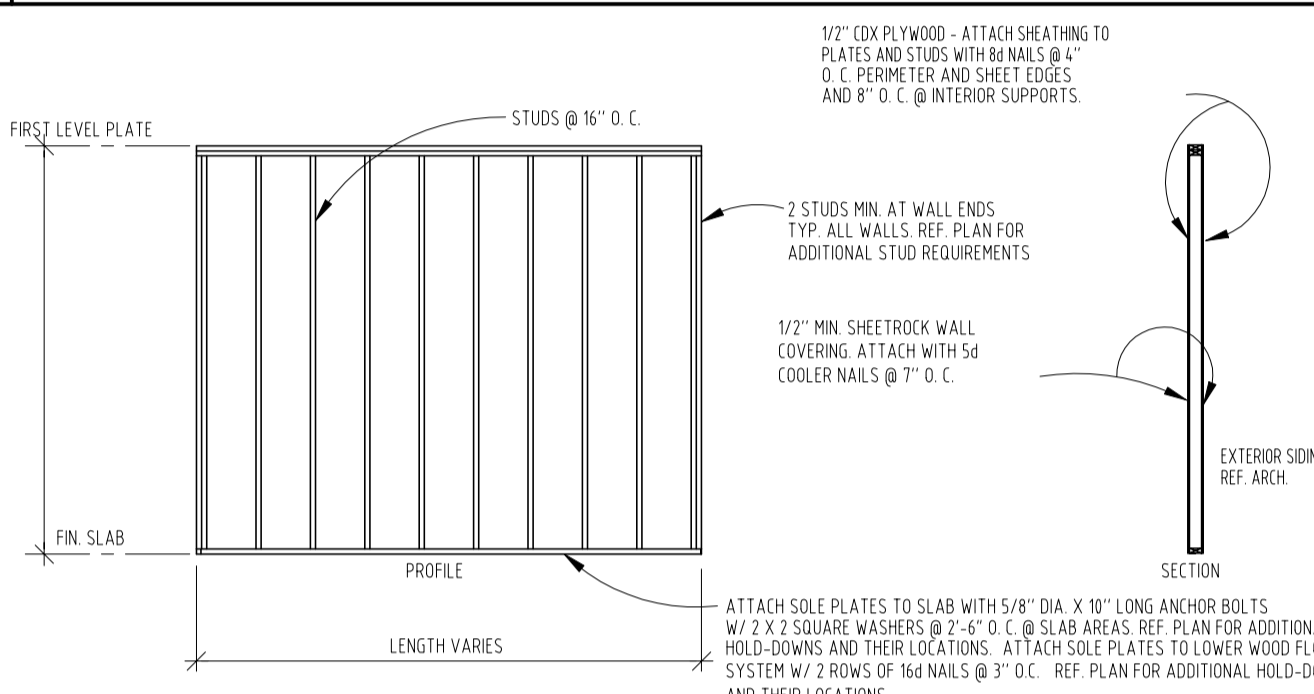
SOLID STUD COLUMN AT BEARING POINTS NAILED TOGETHER TO FUNCTION AS A SINGLE COLUMN. QUANTITY TO MATCH NUMBER OF MEMBERS IN SUPPORTED BEAM.
IF BRACING WHICH BEARS ON FLOAT BEAM HAS AN ANGLE FROM VERTICAL GREATER THAN 30 DEGREES, THEN THE TOP OF THE FLOAT BEAM MUST BE BRACED AT 48" O.C. (MAX. ANGLE FROM VERTICAL IS 30 DEGREES)

BEAM - SEE PLAN
PLYWOOD FILLER
MULTIPLE STUD COLUMN STUDS GLUED AND NAILED TO FUNCTION AS A SINGLE COLUMN UNDER BEAM. NUMBER OF STUDS REQUIRED TO MATCH WIDTH OF SUPPORTED MEMBER.
FULL HEIGHT STUDS REGULAR SPACING

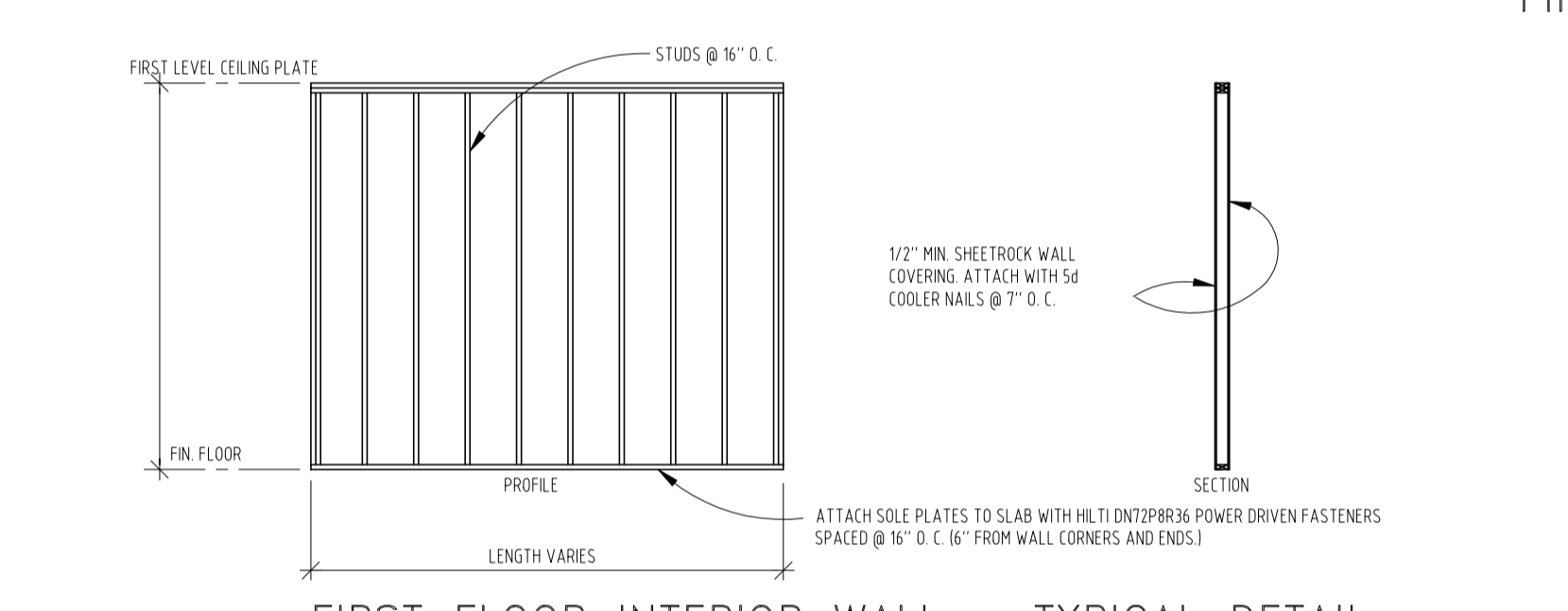
BEAM POCKET DETAIL



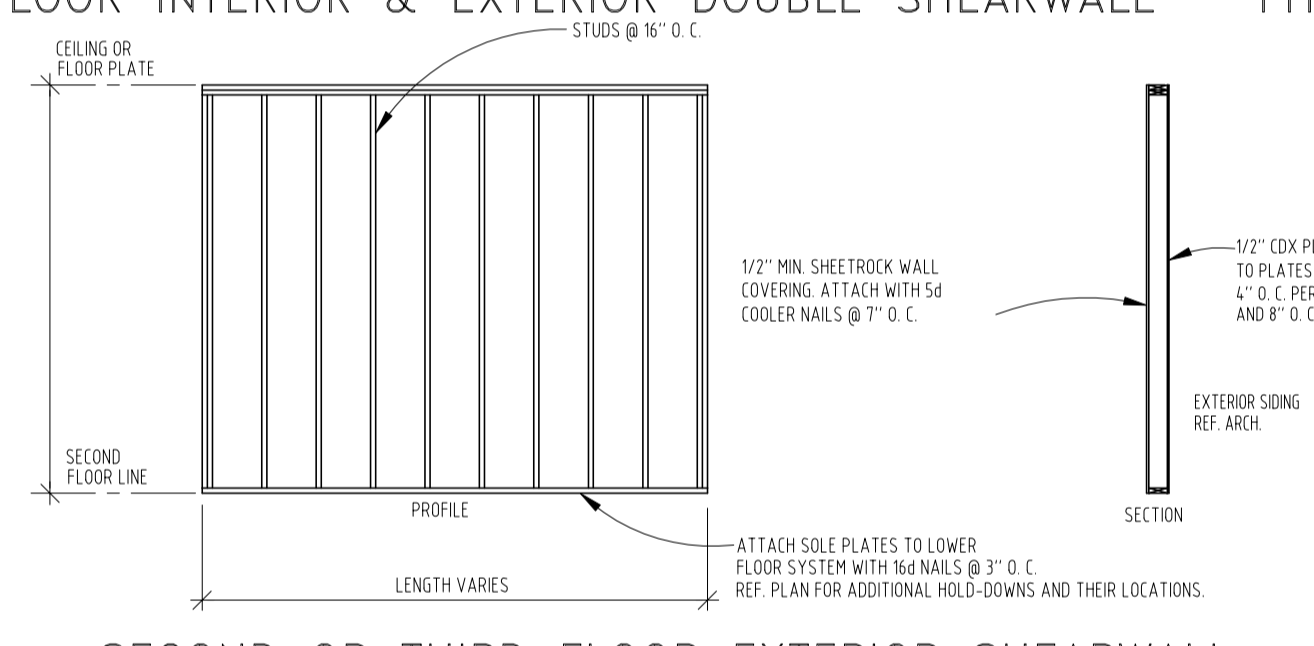
FIRST FLOOR EXTERIOR SHEARWALL - TYPICAL DETAIL



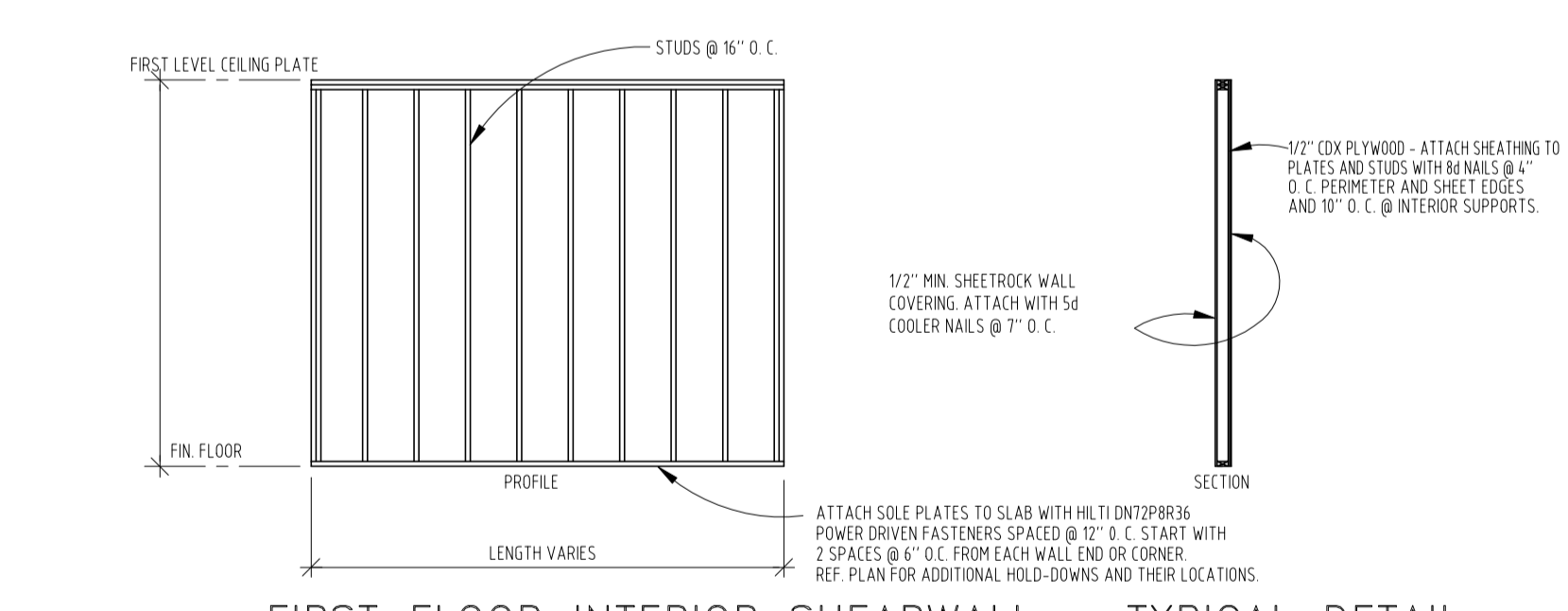
FIRST FLOOR INTERIOR & EXTERIOR DOUBLE SHEARWALL - TYPICAL DETAIL



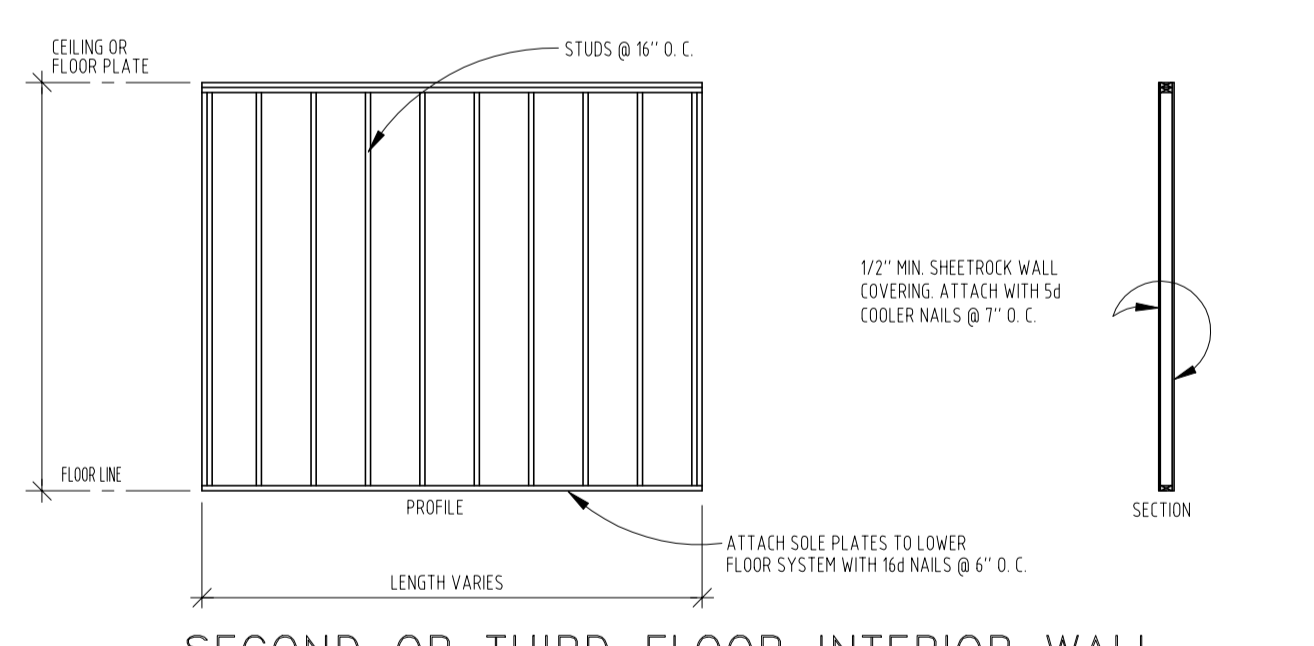
FIRST FLOOR INTERIOR WALL - TYPICAL DETAIL



SECOND OR THIRD FLOOR EXTERIOR SHEARWALL

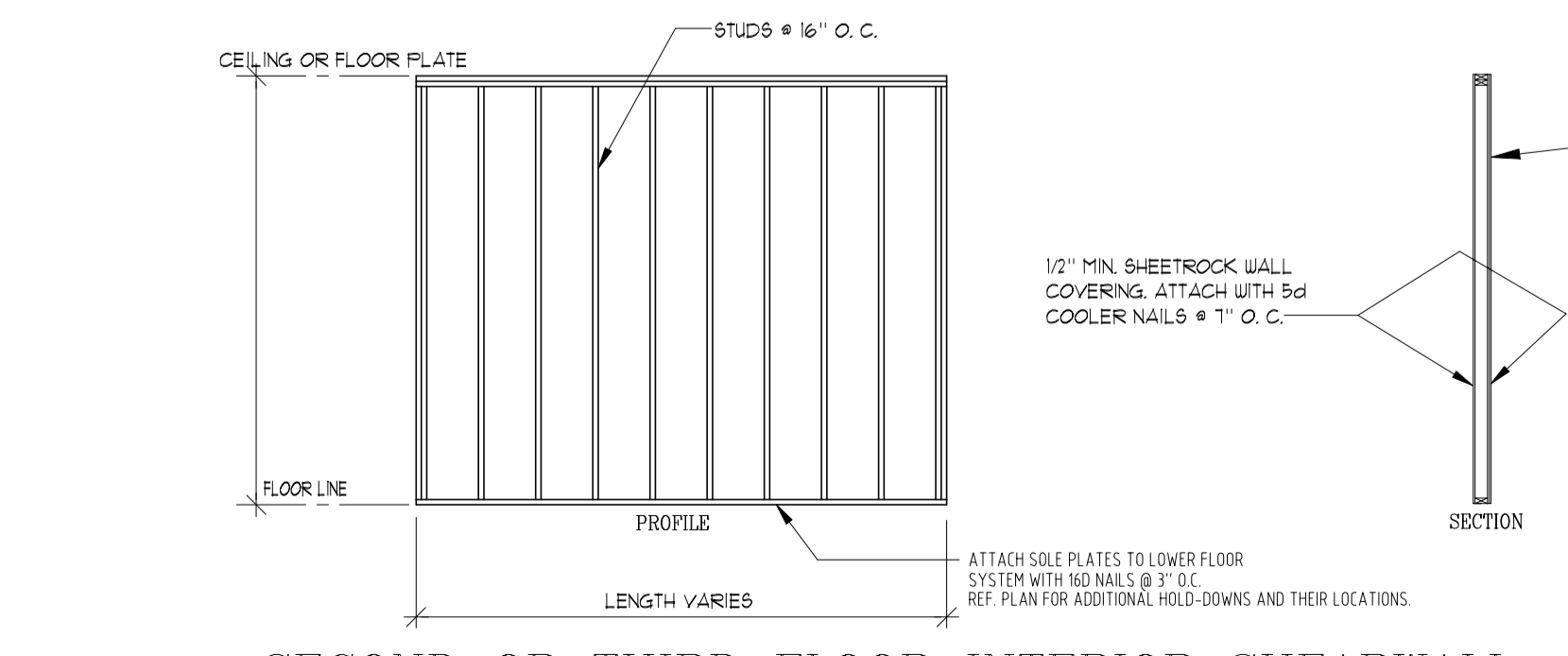


FIRST FLOOR INTERIOR SHEARWALL - TYPICAL DETAIL INDICATED BY "SW" ON PLAN.



SECOND OR THIRD FLOOR INTERIOR WALL TYPICAL DETAIL

PLYWOOD AND SHEETROCK NAILING DIAGRAMS INDICATED ON PLAN BY "SW". LENGTH SPECIFIED WHERE REQUIRED IS GIVEN IN FEET.



SECOND OR THIRD FLOOR INTERIOR SHEARWALL - TYPICAL DETAIL INDICATED BY "SW" ON PLAN.

GENERAL NOTES - WOOD

- All joists and rafters shall be #2 SYP unless otherwise noted. Multiple 2 x 12 beams shall be of #2 SYP. All wall studs to be stud grade or #2 SYP. Attach all rafter ends to exterior wall framing with Simpson HJ connectors. Use Simpson HCP for Hip & Valley connectors. In lieu of 3 - 8d nails as noted in the I.R.C., attach ceiling and floor joists to top plates w/ 3 - 12d common nails (toenailed at each end where a connector tie is not used).
- Bolt holes through wood shall be drilled 1/16" maximum larger than the diameter of the bolts to be installed. Bolts through wood shall be fitted with standard washers.
- Wood framing members and connections shall be constructed and nailed in accordance with the I.R.C. Building Code, latest edition, unless otherwise noted, detailed or specified.
- Wall studs to be 2 x 4 or 2 x 6 studs @ 16" O.C. Attach each stud to top and sole plates with 2-16d nails each end. At exterior walls without plywood sheathing attach studs to the bottom sole plate with an additional Simpson H3 Hurricane anchor at 32" O.C. See plan notes for additional connections.
- Joists under non-load bearing partitions shall be doubled.
- Provide Simpson Galvanized "LU & LUS" standard joist hangers at solid sawn flush joint connections, and for trusses at flush beam connections, or use Simpson LRV hangers. All flush beam - to - beam connections are to be made with Simpson "HGLT & GLT" connectors, U.N.O. All Simpson specifications and recommendations are to be followed, unless noted otherwise.
- Let-in diagonal wood frame bracing shall be continuous #2 KD 1 x 6, well anchored to head and sill plates and attached to each wall stud along diagonal.
- Plywood or sheathing shall bear an AFPA Trademark and be stamped performance rated for application and exposure on panel. Face grain is to run perpendicular to support members for horizontal floor and roof sheathing.
- Provide the same number of wall studs under beams as the number of members in the beams unless noted otherwise (3 - 2 x 4 studs under each end of a beam made of 3 - 2 x 10 members). Studs to be glued and nailed to function as a single column.
- Wood in direct contact with concrete or masonry shall be treated lumber.
- Wood columns and posts shall be framed to true end bearings, and shall be positively anchored to foundation with approved post bases. Support column and post securely in position and protect base from deterioration. Columns and posts of treated wood may be placed directly on concrete or masonry. Use treated wood for all floor joists which are exposed or within 18" of the ground, or in permanent contact with earth.
- Joists shall be laterally supported at the ends, at each support and at 8'-0" O.C. maximum by solid blocking where the ends of joists are nailed to a flush header, band or m joists or to an adjoining stud, end blocking may be omitted, U.N.O. at shearwalls. Solid blocking shall be not less than two inches (2") in thickness and shall match the depth of the joist.
- At exterior sole plates provide 5/8" dia. x 10" long anchor bolts, with 2 x 2 square washers, at 4'-0" (max) o.c., with bolts at 12" maximum from wall ends. Bolts shall be embedded 7" minimum into concrete. As an alternate Simpson "MAS" hold - downs may be used. Place 6" from wall ends and space at 2'-8" O.C. See plans for any additional spacing and hold-down and anchoring requirements.
- All beams made up of multiple 2 x joists shall be connected as per the I.R.C. Code requirements, or local code, whichever is stricter.
- Flitch beam bolts shall be 3/4" diameter, U.N.O., located 2" from steel plate edges and shall be staggered. Provide two (2) standard washers per bolt, one (1) washer installed on each side of beam.
- Floor decking to be min. 3/4" T&G plywood nailed to floor framing with 10d nails spaced at 4" o.c. at plywood sheet edges and 10" o.c. at interior supports. (8 gauge screws 1 1/4" min. penetration into support member may be used in lieu of 10d nails for decking attachment, same spacing as nails.)
- If not specified by applicable building codes, wood members, connections and construction shall comply with AITC Timber Construction Manual requirements, latest edition.
- All Simpson connectors used with treated wood members treated with chromated copper arsenate (CCA-C) or DOT sodium borate (SBN) should be coated with standard G90 galvanizing and connected with nails, screws, or bolts that are post hot dip galvanized. All Simpson connectors used with wood members treated with alkaline copper quat (ACQ-C) and ACQ-D) or copper azole (CCA-A and CCA-B) or any other "non-DOT" borate should be coated with Simpson Z max (G95) or post hot dip galvanized (H90) and connected with nails, screws, or bolts that are post hot dip galvanized (H90) or are stainless steel (SS1300). Wood treated with ammoniac copper zinc arsenate (ACZA) or any other preservative treatment not noted above is NOT ALLOWED for construction.
- For engineered wood products noted on plans, all manufacturer specifications and installation requirements must be followed U.N.O.
- Temporary Bracing is strictly the responsibility of the Contractor. The structural elements of this project were designed by the Engineer of Record to resist the code specified loads that could occur in the final completed structure only, possibly relying upon other architectural and structural elements for bracing. The contractor is responsible to provide the design and construction of all temporary construction bracing needed to maintain the safety and integrity of all structural elements during construction until all architectural and structural elements are erected, fastened and otherwise completed as detailed on the design drawings.

GENERAL NOTES - STRUCTURAL STEEL

- Structural steel shall conform to ASTM A36 and be detailed, fabricated and erected per AISC Manual of Steel Construction, latest edition. Pipe columns shall be ASTM A501 or A53 types E or S Grade B. Tube columns shall be ASTM A500 Grade B. Paint one S/C Zinc Chromate.
- Field connections may be welded or bolted. If bolted, use 3/4" minimum A325-N bolts unless otherwise shown. Unless noted, connections should develop the tabulated uniform load for the actual span from the AISC beam tables (two bolts minimum). Provide web connections for beams to columns unless noted otherwise.
- Spacing of members is prohibited without prior approval by engineer. Connection plates are to be 3/8" thick unless noted otherwise.
- All welding shall conform to the AWS code. Weld electrodes are to be E70XX series. Provide back-up strips as required.
- Where wood blocking is indicated attached to steel, provide 9/16" holes at 24" O.C. staggered for 1/2" machine bolts. Field applied fasteners may be used.
- Loose lintels shall be as scheduled on the structural drawings, or as noted in table below.

CLEAR SPAN	ENGINEERED BEAMS (PARALLAM / GLULAM)	SIZE SIMPSON HANGER
4'-0" OR LESS	L3 1/2" X 3 1/2" X 5/16	HGUS42
6'-0"	L4 X 3 1/2" X 5/16	HGUS44
8'-0"	L5 X 3 1/2" X 5/16	HGUS46
10'-0"	L6 X 3 1/2" X 3/8	HGUS50/52
16'-0" @ GARAGE DOORS (no story above)	L8 X 3 1/2" X 5/8	HGUS50/54

NOTE: All Lintels to be Long Leg Vertical (LLV), U.N.O.

NOTES:

- Lintel steel shall be per ASTM A36.
- Lintels shall bear 6" min. in masonry at each end.
- Lintels shall not be connected to wood framing, U.N.O.
- Lintels shall be coated in accordance with local building code requirements for corrosion resistance.
- See structural drawings for special lintels with spans greater than 10'-0" or @ garage doors w/ 2nd floor veneer above.

DESIGN LOADS:

2012 IRC WITH CITY OF HOUSTON AMENDMENTS

LIVE LOADS:	FLOORS	- 40 PSF
	CEILING	- 20 PSF
	ROOF	- 20 PSF
ATTIC ACCESS STAIR CAPACITY:		- 350 LBS.

HANDRAIL AND GUARDRAIL DESIGN LOADS:
HANDRAILS AND GUARDRAILS SHALL SUPPORT A MINIMUM 200 LB. LIVE LOAD IN ANY DIRECTION AT ANY POINT ALONG THE TOP.

WIND: 110 MPH BASE WIND SPEED
3 SECOND GUST EXPOSURE "B" HEIGHT = 30'

HEADERS:

ALL FIRST FLOOR HEADERS AND SECOND FLOOR LOAD BEARING HEADERS TO BE A MIN. OF 2 - 2 X 12 ON EDGE, UNLESS NOTED OTHERWISE: 10'-0" MAX.

ALL OTHER HEADERS

2 - 2 X 4's on Edge	3'-0" MAX.
2 - 2 X 6's on Edge	4'-0" MAX.
2 - 2 X 8's on Edge	6'-0" MAX.
2 - 2 X 10's on Edge	8'-0" MAX.
2 - 2 X 12's on Edge	10'-0" MAX.

NOTES:

- SAWN TIMBER - SOUTHERN YELLOW PINE SHALL BE THE GRADE SPECIFIED ON THE FRAMING DRAWINGS AND SHALL HAVE A MOISTURE CONTENT OF 15% MAXIMUM.
- SAWN TIMBER BEAMS USED AS HEADERS SHALL HAVE A 1/2" INCH PLYWOOD OR OSB PANEL FLALED BETWEEN THE TWO MEMBERS.
- PSL - PARALLAM BEAMS SHALL BE AS MANUFACTURED BY MEYERHAEUSER, BOISE, IDAHO.
- PROVIDE 3" BEARING AT EACH END OF ANY TIMBER BEAM LISTED ABOVE, MINIMUM.
- HANGERS SHALL BE INSTALLED PER MANUFACTURER'S MOST RECENTLY PRINTED LITERATURE.
- SEE MANUFACTURER'S DETAIL SHEETS FOR TAPERED END CUTS.

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NO. DATE ISSUES/REVISIONS

A	10/22/2019	ISSUED FOR REVIEW
0	10/24/2019	ISSUED FOR PERMIT

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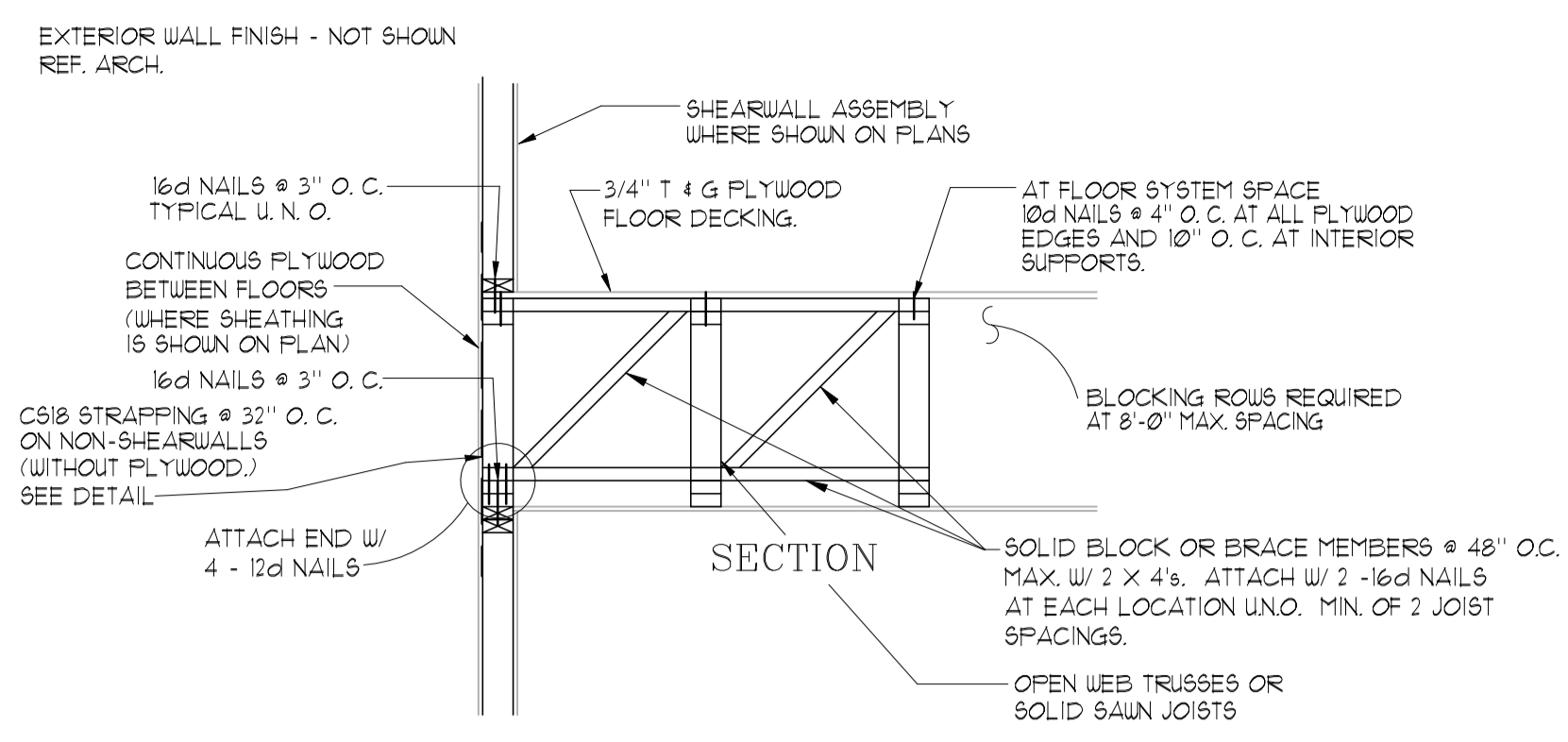
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DRN: JJ CHK: KB DES: TS

FRAMING DETAILS SHEET 1

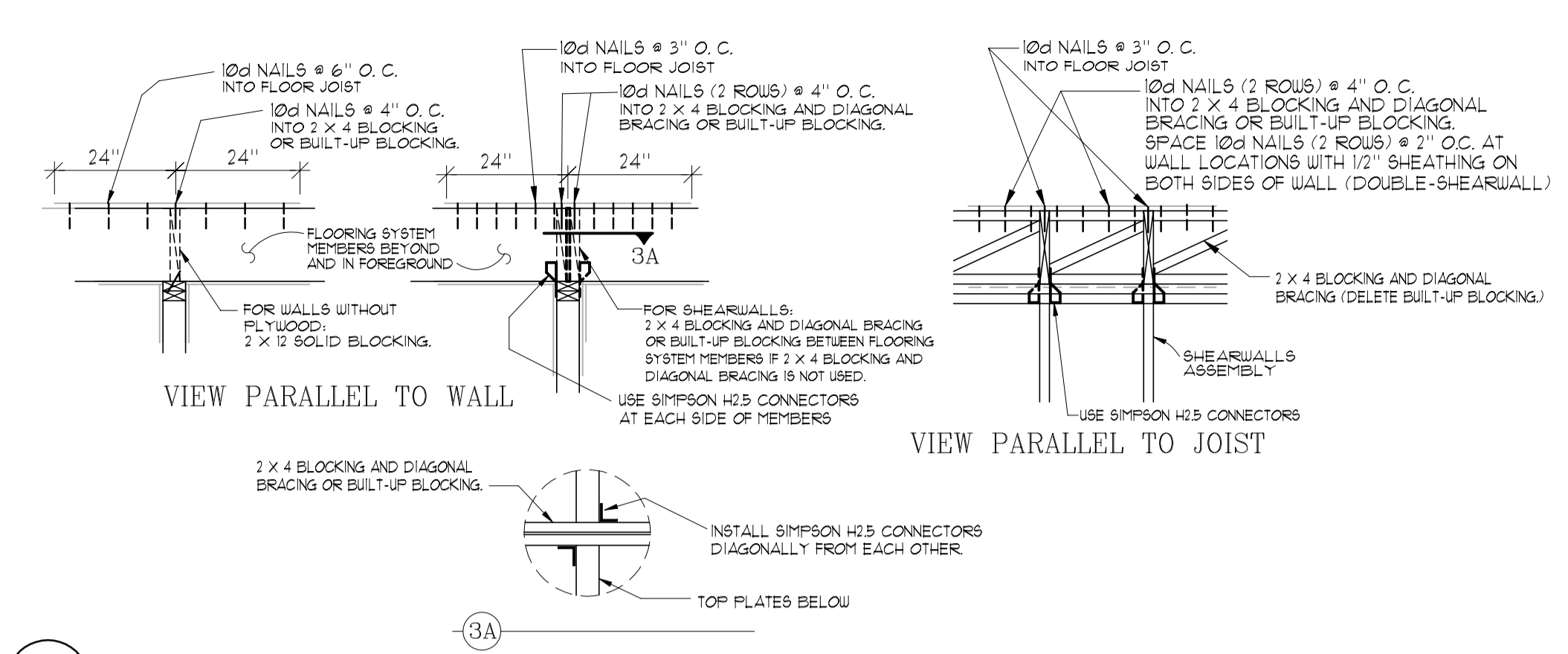
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City of Houston Texas

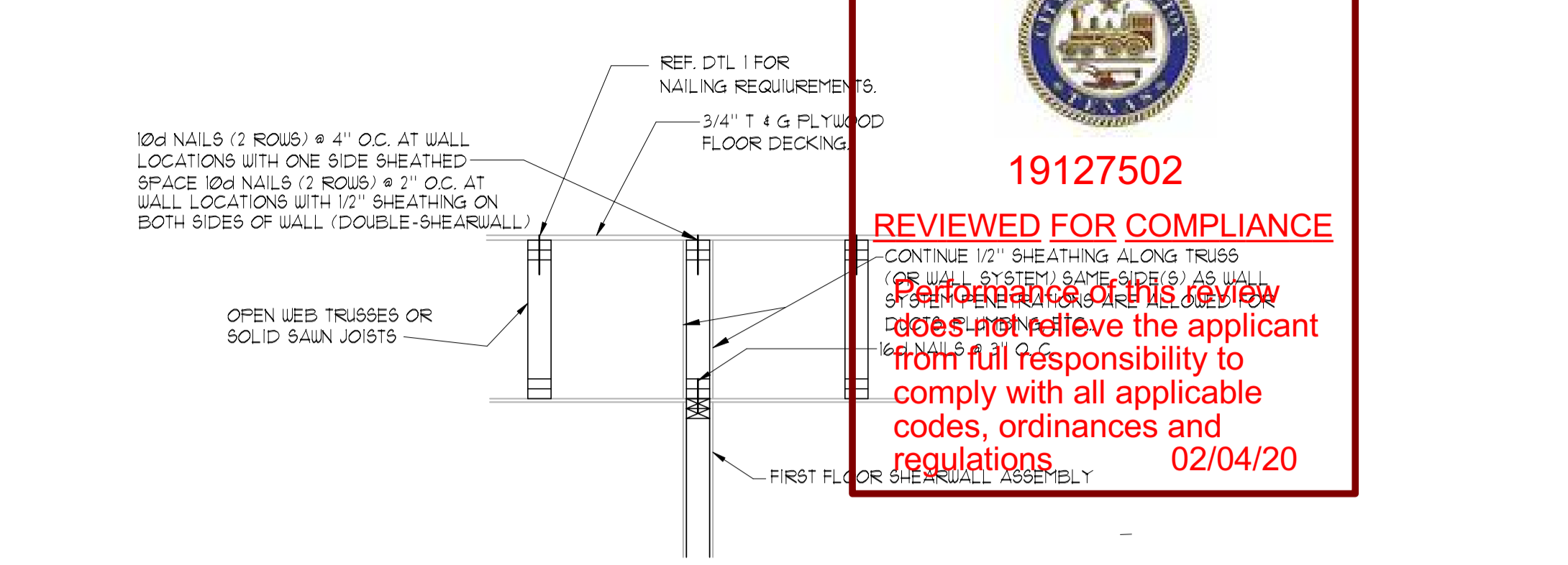
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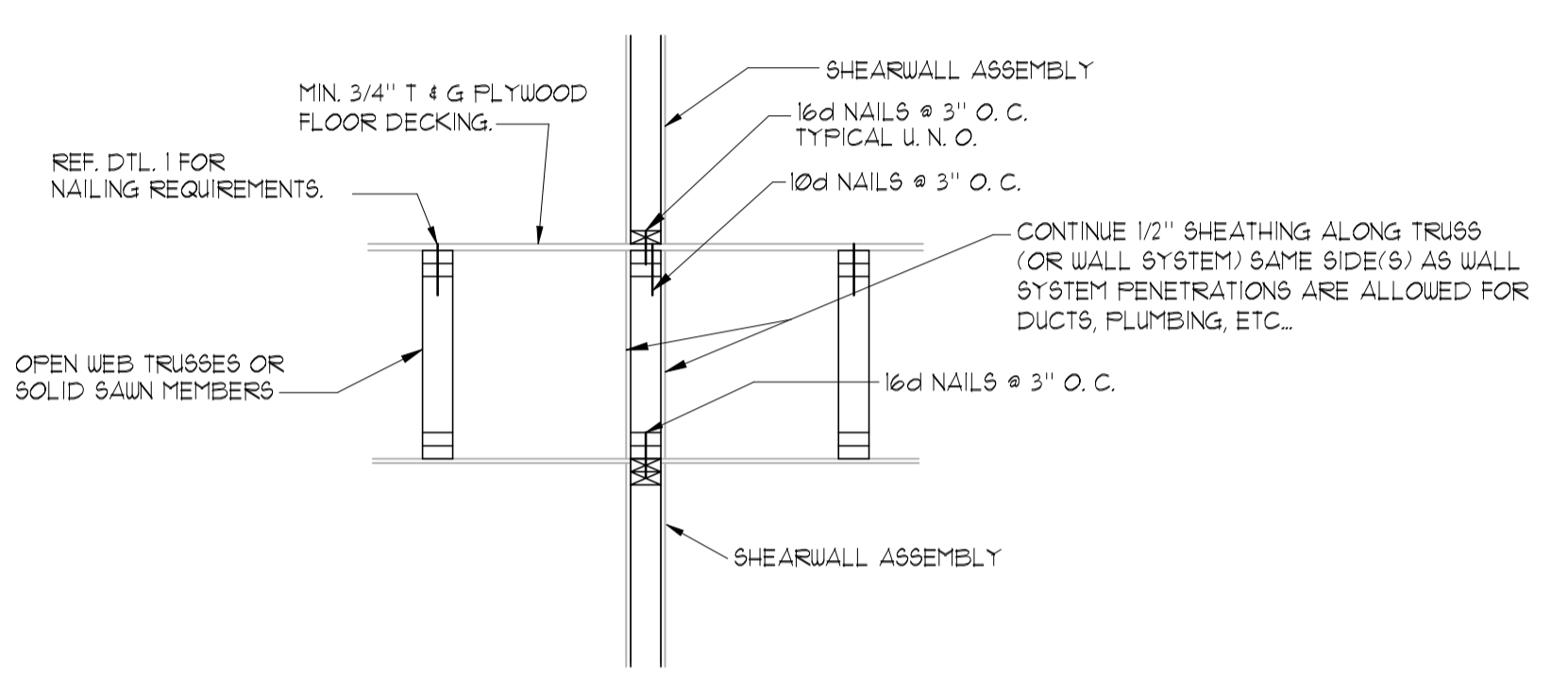
1 TYPICAL PERIMETER WALL FLOOR-TO-FLOOR CONNECTION FOR WALLS RUNNING PARALLEL TO FLOOR MEMBERS



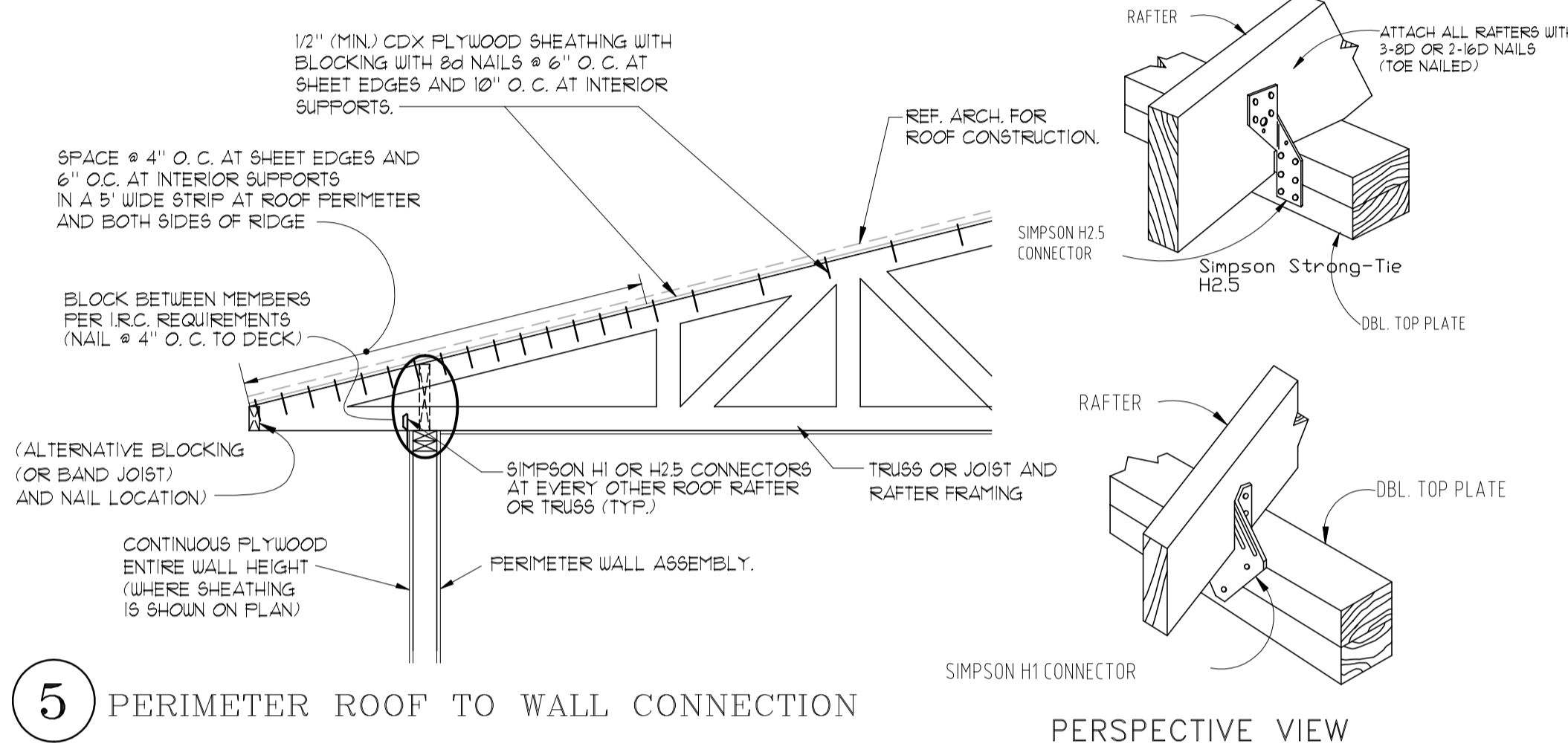
2 WALL AND SHEARWALL CONNECTION TO PERPENDICULAR FLOORING SYSTEM MEMBERS



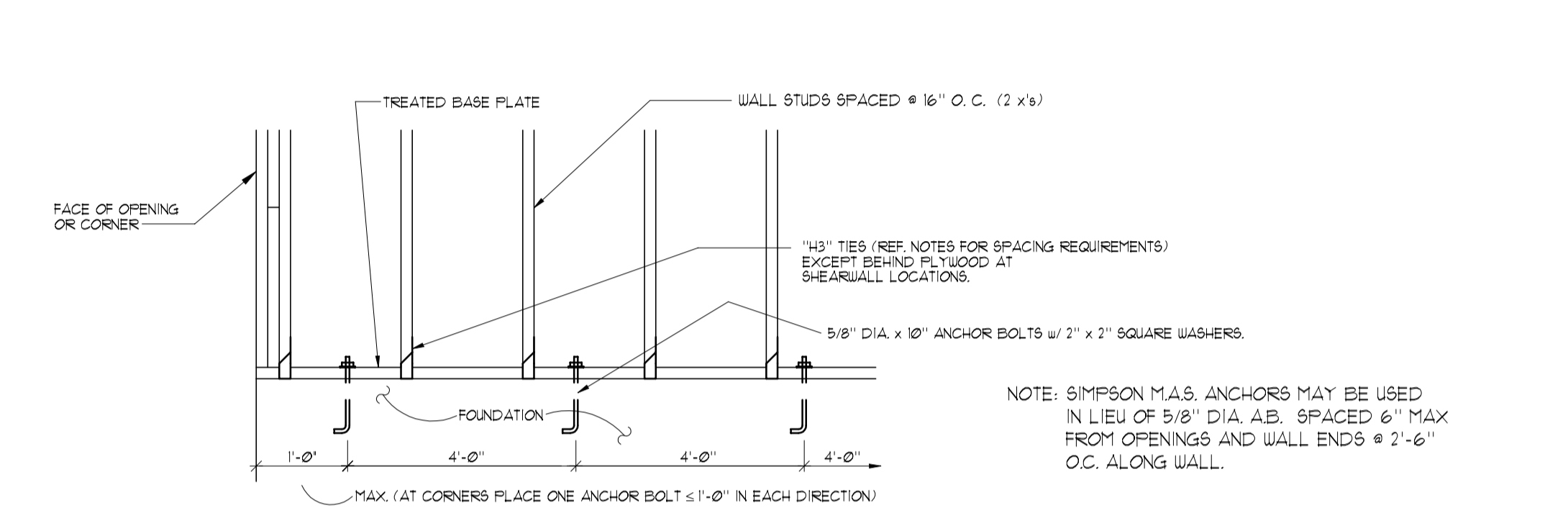
3 TYPICAL INTERIOR SHEARWALL DIRECTLY BELOW TRUSS FOR WALLS RUNNING PARALLEL TO FLOOR MEMBERS



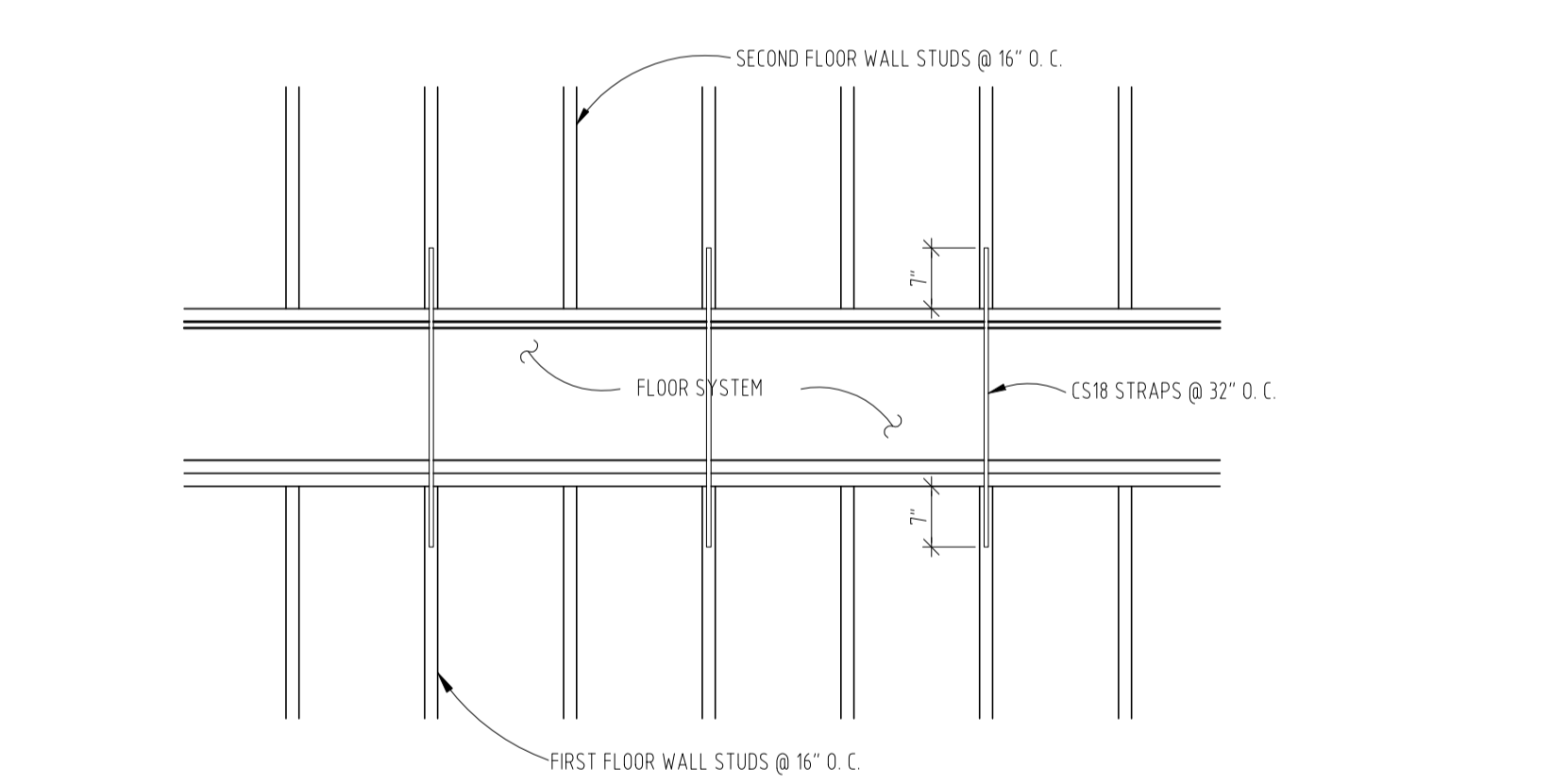
4 TYPICAL FLOOR MEMBERS DIRECTLY BETWEEN FLOOR TO FLOOR SHEARWALLS FOR WALLS RUNNING PARALLEL TO FLOOR MEMBERS



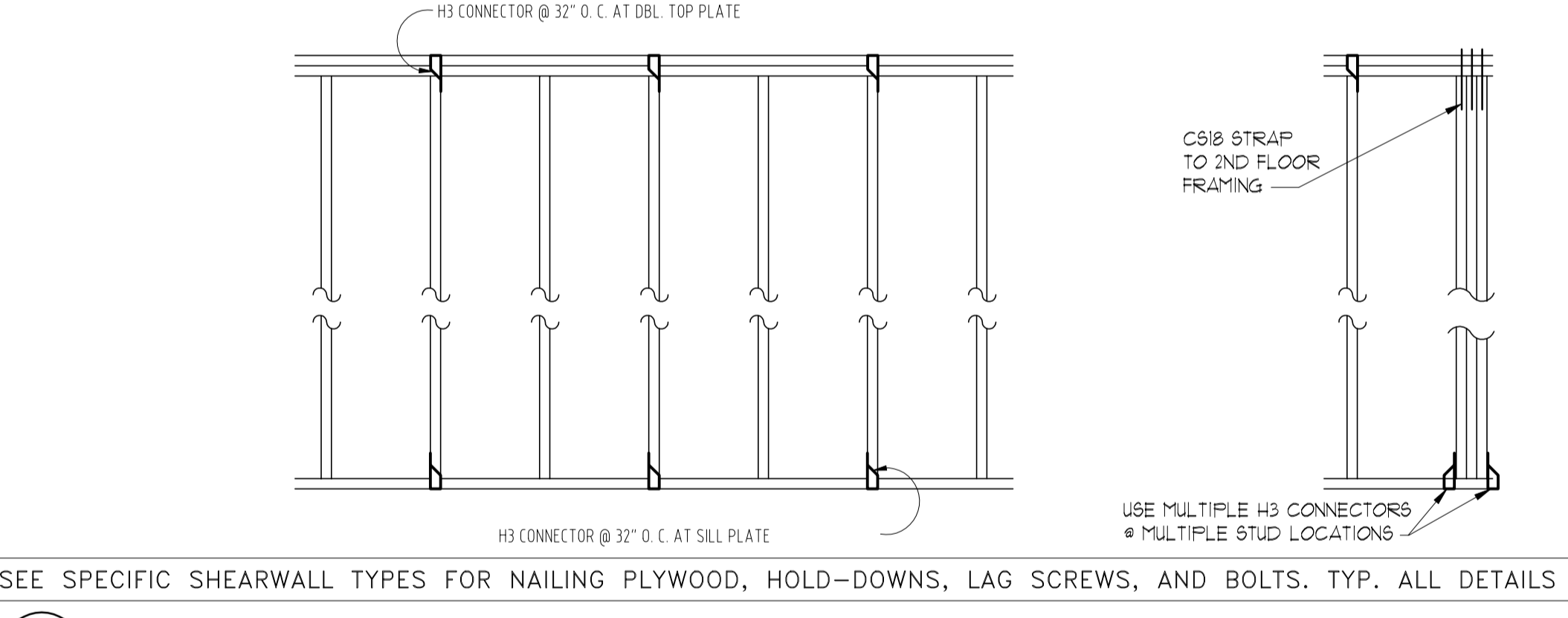
5 PERIMETER ROOF TO WALL CONNECTION



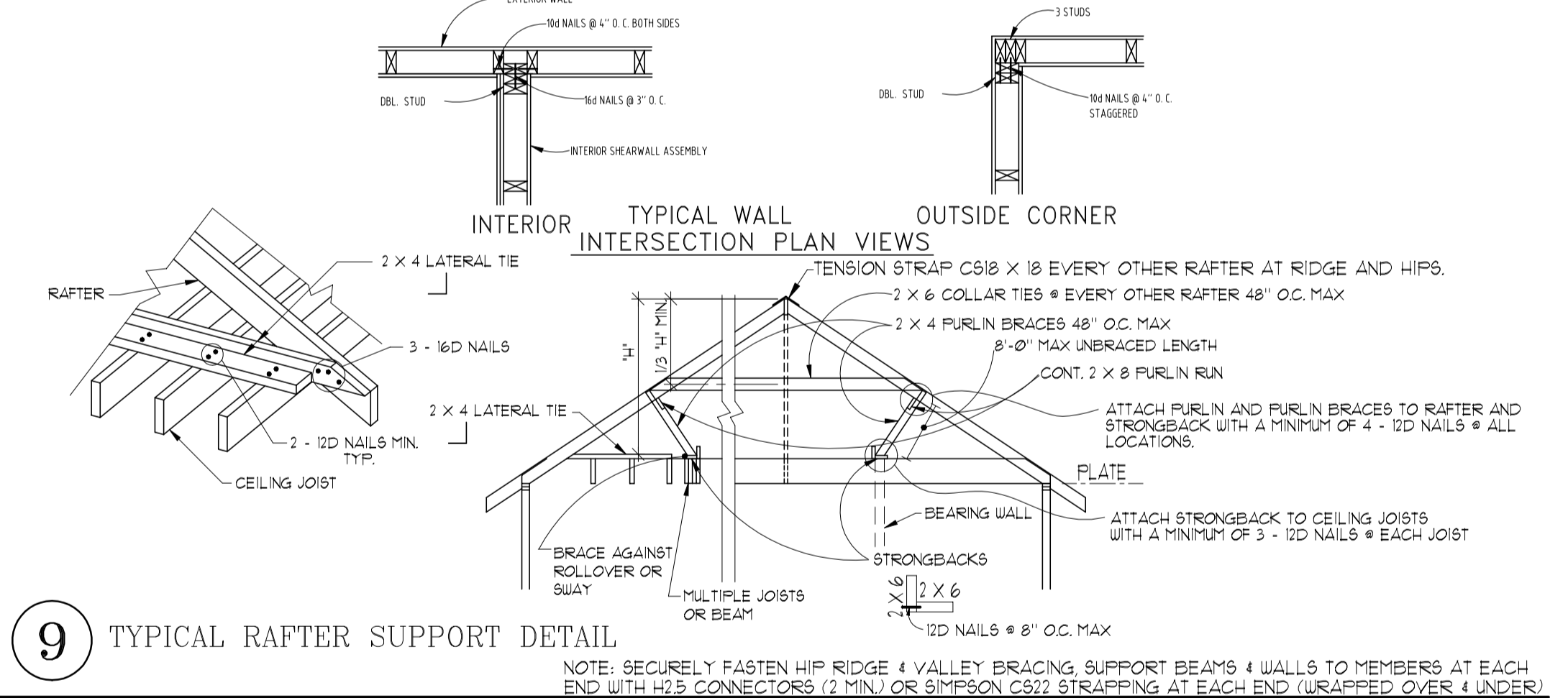
6 FIRST FLOOR PERIMETER WALL CONNECTION TO FOUNDATION. TYPICAL ALL WALLS.



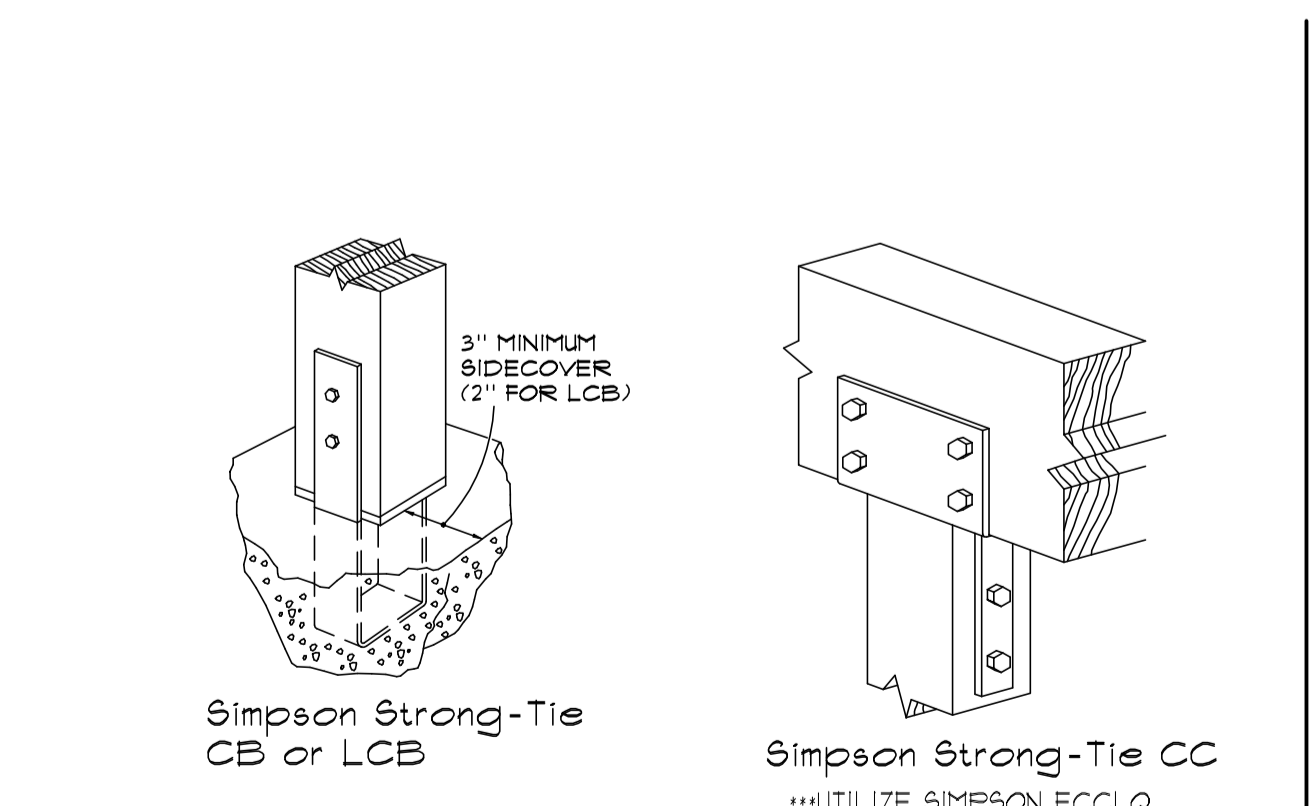
7 ALIGNED FIRST AND SECOND FLOOR EXTERIOR WALLS (UNSHEATHED WALLS)



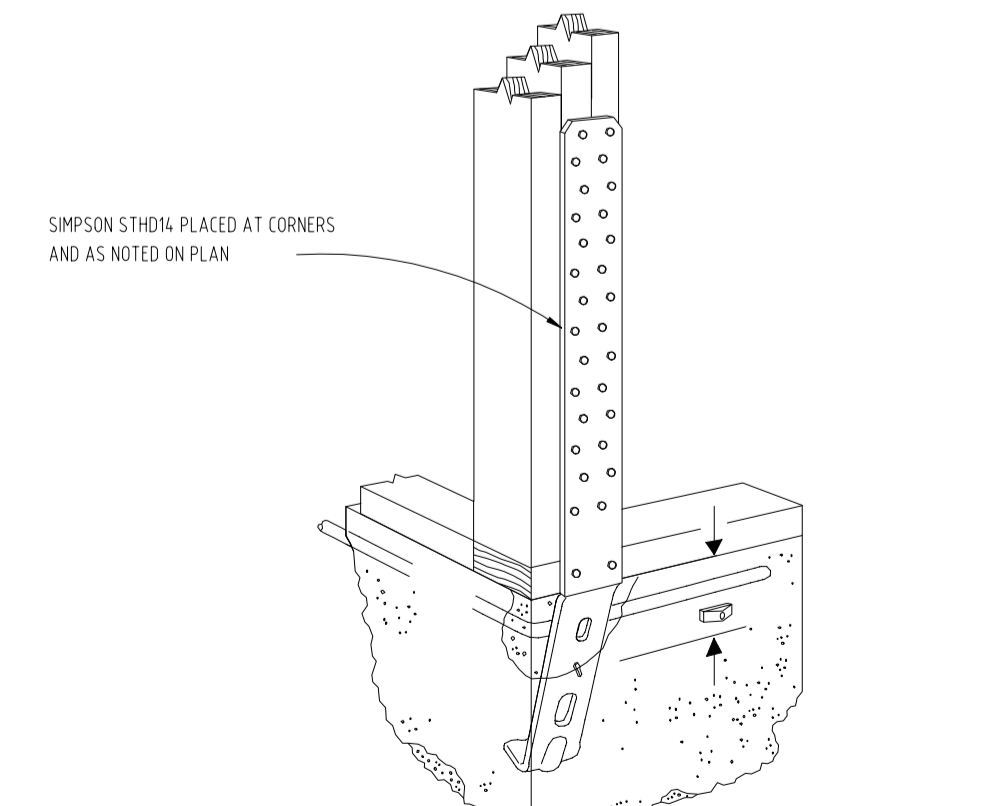
8 TYPICAL STUD - TO - PLATE CONNECTIONS (UNSHEATHED EXTERIOR WALLS-NON PLYWOOD)



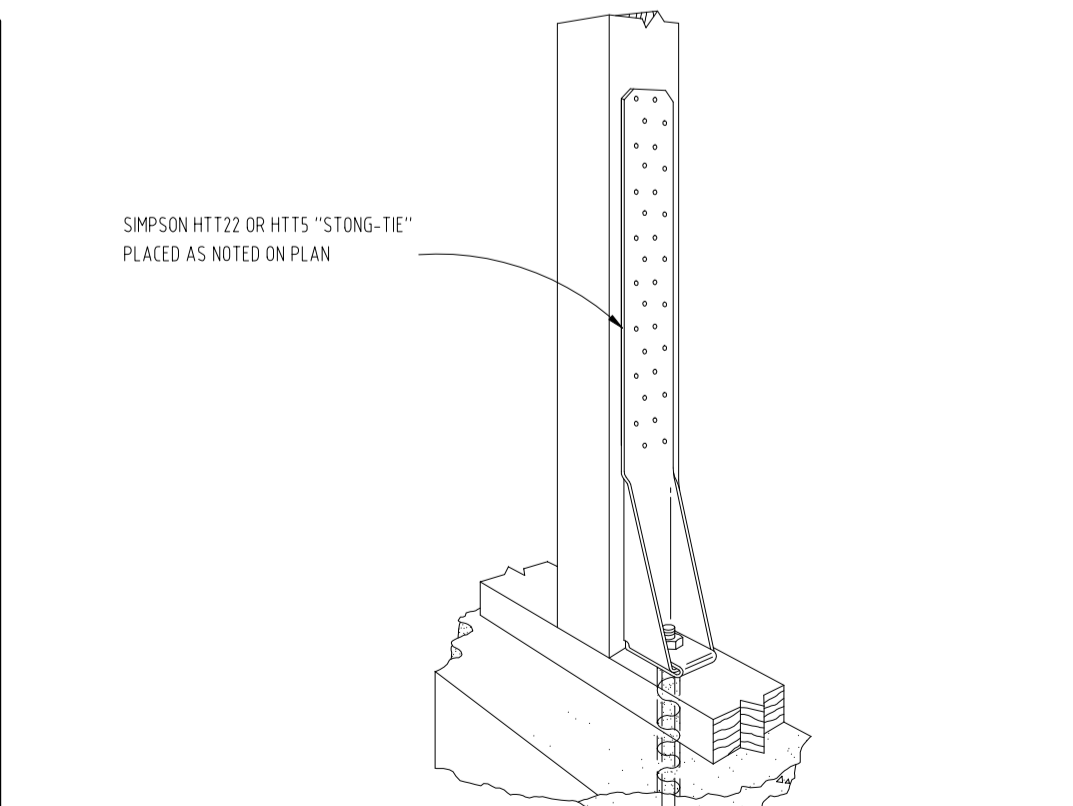
9 TYPICAL RAFTER SUPPORT DETAIL



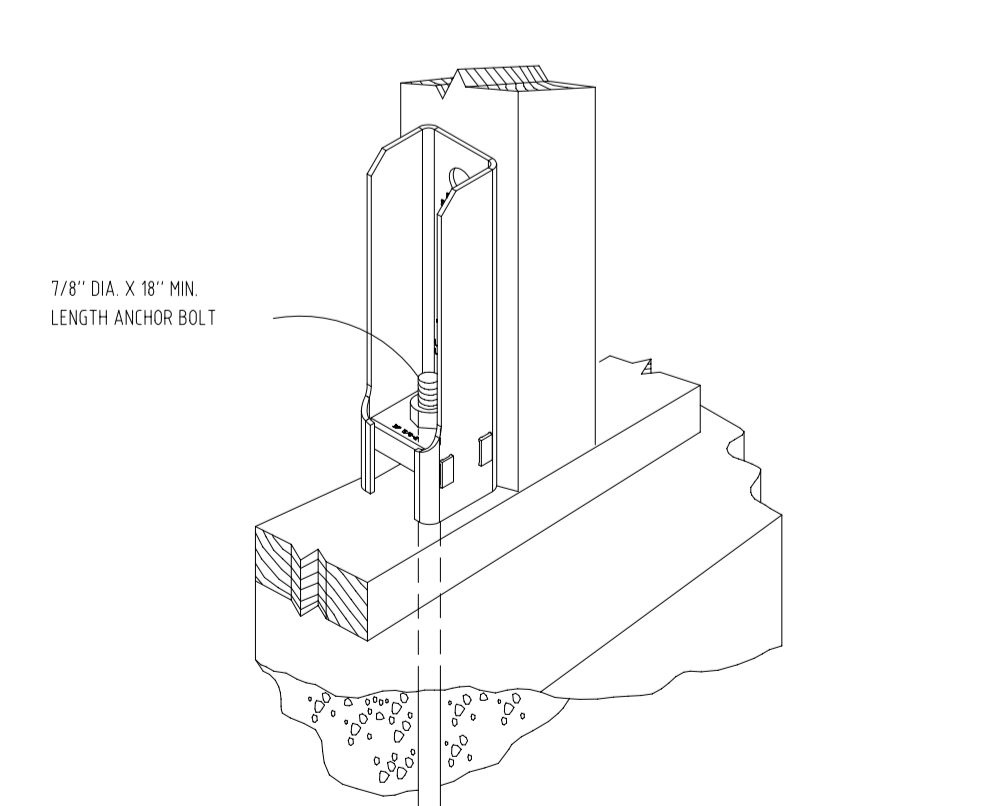
10 TYPICAL POST BASE AND CAP CONNECTIONS



11 ANTI-SPALLING STRAP TIE HOLD-DOWN



12 HOLD-DOWN



13 HD5B, HD7B AND HD9B HOLD-DOWN

SEE SPECIFIC SHEARWALL TYPES AND LAYOUT FOR NAILING PLYWOOD, HOLD-DOWNS, LAG SCREWS, OR BOLTS. TYP. ALL DTLs.

CONNECTION DETAILS

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NO	DATE	ISSUES/REVISIONS
A	10/22/2019	ISSUED FOR REVIEW
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REF # 19-1208-0014
 DRN: JJ CHR: KB DES: TS
FRAMING DETAILS SHEET 2
 SHEET NO. **S4.1**

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